

## Agenda for Strategic Planning Committee Tuesday, 5th December, 2023, 10.00 am

### Members of Strategic Planning Committee

Councillors: B Bailey, J Bailey, K Blakey, B Collins, O Davey (Chair), P Fernley, C Fitzgerald, M Hartnell, P Hayward, M Howe (Vice-Chair), B Ingham, D Ledger, Y Levine, T Olive and H Parr

**Venue:** Council Chamber, Blackdown House, Honiton

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(or group number 01395 517546)

Friday, 24 November 2023



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- 1 Minutes of the previous meeting (Pages 3 - 7)
- 2 Apologies
- 3 Declarations of interest  
Guidance is available online to Councillors and co-opted members on making [declarations of interest](#)
- 4 Public speaking  
Information on [public speaking](#) is available online
- 5 Matters of urgency  
Information on [matters of urgency](#) is available online
- 6 Confidential/exempt item(s)  
To agree any items to be dealt with after the public (including the Press) have been excluded. There are no items which officers recommend should be dealt with in this way.
- 7 New Community Options Appraisal (Pages 8 - 587)
- 8 Joint Strategy for East Devon, Exeter, Mid Devon and Teignbridge (Pages 588 - 657)
- 9 Teignbridge Local Plan -Publication Plan (Regulation 19) addendum consultation (Pages 658 - 661)
- 10 Employment of agency staff in the Planning Policy Team (Pages 662 - 667)

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[Decision making and equalities](#)

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**EAST DEVON DISTRICT COUNCIL****Minutes of the meeting of Strategic Planning Committee held at Council Chamber, Blackdown House, Honiton on 31 October 2023****Attendance list at end of document**

The meeting started at 10.05 am and ended at 12.30 pm. The Chair adjourned the meeting at 11.22 am and was reconvened at 11.41 am.

**33 Minutes of the previous meeting**

The minutes of the Strategic Planning Committee held on 3 October 2023 were confirmed as a true record.

In response to a comment about how North Somerset District Council were going to challenge their housing numbers in their local plan, the Assistant Director advised he would be watching the outcome with interest and reminded Members that this council did not have a sound case to reduce its numbers.

**34 Declarations of interest**

The Chair on behalf of Members of the Strategic Planning Committee advised receiving lobbying communication from Mr Persey who spoke during the public speaking section.

**35 Public speaking**

Robert Persey addressed the Committee to offer land in the centre of Dulford free of charge for up to 12 affordable housing and asked Members to consider changing policy to enable the numbers on the housing waiting list to be used to identify the need for a rural exception site.

The East Devon Local Plan 2013 – 2031 identified that parishes of Awliscombe, Broadhembury, Payhembury and Plymtree all had a housing need. He advised that there were currently 5,109 on the EDDC housing waiting list, of which 18 families were from Broadhembury. He referred to a recent letter from the Department of Levelling Up Communities which stated that local authorities should support local needs in rural areas including rural exception sites and welcomed a debate from Members about this issue as there was a duty to provide more homes.

In response the Assistant Director – Planning Strategy and Development Management advised that the fundamental issue was that Dulford was a small hamlet with a very limited range of services and facilities and that the Devon Home Choice data raised concerns about whether there was a need in that locality. The current position that has been advised to Mr Persey is to test its need through a planning application if he believes the advice to be incorrect and to undergo a housing needs survey through the parish council if he believes the data to be inaccurate.

**36 Matters of urgency**

There were no matters of urgency.

37 **Confidential/exempt item(s)**

There were no confidential or exempt items.

38 **East Devon Local Plan 2020-2040 Consultation Draft - Consultation Feedback Addendum**

The Committee considered the Assistant Director – Planning Strategy and Development Management’s feedback addendum report that had addressed the concerns raised by Members about comments that had been missed out of the original feedback report.

These included:

- The consultation feedback report had not included the sentiment scores from the questions about whether people supported or opposed policies in the draft local plan.
- Various sites allocations had been omitted for development.
- Representation from Network Rail had been omitted.
- Comments made on paper slips at the Whimble event.
- A further review of the comment slips regarding housing numbers at the Whimble event summarised on page 15 of the report.

Members comments included:

- Inconsistent comments made by Network Rail.
- The inclusion of comments made by Whimble residents were welcomed.
- A concern was raised about the sentiment score analysis due to inconsistencies.
- It was noted that DCC did not support a new town in Clyst St Mary.
- Comments made about the new town included the need to consider a development that would cater for cars as without a better public transport system people would be more reliant on cars.
- Clarification was sought about what changes have taken place regarding development following receipt of the 1,800 responses during the consultation stage. In response it was advised decisions were taken on sound planning grounds and work was still ongoing to review all of the comments received.

**RESOLVED:**

That the addendum to the draft local plan consultation feedback report be noted.

39 **East Devon Local Plan - Timetable and Local Development Scheme**

The Committee considered the proposed timetable detailing the key stages of work which included a series of reports that would be made available for public comment under the Regulation 18 stage in respect of matters including Green Wedges and additional employment sites.

Members noted that the timeline leading to the adoption of the local plan was extremely tight and the Assistant Director – Planning Strategy and Development Management advised Members to be mindful for the possibility of additional meetings to help keep on track with the timeline.

It was emphasised to Members that a significant key risk that could hinder keeping to the timetable was the current staff resourcing issue and despite advertising the team currently had a vacant Planning Officer post. To overcome this issue the team were

considering exploring the option of sending work out to consultants to assist and a further report would be brought to Committee to address any budget implications.

Comments received included:

- It was suggested that the committee could link up the redrafted chapters together to help speed things along.
- A concern was raised about the staffing issue and the possibility of costly consultant fees and the need to address the issue long term. In response the Assistant Director – Planning Strategy and Development Management advised that there was no immediate solution as although the council had undergone a pay review there was still high competition between the public and private sector. Long term solutions could involve exploring further apprenticeships within the team but this would not help in the short term.
- It was suggested for the timetable to be made a standard agenda item and to be brought back to Committee every other meeting to update Members.
- Clarification was sought on what the implications would be if Members failed to meet the June 2025 deadline. It was advised that the evidence gathered would be carried over to the new local plan system and that the proposed substantial changes to the new local plan are designed to make it quicker and easier to complete. However any new system comes with uncertainty and it was still desirable to proceed under the current system as quickly as possible.
- Reference was made to the series of reports and whether Built up Area Boundaries would be added to the list of subject matters and whether settlement boundaries would be revisited.
- It was questioned whether discussing two or three chapters per meeting would be feasible.
- A concern was raised that Planning Committee Members are being asked to approve applications without answers to the lack of jobs and infrastructure. The Assistant Director – Planning Strategy and Development Management reminded members of the lack of a five-year housing land supply and the need to apply the tilted balance.

#### **RESOLVED:**

1. That the timetable and approach to local plan making work set out in the committee report be endorsed.
2. That the proposed new Local Development Scheme, appended to this report, be endorsed and that it be recommended to Council for adoption.

#### **40 East Devon Local Plan - A Proposed New Vision**

The Committee considered the East Devon Local Plan – A proposed new vision report that set out a proposed vision for inclusion in the East Devon Local Plan following a decision made by Committee on 21 July 2023 to replace the vision in the draft local plan. Strategic Planning Committee Members attended a workshop session on 31 August 2023 to consider the vision for the plan and those comments and suggestions made during that session helped officers produce a revised vision.

The following suggestions and comments were made by Members:

- It was suggested that a section should be included about the concerns raised about the oversubscribed schools and hospitals.
- There is a need to include the Clyst Valley Regional Park.
- It had been suggested that further work was needed before it could be endorsed.
- There was a need to look at the punctuation.
- It was suggested that each town should have its own vision.

- The vision needs to acknowledge the east and west district divide – urban and rural communities need to be defined.
- Greater emphasis on climate change.
- There is a need to address affordable housing and the protection of local residents to avoid inward migration.
- Infrastructure and transport should be included.
- Support was expressed to include a vision for each of the towns.
- As some villages need small scale development this should also be mentioned.
- It was suggested that the sixth paragraph should be expanded to include what to expect from new development and what it delivers.

The Assistant Director – Planning Strategy and Development Management welcomed all the suggestions and sought further clarification on whether Members preferred to amend the vision's wording at this meeting or to be brought back for members consideration at a later date. It was suggested that the wording could be emailed to Committee Members as a tracked document which could then be brought back to a future meeting.

**RESOLVED:**

1. That the Committee defer the consideration of the proposed vision as set out in this report to allow the Assistant Director – Planning Strategy and Development Management to take on board Members comments and to prepare a revised vision for further deliberation at the January 2024 Strategic Planning Committee.
2. That the new local plan should include a vision for each of the towns to act as a focus for the plans approach for each of these locations.

**Attendance List**

**Councillors present:**

B Bailey  
K Blakey  
B Collins  
O Davey (Chair)  
P Fernley  
C Fitzgerald  
M Howe (Vice-Chair)  
D Ledger  
Y Levine  
T Olive  
H Parr

**Councillors also present (for some or all the meeting)**

I Barlow  
K Bloxham  
C Brown  
J Brown  
P Faithfull  
G Jung

**Officers in attendance:**

Wendy Harris, Democratic Services Officer  
Ed Freeman, Assistant Director Planning Strategy and Development Management

Damian Hunter, Planning Solicitor

**Councillor apologies:**

J Bailey  
M Hartnell  
P Hayward

Chairman .....

Date: .....



Report to: Strategic Planning Committee

Date of Meeting: 5 December 2023

Document classification: Part A Public Document

Exemption applied: None

Review date for release N/A

## **New Community Options Appraisal**

### **Report summary:**

This report follows Members consideration of various iterations of a draft Local Plan which have proposed allocating land for a new community on land within East Devon that lies to the east of Exeter. Members at their meeting on the 1 November 2022 agreed to the principle of a new community forming a key element of a strategy for growth in the new Local Plan. It was then resolved to consult on the 3 options for the new community with option 1 identified as the preferred option and options 2 and 3 as alternative options. A draft plan was consulted on between November 2022 and January 2023 on that basis.

This report seeks to consider the responses on the new community options received through the draft Local Plan consultations as well as revisions that have been made to the assessment of the 3 options undertaken by consultants which have been amended in light of further work undertaken.

It is clear from the revised assessments that of the 3 options identified option 2 continues to score markedly lower than the other two options. Options 1 and 3 continue to score very closely, however further work considering matters of sustainable accessibility and highways impact has widened the gap in scoring in favour of Option 1.

Members are asked to consider the work undertaken to date and determine which of the 3 options they wish to pursue.

### **Is the proposed decision in accordance with:**

Budget Yes  No

Policy Framework Yes  No

### **Recommendation:**

That Members:

Agree that option 1 forms the Council's preferred approach for a further new community and the consultant group should be instructed to progress their work in master planning this option, developing a preferred delivery model and business case.

### **Reason for recommendation:**

To determine a preferred option for a new community so that work in developing these proposals can be progressed alongside the on-going production of the new Local Plan such that a clear masterplan and delivery model for the new community can be presented for comment as part of the Regulation 19 consultation on the Local Plan.

Portfolio(s) (check which apply):

- Climate Action and Emergency Response
- Coast, Country and Environment
- Council and Corporate Co-ordination
- Democracy, Transparency and Communications
- Economy and Assets
- Finance
- Strategic Planning
- Sustainable Homes and Communities
- Tourism, Sports, Leisure and Culture

**Equalities impact** Low Impact

**Climate change** Low Impact

**Risk:** Low Risk;

**Links to background information** [1. SPC New Community Report.pdf \(eastdevon.gov.uk\)](#);

**Link to [Council Plan](#)**

Priorities (check which apply)

- Better homes and communities for all
- A greener East Devon
- A resilient economy

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## Background

At Strategic Planning Committee on the 1 November 2022 Members resolved that:

“In order to meet the required Government’s housing targets Members agreed to the principle of a new community forming a key element of a strategy for growth in the new Local Plan”.

The accompanying report detailed the background of these proposals back to a report to Strategic Planning Committee on the 4 September 2018 where the need for such a development was first formally identified. This was followed by a report to Strategic Planning Committee on the 8 March 2022 which sought to summarise the work that had taken place in the meantime on developing new community proposals. Consultants had been appointed to help to undertake work in considering a new community and the report summarised the commission as follows:

- 1) “Review of options for the choice, form and location of new community proposals – a number of large scale proposals have been promoted through the initial call for sites process. The commission will help to ensure that there is a robust evidence base to inform the selection of development proposals in terms of the ability to secure key outcomes in line with the NPPF considerations.

The options review will need to consider key infrastructure such as:

- transport infrastructure both within and around the site including impacts on the major road network and the ability to promote active travel and a choice of modes of transport.
- energy infrastructure and the ability to support zero carbon development.

- green infrastructure including the ability to mitigate potential impact on key habitat sites and to provide biodiversity net gain.
- community infrastructure, for example to support improved health and wellbeing outcomes.
- Connections to key services such as electricity, water, drainage and broadband as well as community and other infrastructure needed to support the development.

A full understanding of what infrastructure is needed and the associated costs will be required to assess the viability and deliverability of each option. The review will also need to consider the parties involved in each option and the governance arrangements and delivery vehicles they propose.

- 2) Vision– to work with Council officers and members to develop a 30 year vision for a new community in the district which sets out the Council's requirements in the form of a set of criteria against which the options and their proposed delivery vehicles can be assessed.
- 3) Initial Options Appraisal – to use the vision and criteria developed at stage 2 to assess the major development options and make an initial recommendation to be considered alongside a draft Local Plan for consultation.
- 4) Masterplan – Following consultation on the draft Local Plan and consideration of responses to each of the options if a proposed site for allocation is identified then the consultant team will then be expected to undertake a master planning exercise for this site in consultation with key consultees and through a process of community engagement.
- 5) Preferred delivery option/model – this will include all necessary stakeholder engagement to help define the preferred option for the delivery vehicle to bring forward the preferred new community option.
- 6) Business case – to include final modelling of infrastructure costs, indicative viability assessment and long term stewardship and legacy arrangements.

Key outputs from the work to include:

1. Transport Assessment – This will need to consider the impact of each of the proposed new community options on transport infrastructure taking into account other growth planned for within the area including as yet undelivered growth in the adopted Local Plan and Cranbrook Plan as well as that emerging through the production of the new Local Plan. Impacts on all forms of transport will need to be considered including impacts on the county and strategic road network which will need to be considered in consultation with the County Highway Authority and Highways England. The county council have an up to date traffic model of the area which will be made available. This can be used to test options for mitigating the impacts of growth on these networks. The capital and revenue costs of doing so will also need to be understood through this work alongside the alignment with the Exeter Transport Strategy 2020 – 2030.
2. Infrastructure Requirements Report – A detailed report covering all of the infrastructure requirements of the 3 new community options with a breakdown of the costs involved of connecting to key pieces of infrastructure. The report will need to identify where there are key benefits of one option over another as a result of its proximity to key infrastructure connections or where differences in capacity mean that one site is easier/ less costly to connect than another. The infrastructure requirements to be informed by the visioning work.
3. Vision Document – A document produced following workshop sessions with officers, members and partners detailing a high level vision for any new community within the west



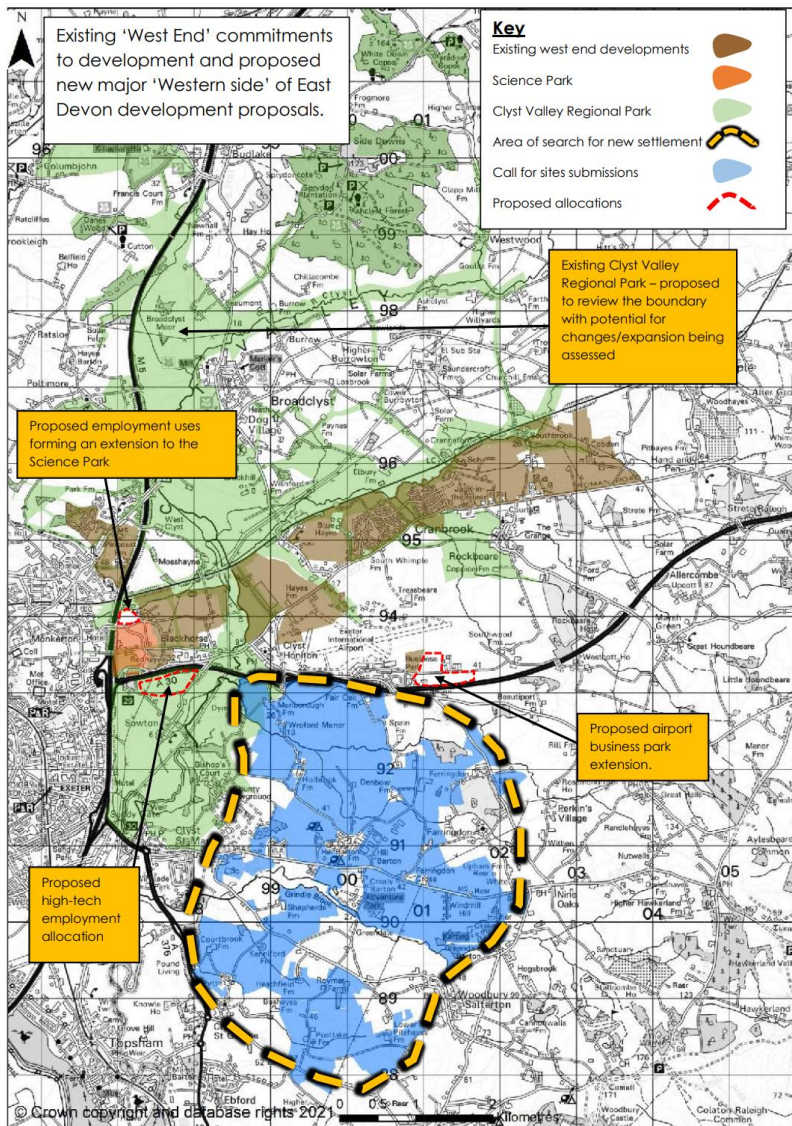
end of East Devon. The report to include key objectives for the community and a purpose and role for the settlement as well as setting out a criteria so that each of the options can be scored in terms of how well they would deliver against the vision.

4. Initial Options Report – An assessment of each of the 3 new community options against the agreed vision document and the criteria within it taking into account the gathered evidence on infrastructure costs, proposed delivery vehicles, transport implications etc such that a clear recommendation is made of which option will best deliver on the Council's aspirations. It is expected that this will be published as part of the evidence base in support of the consultation draft plan.
5. Masterplan – it is expected that this will provide a strategic level framework in the first instance that can be used as the basis for public consultation and engagement alongside the publication draft of the Local Plan. As such it provide a spatial interpretation of the vision and a foundation for future place making. It will enable further levels of detail, including design codes, to be commissioned in the future.
6. Business case – this will set out the rational for establishing a particular form of delivery vehicles to ensure that the vison for the new community is realised. It is expected that the five case model will be used to develop the business case. The business case will need to fulfil the requirements of section 3 of the 'Guidance on the New Towns Act 1981 (Local Authority Oversight) Regulations 2018' document."

By the time of Members meeting on the 1 November 2022 this work had advanced to stage 3 of the key areas set out above and an initial options report had been provided.

### **The 3 options**

The consultants had refined the options that were originally identified by officers following the call for sites. These were set out originally in the working draft of the Local Plan as shown in blue within an area of search on the plan below:

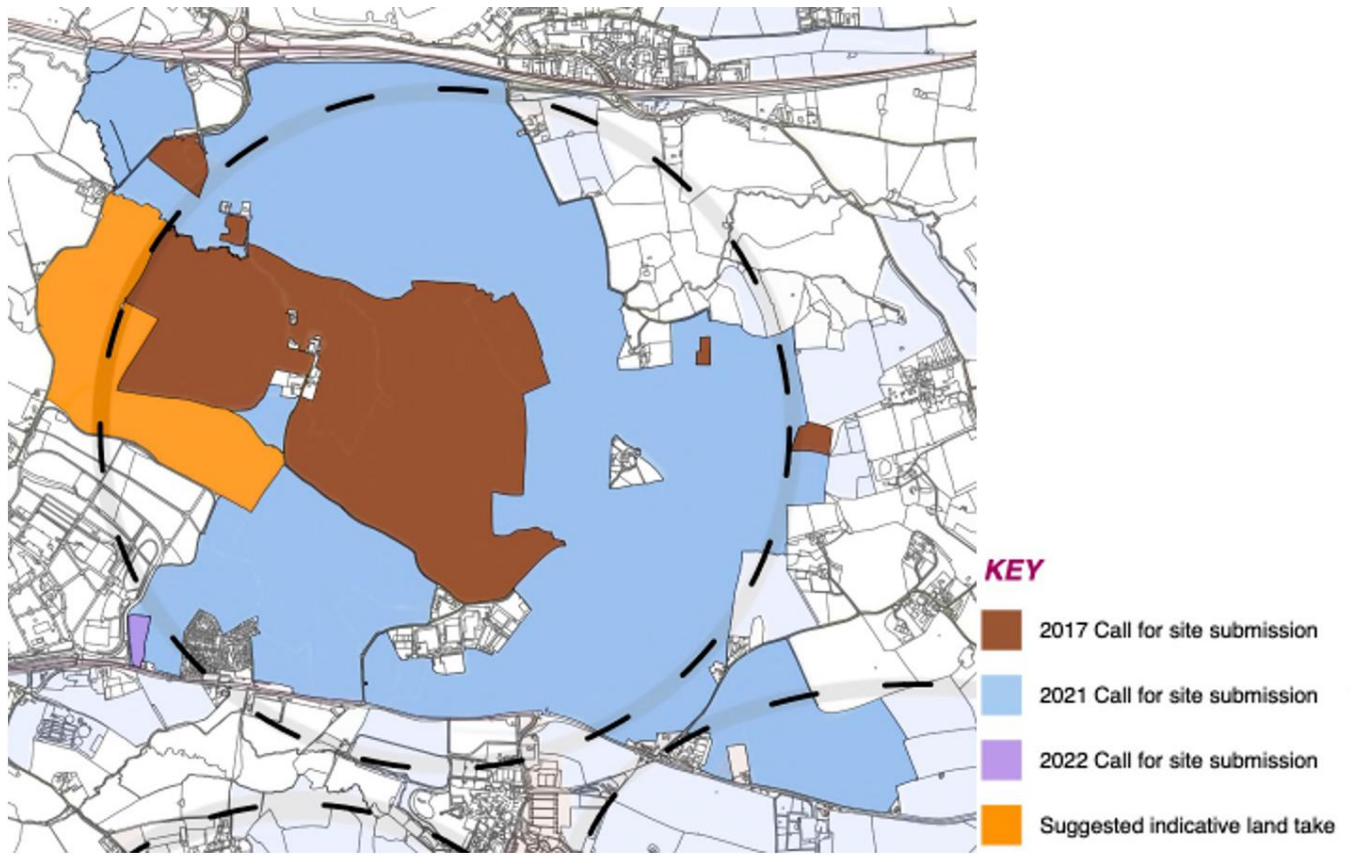


The consultants sought to refine these areas to form 3 equivalent land areas based on the land requirements to establish a community of 8,000 homes. Members will recall that although we are only proposing to allocate 2,500 homes in this plan period it is intended to set out a vision for a large settlement that would be built out into the following plan period post 2040. A lead in time of around 10 years is estimated before development would actually commence and build out rates are generally slow to start due to initial opening up works, connections to infrastructure and ground works that have to come before homes can be built. As a result 2,500 homes by 2040 is considered to be realistic.

A settlement of around 8,000 homes would establish a town which could achieve good levels of self containment and deliver a good level of services and infrastructure to support its community and as a result this is seen as a desirable ultimate size for a new town.

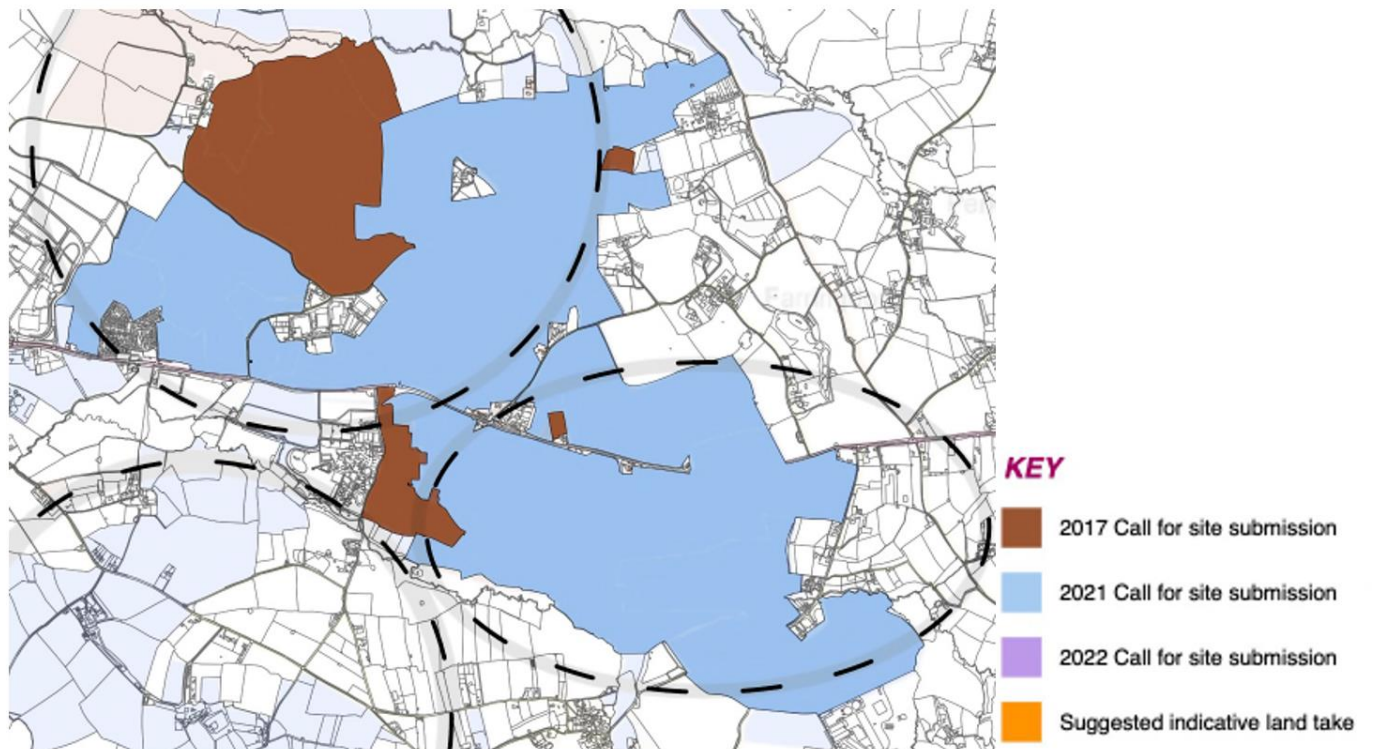
As a result of the consultants work the 3 options were refined to the site areas shown below.

Option 1:



Source: Tibbalds (2022)

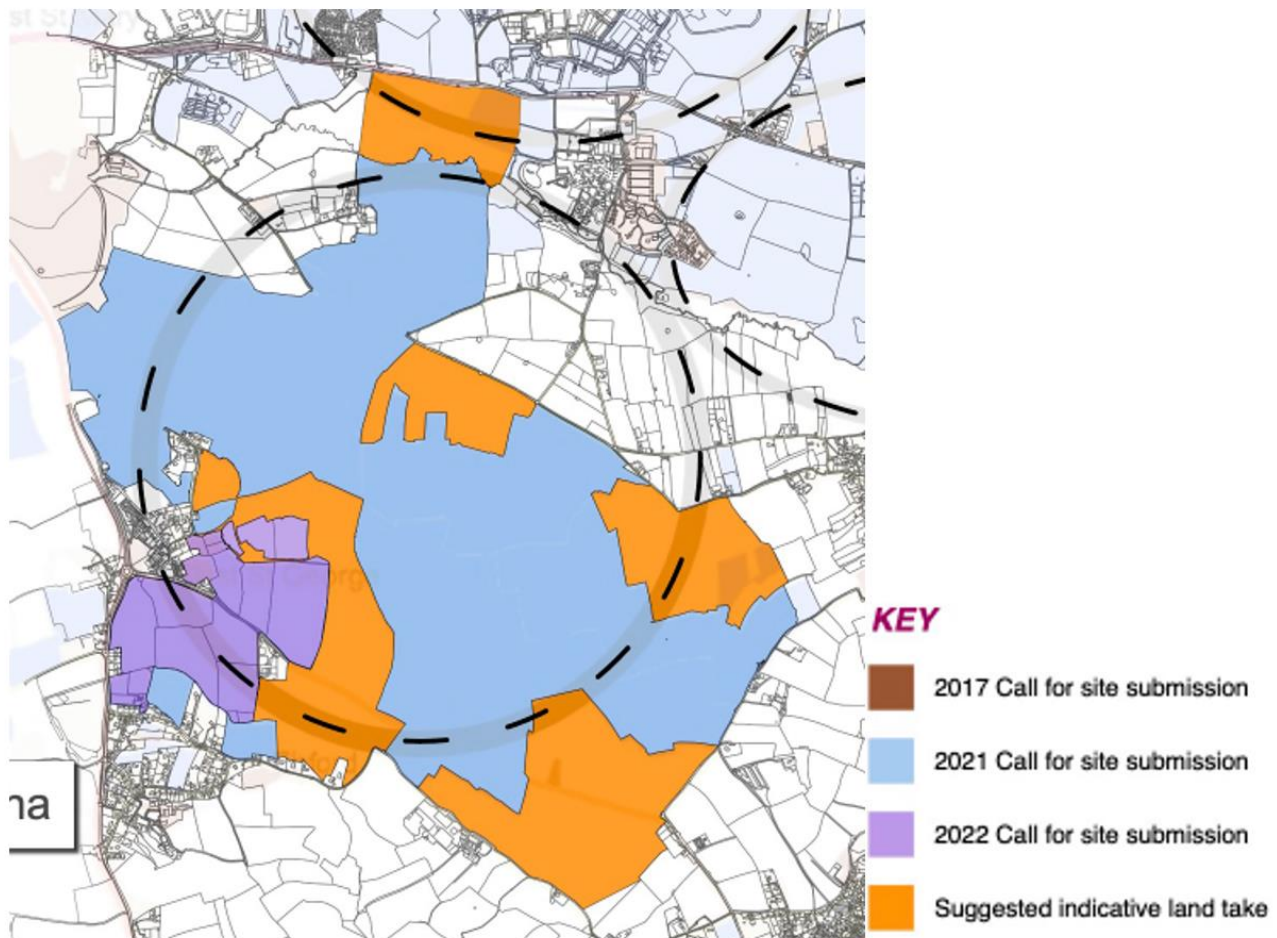
Option 2:



Source: Tibbalds (2022)



### Option 3:



Source: [Tibbalds \(2022\)](#)

It should be noted that options 1 and 3 include some land that at this point has not been put forward through a call for sites exercise (shown in orange on the above plans). It was also highlighted through consultation on the draft Local Plan that land understood to have been put forward within part of option 1 had not in fact been put forward by its owner and the owner was not in favour of it being developed. Whichever option is taken forward discussions would need to be had with land owners over their willingness to be involved and how this could be addressed. This is however appropriate and not unexpected given the scale of development envisaged albeit areas of land not put forward by land owners have been kept to a minimum. Issues surrounding the availability of land and willingness of land owners have factored into assessments of the deliverability of each option.

Land owners and site promoters were given the opportunity to present their proposals to the committee as part of its meeting on the 1<sup>st</sup> November with the papers and presentations available at: [Agenda for Strategic Planning Committee on Tuesday, 1st November, 2022, 9.30 am - East Devon](#). Some other parties involved in these sites had previously presented to the committee at their meeting on the 25<sup>th</sup> January 2022 details of which can be found at: [Agenda for Strategic Planning Committee on Tuesday, 25th January, 2022, 9.30 am - East Devon](#). Members may wish to review these presentations to gain a better understanding of the proposals, however Members should bear in mind that it is intended to undertake master planning work of our own with engagement from stakeholders.

## The Options Appraisal

The options appraisal presented to Members in November 2022 sought to assess the 3 options against a series of criteria as per the table below:

**Table 2.2 – Assessment Criteria**

Landscape sensitivity
Ecological impact/Biodiversity
Sustainable transport
Environmental constraints (flooding, minerals, historic environment, pipelines/cablings etc)
Highways impact
Utility & Net Zero Carbon Infrastructure
Deliverability to include land ownership, presence of businesses/other land uses that need to be relocated and proximity of development to bad neighbours i.e. noise/traffic etc

Source: CBRE (2022)

The assessment has also been informed by a draft vision for the proposed new community which has been arrived at following workshops with Members held on the 26<sup>th</sup> July 2022 and 10<sup>th</sup> October 2022. Members reviewed this vision at their meeting on the 1<sup>st</sup> November 2022 adding in the words in bold below:

*A second new settlement in East Devon with a self-sufficient, healthy and dynamic community with distinctive character. Delivering up to 8,000 high-quality **equitable** homes with an **equitable** range of tenures, places of work and a diverse mix of uses that are easily accessible via sustainable and active travel such that these become the dominant transport modes.*

*This new town will be more than just a settlement, it will be an ambitious and highly desirable place that supports the growth of a self-governing and self-sustaining community that establishes its culture at the outset in order to develop and thrive into the future.*

*The structure of the settlement will promote innovative design that will draw inspiration from the local context, including the unique surrounding historic environment, to create a rich character. Streets and spaces will be designed to encourage social interaction and will be embedded in a well-connected and integrated active travel network with comprehensive links to nearby employment, surrounding countryside and the city of Exeter.*

*It will be underpinned at its core by sustainability, wellbeing, and healthy living, creating an exemplar zero-carbon town both in terms of self-sufficiency and design and by doing so it will provide a legacy to the benefit of future generations.*

*This sustainable community will be sensitively and seamlessly integrated with the outstanding East Devon natural environment and contribute to the delivery of the Clyst Valley Regional Park whilst protecting nearby internationally recognised habitats.*

*It will provide a rich network of substantial open space and diverse landscaping, including areas of enhanced ecology and biodiversity, as well as opportunities for play, recreation and opportunities for food growing.*

*This vibrant and adaptable new settlement will preserve East Devon's legacy as an outstanding place to live. The use of local materials and labour will be promoted to deliver on local priorities, creating somewhere residents can be proud of and where people of all ages and lifestyles will prosper.*

The assessment work as at November 2022 concluded with the following scoring summary:

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
Landscape Sensitivity	2	2	3
Ecological Impact/Biodiversity*	3.4	3.6	3
Flood Risk	4	4	4
Minerals	3	1	5
Historic Environment	3	3	3
Sustainable Accessibility*	3.8	1.8	4.3
Highways*	4.8	4.1	4.6
Utilities*	3	2.3	2.3
Net Zero Carbon*	3.3	2.3	3
Climate Resilience*	2.7	3.4	2.7
Deliverability*	4.5	3	2.5
<b>TOTAL</b>	<b>37.5</b>	<b>30.5</b>	<b>37.4</b>

Source: CBRE (2022) Note: a higher score represents lower potential adverse impact/ higher benefit of each Option.

Key: \*Where a number of assessments inform a technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

At that stage the scoring showed that option 2 was a less acceptable option than options 1 and 3 and so it was recommended that this option was not taken forward. Options 1 and 3 scored almost identically but it was recommended that the consultation be undertaken on Options 1 and 3 with option 1 identified as the preferred option. This reflected a number of factors including the greater clarity over ownership and willingness of land owners to bring forward development at option 1 and better opportunities to connect to the electricity network. It also reflected the opportunity to connect to the envisaged heat main interconnector between the proposed energy from waste plant at Hillbarton and the district heat network serving Cranbrook and the enterprise zone sites. This would better enable a low carbon heat network and delivery of zero carbon development. Option 1 was also considered to have the least impact on the highway network which is known to be a significant concern for Members and the communities close to the option sites. These were considered to be significant factors in terms of meeting the vision for the new community and the overall strategy for the local plan.

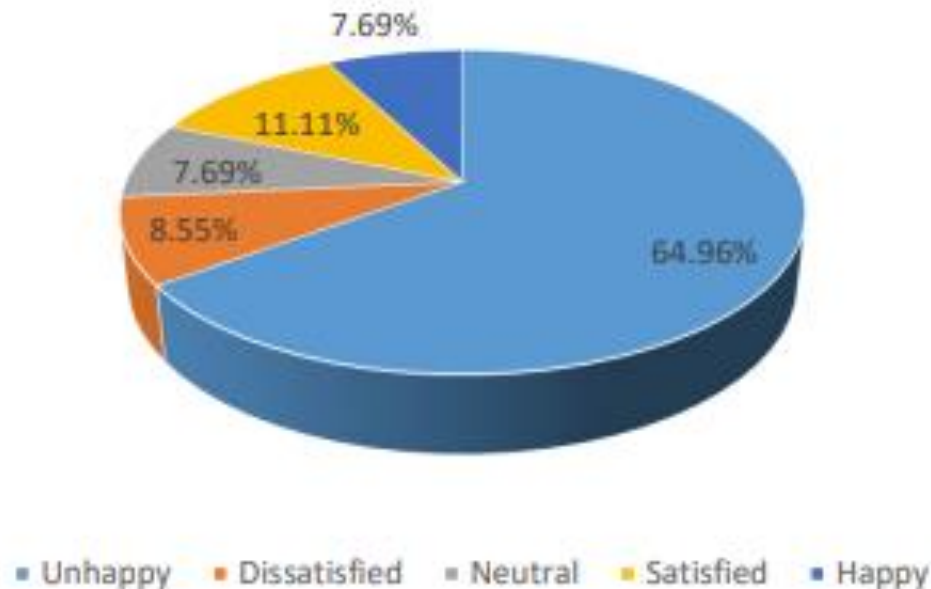
Option 3 when considered at a comparable scale of development to option 1 raised concerns about potential proximity of development to the existing settlements of Clyst St Mary, Clyst St George and Woodbury. It was considered to have a much greater risk of settlement coalescence, albeit overall it would have less landscape impact than option 1.

Members ultimately resolved to consult on all 3 options with option 1 identified as a preferred option and options 2 and 3 as alternative options.

### Consultation Feedback

In feedback to the draft plan consultation responses to the development of a second new town east of Exeter were largely negative. In terms of the sentiment scores in the commonplace consultation system the responses to how people felt about this proposal were as follows:

## How do you feel about Strategic Policy 8: Development of a second new town east of Exeter?



As can be seen nearly 65% of respondents were unhappy with this proposal and a further 8.55% were dissatisfied with it. This is not entirely unexpected and reflects the scale of this proposed development and its perceived impact on the part of the district close to the east of Exeter. Large scale strategic developments were not welcomed in any locations through the consultation.

Previous reports have sought to set out in detail the case for a new community and links to these are provided at the start of this report for ease of reference. These have previously led Members to accept the need for a new community to form part of the new Local Plan and it is considered that this decision and the reasons behind it remain sound and do not need to be revisited.

Turning to consultation comments on the new town these have been summarised in the consultation feedback report which can be found at: [accessible-reg-18-consultation-feedback-report-spring-2023.pdf \(eastdevon.gov.uk\)](#). The comments on the new community proposals can be found on pages 89 to 103. Many of the comments even when made in relation to a particular option could easily relate to all of the options available with concerns most commonly relating to:

- Lack of a train station and poor public transport overall
- Need for infrastructure and facilities and concerns about their delivery
- The impact on the setting and character of nearby villages
- Impacts on the road network
- Loss of best and most versatile agricultural land
- Increased flooding
- Impact on local wildlife and ecology
- Inadequate cycling facilities
- Impacts on the historic environment
- Destruction of the countryside

- Limited employment opportunities
- Impact on utilities
- Impacts on air quality from additional traffic
- Impact on attractiveness of the area for tourism

In relation to comments on specific options the following comments are highlighted:

### **Option 1:**

#### **Support**

- Devon County Council favour option 1 albeit they note that waste and minerals operations at Hillbarton Business Park would impact on part of the site. They note that it would be the least worst option from a transport perspective but still raise concerns about impacts on the road network.
- National Grid also favour option 1 highlighting issues associated with the Exeter Main 132kV electricity line that runs through options 2 and 3 and stating that proposals to divert or underground the line would be highly disruptive and challenging. They say that any proposals that rely on these work would raise an objection from them.
- The Otter Valley Association also favoured this option due to its access to the strategic road network.
- Support Option 1 given its transport connections, access to jobs at the Science Park, Airport, Crealy and Exeter.
- Support Option 1 as it has best access to major roads.
- Landowner of Waldrons Farm (Farr\_02) support Option 1 and state their land (also in Option 2) is available to contribute to a new community – this site can be in the first phase as it fronts directly on to the A3052.
- Support Option 1 as it is gently undulating, and no areas that have serious flood risk
- Link road between the A30 and A3052 will improve the local road network.
- Support Option 1 as lots of buses already operate in the area.
- Church Commissioners England support Option 1 as good access via the A30, proximity to commercial uses, complement the CVRP, and landscape, heritage, and ecology impacts can be made acceptable
- Well sited as potential to extend the district heating network from Hill Barton to Cranbrook.
- Essential infrastructure, such as the spine road, should be delivered early to improve housing delivery rates.
- Policy should facilitate an effective consortium approach to ensure all parties have an equal voice.
- Do not support a new town, but Option 1 is best as will have less impact on existing communities.

#### **Against**

- No train station within walking distance (unlike Cranbrook) and will add extra load on services such as transport, hospitals, and emergency services.
- This option would destroy Farringdon which is a peaceful village set in glorious ancient countryside – the Fiona Fyfe landscape sensitivity assessment refers to its “distinct sense of timelessness” and states high landscape sensitivity.
- Object to extending the new settlement east of Farringdon Cross, as it will envelop the existing community
- Several Grade II listed buildings will be destroyed by this development.
- Options 1 and 2 have a higher visual impact than Option 3.
- Options 1 and 2 have less infrastructure than Option 3.
- Object to Option 1 as it has very little public transport



- Parish will be split in two by new road from A30 to A3052 which will become a rat run.
- Farrington Residents Association, amongst others, object as contrary to the made Farrington Neighbourhood Plan which allows for 12 extra dwellings
- Object as roads are already too busy, particularly A3052, at Clyst St Mary and M5 J29 and J30.
- Concerned about increase in flooding from surface water run-off in surrounding areas due to new development.
- Insufficient land has been made available for SANGS and biodiversity net gain.
- Object to development east of Farrington Cross as this will destroy rural setting.
- Concerned that already overstretched GP and hospital services will not be able to cover this area as well.
- South West Water are already discharging raw sewage, this will just make it worse.
- Option 1 will adversely affect the historic environment in the area, including 13 listed buildings in Farrington.

## **Option 2:**

### **Support**

- Option 2 is a good location as it already has jobs, retail and public transport.
- Support as provides housing near infrastructure and employment without merging existing villages.

### **Against**

- Object to Option 2 due to landscape impact, particularly on AONB and to north of Woodbury Salterton.
- It will destroy our rural countryside.
- Options 1 and 2 have a higher visual impact than Option 3.
- Options 1 and 2 have less infrastructure than Option 3.
- Otter Valley Association object to option 2 as it would increase traffic through Newton Poppleford and increase congestion on the A3052
- Inadequate road capacity, particularly on the A3052 but also the A376, B3179 and M5 junctions.
- Will have a negative impact on the way of life in surrounding villages.
- Object as biodiversity in the area needs to be protected, including County Wildlife Sites.
- Contrary to Farrington Neighbourhood Plan.
- Development will increase flooding in the area.
- Option 2 is located over a water supply/bore hole where most of Farrington receives its water.
- There is inadequate infrastructure in the area, for example schools, hospitals.
- This will lead to light pollution in Farrington which currently has no streetlights.
- The western and southern areas are reasonable infill, but the north eastern area encroaches into genuine green space.

## **Option 3**

### **Support**

- A landowner supports Option 3 as the best option – it offers good road infrastructure; public transport opportunities including close to rail links; proximity to Exeter city centre; proximity to a range of employment sites, retail and leisure facilities; access to open space.
- Landowner states Option 3 can accommodate a range of mixed uses (housing, employment, open space, leisure healthcare, infrastructure, Clyst Valley Trail) in a phased manner, with cooperating landowners.

- Landowner states that Option 3 can deliver earlier due to presence of rail links, road access and existing infrastructure, unlike the other two options where more substantial up-front infrastructure investment is required to deliver sustainable development.
- A developer (Vistry) support inclusion of Land at Addlepool Farm as forming part of a second option for a new town but consider this site can come forward on its own to accommodate a self-sufficient, sustainable, new village of 700 dwellings and facilities – Vistry submit a Vision Document for this land.
- A landowner (Mr and Mrs Murray) support Option 3 subject to the inclusion of their land of 2.1 acres/22 dwellings at Shephards Farm (map attached to Commonplace response)
- Ebford/Clyst St George has been identified as sustainable by three Appeal Inspectors and EDDC Planning Committee as it has numerous facilities, sustainable travel links, over 500 jobs but no housing to serve them – therefore support Option 3 with a connection north to Option 1 for the future
- Option 3 is the best option as it the least rural and limits the impact on the surrounding area, with better roads and amenities.
- This option has excellent transport links, easy to access popular locations like Exeter and Exmouth.
- Option 3 will benefit local shops in Woodbury.

## Against

- Clyst St George Parish Council (PC) object to Option 3 due to the impact on character and setting of the historic medieval village
- Clyst St George PC object due to impact on existing residents.
- Clyst St George PC object as will exacerbate of existing highway and infrastructure problems.
- Clyst St George PC state the boundaries have been drawn without regard for topography or landscape importance. In the detailed response other issues raised include pre existing traffic issues, significant existing road flooding and risk to flood defences and existing properties, proximity to AONB and impact on approach to the village (especially from historic Woodbury Castle), lack of local employment increase in commuting, increase in congestion, lack of school places and other services such as shops.
- Clyst St George has poor public transport with no bus service, there are no safe pedestrian crossings to reach bus number 57.
- Topsham train station is 1.75 miles away has no car parking and too far to walk with no crossing points on route.
- A substantial area sloping north from Clyst St George is affected by flooding, with the ford regularly impassable – development in this area will adversely affect the 15 dwellings at Pytte near the ford.
- The majority of Option 3 is clay soil, surface water run-off is already a problem, including along the B3179, A376, Topsham Road and other local roads around Clyst St George.
- Clyst Valley frequently floods, which is getting worse with climate change – the proposed new settlement will exacerbate this.
- Object as it would ruin the historic medieval village of Clyst St George.
- Roads are already congested at peak times, particularly around Clyst St Mary, the A3052, the A376, B3179 and M5 where there are lengthy traffic queues.
- Absence of pedestrian crossings, combined with current traffic levels, makes it dangerous for pedestrians.
- Building on Option 3 will be detrimental to the western edge of the East Devon AONB, ruining beautiful views to and from Woodbury Castle, and destroying the stunning landscape between Clyst St George and Woodbury.
- South western section of Option 3 will have an adverse impact where it spills over the ridge to Ebford.

- Object as there are limited employment opportunities, residents will need to commute elsewhere e.g. to Exeter, Exmouth, Science Park.
- The primary school in Clyst St George is too small to cope with a new settlement.
- There are no shops in Clyst St George, requiring new residents of Option 3 to travel elsewhere.
- Option 3 is contrary to the Clyst St George Neighbourhood Plan.
- Object as not on the railway line, so will lead to more traffic congestion.
- Will destroy the rural community and just become a suburb of Exeter – small villages of Woodbury, Woodbury Salterton, Clyst St George, Ebford will be dominated.
- SA Report states the reasons for rejecting Option 3, which should be adhered to.
- The gas and electricity network will not be able to cope with this development – Clyst St George is off-grid for gas.
- Object due to increase in noise in the local area.
- Object due to impact upon the numerous listed buildings in the area
- Local GP surgeries cannot cope with existing numbers of patients.

Although a wide range of issues were raised in the feedback to the consultation they are matters considered by the consultants in their work which has now been revised to consider the further work that has been undertaken in particular further work they have undertaken on the issues of sustainable accessibility, highways and land ownership.

Appended to this report is the updated options appraisal report which is accompanied by detailed reports on each of the criteria. Together these documents comprise a comprehensive set of evidence assessing the key aspects of each of the three options to inform a decision on which should be taken forward. The report summarises the scoring of the 3 options against the criteria as follows:

#### Options Appraisal Technical Assessment – Scoring Summary

Assessment Category	Option 1	Option 2	Option 3
Landscape Sensitivity	2	2	3
Ecological Impact/Biodiversity*	3.4	3.6	3
Flood Risk	4	4	4
Minerals	3	1	5
Historic Environment	3	3	3
Sustainable Accessibility*	4.3	2	4
Highways*	4.8	4.1	4.6
Utilities*	3	2.3	2.3
Net Zero Carbon*	3.3	2.3	3
Climate Resilience*	2.7	3.4	2.7
Deliverability*	4.5	3	2.5
<b>TOTAL</b>	<b>38.3</b>	<b>31.7</b>	<b>37.4</b>

Source: CBRE (2023) Note: a higher score represents lower potential adverse impact/ higher benefit of each Option. Key: \*Where a number of assessments inform a technical category the average score per Option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

The report summarises the further work and its final conclusions stating:

“The additional assessments undertaken on land ownership, sustainable accessibility and highways have enabled these scores to be reviewed which has resulted in marginal changes from the 2022 Option Appraisal Report. There is now a larger but still marginal difference (0.9) difference between Options 1 and 3 (38.3 & 37.4) as Preferred Options. Whilst there has been some change in the scoring per assessment category Option 2 has performed better (+1.2).

In terms of ranking Option 1 is marginally the Preferred, with Option 3 the second ranked Option and Option 2 the least preferred and as such it is recommend that Option 2 is not taken forward. Option 1 has the benefit as being the most deliverable in terms of land ownership, is located adjacent to the highway network and is in close proximity to employment opportunities at the Science Park and Airport.”

It then summarises the key factors that lead to option 1 being recommended over option 3 despite the close scoring in the following table:

Assessment Category	Option 1	Option 3
Landscape Sensitivity	<p>This represents: a <b>high-medium overall landscape sensitivity</b> to proposed development. Unique sensitivities are the quality and integrity of the historic rural landscape and associated river corridors which flow east-west through the middle of the defined area; the elevated land in the east, and the slopes forming the setting to the Clyst Valley in the west.</p> <p>These areas are particularly sensitive and it would be very difficult to mitigate for this through masterplanning.</p>	<p>This represents a <b>medium overall landscape sensitivity</b> to proposed development. Higher landscape sensitivity occurs in the south and east of this Option, and is associated with elevated and steeper land; a smaller-scale historic landscape; land intervisible with the East Devon AONB, and the setting of Clyst St George. Lower sensitivity land is found in the north of the Option.</p> <p>Levels of landscape and visual effects could be mitigated by focussing development in the northern part of the Option.</p>
Ecological Impact/Biodiversity	<p>A <b>medium impact on existing ecology and biodiversity</b>. However the location and integration of future green and blue infrastructure for the new settlement will be able to accommodate existing and future ecological processes and biodiversity.</p>	<p>A <b>higher potential impact on existing ecology and biodiversity</b>, due to the proximity of the southern part of the Option to designated sites in the Exe Estuary. However the location and integration of future green and blue infrastructure for the new settlement will be able to accommodate existing and future ecological processes and biodiversity.</p>
Flood Risk	<p>A <b>low to medium flood risk</b> that can be reduced by well designed and implemented drainage and water mitigation strategies.</p>	<p>A <b>low to medium flood risk</b> that can be reduced by well designed and implemented drainage and water mitigation strategies.</p>
Minerals	<p>A <b>medium minerals risk</b> but the area is outside coal mining areas with no nitrate and phosphate areas identified. Other mineral constraints can be addressed by informed masterplanning.</p>	<p>A <b>low minerals risk</b>.</p>

Historic Environment	A <b>medium risk on the historic environment</b> , though again this can be mitigated by thoughtful masterplanning. Ensuring the new settlement doesn't abut existing places and densely planted landscape buffers are introduced to protect the environment around historic buildings and assets.	A <b>medium risk on the historic environment</b> , though again this can be mitigated by thoughtful masterplanning. Ensuring the new settlement doesn't abut existing places and densely planted landscape buffers are introduced to protect the environment around historic buildings and assets.
Sustainable Accessibility	A <b>medium risk in terms of sustainable accessibility</b> but with thoughtful integration into the new community of walking, cycling and public transport infrastructure routes these risks can be mitigated. It benefits from potential for sustainable access to existing and future employment sites.	A <b>low risk in terms of sustainable accessibility</b> but with thoughtful integration into the new community of walking, cycling and public transport infrastructure routes these risks can be mitigated. It benefits from potential for sustainable access to existing and future employment sites.
Highways	A <b>low adverse impact and high benefit</b> in terms of proximity to existing highway infrastructure and it appears that the development of 2,500 new homes up to the end of the Plan period could be accommodated without significant highways interventions. It shows relatively small changes in traffic on the M5, A30 and A380, resulting in generally small increases in delay. Minor highways mitigation and access junction works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required.	A <b>medium adverse impact and medium benefit</b> in terms of proximity to existing highway infrastructure requiring improvements at the Clyst St Mary Roundabout. Based on an initial desktop reviews, it appears that, despite their larger delay impacts, it would be possible to mitigate the impacts this Option were to be taken forward. This would be through either localised capacity improvements or demand reduction schemes.
Utilities	A <b>low-medium adverse impact</b> to diverting existing utilities due to overhead HV networks and high benefit in terms of access to existing utilities with the potential to access existing power, water and telecom connections with proximity to the site	A <b>medium adverse impact and medium benefit</b> in terms of access to existing utilities.
Net Zero Carbon	A <b>low adverse impact and high benefit in terms of net zero carbon</b> .	A <b>medium adverse impact and medium benefit in terms of net zero carbon</b>
Climate Resilience	A <b>medium level of resilience</b> and medium exposure and/or vulnerability.	A <b>medium level of resilience</b> and medium exposure and/or vulnerability.
Deliverability	A <b>low adverse impact and high benefit</b> due to fewer land owners many of whom are private	A <b>medium to high adverse impact and low benefit</b> due to the highest number of different land owners many of

	<p>companies or private individuals all of which are known and registered. Land assembly will still be required but to a lesser extent. The control of land was one of the key learning points from the ten year review of Cranbrook. It is assumed that any existing land uses that are not relocated will be suitably screened and this will be addressed in the masterplanning.</p>	<p>whom are private individuals and there are 5 areas of unregistered land where ownership is not known. Significant land assembly will be required to package a sufficient quantum of land together to enable this to come forward and gain the required level of control, which is a risk. It is assumed that any existing land uses that are not relocated will be suitably screened and this will be addressed in the masterplanning. There are no known barriers to delivery presented by existing land uses in the area.</p>
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The consultants have not sought to weight one criteria over another and to do so is considered to be fraught with difficulties but when considering the options Members may wish to consider the different assessment criteria which they would consider to be most important to inform their thinking.

Ultimately the consultants recommendation is to pursue option 1 which has the notable benefits of being the most deliverable and the lowest adverse impact and highest benefit in terms of net zero carbon. It would also have a lower highway impact than option 3.

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**Financial implications:**

No direct financial implications on which to comment.

**Legal implications:**

There are no legal implications arising other than as set out in the report.

# East Devon - Options Appraisal for a potential New Settlement

Final Report

Options Appraisal

East Devon District Council

November 2023

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# Executive Summary

CBRE are leading a multi-disciplinary technical team including urban designers Tibbalds, infrastructure specialists Hydrock and ecologists TEP to advise East Devon District Council (EDDC) on whether to include a new settlement in its next Local Plan. Legal and financial specialist Pinsent Masons are also part of the team and will become involved as a business case is prepared in due course.

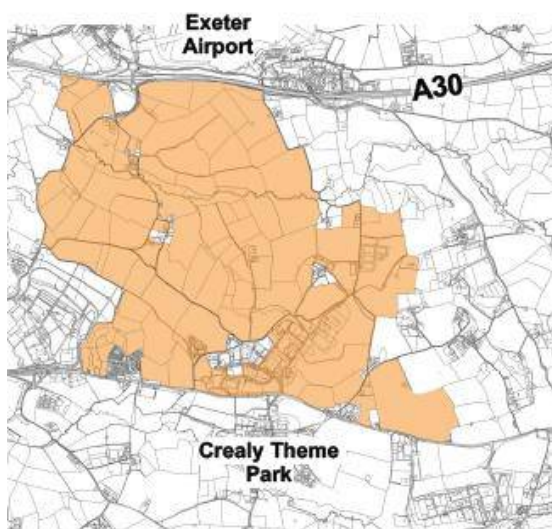
If taken forward, the new settlement will provide up to 8,000 high-quality, sustainable homes as well as a range of community facilities and amenities, in a biodiverse and zero-carbon environment, and would be an exemplar for future towns.

A land budget of 521 hectares has been identified as sufficient to accommodate the development.

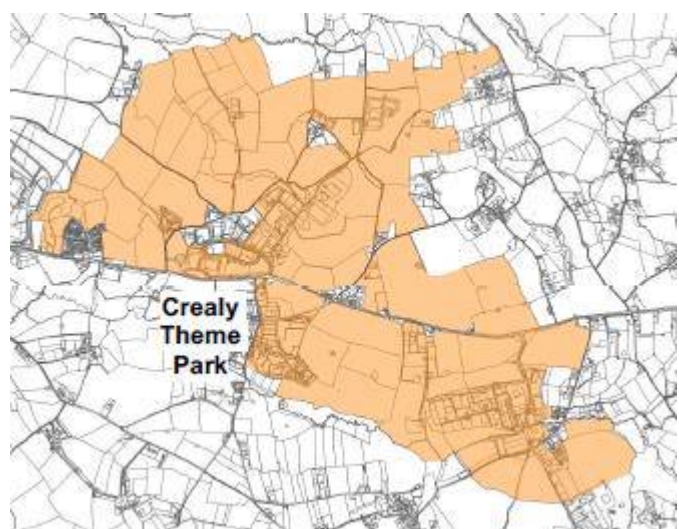
This updated Options Appraisal report outlines the outcome of additional technical work undertaken on sustainable access, highways impact and deliverability during 2023 building upon the work undertaken previously. This has been used to assess potential site locations from environmental, landscape, infrastructure, development and delivery perspectives. It provides a Vision for the new settlement, summarises the outputs from two workshops held with elected Councillors from the District Council. It concludes with a scored assessment of each Option against technical criteria and identifies a Preferred Option. The 2022 report was used by EDDC during their consultation on their Draft Local Plan Reg 18 (November 2022 to January 2023) and this updated report will be considered by Members in December 2023 to help inform discussions on a Preferred Option and the Reg 19 consultation.

The location of the three Options are identified on the plans below:

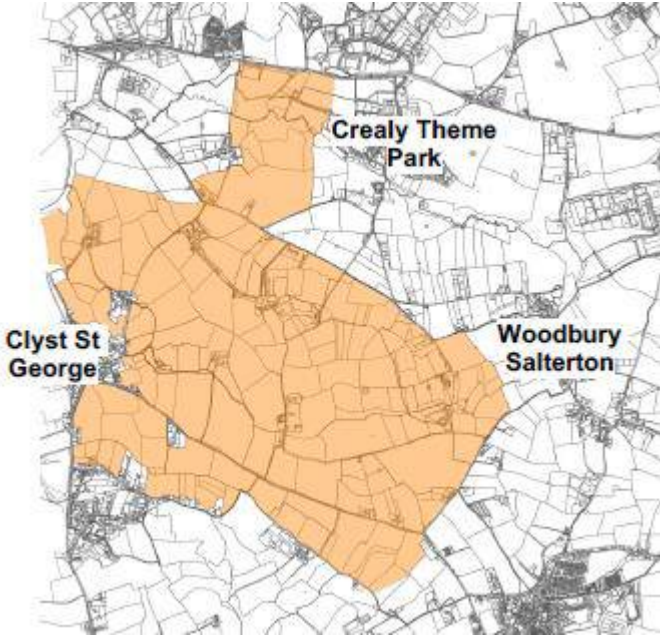
## Option 1



## Option 2



**Option 3**



A Vision statement has been prepared to provide a clear narrative for the potential provision of a second new settlement in East Devon in response to housing need over the next Local Plan period. This Vision outlines the ambition of EDDC for a potential new community over the next 30 years. An ambition that has been influenced by the lessons learnt from the planning and delivery of Cranbrook. The following proposed Vision has been tested and refined with EDDC officers and Councillors.

*A second new settlement in East Devon with a self-sufficient, healthy and dynamic community with distinctive character. Delivering up to 8,000 high-quality equitable homes with an equitable range of tenures, places of work and a diverse mix of uses that are easily accessible via sustainable and active travel such that these become the dominant transport modes.*

*This new town will be more than just a settlement, it will be an ambitious and highly desirable place that supports the growth of a self-governing and self-sustaining community that establishes its culture at the outset in order to develop and thrive into the future.*

*The structure of the settlement will promote innovative design that will draw inspiration from the local context, including the unique surrounding historic environment, to create a rich character. Streets and spaces will be designed to encourage social interaction and will be embedded in a well-connected and integrated active travel network with comprehensive links to nearby employment, surrounding countryside and the city of Exeter.*

*It will be underpinned at its core by sustainability, wellbeing, and healthy living, creating an exemplar zero-carbon town both in terms of self-sufficiency and design and by doing so it will provide a legacy to the benefit of future generations.*

*This sustainable community will be sensitively and seamlessly integrated with the outstanding East Devon natural environment and contribute to the delivery of the Clyst Valley Regional Park whilst protecting nearby internationally recognised habitats.*

*It will provide a rich network of substantial open space and diverse landscaping, including areas of enhanced ecology and biodiversity, as well as opportunities for play, recreation and opportunities for food growing.*

*This vibrant and adaptable new settlement will preserve East Devon’s legacy as an outstanding place to live. The use of local materials and labour will be promoted to deliver on local priorities, creating somewhere residents can be proud of and where people of all ages and lifestyles will prosper.*

The three alternative site Options have been scored against the following technical criteria, with the highest scores representing lower potential adverse impact/ higher benefit.

**Assessment Criteria and Scoring**

<b>Criteria</b>	<b>Scoring</b>
Landscape sensitivity	<b>Sensitivity:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Ecological impact/Biodiversity	<b>Impact:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Environmental constraints (flooding, minerals, historic environment)	<b>Constraint’s level:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5

Sustainable Accessibility	<p><b>Sustainability:</b>                  High – 5                  Medium/High - 4                  Medium – 3                  Low/Medium - 2                  Low – 1</p>
Highways Impact	<p><b>Impact:</b>                  High – 1                  Medium/High - 2                  Medium – 3                  Low/Medium - 4                  Low – 5</p>
Utilities Infrastructure	<p><b>Capacity:</b>                  High – 5                  Medium/High - 4                  Medium – 3                  Low/Medium - 2                  Low – 1</p>
Net Zero Carbon Infrastructure	<p><b>Contribution to Net Zero:</b>                  Low exposure/vulnerability or high opportunity – 5                  Low-medium exposure/vulnerability or medium-high opportunity - 4                  Medium exposure/vulnerability or medium opportunity – 3                  Medium-high exposure/vulnerability or low-medium opportunity - 2                  High exposure/vulnerability or low opportunity – 1</p>
Net Zero Carbon Infrastructure	<p><b>Climate Resilience:</b>                  Low exposure/vulnerability or high opportunity – 5                  Low-medium exposure/vulnerability or medium-high opportunity - 4                  Medium exposure/vulnerability or medium opportunity – 3                  Medium-high exposure/vulnerability or low-medium opportunity - 2                  High exposure/vulnerability or low opportunity – 1</p>
Deliverability (land)	<p><b>Impact:</b>                  Limited i.e., simple land ownership, all land put forward in call for sites, majority of landowners known, few businesses to relocate – 5                  Limited to Medium - mixed land ownership, majority of landowners known, all land put forward in call for sites, few businesses to relocate – 4                  Medium i.e., mixed land ownership, majority of land put forward in call for sites, but some land assembly needed, some landowners known, some businesses to relocate – 3                  Medium to Extensive - complicated land ownership, few landowners known, some land put forward in call for sites, but land assembly needed, lots of businesses to relocate – 2                  Extensive i.e., complicated land ownership, significant land assembly required, lots of businesses to relocate and no landowners known – 1</p>

Source: CBRE (2022)

The score per Option has been used to identify the Preferred Option/s as indicated on the table below. Please note that only the highlighted scores have been reviewed in light of the additional technical work undertaken.

**Options Appraisal Technical Assessment – Scoring Summary**

Assessment Category	Option 1	Option 2	Option 3
Landscape Sensitivity	2	2	3
Ecological Impact/Biodiversity*	3.4	3.6	3
Flood Risk	4	4	4
Minerals	3	1	5
Historic Environment	3	3	3
Sustainable Accessibility*	4.3	2	4
Highways*	4.8	4.1	4.6
Utilities*	3	2.3	2.3
Net Zero Carbon*	3.3	2.3	3
Climate Resilience*	2.7	3.4	2.7
Deliverability*	4.5	3	2.5
<b>TOTAL</b>	<b>38.3</b>	<b>31.7</b>	<b>37.4</b>

Source: CBRE (2023) Note: a higher score represents lower potential adverse impact/ higher benefit of each Option.

Key: \*Where a number of assessments inform a technical category the average score per Option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

The additional assessments undertaken on land ownership, sustainable accessibility and highways have enabled these scores to be reviewed which has resulted in marginal changes from the 2022 Option Appraisal Report. There is now a larger but still marginal difference (0.9) difference between Options 1 and 3 (38.3 & 37.4) as Preferred Options. Whilst there has been some change in the scoring per assessment category Option 2 has performed better (+1.2).

In terms of ranking Option 1 is marginally the Preferred, with Option 3 the second ranked Option and Option 2 the least preferred and as such it is recommend that Option 2 is not taken forward. Option 1 has the benefit as being the most deliverable in terms of land ownership, is located adjacent to the highway network and is in close proximity to employment opportunities at the Science Park and Airport.

We summarise the outcome of the reasons underpinning the recommendation that Option 1 is preferred over Option 3 in the table below:

**Options Appraisal Technical Assessment – Summary**

Assessment Category	Option 1	Option 3
Landscape Sensitivity	This represents: a <b>high-medium overall landscape sensitivity</b> to proposed development. Unique sensitivities are the quality and integrity of the historic rural landscape and associated river corridors which flow east-west through the middle of the defined area; the elevated land in the east,	This represents a <b>medium overall landscape sensitivity</b> to proposed development. Higher landscape sensitivity occurs in the south and east of this Option, and is associated with elevated and steeper land; a smaller-scale historic landscape; land intervisible with the East Devon AONB, and the setting of Clyst St George. Lower



	and the slopes forming the setting to the Clyst Valley in the west. These areas are particularly sensitive and it would be very difficult to mitigate for this through masterplanning.	sensitivity land is found in the north of the Option. Levels of landscape and visual effects could be mitigated by focussing development in the northern part of the Option.
<b>Ecological Impact/Biodiversity</b>	A <b>medium impact on existing ecology and biodiversity</b> . However the location and integration of future green and blue infrastructure for the new settlement will be able to accommodate existing and future ecological processes and biodiversity.	A <b>higher potential impact on existing ecology and biodiversity</b> , due to the proximity of the southern part of the Option to designated sites in the Exe Estuary. However the location and integration of future green and blue infrastructure for the new settlement will be able to accommodate existing and future ecological processes and biodiversity.
<b>Flood Risk</b>	A <b>low to medium flood risk</b> that can be reduced by well designed and implemented drainage and water mitigation strategies.	A <b>low to medium flood risk</b> that can be reduced by well designed and implemented drainage and water mitigation strategies.
<b>Minerals</b>	A <b>medium minerals risk</b> but the area is outside coal mining areas with no nitrate and phosphate areas identified. Other mineral constraints can be addressed by informed masterplanning.	A <b>low minerals risk</b> .
<b>Historic Environment</b>	A <b>medium risk on the historic environment</b> , though again this can be mitigated by thoughtful masterplanning. Ensuring the new settlement doesn't abut existing places and densely planted landscape buffers are introduced to protect the environment around historic buildings and assets.	A <b>medium risk on the historic environment</b> , though again this can be mitigated by thoughtful masterplanning. Ensuring the new settlement doesn't abut existing places and densely planted landscape buffers are introduced to protect the environment around historic buildings and assets.
<b>Sustainable Accessibility</b>	A <b>medium risk in terms of sustainable accessibility</b> but with thoughtful integration into the new community of walking, cycling and public transport infrastructure routes these risks can be mitigated. It benefits from potential for sustainable access to existing and future employment sites.	A <b>low risk in terms of sustainable accessibility</b> but with thoughtful integration into the new community of walking, cycling and public transport infrastructure routes these risks can be mitigated. It benefits from potential for sustainable access to existing and future employment sites.
<b>Highways</b>	A <b>low adverse impact and high benefit</b> in terms of proximity to existing highway infrastructure and it appears that the development of	A <b>medium adverse impact and medium benefit</b> in terms of proximity to existing highway infrastructure requiring improvements at the Clyst St Mary

	<p>2,500 new homes up to the end of the Plan period could be accommodated without significant highways interventions. It shows relatively small changes in traffic on the M5, A30 and A380, resulting in generally small increases in delay. Minor highways mitigation and access junction works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required.</p>	<p>Roundabout. Based on an initial desktop reviews, it appears that, despite their larger delay impacts, it would be possible to mitigate the impacts this Option were to be taken forward. This would be through either localised capacity improvements or demand reduction schemes.</p>
<b>Utilities</b>	<p>A <b>low-medium adverse impact</b> to diverting existing utilities due to overhead HV networks and high benefit in terms of access to existing utilities with the potential to access existing power, water and telecom connections with proximity to the site</p>	<p>A <b>medium adverse impact and medium benefit</b> in terms of access to existing utilities.</p>
<b>Net Zero Carbon</b>	<p>A <b>low adverse impact and high benefit in terms of net zero carbon.</b></p>	<p>A <b>medium adverse impact and medium benefit in terms of net zero carbon</b></p>
<b>Climate Resilience</b>	<p>A <b>medium level of resilience</b> and medium exposure and/or vulnerability.</p>	<p>A <b>medium level of resilience</b> and medium exposure and/or vulnerability.</p>
<b>Deliverability</b>	<p>A <b>low adverse impact and high benefit</b> due to fewer land owners many of whom are private companies or private individuals all of which are known and registered. Land assembly will still be required but to a lesser extent. The control of land was one of the key learning points from the ten year review of Cranbrook. It is assumed that any existing land uses that are not relocated will be suitably screened and this will be addressed in the masterplanning.</p>	<p>A <b>medium to high adverse impact and low benefit</b> due to the highest number of different land owners many of whom are private individuals and there are 5 areas of unregistered land where ownership is not known. Significant land assembly will be required to package a sufficient quantum of land together to enable this to come forward and gain the required level of control, which is a risk. It is assumed that any existing land uses that are not relocated will be suitably screened and this will be addressed in the masterplanning. There are no known barriers to delivery presented by existing land uses in the area.</p>

Source: CBRE (2023)

# 1. Introduction

- 1.1 CBRE are leading a multi-disciplinary technical team including urban designers Tibbalds, infrastructure specialists Hydrock and ecologists TEP to advise East Devon District Council (EDDC) on whether to include a new settlement in its next Local Plan. Legal and financial specialist Pinsent Masons are also part of the team and will become involved as a business case is prepared in due course.
- 1.2 If taken forward, the new settlement will provide up to 8,000 high-quality, sustainable homes as well as a range of community facilities and amenities, in a biodiverse and zero-carbon environment, and would be an exemplar for future towns.
- 1.3 This updated Options Appraisal report outlines the outcome of additional technical work undertaken on sustainable access, highways impact and deliverability during 2023 building upon the work undertaken previously. This has been used to assess potential site locations from environmental, landscape, infrastructure, development and delivery perspectives. It provides a Vision for the new settlement, summarises the outputs from two workshops held with elected Councillors from the District Council. It concludes with a scored assessment of each Option against technical criteria and identifies a Preferred Option. The 2022 report was used by EDDC during their consultation on their Draft Local Plan Reg 18 (November 2022 to January 2023) and this updated report will be considered by Members in December 2023 to help inform discussions on a Preferred Option and the Reg 19 consultation.
- 1.4 For the avoidance of doubt the technical updates are to sections 7, 8 and 11 only. In light of this and to reflect the updates to the emerging Local Plan programme, the scoring and recommendations sections 1, 2, 12 and 13 have also been updated.
- 1.5 The remainder of the report is structured as follows:
- Section 2 provides the Local Plan background to the potential new settlement;
  - Section 3 outlines how the location of the Options were identified, the assumptions made on land budget and the assessment criteria;
  - Section 4 introduces the Vision and its strategic objectives;
  - Section 5 summarises work undertaken on landscape sensitivity and capacity;
  - Section 6 provides the outputs from the assessment of environmental constraints including ecology/biodiversity, flooding, minerals and the historic environment;
  - Section 7 outlines the findings of an updated sustainable traffic accessibility assessment;
  - Section 8 has been updated and considers highways impact;
  - Section 9 looks at utility constraints and provides commentary on net zero carbon infrastructure;
  - Section 10 has been updated and considers deliverability factors;



- Section 11 summarises the engagement undertaken to date;
- Section 12 provides the outcome of the scored assessment of each Option against technical criteria and identified the Preferred Option; and
- Section 13 identifies the conclusions and next steps.

# 2. Background

2.1 This section provides the Local Plan background to the provision of a potential second new town in East Devon District.

## Context

2.2 EDDC is currently progressing a review of their Local Plan, which will replace the existing Local Plan (2013 to 2031) which was adopted in January 2016. The new Local Plan will shape the way East Devon will develop and will direct housing and employment growth and development in the District to 2040.

2.3 There is a history of bringing forward and delivering large scale development proposals in East Devon. Within the adopted East Devon Local Plan (2013-2031) the western area of the district is due to accommodate over 10,000 new homes in the period 2011 to 2031 alongside strategic employment sites. It is enshrined with a deliberate spatial strategy due to the district’s distinctive characteristics and qualities and is guided by the fact that two thirds of the District is within designated Areas of Outstanding Natural Beauty.

2.4 Within this spatial strategy the new town of Cranbrook is being delivered and will provide over 7,750 new homes, 18.4 hectares of employment, Gypsy and traveller provision, a town centre and social, community and education facilities.

2.5 EDDC are unique nationally in terms of seeking to deliver two new towns at the same time. It is essential that lessons are learnt from Cranbrook before embarking on this second new town and these aspects have been considered in this Options Appraisal.

2.6 Development of the new town at Cranbrook began in 2011 and some ten years later the Council took the opportunity to review successes and challenges to date and to consider when bringing forward and delivering future large scale development proposals in East Devon in response to housing need.

2.7 There is considerable learning from the current generation of strategic development sites in terms of what is needed to ensure the delivery of great places alongside the local planning process. This learning underpins the work to date on a second new town, and alongside the emerging Vision and its strategic objectives will inform the development of a preferred Option, business case and a delivery vehicle for the new town. This learning includes:

- 1 Clarity of vision
- 2 Local leadership
- 3 Sustained financial support
- 4 Beyond planning
- 5 Understand the delivery model

- 6 Control of land is key
  - 7 Infrastructure led approach
  - 8 Importance of master developer role
  - 9 Mixed and balanced communities are hard to achieve
  - 10 Look forward and future proof
- 2.8 The Council have contemplated the potential to adopt a more proactive approach going forward and prior to appointing the CBRE led team undertook a review of the different delivery Options available to the Council and the type of delivery vehicle that could be established. The CBRE led team are working alongside the Council and during 2024 will produce a business case for the establishment of a delivery vehicle to run alongside the Local Plan review process.
- 2.9 Significant consideration has already been given to the type of delivery vehicle that will be needed to support the Local Plan review process and realise key strategy and policy objectives. The CBRE led team will advise further on this in due course.
- 2.10 The progression of the Local Plan review has raised that there is a need for a second new settlement in East Devon directly responding to housing need to create a self-sufficient, healthy and dynamic community with distinctive character that can deliver up to 8,000 high quality homes and employment that is easily accessible. A settlement of 8,000 homes is the appropriate scale for self-containment and to deliver supporting infrastructure, employment and services etc. The current assumption is that up to 2,500 homes will be delivered up to 2040 and the remaining 5,500 after.
- 2.11 An initial Issues and Options consultation took place between January and March 2021 which included questions on the distribution and form of new housing development, including identifying an Option for one or more new towns.
- 2.12 Alongside the Issues and Options consultation was a call for sites as part of a Housing and Employment Land Availability Assessment (HELAA). In response to the call for sites proposals for new settlements and adjoining land areas with potential to form a new settlement were put forward. Given the constraints of the district which include two Areas of Outstanding Natural Beauty (AONB) covering two thirds of the district, there is a strong likelihood that one or more of these new settlements (or a combination of them) will need to come forward in the plan period.
- 2.13 A high-level assessment has been undertaken on the potential areas of search for the new town and three broad areas of search for the new settlement have been established (see Section 3). The consultant team and key stakeholders, including councillors and officers have been working together through a series of meetings and workshops to develop a 30-year Vision for the new settlement. This Vision sets out the councils' requirements and ambitions for the new settlement.

- 2.14 The role of this report is to analyse and score the three Options for the new settlement by conducting a detailed multi-disciplinary review of each Option. Taking account of the key infrastructure already available and what is needed for this new town including:
- Transport infrastructure both within and around the site including impacts on the major road network and the ability to promote active travel and choice of modes of transport;
  - Energy infrastructure and the ability to support zero carbon development;
  - Green infrastructure including the ability to mitigate potential impact on key habitat sites and to provide biodiversity net gain;
  - Community infrastructure, for example to support improved health and wellbeing outcomes; and
  - Connections to key services such as electricity, water, drainage and broadband as well as community and other infrastructure needed to support the development.
- 2.15 The 2022 report was used by EDDC during their consultation on their Draft Local Plan Reg 18 (November 2022 to January 2023). A significant number (circa 3,5000) responses were received and reviewed by EDDC to inform plan preparation. Specific comments around weighting and re-scoring of the technical assessments were considered by the consultants but it was decided to not alter the approach applied in the October 2022 report given that there was no clear mandate from Members on prioritisation with regard to writing during the engagement undertaken in 2022.
- 2.16 This updated report (November 2023) will be considered by Members in December 2023 to help inform discussions on a Preferred Option and the Reg 19 consultation. This Options Appraisal report concludes (see Sections 12 and 13) by making a recommendation on the Preferred Option.

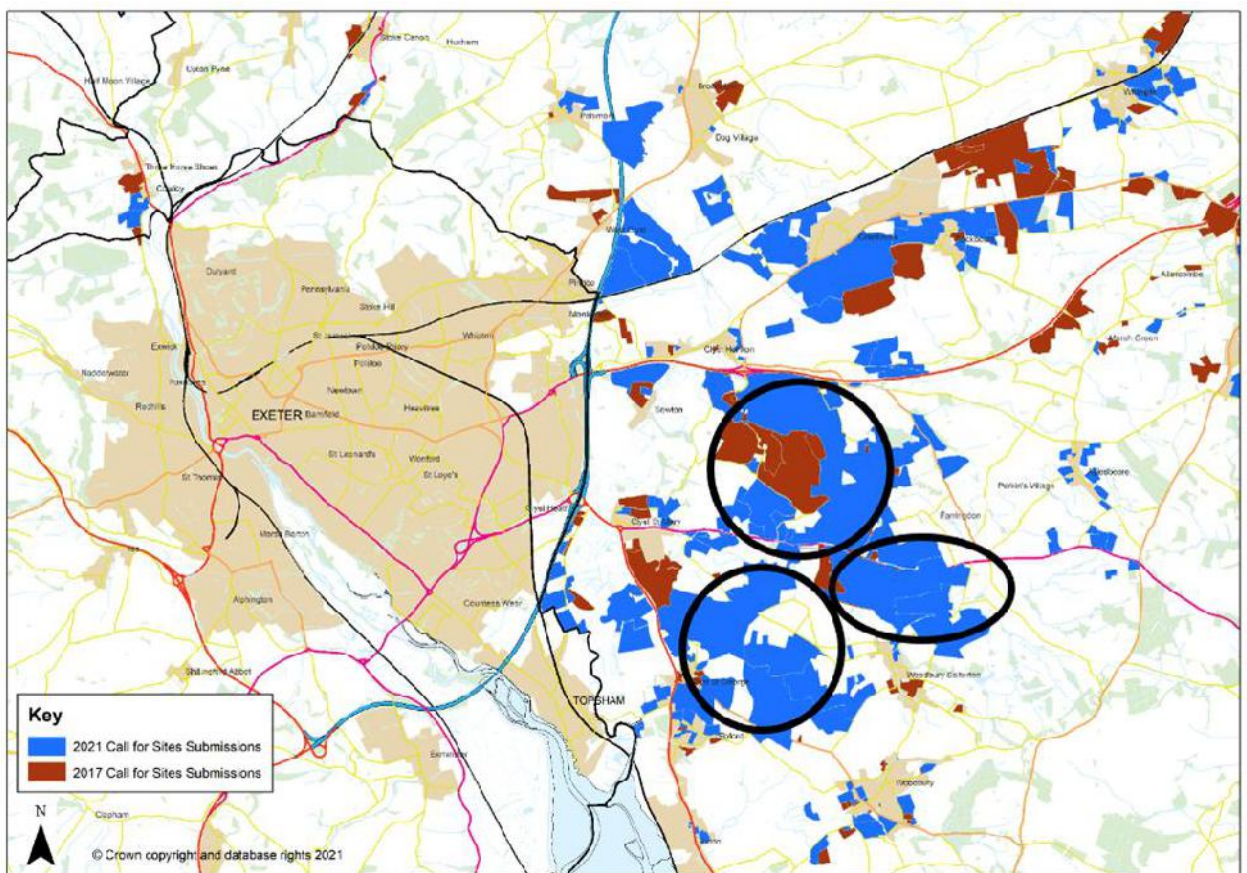
# 3. Identifying Locations

3.1 This section outlines how the location of the Options were identified, the assumptions made on land budget and the assessment / scoring criteria developed.

## Potential Locations

3.2 As referenced in the previous section the potential areas of search were based upon the call for sites exercises undertaken in support of the Local Plan in 2017 and 2021, as shown in Figure 3.1 below.

**Figure 3.1 - Broad areas of search for the potential new community**



Source: EDDC

3.3 This was later added to with land promoted from a third call for sites undertaken in 2022 and an exercise was undertaken to understand how suitably sized land parcels for the potential new community could encompass this land, thus reducing the inclusion of need of additional land yet to be promoted.

3.4 The CBRE led consultant team used these broad areas of search as the basis for the technical assessments.

3.5 The development of a land budget was a key first step.

## Land Budget

- 3.6 In order to determine the quantum of land likely to be required for a settlement of 8,000 dwellings CBRE prepared a land budget which was agreed with EDDC.
- 3.7 This was based upon industry standard density assumptions for residential and employment use, including offices (Use Class E), industrial (Use Classes B2 & B8) and retail/leisure/health (Use Classes E & F2) per square metre (sqm) and the Department for Educations (DfE) published guidelines on space per square metre (sqm) per student.
- 3.8 To align with planning policy land was also identified for gypsy sites and a significant quantum of land identified for public open space, SANGS, Biodiversity Net Gain (BNG) compliance, public realm and infrastructure, based upon the likelihood that there will need to be sufficient landscaped buffers between the new community and existing built development, infrastructure and environmental designations. Table 3.1 shows the land budget and the assumption on which it is based.

**Table 3.1 – Land Budget Assumptions**

Use	Hectares	Assumptions
Housing	180	Applied densities of 35, 45 & 50 dwellings per hectare including a mixture of 2, 3 & 4 bed homes based on industry standard house sizes per sqm which are compliant with nationally described space standards
Employment – offices (E class)	10	Based on analysis of the likely quantum of economically active people, growth and demand factors and employment densities per sqm converted to a land requirement in hectares (ha): <ul style="list-style-type: none"> <li>Offices (E class) – 4,000 sqm per ha;</li> <li>Industrial (B2 &amp; 8) – 4,500 sqm per ha;</li> <li>Retail (E &amp; F2) – 5,000 sqm per ha.</li> </ul>
Employment – industrial (B2)	18	
Employment – industrial (B8)	20	
Retail – including leisure & health (E & F2)	15	
Education – primary & secondary schools	23	That all children are educated in schools located in the development. With space requirement based on assumptions of number of children, schools and DfE guidelines on space requirements per student per sqm
Public Open Space – SANGS, BNG, public realm and infrastructure	254	Based upon experience of extent of requirement in other settlements of a similar size and including the requirement for at least 10% BNG
Gypsy and Traveler pitches	1	Compliant with the Local Plan which requires 37 Gypsy and Traveler pitches and 3 plots for travelling show people should be provided up to 2034.
<b>Total</b>	<b>521</b>	

Source: CBRE, 2022



## Option Refinement

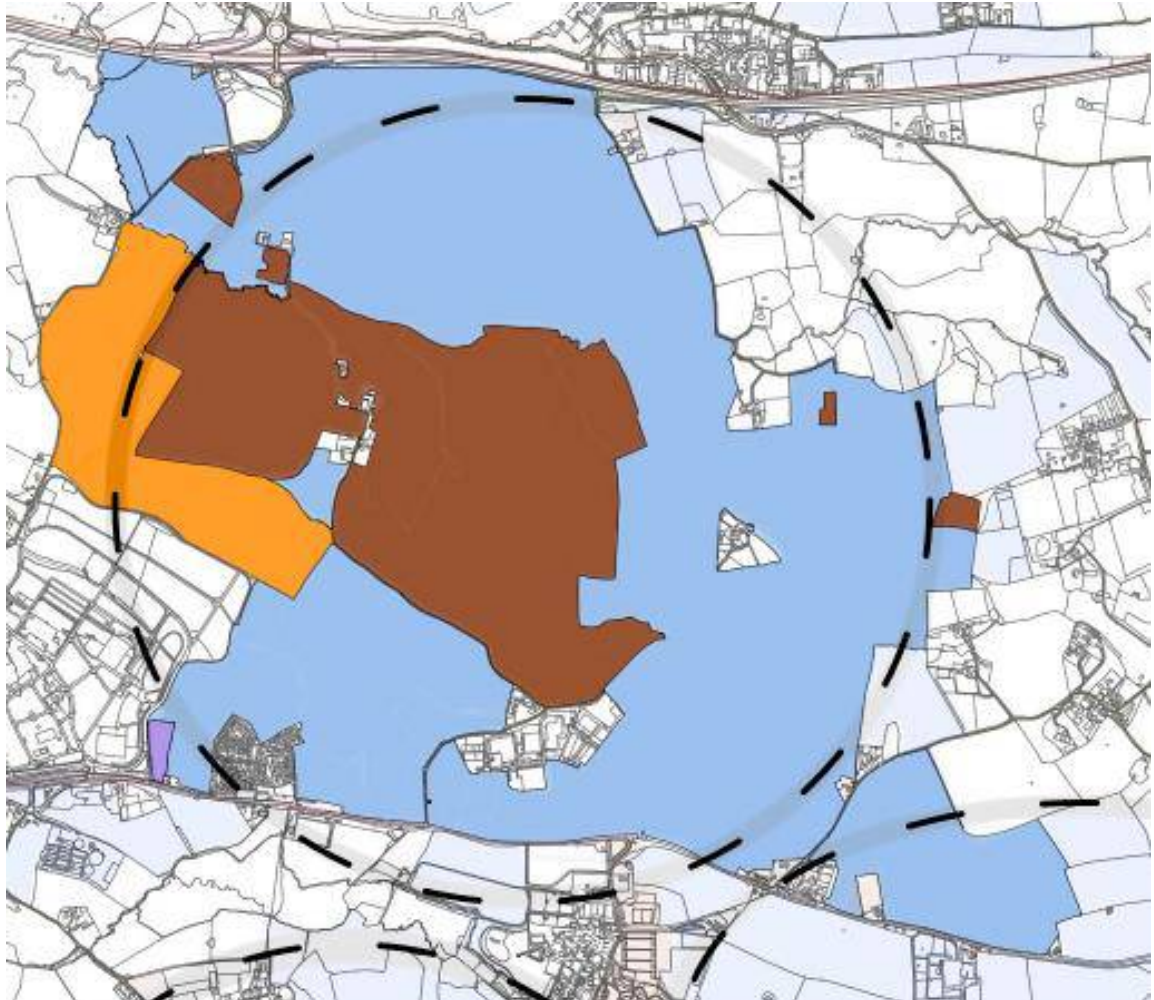
- 3.9 Based on the above land budget and the broad areas of search the team have undertaken a number of technical assessments (see Sections 3 – 8) to refine the locations and identify three locations for the potential new community. This has considered environmental, infrastructure, utilities and highways assessments including access from existing roads, site constraints and deliverability factors.
- 3.10 In addition we have drawn upon work undertaken by Fiona Fyfe Associates for EDDC (separate to the CBRE led commission) on the landscape sensitivity and capacity across the area of search.
- 3.11 A number of variations have been considered and the chosen location of the three Option sites have been refined to ensure that the existing settlements in the area would not be subject to convergence with the potential new community. Where the Options do abut existing settlements, the intention at the masterplanning stage of the project will be to ensure that adequate separation, through a substantially sized landscape buffer, is provided to respect the character of the existing settlements.
- 3.12 The three site locations have been developed to provide as far as possible nucleated, compact settlements. This form of development is conducive to the application of active travel measures.
- 3.13 The boundaries for the three site locations have been defined using landscape features, including existing watercourses, field boundaries and hedgerows, to create rational settlement edges.
- 3.14 In addition to the above and as advised by EDDC a number of other areas have been excluded from the 521 ha land take for either environmental i.e. flood risk or economic reasons i.e. existing established business where it would be prohibitive to relocate, these include:
- Hill Barton Business Park and Greendale Business Parks (close to Options 1&2);
  - Crealy Adventure Park (close to Option 1);
  - Flood zone land as far as possible (all Options) but it is recognised that this land could be used for BNG, nature recovery and integrated water management if required;
  - Land and property within the historic environment (all Options);
  - Large group of buildings to the south east of the junction between the A3052 and Oil Mill Lane including a commercial scale anaerobic digester plant with associated noise and smells which may make siting homes close by difficult for environmental reasons (close to Options 2&3);
  - Exeter Athletic Rugby Club - recently developed at substantial cost (close to Options 2&3);
  - Exeter City FC training pitches (close to Option 3) and
  - Land west of Crealy (all Options).
- 3.15 For the avoidance of doubt these land areas are shown on the following indicative plans as being within the Option but do not form part of the circa 521 hectares required. At this level of detail it is not possible to



show this separation but this will form part of the masterplanning undertaken for the preferred Option in 2023.

3.16 The plans below show the outcome of these technical assessments and identifies land promoted through three call for sites exercises undertaken by EDDC, Option 1 is below.

**Figure 3.2 – Option 1 Land Take**



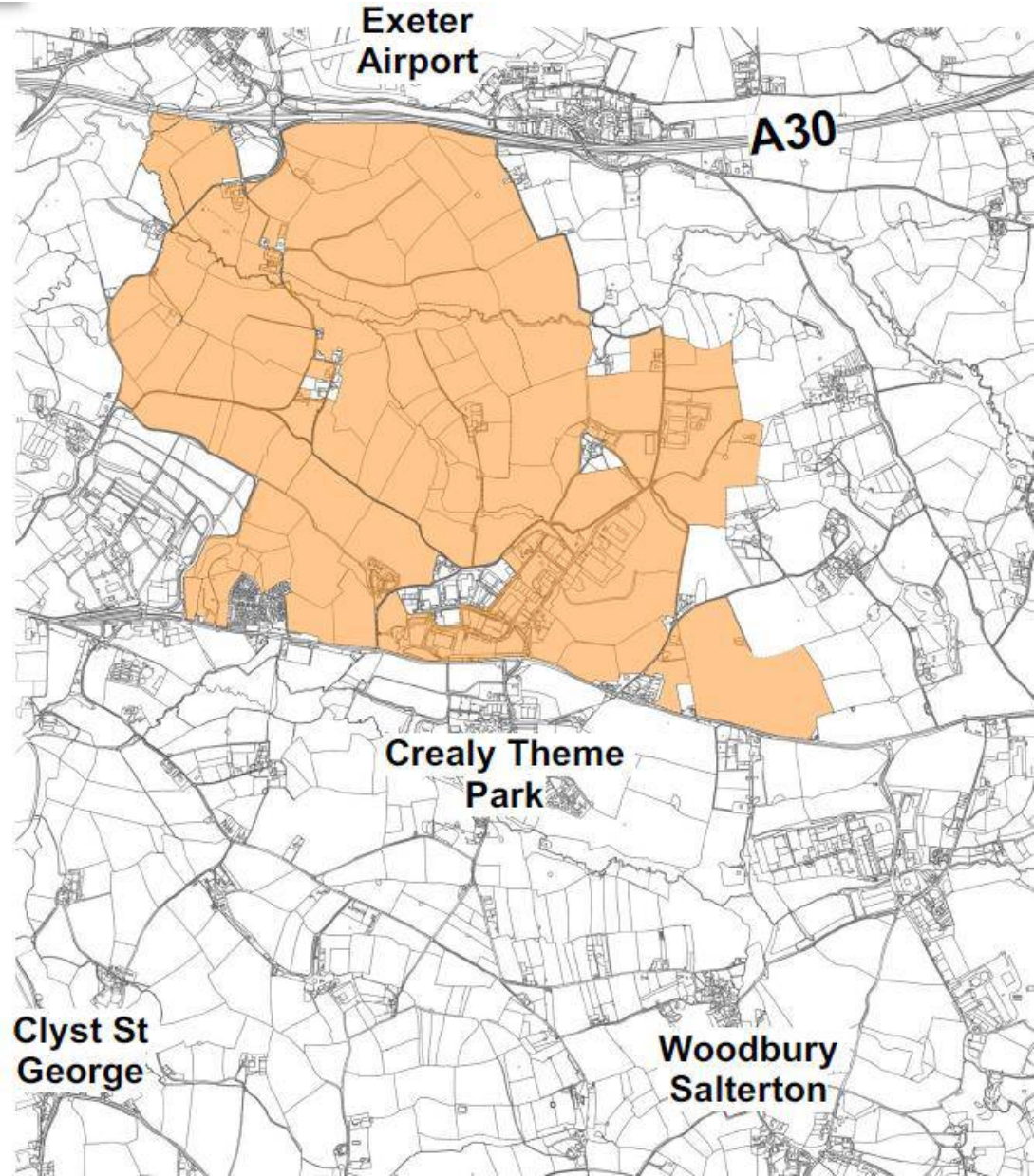
**KEY**

-  2017 Call for site submission
-  2021 Call for site submission
-  2022 Call for site submission
-  Indicative additional land required not currently included in call for sites

Source: Tibbalds (2022)

3.17 This Option encompasses 521 hectares of land with only a small proportion to the North West additional to that already promoted. Figure 3.3 below confirms the extent of land in Option 1.

**Figure 3.3 - Option 1: Land to the north of A3052**

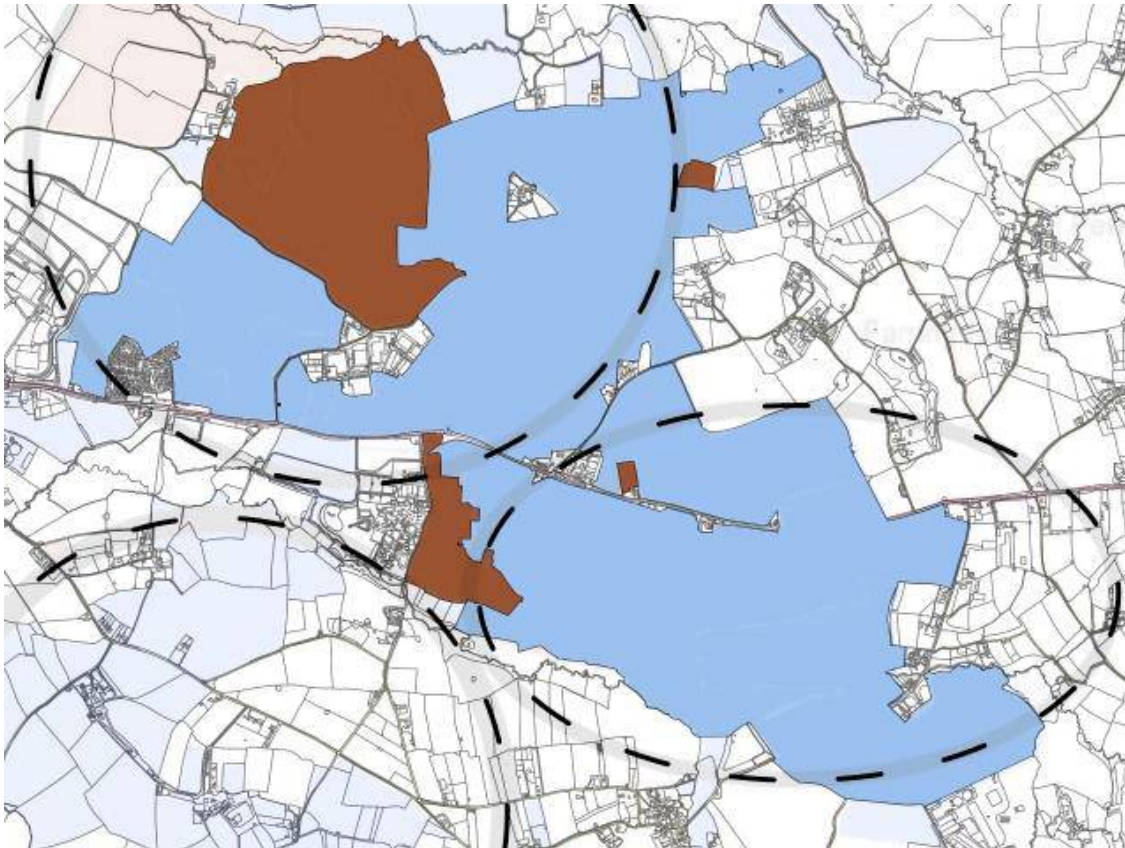


Source: Tibbalds (2022)

3.18 The land take promoted through three call for sites exercises undertaken by EDDC included in Option 2 is provided in the plan below.



**Figure 3.4 – Option 2 Land Take**



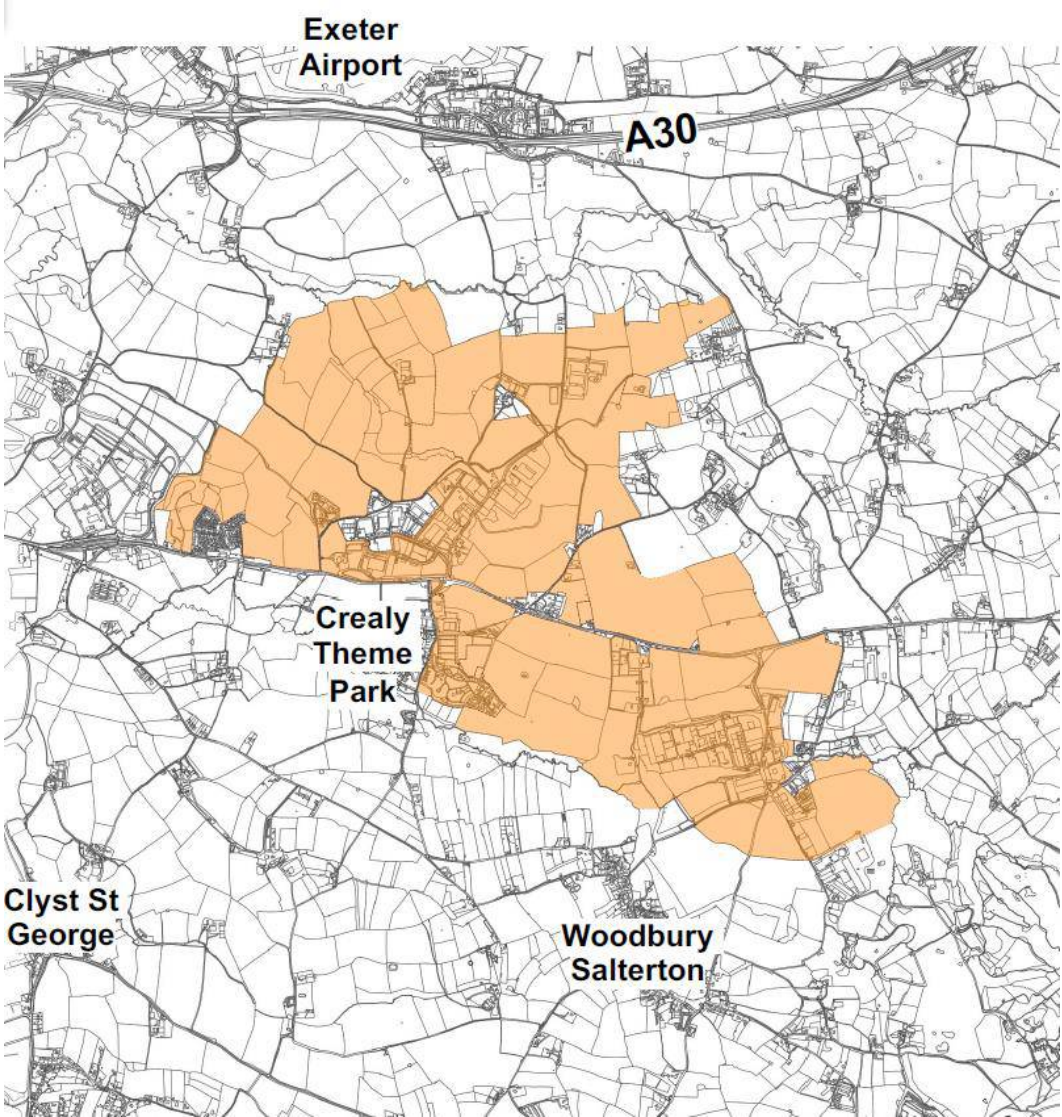
**KEY**

-  2017 Call for site submission
-  2021 Call for site submission
-  2022 Call for site submission
-  Indicative additional land required not currently included in call for sites

Source: Tibbalds (2022)

3.19 This Option encompasses 521.5 hectares of land all of which has already been promoted. Figure 3.5 below confirms the extent of land in Option 2.

**Figure 3.5 - Option 2: Land adjacent to the A3052**

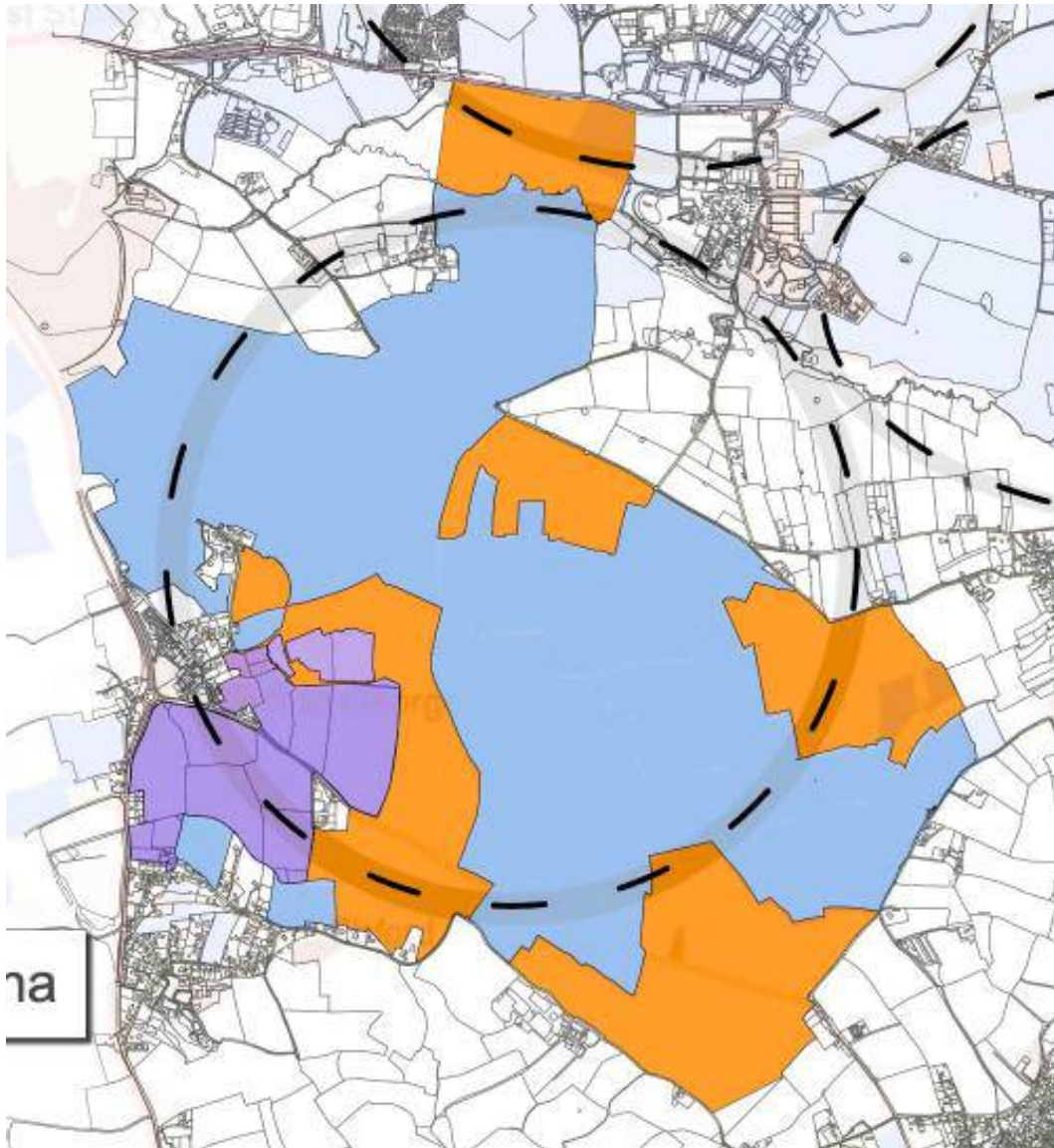


Source: Tibbalds (2022)

3.20 The land take promoted through three call for sites exercises undertaken by EDDC included in Option 3 is provided in the plan below.



**Figure 3.6 – Option 3 Land Take**



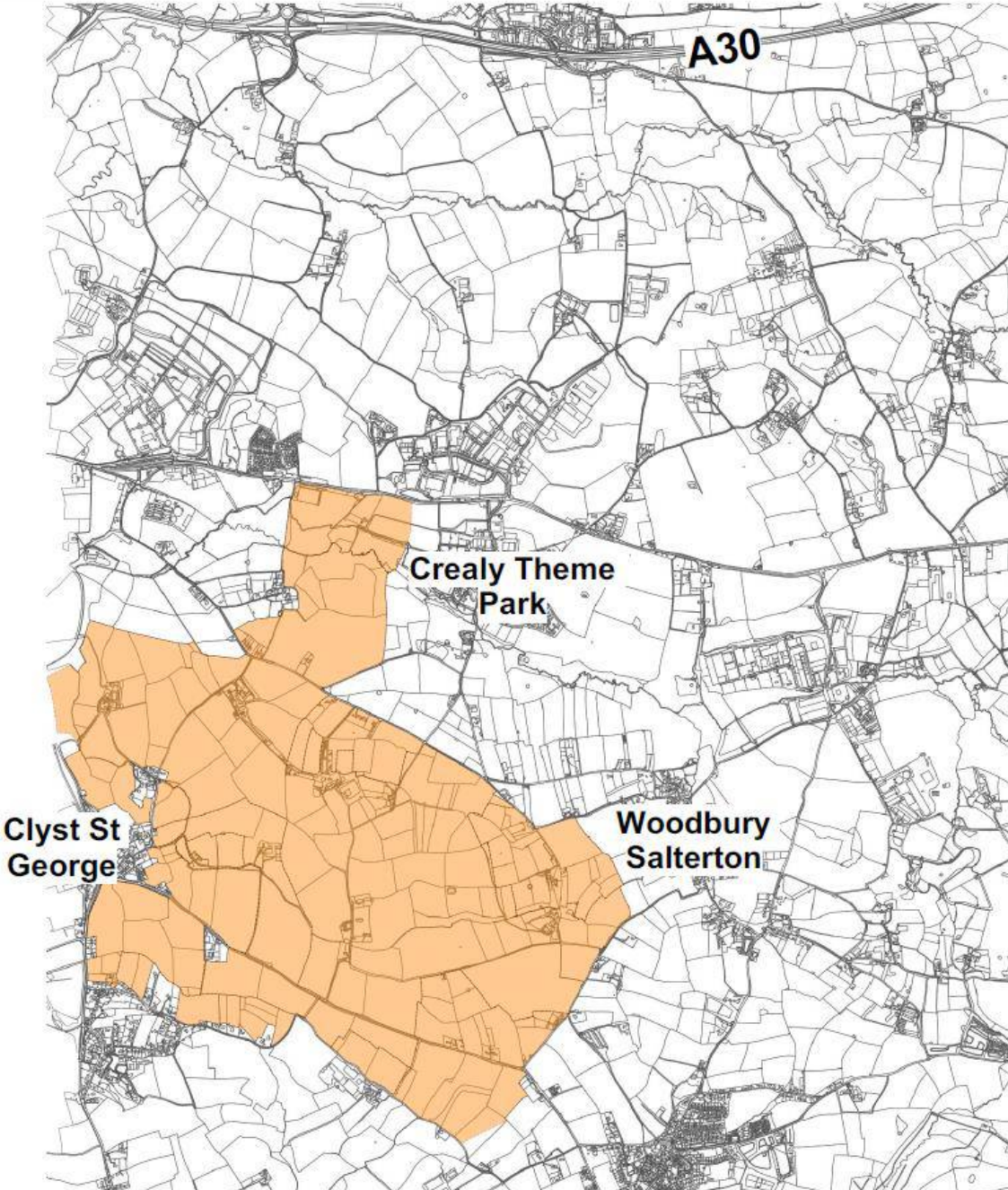
**KEY**

-  2017 Call for site submission
-  2021 Call for site submission
-  2022 Call for site submission
-  Indicative additional land required not currently included in call for sites

Source: Tibbalds (2022)

3.21 This Option encompasses 523.2 hectares of land and of all the Options has the largest proportion of land that has not already been promoted. Figure 3.7 below confirms the extent of land in Option 3.

**Figure 3.7 – Option 3: Land to the south of the A3052**



Source: Tibbalds (2022)

## Assessment Criteria

3.22 Following extensive discussions with EDDC the following technical criteria were confirmed as those by which the three Option sites would be assessed.

**Table 3.2 – Assessment Criteria**

Landscape sensitivity
Ecological impact/Biodiversity
Sustainable transport
Environmental constraints (flooding, minerals and historic environment)
Highways impact
Utilities Infrastructure
Net Zero Carbon Infrastructure (contribution to net zero and climate resilience)
Deliverability to include land ownership, presence of businesses/other land uses that need to be relocated and proximity of development to bad neighbours i.e. noise/traffic

Source: CBRE (2022)

3.23 Based on these assessment criteria the following scoring has been developed alongside EDDC to assess the three Option sites against a basket of criteria. These are outlined in Table 3.3 below. The highest scores represent potential lower adverse impact / higher benefit.

**Table 3.3 – Assessment Criteria and Scoring**

Criteria	Scoring
Landscape sensitivity	<b>Sensitivity:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Ecological impact/Biodiversity	<b>Impact:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Environmental constraints (flooding, minerals, historic environment)	<b>Constraint’s level:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Sustainable Accessibility	<b>Sustainability:</b> High – 5 Medium/High - 4 Medium – 3 Low/Medium - 2 Low - 1



Highways Impact	<p><b>Impact:</b>                  High – 1                  Medium/High - 2                  Medium – 3                  Low/Medium - 4                  Low – 5</p>
Utilities Infrastructure	<p><b>Capacity:</b>                  High – 5                  Medium/High - 4                  Medium – 3                  Low/Medium - 2                  Low - 1</p>
Net Zero Carbon Infrastructure	<p><b>Contribution to Net Zero:</b>                  Low exposure/vulnerability or high opportunity – 5                  Low-medium exposure/vulnerability or medium-high opportunity - 4                  Medium exposure/vulnerability or medium opportunity – 3                  Medium-high exposure/vulnerability or low-medium opportunity - 2                  High exposure/vulnerability or low opportunity – 1</p>
Net Zero Carbon Infrastructure	<p><b>Climate Resilience:</b>                  Low exposure/vulnerability or high opportunity – 5                  Low-medium exposure/vulnerability or medium-high opportunity - 4                  Medium exposure/vulnerability or medium opportunity – 3                  Medium-high exposure/vulnerability or low-medium opportunity - 2                  High exposure/vulnerability or low opportunity – 1</p>
Deliverability (land)	<p><b>Impact:</b>                  Limited i.e., simple land ownership, all land put forward in call for sites, majority of landowners known, few businesses to relocate – 5                  Limited to Medium - mixed land ownership, majority of landowners known, all land put forward in call for sites, few businesses to relocate – 4                  Medium i.e., mixed land ownership, majority of land put forward in call for sites, but some land assembly needed, some landowners known, some businesses to relocate – 3                  Medium to Extensive - complicated land ownership, few landowners known, some land put forward in call for sites, but land assembly needed, lots of businesses to relocate – 2                  Extensive i.e., complicated land ownership, significant land assembly required, lots of businesses to relocate and no landowners known – 1</p>

Source: CBRE (2022)

3.24 Each technical assessment undertaken (see Sections 5 to 10) has been assessed against this scoring. Where a number of criteria have informed a technical assessment the average score is used to identify the

Preferred Option and the second and third ranked Option and this will feed through to the cumulative assessment in Section 12.

## 4. The Vision

### Introduction

- 4.1 This Vision has been prepared by CBRE and Tibbalds alongside the consultant team to provide a clear narrative for the potential provision of a second new settlement in East Devon in response to housing need over the next Local Plan period.
- 4.2 It has been developed based upon the consultant team's knowledge of the area and draws upon the technical work undertaken to date.
- 4.3 It is important that the Vision clearly outlines the ambition of EDDC for this potential new community over the next 30 years. It has also been based on lessons learnt from the planning and delivery of Cranbrook.
- 4.4 We recommend that the Vision is supported by a set of strategic objectives and design principles.
- 4.5 This Vision has been tested and refined with EDDC officers and Councillors at the second workshop (see Section 11) on Monday 10<sup>th</sup> October 2022. It was also commented on and amended by the council's Strategic Planning Committee at their meeting on the 1st November 2022.

### Vision

- 4.6 The proposed Vision is:

*A second new settlement in East Devon with a self-sufficient, healthy and dynamic community with distinctive character. Delivering up to 8,000 high-quality equitable homes with an equitable range of tenures, places of work and a diverse mix of uses that are easily accessible via sustainable and active travel such that these become the dominant transport modes.*

*This new town will be more than just a settlement, it will be an ambitious and highly desirable place that supports the growth of a self-governing and self-sustaining community that establishes its culture at the outset in order to develop and thrive into the future.*

*The structure of the settlement will promote innovative design that will draw inspiration from the local context, including the unique surrounding historic environment, to create a rich character. Streets and spaces will be designed to encourage social interaction and will be embedded in a well-connected and integrated active travel network with comprehensive links to nearby employment, surrounding countryside and the city of Exeter.*

*It will be underpinned at its core by sustainability, wellbeing, and healthy living, creating an exemplar zero-carbon town both in terms of self-sufficiency and design and by doing so it will provide a legacy to the benefit of future generations.*

*This sustainable community will be sensitively and seamlessly integrated with the outstanding East Devon natural environment and contribute to the delivery of the Clyst Valley Regional Park whilst protecting nearby internationally recognised habitats.*

*It will provide a rich network of substantial open space and diverse landscaping, including areas of enhanced ecology and biodiversity, as well as opportunities for play, recreation and opportunities for food growing.*

*This vibrant and adaptable new settlement will preserve East Devon's legacy as an outstanding place to live. The use of local materials and labour will be promoted to deliver on local priorities, creating somewhere residents can be proud of and where people of all ages and lifestyles will prosper.*

## Strategic Objectives/ Design Principles

4.7 The Vision will be supported by the following strategic objectives and design principles which will be developed to inform the preferred Option drawing upon the feedback from the two workshops (see Section 11):

1. Climate resilience, future proofing and net zero carbon;
2. Greening, landscape and biodiversity net gain contributions;
3. Community ownership of land & stewardship of assets;
4. Townscape, design and placemaking including public realm and open space;
5. Relationship to existing settlements;

6. Phasing and delivery of land uses through a flexible masterplan framework to enable the vision to be fulfilled;
7. A truly sustainable self-sufficient settlement incorporating homes, local employment, shops, community amenities, public realm and open space with timely delivery of infrastructure at the first opportunity;
8. Sustainable access, transport, utilities, infrastructure and movement and
9. Connected and integrated transport infrastructure that alleviates pressure on the existing highway network.



# 5. Landscape

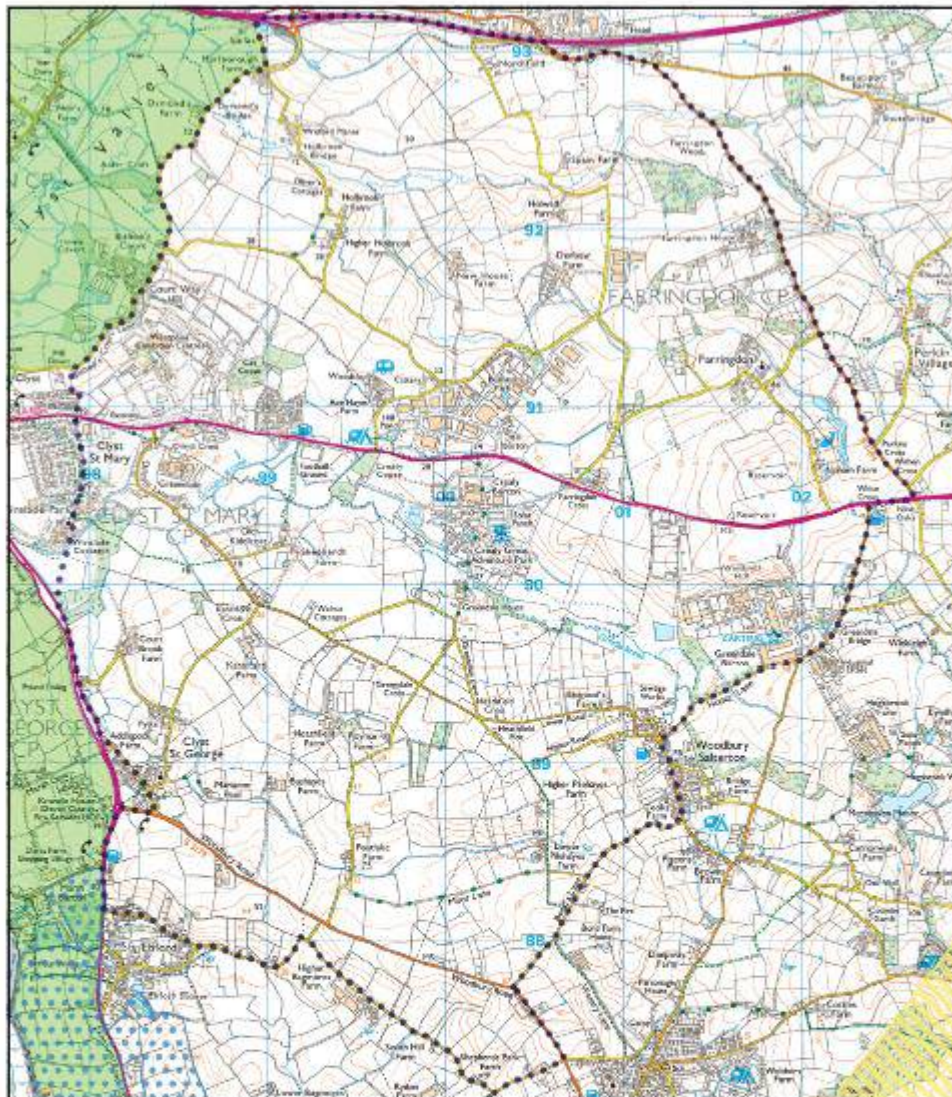
## Introduction

- 5.1 Separate to the CBRE led consultant team Fiona Fyfe Associates (FFA) were commissioned by EDDC to undertake a Landscape Sensitivity Assessment (LSA) and Landscape Capacity Assessment (LCA) for the study areas.
- 5.2 These have both fed into the CBRE led work and FFA have worked alongside EDDC to inform this report. The scope and outcomes of the LSA is most relevant for this report as it covers the same study area and this is provided at Appendix A.
- 5.3 We provide an overview below of the key findings from the LSA and LCA of relevance to this Options Appraisal.

## Landscape Sensitivity Assessment

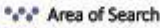
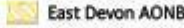

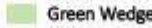
- 5.4 The current NPPF Planning Practice Guidance states that Landscape Sensitivity Assessments (LSA) and Landscape Capacity Assessments (LCA) can be used to assess the scale and type of development which can be accommodated without compromising landscape character. The methodology used in the LSA is in line with current best practice guidelines published by Natural England. It considers landscape sensitivity to three different types of development: Residential; Employment/Commercial, and Very large scale warehousing/distribution. It also considers the potential for cumulative effects in relation to proposed allocations.
- 5.5 The Area of Search for the LSA broadly aligns with that in the CBRE led study as shown on the plan below. This covers the land from the A30 in the north to Ebford in the south, and from the A376 and Bishop's Court Lane in the west to the B 3184 and Woodbury Salterton in the east. Most of the Area of Search is within the Clyst Lowland Farmlands Devon Character Area, but the eastern, higher part is within the Pebble Bed Heaths and Farmland Devon Character Area.

**Figure 5.1 – Area of Search**

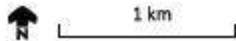


**Landscape Sensitivity Assessment for  
a New Community East of Exeter  
September 2022**

**Map 1. Area of search**

-  Area of Search
-  East Devon AONB
-  Coastal Preservation Area
-  Green Wedge

Policy boundaries are taken from the  
East Devon Local Plan 2013-31  
(Adopted January 2016)



Contains Ordnance Survey data.  
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(FFA, 2022)

5.6 The Area of Search was divided into nine Local Landscape Units (LLUs). Within each LLU, the landscape character, current land uses and likely levels of sensitivity are broadly consistent. LLUs represent broad areas of landscape rather than individual field parcels, and provide a strategic assessment of landscape sensitivity across the Area of Search.

5.7 Desk studies and fieldwork were undertaken to establish and evaluate a range of landscape and visual criteria for each LLU (namely scale, landform, land cover, built environment, perceptual qualities, visual and landscape value). The assessment considers the sensitivity of key landscape and visual characteristics of each LLU to the three different potential development types. A rating is attributed against each criterion using a 5-point scale of High, High-Medium, Medium Medium-Low and Low. The Landscape Sensitivity Assessment is appended to this report.

5.8 In order to provide an overall score for the purposes of numerical comparison of the options, it is necessary to use the findings of the Landscape Sensitivity Study for each component LLU (and the relative proportions of the LLUs) within each option to inform a judgement on the overall landscape sensitivity for each option. The table setting out how this judgement was reached is set out in Section 7.11 of the Landscape Sensitivity Assessment provided at Appendix A. The scoring assessment referenced earlier is replicated below.

**Table 5.1 – Assessment Criteria and Scoring**

<b>Criteria</b>	<b>Scoring</b>
Landscape sensitivity	<b>Sensitivity:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5

Source: CBRE (2022)

5.9 The overall landscape sensitivity scores for each option are as follows:

**Table 5.2- Landscape Sensitivity Options Appraisal Scoring**

<b>Option</b>	<b>Score</b>	<b>Sensitivity</b>
<b>1</b>	<b>2</b>	<b>High-Medium</b>
<b>2</b>	<b>2</b>	<b>High-Medium</b>
<b>3</b>	<b>3</b>	<b>Medium</b>

Source: FFA (2022)

5.10 The study found that the Area of Search contains a number of sensitivities which occur throughout, such as the character of rural lanes, the presence of large trees and hedges, and the character of existing historic settlements on the peripheries. Much of the Area of Search is visible from surrounding high land, including parts of the East Devon AONB.

5.11 In addition to these general sensitivities, there are sensitivities which are unique to each option.

5.12 Unique sensitivities for Option 1 are the quality and integrity of the historic rural landscape and associated Holbrook river corridors which flow east-west through the middle of the defined area. Option 2 includes land at its eastern end which has the highest elevation within the study area which is widely visible in the

surrounding landscape. It also overlaps with Option 1 to include sensitive land within the Holbrook area. For Option 3 particularly high sensitivity occurs in the south (along the Ebford slopes and the ridge followed by Woodbury Road) which has intervisibility with land to the south and the East Devon AONB, and in the east (towards Woodbury Salterton) where the land is relatively steep and elevated with intact medieval field patterns. The setting of Clyst St George, in the south-west of the Option, is also sensitive.

- 5.13 Within the Area of Search (particularly in the northern part) there are also a number of constraints to development such as floodplains, main roads, and existing land uses. However, some of these form potential opportunities as well as constraints.
- 5.14 The LSA concluded that the lowest levels of landscape sensitivity are found in the west-central part of the Area of Search, around the A3052 and the Grindle Brook Valley. The next lowest is found further south, to the north-east of Clyst St George.
- 5.15 As would be expected, landscape sensitivity for residential use is slightly lower than for commercial/employment use. Landscape sensitivity for very large scale warehousing/distribution is high across the Area of Search, suggesting that the key characteristics and qualities of this landscape are highly vulnerable to change from this development type.
- 5.16 Of the three Options identified, overall Option 3 is slightly less sensitive than Options 1 and 2 in landscape terms. However, within the area covered by Option 3 landscape sensitivity varies, and within Option 3 there are some areas of higher sensitivity where development would be likely to cause significant landscape and visual impact.
- 5.17 The land with the lowest levels of sensitivity is found in the southern part of Option 1 (overlapped by the western part of Option 2) and the northern part of Option 3. FFA proposed that these areas could potentially be combined to form a new 'Western Option'. This was considered by the CBRE led consultant team alongside EDDC but it was recognised that landscape was just one of the technical criteria being assessed as part of the Options Appraisal and that this alone should not drive the need to consider an additional Option.
- 5.18 As mentioned earlier in this report an iterative process was followed in identifying the location of land for the three site Options based upon a basket of factors including the outcome of technical assessments, mitigation of constraints and deliverability including land ownerships. Further, any additional Option would have required all the technical assessments to be updated to cover the proposed additional land take which would lead to programme delay. It was therefore decided to retain the three Options and not consider additional areas or Options.



## Landscape Capacity Assessment

- 5.19 The FFA team prepared a Landscape Capacity Assessment that focussed on the land which was identified in the LSA as being of lower sensitivity. It includes the A3052 corridor between Clyst St Mary and Crealy Great Adventure Park, and extends south to the ridge followed by Woodbury Road (B3179). The study area for the Landscape Capacity Study includes the majority of Option 3, and parts of Options 1 and 2. It has not been appended to this report because it does not consider all the Options in their entirety.
- 5.20 Within this Study Area there are a number of landscape constraints. These include topography (watercourses, floodplains, elevated land, ridgelines and steep slopes); vegetation and ecology (deciduous woodland, grassland, traditional orchards, stream corridors, trees and hedges); roads and access (A roads, B roads, minor roads, public rights of way); cultural heritage (Listed Buildings, other historic farmsteads, historic villages, historic field systems, other non-designated heritage assets); views, character and approaches (landscape character, expansive views, approaches to Exeter); existing development, land uses and services (existing residential, industrial and recreational development which will remain for the foreseeable future). Some of these constraints are also opportunities. For example floodplains can be used for public open space and biodiversity net gain, and main roads allow easy access.
- 5.21 Taking all these factors into account, the Study Area contains land ranging from High to Low capacity to accommodate new residential development. All flood zones are assumed to be of low capacity.
- 5.22 The land with higher landscape capacity is associated with the north-central part of the study area, specifically the A3052 corridor (north and south of the road), and the valleys of the Grindle Brook (west of Greendale House) and the unnamed stream which runs past Kenniford Farm. Elsewhere within the Study Area there is lower capacity to accommodate development.
- 5.23 Looking at Option 3, the land with highest capacity to accommodate new development is found within the valleys of the Grindle Brook (west of Greendale House) and the unnamed stream which runs past Kenniford Farm. This part of Option 3 has a relatively high capacity to accommodate new development due to its relatively flat and low-lying topography, the existing trees which form a strong structure to the landscape and would help to screen development, and its lack of visibility from surrounding areas.
- 5.24 The southern and eastern parts of Option 3 were found to have lower capacity to accommodate built development for a variety of reasons including topography, visibility (particularly from East Devon AONB and Woodbury Road), landscape character, lack of mature trees and hedges, and the setting of Clyst St George village. Access into this part of the Option 3 is also challenging.
- 5.25 Within Options 1 and 2, the land with the highest capacity to accommodate development is found on the northern side of the A3052 (between the County Showground and Hill Barton Business Park). There is capacity here to accommodate residential development, and also land parcels in the vicinity of existing commercial/industrial premises where carefully designed new industrial land uses could be accommodated with relatively low landscape and visual impacts.



# 6. Environmental Constraints

## Introduction

- 6.1 This section provides an overview of the environmental constraints that have been considered including ecological impact/biodiversity, flooding, minerals and historic environment.

## Ecological Impact/Biodiversity

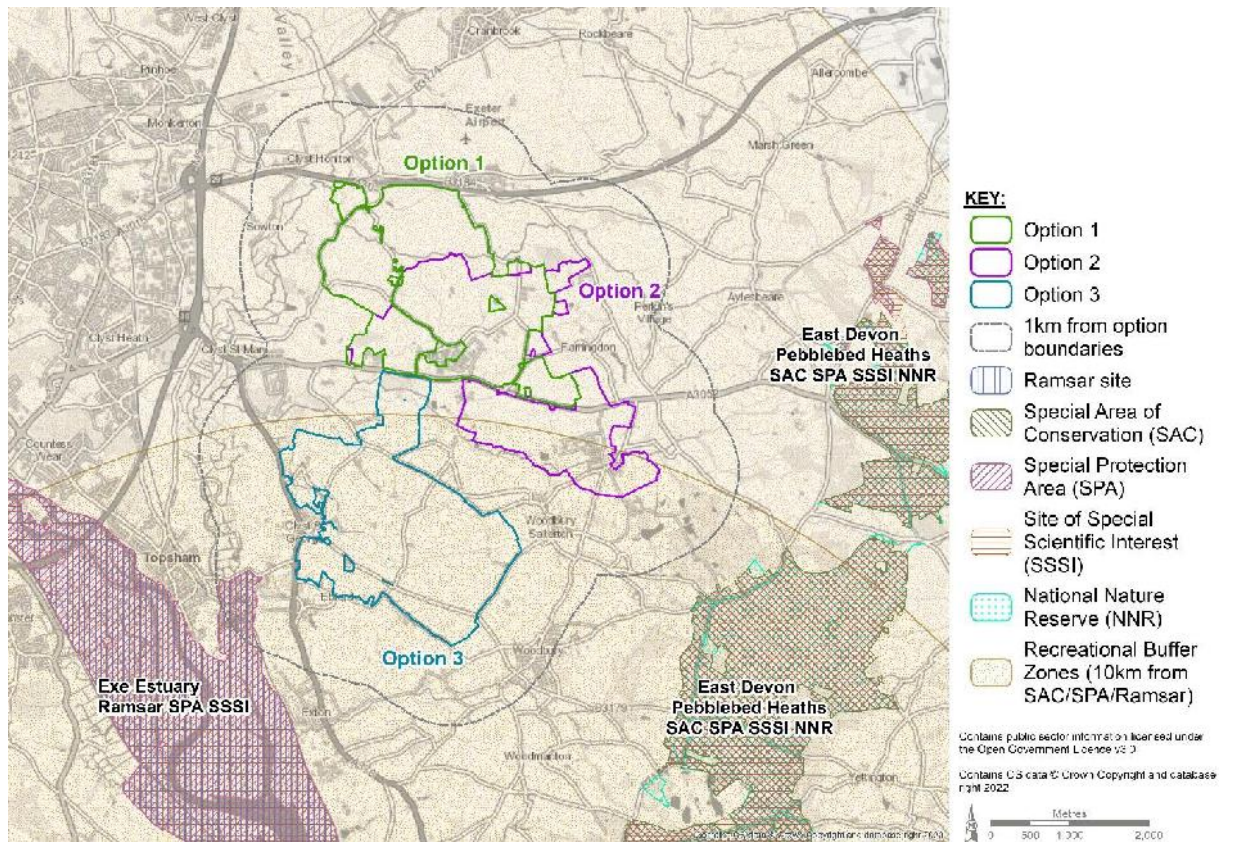
- 6.2 A high-level ecological desk-based appraisal has been completed to inform the Options Appraisal. Methods, data sources and findings are detailed in the Ecological Desk Study Report (Appendix C).

### **Statutory Wildlife Sites**

- 6.3 The Ecological Desk Study Report (Appendix C) details the statutory wildlife designations of international, national, regional or local significance present within the area containing the Options.
- 6.4 No Option contains or lies adjacent to any statutory wildlife designation (refer to Figure 4.1). Option 2 is 1.6km from the East Devon Pebblebed Heaths (SAC, SPA, SSSI, NNR). Option 3 is 0.4km from the Exe Estuary (SPA, Ramsar, SSSI)
- 6.5 Strategy 47 of the EDDC East Devon Local Plan 2013-2031 (adopted 28 January 2016) (EDLP) applies a 400m buffer zone around the East Devon Pebblebed Heaths within which no new residential development is permissible. A 400m zone around the Exe Estuary also applies within which project specific measures are required to identify supporting habitats for SPA qualifying bird species. None of the Options are located within 400m of the East Devon Pebblebed Heaths or the Exe Estuary, although Option 3 is approximately 400m east of the Exe Estuary at its nearest point.
- 6.6 The Exe Estuary and East Devon Pebblebed Heaths, and also Dawlish Warren (located in Teignbridge) have a 10km Recreational Buffer Zone applied, within which all residential schemes will be required to provide mitigation for visitor pressures under Strategy 47. All Options are fully within the 10km buffers from the Exe Estuary and East Devon Pebblebed Heaths. No part of Option 1 falls within the 10km buffer from Dawlish Warren, the southern portion (c 20% by area) of Option 2 and the majority (c 95%) of Option 3 are within the 10km buffer for Dawlish Warren.
- 6.7 Mitigation for diffuse additional recreational pressure will be required under Strategy 47 for all Options which has been accounted for in the land budget. In due course this will be supported by a Habitats Regulations Assessment (HRA).

6.8 There are no overriding ecological constraints for any of the Options arising from statutory wildlife designations of international or national significance.

**Figure 6.1 – Statutory wildlife designations most relevant to the Options**



Source: TEP (2022)

**Non-Statutory (Local) Wildlife Sites**

6.9 Policy EN4 of the EDDC EDLP protects the network of local wildlife sites in East Devon. There is a presumption against development within or otherwise adversely affecting local wildlife sites and other important local wildlife sites. To comply with Policy EN4, local wildlife sites and important connecting or supporting habitat features should be retained and protected.

6.10 Figure 6.2 shows local wildlife sites within 1km of the Options. They fall into categories: County Wildlife Sites (CWS), Other Sites of Wildlife Interest (OSWI), Unconfirmed Wildlife Sites (UWS), Special Verge Sites and Exeter Green Spaces. Further explanation of these sites and their position in the ecological network for Devon is provided in the Ecological Desk Study Report (Appendix C).

6.11 Option 1 contains two UWS and part of a third. It lies adjacent to several other local wildlife sites to the east and west (refer to Figure 6.2). A further ten local wildlife sites were identified within 1km of Option 1, the majority east or west of the Option area. Option 1 also contains, in the west and northwest, land allocated by Strategy 10 of the EDDC EDLP for the Clyst Valley Regional Park. The majority of this allocated area

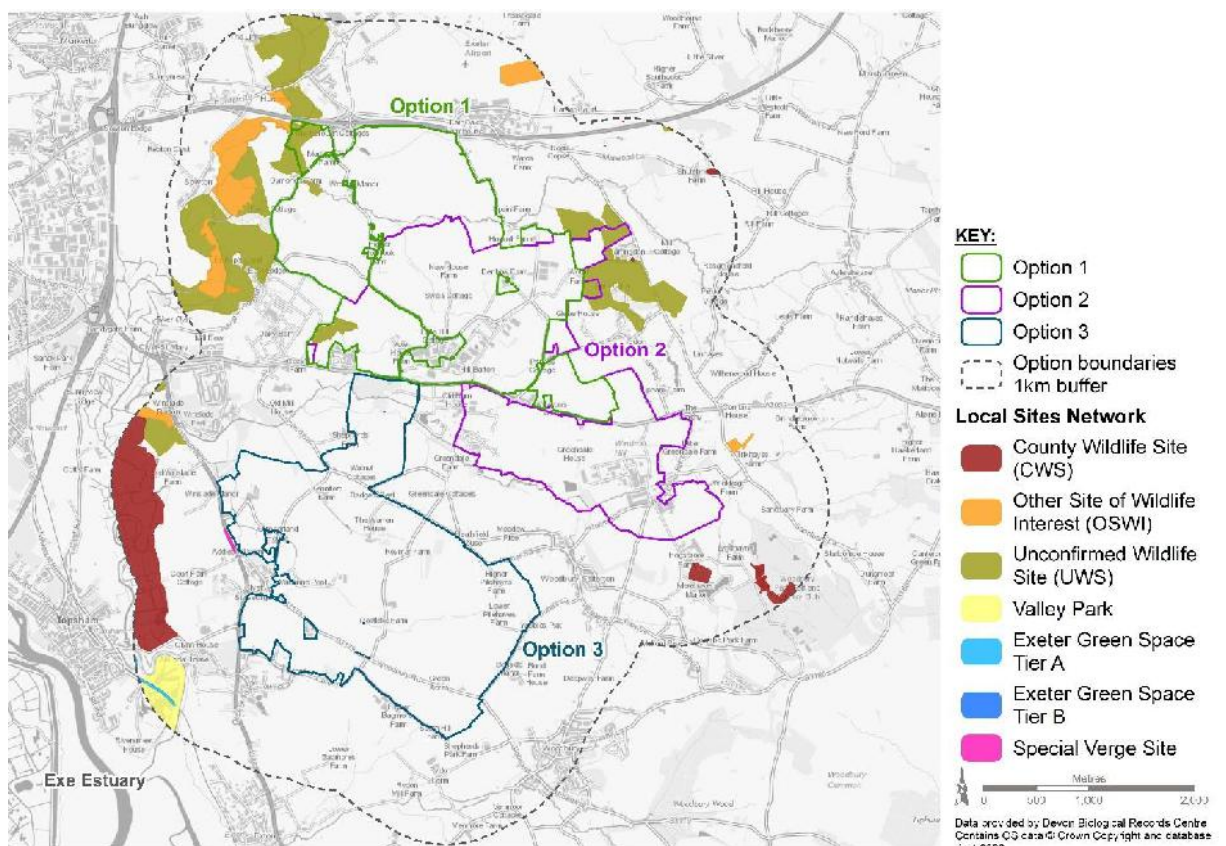


extends from Bishop’s Court Lane to the M5 and encompasses a number of local wildlife sites associated with the River Clyst. Details are presented in the Ecological Desk Study Report (Appendix C).

6.12 Option 2 contains one UWS and part of two others. A further 12 local wildlife sites were identified within 1km of the Option, mostly to the west and east. Option 2 does not contain land allocated for the Clyst Valley Regional Park.

6.13 Option 3 does not contain any local wildlife sites, although a Special Verge Site (a central reservation along Exmouth Road) lies approximately 10m to the west boundary. A further 11 local wildlife sites were identified within 1km of the Option. The Option is positioned between a corridor of local sites along the River Clyst (including the Clyst Marshes CWS) in the west and a cluster of CWS (comprising ancient woodlands) further to the east.

**Figure 6.2 – Non-statutory wildlife sites within 1km of the Options**



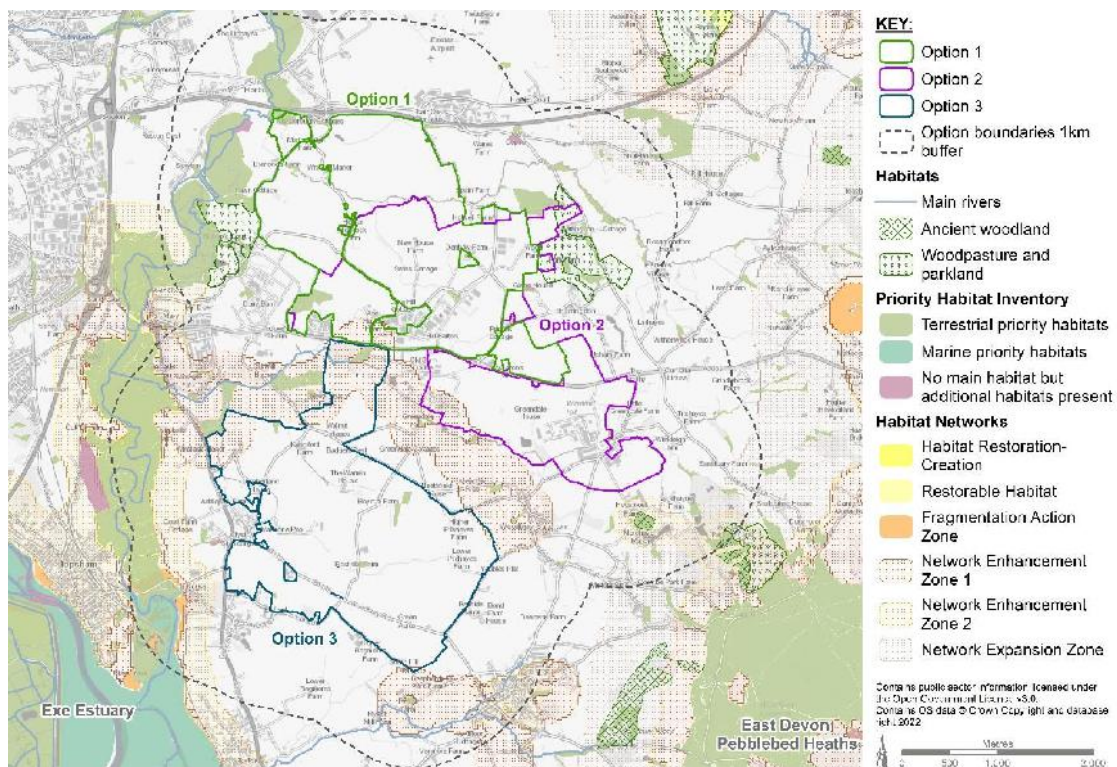
Source: TEP (2022)

**Important Habitats and the National Habitat Network**

6.14 Loss of irreplaceable habitats (e.g. ancient woodland, veteran trees), must be avoided and they must be adequately protected to comply with NPPF. Based on available data, there is no ancient woodland present or adjacent to any of the Options, but there is a high likelihood that small, previously unrecorded, fragments of ancient woodland or trees or veteran trees may occur within each Option. Field survey is required to verify presence of irreplaceable habitats.

- 6.15 Policy EN5 of the EDDC EDLP protects important wildlife habitats and features. There is a presumption against development adversely affecting important wildlife habitats and features. Positive opportunities for habitat creation are encouraged through the development process.
- 6.16 All three Options comprise a similar landscape of predominantly agricultural fields (cereal and arable grasslands) with a comprehensive field boundary network. Some woodlands, traditional orchards, native hedgerows, ponds, watercourses, some grasslands and arable field margins all have potential to qualify as national Habitats of Principal Importance (HPI). Rivers, streams, floodplains and grazing marsh, some woodlands, traditional orchards, some uncultivated grasslands and most hedges may qualify as Devon Biodiversity Action Plan (DBAP) habitats. To comply with Policy EN5, there should be a presumption to retain HPI and DBAP habitats and protect them against construction and recreation-related pressures with appropriate and functioning buffers.
- 6.17 While all Options will certainly include national or regional priority habitats, Natural England’s National Habitat Network does not identify key habitat areas and opportunity zones as significant constraining factors for the Options. The Ecological Desk Study Report (Appendix C) explains the context for the National Habitat Network. A broad east-west corridor identified within the network as Enhancement Zone 1 promotes connectivity from the Pebblebed Heaths across to the River Clyst corridor. This corridor is generally associated with Grindle Brook and passes south of Options 1 and 2, with only minor overlap, and north of Option 3 with moderate overlap in the north and northwest. This corridor can be incorporated into development frameworks; it would not sterilise against development.

**Figure 6.3 – Position within the ecological network (priority habitats and National Habitat Network Combined)**



Source: TEP (2022)

**Protected Species**

6.18 The Ecological Desk Study Report illustrates and summarises existing species records within the search areas. Field study would be needed to fully ascertain presence or otherwise of protected or notable species within the Option areas. Nevertheless, great crested newts are likely to be present within Options 1 and 2 and hazel dormice are highly likely to be present within each Option. A moderate to high diversity of bats should be anticipated, with roosting and important commuting routes and foraging areas being found. Option 3 encompasses land thought to be previously subject to protected species mitigation licensing; pre-existing mitigation delivered under EPS licences should be safeguarded against future development. Option 3 appears to have a higher diversity of birds, invertebrates and flora recorded in the locality. This is likely to be related to its position relative to the designated wildlife sites at the Exe Estuary (west) and Pebblebed Heaths (east) illustrated at Figure 6.1.

**Key Findings**

6.19 Table 6.1 summarises the key findings of the ecological desk study. Full details of the findings and associated drawings are presented in the Ecological Desk Study Report (Appendix C)

**Table 6.1 – Summary Appraisal**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Statutory Wildlife Sites of International &amp; National Significance (closest proximity)</b>	>2km	>1km	<0.5km
<b>Strategy 47 Applies (Recreational Pressure)</b>	Exe Estuary East Devon Pebblebed Heaths	Exe Estuary East Devon Pebblebed Heaths	Exe Estuary East Devon Pebblebed Heaths Dawlish Warren
<b>SSSI Impact Risk Zones</b>	Infrastructure Wind / Solar Energy Minerals, Oil & Gas Air Pollution Combustion Waste Discharges Strategic Solutions	Infrastructure Wind/Solar Energy Minerals/Oil/Gas Rural non-Residential Residential Rural Residential Air Pollution Combustion Waste Composting Discharges Water Supply Strategic Solutions	All Planning Applications Infrastructure Wind/Solar Energy Minerals, Oil & Gas Rural non-Residential Residential Rural Residential Air Pollution Combustion Waste Composting Discharges Water Supply Strategic Solutions
<b>Statutory Wildlife Sites of Regional / Local Significance (closest proximity)</b>	>5km	>5km	<5km



Assessment Category	Option 1	Option 2	Option 3
Local Wildlife Sites	Contained Within Option	Contained Within Option	Not Contained Within Option
Potential for Impact on Wildlife Sites Network (in absence of mitigation)	High risk of local severance or fragmentation impact (east-west)	Moderate risk of local severance or fragmentation impact (east-west)	Moderate risk of local severance or fragmentation impact (east-west)
National or Devon Priority Habitats <i>(note that field surveys would be required to confirm habitats present and status of habitats)</i>	Coastal floodplain and grazing marsh Traditional Orchard Woodland Veteran/Ancient Trees Devon Hedgerows Arable field margins Ponds/Lakes Rivers/Streams	Woodland Veteran/Ancient Trees Devon Hedgerows Arable field margins Ponds/Lakes Rivers/Streams	Traditional Orchard Woodland Veteran/Ancient Trees Devon Hedgerows Arable field margins Ponds/Lakes Rivers/Streams
Overall Risk to Ecological Network (in absence of mitigation)	Limited overlap but contains land allocated for Valley Park, HPI and position within wider network has potential for fragmentation effects	Limited overlap. Avoids key areas identified within Habitat Network for enhancement or expansion but contains some HPI.	Some overlap, especially links east-west. Closer proximity to statutory sites and supporting habitats. Contains HPI. Position in wider network has potential for fragmentation effects.
Diversity of protected or notable species records in locality <i>(note that field surveys would be required to confirm presence or likely absence of species)</i>	12 plants 4 amphibians 2 reptiles 21 birds 10 bats 8 other mammals 5 invertebrates	9 plants 4 amphibians 2 reptiles 18 birds 10 bats 10 other mammals 62 invertebrates	39 plants 3 amphibians 2 reptiles 2 fish 58 birds 11 bats 10 other mammals 70 invertebrates

Source: TEP (2022)

6.20 The scoring assessment referenced earlier is replicated below.

**Table 6.2 – Assessment Criteria and Scoring**

Criteria	Scoring
Ecological impact/Biodiversity	<b>Impact:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5

Source: CBRE (2022)

6.21 This scoring assigns a score ranging from 1 for high impact to 5 for low impact. In adopting this scoring system, the scores are assigned according to a high level comparison between Options (e.g. where impacts may be more complex or extensive across one Option compared with another, it scores lower). The scoring

system is not intended to prejudice conclusions of any ecological impact assessment; it aims to assess the range of ecological constraints that a development framework would need to consider.

**Table 6.3– Scoring**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
Statutory Wildlife Sites of International & National Significance	5	4	3
Strategy 47 Applies (Recreational Pressure)	3	3	2
SSSI Impact Risk Zones	5	4	3
Statutory Wildlife Sites of Regional / Local Significance	5	5	5
Local Wildlife Sites	3	3	5
Potential for Impact on Wildlife Sites Network (in absence of mitigation)	2	3	3
National or Devon Priority Habitats	2	3	2
Overall Risk to Ecological Network	3	4	2
Diversity of protected or notable species records in locality	3	3	2
<b>TOTAL</b>	<b>31</b>	<b>32</b>	<b>27</b>
<b>AVERAGE</b>	<b>3.4</b>	<b>3.6</b>	<b>3</b>

Source: TEP (2022) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

**Summary**

- 6.22 Overall, in terms of ecological risk, Option 2 performs best while Option 3 would be least preferred. However, the Option sites themselves have relatively few absolute ecological constraints, and such constraints can typically be accommodated within a sensitively-designed green and blue infrastructure framework.
- 6.23 The landscapes to the west and east of the Option areas have particular local, regional, national and international significance for wildlife, including mobile species with particular seasonal sensitivities.
- 6.24 Option 3, closest to the Exe Estuary (400m to the south), and with relatively greater proportion of an ecological network enhancement zone, is more vulnerable than the other two Options to the need to provide significant ecological management zones within its boundary.
- 6.25 Opportunities to strengthen and/or diversify the ecological network should be sought within the preferred Option area, making use of existing habitats and features and seeking opportunity to expand habitat or create new habitat to contribute towards biodiversity gains. Opportunities for biodiversity gains would also be presented by the land allocated within Option 1 for the Clyst Regional Valley Park, lands identified within network enhancement or expansion zones, SANGS and flood zone land.

## Other Environmental Constraints

6.26 The scoring assessment referenced earlier is replicated below.

**Table 6.4 – Assessment Criteria and Scoring**

Criteria	Scoring
Environmental constraints (flooding, minerals and historic environment)	<b>Constraint's level:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5

Source: CBRE (2022)

### Flooding

6.27 As previously referenced the assessment of potential flood risk was undertaken at the outset to inform the Option refinement and whilst these areas of flood risk appear to be included within each Option they have not been included in the land budget. More detail will be provided in the masterplanning of the preferred Option.

6.28 The land budget identifies over 200 hectares of land that will be used for public open space etc and we would expect that any flood attenuation is incorporated into this.

6.29 Flood zones are divided into four – Flood Zones 1, 2, 3a and 3b. The Environment Agency only maps three, but Local Authorities split Zone 3 into 3a and 3b.

#### Zone 1

6.30 Flood Zone 1 is Low Probability with areas been shown to be at less than 0.1% chance of flooding in any year. Land having a less than 1 in 1,000 annual probability of river or sea flooding.

6.31 There are very few restrictions in terms of flood risk to development on flood zone 1 areas, the exception is for development over 1 hectare in size which must have a flood risk assessment undertaken as part of a planning application and areas deemed to be at high risk of flooding from rainfall known as Critical Drainage Areas.

#### Zone 2

6.32 Flood Zone 2 is Medium Probability with areas been shown to have between 0.1% – 1% chance of flooding from rivers in any year or between 0.1% – 0.5% chance of flooding from the sea in any year. Land having

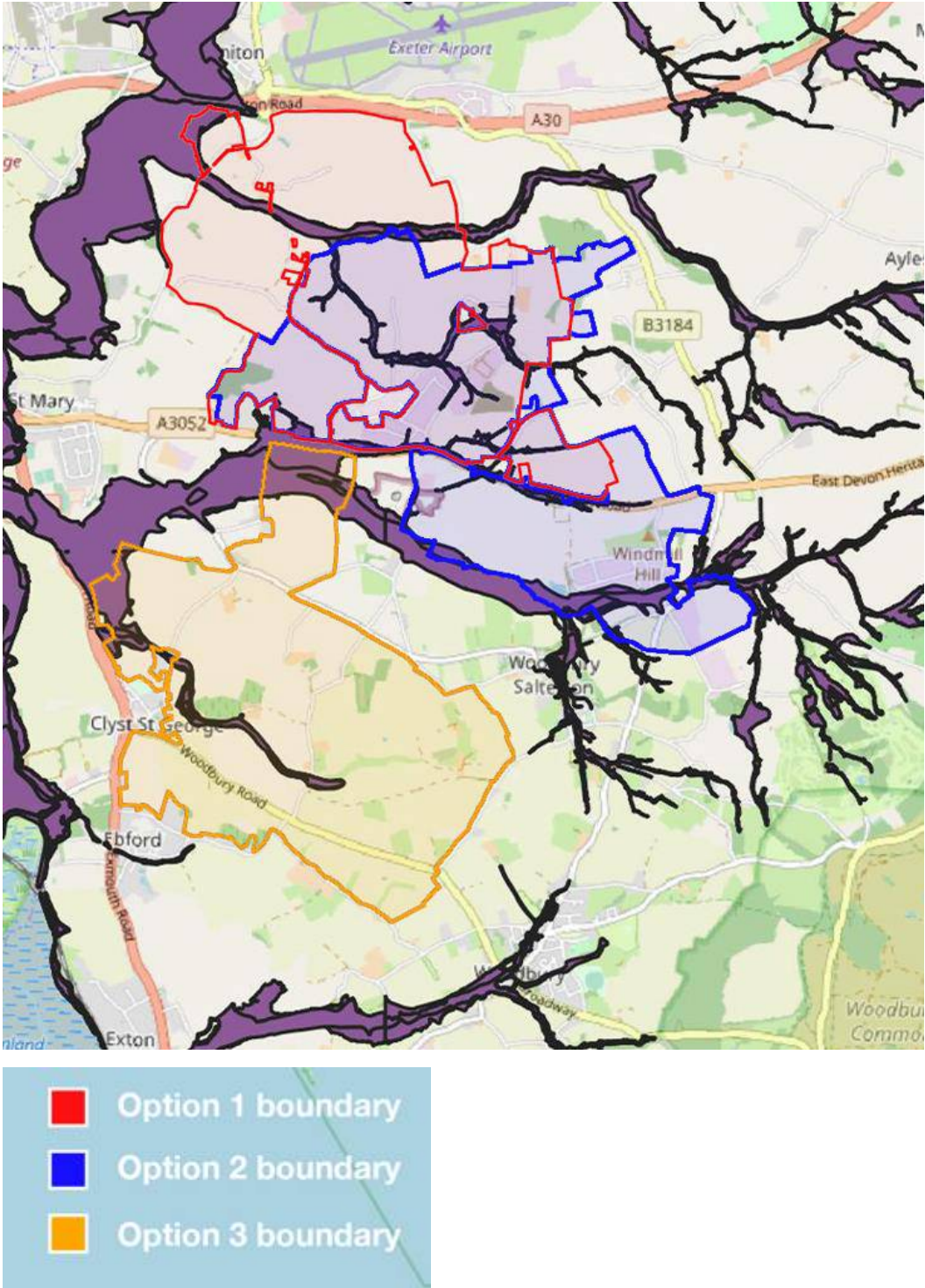
between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.

- 6.33 Flood zone 2 development needs to submit a flood risk assessment as part of its planning application which shows the risk of flooding to the site.

### Zone 3

- 6.34 Flood Zone 3a is High Probability with areas been shown to be at a 1% or greater probability of flooding from rivers or 0.5% or greater probability of flooding from the sea. Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding.
- 6.35 Flood zone 3 development needs to submit a flood risk assessment as part of its planning application which determines if the site is classified as flood zone 3a or 3b as well as reviewing flood risk on the site and proposing suitable mitigation.
- 6.36 Flood Zone 3b is the Functional Floodplain and is deemed to be the most at risk land of flooding from rivers or the sea. Local planning authorities have classified areas at significant risk of flooding to be within flood zone 3b. This classification is usually classified as land which had a 5% probability of flooding also known as a 1:20 chance.
- 6.37 This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency.
- 6.38 A large proportion of the land in all Options are within Flood Zone 1 which is the lowest risk but all sites have some areas that fall within Flood Risk Zones 2 and 3 as the following plans indicate.

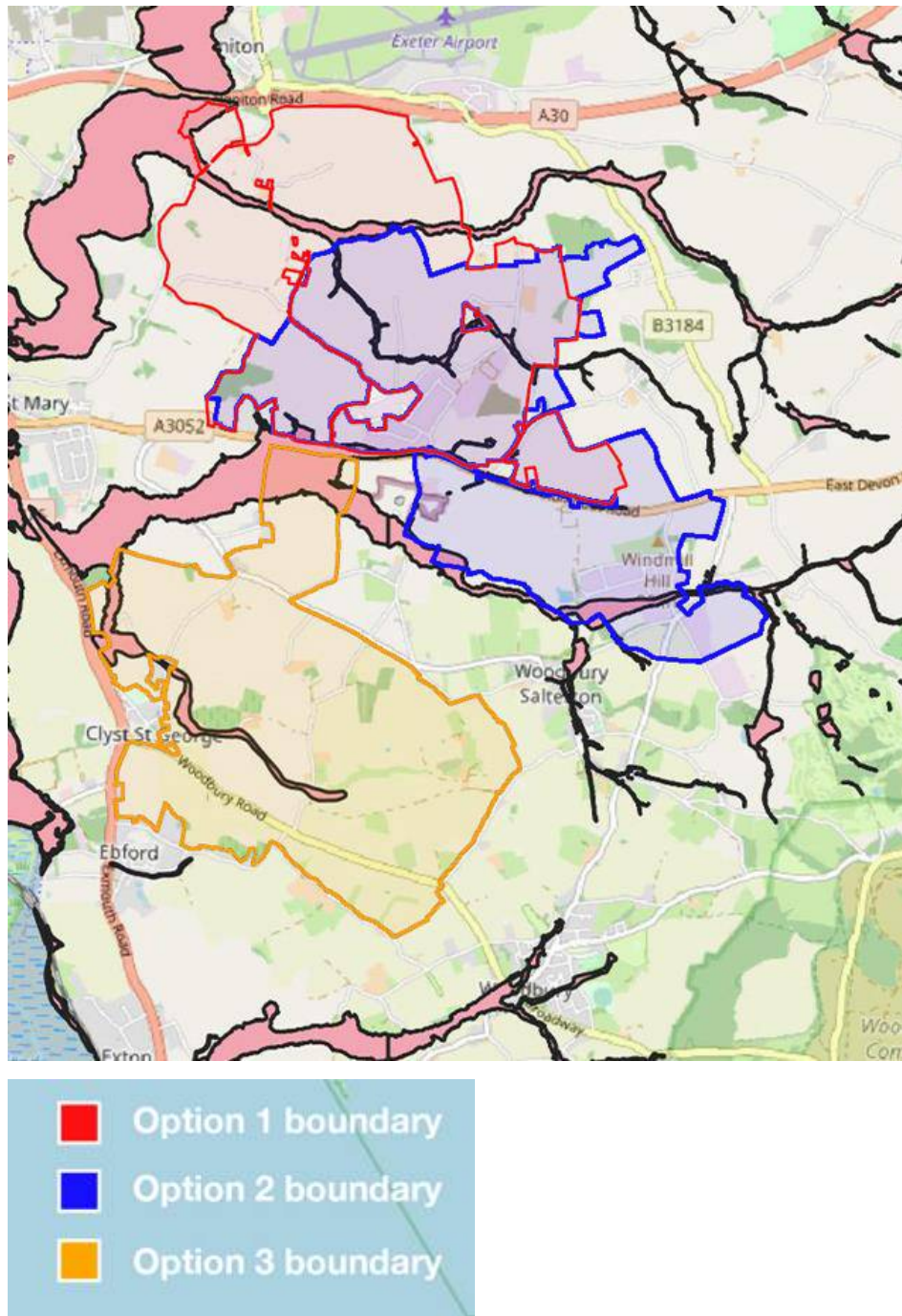
Figure 6.1 – Flood Risk Zone 2



Source: Tibbalds (2022)



**Figure 6.2 – Flood Risk Zone 3**



Source: Tibbalds (2022)

6.39 In Option 1 and running through the centre of the site some areas around the water courses are in Flood Zones 2 and 3a with surface water flooding a possibility but a low to medium risk.

6.40 It is a similar story for Option 2 with areas at risk from Zone 2 flooding running through the centre of the site. Areas to the south fall with Zone 3a which is a medium risk. As with Option 1 these are located around the water courses and will be prone to surface water flooding a possibility but this is a low to medium risk.

6.41 In Option 3 and running through the centre of the site some areas around the water courses are in Flood Zones 2 and 3a with surface water flooding a possibility but a low to medium risk.

**Table 6.4 – Flood Risk**

Option	Score
1	4
2	4
3	4

Source: CBRE (2022)

6.42 All Options have land within Flood Zones 1-3 but as the majority is within Zone 1 this is a low to medium flood risk. Land at flood risk will be incorporated into well designed and implemented drainage and water mitigation strategies and the land used for space for SANGS and biodiversity gains during masterplanning of the Preferred Option.

**Minerals**

6.41 The three Options have been assessed in line with the East Devon Local Plan 2013-2031, Devon Minerals Plan 2011-2033 and Devon Waste Plan 2011-2031. The key outcomes are shown below.

6.42 The potential impact of minerals per Option site is summarised below.

**Table 6.5 – Minerals Presence**

Option	Impact	Score
1	Outside of coal mining affected areas. No nitrate and phosphates identified Mineral safeguarding Zone at Hill Barton Business Park (Policy M2 of the Devon Minerals Plan) Established Strategic Waste facility at Hill Barton Business Park (Policy W10 of Devon Waste Plan)	3
2	Outside of coal mining affected areas Within water source protection zone Within nitrate vulnerable zone Medium priority phosphates Mineral safeguarding Zone at Hill Barton Business Park (Policy M2 of the Devon Minerals Plan) Established Strategic Waste facility at Hill Barton Business Park (Policy W10 of Devon Waste Plan) Established Strategic Waste facility at Greendale Barton (Policy W6 of Devon Waste Plan)	1
3	Outside of coal mining affected areas No nitrate and phosphates identified	5

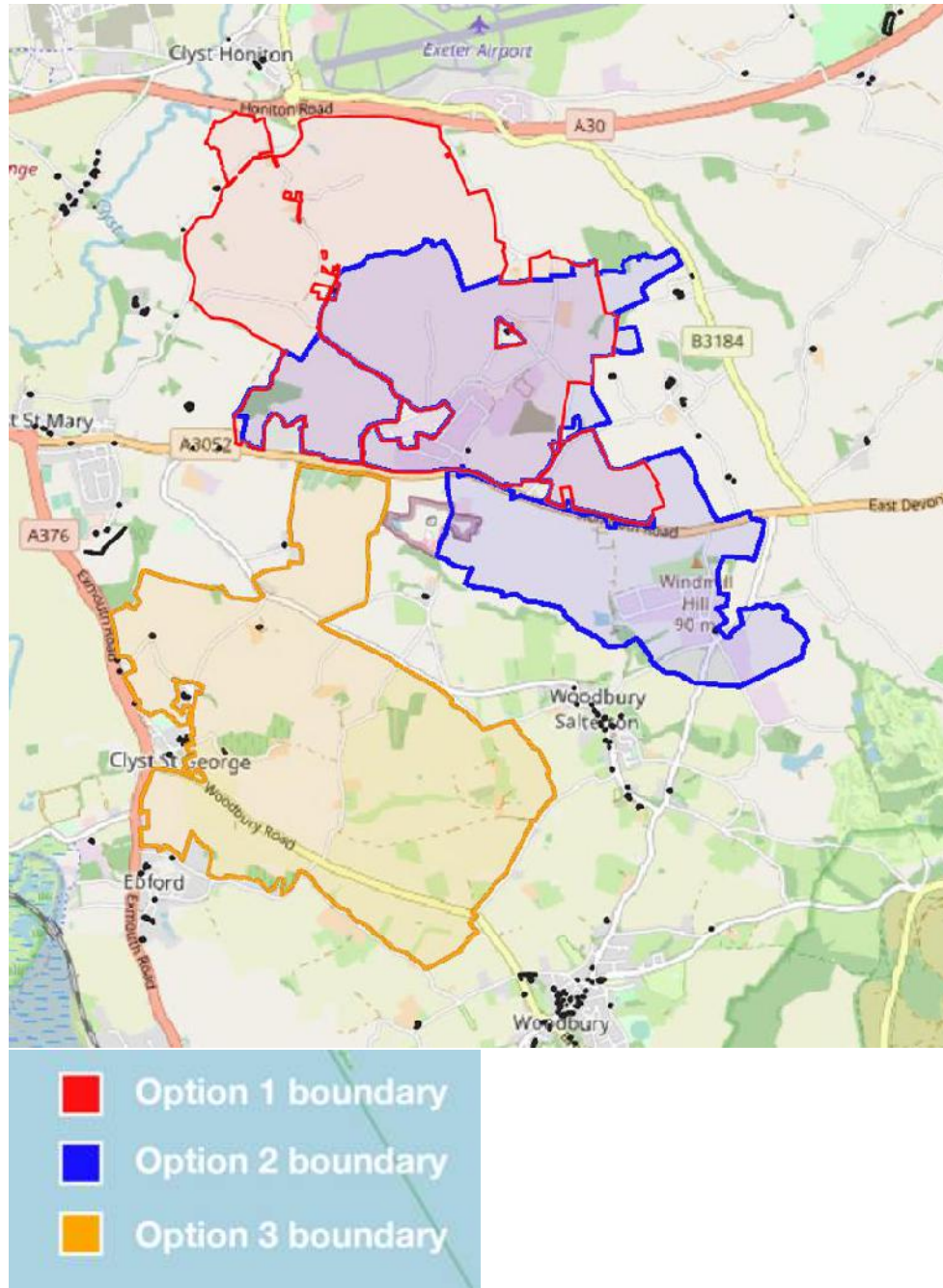
Source: CBRE (2022)

- 6.43 All Options were identified as outside of coal mining areas and Options 1 and 3 have no nitrate and phosphate areas identified.
- 6.44 Option 2 is the most constrained as it contains zones for water source protection, nitrate vulnerability and an area of medium priority for phosphates.
- 6.45 It has also been noted that there is a mineral safeguarding zone at the Hill Barton industrial estate which related to an existing asphalt plant (Devon Mineral Plan – Policy M2). There is also established strategic waste facilities at both Hill Barton Business park and Greendale Barton (Devon Waste Plan – Policy W10 and W6) – this affects both Options 1 and 2.

### Historic Environment

6.46 We have undertaken an assessment of land and property within the historic environment with the key findings summarised below.

**Figure 6.2 – Listed Buildings**



Source: Tibbalds (2022)

6.47 In Option 1 there is one Grade II listed property to the south east that remains in the site area. All other land and property (including Grade II and II\*) has been excluded from the land identified for the proposed settlement. A registered park and garden is also located close to its north western boundary.



- 6.48 In Option 2 there is one Grade II listed property that remains in the site area. All other land and property (including multiple Grade II and II\*) has been excluded from the land identified for the proposed settlement.
- 6.49 In Option 3 there are three Grade II listed properties that remain in the site area. All other land and property (including multiple Grade II and II\*) has been excluded from the land identified for the proposed settlement. There is a scheduled monument (Animal Pound) off Woodbury Road located on the western boundary of the site.

**Table 6.6 – Historic Environment**

<b>Option</b>	<b>Score</b>
<b>1</b>	<b>3</b>
<b>2</b>	<b>3</b>
<b>3</b>	<b>3</b>

Source: CBRE (2022)

- 6.50 This assessment identifies that in each Option there remains at least one and a maximum of three Grade II listed buildings and as a result these are all scored equally as a medium risk but would be subject to appropriate mitigation. As we indicated in Section 3 the land budget excludes land that is part of the historic environment. That said even though historic buildings and registered parks/gardens are outside the site areas of the Options the potential impact upon the setting of those places will be protected as part of the masterplanning of the preferred Option.
- 6.51 A number of variations have been considered for each Option and the chosen location have been refined to ensure that the historic environment would not be subject to convergence with the potential new community. Where the Options do abut the historic environment, the intention at the masterplanning stage of the project will be to ensure that adequate separation, through a substantially sized landscape buffer, is provided to respect the character of the existing settlements. The masterplanning will allow for any potential impact on the historic environment to be sufficiently screened given the extensive public open space land budget.
- 6.52 The three site locations have been developed to provide as far as possible nucleated, compact settlements. This form of development is conducive to the application of active travel measures.
- 6.53 The boundaries for the three site locations have been defined using landscape features, including existing watercourses, field boundaries and hedgerows, to create rational settlement edges.



**Agricultural Land Classification:**

- 6.54 Based on high level data of the quality of agricultural land across the Option it would appear that land within Option 1 is likely to be entirely grade 3. There are however pockets of land within grade 2 within Option 2 land and some larger areas to the north and west of Option 3.
- 6.55 Whether these areas are being used for food production or could feasibly be used for this purpose is unclear and without detailed soil investigations it is hard to draw any firm conclusions on the quality of agricultural land and soil resources in the area. Further work would be needed to conclude on this issue and as a result this hasn't been scored as part of the assessment.

# 7. Sustainable Accessibility Assessment

## Introduction

- 7.1. This section of the report has been based on the Sustainable Access Review (SAR) completed by Hydrock and included in full at Appendix B. The scoring has been reviewed given the additional work undertaken.
- 7.2. The SAR focuses on the opportunities and constraints for enabling and facilitating travel by sustainable transport modes, given the requirements of local and national policy, and the climate emergency context. It also provides preliminary commentary on the nature and quality of provision for access by sustainable modes to be embedded in the design of the new community, and the integration of new and emerging transport technologies – with greater detail to be provided once a preferred Option is progressed.
- 7.3. The National Planning Policy Framework (NPPF – as updated 5th September 2023) sets out the government’s planning policies for England, focusing on the promotion of sustainable transport at Chapter 9, where it states “Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.” The provision of development with sustainable transport is supported by a number of publications by the Department for Transport, including the Transport Decarbonisation Plan (2021), Gear Change: a bold vision for cycling and walking (2020), and The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy (2018).
- 7.4. Furthermore, EDDC is committed to becoming carbon neutral by 2040, with a five-year strategy and action plan in place to support this goal. This recognises that transport has a large part to play in tackling climate change, as the transport sector has been the largest greenhouse gas (GHG) emitting sector in the UK since 2016.
- 7.5. The new settlement will be shaped by a vision which places an emphasis on active travel, greater connectivity and innovative transport technologies, in line with the Exeter Transport Strategy (2021). This will include a step change in transport planning, embedding Triple Access Planning and with a shift from ‘Predict and Provide’ to ‘Vision and Validate’ (alternatively known as ‘Decide and Provide’), supported by:
- Chartered Institution of Highways and Transportation (CIHT) – Better planning, better transport, better places (August 2019);
  - Town and Country Planning Association; Garden City Standards – Guide 13; Sustainable Transport (September 2020); and

- TRICS Guidance Note: On the Practical Implementation of the Decide and Provide Approach (February 2021).

- 7.6 Central to delivering this approach will be the inclusion of the 20-minute neighbourhood principle. The concept is based on ensuring that the daily needs of most people can be met within a short walk or cycle. The approach is not about limiting or restricting people's movements or use of vehicles, but about creating a situation where walking and cycling become attractive, logical and realistic options for travel. For example, a 10-minute bike ride to a local shop on a safe and direct cycle route may become more attractive than a half hour drive to a larger shop. The larger shop remains an option, and may well be used for big, weekly shops, but there is a local facility for top up and utility shopping.
- 7.7 This results in multiple benefits including improved mental and physical wellbeing, reduced traffic congestion, improved noise and air quality and a stronger local community. The integration of land-use planning and transport planning is a key mechanism to facilitate 20-minute neighbourhoods alongside the Triple Access considerations: physical mobility – spatial proximity – digital connectivity.
- 7.8 As such, the three Options have been analysed and assessed based on their ability to deliver sustainable accessibility. Each Option has been provided with a score across four key areas; walking, cycling, public transport, and proximity to employment. The scores for each individual category are scores out of five (5 – high, 3 – medium, 1 – low), which are subsequently averaged to achieve an overall score.
- 7.9 We summarise below the key findings of the assessment of each Options proximity to employment as well as their existing and future potential to accommodate walking, cycling, and public transport. It also summarises the high level consideration of future-proofing for new and emerging modes of transport, which will need to be integrated within the design of whichever Option site is ultimately preferred by EDDC.

## Assessment by Mode

### **Walking**

- 7.10 As the Options are located in predominantly rural locations, internal pedestrian connectivity within all three Options is presently relatively undeveloped. However, the new community will require a network of convenient, direct, permeable, safe and easy to navigate pedestrian routes that are able to accommodate the needs of all users.
- 7.11 These routes will vary in their nature - e.g. alongside carriageways, through public open space, and adjacent to cycle routes. They should be consistent with the requirements of guidance including Manual for Streets (or its successor documents) and provide a level of priority over motorised modes in line with the Highway Code.

- 7.12 The development should include areas of low- or no-traffic, following the principles of shared-space, or play streets, and green/tree-lined streets promoted in guidance and required by policy.
- 7.13 External connectivity also reflects the Options’ rural locations, with footways along the A3052 and B3174 Old Honiton Road providing the key pedestrian facilities in the immediate vicinity of all three Options. These routes offer reasonable east/west connections. The footway on the A3052 terminates in Cat and Fiddle, with no existing provision further into Option 2.
- 7.14 The proposed Clyst Valley Trail, which was subject to public consultation earlier in 2022, offers a north/south multi-use link adjacent to Exeter’s eastern boundary and within the vicinity of Options 1 and 3. The generally steeper topography of Option 2 poses a challenge to a potential route of this nature linking into Option 2.
- 7.15 The new community will need to provide connectivity into existing walking networks and, in many cases, significant upgrades to provision in order to incentivise walking. For the purposes of this comparative exercise, summary scores have been attributed to each of the Options based on the above factors.
- 7.16 Scores have been attributed to each of the Options based on these factors, provided in the table below.

**Table 7.1 – Sustainable Accessibility Scoring Assessment – Walking**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Walking</b>	4	1	4

Source: Hydrock (2023)

**Cycling**

- 7.16 The Local Highway Network in the vicinity of the Options has limited dedicated cycling infrastructure, but the rural nature of many of the local lanes currently results in relatively low traffic volumes, meaning that they can be suitable for cyclists. As evidenced by Strava heat maps and observations during Hydrock’s site visit, cyclists frequent the roads in and around the three Options.
- 7.17 Whichever site is taken forward by EDDC for the new community, it will need to be served by high quality, safe and direct cycle routes that accommodate the needs of all users and provide appropriate priority over motor vehicles, in line with LTN1/20, the NPPF and the recently-revised Highway Code. These will need to be provided within the development and also to connect it to wider employment, retail and leisure opportunities.
- 7.18 Cycle connectivity from Option 3 is comparatively strengthened by the proximity of the Option to the National Cycle Network (NCN) Route 2, which is located approximately 1.5km south-west from the centre of the Option. NCN Route 2 provides a largely traffic-free link along the eastern flank of the Exe estuary, connecting Option 2 to Exeter City Centre and Exmouth Town Centre.
- 7.19 Similarly, Option 1 benefits from a shared footway/cycleway along Old Honiton Road to the north of the Option. This high-quality route connects the north of Option 1 to Cranbrook to the north, and Exeter to the west via the Science Park. . Option 1 also provides the opportunity to create north-south links through the

development. Options 1 and 3 both benefit from two links in the emerging Local Walking and Cycling Implementation Plan (LCWIP) for the area.

- 7.20 Option 2 is isolated from existing dedicated cycle infrastructure, and local topography is less conducive to facilitating cycle movements internally. The emergence of micro-mobility modes (such as e-scooters) and the continued growth of e-bikes could mitigate these issues in the future – hills are less of an issue on electrically-assisted vehicles.
- 7.21 Each Option would benefit from the inclusion of an on-site mobility hub to facilitate these emerging modes of travel.
- 7.22 Based on this information, summary scores have been assigned to each of the Options as set out below:

**Table 7.2 – Sustainable Accessibility Scoring Assessment – Cycling**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Cycling</b>	4	2	4

Source: Hydrock (2023)

- 7.23 As with the comparative assessment of current/potential access by other modes, it is expected that new and upgraded cycle connections will be required to support the new community, ensuring attractive and safe access to surrounding settlements, local facilities, employment and education. Further detail regarding the nature of these connections forms part of the scope of the next stage of assessment work.

**Public Transport**

- 7.24 The new community will require high-quality, frequent and direct public transport provision linking with nearby settlements, employment, education, retail and other services beyond those which will be provided within the settlement.
- 7.25 The level and convenience of provision should make public transport an attractive proposition for all parts of the community, reinforcing the vision that the private car should be the mode of last choice for residents and visitors.
- 7.26 Mirroring the wider transition away from internal combustion engine vehicles, the public transport fleet should focus towards a zero-emissions strategy.
- 7.27 To the north of Option 1, route 4/4A/4B currently runs through Clyst Honiton, linking to Cranbrook north of Option 1. A potential fourth variation of this route could enable it to serve Option 1, and provide a direct link between the potential new community and Cranbrook.



- 7.28 Similarly, the 56/56A service could potentially be diverted to travel through Option 1, utilising a potential north/south link road in order to serve the new community.
- 7.29 Option 1 benefits from existing bus priority infrastructure (bus lanes) at Junction 29 of the M5.
- 7.30 Option 2 is well served by existing routes 9, 52 and 56, which could potentially be diverted into the Option. Additional bus stops adjacent to any proposed access towards the centre of the Option would facilitate uptake of these existing services.
- 7.31 The 57 and 58 routes could serve Option 3, though with no existing bus stops along the A376 or within the immediate vicinity of the Option potentially diverting these services, providing an additional stop close to Clyst St George would be required.
- 7.32 It is apparent that all three Options are well-connected by bus via the A3052 links. Options 2 and 3 also have added connectivity when compared to Option 1 due to their proximity to stops served by the 56/56A. It is apparent that the northern portion of Option 01ne is relatively isolated from any existing bus infrastructure, and a new dedicated service will likely be required.
- 7.33 All three Options are expected to need improvement to local bus services. Analysis has demonstrated that given the size of the development, a c.10-minute frequency service for the development is likely to be commercially viable. This, coupled with the upgrading of existing bus stop facilities, would provide a significant enhancement on the existing services within the area of all three Options, for both existing local communities and future residents of the new settlement. Option 1 would again provide the opportunity to create a north-south link through the development.
- 7.34 In relation to rail, Options 1 and 3 benefit from their proximity to Exeter and the series of stations located along the Avocet Line. Cranbrook station is the closest station to Option 1, providing prospective residents with the opportunity to travel directly to London Waterloo. Option 2 has comparatively poor connections to rail, with the closest railway station being Digby & Sowton. Option 3’s closest station is Topsham.
- 7.35 The public transport summary score for each of the Options accounts for both bus and rail considerations, and is presented below this accounts for BOTH current provision and the ability to deliver suitable future upgrades to incentivise public transport use:

**Table 7.3 – Sustainable Accessibility Scoring Assessment – Public Transport**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Public Transport</b>	4	2	4

Source: Hydrock (2023)

**Employment Accessibility Context**

- 7.36 In line with the ethos of the 20-minute neighbourhood, the new community will contain a mix of uses that includes employment, and will focus on minimising external trips. However, the importance of proximity to existing employment is recognised, as it facilitates sustainable transport modes ensuring that they become viable and realistic modal Options for commuters.
- 7.37 In all Option locations, sustainable transport links to external employment areas will need to be upgraded to be sufficiently attractive to ensure they are used from the outset of the development, and so the proximity of the locations has been taken as the key comparative difference between the Options.
- 7.38 Options 1 and 3 benefit from their proximity to Exeter due to the volume of employment opportunities located within the city. The employment centres located in proximity to Option 2 are limited to the Hill Barton and Greendale Business Parks. Option 3 is also located in close proximity to a range of facilities in addition to Exeter (Winslade Park, Topsham Town Centre etc.). Option 1 benefits from the largest amount of employment opportunity which in addition to Exeter include Exeter Airport and the associated Airport Business Park as well as the SkyPark, Science Park and Exeter Business Park/Met Office facility.
- 7.39 Options 1 and 3 also potentially offer greater opportunities for on-site employment and commercial development, as both are served by more than one main road (the A30 and A3052 for Option 1 and the A376 and A3052 for Option 3). This gives them more reliable accessibility by road for delivery and distribution of goods, making them more attractive and viable sites for future business occupants. Both sites lie a similar distance from the M5, with the Option 3 being further away.
- 7.40 The employment accessibility summary scores reflect the proximity to employment, shown below:

**Table 7.4 – Sustainable Accessibility Scoring Assessment – Employment Accessibility**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Employment</b>	5	3	4

Source: Hydrock (2023)

**Summary**

- 7.41 The scoring assessment referenced earlier is replicated below.

**Table 7.5 – Assessment Criteria and Scoring**

<b>Criteria</b>	<b>Scoring</b>
Sustainable transport	<b>Sustainability:</b> High – 5 Medium/High - 4 Medium – 3 Low/Medium - 2 Low - 1

Source: CBRE (2022)

7.42 These scores are presented in the table below. These are then factored to an equivalent score out of five (calculated by averaging across all categories)

**Table 7.6 – Sustainable Accessibility Scoring – all modes**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Walking</b>	4	1	4
<b>Cycling</b>	4	2	4
<b>Public Transport</b>	4	2	4
<b>Employment</b>	5	3	4
<b>Total</b>	<b>17</b>	<b>8</b>	<b>16</b>
<b>Average Score</b>	<b>4.3</b>	<b>2</b>	<b>4</b>

Source: Hydrock (2023) Note – As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

7.43 For the avoidance of doubt the average score per Option is used only to identify the Preferred Option/s in the summary section for each technical assessment.

7.44 As can be seen Options 1 and 3 perform strongly across all categories, with Option 1 performing marginally better. Option 2 falls some way behind and would require the greatest level of intervention, and provides the lowest opportunity to promote sustainable transport.

**Future Proofing**

7.45 The new community will need to provide for new and emerging transport technologies from the outset – e.g. in the case of Electric Vehicles (EVs) – and should, as far as possible, seek to avoid unintentional constraints on the integration of future technologies as they emerge.

7.46 The SAR describes the current EV context for the EX5 postcode area and East Devon more generally. Highlighting the key role of on-plot residential chargers, on-street, and destination public charging in enabling EV uptake in line with National Grid and other’s projections. Some of the required provision will be in line with the specifications set out in Building Regulations it is noted that East Devon and the EX5 area in particular has comparatively high EV charging demand which will increase further in the near future.

7.47 Research by the RAC Foundation indicates that 29% of the potential future EVs in the area will not have access to an off-street private charger. Using the highest National Grid projection, this would equate to more than 2,500 EVs in the area based solely on current households. Consequently, the number, type and location

of EV charging will be a key consideration in the design of the new community, to enable the EV transition in line with policy and demand.

- 7.48 Options 1 and 3, due to their proximity to the M5, may provide an opportunity for some strategic publicly accessible charging to help facilitate longer-distance travel by Evs in the South West.
- 7.49 Linked considerations will include the availability of electrical power for EV charging (alongside the site's wider power requirements) and the use of Evs within a shared-mobility solution (e.g. Co-Cars).
- 7.50 Alongside this, the SAR notes the important role of e-bikes and micro mobility (e.g. scooters) within the modal mix for the new community. E-bikes already have a proven role in enabling widespread cycle use, overcoming topographical issues, reducing car usage and encouraging active lifestyles. In respect of micro mobility, it is expected that the forthcoming Transport Bill will build on data from ongoing e-scooter hire schemes, and will legalise private e-scooter usage alongside other micro mobility technologies. The design of the new community will encompass provision for such modes from the outset and into the future.
- 7.51 The SAR also addresses the need for the new community to integrate emerging and future Autonomous Vehicle (AV) technologies which are likely to include private and shared-use road vehicles, public transport vehicles, and delivery drones (ground-based and, potentially, airborne – subject to discussion with Exeter Airport and the relevant authorities).
- 7.52 The need to integrate Avs is not simply a function of technological advances. Rather, the masterplan needs to provide for Avs in a way which benefits all users – e.g. geometry and materials choice can enable both AV movements and also aid users including pedestrians, cyclists and people with mobility/sensory difficulties – minimising street clutter and maximising clarity in the layout.

# 8. Highways Impact

## Overview

- 8.1 This section of the report explores the highways impacts associated with three potential locations for the new town. The note concentrates on highways capacity and delay, informed by a SATURN traffic model held by Devon County Council (DCC) which has been run by WSP. The scoring has been reviewed given the additional work undertaken.
- 8.2 The new community will be shaped by a vision which places an emphasis on active travel, greater connectivity and innovative transport technologies, in line with the Exeter Transport Strategy (2021). However the potential impacts that such a development would have on the operation of the local and strategic highway networks remain a key consideration, resulting from the duties set out within Section 16 of the Traffic Management Act 2004:

*The network management duty:*

*(1)It is the duty of a local traffic authority [or a strategic highways company (“the network management authority”)] to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives—*

*(a)securing the expeditious movement of traffic on the authority’s road network; and*

*(b)facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority.*

*(2)The action which the authority may take in performing that duty includes, in particular, any action which they consider will contribute to securing—*

*(a)the more efficient use of their road network; or*

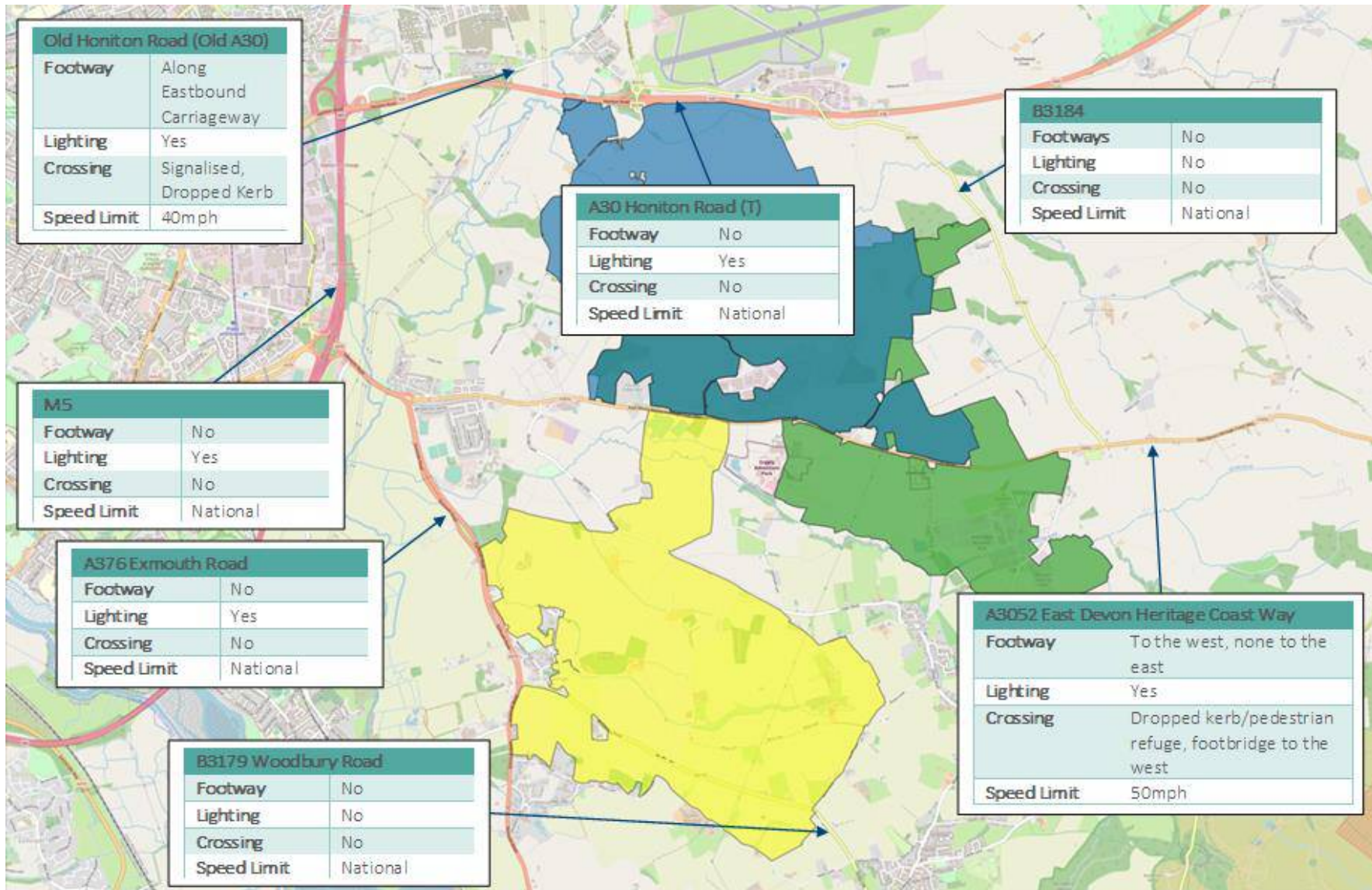
*(b)the avoidance, elimination or reduction of road congestion or other disruption to the movement of traffic on their road network or a road network for which another authority is the traffic authority; and may involve the exercise of any power to regulate or co-ordinate the uses made of any road (or part of a road) in the road network (whether or not the power was conferred on them in their capacity as a traffic authority).*

## Local Highway Network

- 8.3 The local highway network in the vicinity of the three Options is summarised at Figure 8.1, with key junctions highlighted in Figure 8.2.



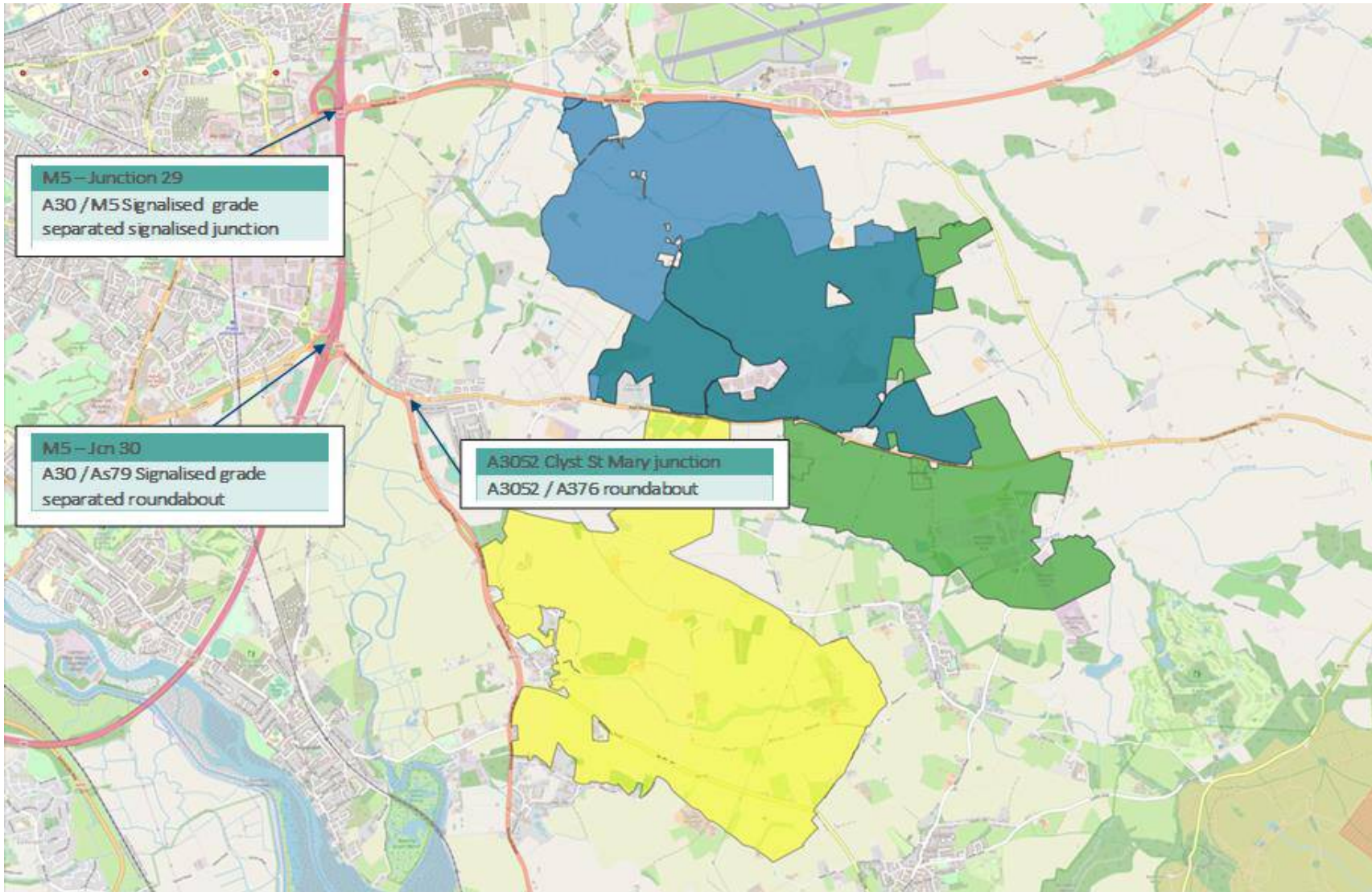
**Figure 8.1: Local Highway Network**



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Source: Hydrock (2022)

**Figure 8.2: Key Junctions**



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Source: Hydrock (2022)



## Highways Impact

### Introduction

- 8.4 This section has been prepared in liaison with DCC as the Local Highway Authority (LHA). It is based on a modelling report commissioned by DCC from WSP during 2022, using DCC's traffic model of the Greater Exeter (GE) area (referred to as the "GE Model") using the SATURN strategic modelling software package.
- 8.5 The GE Model is understood to have been developed by DCC in liaison with National Highways (NH – the Strategic Highway Authority, responsible locally for the M5 and A30). It covers the Local Planning Authority (LPA) areas of Exeter, East Devon, Mid Devon, and Teignbridge, which has a combined population of approximately 475,000 people.
- 8.6 The work commissioned included a review of base year and 2030 forecast models, reflecting the current and anticipated highway conditions, review and modification of the forecasting process, and the production of an updated end-of-Plan 2030 scenario.
- 8.7 The GE base model represents a typical weekday in November 2017, covering the following time periods:
- AM Peak: 08:00 – 09:00
  - Inter-Peak: Average hour 10:00 – 16:00
  - PM Peak: Average hour 16:00 – 18:00
- 8.8 Within the WSP work, the model examines three future development scenarios equivalent to Options 1, 2 and 3, with 2,500 dwellings in each scenario – an assumed level of build-out up to the 2040 end of the Plan period. These developments have a modelled year of 2030, which due to lack of growth on major roads within the model, is stated to be a suitable proxy for 2040 for the local road network. No additional local plan or background growth beyond the existing adopted Local Plans for the districts of Exeter, Mid Devon, East Devon and Teignbridge has been included and the purpose is solely to compare the three options. Junction analysis is included later in this chapter but this is likely to change once this additional development is added into the model which will take place at the next stage of work.
- 8.9 The WSP model report sets out the reasoning for modelling 2,500 dwellings at this time, as opposed to the potential full 8,000 homes within the new community. As confirmed by DCC, the reasons for this include:
- The nature of the DCC model, alongside Local Plan timescales, means that a traditional approach has had to be taken to trip generation, based on typical trip rates for the proposed land-uses. As part of the next stage of work, exploring in more detail the transportation effects of whichever site is preferred by EDDC, the impact of 8,000 homes can be reviewed using a Vision & Validate approach. This would enable greater account to be taken of the trip reduction, mode shift (to sustainable modes)

and internalisation effects that can be achieved as part of the overall masterplan – with ‘economies of scale’ based on the overall quantum of development.

- The existing DCC model has a forecast year of 2030. The timescales for delivering a development of 8,000 new homes are unclear, and the model does not include other future development beyond what is in the current adopted Local Plans for the surrounding districts. Consequently, the simple addition of traffic from an 8,000-home development would not represent the overall future development scenario within East Devon or the wider area, which are currently unknown.
- New national and regional traffic growth projections (‘TEMPRO’) from the Department for Transport become official in November 2022 and include multiple future scenarios reflecting economic, technological, regional and behavioural metrics. This will replace the current version of TEMPRO. The DCC model would need to be updated to reflect the new version of TEMPRO when it becomes current.
- Notwithstanding that the new DfT traffic projections enable forecasting up to 2061, longer-term forecasts in particular need to be treated with caution given the rapid pace and scale of change in travel behaviours and technologies, as well economic factors.
- The existing model cannot take account of the above, meaning that testing a development of 8,000 homes would currently have the potential to result in unrealistic or unsuitable re-routing of vehicles within the model, unreliable results and the potential design of unwarranted or excessive mitigation infrastructure.

8.10 The detailed report prepared by WSP for 2,500 homes has been approved by DCC. Development impacts have been extracted and summarised within this chapter, which also explores potential mitigation Options.

8.11 It should be noted that this preliminary round of modelling work by WSP includes predictions of the traffic attraction of the new community based on an exercise carried out by DCC to create a set of bespoke car trip rates for new communities within the Greater Exeter area. This was derived from an AM Peak average of five urban survey sites from Greater Exeter Spatial Plan settlements. This was then factored to Inter Peak and PM Peak periods using factors derived from the TRICS database.

8.12 This trip prediction methodology implicitly assumes that travel habits at the new community will remain similar to those of recent developments in the Exeter area. However, given the relatively long delivery periods for new housing from planning through to occupation, some of the sustainable travel initiatives at the surveyed sites are unlikely to reflect the latest developments in Transport Planning in terms of encouraging sustainable modal choices (e.g. through provision of electric bike sharing schemes).

8.13 The new community will include a range of infrastructure improvements and promotion measures designed to encourage sustainable modal choices and to reduce the use of cars. The community will also be designed to maximise the trip internalisation (i.e. trips that remain within the overall settlement boundary) by providing a range of employment, leisure and retail facilities in tandem with new housing.

- 8.14 As a result, the initial modelling exercise is likely to overestimate the vehicle trips associated with the new community. Over the course of the project, the modelling will be repeated and updated with a finessed set of trip rates reflecting the various measures employed to encourage sustainable transport choices. The discussion and summary provided below are based on the initial trips rates and are therefore likely to show a robust, worst-case scenario, with some of the identified congestion potentially mitigated by encouraging a shift towards more sustainable habits.
- 8.15 A later, additional round of modelling was completed by WSP (September 2023) on behalf of DCC that reviewed the combined development impacts across all four of the districts in the Greater Exeter area (Exeter, East Devon, Teignbridge and Mid Devon), with only one development location (broadly equivalent to Option 1) reviewed in East Devon. This has been considered by Hydrock as part of this updated Option Appraisal but for the avoidance of doubt only provides more detailed modelling for an area broadly equivalent to Option 1. As this additional modelling has not been undertaken for Options 2 & 3 a comparative assessment of all options can't be undertaken, as this would be inconsistent, and for this reason the scoring assessment has not been updated to reflect the updated modelling.

### **Option 1**

- 8.16 Option 1 shows relatively small changes in traffic on the M5, A30 and A380, resulting in generally small increases in delay. However M5 J29 sees some increases in delay in the AM and PM models, mostly on the east side of the M5. Clyst St. Mary Roundabout also shows some impacts from the development site, with 33 seconds of extra delay on the westbound approach in the AM model and 35 seconds of extra delay on the eastbound approach in the PM model, plus additional turning delay at the roundabout itself.

### **Option 2**

- 8.17 Option 2 shows relatively small changes in traffic on the M5, A30, A38, and A380, and minimal changes to delay as a result.
- 8.18 There are however significant impacts at the Clyst St Mary Roundabout. This sees 277 seconds of additional delay on the westbound approach in the morning peaks and 160 second increases on the eastbound approach in the afternoon peak.
- 8.19 In addition, there are increases in delay to the east of Exeter, particularly at Bond's Lane / Woodbury Road junction and at the Topsham Road junction.

### **Option 3**

- 8.20 Option 3 is similar in terms of its impacts in the morning peak, but sees more significant impacts in the afternoon peak.
- 8.21 There are minimal overall changes in delay on the mainline at M5 J29 and J30 and on most of the road network to the east of Exeter. M5 J29 and J30 see some increases in delay in the AM and PM models, focused



on the east side of the M5 at J29 and the north side of the junction at J30. However, Clyst St. Mary Roundabout shows some significant impacts from the development site, with around 50 seconds of extra delay on both the eastbound and westbound approaches in the AM model and 136 seconds of extra delay on the eastbound approach in the PM model, plus additional turning delay at the roundabout itself.

**Summary**

8.22 Table 8.1 below summarises the delay impacts identified within the WSP modelling: Impacts have been scored from 1 to 5, with minimal adverse impacts scoring 5, minor impacts 4, moderate impacts 3 and significant impacts 1. Note that the Airport Junction has not been included in this table, as it has not been comparatively tested across all the options.

**Table 8.1: Highways Delay Impact Summary**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>M5 Junction 29</b>	Minimal impact (5)	Minimal impact (5)	Minimal impact (5)
<b>M5 Junction 30</b>	Minimal impact (5)	Minor delay increases (4)	Minor delay increases (4)
<b>M5 Junction 31</b>	Minimal impact (5)	Minimal impact (5)	Minimal impact (5)
<b>A30</b>	Minimal impact (5)	Minimal impact (5)	Minimal impact (5)
<b>A3052</b>	Minor delay increases (4)	Minor delay increases (4)	Minor delay increases (4)
<b>A38 and A380</b>	Minimal impact (5)	Minimal impact (5)	Minimal impact (5)
<b>Clyst St Mary Junction</b>	Moderate delay increases (3)	Significant delay increases (1)	Significant delay increases (1)
<b>East of Exeter Network Impacts</b>	Minimal impact (5)	Significant delay increases (1)	Minimal impact (5)
<b>TOTAL</b>	<b>37</b>	<b>30</b>	<b>34</b>

Source: Hydrock (2022)

8.22 Based on the above, WSP forecasts that Option 1 has the least significant highways impact and it appears that the development of 2,500 new homes up to the end of the Plan period could be accommodated without significant highways interventions. Whilst there would be increases in traffic in some areas, the modelling carried out suggests that these would not lead to significant increases in delays. Minor highways mitigation works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required.

8.23 The location of Option 1 between the A30 and A3052 does also provide the opportunity to create a north-south link between these radial routes. This would make the highway network more permeable, as opportunities for north-south link in this area are currently limited, and local knowledge suggests that many

drivers are therefore making short trips between Junctions 29 and 30 of the M5. Similarly, there are few opportunities to re-route in case of congestion or incidents at either of these junctions. A north-south link would therefore provide increase resilience and is likely to be valuable in future development scenarios beyond the 2,500 dwellings that were modelled.

- 8.24 WSP's modelling indicates that Option 3 can also be accommodated with relatively little in terms of mitigation works, with only the Clyst St Mary junction anticipated to see significant delay increases. An improvement of this junction or other appropriate mitigation would be required. It should however be noted that, due to the proximity of the Clyst St Mary junction and the M5 Junction 30, there is likely to be interaction between the two, and increasing capacity at the Clyst St Mary junction may have impacts at Junction 30, with traffic arriving at the junction more freely than it does at present.
- 8.25 Option 2 can generally be accommodated, but has significant impacts at both Clyst St Mary and the East of Exeter road network, with improvements likely to be required at both locations.
- 8.26 It should be noted that the WSP modelling accounts for development traffic up to the end of the new Plan period only. Additional testing would be required in order to determine the potential impact and mitigation requirements for a potential 8,000 new homes. In addition, this is based on only modelling the 2,500 dwellings and not the other allocations in the East Devon Local plan or additional development in Exeter and Mid Devon. This will take place at the next stage and may change these outputs.

## Mitigation Potential

### Overview

- 8.27 Table 8.1 sets out the development impact without mitigation (i.e. without making improvements to address the changes to delay). The main individual junction that will require improvement is the Clyst St Mary roundabout. Whilst there are some increases in delay at M5 Junction 30, this is already a significant piece of highways infrastructure, with grade separation, traffic signals and multiple lanes for most movements. It is therefore unlikely that any significant physical capacity improvements could be achieved.
- 8.28 There is likely to be potential to achieve minor improvements to J30 such as more efficient operation of traffic signals or minor changes to lane markings to accommodate heavier traffic movements. These could only be identified through detailed modelling work, so are not considered further in this report – this would be addressed in the next stage of transport assessment work, once a preferred site has been identified by EDDC. However, any physical works associated with these initial minor adjustments to the junction are likely to be minor and deliverable.
- 8.29 The ability to create a north-south link between the A30 and A3052 via the Option 1 development area is considered beneficial, as it would provide a more resilient and permeable highway network that is more likely to be able to accommodate growth beyond the 2,500 dwellings modelled.

### **A30 Airport Junction**

- 8.30 The existing Clyst St Mary roundabout is a conventional roundabout with two lane entries on the A3076 (west) and A3052 arms, three lanes on the A3076 (south) entry and a single lane on the northern arm. It has a central 'throughabout' lane running from west to east and south. This is not in general use, and is only opened under supervision of marshals during events at the nearby Westpoint Arena. The junction has an inscribed circle diameter of approximately 80m.
- 8.31 The Airport Junction is a dumbbell configuration, with a bridge over the A30 with a roundabout at its northern and southern ends. The WSP modelling appears to assume that the East Devon development would be served by two accesses, a new junction to the south onto the A3052 and northern access onto Bishop's Court Lane, the southern arm of the airport junction.
- 8.32 A review of National Highways boundary data indicates that there is significant room to expand the junction if required. The roundabout is on top of a relatively large embankment, but could be enlarged with appropriate engineering works to the embankment. This could be by extending its footprint, increasing its gradient (possibly in combination with soil reinforcement), or replacing it with a retaining wall.
- 8.33 Although there would be a cost associated with these engineering works and junction improvements, they are considered to be highly deliverable. Any of the options examined would require access junctions, which would also have associated costs, so the overall difference between the options is likely to be relatively minimal.
- 8.34 It should be noted that, as with the schemes described above, any improvement would need to be subjected to detailed modelling and significant scheme development will still be required. However, engineering judgement suggests that the scheme is likely to succeed.
- 8.35 Scheme development would be undertaken as part of any formal planning application process, particularly if this junction forms one of the key accesses to the site.

### **Clyst St Mary Roundabout**

- 8.36 The existing Clyst St Mary roundabout is a conventional roundabout with two lane entries on the A3076 (west) and A3052 arms, three lanes on the A3076 (south) entry and a single lane on the northern arm. It has a central 'throughabout' lane running from west to east and south. This is not in general use, and is only opened under supervision of marshals during events at the nearby Westpoint Arena. The junction has an inscribed circle diameter of approximately 80m.

**Figure 8.1: Existing Clyst St Mary Roundabout Layout**



Source: Hydrock (2022)

### **Improvement Options**

8.37 Five initial Options for mitigation works at this junction have been considered at this stage:

- Signalisation of existing layout
- Signalisation and full use of throughabout
- Replacement with signals
- Removal of northern arm
- Westpoint park and ride

8.38 These are discussed in more detail below. It should be noted that none of these schemes has been subjected to detailed modelling and significant scheme development will still be required as part of future assessment work for the preferred Option site. However, high-level engineering judgement has been applied at this stage to consider whether the schemes would be likely to succeed.

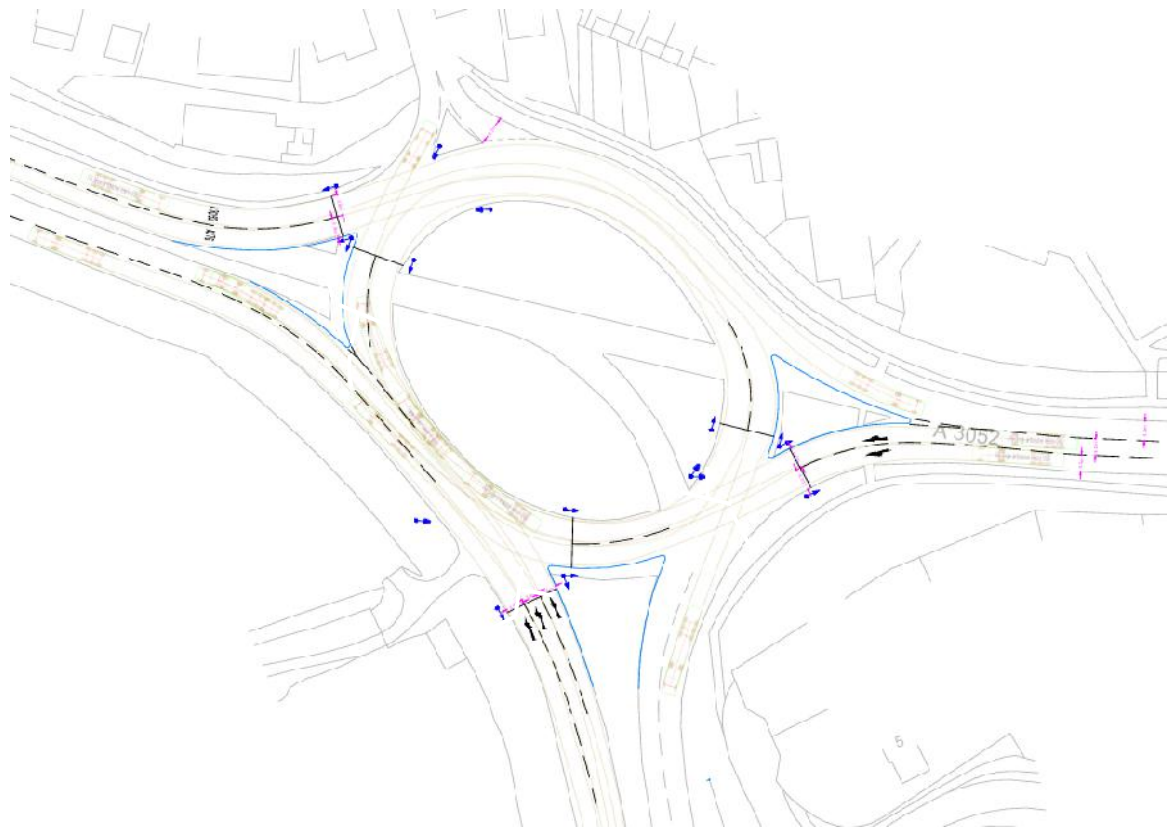


## Signalisation of Existing Layout

### Potential scheme

- 8.39 The modelling does not indicate overall capacity issues, but rather individual arms experiencing delays due to the tidal nature of the traffic flows. The large size of the junction means that it would be possible to part-signalise it to allow flows to be rebalanced.
- 8.40 With four-arm junctions, the most efficient operation is generally achieved by signalling three of the four arms, with the remaining arm operating on a priority basis (as a conventional roundabout). In this instance, it is likely that the northern arm would not be signalised due to its relatively low traffic flows. A sketch of this arrangement is shown below:

**Figure 8.2: Signalised Roundabout Option**



Source: Hydrock (2023)

### Deliverability

- 8.41 A scheme of this nature would allow capacity to be rebalanced to address the tidal nature of the traffic flows and has a high probability of addressing capacity issues. There is also potential to coordinate the traffic signals with Junction 30 and the Clyst Road signals.
- 8.42 The scheme requires relatively minimal physical works and no additional land. It is therefore considered to be deliverable. Detailed design and modelling would be required to test the circulatory queuing.



## Signalisation and Use of Throughabout

### Potential scheme

8.43 As above, use of the throughabout section could help to address the tidal nature of the traffic flows. A sketch of a potential scheme is shown below:

**Figure 8.3: Throughabout Option**



Source: Hydrock (2022)

### Deliverability

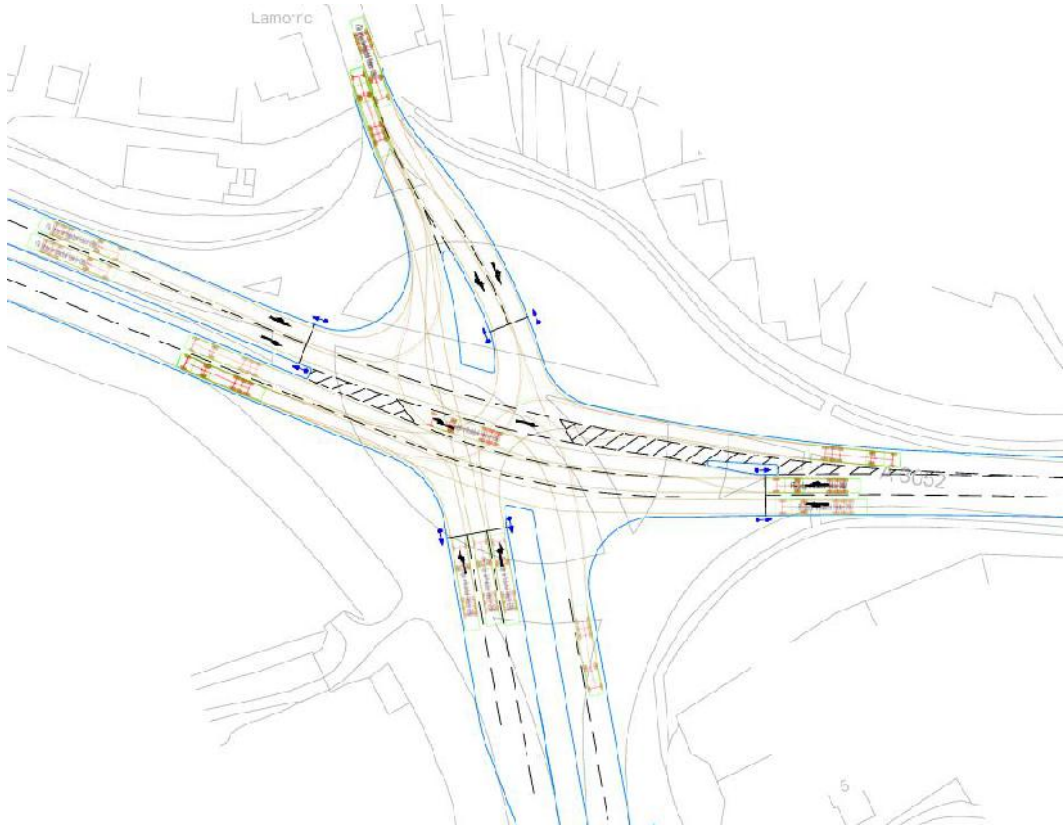
8.44 The size of the junction means that stacking capacity for queues would be limited, and it is unlikely that enough queue storage could be provided on the circulatory, leading the junction to 'lock up'. As a result, this is not considered to be a realistic approach.

## Replacement with Signals

### Potential scheme

8.45 Under this Option, the roundabout would be removed and the junction would become a signalised crossroads. Removal of the roundabout would free up a significant amount of highways land, allowing for multiple lanes to be created as required. Sketches of potential arrangements are shown below:

**Figure 8.4: Signalised Crossroads Option A**



Source: Hydrock (2023)



**Figure 8.5: Signalised Crossroads Option B**



Source: Hydrock (2023)

### **Deliverability**

8.46 A scheme of this nature would allow capacity to be rebalanced to address the tidal nature of the traffic flows and has a high probability of addressing capacity issues. There is also potential to coordinate the traffic signals with Junction 30 and the Clyst Road signals. The scheme requires relatively minimal physical works and no additional land. It is therefore considered to be highly deliverable. It does also offer the opportunity to reclaim some highway land or to use the space for bus priority or cycle measures.

## Removal of northern arm

### Potential scheme

- 8.47 Simply removing the northern arm of the junction would reduce the potential vehicle interactions on the roundabout, and in theory should therefore free up some capacity. However, the impacts of this are unpredictable without modelling, as flows may become unbalanced. There would also be a significant impact on residents in the Frog Lane area to the north of the junction, which would now take its main access from the Bishops Clyst priority junction. This may also impact on emergency access to the area.

### Deliverability

- 8.48 Removal of the northern arm would be highly deliverable in terms of physical engineering works, but its capacity impacts are unpredictable without modelling. It is also unlikely to be popular with local residents without improvements to the Bishops Clyst junction. Additional traffic would also be forced along Bishops Clyst, which is narrow and passes a school. As a result, this scheme is not recommended.

## Westpoint Park and Ride

### Potential scheme

- 8.49 The Westpoint Arena lies to the east of the junction and provides a large, open area with a well-developed access junction. It is well located to intercept trips into Exeter from the east and therefore to limit traffic through both the Clyst St Mary junction and M5 junction 30 Junction. There are already park and ride services operating from the Sowton site, so this route could potentially be extended to the Westpoint Arena, minimizing the number of additional vehicles required.

### Deliverability

- 8.50 Physical costs should be relatively minimal due to the infrastructure already in place at the Arena. There would however be an ongoing revenue cost in terms of bus operation and lease / rent of the Arena. In addition, consideration would need to be given to how the park and ride service could operate during events such as the Devon County Show. However, the service could also help people to access these events by bus, so there are benefits for both parties.
- 8.51 This scheme is considered to be highly deliverable, and would be fully policy compliant in terms of encouraging use of sustainable modes. It would also benefit M5 Junction 30.

## Clyst St Mary Roundabout

- 8.52 There are a number of potential Options for improvement of the junction, the majority of which are likely to be deliverable. Due to the large size of the junction, acquisition of third-part land is unlikely to be required.

As with any major highways re-design, utilities within the road are likely to be a major risk item in terms of costs and would need to be clarified as part of the next assessment steps. An improvement scheme requiring minimal physical intervention would reduce this risk, so signalisation of the existing layout or creation of a new park and ride are likely to be preferred ways forward. A new park and ride would also encourage sustainable transport use and have a knock on benefit at Junction 30 due to reduced traffic demand. All mitigation options would require detailed design and junction capacity modelling.

### **East of Exeter Mitigation**

- 8.53 The area to the east and south of Clyst St Mary is only significantly affected by Option 2, particularly around Woodbury Salterton and at the A376 junction with Topsham Road. The Woodbury Salterton impacts are likely to be a result of the section of Option 2 that lies close to the village. Due to their proximity to the site, it is likely that these impacts could be addressed through the planning application process, as the minor local roads are likely to require improvement in any event. It is unlikely that a strategic-level highway improvement would be required. However, these highway improvements would be an additional cost on the development, and may therefore affect viability and / or affordable housing provision.
- 8.54 The A376/Topsham Road junction is effectively a mini-roundabout, and is closely fronted by third-party land. A straightforward capacity improvement through the creation of additional lanes does not appear to be achievable within the existing highway boundary. On the southwest corner of the junction, there is an open field, and it would need to be confirmed whether it is possible to obtain part of this to provide room to create either a larger roundabout or signalised junction. The levels and vertical alignment of the field also appear to be favourable to achieve this without requiring highways structures. A sketch of a potential roundabout Option is provided below.



**Figure 8.5: A376 / Topsham Road Junction Enlargement**



Source: Hydrock (2023)

8.55 In engineering terms, this appears at high-level to be deliverable, but would require acquisition of third party land, which is a risk item. Overall, likely deliverability is considered to be moderate. The scheme would require detailed design and junction capacity modelling.

## Summary

8.56 The modelling work undertaken shows that Options 2 and 3 would have traffic impacts at the Clyst St Mary Roundabout, with Option 2 also impacting on surrounding local roads.

8.57 In terms of their highways impacts, Option 1 would be the preferred development scenario, followed by Option 2 and then Option 3. Option 1 appears to require no strategic level mitigation measures (other than those that would be addressed as part of the normal planning approval process), Whilst Options 2 and 3 would require improvements at the Clyst St Mary Roundabout, with Option 2 also requiring improvements around Woodbury Salterton and at the A376 / Topsham Lane junction.

8.58 The location of Option 1 also provides the opportunity to create a north-south route through the development area, linking the A30 to the A3052. This would provide greater permeability and resilience for the highway network, which would help to accommodate future growth beyond the plan period.

8.59 Based on an initial desktop reviews, it appears that, despite their larger delay impacts, it would be possible to mitigate the impacts of both Option 2 and 3 if these were to be taken forward. This would be through either localised capacity improvements or demand reduction schemes.

8.60 As a result, it is concluded that at this stage there are no fundamental highways constraints that would prevent any of the development Options coming forward based on the results of the DCC model run by WSP, which has tested the effect of 2,500 new homes up to the end of the new Plan period (2040). However, additional modelling will need to be carried out to further test the network at the next stage, including additional local plan growth.

8.61 The following table summarises development impacts, and the likely deliverability of appropriate improvements. Where no improvements are required, deliverability has been scored a 5-4 depending on likely costs and risks, good deliverability a 3-4, moderate deliverability 2-3, poor deliverability scores 1 and a fundamental highways constraint would score 0.

8.62 The scoring assessment referenced earlier is replicated below, with total scores for each option averaged and then factored to a score out of 5 for consistency with other areas examined within this Option Appraisal..

**Table 8.2 – Assessment Criteria and Scoring**

<b>Criteria</b>	<b>Scoring</b>
Highways Impact	<b>Impact:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5

Source: CBRE (2022)

**Table 8.3: Highways Delay Impact and Mitigation Summary**

Assessment Category	Option 1		Option 2		Option 3	
	Impact	Deliverability	Impact	Deliverability	Impact	Deliverability
<b>M5 J29</b>	5	5	5	5	5	5
<b>M5 J30</b>	5	5	4	5	4	5
<b>M5 J31</b>	5	5	5	5	5	5
<b>A30</b>	5	5	5	5	5	5
<b>A3052</b>	4	5	4	5	4	5
<b>A38 &amp; A380</b>	5	5	5	5	5	5
<b>Clyst St Mary junction</b>	3	4	1	4	1	4
<b>East of Exeter Network Impacts</b>	5	5	1	2	5	5
<b>TOTAL</b>	<b>37</b>	<b>39</b>	<b>30</b>	<b>36</b>	<b>34</b>	<b>39</b>
<b>IMPACT &amp; DELIVERABILITY AVERAGE</b>	<b>38</b>		<b>33</b>		<b>36.5</b>	
<b>AVERAGE</b>	<b>4.8</b>		<b>4.1</b>		<b>4.6</b>	

Source: Hydrock (2022)

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

- 8.63 Based on the above, Option 1 would be most preferred in terms of highways impact, followed by Option 3, with Option 2 being least preferred.
- 8.64 Next steps would be to carry out more detailed modelling at the Clyst St Mary Roundabout and the A376 / Topsham Lane junction based on the flows predicted by the SATURN modelling. This would allow mitigation schemes to be developed in greater detail to gain an understanding of likely costs and risks. It is also recommended that preliminary discussions are held with the owners of Westpoint Arena to determine the potential to use the site for a park and ride, as this could have wider benefits.
- 8.65 As part of the next steps, a trip forecasting exercise will be undertaken. This will include trip generation taking into consideration travel minimisation and internalisation calculations within an overarching Vision and Validate approach whereby a 20-minute neighbourhood is used to support the default usage of sustainable transport modes.

- 8.66 Trip distribution will be reviewed utilising strategic modelling (provided by others), allowing for comparative network impacts.
- 8.67 Overarching commentary will then be provided on the above, alongside a tabular review.
- 8.68 Once a Preferred Option has been identified a High-Level Transport Assessment will be undertaken on that particular Option.

# 9. Utility and Net Zero Carbon Infrastructure

## Introduction

- 9.1 This section of the report provides an overview of the potential capacity of utilities and net zero carbon infrastructure to serve the three Option sites and the potential for these sites to contribute to net zero carbon development. Further detail is provided in Appendix E for utilities and Appendix F for net zero carbon.
- 9.2 The scope of the utilities assessment includes the following utility services:
- Electricity (heat and power);
  - Gas (including district heating);
  - Potable Water;
  - Telecommunications (fibre); and
  - Foul Drainage.
- 9.3 We also consider the impact of a Net Zero Carbon development and climate resilience factors.
- 9.4 Hydrock have undertaken due diligence on utilities for the proposed locations and have investigated whether the existing nearby utility infrastructure could support development. We provide an overview of existing utility services, high level capacity and new supply strategy advice, and advise the extent at which diversionary works might be required.
- 9.5 The primary challenges expected in bringing forward a new settlement in East Devon with respect to utilities will be around capacity and infrastructure to support the increased demand. Early engagement with the utility providers will be key. As well as developing a detailed, thought-out and collaborative strategy that considers both the immediate needs of the site and the local community, and the need for futureproofed utility and energy infrastructure. Taking the development through its years of construction and in-use for years to come.
- 9.6 It should be acknowledged that the opportunities and constraints of the three Options within this report are only marginally impacted by geographical location. An example being the presence of extra-high voltage electricity infrastructure on two of the three sites and not the other. Or proximity to existing clean water trunk mains possibly reducing the distance from the main Source of Water (SoW). This would make an Option slightly more favourable, but would not exclude the other Option from any opportunity, or present an unavoidable obstacle for that Option. A suitable utility strategy would be employed at each of the three Option sites and may face equal challenges, as only marginal differences between the sites.
- 9.7 Within the Utilities assessment in Appendix E, consideration is made for some Options to ensure a futureproofed and net-zero utilities infrastructure delivery strategy, such as incorporation of; Smart micro-grid systems, EV Charging, energy generation and battery storage solutions, as well as Options for



alternative operator/ownership models such as NAVs (New Appointments and Variations), IDNOs (Independent Distribution Network Operator), ICPs (Independent Connection Provider) and ESCos (Energy Services Company).

- 9.8 No infrastructure deemed to be "showstopping" to development has been identified on any three of the Option sites. However, Option 2 does contain a National high pressure gas main which is classed by the Health and Safety Executive as a "major accident hazard pipeline" and poses some considerable design limitations, particularly with regards to proposals for public residence.
- 9.9 It is highly likely all Options will require some level of utility diversion and disconnection to facilitate any new development. Some areas have utility services that are more problematic to divert than others. Equally, some of the areas have services running in existing highways which may help limit the number of diversions required, depending on the proposed masterplans and variations to existing
- 9.10 This assessment is based upon utility information that has been provided by third parties and is a desktop assessment only. The presence of onsite infrastructure should be confirmed by the client's contractors, and safe working practices adhered to at all times. Please note that utility asset information is only valid for three months from the point of issue as networks are constantly changing. Therefore, we recommend updating any enquiries once this time has elapsed.

## Utilities Capacity Overview

- 9.11 This section provides an overview of the utility network's capacity in the study area and offers advice on a likely new utility supply strategy for all three Options, before differentiating the Options by their opportunities in this regard.
- 9.12 As stated in the introduction, the geographical location only marginally affects the outcomes of a capacity assessment with a development of this scale. Each of the three Options would proceed with a new supply strategy that will trigger reinforcements and new major infrastructure installations, regardless of site location.
- 9.13 The main differentiator in this case is only proximity to existing Extra High-Voltage (EHV) networks, presenting an option for a bulk Point Of Connection (POC) and land opportunities for new substation infrastructure directly beneath, and similarly, proximity to clean water trunk mains.

### **Electricity**

- 9.14 As part of this report existing capacities on Western Power Distribution's (now "National Grid Electricity Distribution" – referred to as NGED) grid infrastructure have been assessed using Long Term Development Statements and heat maps in order to identify the level of constraint in the local electrical infrastructure, and to identify opportunities for securing capacity.
- 9.15 The full site load of all Option sites is to be determined; however, given the targets for decarbonisation of heat and transport (i.e. the energy strategy would likely incorporate some form of electric heating, either by

Air Source Heat Pumps (ASHPs) or other technology, and the provision of EV charge points for futureproofing), we expect the power load for this development to be significant – in the region of 30MVA to 50MVA.

9.16 This load calculation is based on an assumption that all homes will be electrically heated via air source heat pumps and that each home with an associated car parking space will have a fast EV charge point.

9.17 It is unlikely that the Option sites can be served from the existing available capacity in the grid. Therefore, both reinforcements and new dedicated bulk and primary infrastructure installations are anticipated, and a phased ramp up and use of capacity is recommended in line with the phasing of the development.

9.18 It is expected that the most likely feasible strategy would focus on providing a new Bulk Supply Point (BSP) for the site from a POC to NGED's existing 132kV infrastructure. Timescales for this would need to be determined with NGED once an understanding of the likely phasing is developed.

9.19 A supply for initial phases of the development could potentially be formed via POCs to existing local infrastructure, such as the 11kV, which would not require Primary substation infrastructure. This would also be dependent on capacity available at the time, and/or local HV reinforcements that could be undertaken on the 11kV networks in the short term.

9.20 Engagement with NGED once site loadings are able to be produced will assist in the formation of a strategy, as above, with their own network assessment, commentary and advice.

9.21 NGED have made a number of commitments to deliver a smart and flexible network, which includes a) minimising the requirement for load related reinforcement by adopting a 'flexibility first' approach in order to maximise the utilisation of the existing network; and b) unlocking capacity from the existing grid and therefore the need for reinforcement. This can be utilised with the development of the East Devon settlement to ensure a coordinated, smart and efficient connection strategy is implemented.

9.22 There are two existing BSP substations which provide the greatest opportunity of securing capacity from WPD's grid network for an initial phase of development:

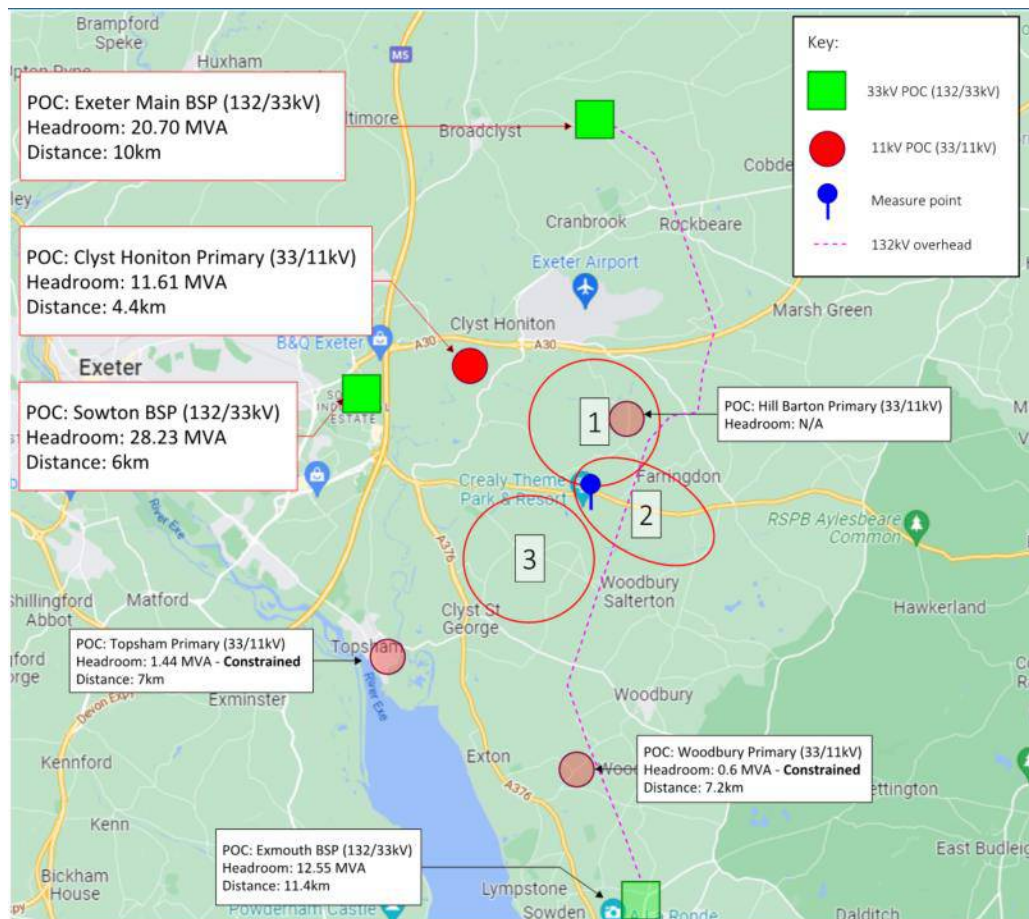
- 1 Sowton BSP, c.6km from site, has ~28.23MVA of capacity available which is a significant amount of power and could certainly serve the earlier phases of delivery;\*
- 2 Exeter Main BSP, c.10km to site, has ~20.70MVA of capacity available which is also a significant amount of power which could serve the earlier phases of delivery;\*

*\*Noting this is only a snapshot of the current situation and should be reviewed regularly for changes and updates.*

9.23 On Option 1, there is also a 33kV/11kV Substation 'Hill Barton Primary' which may present an opportunity for early phase connections, however, capacity information on this substation is not currently available. This substation is located within Hill Barton Business Park, so it's expected to be at capacity serving the existing industrial estate and any proposed connections to this would trigger some level of reinforcements. There may be an opportunity to expand this substation however, given that the land is already within NGED ownership.

- 9.24 A Reservation Of Capacity Connection Offer (ROC) could be a suitable Option for EDDC, as the full site capacity could be reserved on NGED’s network, and be delivered in line with the build programme.
- 9.25 With regards to Utility Delivery Models, there are opportunities to engage with Independent Distribution Network Operators to provide an embedded network within WPD’s (now “National Grid”) wider supply area, and offer ‘Asset Value’ discounts under the Competition in Connections (CiC) market that OFGEM commits to as mechanism to benefit consumers through increased quality, or decreased prices, or both. This Option is equally suitable for any site location.
- 9.26 Smart Microgrids also offer an alternative delivery model, benefitting both Net Zero Carbon targets with regards to ensuring renewable electricity generation is maximised and utilised on site within a smart controlled network with storage facilities, as well as lowering site electrical demand and thus slightly less reliance from the Grid or the Distribution Network Operator (DNO) network, and being able to set energy prices for customers through the creation of an Energy Services Company (ESCO). Further benefits are detailed within the Net Zero Carbon Infrastructure section, and within the technical appendices. An overview of the major power infrastructure in reference to all three Option sites is shown below.

**Figure 9.1 – Power Infrastructure**



Source: Hydrock (2022)

## **Gas**

- 9.27 As of 2025, gas boilers will be banned in the UK for newly built homes. Therefore, it is assumed gas will not be part of the sites heating strategy.
- 9.28 For further commentary on heat sources and Net Zero targets, see the following section on “Contribution to Net Zero”.

## **Water**

- 9.29 South West Water (SWW) is the incumbent water provider for East Devon, who will need to undertake assessments on their network to be able to provide a strategy to move forward with.
- 9.30 It is expected that all three site Options will require a significant level of reinforcements to the potable water network, potentially including offsite trunk main upgrades.
- 9.31 SWW’s strategic team have been made aware of the proposals and have expressed their desire to engage with EDDC to ensure a solution can be offered and infrastructure upgrades undertaken in line with the proposed build programme.
- 9.32 Without undertaking a water load calculation (which requires information currently undeveloped, such as a detailed building schedule or schedule of accommodation), SWW will only be able to comment from a high level perspective on the current state of their networks with regards to new supply provision, trunk main capacity etc.
- 9.33 In order to understand the implications of obtaining a clean water supply from SWW in more detail, a pre-development enquiry will need to be submitted including the expected water loads. For a scheme of this size, it is common for the water utility company to undertake water modelling. This process will allow SWW to assess their network and determine a strategy for how they will supply the site, and where the POC will be, whilst still serving their existing customers without negative affects to their water supply.
- 9.34 Water modelling typically takes 12 months to complete (6 months for modelling and 6 months for detailed design). A further 6 months is estimated for SWW to install the proposed supply solution, although this could extend depending on the level of upgrades needed.
- 9.35 It is unlikely that a site of this size would achieve a POC to a distribution main, but rather to a trunk main with a pressure reduction valve to reduce the water pressure down to be suitable for distributing to residential customers.
- 9.36 There is a key Ductile Iron (DI) trunk main shown to run along the A3052, which is in close proximity to all three Options, and runs directly through Option 2. SWW records also show the presence of a trunk main network shown to run in London Road and Honiton Road, north west of Exeter Airport, which is north-west of Option 1.
- 9.37 Given these locations, each Option is presented with an opportunity to connect to a trunk main, and the reinforcements required to accommodate the new development would not be differentiated between the

Options. The cost of reinforcement works are covered through infrastructure charges. Infrastructure charges are a one off charge, charged by all water companies for first time connections. Each new connection that adds a demand to the water and sewerage network will incur these costs. These charges ensure the upkeep and maintenance of the network.

9.38 New appointments and variations (“NAVs”) allow companies to offer water, sewerage or water and sewerage services to a specific geographic area instead of the existing incumbent company. As a result, similarly to the electricity market, developers and large business customers can choose their supplier for these services and enjoy the benefits of this competitive market.

9.39 Although the main Source of Water (SoW) will ultimately come from a SWW supply such as a reservoir or trunk main network, the ownership, operation, maintenance and wholesale of the water supply will then be under the chosen NAV. Therefore any issues with supply, quality of service, leaks, faults etc with the new water network will not be with SWW to resolve, but the newly appointed provider. Further detail on the process and list of active NAV operators in the UK is within the Appendix E.

### **Foul Drainage**

9.40 An assessment has been made of the potential foul flows that could be delivered by the whole development in order to ascertain the level of impact on the existing sewerage network.

9.41 Flows have been calculated using the recommendations contained within the Water UK Sewerage Sector Guidance, Appendix C, Homes & Community Employment Density Guide 2015, Section 4, and the British Water Flows and Loads.

9.42 On the basis of the above, the total Peak Flow is predicted to be 422 l/s and the total DWF 79 l/s. This is further broken down in the Appendix E.

9.43 It should be noted that this figure may be adjusted subject to discussions with SWW who may have their own factors to apply to large scale developments.

9.44 Due to the proximity of the three Option they all fall within the same catchment area for the existing sewerage network.

9.45 From an inspection of the SWW sewer record plans, existing foul and combined drainage in and around the development areas all drain generally to the west and ultimately discharge to the Countess Wear treatment works near Topsham. This is done via a mixture of gravity sewers and pumped mains, both foul only and combined systems.

9.46 In general, the three Options are in relatively rural settings and therefore there are not significant existing foul/combined drainage networks present. Those systems that are available are of small diameter (150/225mm) and therefore unsuitable to cope with the projected development flows.

9.47 At this stage it is anticipated that two opportunities exist for the disposal of foul drainage from all three Options as set out below.



### **(a) Discharge to Local Watercourse via New Treatment Works**

- 9.48 In view of the potential size of the development, it may be considered economic to provide a standalone treatment works which can discharge to the local watercourse network.
- 9.49 Option 1 has a tributary of the River Clyst running approximately through the centre of the site.
- 9.50 Option 2 benefits from the same tributary on its northern boundary as noted for Option 1, and from the Grindle Brook passing through the southern part of the site.
- 9.51 Option 3 has the Grindle Brook passing just within the northern boundary of the site area. An additional watercourse lies within the southern part of the site however it is likely to be too minor and possibly discontinuous to act as a receptor for treated water.
- 9.52 As a very high level guide, a new waste water treatment works may require an area of some 3 ha and have a potential overall cost of circa £10m. This option would also be subject to obtaining the necessary approvals from the Environment Agency.

### **(b) Connect to Existing SWW Sewerage Network**

- 9.53 As noted above, there are existing foul and combined sewers in and around the 3 Options. None at present will be of a sufficient size to cater for the proposed development flows.
- 9.54 Assuming that a point of connection is to be made to the existing network, it is evident that significant upgrades will be required to the system. Under normal charging arrangements, such upgrade works would be carried out by SWW at their own cost under the assumption that they will recoup their costs through standard charges for new house connections. However, this only applies from the point on the existing network where the size of the sewer is 'like for like' for the pipe diameter needed to serve the development on its own. In this instance, and using the estimated flows set out in section 2.2.2 above, this would approximately equate to a 700mm diameter pipe.
- 9.55 From an inspection of the available sewer record plans, there is no point on the existing network where a connection could be made to a 700mm diameter pipe. On this basis the developer would be responsible for all costs relating to the upgrading of the existing network.
- 9.56 The alternative could be to requisition a new outfall sewer purely serving the development site to the treatment works at Countess Wear. Given their relative locations, Option 1 would have a slightly longer distance and therefore potentially greater cost than Options 2 and 3 however this is likely to be relatively insignificant as a whole.
- 9.57 Improvements are likely to be required to the existing Countess Wear treatment works given the scale of the proposed development. These works would be undertaken by SWW as part of their 5 year Asset management Plan (AMP) for the relevant period.

- 9.58 In the case of all three Options, it is assumed that there will be one main point of discharge, either via a new treatment works specifically for the development, or connection to the Countess Wear works.
- 9.59 Due to the topography of each of the sites, local pumping stations will be required at a number of locations to convey flows to the main discharge point.

### **Telecommunications**

- 9.60 Procurement of telecom services is a low-risk item and is relatively straightforward to complete.
- 9.61 Openreach (who own and manage most of the existing telecoms infrastructure around the UK) along with Virgin Media and an increasing number of independent companies, will install fibre infrastructure to new developments at heavy discounts and rebates based on projected revenue from their new customers.
- 9.62 The traditional model for servicing a site, and buildings, with telecoms is for the service provider (e.g., Openreach) to run a fibre to a local cabinet (FTTC) and then run copper cables from the cabinet to serve individual units. This generally achieves between 67MBps to 100MBps. The step up from FTTC is fibre to the premise (FTTP), replacing the previous copper cable from the cabinet with a fibre connection. FTTP can provide speeds of up to 950MBps for their Jurassic fibre offer.
- 9.63 Hyperfast Broadband providers can offer speeds of up to 1GBps and guarantee connections for customers from day 1. These types of providers are enabling a futureproofed digital network within which new communities can be serviced with data connections suitable for a fast-moving data-focused communications landscape.
- 9.64 All three Options will be equally suitable for competitively tendered fibre offerings given the number of new residential and business customers that will be connecting to the networks.

## **Existing Utilities Infrastructure**

- 9.65 This section aims to provide an overview of existing utilities infrastructure which may pose constraints predominantly with regards to spatial limitations (i.e. easements and safety clearance distances to be adhered to within layout designs). Thus feeding into the scoring of the Option feasibilities with regards to the extent of the impacts or limitations posed and/or expected financial impact of reducing or removing such constraints through infrastructure diversions.
- 9.66 Option 2 has the most significant constraints, including a National Grid high pressure (HP) pipeline which is considered by the HSE as a “major accident hazard pipeline” or “hazardous installation”.
- 9.67 Option 2 is therefore considered to be the least viable for development, although not impossible to proceed with as there are numerous workarounds at the design stage for this constraint.

- 9.68 It is important to note that while existing onsite infrastructure poses some design considerations, in general it also presents opportunities for connections and upgrades to provide for a new town. With a utility requirement this large, a lack of onsite infrastructure would be more problematic than an abundance.

### **Option 1**

- 9.69 Option 1 has a large amount of electrical infrastructure and relatively small amounts of other utilities infrastructure.
- 9.70 A significant number of 11kV & 33kV cabling routes are present throughout the site. As most of the assets do not follow existing highways, it is assumed they are distributed via overhead lines. Therefore, diversions would likely be required to clear them from site or incorporate them into the masterplan with clearance strips.
- 9.71 Hill Barton Primary Substation exists within the Hill Barton Business Park/industrial estate.
- 9.72 A service corridor containing intermediate pressure gas, telecoms and a water main runs through the western half of the area. These mostly run in or near to existing highways and it should be possible to avoid any diversions. However, asset record information is indicative only and although aims to be as accurate as possible, the exact positioning can sometimes differ when onsite investigations are completed i.e. ground penetrating radar surveys or trial holes. Therefore it may transpire that these routes don't fully run in the highways and may require diversions if they cannot be accommodated with the masterplan.
- 9.73 The intermediate gas main could pose a key constraint depending on what portion is outside of the highways, due to the high costs and long timescales to divert.

**Figure 9.2 – Option 1 Existing Utility Infrastructure**



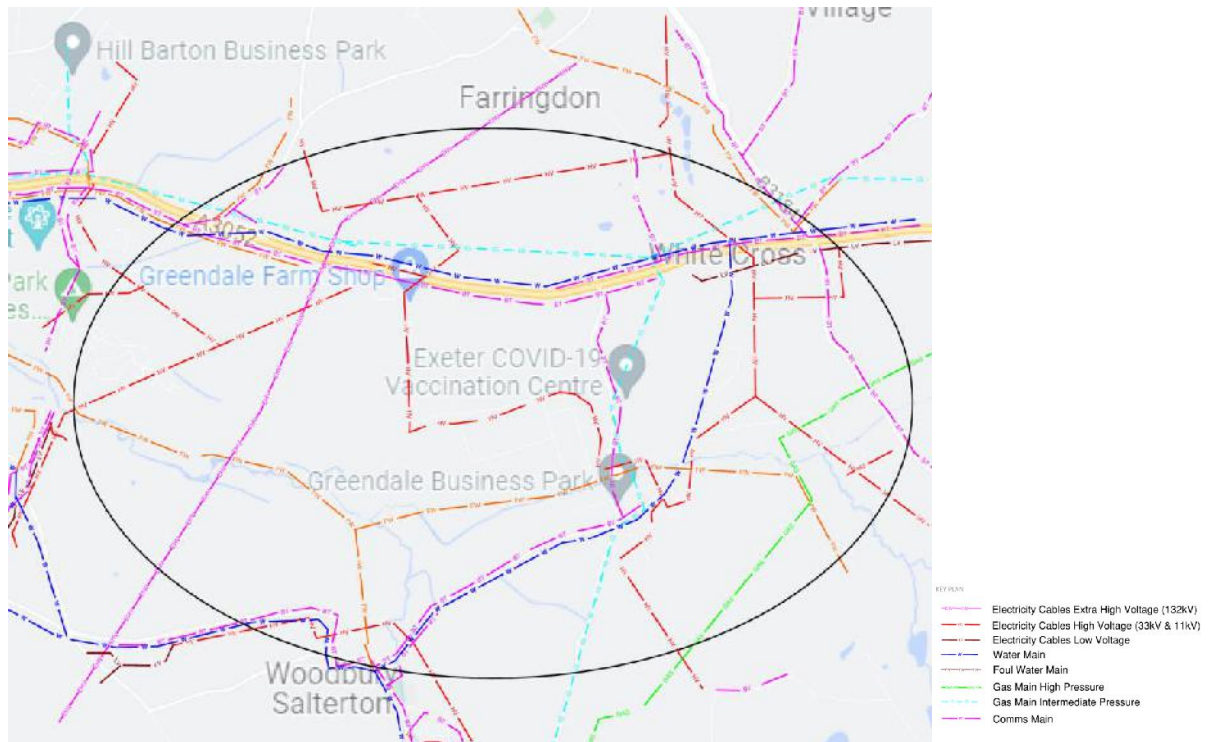
Source: Hydrock (2022)

**Option 2**

- 9.74 Option 2 has the most significant constraints including a high pressure gas main (HP), intermediate pressure gas mains (IP) gas mains and Extra high voltage electricity cables (EHV) which will need to be designed around due to the cost and time implications of diverting them.
- 9.75 EHV (132kV) overhead cabling routes through the site, which is a spatial constraint. Asset specific clearance distances must be kept between the cables and any permanent structure, and between cables and the ground. Additionally, a 30m zone must be kept free around the base of each tower for access for maintenance.
- 9.76 An intermediate gas main routes through various areas of this site. This could be a spatial design constraint depending on how much runs within highways and what portions impact the masterplan. An easement and no-build strip would need to be considered within any site layout designs.
- 9.77 A wider network of 33kV and 11kV cables are located in multiple locations across the area, which will likely require diversions.
- 9.78 Foul water and potable water mains are present across this area. The potable water mains look to run within existing highways.

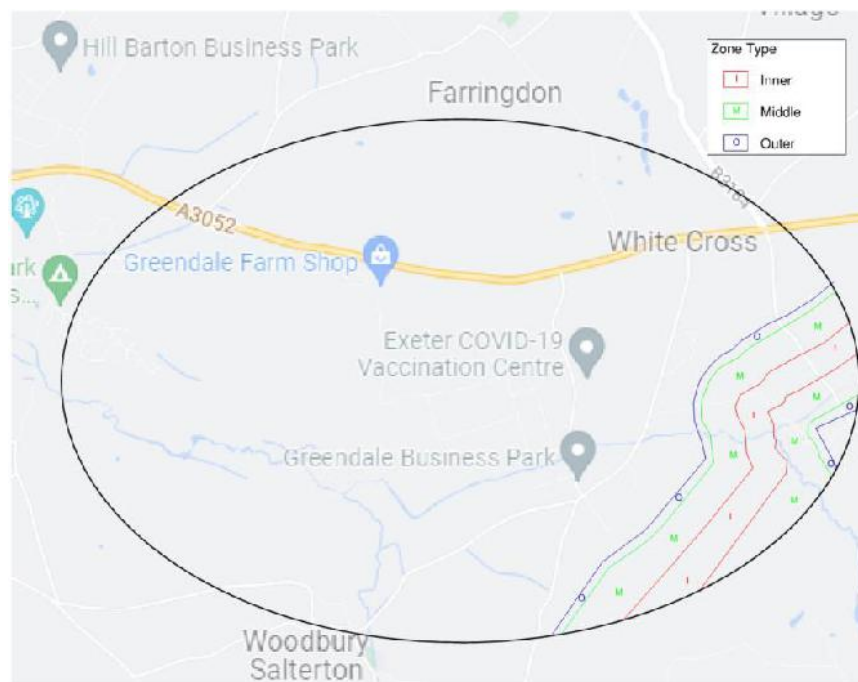
9.79 Comms is present in this area and it's anticipated these will be within existing highways and therefore no diversions will be required.

**Figure 9.3 – Option 2 Existing Utility Infrastructure**



Source: Hydrock (2022)

**Figure 9.4 – HSE consultation zones**



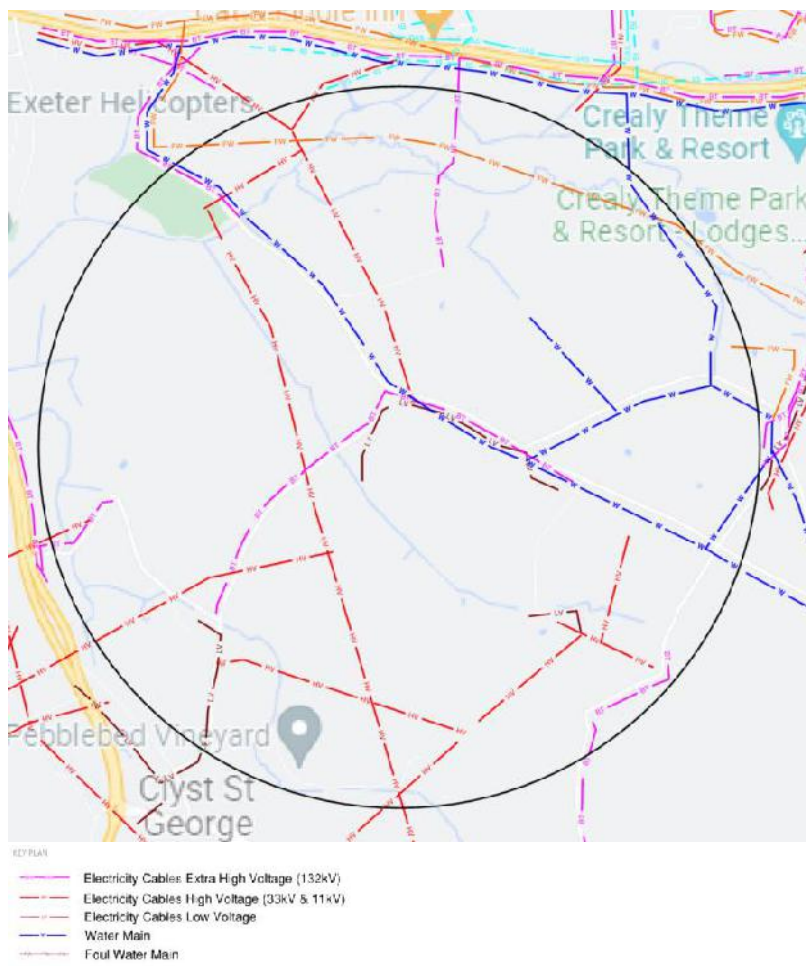
Source: Hydrock (2022)



### Option 3

- 9.80 Option 3 has a higher density of services than Option 1 however, a number of these look to run within existing highways and may in turn require a fewer number of diversions.
- 9.81 Various 11kV & 33kV cabling route through the site. As most of the assets do not follow existing highways, it is assumed they are distributed via overhead lines. Therefore, diversions would likely be required to clear them from site or incorporate them into the masterplan.
- 9.82 Multiple water mains are present with a primary route running through the centre of the site. The water mains generally look to be within existing highways which could limit the number of diversions required.
- 9.83 Foul water drainage routes through the northern edge of this area.
- 9.84 A relatively small amount of comms is present and its anticipated these will be within existing highways and therefore no diversions will be required.

**Figure 9.5 – Figure 9.3 – Option 3 Existing Utility Infrastructure**



Source: Hydrock (2022)

## Key Findings - Utilities

9.85 The three Options have been analysed based on the two categories; impact of existing utility infrastructure; and utility capacities or new connection opportunities. The outcome of the scored assessment is provided in the table below.

9.86 The scoring assessment referenced earlier is replicated below.

**Table 9.1 – Assessment Criteria and Scoring**

Criteria	Scoring
Utility & Net Zero Carbon Infrastructure	<b>Capacity:</b> High – 5 Medium/High - 4 Medium – 3 Low/Medium - 2 Low (limited) - 1

Source: CBRE (2022)

9.87 The outcome of the scored assessment is provide in the table below.

**Table 9.2: Utilities – scored assessment**

Assessment Category	Option 1	Option 2	Option 3
<b>Utility capacities and opportunities for connection</b>	4 Good opportunity	4 Good opportunity	2 Limited opportunity
<b>Foul Drainage capacities and opportunities for connection</b>	2 Limited opportunity	2 Limited opportunity	2 Limited opportunity
<b>Existing Infrastructure Impact</b>	3 Medium impact	1 Significant impact	3 Medium impact
<b>TOTAL</b>	<b>9</b>	<b>7</b>	<b>7</b>
<b>AVERAGE</b>	<b>3</b>	<b>2.3</b>	<b>2.3</b>

Source: Hydrock (2022) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

9.88 Option 1 is the highest scoring site from a utilities perspective due to the relatively minimal impact from existing major infrastructure, whilst also providing an opportunity to connect to WPD’s 132kV overhead for a new Bulk Supply Point to service the site with power.

- 9.89 Option 2 whilst a good opportunity for power connection similar to Option 1, is lower scoring due to the presence of the National High Pressure gas main, which will restrict development and layout.
- 9.90 Option 3 has an extensive amount of existing infrastructure to consider for either diversions to free up developable space, or layout impacts with clearance zones. It does not present as good an opportunity for electrical connection to the 132kV network.
- 9.91 All three Options are constrained for foul drainage capacities due to the rural locations not being served with extensive existing infrastructure. None of the three Options present any better opportunity than the other, with the strategy for providing a connection being the same.

## Contribution to Net Zero

- 9.92 The energy and carbon performance expectations for new developments are rapidly evolving as the UK moves towards a legislated net zero commitment by 2050.
- 9.93 At national level, the updated Building Regulations Part L (2021) revised the SAP methodology and carbon factors. The new regulations support the electrification of heat as a result of decarbonisation of the national power grid and a transition away from fossil fuel heating systems i.e. gas boilers. Significant carbon reductions are delivered through very high fabric standards, improved building services and use of on-site low carbon technology such as heat pumps or solar PV systems.
- 9.94 Part L 2021 requires a 31% carbon reduction (on regulated energy uses) when compared to Part L 2013. This is a 'stepping stone' to Future Homes Standard (FHS) which will ensure that all new homes built from 2025 produce 75-80% less carbon emissions than homes delivered under the 2013 regulations. New commercial buildings such as offices and shops must cut emissions by 27% under Part L 2021, as further work is undertaken to set a firm target on carbon reduction requirements within the Future Buildings Standard (FBS) for non-residential buildings.
- 9.95 Based upon expected delivery timescales, the new town for East Devon will require compliance with the incoming Future Homes and Buildings standards as a minimum and must deliver upon the emerging policy requirement for net zero from the outset to ensure that no further energy efficiency retrofit work will be necessary to make buildings zero-carbon as the electricity grid decarbonises.
- 9.96 In terms of industry best practice, Energy Use Intensity (EUI) metrics are used to set a net zero target. EUI, measured in kilowatt hours per m<sup>2</sup> per year (kWh/m<sup>2</sup>/annum) is the total amount of energy consumed by a building over a year divided by floor area, allowing easy and direct comparison of building performance and removing 'carbon intensity' which will have less relevance as fossil fuels are removed for heating.
- 9.97 EDDC declared a climate emergency in 2019 and has pledged to become a carbon neutral district by 2040. Based upon 2019 data, more than a quarter of the total CO<sub>2</sub> emissions in East Devon (4.25 tonnes of CO<sub>2</sub> emissions per capita) are contributed by the domestic sector, at circa 1.41 tonnes CO<sub>2</sub> per capita.

- 9.98 Emerging Strategic Policy 26 (Net-Zero Carbon Development) will require that all new residential and commercial development delivers net-zero carbon emissions. In addition, future development must maximise opportunities for delivery of renewable energy, district heat networks, zero-carbon energy and energy storage facilities.
- 9.99 Energy demand reduction provides the greatest opportunity for minimising CO2 emissions, which in turn also helps to address concerns with respect to fuel poverty as buildings with lower energy demand require less heating. This begins with appropriate passive design features at site level such as orientation, form and massing which must be considered from the earliest stages to benefit the masterplanning response.
- 9.100 In addition, carbon sequestration as part of offsetting for net zero in initial phases of development requires further assessment, influenced by the existing landscape and the ecology and biodiversity work by TEP.
- 9.101 Whilst passive design considerations and carbon sequestration contributions to net zero will predominantly be addressed by masterplanning and building performance design at the chosen site, this section considers the site Options in terms of opportunities and constraints for technologies and infrastructure that could contribute to achieving net zero.
- 9.102 Each Option is ultimately provided with a score across three key areas; network capacity (generation), zero or low carbon energy technologies and energy storage.

#### **Network Capacity (Generation)**

- 9.103 Given the need to include energy generation within the new town proposals, an assessment of network capacity for export to the national grid is beneficial.
- 9.104 The WPD upstream bulk supply points (BSP) assessed for supply have therefore also been reviewed for generation headroom. Where existing infrastructure cannot accommodate the theoretical output of the energy generation being exported onto its network then the DNO will not allow connection without first upgrading the equipment.
- 9.105 The BSPs from the existing WPD network in the vicinity of the site Options have been assessed for reverse power headroom (the amount of generation that can go back through the transformer) to provide an indication of the capacity for connection of new generators to export to the grid.
- 9.106 The results indicate that the available export capacity at Sowton BSP and Exeter Main BSP is committed by existing connection agreements for generators connecting upstream in the network and that network upgrades will be required to accommodate large scale new generation. This is likely to impact all three Options, noting however that there is some inconsistency with how future export connections and upgrades are presented with some included at a budget application (for which connection dates are often delayed) and some only at formal offer stage.
- 9.107 Whilst the upstream constraints must be acknowledged, at primary substation level there is some export capacity remaining at Clyst Honiston (7.04MVA) and Pinhoe (10.51MVA), both in closest proximity to site Option 1 and also at Topsham (2.37MVA), in relation to Option 3.

- 9.108 Further details are needed in relation to the Hill Barton Primary substation indicated on the WPD network map which would be most easily accessed by site Options 2 and 1.
- 9.109 On-site renewable energy generation 'behind the meter' for self-consumption within the site is more likely to be able to accept a certain level of export limitation (as a result of network constraints) when considering the significant carbon and cost savings against grid supplied power. Solar inverters can also be used to monitor and control the utilisation of power to the site (see Energy Storage).
- 9.110 It may be possible to secure some export capacity so that the limitation process is not activated the moment generation exceeds demand whilst allowing upgrade costs to be avoided or shared between stakeholders though 'fault levels' for the network would also need to be taken into consideration to ensure loss of power to connected customers is avoided.
- 9.111 A WPD budget estimate for the selected Option will inform the solution and provide budgetary costs, however, a formal application will need to be submitted for WPD to determine the exact export solution for the site.

#### **Low or Zero Carbon Energy Technologies**

- 9.112 Creating the right low or zero carbon technology mix for the new town will be essential. An emphasis is placed upon technology options that can aid the decarbonisation of heat as well as options for onsite power generation.
- 9.113 There are a small number of energy generation or low carbon heat technologies operating in the wider area including:
- Gorst Energy, Enfield Farm Anaerobic Digestion plant at Oil Mill Ln, Clyst St Mary;
  - Brook Energy, Biomass plant at Hill Barton Industrial Estate (and associated proposals for a 7.5km district heating interconnector from this facility with an available 37Mth of heat).
- 9.114 A public consultation was also undertaken in June 2022 in relation to a large solar farm (29ha) known as Ford Oaks Solar & Green Infrastructure Facility, proposed off Wescott Lane, close to Exeter Airport and Marsh Green village and bounding the A30. The planning application associated with the proposals is yet to be determined by EDDC but has met with a significant level of local objection at this location.

#### **Decarbonisation of Heat**

- 9.115 Where housing densities and heat demands are sufficient, low temperature site-wide heat networks, following the Danish model, can provide efficient and cost-effective low carbon heat to homes and buildings.
- 9.116 Air source heat pumps could be equally incorporated across all sites, with potential to install commercial scale heat pumps within energy centres to serve specific phases with a centralised system. It is noted however that when comparing the centralised and decentralised networks, decentralised dwelling level



systems represent the lowest CAPEX when compared to site scale solutions, due mainly to the additional costs associated with the buried district heating network.

9.117 The potential use of ground source heat pumps presents a key opportunity for the new town. There are a number of different ways to implement the technology, some of which may be influenced by the site selection.

9.118 Ground loop systems can operate as follows:

- **Closed loop:** in either horizontal or vertical configuration use the relatively constant temperature of the earth to heat refrigerant fluid instead of the outside air temperature.
- **Open loop:** Extracts groundwater which passes through a heat pump where heat is extracted. Running in reverse during summer months can also 'recharge' the ground, making it easier for a centralised system to work efficiently through the winter months

9.119 Two of the three sites (Options 1 and 3) demonstrate potential locations for open loop ground source technology which could be utilised as part of a technology mix for a low carbon heat network. Option 1 includes areas at the north and west of the location which are underlain by a moderately productive aquifer (12L/s) which is also captured by the western boundary of Option 3. Option 2 is underlain by rocks with no or very low levels of groundwater which would limit ground source heat pump technology potential to closed loop systems.

9.120 Where space is limited, vertical boreholes can be used in place of ground loop systems. This is usually more expensive than digging trenches and borehole depth depends on the heat demand of a property and the underlying site geology. Specialist ground (thermogeological) survey work would be required to confirm the suitability of each Option.

9.121 Hybrid models combining both ground and air heat sources could also be explored further for the chosen site to balance upfront costs with low operating costs, resulting in maximum system efficiency, cost effectiveness, and the potential for net zero emissions.

9.122 Whilst a heat network solution may offer improvements in carbon reductions, this must be considered alongside the potential increased cost of the infrastructure as well as ongoing operation and maintenance of the network. The extensive works undertaken to date by East Devon County Council on the extension to the Monkerton scheme and the connection of the Cranbrook scheme should be taken in to consideration. Heat network delivery, would be influenced further by site phasing and the heating (and cooling) demand profiles within each phase.

9.123 Decentralised dwelling level systems represent the lowest CAPEX when compared to site scale solutions, due mainly to the additional costs associated with the buried infrastructure of a district heat network.

9.124 The previous Low Carbon Study details the potential for Solar Thermal generation following the Danish Solar thermal interfacing with heat networks model. This solution has the potential to benefit any of the three Options however it is highly dependent on the selection of a heat network to deliver heat to the residences.

- 9.125 The selection of this delivery method may be dismissed due to the high capital outlay of the technology. If heat network delivery is a selected technology, solar thermal has the potential to lower heat price tariffs for residents. However, the technology may not be the best use of land if Energy from Waste (EfW) is able to provide the full load heating demand of the development.
- 9.126 Should a heat network not be selected in favour of a low CAPEX alternative, solar thermal should be reconsidered at an individual plot level for residential buildings.
- 9.127 EDDC have undertaken extensive feasibility and development works in relation to a potential heat network connector solution to deliver heat from the Hill Barton Energy from Waste (EfW) facilities which are presently under construction.
- 9.128 The combined heat output of the EfW plants is 37MWth and therefore connecting to this heat supply should be considered during site selection.
- 9.129 Due to the EfW plant location at Hill Barton each of the Options would be suitable for connection to the heat network interconnector/extension, although noting that the interconnector is not currently sized sufficiently to provide for the new town. Option 1 transits the proposed route of the interconnector; its proximity to the heat source therefore offers a cheaper and easier solution in comparison to the other options. Option 1 is therefore preferred in relation to this technology..
- 9.130 Connecting to this scheme would allow the “PipeCo” (a special purpose vehicle owned by EDDC for ownership and management of the buried infrastructure) and the potential future ESCo operator of the network to provide competitive heat tariffs in line with tariffs proposed for the existing users and with the potential benefit of reductions due to the economy of scale presented by connecting the new development.

### **On-site Power Generation**

- 9.131 For solar, all three Options fall within the areas previously assessed EDDC Low Carbon Study as suitable for solar energy. The suitable areas identified within the study highlight that Option 1 has reduced overall coverage of suitability for solar and this may also be affected by proximity to Exeter Airport as further assessment with regard to glint and glare is likely to be required for significant solar arrays. All Options will require also further consideration of landscape and visual impacts.
- 9.132 Where possible within the constraints of identified land, ground mount arrays are recommended in order to most easily and efficiently accommodate a site wide power generation approach which could utilise microgrid technology across the development proposals.
- 9.133 Option 2 is in closest proximity to an area identified by the EDDC Low Carbon Study as suitable for wind energy. However, standoff distances to residential properties would need to be carefully considered for the technology, particularly with respect to noise (to meet ETSU-R-97 noise limits). It is unlikely that wind could be deployed at a sufficient scale to address the Additional consideration would also need to be given to the influence that large scale wind infrastructure could have on operations at Exeter Airport.

**Energy Storage**

- 9.134 Energy storage forms an essential element of the replacement of fossil fuels for heat and transport with renewable or low carbon energy alternatives to allow for intermittent power generation (electrical storage) or to store heat until it is needed (thermal storage).
- 9.135 The draft policies within the emerging Local Plan support proposals for renewable and zero carbon energy storage systems in principle. A number of criteria will need to be met with respect to mitigating landscape impacts, not having an unacceptable impact on designated heritage or nature sites and not emitting excessive noise which would harm amenity for nearby residents.
- 9.136 Should EDDC select the EfW energy strategy and the connection to the Hill Barton EfW facilities the need for the storage of heat can be mitigated. The Hill Barton facilities are intended to be made up of three heat source EfWs and therefore their operational routines can be coordinated to ensure heat is always available. In spite of this, and should CAPEX permit, we would advocate an amount of thermal storage capacity be installed in the immediate vicinity to the EfW plants. This should be sized to store approximately 1 days’ energy supply and will provide an immediate resilience benefit to the project and moving forward it will allow for flexibility and the creation of variable heat tariffs.
- 9.137 Grid connected battery storage naturally compliments on-site generation as it provides a platform for moderating and managing the intermittency of renewable technologies and providing a number of benefits for development:
  - Flexibility to match generation and demand;
  - Shift generated energy from off peak times to when it is needed;
  - Grid stabilisation to maintain voltage and frequency levels;
  - Continued resilience of supply in the event of grid failure; and
  - Rationalising on-site generation from PV and use of renewable electricity.
- 9.138 These grid connected (‘In front of the meter’) battery storage solutions are essentially viewed as generators and the demand and export capacities are critical components of viability. Based upon the assessment undertaken, grid connected batteries is not currently recommended at any of the Option locations.
- 9.139 With respect to ‘behind the meter’ applications, all Options have the potential to use battery storage in ‘island mode’ and as part of a microgrid solution for the development. Further detail on development mix and phasing is needed to undertake a more detailed assessment.

## Key Findings – Net Zero Carbon

- 9.140 The three Option have been analysed based on three categories; impact of existing utility infrastructure; and utility capacities or new connection opportunities
- 9.141 The scoring assessment referenced earlier is replicated below.

**Table 9.3 – Assessment Criteria and Scoring**

Criteria	Scoring
Net Zero Carbon Infrastructure	<p><b>Contribution to Net Zero:</b></p> <p>Low exposure/vulnerability or high opportunity – 5</p> <p>Low-medium exposure/vulnerability or medium-high opportunity - 4</p> <p>Medium exposure/vulnerability or medium opportunity – 3</p> <p>Medium-high exposure/vulnerability or low-medium opportunity - 2</p> <p>High exposure/vulnerability or low opportunity – 1</p>

Source: CBRE (2022)

- 9.142 The outcome of the scored assessment is provided in the table below.

**Table 9.4: Contribution to Net Zero - scored assessment**

Assessment Category	Option 1	Option 2	Option 3
<b>Network Capacity (Generation)</b>	2	2	2
<b>Low or Zero Carbon Energy Technologies</b>	5	2	4
<b>Energy Storage</b>	3	3	3
<b>TOTAL</b>	<b>10</b>	<b>7</b>	<b>9</b>
<b>AVERAGE</b>	<b>3.3</b>	<b>2.3</b>	<b>3</b>

Source: Hydrock (2022) *Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.*

*Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.*

- 9.143 Options 1 and 3 both perform strongly in relation to low and zero carbon energy technologies, with Option 1 performing marginally better. Option 2 would require the greatest level of intervention, and in our assessment provides the lowest opportunity to contribute to net zero.
- 9.144 A number of recommendations are made in the detailed Technical Report provided at Appendix F for further work, much of which is required after site selection in alignment with the masterplanning process.

## Climate Resilience

- 9.145 Assessing the impacts of climate change and possible mitigation and adaption measures that can be delivered by strategic development such as the new town is a key opportunity for EDDC.
- 9.146 A regional level climate risk assessment for Devon, Cornwall and the Isles of Scilly (DCIoS) is currently in preparation which will provide strategic level indications of climate risk, sitting above authority level or site-specific assessments. The work is not sufficiently advanced to feed into the Options assessment for EDDC.
- 9.147 Whilst the specific climate change risks and broader environmental, social and economic challenges local to the Options that will be picked up as part of the Sustainability Appraisal work stream will be key to ensuring the future resilience of the new town proposals, there should be consideration of future climate risks to infrastructure within the site selection process.
- 9.148 The latest scientific evidence and industry guidance, including Met Office UK Climate Projections (UKCP18) data, IEMA and UKGBC guidance and the most recent Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) as well as the ongoing development of the third National Adaptation Programme (NAP3) by Defra have formed the basis of an assessment of future climate risk to infrastructure as relevant to the West End site Options.

## Preliminary Climate Risk Assessment

- 9.149 The UK Climate Projections (UKCP) is a set of climate analysis tools and data forming part of the Met Office Hadley Centre Climate Programme that can be used to show how the UK climate may change and aid decision makers in assessing their exposure and vulnerability to future risk.
- 9.150 Given that it is not possible to exactly predict future global GHG emissions, the UKCP18 climate projections make assumptions about the economic, social and physical changes to our environment that will influence climate change and factor in uncertainty.

Representative Concentration Pathways (RCPs) are the established method for capturing those assumptions with a set of global emissions scenarios and are adopted by most climate change reporting and guidance documents. RCPs specify concentrations of greenhouse gases that will ultimately result in a change in global temperature as outlined in the following table.



**Table 9.6 – Relative Concentration Pathways**

<b>RCP</b>	<b>Change in temperature by 2081-2100 (°C)</b>
RCP 2.6	1.6 (0.9-2.3)
RCP 4.5	2.4 (1.7-3.2)
RCP 6.0	2.8 (2.0-3.7)
RCP 8.5	4.3 (3.2-5.4)

Source: Hydrock (2022)

9.151 Using UKCP18 data, potential future conditions have been established over the assumed construction period (2030-2049) and during occupation, well within the design life of the development (2080-2099) in the RCP 4.5 emissions and central probability (i.e. 50%) scenario.

9.152 Changes to summer and winter temperatures and precipitation levels within the South West are significant when compared to other regions, showing that after 2080, the new town could face an increase in summer mean temperatures of 3.5°C, that the change in winter precipitation is predicted to increase by 16% and that summer mean precipitation is predicted to reduce by 29%. In addition, the frequency of extreme weather events is likely to increase across the UK.

9.153 Based upon this, key climate drivers and physical risks for more detailed consideration of potential infrastructure implications across the Options are:

- **Drought:** reduced water availability, ground movement/subsidence, soil erosion and reduced ground permeability
- **Heatwaves:** extreme or prolonged high temperatures, wildfires
- **Extreme precipitation:** ground saturation/increased surface water runoff, soil erosion
- **Storm events:** high winds, soil erosion

9.154 Further desktop analysis across the range of topics above has been undertaken to understand exposure and vulnerability and potential additional impacts to infrastructure beyond those caused by (though in some cases linked to) higher temperatures and changes in rainfall at the three Options.

**Drought**

9.155 Desktop analysis of water availability, ground movement and subsidence, and ground permeability has informed this aspect of assessment in relation to risks to infrastructure from drought.

### Water Availability

- 9.156 SWW Drought Plan was updated in September 2022 and confirms that all three Options sit within the Colliford Water Resource Zone (WRZ). Within the supply area, surface water abstraction dominates, with 90% of total abstraction being from rivers and reservoirs with a 50:50 split (accounting for some variation depending on the weather experienced). Groundwater abstraction accounts for the other 10% and these groundwater sources are more likely to be constrained by licence than water availability.
- 9.157 SWW operate a conjunctive use system with links between and within WRZs, which enables transfer of water from less stressed to more stressed areas and optimisation and use of existing resources prior to the need for drought management actions.
- 9.158 SWW also have a detailed Climate Adaptation Plan in place, published in December 2021 which highlights the following measures in response to risks to public supply as a result of drought and low river levels:
- 50% leakage reduction plan
  - New resource development
  - Smart metering
  - Smarter operation
  - Helping customers to use less water
- 9.159 As detailed within the Utilities report with respect to potable water supply, SWW's strategic team have been made aware of the proposals and have expressed their keenness to engage with EDDC on infrastructure upgrades. It is recommended that these discussions consider opportunities to action some of the above measures in tandem with the new town development.
- 9.160 Options 1 and 3 may have increased opportunity for new ground water abstraction resource development. All Options may contribute to leakage reduction where the inclusion of new water supply infrastructure could also give rise to leakage detection and planning for repair activities

### Ground movement/subsidence

- 9.161 Certain soil types are more susceptible to ground movement and subsidence , including clay, silt, sand and gravel soils.
- 9.162 Clay and silt are 'cohesive' soils, which means that their volume will vary depending on their moisture content – they'll swell when wet and shrink when dry. As many as 75% of UK ground subsidence cases are caused by soil shrinkage and as the UK climate warms, these soils will be more at risk of shrinkage.
- 9.163 Sand and gravel are non-cohesive soils, which means that they don't vary in size depending on moisture content but can be washed away by water flow putting them at higher risk during periods of heavy rain or flooding, or if they are located near a body of water.

- 9.164 The UK Soil Observatory (UKSO) mapping from the British Geological Society has provided the underlying conditions of the sites Options as a strong indicator of future vulnerability. The same mapping is also utilised as an indicator of the permeability and saturation of the ground in relation to risk from extreme precipitation.
- 9.165 Option 3 contains the largest mix of soil types, both sand and loamy clay based which may present additional challenges or require a variety of design approaches in terms of mitigating the effects of future climate change against subsidence that could impact subterranean and surface infrastructure.

### **Heatwaves**

- 9.166 Desktop analysis of the risks to infrastructure from heatwaves has been undertaken through a qualitative consideration of extreme or prolonged periods of high temperatures and wildfires. No further assessment has been undertaken in relation to the site Options at this stage in relation to heatwaves.

### **Extreme or prolonged high temperatures**

- 9.167 Infrastructure operators are on the frontline of efforts to ensure we are resilient to extreme weather including extremes of temperature. The majority of Distribution Network Operators (DNOs) have well progressed adaptation plans in place or in preparation.
- 9.168 The WPD Climate Resilience Strategy has included an initiative to ensure that new overhead lines are designed to a higher temperature rating by specifying taller poles to allow for more conductor sag whilst maintaining clearance requirements.
- 9.169 An information request was submitted to WPD to obtain additional data on heat impacts to the WPD network to ensure detailed power network risks are identified and reviewed following site selection. This request has not yet been fulfilled.
- 9.170 Consideration should be given to on-site energy infrastructure such as batteries and energy compounds which may operate independently of the DNO. No further assessment has been undertaken in relation to the site Options at this stage.

### **Wildfires**

- 9.171 In July 2022, the Devon and Somerset Fire and Rescue Services attended 322 fires in the open against a five-year average for July of 272. The risk of fires in the open is affected by the weather and the type of vegetation but are of note due to the potential severity of the impact to energy and transport infrastructure where they cannot be controlled.

### Extreme precipitation

- 9.172 Desktop analysis of surface water and water soil erosion has informed this aspect of assessment in relation to risks to infrastructure from extreme precipitation.

### Surface Water

- 9.173 In the Climate Resilience Strategy published by Western Power Distribution (WPD) in June 2021, it is noted that predicted surface water and flood risk impacts are an important consideration when planning new installations or safeguarding existing key equipment. The flood protection currently provided is designed to be resilient to the end of this century based upon current Environmental forecasting models.
- 9.174 When social flood risk index information is overlaid upon EA recorded flood outlines there is an indication that Option 3 presents the greatest risk of increased future surface water impacts as a result of development where no mitigation is in place as a result of drainage infrastructure design.

### Soil Erosion (water)

- 9.175 Mapping information (UKSO) has confirmed the water erosion risk to bare soil across all the Options.
- 9.176 Option 1 appears least favourable here, given the presence of significant areas of moderate and high risk. Option 3 is the least constrained from a soil erosion perspective.

### Storm Events

- 9.177 Desktop analysis of the risks to infrastructure from storm events has been undertaken through a qualitative consideration of high winds, lightning and wind soil erosion. No further assessment has been undertaken in relation to the site Options at this stage in relation to storms.

### High winds

- 9.178 In the UK, most wind-driven rain is associated with winter storms and the intensity and frequency of these will increase which will in turn lead to an increased risk of wind driven rain.
- 9.179 Projections for wind-speed are less clearly defined within UKCP18 but an increase in wind-driven rain should be considered as this also increases the risk of water penetration of vertical structures.
- 9.180 An information request was submitted to WPD to obtain additional data on storm impacts to the WPD network to ensure detailed power network risks are identified and reviewed following site selection. This request has not yet been fulfilled.

**Soil Erosion (wind)**

- 9.181 The UKSO mapping includes information on wind erosion risk to bare soil.
- 9.182 Whilst the future conditions at the new town are unlikely to be bare soil, this information is useful to determine the vulnerability of each site to this risk and potential impact upon the design and cost of key site infrastructure.
- 9.183 Options 1 and 3 are similarly affected by areas prone to soil wind erosion. Option 2 is the least constrained from a wind soil erosion perspective.

**Key Findings – climate resilience**

- 9.184 Each site has been assessed qualitatively for its ability to respond to a variety of risks to infrastructure as a result of future climate change, based upon existing conditions and how these may be impacted by a changing climate.
- 9.185 Further detail is provided within the Technical Report provided at Appendix F alongside considerations for further work, following site selection, in alignment with the masterplanning process to ensure that the new town is climate resilient.

**Table 9.7 – Assessment Criteria and Scoring**

Criteria	Scoring
Net Zero Carbon Infrastructure	<p><b>Climate Resilience:</b></p> <p>Low exposure/vulnerability or high opportunity – 5</p> <p>Low-medium exposure/vulnerability or medium-high opportunity - 4</p> <p>Medium exposure/vulnerability or medium opportunity – 3</p> <p>Medium-high exposure/vulnerability or low-medium opportunity - 2</p> <p>High exposure/vulnerability or low opportunity – 1</p>

Source: Hydrock (2022)

- 9.186 To quantify the assessment in relation to the site selection process, the table below shows the assessment of each site Option against key considerations at site level, utilising the performance scale outlined above where a score of 5 represents low exposure/vulnerability or high opportunity.
- 9.187 In terms of future climate risk for infrastructure, Option 2 has been assessed as the best performing Option on the basis that it provides the highest overall level of resilience through lower exposure and/or vulnerability.
- 9.188 All Options would be likely to require further consideration of soil geology which factors into a significant number of risks.



9.189 Any Option which brings forward ground mount solar PV arrays at scale should consider any additional risk or additional drainage design mitigation to ensure future resilience against surface water runoff from the panels.

9.190 Any potential interaction of surface water drainage, power distribution and access and movement strategies for the selected site must be a key consideration during the masterplanning activities to ensure that the site is not locked in to an approach that could trigger cascading failures to infrastructure networks over the long term.

**Table 9.8 - Climate Resilience Performance Summary**

<b>Future Climate Risk</b>	<b>Key Considerations for Infrastructure</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Drought</b>	water availability	4	3	4
	ground movement/ subsidence	3	4	2
	soil erosion (water)	2	3	5
	ground permeability	3	4	2
<b>Heatwaves</b>	extreme or prolonged high temperatures	not assessed	not assessed	not assessed
	wildfires	not assessed	not assessed	not assessed
<b>Extreme precipitation</b>	surface water	2	3	2
	Ground saturation	3	4	2
<b>Storm events</b>	high winds	not assessed	not assessed	not assessed
	Soil erosion (wind)	2	3	2
<b>TOTAL</b>		<b>19</b>	<b>24</b>	<b>19</b>
<b>AVERAGE</b>		<b>2.7</b>	<b>3.4</b>	<b>2.7</b>

Source: Hydrock (2022) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

# 10. Deliverability

## Introduction

- 10.1 This section provides an overview of the factors that could impact on deliverability as identified in the technical assessments. These are not scored, else it would duplicate the scored assessments prepared for each of the technical assessments as identified in the previous sections of this report.
- 10.2 The scored assessment here focuses on deliverability in terms of land ownership and existing land use only. The land ownership scoring has been reviewed given the additional work undertaken.
- 10.3 A high level summary of the deliverability factors from each technical assessment that need to be considered and appropriately mitigated in the masterplanning of the Preferred Option are provided below.

## Landscape

- 10.4 The Landscape Sensitivity Assessment found that all of the Options contain a number of sensitivities, such as the character of rural lanes, the presence of large trees and hedges, and the character of existing historic settlements on the peripheries. Most of the Options are visible from surrounding high land, including parts of the East Devon AONB.
- 10.5 The landscape sensitivities are very variable across each of the Options. There are a number of general sensitivities which occur within all the options, such as the character of rural lanes, the presence of large trees and important hedgerows, and the character of historic settlements around their peripheries. There are also some particular sensitivities unique to each Option.
- 10.6 Unique sensitivities for Option 1 are the quality and integrity of the historic rural landscape and associated Holbrook river corridors which flow east-west through the middle of the defined area. Option 2 includes land at its eastern end which has the highest elevation within the study area which is widely visible in the surrounding landscape. It also overlaps with Option 1 to include sensitive land within the Holbrook area. For Option 3 particularly high sensitivity occurs in the south (along the Ebford slopes and the ridge followed by Woodbury Road) which has intervisibility with land to the south and the East Devon AONB, and in the east (towards Woodbury Salterton) where the land is relatively steep and elevated with intact medieval field patterns. The setting of Clyst St George, in the south-west of the Option, is also sensitive.

## Ecological Impact/Biodiversity

- 10.7 The Options have relatively few absolute ecological constraints, and such constraints can typically be accommodated within a sensitively-designed green and blue infrastructure framework.

- 10.8 The landscapes to the west and east of all Options have particular local, regional, national and international significance for wildlife, including mobile species with particular seasonal sensitivities which would need to be mitigated.
- 10.9 Option 3, closest to the Exe Estuary (400m to the south) is more vulnerable than the other two Options and would require significant ecological management zones to be provided within its boundary. Opportunities for biodiversity gains would be presented and delivered by Option 1 and Option 3 for the Clyst Regional Valley Park, lands identified within network enhancement or expansion zones, SANGS and flood zone land.
- 10.10 Opportunities to strengthen and/or diversify the ecological network should be sought within the Preferred Option area, making use of existing habitats and features and seeking opportunity to expand habitat or create new habitat to contribute towards biodiversity gains.

## Other Environmental Constraints

- 10.11 All Options have land within Flood Zones 1-3 but as the majority is within Zone 1 this is a low to medium flood risk. Any land at risk from flooding will need to be incorporated into well designed and implemented drainage and water mitigation strategies and the land used for space for SANGS and biodiversity gains during masterplanning of the Preferred Option.
- 10.12 In terms of minerals all Options were identified as outside of coal mining areas and Options 1 and 3 have no nitrate and phosphate areas identified. Option 2 is the most constrained as it contains zones for water source protection, nitrate vulnerability and an area of medium priority for phosphates. Impacting both Options 1 & 2 there is a mineral safeguarding zone at the Hill Barton industrial estate and an established strategic waste facilities at both Hill Barton Business Park and Greendale Barton. These factors will need to be assessed and mitigated during masterplanning of the Preferred Option.
- 10.13 With regard to the historic environment there are Grade II listed buildings (three maximum) in the Options. The land budget does exclude these alongside other historic buildings and registered parks/gardens. It is though recognised that the potential impact upon the setting of those places will need to be addressed as part of the masterplanning of the Preferred Option.

## Sustainable Accessibility

- 10.14 All of the Options are located in predominantly rural locations with internal pedestrian connectivity presently relatively undeveloped. The new community will require a network of convenient, direct, permeable, safe and easy to navigate pedestrian routes that are able to accommodate the needs of all users.

- 10.15 The proposed Clyst Valley Trail offers a north/south multi-use link adjacent to Exeter's eastern boundary and within the vicinity of Options 1 and 3. The topography of Option 2 poses a challenge to a potential route of this nature.
- 10.16 The Local Highway Network in the vicinity of the Options has limited dedicated cycling infrastructure, but the rural nature of many of the local lanes results in relatively low traffic volumes, meaning that they can be suitable for cyclists. Each Option would benefit from the inclusion of an on-site mobility hub to facilitate these emerging modes of travel. Options 1 and 3 are the most sustainable for cycling.
- 10.17 All three Options are expected to need improvement to local bus services. Analysis has demonstrated that given the size of the development, a c.10-minute frequency service for the development is likely to be commercially viable. This, coupled with the upgrading of existing bus stop facilities, would provide a significant enhancement on the existing services within the area of all three Options, for both existing local communities and future residents of the new settlement.
- 10.18 In all Options sustainable transport links to employment areas will need to be upgraded to be sufficiently attractive to ensure they are used from the outset of the development, and so the proximity of the locations has been taken as the key comparative difference between the Options.
- 10.19 It should also be noted that Option 1 offers the potential to create north-south sustainable and public transport links between the A3052 and A30 through the development site. This is an additional benefit compared to Options 2 and 3.

## Highways

- 10.20 Option 1 has the least significant highways impact and it appears that the development of 2,500 new homes up to the end of the Plan period could be accommodated without significant highways interventions. Whilst there would be increases in traffic in some areas, the modelling carried out suggests that these would not lead to significant increases in delays. Minor highways mitigation works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required. Later modelling by WSP has indicated an impact from Option 1 at the A30 Exeter Airport Junction, but the mitigation works required are deliverable and consistent with normal access works to any large development site. Option 1 would be most preferred in terms of highways impact, followed by Option 3, with Option 2 being least preferred.
- 10.21 The modelling work undertaken shows that Options 2 and 3 would have traffic impacts at the Clyst St Mary Roundabout, with Option 2 also impacting on surrounding local roads. In terms of their highways impacts, Option 1 would be the preferred development scenario, followed by Option 2 and then Option 3. Option 1 appears to require no mitigation measures (other than those that would be addressed as part of the normal planning approval process) Whilst Options 2 and 3 would require improvements at the Clyst St

Mary Roundabout, with Option 2 also requiring improvements around Woodbury Salterton and at the A376 / Topsham Lane junction.

- 10.22 Based on an initial desktop review, it appears that, despite their larger delay impacts, it would be possible to mitigate the impacts of both Option 2 and 3 if these were to be taken forward. This would be through either localised capacity improvements or demand reduction schemes.

## Utilities

- 10.23 Option 1 has relatively minimal impacts from existing major infrastructure, whilst also providing an opportunity to connect to WPD's 132kV overhead for a new Bulk Supply Point to service the site with power. Option 2 whilst a good opportunity for power connection similar to Option 1 includes the presence of the National High Pressure gas main, which will restrict development and layout. Option 3 has an extensive amount of existing infrastructure to consider for either diversions to free up developable space, or layout impacts with clearance zones, and also does not present as good an opportunity for electrical connection to the 132kV network.
- 10.24 All three Options are constrained for foul drainage capacities due to the rural locations not being served with extensive existing infrastructure with a connection being required for all Options.

## Net Zero

- 10.25 Specifically at primary substation level there is some export capacity remaining at Clyst Honiston and Pinhoe both in closest proximity to Option 1 and also at Topsham in relation to Option 3.
- 10.26 Options 1 and 3 demonstrate potential locations for open loop ground source technology (i.e. based on existing water sources) which could be utilised as part of a technology mix for a low carbon heat network. Option 1 includes areas at the north and west of the location which are underlain by a moderately productive aquifer (12L/s) which is also captured by the western boundary of Option 3. Option 2 is underlain by rocks with no or very low levels of groundwater which would limit ground source heat pump technology potential to closed loop systems.
- 10.27 Due to the EfW plant location at Hill Barton each of the Options would be suitable for connection to the heat network interconnector/ extension, although noting that the interconnector is not currently sized sufficiently to provide for the new town. Option 1 transits the proposed route of the interconnector; its proximity to the heat source therefore offers a cheaper and easier solution in comparison to the other options. Option 1 is therefore preferred in relation to this technology..
- 10.28 For solar, all three Options fall within the areas previously assessed EDDC Low Carbon Study as suitable for solar energy. Option 1 has reduced overall coverage of suitability for solar and this may also be affected by proximity to Exeter Airport as further assessment with regard to glint and glare is likely to be required



for significant solar arrays. All Options will require also further consideration of landscape and visual impact. Option 2 is in closest proximity to an area identified by the EDDC Low Carbon Study as suitable for wind energy.

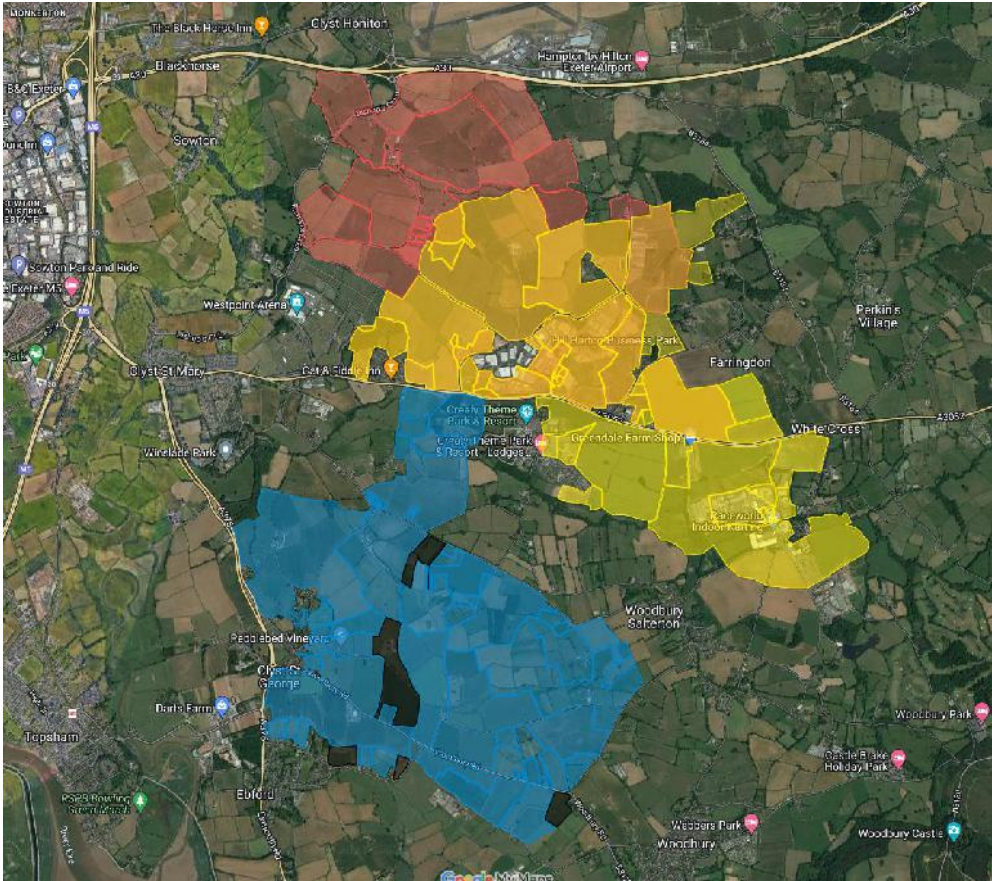
- 10.29 With respect to 'behind the meter' applications, all Options have the potential to use battery storage in 'island mode' and as part of a microgrid solution for the development. Further detail on development mix and phasing is needed to undertake a more detailed assessment.

## Climate Resilience

- 10.30 All Options would be likely to require further consideration of soil geology which factors into a significant number of risks.
- 10.31 Any Option which brings forward ground mount solar PV arrays at scale should consider any additional risk or additional drainage design mitigation to ensure future resilience against surface water runoff from the panels.
- 10.32 Any potential interaction of surface water drainage, power distribution and access and movement strategies for the selected site must be a key consideration during the masterplanning activities to ensure that the site is not locked in to an approach that could trigger cascading failures to infrastructure networks over the long term.

## Land Ownership

- 10.33 To further inform future deliverability and implementation we have undertaken further due diligence on the extent and size of the land holding of the various ownerships within the 3 options as shown on the plan below.



10.34 We provide a summary of the outputs below.

**Option 1**

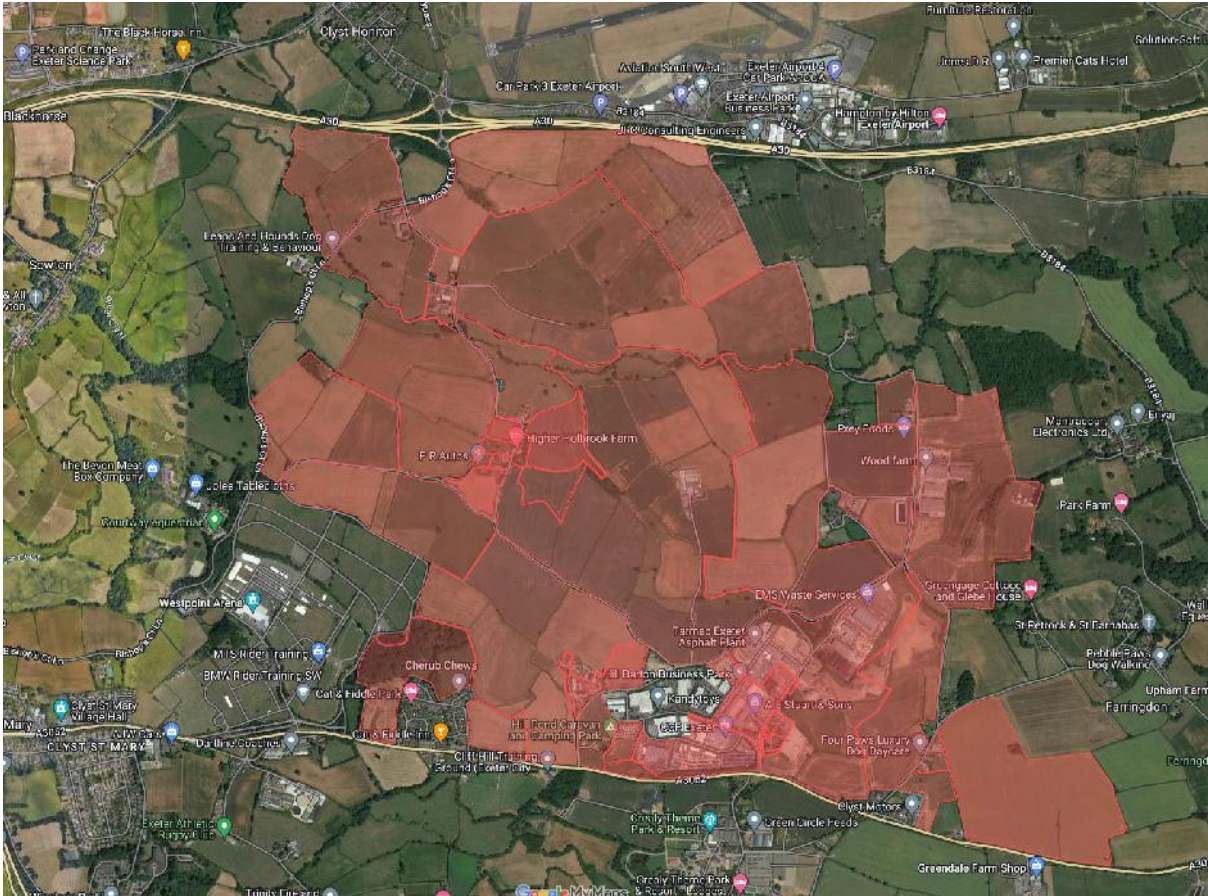
10.35 This Option encompasses 521 hectares of land with only a small proportion to the North West (see Figure 3.2) required that is additional to that already promoted.

10.36 The assessment of land ownership identified:

- A total of 44 separate land areas.
- A total of 41 freehold titles, some of the freehold titles cover multiple areas and 26 different land owners.
- The Land Registry Title view and Register View could not be purchased for 6 locations due to digital copies not being available.
- There were multiple titles that are owned by more than one private individual or company.

10.37 The land parcels mapped include:





- 10.38 Within Option 1 the key land owners are:
  - The Church of Commissioners for England with approximately 178.99ha of land (some of this includes other landowners). The largest parcel of land that they have a stake in is 56.7ha. This area is also owned by 3 private individuals.
  - Another predominant landowner is Stuart Partners Limited based in Clynch St Mary, Exeter. This company owns 167.5ha of land. The largest parcel of land is approximately 48.2ha. There are covenants on multiple pieces of land within their ownership.
  - The largest individual parcel of land mapped is approximately 70.5ha in size and is in private ownership.
  - Another large section of land ownership covers 67.9ha and is in owned by 3 private individuals.
- 10.39 Within Option 1, the Church of Commissioners for England have joint ownership on approximately 122.19ha of land. The majority of land highlighted is co-owned by 3 private individuals.
- 10.40 The Church Commissioners for England have mineral rights for this area with the register view confirming that the rights to work the mines and minerals are identified in the deeds. To understand the mineral rights, the deeds would need to be obtained through a solicitor or from the landowner direct.
- 10.41 In Option 1 50.99% of the total land area (289.96 ha) is controlled by the three largest landowners.
- 10.42 The remaining 49.01% of the land area is in fragmented ownership of 24 known freeholders.
- 10.43 The land is located within an aerodrome safeguarding zone and the northern part of the site is within the 57db noise contours from the airport/A30 which would need to be factored into masterplanning.



10.44 Land assembly would be required to enable this Option to come forward and gain the required level of control. However there may be conflicts between the dominant land promoters who ultimately need to work together to bring the majority of this option forward. The control of land was one of the key learning points from the ten year review of Cranbrook. Parts of the land take incorporate designated employment areas and they will need to be sensitively integrated into the settlement.

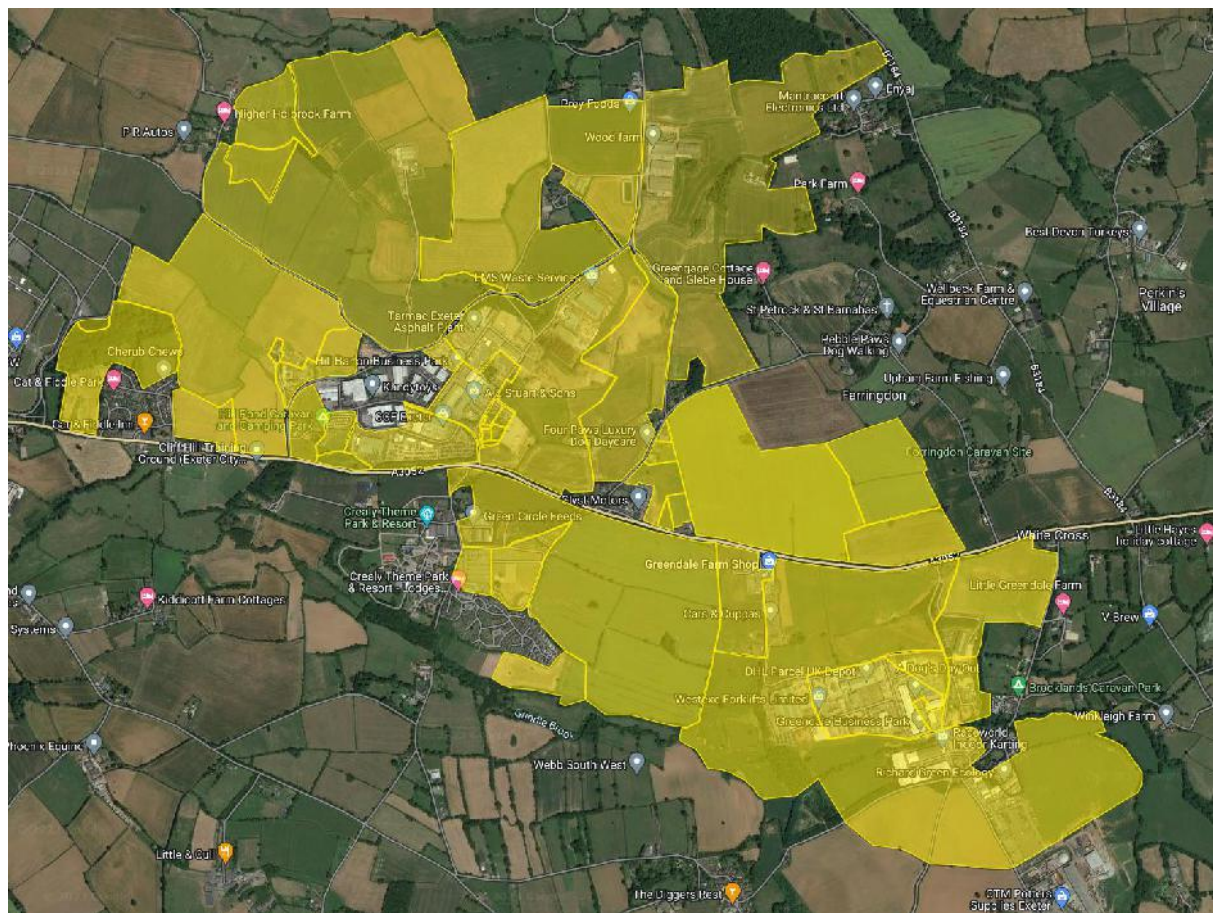
**Option 2**

10.45 This Option encompasses 521.5 hectares of land all of which has been previously promoted (see Figure 3.4).

10.46 The assessment of land ownership identified:

- A total of 41 freehold titles, some of the freehold titles cover multiple areas and 21 different land owners.

10.47 The land parcels mapped include:



10.48 Within Option 2 the key land owners are:

- As in Option 1, Stuart Partners Limited and the Church Commissioners of England own large sections of land.
- The largest section of land at approximately 85.5ha in size is owned by 2 private individuals. This land has 5 leaseholders and also has covenants across the land to allow for water, gas, electricity, soil, and access.
- Another freeholder with a large section of land within Option 2 is a private individual who owns 65.9ha.

- FWS Carter & Sons own multiple medium sized pockets of land which totals approximately 31.34ha. The company are freeholders to Greendale Business Park which has 11 leaseholders associated with it.
- An important section of land to both Options 1 and 2 is the Hill Barton Business Park. This area abuts the A3052 and is owned by multiple landowners. The largest mapped area is approximately 7.24ha (owned by Stuart Partners Limited). There are restrictive covenants in place over sections of this area.

10.49 In Option 2 48.55% of the total land area (268.23 ha) is controlled by the three largest landowners.

10.50 The remaining 51.45% of the land area is in fragmented ownership of 18 known freeholders and 1 unknown landowner.

10.51 Land assembly would still be required to enable this Option to come forward and gain the required level of control. This therefore presents a deliverability risk. Parts of the land take incorporate designated employment areas and they will need to be sensitively integrated into the settlement.

10.52 The land is located within an aerodrome safeguarding zone which would need to be factored into masterplanning.

### **Options 3**

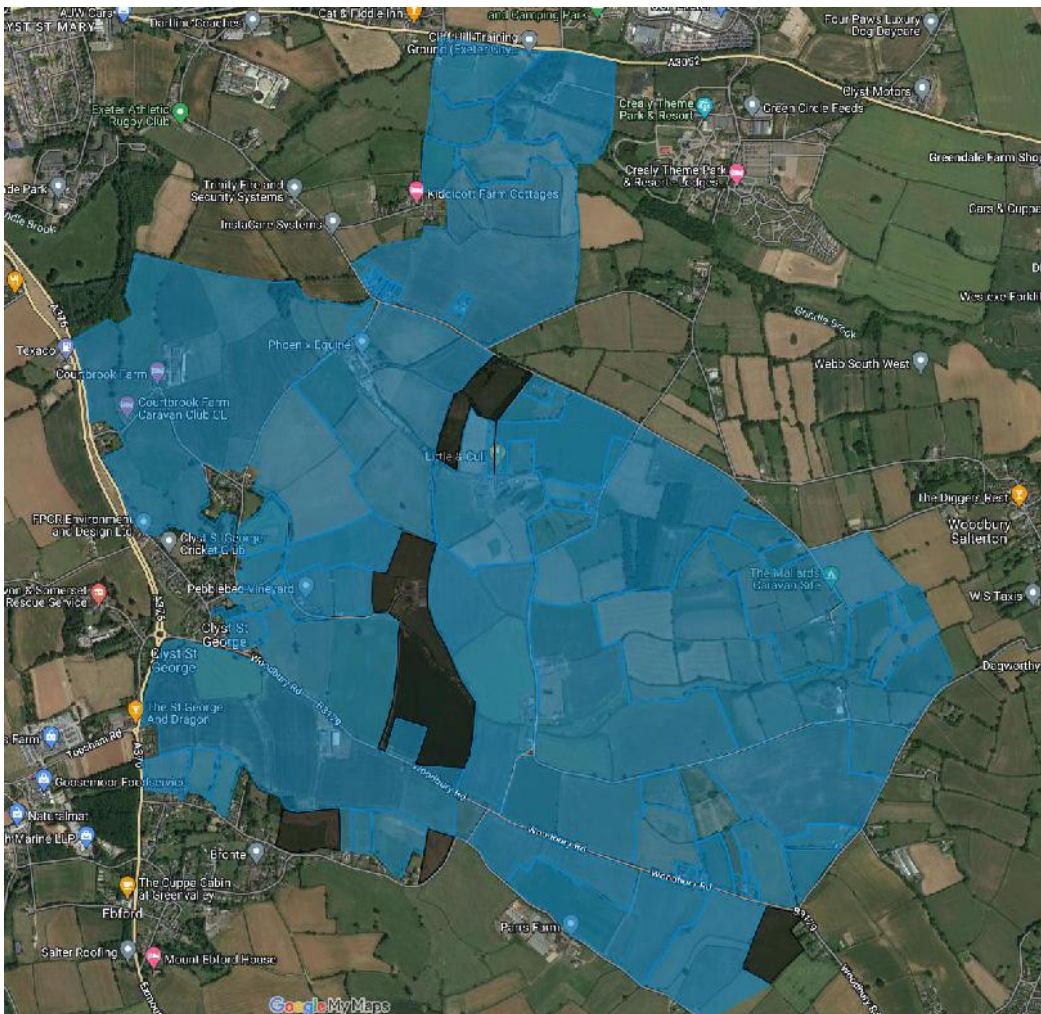
10.53 This Option encompasses 523.2 hectares of land and has the largest proportion of land of all the Options that has not already been promoted (see Figure 3.6).

10.54 The assessment of land ownership identified:

- A total of 72 separate land areas (5 of these were unregistered with no land owner information).
- A total of 65 freehold titles, some of the freehold titles cover multiple areas with the majority small land holdings in private ownership.
- Unlike Options 1 and 2 there is no overlap in landowners.
- There are medium sized sections of land that are unregistered with HM Land Registry totalling 26.34ha.
- There were 14 occasions where the Title View could not be downloaded as digital copies were not available.

10.55 The land parcels mapped include:





- 10.56 Within Option 3 the key land owner interests are:
  - The largest section of land within this option is approximately 68.7ha which is owned by 2 private individuals.
  - There are 3 other private individuals with significant land ownership (32.1ha, 60.1 ha & 28.6ha).
  - Other known landowners include private businesses and the County Council including The Exeter Diocesan Board of Finance Limited (1.7 ha), Devon County Council (43.83 ha), and Maximum Fun Devon Limited (11.9 ha).
  - The remaining land within the option is split into small to medium sized sections ranging from 0.083ha to 15.4ha.
- 10.57 In Option 3 29.47% of the total land area (198.59 ha) is controlled by the three largest landowners.
- 10.58 The remaining 70.53% of the land area is in fragmented ownership of 46 freeholders and 8 unknown landowners.
- 10.59 Option 3 has over 25ha of unregistered land and would require significant land assembly to package an appropriate quantum of land together to enable this Option to come forward and gain the required level of control, which is therefore a deliverability risk. As there are 8 unknown land owners this increases the risk of having land owners who may be resistant to large scale development.

- 10.60 The land is located within an aerodrome safeguarding zone which would need to be factored into masterplanning.
- 10.61 In summary this assessment of land ownership shows that:
- There is a large overlap between Options 1 & 2 meaning that there are many landowners with ownership in both areas. All of the landowners for these two options have been identified. There are some restrictive covenants over sections of the land in both Options 1 & 2.
  - All of the land identified in Option 2 has been previously promoted, Option 1 requires a small quantum of additional land to the North West and Option 3 has the greatest amount of land needed to be assembled.
  - There are fewer land owners/freehold titles in Options 1 & 2 and a mixture of private companies and private individuals. Option 3 has the highest number of land owners/freehold titles with the majority of land owned by private individuals. There are 5 unregistered sections of land within Option 3.

## Existing Land Use

- 10.62 As referenced earlier in this report a number of refinements were made before confirming the broad location of the three Option sites. These ensure that the existing settlements in the area would not be subject to convergence with the potential new community. Where the Options do abut existing settlements, the intention at the masterplanning stage of the project will be to ensure that adequate separation, through a substantially sized landscape buffer, is provided to respect the character of the existing settlements.
- 10.63 The three site locations have been developed to provide as far as possible nucleated, compact settlements. This form of development is conducive to the application of active travel measures.
- 10.64 The boundaries for the three site locations have been defined using landscape features, including existing watercourses, field boundaries and hedgerows, to create rational settlement edges.
- 10.65 In addition a number of other areas have been excluded from the circa 521 ha land take for all options including flood zone land as far as possible but it is recognised that this land could be used for BNG, nature recovery and integrated water management if required and land and property within the historic environment.
- 10.66 Land has also been removed for economic and social reasons i.e. existing established business/ leisure operators where it would be prohibitive to relocate and bad neighbours uses, these include:
- Land west of Crealy (all Options).
  - Crealy Adventure Park (close to Option 1).
  - Hill Barton Business Park and Greendale Business Parks (close to Options 1&2).
  - Large group of buildings to the south east of the junction between the A3052 and Oil Mill Lane including a commercial scale anaerobic digester plant with associated noise and smells which may make siting homes close by difficult for environmental reasons (close to Options 2&3).

- Exeter Athletic Rugby Club - recently developed at substantial cost (close to Options 2&3).
- Exeter City FC training pitches (close to Option 3).

10.67 It is acknowledged that there are a number of bad neighbour uses in all of the Options, specifically including the waste transfer facility at Hillbarton which is in Options 1 and 2. The landfill element is coming to an end with an energy from waste (EFW) plant under construction in this location **and is about to be commissioned. There is also planning permission for a second, larger plant.** This EFW plant will provide waste heat to our existing and future district heating networks. If this and other bad neighbour uses were retained they will need a suitably sized buffer between themselves and the residential development and this will be dealt with through the master planning.

10.68 For the avoidance of doubt some of these land areas are shown in the indicative plans as being within the site area of the Option but do not form part of the circa 521 hectares required. At this level of detail it is not possible to show this separation but this will form part of the masterplanning undertaken for the Preferred Option in 2023.

## Summary

10.69 The scoring assessment referenced earlier is replicated below.

**Table 10.1 – Assessment Criteria and Scoring**

<b>Criteria</b>	<b>Scoring</b>
Deliverability to include land ownership, presence of businesses/other land uses that need to be relocated and proximity of development to bad neighbours i.e. noise/traffic etc	<b>Impact:</b> Limited i.e., simple land ownership, all land put forward in call for sites, majority of landowners known, few businesses to relocate – 5 Limited to Medium - mixed land ownership, majority of landowners known, all land put forward in call for sites, few businesses to relocate – 4 Medium i.e., mixed land ownership, majority of land put forward in call for sites, but some land assembly needed, some landowners known, some businesses to relocate – 3 Medium to Extensive - complicated land ownership, few landowners known, some land put forward in call for sites, but land assembly needed, lots of businesses to relocate – 2 Extensive i.e., complicated land ownership, significant land assembly required, lots of businesses to relocate and no landowners known – 1

Source: CBRE (2022)

10.70 The outcome of the scored assessment for deliverability focuses on land ownership and existing land use only. This avoids potential duplication as the deliverability of each technical aspect has been included within that assessment. The scoring is provided in the table below.

10.71 Given the additional due diligence undertaken on the land owners we were able to revisit the scoring. We considered a number of different approaches as follows:

- Approach 1: the number of separate landowners i.e. how fragmented is the ownership – this considered the percentage control of the options by the 3 landowners with the lowest number of owners (Option 2) scoring highest as they have the highest percentage of control.
- Approach 2: this considered the relative difference from the option site with the lowest number of owners to the other two options.
- Approach 3: this considered the number of different landowners per option and applied the process applied in Approach 2; and
- Approach 4: combined both the relative difference from the option site with the lowest number of owners to the other two options and the number of different landowners per option as per Approaches 2&3 thus giving them equal weighting in the assessment.

10.72 It was felt that Approach 4 was the most robust and this was applied for the land ownership category below and the average scores inclusive of the existing land use scoring which has not altered applied.

**Table 10.2: Deliverability of the Land – scored assessment (2023)**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Land Ownership</b>	4.5	5	2.5
<b>Existing Land Use</b>	5	3	3
<b>Total</b>	<b>9.5</b>	<b>8</b>	<b>5.5</b>
<b>AVERAGE</b>	<b>4.8</b>	<b>4</b>	<b>2.8</b>

Source: CBRE (2023) Note – the average score per Option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

10.73 For comparison purposes there is only a marginal change from the scorings in the 2022 Option Appraisal Report Both Options 1 and 3 see the same increase (0.3) with the main change being that the score for Option 2 increases the most (by 1) driven by the fact that it has the least number of land owners and only a slightly lower proportion of land to Option 1 controlled by the 3 largest ownerships.



# 11. Engagement

## Introduction

11.1 This section provides a summary of the purpose and outcomes of the two engagement workshops led by Tibbalds and held with EDDC Councillors to inform this Options Appraisal.

## Workshop 1 – 21<sup>st</sup> July 2022

11.2 The aim of the preliminary workshop was to introduce the consultant team and to gather information and opinions from the EDDC Officers and Councillors on the issues likely to be faced in the next 30-years. It considered how our day-to day lives are changing to address those issues, and sought to understand the local impact and what it means for East Devon.

11.3 The session was well attended, with approximately 19 participants. However, it was raised that the session had clashed with a committee meeting and therefore a number of interested Councillors were unable to attend. As such, the presentation and the workshop content was shared following the workshop, and a strategy for organising the future sessions was agreed.

11.4 The workshop was hosted virtually over Microsoft Teams and utilised online digital tools including Teams breakout rooms and Miro Boards to ensure the session was not only interactive but gave all those participating the opportunity to provide record their input and engage.

11.5 The agenda provided:

- An introduction to the consultant team’s brief;
- An introduction to the consultant team and associated roles;
- A breakdown of the process, including a high-level timeline.

11.6 The following focus topics were introduced and discussed.

### **Focus Topic 1: How do we want / need to live over the next 30+ years?**

11.7 The first section of the workshop introduced a set of design principles for new settlements which had been informed by a number of studies and reports such as ‘Place value and the Ladder of Place Quality.’ The team presented the principles and the evidence, as well as introducing a selection of relevant, forward-thinking projects and their approach.

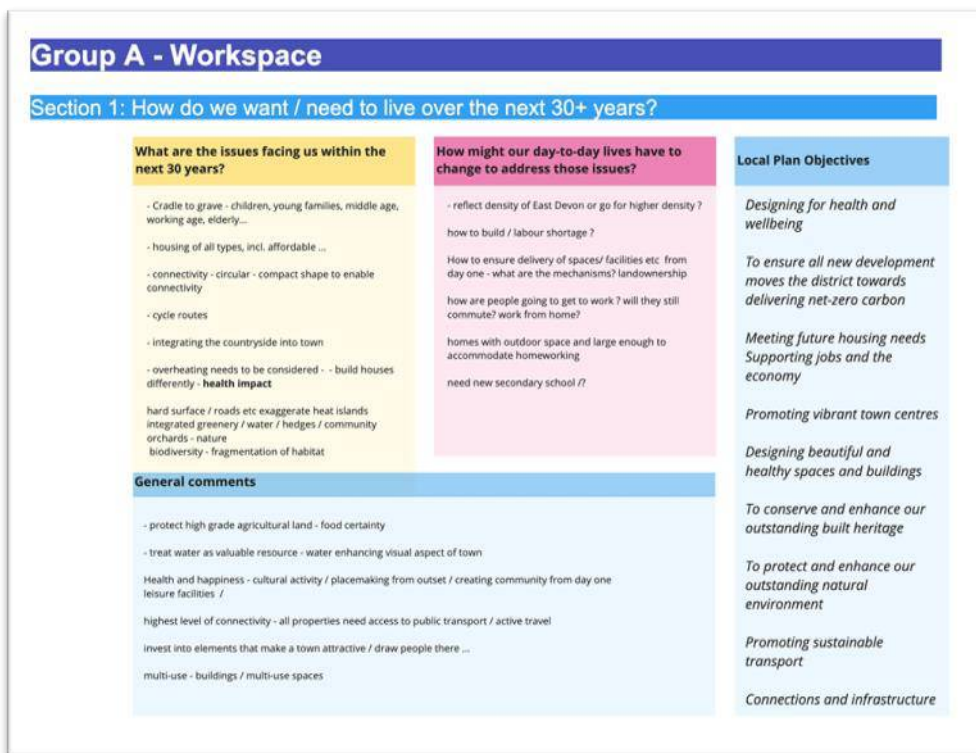


11.8 With all this in mind, attendees were asked to discuss (via smaller breakout groups) their priorities under the following questions:

- What are the issues facing us over the next 30+ years?;
- How might our day-to-day lives change to address these issues;
- Delivering on Local Plan Vision.

11.9 The groups used Miro Boards to note down the discussions and organise thoughts under headings. Below is an extract from one of the group’s discussion

**Figure 11.1: Output from a Discussion Group – how do we want/ need to live over the next 30 years**



Source: Tibbalds (2022)

11.10 The subsequent themes were derived from the first breakout session:

- Future proofing;
- Addressing climate change and extreme weather;
- Range of house typologies;
- Connectivity and movement;
- Compact developments;
- Integrated with nature and landscape (biodiversity);
- Providing facilities, flexible workspace and suitable services;

- Lessons from Cranbrook.

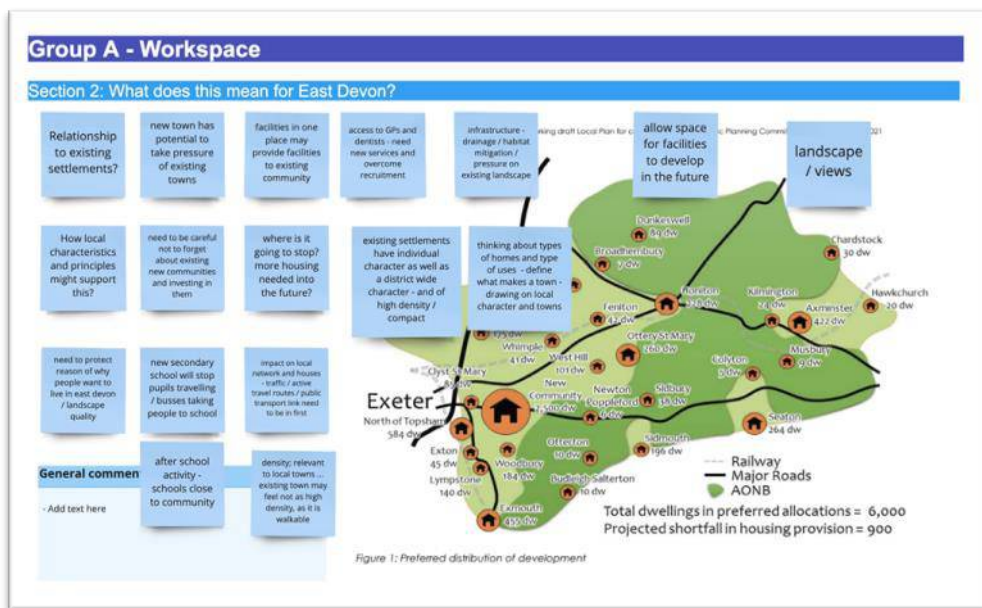
**Focus Topic 2: What is important for East Devon? Local Scale**

11.11 Having asked a volunteer from each group to feedback to the wider team, there were resultant discussions around some of the key themes and emerging topics. Attendees were then asked to return to the breakout groups and consider the following questions:

- What might the second community’s relationship be to existing settlements?;
- How might local characteristics and principles support this?

11.12 Again groups were asked to use Miro Boards to note down the discussion. Below is an extract from one of the group’s discussion:

**Figure 11.2: Output from a Discussion Group – what does this mean for East Devon**



Source: Tibbalds (2022)

11.13 Following the feedback to the wider team, the following emerging themes relating to what was important to East Devon in particular were apparent:

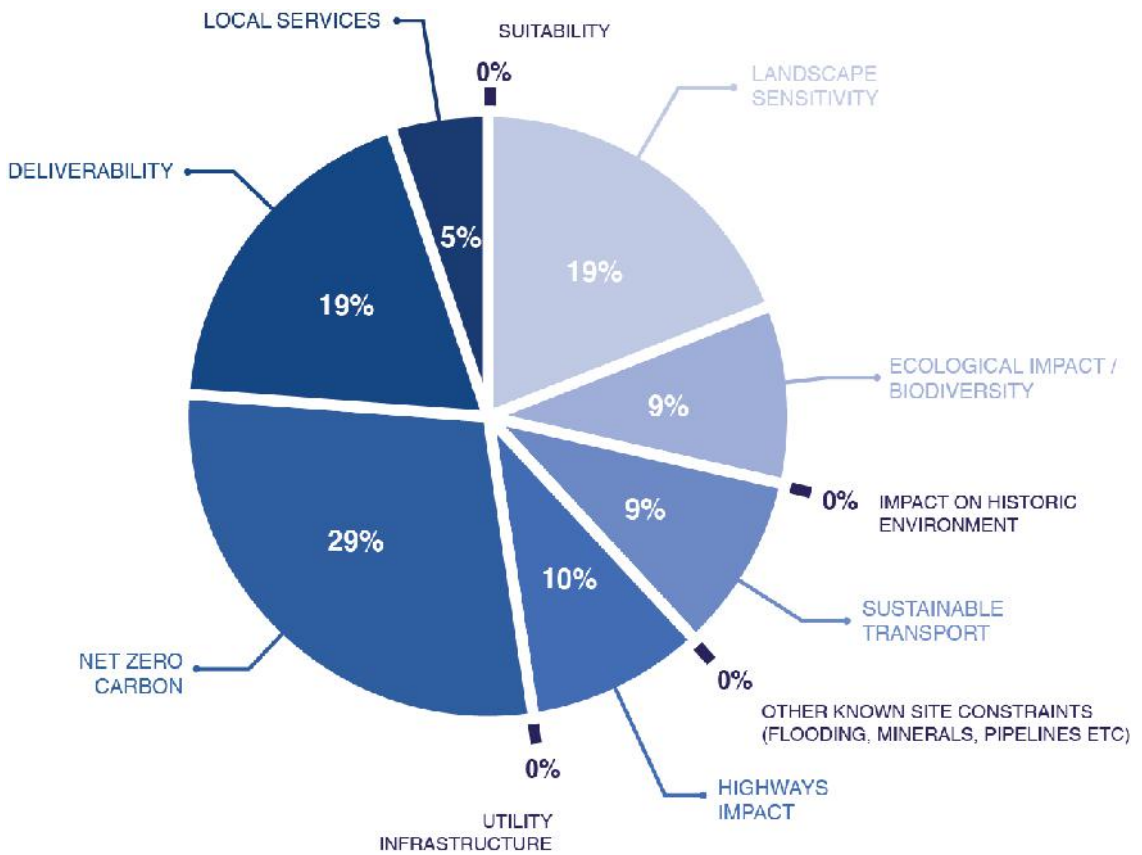
- Integrating with existing communities and settlements;
- Respecting the setting of existing settlements;
- Connected and integrated approach to the provision of facilities and services with existing settlements;
- Future proofing and learning from local sub-regions;
- Local funding and resources;

- Movement and connectivity;
- Infrastructure: drainage / habitat mitigation/ pressure of existing landscapes; and
- Diversify the provision of homes and densities.

**Priorities**

11.14 The comments were organised during the workshop under a set of key design principles, referred to as ‘Thematic Criteria’ so that attendees could rank their priorities for the potential new community. This poll was followed by a second vote, this time on ‘Technical Criteria’ as identified by the consultant team in collaboration with the EDDC. The results of the polls for both Thematic and Technical criteria are shown below:

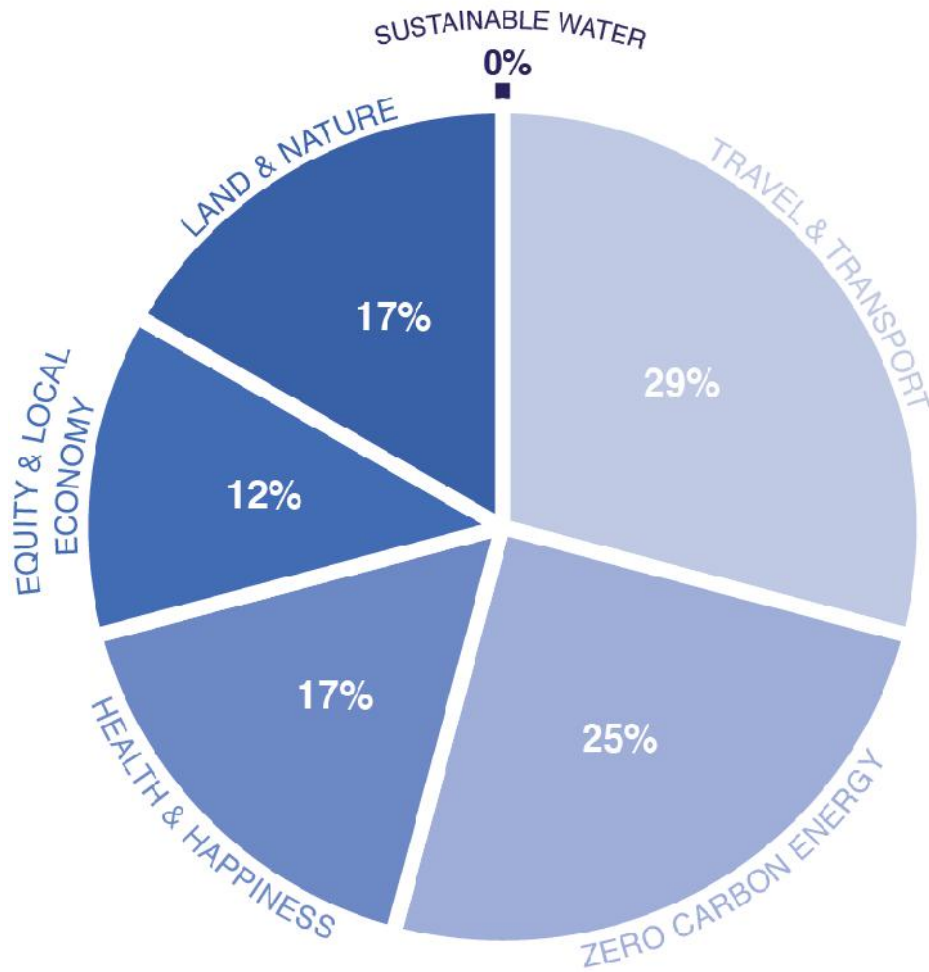
**Figure 11.3: Thematic Outcomes**



Source: Tibbalds (2022)

11.14 These have all been considered within the technical assessments that have informed this Options Appraisal as identified in the previous sections of this report.

**Figure 11.4: Thematic Criteria Results**



Source: Tibbalds (2022)

11.15 The feedback from the thematic criteria was used to feed into the draft vision and a set of draft principles, that were presented and discussed at Workshop 2. This allowed the vision to be developed with a level of understanding of the Members priorities for the settlement, and allowed the conversation to develop to begin to establish a set of measurable principles against which proposals at the masterplanning stage can be assessed.

11.16 Following the final polls, the team presented the next steps and the timing/purpose of the future workshops. The attendees were then asked for any final comments or questions.

## Workshop 2 – 10<sup>th</sup> October 2022

- 11.17 The aim of the second workshop was to introduce the members to the:
- Draft Vision;
  - The three area Options for the potential new community; and
  - To discuss what might be the most important design principles to underpin and support the vision, to take through to the masterplanning stage.
- 11.18 The workshop was attended by 16 people, including EDDC Councillors, the consultant team and EDDC Officers. It was hosted virtually over Zoom and utilised online digital tools such as breakout rooms and Miro boards to ensure the session was interactive and encouraged participants to fully engage with the conversation. An introduction to the project (including ambitions and indicative timeframes) and the consultant team gave a brief recap of the purpose of Workshop 1 and feedback received. The following focus topics were introduced and discussed.

### **Focus Topic 1 – The Draft Vision, Options and Name**

- 11.19 An earlier iteration of the Draft Vision set out in Section 4 of this report was presented, with precedent images to demonstrate the ambitions for the potential new community.
- 11.20 The process of identifying areas of search was explained and the location of the three site Options were introduced with emphasis given to the fact that the preferred Option will be influenced by the outcome of the technical assessments undertaken as part of the Options Appraisal. Attendees were invited to discuss the following questions in smaller breakout groups:
- Do you think the draft vision conveys your priorities for this second new settlement?
  - Do you have any ideas for a suitable name?
  - What do you consider the main opportunities, challenges and priorities for the three site Options?
- 11.21 The groups used Miro boards to record the discussion points, and organise thoughts. The following key comments and themes to be considered were derived from the first breakout session:

### **Draft Vision**

- Future transport modes, including car pools, e-scooters and bikes and promoting other forms of powered movement;
- Keeping it local: using locally sourced labour, materials and housebuilders who are thought of as more likely to deliver on local priorities;



- Provide walking and cycling routes, implemented from the outset;
- Importance of the relationship between the economy (provision of employment, facilities, services) and the growth of the community;
- Agreement with the general principles of the vision;
- Get the culture right from the outset;
- More emphasis on a self-sustaining community.

Three site Options:

- Concerns were raised about the highways impact of Options 2 and 3.
- Option 1 was considered to have more merit in this regard due to the opportunity it provides to connect the A30 and A3052.

Settlement name suggestions

- Greenwood
- Clyst St Joseph
- Name to be related to Grindle Brook

11.22 An extract of one of the Breakout Room notes, recorded on an online whiteboard, is shown below:

**Figure 11.5: Sample of Comments at the Draft Vision**

**Group B - Workspace**




**Breakout Room 1**

**Draft Vision - Comments**

- Relationship between community and economy is important. People reside and work within the same community
- Importance on Cycleways and walking routes
- Active facilities need to be included e.g., gyms, swimming pools.
- Town to be integrated with the forest/landscape
- Better access and availability to public transport
- Design of homes/employment buildings - Passivhaus standard? Example of Norwich City Council with Passivhaus Social Housing
- District Heating System
- Proportion of Social Housing and densities (higher density around town center?)
- Tram to link the site, train network, and economic centers. Run on Tyres?

**Potential settlement names**

- Greenwood
- Clyst St Joseph
- Grindlebrook

Source: Tibbalds (2022)

**Focus Topic 2: What are the top 3 design principles to carry through to the masterplanning stage?**

- 11.23 This topic was introduced to the group, explaining that the purpose of the design principles is to underpin and support the vision and help to guide the masterplanning of the preferred Option. Ensuring that these principles are realised through the design process.
- 11.24 The group was split into two breakout rooms for discussion, with the potential themes set out below presented as a starting point for conversation. These principles were developed from the vision and the thematic criteria feedback from Workshop 1 and are as referenced in Section 4.
- Climate resilience, future proofing and net zero carbon;
  - Greening, landscape and biodiversity net gain contributions;
  - Community ownership of land and stewardship of assets;
  - Townscape, design and placemaking, including public realm and open space;
  - Relationship to existing settlements;

- Phasing and delivery of land uses through a flexible masterplan framework to enable the vision to be fulfilled;
- A truly sustainable, self-sufficient settlement incorporating homes, local employment, shops, community amenities, public realm and open space;
- Sustainable access, transport, utilities, infrastructure and movement;
- Connected and integrated transport infrastructure that alleviates pressure on the existing highway network.

11.25 The following themes were derived from the second breakout session:

- 20 minute neighbourhoods and providing a series of communities (not centralising everything)
- Green streets, spaces and biodiversity
- Climate resilience
- Incorporating designated pedestrianised areas/low traffic neighbourhoods within the town
- Circular economy principles & reuse of resources
- Promoting sustainable access/transport
- Creating an identity for the town
- Adaptable communities
- District Heating

11.26 Group A considered all design principles to be equally as important as one another. Group B summarised their top 3 priorities as:

1. Climate resilience;
2. Green space; and
3. Sustainable access/transport.

### **Amendments to the Draft Vision**

11.27 Following the second workshop the Vision was amended to incorporate the following points as a direct response to feedback received:

- Ensuring that the culture of the place is established at the outset;
- To put more emphasis on the development of a self-sustaining community;

- Rewording of some points into plain English e.g. 'Contemporary interpretation of the local context' was amended to 'innovative design that will draw inspiration from the local context.'
- The use of local materials and labour has been included in the concluding paragraph of the vision.

11.28 The changes made are summarised below:

*The Vision for this second new settlement in East Devon is to create a self-sufficient, healthy and dynamic community with distinctive character. Delivering up to 8,000 high-quality equitable homes with an equitable range of tenures, places of work and a diverse mix of uses that are easily accessible via sustainable and active travel such that these become the dominant transport modes.*

*This new town will be more than just a settlement, it will be an ambitious and highly desirable place that supports the growth of a self-governing and self-sustaining community **that establishes its culture at the outset in order** to develop and thrive into the future.*

*The structure of the settlement will promote innovative design **that will draw inspiration from** the local context, including the unique surrounding historic environment, to create a rich character. Streets and spaces will be designed to encourage social interaction and will be embedded in a well-connected and integrated active travel network with comprehensive links to nearby employment, **surrounding** countryside and the city of Exeter.*

*It will be underpinned at its core by sustainability, wellbeing, and healthy living, creating an exemplar zero-carbon town both in terms of self-sufficiency and design and by doing so it will provide a legacy to the benefit of future generations.*

*This sustainable community will be sensitively and seamlessly integrated with the outstanding East Devon natural environment and contribute to the delivery of the Clyst Valley Regional Park whilst protecting nearby internationally recognised habitats.*

*It will provide a rich network of substantial open space and diverse landscaping, including areas of enhanced ecology and biodiversity, as well as opportunities for play, recreation and opportunities for food growing.*

*This vibrant and adaptable new settlement will preserve East Devon's legacy as an outstanding place to live. **The use of local materials and labour will be promoted to deliver on local priorities, creating** somewhere residents can be proud of and where people of all ages and lifestyles will prosper.*

11.29 In addition to the amendments made to the draft Vision, the comments received will also feed into the design principles to be taken forwards during the masterplanning process for the preferred Option in 2023. The comments on Member's priorities form an invaluable basis from which to begin the design process, to ensure the Vision will be delivered and that local ambitions will be met. The proposed vision was also discussed by Members of the Council's Strategic Planning Committee at their meeting on 1st November 2022 and further changes were made so that it makes reference to "equitable" homes and an "equitable" range of tenures in the second sentence".



# 12. Assessment of the Options

## Introduction

- 12.1 This section provides the cumulative outcome of the scored assessment of the three site Options against the agreed criteria outlined in Table 12.1 below and identifies from this the Preferred Option. The assessment criteria drew upon those used by EDDC for the wider Local Plan site selection process and adapted these to the requirements of assessing a new settlement.
- 12.2 Based on these assessment criteria the following scoring has been developed alongside EDDC to assess the three Option sites against a basket of criteria. The highest scores represent lower potential adverse impact/ higher benefit. The scoring has been reviewed for the sustainable accessibility, highways and deliverability criteria given the additional assessments undertaken.

**Table 12.1 – Assessment Criteria and Scoring**

<b>Criteria</b>	<b>Scoring</b>
Landscape sensitivity	<b>Sensitivity:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Ecological impact/Biodiversity	<b>Impact:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Environmental constraints (flooding, minerals, historic environment)	<b>Constraint’s level:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4 Low – 5
Sustainable Accessibility	<b>Sustainability:</b> High – 5 Medium/High - 4 Medium – 3 Low/Medium - 2 Low - 1
Highways Impact	<b>Impact:</b> High – 1 Medium/High - 2 Medium – 3 Low/Medium - 4

	Low – 5
Utilities Infrastructure	<b>Capacity:</b> High – 5 Medium/High - 4 Medium – 3 Low/Medium - 2 Low - 1
Net Zero Carbon Infrastructure	<b>Contribution to Net Zero:</b> Low exposure/vulnerability or high opportunity – 5 Low-medium exposure/vulnerability or medium-high opportunity - 4 Medium exposure/vulnerability or medium opportunity – 3 Medium-high exposure/vulnerability or low-medium opportunity - 2 High exposure/vulnerability or low opportunity – 1
Net Zero Carbon Infrastructure	<b>Climate Resilience:</b> Low exposure/vulnerability or high opportunity – 5 Low-medium exposure/vulnerability or medium-high opportunity - 4 Medium exposure/vulnerability or medium opportunity – 3 Medium-high exposure/vulnerability or low-medium opportunity - 2 High exposure/vulnerability or low opportunity – 1
Deliverability (land)	<b>Impact:</b> Limited i.e., simple land ownership, all land put forward in call for sites, majority of landowners known, few businesses to relocate – 5 Limited to Medium - mixed land ownership, majority of landowners known, all land put forward in call for sites, few businesses to relocate – 4 Medium i.e., mixed land ownership, majority of land put forward in call for sites, but some land assembly needed, some landowners known, some businesses to relocate – 3 Medium to Extensive - complicated land ownership, few landowners known, some land put forward in call for sites, but land assembly needed, lots of businesses to relocate – 2 Extensive i.e., complicated land ownership, significant land assembly required, lots of businesses to relocate and no landowners known – 1

Source: CBRE (2022)

12.3 The score per Option has been used to identify the Preferred Option.

## Outcome of Technical Assessments

12.4 We summarise below the outcome of the technical assessments and the scoring to assist in identifying a Preferred Option.

### Landscape Sensitivity

12.5 The technical assessment at Section 5 concluded that of the three Options identified, overall Option 3 is slightly less sensitive than Options 1 and 2 in landscape terms, but landscape sensitivity varies within each Option, and all the options - including Option 3 - contain areas of higher sensitivity, where development would be likely to cause significant landscape and visual impact.

12.6 The land with the lowest levels of sensitivity is found in the southern part of Option 1 (overlapped by the western part of Option 2) and the northern part of Option 3.

12.7 The landscape sensitivity risk per Option site is assessed and summarised below.

**Table 12.2- Landscape Sensitivity Options Appraisal Scoring**

Option	Score	Sensitivity
1	2	High - Medium
2	2	High - Medium
3	3	Medium

Source: FFA (2022)

### Ecological Impact/Biodiversity

12.8 The technical assessment at Section 6 concluded that in terms of ecological risk, Option 2 performs best while Option 3 would be least preferred. However, the Option sites themselves have relatively few absolute ecological constraints, and such constraints can typically be accommodated within a sensitively-designed green and blue infrastructure framework.

12.9 The landscapes to the west and east of all the Option areas have particular local, regional, national and international significance for wildlife, including mobile species with particular seasonal sensitivities.

12.10 Option 3, closest to the Exe Estuary (400m to the south), and with relatively greater proportion of an ecological network enhancement zone, is more vulnerable than the other two Options to the need to provide significant ecological management zones within its boundary.

12.11 Opportunities to strengthen and/or diversify the ecological network should be sought within the Preferred Option area, making use of existing habitats and features and seeking opportunity to expand habitat or create new habitat to contribute towards biodiversity gains. Opportunities for biodiversity gains would also be presented by the land allocated within Option 1 for the Clyst Regional Valley Park, lands identified within network enhancement or expansion zones, SANGS and flood zone land.

12.12 The ecological impact/biodiversity risk per Option site is assessed and summarised below.

**Table 12.3– Ecological Impact/Biodiversity Options Appraisal Scoring**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
Statutory Wildlife Sites of International & National Significance	5	4	3
Strategy 47 Applies (Recreational Pressure)	3	3	2
SSSI Impact Risk Zones	5	4	3
Statutory Wildlife Sites of Regional / Local Significance	5	5	5
Local Wildlife Sites	3	3	5
Potential for Impact on Wildlife Sites Network (in absence of mitigation)	2	3	3
National or Devon Priority Habitats	2	3	2
Overall Risk to Ecological Network	3	4	2
Diversity of protected or notable species records in locality	3	3	2
<b>TOTAL</b>	<b>31</b>	<b>32</b>	<b>27</b>
<b>AVERAGE</b>	<b>3.4</b>	<b>3.6</b>	<b>3</b>

Source: TEP (2022) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

**Flood Risk**

12.13 The potential flood risk per Option site is assessed and summarised below.

**Table 12.4 – Flood Risk Options Appraisal Scoring**

<b>Option</b>	<b>Score</b>
<b>1</b>	<b>4</b>
<b>2</b>	<b>4</b>
<b>3</b>	<b>4</b>

Source: CBRE (2022)

12.13 For Option 1 running through the centre of the site are some areas around the water courses which are within Flood Zones 2 and 3a with surface water flooding a possibility but a low to medium risk.

- 12.14 With regard to Option 2 there are areas at risk within Zone 2 running through the centre of the site. Areas to the south fall with Zone 3a which is a medium risk. As with Option 1 these are located around the water courses and will be prone to surface water flooding a possibility but this is a low to medium risk.
- 12.15 In Option 3 and running through the centre of the site some areas around the water courses are in Flood Zones 2 and 3a with surface water flooding a possibility but a low to medium risk.
- 12.16 All Options have land within Flood Zones 1-3 but as the majority is within Zone 1 this is a low to medium flood risk. Land at risk of flooding will be incorporated into well designed and implemented drainage and water mitigation strategies and the land used for space for SANGS and biodiversity gains during masterplanning of the Preferred Option.

**Minerals**

**Table 12.5 – Minerals Presence Options Appraisal Scoring**

<b>Option</b>	<b>Score</b>
<b>1</b>	<b>3</b>
<b>2</b>	<b>1</b>
<b>3</b>	<b>5</b>

Source: CBRE (2022)

- 12.17 All Options were identified as outside of coal mining areas and Options 1 and 3 have no nitrate and phosphate areas identified.
- 12.18 Option 2 is the most constrained as it contains zones for water source protection, nitrate vulnerability and an area of medium priority for phosphates.
- 12.19 It has also been noted that there is a mineral safeguarding zone at the Hill Barton industrial estate which related to an existing asphalt plant (Devon Mineral Plan – Policy M2). There is also established strategic waste facilities at both Hill Barton Business park and Greendale Barton (Devon Waste Plan – Policy W10 and W6) – this affects both Options 1 and 2.



**Historic Environment**

12.20 The potential impact on the historic environment assessed and summarised below.

**Table 12.6 – Historic Environment Options Appraisal Scoring**

<b>Option</b>	<b>Score</b>
<b>1</b>	<b>3</b>
<b>2</b>	<b>3</b>
<b>3</b>	<b>3</b>

Source: CBRE (2022)

12.21 This assessment identifies that in each Option there remains at least one and a maximum of three Grade II listed buildings and as a result these are all scored equally as a medium risk but would be subject to appropriate mitigation. As we indicated in Section 3 the land budget excludes land that is part of the historic environment. That said even though historic buildings and registered parks/gardens are outside the site areas of the Options the potential impact upon the setting of those places will be addressed as part of the masterplanning of the Preferred Option.

12.22 A number of variations have been considered for each Option and the chosen boundaries have been refined to ensure that the historic environment would not be subject to convergence with the potential new community. Where the Options do abut the historic environment, the intention at the masterplanning stage of the project will be to ensure that adequate separation, through a substantially sized landscape buffer, is provided to respect the character of the existing settlements. The masterplanning will allow for any potential impact on the historic environment to be sufficiently screened given the extensive public open space land budget.

12.23 The three site locations have been developed to provide as far as possible nucleated, compact settlements. This form of development is conducive to the application of active travel measures.

12.24 The boundaries for the three site locations have been defined using landscape features, including existing watercourses, field boundaries and hedgerows, to create rational settlement edges.

**Sustainable Accessibility**

12.25 The potential impact on sustainable access assessed and summarised below.

**Table 12.7 – Sustainable Accessibility Options Appraisal Scoring**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Walking</b>	4	1	4
<b>Cycling</b>	4	2	4
<b>Public Transport</b>	4	2	4
<b>Employment</b>	5	3	4
<b>TOTAL</b>	<b>17</b>	<b>8</b>	<b>16</b>
<b>AVERAGE</b>	<b>4.3</b>	<b>2</b>	<b>4</b>

Source: Hydrock (2023)

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

- 12.26 As can be seen Options 1 and 3 perform strongly across all categories, with Option 1 performing marginally better. Option 2 falls some way behind and would require the greatest level of intervention, and provides the lowest opportunity to promote sustainable transport.
- 12.27 It should also be noted that Option 1 offers the potential to create north-south sustainable and public transport links between the A3052 and A30 through the development site. This is an additional benefit compared to Options 2 and 3.

**Highways**

12.28 The potential impact on the highway network is assessed and summarised below.

**Table 12.8: Highways Delay Impact and Mitigation Summary**

Assessment Category	Option 1		Option 2		Option 3	
	Impact	Deliverability	Impact	Deliverability	Impact	Deliverability
<b>M5 J29</b>	5	5	5	5	5	5
<b>M5 J30</b>	5	5	4	5	4	5
<b>M5 J31</b>	5	5	5	5	5	5
<b>A30</b>	5	5	5	5	5	5
<b>A3052</b>	4	5	4	5	4	5
<b>A38 &amp; A380</b>	5	5	5	5	5	5
<b>Clyst St Mary junction</b>	3	4	1	4	1	4
<b>East of Exeter Network Impacts</b>	5	5	1	2	5	5
<b>TOTAL</b>	<b>37</b>	<b>39</b>	<b>30</b>	<b>36</b>	<b>34</b>	<b>39</b>
<b>IMPACT &amp; DELIVERABILITY AVERAGE</b>	<b>38</b>		<b>33</b>		<b>36.5</b>	
<b>AVERAGE</b>	<b>4.8</b>		<b>4.1</b>		<b>4.6</b>	

Source: Hydrock (2023)

*Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.*

12.29 Based on the above, Option 1 would be most preferred in terms of highways impact, followed by Option 3, with Option 2 being least preferred.

12.30 Option 1 shows relatively small changes in traffic on the M5, A30 and A380, resulting in generally small increases in delay. However M5 J29 sees some increases in delay in the AM and PM models, mostly on the east side of the M5. Clyst St. Mary Roundabout also shows some impacts from the development site, with 33 seconds of extra delay on the westbound approach in the AM model and 35 seconds of extra delay on the eastbound approach in the PM model, plus additional turning delay at the roundabout itself.

12.31 Option 1 has the least significant highways impact and it appears that the development of 2,500 new homes up to the end of the Local Plan period could be accommodated without significant highways interventions.

Whilst there would be increases in traffic in some areas, the modelling carried out suggests that these would not lead to significant increases in delays. Minor highways mitigation works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required. Later modelling by WSP has indicated an impact from Option 1 at the A30 Exeter Airport Junction, but the mitigation works required are deliverable and consistent with normal access works to any large development site. Option 1 would be most preferred in terms of highways impact, followed by Option 3, with Option 2 being least preferred.

- 12.32 Next steps would be to carry out more detailed modelling at the Clyst St Mary Roundabout, A30 Exeter Airport Junction and the A376 / Topsham Lane junction based on the flows predicted by the SATURN modelling. This would allow mitigation schemes to be developed in greater detail to gain an understanding of likely costs and risks. It is also recommended that preliminary discussions are held with the owners of Westpoint Arena to determine the potential to use the site for a park and ride, as this could have wider benefits.
- 12.33 In terms of their highways impacts, Option 1 would be the preferred development scenario, followed by Option 2 and then Option 3. Option 1 appears to require no mitigation measures (other than those that would be addressed as part of the normal planning approval process). Whilst Options 2 and 3 would require improvements at the Clyst St Mary Roundabout, with Option 2 also requiring improvements around Woodbury Salterton and at the A376 / Topsham Lane junction.
- 12.34 Based on an initial desktop review, it appears that, despite their larger delay impacts, it would be possible to mitigate the impacts of both Option 2 and 3 if these were to be taken forward. This would be through either localised capacity improvements or demand reduction schemes.
- 12.35 As a result, it is concluded that at this stage there are no fundamental highways constraints that would prevent any of the development Options coming forward based on the results of the DCC model run by WSP, which has tested the effect of 2,500 new homes up to the end of the new Plan period (2040). However, additional modelling will need to be carried out to further test the network at the next stage, including additional local plan growth.
- 12.36 As part of the next steps, a trip forecasting exercise will be undertaken. This will include trip generation taking into consideration travel minimisation and internalisation calculations within an overarching Vision and Validate approach whereby a 20-minute neighbourhood is used to support the default usage of sustainable transport modes.

**Utilities**

12.36 The potential impact on the utility network is assessed and summarised below.

**Table 12.9: Utilities – scored assessment**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Utility capacities and opportunities for connection</b>	4 Good opportunity	4 Good opportunity	2 Limited opportunity
<b>Foul Drainage capacities and opportunities for connection</b>	2 Limited opportunity	2 Limited opportunity	2 Limited opportunity
<b>Existing Infrastructure Impact</b>	3 Medium impact	1 Significant impact	3 Medium impact
<b>TOTAL</b>	<b>9</b>	<b>7</b>	<b>7</b>
<b>AVERAGE</b>	<b>3</b>	<b>2.3</b>	<b>2.3</b>

Source: Hydrock (2022) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

- 12.37 Option 1 is the highest scoring site from a Utilities perspective due to the relatively minimal impacts from existing major infrastructure, whilst also providing an opportunity to connect to WPD’s 132kV overhead for a new Bulk Supply Point to service the site with power.
- 12.38 Option 2 whilst a good opportunity for power connection similar to Option 1, is lower scoring due to the presence of the National High Pressure gas main, which will restrict development and layout.
- 12.39 Option 3 has an extensive amount of existing infrastructure to consider for either diversions to free up developable space, or layout impacts with clearance zones, and also does not present as good an opportunity for electrical connection to the 132kV network.
- 12.40 All three Options are constrained for foul drainage capacities due to the rural locations not being served with extensive existing infrastructure, with none of the 3 Options presenting any better opportunity than the other, the strategy for providing a connection being the same in all cases.



**Net Zero Carbon**

12.41 The potential beneficial impact of net zero carbon technologies is assessed and summarised below.

**Table 12.10: Contribution to Net Zero - scored assessment**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Network Capacity (Generation)</b>	2	2	2
<b>Low or Zero Carbon Energy Technologies</b>	5	2	4
<b>Energy Storage</b>	3	3	3
<b>TOTAL</b>	<b>10</b>	<b>7</b>	<b>9</b>
<b>AVERAGE</b>	<b>3.3</b>	<b>2.3</b>	<b>3</b>

Source: Hydrock (2022) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

12.42 Options 1 and 3 both perform strongly in relation to low and zero carbon energy technologies, with Option 1 performing marginally better given the increased potential for a mix of technologies to be employed.

12.43 More detailed summaries for different low and zero carbon energy technologies are provided in the Technical Report at Appendix F, alongside recommendations for further work, much of which will follow site selection in alignment with the masterplanning process.

**Climate Resilience**

12.44 The potential impact of future climate risk is assessed and summarised below.

**Table 12.11: Climate Resilience - scored assessment**

<b>Future Climate Risk</b>	<b>Key Considerations for Infrastructure</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Drought</b>	water availability	4	3	4
	ground movement/ subsidence	3	4	2
	soil erosion (water)	2	3	5
	ground permeability	3	4	2
<b>Heatwaves</b>	extreme or prolonged high temperatures	not assessed	not assessed	not assessed
	wildfires	not assessed	not assessed	not assessed
<b>Extreme precipitation</b>	surface water	2	3	2
	Ground saturation	3	4	2
<b>Storm events</b>	high winds	not assessed	not assessed	not assessed
	Soil erosion (wind)	2	3	2
<b>TOTAL</b>		<b>19</b>	<b>24</b>	<b>19</b>
<b>AVERAGE</b>		<b>2.7</b>	<b>3.4</b>	<b>2.7</b>

Source: Hydrock (2022) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

- 12.45 In terms of future climate risk for infrastructure, Option 2 has been assessed as the best performing Option on the basis that it provides the highest overall level of resilience through lower exposure and/or vulnerability.
- 12.46 All Options would be likely to require further consideration of soil geology which factors into a significant number of risks.
- 12.47 Any Option which brings forward ground mount solar PV arrays at scale should consider any additional risk or additional drainage design mitigation to ensure future resilience against surface water runoff from the panels.
- 12.48 Any potential interaction of surface water drainage, power distribution and access and movement strategies for the selected site must be a key consideration during the masterplanning activities to ensure that the site is not locked in to an approach that could trigger cascading failures to infrastructure networks over the long term.

**Deliverability**

12.49 The potential deliverability impact is assessed and summarised below.

**Table 12.12: Deliverability – scored assessment**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Land Ownership</b>	4.5	5	2.5
<b>Existing Land Use</b>	5	3	3
<b>Total</b>	<b>9.5</b>	<b>8</b>	<b>5.5</b>
<b>AVERAGE</b>	<b>4.8</b>	<b>4</b>	<b>2.8</b>

Source: CBRE (2023) Note – the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

Key: As a number of assessments inform this technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

12.50 In summary the assessment of land ownership shows that here is a large overlap between Options 1 & 2 meaning that there are many landowners with ownership in both areas. All of the landowners for these two options have been identified. There are some restrictive covenants over sections of the land in both Options 1 & 2.

- 12.51 All of the land identified in Option 2 has been previously promoted, Option 1 requires a small quantum of additional land to the North West and Option 3 has the greatest amount of land needed to be assembled.
- 12.52 There are fewer land owners/freehold titles in Options 1 & 2 and a mixture of private companies and private individuals. Option 3 has the highest number of land owners/freehold titles with the majority of land owned by private individuals. There are 5 unregistered sections of land within Option 3.

## Preferred Option

- 12.51 The score per Option has been used to identify the Preferred Option/s as indicated on the table below.

**Table 12.13– Options Appraisal Technical Assessment – Scoring Summary**

<b>Assessment Category</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
Landscape Sensitivity	2	2	3
Ecological Impact/Biodiversity*	3.4	3.6	3
Flood Risk	4	4	4
Minerals	3	1	5
Historic Environment	3	3	3
Sustainable Accessibility*	4.3	2	4
Highways*	4.8	4.1	4.6
Utilities*	3	2.3	2.3
Net Zero Carbon*	3.3	2.3	3
Climate Resilience*	2.7	3.4	2.7
Deliverability*	4.8	4	2.8
<b>TOTAL</b>	<b>38.3</b>	<b>31.7</b>	<b>37.4</b>

Source: CBRE (2023) Note: a higher score represents lower potential adverse impact/ higher benefit of each Option. Key: \*Where a number of assessments inform a technical category the average score per option is rounded to one decimal point and feeds through to the cumulative assessment in Section 12.

- 12.52 The additional assessments undertaken on land ownership, sustainable accessibility and highways have enabled these scores to be reviewed which has resulted in marginal changes from the 2022 Option Appraisal Report. There is now a larger but still marginal difference (0.9) difference between Options 1 and 3 (38.3 & 37.4) as Preferred Options. Whilst there has been some change in the scoring per assessment category Option 2 has performed better (+1.2).
- 12.53 In terms of ranking Option 1 is marginally the Preferred, with Option 3 the second ranked Option and Option 2 the least preferred and as such it is recommend that Option 2 is not taken forward. Option 1 has the benefit as being the most deliverable in terms of land ownership, is located adjacent to the strategic highway network, has the potential of delivering a north/south route, is in close proximity to employment

opportunities at the Science Park and Airport meaning that early phases would be more sustainable due to proximity.

12.54 We summarise the outcome of the reasons underpinning the recommendation that Option 1 is preferred over Option 3 in the table below:

**Table 12.14: Options Appraisal Technical Assessment – Ranking**

Assessment Category	Option 1	Option 3
Landscape Sensitivity	This represents: a <b>high-medium overall landscape sensitivity</b> to proposed development. Unique sensitivities are the quality and integrity of the historic rural landscape and associated river corridors which flow east-west through the middle of the defined area; the elevated land in the east, and the slopes forming the setting to the Clyst Valley in the west. These areas are particularly sensitive and it would be very difficult to mitigate for this through masterplanning.	This represents a <b>medium overall landscape sensitivity</b> to proposed development. Higher landscape sensitivity occurs in the south and east of this Option, and is associated with elevated and steeper land; a smaller-scale historic landscape; land intervisible with the East Devon AONB, and the setting of Clyst St George. Lower sensitivity land is found in the north of the Option. Levels of landscape and visual effects could be mitigated by focussing development in the northern part of the Option.
Ecological Impact/Biodiversity	A <b>medium impact on existing ecology and biodiversity</b> . However the location and integration of future green and blue infrastructure for the new settlement will be able to accommodate existing and future ecological processes and biodiversity.	A <b>higher potential impact on existing ecology and biodiversity</b> , due to the proximity of the southern part of the Option to designated sites in the Exe Estuary. However the location and integration of future green and blue infrastructure for the new settlement will be able to accommodate existing and future ecological processes and biodiversity.
Flood Risk	A <b>low to medium flood risk</b> that can be reduced by well designed and implemented drainage and water mitigation strategies.	A <b>low to medium flood risk</b> that can be reduced by well designed and implemented drainage and water mitigation strategies.
Minerals	A <b>medium minerals risk</b> but the area is outside coal mining areas with no nitrate and phosphate areas identified. Other mineral constraints can be addressed by informed masterplanning.	A <b>low minerals risk</b> .
Historic Environment	A <b>medium risk on the historic environment</b> , though again this can be mitigated by thoughtful masterplanning. Ensuring the new	A <b>medium risk on the historic environment</b> , though again this can be mitigated by thoughtful masterplanning. Ensuring the new settlement doesn't



	settlement doesn't abut existing places and densely planted landscape buffers are introduced to protect the environment around historic buildings and assets.	abut existing places and densely planted landscape buffers are introduced to protect the environment around historic buildings and assets.
<b>Sustainable Accessibility</b>	A <b>medium risk in terms of sustainable accessibility</b> but with thoughtful integration into the new community of walking, cycling and public transport infrastructure routes these risks can be mitigated. It benefits from potential for sustainable access to existing and future employment sites.	A <b>low risk in terms of sustainable accessibility</b> but with thoughtful integration into the new community of walking, cycling and public transport infrastructure routes these risks can be mitigated. It benefits from potential for sustainable access to existing and future employment sites.
<b>Highways</b>	A <b>low adverse impact and high benefit</b> in terms of proximity to existing highway infrastructure and it appears that the development of 2,500 new homes up to the end of the Plan period could be accommodated without significant highways interventions. It shows relatively small changes in traffic on the M5, A30 and A380, resulting in generally small increases in delay. Minor highways mitigation and access junction works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required.	A <b>medium adverse impact and medium benefit</b> in terms of proximity to existing highway infrastructure requiring improvements at the Clyst St Mary Roundabout. Based on an initial desktop reviews, it appears that, despite their larger delay impacts, it would be possible to mitigate the impacts this Option were to be taken forward. This would be through either localised capacity improvements or demand reduction schemes.
<b>Utilities</b>	A <b>low-medium adverse impact</b> to diverting existing utilities due to overhead HV networks and high benefit in terms of access to existing utilities with the potential to access existing power, water and telecom connections with proximity to the site	A <b>medium adverse impact and medium benefit</b> in terms of access to existing utilities.
<b>Net Zero Carbon</b>	A <b>low adverse impact and high benefit in terms of net zero carbon.</b>	A <b>medium adverse impact and medium benefit in terms of net zero carbon</b>
<b>Climate Resilience</b>	A <b>medium level of resilience</b> and medium exposure and/or vulnerability.	A <b>medium level of resilience</b> and medium exposure and/or vulnerability.
<b>Deliverability</b>	A <b>low adverse impact and high benefit</b> due to fewer land owners many of whom are private companies	A <b>medium to high adverse impact and low benefit</b> due to the highest number of different land owners many of whom are

	<p>or individuals all of which are known and registered. Land assembly will still be required but to a lesser extent. The control of land was one of the key learning points from the ten year review of Cranbrook. It is assumed that any existing land uses that are not relocated will be suitably screened and this will be addressed in the masterplanning.</p>	<p>private individuals and there are 5 areas of unregistered land where ownership is not known. Significant land assembly will be required to package a sufficient quantum of land together to enable this to come forward and gain the required level of control, which is a risk. It is assumed that any existing land uses that are not relocated will be suitably screened and this will be addressed in the masterplanning. There are no known barriers to delivery presented by existing land uses in the area.</p>
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Source: CBRE (2023)

# 13. Conclusions and Next Steps

- 13.1 This final section of the report outlines the key conclusions from the technical assessments that underpin this Options Appraisal Report and identifies key next steps.

## Conclusions

### **Landscape**

- 13.2 The Landscape Sensitivity Assessment (see Appendix A) found that the three options contain a number of general sensitivities such as the character of rural lanes, the presence of large trees and important hedges, and the character of historic settlements on the peripheries which occur within all the Options. There are also a number of constraints to development including floodplains, main roads and existing land uses. However, some of these also form potential opportunities.
- 13.2 In addition to these general sensitivities, the Assessment found that each Option has unique areas of sensitivity for which it would be difficult to mitigate. The Assessment also found that landscape sensitivity levels vary within each of the options. Land with the lowest sensitivity was found to occur in the southern part of Option 1 (overlapped by the western part of Option 2) and the northern part of Option 3.
- 13.3 On landscape sensitivity, of the three Options, Option 3 is preferred, having an overall medium sensitivity compared to Options 1 and 2 both of which are considered to have a high-medium sensitivity overall.

### **Ecology / Biodiversity**

- 13.4 The desktop Ecological Report (see Appendix C) identified that there are no overriding ecological constraints for any of the Options arising from statutory wildlife designations of international or national significance but that all options contain non-statutory wildlife sites. With regard to habitats all three Options comprise a similar landscape of predominantly agricultural fields (cereal and arable grasslands) with a comprehensive field boundary network.
- 13.5 In terms of ecological risk, Option 2 performs best while Option 3 would be least preferred. However, the Option sites themselves have relatively few absolute ecological constraints, and such constraints can typically be accommodated within a sensitively-designed green and blue infrastructure framework.
- 13.6 Opportunities to strengthen and/or diversify the ecological network should be sought within the Preferred Option. Making use of existing habitats and features and seeking opportunity to expand habitat or create new habitat to contribute towards biodiversity gains. Opportunities for biodiversity net gain would also be presented by the land allocated within Option 1 for the Clyst Regional Valley Park, lands identified within network enhancement or expansion zones, SANGS and flood zone land.

### **Flood Risk**

- 13.7 All Options have land within Flood Zones 1-3 but as the majority is within Zone 1 this is a low to medium flood risk. Land at flood risk will be incorporated into well designed and implemented drainage and water mitigation strategies and the land used for space for SANGS and biodiversity gains during masterplanning of the Preferred Option.

### **Minerals**

- 13.8 All Options were identified as outside of coal mining areas and Options 1 and 3 have no nitrate and phosphate areas identified. Option 2 is the most constrained as it contains zones for water source protection, nitrate vulnerability and an area of medium priority for phosphates.

### **Historic Environment**

- 13.9 All land, historic buildings and registered parks and gardens are excluded from the land budget required for the development and will be preserved. These will be subject to appropriate mitigation and will be protected as part of the masterplanning of the Preferred Option.
- 13.10 Where the Options do about the historic environment, the intention at the masterplanning stage of the project will be to ensure that adequate separation, through a substantially sized landscape buffer, is provided to respect the character of the existing settlements. The masterplanning will allow for any potential impact on the historic environment to be sufficiently screened given the extensive public open space land budget.

### **Sustainable Accessibility**

- 13.11 As can be seen Options 1 and 3 perform strongly across all categories, with Option 1 performing marginally better. Option 2 falls some way behind and would require the greatest level of intervention, and provides the lowest opportunity to promote sustainable transport.

#### Walking

- 13.12 All of the Options are located in predominantly rural locations with internal pedestrian connectivity presently relatively undeveloped. The new community will require a network of convenient, direct, permeable, safe and easy to navigate pedestrian routes that are able to accommodate the needs of all users.
- 13.13 The development should include areas of low- or no-traffic, following the principles of shared-space, or play streets, and green/tree-lined streets promoted in guidance and required by policy.
- 13.14 The proposed Clyst Valley Trail offers a north/south multi-use link adjacent to Exeter's eastern boundary and within the vicinity of Options 1 and 3. The topography of Option 2 poses a challenge to a potential route of this nature.

### Cycling

- 13.15 The Local Highway Network in the vicinity of the Options has limited dedicated cycling infrastructure, but the rural nature of many of the local lanes results in relatively low traffic volumes, meaning that they can be suitable for cyclists. Each Option would benefit from the inclusion of an on-site mobility hub to facilitate these emerging modes of travel. Options 1 and 3 are the most sustainable for cycling.

### Public Transport

- 13.16 All three Options are expected to need improvement to local bus services. Analysis has demonstrated that given the size of the development, a c.10-minute frequency service for the development is likely to be commercially viable. This, coupled with the upgrading of existing bus stop facilities, would provide a significant enhancement on the existing services within the area of all three Options, for both existing local communities and future residents of the new settlement.
- 13.17 In relation to rail, Options 1 and 3 benefit from their proximity to Exeter and the series of stations located along the Avocet Line. Options 1 and 3 are the most sustainable for public transport.

### Employment Accessibility

- 13.18 In all Options sustainable transport links to employment areas will need to be upgraded to be sufficiently attractive to ensure they are used from the outset of the development, and so the proximity of the locations has been taken as the key comparative difference between the Options.
- 13.19 Options 1 and 3 benefit from their proximity to Exeter due to the volume of employment opportunities located within the city. The employment centres located in proximity to Option 2 are limited to the Hill Barton and Greendale Business Parks. Option 3 is also located in close proximity to a range of facilities in addition to Exeter (Winslade Park, Topsham Town Centre etc.). Option 1 benefits from the largest amount of employment opportunity which in addition to Exeter include Exeter Airport and the associated Airport Business Park as well as the SkyPark, Science Park and Exeter Business Park/Met Office facility and as such is the Preferred Option for accessibility to employment.

### Highways

- 13.20 Option 1 has the least significant highways impact and it appears that the development of 2,500 new homes up to the end of the Plan period could be accommodated without significant highways interventions. Whilst there would be increases in traffic in some areas, the modelling carried out suggests that these would not lead to significant increases in delays. Minor highways mitigation and access works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required. Option 1 would be the most preferred in terms of highways impact, followed by Option 3, with Option 2 least preferred.
- 13.21 It should be noted that the WSP modelling accounts for development traffic up to the end of the new Plan period only. Additional testing would be required in order to determine the potential impact and mitigation



requirements for a potential 8,000 new homes. In addition, this is based on only modelling the 2,500 dwellings and not the other allocations in the East Devon Local plan or additional development in Exeter, Teignbridge and Mid Devon. This will take place at the next stage and may change these outputs.

### **Utilities**

- 13.22 Option 1 is the highest scoring site from a Utilities perspective due to the relatively minimal impacts from existing major infrastructure, whilst also providing an opportunity to connect to WPD's 132kV overhead for a new Bulk Supply Point to service the site with power.
- 13.23 Option 2 whilst a good opportunity for power connection similar to Option 1, is lower scoring due to the presence of the National High Pressure gas main, which will restrict development and layout. Option 3 has an extensive amount of existing infrastructure to consider for either diversions to free up developable space, or layout impacts with clearance zones, and also does not present as good an opportunity for electrical connection to the 132kV network.
- 13.24 All three Options are constrained for foul drainage capacities due to the rural locations not being served with extensive existing infrastructure.

### **Net Zero Carbon**

- 13.25 Options 1 and 3 both perform strongly in relation to low and zero carbon energy technologies, with Option 1 performing marginally better. Option 2 would require the greatest level of intervention, and in our assessment provides the lowest opportunity to contribute to net zero.
- 13.26 Specifically at primary substation level there is some export capacity remaining at Clyst Honiston and Pinhoe both in closest proximity to Option 1 and also at Topsham in relation to Option 3.
- 13.27 Creating the right low or zero carbon technology mix for the new town will be essential. An emphasis is placed upon technology options that can aid the decarbonisation of heat as well as options for onsite power generation.
- 13.28 Options 1 and 3 demonstrate potential locations for open loop ground source technology which could be utilised as part of a technology mix for a low carbon heat network. Option 1 includes areas at the north and west of the location which are underlain by a moderately productive aquifer (12L/s) which is also captured by the western boundary of Option 3. Option 2 is underlain by rocks with no or very low levels of groundwater which would limit ground source heat pump technology potential to closed loop systems.
- 13.29 Due to the EfW plant location at Hill Barton each of the Options would be suitable for connection to the heat network interconnector/extension, although noting that the interconnector is not currently sized sufficiently to provide for the new town. Option 1 transits the proposed route of the interconnector; its proximity to the

heat source therefore offers a cheaper and easier solution in comparison to the other options. Option 1 is therefore preferred in relation to this technology..

13.30 For solar, all three Options fall within the areas previously assessed EDDC Low Carbon Study as suitable for solar energy. Option 1 has reduced overall coverage of suitability for solar and this may also be affected by proximity to Exeter Airport as further assessment with regard to glint and glare is likely to be required for significant solar arrays. All Options will require also further consideration of landscape and visual impact. Option 2 is in closest proximity to an area identified by the EDDC Low Carbon Study as suitable for wind energy.

13.31 With respect to 'behind the meter' applications, all Options have the potential to use battery storage in 'island mode' and as part of a microgrid solution for the development. Further detail on development mix and phasing is needed to undertake a more detailed assessment.

### **Carbon Resilience**

13.32 In terms of future climate risk for infrastructure, Option 2 has been assessed as the best performing Option on the basis that it provides the highest overall level of resilience through lower exposure and/or vulnerability.

13.33 All Options would be likely to require further consideration of soil geology which factors into a significant number of risks.

13.34 Any Option which brings forward ground mount solar PV arrays at scale should consider any additional risk or additional drainage design mitigation to ensure future resilience against surface water runoff from the panels.

13.35 Any potential interaction of surface water drainage, power distribution and access and movement strategies for the selected site must be a key consideration during the masterplanning activities to ensure that the site is not locked in to an approach that could trigger cascading failures to infrastructure networks over the long term.

13.36 As further detail or a preferred site option emerges, key questions should be asked by EDDC to ensure that the climate resilient vision is maintained:

- Is the proposed infrastructure/utilities designed to withstand the projected future climate expected in the development's lifetime?
- Is the proposed infrastructure/utilities exacerbating any current identified risk within the region?
- Will the proposed infrastructure/utilities increase other risks (e.g. increase the risk of flooding due to changes in the landscape, or increased non-permeable surfaces etc.)
- Are synergies between both mitigation and adaptation objectives being considered with sufficient weight given to climate adaptation alongside the net zero target?

### **Deliverability**

- 13.37 All of the land owners for Options 1 & 2 has been identified and consists of a mixture of private companies and private individuals.. All of the land identified in Option 2 has been previously promoted whilst Option 1 requires a small quantum of additional land to the North West. Option 3 has the greatest amount of land that is needed to be assembled and has the highest number of land owners/freehold titles many owned by private individuals with 5 areas of unregistered of land.

### **Next Steps**

- 13.38 The 2022 report was used by EDDC during their consultation on their Reg 18 Draft Local Plan (November to January 2023) and this updated report will be considered by Members in December 2023 to help inform discussions on a Preferred Option and their Reg 19 consultation.

# Appendix A – Landscape Assessment

# Appendix B – Sustainable Access Review



# Appendix C – Ecological Report

# Appendix D - Highways Impact Modelling Report

# Appendix E - Utilities Due Diligence Report

# Appendix F – Zero Carbon Assessment

# Landscape Sensitivity Assessment for New Community East of Exeter

Final Report

17<sup>th</sup> October 2022





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## 1.0 Non-technical Summary

This report forms part of a Landscape Sensitivity Assessment (LSA) for a new community east of Exeter. It was commissioned by East Devon District Council in May 2022, and was prepared by Fiona Fyfe Associates between June and September 2022. The work had three components, of which this is the first:

- Landscape Sensitivity Assessment
- Landscape Capacity Assessment
- Concept planning

This LSA is intended to complement studies currently being undertaken by consultants CBRE, who are taking forward work relating to infrastructure requirements and delivery vehicles.

The current NPPF Planning Practice Guidance states that Landscape Sensitivity and Capacity Assessments can be used to assess the scale and type of development which can be accommodated without compromising landscape character. The methodology used in this LSA is in line with current best practice guidelines published by Natural England. It considers landscape sensitivity to three different types of development: A Residential; B Employment/Commercial and C Very large scale warehousing/distribution.

The Area of Search for the Landscape Sensitivity Assessment stretches from the A30 in the north to Ebford in the south, and from the A376 and Bishop's Court Lane in the west to the B 3184 and Woodbury Salterton in the east. Most of the Area of Search is within the *Clyst Lowland Farmlands* Devon Character Area, but the eastern, higher part is within the *Pebble Bed Heaths and Farmland* Devon Character Area.

The Area of Search was divided into nine Local Landscape Units (LLUs).

Within each LLU, the landscape character, current land uses and likely levels of sensitivity are broadly consistent. LLUs represent broad areas of landscape rather than individual field parcels, and provide a strategic assessment of landscape sensitivity across the Area of Search.

Desk studies and fieldwork were undertaken to consider a range of landscape and visual criteria for each LLU (namely scale, landform, land cover, built environment, perceptual qualities, visual and landscape value). The assessment considers the susceptibility of key landscape and visual characteristics of each LLU to the three different potential development types. A rating is attributed against each criterion using a 5-point scale of High, High-Medium, Medium, Medium-Low and Low.

The study found that the Area of Search contains a number of sensitivities which occur across the Area of Search, such as the character of rural lanes, the presence of large trees and hedges, and the character of existing historic settlements on its peripheries. Much of the Area of Search is visible from surrounding high land, including parts of the East Devon AONB. There are also a number of constraints to development such as floodplains, main roads, and existing land uses. However, some of these form potential opportunities as well as constraints.

The LSA concluded that the lowest levels of landscape sensitivity are found in the west-central part of the Area of Search, around the A3052 and the Grindle Brook Valley. The next lowest is found further south, to the north-east of Clyst St George.

As would be expected, landscape sensitivity for residential use is slightly lower than for commercial/employment use. Landscape sensitivity for very large scale warehousing/distribution use is high across the Area of Search, suggesting that the key characteristics and qualities of this landscape are highly vulnerable to change from this development type.

CBRE has already identified three potential options for the location of the new community based on land previously put forward for development. Of these three options, overall Option 3 is slightly less sensitive than Options 1 and 2 in landscape terms. However within the area covered by Option 3, landscape sensitivity varies, so not all of the Option 3 area would be suitable for development. Finer-grain assessment of Option 3 is therefore required at the next stage of the work (Landscape Capacity Assessment).

The land with the lowest levels of sensitivity is found in the southern part of Option 1 and the northern part of Option 3. These areas could potentially be combined to form a new 'Western Option'.

## 2.0 Introduction

### 2.1 Commissioning

This report forms part of a Landscape Sensitivity Assessment (LSA) for a New Community East of Exeter. It was commissioned by East Devon District Council (EDDC) in May 2022. Task A of the commission (Landscape Sensitivity Assessment) was undertaken by Fiona Fyfe Associates, with Carol Anderson Landscape Associates, Countryside, and Robin Lines Landscape, between May and July 2022. Additional fieldwork was undertaken in September 2022 following an extension of the Area of Search to ensure consistency with work by CBRE (see section 2.3 below). Tasks B and C (Landscape Capacity Assessment and concept planning exercise) took place in August and September 2022. The complete second draft of the LSA was submitted in late September 2022. and the final report in mid-October 2022.

### 2.2 Purposes

This LSA will form part of the evidence base for the emerging new EDDC Local Plan. Its purpose is to inform the siting and design of a new community east of Exeter to meet additional housing need identified within the District.

The project brief sets out three key tasks. This piece of work refers to the first of these. The tasks are as follows:

**Task A:** Undertake a comprehensive Landscape Sensitivity Assessment in accordance with current best practice guidance for identified residential, commercial, educational and employment development and associated infrastructure. The assessment should also consider potential for cumulative effects in relation to proposed allocations for nearby settlements at Woodbury (184 dwellings) and Clyst St Mary (85 dwellings).

**Task B:** Undertake a Landscape Capacity Assessment based on LSA findings to identify whether the required quantum of development could be accommodated in the identified areas of lesser landscape sensitivity.

**Task C:** Using the assessment findings prepare concept plans for proposed site development (up to three options) indicating principal access points and roads required to serve the development and areas of proposed housing, commercial, educational and employment land and associated green infrastructure.

### 2.3 Project scope, and relation to other studies

The LSA is being undertaken alongside complementary studies by consultants CBRE, who are taking forward work relating to infrastructure requirements and delivery vehicles. CBRE's work is focussing on the impacts on transport infrastructure, utilities and ecology, amongst other issues. The LSA is focussed on landscape and visual matters. It therefore sits alongside the other specialist work by CBRE covering related but separate topics such as ecology.

## 3.0 Policy Context

### 3.1 International policy context

The European Landscape Convention (ELC) which the UK has signed and ratified - and which is not affected by Brexit - presents a holistic concept of 'landscape' which can be used as an integrating framework for various areas of policy. The ELC is intended to put people at the heart of improved approaches to the planning, management and protection of landscapes across Europe. The definition of landscape as adopted in the ELC brings together the natural, cultural and perceptual qualities of landscape, as follows:

*Landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors<sup>1</sup>*

In adopting this broad definition of 'landscape', the ELC moves beyond consideration of landscape purely in aesthetic or visual terms, and instead encourages a focus on landscape as a resource in its own right. Consideration of landscape can therefore provide a helpful spatial framework for thinking about a range of issues relating to environment, land use and development.

The ELC also stresses the importance of landscapes in all people's lives, wherever they live. In its preamble, the ELC states *the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas<sup>2</sup>*. The consideration of landscape is therefore applicable everywhere.

### 3.2 National policy context

The National Planning Policy Framework (NPPF) sets out Government policies on planning, and is accompanied by Planning Practice Guidance. It is a material consideration which must be taken into account by Local Planning Authorities when formulating planning policy. Its topics include achieving sustainable development; making effective use of land; achieving well-designed places; promoting sustainable transport; meeting the challenge of climate change, flooding and coastal change; conserving and enhancing the natural environment, and conserving and enhancing the historic environment. Para 174 of the current NPPF (July 2021) describes how planning policies and decisions should contribute to and enhance the natural and local environment. Of particular relevance are:

*a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*

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<sup>1</sup> Council of Europe, 2000 *European Landscape Convention* p.5

<sup>2</sup> *Ibid* p.3



*b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*

*d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

The current NPPF Planning Practice Guidance for Landscape contains the following relevant paragraphs:

### **Landscape**

#### ***How can planning policies conserve and enhance landscapes?***

*The National Planning Policy Framework is clear that plans should recognise the intrinsic character and beauty of the countryside, and that strategic policies should provide for the conservation and enhancement of landscapes. This can include nationally and locally-designated landscapes but also the wider countryside.*

*Where landscapes have a particular local value, it is important for policies to identify their special characteristics and be supported by proportional evidence. Policies may set out criteria against which proposals for development affecting these areas will be assessed. Plans can also include policies to avoid adverse impacts on landscapes and to set out necessary mitigation measures, such as appropriate design principles and visual screening, where necessary. The cumulative impacts of development on the landscape need to be considered carefully.*

*Paragraph: 036 Reference ID: 8-036-20180721*

#### ***How can the character of landscapes be assessed?***

*For a designated landscape, the relevant management plan will contain further information on the area's particular character and beauty.*

*Where appropriate, landscape character assessments can be prepared to complement Natural England's National Character Area profiles. Natural England provides guidance on undertaking these assessments.*

*To help assess the type and scale of development that might be able to be accommodated without compromising landscape character, a Landscape Sensitivity and Capacity Assessment can be completed.*

*To demonstrate the likely effects of a proposed development on the landscape, a Landscape and Visual Impact Assessment can be used.*

*Paragraph: 037 Reference ID: 8-037-20190721*

*Revision date: 21.07.2019*

### 3.3 Local policy context

The East Devon Local Plan 2013-2031 was adopted in January 2016. A new Local Plan is currently in preparation, but it is likely that the local policies set out below will be taken forward into the emerging Local Plan.

#### **Strategy 10: Clyst Valley Regional Park (shown on fig. 1 below)**

The Clyst Valley Regional Park (CVRP) is intended to help mitigate development in the West End of the district. Strategy 10 of the current Local Plan provides for creation of the CVRP, which will:

- a) provide high-quality natural greenspace that is complementary to development and will be a stimulus to encourage commercial and business development of the highest standard.*
- b) Ensure natural ecosystems function in the West End of our district and ensure residents, workers, school children and visitors of all abilities have easy access to high quality open spaces, with linked benefits to health, education and food production.*
- c) Take recreation pressure away from more environmentally sensitive locations, thereby overcoming concerns arising from application of the Habitat Regulations that would otherwise prevent development coming forward.*
- d) Provide new wildlife corridors that enhance the biodiversity of the West End.*
- e) Provide green corridors, open space and biodiversity enhancement areas. Enhance cycling and walking opportunities to link habitats and sustainable movement networks that promote the overall recreational experience for the West End.*
- f) Conserve and enhance heritage assets and their setting to reflect their intrinsic importance, maximising beneficial outcomes for park users and to encourage use of the park and to enrich the cultural identity of the area.*

#### **Strategy 46: Landscape Conservation and Enhancement and AONBs**

As shown on Map 1 (Appendix B) the Area of Search for the new community is outside the East Devon AONB. However, parts of the Area of Search are intervisible with the AONB (particularly the Pebble-Bed Heaths which form a high ridge on the western side of the AONB). The panoramic views from the Pebble Bed Heaths are a special quality of the landscape. Strategy 46 of the current Local Plan states:

*Development will need to be undertaken in a manner that is sympathetic to, and helps conserve and enhance the quality and local distinctiveness of, the natural and historic landscape character of East Devon, in particular Areas of Outstanding Natural Beauty.*

*Development will only be permitted where it:*

- 1. conserves and enhances the landscape character of the area;*
- 2. does not undermine landscape quality; and*

3. is appropriate to the economic, social and wellbeing of the area.

*When considering development in or affecting AONBs, great weight will be given to conserving and enhancing their natural beauty and major development will only be permitted where it can be shown that it cannot reasonably be accommodated elsewhere outside the AONB.*

#### **Strategy 44: Undeveloped Coast and Coastal Preservation Area**

Land covered by the Coastal Preservation Area policy (Exe Estuary) abuts the south-west corner of the Area of Search (see Map 1). Strategy 44 of the current Local Plan states that:

*Land around the coast and estuaries of East Devon, as identified on the Proposals Map, is designated as a Coastal Preservation Area. Development or change of use will not be allowed if it would damage the undeveloped/open status of the designated area or where visually connected to any adjoining areas. The Coastal Preservation Area is identified on the basis of visual openness and views to and from the sea.*

#### **Strategy 8: Development in Green Wedges**

Much of the Clyst Valley is covered by Green Wedge policy. Although this land is outside the Area of Search (see Map 1), it abuts the most of the western edge of the Area of Search as its boundary follows the A376 (Exmouth Road) and Bishops Court Lane. Strategy 8 of the current Local Plan states that:

*Within Green Wedges, as defined on the Proposals Map, development will not be permitted if it would add to existing sporadic or isolated development or damage the individual identity of a settlement or could lead to or encourage settlement coalescence.*

## 4.0 Area of Search and Landscape Context

### 4.1 Project background

East Devon remains a largely rural district with approximately two thirds of its area designated as AONB. This limits development opportunities, particularly in the east, adding to pressure for new sites in the west. The boundaries of Exeter City extend east to the M5 motorway. The good transport connections this affords, and the relatively restricted opportunities for expansion within the City boundaries, creates pressure on surrounding Authorities to make more land available for development. The current East Devon Local Plan (Adopted January 2016) provided for substantial expansion of residential and employment land (including Cranbrook new town) in the 'West End' of the district to the north of the A30 and the east of the M5 (see figure 1 below).

Despite EDDC's extensive commitments to development, there is still an identified need for additional housing in the West End of the District. EDDC is therefore considering a new community to the east of Exeter as part of its emerging local plan.



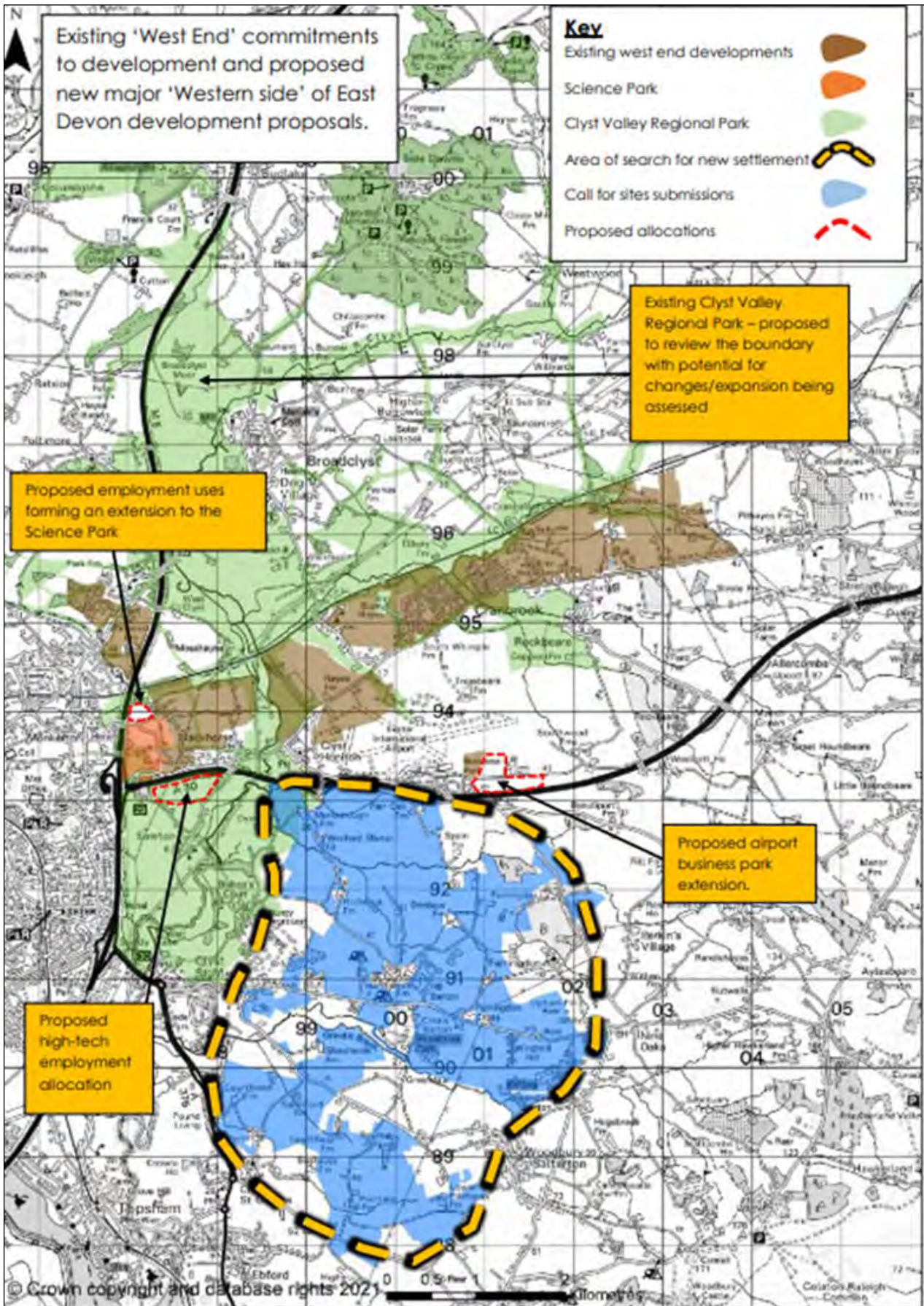


Figure 1 (from Project Brief): Existing 'West End' commitments to development, and area of search for new settlement.

## 4.2 Area of search

The rough area of search for the location of this new community is shown on Fig. 1 above. The Area of Search boundary was subsequently rationalised to follow roads/ features, as shown in Map 1 in Appendix B. It extends from the A30 southwards to Ebford Road, and the minor road to the south of B1397 Woodbury Road. The western boundary runs along the A376 (Exmouth Road), the western edge of Clyst St Mary, and Bishop's Court Lane. The eastern boundary is formed by B3184 Farringdon Road, Honey Lane, and Bond's Lane.

The LSA focusses on the Area of Search, but also considers it within its wider landscape context in terms of views, habitat connections, green infrastructure connections, etc.

## 4.3 Sites put forward and CBRE's Options

Over the past 5 years, a number of sites within the Area of Search have been put forward for development by landowners. These are shown on Map 2 in Appendix B. However, it does not follow that the sites put forward by landowners are necessarily those areas of lowest landscape sensitivity. Therefore this LSA considers the entire Area of Search.

Using land put forward for development is not the only delivery mechanism available for development, although it is the most straightforward. It may be necessary to consider the acquisition of additional land parcels in order to extend or connect sites put forward to make the design for the new community work.

Based on the sites put forward (sometimes with additional areas of land acquisition), CBRE have identified three potential land options within the Area of Search of sufficient size to accommodate the likely requirements for housing, employment spaces, community facilities, open spaces, sports facilities, etc. At present these options (also shown on Map 2) are indicative, but they will be further refined over the coming months. It is intended that the LSA will help to identify the preferred option(s), and also assist in the refining process. The three options are currently forming the basis for CBRE's initial assessments of transport, utilities, etc.

## 4.4 Landscape Character

Map 3 shows the landscape character of the Area of Search. There are three relevant Landscape Character Assessments: *Devon Landscape Character Assessment* (2011), *East Devon and Blackdown Hills Landscape Character Assessment* (2019), and *Clyst Valley Regional Park Landscape Character Assessment* (2022). The three Assessments are at different scales and 'nest' within each other.

The variations in landscape character across the Area of Search reflect its transitional nature between the higher, well-treed landscape of the Pebble Beds Ridge to the east, and the lower-lying land of the Clyst Valley and Exe Estuary to the west.



The **Devon Landscape Character Assessment** is undertaken at a county-wide scale and identifies Devon Character Areas (DCAs). It shows the vast majority of the Area of Search to be within the *Clyst Lowland Farmlands* Devon Character Area, with parts in the east (around Farringdon, Windmill Hill and Woodbury Salterton) within the *Pebble Bed Heaths and Farmland* Devon Character Area. The latter is more elevated and generally smaller in scale, and is associated topographically and visually with the distinctive Pebble Bed ridge which runs north-south to the east of the Area of Search. Immediately to the south-west of the Area of Search is the *Exe Estuary and Farmlands DCA*.

The special qualities and features of the *Clyst Lowland Farmlands*, which covers the majority of the Area of Search are as follows. Most are applicable to the Area of Search:

- Well managed, generally low hedgerows enabling views to distinctive wooded skyline hills...(Pebble Bed Heaths), which help provide orientation and sense of place.
- Sense of tranquillity enhanced by natural qualities of the meandering streams and rivers.
- Killerton SSSI valued for its igneous geology exposed in small disused quarries.
- Other nature conservation interest mainly limited to patches of unimproved neutral grassland and marshy grassland or fen, traditional orchards, stream margins and areas of parkland containing veteran trees.
- Rich cultural heritage of the area's hilltops, such as Bronze Age barrows, Iron Age hillforts and ancient settlement remains.
- Concentration of historic parklands in the north-west including Sprydun Park (National Trust), Killerton Park and House (National Trust) and Rockbears Manor, with one of the largest populations of veteran trees in Devon.
- Picturesque villages with traditional buildings linked by narrow winding lanes crossing historic stone bridges; many Listed Buildings, and Conservation Areas at Sowton, Whimble and Ottery St Mary.
- Many buildings constructed of local stone, e.g. Killerton Chapel.
- Clyst St Mary historically associated with the 1549 Prayer Book Rebellion.
- William Makepeace Thackeray lived at Ottery St Mary; his novel *Pendennis* was set here.

The **East Devon and Blackdown Hills Landscape Character Assessment** is undertaken at a district-wide scale, and identifies Landscape Character Types (LCTs). Most of the Area of Search is within LCT 3E *Lowland Plains*, with parts in the east (around Farringdon, Windmill Hill and Woodbury Salterton) within LCT 3B *Lower rolling farmed and settled valley slopes*. In addition, a stretch of the Holbrook Stream in the north-west of the Area of Search is within LCT 3C *Sparingly settled farmed valley floors*. Immediately to the south-west of the Area of Search is an area of LCT 4A: *Estuaries*, associated with the Exe Valley. Beyond the Area of Search to the south-east is the Pebble Bed Heaths LCT, within the East Devon AONB.

The special qualities of LCT 3E *Lowland Plains* are as follows:

- Historic small parks and gardens, containing a high proportion of mature and veteran trees.
- The range of settlements and building styles, from sleepy coastal villages to Cranbrook new town.
- Its unassuming but still attractive rural feel, particularly away from larger settlements and roads.



- Its strong visual relationship with surrounding higher landscapes – the Lowland Plains LCT is often seen from above, and is also visually influenced by surrounding LCTs.

The special qualities of LCT 3B: *Lower rolling farmed and settled valley slopes* are as follows:

- An extensive LCT which forms the setting for many settlements, and also contributes to many expansive views from higher ground.
- A productive, working but still attractive landscape containing numerous historic and archaeological features.
- A diversity of settlements, with building materials and settlement pattern reflecting local geology.

The special qualities of LCT 3C *Sparsely settled farmed valley floors* are as follows:

- The lack of settlement creates a sense of escape and tranquillity; some valleys popular for recreation.
- Its open, simple landscape pattern contrasts with the relatively complex enclosure and settlement patterns of surrounding landscapes.
- A dynamic landscape which contains important examples of active river processes such as meander formation, and valuable aquatic and wetland habitats.
- Historic bridges, causeways, leat systems and mills, and military structures (e.g. pill boxes and tank traps) in uncluttered landscape settings.

The **Clyst Valley Regional Park (CVRP) Landscape Character Assessment** is undertaken at a local scale and identifies Local Landscape Character Areas (LLCAs). Most of the Area of Search is within LLCA J: *Clyst St Mary Farmlands*, with parts in the east (around Farringdon, Windmill Hill and Woodbury Salterton) within LLCA K: Aylesbeare and Woodbury Farmlands. A small part in the north-west of the Area of Search (around Marlborough Farm) is within LLCA H: *Sowton and Bishop’s Court*. Immediately to the south-west of the Area of Search is LLCA I: *Lower Clyst Valley*. The southernmost part of the Area of Search was not covered by the CVRP Landscape Character Assessment.

Each of the LLCAs covered by the Clyst Valley Regional Park Landscape Character Assessment contains a table setting out their special qualities, associated threats and issues, and guidance. These are set out below.

**Landscape sensitivities of the *Clyst St Mary Farmlands* LLCA**

Special quality to protect	Threats and issues	Guidance
The clear distinction between urban Exeter and its rural surroundings	This quality is retained over much of the LLCA, but is being lost along the A3052 due to creeping suburbanisation through various ‘urban fringe’ land uses. These have a	Consider the cumulative impact of any further development along the A3052 when making planning decisions. Seek to visually enhance this approach to Exeter, for example through new native tree planting, and the sensitive

	<p>cumulative affect when seen from the road.</p> <p>The rural character of some roads and villages is also already or potentially affected by urbanising features.</p>	<p>treatment of site boundaries. Minimise signage along the A3052.</p> <p>Aim to retain the rural character of lanes, minimising urbanising influences such as signage, lighting, concrete kerbs, and urban-style traffic calming schemes.</p> <p>Ensure that new development in villages is sensitive to the rural location in terms of design, layout, plot size, boundary treatments, etc.</p> <p>Minimise light pollution from street lighting, security lighting and buildings (including agricultural buildings).</p>
Patterns of native vegetation	<p>Hedges and hedgerow trees, woodland, riparian trees and copses are key to the character of this LLCA. They are vulnerable to loss through tree disease, highways works or development.</p>	<p>Manage woodland as appropriate to encourage diversity of ages and species of trees. Encourage new hedgerow trees and promote diversity (for example encouraging different species of oak) to increase resilience to tree disease.</p> <p>Any new development should retain (and ideally fit within) existing vegetation patterns, and should be designed to extend and enhance existing vegetation patterns, such as linking woodland and strengthening habitat corridors.</p>
Historic assets and their settings (including Listed Buildings, historic parkland and gardens at Winslade Park, and medieval strip fields near Woodbury Salterton)	<p>The settings of some Listed Buildings have already been compromised (for example Clyst St Mary Parish Church, which is surrounded by a Business Park). Other historic assets (or their settings) may be vulnerable to development, or loss through neglect.</p> <p>Non-listed historic assets are particularly vulnerable to gradual change and modification (for example replacement of wooden windows and doors with PVC).</p>	<p>Protect Listed Buildings and their settings, and other historic assets, and seek opportunities to enhance them where possible.</p> <p>Owners of non-listed properties should be encouraged to adopt good practice when undertaking building repairs.</p> <p>Historic structures (including farm buildings) and their fixtures and fittings should be recorded by a specialist prior to re-development. Record and raise awareness of non-designated historic assets.</p>
Areas retaining their rural character and sense of tranquillity. The Holbrook Valley is particularly	<p>Areas away from the A3052 and the Grindle Brook Valley still retain their rural character and sense of tranquillity. This could be eroded through new</p>	<p>Seek to retain the rural character and relative tranquillity of these parts of the LLCA, by discouraging development or land use changes detrimental to this special quality.</p>

tranquil and attractive, with riverside meadows, tree-lined streams and a secluded feel. Otters have been sighted in the Holbrook.	development within or close to these areas, and by issues such as noise, traffic and light pollution.	Consider the visual impacts, as well as other impacts (such as noise or light pollution) of new agricultural developments such as biogas generation within the LLCA. Site such structures carefully, and mitigate impacts through design and screening.
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**Landscape sensitivities of *Aylesbears and Woodbury Farmlands LLCA*:**

Special quality to protect	Threats and issues	Guidance
The elevated, wooded backdrop to views from lower land.	Much of this LLCA is visible from a wide area, so any large-scale developments here (particularly on higher land just below the ridge) may be highly visible.	Avoid constructing large buildings or structures in prominent locations. Consider the impacts of associated lighting on night-time views.
The well-treed and wooded character of the LLCA	Tree disease and climate change	Manage woodlands to promote age and species diversity. Link and extend woodlands and other treed habitats to create habitat networks. Encourage new hedgerow and roadside trees to grow out to become the mature trees of the future. Encourage local seed collection and planting to promote genetic diversity of oak trees, to increase resilience to tree disease.
The small scale of the LLCA	Large-scale or overly-urban developments which are out of scale with this relatively small-scale landscape.	Undertake appropriate Landscape and Visual Assessment to understand the potential impact of new development. Be mindful of the need to integrate any new development into the landscape through careful siting, design and mitigation. For example, use non-reflective and visually unobtrusive materials for the walls and roofs of agricultural buildings, such as Yorkshire boarding and dark green matt paint. Try to stagger rooflines, work with contours, and minimise use of cut and fill. Use native planting for screening.

Special quality to protect	Threats and issues	Guidance
Strongly rural character	The rural character could be affected by urbanising influences on (for example) property boundaries, rural lanes, signage or development styles.	Protect the character of rural lanes, keeping signage to a minimum and avoiding suburban features such as concrete kerbs. Property boundaries should respect rural character, e.g. native hedges and timber gates. Close-boarded fencing should be avoided. Any new development should fit with surrounding buildings in terms of plot size, massing, design and materials. Minimise light pollution from street lighting, security lighting and buildings (including agricultural buildings).

**Landscape sensitivities of *Sowton and Bishop's Court* LLCA:**

Special quality to protect	Threats and issues	Guidance
The visual and physical separation between this LLCA and urban Exeter	Large buildings have recently been constructed outside this LLCA which are visible from it. They increase awareness of the proximity of the city of Exeter and introduce modern structures into views from this historic and predominantly rural area. It is likely that this issue will increase due to development pressure.	Aim to strengthen the visual separation between this LLCA and urban Exeter. Strengthen peripheral planting (using native species woodland and hedgerows) to create strong northern and western edges to the LLCA. Any new buildings should be sited and designed to minimise their visual intrusion on the valley, for example by avoiding hilltop sites, using sensitive massing in building design, and using muted colours and non-reflective materials.
The settings of historic assets (particularly Sowton Conservation Area and Bishop's Court)	If future development extends into this LLCA (for example across the A30) it may impact on the setting of Sowton Conservation Area and erode the rural context of the village.	Development to the south of the A30 is likely to impact on the predominantly rural character of this LLCA and reduce the separation between this LLCA and urban Exeter (see above). Should development be proposed to the south of the A30, appropriate Landscape and Visual Impact Assessments, and Heritage Impact Assessments, must be undertaken to ascertain the level of impact on the setting to Sowton Conservation Area, and on views from within the valley.  The settings of Bishop's Court and Bishop's Clyst Bridge should also be protected from inappropriate development, and enhanced where possible.

Special quality to protect	Threats and issues	Guidance
The historic landscape and field patterns of the valley floor	The valley floor contains areas of surviving medieval field systems and water meadows, as well as the Bishop's Court parkland and historic buildings on the edge of Sowton village.	The integrity of the historic landscape should be protected from development or land use changes which would affect it. The new Clyst Valley Trail should be designed with care through this LLCA so that it works with and enhances historic features.
Veteran trees	Tree disease, climate change, and damage by livestock and/or visitors.	Continue to monitor veteran trees and manage them accordingly. Use fencing or brushwood to prevent people and animals accessing the trunks. This is particularly important where they are in horse paddocks. Encourage new parkland trees which will become the veteran trees of the future.
The visual focus on the River Clyst	Most views within and across the valley are dominated by the river. Adding new elements to the landscape could erode this quality.	Remain mindful of how any new developments or land use changes will be perceived in relation to the river. Aim to keep the river as the dominant feature.

#### 4.5 Topography and drainage

Map 4 shows landform and flood zones within the Area of Search. The Area of Search is between the Clyst Valley (to the west) and the Pebble Bed Heaths (to the east), and consequently slopes down towards the west. The highest points are therefore found in the eastern part of the Area of Search, reaching 81m asl just to the west of Woodbury Salterton, and 94m on an un-named hill to the west of Upham Farm south of Farringdon. Close by, on the south side of the A3052, the distinctive rounded knoll of Windmill Hill reaches 90m asl.

A series of streams run westwards across the Area of Search, draining into the Clyst Valley. The most northerly of these is the Holbrook Stream which (together with its un-named tributary issuing from springs at Upham) joins the Clyst near Clyst Honiton, and creates a relatively varied and intricate landform between the A30 and the A3052. The central part of the Area of Search is drained by the Grindle Brook and its tributaries which rise on the Pebble Bed Heaths. Its valley is relatively steep in the eastern part of the Area of Search, and gradually flattens out towards the west, where it flows through a broad floodplain and joins the River Clyst west of Winslade Park. Watercourses are least pronounced in the southern part of the Area of Search, which is drained by two small unnamed streams - one running to the east of Clyst St George and joining the Grindle Brook near Winslade Park before flowing into the River Clyst, and one running past Kenniford Farm and into the Grindle Brook.



The southernmost part of the Area of Search, to the south of Woodbury Road, drains into the unnamed stream which flows through Ebford to the Clyst, or into another unnamed stream which flows into the Exe near Exton.

#### 4.6 Designated sites

There are no nationally-designated sites within the Area of Search, but there are several nationally and internationally-designated sites surrounding it. The Pebble Bed Heaths to the east (within the East Devon AONB) are designated Site of Special Scientific Interest, Special Protection Area, Special Area of Conservation and National Nature Reserve for their heathland habitat. They also contain several Scheduled Monuments, including prehistoric barrows, and the Iron-Age hillfort of Woodbury Castle. To the west of the Area of Search is the Exe Estuary, containing wetland habitats designated Site of Special Scientific Interest, Ramsar Site, and Special Protection Area. A contiguous County Wildlife Site extends northwards and includes the grazing marshes associated with the Lower Clyst Valley between Topsham and Bishop's Clyst. To the north-east of the Area of Search is a Registered Historic Park and Garden at Rockbeare, and a County Wildlife Site covering neutral grassland at Beautiport Farm near Aylesbeare.

Map 5 shows that within the Area of Search there is one County Wildlife Site – a former swimming pool with amphibian interest at Farrington House. Listed Buildings are scattered throughout, concentrated within the villages at the peripheries of the Area of Search. Listed Buildings include churches, cottages, farmhouses, country houses, farm buildings, and features such as milestones. Farrington [sic.] House is listed in the Devon County list of Gardens.

#### 4.7 Priority Habitats

As would be expected, the majority of priority habitats are associated with the designated sites surrounding the Area of Search, including extensive areas of Lowland Heathland on the Pebble Bed Heaths, and Mudflats, Saltmarsh and Grazing Marsh in the Exe Estuary and Lower Clyst Valley. There are also several small blocks of deciduous woodland, particularly on the slopes of the Pebble Bed Heaths.

As shown on Map 6, within the Area of Search there is deciduous woodland at Farrington Wood, Cat Copse, Creely Copse, and smaller blocks/ belts scattered throughout. There is some good quality semi-improved grassland in the Grindle Brook Valley near Oil Mill Lane. Small traditional orchards are scattered across the Area of Search, usually associated with farms. A larger traditional orchard is shown in the west of the Study Area, south-east of Winslade Park. However, fieldwork has confirmed this to be a poplar plantation, rather than an orchard.

#### 4.8 Historic Landscape Characterisation

The Devon Historic Environment Record shows a range of field types across the Area of Search (see Map 7). The oldest date from the medieval period, with some notable surviving medieval strip fields to the west of Woodbury Salterton. There are also some fairly extensive areas of

Barton Fields (dating from 15<sup>th</sup>-18<sup>th</sup> Century) and post-medieval enclosures, particularly in the north and south-east of the Area of Search. These areas of older field patterns are separated by modern enclosures. In addition, parts of the Area of Search (particularly in the centre) are associated with recreation, public complex, and industrial land uses, and field patterns have therefore been lost.

## 5.0 Potential Development Types

### 5.1 Types of development considered

The following table sets out the three types of potential development which have been considered in this LSA.

*Table 1: Development types to be considered in the sensitivity assessment*

Development type	Key characteristics
A. Residential	Between 20-35 dwellings per hectare, generally 2 storeys/7-9m high but with occasional taller 3 storey buildings up to 10m
B. Employment/Commercial	Workshops, offices, educational, hospitality, business and industrial buildings up to approx. 12m high, 20m width and 100m length*
C. Very large scale distribution/warehousing	Very large scale distribution and other warehousing and industrial units**

\*NOTE - the existing business park at Hill Barton is an example of industrial buildings within this development type.

\*\*NOTE – the Lidl distribution centre near the airport is an example of this development type.

### 5.2 Aspects of development considered

The LSA considers the aspects of built development which have potential to adversely affect key landscape characteristics. These include consideration of height, density, boundaries, materials and associated infrastructure (including potential earthworks to accommodate building platforms). Landscape and visual constraints identified during the LSA inform potential mitigation measures, for example recommendations for a reduction in density or limits to the height of buildings in some areas.

## 6.0 Assessment Methodology

### 6.1 Approach

The proposed methodology was approved by the client team and the Devon County Landscape Officer prior to commencement of the Assessment. The methodology is compatible with that being used for the Landscape Sensitivity Assessment being undertaken concurrently for Exeter City Council, and is consistent with current best practice guidance in the following documents:

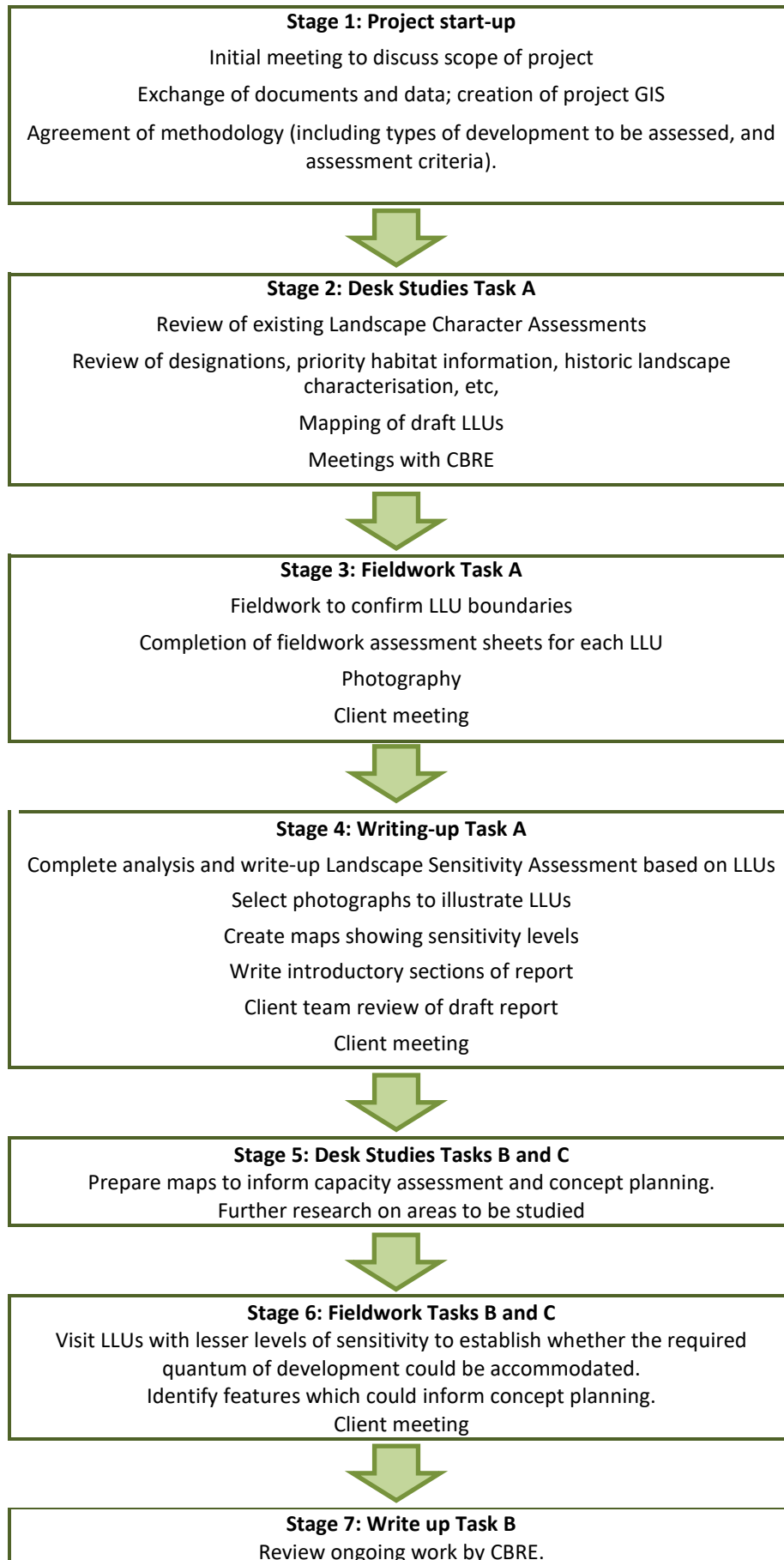
- Natural England (2014) *An Approach to Landscape Character Assessment*
- Natural England (2019) *An Approach to Landscape Sensitivity Assessment – to Inform Spatial Planning and Land Management*
- Landscape Institute (2021) *Technical Guidance Note 02/21 – Assessing Landscape Value Outside of National Designations*
- Landscape Institute and IEMA (2013) *Guidelines for Landscape and Visual Impact Assessment 3<sup>rd</sup> Ed.*
- Landscape Institute Technical Guidance Note 02/21 *Assessing Landscape Value Outside National Designations*

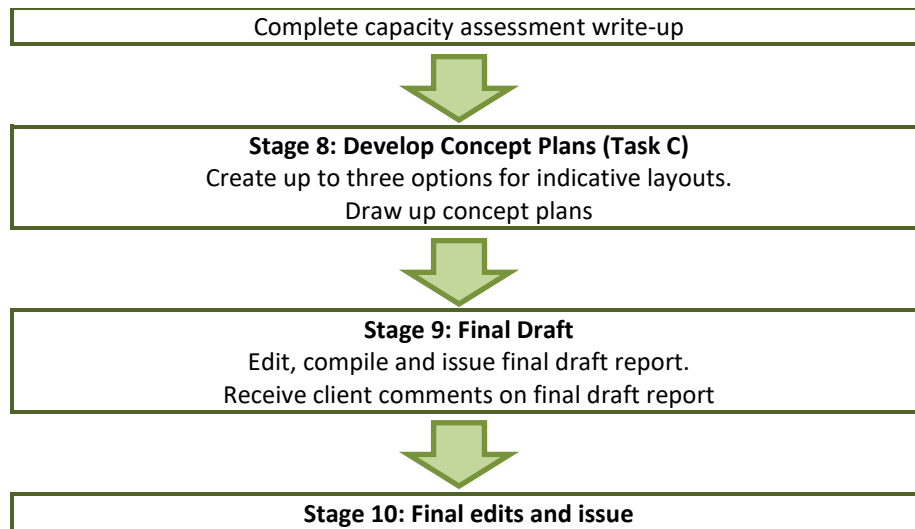
Landscape sensitivity is defined as *a measure of the resilience, or robustness, of a landscape to withstand specified change arising from development types or land management practices without undue negative effects on the landscape and visual baseline and their value*<sup>3</sup>. The sensitivity of a landscape is judged by considering the susceptibility of key characteristics to a defined development type together with the value associated with the landscape. The sensitivity assessment provides an assessment of relative sensitivity of landscapes across the study area with the aim of informing strategic planning, siting and design. It does not replace the need for Landscape and Visual Impact Assessment of specific development proposals.

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<sup>3</sup> Natural England (2019) *An Approach to Landscape Sensitivity Assessment – to Inform Spatial Planning and Land Management p. 7*

## 6.2 Stages of Work





### 6.3 Local Landscape Units

The Area of Search has been divided into a series of Local Landscape Units (LLUs), shown in Map 8. Each of the LLUs is broadly consistent in terms of its landscape character, current land uses, and likely levels of sensitivity. The LLUs were defined at the desk study stage, and refined during fieldwork. They represent broad areas of landscape rather than individual field parcels, and therefore provide a strategic assessment of landscape sensitivity across the Area of Search.

Some LLU boundaries are clearly-defined, for example those following roads along ridgelines. Others are more transitional, reflecting a more gradual change in landscape character. In these cases, the LLU boundary follows a suitable line has been within the zone of transition.

The findings for each LLU are summarised in section 7.0, with more detail provided in Appendix C.

Those LLUs found to be of lowest sensitivity will be taken forward for more finer-grained analysis in the next stage of the project (Landscape Capacity Assessment), considering a wider range of landscape, technical and other constraints to development such as flood risk, major services wayleaves and road access, as well as the scope for accommodating the extent of development required, as set out in the project brief.

### 6.4 Assessment criteria

The assessment criteria have been selected to minimise overlap and potential 'double-counting' in the sensitivity assessment and to streamline the field assessment process whilst still providing a comprehensive assessment.

The assessment considers the susceptibility of key landscape and visual characteristics of each LLU within the Area of Search to 3 different potential development types. A rating is attributed against each criterion using a five-point scale of High, High-medium, Medium, Medium-low and Low. The inherent value associated with the landscape is judged without reference to the different development types. Table 2 sets out the landscape and visual criteria and indicators of relative sensitivity considered in the assessment.



Table 2: Landscape and visual sensitivity criteria

<b>Sensitivity criteria</b>	<b>Factors considered in the assessment</b>
<b>Scale</b>	Consideration of the scale of the landscape based on the degree of topographical relief, openness and enclosure and the presence of smaller scale features. In general, larger scale landscapes are likely to be less susceptible to larger forms of built development.
<b>Landform</b>	Consideration of the degree of complexity of landform including identification of any distinct topographical features. Assessment of how development, including ancillary works, could impact on or relate to landform. Simpler and more gently graded or flat landform would generally be less susceptible while more complex, steeper and distinctive landform would be of increased susceptibility.
<b>Land cover</b>	Consideration of the degree of complexity and diversity of land cover including field enclosure pattern (including consideration of historic patterns), woodlands, water courses/bodies and wetlands but also distinctive or rare landcover features. The contribution of landcover to green infrastructure will additionally be considered. More diverse and intricate landcover pattern would be more susceptible to development in general with a simpler or more fragmented landcover pattern being less susceptible. Effects include loss of the feature and diminishment of the integrity of landcover if features were removed to accommodate development and associated infrastructure.
<b>Built environment</b>	Consideration of the pattern, density and character of settlement and other built features, including prominent cultural heritage features, their relationship to topography or other natural features and their setting. Consideration of existing settlement boundaries and integration with the surrounding rural landscape. Assessment of how new development might impinge on positive aspects of the built environment and where there may be scope to attain some visual separation or appropriate amalgamation to minimise effects.
<b>Perceptual aspects</b>	Consideration of the degree of modification by human intervention and how development could affect perceptions of naturalness and tranquillity. Identification of landscapes where the number and distinctiveness of archaeological or historic features, and scarcity of modern built features, can give a strong sense of history or 'timelessness'. In general, landscapes which are more modified and developed are likely to be less susceptible while landscapes with a distinct sense of naturalness, tranquillity and

	timelessness will be more susceptible to development.
<b>Visual amenity</b>	The extent of relative visibility of the landscape (including considerations of whether it is well-settled and easily accessible) and key views to and from the landscape. The degree of openness or enclosure which influences visibility, including the amount of screening created by topography and woodland. The type of views, including elevated, extensive views from settlement, roads and recreational routes which are sustained or more intermittent views where woodland or landform provides some screening. Appraisal of the significance of skylines and key vistas including the presence of landmark features and distinct scenic qualities such as strong contrasts of character and/or harmonious features. Susceptibility is generally reduced if landform and woodland have the potential to provide screening. Prominent skylines and views to landmark natural or built features increase susceptibility as do promoted viewpoints/renowned views and notably scenic views. The presence of some forms of built development can reduce susceptibility as additional development may not significantly increase levels of intrusion.
<b>Landscape Value</b>	The presence of designated and other valued landscapes, which in the Area of Search (and its environs) comprise the Clyst Valley Regional Park, Conservation Areas, Listed Buildings, County Wildlife Sites, and a Registered Historic Park and Garden, would generally increase value. Related interests such as promoted viewpoints and recreational/tourist routes, cultural associations and the distinctiveness of the landscape will also be considered as will designations or values that reinforce landscape features, for example ancient woodland, landform, historic field patterns or landcover features. Judgements are made on the contribution to landscape value taking into account the nature, importance, extent and number of designations and recognised interests. Landscapes with no formal scenic, cultural or natural designations and no/very few otherwise valued features would have a lower landscape value.

### 6.5 Judgements on overall sensitivity

Landscape and visual susceptibility and value ratings are combined to arrive at an overall sensitivity rating for each development type. The overall sensitivity level is judged by considering the combined weight of evidence on landscape and visual susceptibility and value rather than using a numerical scoring system. Each criterion will be given equal weight when scoring. A five-point scale has been used in the assessment of each susceptibility criterion and with regard to the value associated with the LLU. This is also adopted in the overall sensitivity ratings accorded to each LLU as interpreted in Table 3 below.

Table 3: Explanation of sensitivity ratings

Overall Sensitivity rating	Definition
High	Key characteristics and qualities of the landscape are highly vulnerable to change from the development type. Development would conflict with several or most of the assessment criteria with widespread and severe adverse impacts likely to arise.
High-medium	Key characteristics and qualities of the landscape are vulnerable to change from the development type. Development would conflict with some of the landscape and visual criteria but may be able to be accommodated in very small parts of some LLUs.
Medium	Some of the key landscape characteristics or qualities of the landscape are vulnerable to change from the development type. There is some ability to accommodate development in some situations without widespread or severe changes to the landscape; the development type relates to some aspects of landscape character.
Medium-low	Fewer of the key characteristics and qualities of the landscape are vulnerable to change from the development type. There are opportunities to accommodate the development type in most locations without widespread or severe effects on the assessment criteria.
Low	Key characteristics and qualities of the landscape are unlikely to be adversely affected by the introduction of the development type. The development type relates well to the assessment criteria and change may be accommodated without widespread significant adverse impacts on the LLU.

## 6.6 Assumptions

When undertaking the Assessment we have assumed that existing built development within the Area of Search (e.g. business parks, housing, Crealy Great Adventure Park etc.) will remain. Land associated with the Country Showground at West Point (including the parking fields) is also assumed to remain in its current use.

## 6.7 Mitigation measures

Constraints and opportunities have been recorded for each LLU, and potential design and mitigation measures outlined. These include guidance on the appropriate type and density of building, the location of greenspace and walking/cycling routes, the treatment of settlement edges including screen planting, identifying where advance planting may be needed, and

landscape buffers necessary to protect sensitive landscape features. They therefore inform the capacity assessment and concept planning stages of the project.

## 7.0 Summary of Findings

### 7.1 General observations

A number of sensitivities and/or constraints to development occur throughout the Area of Search and are not limited to particular LLUs. These include:

The **character of rural lanes** – often narrow and winding, with high banks/hedges and a lack of passing places. Upgrading them (for example to take two-way traffic) would result in a loss of vegetation and of character to the point that they would become unrecognisable.

The presence of **large trees and hedges** – these are found alongside most roads, in field boundaries, and along watercourses. As a result the area appears much more heavily treed than suggested on a map. Loss of trees and hedges would impact on the character of the area, and would reduce the effectiveness of their screening function. There would also be ecological impacts.

The **lack of bridging points** – the Area of Search contains a number of streams and main roads, but relatively few crossing points. Constructing new bridges would involve significant engineering and cost.

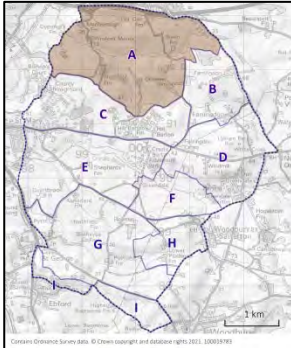
The **busy A3052** – this road physically and visually severs the Area of Search and could restrict the integrity of any new community without significant mitigation, including new bridge crossings.

The **character of existing settlements** – small historic villages such as Clyst St George, Farringdon, Ebford and Woodbury Salterton, lying within / close to the Area of Search, are small and tightly clustered. They sit low in the landscape, being associated with narrow water courses. They are therefore not prominent in long views (for example from the elevated land of the nearby Pebblebed Ridge). Any new development sited on more elevated parts of the Area of Search would conflict with the established pattern and character of existing settlement.

**Visual prominence** – the degree of visual prominence varies across the Area of Search, but nevertheless much of the Area of Search is visible in distant views from the Pebble Bed Heaths, and also in views from high land across the Clyst Valley and Exe Estuary. In all these situations it is seen as part of a wider sweep of land.

## 7.2 Landscape Sensitivity Summary for LLU A: Holbrook

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This landscape is centred on the valley of the Holbrook watercourse and its unnamed tributary. It comprises rolling farmland lying close to the A30, Exeter Airport and associated business park on its northern boundary. The western boundary abuts the edge of the Clyst valley while a minor road on a low ridge forms the southern boundary, marking the slightly increased elevation of this LLU above the adjacent LLU C. A more gradual transition occurs to the east where the simpler landform of LLU B prevails.



*A typical scene in the Holbrook LLU, looking north-east from the southern boundary of the LLU.*

### Sensitivity summary

<b>A Residential</b>	High - Medium
<b>B Employment/Commercial</b>	High
<b>C Very large scale warehousing/distribution</b>	High

## Supporting analysis

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>Overall sensitivity High-medium                      The broader gently sloping ridges which rim the valleys would be less sensitive to residential development. The complex landform associated with the valleys would however be highly sensitive to development due to the considerable ground modification to accommodate building platforms and access. This LLU is influenced on its northern edge by adjacent development associated with Exeter Airport but the central part of the LLU has extensive historic field systems creating a strongly rural character and integrity, which would be significantly diminished by widespread residential development.</p>	<p>Overall sensitivity High                      This development type would overwhelm the scale of this landscape and would require substantial ground modification to accommodate larger buildings. This development type would significantly diminish the strong rural character and integrity of this landscape.</p>	<p>Overall sensitivity High                      This development type would overwhelm the scale of this landscape and would require substantial ground modification to accommodate larger buildings. This development type would significantly diminish the strong rural character and integrity of this landscape.</p>

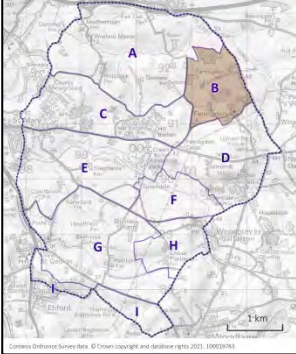
## Capacity and design guidance

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>More gently sloping fields on the northern, south-western and south-eastern edges of this unit would be more able to accommodate residential development. The setting and views to/from Bishop's Court and the Clyst Valley Regional Park is a potential sensitivity in the south-west and advance woodland planting may be necessary to provide screening in the long term. Public access routes could be provided within this landscape and enhancement of riparian habitats undertaken to provide a setting for any new community established within LLU to the south.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>



### 7.3 Landscape Sensitivity Summary for LLU B: Farrington

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



#### Location and context

This LLU is located in relatively elevated and gently sloping land in the north-east of the Area of Search. It is associated with the historic village of Farrington, and Farrington House to the north. The setting of Farrington House includes historic parkland, and a large block of deciduous woodland at Farrington Wood. The northern and eastern boundaries are formed by the Area of Search boundary along the B3184. There is a gradual transition with the lower and more undulating landscape of LLU A (Holbrook) to the west. To the south the land rises where it meets LLU D (Windmill Hill and Greendale).



*A typical scene within LLU B. Farrington Wood is on the left of the picture, and parkland trees associated with Farrington Hall are visible in the centre.*

#### Sensitivity summary

<b>A Residential</b>	<b>High - Medium</b>
<b>B Employment/Commercial</b>	<b>High</b>
<b>C Very large scale warehousing/distribution</b>	<b>High</b>

## Supporting analysis

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>Overall sensitivity High-medium                      Widespread residential development would significantly diminish the strongly rural character of this landscape which is divorced from urban centres and has relatively few incongruous features. The diverse woodlands and parkland characteristic of this LLU could be adversely affected by removal to accommodate development (for example the loss of mature trees against the B3184) and while woodland has potential to provide screening, dense housing would detract from its presence in the landscape. The setting of the historic village of Farringdon is a key sensitivity. Lower, less prominent, gently sloping farmland in the western part of this LLU would be of reduced sensitivity.</p>	<p>Overall sensitivity High                      This development type would significantly detract from the woodlands and parkland which characterises parts of this landscape. While it could be sited to avoid significant effects on the setting of Farringdon village, it would significantly diminish the strong rural character and integrity of this landscape.</p>	<p>Overall sensitivity High                      This development type would significantly detract from the woodlands and parkland which characterises parts of this landscape. It would require greater modification of topography and removal of mature vegetation and it would significantly diminish the strong rural character and integrity of this landscape.</p>

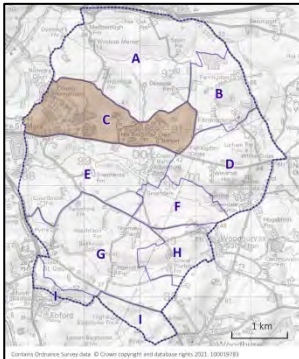
## Capacity and design guidance

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>It is considered that the scale of development required in the brief could not be met in this LLU given the landscape and visual sensitivities identified. Potential for a lesser extent of development may exist on the basis of the following constraints:</p> <ul style="list-style-type: none"> <li>Woodland could provide a framework and screening for housing around Farringdon House although parkland (with mature trees) should be conserved and rejuvenated and the frontage to the house kept open. Housing in this area would need to be of the highest quality and of low density to respect the character of the designed landscape and setting of Farringdon House and should be of limited height to avoid breaching the containment</li> </ul>	<p>No scope for development has been identified due to high sensitivity score.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>

<p>offered by woodland.</p> <ul style="list-style-type: none"><li>• The settings of Farringdon village and the listed Glebe House are sensitive and development should be well set back from the narrow valley which they are associated with.</li><li>• New recreational access routes could be focussed on the Holbrook valley which lies to the north of this unit.</li></ul>		
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## 7.4 Landscape Sensitivity Summary for LLU C: Cat and Fiddle

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This LLU comprises an area of relatively low-lying farmland interspersed with isolated development uses including a business park and the County Showground. The southern boundary of this LLU is formed by the A3052; the northern boundary marks the transition with the generally more undulating LLU A. The eastern boundary is formed by the low mound of a restored tip while western boundary is formed by the Area of Search boundary along Bishop’s Court Lane, on the edge of the Clyst Valley.



*A typical view within LLU C, looking east from County Showground parking field over agricultural land towards the Hill Barton Business Park*

### Sensitivity summary

<b>A Residential</b>	<b>Medium - Low</b>
<b>B Employment/Commercial</b>	<b>Medium</b>
<b>C Very large scale warehousing/distribution</b>	<b>High</b>

## Supporting analysis

<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<p>Overall sensitivity Medium-low                      The simple landform, limited visibility and presence of existing built development reduces sensitivity to this development type. Well-designed residential development has potential to have beneficial effects in parts of this landscape by improving the fragmented appearance of disparate built development and acting as a catalyst for enhancement.</p>	<p>Overall sensitivity Medium                      While this development type could fit with the scale, simple landform and built character of part of this LLU, the more rural and tranquil landscape present in the north-western part of this landscape is sensitive.</p>	<p>Overall sensitivity High                      This development type would overwhelm the scale of this landscape and would also require some modification of the landform where it is more sloping. Development of this nature and size could exacerbate the existing detractive approach to Exeter from the A3052 and would increase the perceived fragmentation of disparate landuses and developments.</p>

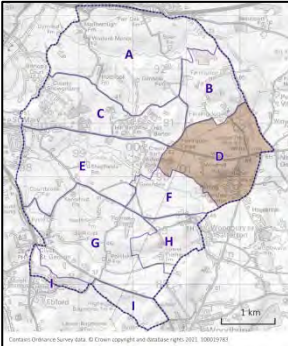
## Capacity and design guidance

<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<ul style="list-style-type: none"> <li>• The busy A3052 is a major barrier to creating an integrated community within the less sensitive LLUs C and E. Construction of green bridges across this road would create stronger links between housing and workplaces and open up access to the wider countryside for residents.</li> <li>• New recreational routes could be focussed within the Holbrook valley with links to the Clyst Valley Regional Park</li> <li>• Sustainable transport routes into Exeter should be established and the approach to the city from the A3052 improved – this may require acquisition/relocation of buildings close to the road.</li> <li>• Advance planting of field boundary trees and woodland should be undertaken on the western edge of this unit to provide long term screening from the Clyst Valley.</li> </ul>	<p>Some scope for development has been identified with this preferably being associated with the existing business park. Tree planting on the restored tip would enhance screening of development in views from the east.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>



## 7.5 Landscape Sensitivity Summary for LLU D: Windmill Hill and Greendale

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This LLU principally comprises an elevated ridge with a group of rounded tops lying close to the eastern boundary of the Study Area. It lies within the *Pebble Bed Heaths and Farmland* LCT which reflects its elevation and association with the transitional rolling slopes lying below the high Pebble Bed ridge. This LLU also includes the lower southern slopes of these hills at the transition with the upper Grindle Brook valley (an area largely occupied by the Greendale Business Park) and the narrow valley lying on the north-eastern boundary where the Upham fishing ponds are located. The lower southern fringes of this LLU are classified as the *Clyst Lowland Farmland* LCT.



*Windmill Hill and Greendale Business Park looking west*

### Sensitivity summary

A Residential	High - medium
B Employment/Commercial	High
C Very large scale warehousing/distribution	High



## Supporting analysis

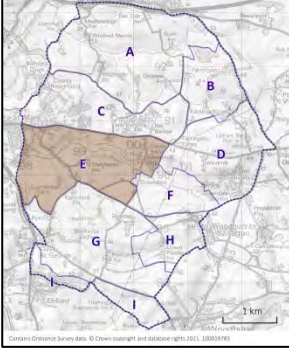
<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<p>Overall sensitivity High                      This development type would require significant ground modification on the more pronounced hill tops although more gently graded lower slopes would be less sensitive. Development would be prominent in long views from the west and east due to the elevation of this landscape.</p>	<p>Overall sensitivity High                      This development type would require significant ground modification on the more pronounced hill tops although more gently graded lower slopes would be less sensitive. It would overwhelm the scale of confined hill tops and the narrow Upham Farm valley. Development would be prominent in long views from the west and east due to the elevation of this landscape. Although this landscape is modified on its southern slopes, additional development on the more elevated parts of this LLU would breach the containment provided to the existing Greendale Business Park and exacerbate the negative perceptions associated with parts of this landscape.</p>	<p>Overall sensitivity High                      This development type would require significant ground modification. It would overwhelm the scale of this LLU. Development would be prominent in long views from the west and east due to the elevation of this landscape. Although this landscape is modified on its southern slopes, additional development on the more elevated parts of this LLU would breach the containment provided to the existing Greendale Business Park and exacerbate the negative perceptions associated with parts of this landscape.</p>

## Capacity and design guidance

<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<p>It is considered that the scale of development required in the brief could not be met in this LLU given the landscape and visual sensitivities identified. Potential for a lesser extent of residential development may exist on the more gently graded and less prominent lower western slopes of this LLU although residential development would appear dislocated, intrusive and would further erode the rural character of this landscape.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>

## 7.6 Landscape Sensitivity Summary for LLU E: West Grindle Brook Valley

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This landscape unit lies to the south of the A3052 and generally comprises an area of lower ground associated with the broader floodplain of the lower Grindle Brook. The north-eastern boundary marks the transition into rising ground associated with the *Pebble Bed Heaths and Farmland* LCT (LLU D) while the eastern boundary reflects the transition into a steeper valley topography with smaller-scale enclosure (LLU F). The southern boundary is formed by a subtly higher ridge which encloses the farmed valley lying to the east of Clyst St George (LLU G). This LLU abuts Clyst St Mary and Winslade Park to the west.



*A typical scene within LLU E, in the Grindle Brook Valley near Winslade Park*

### Sensitivity summary

<b>A Residential</b>	Medium- low
<b>B Employment/Commercial</b>	Medium
<b>C Very large scale warehousing/distribution</b>	High

## Supporting analysis

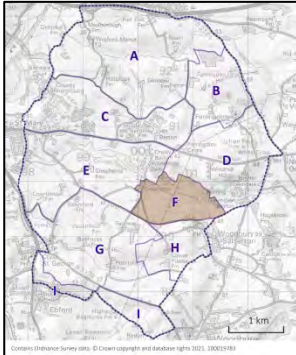
<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<p>Overall sensitivity Medium-low                      The diverse vegetation and small scale of the floodplain pastures and remnant designed landscape features are sensitive. The simple landform, limited visibility and presence of existing built development however reduces sensitivity to this development type elsewhere in the LLU and residential buildings could be sited and designed to minimise effects on views from footpaths and near remnant designed features. Well-designed residential development has potential to have beneficial effects in parts of this landscape by improving the fragmented appearance of disparate built development and acting as a catalyst for enhancement.</p>	<p>Overall sensitivity Medium                      The diverse vegetation and small scale of the floodplain pastures and remnant designed landscape features are sensitive. This development type would require removal of hedges and trees although more open gently sloping farmland in the east would be less sensitive. Some ground modification may be necessary to accommodate larger units although the simple landform reduces sensitivity in general. The appreciation of the more diverse floodplain pastures and Winslade designed landscape could be diminished by intrusion of larger buildings, although association with existing industrial/business park developments would reduce sensitivity.</p>	<p>Overall sensitivity High                      The diverse vegetation and small scale of the floodplain pastures and remnant designed landscape features are sensitive. Development of this size would require widespread removal of hedges and trees and ground modification of more sloping ground. It would overwhelm the scale of this landscape and diminish the appreciation of the more diverse floodplain pastures and Winslade designed landscape even if located in the less sensitive eastern part of this LLU.</p>

## Capacity and design guidance

<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<p>There is scope for residential development on more open gently rising farmland avoiding sensitive semi-improved grassland and intact hedges of floodplain pastures which should be retained as open space. Some of this area has an increased flood risk which may inhibit sustainable development. Mitigation measures should include:</p> <ul style="list-style-type: none"> <li>• Improvements to connectivity and creation of sustainable walking/cycling routes to/from Exeter possibly via Winslade Park, and to local employment.</li> <li>• The creation of green bridges across the A3052 to enhance community cohesiveness and provide sustainable travel routes if LLU C also considered suitable for development</li> <li>• Improvements to the approach to Exeter via the A3052.</li> </ul>	<p>There is some limited scope for development but this should be associated with the existing industrial/business park near Oilmill Lane and to the west of Crealy Adventure Park. These sites have easy vehicular access to the A3052.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>

## 7.7 Landscape Sensitivity Summary for LLU F: East Grindle Brook Valley

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This LLU comprises and the north-facing slopes of the Grindle Brook valley which has a distinctive pattern of small strip fields. It lies to the west of the small settlement of Woodbury Salterton and is principally accessed by the narrow road of Lower Lane which is aligned at the top of these valley side fields. The less modified floor of the Upper Grindle Brook valley also lies in this LLU where it abuts the steep southern slopes of LLU D. The western boundary of this landscape marks the transition from the distinct enclosure pattern and dense trees and hedges of this LLU to the more open farmland of LLU E.



*Scene within LLU F – Fishing lake on valley floor with medieval strip fields visible on the valley side*

### Sensitivity summary

<b>A Residential</b>	High-medium
<b>B Employment/Commercial</b>	High
<b>C Very large scale warehousing/distribution</b>	High

## Supporting analysis

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>Overall sensitivity High-medium                      Residential development would necessitate removal of trees/hedges on field boundaries and along the access road and, if extensive in scale, would significantly affect the integrity of the distinctive field enclosure pattern. While the valley floor is generally more open riparian features would be susceptible to all forms of development.                      Dense/extensive residential development would significantly diminish the rural character of this landscape.</p>	<p>Overall sensitivity High                      This development type would overwhelm the scale of this landscape and would necessitate widespread removal of vegetation and obliteration of the distinctive field enclosure pattern. Development of this nature would significantly diminish the strongly rural character of this LLU and the setting to nearby Woodbury Salterton.</p>	<p>Overall sensitivity High                      This development type would overwhelm the scale of this landscape and would necessitate widespread removal of vegetation and obliteration of the distinctive field enclosure pattern. Development of this nature would significantly diminish the strongly rural character of this LLU and the setting to nearby Woodbury Salterton.</p>

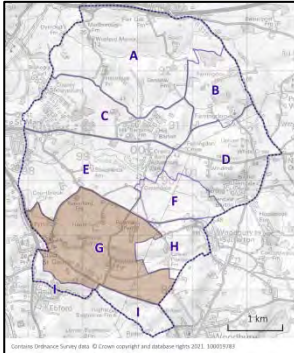
## Capacity and design guidance

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>There is no scope to accommodate the scale of development stipulated in the study brief without significant adverse effects occurring on the distinctive field pattern and rural character of this landscape. Potential for smaller scale and very low density housing development has however been identified where this could be linked with the sustainable agricultural use of strip fields with the aim of conserving their integrity. Access is a key constraint and limits to development would be necessary to protect mature boundary trees and hedges.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>



## 7.8 Landscape Sensitivity Summary for LLU G: Clyst St George Farmland

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This LLU comprises two broad, gently undulating valleys. The larger southern valley extends eastwards from the small settlement of Clyst St George. The other, smaller, valley to the north is formed by the stream which runs past Kenniford Farm. The southern boundary of LLU G follows the ridge dividing it from the Ebford Slopes LLU to the south (followed by Woodbury Road (B1379) for much of its length). A lower ridge along the north-eastern edge of LLU G forms the boundary with LLU E. A gradual transition occurs to the east where LLU G borders LLU H – here the landform and vegetation pattern becomes more complex and the scale of the landscape is reduced.



*Typical scene within LLU G, looking west towards Clyst St George village from road near Postlake Farm*

### Sensitivity summary

<b>A Residential</b>	Medium
<b>B Employment/Commercial</b>	High-medium
<b>C Very large scale warehousing/distribution</b>	High



### Supporting analysis

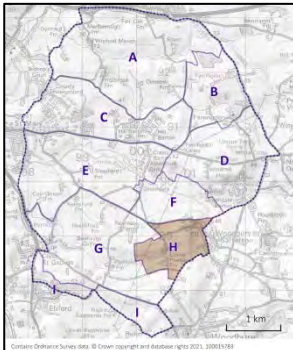
A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>Overall sensitivity Medium                      Some ground modelling would be necessary to accommodate buildings of this size, particularly on steeper slopes. This development type would significantly detract from the rural character of this landscape.                      Residential development would need to be carefully located and designed to minimise effects on long views to surrounding landscapes and on the setting of historic Clyst St George.</p>	<p>Overall sensitivity High-medium                      Ground modelling and removal of hedges would be necessary to accommodate buildings of this size. This development type would significantly detract from the rural character of this landscape, its visual connection with surrounding landscapes and the setting of historic Clyst St George.</p>	<p>Overall sensitivity High                      Significant ground modelling and removal of hedges/trees and possibly also woodlands would be necessary to accommodate buildings of this size. This development type would significantly detract from the rural character of this landscape, its visual connection with surrounding landscapes and the setting of historic Clyst St George.</p>

### Capacity and design guidance

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>The setting of Clyst St George, views to the wider landscape, and the strongly rural character are the key sensitivities associated with this landscape. In general, the southern part of the LLU is more sensitive than the northern part. Any residential development accommodated in this LLU should minimise effects on the setting of Clyst St George and retain key views to its church. Other mitigation measures that should be undertaken include:</p> <ul style="list-style-type: none"> <li>• Avoid building on the highest and steepest land, and undertake advance planting of woodland and boundary trees to provide a more robust containing edge to development.</li> <li>• Buildings should be located and designed to retain open views across this landscape to more distant ridges.</li> <li>• Impacts on views from the East Devon AONB should be considered.</li> <li>• Recreational routes could be enhanced with better connectivity focussing on the valley which lies in the southern part of the LLU, with links east to Woodbury Salterton and west to Winslade Park and the Clyst valley.</li> </ul>	<p>There is only very limited scope for development of this type, which would need to be limited to the flattest, lowest land with largest land parcels to minimise loss of hedges. It would also need to be carefully designed and screened, and sited to limit impacts on long views and on the setting of Clyst St George.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>

## 7.9 Landscape Sensitivity Summary for LLU H: Woodbury Salterton Farmland

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This LLU largely forms a small area of rolling and elevated farmland lying adjacent to the small settlement of Woodbury Salterton. The western boundary marks the transition from the more complex landform of this LLU to the broader, more gently sloping farmland east of Clyst St George (LLU G). The northern boundary of this LLU is formed by Lower Road where a clear change occurs in field enclosure pattern within LLU F.



*A typical scene within LLU H – small scale, elevated farmland seen from Bond's Lane*

### Sensitivity summary

<b>A Residential</b>	High-medium
<b>B Employment/Commercial</b>	High
<b>C Very large scale warehousing/distribution</b>	High

## Supporting analysis

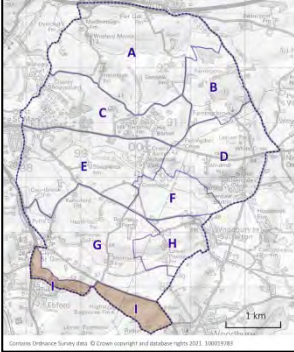
A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>Overall sensitivity High-medium            Steep and complex slopes would necessitate substantial ground modelling and removal of hedges and trees would also be needed to accommodate access and building platforms. The setting and character of Woodbury Salterton would be affected by development sited on elevated ground above the village. The elevation of this LLU, and its location in relation to the East Devon AONB, means that development here would be likely to impact on views from the AONB.</p>	<p>Overall sensitivity High            Steep and complex slopes would necessitate substantial ground modelling and widespread removal of hedges and trees would additionally be needed to accommodate this development type. Larger buildings would overwhelm the scale of this small hill and valley and would significantly detract from the distinctly rural character of this landscape. The setting and character of Woodbury Salterton, and views from the AONB would be affected by development of this scale.</p>	<p>Overall sensitivity High            Steep and complex slopes would necessitate substantial ground modelling and widespread removal of hedges and trees would additionally be needed to accommodate this development type. Larger buildings would overwhelm the scale of this small hill and valley and would significantly detract from the distinctly rural character of this landscape. The setting and character of Woodbury Salterton, and views from the AONB would be affected by development of this scale.</p>

## Capacity and design guidance

A: Residential	B: Employment/Commercial	C: Very large scale warehousing/distribution
<p>There is no scope to accommodate the scale of development stipulated in the study brief.            However, there may be limited opportunities for very small-scale residential development closely associated with Woodbury Salterton, and kept low to fit with the historic form of the village.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>

## 7.10 Landscape Sensitivity Summary for LLU I: Ebford Slopes

Note – full survey sheets and additional photographs can be found in Appendix C. Sensitivity levels are shown on Maps 9, 10 and 11 (found in Appendix B).



### Location and context

This LLU is located on the southern edge of the Area of Search, on the south side of the ridge largely followed by Woodbury Road. It comprises a series of steeply-sloping fields, mostly with a southerly aspect towards tributaries of the Exe, although those in the far west have a westerly aspect and are part of the Clyst Valley side. The northern boundary of the LLU is the ridge followed by (or close to) Woodbury Road (B3179), and the western boundary is Exmouth Road (A376). Minor lanes (one called Ebford Lane) form the southern and eastern boundaries. The historic village of Ebford is located immediately to the south-west of the LLU.



*A typical scene within LLU I, looking east from Ebford Lane. The white houses in the centre are on Woodbury Rd.*

### Sensitivity summary

<b>A Residential</b>	High - medium
<b>B Employment/Commercial</b>	High
<b>C Very large scale warehousing/distribution</b>	High



## Supporting analysis

<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<p>Overall sensitivity High-medium                      The sloping landform makes this LLU highly sensitive to development due to the ground modifications which would be required to accommodate building platforms and access. In addition, the LLU contributes to the rural setting of the village of Ebford, and is highly visible from land to the south. In these views it forms a rural, small-scale backdrop and horizon. The eastern part of the LLU is close to (and often visible from) the East Devon AONB. The western part of the LLU forms an open sloping side of the Clyst Valley. Large-scale residential development in this LLU would be visually prominent over a wide area and would appear incongruous in the rural landscape.</p>	<p>Overall sensitivity High                      This development type would overwhelm the scale of this landscape and would require substantial ground modification as well as removal of hedges. Although there are some existing large agricultural buildings nearby, they are located on the flatter land at the base of the slope (outside the LLU) and their scale would overwhelm the sloping, small-scale fields if they were replicated within the LLU. Industrial buildings within this LLU would severely diminish the rural character of the landscape and the setting of Ebford, and would be highly prominent in views, including from the East Devon AONB.</p>	<p>Overall sensitivity High                      This development type would overwhelm the scale of this landscape, and would require substantial ground modification and hedge removal to accommodate large buildings. It would significantly diminish the rural character of the landscape, and the setting of Ebford, and would be highly prominent in views, including from the East Devon AONB.</p>

## Capacity and design guidance

<b>A: Residential</b>	<b>B: Employment/Commercial</b>	<b>C: Very large scale warehousing/distribution</b>
<p>There is no scope to accommodate the scale of development stipulated in the study brief without significant adverse effects occurring on rural character and views (including from the AONB), and on the setting of Ebford village. However, there may be limited opportunities for very small scale and carefully designed development closely associated with Ebford, provided that it is kept low, and integrated into the existing form of the village.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>	<p>No scope for development has been identified due to high sensitivity score.</p>



## 7.10 Overall Landscape Sensitivity for CBRE Options

The purpose of this section of the Landscape Sensitivity Assessment is to provide an overall landscape sensitivity numerical score for each of CBRE’s Options 1-3, which can be fed into their Options Appraisal. These scores were requested by CBRE at the end of the project and did not form part of the original brief. The landscape sensitivity scores provided are based on the following scale:

- High (H): 1
- High-medium (HM): 2
- Medium (M): 3
- Medium-Low (ML): 4
- Low (L): 5

In order to provide an overall score for the purposes of numerical comparison of the options, it is necessary to use the findings of the Landscape Sensitivity Study for each component LLU (and consider the relative proportions of the LLUs) within each option to inform a judgement on overall landscape sensitivity for each option. This is set out in the table below.

It is important to remember that LLUs represent broad areas of landscape rather than individual field parcels, and that within each LLU there are likely to be pockets of higher and lower sensitivity.

The maps in this report only show the indicative locations of the three options. It is therefore also necessary to refer to the maps in the CBRE Options Appraisal Report which show more refined boundaries for each option. CBRE’s maps show a considerable overlap between options 1 and 2.

Option	Component LLUs*	Sensitivity Levels for dev. type			Key Landscape Sensitivities	Overall landscape sensitivity
		A	B	C		
1	A Holbrook	HM	H	H	The majority of this option is within the Holbrook LLU, much of which is sensitive due to its relatively complex landform and small scale historic field patterns, and its strongly rural character and integrity. The eastern part of the option extends into Farringdon and Windmill Hill LLUs. These LLUs are more elevated, and therefore generally more visible over a wide area, including from parts of Exeter, and from the East Devon AONB. There is a relatively small area of lower landscape sensitivity in the south-western part of the option associated with the A3052 corridor, within the Cat and Fiddle LLU. Here there is scope to accommodate residential development, and some land parcels (in proximity to existing business park) which could accommodate Type B industrial development.	HM
	C Cat and Fiddle	ML	M	H		
	D Windmill Hill and Greendale	HM	H	H		Score 2
	B Farringdon	HM	H	H		

\*listed in approximate order of size within the option, with the largest first

Option	Component LLUs*	Sensitivity Levels for dev. type			Key Landscape Sensitivities	Overall landscape sensitivity
		A	B	C		
2	D Windmill Hill and Greendale	HM	H	H	The majority of this option is within the Windmill Hill and Greendale LLU. This contains some of the most elevated land within the study area, and is within the 'Pebble Bed Heaths and Farmland' Devon Character Area. It is highly visible from parts of Exeter, from the East Devon AONB, and in general views from the surrounding area. The relative lack of tree cover increases its visibility. The northern part of the option overlaps with Option 1. This includes part of the Holbrook LLU, with its relatively complex landform and small scale historic field patterns, and its strongly rural character and integrity. Option 2 also includes the less sensitive land associated with the A3052 corridor, within the Cat and Fiddle LLU (plus a sliver of lower sensitivity land in the West Grindle Brook Valley at Creely). Option 2 extends into the rural valley floor within the East Grindle Brook Valley LLU. Where there are views of the Greendale Business Park the buildings appear incongruous and out of scale with the surrounding landscape.	HM
	A Holbrook	HM	H	H		
	C Cat and Fiddle	ML	M	H		Score 2
	B Farringdon	HM	H	H		
	E West Grindle Brook Valley	ML	M	H		
	F East Grindle Brook Valley	HM	H	H		
	G Clyst St Geo. Farmland	M	HM	H	The majority of this option is within the Clyst St George Farmland LLU, which has variable sensitivity but is considered to be of medium sensitivity overall, as the landscape here is of a larger scale and relatively gentle topography, and parts are well-treed which creates a strong landscape structure. However its role in the setting of Clyst St George village, and in long views to/from the East Devon AONB, increases its sensitivity. The southern and eastern parts of Option 3 extend into the more sensitive landscapes of the Ebford Slopes LLU (highly visible from the valley to the south and visually disconnected from the rest of the study area), and the Woodbury Salterton Farmland LLU, which is elevated and relatively steep, with a small-scale medieval field pattern. The lowest sensitivity land is in the northern part of this Option, associated with the West Grindle Brook Valley LLU.	M
	I Ebford Slopes	HM	H	H		
	E West Grindle Brook Valley	ML	M	H		Score 3
	H Woodbury Salt'n farmland	HM	H	H		

\*listed in approximate order of size within the option, with the largest first

## 8.0 Conclusions and Next Steps

The lowest levels of landscape sensitivity are found in the west-central part of the Area of Search, around the A3052 and the Grindle Brook Valley (LLUs C and E). The next lowest is found towards the south of the Area of Search, north-east of Clyst St George (LLU G). Across the remainder of the Area of Search landscape sensitivity levels are relatively high, but the reasons for this vary.

As would be expected, landscape sensitivity for residential use is slightly lower than that for employment/commercial use. Landscape sensitivity for very large scale distribution/warehousing use is high across the Area of Search, suggesting that the key characteristics and qualities of the landscape are highly vulnerable to change from this development type. This type of development would conflict with several or most of the assessment criteria with widespread and severe adverse impacts likely to arise.

Within the A3052 corridor and the Grindle Brook valley are a number of existing features including existing commercial, residential and recreational land uses, floodplains, and the busy A3052. These are all likely to constrain development, but some also present opportunities. For example, the Grindle Brook floodplain could become a linear park with benefits for recreation, biodiversity and drainage. Existing business / industrial parks could be carefully expanded to accommodate new units, so that the new units appear as an extension of an existing land use. The A3052 is a barrier for north-south movement, but also has opportunities for enhancement (it is currently a relatively poor quality approach to Exeter) and could provide convenient access for new homes and businesses.

In terms of CBRE's three options, overall Option 3 is preferable in terms of landscape sensitivity. However, this option contains land of varying sensitivity, and therefore not all land within Option 3 will be suitable for development in landscape terms.

The least sensitive land is found in the northern part of Option 3, and in the southern part of Option 1. These areas of lowest sensitivity could potentially be combined to form a new Western Option. It is therefore suggested that next stages of the project (Capacity Assessment and concept planning) focus on two tasks:

**Task 1:** Undertake a finer grain capacity assessment and concept planning exercise for CBRE's Option 3, focussing on land parcels already put forward, but with some additional land take if necessary. It would take into account landscape, visibility, and other constraints (e.g. floodplains, services, access etc.). This task will explore if Option 3 could work in practice in landscape terms, and outputs could feed into later masterplanning.

**Task 2:** Undertake a finer grain capacity assessment and concept planning exercise to see if there is sufficient capacity to deliver the required development within the areas of lowest landscape sensitivity (found within LLUs C, E and G). This would include parts of CBRE's Options 1 and 3, plus the land between them. It would take into account landscape, visibility and other constraints (e.g. floodplains, services, existing land uses etc.).

## Appendix A: Glossary

### Acronyms

<b>AONB</b>	Area of Outstanding Natural Beauty
<b>EDDC</b>	East Devon District Council
<b>ELC</b>	European Landscape Convention
<b>LCA</b>	Landscape Character Area
<b>LCT</b>	Landscape Character Type
<b>LLU</b>	Local Landscape Unit
<b>LSA</b>	Landscape Sensitivity Assessment
<b>NPPF</b>	National Planning Policy Framework
<b>SSSI</b>	Site of Special Scientific Interest

### Technical Terms

**Green Infrastructure:** a network of multifunctional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.

**Landscape Character Area:** a single unique area which is the discrete geographical area of a particular landscape type. Each has its own individual character and identity.

**Landscape Character Type:** distinct types of landscape that are relatively homogenous in character. Wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, historical land use, and settlement pattern.

**Landscape Sensitivity:** a measure of the resilience, or robustness, of a landscape to withstand specific change arising from development types or landscape management practices without undue negative effects on the landscape and visual baseline and their value<sup>4</sup>.

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<sup>4</sup> Natural England (2019) *An Approach to Landscape Sensitivity Assessment – to Inform Spatial Planning and Land Management* p. 7

## Appendix B: Maps

### List of Maps

Map 1: Area of Search

Map 2: Sites put forward and CBRE options

Map 3: Landscape character

Map 4: Topography and drainage

Map 5: Designated sites

Map 6: Priority habitats

Map 7: Historic Landscape Characterisation

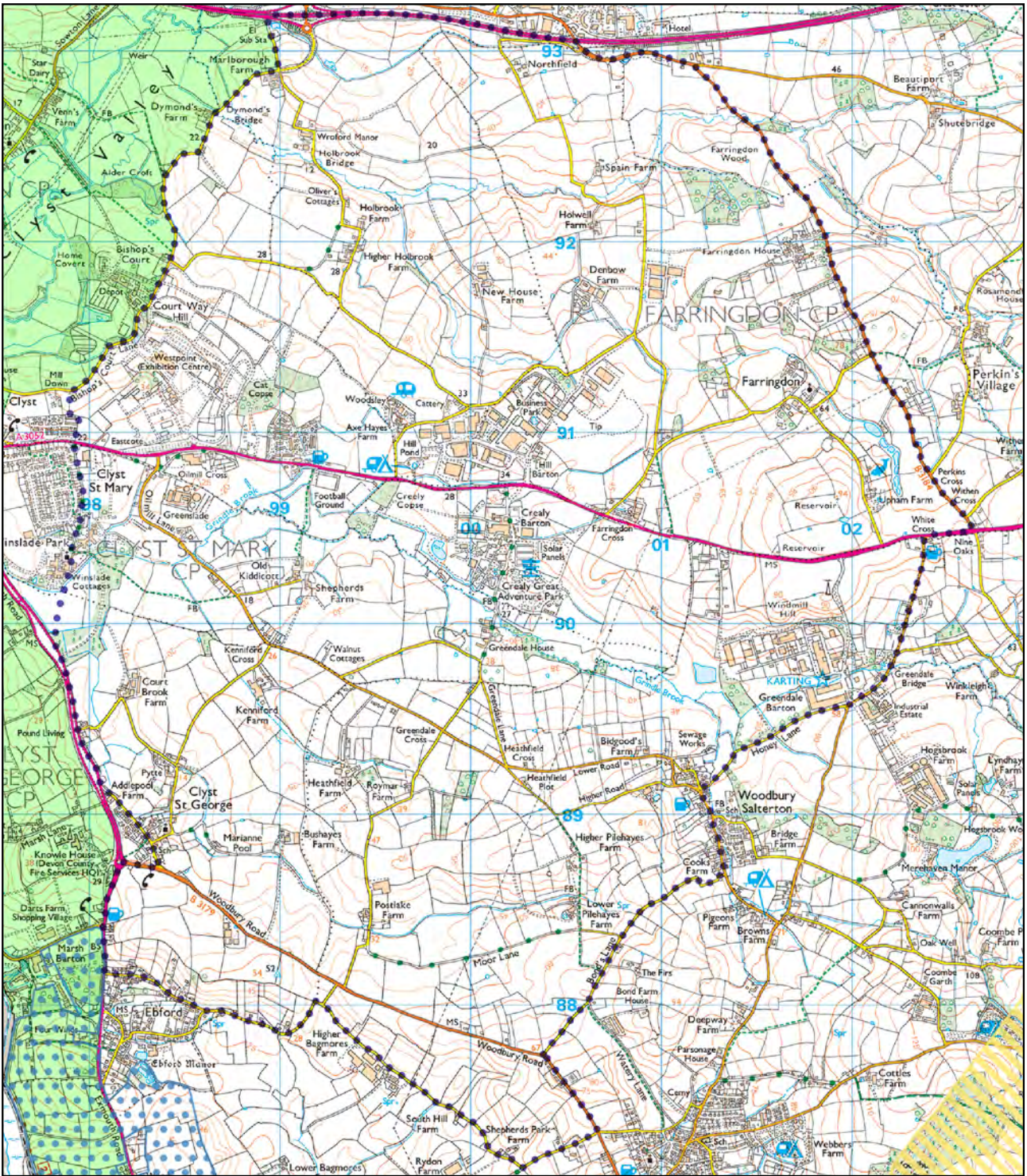
Map 8: Local Landscape Units (LLUs)

Map 9: Landscape sensitivity for housing

Map 10: Landscape sensitivity for employment/commercial





Map 11: Landscape sensitivity for very large scale warehousing/distribution



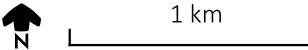


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Map 1. Area of search

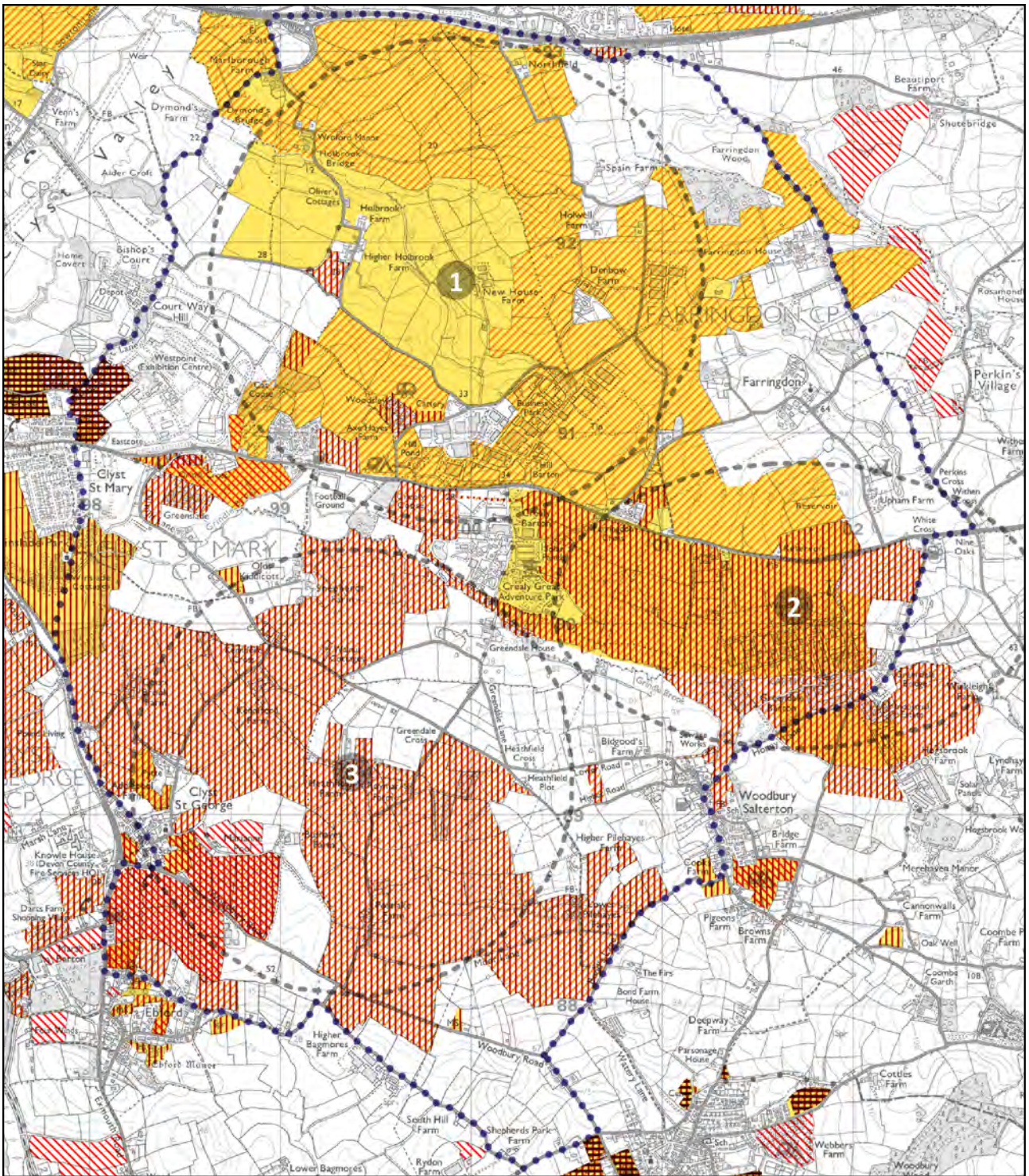
-  Area of Search
-  East Devon AONB
-  Coastal Preservation Area
-  Green Wedge

Policy boundaries are taken from the  
East Devon Local Plan 2013-31  
(Adopted January 2016)



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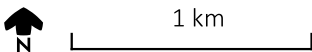




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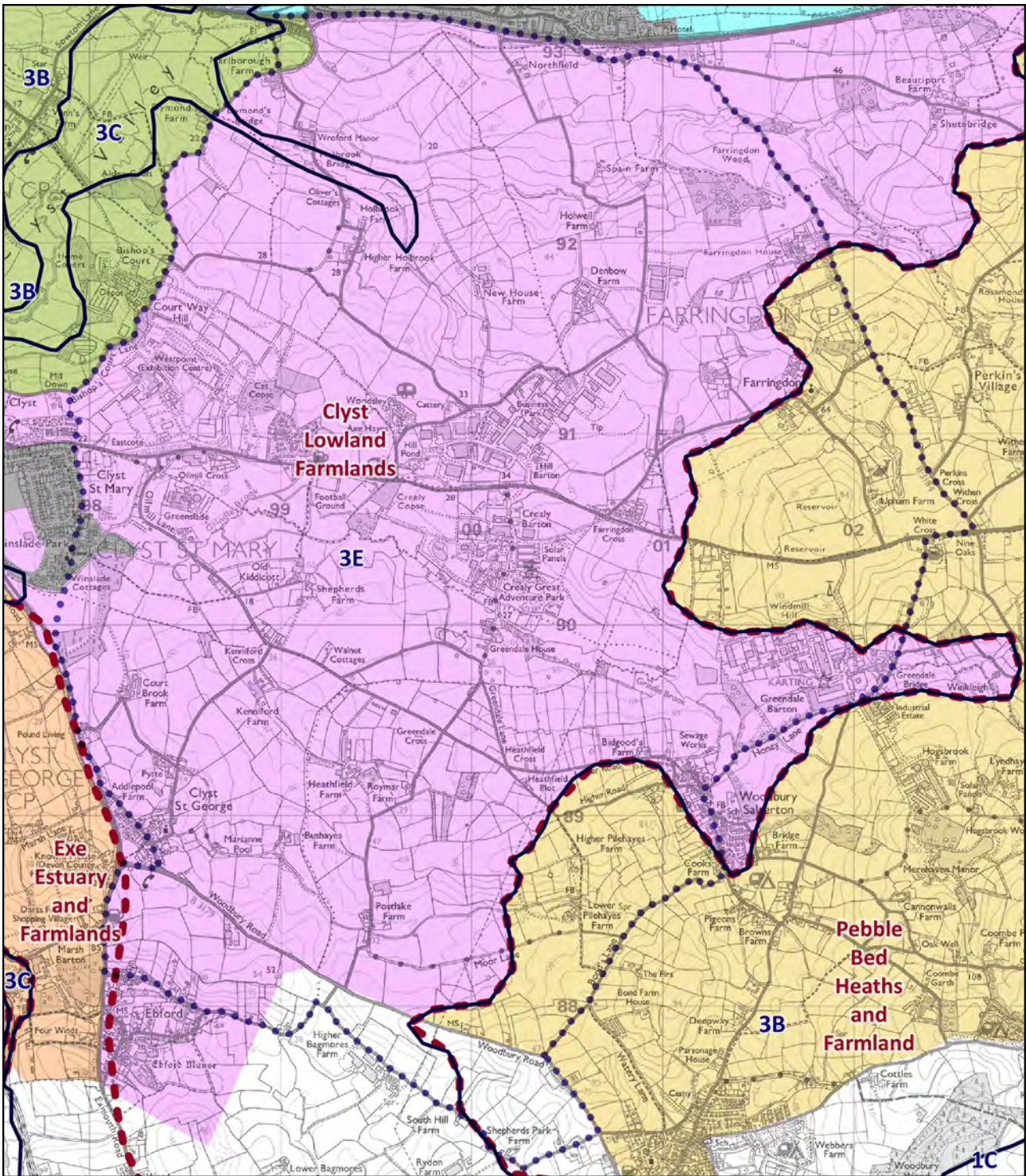
Map 2. Sites put forward and CBRE options

- Area of Search
- ▬▬▬ 1d Site Assessment Tier 3 and 4 Settlements
- ▨▨▨ HELLA 2021 Call for Sites
- ▧▧▧ 2022 Call for Sites
- ▨▨▨ 2021 Call for Sites
- ▨▨▨ 2017 Call for Sites
- ▭▭▭ CBRE Options June 2022 (labelled with numbers)



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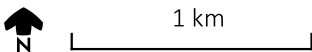




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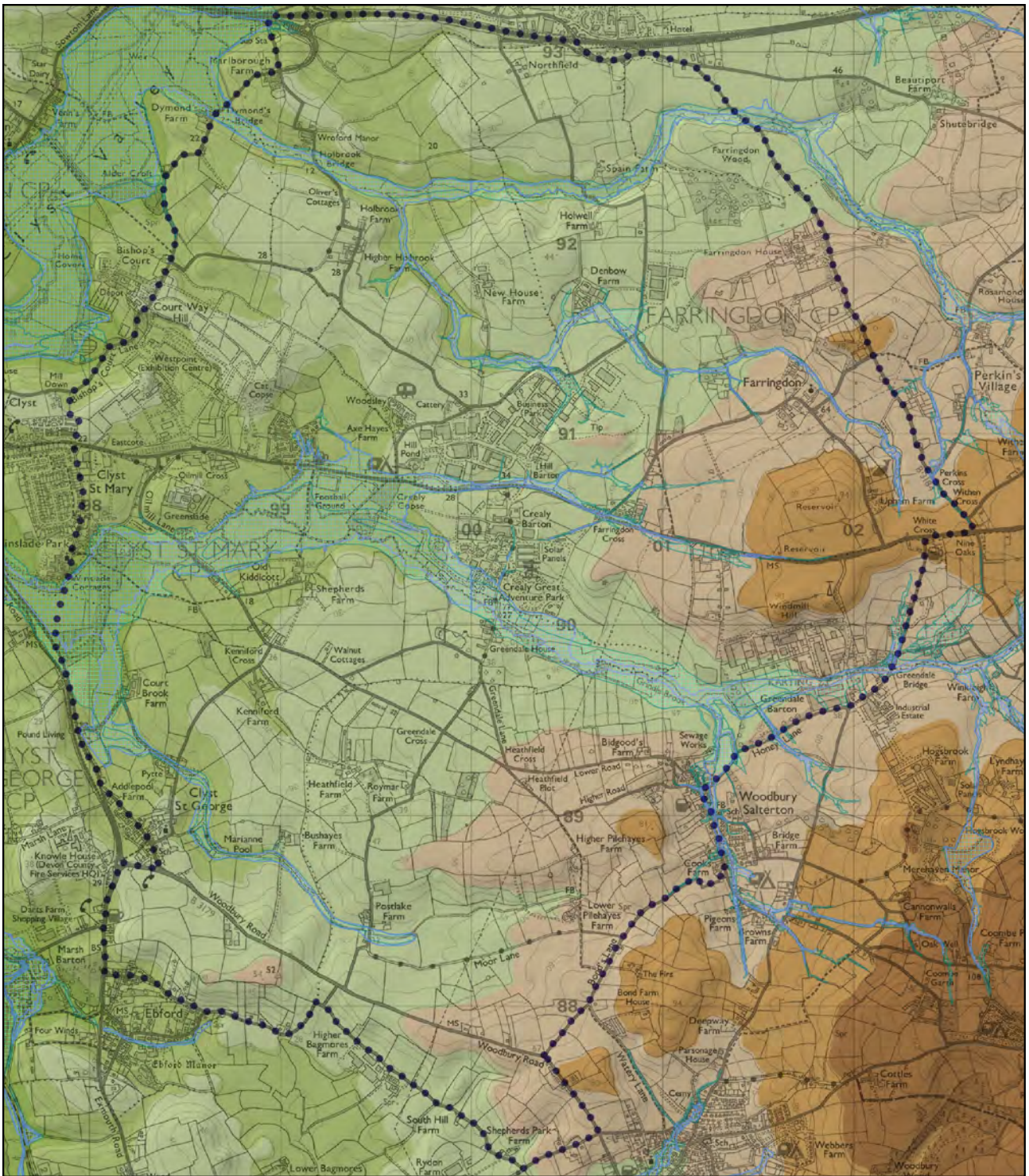
Map 3. Landscape character

- Area of Search
- Devon Character Areas (red labels)
- Devon Landscape Character Types (blue labels)
- 1C. Pebblebed heaths
- 3B. Lower rolling farmed and settled valley slopes
- 3C. Sparsely settled farmed valley floors
- 3E. Lowland plains
- 4A. Estuaries
- Clyst Valley Local Landscape Character Areas
- Central Cyst Valley
- London Road Corridor
- Sowton and Bishop's Court
- Lower Cyst Valley
- Cyst St Mary Farlands
- Aylesbeare and Woodbury Farlands



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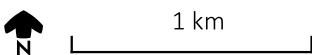




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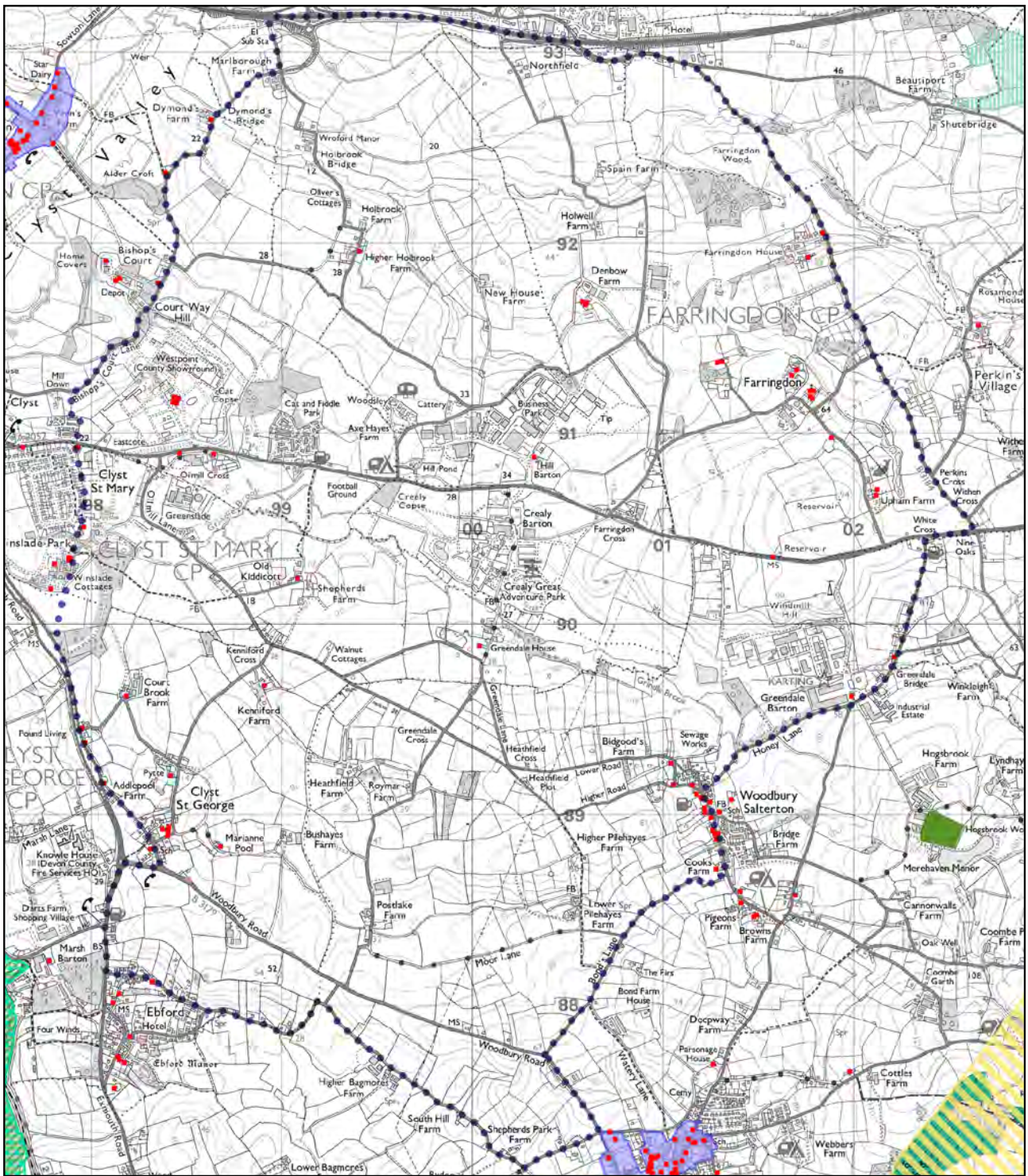
Map 4. Topography and drainage

- Area of Search
- < 10 m
- 10- 25 m
- 25- 50 m
- 50- 75 m
- 75- 100 m
- > 100 m
- ▨ Flood Zone 3
- ▧ Flood Zone 2



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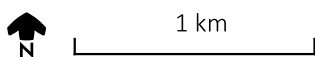




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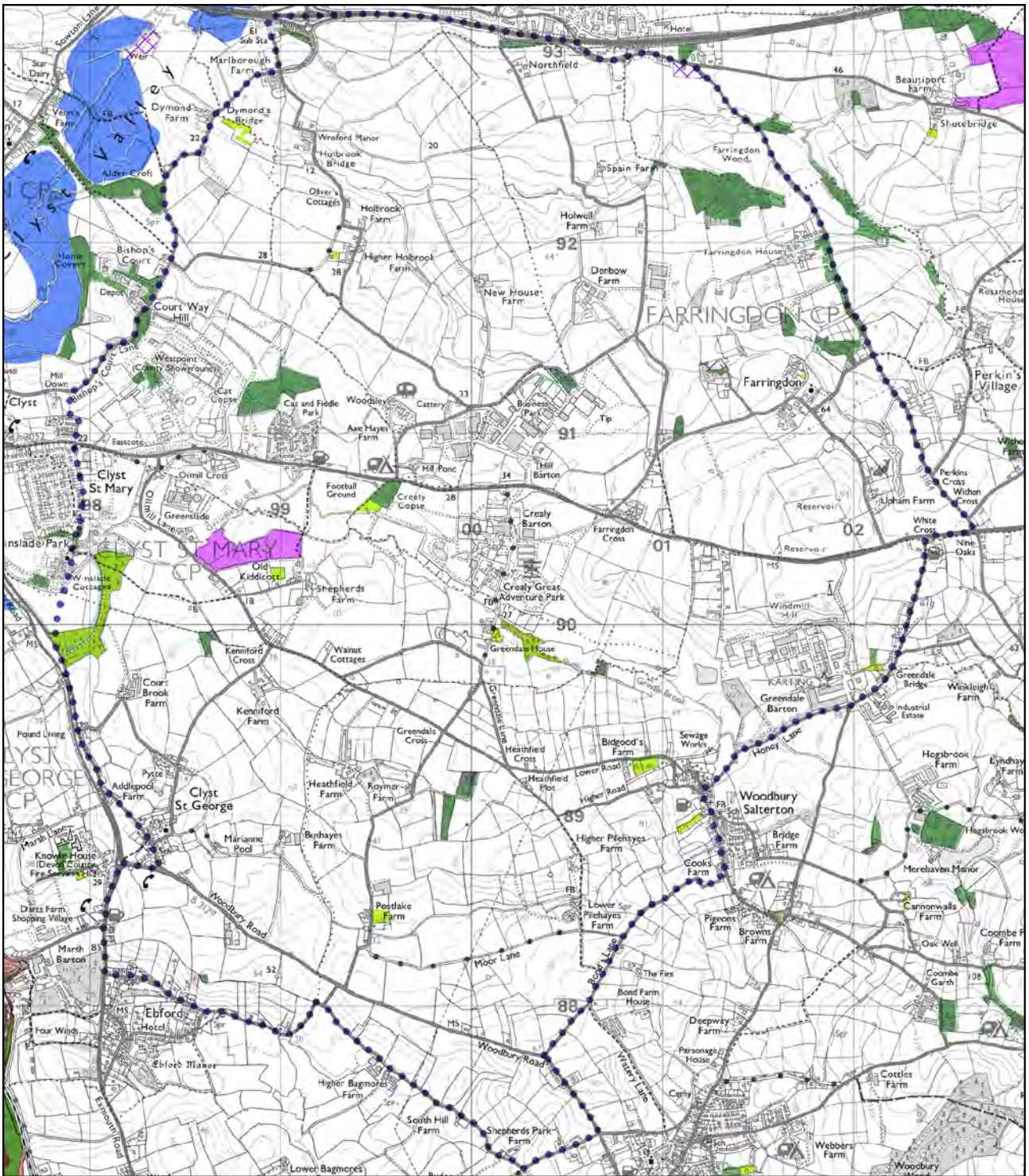
Map 5. Designated sites

- Area of Search
- ▨ East Devon AONB
- ▨ County Wildlife Sites
- ▨ Ancient Semi-natural Woodlands
- ▨ Plantations on Ancient Woodland Sites
- Listed Buildings
- Conservation Areas
- ▨ Special Protection Areas
- ▨ Sites of Special Scientific Interest
- Ramsar Site



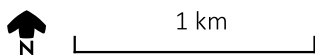
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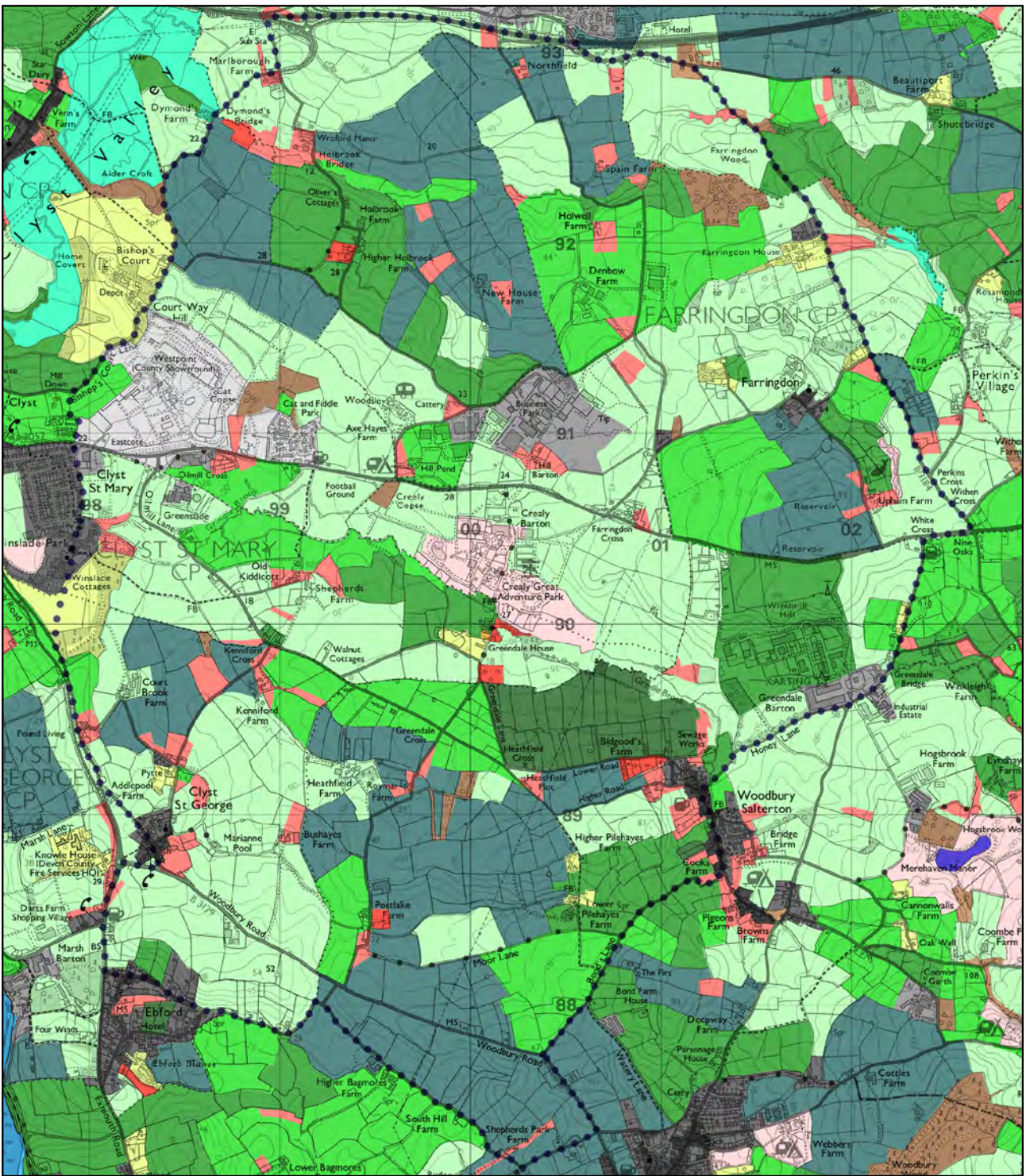
Map 6. Priority habitats



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










- Area of Search
- Priority Habitat Inventory
  - Coastal and floodplain grazing marsh
  - Coastal saltmarsh
  - Deciduous woodland
  - Good quality semi-improved grassland
  - Lowland fens
  - Mudflats
  - ✕ No main habitat but additional habitats present
  - Traditional orchard

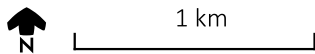




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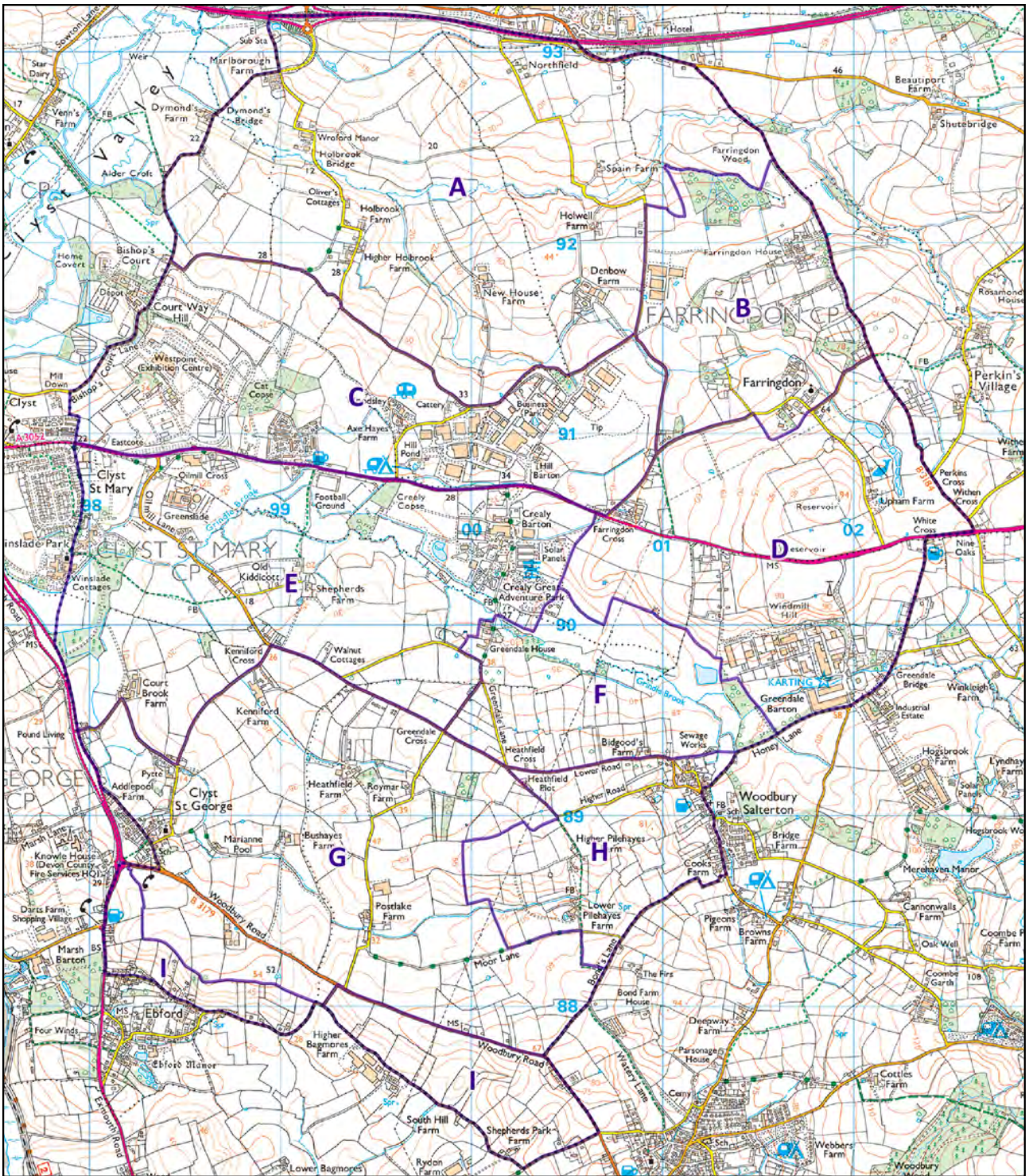
Map 7. Historic Landscape Characterisation

-  Area of Search
-  Water
-  Recreation
-  Horticulture
-  Public complex
-  Industrial complex
-  Park/garden
-  Orchard
-  Historic settlements
-  Watermeadow
-  Conifers
-  Post-medieval enclosures
-  Barton fields
-  Medieval enclosures
-  Medieval strip-enclosures
-  Intertidal mud & marsh
-  Modern settlement
-  Airfield
-  Woodland
-  Modern enclosures
-  Former orchards





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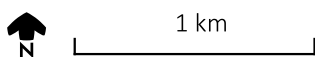




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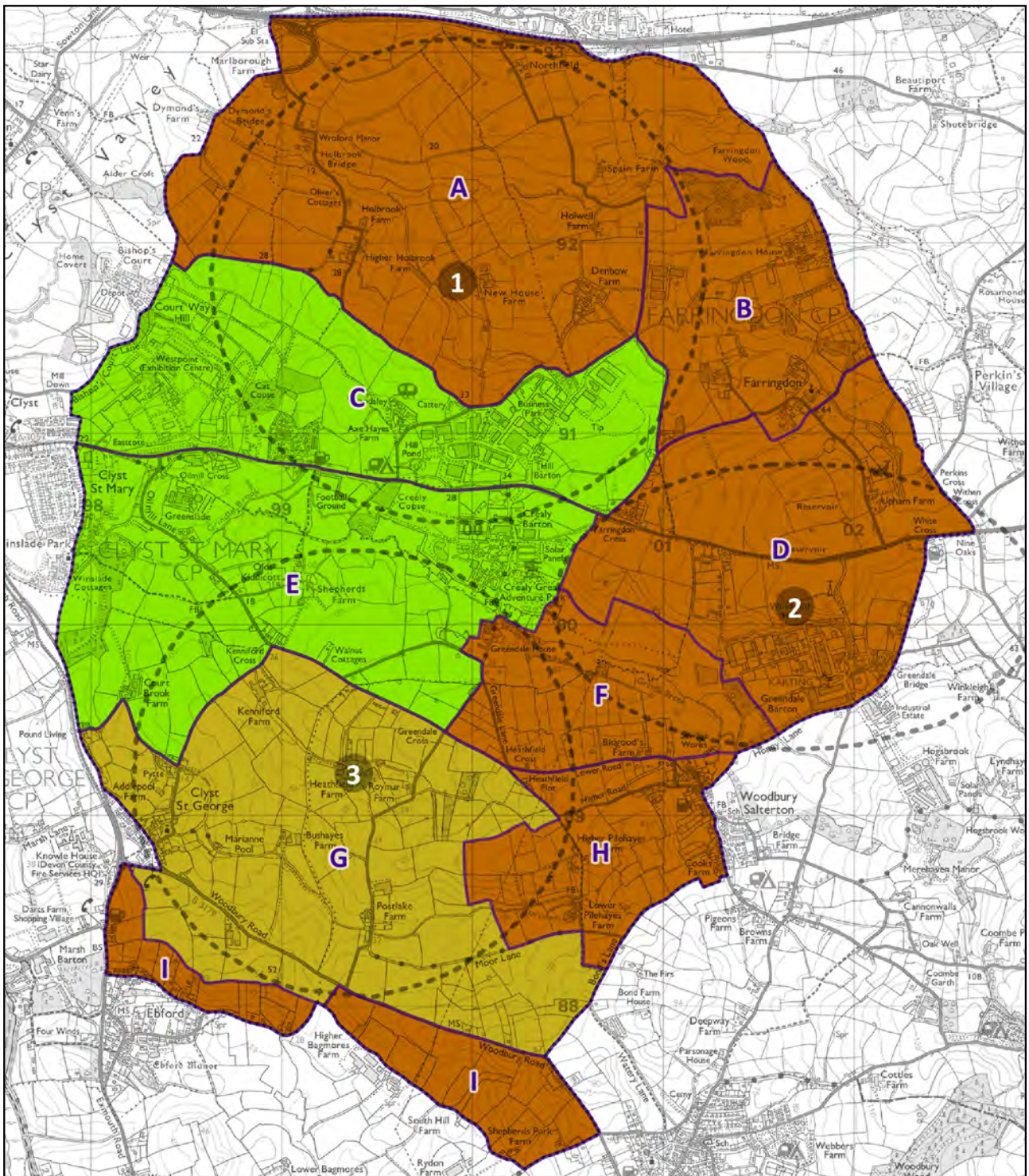
Map 8. Local Landscape Units (LLUs)

-  Area of Search
-  Local Landscape Units (LLUs)
- A. Holbrook
- B. Farringdon
- C. Cat and Fiddle
- D. Windmill Hill and Greendale
- E. West Grindle Brook Valley
- F. East Grindle Brook Valley
- G. Clyst St George Farmland
- H. Woodbury Salterton Farmland
- I. Ebford Slopes



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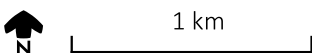




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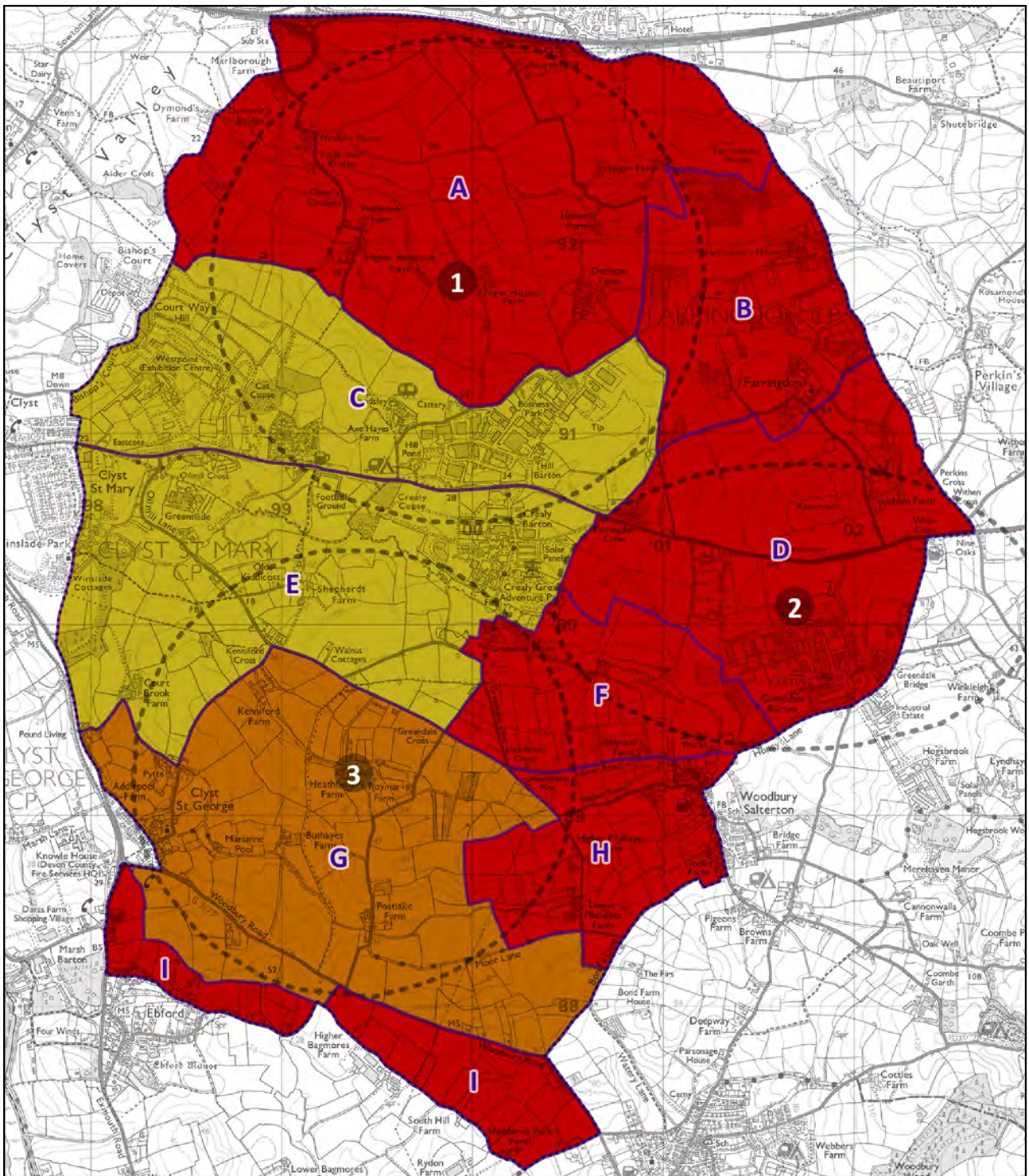
Map 9. Landscape sensitivity for housing

- ⋯ Area of Search
- ▭ Local Landscape Units (LLUs) (labelled with letters)
- Landscape sensitivity for housing
  - High-medium
  - Medium
  - Medium-low
- ⋯ CBRE Options June 2022 (labelled with numbers)



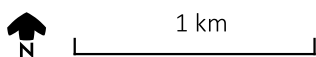
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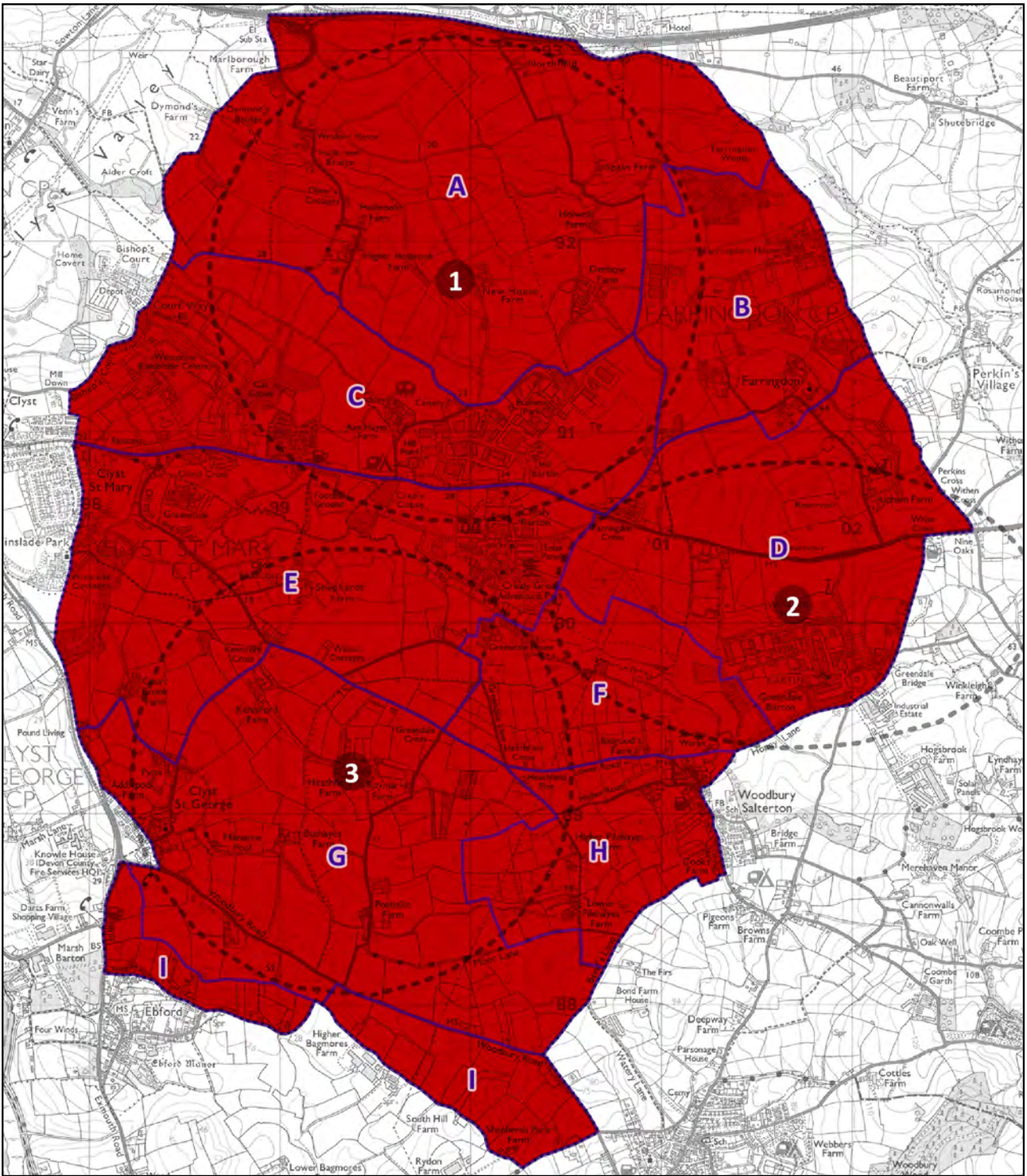
Map 10. Landscape sensitivity for  
employment/commercial



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- ⋯ Area of Search
  - ▭ Local Landscape Units (LLUs)  
(labelled with letters)
- Landscape sensitivity for  
employment/commercial
- High
  - High-medium
  - Medium
- - - CBRE Options June 2022  
(labelled with numbers)

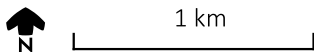




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Map 11. Landscape sensitivity for very large  
scale warehousing/distribution

- ⋯ Area of Search
- ▭ Local Landscape Units (LLUs)  
(labelled with letters)
- Landscape sensitivity for very large  
scale warehousing/distribution
- High
- - - CBRE Options June 2022  
(labelled with numbers)



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## Appendix C: LLU Survey Sheets and Photographs

### Appendix C Contents

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<b>LLU A</b>	Holbrook	i
<b>LLU B</b>	Farringdon	iv
<b>LLU C</b>	Cat and Fiddle	viii
<b>LLU D</b>	Windmill Hill and Greendale	xi
<b>LLU E</b>	West Grindle Brook Valley	xiv
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## LLU A: Holbrook Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> <i>Clyst Lowland Farmlands</i> <b>EDDC LCT:</b> Mostly LCT 3E <i>Lowland Plains</i> . Small area of 3C <i>Sparsely Settled Farmed Valley Floors</i> around Holbrook Stream <b>CVRP LLCA:</b> Mostly J <i>Clyst St Mary Farmlands</i> . Small area of H <i>Sowton and Bishop's Court</i> in NW
<b>Topography</b>	Undulating. Holbrook Stream and tributaries (running NW into Clyst) create variety of landform with relatively steep slopes, and make it more complex than most other LLUs.
<b>Flood Zones</b>	Valley floors in flood zones 2 and 3.
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	Traditional Orchard at Dymonds Bridge and Higher Holbrook Farm (small). Small strips of deciduous woodland. [Riparian habitats not on priority habitats list, but still important in this LLU]
<b>Cultural Heritage Designations</b>	Listed Buildings at Higher Holbrook Farm and Denbow Farm
<b>Historic Landscape Characterisation</b>	Mix of medieval enclosures, Barton fields, post-medieval enclosures (all extensive), Some modern enclosures in the northern part. Extensive park/garden at Bishop's Court immediately adjacent to west.
<b>CVRP</b>	Adjacent to Clyst Valley CVRP in W and NW. CVRP shown as extending into LLU around Dymonds Bridge.

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## LLU A: Holbrook Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> The scale of this rolling landscape varies with stronger containment experienced within the valleys and a more open character prevalent on the ridges. Farm and residential buildings located on the rim of the valleys appear large in relation to the scale of the more complex and incised lower slopes.	HM	H	H
<u>Landform</u> Landform is varied with steep convex and concave slopes interspersed with more gently sloping ground. The area close to and	HM	H	H

between the confluence of the two narrow convoluted valleys which weave through the core of this landscape is particularly rolling and complex.			
<p><u>Landcover</u>                  Medium and small-sized fields of arable and pasture are enclosed by hedgerows. These include extensive areas of semi-regular medieval, post-medieval and Barton fields. There are some modern enclosures in the northern part of the LLU, which are larger and more rectilinear in form. Fields are notably smaller and more irregular where the landform is more complex near the valleys. Although there are relatively few boundary trees, a reasonably well-wooded character is present due to consistent riparian woodlands and clumps of trees associated with farmsteads. Traditional orchards and some small broadleaved woodlands are present.</p>	HM	HM	H
<p><u>Built environment</u>                  Farms and occasional residential buildings are located on the rim of the valleys. There are also some large agricultural sheds. This landscape is relatively sparsely settled although there are views to Exeter Airport and associated business park from more elevated areas in the north of the unit.</p>	M	HM	H
<p><u>Perceptual qualities</u>                  A sense of space and openness can be experienced from the upper slopes and ridges with long views to distant hills and ridges. While the more contained parts of this landscape can feel secluded, the proximity of the A30 and airport reduces the sense of tranquillity in the northern parts of this LLU. This landscape appears distinctly rural with a strong integrity and few incongruous or detractive features.</p>	HM	H	H
<p><u>Visual</u>                  Views into the interior valleys are restricted to the relatively few farms/residential buildings perched on higher slopes and ridges. This landscape is generally not readily visible in wider views from surrounding roads and settlement although larger buildings sited on ridges (40m AOD) would be prominent from across the Clyst Valley and from the more elevated parts of Exeter.</p>	M	HM	H
<p><u>Landscape value</u>                  There are a few Listed Buildings but no public footpaths or recreational use of this landscape. The water courses will have some biodiversity value.</p>	M	M	M
<b>Overall sensitivity score</b>	HM	H	H



**LLU A: Holbrook** Photographic Record (see also panoramic photo in main report)



*Small-scale sloping fields in the Holbrook Valley near Spain Farm*



*Larger fields near the A30 with airport buildings visible in the distance*



*Farm track looking east from Wroford Manor*



*Riparian and field trees in the central part of the LLU*



LLU B: Farringdon Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> Northern part is <i>Clyst Lowland Farmlands</i> . Southern part is <i>Pebble Bed Heaths and Farmland</i> . <b>EDDC LCT:</b> Northern part is 3E <i>Lowland Plains</i> . Southern part is 3B <i>Lower rolling farmed and settled valley slopes</i> . <b>CVRP LLCA:</b> Northern part is J <i>Clyst St Mary Farmlands</i> . Southern part is K <i>Aylesbeare and Woodbury farmlands</i>
<b>Topography</b>	Highest point is in SE. Gradual slope down towards NW. Landform is higher but less complex than LLU A.
<b>Flood Zones</b>	Flood zones 2 and 3 follow stream corridor quite tightly.
<b>Nature Conservation Designations</b>	County Wildlife Site: Abandoned swimming pool with amphibian interest in grounds of Farringdon School.
<b>Priority Habitats</b>	Relatively large amounts of woodland, including Farringdon Wood. Small traditional orchard in Farringdon Village.
<b>Cultural Heritage Designations</b>	Cluster of Listed Buildings in Farringdon Village (Church (II*), lychgate, headstone, church cottage, home farm and farmbuilding. Also Farringdon House and lodge, and Glebe House and barn. Faringdon House in Devon County List of Gardens. Description is as follows: <i>A mansion with C18 origins, modernised c1800, thoroughly remodelled 1897-1900. The home of the Cholwich family in the early eighteenth century through to 1835. Farringdon House has a C18 core, it is two and a half storeys, with a hipped roof and centre pediment. It was much altered in 1897—1900 for the Johnson family by E. H. Harbottle, who added the gables, half-timbering, towers and casement windows. Each front has a different elevation. In 1793 Polwhele noted the flourishing oak plantations and the quick growth of its shrubs and trees. Swete wrote in 1800 that it was ‘a most comfortable house and establishment, which, with the lawn and shrubberies around, from a union of taste subsisting between Mrs Hole and himself, have received every embellishment of which the nature of the place will admit.’ White (1850) noted that it was ‘a large cemented mansion with a handsome front, standing in a small park, and commanding extensive and beautiful views of the surrounding country.’ The sale particulars of 1910 noted that the pleasure grounds were not extensive but overlooked a well-timbered park. Nevertheless the grounds included parterres, a wilderness walk, three walled kitchen gardens, a bee house, a number of glass houses including a camellia house and a tropical house with palms and ferns. The park contained several ponds and a thatched cottage orné which was used as a coachman’s house. A terrace adjoins the north side.</i>
<b>Historic Landscape Characterisation</b>	Mainly modern enclosures. Some post-medieval enclosures, several small parks/gardens (around Farringdon House and Farringdon village); Woodland
<b>CVRP</b>	None

LLU B: Farringdon Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<p><u>Scale</u>                      While landform is generally gently sloping providing little containment, the relatively well-wooded nature of this landscape compartmentalises space, reducing overall scale to medium.</p>	M	HM	H
<p><u>Landform</u>                      This landscape is comparatively elevated at 75m AOD. It largely comprises gently graded west-facing slopes although landform is more complex and tightly constrained within the tributary valley of the Holbrook aligned close to Farringdon village.</p>	M	HM	H
<p><u>Landcover</u>                      Woodlands and parkland with mature trees are associated with the designed landscape of Farringdon House, including the sizeable broadleaved woodland of Farringdon Wood. A small orchard is present near Farringdon village. Arable land on more gently sloping ground is more open with few field-boundary trees although with intact but relatively low managed hedgerows.</p>	HM	H	H
<p><u>Built environment</u>                      There are some Listed Buildings within the tightly clustered historic Farringdon village and elsewhere. This village is set low within the landscape, associated with a small tributary water course of the Holbrook, and its immediate setting is sensitive. Farringdon House designed landscape is listed in the Devon County List of Gardens although accommodates a disparate collection of residential and commercial buildings of various ages and architectural styles. Large agricultural sheds on the western edge of this landscape unit are incongruous when seen at close quarters but not widely visible due to their location on lower ground.</p>	M	H	H
<p><u>Perceptual qualities</u>                      There is a distinct sense of timelessness associated with Farringdon village and, to a lesser degree, with Farringdon House and its designed landscape (due to the extent and mix of more recent development affecting part of its immediate setting). The relatively well-wooded nature of this landscape increases the perception of naturalness and a strongly rural character distant from urban centres.</p>	HM	H	H
<p><u>Visual</u>                      Both Farringdon village and Farringdon House are not readily visible from afar. Development located on the more elevated and</p>	M	H	H

<p>open slopes of this landscape would be likely to be visible from parts of the Pebblebed Ridge and while woodland would provide some screening, it would be much more prominent than existing settlement which is compact and tucked down into valleys and lower slopes. Larger buildings would be more intrusive in this respect.</p>			
<p><u>Landscape value</u>                  There are Listed Buildings within Farringdon village and elsewhere, a valued designed landscape but no footpaths or other features of recreational interest.</p>	HM	HM	HM
<p><b>Overall sensitivity score</b></p>	HM	H	H

**LLU B: Farrington Photographic Record** (see also panoramic photo in main report)

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*Farrington Church and Lych Gate*



*South Front of Farrington House (now converted into flats)*



*Farrington Wood*



*Parkland trees to the north of Farrington House*

### LLU C: Cat and Fiddle Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> <i>Clyst Lowland Farmlands</i> <b>EDDC LCT:</b> <i>3E Lowland Plains</i> <b>CVRP LLCA:</b> <i>J Clyst St Mary Farmlands</i>
<b>Topography</b>	Relatively low and flat but rises slightly in N and E.
<b>Flood Zones</b>	Mostly outside floodplain – but floodplain extends along A3052 and in one place (east of Cat and Fiddle) extends to the north of it.
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	Deciduous Woodland at Cat Copse, and small area NE of Business Park.
<b>Cultural Heritage Designations</b>	Cluster of Listed Buildings within County Showground (former farm and outbuildings). Also 'The Thatch' at Hill Barton (just to south of Business Park).
<b>Historic Landscape Characterisation</b>	Mainly 'public complex', modern enclosures, and industrial complex. Some post-mediaeval enclosures shown, but these have mostly been built over. Some Barton Fields adjacent to road along northern edge. Woodland (Cat Copse), and former orchard sites.
<b>CVRP</b>	Runs close to W. edge (far side of Bishop's Court Lane).

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### LLU C: Cat and Fiddle Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> The flat to gently undulating landform, generally medium-sized and open fields and the presence of existing large business park buildings increases scale although woodland provides some containment in the west near the County Showground.	ML	M	H
<u>Landform</u> Gently sloping to flat topography although some ground modification indicated by the capped mound of the former tip in the eastern part of this LLU. In general, a simple landform which would require relatively little modification to accommodate smaller building types.	ML	M	HM



<p><u>Landcover</u>                  Fields of pasture and grassland (some used as temporary car parking areas for the County Showground and for turf growing) are contained by low managed hedgerows and occasional boundary trees. A larger area of woodland, Cat Copse, is present between the showground and a residential chalet park.</p>	M	HM	H
<p><u>Built environment</u>                  An existing business park, residential chalet park, cattery and some permanent buildings associated with the County Showground together with the busy A3052 create a fragmented pattern of development.</p>	L	L	H
<p><u>Perceptual qualities</u>                  This LLU feels closer to the urban centre of Exeter and is already more semi-urban in character due to the existing business park and the proximity of Clyst St Mary to the west. Noise from the A3052 is intrusive and the approach to the city feels degraded and unattractive. The area behind Cat Copse is more tranquil and rural in character.</p>	ML	M	H
<p><u>Visual</u>                  There is some visibility from the A3052 although this is restricted in extent due to the screening provided by existing buildings. Parts of this LLU are visible from the residential chalet park and other housing. There is limited visibility from the County Showground due to screening by woodland and other vegetation. The low elevation of this unit limits widespread views from surrounding areas.</p>	ML	M	H
<p><u>Landscape value</u>                  The County Showground has some value as a community resource although there are no footpaths or other recreational facilities in this LLU. Some Listed Buildings are present.</p>	M	M	M
<p><b>Overall sensitivity score</b></p>	<b>ML</b>	<b>M</b>	<b>H</b>

LLU C: Cat and Fiddle Photographic Record (see also panoramic photo in main report)

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*A3052 near Cat and Fiddle Inn*



*View west from Hill Barton Business Park access road towards Cat & Fiddle Park*



*West Point County Showground*



*View south across fields towards Cat Copse and the A3052*

### LLU D: Windmill Hill and Greendale Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> Mostly <i>Pebble Bed Heaths and Farmland</i> . Valley (industrial estate) is within <i>Clyst Lowland Farmlands</i> . <b>EDDC LCT:</b> Mostly 3B <i>Lower rolling farmed and settled valley slopes</i> . Valley (industrial estate) is 3E <i>Lowland Plains</i> . <b>CVRP LLCA:</b> Mostly <i>K Aylesbeare and Woodbury Farmlands</i> . Valley (industrial estate) is within <i>J Clyst St Mary Farmlands</i> .
<b>Topography</b>	Prominent rounded hills. Although doesn't easily show on map, there are 3 distinct summits: Windmill Hill; hill with mast on; hill with reservoir. Contains one of highest points in Area of Search. Also includes hill slopes and adjacent valleys (valley with fishing lakes S of Farringdon, and valley containing Greendale industrial estate).
<b>Flood Zones</b>	Follow valley floor streams. Some places where FZ2 extends notably beyond FZ3 creating floodplain.
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	Small areas of traditional orchard and deciduous woodland on valley floor E of Business Park.
<b>Cultural Heritage Designations</b>	A few Listed Buildings scattered: Upham Cottage, Upham Farmhouse + barn, Milestone on A3052, Higher Greendale Farmhouse (in valley E of Business Park); Greendale Barton (in valley on S side of Business Park). Windmill Hill associated with 'Prayerbook Rebellion' battle in 1549.
<b>Historic Landscape Characterisation</b>	Mixture of Barton fields, post-medieval enclosures, medieval enclosures (though half of these are now under the business park), industrial complex and modern fields.
<b>CVRP</b>	None (but potential connection along Grindle Brook)

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### LLU D: Windmill Hill and Greendale Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> The absence of a strong enclosure pattern and woodland gives an openness to this landscape although a medium scale generally prevails due to the confined nature of small hill tops. The large buildings of the Greendale Business Park overwhelm the scale of the upper Grindle Brook valley on the southern fringes of this LLU. A more intimate scale is experienced within the narrow Upham Farm valley.	HM	H	H
<u>Landform</u> A subtly rolling ridge with some pronounced rounded hill tops including Windmill Hill. Relatively smoothly graded slopes to the	HM	H	H

<p>west but steeper on the southern side against the Grindle Brook valley. The Upham Farm valley on the eastern edge of this LLU is narrow and strongly contained.</p>			
<p><u>Landcover</u>                  The field enclosure pattern is not particularly distinctive or complex with low hedges enclosing medium to large arable fields. Rough pasture occurs on steeper slopes above the business park. There are relatively few field boundary trees although mature trees are present either side of the A3052. Small areas of broadleaved woodland are associated with the access road to the Greendale Business Park and near Upham Farm where the small string of fishing ponds set within the narrow valley add diversity to this landscape.</p>	ML	M	MH
<p><u>Built environment</u>                  Greendale Business Park lies on the south-eastern edge of this unit. This development comprises large industrial units and storage sheds cut into the southern slopes of Windmill Hill and extending across the upper Grindle Brook valley. Greendale Farm Shop and associated development occupies a prominent position on the mid part of the longer western slopes of Windmill Hill. Upham Farm is tucked down within a small valley on the western edge of this unit. A small mast and access road is located on Windmill Hill and the A3052 crosses this landscape. While the presence of existing large-scale development reduces sensitivity to some degree, the remaining undeveloped ground is more elevated and plays an important role in screening the Business Park.</p>	M	M	MH
<p><u>Perceptual qualities</u>                  Parts of this landscape are significantly modified with the Business Park being incongruous in this rural setting. However, the ridge is the most visible part of this landscape and has an intact character with well-managed farmland. This ridge forms a distinct threshold experienced from the A3052 when travelling westwards with views opening up across the <i>Clyst Lowland Farmlands</i> LCT.</p>	HM	H	H
<p><u>Visual</u>                  This LLU forms the highest ground within the Study Area and plays an important role in screening incongruous and detractive development within the Greendale Business Park. The ridge of Windmill Hill (and other nearby tops) is locally prominent and this increases sensitivity in relation to visibility of development seen in long views across the Clyst valley, from the more elevated parts of Exeter, and from the East Devon AONB.</p>	H	H	H
<p><u>Landscape value</u>                  A permitted footpath provides access between Greendale Farm Shop and Woodbury Salterton. The fishing ponds at Upham Farm valley have some recreational value.</p>	M	M	M
<p><b>Overall sensitivity score</b></p>	<b>HM</b>	<b>H</b>	<b>H</b>



**LLU D: Windmill Hill and Greendale Photographic Record (see also panoramic photo in main report)**

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*Distinctive summit of Windmill Hill as seen from the entrance to Greendale Business Park*



*View east towards the Pebble Bed Ridge, with Greendale Business Park in foreground*



*View towards highest point (94m asl) above Upham Farm from near Farrington*



*Fishing lakes at Upham Farm*



### LLU E: West Grindle Brook Valley Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> <i>Clyst Lowland Farmlands</i> <b>EDDC LCT:</b> <i>3E Lowland Plains</i> <b>CVRP LLCA:</b> <i>J Clyst St Mary Farmlands</i>
<b>Topography</b>	Relatively flat and low lying, with gentle slopes. Simple landform
<b>Flood Zones</b>	Extensive. Broad band of FZ2 and 3 associated with Grindle Brook.
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	Fairly large area of Good quality semi-improved grassland in valley floor floodplain N of Old Kiddicott. Deciduous Woodland at Creely Copse and W of Kenniford Cross. Traditional orchard at Old Kiddicott and to S of Creely Copse. Winslade poplar plantation is also shown as Traditional Orchard in priority habitat mapping
<b>Cultural Heritage Designations</b>	Scattered Listed Buildings: 'Linden Lea' and 'Coxe's Dairy or Farmhouse' immediately to S of A3052; Court Brook Farm; Various within Winslade Park, including church and terrace walk; Pound Living (on edge of LLU adjacent to A376). Unregistered historic park at Winslade Park immediately to the W.
<b>Historic Landscape Characterisation</b>	Mixture of modern enclosures, Barton fields; medieval fields; post-medieval fields; former orchards; recreation; park/garden (Winslade Park); industrial complex.
<b>CVRP</b>	Potential links through Winslade Park, and along Grindle Brook Valley.

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### LLU E: West Grindle Brook Valley Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> The flat to very gently sloping landform increases openness although scale is reduced within parts of the floodplain pastures where fields are small and strongly enclosed by high hedgerows and trees.	ML	HM	H
<u>Landform</u> Landform is simple comprising a flat floodplain in the west with land rising gently in the south and east to around 30m AOD.	L	M	HM

<p><u>Landcover</u>                  Wet meadows and remnant designed landscape features are associated with nearby Winslade Park on the western fringes of this LLU. A poplar plantation is a locally distinctive feature. Small pastures of semi-improved grassland on the floodplain of the Grindle Brook are enclosed by tall hedgerows and boundary trees. Medium-sized and more open arable fields are present on gently sloping ground set above the floodplain.</p>	M	HM	H
<p><u>Built environment</u>                  Existing development is largely associated with the A3052 and comprises the Crealy Great Adventure Park, football pitches and the Greenslade industrial park near Oilmill Lane. Some small clusters of residential properties line minor roads.</p>	ML	M	H
<p><u>Perceptual qualities</u>                  This landscape has an 'urban fringe' character in places due to the fragmented pattern and disparate character of existing development including industrial estate and the amusement park. The A3052 is noisy and provides an unattractive approach to Exeter. Away from this road, deeper within the floodplain pastures of the Grindle Brook, a degree of tranquillity can be experienced.</p>	M	M	H
<p><u>Visual</u>                  Visibility is restricted because of the low-lying nature of this landscape. Trees and small woodlands also provide screening of existing buildings, including those within the Crealy Great Adventure Park. The flat to very gently undulating topography would principally result in the outer edges of development being visible from nearby roads and settlement although the presence of public footpaths increases visual sensitivity in some areas.</p>	ML	M	H
<p><u>Landscape value</u>                  Crealy Great Adventure Park and the recently upgraded football ground have some value as leisure and recreational facilities. Footpaths provide access to Winslade Park (potentially linking with CVRP) and across the Grindle Brook near Greendale House. There are some Listed Buildings including those in nearby Winslade Park.</p>	M	M	M
<p><b>Overall sensitivity score</b></p>	<b>ML</b>	<b>M</b>	<b>H</b>

**LLU E: West Grindle Brook Valley** Photographic Record (see also panoramic photo in main report)

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*Good quality semi-improved grassland habitat near Old Kiddicott*



*Historic gardens and valley-floor parkland at Winslade Park*



*Footpath over Grindle Brook near A3052*



*The Grindle Brook near Crealy Great Adventure Park*

### LLU F: East Grindle Brook Valley Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> <i>Clyst Lowland Farmlands</i> <b>EDDC LCT:</b> <i>3E Lowland Plains</i> <b>CVRP LLCA:</b> <i>J Clyst St Mary Farmlands</i>
<b>Topography</b>	Comprises valley floor and side. Rises relatively steeply.
<b>Flood Zones</b>	Narrow band of FZ3 associated with Grindle Brook. Wider area of FZ 2 on valley floor.
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	Traditional Orchards around Greendale House. Small patch of deciduous woodland in valley floor (also larger areas shown on OS base). [Riparian habitats not on priority habitats list, but still important in this LLU]
<b>Cultural Heritage Designations</b>	Listed Building at Greendale House.
<b>Historic Landscape Characterisation</b>	Notable Medieval Strip Enclosures on valley side; park/garden around Greendale House and some existing orchards in valley floor. Modern enclosures elsewhere and former orchard site near fishing lake.
<b>CVRP</b>	None. But potential to connect via Grindle Brook.

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### LLU F: East Grindle Brook Valley Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> The strong enclosure pattern of narrow strip fields, enclosed by tall hedgerows and many mature field trees often results in an intimate scale although scale is increased within the more open floor of the Grindle Brook valley and in the rare areas where containment by trees and hedges is less pronounced. Views towards the Greendale Industrial Park provide an indication of how larger buildings would overwhelm the scale of this LLU.	HM	H	H
<u>Landform</u> Landform is generally simple with gently sloping valley sides and a flat narrow valley floor. The Grindle Brook, although small, adds	ML	MH	H

some topographical diversity as does the artificial fishing pond close to the brook.			
<p><u>Landcover</u></p> <p>There are notable Medieval strip enclosures on the valley side with these comprising long, narrow pastures (some of these horse paddocks and with one field used for storage of building materials) strongly contained by thick high hedgerows and many mature boundary trees. Fields are small but squarer and enclosed by lower, more managed hedges closer to Greendale House in the west. The narrow lane which forms the southern boundary of this unit is also aligned with many mature trees and dense high hedgerows. Small orchards are associated with Greendale House and Bidgood’s Farm. The valley floor is more open although grassland and some riparian vegetation and a small broadleaved woodland add diversity.</p>	H	H	H
<p><u>Built environment</u></p> <p>The few existing buildings in this unit comprise farms, Greendale house and occasional small timber buildings associated with horse paddocks. The small, tightly clustered and historic settlement of Woodbury Salterton is located nearby in the east and is associated with a narrow tributary water course. The incongruous large warehousing and sheds of the nearby Greendale Business Park (located in LLU D) is visible from parts of this landscape.</p>	HM	H	H
<p><u>Perceptual qualities</u></p> <p>A sense of history is associated with the Medieval strip fields for receptors aware of their origin. The strong containment of hedgerows and trees provides a feeling of seclusion within the fields. Some traffic noise from the A3082 can be heard reducing tranquillity and the perception of history and containment is diminished where there are views of the large and incongruous nearby Greendale Business Park.</p>	HM	H	H
<p><u>Visual</u></p> <p>Views from within this landscape are generally contained and intimate in nature and views to this landscape are limited due to the screening effect of coalescing mature trees and hedgerows. There is little visibility of this landscape from nearby Woodbury Salterton and the valley landform additionally restricts widespread views of this landscape.</p>	ML	M	MH
<p><u>Landscape value</u></p> <p>Although not formally designated, the Medieval strip fields are listed in the Devon Historic Environment Record, Greendale House is Listed and public access routes are aligned across the Grindle Brook valley.</p>	HM	HM	HM
<b>Overall sensitivity score</b>	<b>HM</b>	<b>H</b>	<b>H</b>



**LLU G: East Grindle Brook Valley** Photographic Record (see also panoramic photo in main report)

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*Medieval strip field as seen from Lower Road, Woodbury Salterton*



*View from valley side, with Windmill Hill and buildings in Greendale Business Park visible*



*Fishing Lake on valley floor in view looking towards Woodbury Salterton*



*Valley floor fields near Greendale House*

### LLU G: Clyst St George Farmland Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> Mostly <i>Clyst Lowland Farmlands</i> . Small part of <i>Pebble Bed Heaths and Farmland</i> in east. <b>EDDC LCT:</b> 3E <i>Lowland Plains</i> . Small part of 3B <i>Lower rolling farmed and settled valley slopes</i> in east. <b>CVRP LLCA:</b> Mostly J <i>Clyst St Mary Farmlands</i> . Small part of K <i>Aylesbeare and Woodbury Farmlands</i> in east.
<b>Topography</b>	Slopes gradually down towards the W (Clyst Valley). Contains unnamed stream which runs through Clyst St George, which adds some diversity to topography, and a smaller unnamed stream (in a shallower valley) past Kenniford Farm.
<b>Flood Zones</b>	Flood Zone 2 and 3 tight to watercourse
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	Traditional Orchard at Postlake Farm. Small patches of Deciduous Woodland E of Roymar Farm and on southern ridge top.
<b>Cultural Heritage Designations</b>	Listed Buildings at Kenniford Farm, Pytte, Addlepool Farm, Manor House, Cade's Cottage, Marianne Pool, and cluster in Clyst St George Village.
<b>Historic Landscape Characterisation</b>	Mostly modern enclosures (in west) and Barton Fields (in east), with some post-medieval enclosures, and several former orchard sites. Small park/garden at Pytte (to north of Clyst St George village)
<b>CVRP</b>	None, but possible connection via streams through Clyst St George and past Kenniford Farm to Winslade Park and Clyst Valley.

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### LLU G: Clyst St George Farmland Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> The gently undulating landform and medium-sized fields give an openness to this landscape resulting in a medium scale overall. Scale is however reduced within the upper reaches of the valley at the transition with LLU H where a more pronounced narrow 'V' shaped valley form is present and where vegetation and smaller fields contribute to a small scale.	M	HM	H
<u>Landform</u> A relatively simple landform comprising shallow valleys contained by rounded ridges. The southern ridge (following / to the south of Woodbury Road) is relatively high, and forms a distinct topographical feature in views from the south and from the Pebble Bed	HM	HM	H

Ridge (within the East Devon AONB). The valley floor is more incised close to Clyst St George.			
<p><u>Landcover</u></p> <p>Fairly open with broad arable fields enclosed by low managed hedgerows and relatively few field boundary trees. Extensive area of Barton Fields in the east, and modern enclosures in the west. A vineyard is located on gentle south-facing slopes close to Clyst St George and there is a traditional orchard at Postlake Farm. Small deciduous woodlands are present at Roymar Farm although woodland is generally a rare feature in this landscape.</p>	M	M	HM
<p><u>Built environment</u></p> <p>The few existing buildings in this unit comprise farmsteads with occasional large agricultural sheds, notably at Postlake Farm where a haulage business operates. The tightly clustered historic estate-influenced settlement of Clyst St George lies on the south-western edge of this landscape, with fields forming its immediate setting.</p>	M	HM	H
<p><u>Perceptual qualities</u></p> <p>This landscape has a strongly rural character with few incongruous features located within it or seen from it and it therefore feels distant from urban centres. There is a sense of openness and connection to the wider landscape due to the wide-reaching views that are possible, particularly in the south of the LLU.</p>	HM	H	H
<p><u>Visual</u></p> <p>The openness of this landscape (particularly in the south of the LLU) allows distant views to surrounding landscapes and vice-versa including the Pebblebed ridge and the west side of the Exe Estuary. Key features of mid-range views include the concentrated arc of coalescing woodland seen to the east (principally comprised of woodlands and field boundary trees within LLUs F and H) and, in closer range to the west, the distinctive tower of Clyst St George church and the tall Wellingtonia in the graveyard which are landmark features seen from the B3179 and other local roads.</p>	HM	H	H
<p><u>Landscape value</u></p> <p>There are recreational routes aligned along Moor Road and, for a short distance, between Clyst St George and Marianne Pool. A number of farms are Listed and there are a cluster of Listed Buildings within Clyst St George.</p>	M	M	M
<b>Overall sensitivity score</b>	<b>M</b>	<b>HM</b>	<b>H</b>



LLU G: Clyst St George Farmland Photographic Record (see also panoramic photo in main report)



*View east from the track to Bushayes Farm (just off the B3179), looking towards the Pebble Bed Ridge*



*View north-west from lane near Roymer Farm*



*Smaller enclosures on the eastern edge of Clyst St George village*



*Clyst St George church and Wellingtonia tree*

## LLU H: Woodbury Salterton Farmland Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> Mostly <i>Pebble bed heaths and farmland</i> . Couple of fields of <i>Clyst Lowland Farmlands</i> in NW <b>EDDC LCT:</b> Mostly 3B <i>Lower rolling farmed and settled valley slopes</i> . Couple of fields of 3E <i>Lowland Plains</i> in NW. <b>CVRP LLCA:</b> Mostly <i>K Aylesbeare and Woodbury Farmlands</i> . Couple of fields of <i>J Clyst St Mary Farmlands</i> in NW.
<b>Topography</b>	Relatively high - contains some of highest land in area of search. Forms dome-shaped hill in east, and valley and ridge extending out to west.
<b>Flood Zones</b>	None
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	Traditional Orchard in N of LLU adjacent to Lower Road and others W of Woodbury Salterton village and at Postlake Farm.
<b>Cultural Heritage Designations</b>	Listed Buildings: Linhay on lower road; 'Crosshills'; Lots in Woodbury Salterton including just outside LLU.
<b>Historic Landscape Characterisation</b>	Extensive area of medieval fields in south of LLU. Modern enclosures to north, and Barton Fields between High Road and Lower Road, and west of Pilehayes Farm. Small parks/gardens at Higher and Lower Pilehayes Farms. Orchard south of Lower Road, and several former orchard sites on edge of Woodbury Salterton village
<b>CVRP</b>	None

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## LLU H: Woodbury Salterton Farmland Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> The complex rolling landform, irregular hedged fields and many mature field trees create containment and influence the intimate scale of this landscape. The narrow valley west of Lower Pilehayes Farm is strongly contained by steep slopes.	HM	H	H
<u>Landform</u> This landscape comprises a small hill rising to 81m AOD in the east (relatively high within the Study Area) with irregular and alternating concave and convex slopes. A narrow valley extends west of Lower Pilehayes Farm with this having particularly steep south-facing slopes.	H	H	H



<p><u>Landcover</u>                  There are many mature boundary and field trees and high hedgerows enclose small pastures (some fields are of Medieval origin in the southern part of the LLU). Narrow lanes providing access to this landscape are lined with many mature oak trees and hedgerows. Small orchards are present close to Woodbury Salterton and adjacent to Lower Road.</p>	HM	H	H
<p><u>Built environment</u>                  The few existing buildings in this LLU comprise compact farms and occasional timber sheds within fields used as horse paddocks. The small historic settlement of Woodbury Salterton lies adjacent to this LLU and is tucked low into a small valley - this landscape forms an important backdrop to the village.</p>	H	H	H
<p><u>Perceptual qualities</u>                  This is a strongly rural landscape with few incongruous features and a distinct sense of tranquillity.</p>	HM	H	H
<p><u>Visual</u>                  Visibility from surrounding roads and settlement is limited due to the degree of screening provided by the many trees, woodland and the rolling landform. Development on the elevated eastern area would be likely to be visible intermittently from more open parts of the Pebblebed Heaths (within East Devon AONB) and may also be visible at greater distances from elevated areas west on the west side of the Exe Estuary.</p>	HM	H	H
<p><u>Landscape value</u>                  Traditional orchards and a Medieval field pattern is present in parts of this LLU. There are a few scattered Listed Buildings with many more located within nearby Woodbury Salterton. A public footpath is aligned across the narrow valley near Lower Pilehayes Farm.</p>	M	M	M
<p><b>Overall sensitivity score</b></p>	<b>HM</b>	<b>H</b>	<b>H</b>

LLU H: Woodbury Salterton Farmland Photographic Record (see also panoramic photo in main report)

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*Elevated fields west of Woodbury Salterton*



*View north from Moor Lane showing steep valley-side fields near Pilehayes Farm*



*View north from Higher Road showing long view*



*Traditional orchard, Lower Road*

### LLU I: Ebford Slopes Desk Study Record Form

<b>Landscape Character</b>	<b>DCA:</b> Far west is <i>Exe Estuary and Farmlands</i> . Centre is <i>Clyst Lowland Farmlands</i> . East is <i>Pebble Bed Heaths and Farmland</i> . <b>EDDC LCT:</b> Mostly 3E Lowland Plains. Eastern part is 3B <i>Lower rolling farmed and settled valley slopes</i> . <b>CVRP LLCA:</b> Western part is <i>Clyst St Mary Farmlands</i> . Eastern part is outside study area for CVRP LLCA as outside Clyst Valley catchment.
<b>Topography</b>	Steep slopes, generally south-facing, largely within Exe catchment. West-facing slopes in west of LLU associated with side of Clyst valley.
<b>Flood Zones</b>	None (though flood zone of unnamed stream running through Ebford is close to southern boundary of LLU).
<b>Nature Conservation Designations</b>	None
<b>Priority Habitats</b>	None
<b>Cultural Heritage Designations</b>	None within LLU. Clusters of Listed Buildings in Ebford to SW and in Woodbury to E. Woodbury Conservation Area touches LLU boundary.
<b>Historic Landscape Characterisation</b>	Eastern part is mostly Barton Fields (part of larger block of historic field systems extending to N, E and S). Western part (around Ebford) is mix of modern enclosures, medieval enclosures, historic and modern settlement.
<b>CVRP</b>	None within LLU. Western end of LLU is close to Clyst Valley so potential for some connection here.

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### LLU I: Ebford Slopes Sensitivity Assessment Record Form

ASSESSMENT CRITERIA	DEVELOPMENT TYPE		
	A	B	C
<u>Scale</u> This is a relatively steeply-sloping landscape containing relatively small land parcels. The LLU appears smaller in scale than the wide valley to the south which it overlooks. Farm buildings located in flatter land immediately to the south of the LLU appear large in relation to the sloping fields within the LLU.	HM	H	H
<u>Landform</u> This LLU contains some of the steepest land within the Area of Search, and its slopes are a distinctive feature. Most of the LLU is south-facing and forms the northern side of a valley containing tributaries of the Exe (which meet the Exe at Exton). A small part in the west is west-facing and forms part of the Clyst valley side. The slopes immediately north of Ebford drain into the unnamed stream which flows through Ebford. Its association with the Exe catchment makes this LLU distinctive from the rest of the Area of	H	H	H

Search (which is within the Clyst catchment).			
<p><u>Landcover</u></p> <p>Landcover comprises generally small fields of pastoral or arable farmland. The eastern half comprises Barton Fields (part of a larger block of historic field pattern which extends north, east and south). Fields are generally divided by hedges with occasional trees, with field boundaries running up/down the slope which emphasise the steep landform. There are some fenced paddocks and some woodland/garden vegetation on the edge of Ebford.</p>	HM	H	H
<p><u>Built environment</u></p> <p>Buildings within the LLU are limited to properties along Ebford Road and Exmouth Road in the south-west of the LLU, and occasional farms and isolated houses along roads in the east. None are Listed. Large farms are located to the south of the LLU. The historic village of Ebford is located immediately adjacent to the LLU, and land within the LLU forms a green setting and backdrop to the village.</p>	M	MH	H
<p><u>Perceptual qualities</u></p> <p>The lack of development within this LLU, and its strongly rural character, gives it a sense of timelessness. However this is locally reduced to some degree by the presence of pylons, and occasional large / modern buildings on the peripheries.</p>	HM	H	H
<p><u>Visual</u></p> <p>This LLU is highly visible from the south, both from Ebford Village, and across the valley of the unnamed stream which runs into the Exe at Exton. In these views the LLU appears as a series of open fields forming the northern backdrop and skyline. Much of the LLU can also be seen in elevated views from high land to the east, within the East Devon AONB.</p>	H	H	H
<p><u>Landscape value</u></p> <p>There are no designated sites or buildings, or Priority Habitats within the LLU. Nor are there any footpaths or access land within it, although the lane along its southern boundary is a quiet lane and advisory cycle route. Nevertheless the LLU makes an important contribution to the appearance and rural character of the area.</p>	M	M	M
<b>Overall sensitivity score</b>	<b>HM</b>	<b>H</b>	<b>H</b>



**LLU I: Ebford Slopes** Photographic Record (see also panoramic photo in main report)



*Steep slopes and small-scale field pattern near South Hill Farm*



*Rural lane along southern edge of LLU*



*LLU forming backdrop and skyline in view looking north from lane SE of Exton*



*LLU forming setting to Ebford village (wall of Ebford Manor on right of picture)*





# East Devon New Community

## Sustainable Access Review of Option Sites

*For East Devon District Council*

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Date 8 November 2023

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# Executive Summary

This Sustainable Access Review provides an initial assessment to help shape and inform discussions regarding the location of a potential new community of up to 8,000 new homes in East Devon. Three Option sites have been examined against a range of criteria, focusing on their credentials for enabling and facilitating travel by sustainable transport modes given the requirements of local and national policy, and the climate emergency context.

Following the completion of traffic modelling by consultants acting on behalf of Devon County Council (DCC), this report sits alongside a high-level comparative Strategic Traffic Review, with both reports brought together in an overarching Summary Note.

This review, prepared by Hydrock's Transportation team in consultation with East Devon District Council (EDDC) and DCC, takes account of the local context, current constraints, and the emerging vision for the new community - e.g. the potential to achieve a development which incentivises and delivers high-levels of non-car travel, makes suitable provision for residual car trips/parking (including Electric Vehicles (EVs), and considers new and emerging transport technologies including e-bikes/scooters, other forms of micromobility, and Autonomous Vehicles (AVs). More detailed proposals for such provision will form part of the high-level Transport Assessment for the preferred site, once this has been determined by EDDC; at this stage, consideration has been given to the differing nature of each of the sites and whether this enhances or restricts potential access by all modes. For example, even if high quality cycle facilities are provided, a site that lies closer to large employment areas is likely to see higher levels of cycle commuting than one that lies further away.

While many transport aspects of each site could be addressed or improved (e.g. public transport provision), there will be some fundamental elements of their location or topography that will either be more expensive to mitigate or continue to have an underlying effect. Each Option has been reviewed and scored across four key areas, walking, cycling, public transport and proximity to employment. For each site, a high-level commentary is provided on its ability to accommodate emerging and future transport modes.

The table below provides a summary of the three potential Options for a new town in East Devon, and their respective scores.

Assessment Category	Option One	Option Two	Option Three
<b>Walking</b>	4	1	4
<b>Cycling</b>	4	2	4
<b>Public Transport</b>	4	2	4
<b>Employment</b>	5	3	4
<b>Overall (/20)</b>	<b>17</b>	<b>8</b>	<b>16</b>
<b>Rounded Average Score</b>	<b>4.3</b>	<b>2</b>	<b>4</b>

*Options One and Three perform strongly across all categories, and are considered to be evenly matched in terms of transport sustainability. Option Two would require the greatest level of intervention, and provides the lowest opportunity to promote sustainable transport.*

## 1. Introduction

### 1.1 Overview

- 1.1.1 This Strategic Transport Review document has been prepared by Hydrock on behalf of East Devon District Council (EDDC) as an initial exercise to help shape and inform discussions regarding the location of a potential new community of up to 8,000 new homes in the western part of East Devon, to the east of Exeter.
- 1.1.2 This document explores the opportunities and constraints for sustainable transport provided by three potential locations for the new town and, at a high level, given the rapidly-changing nature of such technologies, provides commentary on their comparative suitability for emerging and future modes of transport.
- 1.1.3 The new community will be shaped by a vision which places an emphasis on active travel, greater connectivity and innovative transport technologies, in line with the Exeter Transport Strategy (2021). This report therefore focuses on the existing and potential accessibility and connectivity of the three Options, including an assessment using principles established within Sustrans' 20-minute neighbourhood concept. It then provides a comparison of the sustainable transport accessibility credentials of the Options.

### 1.2 Report Structure

1.2.1 The structure of the report is as follows:

- » Section 2: Policy Context and Objectives
- » Section 3: Walking Connectivity
- » Section 4: Cycle Connectivity
- » Section 5: Public Transport Connectivity
- » Section 6: Existing Employment Context
- » Section 7: Future Proofing
- » Section 8: Conclusion and Next Steps

### 1.3 Option Locations

- 1.3.1 The three Option locations are all in the western part of the EDDC area, to the east of Exeter, and are shown indicatively at Figure 1.1.
- » **Option One** is located approximately 7km east of Exeter city centre and 3km east of the M5. The A30 is to the north of the Option and the A3052 is to the south of the Option; Exeter Airport is also located less than 500m north of the Option One's northern boundary.
  - » **Option Two** is located approximately 9km south-east of Exeter city centre and has the potential to be bisected by the A3052. The village of Woodbury Salterton is located south of the Option's indicative boundary, with Greendale Business Park and Greendale Farm shop located within the Option's area.
  - » **Option Three** is located adjacent to the A376, in between Clyst St George (to the south-west) and Clyst St Mary (to the north-west). Option Three is 2km east of Topsham, which offers a rail link to Exeter and Exmouth via the Avocet Line.

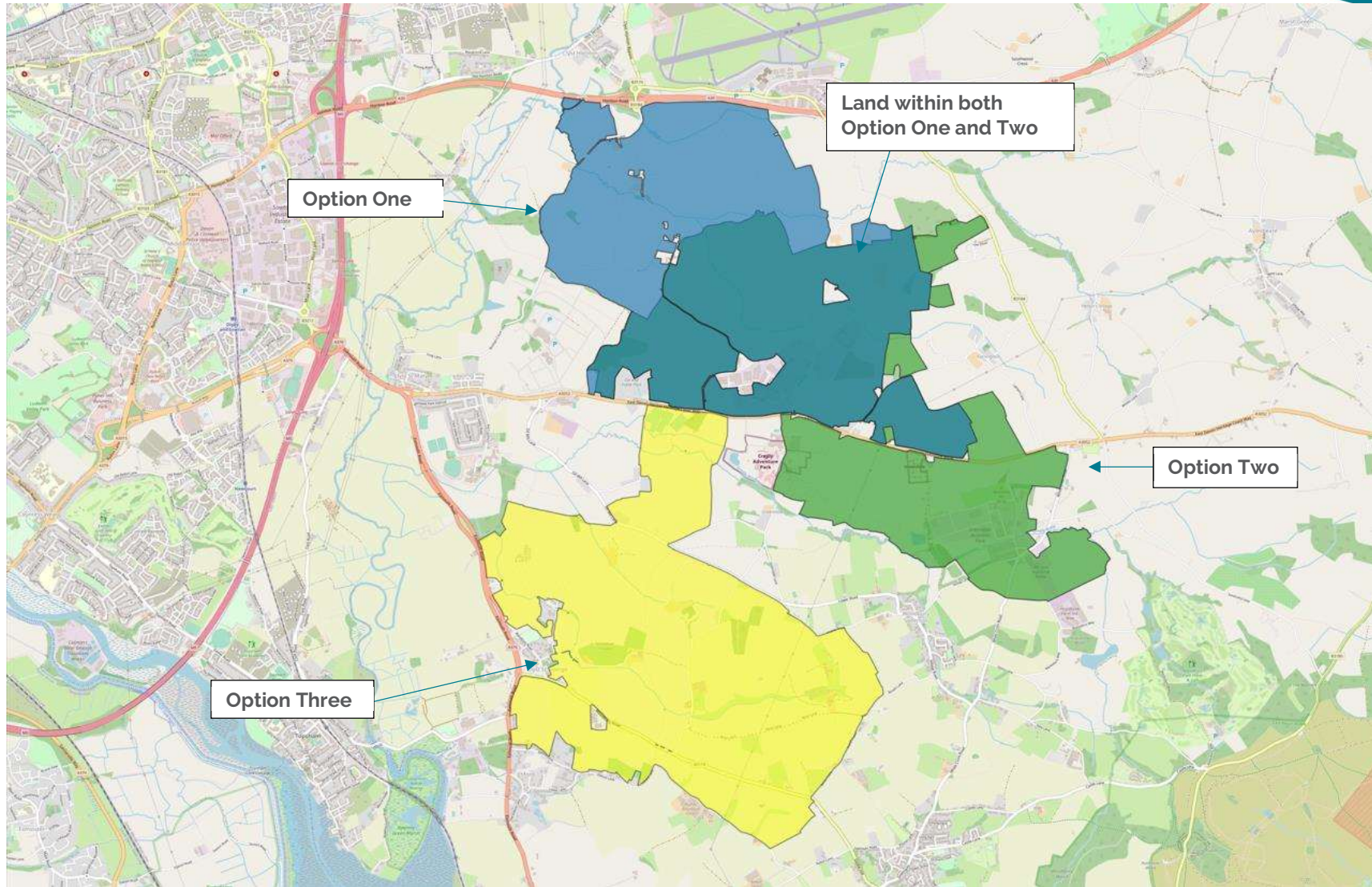
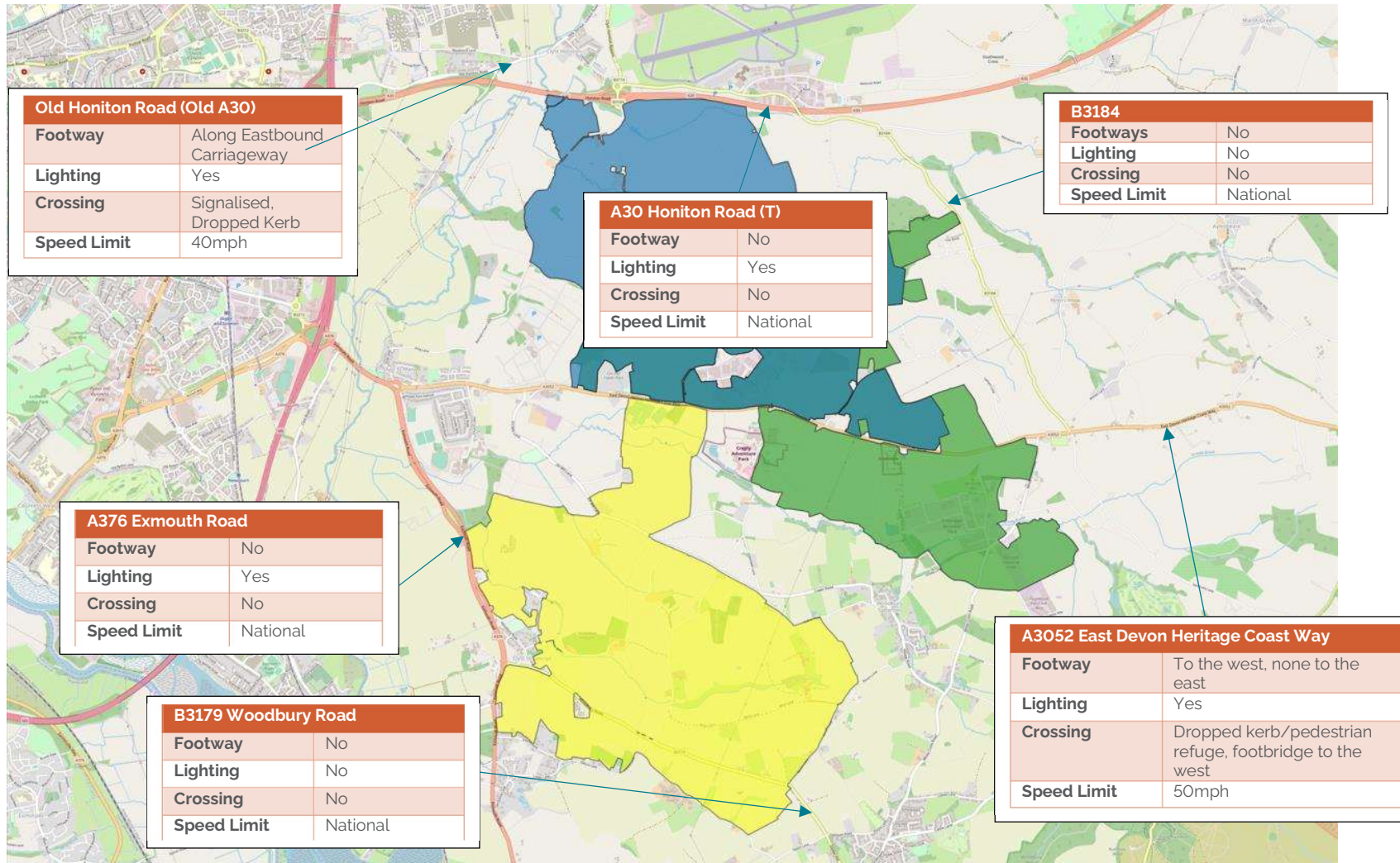


Figure 11: Option One Location



## 1.4 Local Highway Network

1.4.1 The local highway network in the vicinity of the three Options is summarised at Figure 1.2.



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Figure 1.2: Local Highway Network



## 2. Policy Context and Objectives

### 2.1 Climate Emergency – 2040 Carbon Neutral Target

- 2.1.1 We live in a very different world to one that existed 20 years ago. In fact, we live in a very different world to the one that existed in 2019. The COVID-19 pandemic has accelerated a lifestyle change beyond anything that could have been foreseen.
- 2.1.2 Change was already on the horizon. The climate change agenda and the climate emergency declarations of local authorities necessitate this. EDDC is committed to becoming carbon neutral by 2040, with a five-year strategy and action plan in place to support this goal.
- 2.1.3 Transport has a fundamental role to play in tackling climate change, as the transport sector has been the largest greenhouse gas (GHG) emitting sector in the UK since 2016.
- 2.1.4 We risk missing the 2040 target by a substantial margin unless we significantly alter current behaviours, known technologies and our approach to masterplanning and development.

**Figure 3: Greenhouse gas emissions by sector, 2019, by proportion (BEIS, 2021)**



Figure 2.1: Greenhouse gas emissions by sector, 2019, by proportion<sup>1</sup>

- 2.1.5 Subject to confirmation by EDDC, it is likely that accelerating and supporting the path towards net zero will form a key element of the vision for the new community.

### 2.2 National Policy

#### *National Planning Policy Framework*

- 2.2.1 The National Planning Policy Framework (NPPF – as updated 5<sup>th</sup> September 2023) sets out the government's planning policies for England, focusing on the promotion of sustainable transport at Chapter 9, where it states "*Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.*"
- 2.2.2 It encourages transport issues to be considered from the earliest stages, to identify opportunities to promote sustainable travel and make high quality places.

<sup>1</sup> Figure 3, DfT Transport and Environment Statistics 2021 Annual report

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/984685/transport-and-environment-statistics-2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984685/transport-and-environment-statistics-2021.pdf)

- 2.2.3 It recognises that an appropriate mix of uses can minimise the number and length of journeys needed, and that infrastructure can be used to widen transport choice.
- 2.2.4 It states that development should give priority first to pedestrian and cycle movements and facilitate access to high quality public transport.
- 2.2.5 The NPPF defines Sustainable Transport Modes as '*Any efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, ultra low and zero emission vehicles, car sharing and public transport*'. Other considerations pertinent to emerging vehicle technologies include the support within the NPPF for next generation mobile technologies including 5G networks and other future connected transport / smart cities applications.
- 2.2.6 The NPPF also notes that planning policies should '*recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government's General Aviation Strategy*'. This is relevant in the context of the nearby Exeter International Airport, which will need to be consulted in relation to the emerging development options via the Local Plan process in line with government policy.

*Department for Transport*

- 2.2.7 The recently published Transport Decarbonisation Plan (DfT 2021), will need to form a central pillar to all future plans to support the sustainable mobility aspirations of the Option allocation process.
- 2.2.8 The DfT's Gear Change: a bold vision for cycling and walking (2020) sets out the vision to make England a great walking and cycling nation, alongside the actions to make this a reality, grouped under four themes:
- » Better streets for cycling and people
  - » Cycling and walking at the heart of decision-making
  - » Empowering and encouraging local authorities
  - » Enabling people to cycle and protecting them when they do.
- 2.2.9 Alongside the Transport Decarbonisation Plan, this gives a clear indication of the importance of walking and cycling to the Government.
- 2.2.10 The DfT states as part of The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy (DfT, 2018) that Electric vehicles (EVs) are highly energy efficient and have zero tailpipe emissions. EVs also have substantially lower greenhouse gas emissions than conventional vehicles, even when taking into account the electricity source and the electricity used for battery production. They are therefore a key tool to help to contribute to cleaner air and lower carbon emissions, particularly for those trips that need to be undertaken by car.
- 2.2.11 Electric mobility will need to form a key element within the overall transport mix supporting the new community.

## 2.3 Vision and Validate vs. Predict and Provide

**VISION & VALIDATE: Define the vision, and develop a strategy that provides the best opportunity of achieving that vision**

- 2.3.1 Historically, transport planning has attempted to predict future traffic conditions based on the travel patterns of existing sites, and then provide additional infrastructure to meet the anticipated demand ('Predict and Provide').
- 2.3.2 Demand for road space (including parking) increases in line with its supply, and so congestion and other associated negative externalities persist. Traditionally, this Predict and Provide approach has failed to deliver a significant shift towards sustainable modes, with the wider benefits they bring. The continued expansion of road infrastructure to meet demand appears to proliferate unsustainable travel, which is at odds with the current climate crisis. This was recognised by Government as long ago as 1997, when it published the White Paper entitled *A New Deal for Transport: Better for Everyone*, which stated that '*Simply building more and more roads is not the answer to traffic growth. 'Predict and provide' didn't work*<sup>2</sup>, going on to say that '*The days of 'predict and provide' are over – we will give top priority to improving the maintenance and management of existing roads before building new ones*<sup>3</sup>.
- 2.3.3 The new approach, which is labelled by some as Vision & Validate, or Decide & Provide, is set out by the Chartered Institution of Highways and Transportation, the Town and Country Planning Association, the industry standard database TRICS, and by Government (through the Department for Transport (DfT)) in the documents summarised below.
- 2.3.4 This supports EDDC's proposed identification of an overarching vision for the new community, encompassing transport/accessibility considerations, which enables the delivery of that vision to be the key focus of analyses and infrastructure interventions which support transport and movement to/from and within the new settlement.
- 2.3.5 More detail regarding Vision & Validate / Decide & Provide and its impact on the level of vehicle trips associated with the development is provided in a separate Trip Generation Methodology Note (ref. 22462-HYD-XX-XX-RP-TP-1001).
- Chartered Institution of Highways and Transportation (CIHT) – Better planning, better transport, better places (August 2019)*
- 2.3.6 CIHT advises that '*the current planning practice is not delivering the best outcomes ... far too many examples still exist where the long since discredited approach of 'predict and provide' is used to the detriment of planning better places*'.
- 2.3.7 It goes on to say that '*we must fully abandon predict and provide models of transport planning and assess against health and well-being, lifestyle, and environmental criteria including carbon emissions*'. It explains the better approach of 'Decide and Provide', or 'Vision & Validate'.

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<sup>2</sup> Lives Shaped by Transport, Chapter 1.

<sup>3</sup> Making Better Use of Trunk Roads, Chapter 3.

*Town and Country Planning Association; Garden City Standards – Guide 13: Sustainable Transport (September 2020)*

- 2.3.8 T CPA guidance is to “take a ‘vision and validate’ approach, not predict and provide, which historically has meant building more roads for more cars”.
- 2.3.9 It goes on to highlight the “growing twin emergencies of climate change and obesity”, both of which, it says, have significant implications for transport. It says that there is an opportunity to embed positive changes in people’s travel behaviour and transform permanently how many people move around. It states that “decarbonisation of travel must be the focus”.

*TRICS Guidance Note: On the Practical Implementation of the Decide and Provide Approach (February 2021)*

- 2.3.10 The TRICS guidance states that “in contrast to the forecast-led paradigm of Predict and Provide, we need to embrace the vision-led paradigm of Decide and provide – decide upon a preferred future and then provide the means to help realise that future”.
- 2.3.11 It advises that “if we continue to reproduce past transport solutions based on previous travel behaviour, it is inevitable that transport planning will continue to seek to provide infrastructure that meets previously predicted needs, rather than meeting, and indeed shaping, the transport needs of the future”.

*Transport Decarbonisation Plan (DfT 2021)*

- 2.3.12 This approach has been confirmed as the correct course of action within the Transport Decarbonisation Plan (DfT 2021) where it is stated:

*“We need to move away from transport planning based on predicting future demand to provide capacity (‘predict and provide’) to planning that sets an outcome communities want to achieve and provides the transport solutions to deliver those outcomes (sometimes referred to as ‘vision and validate’). ... From our recent experiences of the COVID-19 pandemic as well as in the commitments in this plan, it is clear that we have the opportunity to change the way we think about movement and to challenge our behaviours.”*

## 2.4 Triple Access Planning

- 2.4.1 The Vision & Validate approach recognises that transport is a derived demand, resulting from how we design for access and how people are able to fulfil their accessibility needs. The Triple Access system refers to the way in which the transport system provides access through physical mobility, the land-use system provides access through spatial proximity, and telecommunications provide digital connectivity.
- 2.4.2 The Covid-19 pandemic has shown how the increased use of digital systems can become normalised, in turn reducing both the demand for motorised mobility and the related policy requirements to address the resultant demands. Refocussing policy towards prioritising active-travel based access has the potential to increase demand for and the provision of nearby in-person activities and services.

2.4.3 Focussed on outcomes, the Triple Access Planning system is led by the vision, in this case for the East Devon New Community, which has the ability to influence not only the infrastructure of physical mobility, but also to influence spatial proximity and to require digital connectivity - a powerful tripartite approach to deliver economic, environmental and social gains.

## 2.5 20-Minute Neighbourhoods

2.5.1 The principal of co-locating dwellings with employment and key services and facilities is not new, and the benefits of residents being able to choose to walk or cycle for their daily needs is well understood. The approach is not about limiting or restricting people's movements or use of vehicles, but about creating a situation where walking and cycling become attractive, logical and realistic options for travel. For example, a 10-minute bike ride to a local shop on a safe and direct cycle route may become more attractive than a half hour drive to a larger shop. The larger shop remains an option, and may well be used for big, weekly shops, but there is a local facility for top up and utility shopping.

2.5.2 There are a number of concepts that capture this ideal and provide a framework for its delivery. One such example is Moreno's 15-minute City, popularised through the Paris Mayor's election campaign in 2020.

2.5.3 Moreno created a concept for a city in which residents can access their daily necessities by foot or by bike within 15 minutes in order to tackle car hegemony and create more sustainable, human-centric urban environments. Facilitating active travel not only nullifies the negative externalities associated with car travel, but also offers a number of physical health benefits while also reducing commute times to enable a healthier work/life balance.

2.5.4 The concept won the 2021 Obel Award for outstanding architectural contributions to human development. Moreno's ideas have already been implemented in Paris, and have informed urban planning in other international cities such as Buenos Aires, Chengdu and Melbourne.

2.5.5 Within Melbourne, 20-minute neighbourhood pilot programmes were launched in 2018 and have since been delivered successfully across three areas. The 20-minute neighbourhood concept fostered in Melbourne refers to the ability for people to meet most of their daily needs within a 20-minute walk from home. The pilot studies demonstrated that place-based planning is effective, and led to the recommendation that the 20-minute neighbourhood principle should become embedded in decision making at the policy level.

2.5.6 Sustrans promote a similar vision of a 20-minute neighbourhood, which has gained significant traction in the UK, as illustrated by publications such as the RTPi's Briefing Paper 20 Minute Neighbourhoods (2021).

2.5.7 Key to the concept is ensuring that most of people's daily needs can be met within a short walk or cycle. This results in multiple benefits including improved mental and physical wellbeing, reduced traffic congestion, improved noise and air quality and a stronger community.



- 2.5.8 For Sustrans, in contrast to the Melbourne concept, this means a 20-minute return walk, 10 minutes there and 10 minutes back, which is consistent with the 800m 'Walkable Neighbourhood' described in Manual for Streets.
- 2.5.9 Although now superseded by CD143, TA91/05 Provision for Non-Motorised Users states at paragraph 2.3 that *'Walking is used to access a wide variety of destinations including educational facilities, shops, and places of work, normally within a range of up to 2 miles' (3.2km)*. Paragraph 2.2 of TA91/05 stated that 2 miles is *'a distance that could easily be walked by the majority of people'* and (at paragraph 2.3) that *'Walking and rambling can also be undertaken as a leisure activity, often over longer distances'*. In relation to shorter trips in particular, the CIHT publication Planning for Walking (Section 2.1) states that across Britain about *'80% of journeys shorter than 1 mile are made wholly on foot'*.
- 2.5.10 Consequently, whilst a 10-minute walking distance to key everyday facilities should be the target for new neighbourhoods, the 20-minute neighbourhood concept can be based around that length of walk each-way to wider locations including employment and less-frequently visited facilities (e.g. healthcare provision).
- 2.5.11 Cycling allows people to move more quickly than walking. With appropriate and safe cycling facilities provided, the size of a 20-minute neighbourhood could effectively be increased, although walking should still be the priority where possible.
- 2.5.12 The integration of land-use planning and transport planning is a key mechanism to facilitate 20-minute neighbourhoods, and it is anticipated that this will be reinforced through EDDC's emerging vision for the new community, and enacted as part of its future design.
- 2.5.13 It should also be noted that the phasing of the new development will have an impact on this. It is important that the build out of the new community is balanced, so that employment, retail and leisure opportunities are delivered in parallel with new housing. This will enable people to establish sustainable travel and local living habits from the day they move in.

## 2.6 Local Policy

### *East Devon Local Plan (2013-2031)*

- 2.6.1 The East Devon Local Plan (2013-2031) sets out a vision for East Devon's 'West End', with an aim to provide large-scale development to complement the role of the City of Exeter. Large scale development at the Exeter and East Devon 'Growth Point' has already commenced, with the area now host to developments including Exeter Science Park, SkyPark and the Cranbrook new community. The Local Plan emphasises the need for the West End development to be '*inter-related*' and '*at the forefront of sustainable design*', in keeping with the 15/20-minute concepts explored earlier in this chapter.
- 2.6.2 In January 2011 Devon County Council outlined its commitment to improving public transport and other forms of green travel. The subsequently published '*Devon Metro – fulfilling the potential of rail*' outlines an aim to promote opportunities to enhance rail travel into Exeter. Whilst the new Cranbrook station has gone some way towards achieving this, there is still potential to increase uptake especially in the context of the new community, including optimising connectivity to rail.
- 2.6.3 The East Devon Local Plan also identifies potential for development along the A3052 corridor, which runs from Junction 30 of the M5 eastward into East Devon and through the centre of the area of the three potential new community Options. The Local Plan states that for this location development would '*require very significant infrastructure improvements to address resulting congestion*' and '*public transport access would need to be enhanced*'.
- 2.6.4 Strategy 18 of the document identifies the Exeter Airport Business Park as a hub for future development. At 7.47 the Local Plan states that the business park '*has proven to be a very successful business location*' in recent years, going on to conclude that its expansion would help to cater for a range of business uses locally. The importance of the airport has previously been noted with regard to the requirements of the NPPF, and this report considers potential linkages between the Option sites and the airport / business park.

### *Exeter Transport Strategy (2020-2030)*

- 2.6.5 The Exeter Transport Strategy sets out a vision for improved travel choices, utilising technological opportunities to facilitate the creation of better places for people and influence travel behaviour in a positive way. It focuses on improving travel choices and provides the first stages in the transition of transport towards net zero.
- 2.6.6 The strategy sets out three key themes:
- » **Greater connectivity** focusing on travel into the city from outside Exeter's boundaries. This theme is especially pertinent in the context of the proposed new community in East Devon, just outside Exeter's eastern boundary. The theme considers the need to provide a consistent standard of frequency of both rail and interurban bus routes, as well as provision of strategic cycle trails between key settlements (such as the proposed Clyst Valley trail). The theme also stresses the importance of providing park and ride facilities at all main corridors into the city to facilitate sustainable travel from those residing in 'rural hinterland'.
  - » **Greater places for people**, specifically provision of high-quality travel options and improving quality of life within the city. This includes a target for 50% of trips to be made by walking and cycling. There is also an aim to work with bus operators to provide a low-carbon network of buses.

- » **Greater innovation** which will involve the council working with private sector partners to test and implement innovative technology solutions. This will be done with the aim of making travel easier and enabling efficient and flexible operation of the city's transport networks. A key aspiration is to expand electric vehicle car clubs as well as the electric cycle hire network and low carbon buses.

*East Devon Villages Plan (Adopted July 2018)*

- 2.6.7 The East Devon Villages Plan forms part of the 'Development Plan' for East Devon, along with the Local Plan and neighbourhood plans. The Villages Plan defines '*built-up area boundaries*' around various settlements, as well as including plans of the extent of authorised uses at the Hill Barton and Greendale Business Parks, which are located within the vicinity of the three potential new community Options.

*East Devon New Community Committee Papers*

- 2.6.8 An EDDC strategic planning committee meeting took place on 8th March 2022, focusing on the provision of a new community and infrastructure. An outcome of the committee meeting was the recommendation that members '*agree in principle to the inclusion of a new community as part of the spatial strategy within the working draft Local Plan subject to this being reviewed as further evidence comes forward*'. This recommendation followed a previous request (8th February 2022) from members for a further report on the proposed option of a new community in order to support it.
- 2.6.9 The committee meeting report states that consultants have been commissioned to produce work which will help assess the Options for a new community - namely, the appointment of a CBRE-led consortium including Tibbalds and Hydrock, leading to the production of this report.
- 2.6.10 The commission could include:
1. *Review of options for the choice, form and location of new community proposals – a number of large-scale proposals have been promoted through the initial call for sites process. The commission will help to ensure that there is a robust evidence base to inform the selection of development proposals in terms of the ability to secure key outcomes in line with the NPPF considerations.*
  2. *Vision– to work with Council officers and members to develop a 30-year vision for a new community in the district which sets out the Council's requirements in the form of a set of criteria against which the options and their proposed delivery vehicles can be assessed.*
  3. *Initial Options Appraisal – to use the vision and criteria developed at stage 2 to assess the major development options and make an initial recommendation to be considered alongside a draft Local Plan for consultation.*
  4. *Masterplan – Following consultation on the draft Local Plan and consideration of responses to each of the options if a proposed site for allocation is identified then the consultant team will then be expected to undertake a master planning exercise for this site in consultation with key consultees and through a process of community engagement.*
  5. *Preferred delivery option/model – this will include all necessary stakeholder engagement to help define the preferred option for the delivery vehicle to bring forward the preferred new community option.*
  6. *Business case – to include final modelling of infrastructure costs, indicative viability assessment and long-term stewardship and legacy arrangements.*

### 3. Walking Connectivity

#### 3.1 Overview

- 3.1.1 Whichever option is taken forward by EDDC as the preferred location for the new community will require a network of convenient, direct, permeable, safe and easy to navigate pedestrian routes that are able to accommodate the needs of all users.
- 3.1.2 These routes will vary in their nature - e.g. running alongside carriageways, in public open space, and adjacent to cycle routes. They should be consistent with the requirements of guidance including Manual for Streets (or its successor documents) and provide a level of priority over motorised modes in line with the Highway Code.
- 3.1.3 The development should include areas of low- or no-traffic, following the principles of shared-space, or play streets, and green / tree-lined streets promoted in guidance and required by policy.

#### 3.2 Existing Walking Infrastructure

##### *Option One*

##### *Internal Connectivity*

- 3.2.1 A number of existing roads bisect Option One, providing access to existing development within the area including small settlements, farms and Hill Barton Business Park. These roads link the A30 to the north to the A3052 to the south. These roads are generally rural in nature and, whilst they have not been designed to accommodate pedestrian movements, pedestrians can utilise these routes, which are generally lightly trafficked and relatively flat. However, the narrow nature of these routes leaves little space for pedestrians as illustrated by Figure 3.1.



Figure 3.1: Bishop's Court Lane - Option One

- 3.2.2 There are no existing Public Rights of Ways (PRoW) within the potential area of Option One.
- 3.2.3 The B3184 lies to the east of Option One, connecting the A30 to the A3052, and a further existing north-south route is located to the west of Option One. Both of these routes are rural in nature, particularly the western route, and connect to the A30 at Exeter Airport grade separated junction.

#### *External Connectivity*

- 3.2.4 Key routes to Exeter from Option One include the A30 dual carriageway to the north and the A3502 to the south. The A30 is a car dominated link and does not offer any sort of pedestrian facilities westward towards Exeter.
- 3.2.5 However, pedestrian permeability is present towards the north, with crossing points provided to the north of Bishop's Court Lane as well as a footbridge over the A30, before further pedestrian facilities including crossing points and footways are provided along the Clyst Honiton Bypass towards Skypark. From here, pedestrians can travel west towards Exeter via continuous footways along Old Honiton Road (the old A30), which links to Exeter Science Park with M5 J29 and Sowton Industrial Estate / Exeter Business Park beyond.
- 3.2.6 This direction also provides a strong connection to the growing community at the new town of Cranbrook. Development of Cranbrook is ongoing, and is planned to provide a vibrant town centre with a range of retail, community and leisure opportunities, alongside employment opportunities.
- 3.2.7 To the south, pedestrian infrastructure along the A3502 is of a good standard near to Clyst St Mary to the west (including the Winslade Park employment development). Continuous footway is provided along the A3502 from the junction with Valley Road through to Exeter, including pedestrian/cycle facilities at M5 Junction 30. The footway along the A3502 is of good standard, evolving to an off-road segregated footway as the road becomes more vehicle-dominated towards Junction 30 of the M5. Crossing points are provided throughout, including a footbridge over the road to the south of Clyst St Mary, and signalised Toucan crossings connecting pedestrians/cyclists through J30 to Sowton Industrial Estate. The A3502 offers realistic potential for pedestrian trips to be made from Option One westwards towards Clyst St Mary and Exeter.
- 3.2.8 To the east of M5 J30, Clyst Road and Old Rydon Lane provide an alternative route towards Exeter for cyclists in particular, with Old Rydon Lane being a designated quiet route with recently-installed contraflow cycle facilities to the south of Exeter Chiefs' Sandy Park stadium.
- 3.2.9 In contrast, connectivity towards the east along the A3502 is poor, reflecting the lack of existing pedestrian demand to travel east-bound.



3.2.10 The preceding text describes the existing level of provision locally, recognising its deficiencies, advantages and opportunities, and appreciating that provision to serve the new community will need to be substantially enhanced as part of strategic initiatives to optimise and incentivise the use of sustainable modes of transport. This is also reflected in the assessment of Options 2 and 3. The required interventions to provide high-quality access will be explored in the Transport Assessment for the preferred site (once agreed by EDDC).

### *Option Two*

#### *Internal Connectivity*

- 3.2.11 Option Two is potentially bisected by the A3052 which, as previously mentioned, enables pedestrian permeability towards the west. However, in the vicinity of Option Two, the A3052 does not offer any pedestrian facilities (aside from a footway from Greendale Farm Shop to a bus stop) and is not currently suited to accommodate pedestrians.
- 3.2.12 White Cross Road cuts through Option Two in a north/south alignment connecting to the A3052. White Cross Road also does not offer any pedestrian facilities; however, the lane is wide, lightly trafficked and considered a shared space as it serves the frontages of a number of local residences as shown at Figure 3.2. Again, this conclusion will be checked and updated in the context of traffic modelling information from the DCC model.



*Figure 3.2: White Cross Road Street View*

#### *External Connectivity*

- 3.2.13 The A3052 is the sole direct route connecting Option Two to Exeter. As mentioned, the A3052 does not provide any supporting pedestrian facilities within the vicinity of the Option. This means that existing pedestrian permeability from Option Two is very poor.

- 3.2.14 There are no PRoWs within the vicinity of Option Two, either internally or externally.
- 3.2.15 The lack of existing pedestrian permeability in any direction from Option Two sets it behind Option One and Three, which both facilitate pedestrian permeability to the west to a significantly greater extent.

### *Option Three*

#### *Internal Connectivity*

- 3.2.16 Oil Mill Lane runs in a north-west/east alignment cutting through Option Three, with an unnamed road connecting Oil Mill Lane to Clyst St George and Woodbury Road to the south of the Option. Both roads, as shown at Figure 3.3, are rural lanes without footway provision.
- 3.2.17 The route along Oil Mill Lane is a pleasant country lane, with wide verges. It is a route suitable for walking given the lack of strategic function of the route, with traffic volumes expected to be low, and it is conducive for a pleasant and safe pedestrian environment.
- 3.2.18 The unnamed road is narrower, with limited verge provision between the Devon hedge banks.



*Figure 3.3: Routes in the Vicinity of Option 3*

- 3.2.19 PRoWs exist to the north of the Option in the form of public footpaths, connecting Oil Mill Lane to Clyst St Mary as shown in red at Figure 3.4. However, there is no existing PRoW connectivity to the south of Option Three.

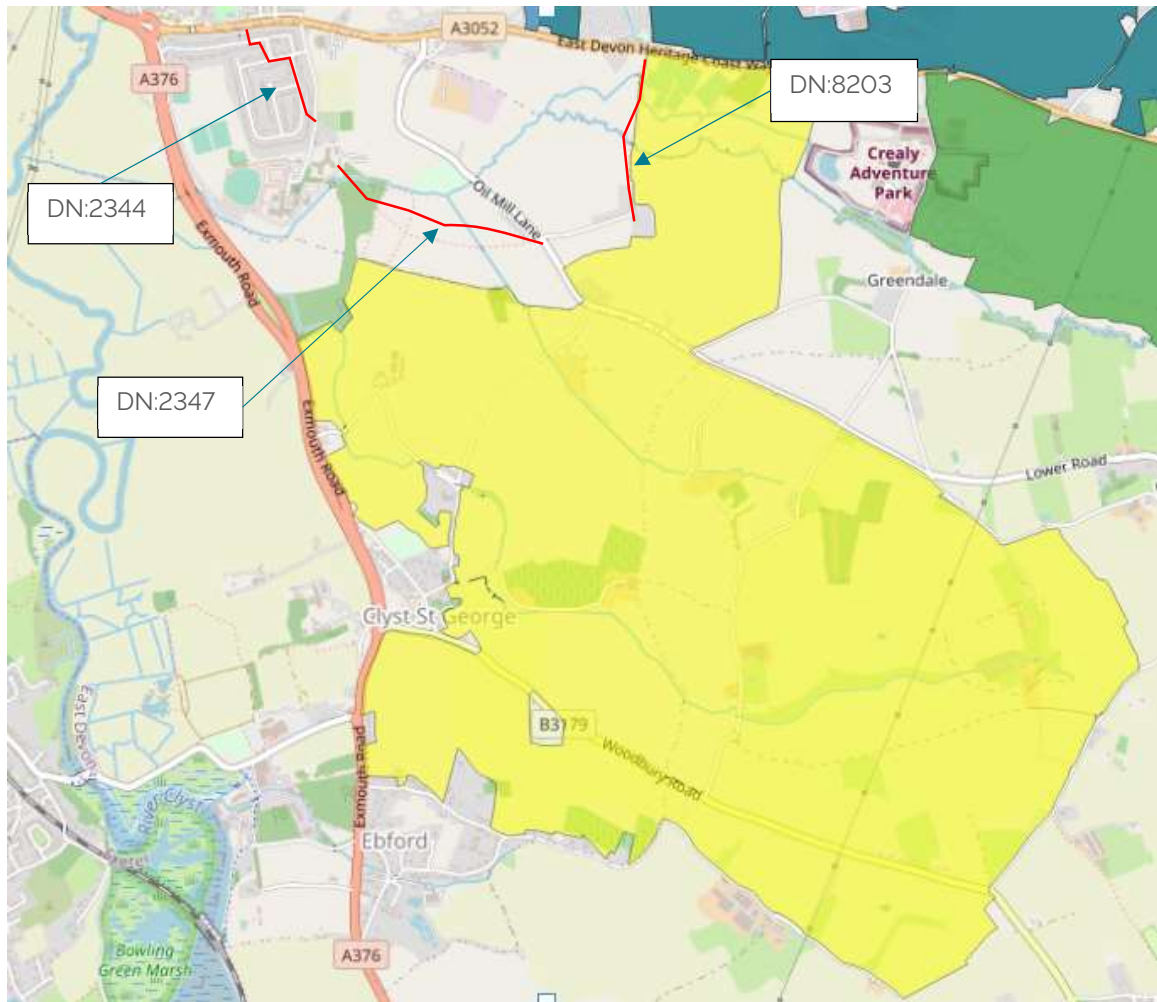


Figure 3.4: PRoWs within the vicinity of Option Three

#### External Connectivity

- 3.2.20 The A376 runs in a north/south alignment along the western flank of Option Three, offering a route to eastern Exeter to the north-west. However, the A376 is a dual carriageway and does not contain pedestrian facilities between Clyst St George and Clyst St Mary.
- 3.2.21 The A376 does provide a link south-bound from Clyst St George towards Topsham, facilitating pedestrian desire lines from Option Two towards Topsham village centre.
- 3.2.22 The A3052 to the north of the Option, as previously mentioned, offers a continuous route from Clyst St Mary westwards towards Exeter, including crossing points, footbridges and segregated footways. The Winslade Park employment development lies relatively close via the A3052.
- 3.2.23 The B3179 Woodbury Road is narrow and rural in nature and does not contain footways.
- 3.2.24 Option Three facilitates pedestrian desire lines towards Exeter to the north-west and towards Topsham to the south-west.

### 3.3 Clyst Valley Trail

- 3.3.1 Devon County Council and East Devon District Council are in the early stages of designing the multi-use Clyst Valley Trail Route, which will connect a number of East Devon's local villages/towns with Exeter.
- 3.3.2 The 13km route will be accessible for all users, and passes through picturesque parkland and river valleys.
- 3.3.3 The precise route of the trail is subject to a public consultation, which closed in mid-2022. However, the indicative route is shown overleaf at Figure 3.5.



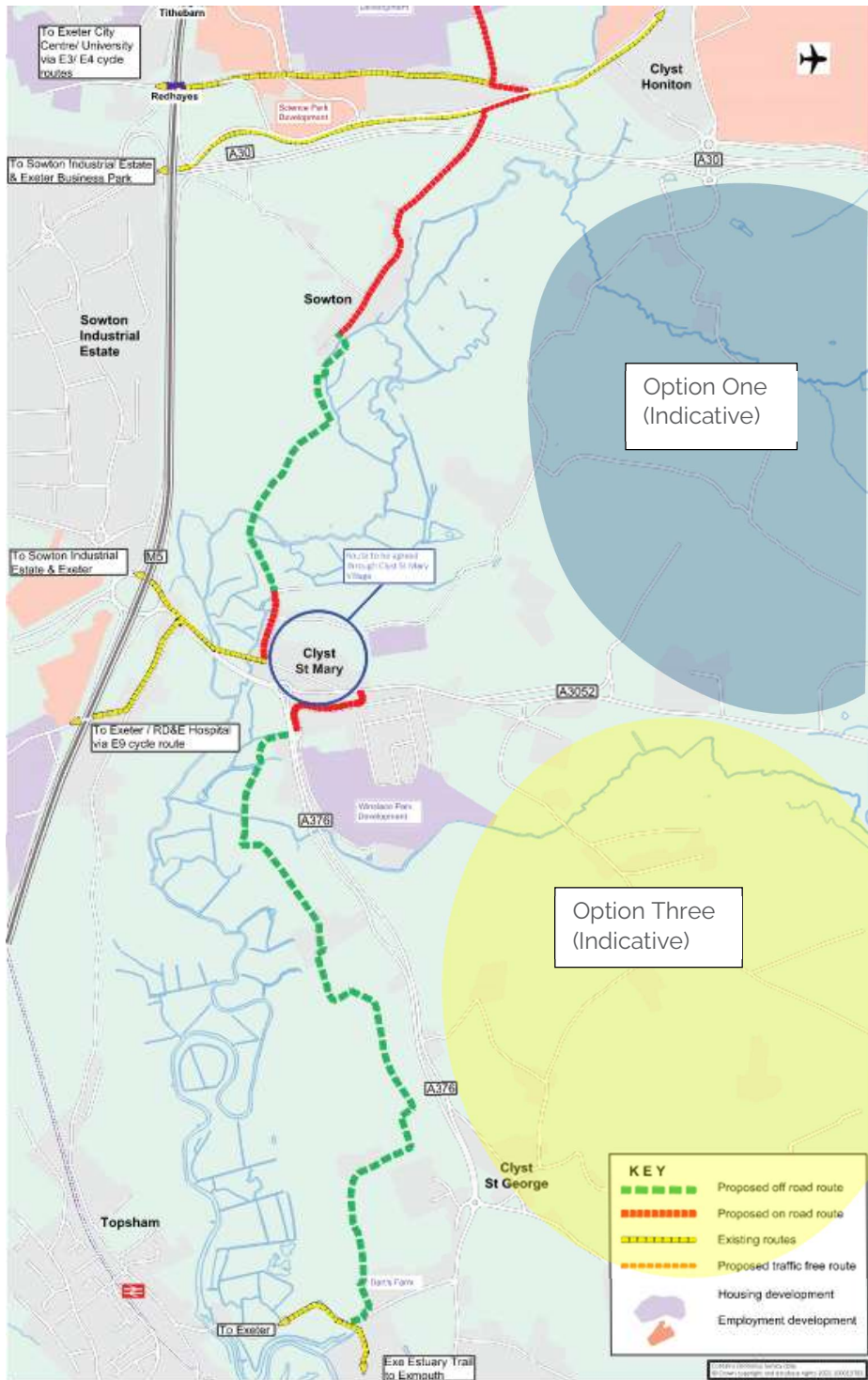


Figure 3.5: Indicative Cyst Valley Trail Proposals in Context of Options

As Figure 3.5 shows, the proposed Cyst Valley Trail will offer added pedestrian (and cycle) permeability for external north/south movements for both Options One and Three. The route will also enhance permeability towards Exeter as it ties in to existing pedestrian infrastructure towards both Junction 29 and 30 of the M5 (see Figure 3.6).



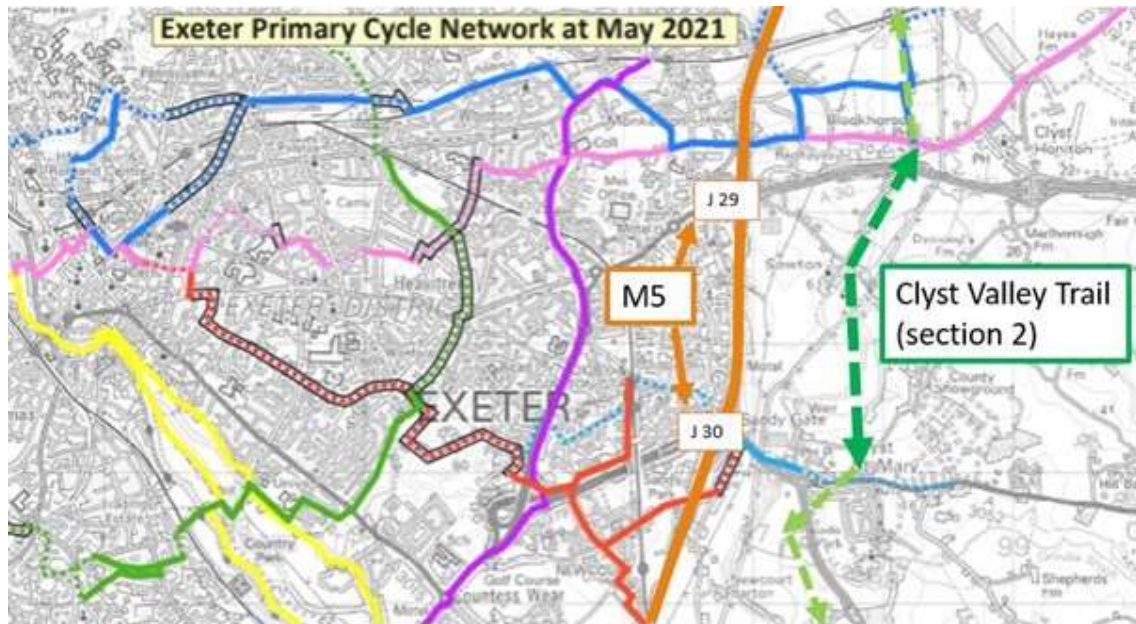


Figure 3.6: Existing Cycle Infrastructure and Proposed Clyst Valley Trail (image from public consultation website<sup>4</sup>)

### 3.4 Existing Usage

- 3.4.1 Strava is a tool to track physical exercise, and is used by many runners and walkers to track their activity, whether for leisure or commuting. Strava produces heatmaps showing their users' recorded activities. The heatmap shown in Figure 3.7 has been filtered to include runners/walkers only, and shows that the local highway network is currently well used by them.

<sup>4</sup> <https://www.devon.gov.uk/haveyoursay/consultations/clyst-valley-trail/>



Figure 3.7: Strava Pedestrian Heat Map

- 3.4.2 Internal routes within all three options are well-used by Strava runners/walkers.
- 3.4.3 The A3052, which links all three Options to Exeter, is well-used towards the west, as is Clyst Road, which provides a link between the A3052 and Clyst St Mary to Topsham to the south. There is also notable use of Honiton Road to the north of Option One, possibly by residents of Cranbrook accessing Exeter by sustainable modes.

### 3.5 Walking Travel Times

- 3.5.1 Table 3.1 displays existing travel times by foot from the centre of each of the three Options to a selection of key local destinations.

Table 3.1: Walking Times to Key Local Destinations

Destination	Travel Time (mins)		
	Option One	Option Two	Option Three
Hill Barton Business Park	11	16	22
Exeter Airport/Airport Business Park	16	38	49
Winslade Park	34	49	25
Sowton Industrial Estate	49	66	40
Topsham	69	65	32
Exeter City Centre	104	118	90

3.5.2 Table 3.1 shows that all three Options have limited destinations available by foot. There will be a need to provide a range of services and facilities both within and connecting to the new development in order to facilitate walking as a modal choice, in keeping with the 20-minute neighbourhood concept and Manual for Streets guidance.

### 3.6 Pedestrian Infrastructure Opportunities

3.6.1 All three potential Options are located in a currently rural area which has limited existing pedestrian infrastructure and will require significant upgrades to sustainable access infrastructure as part of the new community development. Proximity to destinations of interest is therefore a fundamental consideration, as are terrain and gradient.

3.6.2 **Option One and Option Three** – Through their respective connections to the A3052, Option One and Option Three have continuous footway connections through to Exeter (via the A376 Sidmouth Road). This is advantageous in facilitating pedestrian desire lines to the city, and ensures that a range of services and facilities within the eastern side of the city would be accessible from the Options by foot within the 3.2km walking distance threshold specified within TA91/05.

3.6.3 **Option One** – Similarly, existing connections from Option One to the Skypark to the north offer realistic potential for trips. There is an opportunity to extend these routes to the south so that they can connect to all areas of Option One.

3.6.4 **Option Three** – Given that internal routes within Option Three are considered suitable for pedestrians and provide connectivity towards the south-west (Clyst St George), there is potential for pedestrian trips to be made to Topsham railway station. The connecting route, Topsham Road, has a footway along one side of the carriageway and therefore there is realistic potential for multi-modal travel opportunities from the Option.

3.6.5 **Option One and Option Three** – As Figure 3.8 shows, the topographies of both Option One and Option Three are relatively flat with levels of no greater than 35m. Therefore, both Options offer realistic potential for efficient internal walking networks to be established within the Options to enhance intra-site connectivity.

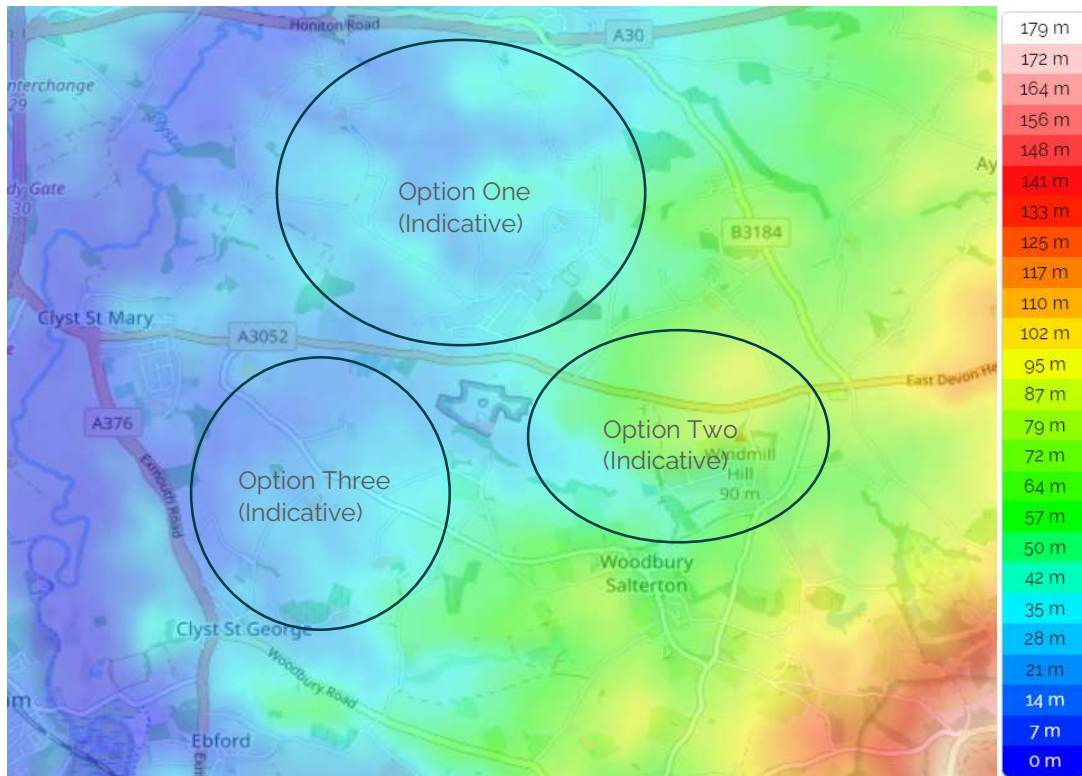


Figure 3.8: Indicative Options by Topography

### 3.7 Pedestrian Infrastructure Constraints

3.7.1 **Option Two** – As illustrated above, Option Two is slightly hillier than Option One and Option Three as shown in Figure 3.8, with levels varying significantly. This is further illustrated by Figure 3.9, which displays a north/south cross-section, and Figure 3.10 which presents an East/West cross-section of the indicative Option area.



Figure 3.9: North/South Cross-Section of Option Two



Figure 3.10: East/West Cross Section of Option Two



- 3.7.2 As Figure 3.9 and Figure 3.10 show, heights within Option Two range from 40m to the west, to 90m to the north. This poses a challenge to intra-site connectivity, and means that walking times from one side of the Option to the other are likely to be higher, whilst walking as a modal choice is likely to be less attractive.
- 3.7.3 Figure 3.11 provides a further illustration of the gradient variations at the Greendale Farm Shop which is located within Option Two.



Figure 3.11: Gradient at Greendale Farm Shop (Option Two)

- 3.7.4 **Option Two** – Option Two is also relatively isolated in comparison to Options One and Three, with little in the way of services and facilities within walking distance and Exeter itself located some way away. Given the distance between Option Two and Exeter, pedestrian trips to/from the eastern flank of the city from Option Two are likely to be limited due to the time that it takes to travel to Exeter by foot (approximately 66 mins from Option Two to Sowton Industrial Estate).
- 3.7.5 **Option One** – In the absence of any supporting pedestrian facilities along the A30 to the north of Option One, pedestrian desire lines for those residing within the northern portion of the Option wishing to head into Exeter will be diverted, requiring an elongated route into the city via either Clyst Honiton / Old Honiton Road or the A3052.



### 3.8 Walking Summary

3.8.1 The following table summarises each Option's existing walking connectivity, recognising that a suite of strategic improvements will be needed in order to deliver an attractive and safe network suitable to provide pedestrian access to whichever option site is ultimately taken forward by the Council:

Table 3.2: Summary of Option Walking Connectivity

	Option One	Option Two	Option Three
<b>Internal Connectivity</b>	<ul style="list-style-type: none"> <li>» A number of narrow, rural roads.</li> <li>» No existing PRow's</li> </ul>	<ul style="list-style-type: none"> <li>» No pedestrian facilities along the A3502 in vicinity of the Option.</li> <li>» Lightly trafficked 'shared space' offers north/south internal connectivity.</li> </ul>	<ul style="list-style-type: none"> <li>» Some internal connectivity albeit with a lack of pedestrian facilities.</li> <li>» Some PRow connectivity within the northern portion of the Option.</li> </ul>
<b>External Connectivity</b>	<ul style="list-style-type: none"> <li>» Permeability towards the north.</li> <li>» Permeability via elongated route to the north-west (not via A30).</li> <li>» A3502 offers route to south-west but poor connectivity to east.</li> <li>» Enhanced pedestrian permeability provided by the proposed Clyst Valley Trail.</li> </ul>	<ul style="list-style-type: none"> <li>» No connectivity to west along A3502.</li> <li>» Lack of external pedestrian connectivity.</li> </ul>	<ul style="list-style-type: none"> <li>» Pedestrian links south-west to Topsham.</li> <li>» A3502 again offers an adequate route west to Exeter.</li> <li>» No facilities along the A376.</li> <li>» Enhanced pedestrian permeability provided by the proposed Clyst Valley Trail.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>» East Exeter accessible by foot.</li> <li>» Opportunity to extend existing/recently constructed routes located to the north (Skypark) down to the Option area.</li> <li>» Flat gradient facilitates internal connectivity.</li> <li>» Good proximity to Cranbrook area</li> </ul>	<ul style="list-style-type: none"> <li>» None identified.</li> </ul>	<ul style="list-style-type: none"> <li>» East Exeter accessible by foot.</li> <li>» Opportunity for direct ped route between Option Three and Topsham train station.</li> <li>» Flat gradient facilitates internal connectivity.</li> </ul>
<b>Constraints</b>	<ul style="list-style-type: none"> <li>» Lack of ped facilities on A30 means that desire lines towards Exeter to north-west are elongated.</li> </ul>	<ul style="list-style-type: none"> <li>» Hillier topography poses a challenge for intra-site connectivity.</li> <li>» Isolated.</li> </ul>	<ul style="list-style-type: none"> <li>» None identified.</li> </ul>
<b>Option Score (/5)</b>	<b>4</b>	<b>1</b>	<b>4</b>

## 4. Cycle Connectivity

### 4.1 Overview

4.1.1 With regard to cycling, TA91/05 stated (paragraph 2.11) that *'Cycling is used for accessing a variety of different destinations, including educational facilities shops and places of work, up to a range of around 5 miles. Cycling is also undertaken as a leisure activity, often over much longer distances.'* At paragraph 2.9, TA91/05 stated that 5 miles (8km) is a distance *'that could easily be cycled by the majority of people'*.

4.1.2 This is consistent with the statement in LTN02/08 Cycle Infrastructure Design (in paragraph 1.5.1) which states that *'for commuter journeys, a trip distance of over five miles is not uncommon'*, and that *'Novice and occasional leisure cyclists will cycle longer distances where the cycle ride is the primary purpose of their journey. A round trip on a waymarked leisure route could easily involve distances of 20 to 30 miles. Experienced cyclists will often be prepared to cycle longer distances for whatever journey purpose.'* Though LTN02/08 has since been superseded by LTN1/20, this guidance remains relevant in the absence of any contrary guidance.

4.1.3 Whichever site is taken forward by EDDC for the new community, it will need to be served by high quality, safe and direct cycle routes that accommodate the needs of all users and provide appropriate priority over motor vehicles, in line with LTN1/20, the NPPF and the recently-revised Highway Code.

### 4.2 Existing Cycling Infrastructure

4.2.1 National Cycle Network (NCN) Route 2 is located approximately 1.5km south-west of the centre of Option Three. The NCN Route 2 is a long-distance cycle route which cuts across the south coast of England, connecting Cornwall with Kent. Locally, the route is part of the Exe Estuary trail, and provides a largely traffic-free connection into Exeter city centre and on to Dawlish to the south along the western side of the Exe estuary. Along the eastern side of the Exe estuary, the route provides a connection to Exmouth town centre.

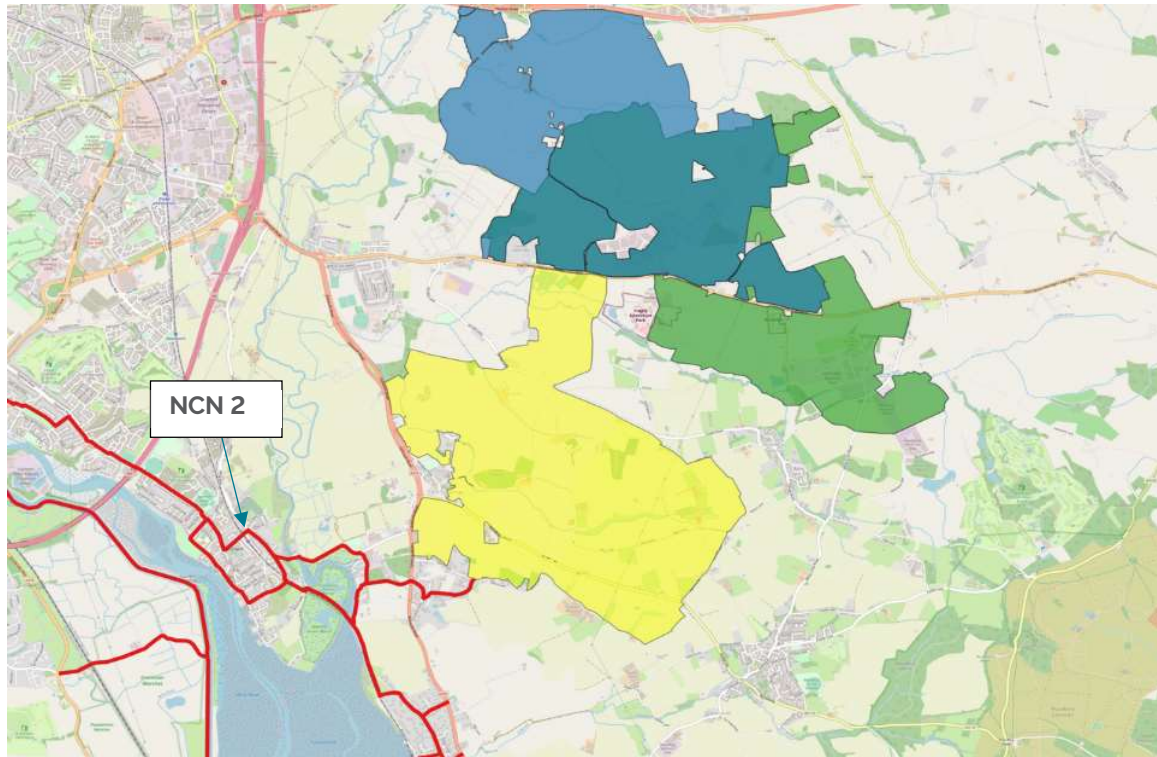


Figure 4.1: NCN in Vicinity of the Options

- 4.2.2 A shared footway/cycleway is present along the Old Honiton Road to the north of Option One, connecting the new community of Cranbrook to Exeter via Clyst Honiton. As previously discussed, this popular route provides a connection to the Science Park and into Exeter city centre via high-quality provision. It also extends towards Cranbrook.
- 4.2.3 An extract from Devon County Council's cycle map is provided at Figure 4.2, showing the existing cycle infrastructure in terms of designated routes and on-road/advisory routes and PRow's within the vicinity of the three Options. Beyond the immediate vicinity of the three Options, Figure 4.3 shows the continuation of local routes, and general cycle connectivity within Exeter as set out within the Exeter City 2019 cycle map.
- 4.2.4 Roads to the west (between Exeter and Option One and Three) have relatively flat topography, as shown by Figure 3.8, which further facilitates cycling.



- Numbered Routes**
- Local cycle route
  - National Cycle Network route
  - Regional Cycle Network route
  - Motorway
- One-way**
- 
- On-road cycle lanes**
- 
- Cycle Contraflow**
- 
- Ferry**
- 
- Railway**
- 
- County Boundary**
- 
- Traffic-Free Routes**
- ... Bridleway
  - ... Footpath
  - Traffic-free cycle route
- On-Road Routes**
- Advisory cycle route
- Route Overlays**
- 
- Public Rights of Way**
- Bridleway
  - Byway
  - Footpath (on foot only)
  - Restricted Byway



Figure 4.2: Extract from DCC Cycle Map



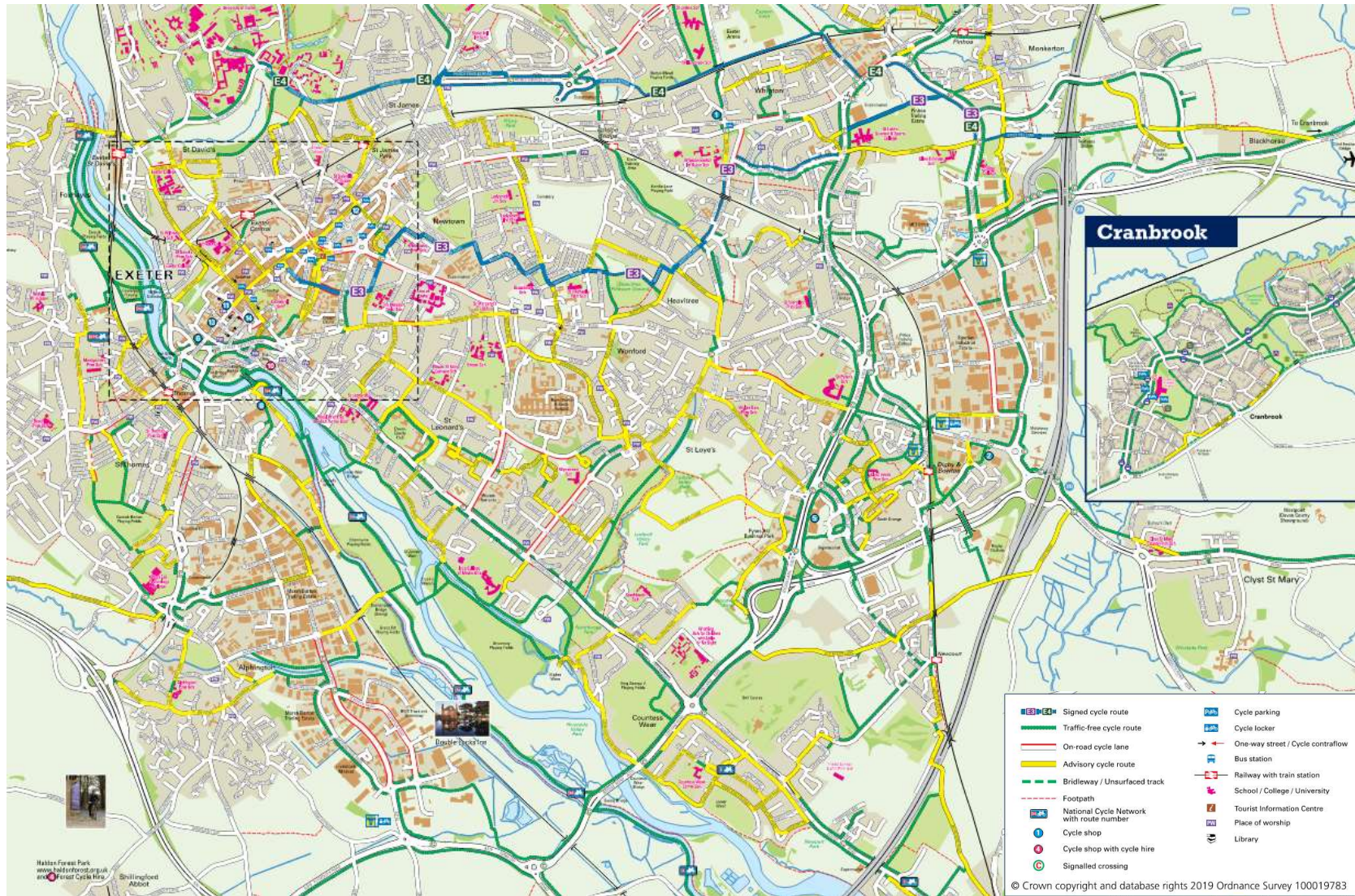


Figure 4.3: Extract from Exeter Cycle Map 2019



### 4.3 Proposed Infrastructure

- 4.3.1 In early 2023, a public consultation was held on proposals for new and improved cycling and walking routes that will be included in the Exeter Local Cycling and Walking Infrastructure Plan (LCWIP).
- 4.3.2 The requirement for local authorities to produce a LCWIP is set out in the Government's Cycling and Walking Investment Strategy. Developing a LCWIP follows a consistent process to identifying cycling and walking improvements required at a local level and allows Devon County Council to bid for future funding and ensure improvements are incorporated into future development.
- 4.3.3 The Exeter Transport Strategy 2020 – 2030 sets out the ambition for 50% of work trips originating in Exeter to be made by foot or cycle by 2030. This aim received high levels of public support during the Exeter Transport Strategy consultation.
- 4.3.4 The Exeter LCWIP will set out the infrastructure needed to enable people to change their travel habits and make progress towards the aim for 2030. An overall plan of the proposed network (at the time of consultation) is shown below:

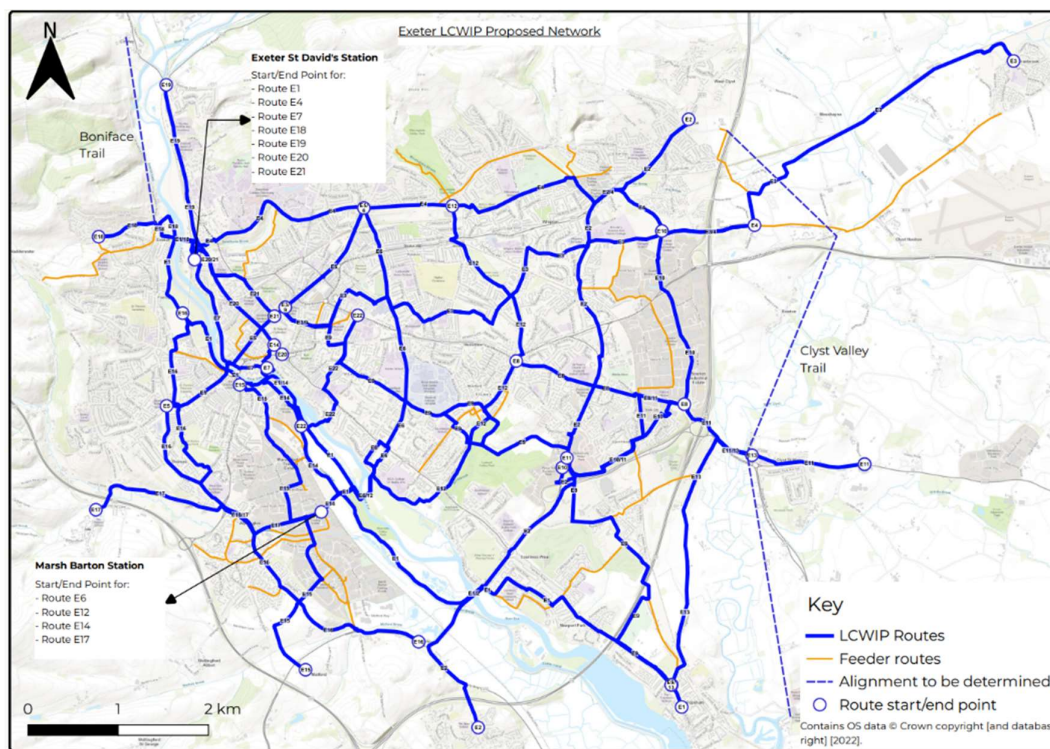


Figure 4.4: Exeter LWIP Proposed Network

- 4.3.5 It is understood that the LCWIP for the area containing the options sites is currently under development by DCC. Officers from EDDC have supplied the following preliminary map:

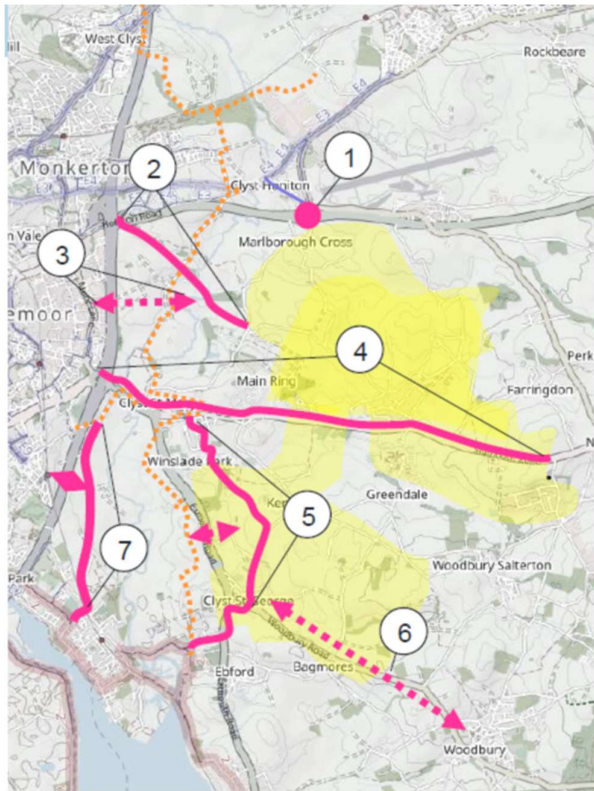


Figure 4.5: East Devon Preliminary LCWIP map

4.3.6 These maps suggest that links to all of the options areas are being considered, with both Options One and Three offering two strong links, whilst Option Two only has one link. Option One benefits from its proximity to Cranbrook, whilst Option Three has a similar relationship with Topsham.

#### 4.4 Existing Usage

4.4.1 Strava is used by many cyclists to track their cycle activity, whether for leisure or commuting. Strava produce heatmaps showing their users recorded activities. The heatmap shown in Figure 4.6 has been filtered to include cyclists only, and shows that the local highway network is currently well used by cyclists.

4.4.2 This is especially evident in north/south routes within Option One, as well as internal routes within Options Two and Three.

4.4.3 Cycle connectivity to/from Exeter appears to be particularly focussed on the A376, with cyclists passing under the M5 Junction 30 via the Sandygate Roundabout. Routes to and from Cranbrook are also well used.

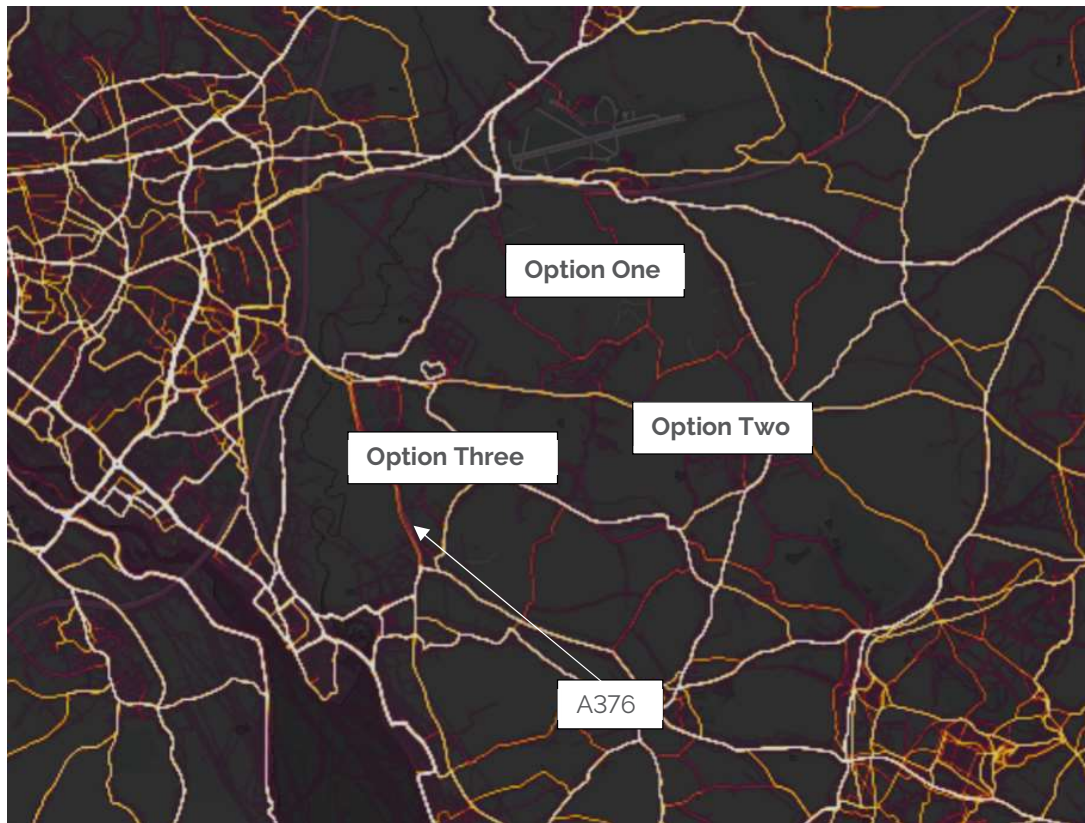


Figure 4.6: Strava Cycling Heat Map

- 4.4.4 The findings of the Strava analysis are corroborated by observed cycle movements during Hydrock's site visit on 8th July 2022 and through our wider local experience of the network. Cyclists were observed utilising existing routes within the vicinity of all three Option areas, as evidenced by Figure 4.7.





Figure 4.7: Cycle Movements Observed During Site Visit

## 4.5 E-Bike Potential

- 4.5.1 Recent studies<sup>5</sup> into the cost/benefit of E-bikes and a complementary cycling-oriented infrastructure found that it had a positive net present value, specifically leading to travel time savings. Another study<sup>6</sup> also suggested that, if used to replace car travel, E-bikes have the capability to cut carbon dioxide emissions in England by up to 50% (approximately 30 million tonnes per year).
- 4.5.2 E-bikes increase the typical range available for most people who cycle by providing pedalling assistance up to a speed of 15.5mph, with studies suggesting that E-bikes are on average 21% faster than a conventional bike<sup>7</sup>. With an average range of 40-80km, E-bikes offer a genuine choice of sustainable travel for commuter and leisure-based trips to/from the proposed new communities.

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<sup>5</sup> Cost-benefit of bicycle infrastructure with E-bikes and cycle superhighways; Rich et al; Case Studies on Transport Policy; June 2021

<sup>6</sup> E-bike Carbon Savings – how much and where?; Philips et al; CREDS; May 2020

<sup>7</sup> Physical Activity when riding an electric assisted bicycle; Bernsten et al; International Journal of Behaviour Nutrition; 2017

- 4.5.3 When analysing the impact of E-bike speed on travel times and range, the benefit of the modal choice becomes more apparent. LTN 1/20 Cycle Infrastructure Design (paragraph 2.2.2) states that *'Two out of every three personal trips are less than five miles in length – an achievable distance to cycle for most people'*. A five-mile (or 8km) cycle equates to a journey time of 25 minutes when travelling at 320 meters per minute (12mph, speed taken from the Cycling England Design Guide). When applied to E-bikes, which assist pedalling up to 15.5mph, a 25-minute cycle can yield a range of 10km, which is a 25% increase.
- 4.5.4 Both E-bikes and E-scooters represent a genuine game-changing mode choice for sustainable travel, with the following benefits arising:
- » Topography is flattened. Motor assisted travel means that hills/gradients (such as those in the vicinity of Option Two) are no longer a discouraging factor
  - » Health, fitness and wellbeing are improved, particularly with E-bikes which are pedal assisted
  - » Journey time can be improved, especially when compared with car travel on congested routes
  - » Effort is less and riders arrive at their destination without the appearance of a hard physical workout
  - » Off-road options exist for E-bikes, which offers potential for e-bike users to utilise the Exe Estuary Trail
  - » Financial benefits relative to car or bus travel
  - » Easy to store
  - » Tax efficient when bought in conjunction with the Cycle to Work scheme
  - » Eco friendly
- 4.5.5 In order to facilitate e-bike usage, the proposed new communities could include:
- » Docking stations at the on-site mobility hub for the community E-bike and E-scooter hire schemes.
  - » Alternative storage facilities at the mobility hub to allow electric folding bikes to be stored securely in lockers
  - » Mobility hub cycle repair facilities for standard and e-bikes
  - » Vouchers towards the use of such vehicles, secured via the Travel Plan and distributed by the site Travel Plan Coordinator
- 4.5.6 The proposals align with the aims of the Exeter Transport Strategy (2020-2030), which sets out aspirations to facilitate greater innovation by working with the private sector to develop technology solutions. Specifically, the document references a desire to expand the on-street electric cycle hire network, something which the proposed new community could facilitate.
- 4.5.7 E-cargo bikes could also be introduced within the proposed development, particularly as a last mile logistics solution. These bikes can carry loads of up to 250kg, and offer a sustainable modal choice alternative for the last mile for logistics/distribution companies. Zedify demonstrate how such a service can operate commercially, and have recently opened a large logistics hub in Bristol. They now make over 48,000 zero emissions deliveries in Bristol, offering an existing regional presence in the south-west which could potentially translate to Exeter.

## 4.6 Travel Times by Bike

4.6.1 Table 4.1 sets out travel times by bike to a range of key local destinations.

Table 4.1: Travel Times to Key Local Destinations by Bike

Destination	Travel Times (Mins)		
	Option One	Option Two	Option Three
Hill Barton Business Park	3	4	6
Exeter Airport/Airport Business Park	4	10	12
Winslade Park	11	10	6
Sowton Industrial Estate	12	17	10
Topsham	17	16	8
Exeter City Centre	26	30	23

## 4.7 Cycle Infrastructure Opportunities

- 4.7.1 **All Three Options** – Given the existing use of the various Options' internal roads for cycling as evidenced by Strava, there is potential to promote cycling as an active travel mode within all three of the potential Options. These existing internal routes would need to be further reinforced with appropriate cycling infrastructure such as designated cycleways to attract more users and accommodate the increased demand from the new settlement.
- 4.7.2 **All Three Options** – The topography of the general area in which all three Options are located is relatively flat, which is likely to facilitate cycling and encourage its uptake. Whilst a slight gradient has been identified at Option Three, it is not significant enough to detract from a potential cycle route being located within the vicinity of the Option.
- 4.7.3 **All Three Options** – There is also potential to provide a dedicated cycleway along the A3052, which would benefit all three potential Options facilitating cycle desire lines west into Exeter. At present the road appears to have wide verges which could potentially accommodate a dedicated cycleway. Further improvements at the Sandygate Roundabout to the west would also benefit all three Options.
- 4.7.4 **Option One** – The Honiton Road shared footway/cycleway which currently connects Cranbrook to Exeter could be extended to the south to connect to Bishops Court Lane so that it can serve Option One. This would offer those to the north of Option One a direct route to Exeter by bike. There is also the potential to create a series of north-south cycle links through the development site itself, facilitating strong links to Cranbrook.
- 4.7.5 **Option Three** – Further cycle improvements (cycleways etc.) could also be delivered along the A376 which would benefit cycle connectivity to/from Option Three.
- 4.7.6 **Option Three** – Given the proximity of Option Three to Topsham, there is an opportunity to provide a cycle corridor between Clyst St George to the south-west of the Option and Topsham Railway Station. The route would be 1.9km, and encompasses a small stretch of the A376 Exmouth Road, Topsham Road, Bridge Hill and Elm Grove Road. A potential cycle corridor would facilitate multi-modal travel to key local destinations including Exeter and Exmouth via the Avocet Line. This would have wider benefits for residents of Exeter and Topsham.

## 4.8 Cycle Infrastructure Constraints

4.8.1 **Option Two** – There are no existing routes (cycleway or dedicated cycle routes) in the vicinity of Option Two.

4.8.2 **Option One** – The comparable size of Option One leads to increased cycle travel times. Some areas of the Option would be beyond a 10-minute cycle of the centre of the Option area, though they would still be within the 8km distances discussed at paragraph 4.1.1. This could to some extent be addressed through development phasing and masterplanning, ensuring that essential services were centrally located and delivered at an early stage of the development phasing.

## 4.9 Cycling Summary

4.9.1 A summary of the cycling connectivity of all three Options is provided at Table 4.2, again recognising that the role of this report is to assess the current and potential future level of provision, with the detail of that provision following within the Transport Assessment for the preferred site.

Table 4.2: Cycle Connectivity Summary

	Option One	Option Two	Option Three
<b>Existing Infrastructure</b>	<ul style="list-style-type: none"> <li>» Shared cycleway/footway along Honiton Rd to north.</li> <li>» Flat topography.</li> </ul>	<ul style="list-style-type: none"> <li>» None.</li> </ul>	<ul style="list-style-type: none"> <li>» NCN Route 2 is located in proximity to Option Two providing a connection to Exeter and Exmouth.</li> <li>» Flat topography.</li> </ul>
<b>Existing Usage</b>	<ul style="list-style-type: none"> <li>» Internal routes appear to be well-used.</li> </ul>	<ul style="list-style-type: none"> <li>» Internal routes well-used.</li> </ul>	<ul style="list-style-type: none"> <li>» Internal routes and A376 appear to be well-used.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>» Opportunity to reinforce already popular routes with flat topography.</li> <li>» Potential to provide a dedicated cycleway along A3052.</li> <li>» Honiton Rd cycleway (to the north) could be extended to serve Option One.</li> <li>» Good opportunities for north-south routes linking to Cranbrook</li> <li>» Two connections within emerging LCWIP</li> </ul>	<ul style="list-style-type: none"> <li>» Opportunity to reinforce already popular routes.</li> <li>» Potential to provide a dedicated cycleway along A3052.</li> <li>» Single connection within emerging LCWIP</li> </ul>	<ul style="list-style-type: none"> <li>» Opportunity to reinforce already popular routes with flat topography.</li> <li>» Potential to provide a dedicated cycleway along A3052.</li> <li>» Opportunity to provide a cycle corridor connecting to Topsham railway station.</li> <li>» Two connections within emerging LCWIP</li> </ul>
<b>Constraints</b>	<ul style="list-style-type: none"> <li>» Large area of the Option increases cycle times from the centre point to surrounding areas.</li> </ul>	<ul style="list-style-type: none"> <li>» Lack of existing cycle infrastructure in the vicinity of Option Two.</li> </ul>	<ul style="list-style-type: none"> <li>» None.</li> </ul>
<b>Summary Score (/5)</b>	<b>4</b>	<b>2</b>	<b>4</b>



## 5. Public Transport Connectivity

### 5.1 Overview

- 5.1.1 The new community will require high-quality, frequent and direct public transport provision linking with nearby settlements, employment, education, retail and other services beyond those which will be provided within the settlement.
- 5.1.2 The level and convenience of provision should make public transport an attractive proposition for all parts of the community, reinforcing the vision that the private car should be the mode of last choice for residents and visitors.
- 5.1.3 Mirroring the wider transition away from internal combustion-engined vehicles, the public transport fleet should focus towards a zero-emissions strategy.
- 5.1.4 This section examines the existing accessibility of the sites, how this could be improved and whether these improvements would offer benefits to existing communities and public transport users.

### 5.2 Existing Public Transport Infrastructure

#### Bus

- 5.2.1 There are a number of existing bus stops within the wider area of the three Options. These are shown at Figure 5.1.

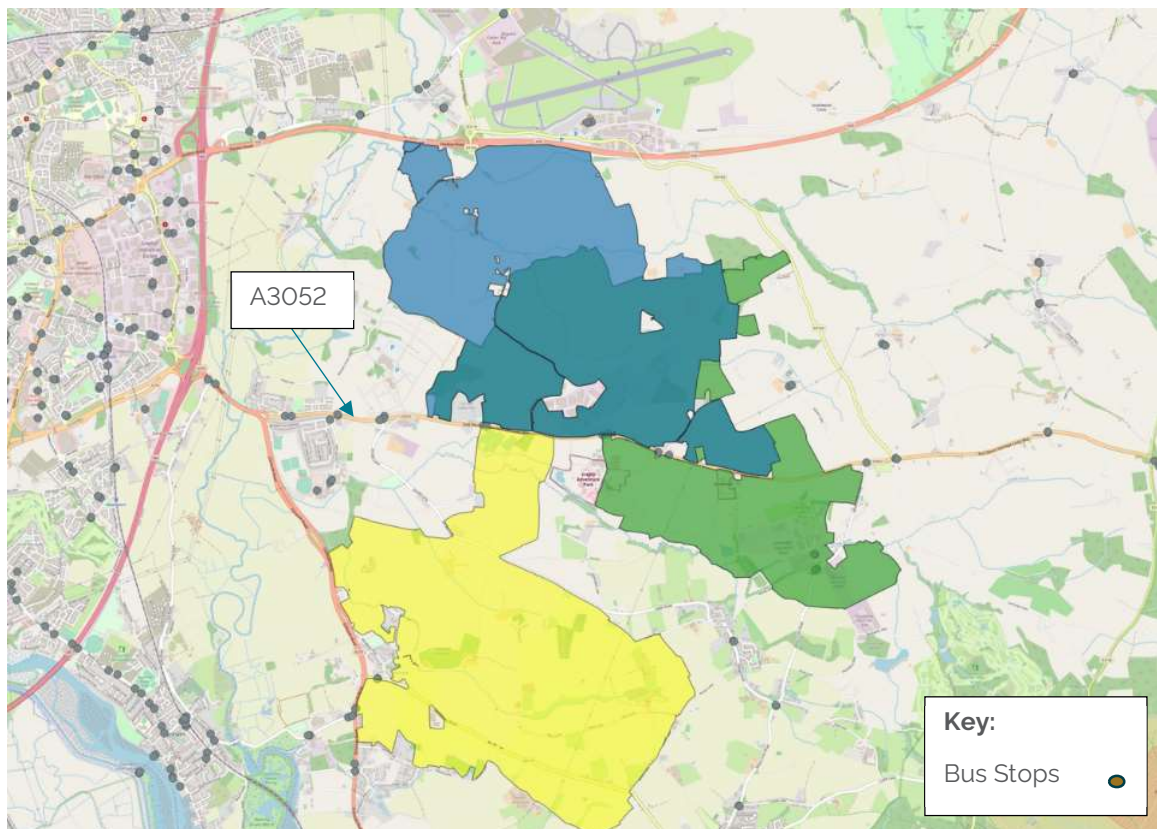


Figure 5.1: Location of Local Bus Stops

- 5.2.2 Stops are primarily located along the A3052, which offers strong public transport connectivity westwards towards Exeter city centre via the 9, 9A and 52 services. To the east, the 9 and 9A services also connect to other regional destinations including Honiton, Sidmouth and Lyme Regis. The 9 and 9A services run at frequent intervals, varying between 14 and 85 minutes, whilst the 52 service offers just one service between Seaton and Exeter daily.
- 5.2.3 Stops to the east of the map and the stop to the south-west at Clyst St George are served by the 56/56A service (the route of which is shown below at Figure 5.2). The 56/56A services vary in route, offering services to a range of varying destinations including St David's, Exmouth, Exeter City Centre, Clyst Honiton and Woodbury. Services are generally frequent, ranging from 20 minute to 60-minute intervals.
- 5.2.4 An illustrative summary of the existing bus routes within the context of the Options are shown below at Figure 5.2.

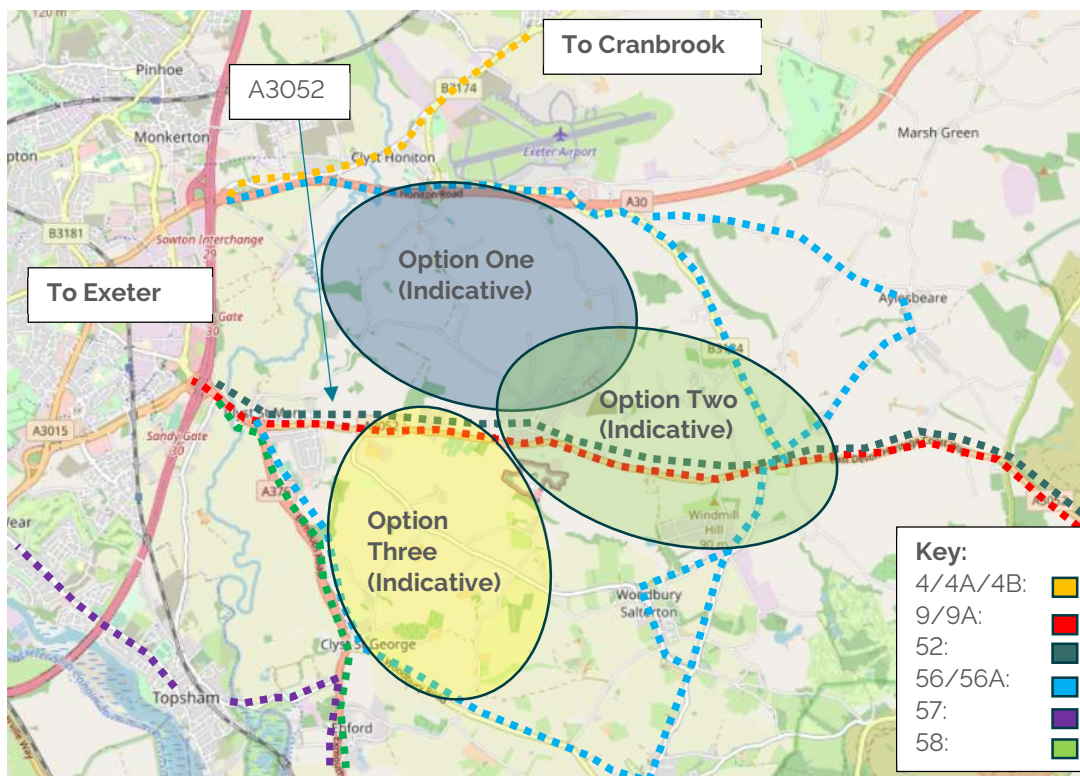


Figure 5.2: Indicative Local Bus Route Map

- 5.2.5 As Figure 5.2 shows, routes 9/9A and 52 would be able to serve at least a portion of all three of the new community Options without any diversion. Similarly, the 56/56A route, which currently operates in a circular loop within the vicinity of all three Options, could also serve a portion of each of the Options. The A3052 is a key bus corridor in the context of the emerging new community Options.
- 5.2.6 However, given the scale of the proposed new community, a bus route through any potential Option would be required in order to adequately serve the new community and to embed the principles of sustainable access from the outset.

- 5.2.7 **Option One** – To the north, route 4/4A/4B currently runs through Clyst Honiton, linking to Cranbrook north of Option One. A potential fourth variation of this route could enable it to serve Option One, and provide a direct link between the potential new community and Cranbrook.
- 5.2.8 Similarly, the 56/56A service could potentially be diverted to travel through Option One, utilising a potential north/south link road in order to serve the new community.
- 5.2.9 **Option One** benefits from existing bus priority infrastructure (bus lanes) at Junction 29 of the M5.
- 5.2.10 **Option Two** – Option Two is well served by existing routes 9, 52 and 56, which could potentially be diverted into the Option. Additional bus stops adjacent to any proposed access towards the centre of the Option would facilitate uptake of these existing services.
- 5.2.11 **Option Three** – The 57 and 58 route could serve Option Three, though with no existing bus stops along the A376 or within the immediate vicinity of the Option potentially diverting these services, and providing an additional stop close to Clyst St George would be required.
- 5.2.12 **All Three Options** – It is apparent that all three Options are well-connected by bus via the A3052 links. Options Two and Three also have added connectivity when compared to Option One due to their proximity to stops served by the 56/56A. It is apparent that the northern portion of Option One is relatively isolated from any existing bus infrastructure, and a new dedicated service will likely be required.



## Rail

5.2.13 There are a number of railway stations located within the vicinity of the three Options, including Cranbrook, Pinhoe, Digby and Sowton, Newcourt and Topsham. The location of these stations in relation to the three Options is shown below at Figure 5.3.

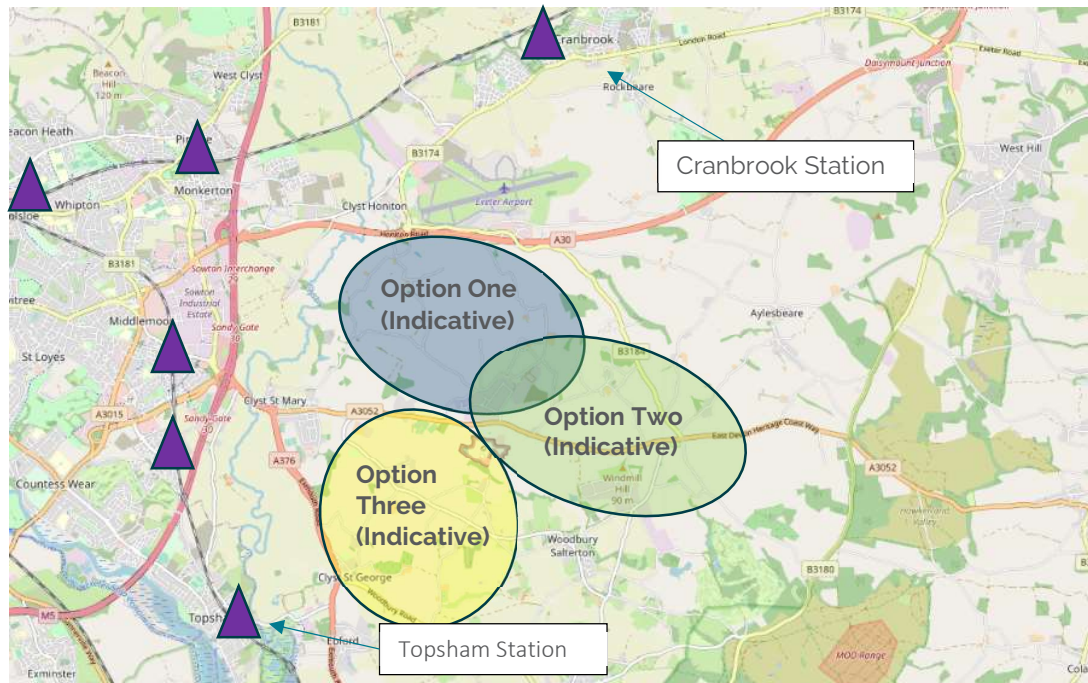


Figure 5.3: Local Railway Stations

- 5.2.14 **Option One** – The Digby and Sowton, Pinhoe and Cranbrook railway stations are the closest stations to Option One, located 4km, 4.3km and 3.5km from the centre of the Option respectively. When taking into account existing routes, the Cranbrook station is the closest to the Option, and can be accessed via the footbridge over the A30 and footways along the Clyst Honiton Bypass.
- 5.2.15 The Cranbrook railway station offers South Western Railway services between London Waterloo and Exeter. Services run between 06:19 and 23:53, frequenting the station at hourly intervals throughout the day. Having opened in 2015, the Cranbrook Train Station is the newest station on the West of England Main Line.
- 5.2.16 **Option Two** – Option Two is the most isolated of the three Options in terms of its proximity to railway stations, with no stations within a realistic walking distance. The Digby and Sowton train station is the closest to the Option, located approximately 5.6km to the west. Digby and Sowton can be accessed via the A3052 either by car or bike.
- 5.2.17 The 9/9A services also connect Option Two to the Digby and Sowton train station, providing a frequent bus link to the station which can facilitate multi-modal travel from all three Options. The Digby and Sowton railway station, like Topsham, also offers half hourly services along the Avocet Line. Services run seven minutes behind Topsham, with the first train departing at 06:08 and the last at 00:38 on weekdays.



5.2.18 **Option Three** – Topsham railway station is the closest station to Option Three, located just 2.3km from the centre of the Option. From Clyst St George, Topsham railway station can be accessed along continuous footway via the A376, Topsham Road, Bridge Hill and Elm Grove Road. The Topsham railway station offers half-hourly services along the Avocet Line (GWR), which connects Exmouth, Paignton and Exeter. Services run from 06:01 until 00:31 on weekdays, or 07:01 and 00:01 on Saturdays.

### 5.3 Public Transport Travel Times

5.3.1 Table 5.1 sets out the existing travel times from each of the three Options to a range of key destinations via public transport. Travel times are taken as direct journeys from the nearest existing public transport node as illustrated at Figure 5.1.

Table 5.1: Travel Times to Key Destinations by Public Transport

Destination	Travel Time (mins)		
	Option One	Option Two	Option Three
<b>Exeter Airport/Airport Business Park</b>	_ <sup>8</sup>	15	43
<b>Winslade Park</b>	29	5	33
<b>Sowton Industrial Estate</b>	18	21	15
<b>Topsham</b>	45	54	3
<b>Exeter City Centre</b>	20	23	17
<b>Exmouth</b>	43 <sup>9</sup>	33	22

### 5.4 Public Transport Opportunities

#### *New Bus Service Viability*

- 5.4.1 **All Three Options** – There is potential for a new commercially viable bus services to serve a community of this scale. Generally, new bus services must generate c.£200,000 per vehicle per year in revenue<sup>10</sup>.
- 5.4.2 The £200,000 of revenue comprises of passenger revenue, plus any developer subsidy if required. When assessing the commercial viability of a route, it is important to consider the potential patronage, to estimate the potential revenue.
- 5.4.3 The TRICS database has been reviewed in order to assess the predicted level of bus journeys associated with an 8,000-dwelling private housing development with similar characteristics to the proposed East Devon new community. The results of the TRICS search indicates that historically comparable sites would have generated approximately 1,491 daily two-way trips via bus.
- 5.4.4 Based on a Stagecoach Exeter adult day ticket price of £4.50, this results in a revenue of c£3,350 per day, or an annual figure of c.£840k. Subject to confirmation with the operator, this would appear to provide the demand for a service that could commercially run four buses, without considering existing demand along the route.

<sup>8</sup> Quicker to walk

<sup>9</sup> Multi-modal (Bus and Train)

<sup>10</sup> 2022 figures based on other Hydrock projects nationally.

- 5.4.5 Given the differing locations of each of the potential Options, each Option will have a different journey time to the end destination of the potential new service. Travel times to Exeter City Centre as set out at Table 5.1 have been used to illustrate the indicative bus frequencies along the routes from each Option.
- 5.4.6 The illustrative bus timetable plan for Option One has been produced as shown at Figure 5.4
- 5.4.7 This illustrates that two buses would be required to run a continuous service between Option One and Exeter City Centre, with a 20-minute frequency, or three per hour.

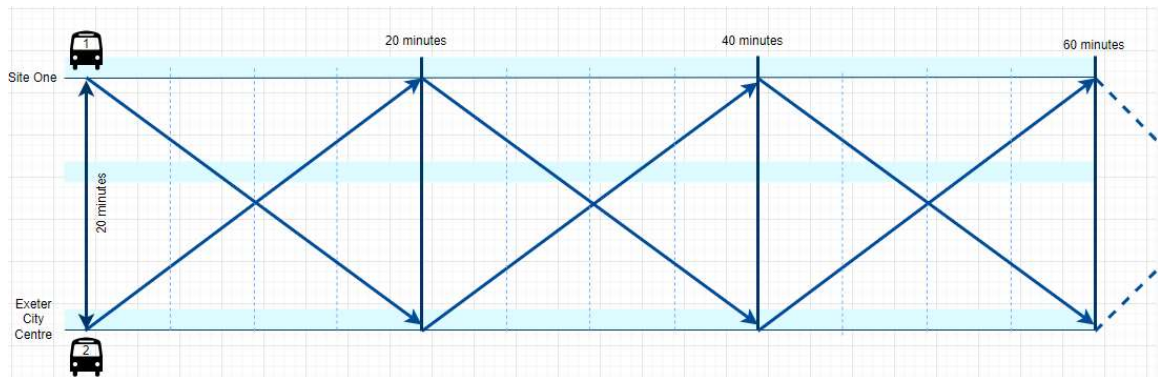


Figure 5.4: Option One Bus Service Timetable Plan

- 5.4.8 It should be noted that it is generally good practice to allow for some variation in journey times to ensure a punctual and reliable service. This should be accounted for in that existing public transport journey times have been used, but an elongated route extending into the centre of Option 1 may not be wholly achievable with just two vehicles.
- 5.4.9 Figure 5.5 shows the potential bus service timetable plan for Option Two.
- 5.4.10 With a 23-minute journey time, two buses would not be able to provide a 20-minute frequency each hour. Across a 12-hour day, the number of services would be 31, equating to approximately 2.6 services an hour and a departure time that varies hour to hour.

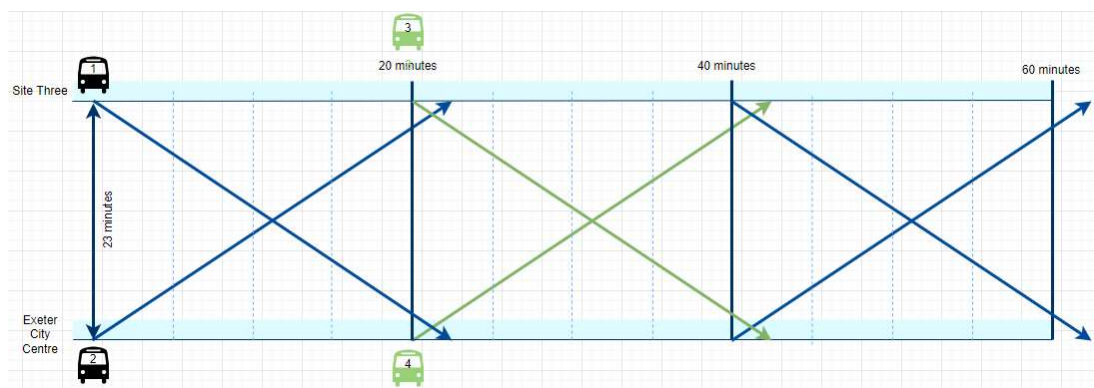


Figure 5.5: Option Two Bus Service Timetable Plan

- 5.4.11 This means that additional vehicles would be required in order to provide a regular, 'clockface' service (i.e. buses consistently arrive at the same minutes within each hour). A clockface service is simpler for people to use and therefore likely to be more possible. The requirement for additional vehicles and inconvenient journey times means that, not only would there be additional costs, but also, there would be greater redundancies and inefficiencies in how the route would operate.
- 5.4.12 Figure 5.6 shows the potential bus service timetable plan for Option Three. With a 17-minute journey time, two buses can maintain a 20-minute service (three per hour), with the Option of building in a three-minute layover to improve reliability and maintain a fixed bus departure time across each hour.

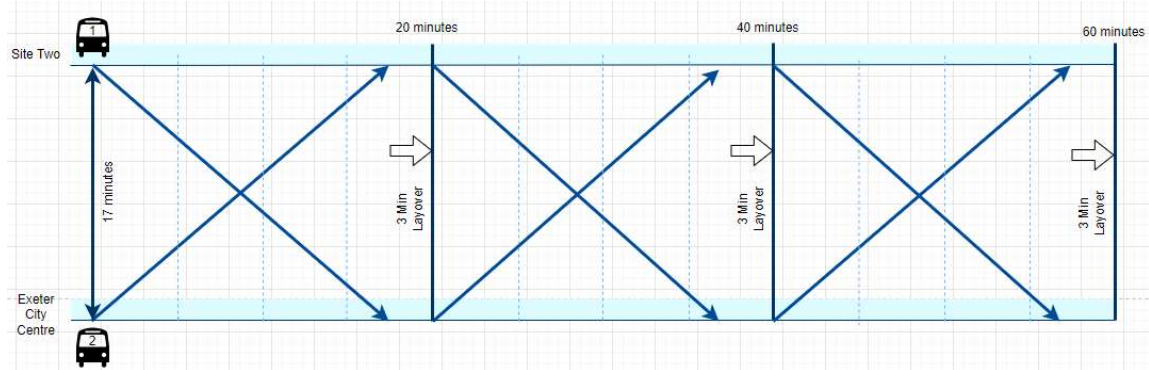


Figure 5.6: Option Three Bus Service Timetable Plan

- 5.4.13 **Option Three** is therefore considered to provide the best Option for a new bus service, followed by Option One and then Option Two. However, due to the size of the development, all three Options are considered likely to be able to provide a commercially viable service.
- 5.4.14 With the potential revenue sufficient to cover four buses, c.10-minute frequency could be achieved, that would be a significant enhancement to the existing bus Options within the area, approaching a 'clock-face' high-frequency level of provision suitable to encourage significantly-improved patronage.
- 5.4.15 Increased service frequency may also encourage uptake further down/higher up along the route, and offer a net benefit to other communities located between the proposed new community and Exeter, such as Clyst St Mary. Financially, the services may alleviate the need for the relevant local authority to subsidise a service to these areas, given that the proposed new community will meet the threshold for an operator to fund the service independently.

#### Other Bus Opportunities

- 5.4.16 **Option One** - Given the lack of bus coverage to the north of Option One, there is potential to install a bus-gate adjacent to the A30 slip road/Bishops Court Lane. The bus-gate could serve the new community, with the potential for a new service, or a new variation of an existing service, which would provide a direct link to Exeter via the A30. Journey times should also become more consistent and reliable.

- 5.4.17 **Option One** - Alternatively existing services that serve Cranbrook to the north, such as the 56/56A, could be diverted to serve the new community, with potential for a bus-gate to the north of Option One.
- 5.4.18 **Option One** - The provision of a north/south bus corridor would enhance internal and external connectivity within Option One. Within Option One, this potential corridor would connect the A30 to the A3052. It could be served by diverting existing services such as the 56/56A to the north, or a new service could be created to connect the new community to Exeter, potentially via a circular route in order to maximise the community coverage of the new service.
- 5.4.19 **Option Three** - relative to existing bus services, Option Three also offers a good opportunity for a circular route running along the A376 and A3052.
- 5.4.20 **Option One and Option Three** - There is potential to provide a new park and ride site along one of two strategic corridors into Exeter (either the A30 or A3052) in line with the aims of the Exeter Transport Strategy. A number of park and ride sites already exist in around Sowton, though a new facility to the east within one of the potential Options would intercept traffic before it crosses the M5, and therefore alleviate traffic and congestion in and around Junctions 29 and 30, where the existing park and ride facilities are located. It would be best practice for the facility to comprise of a wider mobility hub, enabling interchange between car, bus, cycle, micromobility, and from internal combustion engine vehicles to zero-emissions (including on-site EV charging).
- 5.4.21 **Option Three** - To facilitate access to the 57 and 58 services from Option Three, a slight diversion could be implemented, with a new bus stop installed to the south of the Option adjacent to Clyst St George. This would significantly enhance the public transport offering in the vicinity of the Option, providing an alternative option for travel for those located to the south who are further away from the A3052 links.
- 5.4.22 **All Three Options** - A more consistent 9/9A service frequency would provide more reliable connectivity to all three new community Options. This would be of benefit to all three Options and would tie in with the aims of the Exeter Transport Strategy, which targets a consistent standard of sustainable transport.
- 5.4.23 Given the size of the Options, a potential park and ride facility is most feasible within Option One, followed by Option Three. A potential new bus service could serve both the new community and the park and ride facility.

### *Rail*

- 5.4.24 **Option One** - As previously mentioned, there is potential to provide a bus link between Option One and Cranbrook station. This link would facilitate multi-modal travel to a range of local, regional and national locations, significantly enhancing the connectivity of the Option.
- 5.4.25 **Option Three** - If Option Three were to be selected as the preferred Option, there is the potential to increase the frequency of services along the Avocet Line in line with the aims of the Exeter Transport Strategy for a consistent standard of sustainable transport.



## 5.5 Constraints

5.5.1 As with the preceding sections, it is appreciated that current provision would be insufficient to provide for the requirements of a new community of the scale proposed, meaning that significant infrastructure enhancements will be needed. Existing constraints have been considered in the context of the extent to which they would need to / could be overcome through such enhancements. The nature of the required enhancements will be examined in greater detail in the Transport Assessment and masterplanning work for whichever site is preferred by EDDC.

### Bus

5.5.2 **All Three Options** - Existing bus stops along the A3052 vary in standard, with some consisting of flagpoles and on-carriageway bus cages as shown at Figure 5.7. Alongside diversion of services, upgrades of existing bus stops are considered likely. It is our understanding that upgrade works are proposed to the stops located on the A3052 adjacent to Crealy Theme Park, though improvement schemes should be extended to encompass other stops located on the A3052. Upgrades should ensure that stops are accessible for all users (raised platforms), and should encourage uptake of bus as a modal choice (shelters, seating, real-time digital bus information) for all three potential Options.



Figure 5.7: Inadequate Bus Stops along A3052



Figure 5.8: Cat and Fiddle Bus Lay-by

- 5.5.3 **All Three Options** - Will be reviewed in terms of their comparative traffic impacts / effects of traffic on public transport accessibility following the completion of traffic modelling by DCC and its consultants.

*Rail*

- 5.5.4 **Option Two** – Option Two is not within walking distance of any railway stations, in contrast to the other Options which both have railway stations located in closer proximity. The links from the Option to the nearest station, Digby and Sowton, are dependent upon the A3052, meaning that journeys from the Option to the station could be vulnerable to any potential congestion, the potential for which will become clearer following the strategic modelling, which is yet to be undertaken by DCC and its consultants.
- 5.5.5 **All Three Options** – A rail capacity study, separate from this commission, will be required to confirm if the existing stations can accommodate the potential growth in customers.

## 5.6 Public Transport Summary

5.6.1 A summary of the public transport connectivity of the three Options is provided at Table 5.2.

	Option One	Option Two	Option Three
<b>Existing Bus Infrastructure</b>	<ul style="list-style-type: none"> <li>» Bus Stops located adjacent to the south of the Option along A3052.</li> <li>» Routes 9/9A and 52 pass to the south of the Option.</li> <li>» Route 56/56A passes to the north of the Option.</li> </ul>	<ul style="list-style-type: none"> <li>» Bus stops located along the A3052 which bisects the Option area. Further stops located to the south of the Option.</li> <li>» Routes 9/9A, 52 and 56/56A pass through the Option.</li> </ul>	<ul style="list-style-type: none"> <li>» Bus stops located adjacent to the north of the Option along A3052 and to the south of the Option along B3179.</li> <li>» Routes 9/9A and 52 pass to the north of the Option.</li> <li>» Routes 56/56A and 58 pass to the west of the Option.</li> <li>» Route 57 passes some 500m south-west of the Option.</li> </ul>
<b>Existing Rail Infrastructure</b>	<ul style="list-style-type: none"> <li>» Three rail stations located within 4.3km of the Option.</li> <li>» Stations offer GWR and South Western services to local, regional and national locations.</li> </ul>	<ul style="list-style-type: none"> <li>» Closest station, Digby and Sowton, located some 5.6km west of the Option.</li> <li>» Offers half-hourly GWR services along Avocet Line.</li> </ul>	<ul style="list-style-type: none"> <li>» 2.3km from Topsham rail station.</li> <li>» Accessible via continuous footway from the Option.</li> <li>» Offers half-hourly GWR services along Avocet Line.</li> </ul>
<b>Bus Opportunities</b>	<ul style="list-style-type: none"> <li>» Journey time to Exeter City Centre ensures that a potential new service would be efficient, but with limited resilience.</li> <li>» Potential to install a bus-gate adjacent to the A30 slip-road.</li> <li>» 4/4A/4B existing service could be diverted to serve the new community.</li> <li>» Potential to increase frequency of 9/9A.</li> <li>» Potential to implement a north/south bus corridor within Option area.</li> <li>» Potential to install a park and ride facility within the Option.</li> <li>» Option to create north south route through development site</li> </ul>	<ul style="list-style-type: none"> <li>» Potential to increase frequency of 9/9A.</li> <li>» Journey times make provision of a clockface timetable challenging</li> </ul>	<ul style="list-style-type: none"> <li>» Journey time to Exeter City Centre ensures that a potential new service would be efficient.</li> <li>» Potential to divert 57 and 58, and install a new bus stop to the south-west to serve the new community.</li> <li>» Potential to increase frequency of 9/9A.</li> <li>» Potential to install a park and ride facility within the Option.</li> </ul>

	Option One	Option Two	Option Three
<b>Rail Opportunities</b>	» Potential to provide a bus link (4/4A/4B) between the Option and Cranbrook rail station.	» None.	» Potential to increase the frequency of services along the Avocet line.
<b>Bus Constraints</b>	» Poor standard of existing stops/infrastructure along A3052, though some are due to be upgraded.	» Poor standard of existing stops/infrastructure along A3052. » Potential bus service to Exeter would be inefficient.	» Poor standard of existing stops/infrastructure along A3052, though some are due to be upgraded.
<b>Rail Constraints</b>	» None.	» Relatively isolated from rail facilities.	» None.
<b>Scoring Summary (/5)</b>	<b>4</b>	<b>2</b>	<b>4</b>

Table 5.2: Summary of Public Transport Connectivity



## 6. Existing Employment Accessibility Context

### 6.1 Overview

- 6.1.1 Whilst the new community will contain a mix of uses, including employment, and will focus on the minimisation of external trips, it is a benefit in terms of the future vision for the new community to be near to existing employment areas.
- 6.1.2 Proximity to employment facilitates sustainable transport modes, ensuring that they become viable and realistic modal options for commuters - particularly in combination with infrastructure upgrades supporting the new community. In all Option locations, sustainable transport links to these employment areas will need to be upgraded to be sufficiently attractive to ensure they are used from the outset of the development.
- 6.1.3 From discussions with EDDC officers, it is understood that employment in the Exeter area (outside of the city centre) is anticipated to gravitate towards the airport area.

### 6.2 Comparative Proximity to Employment

- 6.2.1 Figure 6.1 shows the location of the three Options in the context of major local employment centres.

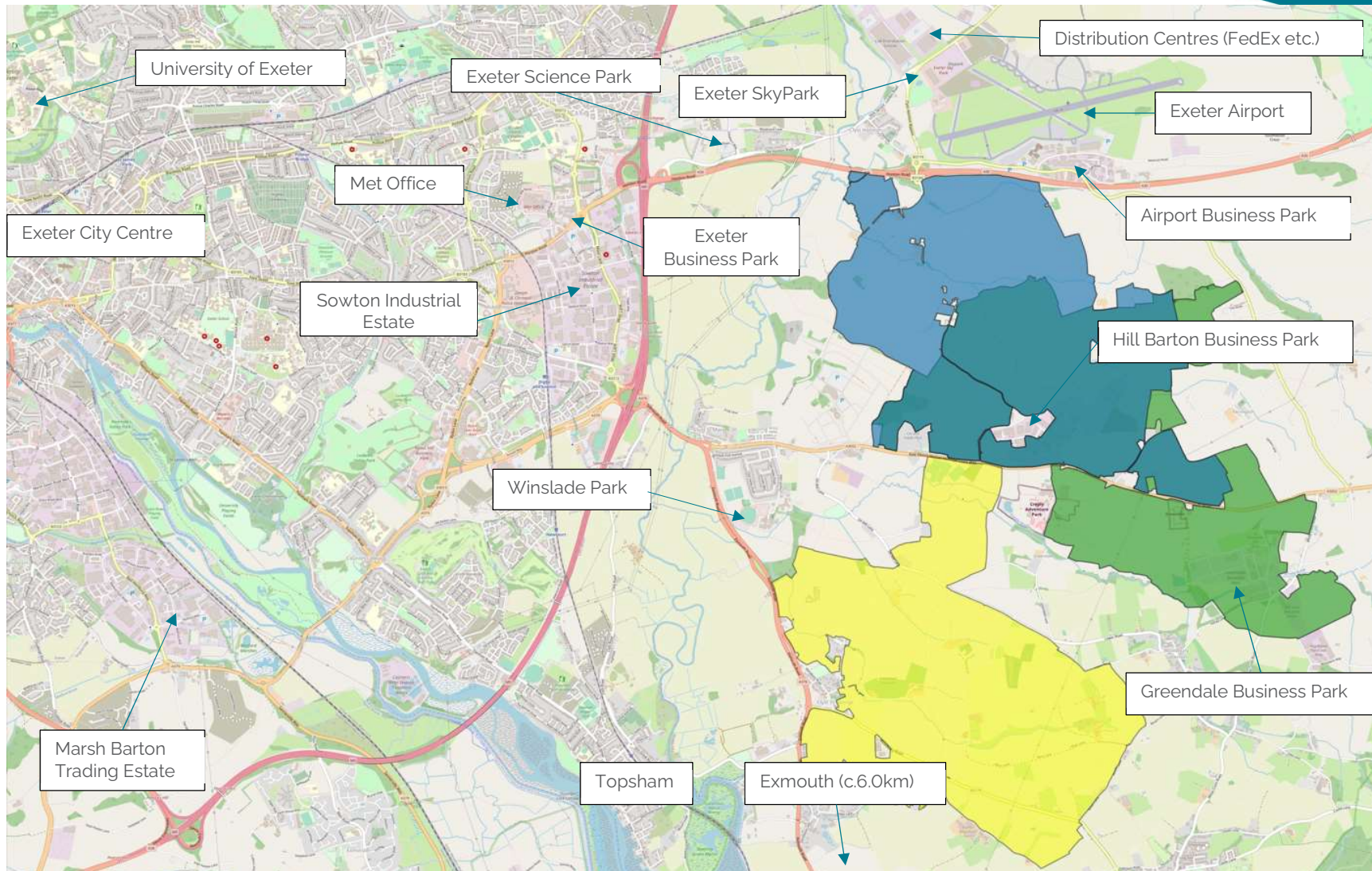


Figure 6.1: Proximity of Options to Major Employment Centres

6.2.2 Table 6.1 provides a summary of the distances from each Option to the major local employment areas. As infrastructure associated with the potential new community has not yet been built out, distances are taken as direct (as the crow flies) distances from the centre point of the Options.

Table 6.1: Distances to Major Employment Centres

Employment Centre	Approximate Distance (km) from the centre of each Option		
	Option One	Option Two	Option Three
Exeter Science Park*	3.1	5.1	3.9
Exeter SkyPark*	2.4	4.3	4.4
Distribution Centres to North of SkyPark (FedEx etc.)	3.5	5.3	5.5
Exeter Airport	1.3	3.0	3.9
Airport Business Park	1.3	3.0	3.9
Hill Barton Business Park	0.9	1.3	1.8
Sowton Industrial Estate*	3.9	5.3	3.2
Winslade Park	2.6	3.6	1.0
Met Office	3.9	5.9	4.1
Exeter Business Park*	3.8	5.8	4.1
Greendale Business Park	2.6	0.5	3.2
Exmouth	10.7	9.4	8.8
Topsham	5.5	5.2	2.6
Marsh Barton Trading Estate*	8.2	8.9	6.3
Exeter City Centre*	8.3	9.4	7.2
University of Exeter*	8.9	10.2	8.1

\*Designated as Key Business Locations by ECC

6.2.3 **Option One** – Option One is located in close proximity to Exeter Airport, with the centre of the Option just 1.3km south of the airport, a significant employer in the region. Local industrial/business parks/estates including Sowton Industrial Estate (3.9km), Hill Barton Business Park (0.9km) and Greendale Business Park (2.6km) are all located within relative proximity to the centre of the Option. The latter two business parks feature within the East Devon Villages Plan (adopted July 2018) for further development concerning business use for future years.

6.2.4 Exeter Science Park is located 3.1km north-west of the centre of Option One, whilst Amazon, Lidl and DPD's distribution centres are immediately north of Exeter Skypark, 2.4km north of the Option.

- 6.2.5 Further afield, Exeter City Centre is located some 8.3km east of Option One.
- 6.2.6 **Option Two** - Greendale Business Park is located within the proposed Option Two indicative boundary, providing an existing employment opportunity within the potential new community. Hill Barton Business Park is just 1.3km north-west of the Option's centre.
- 6.2.7 Exeter Airport, Exeter Skypark and Exeter Science Park are all located between 3-5.1 km north-west of Option Two, whilst Topsham is located some 5.2 km south-west of Option Two. Exeter city centre itself is approximately 9.4 km east of the Option.
- 6.2.8 When comparing the Options, Option Two offers fewer employment opportunities within its vicinity. Aside from the Greendale and Hill Barton Business Parks, all other employment centres are located at least 3km from the Option, with no clear or efficient routing strategy to reach these centres. Furthermore, all employment opportunities are distributed to the west of the Option, increasing Option Two's reliance on the A3052 as the sole transport link to travel to these locations.
- 6.2.9 **Option Three** - Option Three is located in close proximity to Topsham town centre (2.6km south-east of the Option), which offers a rail link connecting to Exeter City Centre 7.2km north-west of the Option.
- 6.2.10 Exmouth town centre is located 8.8km south of Option Three, and is also accessible from Topsham train station as well as via the A376 which runs along the western side of the Option.
- 6.2.11 Option Three is also located 6.3km east of the Marsh Barton Trading Estate, which is designated as a 'key business location' by Exeter City Council (ECC)<sup>11</sup>. Similarly, Option Three is located some 4.4km to the south of Exeter Skypark.
- 6.2.12 In the more immediate vicinity of Option Three is the Sowton Industrial Estate (3.2km north-west), the Hill Barton Business Park (1.8km north-east), the Greendale Business Park (3.2km east) and the Winslade Park co-working facility.
- 6.2.13 Both Option One and Option Three are advantageous in that they offer a wide range of employment opportunities within circa 4km.

### 6.3 Employment Opportunities

- 6.3.1 **All Three Options** - All three potential Options are located in close proximity to both Greendale Business Park and Hill Barton Business Park. Both business parks have expanded from small sites to substantial business parks, which each cover over 20 hectares and employ 'a substantial number of people' according to the East Devon Villages Plan. Plans for the future growth of the two business parks are also outlined within the Villages Plan, with limitations set regarding the extent of authorised business use which will ensure that Greendale Business Park would not encroach onto land designated for new community development within Option Two.

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<sup>11</sup> 'Key Business Locations', Exeter City Council, July 2018 (<https://exeter.gov.uk/business/available-land-and-premises/key-business-locations/>)



- 6.3.2 **Option One** - The location of Option One is advantageous in that it is proximate to these business parks, whilst also being located within 3km of other major employment centres with significant future growth potential such as Exeter Science Park and Exeter Skypark (Amazon, Lidl and DPD distribution centres)
- 6.3.3 **Option Three** - Option Three offers opportunity for multi-modal travel to two major employment centres in Exeter and Exmouth via Topsham. With Option Three located just 2km east of Topsham, journeys can be made to the train station in the village, with the second leg of the journey to be made via train along the Avocet Line.
- 6.4 **Employment Constraints**
- 6.4.1 **All Three Options** - All three Options are located a significant distance away from Exeter city centre (between 7km and 10km), meaning that employment opportunities within the city centre are not within the walking and cycling distances outlined within TA91/05. This distance becomes more achievable with the increase in e-bikes, and so may be reduced as a constraint in the longer term, as well as being accessible for keener and more experienced cyclists.
- 6.4.2 **Option Two** - For Option Two, aside from employment opportunities provided by Hill Barton and Greendale, the closest employment centres are located a minimum of 3km from the Option. It is apparent that the Option is relatively isolated and prospective residents would have to commute quite significant distances when travelling to work unless this was provided on Option.
- 6.4.3 **Option Two** - without significant internalisation of employment trips, the main commuting route relies upon the A3052, which could make it prone to congestion as a result of the higher volumes of traffic originating from the new community. As a commercial location for employment, Option Two is also more limited, as the A3052 is the only main route that offers direct access to the site.
- 6.4.4 **Options One and Three** - both offer greater opportunities for on-site employment and commercial development, as both are served by more than one main road (the A30 and A3052 for Option One and the A376 and A3052 for Option Three). This gives them more reliable accessibility by road for delivery and distribution of goods, making them more attractive and viable sites for future business occupants. Both sites lie a similar distance from the M5, with the Option Three being further away.
- 6.4.5 It is apparent that there are more constraints associated with access to employment opportunities at Option Two than at Option One or Three.

## 6.5 Employment Summary

6.5.1 A summary of the local employment accessibility context of the three Options is provided below at Table 6.2.

Table 6.2: Employment Summary

	Option One	Option Two	Option Three
<b>Proximity</b>	<ul style="list-style-type: none"> <li>» Located in proximity to Exeter Airport, Science Park and SkyPark as well as Greendale Business Park.</li> <li>» Hill Barton Business Park located within the Option.</li> </ul>	<ul style="list-style-type: none"> <li>» Greendale Business Park located within the Option.</li> <li>» Hill Barton Business Park located in proximity to the Option.</li> <li>» Few other employment centres within the vicinity of the Option. The majority are at least 5km away.</li> </ul>	<ul style="list-style-type: none"> <li>» Located in proximity to Hill Barton Business Park and Topsham town.</li> <li>» A number of other employment centres located within medium range (3-5km) of the Option.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>» Proximity to Hill Barton and Greendale Business Parks. Both parks have plans in place for growth within the East Devon Villages Plan.</li> <li>» Close to major employment centres with significant future growth potential in Exeter SkyPark, Science Park and Airport.</li> <li>» Good road links are likely to make it an attractive site for future business occupants, increasing on-site employment choices.</li> </ul>	<ul style="list-style-type: none"> <li>» Proximity to Hill Barton and Greendale Business Parks. Both parks have plans in place for growth within the East Devon Villages Plan.</li> </ul>	<ul style="list-style-type: none"> <li>» Proximity to Hill Barton and Greendale Business Parks. Both parks have plans in place for growth within the East Devon Villages Plan.</li> <li>» Potential to facilitate multi-modal trips to major employment centres including Exeter City Centre and Exmouth via Topsham railway station and the Avocet Line.</li> <li>» Good road links are likely to make it an attractive site for future business occupants, increasing on-site employment choices.</li> </ul>
<b>Constraints</b>	<ul style="list-style-type: none"> <li>» Distant from Exeter City Centre.</li> </ul>	<ul style="list-style-type: none"> <li>» Reliant upon A3052 as a link to reach employment centres.</li> <li>» Aside from Hill Barton and Greendale, the closest employment centres are located at least 3km from the Option.</li> <li>» Distant from Exeter City Centre.</li> </ul>	<ul style="list-style-type: none"> <li>» Distant from Exeter City Centre.</li> </ul>
<b>Scoring Summary (/5)</b>	<b>5</b>	<b>3</b>	<b>4</b>

## 7. Future Proofing

### 7.1 Electric Vehicles (EVs)

#### *Policy*

- 7.1.1 The DfT states as part of The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy (DfT, 2018) that Electric vehicles (EV) are highly energy efficient and have zero tailpipe emissions. They also have substantially lower greenhouse gas emissions than conventional vehicles, even when taking into account the electricity source and the electricity used for battery production. Defined by the NPPF as a sustainable mode of transport, EVs are therefore a key tool to help to contribute to cleaner air and lower carbon emissions, particularly for those trips that need to be undertaken by car.
- 7.1.2 Whilst the current East Devon Local Plan (2013-2031) does not contain any formal policy regarding electric vehicle provision within new developments, the document does stress that 'charging points for electric vehicles should be made available in new developments throughout the district'. The emerging East Devon Local Plan working draft, which shapes the likely future policy on the matter, provides more detail, stating that 'Development needs to provide Electric Vehicle Charging points in accordance with the latest Government guidance'. It goes on to state that rapid charging points will be particularly important in the public domain, with a further desire to provide spaces for public electric car charging points and for car clubs.
- 7.1.3 The government's 'Approved Document S' sets out requirements for EV provision. The requirements are summarised below:
- » For residential EV provision must be provided for the number of spaces or the number of dwellings, whichever is lower.
  - » For other uses, one space must be provided (above 10 spaces) and 20% must have cable provision.
  - » An exception to this is covered car parking, where there is no requirement other than cable routing.
  - » There are also exceptions based on the cost of the connection and infrastructure.

#### *Existing Infrastructure*

- 7.1.4 To complement the above policy requirements, and provide some context to the existing EV landscape in East Devon, Figure 7.1 provides a snapshot of existing EV charging point provision within the vicinity of the three potential Options.

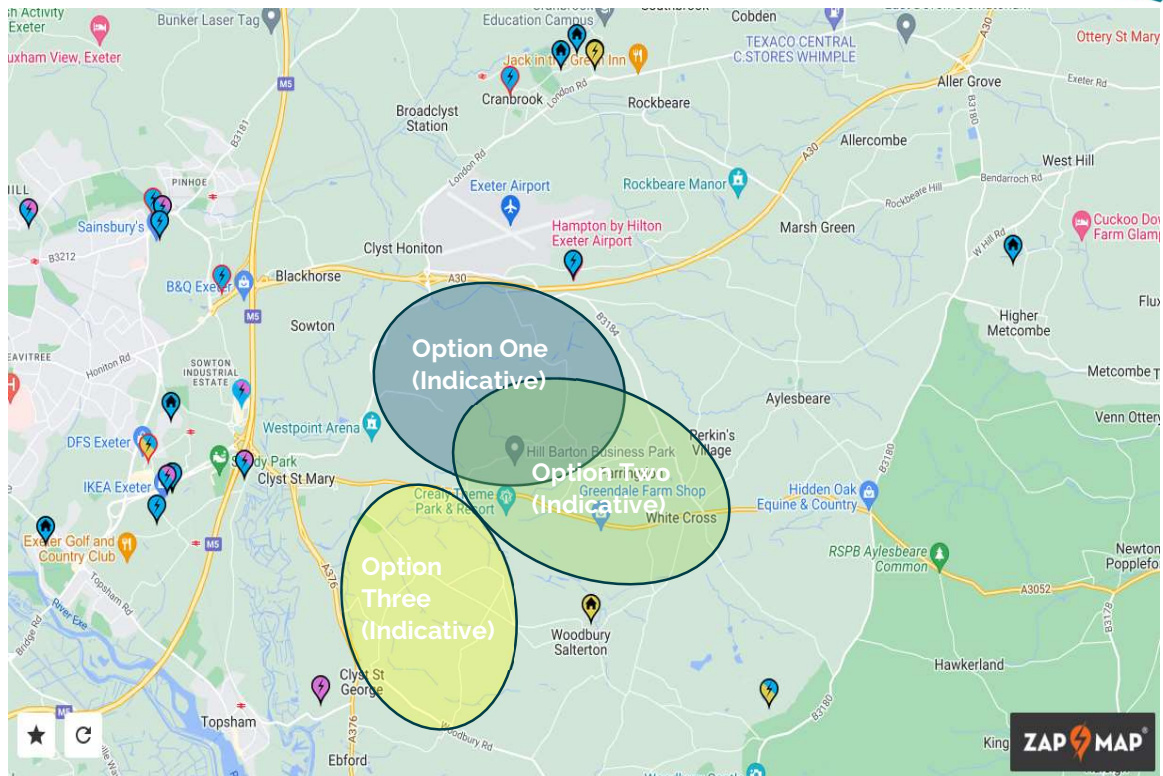


Figure 7.1: Zap Map of Existing EV Charging Infrastructure in East Devon

*Existing and Future Demand - current settlements*

7.1.5 Data regarding EV ownership within the EX5 postcode, and potential future trends for existing development have been explored in order to ‘set the scene’ for consideration of appropriate provision within the East Devon New Community (EDNC).

*Off-street Charging Grants*

7.1.6 Reference has been made to statistics for households receiving government grants for off-street EV charger installations<sup>12</sup>.

7.1.7 East Devon has the highest number of grant-funded home EV chargers of any Devon authority, at 865 units up to July 2022. Within the same timeframe, 3,885 home chargers have been funded across Devon.

<sup>12</sup> This data has been used as the best-available proxy in preference to Driver & Vehicle Licencing Agency (DVLA) data, as a majority of EV owners have access to a private charge-point, whereas DVLA statistics reflect where a vehicle is registered, rather than where it is used – e.g. lease or fleet vehicles will be registered at the owning company’s offices, as opposed to the driver’s address.



7.1.8 The data enables the following comparison:

- » EX5: 188 chargers / 8,916<sup>13</sup> households = 21 chargers per 1,000 households
- » Exeter: 383 chargers / 52,500 households = 7 chargers per 1,000 households
- » East Devon: 865 chargers / 66,800 households = 13 chargers per 1,000 households

*National EV Growth Projections*

7.1.9 National Grid projections for EV uptake present four scenarios based on the level of EV sales and infrastructure availability. In this case, we have used the most optimistic projection in order to highlight the possible level of charging demand<sup>14</sup>.

7.1.10 Applying the highest National Grid EV uptake projection to the number of vehicles in the EX5 area indicates that there could be up to:

- » 934 EVs in EX5 by 2025
- » 4,007 EVs in EX5 by 2030
- » 9,206 EVs in EX5 by 2035

*EV mileage*

7.1.11 Average vehicle mileage declined prior to and during the Covid pandemic. National Travel Survey (NTS) data shows that vehicles travelled an average of 5,300 miles annually in 2021, equivalent to 102 miles per week. However, this data needs to be treated with caution, as it does not capture the higher mileages of new vehicles, and particularly vehicles used on company business.

7.1.12 Analysis by the [RAC Foundation](#) in 2020 showed that new vehicles averaged 10,377 miles per year during the first three years after registration. Battery Electric Vehicles (BEVs) travelled an average of 9,435 miles per year in the same period. This data pre-dates the effect of the Covid pandemic on mileage and, applying average reductions in vehicle mileage across that timeframe (NTS: 22% reduction in total mileage from 2020 to 2021), the equivalent figures would be 8,088 miles for all vehicles and 7,354 miles for BEVs. The resultant average BEV mileage equates to 141 miles per week.

*Frequency of charging*

7.1.13 The average battery capacity of contemporary EVs for sale in the UK is 68 kWh, with an efficiency of 3.2 miles/kWh.

7.1.14 Based on the above, contemporary EVs will, on average, need to charge at least once every 10.8 days.

7.1.15 However, this is not a worst-case, as older EVs typically have lower battery capacities, EV drivers will typically not let batteries deplete towards 0% before charging, and higher-mileage drivers will need to charge more frequently.

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<sup>13</sup> Forecast from 2011 and 2021 Census data - NB that charger data is from July 2022, which post-dates the Census and cannot therefore fully reflect ongoing household growth in the EX5 area (e.g. at Cranbrook).

<sup>14</sup> It has to be caveated that achieving this level of growth is highly dependent on factors including materials/semiconductor availability, vehicle pricing/availability, and the roll-out of charging more widely - i.e. the number of EVs could be significantly lower.

*Off- and on-street chargers*

7.1.16 To cater for charging demand in the EX5 area, there will need to be a combination of household EV chargers, on-street and destination charging locations.

7.1.17 Research by the [RAC Foundation](#)<sup>15</sup> indicates that:

- » 68% of homes in England have, or could have, off-street EV charging
- » 71% of East Devon homes meet this criterion
- » For comparison, the figure is 58% for homes in Exeter

7.1.18 For the highest National Grid uptake scenario in 2035:

- » 6,536 EVs in the EX5 area will likely have access to off-street charging (actual or potential) - 71%
- » 2,670 EVs in the same area will be reliant on on-street or destination charging - 29%

*Summary*

- » The EX5 postcode area currently has 21 funded household chargers per 1,000 households - three times the number in Exeter and significantly higher than the average (13 per 1,000 households) for East Devon.
  - » There could be more than 9,200 EVs in the EX5 postcode area by 2035.
  - » The average contemporary EV will need to charge once every 10.8 days - this will be more frequent for older EVs, higher-mileage drivers, and those that do not wish to deplete their battery below a certain level
  - » East Devon has a slightly higher than average proportion of homes which are able to accommodate off-street charging (e.g. on driveways).
  - » By 2035, there could be 2,670 EVs in the EX5 area which do not have off-street charging, meaning that a combination of household, on-street and destination chargers will be required to meet demand.
- 7.1.19 The above figures are based on demand from existing development in the area and are intended to inform EV provision within the new community. Importantly, the exact number of cars (and, hence, EVs) in the new community will be a function of wider trends and also the vision for the settlement/measures to reduce the need for car ownership/use. This will be explored further in the Transport Assessment for the preferred site, once this has been confirmed by EDDC.
- 7.1.20 **Options One and Three** - due to their proximity to the M5, these sites may provide an opportunity for some strategic publicly accessible charging to help facilitate longer-distance travel by EVs in the South West.

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<sup>15</sup> This data needs to be treated with caution as it relates to the area available within properties for the theoretical installation of a driveway, which is not guaranteed to be acceptable or affordable to potential EV owners, or even practical in terms of accessibility onto the highway.

### *Electrical Power Considerations*

- 7.1.21 The availability of electrical power for EV charging is addressed in Hydrock's separate report covering utilities matters. It is understood that Options 1 and 2 are marginally better than Option 3 in terms of the existing electrical supply; however, all of the sites will require extensive utilities works to provide sufficient power, meaning that this is not a decisive factor between them from an EV charging perspective.

### *Shared Mobility*

- 7.1.22 The number of privately-owned/leased EVs is rising rapidly in response to technological advances, fossil fuel costs and the ban on the sale of new internal combustion engines in 2030. Alongside this, EVs have a key role to play in shared mobility solutions such as the Co-Cars scheme active in the local area - 2019 data from Co-Cars indicates that the scheme had removed 150 cars from Exeter's roads and 149 tonnes of CO<sub>2</sub> every year.

## 7.2 E-bikes

- 7.2.1 The important current, developing and future role of e-bikes is described in Section 4.5 of this report, which notes their ability to effectively overcome topographical and physical constraints for users.
- 7.2.2 Privately-owned e-bikes have increased rapidly in number, with the cost of purchase reducing dramatically. Alongside this, publicly-accessible e-bike hire schemes such as the popular Co-Bikes network in and around Exeter form a key part of the shared mobility network needed to deliver on the Council's vision for the new community. Figures from Co-Bikes cite more than 1,300 bike rentals per month on their network in 2019, with a 30% reduction in car usage and 15% increase in walking/regular cycling<sup>16</sup>.

## 7.3 Micromobility

- 7.3.1 Micromobility modes of transport refers to small, lightweight vehicles which include bikes and e-bikes (see above), e-/scooters, e-/skateboards and other emerging modes such as powered unicycles and Segways.
- 7.3.2 Whilst it is currently illegal to use privately-owned e-scooters on the highway, their use is increasingly commonplace (particularly in large urban centres). Alongside this, legal, government-backed trials are running in locations in the south west including Taunton, Bristol and Barnstaple, alongside a range of other Local Authority areas nationally. Data from these trials will help to inform the wider roll-out of shared rental scooters.
- 7.3.3 It is understood that the Modern Transport Bill will seek to legalise government-approved private e-scooters for use on the public highway, informed by the findings of the ongoing rental trials across the UK. Alongside this, the Bill may introduce a new low-speed vehicle class, intended to encompass a range of micromobility technologies, minimising the need for subsequent legislation to cover similar technologies.

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<sup>16</sup> [Co Bikes & Co Cars: Electric Shared Mobility - Exeter City Futures](#)

7.3.4 It will consequently be important for the design of the new community to facilitate and, as far as possible, avoid 'designing out' new and emerging travel technologies. Mirroring the significant positive impact of e-bikes, carefully designed provision for government-approved e-scooters and other micromobility technologies will play a key role in the overall transport and accessibility mix for the new community.

## 7.4 Autonomous Vehicles (AVs)

7.4.1 The rate of progress in autonomous vehicle (AV) technology, combined with UK AV trials and governmental statements regarding its commitment to enabling the use of AVs on the highway in the future, all indicate the need to design the new community to facilitate autonomy as far as is possible and desirable.

7.4.2 Alongside private and shared-use AVs - e.g. cars, taxi shuttles - consideration also needs to be given to facilitating autonomy in the public transport fleet.

7.4.3 AVs are not limited to passenger-carrying vehicles. AV technologies are already being seen in ground-based and airborne drone systems undertaking last-mile and longer-distance freight deliveries.

7.4.4 The Transport Assessment for the preferred Option site, once it is approved by EDDC through the ongoing plan-making process, will address this in further detail, drawing upon emerging best-practice and Hydrock's engagement with AV manufacturers.

7.4.5 Details will likely include identifying 'win-win' solutions - e.g. reduced AV roadspace requirements leading to better pedestrian/cycling environments, alternative future uses of roadspace/parking, alongside integration of V2X (vehicle to infrastructure/other vehicles), and potential future lighting/materials/construction requirements.

7.4.6 Whilst there are no immediate proposals for fully autonomous transport solutions - e.g. AV pods or autonomised public transport vehicles running on the highway - the objective will be to ensure that such developments are enabled rather than precluded by the design, where this is to the benefit of all users.

7.4.7 Whilst the legalities of AV operation in the public highway are addressed by government, there will also be potential interim solutions which can be enabled by the masterplan design - e.g. walk/cycle facilities which are also suited to low-speed AV passenger shuttles and delivery pods.

7.4.8 The nearby location of Exeter International Airport raises the interesting potential for integrated airborne/last-mile drone deliveries, should that be acceptable to the airport and associated authorities. As noted, the airport would be an important consultee with regard to the new community proposals, and this would be particularly relevant in relation to the potential for any future airborne delivery systems operating at these sites.

## 7.5 Materials

7.5.1 As part of the high-level masterplan for the chosen location, consideration should also be given to the use of new materials, whether in the highway (where permitted, now and in the future) or in non-highway settings (where materials choice can be freer).



7.5.2 Examples might include recycled pavement materials, art or lighting in the pavement surface, and the use of energy-generating kinetic footways (potentially with inbuilt data collection as part of a smart cities approach).

7.5.3 As previously noted, materials choice should also reflect best practice for existing sustainable and motorised modes of transport - e.g. minimising street clutter and maximising clarity for users with visibility difficulties, with clear differentiation and strong 'edges' which would also serve to assist future AV use.

## 7.6 Summary

7.6.1 **Options One and Three** – lie closer to Exeter and the M5, and are therefore likely to have some slight advantages in terms of their ability to accommodate or facilitate new developments in transport technology.

7.6.2 However, as these new technologies are still emerging, their exact impact is still unknown, and many of them will be facilitate by measures incorporated within the new development itself. As a result, there is likely to be little difference in the sites' abilities to future proof for new developments in transport technology and no scoring metric has been applied for this attribute.

## 8. Conclusion

8.1.1 This strategic Sustainable Access Review document has been prepared by Hydrock on behalf of EDDC as part of an initial transport information gathering exercise to help shape and inform discussions regarding the location of a new community of up to 8,000 new homes in East Devon, to the east of Exeter.

8.1.2 This report has investigated the connectivity of three Options, exploring their accessibility across walking, cycling and public transport modes as well as their proximity to existing employment functions within East Devon. Opportunities for development have been identified as well as constraints associated with the Options, and consideration has been given to local context and the potential integration of new and emerging transport technologies.

### 8.2 Conclusion

8.2.1 Table 8.1 provides a summary of the three Options' walking, cycling and public transport credentials, as well as their situation in relation to existing employment opportunities.

Table 8.1: Option Connectivity Summary

	Option One	Option Two	Option Three
<b>Walking</b>	<ul style="list-style-type: none"> <li>» Good existing external connectivity to north and west.</li> <li>» Opportunities to expand on recently installed infrastructure to the north.</li> <li>» Desire lines to Exeter to north-west are elongated.</li> <li>» Good proximity to Cranbrook area</li> </ul>	<ul style="list-style-type: none"> <li>» Poor external connectivity.</li> <li>» Hilly topography poses a challenge for intra-site connectivity.</li> </ul>	<ul style="list-style-type: none"> <li>» Good existing external connectivity to west and south-west.</li> <li>» Opportunity for pedestrian route between Option and Topsham.</li> </ul>
<b>Walking Score</b>	4	1	4
<b>Cycling</b>	<ul style="list-style-type: none"> <li>» Recently installed cycle infrastructure to the north.</li> <li>» Opportunities to expand existing infrastructure to serve the Option.</li> <li>» Potential to provide a dedicated cycleway along A3052.</li> <li>» Two connections in emerging LCWIP</li> </ul>	<ul style="list-style-type: none"> <li>» Potential to provide a dedicated cycleway along A3052.</li> <li>» Lack of existing infrastructure within vicinity of the Option.</li> <li>» Single connection in emerging LCWIP</li> </ul>	<ul style="list-style-type: none"> <li>» NCN Route 2 located in proximity to the Option.</li> <li>» Potential to provide a dedicated cycleway along A3052 as well as along route to Topsham railway station.</li> <li>» Two connections in emerging LCWIP</li> </ul>
<b>Cycling score</b>	4	2	4
<b>Public Transport</b>	<ul style="list-style-type: none"> <li>» Realistic potential for an efficient new service.</li> </ul>	<ul style="list-style-type: none"> <li>» Potential new service would likely be inefficient.</li> <li>» Existing routes pass through the Option via the A3052.</li> </ul>	<ul style="list-style-type: none"> <li>» Realistic potential for an efficient new service.</li> <li>» Opportunity to extend/divert services.</li> </ul>

	<ul style="list-style-type: none"> <li>» Limited opportunity to extend/divert existing services.</li> <li>» Close to Cranbrook railway station.</li> <li>» Opportunity for a circular bus route</li> <li>» Option to create north south route through development site</li> </ul>	<ul style="list-style-type: none"> <li>» Isolated from rail services (nearest station is approx. 5.6km away).</li> </ul>	<ul style="list-style-type: none"> <li>» Located close to Topsham railway station.</li> <li>» Opportunity for a circular bus route</li> </ul>
<b>Public Transport Score</b>	4	2	4
<b>Employment</b>	<ul style="list-style-type: none"> <li>» Option One has the most significant employment centres, with serious future growth potential, located within a suitable walking/cycling distance.</li> </ul>	<ul style="list-style-type: none"> <li>» Greendale Business Park located within the Option, whilst Hill Barton Business Park is located in close proximity.</li> <li>» Aside from these, the Option is relatively isolated from other employment centres.</li> <li>» Reliant upon the A3052 to reach employment centres.</li> </ul>	<ul style="list-style-type: none"> <li>» Option Two has a limited number of employment centres within suitable walking/cycling distance.</li> <li>» However, its proximity to Topsham railway station can facilitate multi-modal trips to major employment centres including Exeter city centre and Exmouth.</li> </ul>
<b>Employment Score</b>	5	3	4
<b>Scoring Summary (/20)</b>	<b>17</b>	<b>8</b>	<b>16</b>
<b>Rounded Average Score</b>	<b>4.3</b>	<b>2</b>	<b>4</b>

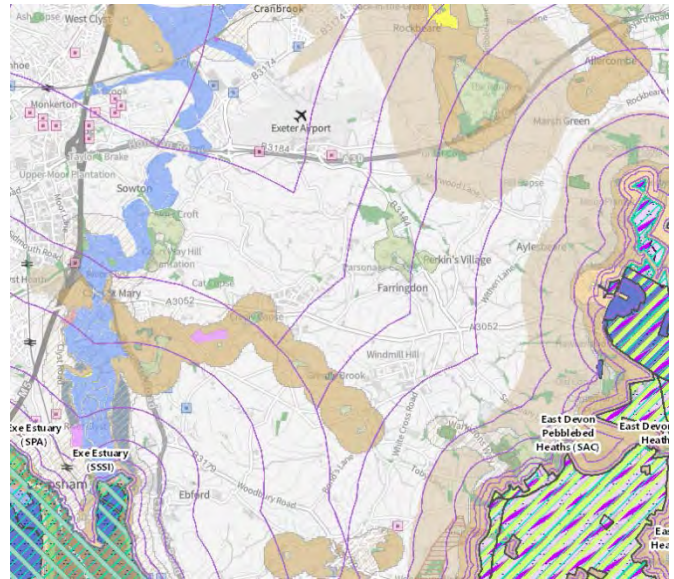
- 8.2.2 Internal pedestrian connectivity within all three Options is presently relatively undeveloped, with a lack of pedestrian infrastructure across all routes.
- 8.2.3 External pedestrian connectivity for Options One and Three is facilitated by the A3052, which offers continuous footway west to Exeter. In this regard, Option Two is comparatively isolated with no such external pedestrian connections. Options One and Three also have pedestrian connections to Exeter Skypark and Topsham respectively.
- 8.2.4 Options One and Three benefit from proximity to either dedicated cycleways or cycle routes (NCN 2). Option Two is comparatively constrained by a lack of any such route within its vicinity. However, there are a number of opportunities to enhance cycle infrastructure provision across all three Options.
- 8.2.5 Public transport provision is of a high standard along the A3052 to the south of Option One and to the north of Options Two and Three, with opportunities to enhance existing service provision along this route. Option One provides the greatest opportunities for a park and ride facility, with the potential addition of a bus-gate to provide bus priority for the service.
- 8.2.6 Option Three has the strongest connectivity to a railway station, followed by Option One. Option Two is notably more remote from rail, with a reliance on a bus/car connection to the station.

- 8.2.7 Option One is well-connected to a range of major employers with significant future growth potential. Out of the three Options, it represents the best offering for employment. Aside from proximity to Greendale and Hill Barton Business Parks, Option Two is comparatively isolated from an employment perspective.
- 8.2.8 As such Options One and Three are closely matched from an existing connectivity and accessibility perspective, outperforming Option Two.
- 8.2.9 Therefore, the highest summary score (4) has been assigned to Options One and Three, due to their strong performance across all measures. Both options score consistently across walking, cycling, public transport and employment, and offers a well-rounded choice for the new community.
- 8.2.10 Option Two performs comparatively worse than Options One and Three across all four measures, and its overall summary score of 2 reflects this. A lack of existing infrastructure in the area of Option Two is compounded by the Option's relative isolation in regards to employment and public transport, largely due to its distance from Exeter's eastern boundary.

### 8.3 Next Steps

- 8.3.1 As part of the next steps, a trip forecasting exercise will be undertaken. This will include trip generation taking into consideration travel minimisation and internalisation calculations within an overarching Decide and Provide approach whereby a 20-minute neighbourhood is used to support significantly increase usage of sustainable transport modes.
- 8.3.2 Trip distribution will be reviewed utilising strategic modelling (provided by others), allowing for comparative network impacts.
- 8.3.3 Overarching commentary will then be provided on the above, alongside a tabular review.
- 8.3.4 Once a preferred Option has been identified a High-Level Transport Assessment will be undertaken on that particular Option.





# East Devon Options Appraisal

## East Devon District Council

### Ecological Desk Study

Prepared For: CBRE

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Version 2.0

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The content of this document has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Code of Professional Conduct and is compliant with British Standard BS42020:2013 Biodiversity Code of Practice for Planning and Development.

The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

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## 1.0 Introduction

- 1.1 The Environment Partnership (TEP) was commissioned by CBRE in September 2022 to complete an Ecological Desk Study to inform and support an Option Appraisal as part of the Local Plan Review for East Devon District Council (EDDC).

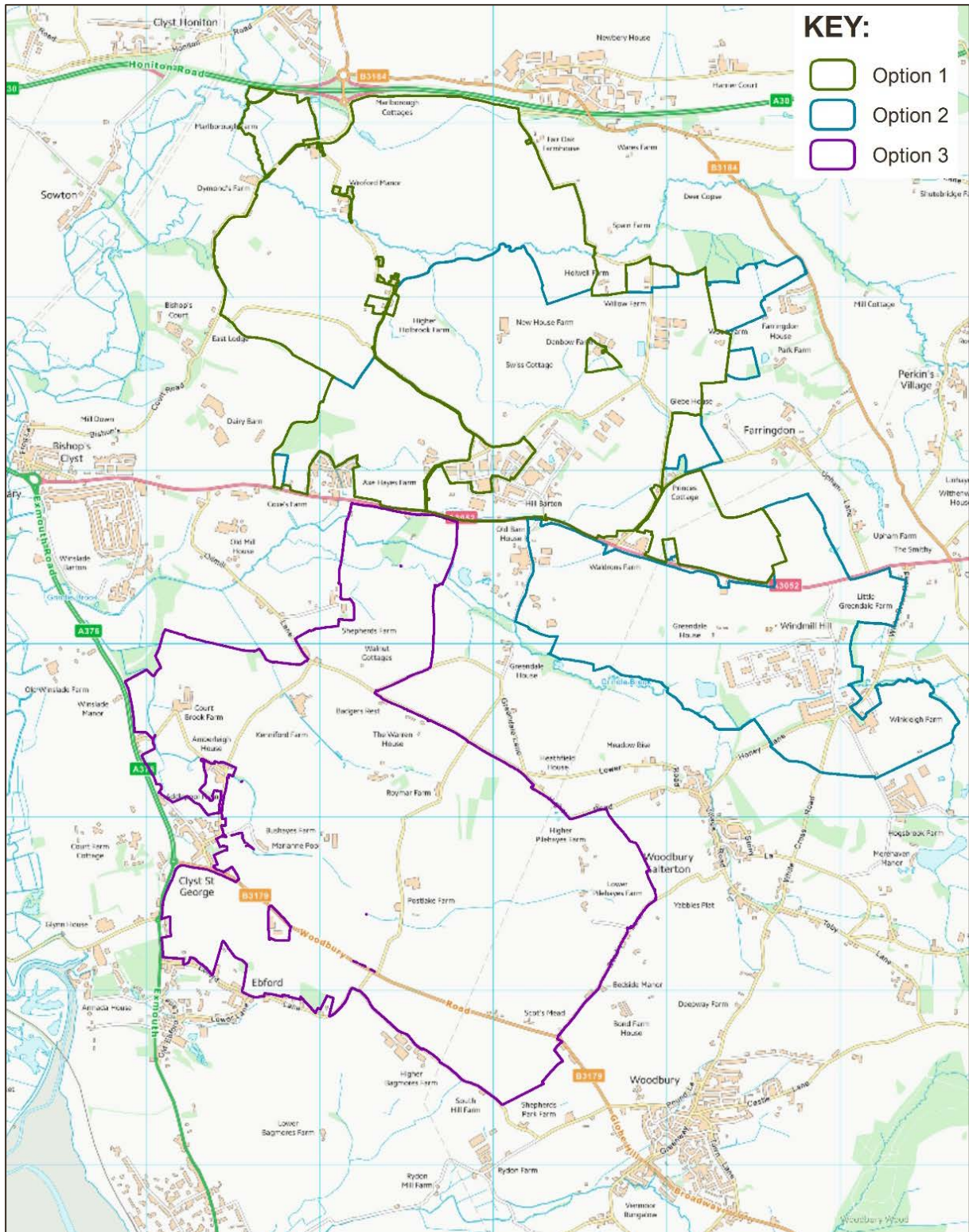
### Site Location

- 1.2 Three option areas are included within the Option Appraisal, illustrated in Figure 1. Option 1 and 2 are partially overlapping. Option 3 is distinct from the other option areas.

### Context and Purpose

- 1.3 The current East Devon Local Plan 2013 to 2013 was adopted in January 2016. EDDC is currently progressing a review of this Local Plan which will roll planning horizons forward to 2040. This raises the prospect that further large scale development will need to be identified, allocated and brought forward in the District.
- 1.4 An initial Issues and Options consultation took place between January and March 2021. Alongside this was a call for sites as part of a Housing and Employment Land Availability Assessment (HELAA). In response to the call for sites, three proposals for new settlements were put forward. Given the constraints of the district, which include two areas of outstanding natural beauty covering two thirds of the district, there is a strong likelihood that one or more of these new settlements will need to come forward in the plan period.
- 1.5 This Ecological Desk Study report details the methods of data gathering and presents the findings of the desk-based assessment as it relates to the three options under consideration. This report is intended to support the Options Appraisal Report.

Figure 1: Option Areas



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## 2.0 Methods

### Scope and Data Sources

- 2.1 The ecological Zone of Influence (ZOI) is an area defined by the ecological assessment within which valued ecological features may be subject to significant biophysical changes as a consequence of the proposed development under assessment.
- 2.2 For the purposes of this assessment, the preliminary ZOIs within which ecological features were searched for as part of this desk study were varied according to the geo-spatial and/or legal significance of the feature.
- 2.3 Table 1 summarises the scope and the preliminary ZOIs applied for this desk study. The preliminary ZOIs were applied by extending search radii by the respective distances from the site boundary outwards.

*Table 1: Scope and preliminary ecological Zones of Influence (ZOI)*

Feature	Scope	Key Source(s)	ZOI
Statutory wildlife sites:	Ramsar sites Proposed Ramsar sites Special Areas of Conservation (SAC) Possible SAC SAC with marine components Special Protection Areas (SPA) Potential SPA Marine Conservation Zones	Natural England (public sector information) Devon County Council Environment Viewer <sup>1</sup> EDDC East Devon Local Plan 2013-2031 (Adopted 28 January 2016) <sup>2,3</sup>	10km
	Sites of Special Scientific Interest (SSSI) National Parks National Nature Reserves (NNR) Marine Nature Reserves (MNR)	Natural England (public sector information) EDDC East Devon Local Plan 2013-2031 (Adopted 28 January 2016)	5km
	Local Nature Reserves (LNR) Country Parks Strategic Nature Areas	Natural England (public sector information) Devon County Council Environment Viewer	2km
Non-statutory wildlife sites:	County Wildlife Sites (CWS) Other Sites of Wildlife Interest (OSWI) Unconfirmed Wildlife Sites (UWS) Exeter Green Spaces Special Verges Exeter Valley Parks Regional Parks Green Wedges	Devon Biological Records Centre (DBRC) EDDC East Devon Local Plan 2013-2031 (Adopted 28 January 2016) EDDC Local Plan Interactive Map <sup>4</sup> Devon County Council Environment Viewer	1km

<sup>1</sup> <https://www.devon.gov.uk/environment/environmental-maps> [Accessed September-October 2022]

<sup>2</sup> <https://eastdevon.gov.uk/planning/planning-policy/local-plan-interactive-map/> [Accessed September-October 2022]

<sup>3</sup> <https://eastdevon.gov.uk/media/1772841/local-plan-final-adopted-plan-2016.pdf> [Accessed September-October 2022]

<sup>4</sup> <https://eastdevon.gov.uk/planning/planning-policy/local-plan-interactive-map/> [Accessed September-October 2022]



Feature	Scope	Key Source(s)	ZOI
Notable habitats:	Ancient Woodland Habitats of principal importance Devon Biodiversity Action Plan (DBAP) habitats Main rivers Habitat Network / Nature Recovery Network	Natural England (public sector information) Environment Agency (public sector information) DBRC Devon County Council Environment Viewer Devon Biodiversity Action Plan (DBAP) <sup>5</sup> Google Earth	1km
Protected or notable species:	Pre-existing records for protected or notable species <sup>6</sup> , non-native invasive species	DBRC Devon County Council Environment Viewer	1km
	Protected species licences granted by Natural England Great crested newt survey pond records (2017 – 2019) held by Natural England	Natural England (public sector information)	1km
	Great crested newt Consultation Zone Cirl bunting Consultation Zone	Devon County Council Environment Viewer	As applicable to site
	Important Bird Areas (IBA)	Bird Life International <sup>7</sup>	5km
	Important Plant Areas (IPA)	Plantlife <sup>8</sup>	1km
Policy and Related Guidance	Land allocations and relevant environment / biodiversity policy Local biodiversity priority habitats and species	EDDC East Devon Local Plan 2013-2031 (Adopted 28 January 2016) EDDC Local Plan Interactive Map DBAP	As applicable to site

2.4 An absence of records does not indicate the absence of notable species from the search area.

2.5 Geological sites are not designated for ecology reasons and are therefore excluded from further consideration in this report.

<sup>5</sup> <https://www.devon.gov.uk/environment/wildlife/the-devon-biodiversity-action-plan-bap> [Accessed September-October 2022]

<sup>6</sup> Notable and protected species records may include those listed under any of the following:

- Protected species listed under Schedule 2 (animals) or Schedule 5 (plants) under the Conservation of Habitats and Species Regulations 2017 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance (SPI) listed by requirements under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

<sup>7</sup> <http://www.birdlife.org> [Accessed October 2022]

<sup>8</sup> <https://www.plantlife.org.uk/nature-reserves-important-plant-areas/important-plant-areas> [Accessed October 2022]

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## Additional Supporting Data

2.6 A preliminary planning search on East Devon District Council's planning portal identified the following potentially relevant pre-existing ecological survey reports, which were then reviewed to determine any additional local context:

Planning Ref: 22/1532/MOUT Treasbere Garden Village

- Environmental Statement Chapter 14 Biodiversity June 2022 Ref 32463/A5/ES2022;
- Appendix 14.1 Ecological Baseline Report June 2022 (A report on behalf of Redrow Homes Limited and Carden Group) Ref 1236-EBR-AM, GE Consulting;

and

Planning Ref: 20/0530/LDO East Devon District Heating Local Development Order

- Habitats Regulations – Screening Assessment;
- The Town and Country Planning (Environmental Impact Assessment Regulations 2017) Screening Opinion;
- Consultation Response Summary.

## 3.0 Legislation and Policy

- 3.1 This section details legislation and planning policy which may have relevance to the Option Appraisal. Only legislation and policy of key relevance to biodiversity are included.

### Relevant Legislation

#### International Conventions

- 3.2 The UK is a Contracting Party to numerous environmental conventions, the commonest form of international agreements to encourage a coordinated response to managing the environment. Key environmental conventions ratified in the UK include:
- The Convention on Wetlands of International Importance especially as Waterfowl Habitat ('Ramsar Convention'<sup>9</sup> or 'Wetlands Convention') - provides the only international mechanism for protecting sites of global importance;
  - The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention<sup>10</sup>) - imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species;
  - The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention<sup>11</sup> or CMS) - provides strict protection for endangered migratory species. The UK has currently ratified four legally binding Agreements under the convention relating to bats (EUROBATS), African-Eurasian migratory birds (AEWA), small cetaceans in the Baltic, Irish and North Seas (ASCOBANS) and albatrosses and petrels (ACAP) in addition to five Memorandum of Understanding (MoU) and is non-party range state to a further Agreement and a further MoU;
  - The Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention) - seeks to protect both cultural and natural heritage;
  - The Convention on Biological Diversity (Biodiversity Convention<sup>12</sup> or CBD) - provides a legal framework for biodiversity conservation. Within the UK, delivery of the CBD and the Strategic Plan for Biodiversity 2011-2020<sup>13</sup> is guided by the UK Post-2010 Biodiversity Framework<sup>14</sup>.

<sup>9</sup> Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2.2.1971 <https://www.ramsar.org/>

<sup>10</sup> Convention on the Conservation of European Wildlife and Natural Habitats. Bern, 1979 <https://www.coe.int/>

<sup>11</sup> Convention on the Conservation of Migratory Species of Wild Animals, Bonn, June 1979 <https://www.cms.int/>

<sup>12</sup> Convention on Biological Diversity, Rio de Janeiro, June 1992 <https://www.cbd.int/>

<sup>13</sup> In October 2010, at the 10th Conference of the Parties to the CBD in Nagoya, Japan, the Parties adopted a new 'Strategic Plan for Biodiversity 2011–2020' along with its 20 'Aichi targets'. <https://www.cbd.int/sp/>

<sup>14</sup> The framework is overseen by the Environment Departments of the four UK governments working through the Four Countries' Biodiversity Group. It demonstrates how the UK, through each of the four countries, contributes to achieving the 'Aichi targets', and identifies the activities required to complement the individual country biodiversity strategies <https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/>

- 3.3 The legal obligations of the multiple Conventions to which the UK is a Contracting Party are enacted through a suite of national environmental legislation. The most relevant are described in the following paragraphs.

#### Conservation of Habitats and Species Regulations

- 3.4 The Conservation of Habitats and Species Regulations 2017<sup>15</sup> (2017 Regulations) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into domestic law.
- 3.5 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019<sup>16</sup> (2019 Regulations) amends the 2017 Regulations to make them operable following the withdrawal of the United Kingdom from the European Union (EU). Most of the changes involve transferral of functions from European Commission to the appropriate authorities in England and Wales, also extending to Scotland and Northern Ireland and applies to Scotland and Northern Ireland (including the adjacent territorial sea to a limited degree), as regards reserved and excepted matters respectively. It also amends Section 27 of the Wildlife and Countryside Act 1981 to maintain existing protections and enforcement for species of wild birds.
- 3.6 All other processes or terms in the 2017 Regulations remain unchanged and existing guidance and obligations (of a competent authority) remain relevant.

#### *National Site Network*

- 3.7 Under the 2019 Regulations, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) in the UK no longer form part of the EU's 'Natura 2000' ecological network, but instead (along with new SACs and SPAs designated under the 2019 Regulations) form the new National Site Network (NSN). Ramsar sites do not form part of the NSN but remain protected in the same way as SACs and SPAs.
- 3.8 Proposals which may significantly affect a site belonging to the NSN and which are not connected with or necessary to the management of that site require (by Regulations 63 and 64 of the 2017 Regulations, as amended by Regulations 24 and 25 of the 2019 Regulations, respectively) competent authorities to undertake an Appropriate Assessment of the implications of the plan or project in view of that site's conservation objectives. This process is commonly referred to as a 'Habitats Regulations Assessment' (HRA). The assessment must consider the potential effects both of the plan/project itself and in combination with other plans or projects. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest (IROPI) and if the necessary compensatory measures can be secured.

<sup>15</sup> Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) <https://www.legislation.gov.uk/ukSI/2017/1012/>

<sup>16</sup> Conservation of Habitats and Species Regulations 2019 (SI 2019/579) <https://www.legislation.gov.uk/ukSI/2019/579/>



### *Protected Species*

- 3.9 Certain animals and their breeding sites or resting places are protected under Regulation 43 of the 2017 Regulations, which makes it illegal to:
- Deliberately capture, injure or kill any such animal or to deliberately take or destroy the eggs of such an animal;
  - Deliberately disturb such an animal; and
  - Damage or destroy a breeding site or resting place of such an animal.
- 3.10 Disturbance is defined in the 2017 Regulations as an activity which is likely to impair a species' ability to survive, to breed or reproduce, to rear or nurture young or, in the case of animals hibernating or migratory species, to hibernate, migrate or which may affect significantly the local distribution or abundance; of the species.
- 3.11 A bat's resting place is known as a roost site. Because bats tend to be faithful to roost sites, but their biology is such that different roost site characteristics are preferred at different times of the year by different species for different functions, a bat roost is considered to be afforded protection even when it is not occupied.
- 3.12 Certain plant species are protected under Regulation 47 of the 2017 Regulations against deliberate picking, collecting, cutting, uprooting or destruction. It is also an offence to be in possession or control and to transport any live or dead plant or part of a plant of such a species which has been taken in the wild.
- 3.13 The 2017 Regulations (Regulation 55) enables a relevant licensing body to grant a licence for certain activities that may affect animal or plant species protected by the above provisions. The purpose must conform to one of those listed under Regulation 55(2). For most development related activities, the purpose normally relates to Regulation 55(2)(e) 'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment' – commonly known as the IROPI test. Regulation 55(9) introduces two further tests that the licensing body must consider:
- There is no satisfactory alternative; and
  - The favourable conservation status of the species concerned will be maintained and/or enhanced.
- 3.14 Under Regulation 9(1) of the 2017 Regulations (as amended), competent authorities "must exercise their functions which are relevant to nature conservation... so as to secure compliance with the requirements of the Directives". Regulation 9(3) requires a competent authority, in exercising any of its function, to "have regard to the requirements of the Directives so far as they be affected by the exercise of those functions." Local planning authorities must therefore consider the above three 'tests' when determining if planning permission should be granted for developments likely to cause an offence under the Regulations.

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## Wildlife and Countryside Act 1981

- 3.15 The Wildlife and Countryside Act 1981 (as amended)<sup>17</sup> (WCA) is a major legal instrument for wildlife protection in the UK. In respect of habitats and flora, the WCA protects important habitats and/or species as Sites of Special Scientific Interest (SSSI). The designation of UK Ramsar sites<sup>9</sup> has usually been underpinned through prior notification of these areas as SSSI and accordingly they receive statutory protection under the WCA.
- 3.16 The obligations of the Bern Convention<sup>10</sup> (the protection of wild plant and animal species and their natural habitats) are transposed into law for England and Wales<sup>18</sup> by the WCA. The legal requirement for the protection of migratory species listed by the Bonn Convention<sup>11</sup> is also provided by the WCA.
- 3.17 All wild birds (as defined by the WCA and with exception to species listed in Schedule 2) are protected under the WCA, which makes it illegal to:
- Intentionally kill, injure or take any wild bird;
  - Take, damage or destroy the nest (whilst being built or in use) of any wild bird; or
  - Take or destroy the eggs of any wild bird.
- 3.18 Special penalties are available for offences related to birds listed in Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The WCA also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.
- 3.19 Certain animal species (listed under Schedule 5) of the WCA receive protection which makes it illegal (with certain exceptions) to:
- Intentionally kill, injure or take any such animal;
  - Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal;
  - Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
- 3.20 The Environment Act (EA) 2021 amends the licensing regime under Section 16 of the WCA 1981 to enable licences to be granted (in England only) for reasons of overriding public interest. This new purpose will enable those involved in development activities to apply for a derogation under the WCA for species domestically protected under Schedule 5 of the WCA 1981.

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<sup>17</sup> Wildlife and Countryside Act 1981 c. 69 <https://www.legislation.gov.uk/ukpga/1981/69/>

<sup>18</sup> In Scotland by the Nature Conservation (Scotland) Act 2004 (as amended) and in Northern Ireland by Wildlife (Northern Ireland) Order 1985 and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.

- 3.21 The amendments introduced by the EA 2021 at Section 16(3) requires that licensed may only be granted (in England) where:
- there is no other satisfactory solution, and
  - the grant of the licence is not detrimental to the survival of any population of the species of animal or plant to which the licence relates.
- 3.22 Plant species listed under Schedule 8 of the WCA 1981 are protected from unauthorised intentional picking, uprooting and destruction.
- 3.23 It is an offence to plant or otherwise cause to grow in the wild any plant that is included in Schedule 9.

#### Countryside and Rights of Way Act 2000

- 3.24 Part III of the Countryside and Rights of Way Act 2000<sup>19</sup> (CROW) deals specifically with wildlife protection and nature conservation. It requires that Government Departments have regard for the conservation of biodiversity, in accordance with the CBD. In addition, it requires that The Secretary of State publishes a list of living organisms and habitat types that are considered to be of principal importance in conserving biodiversity.
- 3.25 CROW also amends the WCA, expanding the terms of offences to include reckless activity. It increases the legal protection of threatened species, by also making it an offence to “recklessly” obstruct access to a sheltering place used by an animal listed in Schedule 5 of the WCA or “recklessly” disturb an animal occupying such a structure or place.

#### Natural Environment and Rural Communities (NERC) Act 2006

- 3.26 Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC)<sup>20</sup> places a duty to conserve biodiversity on public authorities in England. It requires local authorities and government departments to have regard to the purposes of conserving biodiversity in a manner that is consistent with the exercise of their normal functions such as policy and decision-making. 'Conserving biodiversity' may include enhancing, restoring or protecting a population or a habitat.
- 3.27 Section 41 requires the Secretary of State to publish and maintain lists of species and types of habitats which are regarded by Natural England to be of "principal importance" for the purposes of conserving biodiversity in England.
- 3.28 These habitats and species of principal importance (HPI and SPI) are drawn from earlier lists of United Kingdom Biodiversity Action Plan Priority Species and Habitats. The Section 41 (S41) lists of HPI and SPI are needed by decision-makers in local and regional authorities when carrying out their duties under Section 40 of the Act.

<sup>19</sup> Countryside and Rights of Way Act 2000 c. 37 <https://www.legislation.gov.uk/ukpga/2000/37/>

<sup>20</sup> Natural Environment and Rural Communities Act 2006 c. 16 <https://www.legislation.gov.uk/ukpga/2006/16/>

## Environment Act 2021

- 3.29 The Environment Act 2021<sup>21</sup> was passed into law in November 2021. The Act applies only to England, although many of its measures are designed to be operable across the UK with the consent of devolved administrations. The Act requires statutory long-term (15+ years) targets to be set (and monitored, reported and reviewed) in the four priority areas of waste reduction, air quality, water resources and biodiversity as well as additional targets relating to species abundance and fine particulates by 2030.
- 3.30 The Environment Act amends the Town and Country Planning Act 1990<sup>22</sup> in that planning permissions granted after the provisions come into force<sup>23</sup> are deemed to be subject to a condition prohibiting the start of development before a biodiversity gain plan has been submitted to and approved by the Local Planning Authority (LPA).
- 3.31 The biodiversity gain plan must demonstrate a net gain of at least 10% in the biodiversity value of the development site “as at the time the development is completed”. Biodiversity net gain must be demonstrated by calculations using the biodiversity metric (currently version 3.1 published by Natural England)
- 3.32 The Environment Act introduces Local Nature Recovery Strategies (LNRS), a new system of spatial strategies for nature, covering the whole of England. LNRS are to be prepared and published by the ‘responsible authority’, namely the local authority, mayoral authority or National Park authority whose area is, or is within, the strategy area, the Broads Authority or Natural England. Section 40 of the NERC Act (duty to conserve biodiversity) makes provision about the duties of public authorities in relation to LNRS.
- 3.33 A ‘responsible authority’ is to be appointed to lead each LNRS area, which could include LPAs and which in mayoral combined authorities is highly likely to be the mayor. The responsible Authority must map the most valuable existing natural habitat in its area and develop a biodiversity strategy, including specific proposals for creating or improving habitats and priorities for nature recovery.
- 3.34 In addition to the above, the Environment Act Part 6 (Nature and biodiversity) will also:
- Strengthen the biodiversity duty through amendments to Section 40 of the NERC Act.
  - Impose a duty upon Local Authorities to consult on street tree felling;
  - Strengthen woodland protection enforcement measures;
  - Introduce Conservation Covenants (agreements between a landowner and a responsible body);
  - Protected Site Strategies (prepared and published by Natural England) to improve the conservation and management of a protected site (including SACs, SPAs listed before

<sup>21</sup> Environment Act 2021 c.30 <https://www.legislation.gov.uk/ukpga/2021/30/>

<sup>22</sup> Town and Country Planning Act 1990 c. 8 <https://www.legislation.gov.uk/ukpga/1990/8/>

<sup>23</sup> The Biodiversity Gain provision of the Environment Act requires the Secretary of State to first publish detailed regulations (see s147(3) of the Act). These are anticipated in November 2023.



exit day, Sites of Community Importance (SCI)<sup>24</sup> listed before exit day and those sites proposed before exit day as SACs).

- Species Conservation Strategies (prepared and published by Natural England) to improve the conservation status of any species of flora or fauna, with which a LPA in England and any prescribed authority must have regard so far as relevant to its functions, including when discharging its duties under the 2017 Regulations (as amended);
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation (where 'forest' is defined as "an area of land of more than 0.5 hectares with a tree canopy cover of at least 10% (excluding trees planted for the purpose of producing timber or other commodities)", which includes "land that is wholly or partly submerged in water whether temporarily or permanently");
- Require regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system.

### Hedgerow Regulations 1997

- 3.35 Important hedgerows are protected from removal by the Hedgerows Regulations<sup>25</sup> (as amended). Regulation 3 defines the hedgerows to which the Regulations apply. Regulation 4 sets out the criteria for identifying "important hedgerows" including ecological, landscape or historical/cultural reasons. Under the Hedgerow Regulations it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Works to "important hedgerows" are exempt under the Hedgerow Regulations if planning consent is granted which allows their removal.
- 3.36 The identification of important hedgerows also provides an additional means to value hedgerows aside from their botanical value (e.g., species richness) as the assessment of importance also includes characteristics relating to maturity and structure (e.g., associated features, connectivity, integrity) which will affect the functional value of the hedgerow.

### Protection of Badgers Act 1992

- 3.37 Badgers and their setts receive statutory protection under the Protection of Badgers Act 1992 (PBA)<sup>26</sup>. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett.
- 3.38 Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "any structure or place, which displays signs indicating current use by a badger."

<sup>24</sup> SCIs are established under the European Union Habitats Directive (92/43/EEC) and are (under the Habitats Directive) the pre-requisite step for establishing SACs and SPAs.

<sup>25</sup> The Hedgerow Regulations 1997 (SI 1997/1167) <https://www.legislation.gov.uk/uksi/1997/1160/>

<sup>26</sup> Protection of Badgers Act 1992 c. 51 <https://www.legislation.gov.uk/ukpga/1992/51/>

## Relevant Policy

### National Planning Policy Framework

- 3.39 The National Planning Policy Framework (NPPF21)<sup>27</sup> sets out the Government's planning policies for England and how these are expected to be applied at a local level in development plans and how developers should address them. The Framework places great emphasis on plans and developments contributing to sustainable development.
- 3.40 Relating to the planning and delivery of large-scale developments, Paragraph 22 requires that a vision should look at least 30 years ahead. Paragraph 73 identifies a number of considerations to help guide such large-scale proposals including consideration of opportunities presented by the scope for net environmental gains, ensuring sustainable communities, quality of places, rates of delivery and establishment of Green Belt around or adjoining new developments of significant size.
- 3.41 Paragraph 174 requires that planning policies and decisions should contribute to and enhance the natural and local environment by:
- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
  - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
  - maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
  - minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
  - preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
  - remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 3.42 Paragraph 180 requires local planning authorities to apply the following principles when determining planning applications:
- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

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<sup>27</sup> National Planning Policy Framework (2021) Ministry of Housing, Communities and Local Government  
[www.gov.uk/government/publications](http://www.gov.uk/government/publications)

- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
  - development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and;
  - development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”
- 3.43 Paragraph 181 stipulates that the following should be given the same protection as habitats sites<sup>28</sup>:
- potential Special Protection Areas and possible Special Areas of Conservation;
  - listed or proposed Ramsar sites; and
  - sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.
- 3.44 Paragraph 182 confirms the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

#### Government Circular 06/2005

- 3.45 Government Circular 06/2005<sup>29</sup> remains pertinent in national policy even though PPS9, which it originally supported, was revoked by the NPPF.
- 3.46 The Circular outlines the legislative provisions relating to biodiversity and geological conservation which affect planning and development. The Circular provides guidance on the protection of designated international and national nature conservation sites, non-designated sites, the conservation of species, and advice on the related issues and statutory powers.
- 3.47 Paragraphs 123 and 124 of Part IV of Circular 06/2005 state that “the likelihood of disturbing a badger sett, or adversely affecting badgers’ foraging territory, or links

<sup>28</sup> Defined by NPPF21 as “Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites”.

<sup>29</sup> Office of the Deputy Prime Minister (2005) ‘Government Circular: Geological and Biological Conservation – Statutory obligations and their implications within the planning system’ ODPM circular 06/2005, DEFRA circular 01/2005 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7692/147570.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf)

between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions. Although consideration of the case for granting a licence is separate from the process of applying for planning permission, a planning authority should advise anyone submitting an application for development in an area where there are known to be badger setts that they must comply with the provisions of the Act”.

### Local Planning Policy

- 3.48 The current Local Plan is the East Devon Local Plan 2013-2031, adopted 28<sup>th</sup> January 2016. The Local Plan is currently under review.
- 3.49 Spatial Strategy 5 relates to the Environment and aims to deliver sustainable development, to conserve and enhance natural, historic and built environmental assets, and to promote ecosystem services, green infrastructure and geodiversity. This strategy identifies a combination of measures from maximising green infrastructure and network creation in allocated sites to the designation of LNRs and CWS, conserving statutory and non-statutory nature conservation and wildlife sites (particularly the Exe Estuary and East Devon Pebblebed Heaths) and areas of value. The strategy strongly promotes contribution to or creation of new networks of greenspace.
- 3.50 Spatial Strategy 7 relates to Development in the Countryside, which (except where specific Local or Neighbourhood Plan policy explicitly permits) prevents development that would harm the landscape, amenity or environmental qualities within which it is located. This includes ‘traditional field boundaries’ and ‘areas of importance for nature conservation’.
- 3.51 Spatial Strategy 47 relates to Nature Conservation and Geology. Under this strategy, all developments need to (1) conserve the biodiversity and geodiversity value of land and buildings and minimise fragmentation of habitats; (2) maximise opportunities for restoration, enhancement and connection of natural habitats; and (3) incorporate beneficial biodiversity conservation features. A key focus of Strategy 47 is the protection of internationally and nationally designated sites. It includes specific policies relating to the Exe Estuary and the Pebblebed Heaths (and Dawlish Warren in Teignbridge), for which an over-arching strategic approach has been established in respect of increased recreational pressures and habitat mitigation that “*will typically negate the need for residential development schemes to be subject to individual Appropriate Assessment*”. “*Through this strategic approach monies collected through CIL, negotiated separately through Section 106 agreements or potentially otherwise paid or contributed through other means will address mitigation requirements.*”
- 3.52 Strategy 47 details SANGS provision as follows “*On-site mitigation measures are likely to be most appropriate in the very early years of the Local plan’s life. Off-site provision in the form of SANGS should aim for a target level of provision of around 8 hectares of open space provision for every net new 1,000 residents accommodated through development. At a residential density averaged at 2.2 persons per each new home built this will equate to around 176sqm of SANGS space per each net extra dwelling. However actual space standards will depend on the quality, character and*



*location of provision. SANGS will need to include substantial open space areas ideally of semi-natural character and should specifically be appealing to dog walkers. They can utilise land previously inaccessible to the public or arise from improvements of currently accessible but under-used spaces. To help ensure and secure timely delivery of mitigation, specifically SANGS, the Council has the option of exercising Compulsory Purchase Order powers to ensure availability of land."*

- 3.53 Additional mitigation measures relating to the internationally and nationally designated wildlife sites include a moratorium on any residential development within 400m of the East Devon Pebblebed Heaths and a requirement that new development within 400m of the Exe Estuary should be subject to a project level assessment to check for potential impacts on roost sites or key areas for birds outside the SPA boundary.
- 3.54 In addition to the Spatial Strategies, the Local Plan includes a comprehensive suite of Development Management Policies that provide more detail on the implementation and application of the strategic policies in the Local Plan. Of particular relevance to natural assets and the natural environment are the following:
- D1 Design and Local Distinctiveness
  - D3 Trees and Development Sites
  - EN2 The Valley Parks in Exmouth
  - EN4 Protection of Local Nature Reserves, County Wildlife Sites and County Geological Sites
  - EN5 Wildlife Habitats and Features
  - EN14 Control of Pollution
  - EN18 Maintenance of Water Quality and Quantity
  - EN21 River and Coastal Flooding
  - EN22 Surface Run-off Implications of New Development

## Biodiversity Initiatives and Strategies

### Local Biodiversity Action Plans (BAP)

- 3.55 The Devon BAP <sup>5</sup> covers a number of local district, unitary authority or planning area, such as the two National Park Authorities (Dartmoor and Exmoor), some but not all of which have local BAPs. Consequently, as a joint BAP, not all local priority habitats or species may be of direct relevance to each sub-county area. The relationship between sub-county local BAPs and the Devon BAP is not strictly hierarchical.
- 3.56 The Devon priority habitats include:
- |                                          |                         |
|------------------------------------------|-------------------------|
| Land:                                    | Sea:                    |
| ■ Alder/willow wet woodland              | ■ Estuaries action plan |
| ■ Caves, karst and limestone habitats    | ■ Rocky Foreshore       |
| ■ Cities, towns and villages             | ■ Rocky seabed          |
| ■ Dynamic coastal landforms and habitats |                         |

- Flower-rich meadows and pastures
  - Lowland heathland
  - Mines and mineral waste tip
  - Oak woodland
  - Parkland and wood pasture
  - Periglacial landscape
  - Pits, quarries & cuttings
  - Rhôs pasture
  - Sea Cliff and slope
  - Species-rich hedges
- Freshwater:
- Freshwater reedbed
  - Grazing marsh
  - Rivers, streams, floodplains and fluvial processes

3.57 The Devon priority species include:

- Plants:
- Golden hair lichen
  - Primrose
  - Devon whitebeam and related species
- Invertebrates:
- Freshwater pearl mussel
  - Great green bush-cricket
  - Marsh fritillary
  - Pearl-bordered fritillary
  - Pink seafan
  - Southern damselfly
  - White-clawed crayfish
- Birds:
- Barn owl
  - Cirl bunting
  - Curlew
  - Nightjar
- Fish:
- Atlantic salmon
- Mammals
- Brown hare
  - Greater horseshoe bat
  - Otter
  - Dormouse
  - Water vole

### Nature Recovery Network

- 3.58 Habitat Network maps are produced by Natural England in response to the Lawton report (*Making Space for Nature, A review of England's Wildlife Sites and Ecological Network*<sup>30</sup>).
- 3.59 These maps provide a useful baseline for the development of a Nature Recovery Network (NRN) as required within the 25 Year Environment Plan and for LRNS proposed within the Environment Act.
- 3.60 The Habitat Network maps in conjunction with other datasets and local knowledge can identify opportunities for biodiversity action. The Habitat Network comprises (a) Existing Habitats (HPI and associated habitats) and (b) Network Enhancement and Expansion Zones. These latter zones include:
- Network Enhancement Zone 1: Land connecting existing habitats which is likely to be suitable for habitat creation. Action in this zone to expand and join up existing habitat patches and improve the connections between them can be targeted here.
  - Network Enhancement Zone 2: Land connecting existing habitats which is less likely to be suitable for habitat creation. Action in this zone that improves the biodiversity

<sup>30</sup> Lawton, J.H., Brotherton, P.N.M., Brown, V.K., Elphick, C., Fitter, A.H., Forshaw, J., Haddow, R.W., Hilborne, S., Leafe, R.N., Mace, G.M., Southgate, M.P., Sutherland, W.A., Tew, T.E., Varley, J., & Wynne, G.R. (2010) *Making Space for Nature: a review of England's wildlife sites and ecological network*. Report to Defra

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value through land management changes and/or green infrastructure provision can be targeted here.

- Fragmentation Action Zone: Land within Enhancement Zone 1 that connects existing habitats patches which are currently highly fragmented and where fragmentation could be reduced by habitat creation.
- Network Expansion Zone: Land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape.

## 4.0 Wildlife Sites

### Statutory Sites

4.1 Internationally significant statutory wildlife designations within 10km are illustrated on Drawings G9631.002, 003 and 004 for Options 1, 2 and 3, respectively. Nationally significant statutory wildlife sites within 5km are illustrated on Drawings G9631.005, 006 and 007 for Options 1, 2 and 3, respectively. Regionally or locally significant statutory wildlife sites within 5km are illustrated on Drawings G9631.011, 012 and 013 for Options 1, 2 and 3, respectively. These statutory wildlife sites are summarised in Table 2 below. Distances are calculated between the closest points. Distances cited are approximate. Links to data forms and citations are provided, where applicable.

Table 2: Statutory wildlife sites

Site Name	Designation & Citation Link	Distance from Option			Reason for Designation
		1	2	3	
<b>Statutory wildlife sites of international significance within 10km of Option 1 (Drawing G9631.002), Option 2 (Drawing G9631.003), and Option 3 (Drawing G9631.004)</b>					
East Devon Pebblebed Heaths	SAC (ref UK0012602) <a href="#">JNCC Data Form Link</a>	2.8km east/south east	1.6km east/south east	2.3km east	Annex I habitats that are a primary reason for selection: <ul style="list-style-type: none"> <li>4010 Northern Atlantic wet heaths with <i>Erica tetralix</i></li> <li>4030 European dry heaths</li> </ul> Annex I habitats present as a qualifying feature but not a primary reason for selection: <ul style="list-style-type: none"> <li>n/a</li> </ul> Annex II species that are a primary reason for selection: <ul style="list-style-type: none"> <li>1044 Southern damselfly <i>Coenagrion mercurial</i></li> </ul> Annex II species present as a qualifying feature but not a primary reason for selection: <ul style="list-style-type: none"> <li>n/a</li> </ul>
East Devon Heaths	SPA (ref UK9010121) <a href="#">Standard Data Form Link</a>	2.8km east/south east	1.6km east/south east	2.3km east	Article 4.1 qualifying species: <ul style="list-style-type: none"> <li><i>Caprimulgus europaeus</i> (breeding)</li> <li><i>Sylvia undata</i> (breeding)</li> </ul>
Exe Estuary	SPA (ref UK9010081) <a href="#">Standard Data Form Link</a>	2.9km south west	2.9km south west	0.4km west	Article 4.1 qualifying species: <ul style="list-style-type: none"> <li><i>Podiceps auritus</i> (wintering)</li> <li><i>Recurvirostra avosetta</i> (breeding)</li> </ul> Article 4.2 qualifying species: <ul style="list-style-type: none"> <li><i>Branta bernicla bernicla</i> (wintering)</li> <li><i>Calidris alpina alpina</i> (wintering)</li> <li><i>Haematopus ostralegus</i> (wintering)</li> <li><i>Limosa limosa islandica</i> (breeding)</li> <li><i>Pluvialis squatarola</i> (winter)</li> </ul> Article 4.2 qualifying assemblage: <ul style="list-style-type: none"> <li><i>Podiceps auritus</i>, <i>Branta bernicla bernicla</i>, <i>Haematopus ostralegus</i>, <i>Recurvirostra avosetta</i>, <i>Pluvialis squatarola</i>, <i>Calidris alpina alpina</i>, <i>Limosa limosa islandica</i></li> </ul>

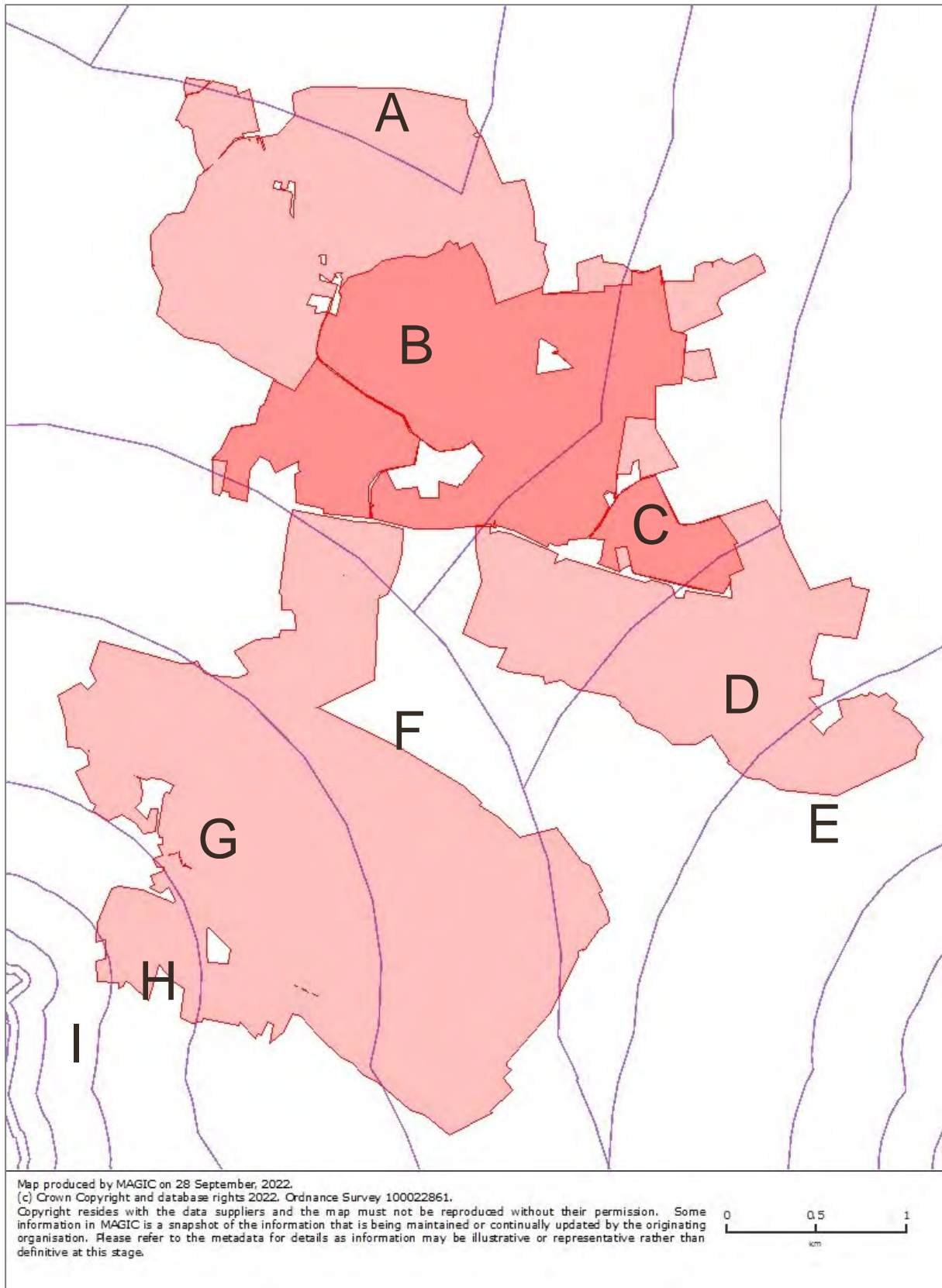


Site Name	Designation & Citation Link	Distance from Option			Reason for Designation
		1	2	3	
Exe Estuary	Ramsar (ref UK11025) <a href="#">Information Sheet (RIS) Link</a>	2.9km south west	2.9km south west	0.4km west	<p>Ramsar Criterion 5:</p> <ul style="list-style-type: none"> <li>Waterfowl assemblage</li> </ul> <p>Ramsar Criterion 6 – qualifying species</p> <ul style="list-style-type: none"> <li><i>Branta bernicla bernicla</i> (wintering)</li> </ul> <p>Ramsar Criterion 6 – future consideration</p> <ul style="list-style-type: none"> <li><i>Limosa limosa islandica</i> (wintering)</li> </ul> <p>Noteworthy flora:</p> <ul style="list-style-type: none"> <li>Sand crocus <i>Romulea columnae</i></li> <li>Parsley water dropwort <i>Oenanthe lachenalii</i></li> <li>Flowering rush <i>Butomus umbellatus</i></li> <li>Eelgrass <i>Zostera spp.</i></li> </ul> <p>Noteworthy fauna:</p> <ul style="list-style-type: none"> <li><i>Sterna albifrons albifrons</i> (breeding)</li> <li><i>Egretta garzetta</i> (spring/autumn)</li> <li><i>Numenius phaeopus</i> (spring/autumn)</li> <li><i>Tringa nebularia</i> (spring/autumn)</li> <li><i>Mergus serrator</i> (wintering)</li> <li><i>Rallus aquaticus</i> (wintering)</li> <li><i>Rallus aquaticus</i> (wintering)</li> <li><i>Tringa erythropus</i> (wintering)</li> </ul> <p>Species Information:</p> <ul style="list-style-type: none"> <li>Ruddy darter <i>Sympetrum sanguinum</i></li> <li>Hairy dragonfly <i>Brachyton pratense</i>.</li> <li><i>Ophelia bicornis</i></li> </ul>
Dawlish Warren	SAC (ref UK0030130) <a href="#">JNCC Data Form Link</a>	>10km south	9.4km south	7.1km south	<p>Annex I habitats that are a primary reason for selection:</p> <ul style="list-style-type: none"> <li>2190 Humid dune slacks</li> </ul> <p>Annex I habitats present as a qualifying feature but not a primary reason for selection:</p> <ul style="list-style-type: none"> <li>2120 "Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")"</li> <li>2130 "Fixed coastal dunes with herbaceous vegetation ("grey dunes")" * Priority feature</li> </ul> <p>Annex II species that are a primary reason for selection:</p> <ul style="list-style-type: none"> <li>1395 Petalwort <i>Petalophyllum ralfsii</i></li> </ul> <p>Annex II species present as a qualifying feature but not a primary reason for selection:</p> <ul style="list-style-type: none"> <li>n/a</li> </ul>
<b>Statutory wildlife sites of national significance within 5km of Option 1 (Drawing G9631.005), Option 2 (Drawing G9631.006), and Option 3 (Drawing G9631.007)</b>					
East Devon Pebblebed Heaths	SSSI (ref 1001461) <a href="#">Citation 1004364</a>	2.8km east/south east	1.6km east/south east	2.3km east	This is the largest block of lowland heath in Devon. It is a nationally important representative of the inland Atlantic-climate, lowland heathlands of Britain and north-west Europe. A significant feature of the site is the diversity of heathland associated communities, related to its large area and the range of substrate and topography. It also supports a wide range of birds (>70 breeding species, notably nightjar, hobby and Dartford warbler) and invertebrates (21 breeding

Site Name	Designation & Citation Link	Distance from Option			Reason for Designation
		1	2	3	
					dragonfly species including small red damselfly, southern damselfly and downy emerald damselfly in addition to the bog bush cricket).
Exe Estuary	SSSI (ref 1001136) Citation 1002089	2.9km south west	2.9km south west	0.4km west	The waters, foreshore and low-lying land of the Exe Estuary are of international importance for wintering wildfowl (>10,000) and waders (>20,000). Many rare species of plant occur too, whilst the sandbanks and mudflats support communities of invertebrates that are of national significance. The site also contains key features of geological interest and has been the subject of considerable scientific research.
Dawlish Warren	SSSI (ref 1001161) <a href="#">Citation 1003137</a>	>10km south	>5km south	>5km south	An area of international importance for several species of wildfowl and wading birds. It is particularly noted for its flora (orchids and the only mainland British population of the Warren crocus <i>Romulea columnae</i> var <i>occidentalis</i> ) and over-wintering and migratory bird populations. Saltmarsh flora includes eelgrass <i>Zostera</i> spp, provides particularly important food for wildfowl. Several insects recorded with limited mainland distribution including the sand wasp <i>Ammophila sabulosa</i> .
Pebblebed Heaths	NNR (ref 1460452) <a href="#">Link</a>	2.8km east/south east	1.6km east/south east	2.3km east	Pebblebed Heaths is the largest block of lowland heath in Devon. It's an internationally important representative of the inland Atlantic-climate, lowland heathlands of Britain and north-west Europe.  The NNR is managed by Clinton Devon Estates, the Pebblebed Heaths Conservation Trust, RSPB and Devon Wildlife Trust.  A significant feature of the site is the diversity of heathland-associated plant and animal communities that reflect the varied topography, geology, hydrology and water chemistry of the area. The majority of this NNR is also designated as site of special scientific interest (SSSI), special area of conservation (SAC), special protection area (SPA), and forms part of the landscape of the East Devon Area of Outstanding Natural Beauty (AONB).
Dawlish Warren	NNR (ref 1007657) <a href="#">Link</a>	>5km south	>5km south	>5km south	Dawlish Warren NNR includes the full range of coastal habitats, from mudflats to sand dunes. The reserve provides shelter and food for up to 12,000 wading birds and also helps to protect the Exe Estuary from wave action, which is particularly important during storm events.  Dawlish Warren is jointly owned and managed by Teignbridge District Council and the Devon Wildlife Trust.
<b>Statutory wildlife sites of regional/local significance within 5km of Option 1 (Drawing G9631.008), Option 2 (Drawing G9631.009), and Option 3 (Drawing G9631.010)</b>					
Exmouth	LNR (ref 1008887) <a href="#">Link</a>	>5km south	>5km south	4.3km south	The site is good for passage and wintering estuary bird and has a flower-rich bankside in summer. It is important for invertebrates.  Owned and managed by East Devon District Council

- 4.2 Option 1 overlaps with five SSSI IRZ (A, B, C, D and F illustrated in Figure 2). Proposals relevant to the risk thresholds (applying fully or partially across the Option) include aviation, wind turbines, minerals/ROMPs, residential development 50+ units, non-residential development >1ha, air pollution, combustion, waste and discharges.
- 4.3 Option 2 overlaps five SSSI IRZ (B, C, D, E and F illustrated in Figure 2). Proposals relevant to the risk thresholds (applying fully or partially across the Option) include aviation, wind turbines and solar >0.5ha, minerals/ROMPs, residential development 50+ units, non-residential development >1ha, air pollution, combustion, composting >75kt, waste and discharges.
- 4.4 Option 3 overlaps six SSSI IRZ (B, D, F, G, H, and I illustrated in Figure 2). Proposals relevant to the risk thresholds (applying fully or partially across the Option) include aviation, pipelines/cables, any transport (road/rail/water), wind turbines and solar >0.5ha, minerals/ROMPs, residential development 50+/1+/any units, non-residential development >1ha/0.2ha, air pollution, combustion, composting, waste and discharges.
- 4.5 All IRZs overlapping the three options apply “Strategic solutions” (Note 1 in Table 3). These relate to the Recreational Buffer Zones applied to the Exe Estuary and East Devon Pebblebed Heaths. In both cases, the buffer zone applied is 10km. Part of Option 2 and the majority of Option 3 are also within 10km of Dawlish Warren. Spatial Strategy 47 of the East Devon Local Plan 2013-2031 adopted January 2016 applies. Further details are discussed in Section 3 (paragraphs 3.51 to 3.53).

Figure 2: SSSI Impact Risk Zones crossed by the options (refer to Table 3 for IRZ criteria)





*Table 3: SSSI Impact Risk Zones crossed by the options*

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?

2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

1 PROPOSAL	2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:								
IRZ	A	B	C	D	E	F	G	H	I
Option	1	1,2,3	1,2	1,2, 3	2	1,2,3	3	3	3
All Planning Applications	-	-	-	-	-	-	-	-	All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/ structures.
Infrastructure	Airports, helipads and other aviation proposals.	Airports, helipads and other aviation proposals.	Airports, helipads and other aviation proposals.	Airports, helipads and other aviation proposals.	Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Airports, helipads and other aviation proposals.	Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
Wind & Solar Energy	-	-	-	Wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.	Wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.

1 PROPOSAL	2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:								
IRZ	A	B	C	D	E	F	G	H	I
Option	1	1,2,3	1,2	1,2, 3	2	1,2,3	3	3	3
Minerals, Oil & Gas	-	-	-	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
Rural Non-Residential	-	-	-	-	Large non-residential developments outside existing settlements/urban areas where footprint exceeds 1ha.	-	Large non-residential developments outside existing settlements/urban areas where footprint exceeds 1ha.	Large non-residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m <sup>2</sup> or footprint exceeds 0.2ha.	Large non-residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m <sup>2</sup> or footprint exceeds 0.2ha.
Residential	-	-	-	-	Residential development of 50 units or more.	-	Residential development of 50 units or more.	Residential development of 50 units or more.	Residential development of 50 units or more.
Rural Residential	-	-	-	-	Any residential development of 50 or more houses outside existing settlements/urban areas.	-	Any residential development of 50 or more houses outside existing settlements/urban areas.	Any residential development of 10 or more houses outside existing settlements/urban areas.	Any residential developments outside of existing settlements/urban areas with a total net gain in residential units.

1 PROPOSAL 2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:									
IRZ	A	B	C	D	E	F	G	H	I
Option	1	1,2,3	1,2	1,2, 3	2	1,2,3	3	3	3
Air Pollution	Livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 4000m <sup>2</sup> .	Any industrial/ agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 750m <sup>2</sup> , manure stores > 3500t).	Any industrial/ agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 750m <sup>2</sup> , manure stores > 3500t).	Any industrial/ agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 750m <sup>2</sup> , manure stores > 3500t).	Any industrial/ agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 200m <sup>2</sup> , manure stores > 250t).	Any industrial/ agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 750m <sup>2</sup> , manure stores > 3500t).	Any industrial/ agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 200m <sup>2</sup> , manure stores > 250t).	Any industrial/ agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 200m <sup>2</sup> , manure stores > 250t).	Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).
Combustion	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/ gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

1 PROPOSAL	2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:									
IRZ	A	B	C	D	E	F	G	H	I	
Option	1	1,2,3	1,2	1,2, 3	2	1,2,3	3	3	3	
Waste	-	-	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.
Composting	-	-	-	-	Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	-	Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
Discharges	Any discharge of water or liquid waste of more than 20m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 5m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 5m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 2m <sup>3</sup> /day to ground (i.e., to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste that is discharged to ground (i.e., to seep away) or to surface water, such as a beck or stream.

1 PROPOSAL	2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:								
IRZ	A	B	C	D	E	F	G	H	I
Option	1	1,2,3	1,2	1,2, 3	2	1,2,3	3	3	3
Water Supply	-	-	-	-	Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m <sup>2</sup> or more.	-	Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m <sup>2</sup> or more.	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m <sup>2</sup> or any development needing its own water supply.	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m <sup>2</sup> or any development needing its own water supply.
Notes 1	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.	Strategic solutions are in place. Please contact your Local Planning Authority as they have the information to advise on specific requirements.

GUIDANCE - *How to use the impact guidance*



## Non-Statutory Wildlife Sites

- 4.6 Table 4 summarises the non-statutory locally designated wildlife sites identified within 5km (in respect of sites designated for bird life) or 1km (for other wildlife sites) of the option areas. Distances are calculated between the closest points. Distances cited are approximate.
- 4.7 Data relating to local wildlife sites, comprising County Wildlife Sites (CWS), Other Sites of Wildlife Interest (OSWI), Unconfirmed Wildlife Sites (UWS), Valley Parks, Green Spaces and Special Verge Sites, were provided by DBRC. These sites, in so far as they fall within 1km of the option areas, are illustrated at Drawings G9631.041, 042 and 043 for Options 1, 2 and 3, respectively.

Table 4: non-statutory local wildlife sites

Site Name	Status	Distance from Option			Key Interest Feature(s)
		1	2	3	
Exe Estuary	RSPB reserve	3.1km south west	3.1km south west	0.6km west	Components within Exe Estuary SPA/Ramsar/SSSI
Aylesbeare Common	RSPB reserve	3.1km east	2km east	4.4km east	Components within East Devon Pebblebed Heaths SAC/SPA/NRR/SSSI (except for a small standalone component west of the B3180 which lies closest to all options)
Exe Estuary	Important Bird Area <sup>31</sup>	1.4km west	1.4km west	0.3km west	Overlaps with Exe Estuary SPA/Ramsar/SSSI but extends further north along the estuary. A complex of habitats, extending over 10 km south from Exeter to the open sea at Dawlish Warren. Broad intertidal flats and grazing-marshes are the dominant habitats. Extensive mussel, eelgrass <i>Zostera</i> and algal beds and a sand-spit further increase the habitat diversity. The site is important for wintering and passage wildfowl and waders, and for breeding <i>Cettia cetti</i> . Populations of IBA trigger species: <ul style="list-style-type: none"> <li>■ Horned grebe <i>Podiceps auritus</i></li> <li>■ Pied avocet <i>Recurvirostra avosetta</i></li> <li>■ Bar-tailed godwit <i>Limosa lapponica</i></li> <li>■ Black-tailed godwit <i>Limosa limosa</i></li> <li>■ Species group - waterbirds</li> </ul>
East Devon Heaths	Important Bird Area <sup>32</sup>	2.8km east/south east	1.6km east/south east	2.3km east	Overlaps with East Devon Pebblebed Heaths SAC/SPA/NRR/SSSI. These areas form the largest blocks of lowland heath in Devon. The site supports a range of breeding heathland birds. Populations of IBA trigger species: <ul style="list-style-type: none"> <li>■ European nightjar <i>Caprimulgus europaeus</i></li> <li>■ Dartford Warbler <i>Curruca undata</i></li> </ul>

<sup>31</sup> BirdLife International (2022) Important Bird Areas factsheet: Exe Estuary <http://www.birdlife.org> [Accessed October 2022].

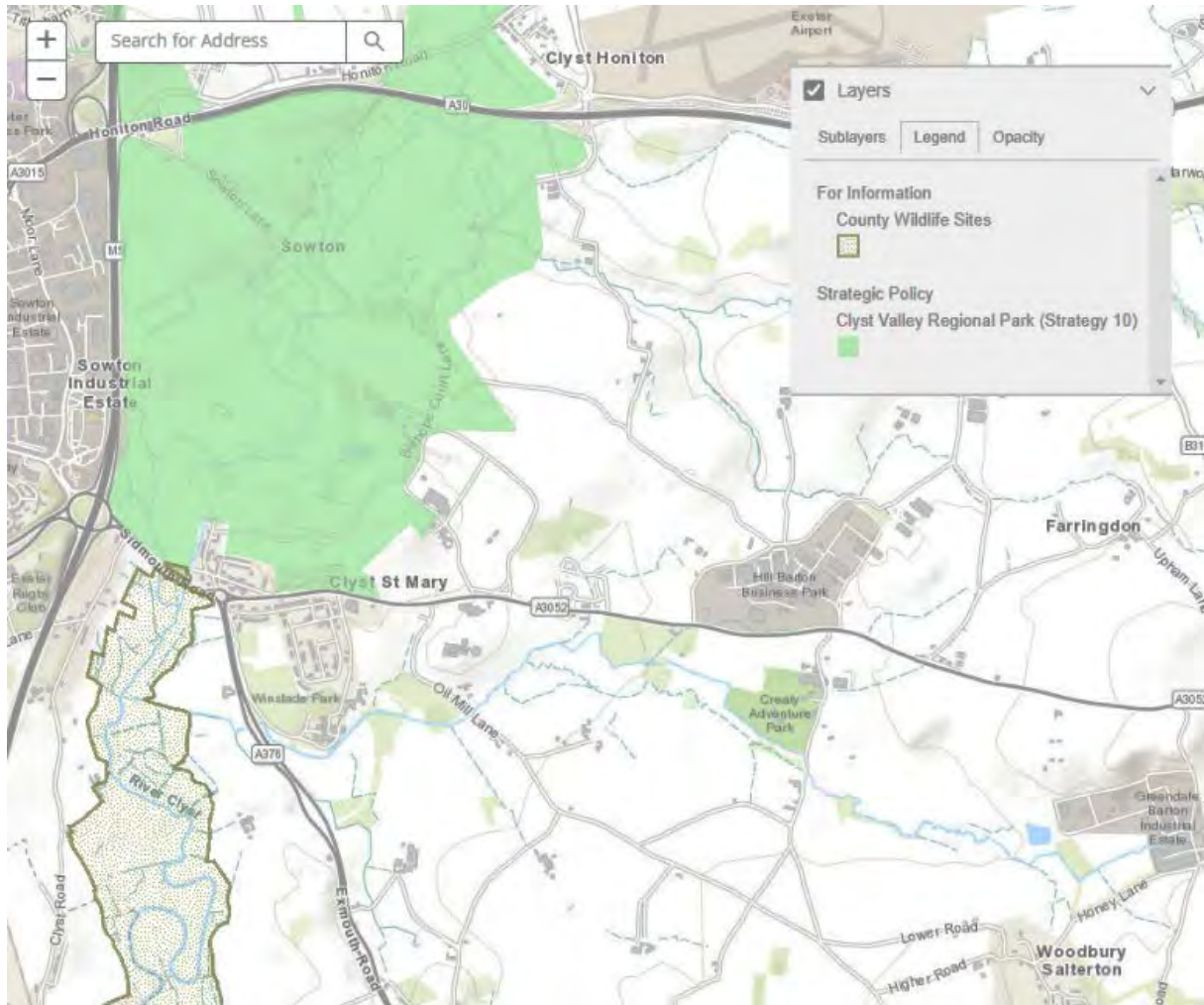
<sup>32</sup> BirdLife International (2022) Important Bird Areas factsheet: East Devon Heaths <http://www.birdlife.org> [Accessed October 2022].

Site Name	Status	Distance from Option			Key Interest Feature(s)
		1	2	3	
Clyst Marshes	CWS	>1km south west	>1km south west	0.5km west	Semi-improved marshy grassland, saltmarsh, riverside vegetation and species-rich ditches
Rockham Wood	CWS	0.5km south east	>1km south east	>1km east	Ancient and non-ancient lowland mixed deciduous woodland
Hogsbrook Wood	CWS	>1km south east	0.3km south	>1km east	Ancient semi-natural woodland
Beautiport Farm	CWS	>1km north east	0.9km north east	>1km north east	Unimproved neutral grassland
Farringdon School	CWS	0.4km east	0.2km east	>1km north east	Abandoned swimming pool with amphibian interest
Beautiport	CWS	0.9km north east	0.8km north east	>1km north east	Small ponds with amphibian interest
Bishop's Court Pond	OSWI	0.4km west	0.8km west	>1km north west	Parkland lake
Sowton - Winslade Park Marshes	OSWI	0.5km west	0.9km west	>1km north west	Floodplain grazing marsh
Venn's Marsh	OSWI	Adjacent	>1km west	>1km north west	Floodplain grazing marsh
Broadclyst Moor - Dymond's Bridge Marsh	OSWI	0.1km north	>1km north west	>1km north	Floodplain grazing marsh
Trixhayes Farm	OSWI	0.4km east	>1km east	>1km east	Semi-improved neutral grassland
Exeter Airport	OSWI	0.7km north east	>1km north	>1km north	Marshy grassland
Cat Copse	UWS	Fully within option	Fully within option	0.4km north	Secondary woodland
Dymond's Bridge Orchard	UWS	Fully within option	0.7km west	>1km north	Orchard
Sowton - Winslade Park Marshes	UWS	0.4km west	0.9km west	0.5km north west	Possible floodplain grazing marsh
Venn's Marsh	UWS	Adjacent	1km west	>1km north west	Possible floodplain grazing marsh
Broadclyst Moor - Dymond's Bridge Marsh	UWS	Partly within option	1km west	>1km north west	Possible floodplain grazing marsh

Site Name	Status	Distance from Option			Key Interest Feature(s)
		1	2	3	
Bishop's Court	pCWS	Adjacent	0.7km west	>1km north west	Parkland with veteran trees
Farringdon Wood	UWS	Adjacent	Partly within option	>1km north east	Secondary woodland
Great Covert	UWS	0.9km north east	0.3km north east	>1km north east	Secondary woodland
Farringdon	UWS	Adjacent	Partly within option	>1km north east	Parkland with veteran trees
Green Spaces	A	>1km south west	>1km south west	1km west	Semi-improved amenity grassland, trees (native and non-native), ponds, hedges. Survey card notes area is for invertebrates: dragonflies, butterflies, grasshoppers, crickets.
Green Spaces	A	>1km south west	>1km south west	1km west	Dense salt marsh. Buffers SSSI which is a continuation of this habitat. Habitat of principle importance but no species information.
Green Spaces	A	>1km south west	>1km south west	0.8km south west	Scrub, woodland. Semi-natural formation
Green Spaces	A	>1km south west	>1km south west	0.8km south west	Scrub, woodland. Semi-natural formation
Green Spaces	A	>1km south west	>1km south west	0.8km south west	Rough grassland, trees, scrub, urban. The banks of the railway line are steep in places with areas of semi-natural habitat.
Green Spaces	B	>1km south west	>1km south west	1km west	Conifer plantation
Exeter Riverside Valley Park	Valley Park	>1km south west	>1km south west	0.6km south west	Exe Valley with semi-improved neutral grassland, tidal estuary with mudflats, saltmarsh, reedbeds and marshy grassland
	Special Verge Site	>1km south west	>1km south west	0.01km west	

4.8 In addition to the above non-statutory sites, the EDDC Local Plan Interactive Map identifies land from north of the A30 to Sidmouth Road, and from east of Bishop's Court Road to the M5 (encompassing the corridor of local wildlife sites along the River Clyst), as allocated for delivery of The Clyst Valley Regional Park. Strategy 10 of the EDDC East Devon Local Plan 2013-2031 Adopted 28 January 2016 applies. The Park will be high quality green spaces linked by trails. Land to accommodate the Park is allocated on the Proposals Map. An extract of the EDDC Local Plan Interactive Map is presented at Figure 3.

Figure 3: Extract of EDDC Local Plan Interactive Map [Accessed 05/10/2022]



4.9 This proposed Valley Park includes land within Option 1, in the west (east of Bishop's Court Road) and north (south of the A30, west of Bishop's Court Road).

## 5.0 Notable Habitats

### Irreplaceable Habitats

- 5.1 No ancient woodland is identified within any option areas.
- 5.2 The landscape across Farringdon UWS, adjacent to Option 1 in the east, and Bishop's Court UWS adjacent to Option 1 in the west, are indicated to comprise parkland with veteran trees (Table 4).
- 5.3 Data relating to Tree Preservation Orders (TPO) was not available at the time of writing. The Woodland Trust ancient tree inventory<sup>33</sup> was reviewed. This identified two potential veteran trees and two potential notable trees along Bishop's Court Lane (west boundary of Option 1). These are mainly pedunculate oak with one Turkey oak. Numerous ancient, veteran and notable trees were identified on the inventory across parkland west of Bishops Court Lane (to the west of Option 1). Two ancient trees (Anne's Great Oak and a lime) were identified on the inventory which appear to be associated with Farringdon UWS, in a field adjacent to Option 2 to the east, and slightly further east of Option 1. The inventory also identifies a notable tree (a giant sequoia) adjacent to Option 3, in Clyst St George north of Woodbury Road.

### Habitats of Principal Importance (HPI)

- 5.4 HPI within Option 1 are illustrated on Drawing G9631.017. The only potential areas of pre-recorded habitats identified as HPI listed on Natural England's Priority Habitat Inventory are small areas of traditional orchard at Dymond's Farm (Dymond's Bridge Orchard UWS), woodlands (including Cats Copse UWS) and grassland (part of Broadclyst Moor-Dymond's Bridge Marsh UWS).
- 5.5 A major habitat corridor links local wildlife sites along the River Clyst (east of the M5 and west of Option 1) comprises floodplain grazing marsh (HPI and DBAP) and range of other wetland and woodland HPI associated with the river. A small area of floodplain grazing marsh overlaps with Option 1 in the north, associated with Broadclyst Moor-Dymond's Bridge Marsh UWS which partially overlaps the option.
- 5.6 A number of watercourses and ponds are identified on OS maps within the Option area. Aylesbeare Stream flows across the site to the River Clyst in the west and a number of other tributaries and small streams/drains are present. Most watercourses appear wooded along significant lengths or are at least associated with lines of trees.
- 5.7 Aerial imagery (Google Earth) indicates the Option area comprises primarily agricultural land with an extensive hedgerow network, some orchard (e.g., Bishop's Court Orchard UWS) and pockets of woodland and scattered trees. Cat's Copse UWS is the most significant area of woodland within the Option, in addition to the tree lined watercourses crossing the option area (most notably, Aylesbeare Stream in the

<sup>33</sup> <https://ati.woodlandtrust.org.uk/> [Accessed 05/10/2022]

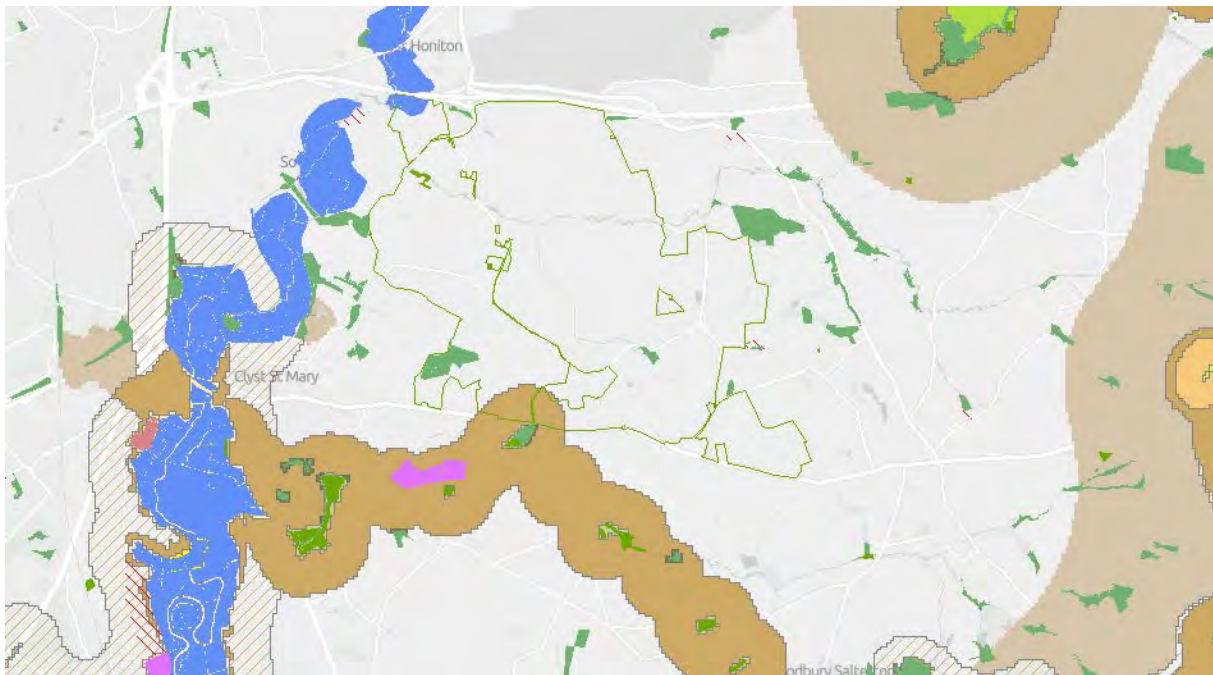


- north). The whole of Option 1 falls within an area of landscape characterised by elm-dominated hedgerows.
- 5.8 HPI within Option 2 are illustrated on Drawing G9631.018. Option 2 contains similar habitat types to Option 1, except no floodplain grazing marsh or traditional orchard are recorded on the Priority Habitat Inventory within the option boundary. Cats Copse UWS is again the most substantial area of woodland within the option. The landscape across Farringdon UWS, partly overlapping Option 2 in the northeast is indicated to comprise woodpasture and parkland HPI. The UWS description provided by DBRC indicates the presence of veteran trees (although as noted above, the two ancient trees identified on the Woodland Trust's ancient tree inventory are to the east of the option boundary).
- 5.9 Aerial imagery (Google Earth) indicates Option 2 comprises primarily agricultural land with an extensive hedgerow network and pockets of woodland and scattered trees. The whole of Option 2 is within an area of landscape characterised by elm-dominated hedgerows.
- 5.10 A number of small watercourses criss-cross the Option area, most are likely to feed Aylesbeare Stream (north) or Grindle Brook (south). Numerous ponds are identified on OS maps within and around the Option area.
- 5.11 HPI within Option 3 are illustrated on Drawing G9631.019. Pre-recorded HPI listed on Natural England's Priority Habitat Inventory within Option 3 appears limited to small pockets of woodlands and two small areas of traditional orchard (south of the A3052 and at Postlake Farm) (Drawing G9631.019).
- 5.12 Aerial imagery (Google Earth) indicates the site comprises primarily agricultural land with an extensive hedgerow network and pockets of woodland and scattered trees. The whole site falls within an area of landscape characterised by elm-dominated hedgerows. At a high level, field sizes appear smaller with a higher proportion of tree lines along field boundaries in the northern extent of the east of Option 3.
- 5.13 Grindle Brook crosses Option 3 in the far north, with numerous other small watercourses/drains crossing the Option area and likely to feed either Grindle Brook (north) or the River Clyst (west). Few ponds are identified on OS maps within the Option area, but numerous ponds are shown around the option area particularly to the east and the south.

## Nature Recovery Network

- 5.14 Aside from the major habitat corridor in the west, a corridor running east-west to the south edge of Option 1 is identified within the Network Enhancement Zone 1 of the Habitat Network (Figure 4). A small proportion of the south of this enhancement zone corridor overlaps with Option 1 in the south.

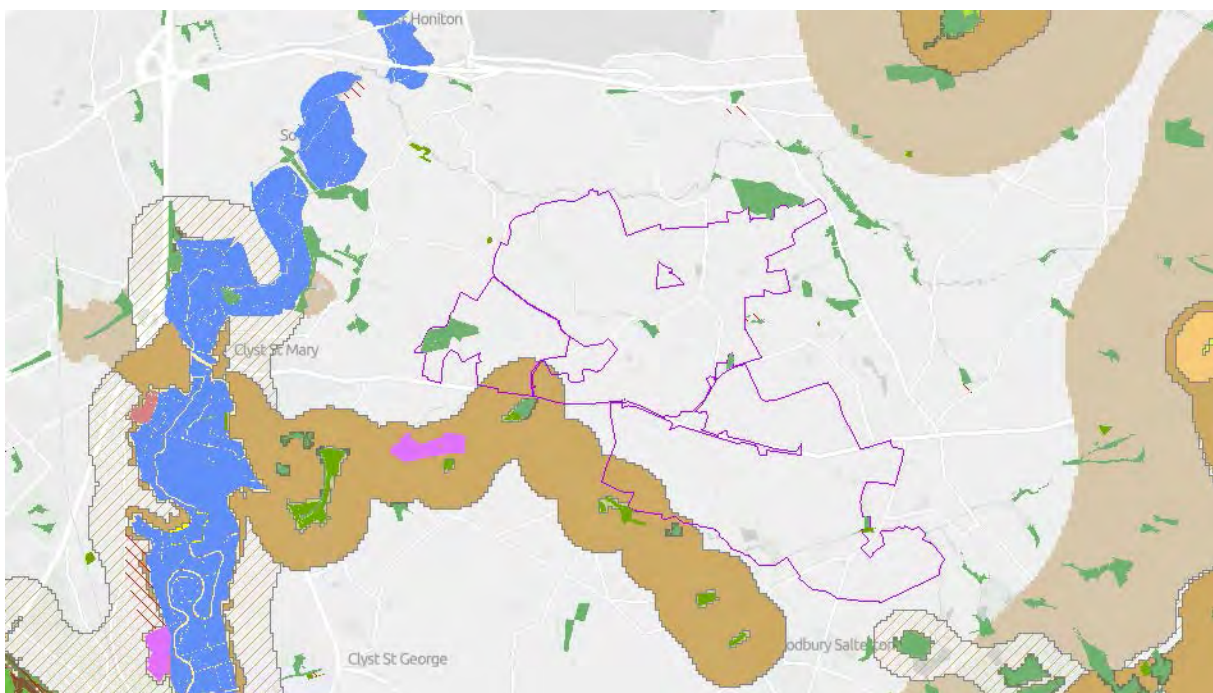
*Figure 4: Option 1 position within the ecological network (Habitats of Principal Importance and National Habitat Network Combined)*



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5.15 A small proportion in the south and west of Option 2 overlaps with Network Enhancement Zone 1 of the Habitat Network (Figure 5).

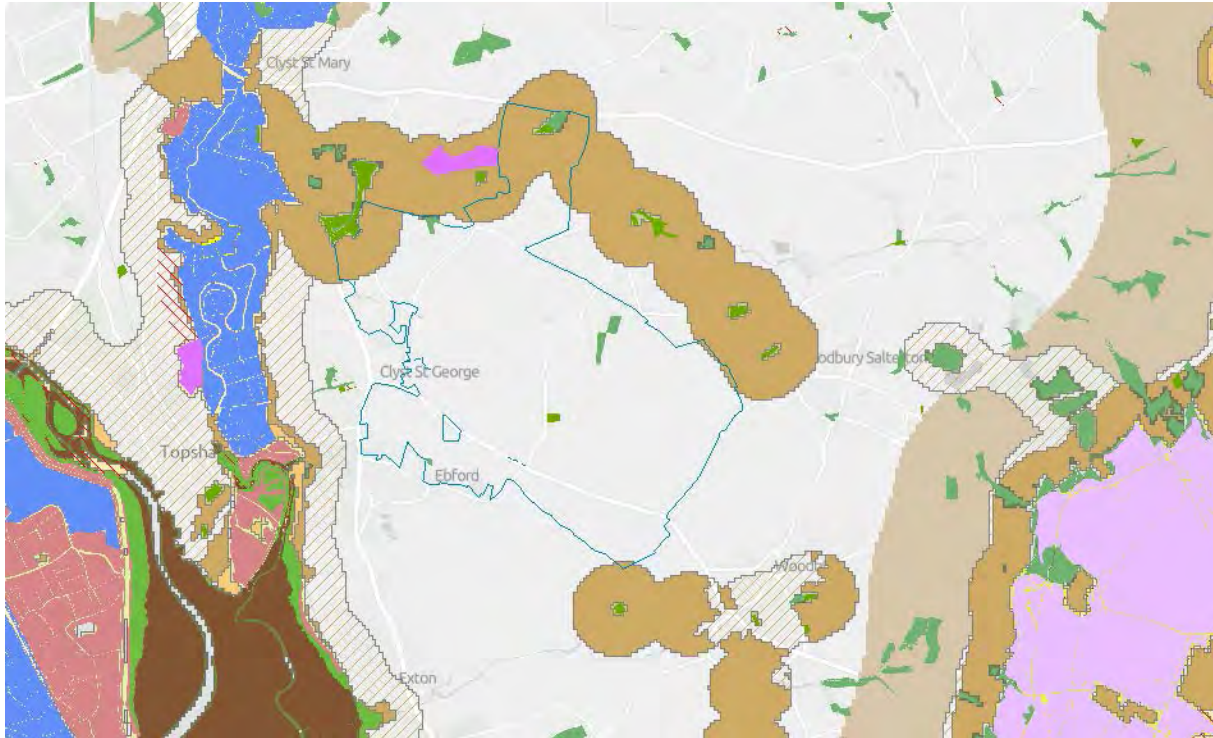
*Figure 5: Option 2 position within the ecological network (Habitats of Principal Importance and National Habitat Network Combined)*



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- 5.16 The north and northwest of Option 3 overlap with Network Enhancement Zone 1 of the Habitat Network (Figure 6).

*Figure 6: Option 3 position within the ecological network (Habitats of Principal Importance and National Habitat Network Combined)*



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- 5.17 The National Habitat Network is also displayed with HPI on Drawings G9631.017 to G9631.019 for Options 1 to 3, respectively.



## 6.0 Protected and Notable Species

### Protected Species Licences

- 6.1 Two Natural England mitigation licences for hazel dormouse have been granted adjacent to Option 1 (Drawings G9631.020) in the north (along the A30). The licences data from 2014 to 2019 and from 2019 to 2022.
- 6.2 Two Natural England mitigation licences have been granted within the northwest of Option 3 (around Court Brook Farm and Amberleigh House and dating from 2017 to 2022 and 2013 to 2014, respectively). Species included under these licences were brown long-eared bat, lesser horseshoe, common pipistrelle and serotine.
- 6.3 Several other licences have been granted in the surrounding landscape, for either hazel dormouse or bat species (Drawings G9631.020 to G9631.023).
- 6.4 No Natural England mitigation licences were identified within the search area for GCN. One GCN Class Survey Licence Return was identified from Farringdon House, within 250m east of Option 2 and within 500m east of Option 1. Two other positive GCN licence return records were identified within 5km northeast of Option 1 and southeast of Option 3.

### Pre-existing Species Records

- 6.5 Numerous species records were returned from the 1km search areas in and around the three options. Drawings G9631.023 to G9631.040 present the species records data for Options 1 to 3, with accompanying data tables which cross-reference the record identifiers. Species records returned from within 1km of the Option areas are summarised in Table 5.
- 6.6 Option 1 recorded 12 Devon notable flora species within 1km and two non-native invasive species (Drawing G9631.023), although none were recorded actually within the Option area (total of 16 flora records). No Important Plant Areas were identified within 10km. The Summarised Botanical Value Map 2021 (BSBI) indicates the majority of the Option area is of moderate value (northwest) to low value (southeast). High value areas are located west of the Option area to the M5 and south of the A3052 (Creely Cross and Honey Lane). This distribution broadly accords with the combinations of statutorily and non-statutorily designated wildlife sites, priority habitats and the National Habitat Network.
- 6.7 Option 1 is fully within Devon GCN Consultation Zone. There are an estimated six waterbodies within Option 1 and an estimated seven waterbodies within 500m, most of which are to the southeast. GCN presence (EPS, WCA5, SPI) is confirmed likely within at least some of these waterbodies by licence returns from waterbodies located at Farringdon House, within 500m to the east, although no EPS mitigation licences were identified for GCN. A total of 14 records for four amphibian species, including GCN (EPS, SPI) and common toad (SPI) were identified within 1km of Option 1. Only

- one record (for common toad SPI) was within the option boundary (Drawing G9631.026).
- 6.8 Five records of two reptiles (WCA5, SPI) were identified within 1km of Option 1, although none within the Option area (Drawing G9631.026).
- 6.9 There were 41 records for 21 BoCC species recorded within 1km, including four Schedule 1 species. Two BoCC, including one Schedule 1 species, were recorded within the Option 1 (Drawing G9631.029). Land north of the A30 is indicated to be of potential importance or is targeted for cirl bunting conservation, although Option 1 is not located within the Cirl Bunting Consultation Zone.
- 6.10 A total 269 records for 10 bat species recorded within 1km of Option 1, although no records within the option boundary (Drawing G9631.032). Species recorded include Annex II species lesser and greater horseshoe and barbastelle. No EPS licences identified within the Option area, although 8 were identified within 1km, to the southwest, south and north.
- 6.11 Eight protected or notable other mammal species were recorded within 1km (Drawing G9631.035). Of these, badgers (PBA) are recorded within the site. Hazel dormouse (EPS, WCA5, SPI) is recorded from EPS licenses adjacent to Option 1 in the north (A30 corridor) and to the northwest of the Option area (Drawing G9631.020) with other records to the southwest and east (Drawing G9631.035).
- 6.12 A total 19 records for five protected/notable invertebrate species recorded within 1km, all Lepidoptera. Two species recorded from within site (Drawing G9631.038). Land to the west extent of Option 1 is identified as target area for brown hairstreak conservation measures.
- 6.13 One Devon notable flora species was recorded within Option 2. Nine Devon notable flora species and two non-native invasive species recorded within 1km (total of 17 flora records) (Drawing G9631.024). No Important Plant Areas are within 10km. The Summarised Botanical Value Map 2021 (BSBI) indicates the Option area is of moderate value (west) to low value (majority) with high value in the south (Honey Lane area).
- 6.14 Option 2 is fully within Devon GCN Consultation Zone. There are an estimated seven waterbodies within Option 2 and an estimated 16 waterbodies within 500m, most of which are to the southeast. GCN presence is confirmed likely through a positive survey licence return within 250m east of Option 1 (at Farringdon House. A total of 17 records for four amphibian species within 1km, including GCN (EPS, SPI) and common toad (SPI), although none identified within site (Drawing G9631.027).
- 6.15 Three records for two reptiles (SPI) recorded within 1km of Option 2, although none were within the option boundary.
- 6.16 A total 28 records for 18 BoCC species were recorded within 1km of Option 2, including six Schedule 1 species. Four BoCC (two Schedule 1) records originate within the option boundary (Drawing G9631.030). The southeast of Option 2 is indicated to be of potential importance or is targeted for turtle dove conservation.



- 6.17 A total 239 records for 10 bat species was recorded within 1km of Option 2, although no records were within the option boundary (Drawing G9631.032). Species recorded include Annex II species lesser and greater horseshoe and barbastelle. No EPS licences identified within the option area, although six were identified within 1km, mainly to the southwest (Drawing G9631.021).
- 6.18 There were 38 records for ten mammal species identified within 1km of Option 2, including hazel dormouse (EPS, SPI, DBAP) and otter (EPS, SPI, DBAP). Nine of these records for three species, including otter, are estimated to originate from within the option boundary (Drawing G9631.036). Three EPS licences for hazel dormouse were identified within 1km (Drawing G9631.021).
- 6.19 A total 101 records for 62 protected/notable invertebrate species were recorded within 1km of Option 2. The majority of records are Lepidoptera. Five records for two species originate from within the Option area (Drawing G9631.038). The west extent of Option 2 is identified as target area for brown hairstreak conservation measures.
- 6.20 There were 85 records of 39 protected or Devon notable flora species identified within 1km of Option 3, although none with the option boundary and the majority of the records appear to originate from the River Clyst corridor to the west (Drawing G9631.025). No Important Plant Areas were identified within 10km. The Summarised Botanical Value Map 2021 (BSBI) indicates Option 3 is of moderate value (northwest) to low value (southeast). High value areas are adjacent to the northwest, west and southwest.
- 6.21 Option 3 is fully within Devon GCN Consultation Zone. An estimated four waterbodies are within the option boundary and an estimated 14 waterbodies are within 500m, most of which are found within a high density pond cluster to the south. No EPS licences or licence returns confirming presence of GCN were identified within 1km of the Option area. A total of 7 records for 3 amphibians (including common toad SPI) were identified within 1km, although none within the option boundary (Drawing G9631.028).
- 6.22 There seven records for two reptile species (SPI) recorded within 1km of Option 3, but none within the option boundary (Drawing G9631.028).
- 6.23 Two fish records, one for sea lamprey (SPI) and one for European eel (SPI) were recorded within 1km to the west of Option 3, associated with River Clyst corridor.
- 6.24 A total 84 records for 58 BoCC species were identified within 1km of Option 3, including 16 Schedule 1 species. Seven records for six BoCC species (one Schedule 1) were within the option boundary (Drawing G9631.031). The Exe Estuary west of the Option area is identified to be an Important Bird Area which is the origin of the majority of records identified. The west of the Option area falls within the coverage of 'grassland bird assemblage', suggesting the landscape may be of importance for supporting grassland dependant farmland species (including lapwing and redshank) Although not within the Devon Cirl Bunting Consultation Zone, the option boundary is 0.45km north and 1.1km west of these consultation zones.

- 6.25 A total 208 records for 11 bat species were identified within 1km of Option 3, although none were within the option boundary (Drawing G9631.033). Species recorded included Annex II species lesser horseshoe and barbastelle. Two bat EPS licences (including lesser horseshoe bat, brown long-eared bat, common pipistrelle and serotine) appear to originate from within the option boundary in the west. A further seven were identified within 1km, mainly to the west (Drawing G9631.022). South Hams SAC Landscape Connectivity Zone for greater horseshoe bats is located approximately 5km to the southwest (west of the Exe Estuary).
- 6.26 A total 34 records for 10 mammal species were identified within 1km of Option 3, including hazel dormouse (EPS, SPI, DBAP) and otter (EPS, SPI, DBAP). Of these, 3 records for five species, including otter, appear to originate from within the option boundary (Drawing G9631.037). Three EPS licences for hazel dormouse were identified within 1km to the west and a fourth to the southeast (Drawing G9631.022).
- 6.27 There were 141 records for 70 protected or notable invertebrate species recorded within 1km, with 1-3 species potentially recorded from within site (Drawing G9631.038). The majority of these records were for Lepidoptera. The far northern extent of option area was identified as target area for brown hairstreak conservation measures.
- 6.28 Table 5 summarises the species records returned by DBRC and identifies which species were found in or within 1km of each option. The legislation and conservation status assigned by DBRC is presented for each species recorded; explanations to the abbreviations assigned by DBRC are provided below the table.

*Table 5: Summary of pre-existing species records returned by DBRC within 1km of the options*

Taxon Common Name	Present <1km of Option?			Legislation and Conservation Status (as assigned by DBRC)		
	1	2	3	International	UK	Status
<b>Amphibian</b>	<b>4spp</b>	<b>4spp</b>	<b>3spp</b>			
Common Frog	✓	✓	✓	EC Va; Bern III	WCA 5 (S)	
Common Toad	✓	✓	✓	Bern III	WCA 5 (S); NERC 41	UKBAP (P)
Great Crested Newt	✓	✓		EC IIa, IVa; Bern II	WCA 5; NERC 41	UKBAP (P)
Smooth Newt	✓	✓	✓	Bern III	WCA 5 (S)	
<b>Bird</b>	<b>21spp</b>	<b>18spp</b>	<b>58spp</b>			
Barn Owl	✓	✓	✓	Bern II	WCA 1, 9	DBAP
Black-Tailed Godwit			✓	NULL	WCA 1	Red
Black-throated Diver			✓	Bern II	WCA 1	UKBAP (P); Amber
Blue Tit	✓	✓		Bern II		
Brent Goose			✓			Amber
Bullfinch	✓	✓	✓		NERC 41	UKBAP (P); Amber
Cirl Bunting	✓	✓		Bern II	WCA 1; NERC 41	UKBAP (P); Special Species; DBAP; Red
Common Sandpiper			✓			Amber
Curlew			✓		NERC 41	UKBAP (P); DBAP; Red
Curlew Sandpiper			✓	Bern II		Amber

Taxon Common Name	Present <1km of Option?			Legislation and Conservation Status (as assigned by DBRC)		
	1	2	3	International	UK	Status
Dunlin			✓	Bern II		Red
Duncock			✓	Bern II		Amber
Eider			✓			Amber
Fieldfare			✓		WCA 1	Red
Grasshopper Warbler			✓		NERC 41	UKBAP (P); Red
Great Northern Diver			✓	Bern II	WCA 1	Amber
Green Sandpiper			✓	Bern II	WCA 1	Amber
Greenfinch	✓	✓		Bern II		Red
Greenshank			✓		WCA 1	Amber
Grey Plover			✓			Amber
Grey Wagtail	✓			Bern II		Amber
Herring Gull	✓	✓	✓			Red
Hoopoe	✓	✓		Bern II	WCA 1	
House Martin	✓	✓		Bern II		Red
House Sparrow			✓		NERC 41	UKBAP (P); Red
Kestrel	✓	✓	✓	Bern II		Amber
Kingfisher			✓		WCA 1	Amber
Lapwing			✓		NERC 41	UKBAP (P); Red
Lesser Spotted Woodpecker			✓	Bern II		Red
Little Egret			✓	Bern II		
Little Gull			✓		WCA 1	
Little Stint			✓	Bern II		
Long-tailed Duck			✓		WCA 1	Red
Mallard			✓			Amber
Meadow Pipit			✓	Bern II		Amber
Mediterranean Gull	✓	✓	✓	Bern II	WCA 1	Amber
Mistle Thrush			✓			Red
Montagu's Harrier		✓			WCA 1	Red
Moorhen	✓					Amber
Mute Swan			✓			Amber
Osprey			✓		WCA 1	Amber
Peregrine			✓	Bern II	WCA 1	
Red Kite	✓				WCA 1, 9	
Red-necked Grebe			✓			Red
Redshank			✓			Amber
Redwing	✓	✓	✓		WCA 1	Amber
Reed Bunting			✓	Bern II	NERC 41	UKBAP (P); Amber
Rook	✓					Amber
Ruff			✓		WCA 1	Red
Sanderling			✓	Bern II		Amber

Taxon Common Name	Present <1km of Option?			Legislation and Conservation Status (as assigned by DBRC)		
	1	2	3	International	UK	Status
Sedge Warbler			✓			Amber
Shelduck			✓	Bern II		Amber
Skylark	✓	✓	✓			UKBAP (P); Red
Slavonian Grebe			✓	Bern II	WCA 1	Red
Snipe	✓	✓	✓			Amber
Song Thrush	✓	✓	✓			UKBAP (P); Amber
Spotted Redshank			✓			Amber
Starling			✓			Red
Stonechat			✓	Bern II		NULL
Swift	✓	✓	✓			Red
Teal			✓			Amber
Turtle Dove		✓	✓		NERC 41	UKBAP (P); Red
Water Pipit			✓	Bern II		Amber
Water Rail			✓	Bonn II		NULL
Wheatear			✓	Bern II		Amber
Whinchat			✓	Bern II		Red; Special Species
Wigeon			✓			Amber
Woodpigeon	✓					Amber
Wren	✓			Bern II		Amber
<b>Fish</b>			<b>2spp</b>			
European Eel			✓	NULL	NERC 41	UKBAP (P)
Sea Lamprey			✓	NULL	NERC 41	NULL
<b>Invertebrate</b>	<b>5spp</b>	<b>62spp</b>	<b>70spp</b>			
August Thorn		✓	✓		NERC 41	UKBAP (P)
Autumnal Rustic		✓	✓		NERC 41	
Beaded Chestnut		✓	✓		NERC 41	UKBAP (P)
Black Oil-beetle			✓		NERC 41	UKBAP (P)
Bleached Pug		✓	✓			Nb
Blood-Vein		✓	✓		NERC 41	
Bloxworth Snout		✓	✓			RDB3
Brindled Beauty		✓	✓		NERC 41	UKBAP (P)
Buff Ermine		✓	✓		NERC 41	UKBAP (P)
Centre-barred Sallow		✓	✓		NERC 41	UKBAP (P)
Cinnabar		✓	✓		NERC 41	UKBAP (P)
Cloaked Carpet		✓	✓			Nb
Coastal Pearl		✓	✓			Nb
Currant Clearwing			✓			Nb
Dark Green Fritillary		✓	✓			Decline
Dark-barred Twin-spot Carpet		✓	✓		NERC 41	UKBAP (P)
Dot Moth		✓	✓		NERC 41	UKBAP (P)

Taxon Common Name	Present <1km of Option?			Legislation and Conservation Status (as assigned by DBRC)		
	1	2	3	International	UK	Status
Double Dart		✓	✓		NERC 41	
Dusky Brocade		✓	✓		NERC 41	UKBAP (P)
Dusky Thorn		✓	✓		NERC 41	UKBAP (P)
Figure of Eight		✓	✓		NERC 41	
Flounced Chestnut		✓	✓		NERC 41	UKBAP (P)
Galium Carpet		✓	✓		NERC 41	UKBAP (P)
Garden Tiger		✓	✓		NERC 41	UKBAP (P)
Ghost Moth		✓	✓		NERC 41	UKBAP (P)
Green-brindled Crescent		✓	✓		NERC 41	UKBAP (P)
Hairy Dragonfly			✓			Nb; KeyD (N)
Heath Rustic		✓	✓		NERC 41	UKBAP (P)
Horse Chestnut		✓	✓			Nb
Jersey Tiger	✓	✓	✓			Nb
Keeled Skimmer			✓			KeyD (N)
Kent Bent-wing			✓			Nb
Kent Black Arches		✓	✓			Nb
Knot Grass	✓	✓	✓		NERC 41	UKBAP (P)
Lackey		✓	✓		NERC 41	UKBAP (P)
L-album Wainscot		✓	✓			Nb
Large Wainscot		✓	✓		NERC 41	
Marbled Green		✓	✓			Nb
Mocha		✓	✓			Nb
Mottled Rustic		✓	✓		NERC 41	UKBAP (P)
Mouse Moth		✓	✓		NERC 41	UKBAP (P)
Mullein Wave		✓	✓		NERC 41	UKBAP (P)
Neglected Rustic		✓	✓		NERC 41	UKBAP (P)
Oak Hook-tip		✓	✓		NERC 41	
Orange Footman		✓	✓			Nb
Pale Eggar		✓	✓		NERC 41	UKBAP (P)
Pied Grey		✓	✓			Nb
Portland Ribbon Wave		✓	✓			RDB3
Powdered Quaker		✓	✓		NERC 41	UKBAP (P)
Purple Hairstreak	✓	✓	✓			Decline
Rosy Minor		✓	✓		NERC 41	UKBAP (P)
Rosy Rustic		✓	✓		NERC 41	UKBAP (P)
Ruddy Carpet		✓	✓			Nb
Ruddy Darter			✓			Nb; KeyD (R)
Rustic		✓	✓		NERC 41	UKBAP (P)
Sallow		✓	✓		NERC 41	UKBAP (P)
Scarce Chaser			✓			RDB3



Taxon Common Name	Present <1km of Option?			Legislation and Conservation Status (as assigned by DBRC)		
	1	2	3	International	UK	Status
September Thorn		✓	✓		NERC 41	UKBAP (P)
Shaded Broad-bar		✓	✓		NERC 41	UKBAP (P)
Shoulder-striped Wainscot		✓	✓		NERC 41	UKBAP (P)
Small Eggar		✓	✓			Nb
Small Emerald		✓	✓		NERC 41	UKBAP (P)
Small Heath	✓	✓	✓		NERC 41	UKBAP (P)
Small Phoenix		✓	✓		NERC 41	UKBAP (P)
Small Square-spot		✓	✓		NERC 41	UKBAP (P)
Spinach		✓	✓		NERC 41	UKBAP (P)
Sprawler		✓	✓		NERC 41	
Wall	✓		✓		NERC 41	UKBAP (P)
Wasp Spider			✓			Na
White Ermine		✓	✓		NERC 41	UKBAP (P)
White-line Dart		✓	✓		NERC 41	
<b>Mammal-bat</b>	<b>10spp</b>	<b>10spp</b>	<b>11spp</b>			
Brown Long-eared Bat	✓	✓	✓	EC IVa; Bern II; Bonn II	WCA 5, 6; NERC 41	UKBAP (P)
Common Pipistrelle	✓	✓	✓	EC IVa; Bern III, Bonn II	WCA 5, 6	
Daubenton's Bat			✓	EC IVa; Bern II; Bonn II	WCA 5, 6	
Greater Horseshoe Bat	✓	✓		EC IIa, IVa; Bern II; Bonn II	WCA 5, 6; NERC 41	UKBAP (P); Special Species; DBAP
Lesser Horseshoe Bat	✓	✓	✓	EC IIa, IVa; Bern II; Bonn II	WCA 5, 6; NERC 41	UKBAP (P)
Lesser Noctule			✓	EC IVa; Bern II; Bonn II	WCA 5, 6	
Nathusius' Pipistrelle	✓	✓	✓	EC IVa; Bern II; Bonn II	WCA 5, 6	
Natterer's Bat	✓	✓	✓	EC IVa; Bern II; Bonn II	WCA 5, 6	
Noctule Bat	✓	✓	✓	EC IVa; Bern II; Bonn II	WCA 5, 6; NERC 41	UKBAP (P)
Serotine	✓	✓	✓	EC IVa; Bern II; Bonn II	WCA 5, 6	Vul
Soprano Pipistrelle	✓	✓	✓	EC IVa; Bern III, Bonn II	WCA 5, 6; NERC 41	UKBAP (P)
Western Barbastelle	✓	✓	✓	EC IIa, IVa; Bern II; Bonn II	WCA 5, 6; NERC 41	UKBAP (P); Vul
<b>Mammal-other</b>	<b>8spp</b>	<b>10spp</b>	<b>10spp</b>			
Badger	✓	✓	✓	Bern III	WCA 6, BA	
Common Shrew	✓	✓	✓	Bern III	WCA 6	
Otter	✓	✓	✓	EC IIa, IIIa; Bern II	WCA 5; NERC 41	UKBAP (P); DBAP
Pygmy Shrew	✓	✓	✓	Bern III	WCA 6	
Water Shrew	✓	✓	✓	Bern III	WCA 6	

Taxon Common Name	Present <1km of Option?			Legislation and Conservation Status (as assigned by DBRC)		
	1	2	3	International	UK	Status
Hazel Dormouse	✓	✓	✓	EC IIa; Bern III	WCA 5, 6; NERC 41	UKBAP (P); Special Species; DBAP; Vul
Indet. Deer			✓	Bern III	DA	
Red Deer	✓	✓		Bern III	DA	
Roe Deer		✓		Bern III	DA	
Sika Deer		✓			WCA 9, DA	
Stoat			✓	Bern III		
Weasel			✓	Bern III		
Hedgehog	✓	✓	✓	Bern III	WCA 6; NERC 41	UKBAP (P); Vul
<b>Plant</b>	<b>14spp</b>	<b>12spp</b>	<b>43spp</b>			
Annual Beard-Grass			✓			NS
Annual Sea-blite			✓			DN2
Blue Water-Speedwell	✓					DN2
Borrer's Saltmarsh-Grass			✓		NERC 41	NS
Box			✓			NR
Bulbous Foxtail			✓			NS; DN1; DR
Bur Chervil	✓	✓	✓			DN1
<b>Canadian Pondweed</b>			✓		<b>WCA 9</b>	<b>NULL</b>
Common Club-rush	✓		✓			DN1
Corky-Fruited Water-Dropwort		✓	✓			DN3
English Scurvygrass			✓			DN2
Fat Duckweed			✓			DN2
Fennel Pondweed			✓			DN1
<b>Floating Pennywort</b>	✓	✓			<b>WCA 9</b>	<b>NULL</b>
Galingale	✓	✓	✓			NS; DN1; DR
Great Pond-Sedge			✓			DN2
Great Water Dock			✓			DN2
Greater Duckweed			✓			DN1
Greater Sea-Spurrey			✓			DN2
Grey Club-Rush			✓			DN2
Hard Grass			✓			DN1
Horned Pondweed			✓			DN1; DR
<b>Indian Balsam</b>			✓		<b>WCA 9</b>	<b>NULL</b>
Ivy-Leaved Duckweed			✓			DN1
<b>Japanese Knotweed</b>		✓	✓		<b>WCA 9</b>	<b>NULL</b>
Lesser Pondweed			✓			DN1; DR
Lesser Sea-Spurrey			✓			DN3
Meadow Barley			✓			DN1
Meadow Brome			✓			DN2
Nuttall's Water-Weed	✓	✓	✓			DN1

Taxon Common Name	Present <1km of Option?			Legislation and Conservation Status (as assigned by DBRC)		
	1	2	3	International	UK	Status
Pepper-Saxifrage		✓				DN1
Prickly Lettuce	✓					DN2
Primrose		✓	✓			DBAP
Procumbent Meadow-Grass			✓			NS; DN1; DR
Pyramidal Orchid	✓	✓	✓			DN2
Reed Sweet-grass	✓		✓			DN2
<b>Rhododendron</b>	✓	✓	✓		WCA 9	NULL
Saltmarsh Rush			✓			DN3
Sea Aster			✓			DN3
Sea Couch			✓			DN3
Sea Meadow-Grass			✓			DN2
Sea Purslane			✓			DN2
Sea Rush			✓			DN2
Smooth Brome		✓				DN2
Spiked Water-Milfoil			✓			DN1
Unbranched Bur-reed	✓		✓			DN2
White Water-Lily	✓	✓	✓			DN1
Wood Club-rush	✓					DN3
Yellow Water-Lily	✓		✓			DN1
<b>Reptile</b>	<b>2spp</b>	<b>2spp</b>	<b>2spp</b>			
Grass Snake	✓	✓	✓	Bern III	WCA 5 (KIS); NERC 41	UKBAP (P)
Slow worm	✓	✓	✓	Bern III	WCA 5 (KIS); NERC 41	UKBAP (P)
<b>Grand Total</b>	<b>64spp</b>	<b>118spp</b>	<b>199spp</b>			



### Species Status Explanations

**NERC 41 NERC Act (2006) Section 41:** Species listed under Section 41 of the Natural Environment and Rural Communities Act (2006). These are the species found in England which have been identified as requiring action under the UK BAP. All local authorities and other public authorities in England and Wales have a duty to promote and enhance biodiversity in all of their functions.

**WCA 1 Wildlife and Countryside Act (1981) Schedule 1:** birds which are protected by special penalties at all times.

**WCA 5 Wildlife and Countryside Act (1981) Schedule 5:** species protected against killing, injury, disturbance and handling.

**WCA 5 (S) Wildlife and Countryside Act (1981) Schedule 5: (sale):** species protected against sale only.

**WCA 5 (KIS) Wildlife and Countryside Act (1981) Schedule 5: (killing & injury):** species protected against killing, injury and sale only.

**WCA 9 Wildlife and Countryside Act (1981) Schedule 9:** animals and plants for which release into the wild is prohibited.

**Bern I Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix I:** Special protection for listed plant species and their habitats.

**Bern II Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix II:** Special protection for listed animal species and their habitats.

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**Bern III Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Appendix**

**III:** Exploitation of listed animal species to be subject to regulation.

**UKBAP(P)** UK Priority Species (Short and Middle Lists - UK Biodiversity steering Group Report 1995) i.e., species that are globally threatened and rapidly declining in the UK (by more than 50% in the last 25 years). Has a Species Action Plan.

**DBAP Devon Biodiversity Action Plan species:** these have been identified as species of key conservation concern in Devon.

**NR Nationally Rare:** 1-15 10km squares in Atlas of British Flora 1962.

**NS Nationally Scarce:** 15-100 10km squares in Atlas of British Flora 1962.

**Devon Notable Species:** Selected species recorded from over 50 2km squares in the Atlas of Devon Flora 1984 (R.B. Ivimey-Cook, Department of Biological Sciences, The University of Exeter).

**Na Nationally Notable A:** known from 30 or fewer 10km squares. Taken from the Invertebrate Site Register.

**Nb Nationally Notable B:** known from 100 or fewer 10km squares. Taken from the Invertebrate Site Register.

**Decline** Substantial local decline in Devon.

**Red List** Bird species of high conservation concern, such as those whose population or range is rapidly declining, recently or historically, and those of global conservation concern.

**Amber List** Bird species of medium conservation concern, such as those whose population is in moderate decline, rare breeders, internationally important and localised species and those of unfavourable conservation status in Europe.

## 7.0 Summary

7.1 Table 6 provides a summary of the ecological features identified by this ecological desk study within potential influence of the three option areas.

Table 6: Summary of desk-based ecological baseline for options

Assessment Category		
Option 1	Option 2	Option 3
<b>Statutory Wildlife Sites of International &amp; National Significance (closest proximity)</b>		
East Devon Pebblebed Heaths SPA SAC SSSI NNR >2km Exe Estuary Ramsar SPA SSSI >2km Dawlish Warren SAC SSSI NNR >10km	East Devon Pebblebed Heaths SPA SAC SSSI NNR 1.6km Exe Estuary Ramsar SPA SSSI >2km Dawlish Warren SAC SSSI >5km	East Devon Pebblebed Heaths SPA SAC SSSI NNR >2km Exe Estuary Ramsar SPA SSSI 0.4km Dawlish Warren SAC SSSI >5km
<b>Strategy 47 Applies (Recreational Pressure)</b>		
Exe Estuary East Devon Pebblebed Heaths	Exe Estuary East Devon Pebblebed Heaths	Exe Estuary East Devon Pebblebed Heaths Dawlish Warren
<b>SSSI Impact Risk Zones</b>		
Infrastructure Wind / Solar Energy Minerals, Oil & Gas Air Pollution Combustion Waste Discharges Strategic Solutions	Infrastructure Wind/Solar Energy Minerals/Oil/Gas Rural non-Residential Residential Rural Residential Air Pollution Combustion Waste Composting Discharges Water Supply Strategic Solutions	All Planning Applications Infrastructure Wind/Solar Energy Minerals, Oil & Gas Rural non-Residential Residential Rural Residential Air Pollution Combustion Waste Composting Discharges Water Supply Strategic Solutions
<b>Statutory Wildlife Sites of Regional / Local Significance (closest proximity)</b>		
Exmouth LNR >5km	Exmouth LNR >5km	Exmouth LNR >2km
<b>Non-Statutory Wildlife Sites of Local Significance (closest proximity)</b>		
Exe Estuary RSPB >2km Exe Estuary IBA 1.4km Aylesbeare RSPB >2km East Devon Heaths IBA >2km Two LWS contained within option One LWS partly contained within option Five LWS adjacent to option Ten LWS <1km	Exe Estuary RSPB >2km Exe Estuary IBA 1.4km Aylesbeare RSPB 2km East Devon Heaths IBA 1.6km One LWS contained within option Two LWS partly contained within option 12nr LWS <1km	Exe Estuary RSPB 0.6km Exe Estuary IBA 0.3km Aylesbeare RSPB >2km East Devon Heaths IBA >2km No LWS within or adjacent to option One LWS partly contained within option Five LWS adjacent to option 11nr LWS <1km
<b>Potential for impact on Wildlife Sites network (in absence of mitigation)</b>		
High risk of local severance or fragmentation impact (east-west)	Moderate risk of local severance or fragmentation impact (east-west)	Moderate risk of local severance or fragmentation impact (east-west)

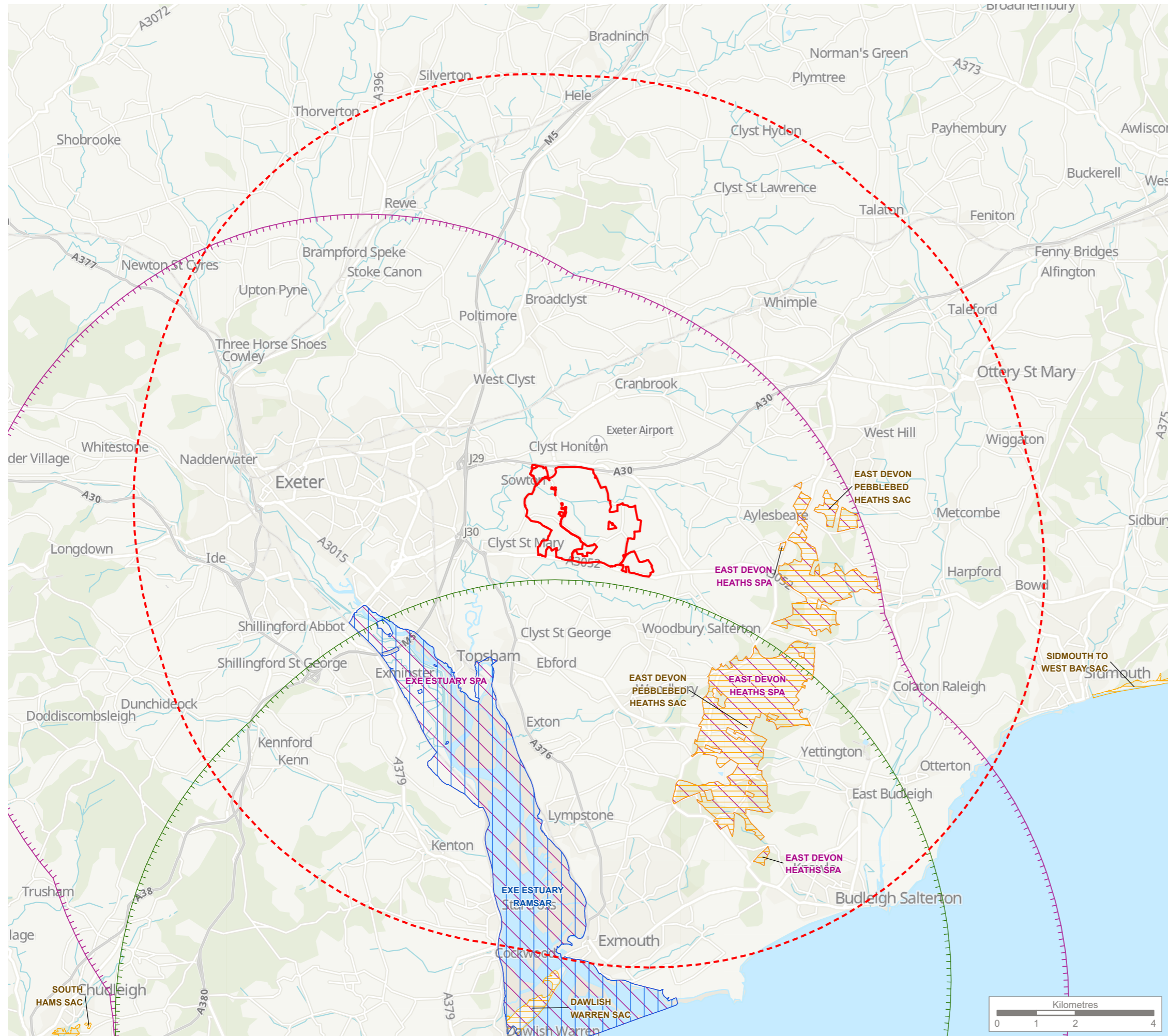


<b>Assessment Category</b>		
<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Irreplaceable habitats pre-recorded within option</b>		
None recorded within option. Woodland Trust tree inventory identifies potential veteran and notable trees close or adjacent to west boundary.	None recorded within option. Woodland Trust tree inventory identifies two ancient trees within an adjacent field to the east.	None recorded within option. Woodland Trust tree inventory identifies a notable tree adjacent to the option in the southwest.
<b>HPI or DBAP habitats pre-recorded within option</b>		
Coastal floodplain and grazing marsh Traditional Orchard Woodland Veteran/Ancient Trees Devon Hedgerows Arable field margins Ponds/Lakes Rivers/Streams	Woodland Veteran/Ancient Trees Devon Hedgerows Arable field margins Ponds/Lakes Rivers/Streams	Traditional Orchard Woodland Veteran/Ancient Trees Devon Hedgerows Arable field margins Ponds/Lakes Rivers/Streams
<b>Overall Risk to HPI and Habitat Network (in absence of mitigation)</b>		
Limited overlap with Habitat Network zones for enhancement / expansion. Contains land allocated for Valley Park and areas of pre-recorded HPI, particularly in west and northwest of option. Position within wider network has potential risk for fragmentation effects east-west particularly	Limited overlap with Habitat Network for enhancement or expansion. Minor areas of pre-recorded HPI present within option.	Some overlap with Habitat Network enhancement zone linking east-west, particularly in north of option area. Closer proximity to local and statutory sites east and west, with potential risk for fragmentation effects.
<b>Diversity of protected or notable species pre-recorded within 1km of option</b>		
12 plants 4 amphibians 2 reptiles 21 birds 10 bats 8 other mammals 5 invertebrates	9 plants 4 amphibians 2 reptiles 18 birds 10 bats 10 other mammals 62 invertebrates	39 plants 3 amphibians 2 reptiles 2 fish 58 birds 11 bats 10 other mammals 70 invertebrates



## Drawings

Option 1



**KEY**

- Site boundary
- Site boundary - 10km buffer
- Ramsar
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- Dawlish Warren SAC Buffer Area
- Exe Estuary SPA Buffer Area

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Sites searched for were as follows:  
 - Ramsar and Proposed Ramsar  
 - Special Protection Areas (SPA) and Potential SPA  
 - Special Areas of Conservation (SAC) and Potential SAC

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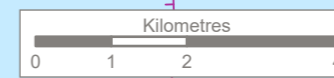
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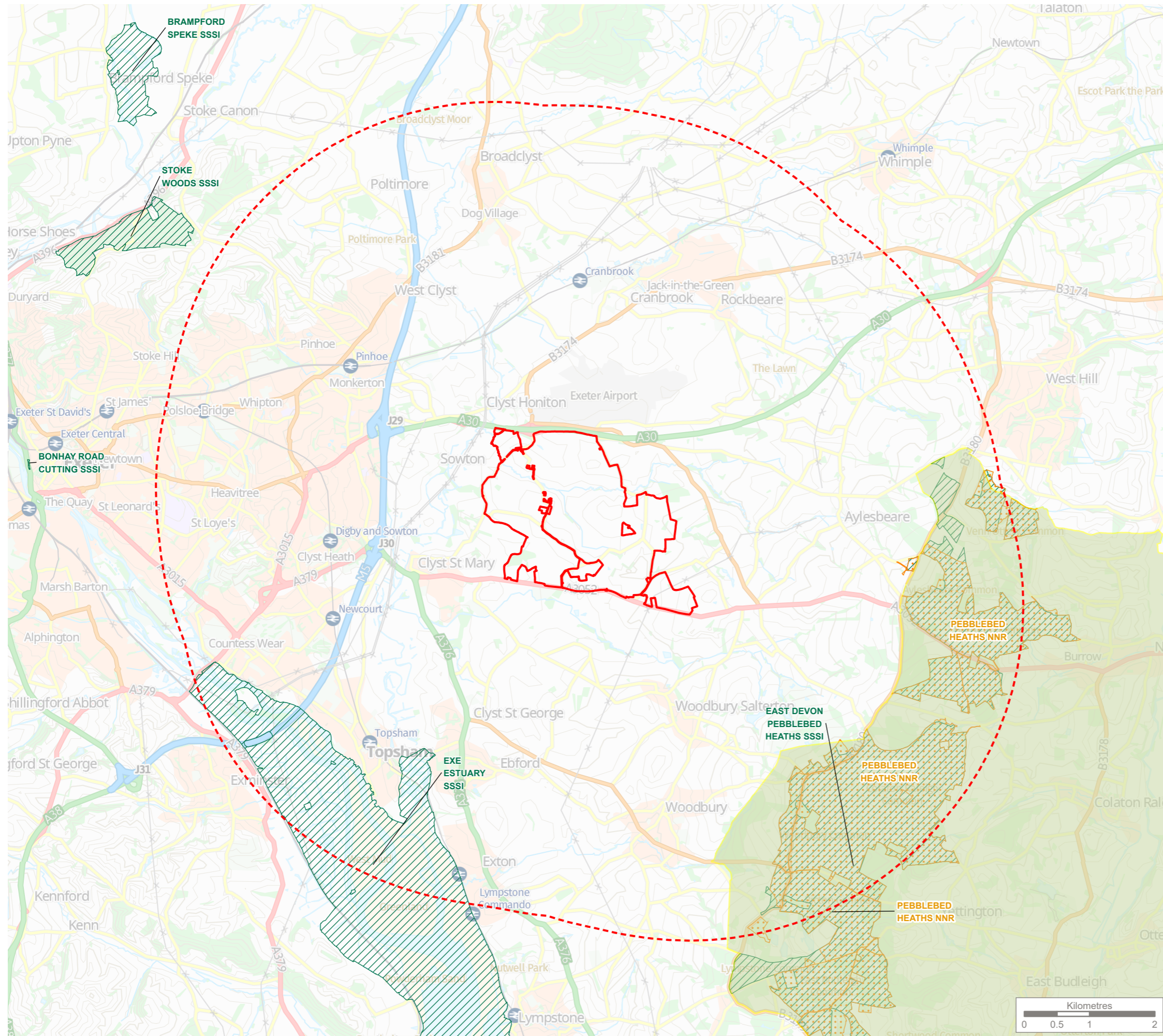
Title  
**Internationally Designated Sites Within a 10km Buffer  
 Option 1**

Drawing Number  
**G9631.002**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:100,000 @ A3	03/10/2022







**KEY**

- Site boundary
- Site boundary - 5km buffer

**Natural England Data**

- Areas of Outstanding Natural Beauty
- National Nature Reserve (NNR)
- Sites of Special Scientific Interest (SSSI)

**CONFIDENTIAL**

- Sites searched for were as follows:
- Sites of Special Scientific Interest (SSSI)
  - National Nature Reserve (NNR)
  - Area of Outstanding Natural Beauty (AONB)
  - Marine Conservation Zones (MCZ)



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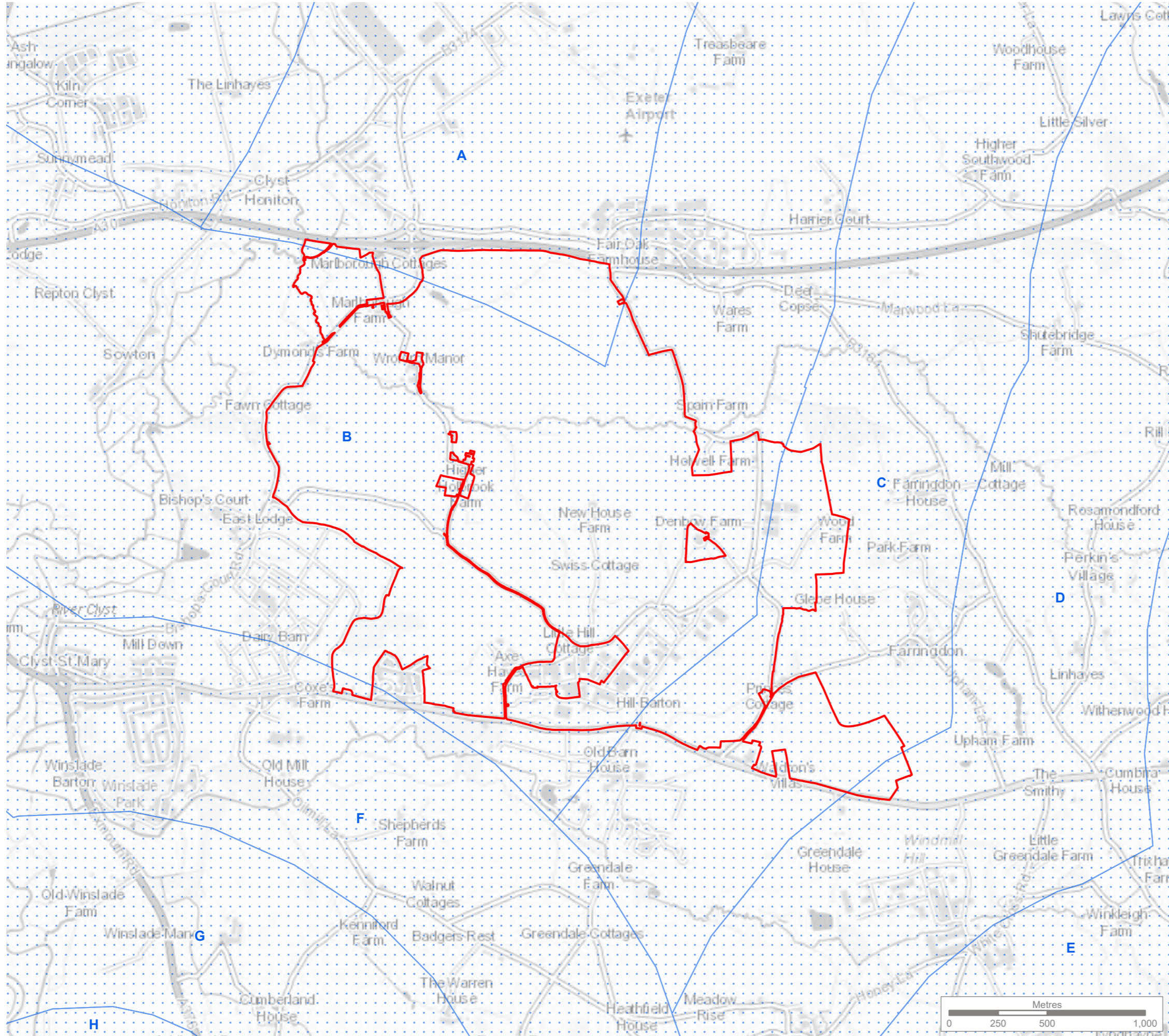
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Title  
**Nationally Designated Sites Within a 5km Buffer  
 Option 1**

Drawing Number  
**G9631.005**

Drawn	Checked	Approved	Scale	Date
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**KEY**

- Site boundary
- Sites of Special Scientific Interest - Impact Risk Zone

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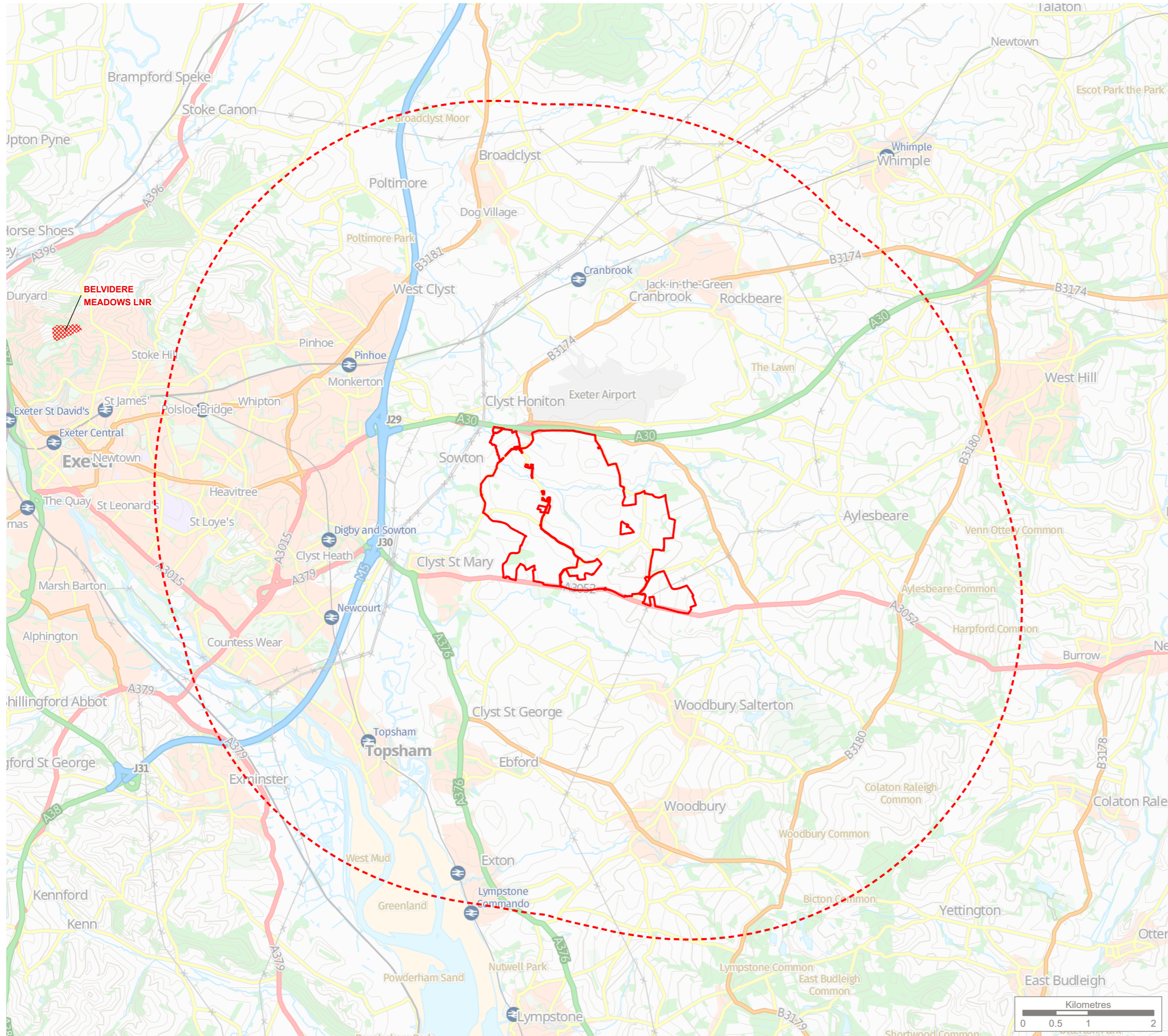
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Title  
**SSSI IRZ  
 Option 1**




Drawing Number  
**G9631.014**

Drawn	Checked	Approved	Scale	Date
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**KEY**

-  Site boundary
-  Site boundary - 5km buffer
-  Local Nature Reserve

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Sites searched for were as follows:  
- Local Nature Reserve (LNR)

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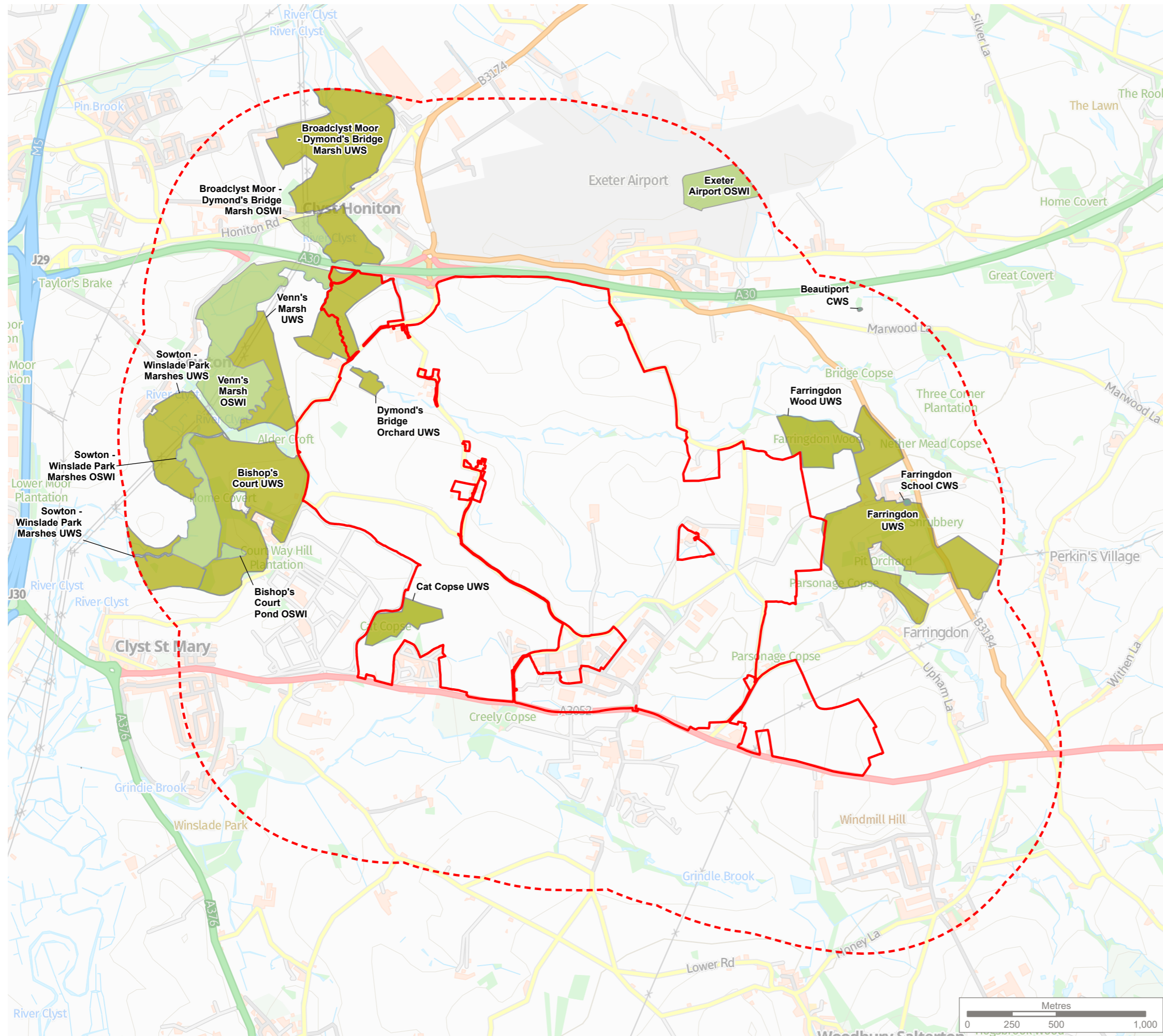
Project  
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Title  
**Statutory Local Designated Sites Within a 5km Buffer  
Option 1**

Drawing Number  
**G9631.008**

Drawn	Checked	Approved	Scale	Date
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**KEY**

- Site boundary
- Site boundary - 1km buffer

**Non-Statutory Designation**

- County Wildlife Site (CWS)
- Unconfirmed Wildlife Site (UWS)
- Other Sites of Wildlife Interest (OSWI)

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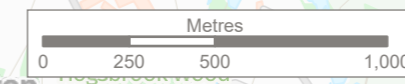
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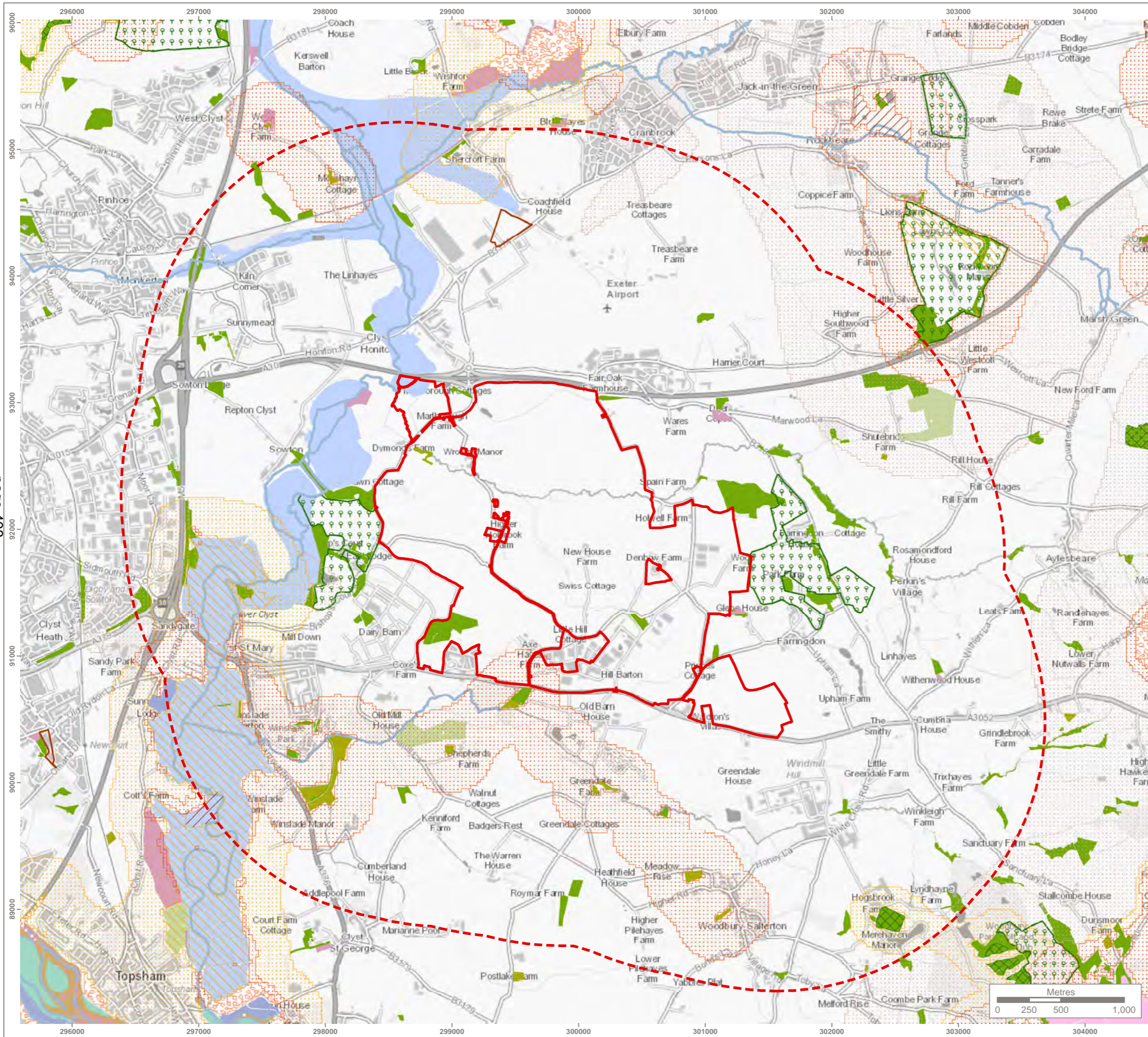
Title  
 Non-Statutory Locally Designated Sites Within 1km  
 Option 1

Drawing Number  
 G9631.041

Drawn	Checked	Approved	Scale	Date
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**KEY**

- Option boundary
  - 2km buffer
  - Main rivers
  - Ancient woodland
  - Woodpasture and parkland
  - Open mosaic habitat on previously developed land
- Priority Habitat Inventory**
- Traditional orchard
  - Deciduous woodland
  - Coastal and floodplain grazing marsh
  - Good quality semi-improved grassland
  - Lowland fens
  - Lowland heathland
  - Coastal saltmarsh
  - Mudflats
  - No main habitat but additional habitats present
- Habitat Networks**
- Habitat Restoration-Creation
  - Restorable Habitat
  - Fragmentation Action Zone
  - Network Enhancement Zone 1
  - Network Enhancement Zone 2
  - Network Expansion Zone

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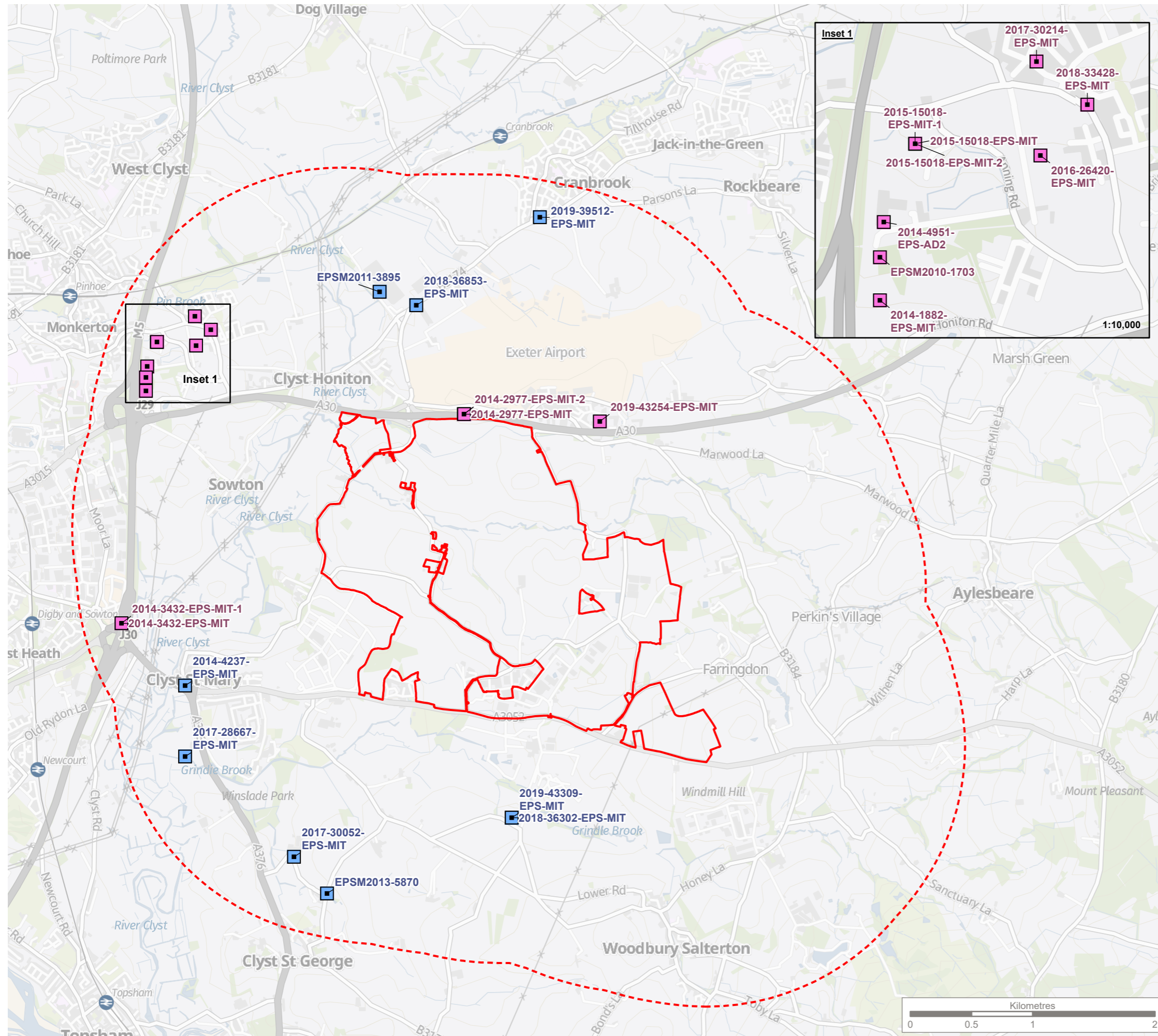
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Title  
 Notable Habitats and Habitat Network Within 2km  
 Option 1

Drawing Number  
 G9631.017

Drawn	Checked	Approved	Scale	Date
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**KEY**

- Site boundary
- Site boundary - 2km buffer

**Granted European Protected Species Mitigation Licence Application**

- Bat
- Other mammal

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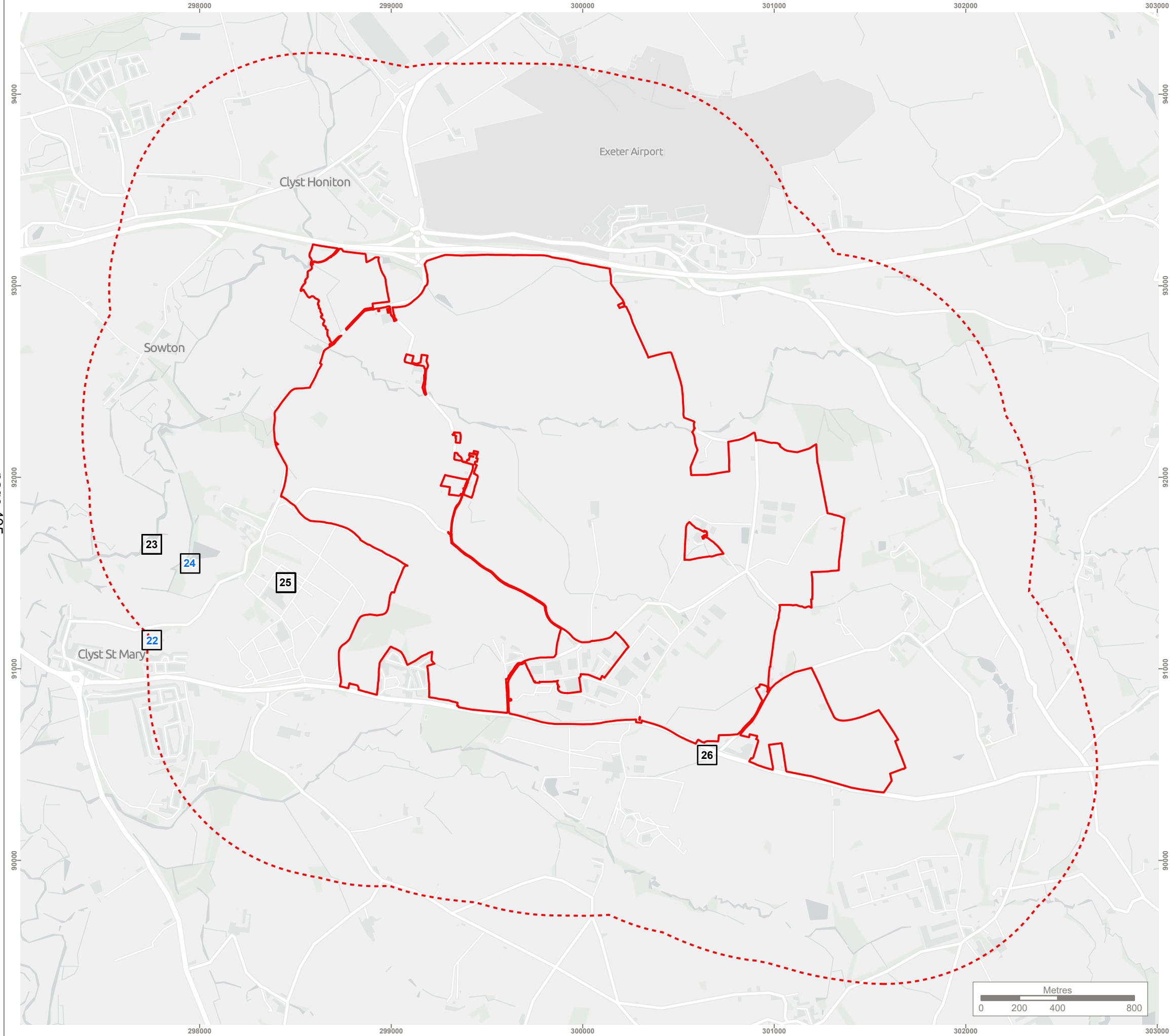
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Title  
**Granted European Protected Species Mitigation Licence Applications Within 2km - Option 1**

Drawing Number  
**G9631.020**

Drawn	Checked	Approved	Scale	Date
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**KEY**

- Site boundary
- Site boundary - 1km buffer

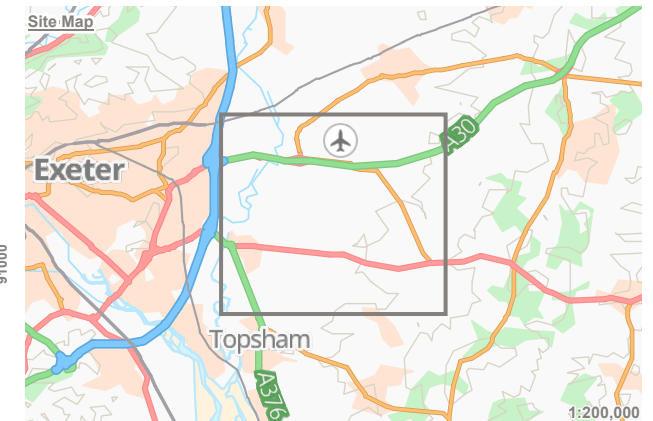
**Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)**

100m

**Note:**  
Record IDs in blue indicate the presence of invasive species

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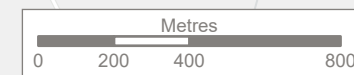
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Title  
**Species Desktop Records - Plants  
Option 1**

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**G9631.023**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:20,000 @ A3	30/09/2022

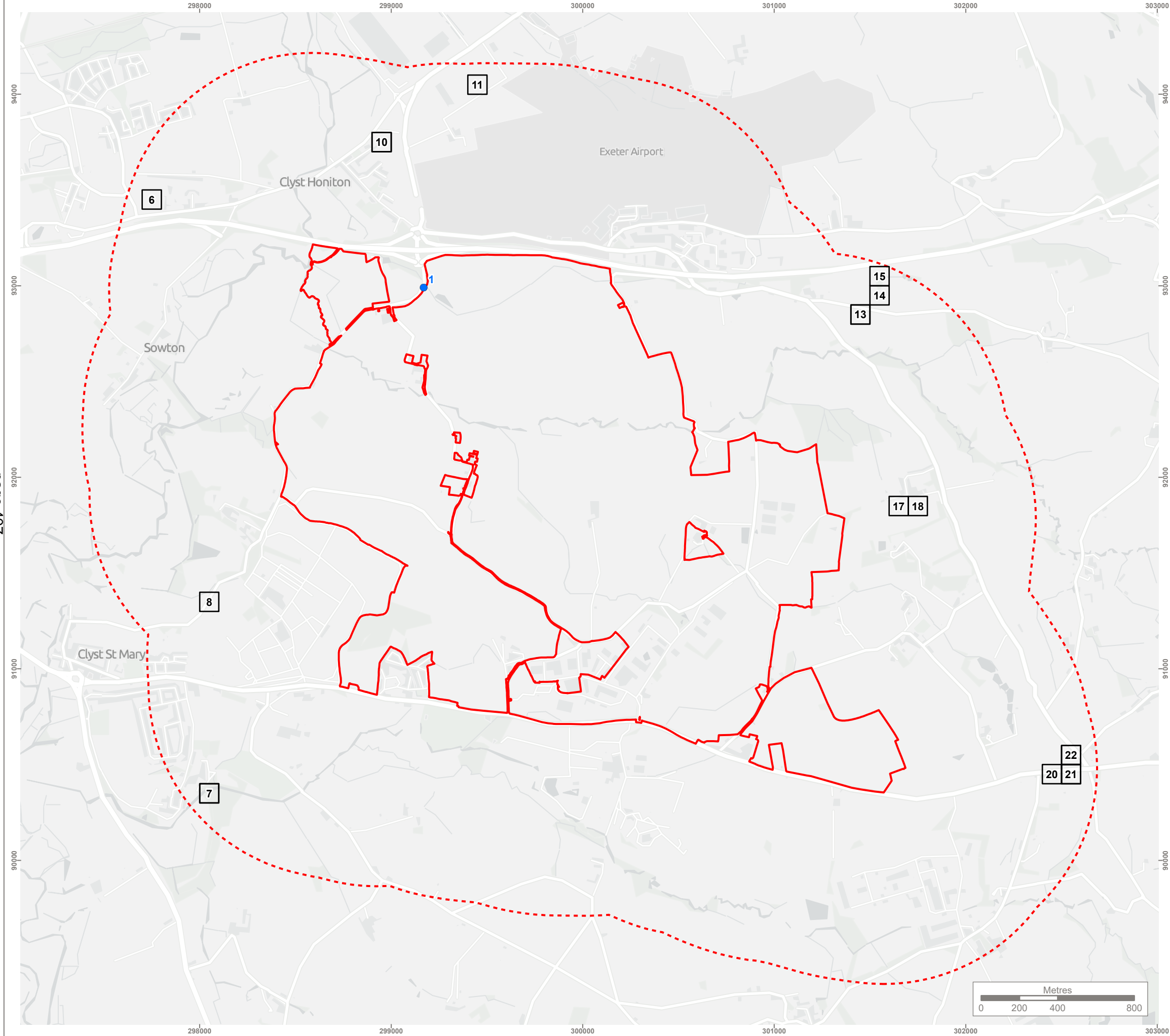




**Plant Desktop Records (Option 1)**

*Refer to drawing G9631.023 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
<b>22</b>	Floating Pennywort	1
<b>23</b>	Blue Water-Speedwell	1
	Common Club-rush	1
	Prickly Lettuce	1
	Reed Sweet-grass	1
	Rhododendron	1
	Unbranched Bur-reed	1
	Wood Club-rush	1
	Yellow Water-Lily	1
<b>24</b>	Rhododendron	1
<b>25</b>	Bur Chervil	1
	Galingale	1
	Nuttall's Water-Weed	1
	Rhododendron	1
	White Water-Lily	1
<b>26</b>	Pyramidal Orchid	1



**KEY**

- Site boundary
- Site boundary - 1km buffer

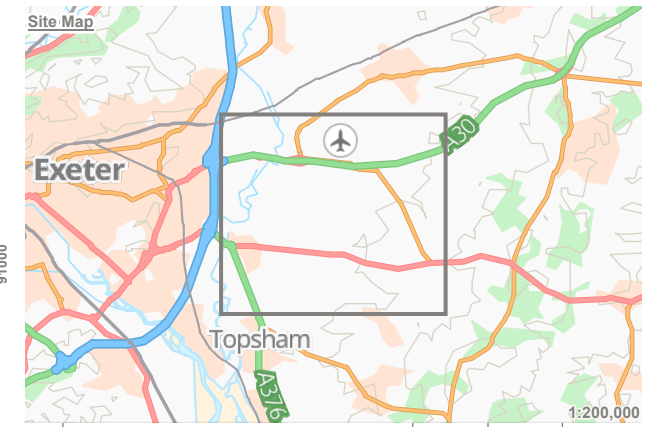
**Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)**

- 1 and 10m
- 100m

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Rev	Description	Drawn	Approved	Date



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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Amphibians, Reptiles and Fish Option 1**

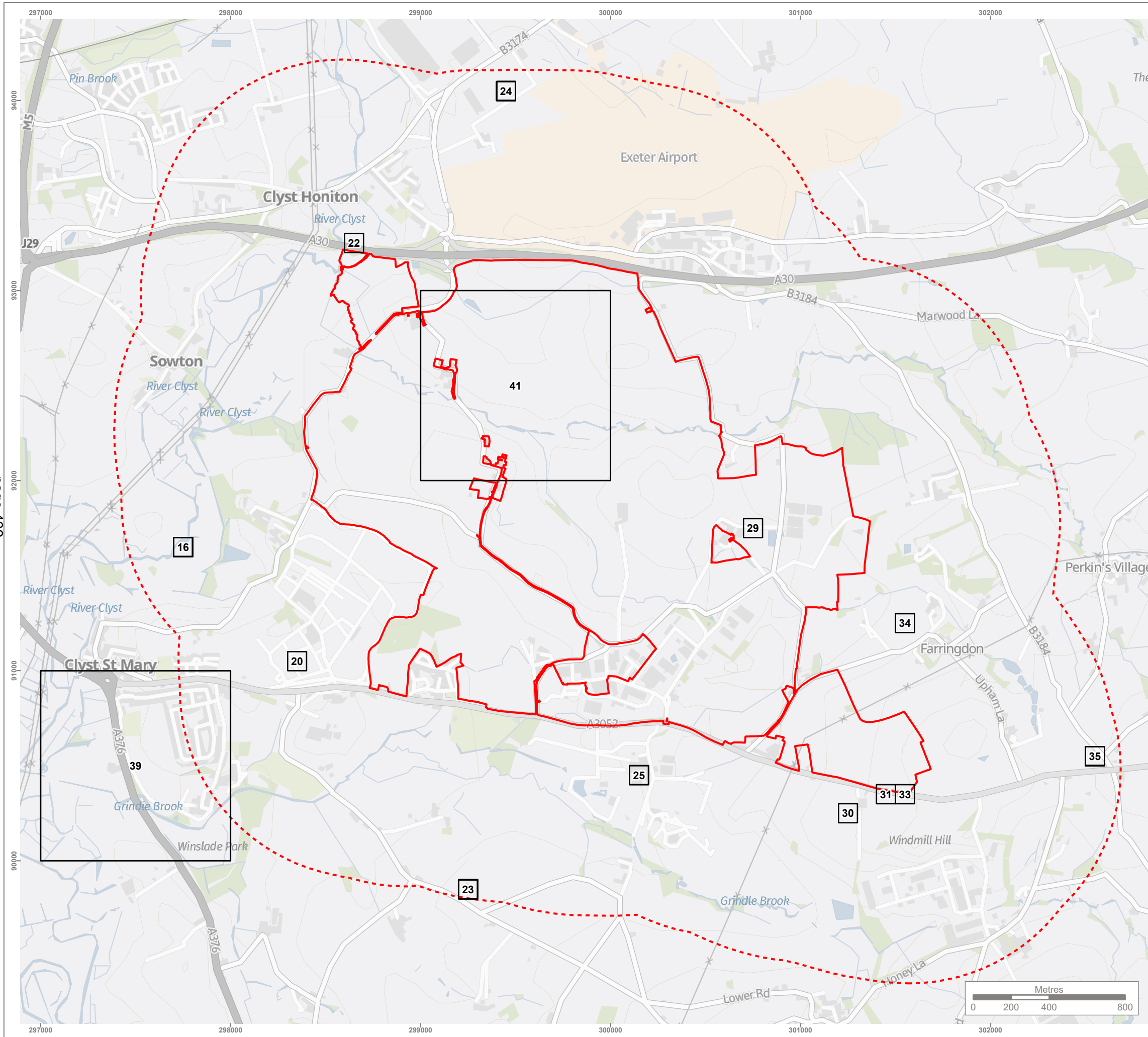
Drawing Number  
**G9631.026**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:20,000 @ A3	03/10/2022

**Amphibian, Reptile and Fish Desktop Records (Option 1)**

*Refer to drawing G9631.026 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
<b>1</b>	Common Toad	1
<b>6</b>	Common Frog	1
<b>7</b>	Grass Snake	1
	Slow-worm	1
<b>8</b>	Common Toad	1
<b>10</b>	Grass Snake	1
	Slow-worm	1
<b>11</b>	Slow-worm	1
<b>13</b>	Great Crested Newt	2
<b>14</b>	Great Crested Newt	1
<b>15</b>	Great Crested Newt	1
<b>17</b>	Great Crested Newt	1
<b>18</b>	Great Crested Newt	1
<b>20</b>	Common Toad	1
<b>21</b>	Common Toad	1
	Slow-worm	1
<b>22</b>	Common Frog	1
	Smooth Newt	1



**KEY**

- Site boundary
- Site boundary - 1km buffer

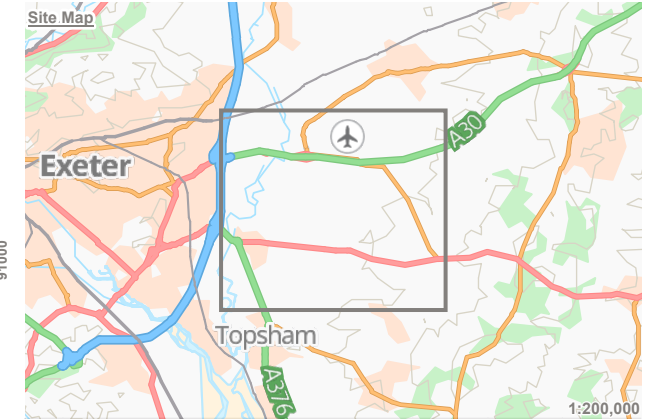
Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

- 100m
- 1000m

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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Birds  
 Option 1**

Drawing Number  
**G9631.029**

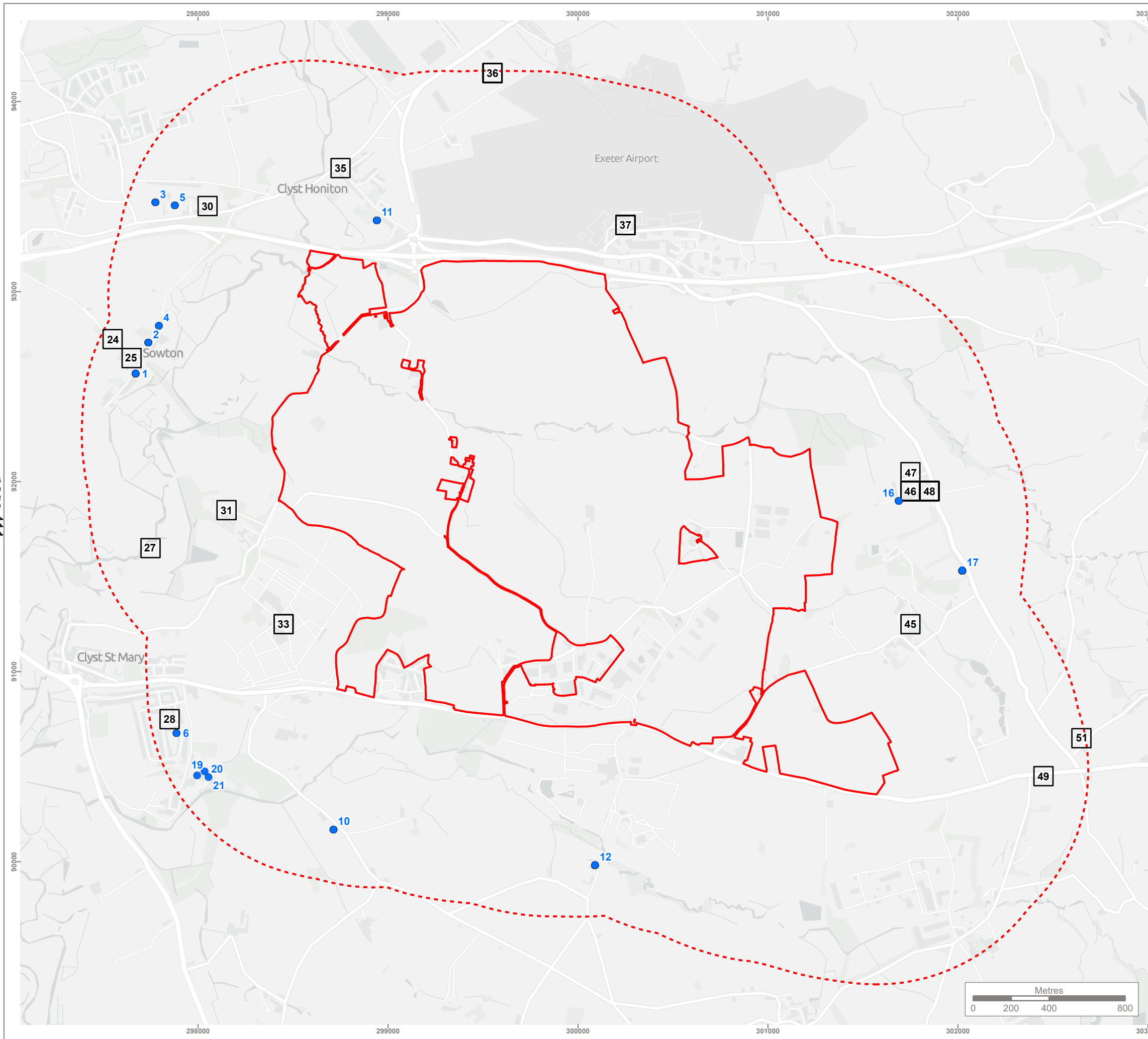
Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:20,000 @ A3	03/10/2022

**Bird Desktop Records (Option 1)**

*Refer to drawing G9631.029 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
<b>16</b>	Blue Tit	1
	Great Tit	1
	Green Woodpecker	1
	Grey Wagtail	1
	Herring Gull	1
	Kestrel	1
	Moorhen	1
	Nuthatch	1
	Robin	1
	Woodpigeon	1
	Wren	1
<b>20</b>	Swift	1
<b>22</b>	Red Kite	1
<b>23</b>	Bullfinch	1
	Herring Gull	1
	Kestrel	1
	Skylark	1
	Snipe	1
<b>24</b>	Kestrel	1
	Rook	1
	Skylark	1
	Swallow	1
	Wren	1
<b>25</b>	Common Bullfinch	1
	Kestrel	1
<b>29</b>	Hoopoe	1
<b>30</b>	Cirl Bunting	1
<b>31</b>	Barn Owl	1
<b>33</b>	Kestrel	1
<b>34</b>	Barn Owl	1
<b>35</b>	Blue Tit	1
	Great Tit	1
	Greenfinch	1
	House Martin	2
	Redwing	1
	Robin	1
	Song Thrush	1
<b>39</b>	Barn Owl	1
	Mediterranean Gull	1
<b>41</b>	Kestrel	1





**KEY**

- Site boundary
- Site boundary - 1km buffer

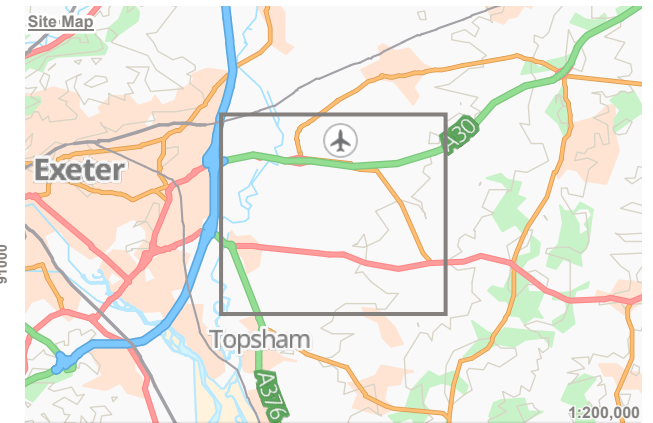
**Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)**

- 1 and 10m
- 100m

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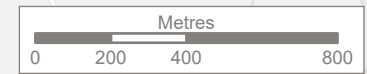
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Project  
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Title  
**Species Desktop Records - Bats  
 Option 1**

Drawing Number  
**G9631.032**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:20,000 @ A3	03/10/2022

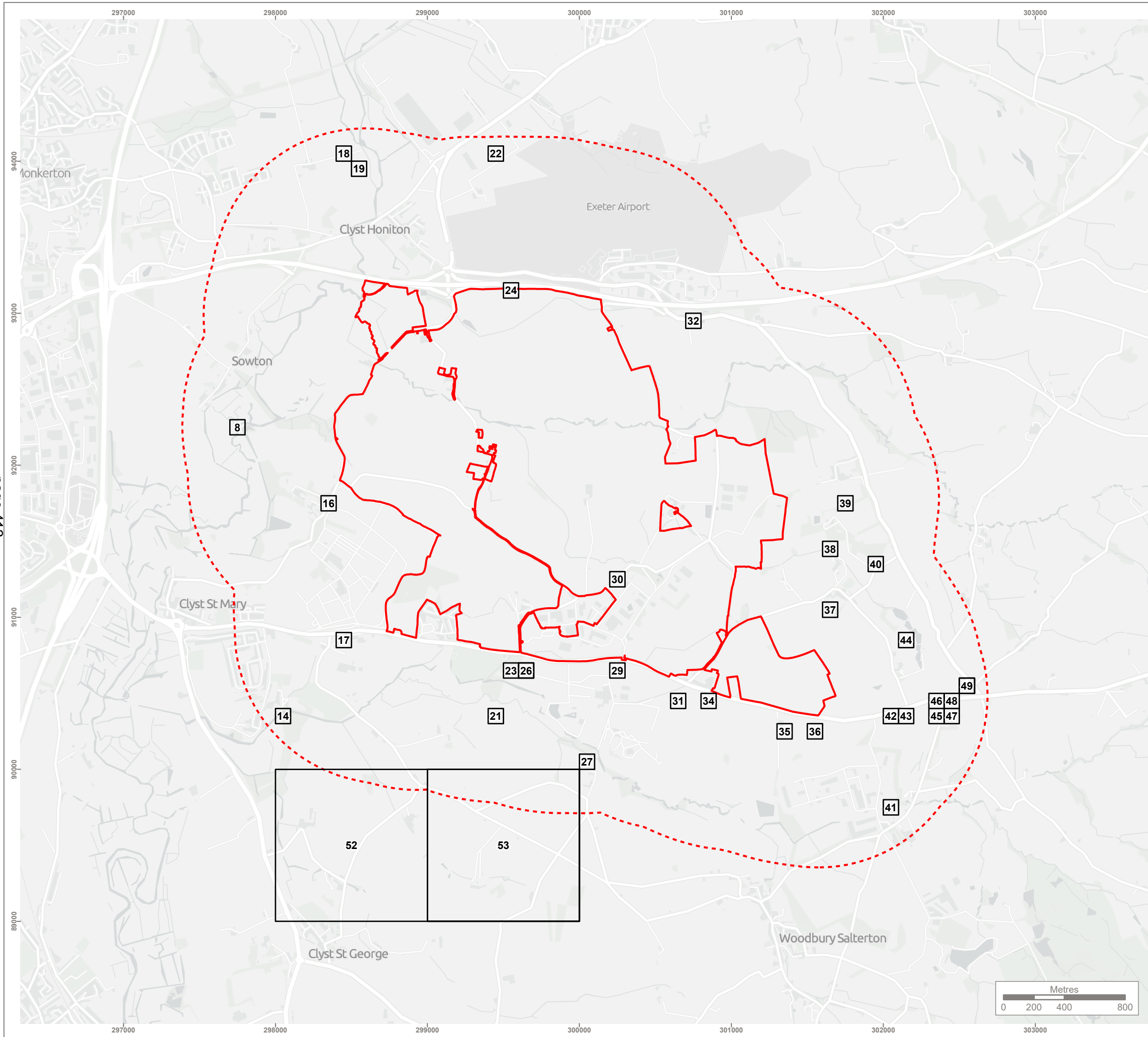


**Bat Desktop Records (Option 1)**

*Refer to drawing G9631.032 for spatial location of species data*

Species Record Identifier	Common Name	Count
1	a Bat	1
	a Long-eared Bat	1
	Nathusius's Pipistrelle	1
	Noctule Bat	1
2	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
	Western Barbastelle	2
3	a Long-eared Bat	1
	Common Pipistrelle	1
	Noctule Bat	1
	Soprano Pipistrelle	1
4	Greater Horseshoe Bat	1
	Western Barbastelle	1
5	a Bat	1
	Noctule Bat	1
	Western Barbastelle	1
6	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
10	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
	Western Barbastelle	1
11	a Bat	1
	a Long-eared Bat	1
	Lesser Horseshoe Bat	1
	Nathusius's Pipistrelle	1
	Noctule Bat	1
12	Brown Long-eared Bat	1
	Common Pipistrelle	1
	Lesser Horseshoe Bat	1
	Natterer's Bat	1
	Western Barbastelle	1
16	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
	Western Barbastelle	1
17	a Bat	1
	Brown Long-eared Bat	1
	Common Pipistrelle	1
	Greater Horseshoe Bat	1
	Lesser Horseshoe Bat	1
	Nathusius's Pipistrelle	1
	Natterer's Bat	2
	Noctule Bat	1
	Serotine	1
	Soprano Pipistrelle	1
Western Barbastelle	1	

Species Record Identifier	Common Name	Count
19	Soprano Pipistrelle	1
20	Soprano Pipistrelle	140
21	Soprano Pipistrelle	1
24	a Bat	1
25	Lesser Horseshoe Bat	1
27	a Bat	1
28	a Bat	1
30	a Bat	1
31	a Long-eared Bat	1
33	a Bat	1
	a Long-eared Bat	1
35	a Long-eared Bat	3
36	Common Pipistrelle	2
	Noctule Bat	2
	Serotine	1
	Soprano Pipistrelle	2
37	a Long-eared Bat	1
	Common Pipistrelle	1
	Noctule Bat	1
	Serotine	1
	Soprano Pipistrelle	2
45	a Bat	1
46	a Long-eared Bat	1
	Brown Long-eared Bat	2
	Common Pipistrelle	1
	Lesser Horseshoe Bat	4
47	Soprano Pipistrelle	1
48	Common Pipistrelle	1
	Brown Long-eared Bat	2
	Common Pipistrelle	2
49	Lesser Horseshoe Bat	35
	Common Pipistrelle	1
51	Common Pipistrelle	1



**KEY**

- Site boundary
- Site boundary - 1km buffer

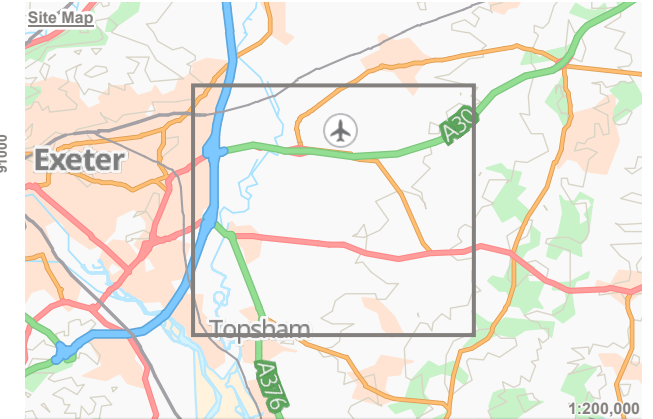
Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

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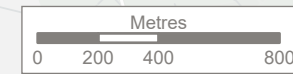
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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Other Mammals  
 Option 1**

Drawing Number  
**G9631.035**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	03/10/2022

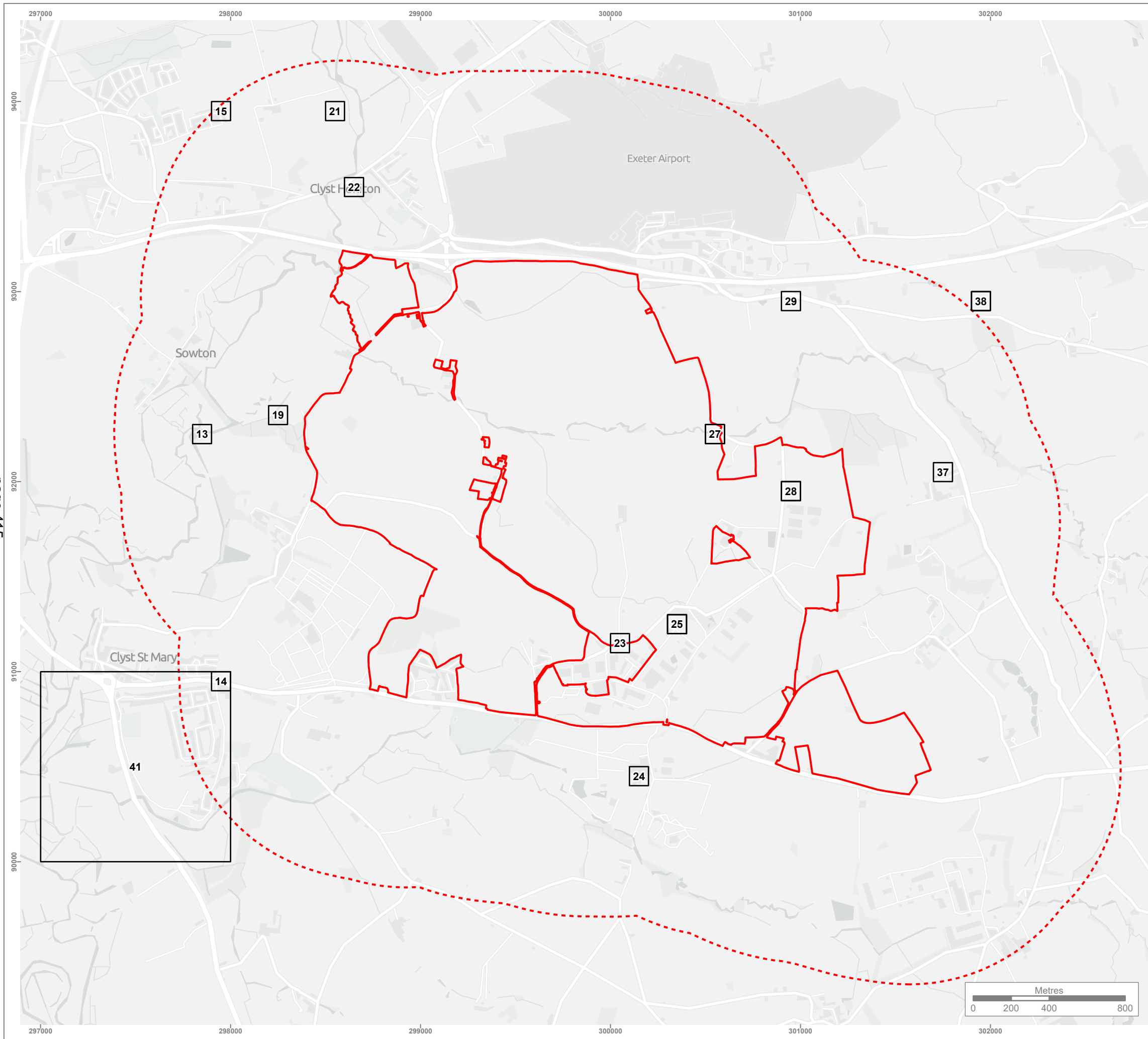


**Other Mammal Desktop Records (Option 1)**

*Refer to drawing G9631.035 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
8	Eurasian Otter	1
14	Hazel Dormouse	1
16	Eurasian Badger	1
17	Eurasian Badger	1
18	Eurasian Otter	1
19	Eurasian Otter	1
21	Eurasian Badger	1
22	Eurasian Badger	1
23	Eurasian Otter	1
24	Eurasian Badger	1
26	Eurasian Otter	2
27	Eurasian Otter	1
29	Eurasian Otter	1
30	Eurasian Badger	1
31	Eurasian Badger	1
32	Eurasian Badger	1
34	Eurasian Badger	1
35	Eurasian Badger	1
36	Eurasian Badger	1
37	Hazel Dormouse	1
38	Eurasian Badger	1
39	Eurasian Badger	1
40	Hazel Dormouse	1
41	Eurasian Otter	1
42	Eurasian Otter	1
43	Eurasian Badger	1
44	Eurasian Otter	1
45	West European Hedgehog	1
46	Eurasian Badger	1
47	Eurasian Badger	1
48	Eurasian Badger	1
49	Red Deer	1
	West European Hedgehog	1
52	Eurasian Badger	1
53	Eurasian Common Shrew	1
	Eurasian Pygmy Shrew	1
	Eurasian Water Shrew	1





**KEY**

- Site boundary
- Site boundary - 1km buffer

**Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)**

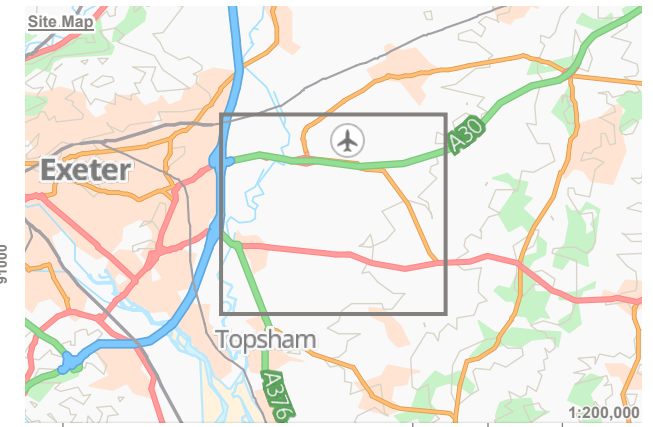
- 100m
- 1000m

page 415

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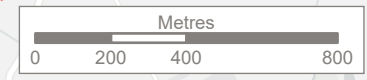
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 Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Invertebrates  
 Option 1**

Drawing Number  
**G9631.038**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:20,000 @ A3	03/10/2022



**Invertebrate Desktop Records (Option 1)**

*Refer to drawing G9631.038 for spatial location of species data*

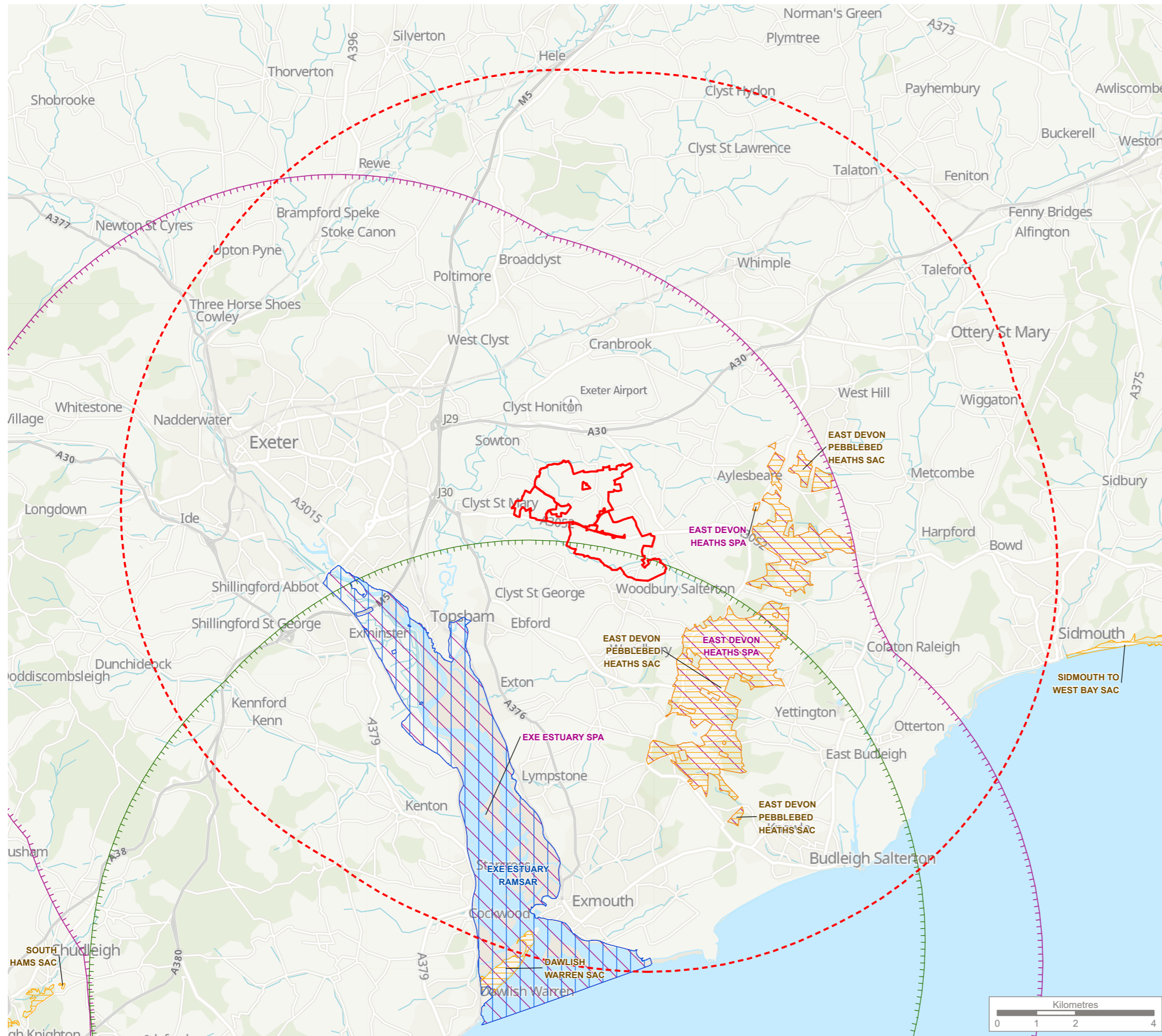
<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
13	Purple Hairstreak	1
14	Purple Hairstreak	1
15	Purple Hairstreak	1
19	Purple Hairstreak	1
21	Wall	1
22	Purple Hairstreak	1
23	Purple Hairstreak	1
24	Jersey Tiger	1
25	Purple Hairstreak	2
27	Purple Hairstreak	2
28	Small Heath	2
29	Purple Hairstreak	1
37	Purple Hairstreak	1
38	Purple Hairstreak	1
	Small Heath	1
41	Knot Grass	1



# Drawings

Option 2





**KEY**

- Site boundary
- Site boundary - 10km buffer
- Ramsar
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- Dawlish Warren SAC Buffer Area
- Exe Estuary SPA Buffer Area

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- Sites searched for were as follows:
- Ramsar and Proposed Ramsar
  - Special Protection Areas (SPA) and Potential SPA
  - Special Areas of Conservation (SAC) and Potential SAC



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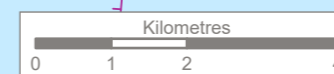
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Project  
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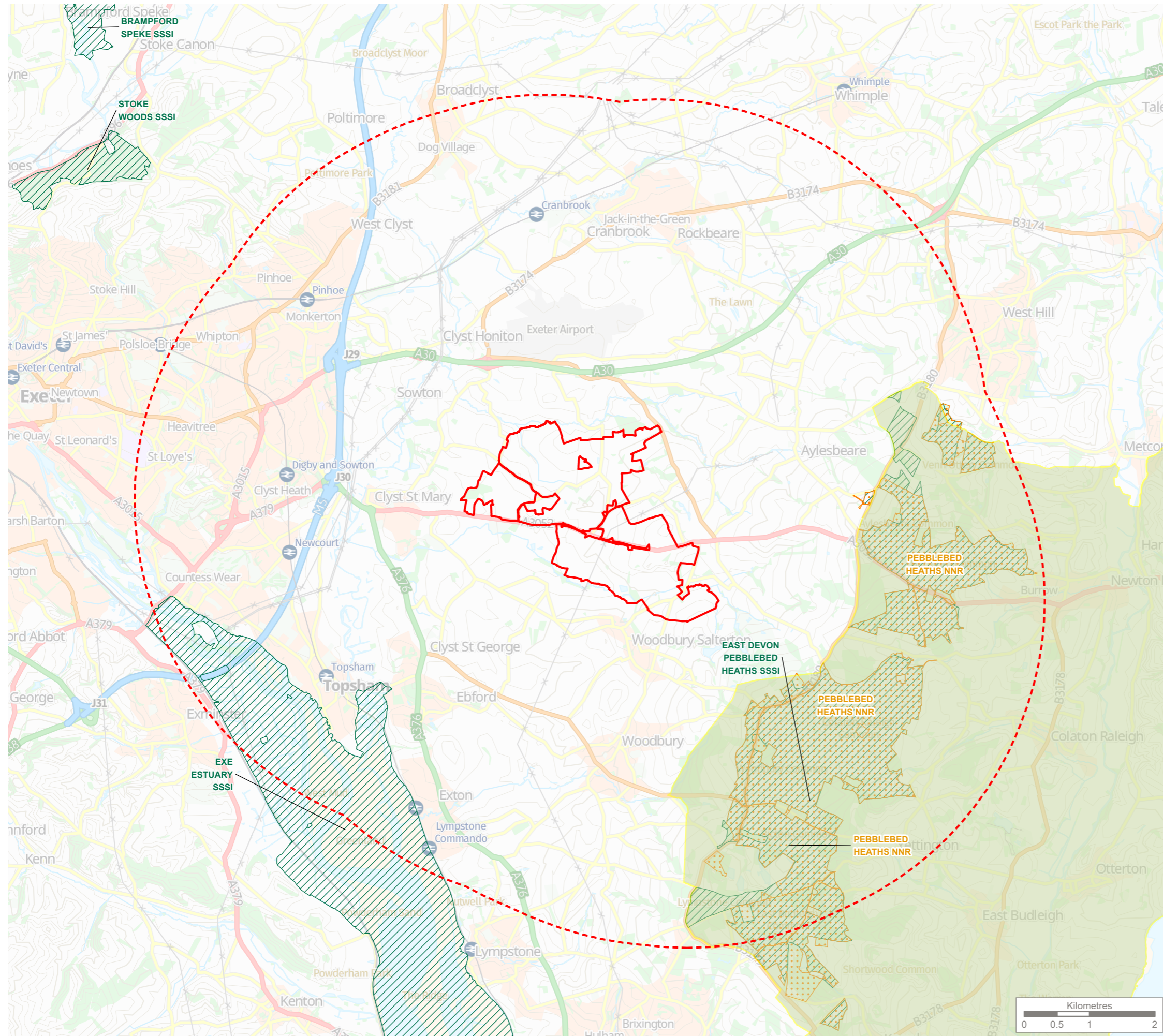
Title  
Internationally Designated Sites Within a 10km Buffer  
**Option 2b**

Drawing Number  
G9631.003

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:100,000 @ A3	03/10/2022







**KEY**

- Site boundary
- Site boundary - 5km buffer
- Natural England Data**
- Areas of Outstanding Natural Beauty
- National Nature Reserve (NNR)
- Sites of Special Scientific Interest (SSSI)

**CONFIDENTIAL**

- Sites searched for were as follows:
- Sites of Special Scientific Interest (SSSI)
  - National Nature Reserve (NNR)
  - Area of Outstanding Natural Beauty (AONB)
  - Marine Conservation Zones (MCZ)



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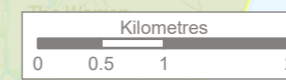
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Project  
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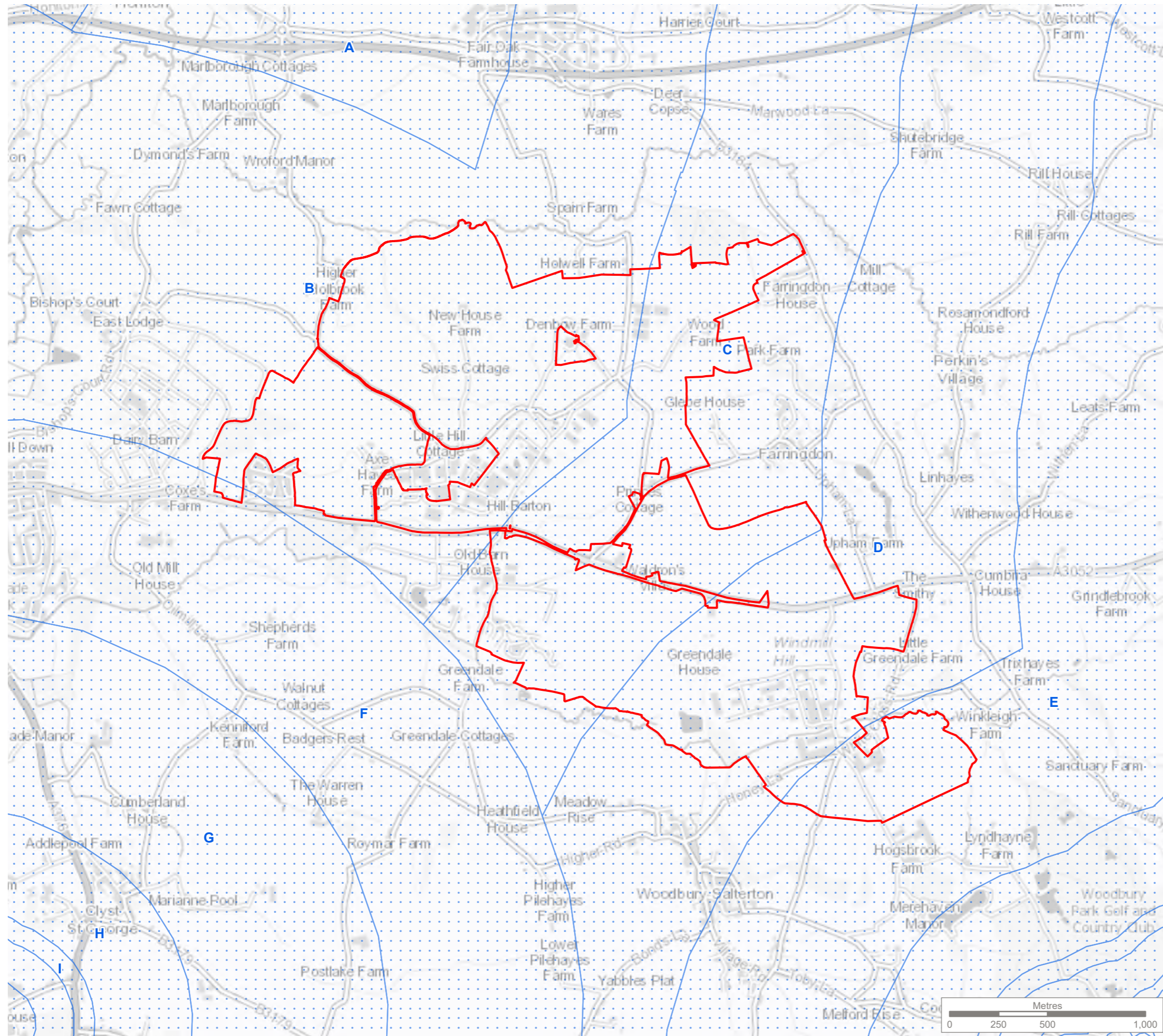
Title  
**Nationally Designated Sites Within a 5km Buffer  
 Option 2b**

Drawing Number  
**G9631.006**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:60,000 @ A3	21/09/2022







**KEY**

- Site boundary
- Sites of Special Scientific Interest - Impact Risk Zone

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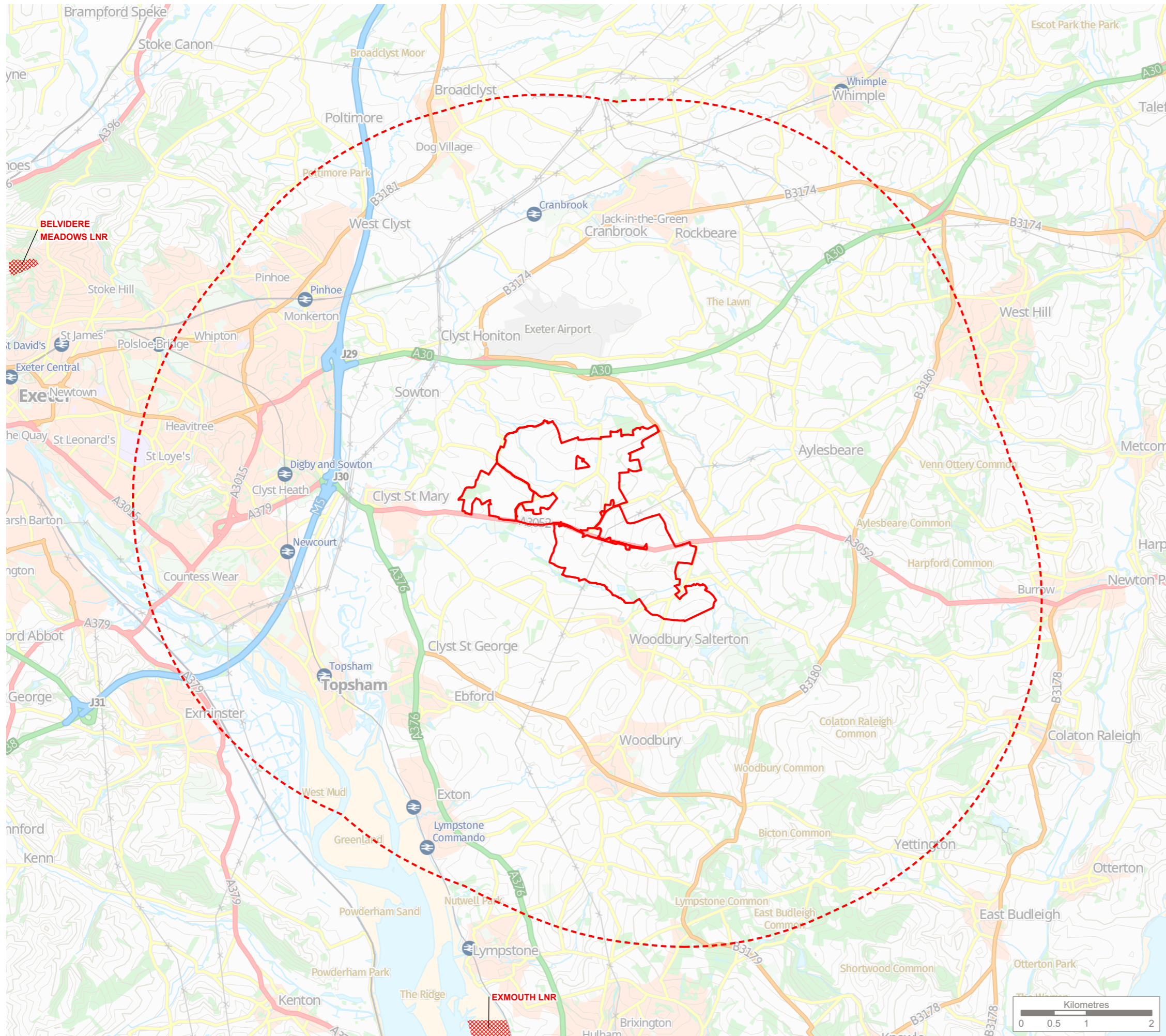
Project  
**East Devon Options Appraisal**

Title  
**SSSI IRZ  
 Option 2b**




Drawing Number  
**G9631.015**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:20,000 @ A3	29/09/2022





**KEY**

-  Site boundary
-  Site boundary - 5km buffer
-  Local Nature Reserve

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Sites searched for were as follows:  
- Local Nature Reserve (LNR)



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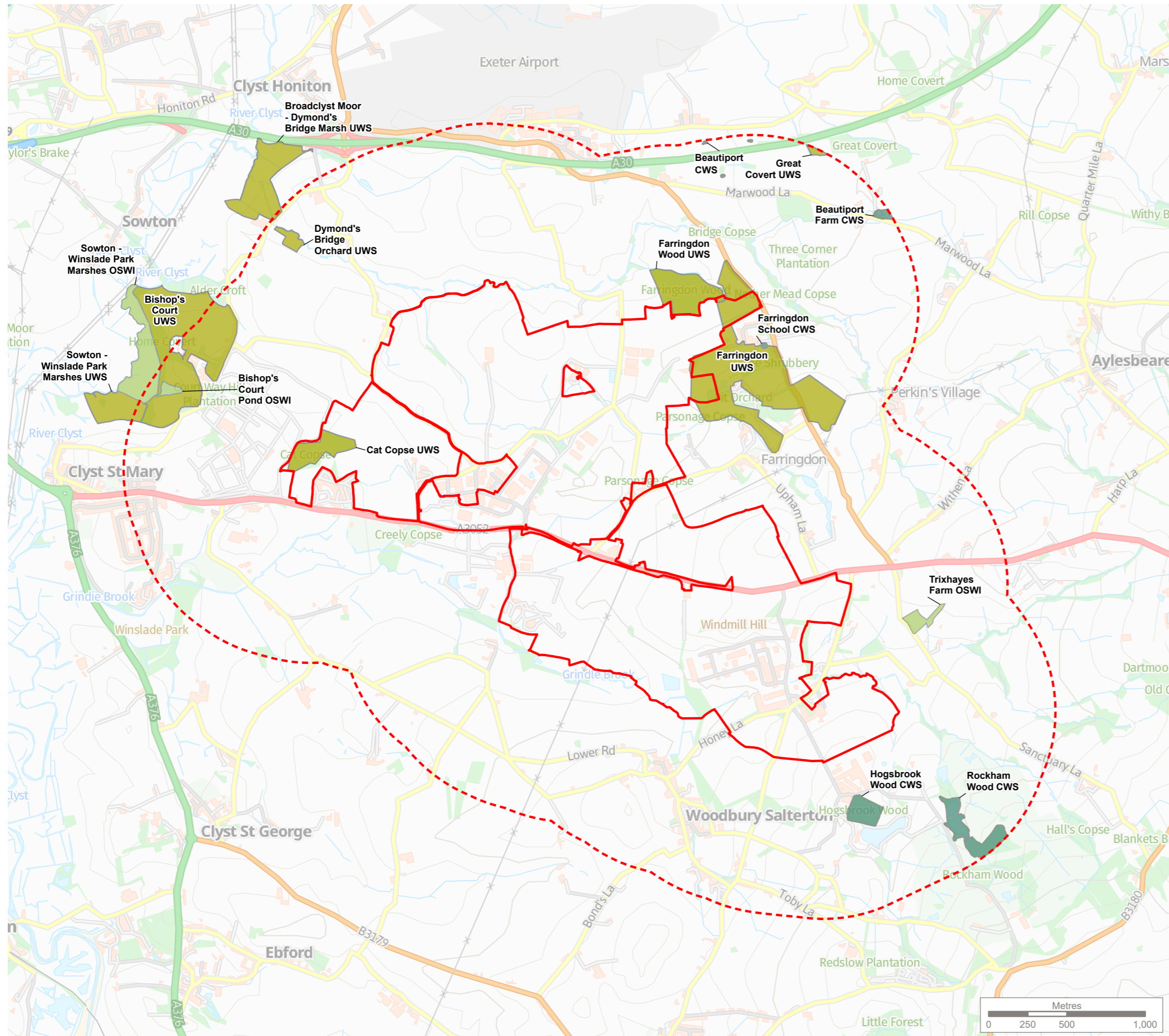
Project  
**East Devon Options Appraisal**

Title  
**Statutory Local Designated Sites Within a 5km Buffer  
Option 2b**

Drawing Number  
**G9631.009**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:60,000 @ A3	03/10/2022





**KEY**

- Site boundary
- Site boundary - 2km buffer

**Non-Statutory Designation**

- County Wildlife Site (CWS)
- Unconfirmed Wildlife Site (UWS)
- Other Sites of Wildlife Interest (OSWI)

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Rev	Description	Drawn	Approved	Date



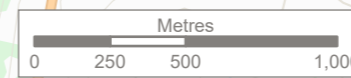
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Project  
**East Devon Options Appraisal**

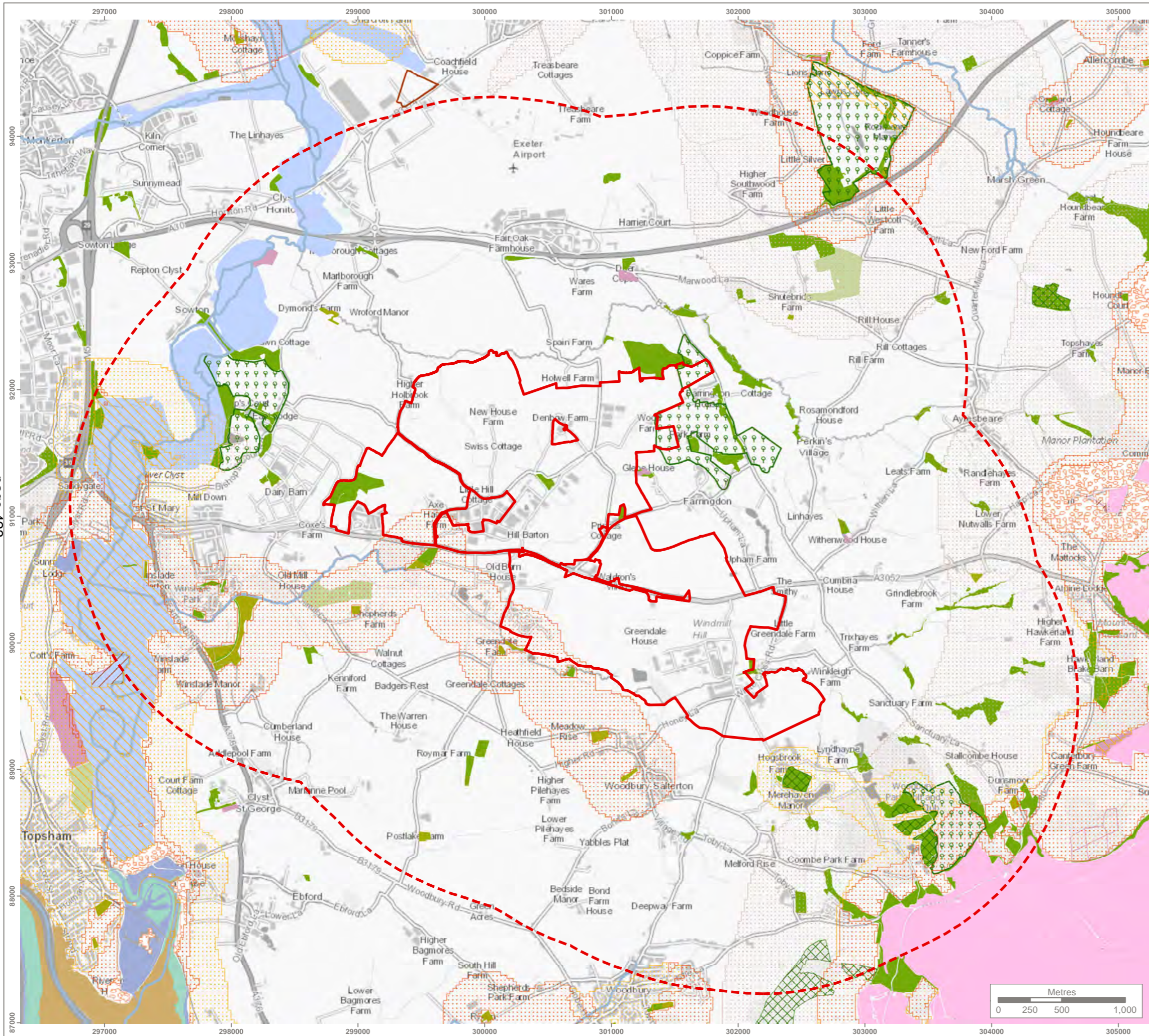
Title  
**Non-Statutory Locally Designated Sites Within 1km  
 Option 2b**

Drawing Number  
**G9631.042**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	07/10/2022







**KEY**

-  Option boundary
-  2km buffer
-  Main rivers
-  Ancient woodland
-  Woodpasture and parkland
-  Open mosaic habitat on previously developed land
- Priority Habitat Inventory**
-  Traditional orchard
-  Deciduous woodland
-  Coastal and floodplain grazing marsh
-  Good quality semi-improved grassland
-  Lowland fens
-  Lowland heathland
-  Coastal saltmarsh
-  Mudflats
-  No main habitat but additional habitats present
- Habitat Networks**
-  Habitat Restoration-Creation
-  Restorable Habitat
-  Fragmentation Action Zone
-  Network Enhancement Zone 1
-  Network Enhancement Zone 2
-  Network Expansion Zone

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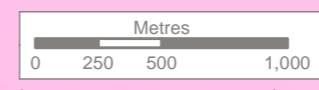
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Project  
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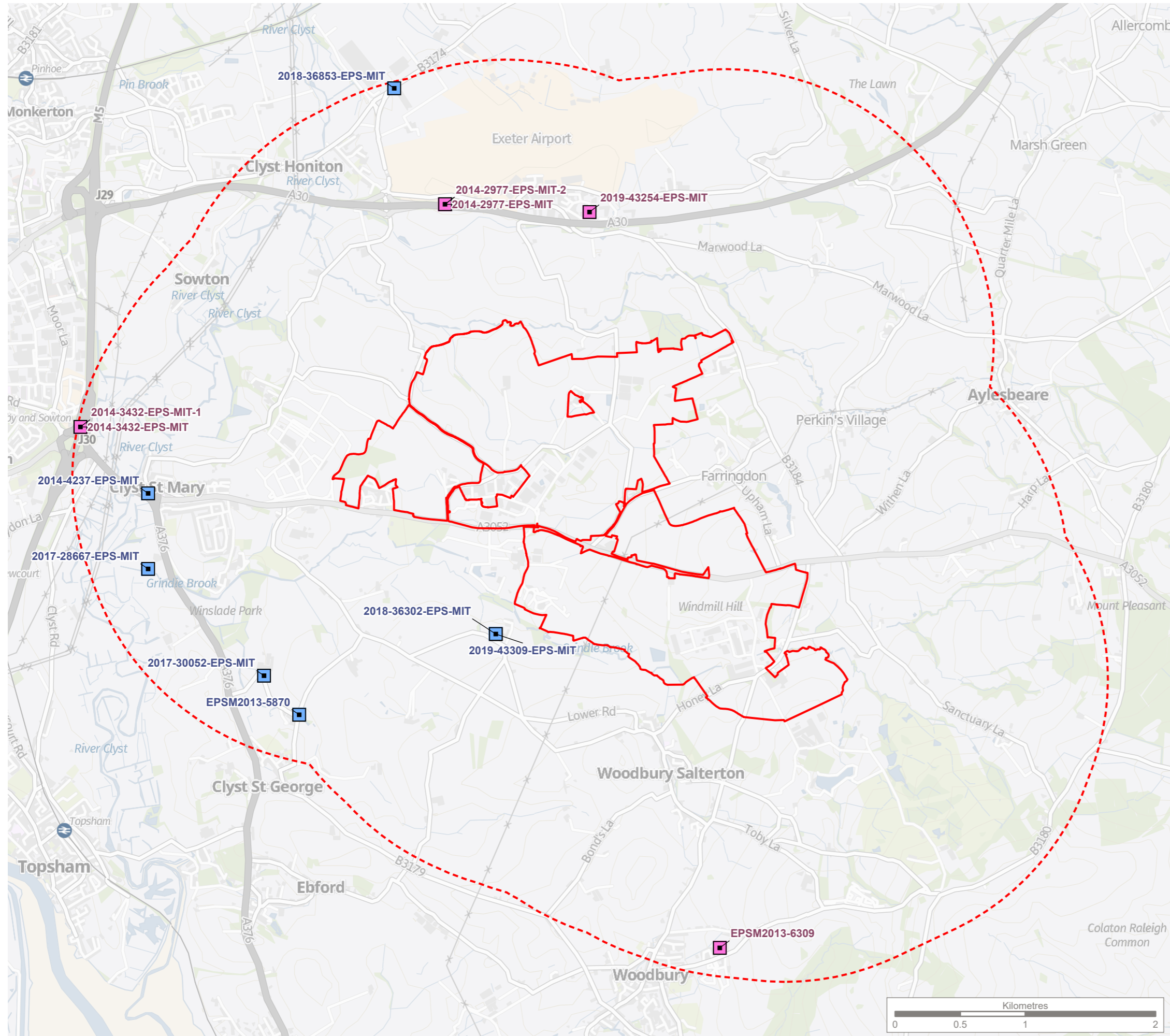
Title  
**Notable Habitats and Habitat Network Within 2km Option 2**

Drawing Number  
**G9631.018**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:30,000 @ A3	22/09/2022







**KEY**

- Site boundary
- Site boundary - 2km buffer

**Granted European Protected Species Mitigation Licence Application**

- Bat
- Other mammal

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Granted EPS Mitigation Licence Applications <https://magic.defra.gov.uk>

Rev	Description	Drawn	Approved	Date



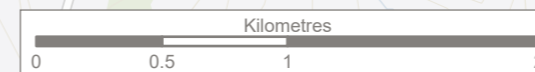
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH  
Tel 01925 844004 e-mail [tep@tep.uk.com](mailto:tep@tep.uk.com) www.[tep.uk.com](http://tep.uk.com)

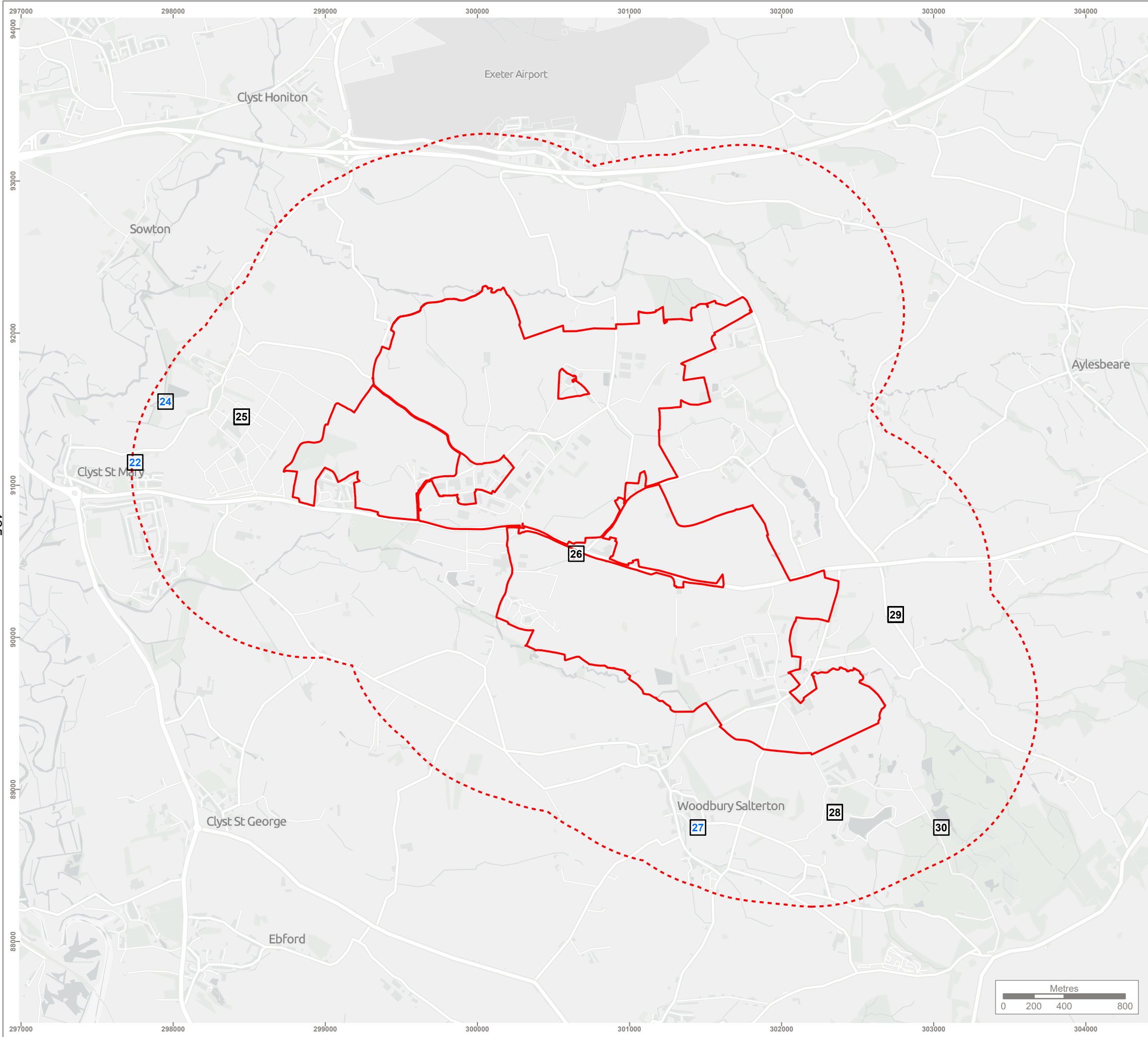
Project  
**East Devon Options Appraisal**

Title  
**Granted European Protected Species Mitigation Licence Applications Within 2km - Option 2b**

Drawing Number  
**G9631.021**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:30,078 @ A3	23/09/2022





**KEY**

- Site boundary
- Site boundary - 1km buffer

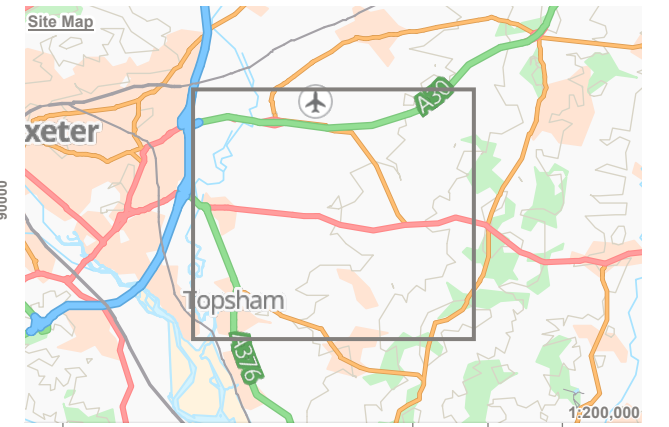
**Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)**

100m

**Note:**  
Record IDs in blue indicate the presence of invasive species

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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Plants  
Option 2b**

Drawing Number  
**G9631.024**

Drawn BJ	Checked MK	Approved RR	Scale 1:25,000 @ A3	Date 30/09/2022
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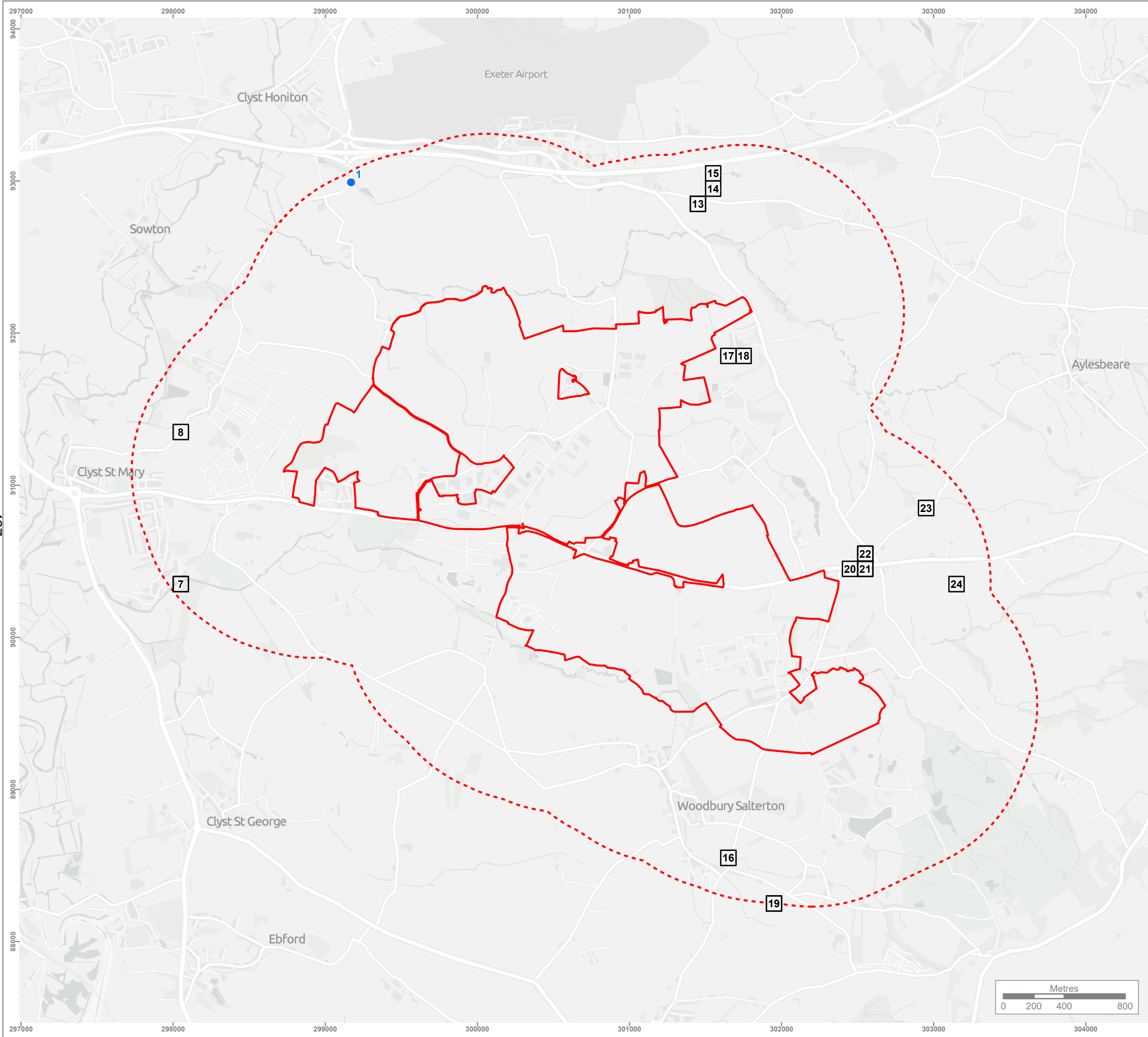


**Plant Desktop Records (Option 2b)**

*Refer to drawing G9631.024 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
<b>22</b>	Floating Pennywort	1
<b>24</b>	Rhododendron	1
<b>25</b>	Bur Chervil	1
	Galingale	1
	Nuttall's Water-Weed	1
	Rhododendron	1
	White Water-Lily	1
<b>26</b>	Pyramidal Orchid	1
<b>27</b>	Japanese Knotweed	1
<b>28</b>	Primrose	1
	Smooth Brome	1
<b>29</b>	Corky-Fruited Water-Dropwort	2
	Pepper-Saxifrage	2
	Primrose	1
<b>30</b>	Corky-Fruited Water-Dropwort	1





**KEY**

- Site boundary
- Site boundary - 1km buffer

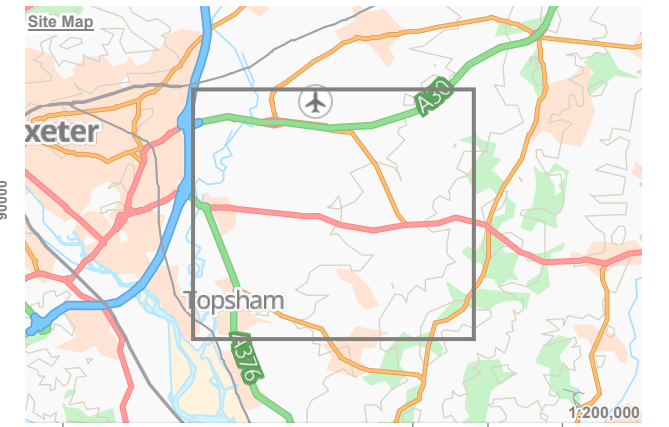
**Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)**

- 1 and 10m
- 100m

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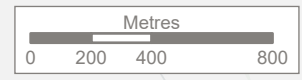
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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Amphibians, Reptiles and Fish Option 2b**

Drawing Number  
**G9631.027**

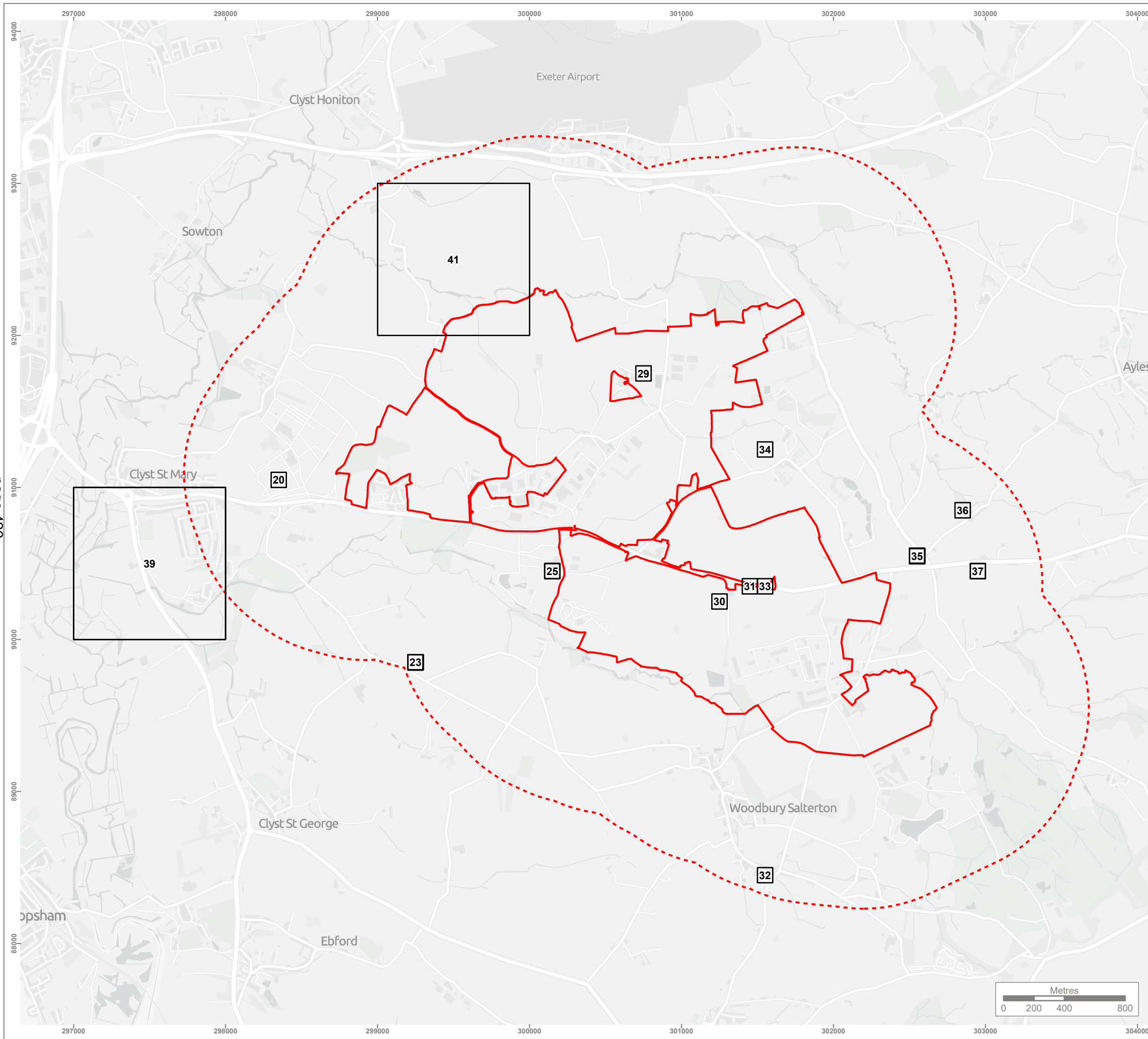
Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	03/10/2022



**Amphibian, Reptile and Fish Desktop Records (Option 2b)**

*Refer to drawing G9631.027 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
1	Common Toad	1
7	Grass Snake	1
	Slow-worm	1
8	Common Toad	1
13	Great Crested Newt	2
14	Great Crested Newt	1
15	Great Crested Newt	1
16	Common Toad	1
17	Great Crested Newt	1
18	Great Crested Newt	1
19	a Newt	1
	Common Frog	1
20	Common Toad	1
21	Common Toad	1
	Slow-worm	1
22	Common Frog	1
	Smooth Newt	1
23	Smooth Newt	1
24	Common Frog	1



**KEY**

- Site boundary
- Site boundary - 1km buffer

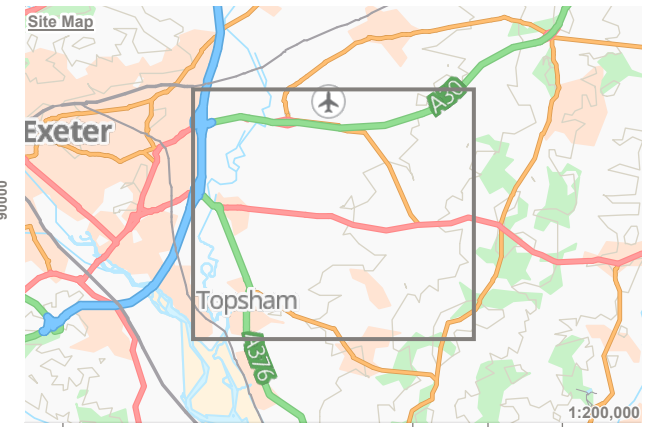
Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

- 100m
- 1000m

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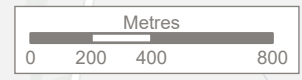
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 Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Birds  
 Option 2b**

Drawing Number  
**G9631.030**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	03/10/2022

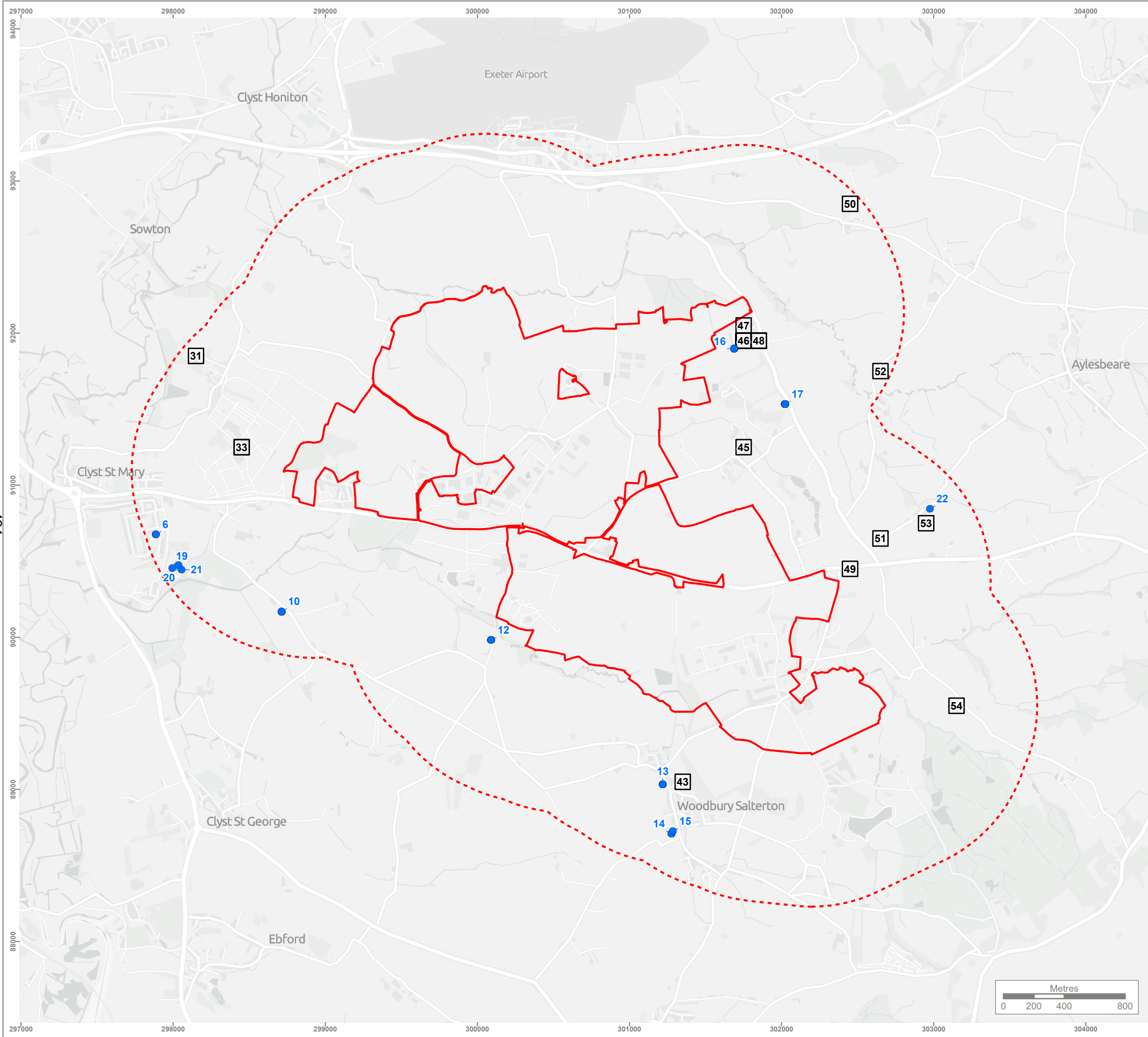


**Bird Desktop Records (Option 2b)**

*Refer to drawing G9631.030 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
<b>20</b>	Swift	1
<b>23</b>	Bullfinch	1
	Herring Gull	1
	Kestrel	1
	Skylark	1
	Snipe	1
<b>25</b>	Common Bullfinch	1
	Kestrel	1
<b>29</b>	Hoopoe	1
<b>30</b>	Cirl Bunting	1
<b>31</b>	Barn Owl	1
<b>32</b>	Turtle Dove	1
<b>33</b>	Kestrel	1
<b>34</b>	Barn Owl	1
<b>35</b>	Blue Tit	1
	Great Tit	1
	Greenfinch	1
	House Martin	2
	Redwing	1
	Robin	1
	Song Thrush	1
<b>36</b>	Montagu's Harrier	1
<b>37</b>	Kestrel	1
	Robin	1
<b>39</b>	Barn Owl	1
	Mediterranean Gull	1
<b>41</b>	Kestrel	1





**KEY**

- Site boundary
- Site boundary - 1km buffer

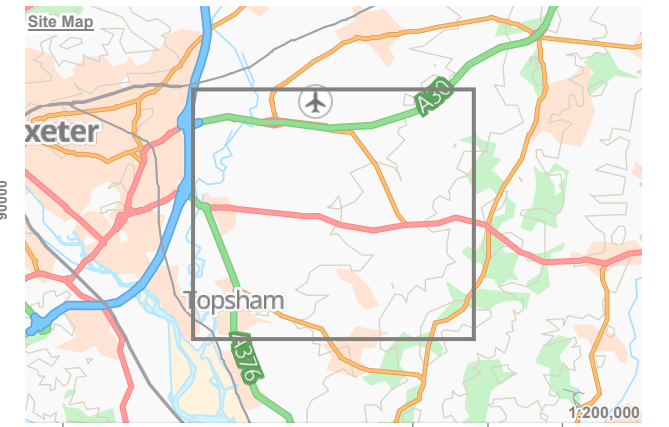
**Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)**

- 1 and 10m
- 100m

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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Bats  
 Option 2b**

Drawing Number  
**G9631.033**

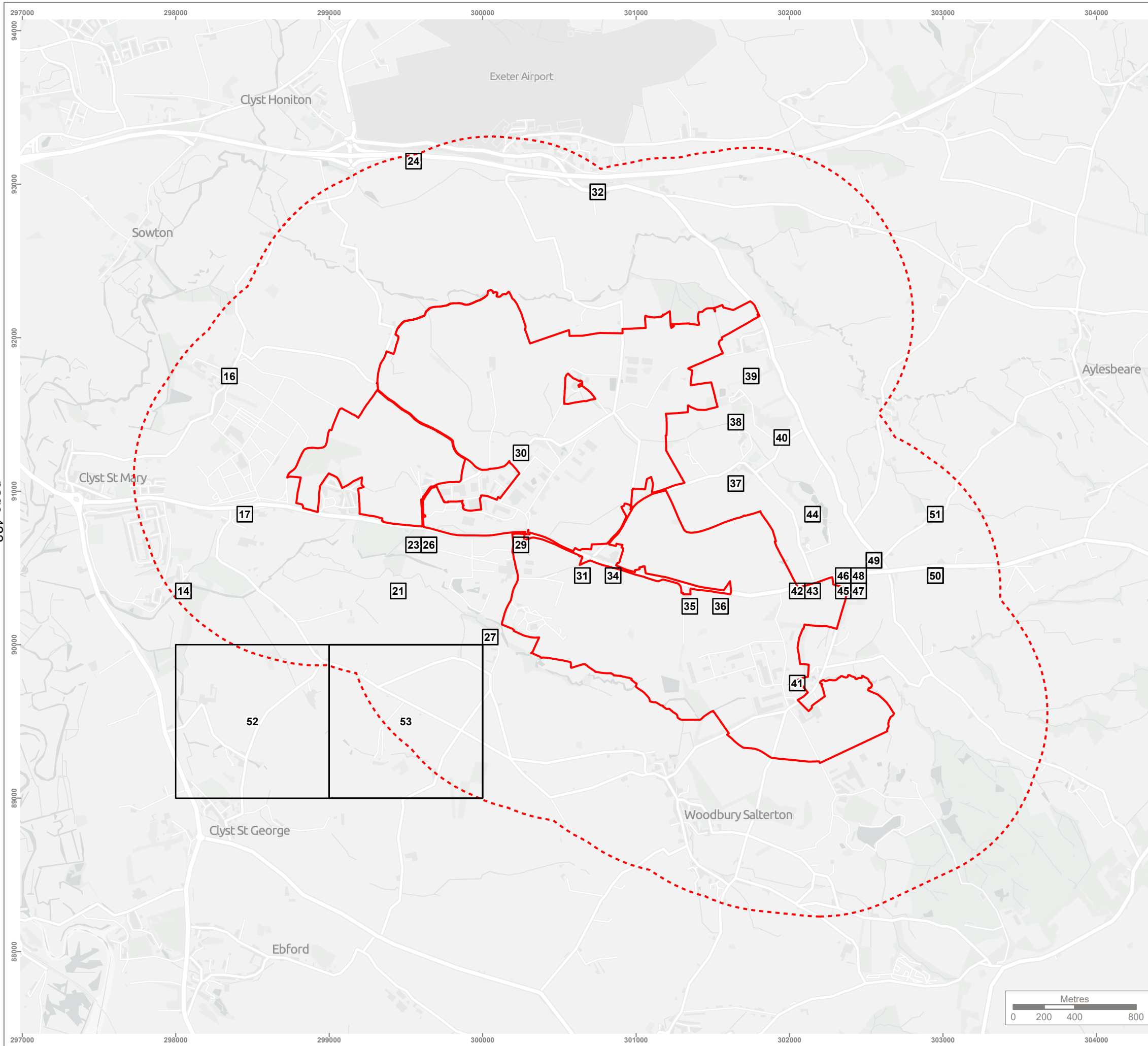
Drawn BJ	Checked MK	Approved RR	Scale 1:25,000 @ A3	Date 03/10/2022
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**Bat Desktop Records (Option 2b)**

*Refer to drawing G9631.033 for spatial location of species data*

Species Record Identifier	Common Name	Count
6	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
10	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
	Western Barbastelle	1
12	Brown Long-eared Bat	1
	Common Pipistrelle	1
	Lesser Horseshoe Bat	1
	Natterer's Bat	1
	Western Barbastelle	1
13	a Bat	1
	a Long-eared Bat	1
	Lesser Horseshoe Bat	1
	Western Barbastelle	1
14	a Bat	1
	a Long-eared Bat	1
	Lesser Horseshoe Bat	1
15	Western Barbastelle	1
16	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
	Western Barbastelle	1
17	a Bat	1
	Brown Long-eared Bat	1
	Common Pipistrelle	1
	Greater Horseshoe Bat	1
	Lesser Horseshoe Bat	1
	Nathusius's Pipistrelle	1
	Natterer's Bat	2
	Noctule Bat	1
	Serotine	1
	Soprano Pipistrelle	1
	Western Barbastelle	1

Species Record Identifier	Common Name	Count
19	Soprano Pipistrelle	1
20	Soprano Pipistrelle	140
21	Soprano Pipistrelle	1
22	a Bat	1
31	a Long-eared Bat	1
33	a Bat	1
	a Long-eared Bat	1
43	a Bat	1
45	a Bat	1
46	a Long-eared Bat	1
	Brown Long-eared Bat	2
	Common Pipistrelle	1
	Lesser Horseshoe Bat	4
	Soprano Pipistrelle	1
47	Common Pipistrelle	1
48	Brown Long-eared Bat	2
	Common Pipistrelle	2
	Lesser Horseshoe Bat	35
49	Common Pipistrelle	1
50	a Bat	1
51	Common Pipistrelle	1
52	Brown Long-eared Bat	1
53	a Bat	1
54	Common Pipistrelle	1



**KEY**

- Site boundary
- Site boundary - 1km buffer

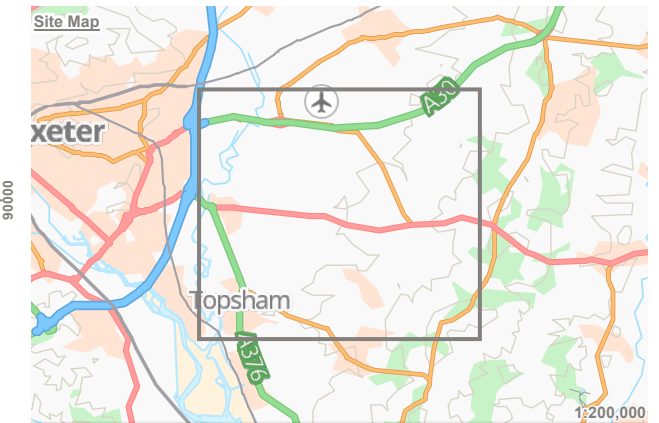
Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

- 100m
- 1000m

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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Other Mammals  
 Option 2b**

Drawing Number  
**G9631.036**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	03/10/2022

**Other Mammal Desktop Records (Option 2b)**

*Refer to drawing G9631.036 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
14	Hazel Dormouse	1
16	Eurasian Badger	1
17	Eurasian Badger	1
21	Eurasian Badger	1
23	Eurasian Otter	1
24	Eurasian Badger	1
26	Eurasian Otter	2
27	Eurasian Otter	1
29	Eurasian Otter	1
30	Eurasian Badger	1
31	Eurasian Badger	1
32	Eurasian Badger	1
34	Eurasian Badger	1
35	Eurasian Badger	1
36	Eurasian Badger	1
37	Hazel Dormouse	1
38	Eurasian Badger	1
39	Eurasian Badger	1
40	Hazel Dormouse	1
41	Eurasian Otter	1
42	Eurasian Otter	1
43	Eurasian Badger	1
44	Eurasian Otter	1
45	West European Hedgehog	1
46	Eurasian Badger	1
47	Eurasian Badger	1
48	Eurasian Badger	1
49	Red Deer	1
	West European Hedgehog	1
50	Red Deer	1
	Roe Deer	1
	Sika Deer	1
51	Eurasian Badger	1
52	Eurasian Badger	1
53	Eurasian Common Shrew	1
	Eurasian Pygmy Shrew	1
	Eurasian Water Shrew	1

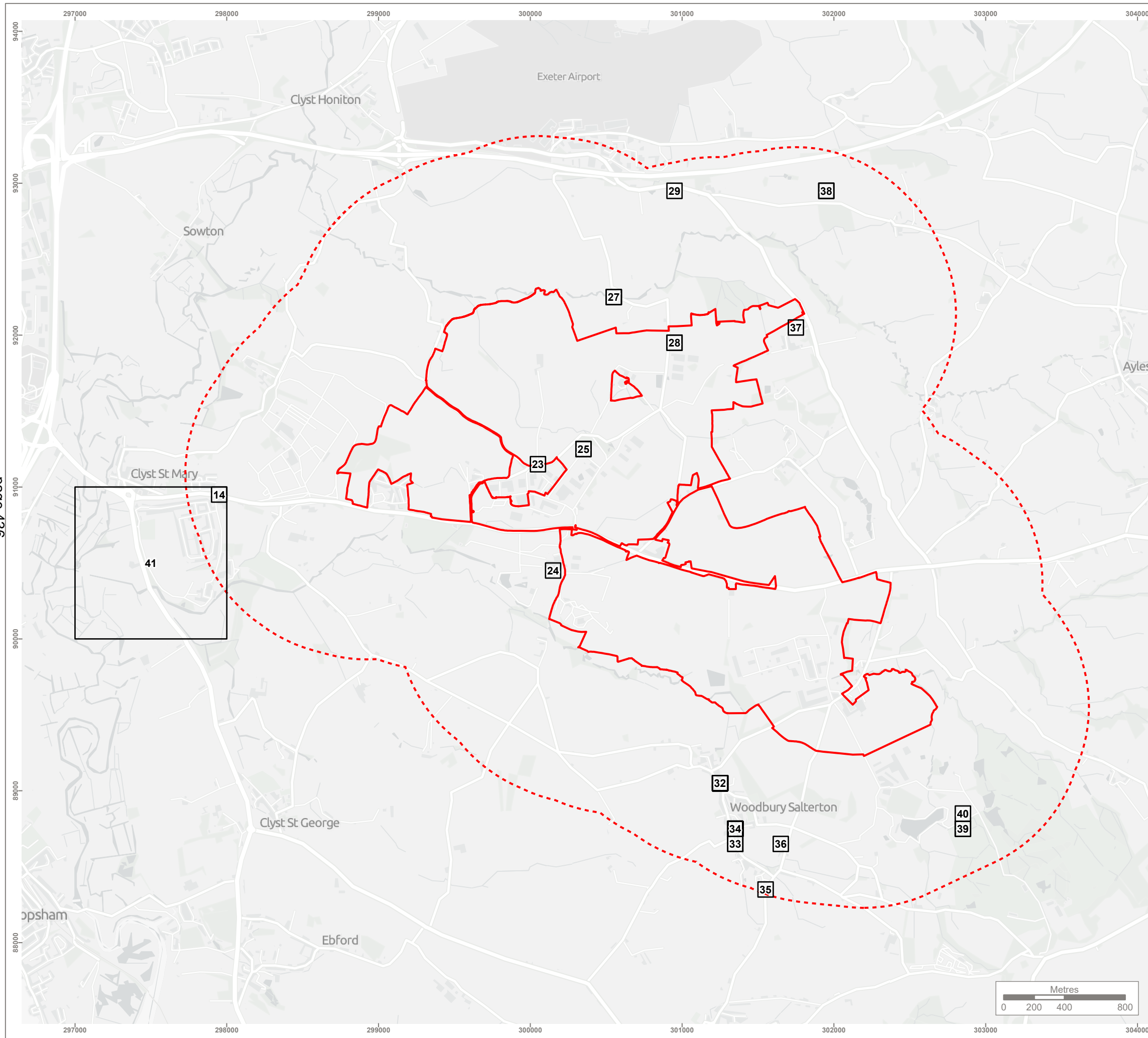


**Invertebrate Desktop Records (Option 2b)**

*Refer to drawing G9631.039 for spatial location of species data*

Species Record Identifier	Common Name	Count
14	Purple Hairstreak	1
23	Purple Hairstreak	1
24	Jersey Tiger	1
25	Purple Hairstreak	2
27	Purple Hairstreak	2
28	Small Heath	2
29	Purple Hairstreak	1
32	Beaded Chestnut	1
	Bloxworth Snout	1
	Brindled Beauty	1
	Buff Ermine	1
	Cinnabar	1
	Cloaked Carpet	1
	Coastal Pearl	1
	Dot Moth	1
	Dusky Brocade	1
	Dusky Thorn	1
	Green-brindled Crescent	1
	Horse Chestnut	1
	Jersey Tiger	1
	Knot Grass	1
	Lackey	1
	L-album Wainscot	1
	Marbled Green	1
	Mottled Rustic	1
	Pied Grey	1
	Portland Ribbon Wave	1
	Powdered Quaker	1
	Rosy Rustic	1
	Sallow	1
	September Thorn	1
	Shoulder-striped Wainscot	1
	Spinach	1
	White Ermine	1
	White-line Dart	1
33	Mullein Wave	1
	White Ermine	1
34	August Thorn	1
	Autumnal Rustic	1
	Beaded Chestnut	1
	Bleached Pug	1
	Blood-Vein	1
	Bloxworth Snout	1
	Brindled Beauty	1
	Buff Ermine	1
	Centre-barred Sallow	1
	Cinnabar	1
	Cloaked Carpet	1
	Dark-barred Twin-spot Carpet	1

Species Record Identifier	Common Name	Count
34	Dot Moth	1
	Double Dart	1
	Dusky Brocade	1
	Dusky Thorn	1
	Figure of Eight	1
	Flounced Chestnut	1
	Galium Carpet	1
	Garden Tiger	1
	Ghost Moth	1
	Green-brindled Crescent	1
	Heath Rustic	1
	Horse Chestnut	1
	Jersey Tiger	1
	Kent Black Arches	1
	Knot Grass	1
	Lackey	1
	L-album Wainscot	1
	Large Wainscot	1
	Marbled Green	1
	Mocha	1
	Mottled Rustic	1
	Mouse Moth	1
	Neglected Rustic	1
	Oak Hook-tip	1
	Orange Footman	1
	Pale Eggar	1
	Powdered Quaker	1
	Rosy Minor	1
	Rosy Rustic	1
	Ruddy Carpet	1
	Rustic	1
	Sallow	1
September Thorn	1	
Shaded Broad-bar	1	
Shoulder-striped Wainscot	1	
Small Emerald	1	
Small Phoenix	1	
Small Square-spot	1	
Sprawler	1	
White Ermine	1	
35	Lackey	1
36	Small Eggar	1
37	Purple Hairstreak	1
38	Purple Hairstreak	1
	Small Heath	1
39	Dark Green Fritillary	1
	Purple Hairstreak	1
40	Purple Hairstreak	1
41	Knot Grass	1



**KEY**

Site boundary

Site boundary - 1km buffer

Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

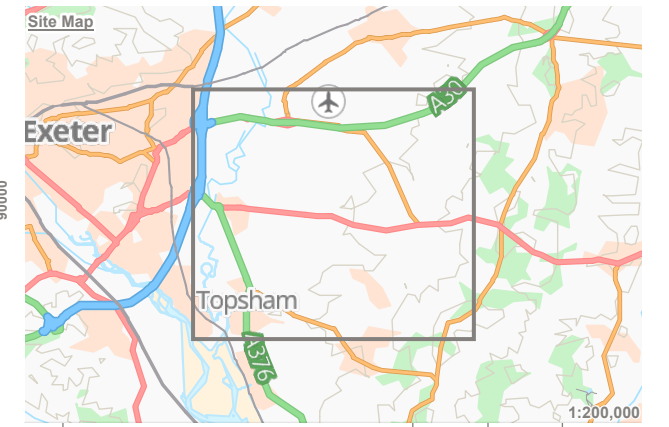
100m

1000m

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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Invertebrates  
Option 2b**

Drawing Number  
**G9631.039**

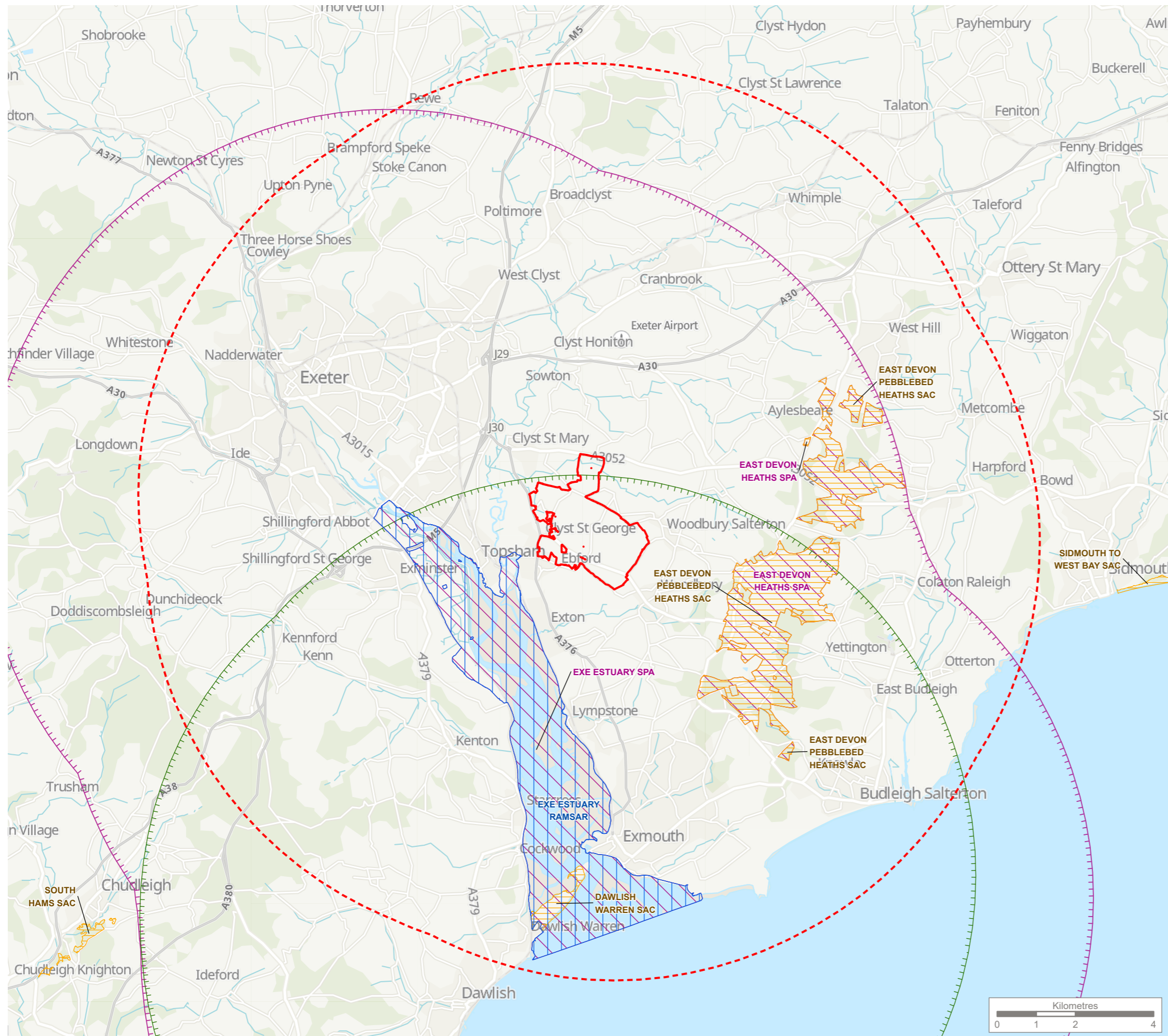
Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	03/10/2022



## Drawings

Option 3





**KEY**

- Site boundary
- Site boundary - 10km buffer
- Ramsar
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- Dawlish Warren SAC Buffer Area
- Exe Estuary SPA Buffer Area

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Sites searched for were as follows:

- Ramsar and Proposed Ramsar
- Special Protection Areas (SPA) and Potential SPA
- Special Areas of Conservation (SAC) and Potential SAC

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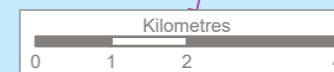
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Project  
**East Devon Options Appraisal**

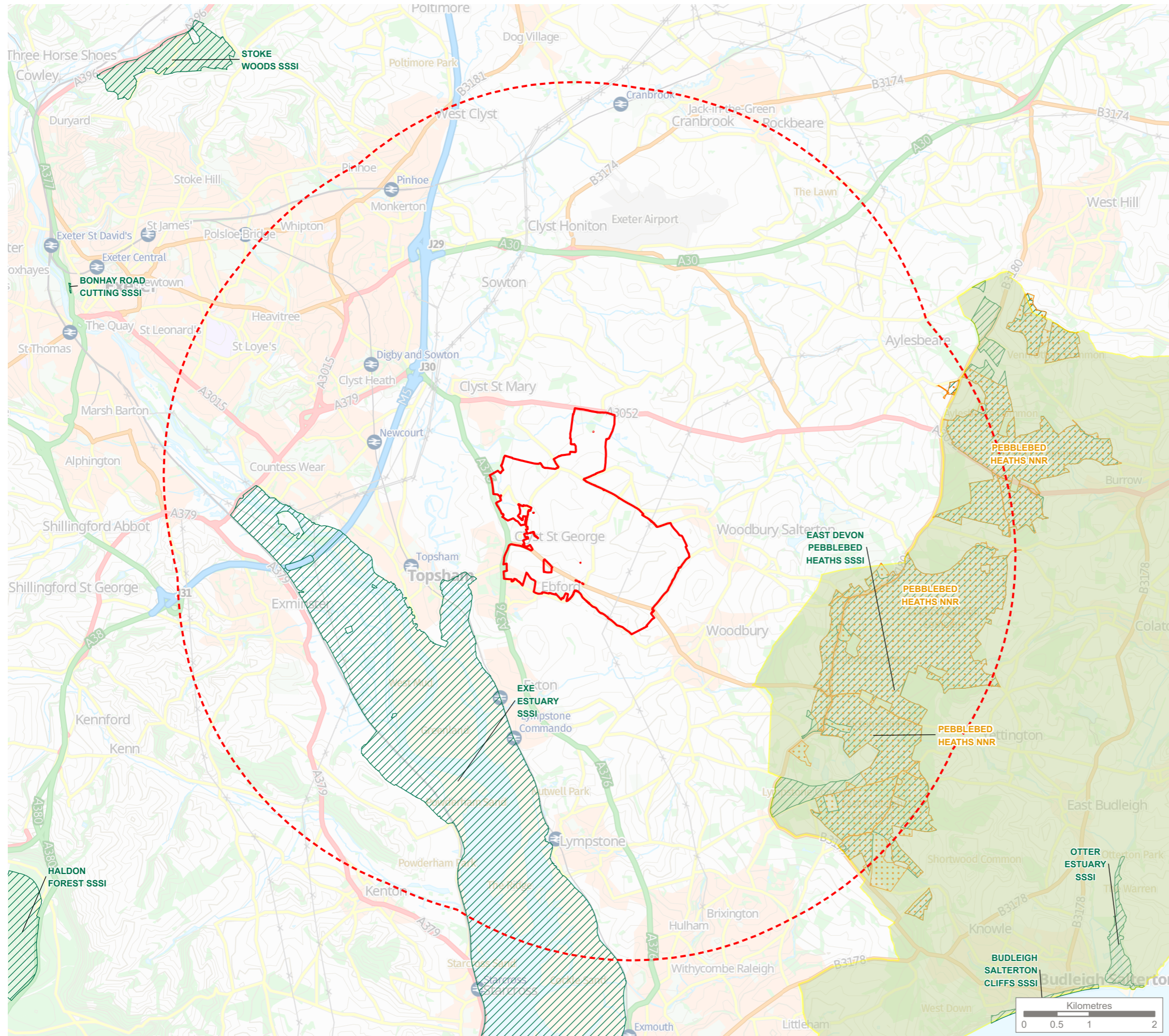
Title  
**Internationally Designated Sites Within a 10km Buffer  
 Option 3**

Drawing Number  
**G9631.004**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:100,000 @ A3	03/10/2022







**KEY**

- Site boundary
- Site boundary - 5km buffer

**Natural England Data**

- Areas of Outstanding Natural Beauty
- National Nature Reserve (NNR)
- Sites of Special Scientific Interest (SSSI)

**CONFIDENTIAL**

- Sites searched for were as follows:
- Sites of Special Scientific Interest (SSSI)
  - National Nature Reserve (NNR)
  - Area of Outstanding Natural Beauty (AONB)
  - Marine Conservation Zones (MCZ)

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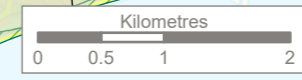
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 Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project  
**East Devon Options Appraisal**

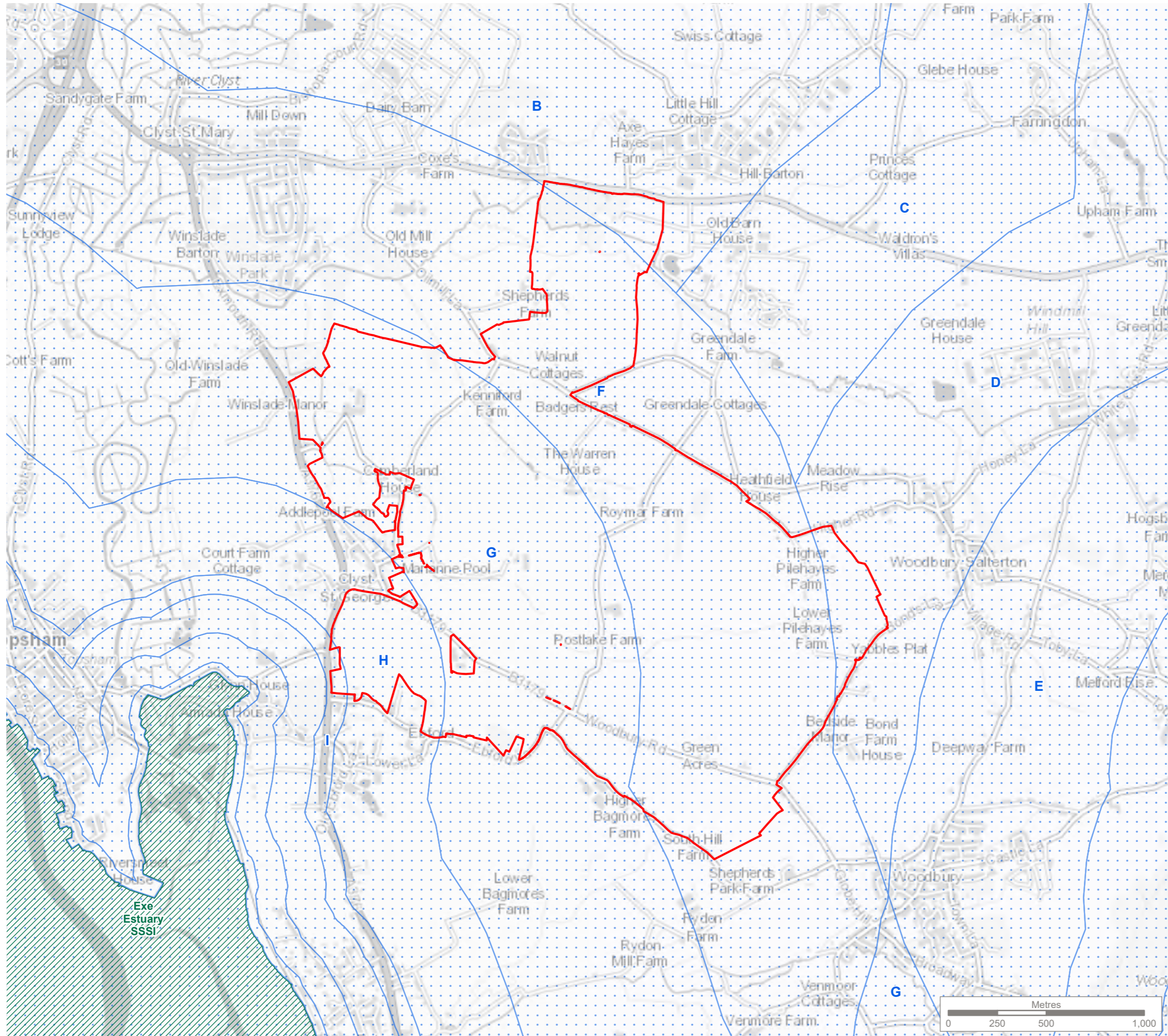
Title  
**Nationally Designated Sites Within a 5km Buffer  
 Option 3**

Drawing Number  
**G9631.007**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:60,000 @ A3	21/09/2022







**KEY**

- Site boundary
- Sites of Special Scientific Interest
- Sites of Special Scientific Interest - Impact Risk Zone

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Project  
**East Devon Options Appraisal**

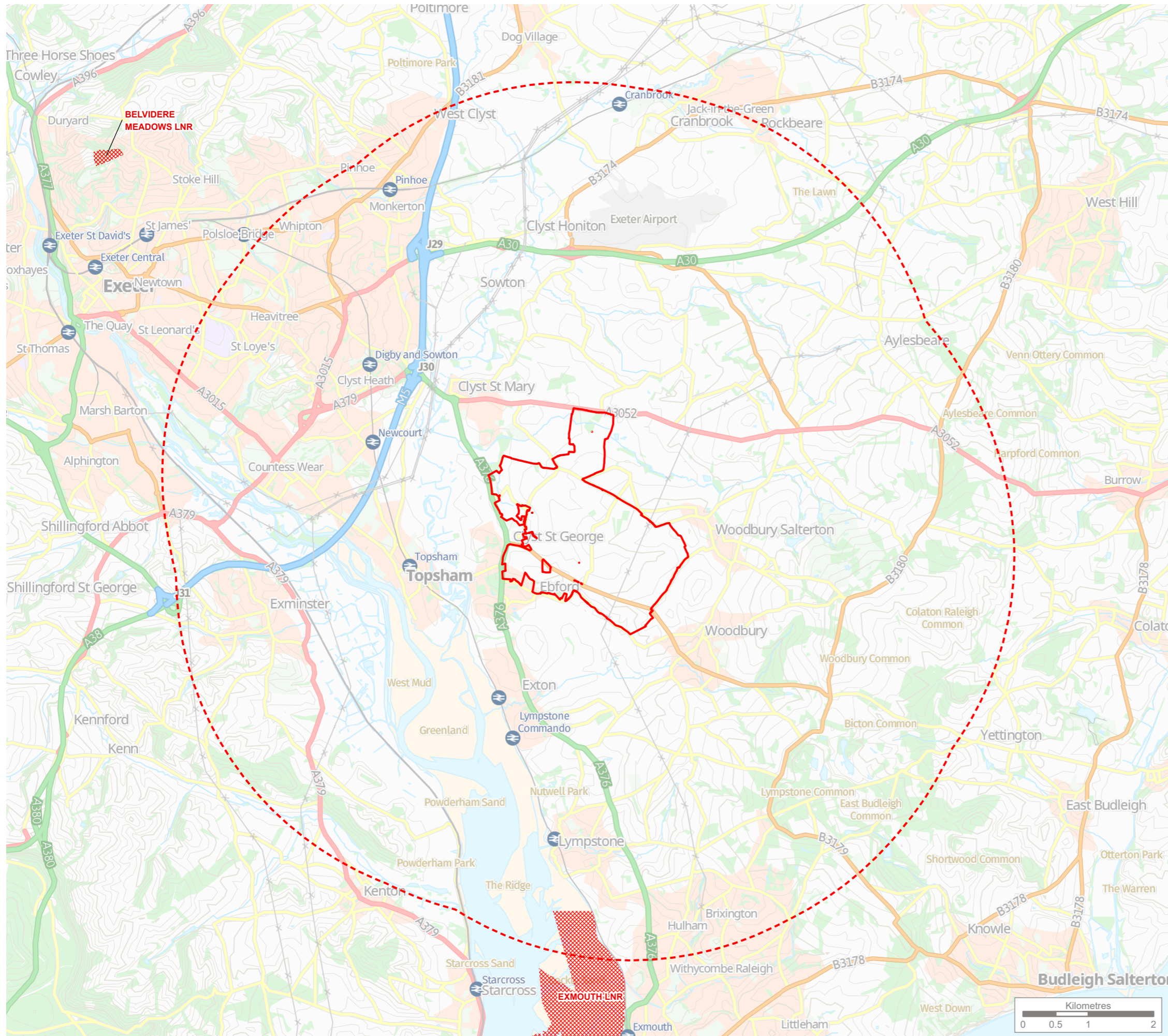
Title  
**SSSI IRZ  
 Option 3**

Drawing Number  
**G9631.016**




Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:20,000 @ A3	29/09/2022







**KEY**

-  Site boundary
-  Site boundary - 5km buffer
-  Local Nature Reserve

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Sites searched for were as follows:  
- Local Nature Reserve (LNR)



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Rev	Description	Drawn	Approved	Date



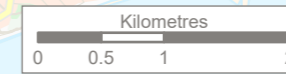
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Project  
**East Devon Options Appraisal**

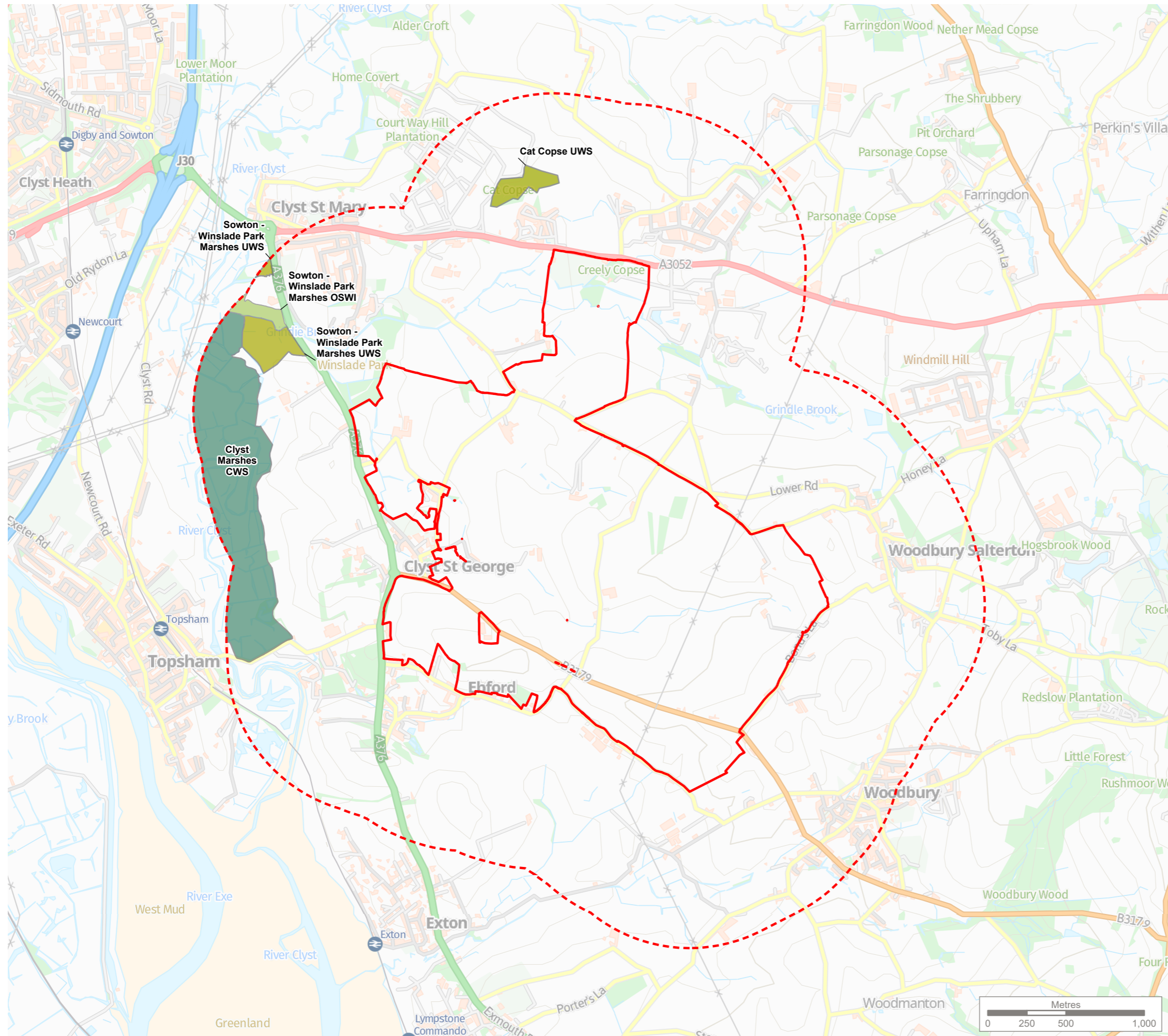
Title  
**Statutory Local Designated Sites Within a 5km Buffer  
Option 3**

Drawing Number  
**G9631.010**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:60,000 @ A3	10/10/2022







**KEY**

- Site boundary
- Site boundary - 1km buffer

**Non-Statutory Designation**

- County Wildlife Site (CWS)
- Unconfirmed Wildlife Site (UWS)
- Other Sites of Wildlife Interest (OSWI)

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Rev	Description	Drawn	Approved	Date



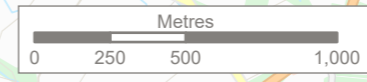
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Project  
**East Devon Options Appraisal**

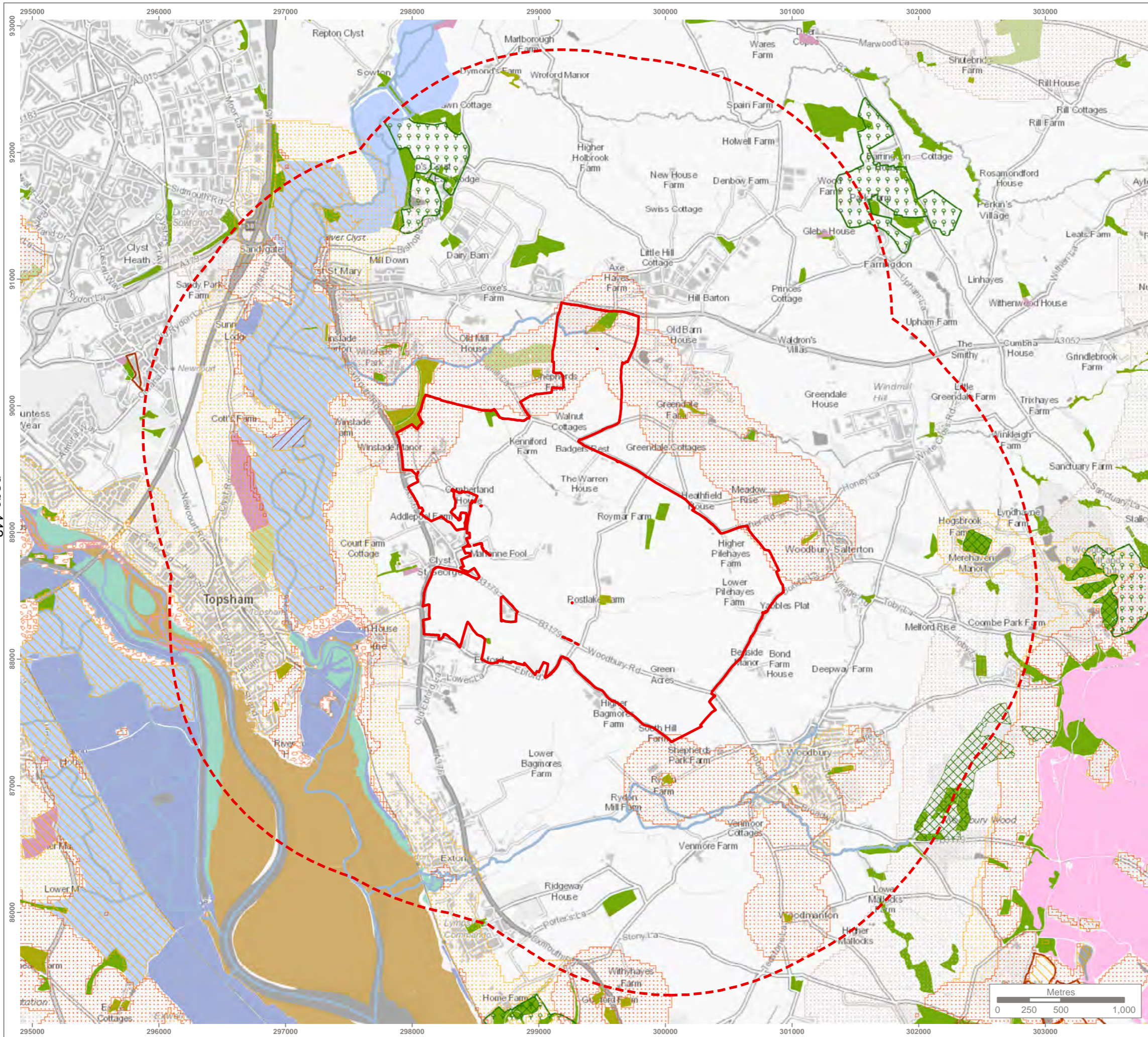
Title  
**Non-Statutory Locally Designated Sites Within 1km  
 Option 3**

Drawing Number  
**G9631.043**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	07/10/2022







**KEY**

- Option boundary
  - 2km buffer
  - Main rivers
  - Ancient woodland
  - Woodpasture and parkland
  - Open mosaic habitat on previously developed land
- Priority Habitat Inventory**
- Traditional orchard
  - Deciduous woodland
  - Coastal and floodplain grazing marsh
  - Good quality semi-improved grassland
  - Lowland fens
  - Lowland heathland
  - Coastal saltmarsh
  - Mudflats
  - No main habitat but additional habitats present
- Habitat Networks**
- Habitat Restoration-Creation
  - Restorable Habitat
  - Fragmentation Action Zone
  - Network Enhancement Zone 1
  - Network Enhancement Zone 2
  - Network Expansion Zone

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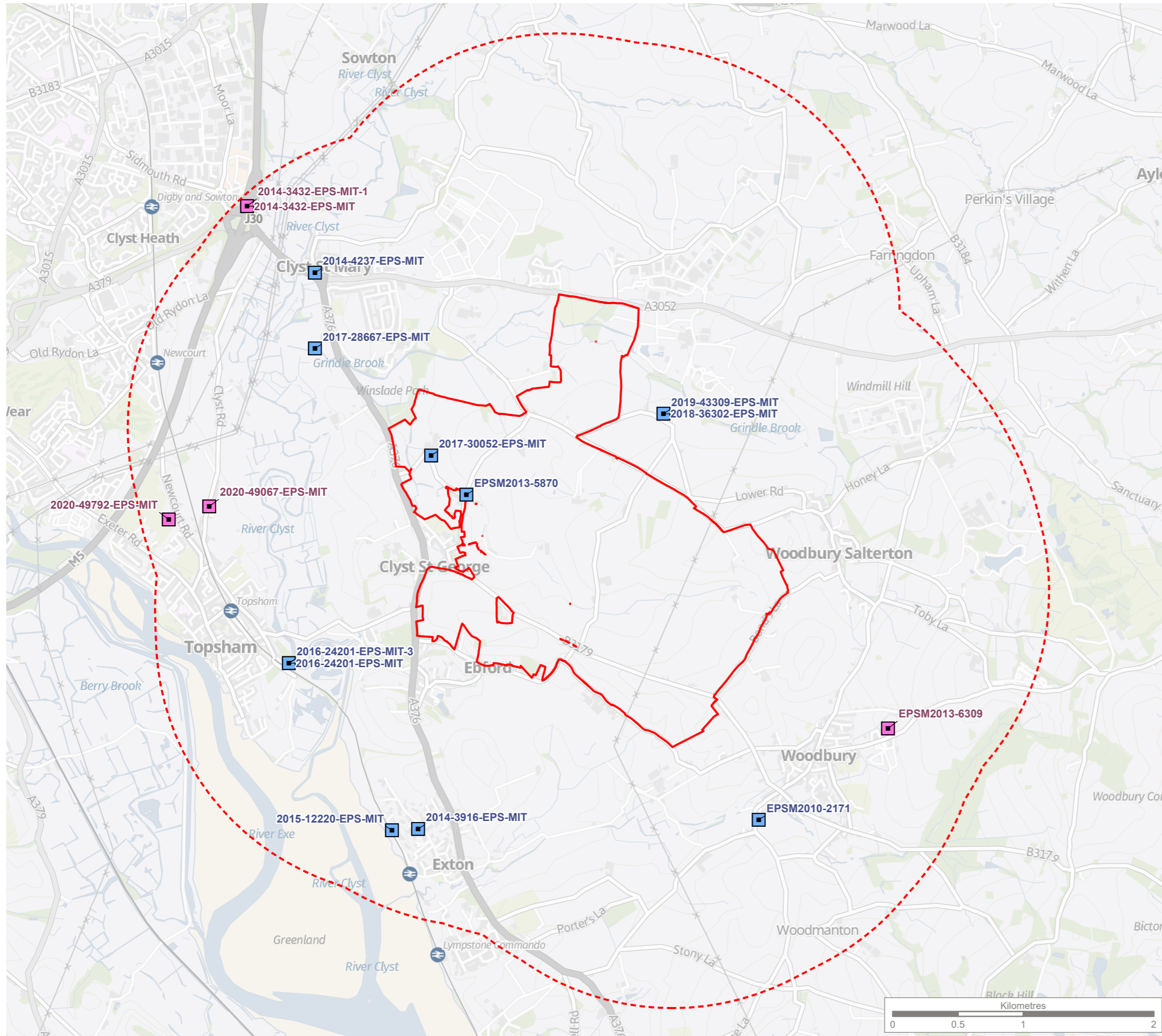
Title  
**Notable Habitats and Habitat Network Within 2km Option 3**

Drawing Number  
**G9631.019**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:30,000 @ A3	22/09/2022







**KEY**

- Site boundary
- Site boundary - 2km buffer

**Granted European Protected Species Mitigation Licence Application**

- Bat
- Other mammal

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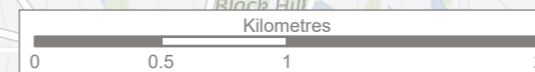
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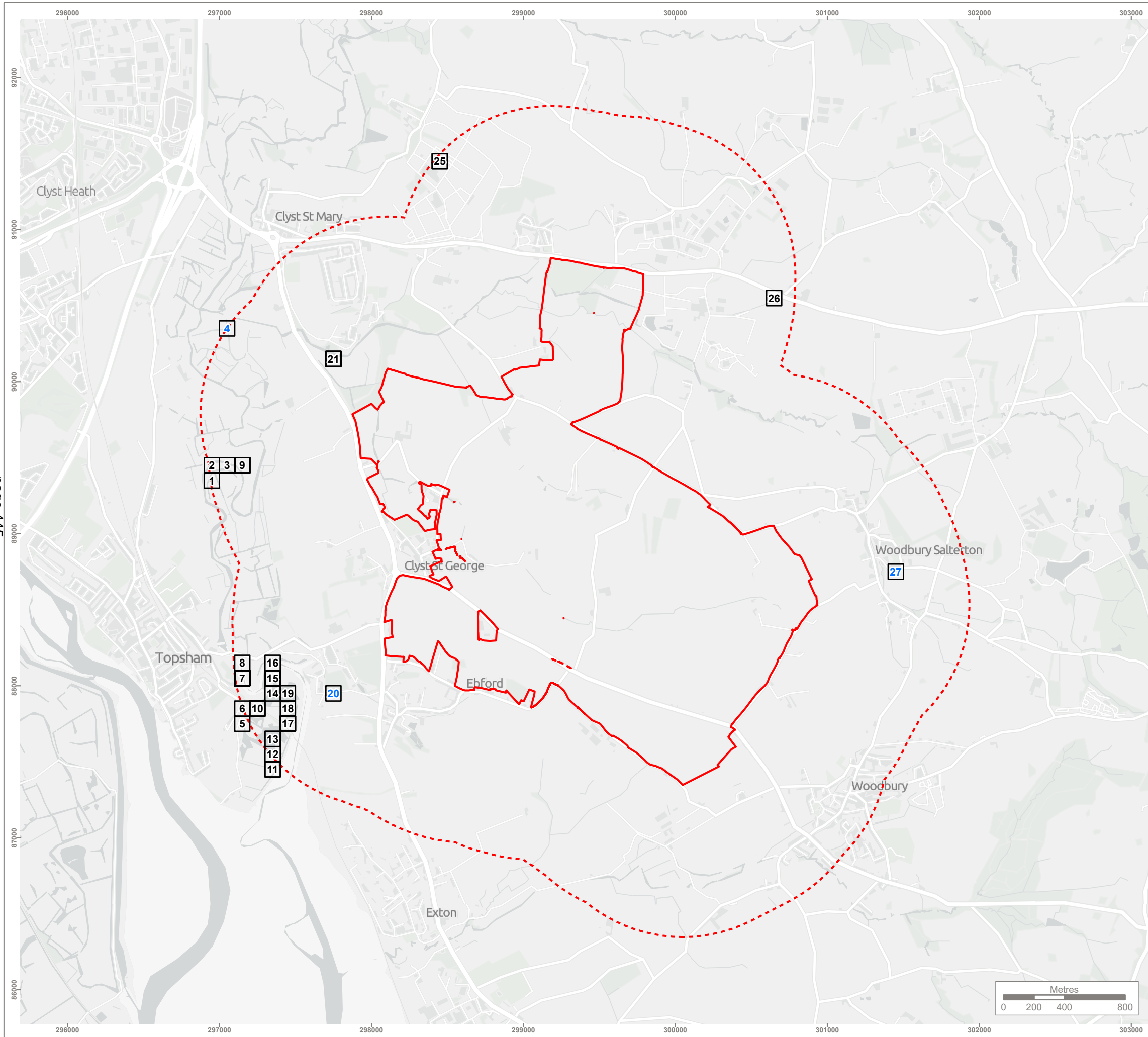
Title  
**Granted European Protected Species Mitigation Licence Applications Within 2km - Option 3**

Drawing Number  
**G9631.022**

Drawn	Checked	Approved	Scale	Date
BJ	CW	RR	1:30,000 @ A3	23/09/2022







**KEY**

Site boundary

Site boundary - 1km buffer

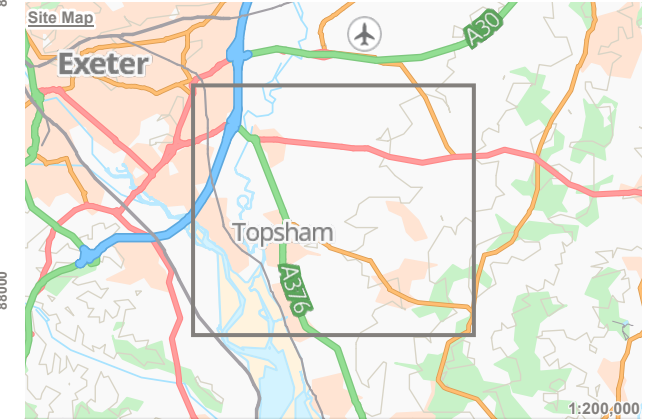
Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

100m

Note:  
Record IDs in blue indicate the presence of invasive species

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Title  
**Species Desktop Records - Plants  
Option 3**

Drawing Number  
**G9631.025**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	30/09/2022

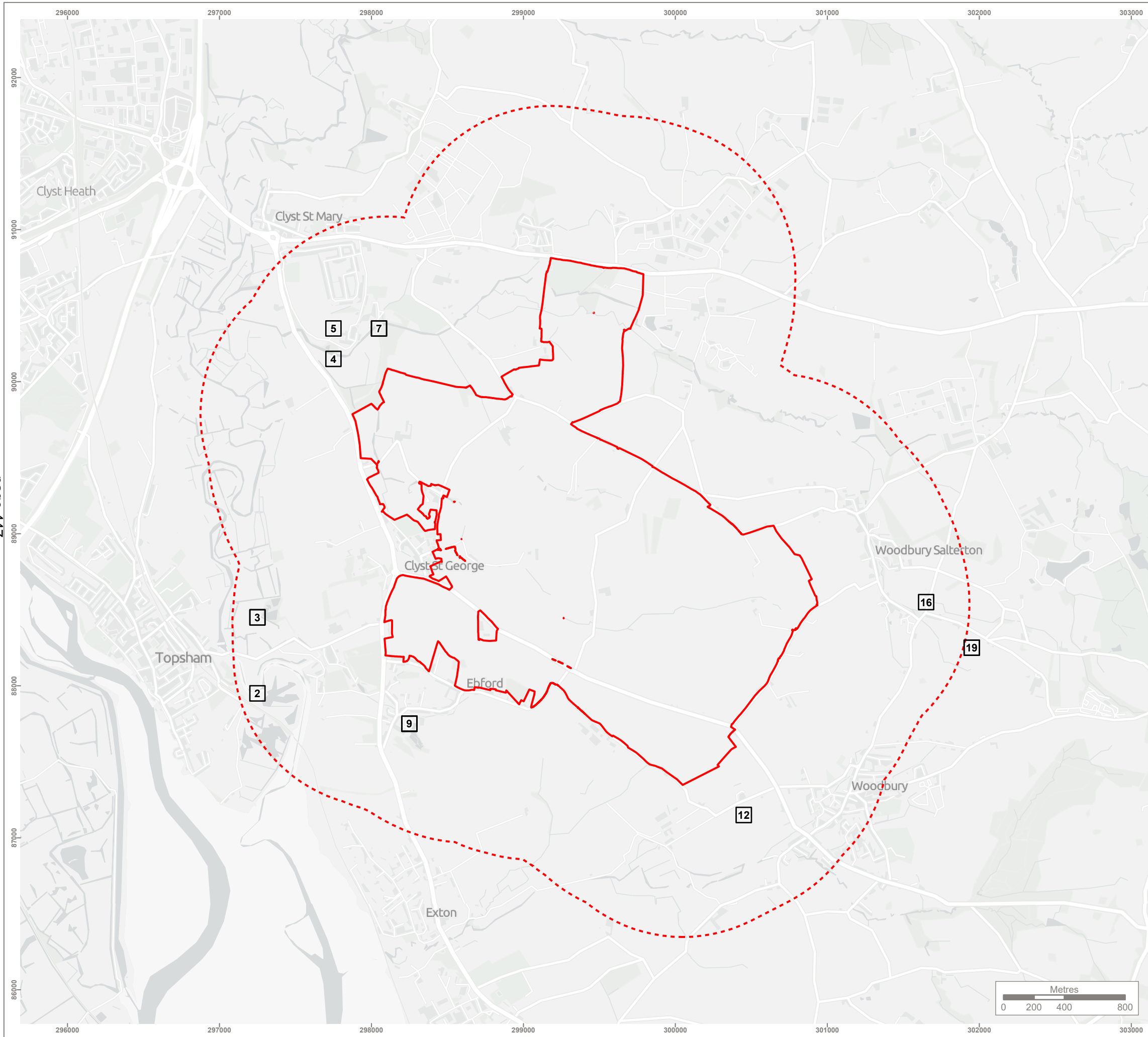
**Plant Desktop Records (Option 3)**

*Refer to drawing G9631.025 for spatial location of species data*

Species Record Identifier	Common Name	Count
1	Bulbous Foxtail	1
2	Bulbous Foxtail	1
	Corky-Fruited Water-Dropwort	1
	Fat Duckweed	1
	Great Pond-Sedge	1
	Greater Duckweed	1
	Grey Club-Rush	1
	Ivy-Leaved Duckweed	1
	Meadow Barley	1
	Meadow Brome	1
3	Bulbous Foxtail	1
	Bulrush	1
	Canadian Pondweed	1
	Corky-Fruited Water-Dropwort	1
	English Scurvygrass	1
	Fennel Pondweed	1
	Great Pond-Sedge	2
	Great Water Dock	1
	Greater Sea-Spurrey	1
	Grey Club-Rush	1
	Lesser Sea-Spurrey	1
	Meadow Barley	1
	Meadow Brome	1
	Sea Aster	1
	Small Bur-Reed	1
Yellow Water-Lily	1	
4	Indian Balsam	1
5	Box	1
6	Annual Beard-Grass	1
7	Borrer's Saltmarsh-Grass	1
	Bulbous Foxtail	1
	Greater Sea-Spurrey	1
	Lesser Sea-Spurrey	1
	Meadow Barley	1
	Primrose	1
	Procumbent Meadow-Grass	1
	Sea Aster	1
	Sea Meadow-Grass	1
	Sea Purslane	1
Sea Rush	1	
8	Bulbous Foxtail	1

Species Record Identifier	Common Name	Count
9	Bulbous Foxtail	1
	Canadian Pondweed	1
	Horned Pondweed	1
	Lesser Pondweed	1
	Spiked Water-Milfoil	1
10	Borrer's Saltmarsh-Grass	1
	Bulbous Foxtail	2
11	Bulbous Foxtail	1
	Procumbent Meadow-Grass	1
12	Procumbent Meadow-Grass	1
13	Great Pond-Sedge	1
	Procumbent Meadow-Grass	1
14	Bulbous Foxtail	1
15	Annual Sea-blite	1
	English Scurvygrass	1
	Greater Sea-Spurrey	1
	Hard Grass	1
	Lesser Sea-Spurrey	1
	Sea Aster	1
	Sea Couch	1
	Sea Meadow-Grass	1
Sea Purslane	1	
16	Sea Aster	1
17	Corky-Fruited Water-Dropwort	1
	Greater Sea-Spurrey	1
	Grey Club-Rush	1
	Lesser Sea-Spurrey	1
	Meadow Barley	1
	Procumbent Meadow-Grass	1
18	Procumbent Meadow-Grass	1
19	Procumbent Meadow-Grass	1
20	Japanese Knotweed	1
21	Indian Balsam	1
	Reed Sweet-grass	1
	Yellow Water-Lily	1
25	Bur Chervil	1
	Galingale	1
	Nuttall's Water-Weed	1
	Rhododendron	1
	White Water-Lily	1
26	Pyramidal Orchid	1
27	Japanese Knotweed	1





**KEY**

- Site boundary
- Site boundary - 1km buffer

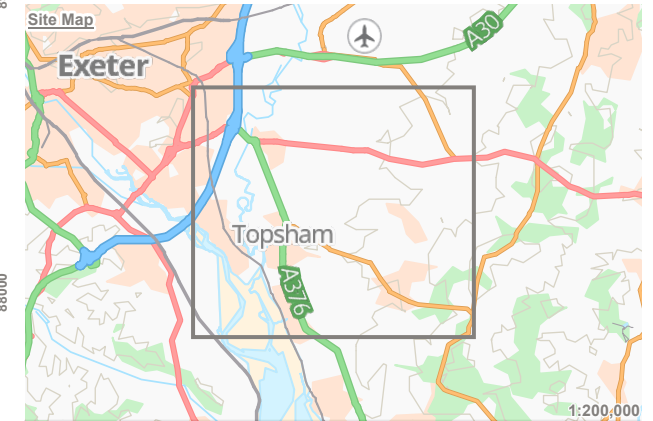
Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

- 100m

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Project  
**East Devon Options Appraisal**

Title  
**Species Desktop Records - Amphibians, Reptiles and Fish Option 3**

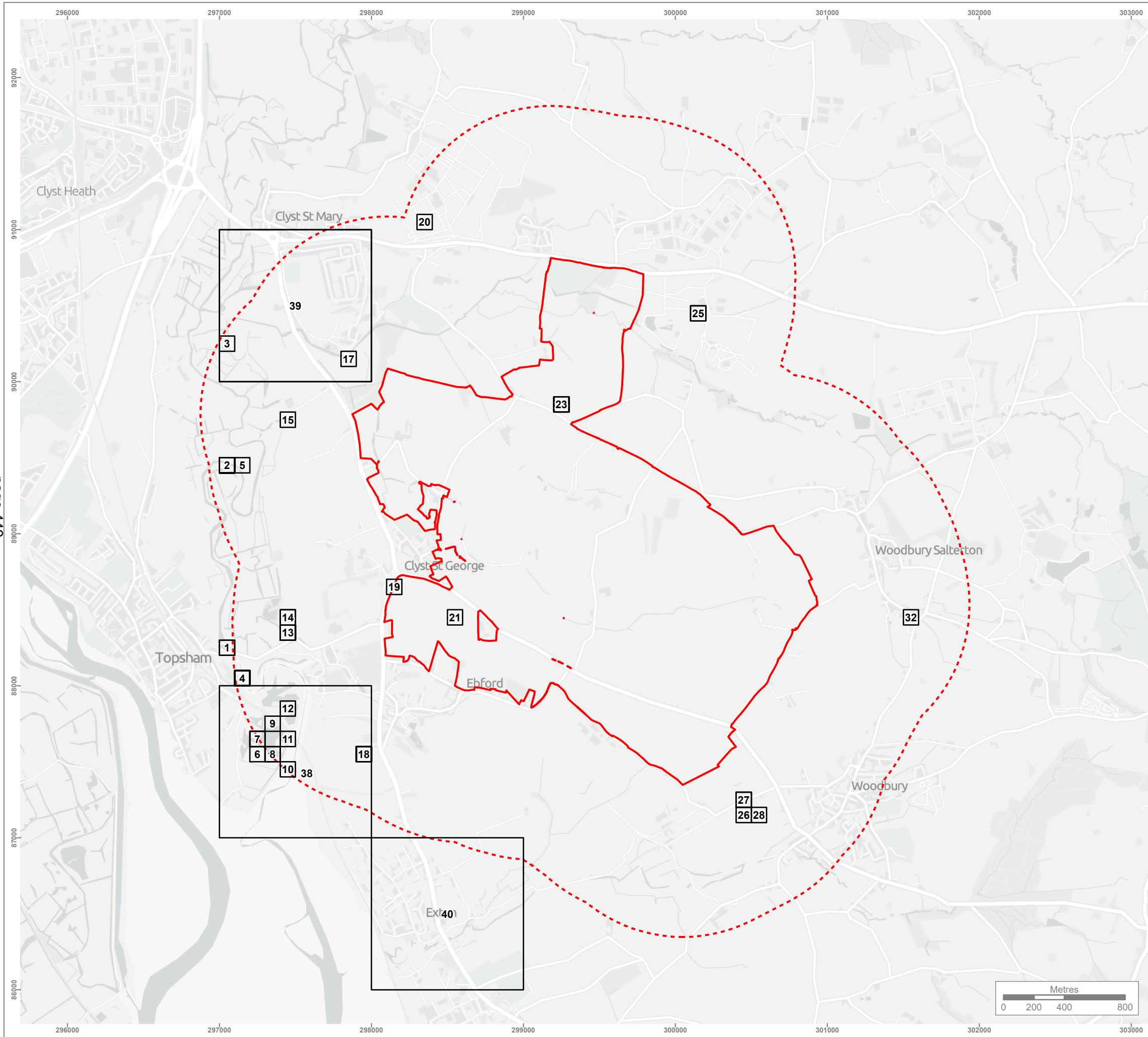
Drawing Number  
**G9631.028**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	03/10/2022

**Amphibian, Reptile and Fish Desktop Records (Option 3)**

*Refer to drawing G9631.028 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
2	Sea Lamprey	1
3	Grass Snake	1
	Slow-worm	1
4	European Eel	1
5	Slow-worm	1
7	Grass Snake	1
	Slow-worm	1
9	a Newt	1
	Common Frog	1
	Common Toad	1
	Smooth Newt	1
12	Slow-worm	1
16	Common Toad	1
19	a Newt	1
	Common Frog	1



**KEY**

- Site boundary
- Site boundary - 1km buffer

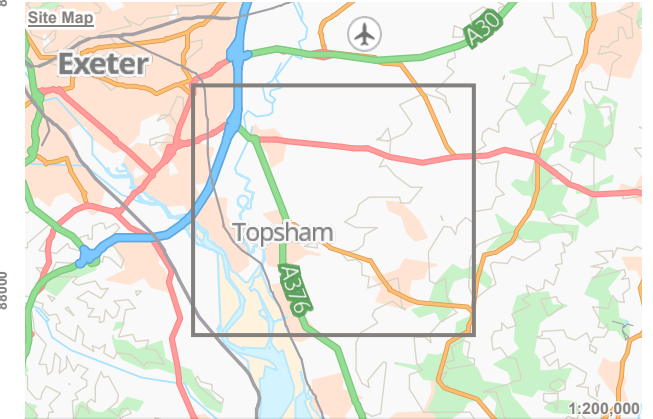
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Title  
**Species Desktop Records - Birds  
 Option 3**

Drawing Number  
**G9631.031**

Drawn	Checked	Approved	Scale	Date
BJ	MK	RR	1:25,000 @ A3	03/10/2022

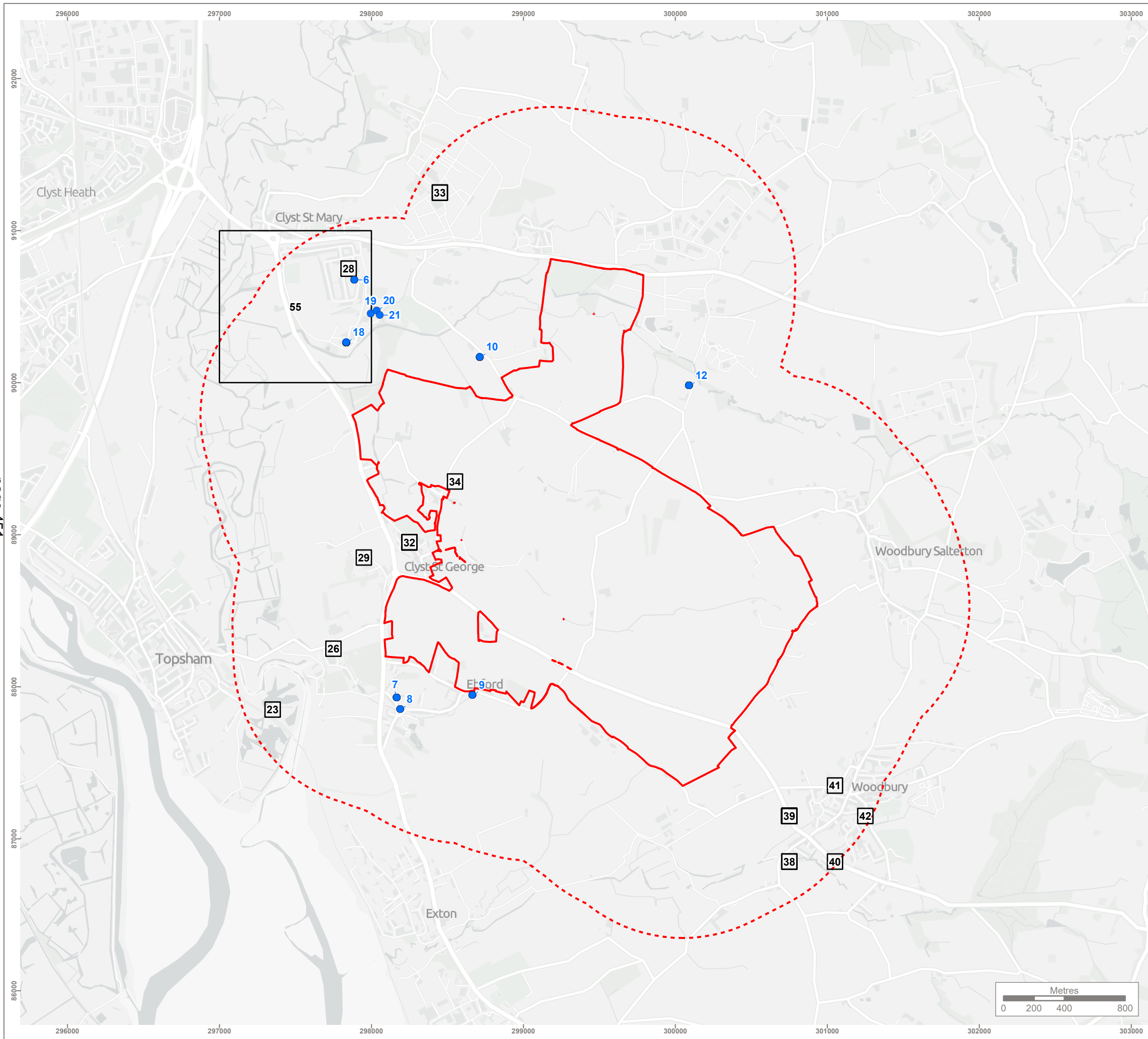
**Bird Desktop Records (Option 3)**

*Refer to drawing G9631.031 for spatial location of species data*

Species Record Identifier	Common Name	Count	
1	Little Egret	2	
	Black-Tailed Godwit	1	
	Common Kingfisher	1	
	Curlew	1	
	Grasshopper Warbler	1	
	Green Sandpiper	2	
	Grey Plover	1	
	Mallard	1	
	Meadow Pipit	1	
	Mute Swan	1	
	2	Reed Bunting	1
		Ruff	1
		Sedge Warbler	1
		Snipe	1
		Stonechat	1
		Teal	1
Water Pipit		1	
Water Rail		1	
Whinchat		1	
Wigeon		1	
3	Starling	1	
4	Common Kingfisher	1	
	Common Sandpiper	1	
	Curlew Sandpiper	1	
	Dunlin	1	
	Greenshank	1	
	Little Egret	1	
	Little Stint	1	
Redshank	1		
Spotted Redshank	1		
5	Curlew	1	
6	Wheatear	1	
7	Lapwing	1	
	Peregrine	1	
	Swift	1	
8	Brent Goose	1	
	Little Stint	1	
	Starling	1	
9	Shelduck	1	
10	Osprey	1	
11	Greenshank	1	

Species Record Identifier	Common Name	Count
12	Little Egret	1
13	Dunnock	1
	Fieldfare	1
	Herring Gull	1
	Lesser Spotted Woodpecker	1
	Mistle Thrush	1
	Redwing	1
	Skylark	1
	Song Thrush	1
14	Starling	1
	Common Bullfinch	1
15	House Sparrow	1
	Barn Owl	1
17	Common Kingfisher	1
18	Black-throated Diver	1
	Eider	1
	Great Northern Diver	1
	Little Gull	1
	Long-tailed Duck	1
	Mediterranean Gull	1
	Red-necked Grebe	1
Slavonian Grebe	1	
19	Kestrel	1
20	Swift	1
21	Barn Owl	1
23	Bullfinch	1
	Herring Gull	1
	Kestrel	1
	Skylark	1
	Snipe	1
25	Common Bullfinch	1
	Kestrel	1
26	Bullfinch	1
27	Barn Owl	1
	Skylark	1
28	Skylark	1
32	Turtle Dove	1
38	Sanderling	1
39	Barn Owl	1
	Mediterranean Gull	1
40	Barn Owl	1





**KEY**

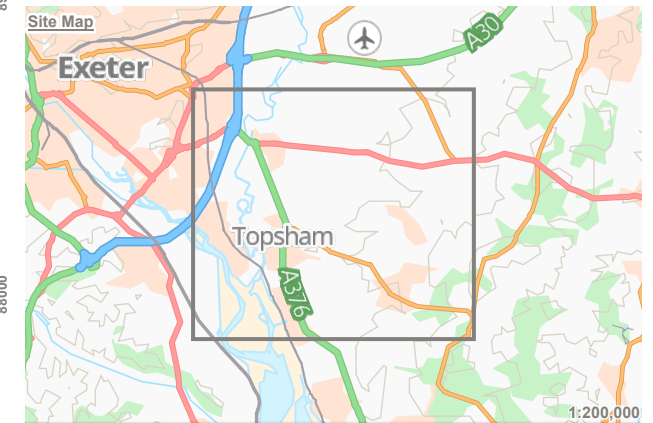
- Site boundary
- Site boundary - 1km buffer
- 1 and 10m
- 100m
- 1000m

Accuracy of Data (Refer to Desktop Assessment Report for Species Records Identifier for Desktop Records)

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Title  
**Species Desktop Records - Bats  
 Option 3**

Drawing Number  
**G9631.034**

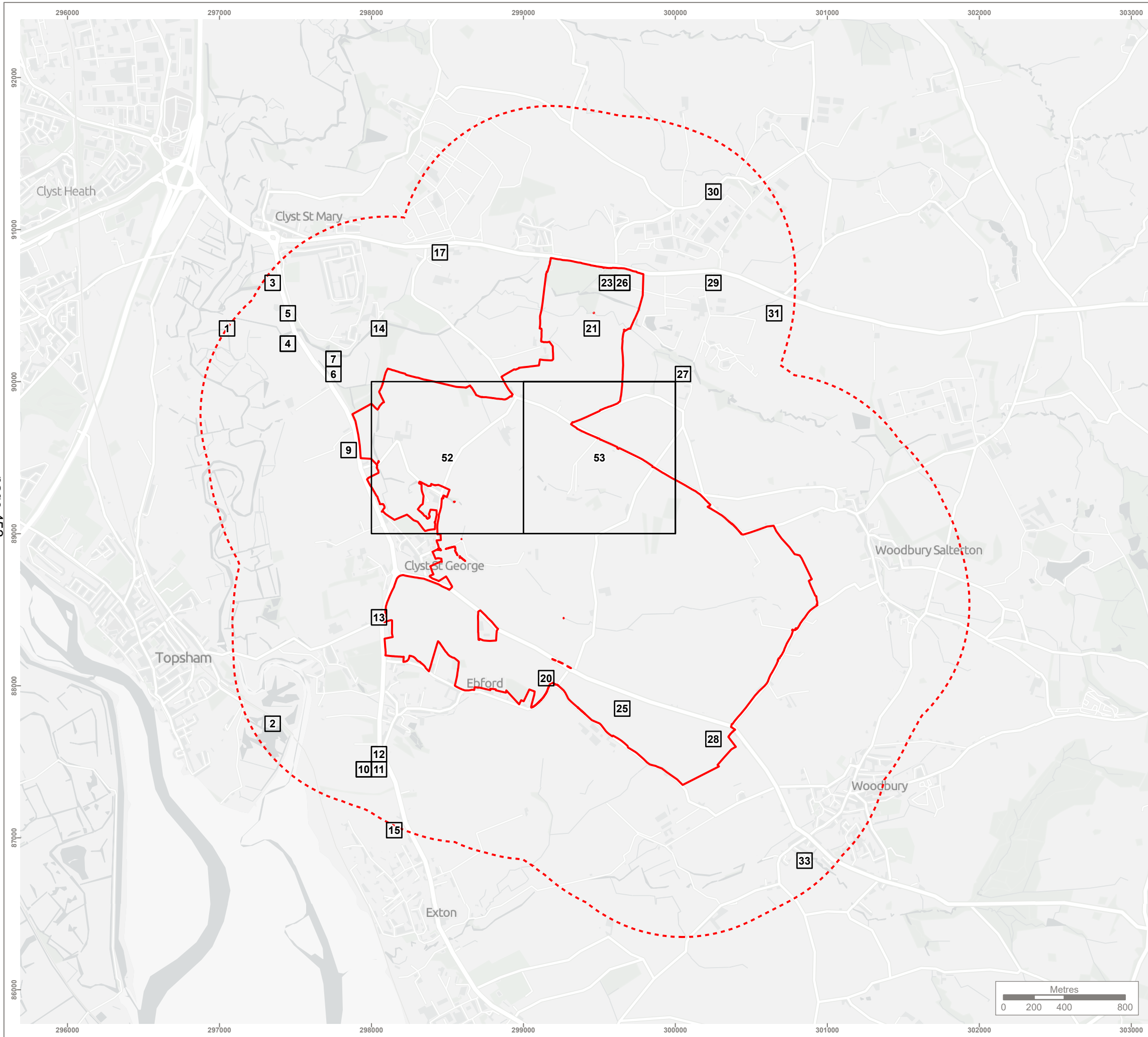
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**Bat Desktop Records (Option 3)**

*Refer to drawing G9631.034 for spatial location of species data*

Species Record Identifier	Common Name	Count
6	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
7	a Bat	1
	a Long-eared Bat	1
	Nathusius's Pipistrelle	1
	Noctule Bat	1
	Western Barbastelle	1
8	a Bat	1
	Noctule Bat	1
	Western Barbastelle	1
9	a Bat	1
	a Long-eared Bat	1
	Nathusius's Pipistrelle	1
	Noctule Bat	1
10	a Bat	1
	a Long-eared Bat	1
	Noctule Bat	1
	Western Barbastelle	1
12	Brown Long-eared Bat	1
	Common Pipistrelle	1
	Lesser Horseshoe Bat	1
	Natterer's Bat	1
	Western Barbastelle	1
18	a Bat	1
	a Long-eared Bat	1
	Common Pipistrelle	1
	Daubenton's Bat	1
	Lesser Horseshoe Bat	1
	Lesser Noctule	1
	Noctule Bat	1
	Serotine	1
	Soprano Pipistrelle	1
Western Barbastelle	1	
19	Soprano Pipistrelle	1

Species Record Identifier	Common Name	Count
20	Soprano Pipistrelle	140
21	Soprano Pipistrelle	1
23	Noctule Bat	1
26	a Bat	1
28	a Bat	1
29	a Bat	1
32	Common Pipistrelle	1
	Serotine	1
	Soprano Pipistrelle	1
33	a Bat	1
	a Long-eared Bat	1
34	Serotine	1
38	Brown Long-eared Bat	1
	Common Pipistrelle	1
39	a Bat	2
	a Long-eared Bat	2
	Common Pipistrelle	2
	Lesser Horseshoe Bat	2
	Nathusius's Pipistrelle	2
	Noctule Bat	2
	Serotine	2
Soprano Pipistrelle	2	
40	a Bat	1
41	a Long-eared Bat	1
42	a Bat	1
55	Common Pipistrelle	1



**KEY**

- Site boundary
- Site boundary - 1km buffer

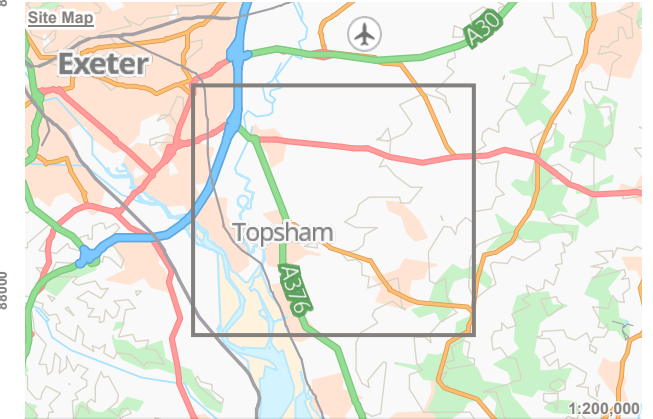
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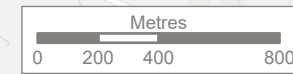
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Title  
**Species Desktop Records - Other Mammals  
 Option 3**

Drawing Number  
**G9631.037**

Drawn	Checked	Approved	Scale	Date
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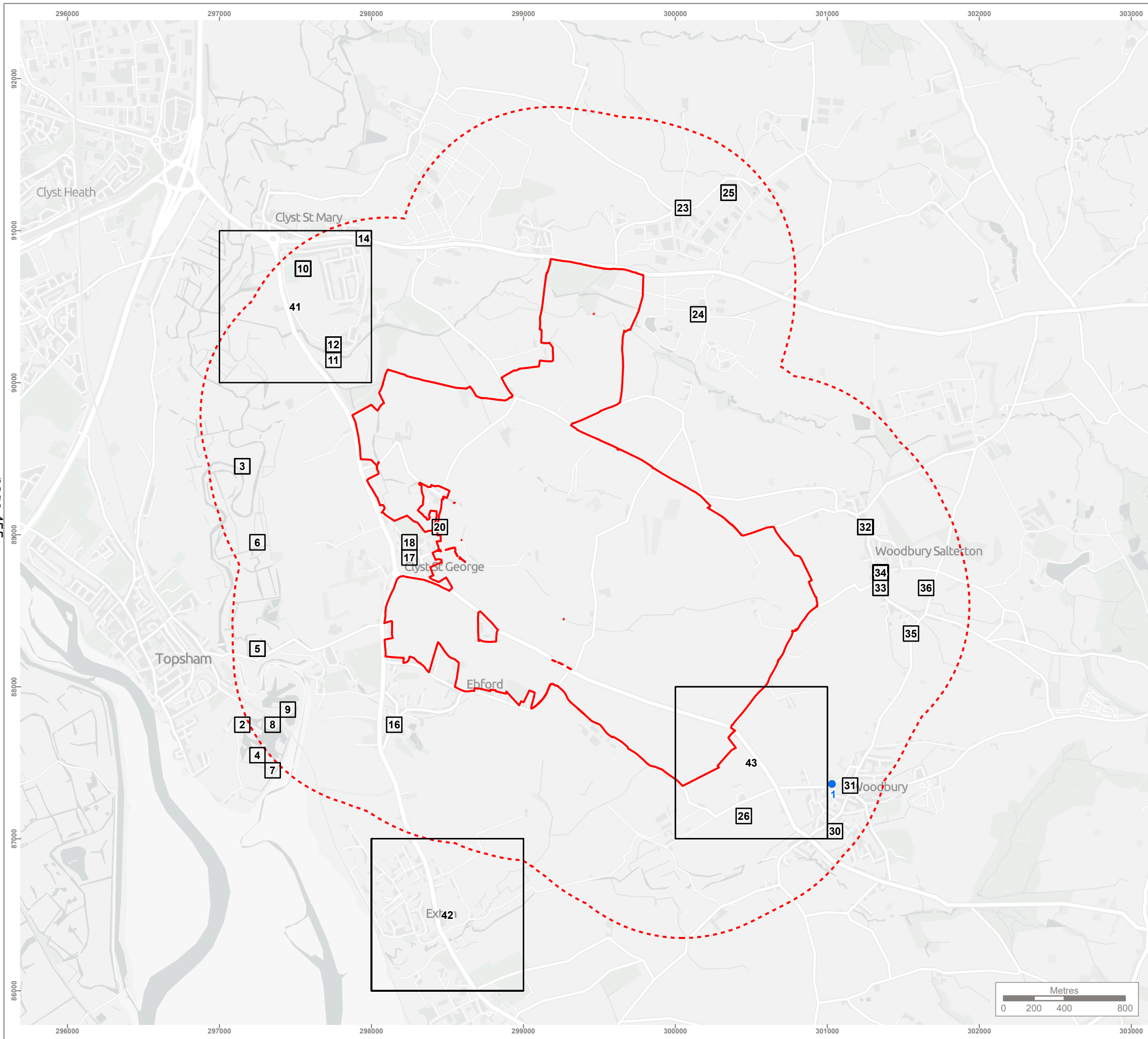


**Other Mammal Desktop Records (Option 3)**

*Refer to drawing G9631.037 for spatial location of species data*

<b>Species Record Identifier</b>	<b>Common Name</b>	<b>Count</b>
1	Eurasian Otter	1
2	Eurasian Otter	1
3	Weasel	1
4	Eurasian Otter	1
	Hazel Dormouse	1
5	Hazel Dormouse	1
6	Eurasian Otter	1
7	Indet. Deer	1
	Stoat	1
9	Eurasian Badger	1
10	Eurasian Badger	2
11	Eurasian Badger	1
12	Eurasian Otter	1
13	Eurasian Badger	1
14	Hazel Dormouse	1
15	Eurasian Badger	1
17	Eurasian Badger	1
20	Eurasian Otter	1
21	Eurasian Badger	1
23	Eurasian Otter	1
25	Eurasian Badger	1
26	Eurasian Otter	2
27	Eurasian Otter	1
28	Eurasian Otter	1
29	Eurasian Otter	1
30	Eurasian Badger	1
31	Eurasian Badger	1
33	West European Hedgehog	1
52	Eurasian Badger	1
53	Eurasian Common Shrew	1
	Eurasian Pygmy Shrew	1
	Eurasian Water Shrew	1





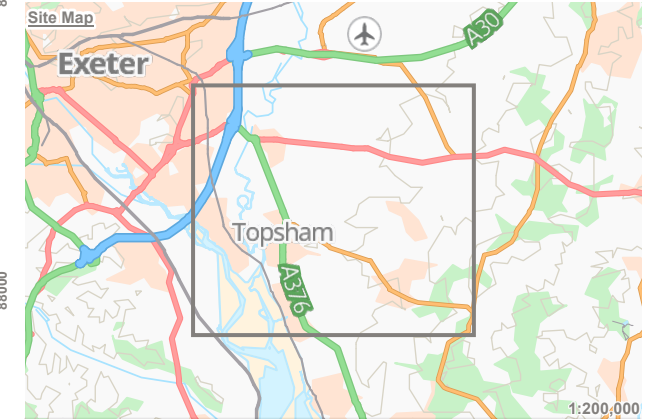
**KEY**

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Title  
**Species Desktop Records - Invertebrates  
 Option 3**

Drawing Number  
**G9631.040**

Drawn	Checked	Approved	Scale	Date
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**Invertebrate Desktop Records (Option 3)**

*Refer to drawing G9631.040 for spatial location of species data*

Species Record Identifier	Common Name	Count
1	Wasp Spider	1
2	Cinnabar	1
3	Keeled Skimmer	1
	Ruddy Darter	1
4	Hairy Dragonfly	1
5	Hairy Dragonfly	1
	Scarce Chaser	1
6	Hairy Dragonfly	1
7	Dark Green Fritillary	1
8	Hairy Dragonfly	1
9	Hairy Dragonfly	1
10	Purple Hairstreak	4
11	Black Oil-beetle	1
12	Blood-Vein	1
	Buff Ermine	1
	Cinnabar	1
	Currant Clearwing	1
	Dusky Brocade	1
	Jersey Tiger	1
	Kent Black Arches	1
	Knot Grass	1
	Lackey	1
	Marbled Green	1
	Mottled Rustic	1
	Mouse Moth	1
	Oak Hook-tip	1
	Rosy Minor	1
Rosy Rustic	1	
Small Square-spot	1	
White Ermine	1	
14	Purple Hairstreak	1
16	Kent Bent-wing	1
17	Wall	1
18	Wall	1
20	Wall	1
23	Purple Hairstreak	1
24	Jersey Tiger	1
25	Purple Hairstreak	2
26	Wall	1
30	Buff Ermine	1
31	Jersey Tiger	1
32	Beaded Chestnut	1
	Bloxworth Snout	1
	Brindled Beauty	1
	Buff Ermine	1
	Cinnabar	1
	Cloaked Carpet	1
	Coastal Pearl	1

Species Record Identifier	Common Name	Count
32	Dot Moth	1
	Dusky Brocade	1
	Dusky Thorn	1
	Green-brindled Crescent	1
	Horse Chestnut	1
	Jersey Tiger	1
	Knot Grass	1
	Lackey	1
	L-album Wainscot	1
	Marbled Green	1
	Mottled Rustic	1
	Pied Grey	1
	Portland Ribbon Wave	1
	Powdered Quaker	1
	Rosy Rustic	1
	Sallow	1
	September Thorn	1
	Shoulder-striped Wainscot	1
	Spinach	1
	White Ermine	1
	White-line Dart	1
33	Mullein Wave	1
	White Ermine	1
34	August Thorn	1
	Autumnal Rustic	1
	Beaded Chestnut	1
	Bleached Pug	1
	Blood-Vein	1
	Bloxworth Snout	1
	Brindled Beauty	1
	Buff Ermine	1
	Centre-barred Sallow	1
	Cinnabar	1
	Cloaked Carpet	1
	Dark-barred Twin-spot Carpet	1
	Dot Moth	1
	Double Dart	1
	Dusky Brocade	1
	Dusky Thorn	1
	Figure of Eight	1
	Flounced Chestnut	1
	Galium Carpet	1
	Ghost Moth	1
Green-brindled Crescent	1	

Species Record Identifier	Common Name	Count
34	Garden Tiger	1
	Heath Rustic	1
	Horse Chestnut	1
	Jersey Tiger	1
	Kent Black Arches	1
	Knot Grass	1
	Lackey	1
	L-album Wainscot	1
	Large Wainscot	1
	Marbled Green	1
	Mocha	1
	Mottled Rustic	1
	Mouse Moth	1
	Neglected Rustic	1
	Oak Hook-tip	1
	Orange Footman	1
	Pale Eggar	1
	Powdered Quaker	1
	Rosy Minor	1
	Rosy Rustic	1
	Ruddy Carpet	1
	Rustic	1
	Sallow	1
	September Thorn	1
	Shaded Broad-bar	1
	Shoulder-striped Wainscot	1
	Small Emerald	1
	Small Phoenix	1
	Small Square-spot	1
	Sprawler	1
	White Ermine	1
	35	Lackey
36	Small Eggar	1
41	Knot Grass	1
42	Beaded Chestnut	1
	Figure of Eight	1
	Green-brindled Crescent	1
	L-album Wainscot	1
	Large Wainscot	1
	Mouse Moth	1
	Pale Eggar	1
Rosy Rustic	1	
Small Square-spot	1	
43	Lackey	1
	Pale Eggar	1



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# East Devon New Community

## Strategic Traffic Review of Option Sites

For East Devon District Council

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Date *7 November 2023*

Doc ref *22462-HYD-XX-XX-TP-RP-1002*



# Document control sheet

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Appendix A WSP Modelling Report

# Executive Summary

This Highways Impact Review provides an initial assessment to help shape and inform discussions regarding the location of a potential new community of up to 8,000 new homes in East Devon.

The document is based on traffic modelling by consultants (WSP) acting on behalf of Devon County Council (DCC), this report sits alongside a high-level comparative Sustainable Access Review.

Three location Options have been examined against a range of criteria, focusing on their impact on the local and strategic highway networks, and, where necessary, the potential to mitigate these impacts. This includes consideration of the deliverability of appropriate capacity improvement or demand reduction schemes.

Subsequently, each Option has been provided with a subjective score across key local junctions, with total scores for each option averaged and then factored to a score out of 5.

The table below provides an overview of the highway implication of the three potential Options for a new town in East Devon, and their respective scores.

Assessment Category	Option 1		Option 2		Option 3	
	Impact	Deliverability	Impact	Deliverability	Impact	Deliverability
M5 J29	5	5	5	5	5	5
M5 J30	5	5	4	5	4	5
M5 J31	5	5	5	5	5	5
A30	5	5	5	5	5	5
A3052	4	5	4	5	4	5
A38 & A380	5	5	5	5	5	5
Clyst St Mary junction	3	4	1	4	1	4
East of Exeter Network Impacts	5	5	1	2	5	5
<b>TOTAL</b>	37	39	30	36	34	39
<b>Average</b>		38		33		36.5
<b>Equivalent Score (1-5)</b>		4.8		4.1		4.6
<b>Rounded Score</b>		<b>5</b>		<b>4</b>		<b>5</b>

Based on the above, Option 1 would be most preferred in terms of highways impact, followed by Option 3, with Option 2 being least preferred.

This document now explores the highways impact associated with the three potential locations for a new town in East Devon.



## 1. Introduction

### 1.1 Overview

- 1.1.1 This Strategic Traffic Review document has been prepared by Hydrock on behalf of East Devon District Council (EDDC) as an initial exercise to help shape and inform discussions regarding the location of a potential new community of up to 8,000 new homes in the western part of East Devon, to the east of Exeter.
- 1.1.2 This document explores the highways impacts associated with three potential locations for the new town. The note concentrates on highways capacity and delay and does not consider matters such as noise or air quality impacts.
- 1.1.3 The new community will be shaped by a vision which places an emphasis on active travel, greater connectivity and innovative transport technologies, in line with the Exeter Transport Strategy (2021). However, there is still a need to understand the potential impacts that such a development would have on the operation of the local and strategic highway networks. This is a result of the duties set out within Section 16 of the Traffic Management Act 2004:

#### *The network management duty*

*(1) It is the duty of a local traffic authority [F1] or a strategic highways company ("the network management authority") to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives—*

*(a) securing the expeditious movement of traffic on the authority's road network; and*

*(b) facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority.*

*(2) The action which the authority may take in performing that duty includes, in particular, any action which they consider will contribute to securing—*

*(a) the more efficient use of their road network; or*

*(b) the avoidance, elimination or reduction of road congestion or other disruption to the movement of traffic on their road network or a road network for which another authority is the traffic authority; and may involve the exercise of any power to regulate or co-ordinate the uses made of any road (or part of a road) in the road network (whether or not the power was conferred on them in their capacity as a traffic authority).*

### 1.2 Report Structure

- 1.2.1 The structure of the report is as follows:

- » Section 2: Highways Impact
- » Section 3: Mitigation Potential
- » Section 4: Conclusions

## 1.3 Option Locations

1.3.1 The three Option locations are all in the western part of the EDDC area, to the east of Exeter, and are shown indicatively at Figure 1.1.

- » **Option One** is located approximately 7km east of Exeter city centre and 3km east of the M5. The A30 is to the north of the Option and the A3052 is to the south of the Option; Exeter Airport is also located less than 500m north of the Option One's northern boundary.
- » **Option Two** is located approximately 9km south-east of Exeter city centre and has the potential to be bisected by the A3052. The village of Woodbury Salterton is located south of the Option's indicative boundary, with Greendale Business Park and Greendale Farm shop located within the Option's area.
- » **Option Three** is located adjacent to the A376, in between Clyst St George (to the south-west) and Clyst St Mary (to the north-west). Option Three is 2km east of Topsham, which offers a rail link to Exeter and Exmouth via the Avocet Line.

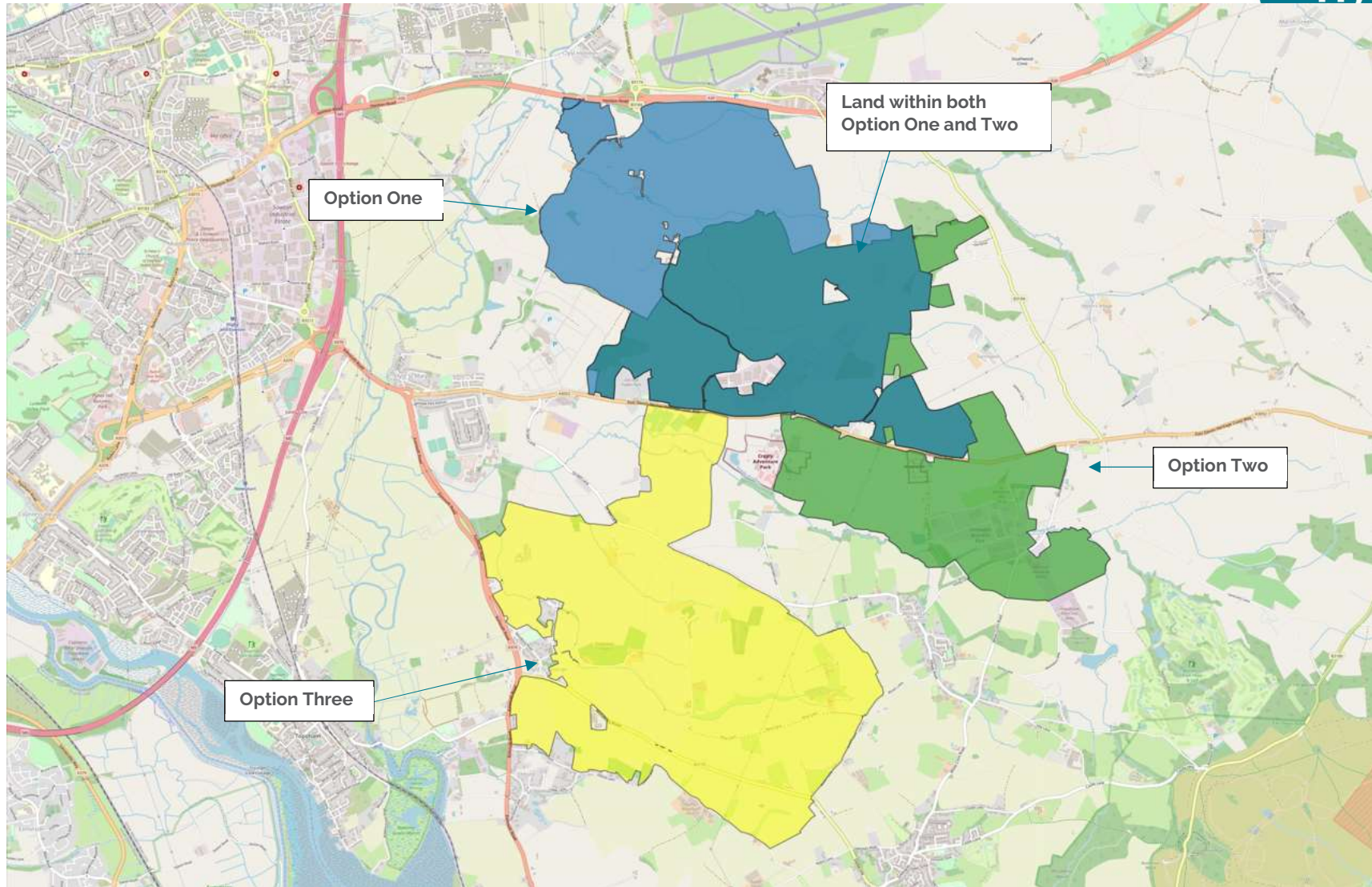


Figure 11: Option One Location



## 1.4 Local Highway Network

1.4.1 The local highway network in the vicinity of the Options is summarised at Figure 1.2, with key junctions highlighted in Figure 1.3.

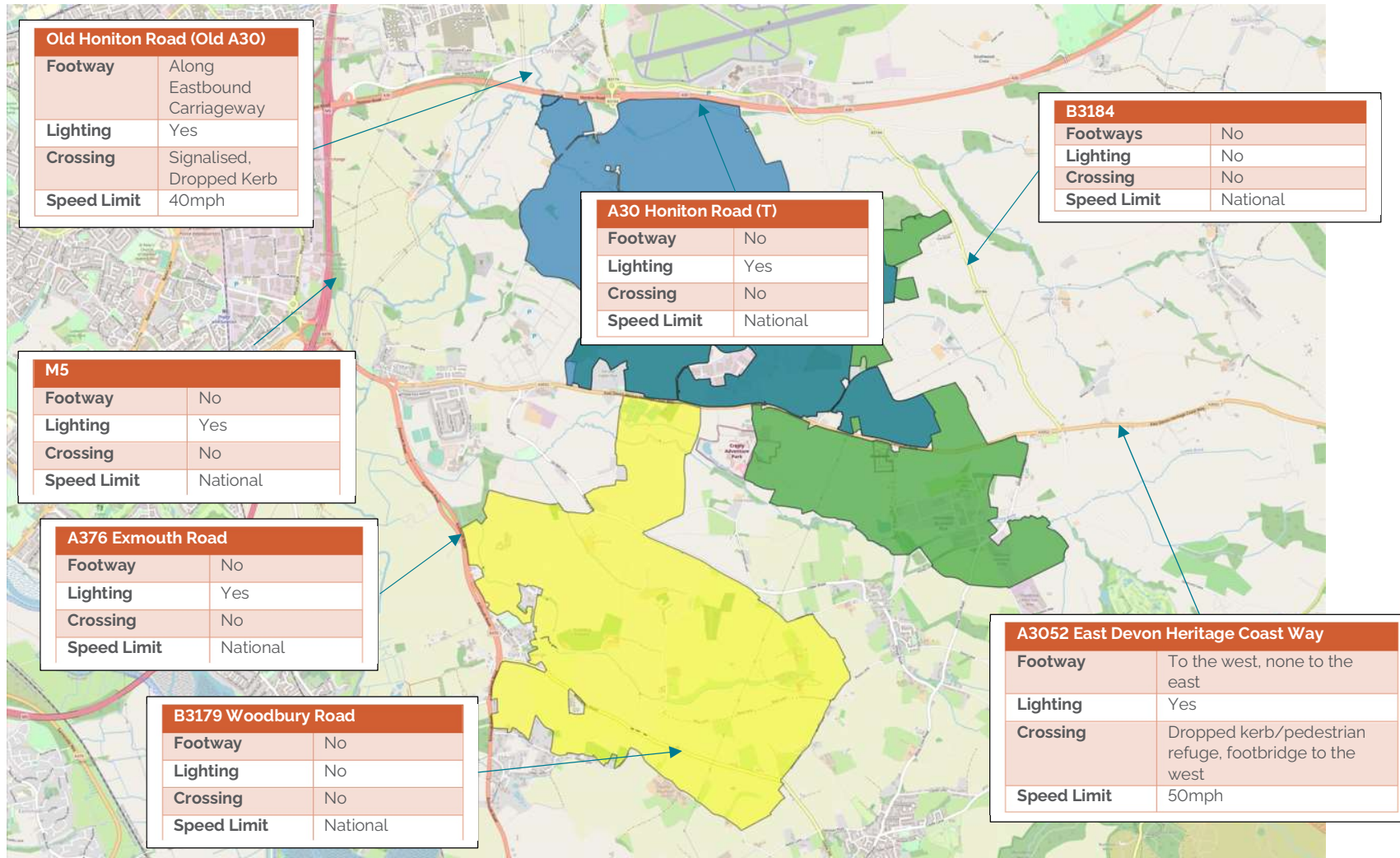


Figure 1.2: Local Highway Network



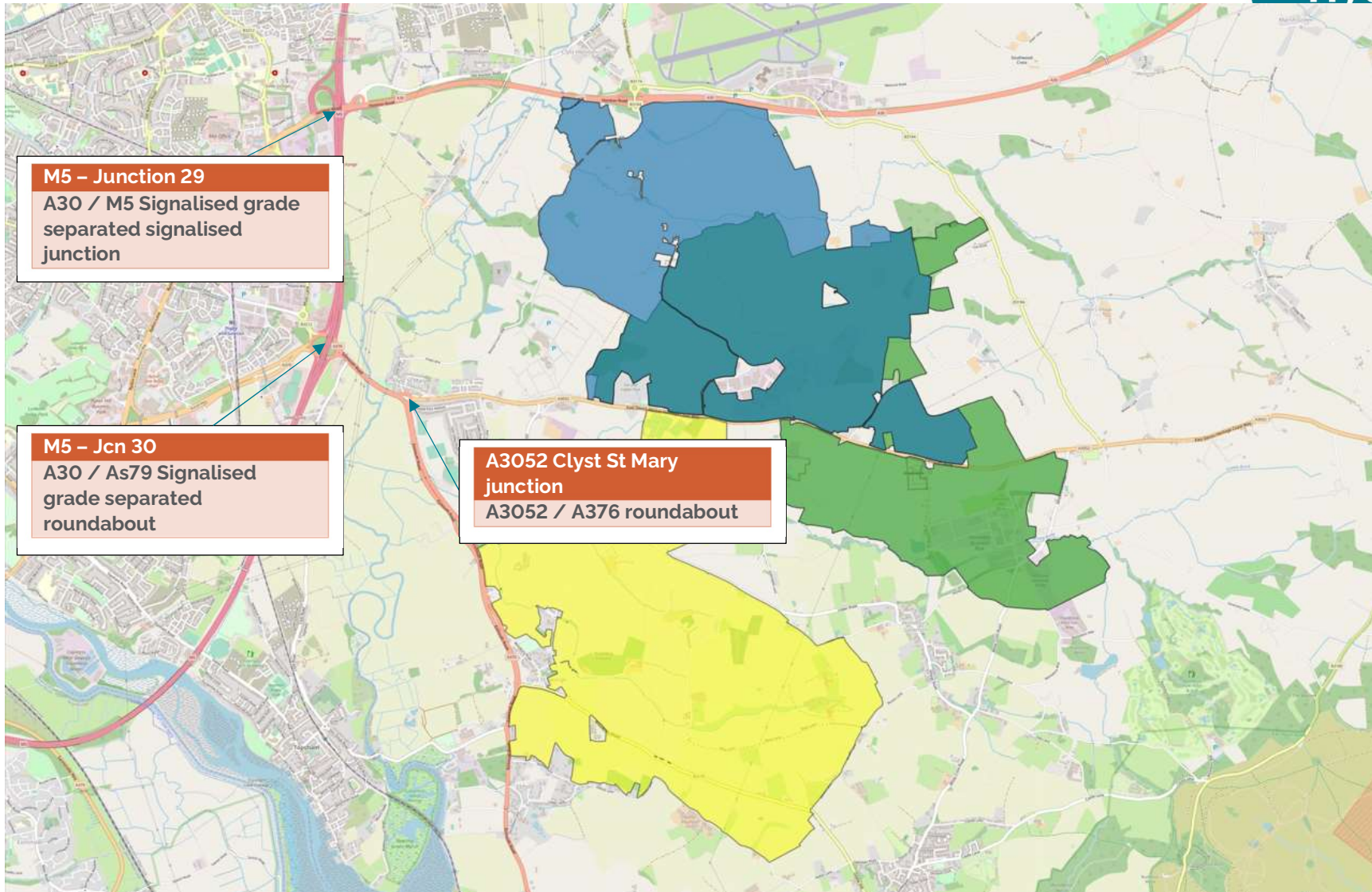


Figure 1.3: Key Junctions

## 2. Highways Impact

### 2.1 Introduction

- 2.1.1 This report is based on a modelling report commissioned by East Devon Council (EDC) from WSP, using the traffic model of the Greater Exeter (GE) area, originally developed by DCC (referred to as the “GE Model”) using the SATURN strategic modelling software package. The GE Model area covers the Local Planning Authority (LPA) areas of Exeter, East Devon, Mid Devon, and Teignbridge, which has a combined population of approximately 475,000 people.
- 2.1.2 The work commissioned included a review of base year and 2030 forecast models, reflecting the current and anticipated highway conditions, review and modification of a forecasting process, and the production of an updated end-of-Plan 2030 scenario.
- 2.1.3 The GE base model represents a typical weekday in November 2017, covering the following time periods:
- » AM Peak: 08:00 – 09:00
  - » Inter-Peak: Average hour 10:00 – 16:00
  - » PM Peak: Average hour 16:00 – 18:00
- 2.1.4 Within the WSP work, the model examines three future development scenarios equivalent to Options 1,2 and 3, with 2,500 dwellings in each scenario. These developments have a modelled year of 2030, which, due to lack of growth on major roads within the model, is stated to be a suitable proxy for 2040, the anticipated completion year of the development options.
- 2.1.5 The WSP model report sets out the reasoning for modelling 2,500 dwellings at this time, as opposed to the potential full 8,000 homes within the new community. As confirmed by DCC, the reasons for this include:
- » The role of this stage of work is to assess the comparative effects of the three option sites – WSP’s modelling of the 2,500 homes that are anticipated to be delivered within the new Local Plan period already identifies differences in traffic impact. It is likely that modelling of a higher level of development would largely simply amplify these differences.
  - » The nature of the DCC model, alongside Local Plan timescales, means that a traditional approach has had to be taken to trip generation, based on typical trip rates for the proposed land-uses. As part of the next stage of work, exploring in more detail the transportation effects of whichever site is preferred by EDDC, the impact of 8,000 homes can be reviewed using a Vision & Validate approach. This would enable greater account to be taken of the trip reduction, mode shift (to sustainable modes) and internalisation effects that can be achieved as part of the overall masterplan – with ‘economies of scale’ based on the overall quantum of development.
  - » The existing DCC model has a forecast year of 2030. The timescales for delivering a development of 8,000 new homes are unclear, and the model does not include other future development beyond what is in the current adopted Local Plans for the surrounding districts. Consequently, the simple addition of traffic from an 8,000-home development would not represent the overall future development scenario within East Devon or the wider area, which are currently unknown.
  - » New national and regional traffic growth projections (‘TEMPRO’) from the Department for Transport become official in November 2022 and include multiple future scenarios reflecting economic, technological, regional and behavioural metrics. This will replace the current version of TEMPRO. The DCC model would need to be updated to reflect the new version of TEMPRO when it becomes current.

- » Notwithstanding that the new DfT traffic projections enable forecasting up to 2061, longer-term forecasts in particular need to be treated with caution given the rapid pace and scale of change in travel behaviours and technologies, as well economic factors.
  - » The existing model cannot take account of the above, meaning that testing a development of 8,000 homes would currently have the potential to result in unrealistic or unsuitable re-routing of vehicles within the model, unreliable results and the potential design of unwarranted or excessive mitigation infrastructure.
- 2.1.6 The detailed report prepared by WSP for 2,500 homes is attached as Appendix A. This sets out impacts for each scenario.
- 2.1.7 It should be noted that this preliminary round of modelling work by WSP includes predictions of the traffic attraction of the new community based on an exercise carried out by DCC to create a set of bespoke car trip rates for new communities within the Greater Exeter area. This was derived from an AM Peak average of five urban survey sites from Greater Exeter Spatial Plan settlements. This was then factored to Inter Peak and PM Peak periods using factors derived from the TRICS database.
- 2.1.8 This trip prediction methodology implicitly assumes that travel habits at the new community will remain similar to those of recent developments in the Exeter area. However, given the relatively long delivery periods for new housing from planning through to occupation, some of the sustainable travel initiatives at the surveyed sites are unlikely to reflect the latest developments in Transport Planning in terms of encouraging sustainable modal choices (e.g. through provision of electric bike sharing schemes).
- 2.1.9 The new community will include a range of infrastructure improvements and promotion measures designed to encourage sustainable modal choices and to reduce the use of cars. The community will also be designed to maximise the trip internalisation (i.e. trips that remain within the overall settlement boundary) by providing a range of employment, leisure and retail facilities in tandem with new housing.
- 2.1.10 As a result, the initial modelling exercise is likely to overestimate the vehicle trips associated with the new community. Over the course of the project, the modelling will be repeated and updated with a finessed set of trip rates. This is discussed with a separate Trip Generation Methodology Note (ref 22462-HYD-XX-XX-RP-TP-1001). The discussion and summary provided below are based on the initial trips rates and are therefore likely to show a robust, worst-case scenario, with some of the identified congestion likely to be mitigated by encouraging a shift towards more sustainable habits.

## 2.2 Option One

- 2.2.1 Option 1 shows relatively small changes in traffic on the M5, A30 and A380, resulting in generally small increases in delay. However, M5 J29 sees some increases in delay in the AM and PM models, mostly on the east side of the M5. Clyst St. Mary Roundabout also shows some impacts from the development site, with 33 seconds of extra delay on the westbound approach in the AM model and 35 seconds of extra delay on the eastbound approach in the PM model, plus additional turning delay at the roundabout itself.

## 2.3 Option Two

- 2.3.1 Option 2 shows relatively small changes in traffic on the M5, A30, A38, and A380, and minimal changes to delay as a result.

- 2.3.2 There are however significant impacts at the Clyst St Mary Roundabout. This sees 277 seconds of additional delay on the westbound approach in the morning peaks and 160 second increases on the eastbound approach in the afternoon peak.
- 2.3.3 In addition, there are increases in delay to the east of Exeter, particularly at Bond's Lane / Woodbury Road junction and at the Topsham Road junction.

## 2.4 Option Three

- 2.4.1 Option 3 is similar in terms of its impacts in the morning peak, but sees more significant impacts in the afternoon peak.
- 2.4.2 There are minimal overall changes in delay on the mainline at M5 J29 and J30 and on most of the road network to the east of Exeter. M5 J29 and J30 see some increases in delay in the AM and PM models, focused on the east side of the M5 at J29 and the north side of the junction at J30. Clyst St. Mary Roundabout shows some significant impacts from the development site though, with around 50 seconds of extra delay on both the eastbound and westbound approaches in the AM model and 136 seconds of extra delay on the eastbound approach in the PM model, plus additional turning delay at the roundabout itself.

## 2.5 Summary

- 2.5.1 Table 2.1 below summarises the delay impacts identified within the WSP modelling, Impacts have been scored from 1 to 5, with minimal adverse impacts scoring 5, minor impacts 4, moderate impacts 3 and significant impacts 1..

Table 2.1: Highways Delay Impact Summary

Assessment Category	Option One	Option Two	Option Three
<b>M5 Junction 29</b>	» Minimal impact (5)	» Minimal impact (5)	» Minimal impact (5)
<b>M5 Junction 30</b>	» Minimal impact (5)	» Minor delay increases (4)	» Minor delay increases (4)
<b>M5 Junction 31</b>	» Minimal impact (5)	» Minimal impact (5)	» Minimal impact (5)
<b>A30</b>	» Minimal impact (5)	» Minimal impact (5)	» Minimal impact (5)
<b>A3052</b>	» Minor delay increases (4)	» Minor delay increases (4)	» Minor delay increases (4)
<b>A38 and A380</b>	» Minimal impact (5)	» Minimal impact (5)	» Minimal impact (5)
<b>Clyst St Mary Junction</b>	» Moderate delay increases (3)	» Significant delay increases (1)	» Significant delay increases (1)
<b>East of Exeter Network Impacts</b>	» Minimal impact (5)	» Significant delay increases (1)	» Minimal impact (5)
<b>Hydrock Scores</b>	<b>37</b>	<b>30</b>	<b>34</b>



- 2.5.2 Based on the above, Option 1 has the least significant highways impact and it appears that the development could be accommodated without significant highways interventions. Whilst there would be increases in traffic in some areas, the modelling carried out suggests that these would not lead to significant increases in delays. Minor highways mitigation works may be needed and could be reviewed and addressed as part of the normal planning process, with no strategic interventions required.
- 2.5.3 Option 3 is can also be accommodated with relatively little in term of mitigation works, with only the Clyst St Mary junction anticipated to see significant delay increases. An improvement of this junction or other appropriate mitigation would be required. It should however be noted that, due to the proximity of the Clyst St Mary junction and the M5 Junction 30, there is likely to be interaction between the two, and increasing capacity at the Clyst St Mary junction may have impacts at Junction 30, with traffic arriving at the junction more freely than it does at present. It is therefore likely that any scheme would have to coordinate with changes to Junction 30.
- 2.5.4 Option 2 can generally be accommodated, but has significant impacts at both Clyst St Mary and the east of Exeter road network, with improvements likely to be required at both locations.

### 3. Mitigation Potential

#### 3.1 Overview

3.1.1 Table 2.1 sets out the development impact without mitigation (i.e. without making improvements to address the changes to delay). The main individual junction that will require improvement is the Clyst St Mary (CSM) roundabout.

3.1.2 The existing CSM roundabout is a conventional roundabout with two lane entries on the A3076 (west) and A3052 arms, three lanes on the A3076 (south) entry and a single lane on the northern arm. It has a central 'throughabout' lane running from west to east and south. This is not in general use, and is only used under supervision of marshals during events at the nearby Westpoint showground. The junction has an inscribed circle diameter of approximately 80m.

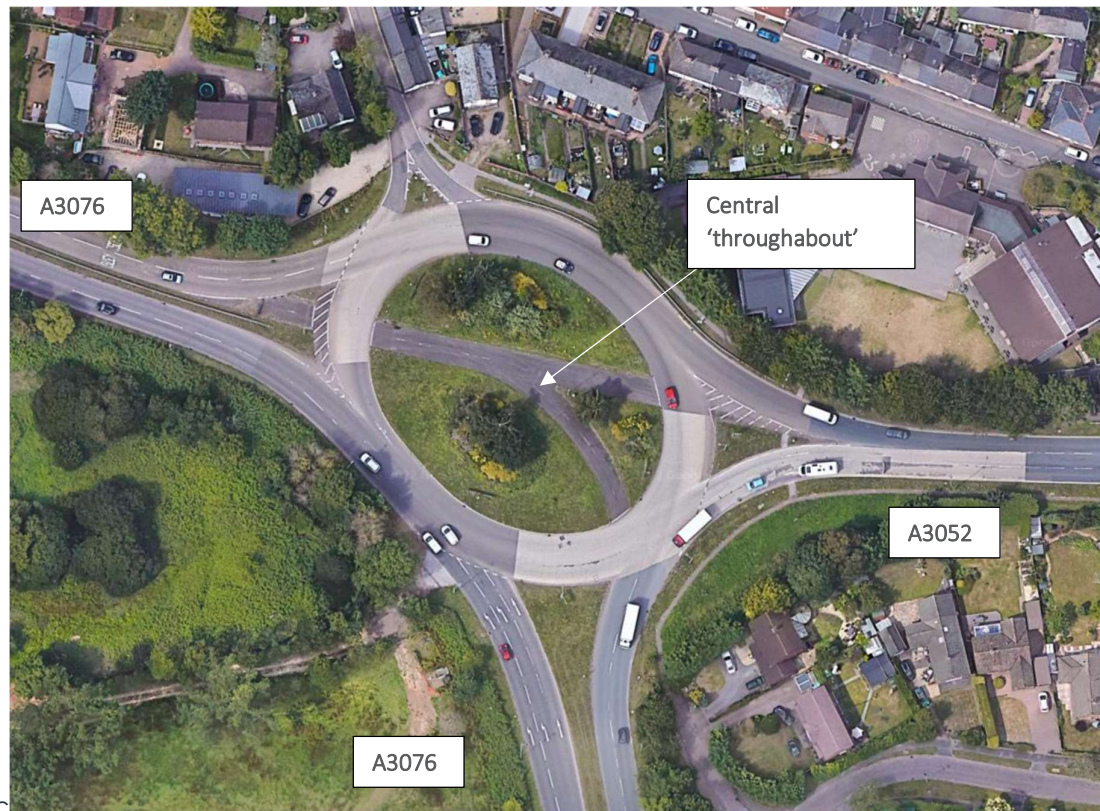


Figure 3.1: Existing Clyst St Mary Roundabout Layout

#### 3.2 Improvement Options

Five options for mitigation works at this junction have been considered:

- » Signalisation of existing layout
- » Signalisation and full use of throughabout
- » Replacement with signals
- » Removal of northern arm
- » Westpoint park and ride

3.2.1 These are discussed in more detail below. It should be noted that none of these schemes has been subjected to detailed modelling and significant scheme development will still be required. However, engineering judgement has been applied to determine if the schemes are likely to succeed.

### 3.3 Signalisation of Existing Layout

#### *Potential scheme*

3.3.1 The modelling does not indicate overall capacity issues, but rather individual arms experiencing delays due to the tidal nature of the traffic flows. The large size of the junction means that it would be possible to part-signalise it to allow flows to be rebalanced.

3.3.2 With four-arm junctions, the most efficient operation is generally achieved by signalling three of the four arms, with the remaining arm operating on a priority basis (as a conventional roundabout). In this instance, it is likely that the northern arm would not be signalised due to its relatively low traffic flows. A sketch of this arrangement is shown below:

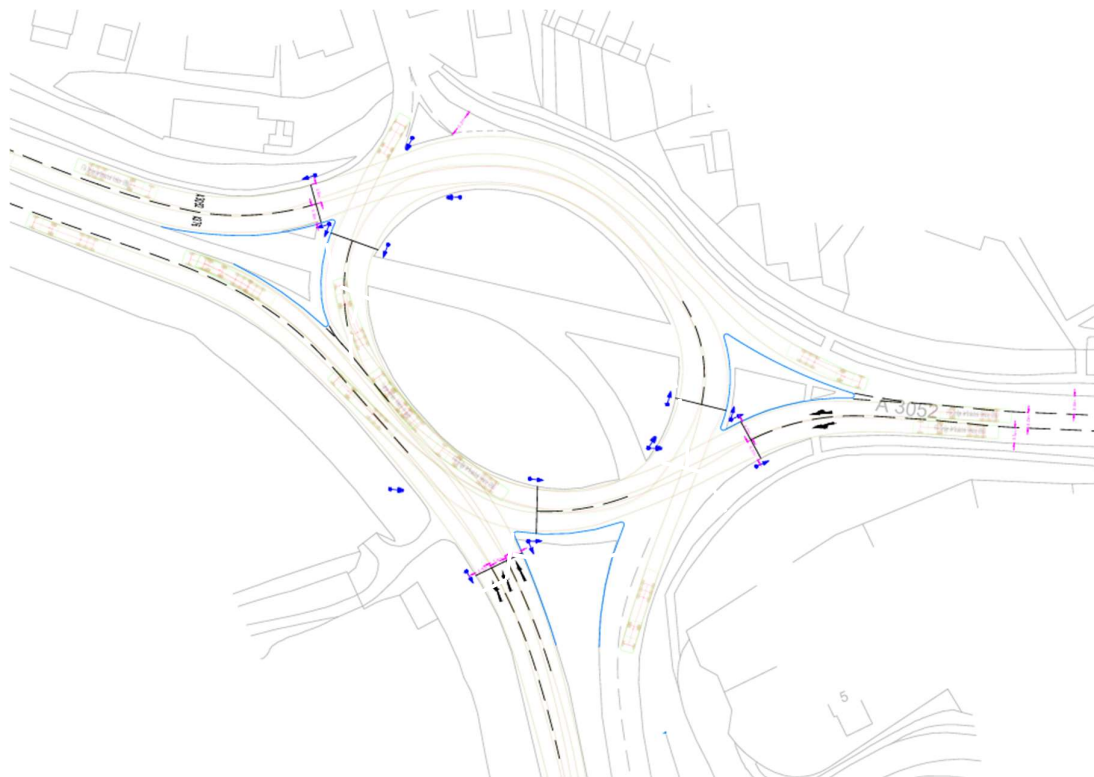


Figure 3.2: Signalised Roundabout Option



### *Deliverability*

- 3.3.3 A scheme of this nature would allow capacity to be rebalanced to address the tidal nature of the traffic flows and has a high probability of addressing capacity issues. There is also potential to coordinate the traffic signals with Junction 30 and the Clyst Road signals.
- 3.3.4 The scheme requires relatively minimal physical works and no additional land. It is therefore considered to be highly deliverable.

## 3.4 Signalisation and Use of Throughabout

### *Potential scheme*

- 3.4.1 As above, use of the existing throughabout section could help to address the tidal nature of the traffic flows. A sketch of a potential scheme is shown below:



Figure 3.3: Throughabout Option

### *Deliverability*

- 3.4.2 The size of the junction means that stacking capacity for queues would be limited, and there is unlikely that enough queue storage could be provided on the circulatory, leading the junction to 'lock up'. This is particularly the case on the east and west side of the circulatory. As a result, this is considered to be an unrealistic approach.

## 3.5 Replacement with Signals

### *Potential scheme*

- 3.5.1 Under this option, the roundabout would be removed and the junction would become a signalised crossroads. Sketch of potential arrangements are shown overleaf:



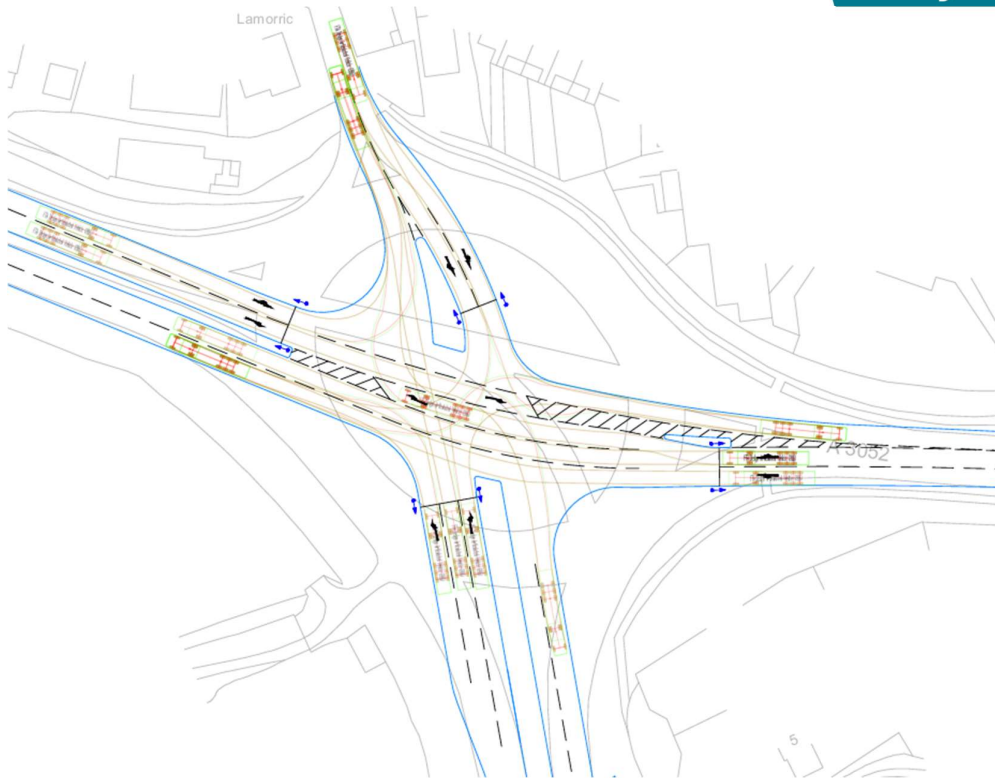


Figure 3.4: Signalised Crossroads Option A



Figure 3.5: Signalised Crossroads Option B

### *Deliverability*

- 3.5.2 A scheme of this nature would allow capacity to be rebalanced to address the tidal nature of the traffic flows and has a high probability of addressing capacity issues. There is also potential to coordinate the traffic signals with Junction 30 and the Clyst Road signals.
- 3.5.3 The scheme requires relatively minimal physical works and no additional land. It is therefore considered to be highly deliverable. It does also offer the opportunity to reclaim some highway land or to use the space for bus priority or cycle measures.
- 3.6 Removal of northern arm

### *Potential scheme*

- 3.6.1 The northern arm of the junction provides access to a relatively small area of housing around Frog Lane. There is alternative access to this area via Bishops Clyst, so the roundabout arm could potentially be removed. This would remove the number of give-way movements at the junction and, depending on the balance of traffic flows, may result in smoother operation. A sketch of this arrangement is shown below:



### *Deliverability*

- 3.6.2 Removal of the northern arm would be highly deliverable in terms of physical engineering works, but its capacity impacts are unpredictable without modelling. It is also unlikely to be popular with local residents without improvements to the Bishops Clyst junction. Additional traffic would also be forced along Bishops Clyst, which is narrow and goes past a school. As a result, although worthy of further investigation, this scheme is not recommended.



### 3.7 Westpoint Park and Ride

#### *Potential scheme*

- 3.7.1 The Westpoint Arena lies to the east of the junction and provides a large, open area with a well-developed access junction. It is well located to intercept trips into Exeter from the east and therefore to limit traffic through both the Clyst St Mary junction and M5 junction 30 Junction. There are already park and ride services operating from the Sowton site, so this route could potentially be extended to the Westpoint Arena, minimizing the number of additional vehicles required.

#### *Deliverability*

- 3.7.2 Physical costs should be relatively minimal due to the infrastructure already in place at the Arena. There would however be an ongoing revenue cost in terms of bus operation and lease / rent of the Arena. In addition, consideration would need to be given to how the park and ride service could operate during events such as the Devon County Show. However, the service could also help people to access these events by bus, so there are benefits for both parties.
- 3.7.3 This scheme is considered to be highly deliverable, and would be fully policy compliant in terms of encouraging use of sustainable modes. It would also benefit M5 Junction 30.

### 3.8 Clyst St Mary Roundabout Summary

- 3.8.1 There are a number of potential options for improvement of the junction, the majority of which are likely to be deliverable. Due to the large size of the junction, acquisition of third-part land is unlikely to be required. As with any major highways re-design, utilities within the road are likely to be a major risk item in terms of costs and would need to be clarified as part of the next assessment steps. An improvement scheme requiring minimal physical intervention would reduce this risk, so signalisation of the existing layout or creation of a new park and ride are likely to be preferred ways forward. A new park and ride would also encourage sustainable transport use and have a knock on benefit at Junction 30 due to reduced traffic demand.

### 3.9 East of Exeter Mitigation

- 3.9.1 The area to the east and south of Clyst St Mary is only significantly affected by Option 2, particularly around Woodbury Salterton and at the A376 junction with Topsham Road. The Woodbury Salterton impacts are likely to be a result of the section of Option 2 that lies close to the village. Due to their proximity to the site, it is likely that these impacts could be addressed through the planning application process, as the minor local roads are likely to require improvement in any event. It is unlikely that a strategic-level highway improvement would be required. However, these highway improvements would be an additional cost on the development, and may therefore affect viability and / or affordable housing provision.

- 3.9.2 The A376 / Topsham Road junction is effectively a mini-roundabout, and is closely fronted by third-party land. A straightforward capacity improvement through the creation of additional lanes does not appear to be achievable within the existing highway boundary. On the southwest corner of the junction, there is an open field, and it would need to be confirmed whether it is possible to obtain part of this to provide room to create either a larger roundabout or signalised junction. The levels and vertical alignment of the field also appear to be favourable to achieve this without requiring highways structures. A sketch of a potential roundabout option is provided below.



Figure 6: A376 / Topsham Road Junction Enlargement

- 3.9.3 In engineering terms, this appears at a high-level to be deliverable, but it would require acquisition of third-party land, which is a risk item. Overall, likely deliverability is considered to be moderate.

### 3.10 Mitigation Summary

- 3.10.1 The modelling work undertaken shows that Options 2 and 3 would have traffic impacts at the Clyst St Mary Roundabout, with Option 2 also impacting on surrounding local roads
- 3.10.2 In terms of their highways impacts, Option 1 would be the preferred development scenario, followed by Option 2 and then Option 3. Option 1 appears to require no strategic-level mitigation measures (other than those that would be addressed as part of the normal planning approval process),
- 3.10.3 Options 2 and 3 would require improvements at the Clyst St Mary Roundabout, with Option 2 also requiring improvements around Woodbury Salterton and at the A376 / Topsham Lane junction.



## 4. Additional Modelling

- 4.1.1 In September and October 2023, Hydrock were supplied with additional modelling work undertaken by WSP and DCC:
- » Greater Exeter Strategic Plan - East Devon Local Plan Development Impact (WSP ref. 70105008, August 2023)
  - » East Devon Local Plan Review Forecasting Technical Note (WSP September 2023)
  - » Greater Exeter Local Plan Developments Strategic Modelling Report September 2023 (DCC)
- 4.1.2 These notes examine the combined development impacts across all four of the districts in the Greater Exeter area (Exeter, East Devon, Teignbridge and Mid Devon), with only one development location (broadly equivalent to Option 1) reviewed in East Devon; an extract showing this location is reproduced below:

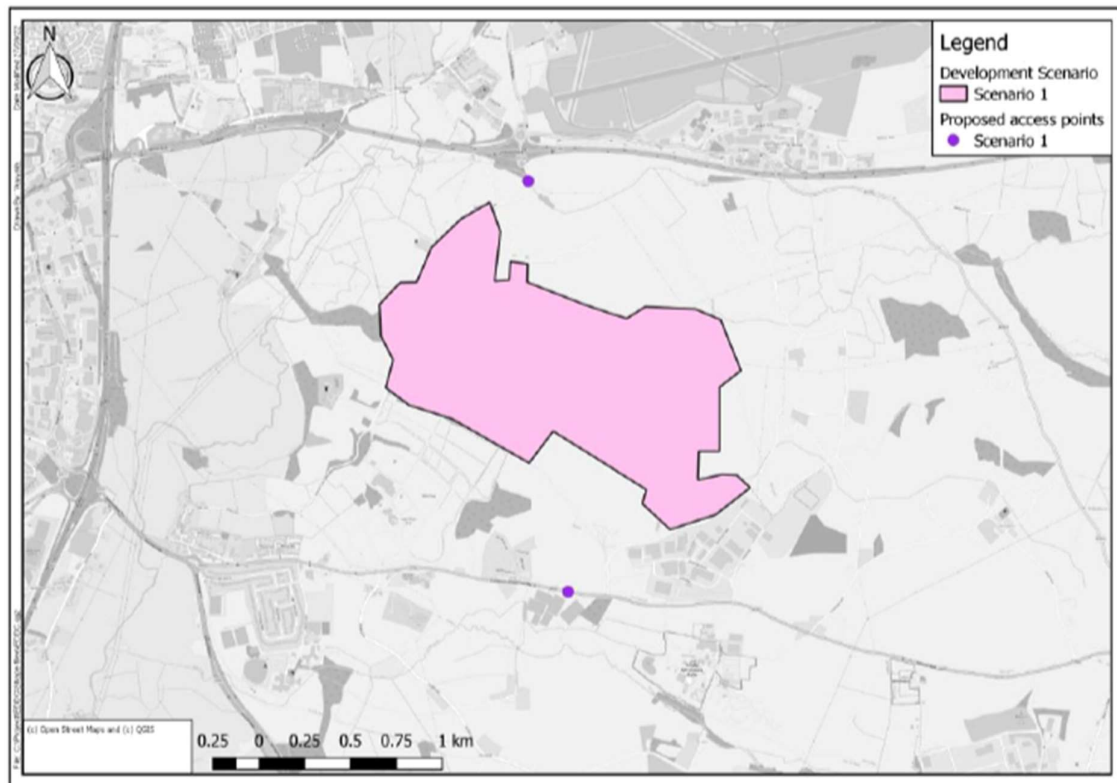


Figure 4.1: East Devon development location from DCC modelling exercise

- 4.1.3 The DCC note states at paragraphs 2.2.2 and 2.2.4:

*The main junctions impacted by the proposed development (difference between 2030 and 2040) are the airport junction onto the A30 and all the way along London Inn Road to Cranbrook. However, this is mainly linked to the Cranbrook development which has been subject to a separate modelling appraisal and the additional development of Cranbrook sits outside of the Local Plan allocation.*

*The bigger issues are highlighted to be at the airport junction onto the A30 and Clyst St. Mary roundabout. The airport junction issues are caused by an increase in traffic from the New Community to Cranbrook cutting off the eastbound off-slip in the AM and additional delays on Clyst Honiton Bypass approach to the roundabout in the PM peak. This will need to be addressed as part of the planning application for the New Community. Clyst St. Mary is impacted by most of the developments proposed in East Devon as opposed to an individual site.*

- 4.1.4 It should however be noted that this recent round of modelling does not appear to take any specific account of transport planning measures to encourage sustainable travel choices (as discussed in Hydrock's separate note Trip Generation Methodology Note - ref. 22462-HYD-XX-XX-RP-TP-2001). This would offer significant mitigation against the identified impacts.
- 4.1.5 Potential for improvements to the Clyst St Mary junction are discussed in Section 3 of this note. The Airport Junction is a dumbbell configuration, with a bridge over the A30 with a roundabout at its northern and southern ends. The WSP modelling appears to assume that the East Devon development would be served by two accesses, a new junction to the south onto the A3052 and northern access onto Bishop's Court Lane, the southern arm of the airport junction.
- 4.1.6 The capacity of roundabouts can be increased by enlarging their size and the number of lanes on entry arms. As a preliminary step of examining if this would be possible, land ownership around the junction has been examined. The following figure shows an extract from the National Highways [highway boundary mapping viewer](#):



Figure 4.2: Highway boundary surrounding Airport Junction

- 4.1.7 This indicates that there is significant room to expand the junction if required. The roundabout is on top of a relatively large embankment, but could be enlarged with appropriate engineering works to the embankment. This could be by extending its footprint, increasing its gradient (possibly in combination with soil reinforcement), or replacing it with a retaining wall.
- 4.1.8 Although there would be a cost associated with these engineering works and junction improvements, they are considered to be highly deliverable. Any of the options examined would require access junctions, which would also have associated costs, so the overall difference between the options is likely to be relatively minimal.
- 4.1.9 It should be noted that, as with the schemes described above, any improvement would need to be subjected to detailed modelling and significant scheme development will still be required. However, engineering judgement suggests that the scheme is likely to succeed.
- 4.1.10 Scheme development would be undertaken as part of any formal planning application process, particularly if this junction forms one of the key accesses to the site (as it would for Option 1).
- 4.1.11 The need for improvements at the Airport Junction has only been reviewed for Option 1. Options 2 and 3 have not been included in the latest round of modelling, so the impact under these scenarios is not known. Engineering judgement suggests that, given the different locations and access arrangements, the impacts at this junction are likely to be reduced for these options.

## 5. Conclusions

- 5.1.1 Based on an initial desktop review, it appears that, despite their larger delay impacts, it would be possible to mitigate the impacts of both Option 2 and 3 if these were to be taken forward. This would be through either localised capacity improvements or demand reduction schemes.
- 5.1.2 As a result, it is concluded that there are no fundamental highways constraints that would prevent any of the development options coming forward based on the results of the DCC model run by WSP, which has tested the effect of 2,500 new homes up to the end of the new Plan period (2040).
- 5.1.3 The table overleaf summarises development impacts, and the likely deliverability of appropriate improvements. Where no improvements are required, deliverability has been scored a 5-4 depending on likely costs and risks, good deliverability a 3-4, moderate deliverability 2-3, poor deliverability scores 1 and a fundamental highways constraint would score 0.
- 5.1.4 Note that the Airport Junction (Section 4) has not been included in this table, as it has not been comparatively tested across the options.



Table 5.1: Highways Delay Impact and Mitigation Summary

Assessment Category	Option 1		Option 2		Option 3	
	Impact	Deliverability	Impact	Deliverability	Impact	Deliverability
M5 J29	5	5	5	5	5	5
M5 J30	5	5	4	5	4	5
M5 J31	5	5	5	5	5	5
A30	5	5	5	5	5	5
A3052	4	5	4	5	4	5
A38 & A380	5	5	5	5	5	5
Clyst St Mary junction	3	4	1	4	1	4
East of Exeter Network Impacts	5	5	1	2	5	5
<b>TOTAL</b>	37	39	30	36	34	39
<b>Average</b>	<b>38</b>		<b>33</b>		<b>36.5</b>	
<b>Equivalent Score (1-5)</b>	<b>4.8</b>		<b>4.1</b>		<b>4.6</b>	

5.1.5 Based on the above, Option 1 would be most preferred in terms of highways impact, followed by Option 3, with Option 2 being least preferred.

## 5.2 Next Steps

- 5.2.1 Next steps would be to carry out more detailed modelling at the Clyst St Mary Roundabout, the A376 / Topsham Lane junction and the Airport Junction based on the flows predicted by the SATURN modelling. This would allow mitigation schemes to be developed in greater detail to gain an understanding of likely costs and risks. It is also recommended that preliminary discussions are held with the owners of Westpoint Arena to determine the potential to use the site for a park and ride, as this could have wider benefits.
- 5.2.2 As part of the next steps, a trip forecasting exercise will be undertaken. This will include trip generation taking into consideration travel minimisation and internalisation calculations within an overarching Vision and Validate approach whereby a 20-minute neighbourhood is used to support the default usage of sustainable transport modes. This is addressed in a separate note.
- 5.2.3 Trip distribution will be reviewed utilising strategic modelling (provided by others), allowing for comparative network impacts.
- 5.2.4 Overarching commentary will then be provided on the above, alongside a tabular review.
- 5.2.5 Once a preferred Option has been identified a High-Level Transport Assessment will be undertaken on that particular Option.

# Appendix A WSP Modelling Report



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<b>CHECKED:</b>	Tom Holian	<b>APPROVED:</b>	Matthew Turner

## INTRODUCTION

WSP have been commissioned to assist Devon County Council (DCC) alongside East Devon District Council (EDDC) in the process of refreshing the adopted Local Plan for EDDC through a 'Local Plan Review' with specific focus around Westpoint. The adopted Local Plan will extend the land use planning strategy in the area to 2030.

Demand for housing is predicted to continue increasing in the future. In order to model the impacts of increased housing and population on the local road network, a traffic model of the Greater Exeter (GE) area was developed by DCC (referred to as the "GE Model") using the SATURN strategic modelling software package. The GE Model area covers the Local Planning Authority (LPA) areas of Exeter, East Devon, Mid Devon, and Teignbridge, which has a combined population of approximately 475,000 people.

DCC commissioned a review of the GE Model to support the preparation of a transport evidence base, with a focus around the Westpoint area located to the east of Exeter. This work includes the review of base year and 2030 forecast models, reflecting the current and anticipated highway conditions, review and modification of a forecasting process, and the production of an updated end-of-Plan 2030 scenario.

This document outlines the forecasting process used to create a 2030 model, including the development around Westpoint.

## MODEL OVERVIEW

The GE Model was developed in 2018 using the SATURN strategic traffic modelling software package. The model was developed using the latest version of SATURN at the time of development (11.4.07H, released August 2018).

The GE Model was initially developed based on the Bridge Road Model (BRM), another strategic model developed by DCC. The study area for the BRM was a smaller area focused on Bridge Road and therefore the model network was expanded to include the entirety of Exeter in addition to a large area east of Exeter.

This was then supplemented with more detailed geometries and saturation flows for key junctions from the East of Exeter (EoE) model, which had a specific focus on the M5 Exeter corridor and immediate surrounding area. The EoE model was developed by DCC in partnership with and approved by National Highways.

## Modelled Time Periods

As per the GE Traffic Model Local Model Validation Report (LMVR)<sup>1</sup>, the model represents a typical weekday in November 2017. In addition to this, there is a 2030 forecast model that includes Local Plan development and committed schemes.

<sup>1</sup> Version 006 October 2021



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November was selected due to it being listed as a neutral month in the Department for Transport's (DfT's) Transport Appraisal Guidance (TAG) in addition to data availability and it being post completion of the Bridge Road widening scheme.

The GE Model includes the following three time periods:

- AM Peak: 08:00 – 09:00
- Inter-Peak: Average hour 10:00 – 16:00
- PM Peak: Average hour 16:00 – 18:00

## Demand Segmentation

The GE Model comprises of three car User Classes (UCs), segmented by travel purpose, and two goods vehicle UCs as summarised below in Table 1.

**Table 1 – GE Model Demand Segmentation**

User class	Vehicle Type	Purpose
1	Car	Home Based Work (Commute)
2	Car	Employer's Business
3	Car	Other (Discretionary)
4	Light Goods Vehicle (LGV)	Employer's Business
5	Heavy Goods Vehicle (HGV)	Employer's Business

## Generalised Cost Parameters

The Value of Time (VoT) values used in the GE Model were taken from the November 2018 release of the TAG Databook, the most recently available release at the time of the model development. The VoT values used are shown below in Table 2 in Pence Per Minute (PPM) alongside the operating cost values in Pence Per Kilometre (PPK).

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**Table 2 – Generalised Cost Parameters**

UC	User Class	Value of Time (PPM)			Value of Time (PPK)		
		AM	IP	PM	AM	IP	PM
1	Car – Commute	12.3	12.5	12.34	9.84	9.69	9.79
2	Car – Employer’s Business	21.82	22.36	22.14	13.74	13.33	13.61
3	Car – Other	8.48	9.04	8.89	9.84	9.69	9.79
4	LGV	15.2	15.2	15.2	14.69	14.7	14.68
5	HGV	15.66	15.66	15.66	33.19	32.02	32.81

## DEVELOPMENT SCENARIOS

In order to assess the potential impact of the additional traffic generated by the Local Plan and Westpoint development, three development scenarios have been assessed. Each development scenario represents a different proposed site location (Zone 907), all containing 2,500 dwellings. 2,500 dwellings are being tested as part of the first phase. The full development build out of 8,000 dwellings would amplify the highlighted problems and cause unreasonable and unrealistic rerouting given the strategic nature of the SATURN model.

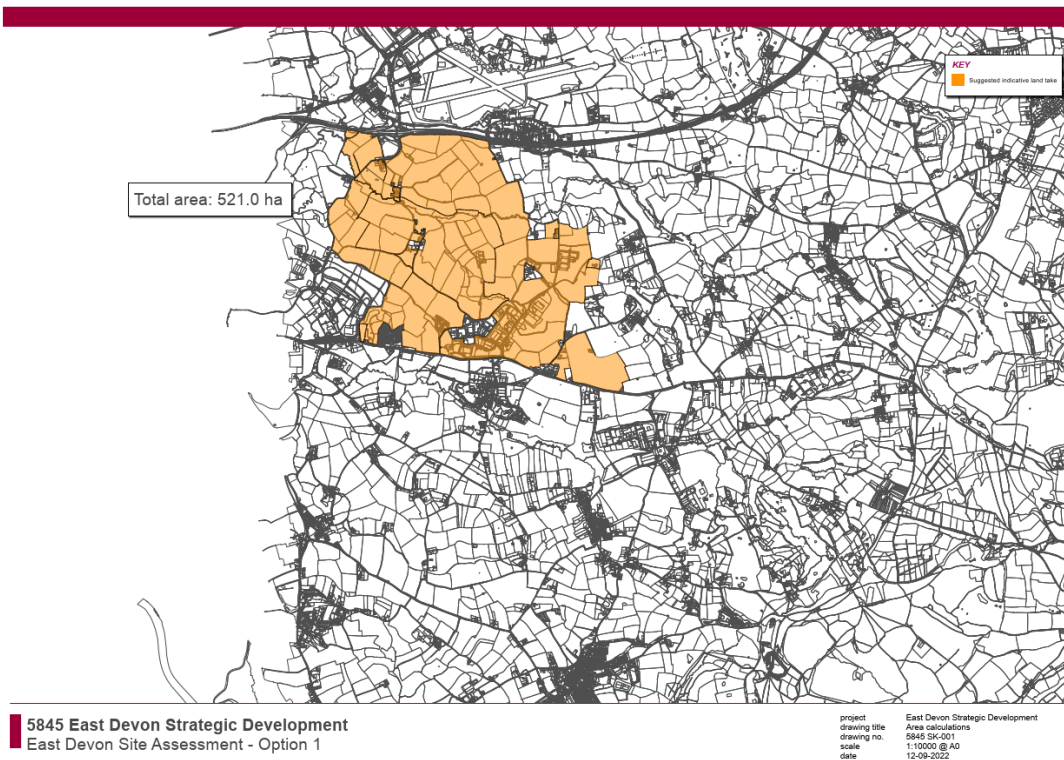
The development forecast scenarios are only to determine where traffic generated by the new sites would travel and do not include additional growth (either from background growth or other development sites likely to come forward in the neighbouring districts) which could impact the performance of the motorway junctions in future. The model doesn’t currently include any other development across the area beyond the existing adopted local plans in each of the districts.

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## Scenario 1

Development scenario 1 includes a 521.0 ha site located between A30 Honiton Road in the north and A3052 East Devon Heritage Coast Way in the south. The location of the proposed development site is shown below in Figure 1.

**Figure 1 – Scenario 1 Development Area**

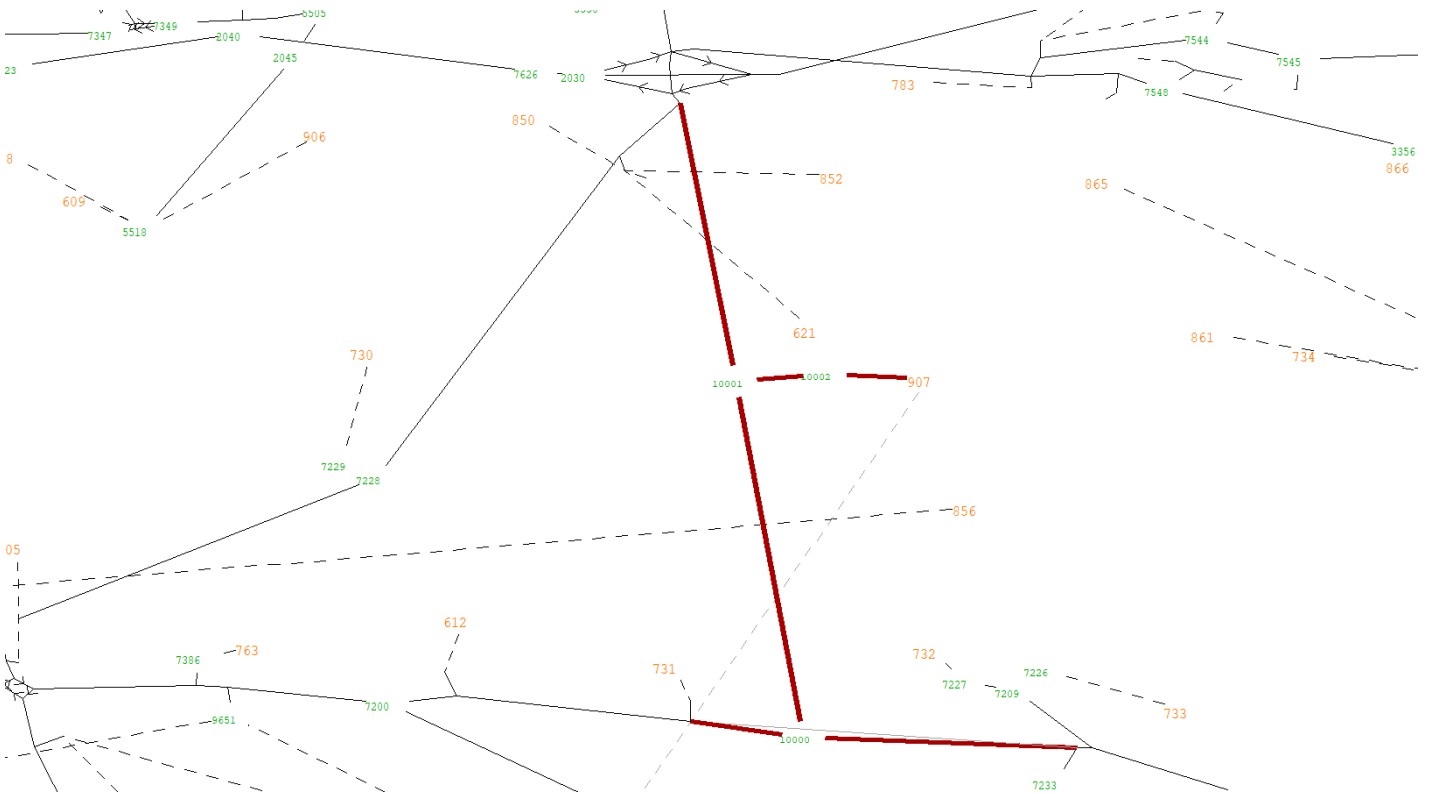


Two access points to the development site are coded as part of this scenario; one in the north providing access to the A30, and one in the south providing access to the A3052. A 2-lane, 20mph through-road connecting the northern and southern access points has been assumed to limit the amount of through routing. The access junctions connecting the through-road to the existing road network are coded as roundabouts with 2-lane approaches on each arm (one lane flaring to two), other than where pre-existing roads have different actual conditions. These approaches have been coded with modified stacking capacities and speed flow curves to imitate a 1-lane with flare approach on each arm.

The SATURN network around the proposed development site in this scenario is shown below in Figure 2, with development access roads highlighted in red.

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**Figure 2 - Scenario 1 Development Site SATURN Network**



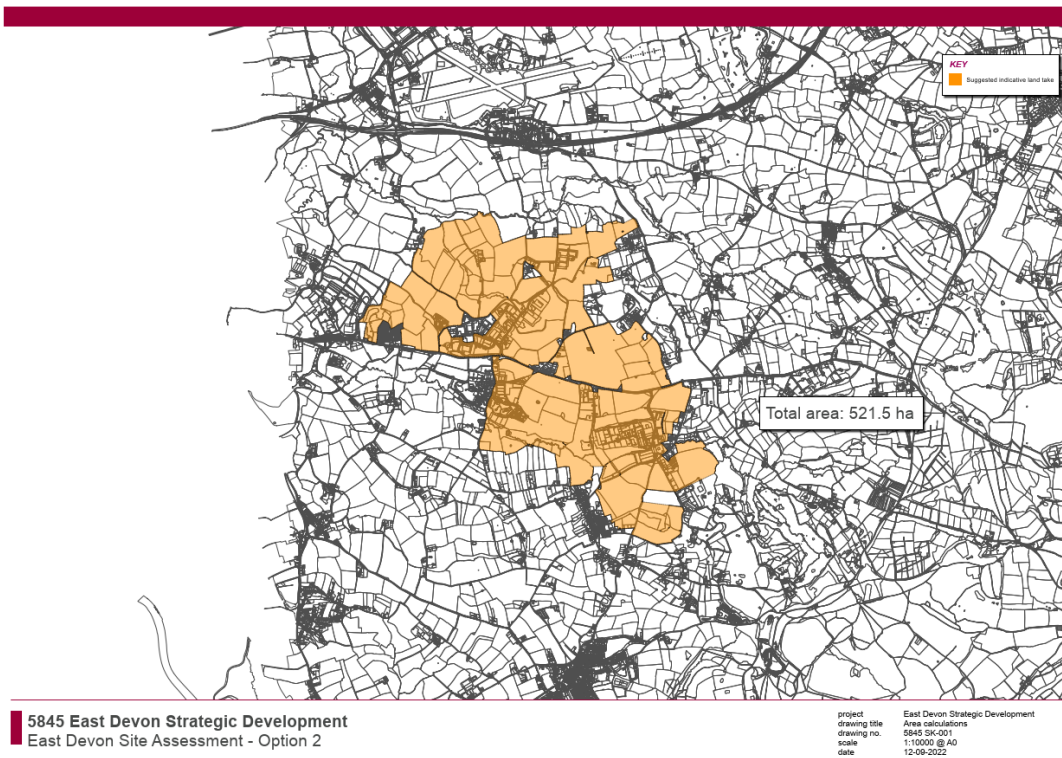


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## Scenario 2

Development scenario 2 includes a 521.5 ha site located across the A3052. The location of the proposed development site is shown below in Figure 3.

**Figure 3 - Scenario 2 Development Area**

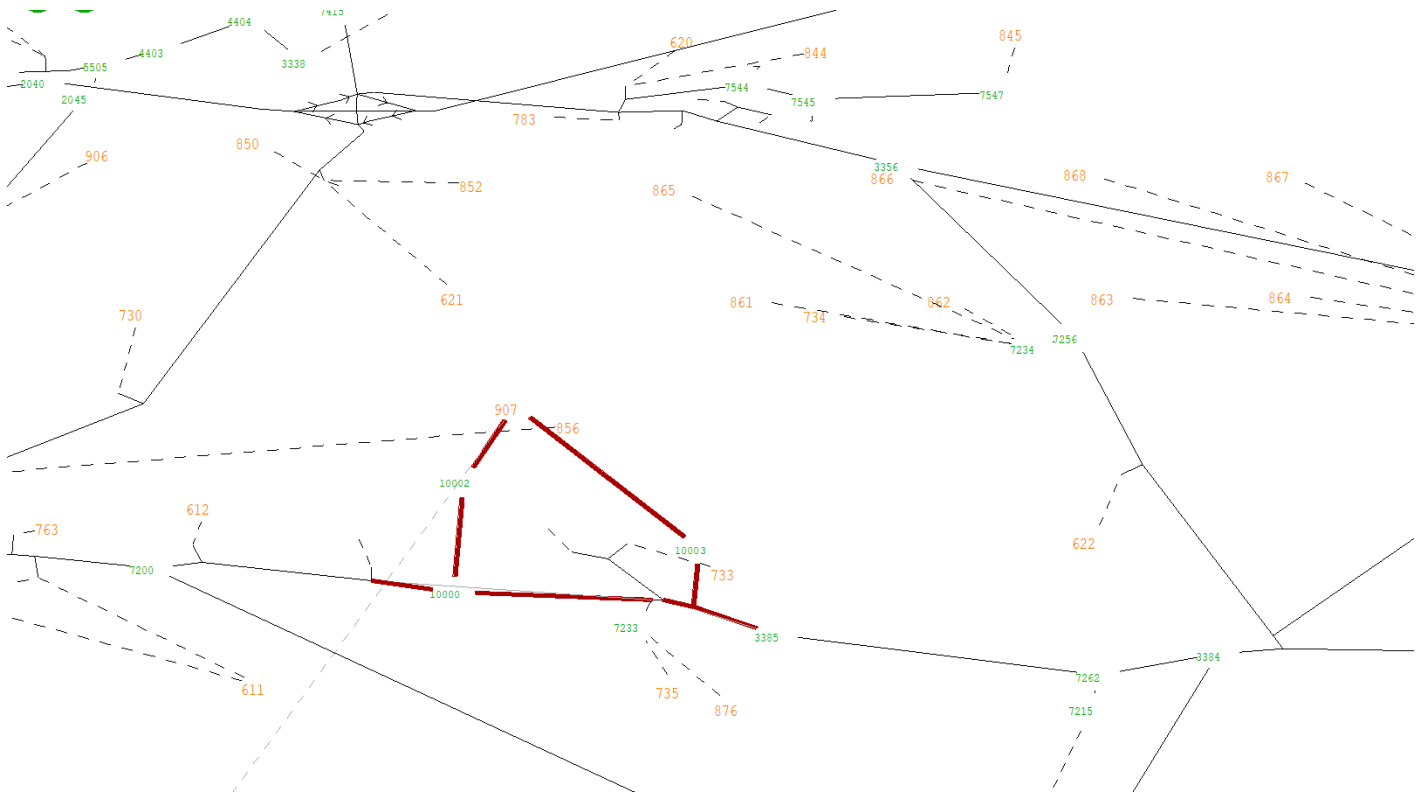


Two access points to the development site have been considered as part of this development scenario, both providing access to the A3052. The access junctions connecting the development site zone to the wider road network are coded as roundabouts with 2-lanes (one lane plus flared approach). These approaches have been coded with modified stacking capacities and speed flow curves to imitate a 1-lane with flare approach on each arm.

The SATURN network around the proposed development site in this scenario is shown below in Figure 4, with development site access roads highlighted in red.

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**Figure 4 - Scenario 2 Development Site SATURN Network**

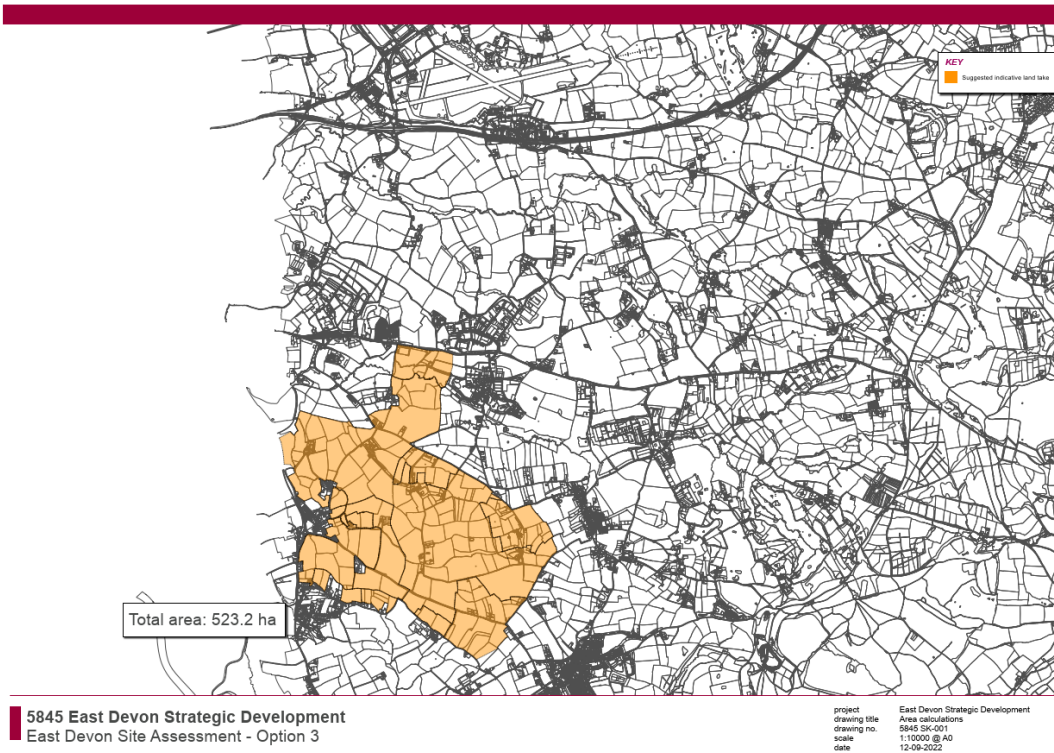


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### Scenario 3

Development scenario 3 includes a 523.2 ha site located in the vicinity of Woodbury Salterton between A3052 East Devon Heritage Coast Way, B3180, B3179, and A376 Exmouth Road. The location of the proposed development site is shown below in Figure 5.

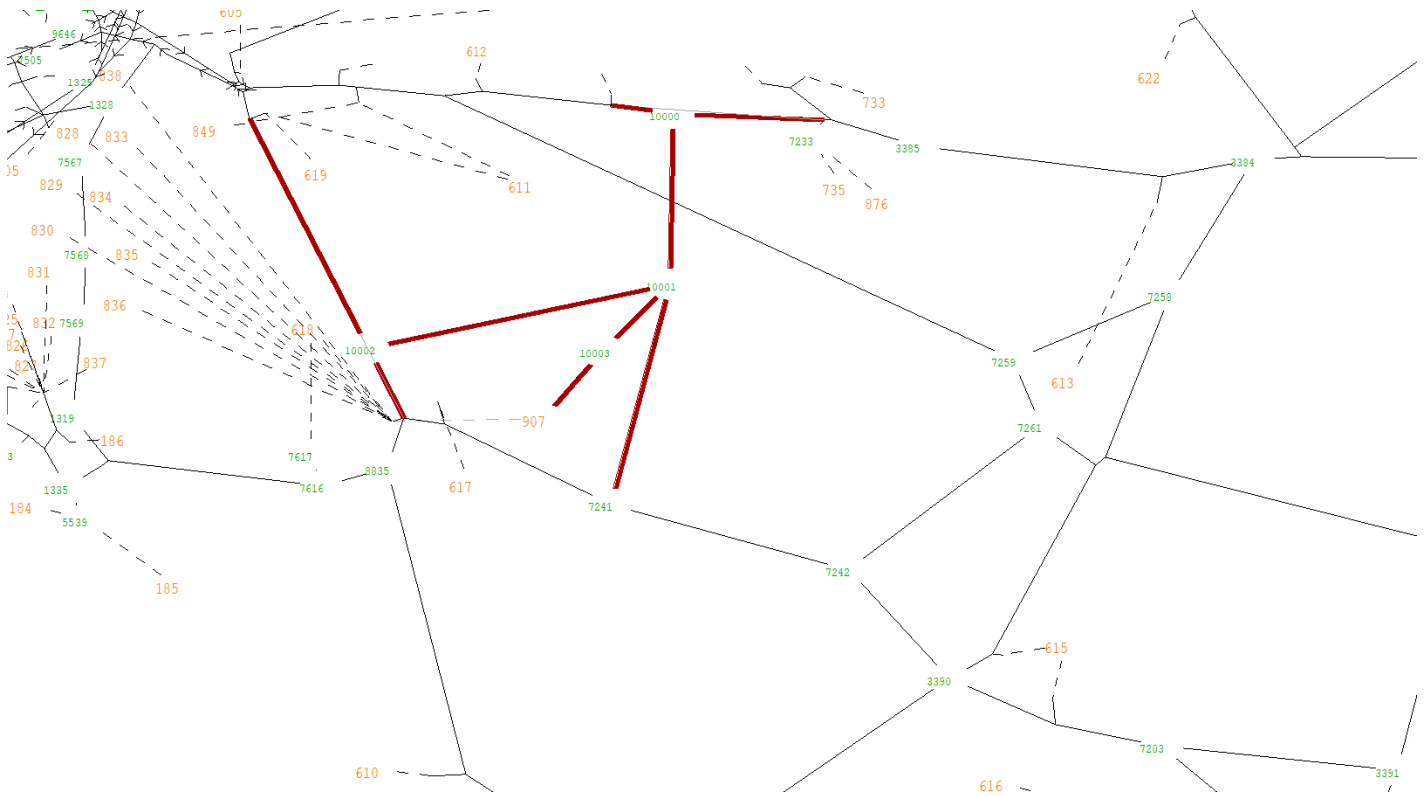
**Figure 5 - Scenario 3 Development Area**



Three access points to the development site have been considered as part of this development scenario: one connecting to the A3052, one connecting to the B3179, and one connecting to the A376. The access junctions connecting the development site to the wider road network are coded as roundabouts with 2-lane (One lane plus flared approach), 20mph approaches on each new arm. These approaches have been coded with modified stacking capacities and speed flow curves to imitate a 1-lane with flare approach on each arm. The SATURN network around the proposed development site in this scenario is shown below in Figure 6, with development site access roads highlighted in red.

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**Figure 6 - Scenario 3 Development Site SATURN Network**





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## FORECASTING PROCESS

### Trip Generation Methodology

DCC undertook an exercise to create a set of bespoke car trip rates for new communities within the Greater Exeter area<sup>2</sup>. Using an average of five urban survey sites from Greater Exeter Spatial Plan settlements, AM peak vehicle trip rates were calculated with consideration applied to the site location and internalisation by purpose. These are shown in Table 3 below.

**Table 3 – AM Trip Rates for New Communities (Per dwelling)**

Type	Inbound	Outbound	2-Way
Internal	0.02	0.10	0.12
External	0.07	0.27	0.34
Total	0.09	0.37	0.46

Both internal and external trip rates were provided, but only the external trip rates have been used as the proposed development sites are singular zones for this assessment. No internal trips have been assumed in this modelling. To obtain PM car trip rates, the AM car trip rates identified above have been compared to the AM values in Trip Rate Information Computer System (TRICS) to gain a relative difference. The same relative difference has then been inversed and applied to the PM with trip rates for all other modes coming from TRICS. Trips rates provided in TRICS are detailed below in Table 4. All trip rates for the IP have come directly from TRICS.

**Table 4 – TRICS Trip Rates per Dwelling**

Vehicle	Peak	Arrival	Departure
Car	AM	0.138	0.409
	IP	0.131	0.129
	PM	0.383	0.164
LGV	AM	0.013	0.018
	IP	0.017	0.018
	PM	0.022	0.014
HGV	AM	0.000	0.000

<sup>2</sup> TR2 – Trip Rates for New Communities

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Vehicle	Peak	Arrival	Departure
	IP	0.001	0.001
	PM	0.000	0.000
Total	AM	0.151	0.427
	IP	0.149	0.147
	PM	0.405	0.178

The final development site trip rates once the relative differences have been applied are detailed below, in Table 5.

**Table 5 – Final Development Site Trip Rates per Dwelling**

Vehicle	Peak	Arrival	Departure
Cars	AM	0.070	0.270
	IP	0.131	0.129
	PM	0.244	0.096
LGV	AM	0.013	0.018
	IP	0.017	0.018
	PM	0.022	0.014
HGV	AM	0.000	0.000
	IP	0.001	0.001
	PM	0.000	0.000
Total	AM	0.083	0.288
	IP	0.149	0.147
	PM	0.266	0.110

## Forecasting Process Methodology

The GE Model has a bespoke forecasting process developed by DCC, which has been inherited for this development assessment. High level processes are detailed below, but further information can be found in the Greater Exeter Traffic Model Forecasting Report<sup>3</sup>.

<sup>3</sup> Greater Exeter Traffic Model Forecasting Report, October 2021 (GE-FR-06)

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The forecasting process starts by factoring the base year matrices to account for local background growth and windfall development up to the year 2030. The matrices generated by this step are referred to as the Local Background Growth 2017 to 2030 (LBG1730) matrices.

The GE Model has a forecast year of 2030, whereas the 2,500 dwellings located at the proposed development sites are due to be completed by 2040. As part of the GE Model forecasting process, major roads in Exeter do not experience any growth in trips during the modelled peak hour(s) due to already being at capacity. Therefore, the calculations for the forecast year of 2030 are deemed to be a suitable proxy for the forecast year of 2040 on the local road network and, with that caveat, the model is considered suitable for the purposes of preliminary testing and comparison of the impacts of the proposed development sites, mindful of the requirement for further and updated modelling as part of the next stages of assessment.

The forecasting process then uses the LBG1730 matrices and Local Plan development up to the year 2030 to create targets for a furnishing process. This is the stage at which the Local Plan Review development trips are inserted into the forecasting process to produce the Do-Something (DS) matrices, or not inserted to produce the Do-Minimum (DM) matrices. The matrices generated by this step are referred to as the Local Plan 2017 to 2030 Pre Park & Change (LP1730\_Pre\_PC) matrices.

The LP1730\_Pre\_PC matrices are then assigned to the development scenario networks, and select links are taken from the networks at identified future Park & Change sites. These select link matrices are factored and recombined with the LP1730\_Pre\_PC matrices to produce the Local Plan 2017 to 2030 (LP1730) matrices.

The next stage of the forecasting process generates and furnishes matrices based on the Road Traffic Forecast (RTF) scenarios, which combines the resulting matrix with the LP1730 matrices to adjust traffic flows on the Strategic Road Network (SRN).

Finally, a series of select links along the M5 are undertaken on the adjusted LP1730. These select links are subsequently factored and combined into the adjusted LP1730 matrices, the final forecast matrices.

The GE Model forecasting process produces two sets of forecast matrices based on different RTF scenarios. For the purposes of this assessment, only the set of matrices based on RTF scenario 1 have been analysed, and a comparison of total matrix trips between the different development scenarios are presented below in Table 6.

**Table 6 - Matrix Totals Comparison**

Scenario	AM	AM Diff. vs Base	IP	IP Diff. vs Base	PM	PM Diff. vs Base
Base	45,697	0.00%	32,612	0.00%	42,041	0.00%
DM	53,289	16.61%	38,195	17.12%	48,480	15.32%
DS Scenario 1	53,710	17.53%	38,545	18.21%	48,909	16.34%

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Scenario	AM	AM Diff. vs Base	IP	IP Diff. vs Base	PM	PM Diff. vs Base
DS Scenario 2	53,792	17.71%	38,567	18.26%	48,834	16.16%
DS Scenario 3	53,778	17.68%	38,567	18.26%	48,840	16.17%

This comparison shows that the number of trips added to the network by the development changes between scenarios, despite being based on the same trip rates and number of dwellings. This is due to the stage at which the development trips are inserted into the forecasting process, as noted in the forecasting methodology. Select links are taken from the model, factored, and recombined after the development trips are added, thereby affecting the final matrix totals.

## RESULTS

Bespoke models have been created for each development scenario and compared against the DM models produced by the same forecasting process, with a particular focus on effects on and around the M5 from J29 to J31.

To aid this comparison, a set of diagrams showing traffic flows on the M5 from J29 to J31 and parts of the A30, A38, and A380 to the east and west of Exeter have been produced. These diagrams were initially produced by DCC as part of the GE Model development process and have been modified and updated with model data for the DM and three DS development scenarios. However, these diagrams do not include details of the junctions themselves at M5 J29 and J30, or details of Clyst St. Mary Roundabout and the road network immediately to the east of Exeter.

Therefore, for each development scenario, a summary of information included in the diagrams and an investigation of the models at M5 J29 and J30, Clyst St. Mary Roundabout, and areas to the east of Exeter have been provided. Images of the AM and PM models have also been provided for each model investigation, showing demand flow, actual flow, delay, and volume over capacity (V/C) at M5 J29 and J30. In each model image, the demand and actual flows and delay times have been truncated to show only changes of greater than 25 PCUs per hour and five seconds respectively. Anything less than five seconds could be a consequence of model noise rather than actual results.

The full set of diagrams are available in Appendix A. To aid these diagrams, SATURN difference plots are available in Appendix B for each scenario with an additional set of model screenshots of the M5 J29 and J30, A30, A3052, and Clyst St. Mary Roundabout in Appendix C.

### Scenario 1

In the AM for Scenario 1, the model shows a slight increase in traffic flows travelling southbound on the M5, westbound on the A30 west of Exeter, and southwest bound on the A38 and A380. However, the model also shows a slight decrease in traffic travelling in the opposite direction. The IP and PM models show



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similar slight changes in traffic flow. All models show a slight increase in traffic travelling in all directions on the A30 east of Exeter. This has not had a material impact on delay along the M5, with the largest increase being less than a second.

The SATURN models show an increase in traffic flow but minimal overall changes to delay along the M5 and the surrounding road network to the east of Exeter. Increases in delays at Junction 29 can be seen in the AM and PM models, predominantly on the eastern side of the M5. Clyst St. Mary Roundabout shows an increase in delay, with an additional 33 seconds on the westbound approach in the AM model and 35 seconds on the eastbound approach in the PM model. Subsequently, additional turning delay can be seen on the roundabout itself.

Images of the demand flow, actual flow, delay and volume over capacity in the AM and PM models are shown below, in Figure 7 through to Figure 14.

Figure 7 – DM vs DS Scenario 1, AM, Demand Flow

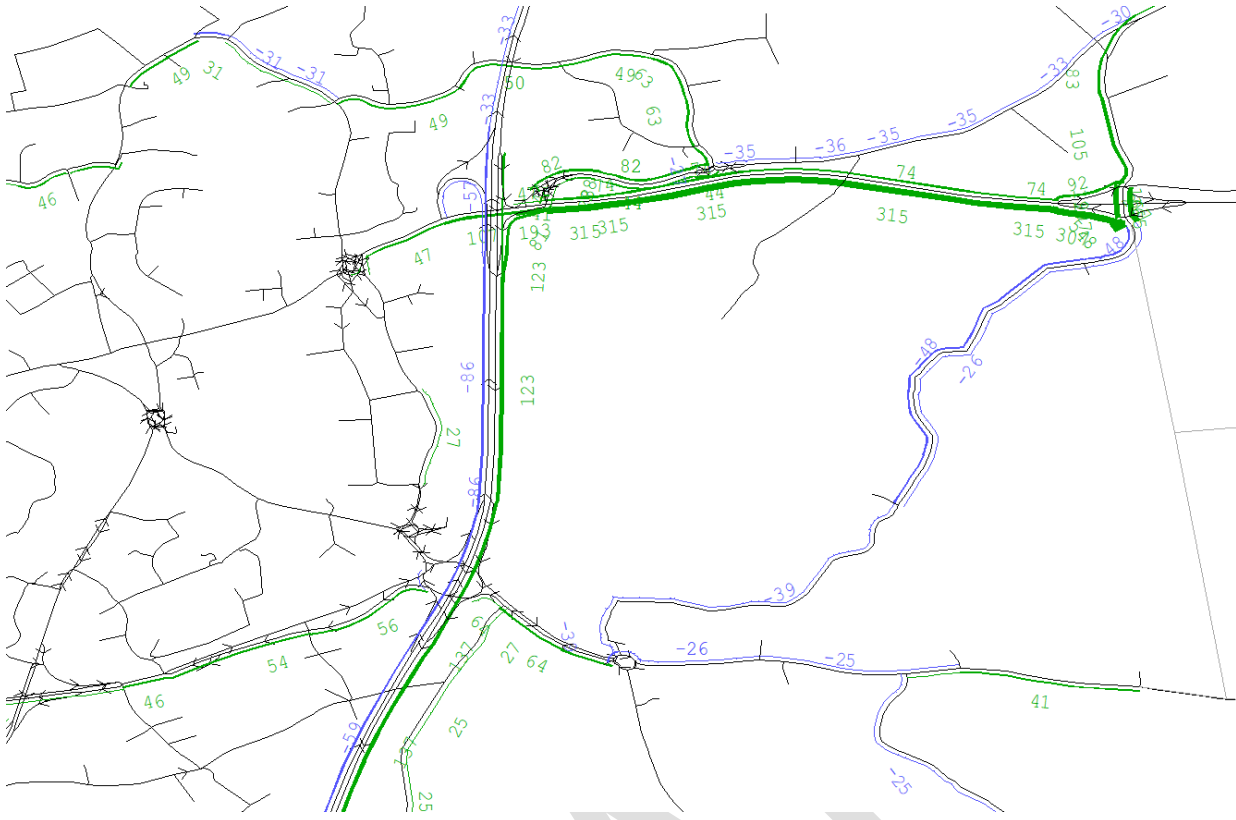


Figure 8 – DM vs DS Scenario 1, AM, Actual Flow

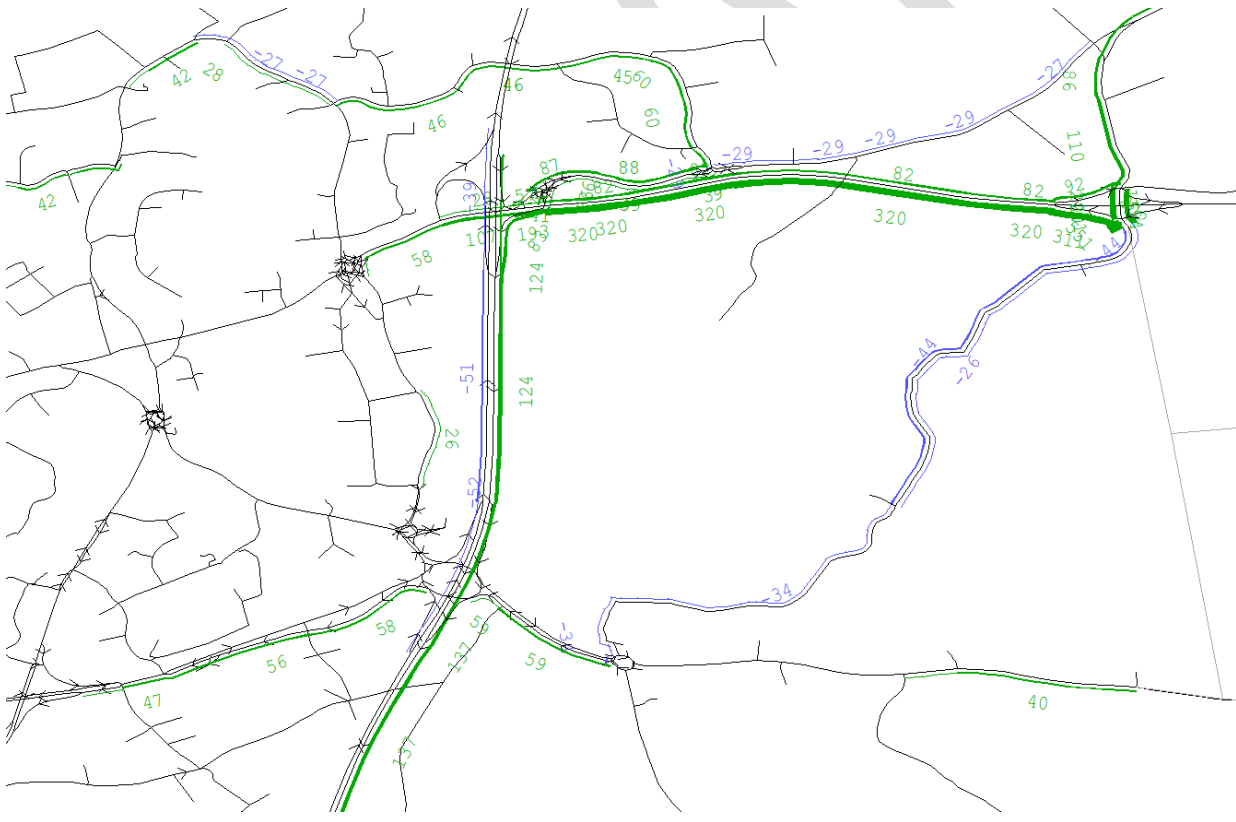


Figure 9 – DM vs DS Scenario 1, AM, Delay

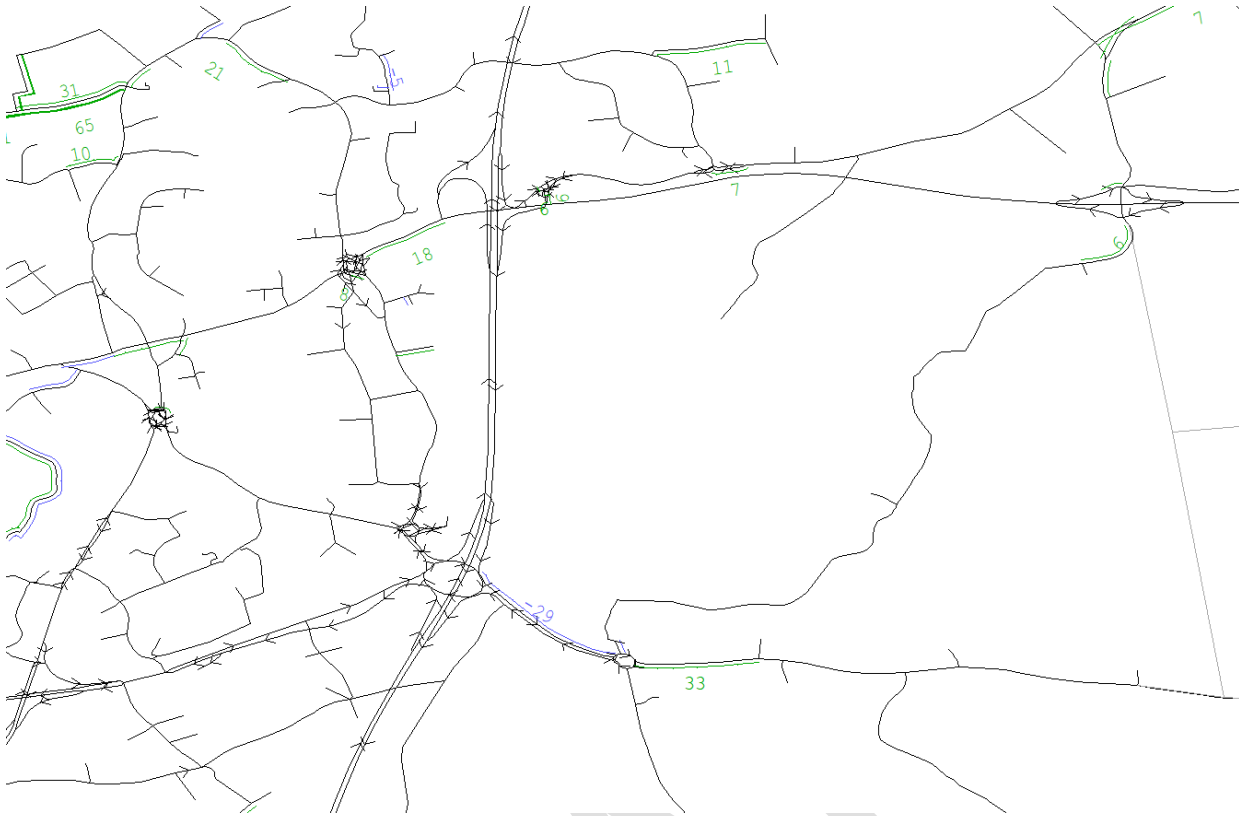


Figure 10 – DM vs DS Scenario 1, AM, V/C

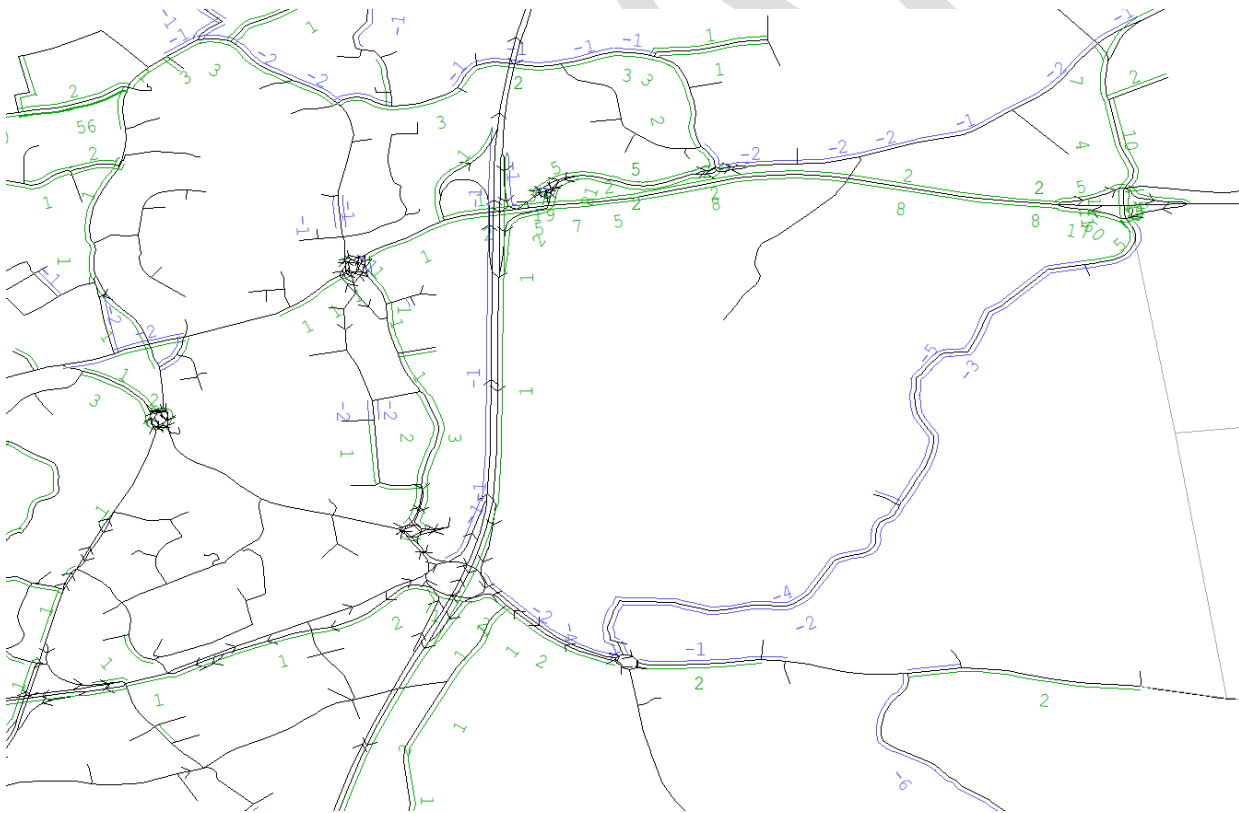


Figure 11 – DM vs DS Scenario 1, PM, Demand Flow

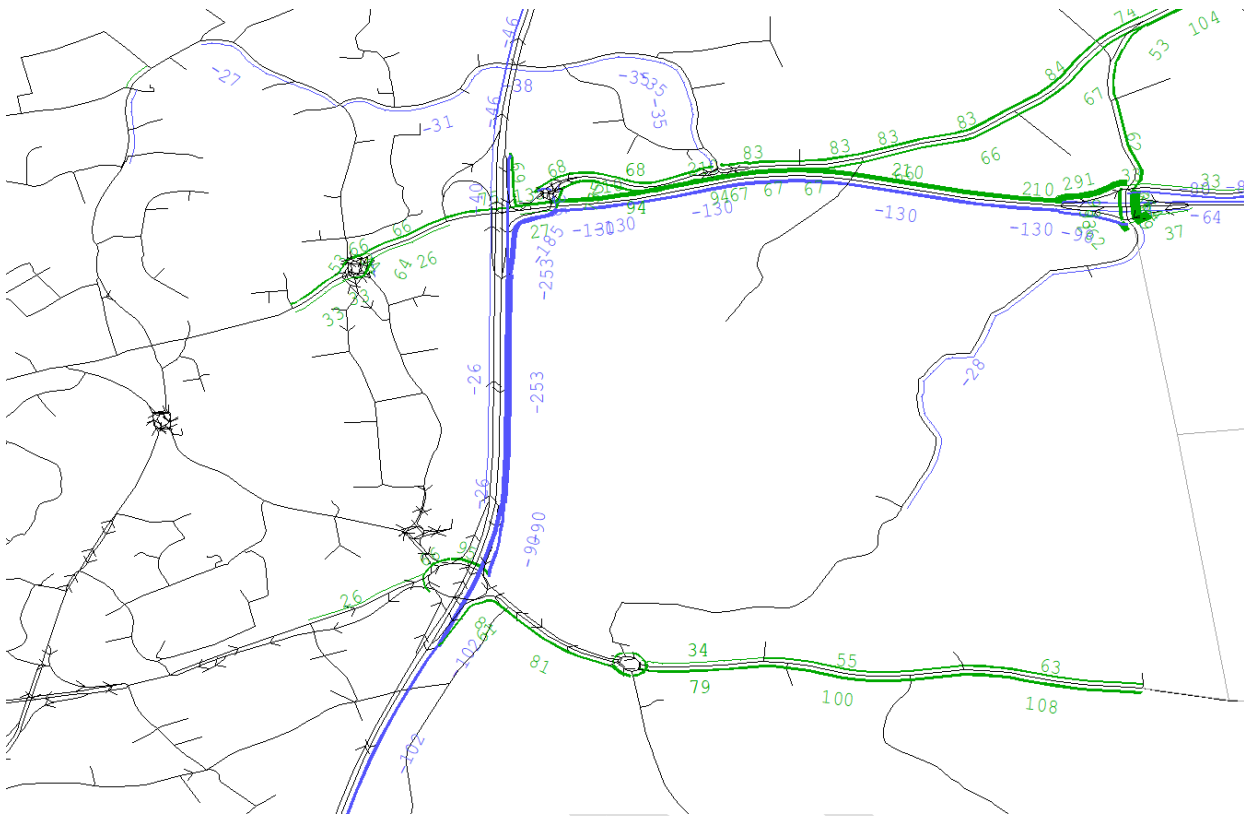
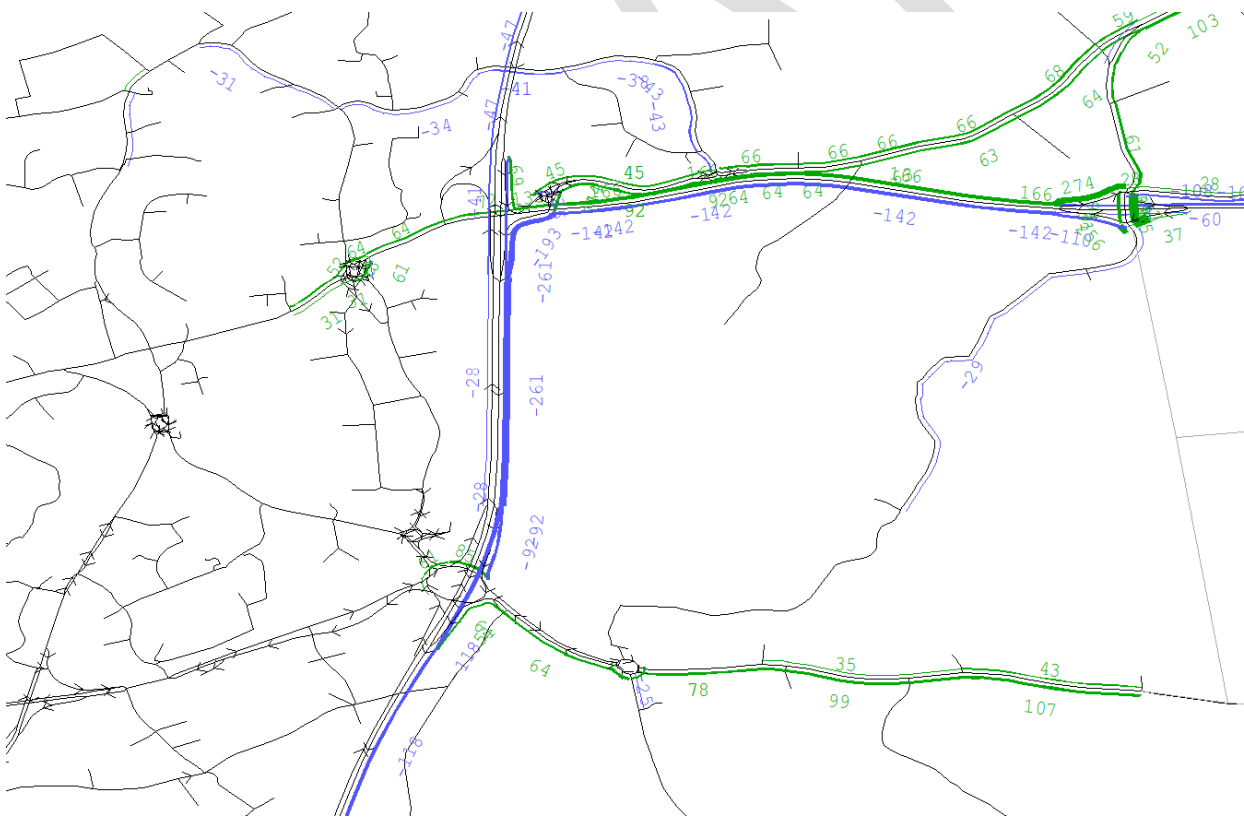


Figure 12 – DM vs DS Scenario 1, PM, Actual Flow

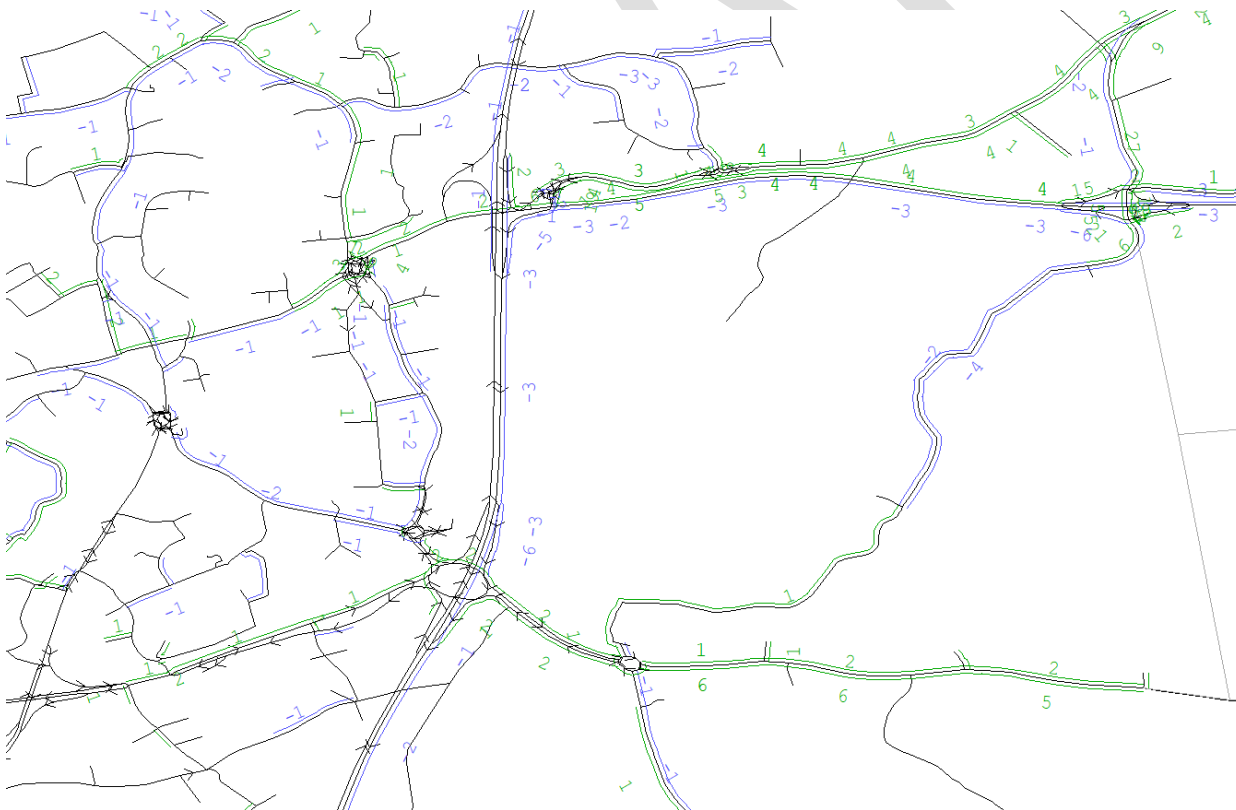




**Figure 13 – DM vs DS Scenario 1, PM, Delay**



**Figure 14 – DM vs DS Scenario 1, PM, V/C**



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<b>CHECKED:</b>	Tom Holian	<b>APPROVED:</b>	Matthew Turner

## Scenario 2

In the AM and IP models for Scenario 2, there are slight traffic flow changes along the M5, A30, A38, and A380. The PM model similarly shows slight traffic flow changes, however there are some larger differences in flow of up to 130 Passenger Car Units (PCUs). Minimal changes in delay can be seen on the M5 itself, increasing by less than four seconds in any model.

Increased traffic flows can be seen alongside minimal changes in delay along the mainline at M5 Junction 29 and Junction 30 in addition to the road network to the east of Exeter. Junction 29 and 30 along the M5 see some increases in delay in the AM and PM models, focused on the east side of the M5 at Junction 29 and the north side of the junction at Junction 30.

The models show that Clyst St. Mary Roundabout sees a significant increases in delay in Scenario 2, with an increase of 277 seconds of delay on the westbound approach in the AM and 160 seconds additional delay on the eastbound approach in the PM. In addition to this, there is an overall increase in the turning delay on the roundabout itself. Some parts of the road network to the east of Exeter also see large increases in delay. The AM model shows an increase of 227 seconds southbound on Bond's Lane and 90 seconds northbound on Woodbury Road around the combining junction. An increase of 76 seconds can also be seen northbound on the A376 at the junction with Topsham Road.

Images of the demand flow, actual flow, delay and volume over capacity in the AM and PM models are shown below, in Figure 15 through to Figure 22.



Figure 17 – DM vs DS Scenario 2, AM, Delay

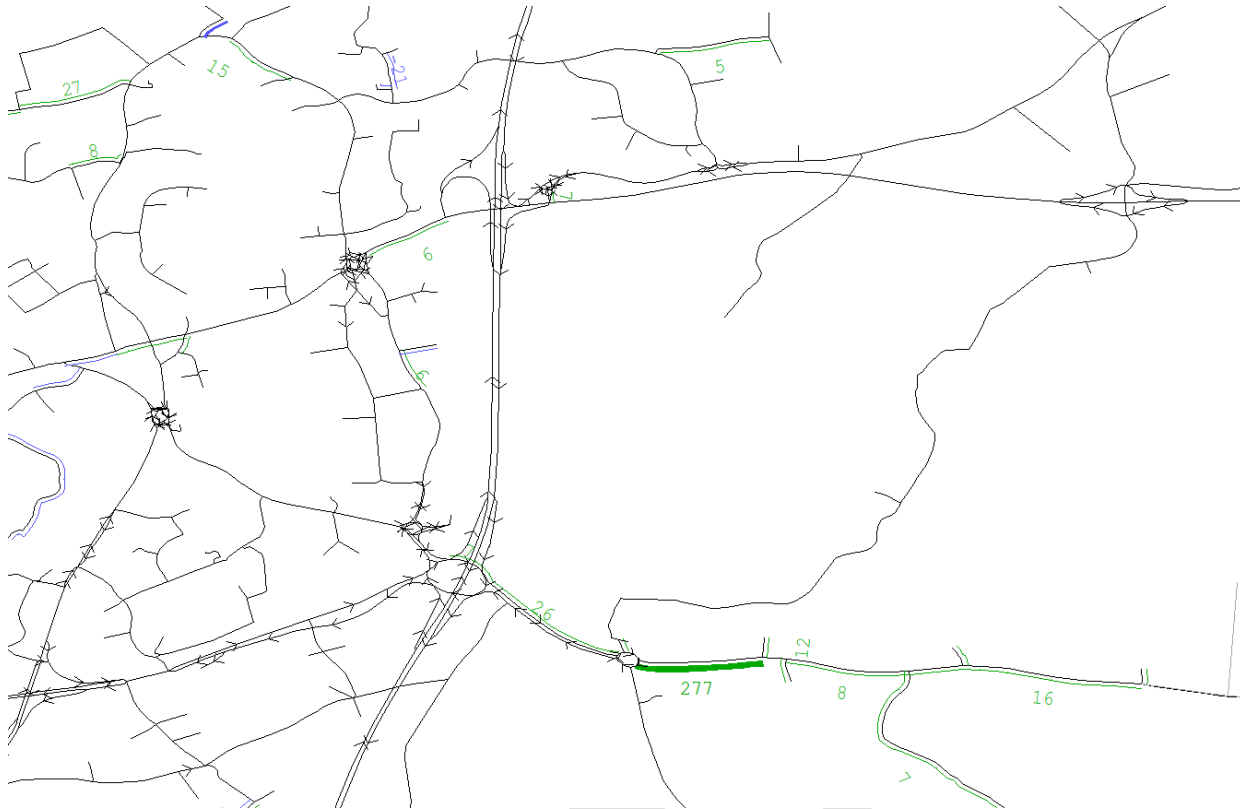


Figure 18 – DM vs DS Scenario 2, AM, V/C

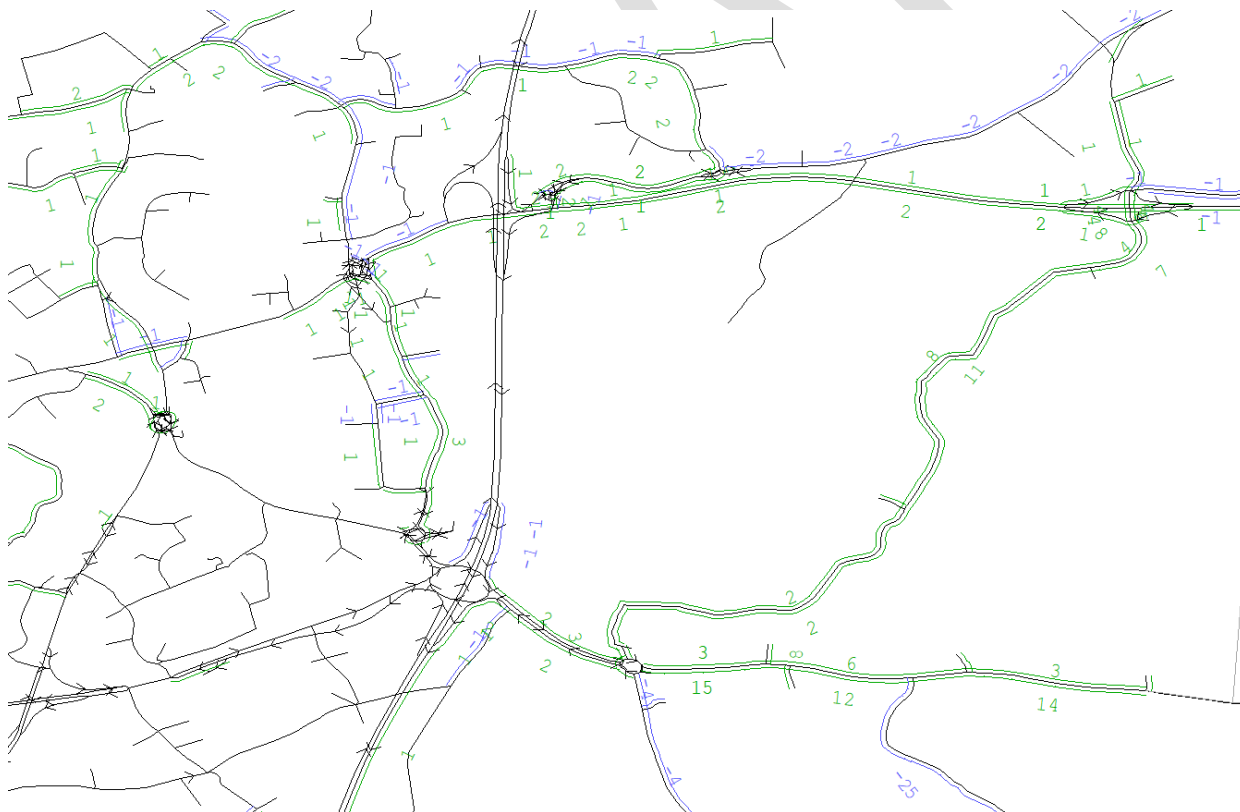


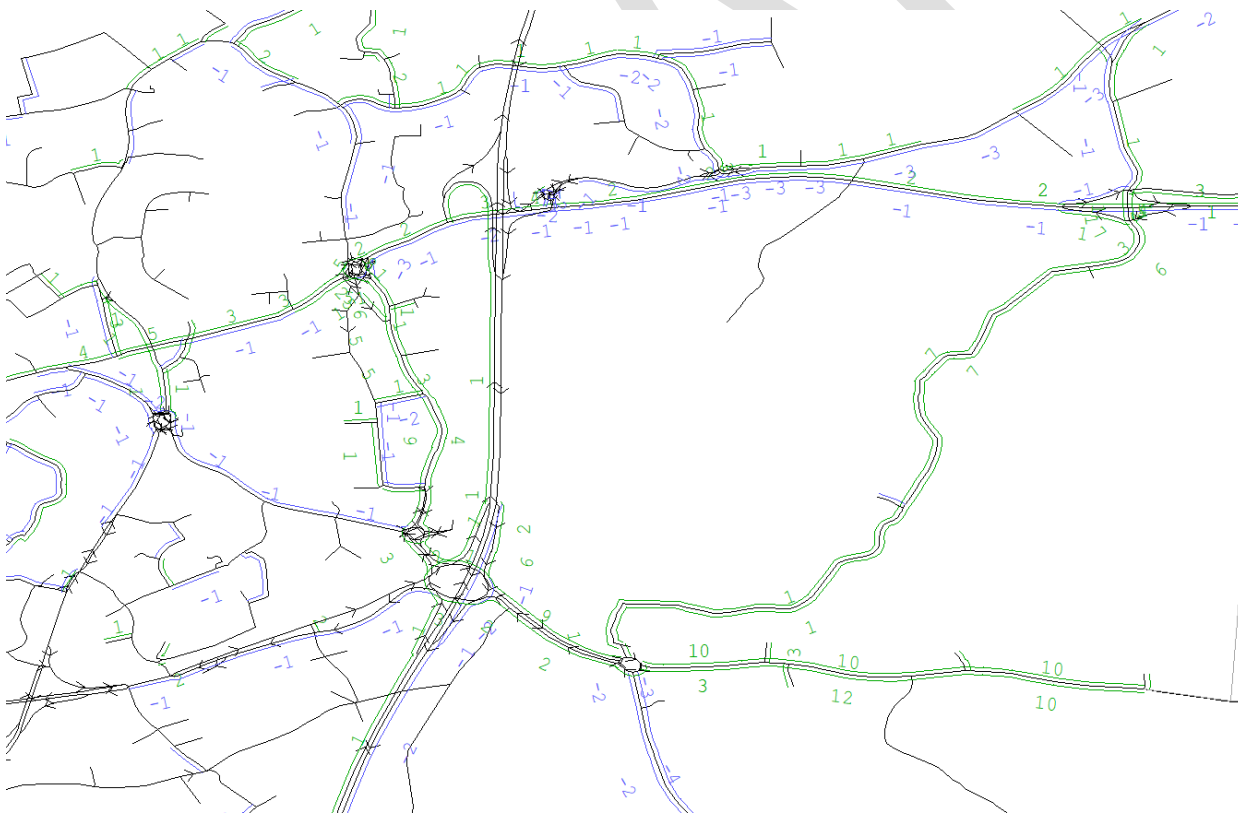




Figure 21 – DM vs DS Scenario 2, PM, Delay



Figure 22 – DM vs DS Scenario 2, PM, V/C



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### Scenario 3

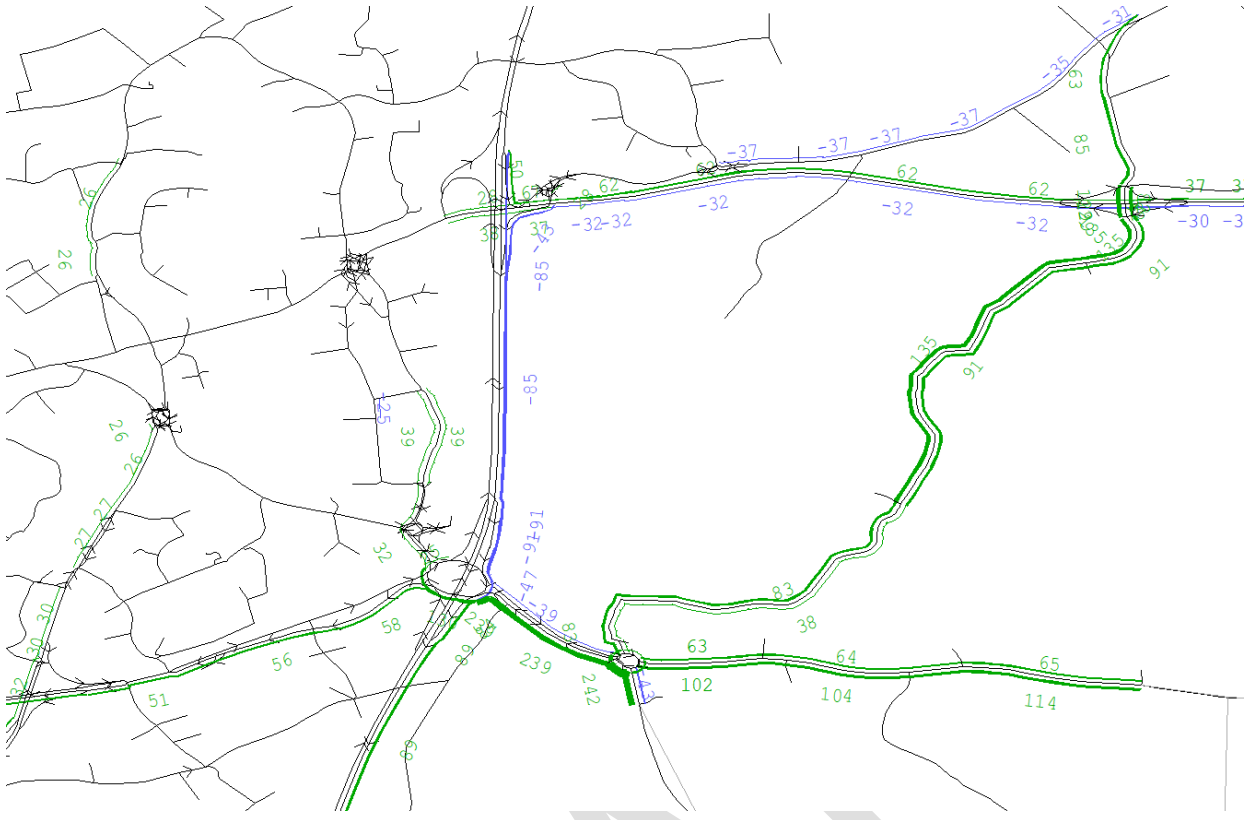
The AM and IP models for Scenario 3 show slight traffic flow changes along the M5, A30, A38, and A380. However, the PM models show greater traffic differences in comparison to the DM of up to 130 PCUs. Delay is not materially affected by this, with the model showing increases of less than two seconds.

The models show that at M5 Junction 29 and 30 there are increases in delay in the AM and PM, focused on the east side of the M5 at Junction 29 and the north side of the junction at Junction 30. Clyst St. Mary Roundabout shows some significant changes in delay, with an increase of approximately 50 seconds of delay on both the eastbound and westbound approaches in the AM model and 136 seconds of delay on the eastbound approach in the PM model.

Images of the demand flow, actual flow, delay and volume over capacity in the AM and PM models are shown below, in Figure 23 through to Figure 30.

DRAFT

**Figure 23 – DM vs DS Scenario 3, AM, Demand Flow**



**Figure 24 – DM vs DS Scenario 3, AM, Actual Flow**

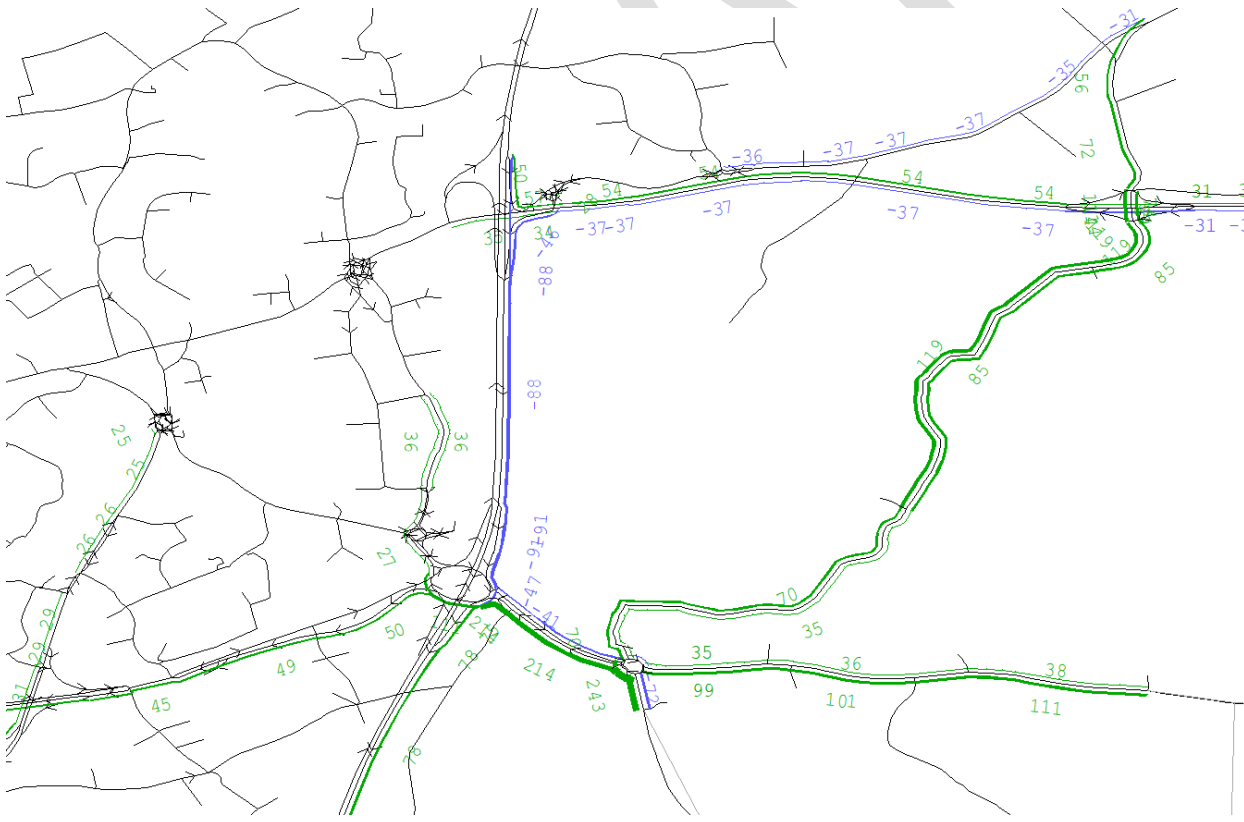




Figure 25 – DM vs DS Scenario 3, AM, Delay

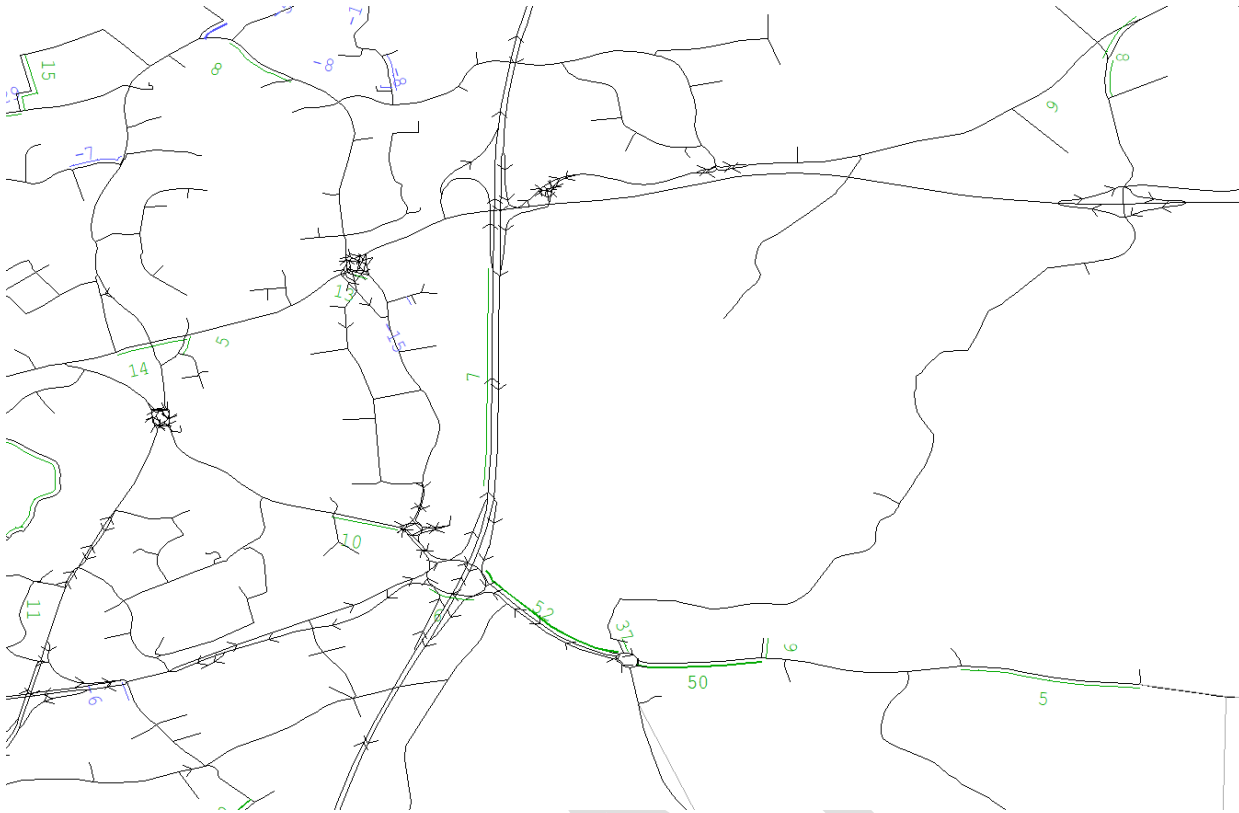
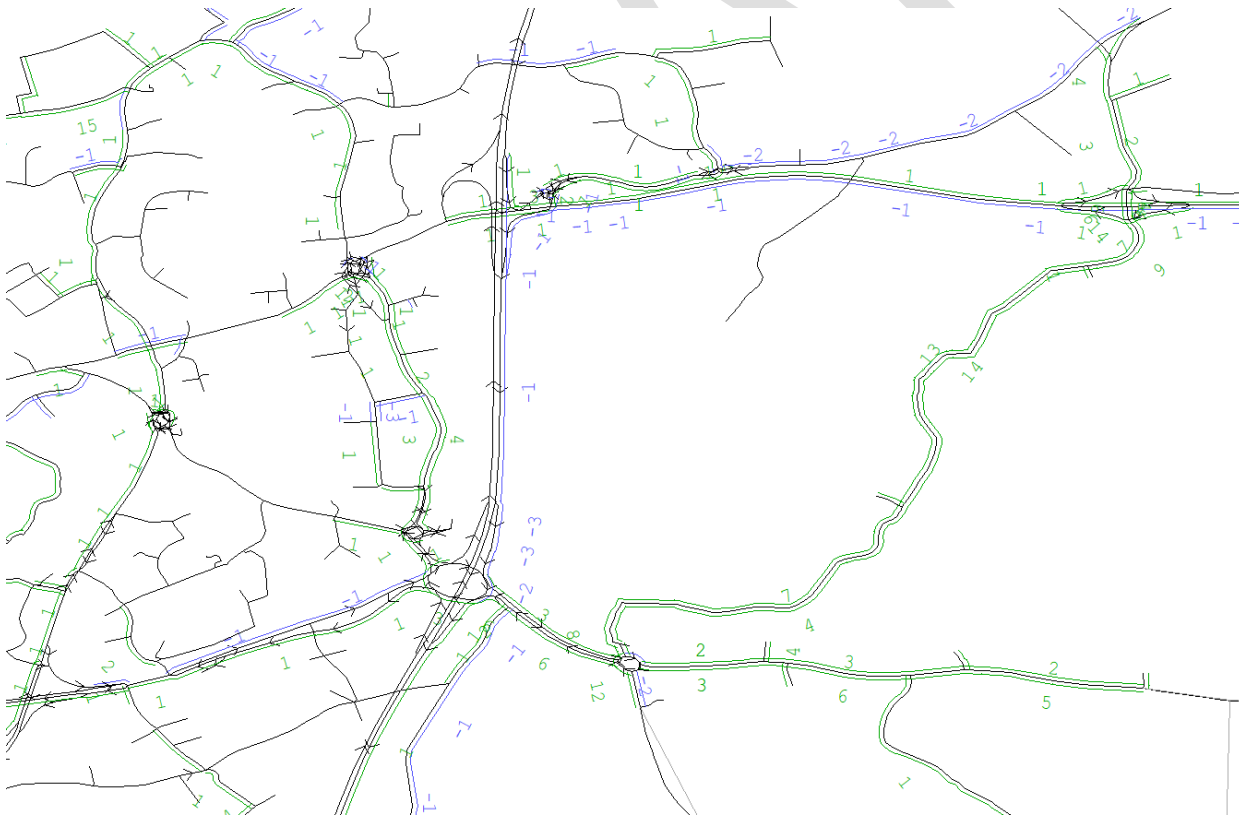
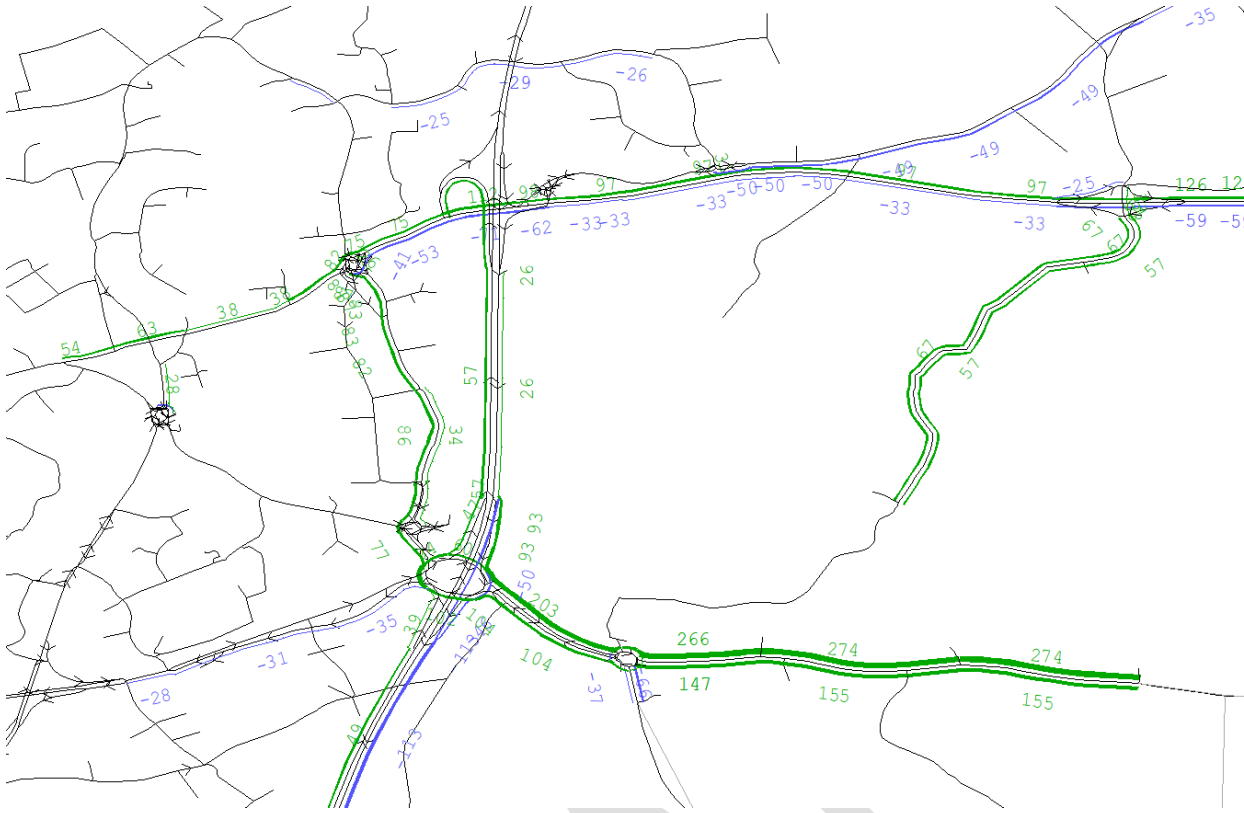


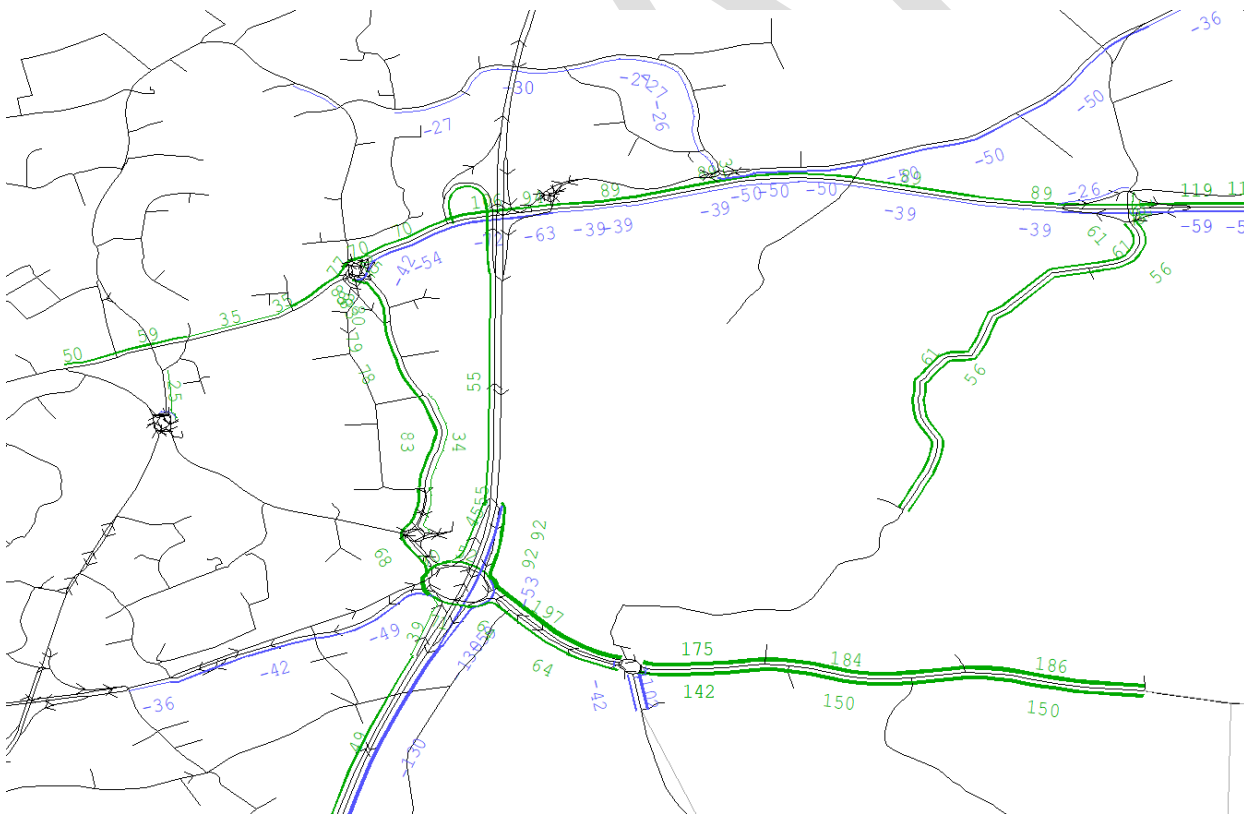
Figure 26 – DM vs DS Scenario 3, AM, V/C



**Figure 27 – DM vs DS Scenario 3, PM, Demand Flow**



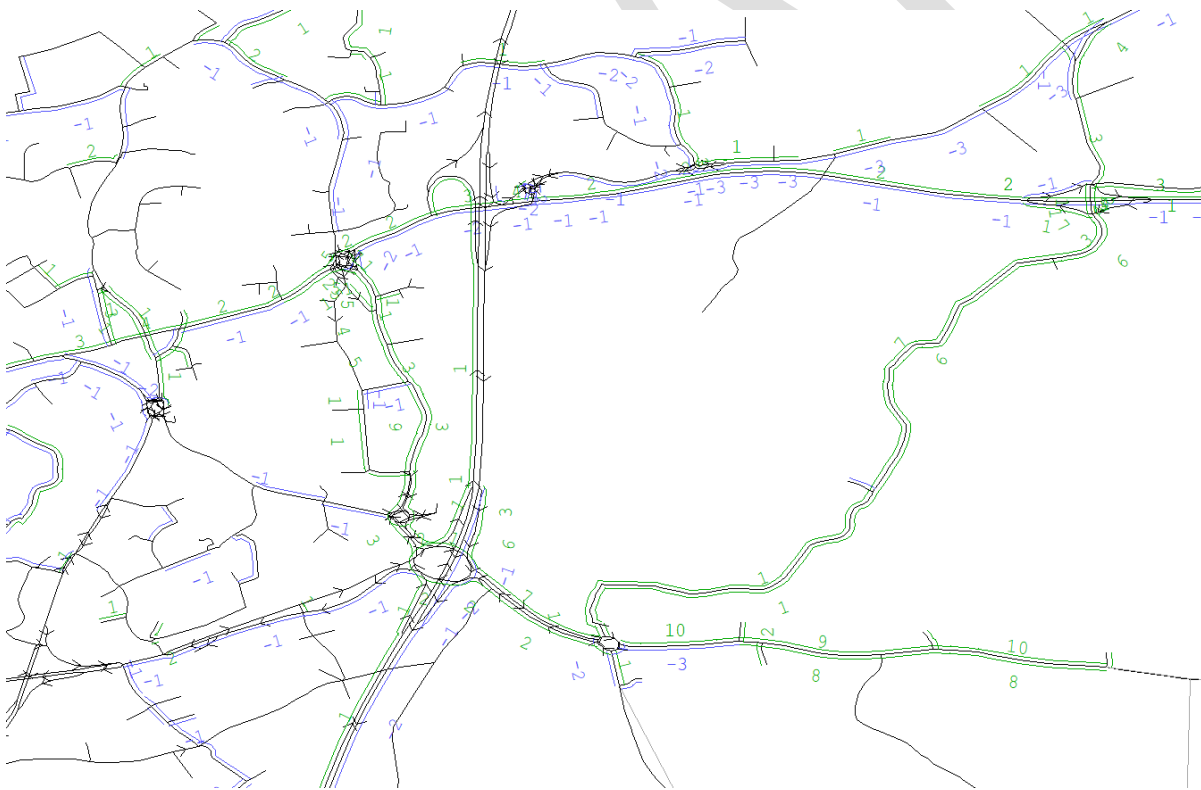
**Figure 28 – DM vs DS Scenario 3, PM, Actual Flow**



**Figure 29 – DM vs DS Scenario 3, PM, Delay**



**Figure 30 – DM vs DS Scenario 3, PM, V/C**



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## CONCLUSION

This technical note has detailed the background of the Local Plan Review commissioned by DCC alongside EDDC, looking at the proposed development scenarios, trip generation, forecasting process methodology, and a comparison of the resultant traffic models.

The model comparisons highlight that the additional traffic generated by the development has minimal effects on traffic flows and delays on the M5, A30, A3052, A38, and A380 around Exeter. However, Clyst St. Mary Roundabout is negatively affected in all three development scenarios and the road network to the east of Exeter is negatively affected in two out of three scenarios (Scenarios two and three).

The impacts of the three development scenarios on various key parts of the road network around Exeter have been compared to the DM models and summarised below in Table 7.

**Table 7 - Development Scenario Impacts Summary**

Area	Scenario 1	Scenario 2	Scenario 3
M5 J29 to J31 Mainline	Some increase in overall traffic flows, but minimal change in delay.	Minimal increases in overall traffic flows and delay.	Some increase in overall traffic flows, but minimal change in delay.
M5 J29	Increases in overall traffic flows across all peaks. Minimal delay increases in IP models, but small, tidal delay increases in AM and PM models.	Increases in overall traffic flows across all peaks. Minimal delay increases in IP models, but small, tidal increases in AM and PM models.	Increases in overall traffic flows across all peaks. Minimal delay increases in IP models, but small, tidal increases in AM and PM models.
M5 J30	Increases in overall traffic flows across all peaks, but minimal increases in delay.	Increases in overall traffic flows across all peaks. Minimal delay increases in IP models, but some delay increases in AM and PM models. Largely being affected by the tidal flow of traffic with larger increases westbound in the AM and eastbound in the PM.	Increases in overall traffic flows across all peaks. Minimal delay increases in IP models, but some delay increases in AM and PM models. Largely being affected by the tidal flow of traffic with larger increases westbound in the AM and eastbound in the PM.
M5 J31	Some increase in overall traffic flows, but minimal change in delay.	Some increase in overall traffic flows, but minimal change in delay.	Some increase in overall traffic flows, but minimal change in delay.



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**SUBJECT:** East Devon Local Plan Review Forecasting Technical Note

**PROJECT:** East Devon Local Plan Review **AUTHOR:** Henry Dixon

**CHECKED:** Tom Holian **APPROVED:** Matthew Turner

Area	Scenario 1	Scenario 2	Scenario 3
A30	Large increases in traffic to the east of Exeter but minimal increases in delay on the mainline. Minimal changes to the west of Exeter	Some increases in traffic to the east of Exeter but minimal increases in delay on the mainline. Minimal changes to the west of Exeter	Minimal changes in traffic flows and delay both to the east and west of Exeter.
A3052	Small increases in traffic flows in both directions of travel. Minimal changes in delay on the mainline, but minor levels of additional delay at junctions.	Large increases in traffic flows in both directions of travel. Minimal changes in delay on the mainline, but minor levels of additional delay at junctions.	Some increase in traffic flows in both directions of travel. Minimal changes in delay on the mainline, but minor levels of additional delay at junctions.
A38 & A380	Minimal changes in traffic flows and delay.	Minimal changes in traffic flows and delay.	Minimal changes in traffic flows and delay.
Clyst St. Mary Roundabout	Least impact of the scenarios. Minimal increases in traffic flows and delay westbound in the AM model and eastbound in the PM model. Slight additional turning delay at the roundabout itself in all models.	Second highest impact of the scenarios. Significant increases in delay westbound in the AM model and eastbound in the PM model. Moderately high levels of additional turning delay at the roundabout itself in all models.	Highest impact of the scenarios. Large increases in delay eastbound and westbound in the AM model and eastbound in the PM model. High levels of additional turning delay at the roundabout itself in all models.
East of Exeter	Minimal changes in traffic flows and delay.	Large increases in delay on the road network near Woodbury Salterton and at the A376 junction with Topsham Road.	Some increase in overall traffic flows, but minimal change in delay.



# East Devon New Community Utilities Due Diligence Report

*For CBRE*

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*Date:* 11 October 2022

*Doc ref:* 22462-HYD-XX-XX-RP-3000-P01

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Hydrock Consultants Limited has prepared this report in accordance with the instructions of the above named client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

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## 1. INTRODUCTION

Hydrock Consultants has been appointed by CBRE to provide utilities due diligence for the proposed development for East Devon New Community and investigate whether the existing nearby utility infrastructure could support the development. This document is provided to give an overview of existing utility services, high level capacity advice and new supply strategy advise, and advise if diversionary works might be required at the three option sites.

The scope of this assessment includes the following utility services:

- Electricity (Power and heat)
- Gas (Heat)
- Potable Water
- Telecommunications
- Foul Drainage

The report is split into Capacity and New Supplies, and Existing Utilities Infrastructure. The first section will assess the new connections for each of the utility services to serve the development. The second sections will cover the existing infrastructure and their impact on the three possible development sites, assessing the possible diversions or disconnections required.

This report is based upon utility information that has been provided by third parties and is a desktop assessment only. The presence of onsite infrastructure should be confirmed by the client's contractors, and safe working practices adhered to at all times. Please note that utility asset information is only valid for 3 months from the point of issue as the networks are constantly changing. Therefore, we recommend updating any enquiries once this time has elapsed.

## 2. EXECUTIVE SUMMARY

This report assesses the existing utilities infrastructure and both their constraints on, and opportunities for, the three proposed sites. Opportunities for new supplies has also been assessed.

The primary challenges expected with bringing forward a new community settlement in East Devon with respect to Utilities will be around capacity and infrastructure to support such a large new demand. Early engagement with the Utility providers will be key, as well as developing a detailed, thought-out and collaborative strategy that considers both the immediate needs of the site and the local community, and the need for futureproofed utility and energy infrastructure that will see the development through its years of construction, and in-use for years to come.

With the above in mind, it should be acknowledged that the opportunities and constraints of the three options within this report are only *marginally* impacted by geographical location. An example being the presence of extra-high voltage electricity infrastructure on 2 of the 3 sites and not the other, or proximity to existing clean water trunk mains possibly reducing the distance from the main Source of Water (SoW). This would make an option slightly more favourable, but would not exclude the other option from any opportunity, or present an unavoidable obstacle for that option. A suitable utility strategy would be employed at each and any of the 3 option sites and may face either equal challenges, or only marginal differences between them.

No infrastructure deemed to be major (or "showstopping") constraints to development has been identified on any three of the optional sites, however, Site 2 does contain a National high pressure gas main which is classed by the Health and Safety Executive as a "major accident hazard pipeline" and poses some considerable design limitations, particularly with regards to proposals for public residence.

It is highly likely all sites will require diversions and disconnections to facilitate any new development. Some areas have utility services that are more problematic to divert than others. Equally, some of the areas have services running in existing highways which may help limit the number of diversions required, depending on the proposed masterplans and variations to existing highways.

The three sites have been analysed based on the two categories; impact of existing utility infrastructure; and utility capacities/opportunities for connection to key infrastructure.

Assessment Category	Option 1	Option 2	Option 3
Utility capacities and opportunities for connection	4 – Good opportunity	4 – Good opportunity	2 – Limited opportunity
Foul Drainage capacities and opportunities for connection	2 - Limited opportunity	2 - Limited opportunity	2 - Limited opportunity
Existing Infrastructure Impact	3 – Medium impact	1 – Significant impact	3 – Medium impact
Overall (/15)	9	7	7

- **Option 1** is presenting as the highest scoring site from a Utilities perspective due to the relatively minimal impacts from existing major infrastructure, whilst also providing an opportunity to connect to WPD’s 132kV overhead for a new Bulk Supply Point to service the site with power.
- **Option 2** whilst presenting a good opportunity for power connection similar to Option 1, is lower scoring due to the presence of the National High Pressure gas main, which will restrict development and layout.
- **Option 3** has an extensive amount of existing infrastructure to consider for either diversions to free up developable space, or layout impacts with clearance zones, and also does not present as good an opportunity for electrical connection to the 132kV network.
- All three options are constrained for foul drainage capacities due to the rural locations not being served with extensive existing infrastructure, with none of the 3 options presenting any better opportunity than the other, and the strategy for providing a connection being the same.

### 3. CAPACITY & NEW SUPPLIES

As mentioned in the introduction, the geographical location only marginally affects the outcomes of a capacity assessment with a development of this scale. Each of the three site options would proceed with a new supply strategy that will trigger reinforcements and new major infrastructure installations, regardless of site location.

The main differentiator in this case is only proximity to existing Extra High-Voltage (EHV) networks, presenting an option for a bulk point of connection (POC) and land opportunities for new substation infrastructure directly beneath, and similarly, proximity to clean water trunk mains.

#### 3.1 Utility Capacity and New Supplies Options Summary

##### Option 1: [4 - good opportunity]

- Presence of 132kV electrical infrastructure onsite, opportunity for EHV connection for BSP;
- Close proximity to water trunk main, opportunity for large clean water supply connection.

##### Option 2: [4 - good opportunity]

- Presence of 132kV electrical infrastructure onsite, opportunity for EHV connection for BSP;
- Presence of water trunk main onsite, opportunity for large clean water supply connection.

##### Option 3: [2 - limited opportunity]

- Only 33kV and 11kV infrastructure onsite, limited opportunity for EHV connection for BSP;
- In proximity to water trunk main, but further distance required for large clean water supply connection, involving third party land crossing.

#### 3.2 Foul Drainage Capacity and New Connections Options Summary

##### Option 1, 2 and 3: [2 - limited opportunity]

- All three options are constrained for foul drainage capacities due to the rural locations not being served with extensive existing infrastructure, with none of the 3 options presenting any better opportunity than the other, and the strategy for providing a connection being the same.
- In the case of all of the sites, it is assumed that there will be one main point of discharge, either via a new treatment works specifically for the development, or connection to the Countess Wear works.
- Due to the topography of each of the sites, local pumping stations will be required at a number of locations to convey flows to the main discharge point.

#### 3.3 Electricity

As part of this report existing capacities on Western Power Distribution's (Now "National Grid Electricity Distribution" – referred to as NGED) grid infrastructure have been assessed using Long Term Development

Statements and heat maps in order to identify the level of constraint in the local electrical infrastructure, and to identify opportunities for securing capacity.

The site's full site load is to be determined once unit numbers and build types can be confirmed; however, what can be determined is that we expect the power load for this development to be significant, given the targets for decarbonisation of heat and transport (i.e. the energy strategy would likely incorporate some form of electric heating, either by Air Source Heat Pumps (ASHPs) or other technology, and the provision of EV charge points for futureproofing).

Based on current DNO guidance for power and heat loads, an early stage estimation for 8000no new residential dwellings with ASHPs and 1no EV Charge Point per home is expected to be in the region of **35mVA-50mVA** after diversity maximum demand (ADMD).

We can see that it is unlikely the full site can be served from the existing available capacity in the grid. Also given the known constraints in the area and other developments coming forward in the local area, it is assumed that there is no spare capacity in the region for a new development of this size. Therefore, both reinforcements and new dedicated bulk and primary infrastructure installations are anticipated, and a phased ramp up and use of capacity is recommended in line with the phasing of the development.

It is expected that the most likely feasible strategy would focus on providing a new Bulk Supply Point (BSP) for the site from a point of connection (POC) to NGED's existing 132kV infrastructure. From this BSP, a number of Primary substations would be installed throughout the development, serving the parcels of dwellings in their own HV grid systems. Timescales, costs, and technical viability of this strategy would need to be determined with NGED once an understanding of the likely loads as well as phasing is developed.

A supply for initial phases of the site could potentially be formed via POCs to existing local infrastructure, such as the 11kV, which would not require BSP or Primary substation infrastructure. This would also be dependent on capacity available at the time, and/or local HV reinforcements that could be undertaken on the 11kV networks in the short term.

There are two substations which provide the greatest opportunity of securing capacity from WPD's grid network for an initial phase of development:

1. Sowton BSP, c. 6km from site, has ~28.23MVA of capacity available which is a significant amount of power and could certainly serve the earlier phases of delivery.
2. Exeter Main BSP, c.10km to site, has ~20.70MVA of capacity available which is also a significant amount of power which could serve the earlier

*\*Note this is only a snapshot of the current situation and should be reviewed regularly for changes and updates. The data could also be out-of-date and does not replace engagement with an NGED engineer.*

On Option 1, there is also a 33kV/11kV Substation 'Hill Barton Primary' which may present an opportunity for early phase connections, however, capacity information on this substation is not currently available. This substation is located within Hill Barton Business Park, so it's expected to be at capacity serving the existing



industrial estate and any proposed connections to this would trigger some level of reinforcements. There may be an opportunity to expand this substation however, given that the land is already within NGED ownership.

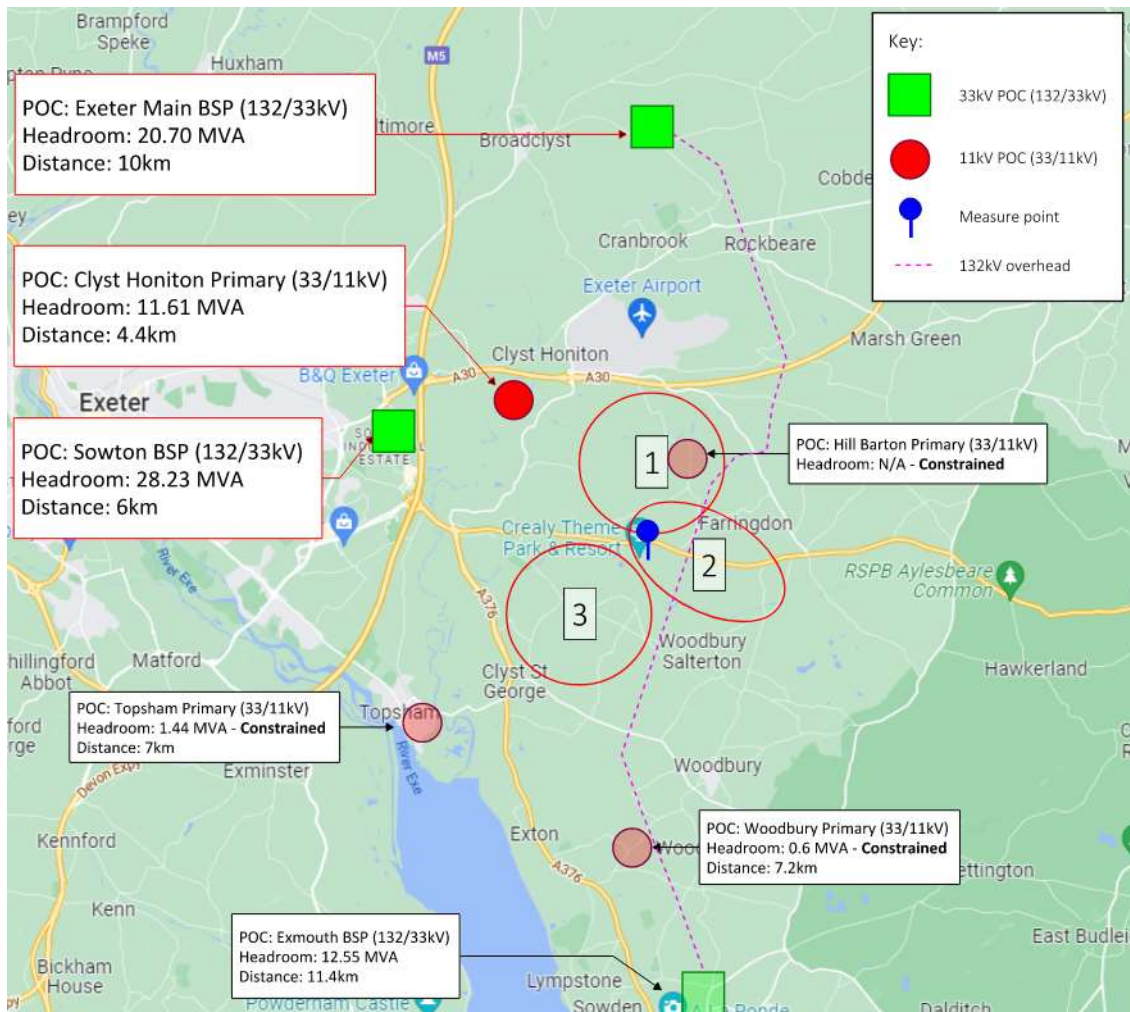


Figure 1 - NGED Regional Infrastructure overview

The key difference in supply solution between the three sites will be the cable route distances from the Point Of Connection (POC) to the preferred site location. The resulting infrastructure and possible reinforcements required to supply the quantum of build uses in the masterplan is anticipated to be much the same for each of the three sites.

Initial correspondence with NGED's local team in Exeter North determined that a site of this size would likely be dealt with by their Primary System Design team, but is to be confirmed based on confirmed site load. NGED is set up so that there are teams and appropriate engineers dealing with each voltage level. Until a confirmed site load can be provided, NGED will not engage in consultation, as they cannot determine which engineering level their assessment will require.

A NGED budget estimate will indicate the solution and provide budgetary costs, however, a formal application will need to be submitted for NGED to complete a detailed design in order to determine the exact supply solution for the site.

### *3.3.1 Load Assessment*

A very high-level estimation of power required for 8,000 homes is circa 35MVA. The 'Commercial' power requirement is to be confirmed on receipt of an area schedule and completion of a load assessment.

A load assessment will be completed at the next stage once a preferred site location has been agreed and the quantum of residential, commercial and other building uses is defined. From here, budget applications will be submitted to WPD in order to understand the estimated costs for obtaining a POC to their network for the calculated load demand.

### *3.3.2 Delivery Models*

#### *3.3.2.1 Independent Distribution Network Operators*

With regards to Utility Delivery Models, there are opportunities to engage with Independent Distribution Network Operators to provide an embedded network within WPD's (now "National Grid") wider supply area, and offer 'Asset value' discounts under the Competition in Connections (CiC) market that OFGEM commits to as a mechanism to benefit consumers through increased quality, or decreased prices, or both. This option is equally suitable for any site location.

#### *3.3.2.2 Microgrids*

Smart Microgrids also offer an alternative delivery model, benefitting both Net Zero Carbon targets with regards to ensuring renewable electricity generation is maximised and utilised on site within a smart controlled network with storage facilities, as well as lowering site electrical demand and thus slightly less reliance from the Grid or the DNO network, and being able to set energy prices for customers through the creation of an Energy Services Company (ESCO).

A microgrid is a local power network that uses distributed energy resources (DERS), such as solar PV, wind turbines, backup generators and battery storage systems, to manage local energy supply and demand.

For a residential microgrid, a single point of connection (POC) is provided by the DNO with all generation (including rooftop PV), supply and metering owned by, and connected directly in to, the microgrid with its associated digital infrastructure and smart controls system. It is the smart controls that enables forecasting to be carried out to optimise when to produce, consume, store or sell energy based on the flexibility of batteries, EVs, and site loads connected to the microgrid. It can also perform use-cases such as tariff management and metering and billing for the site. The only differentiator to each of these sites with regards to Micro-grids is where the POC will be to the DNO network.

To operate a microgrid, an energy services Company (ESCO) is normally formed to manage energy supply. The ESCO's business model can be formed on various bases such as non-profit, community share-holding or more commercial arrangements.

Microgrids connect both demand and generation on a shared network, leading to improved performance of technology, lower energy emissions and greater equity, with all able to benefit from the communal system.

### 3.4 Gas

As of 2025, gas boilers will be banned in the UK for newly built homes. Therefore, it is assumed gas will not be part of the site's heating strategy.

Should a gas connection be required for the site, a budget application can be submitted to Cadent to understand the POC to their network and associated costs to provide this connection.

### 3.5 Potable Water

South West Water (SWW) is the incumbent water provider for East Devon, who will need to undertake assessments on their network to be able to provide a strategy to move forward with.

It is expected that all three site options will require a significant level of reinforcements to the potable water network, potentially including offsite trunk main upgrades.

SWW's strategic team have been made aware of the proposals and have expressed their desire to engage with EDDC to ensure a solution can be offered and infrastructure upgrades undertaken in line with the proposed build programme.

Without undertaking a water load calculation (which requires information currently undeveloped, such as a detailed building schedule or schedule of accommodation), SWW will only be able to comment from a high level perspective on the current state of their networks with regards to new supply provision, trunk main capacity etc.

In order to understand the implications of obtaining a clean water supply from SWW in more detail, a pre-development enquiry will need to be submitted including the expected water loads. For a scheme of this size, it is common for the water utility company to undertake water modelling. This process will allow SWW to assess their network and determine a strategy for how they will supply the site, and where the POC will be, whilst still serving their existing customers without negative affects to their water supply.

Water modelling typically takes 12 months to complete (6 months for modelling and 6 months for detailed design). A further 6 months is estimated for SWW to install the proposed supply solution, although this could extend depending on the level of upgrades needed.

It is unlikely that a site of this size would achieve a POC to a distribution main, but rather to a trunk main with a pressure reduction valve to reduce the water pressure down to be suitable for distributing to residential customers.

There is a key Ductile Iron (DI) trunk main is shown to run along the A3052, which is in close proximity to all three site Options, and directly through Option 2. SWW records also show the presence of a trunk main network shown to run in London Road and Honiton Road, north west of Exeter Airport, which is north-west of Option 1.

Given these locations, each site is presented with an opportunity to connect to a trunk main, and the reinforcements required to accommodate the new development would not be differentiated between the sites. The cost of reinforcement works are covered through infrastructure charges. Infrastructure charges are a one off charge, charged by all water companies for first time connections. Each new connection that adds a demand to the water and sewerage network will incur these costs. These charges ensure the upkeep and maintenance of the network.

### 3.6 Foul Drainage

#### 3.6.1 Development Flows

An assessment has been made of the potential foul flows that could be delivered by the whole development in order to ascertain the level of impact on the existing sewerage network.

Flows have been calculated using the recommendations contained within the Water UK Sewerage Sector Guidance, Appendix C, Homes & Community Employment Density Guide 2015, Section 4, and the British Water Flows and Loads.

On the basis of the above, the following flow rates have been estimated;

180 ha of housing equating to circa 8,000 dwellings	Peak = 368 l/s	DWF = 61 l/s
10 ha of office employment use	Peak = 19 l/s	DWF = 6 l/s
38 ha of Class B2/B8 industrial use	Peak = 19 l/s	DWF = 6 l/s
15 ha of retail and leisure use	Peak = 7 l/s	DWF = 3 l/s
23 ha of education use	Peak = 9 l/s	DWF = 3 l/s

(NB: DWF = dry weather flow)

Therefore, the total Peak Flow is predicted to be 422 l/s and the total DWF 79 l/s.

It should be noted that this figure may be adjusted subject to discussions with South West Water who may have their own factors to apply to large scale developments.

#### 3.6.2 Sewerage Catchment Area

Due to the proximity of the three option sites, they all fall within the same catchment area for the existing sewerage network.

From an inspection of the South West Water sewer record plans, existing foul and combined drainage in and around the development areas all drain generally to the west and ultimately discharge to the Countess Wear treatment works near Topsham. This is done via a mixture of gravity sewers and pumped mains, both foul only and combined systems.

In general, the three site options are in relatively rural settings and therefore there are not a significant existing foul/combined drainage networks present. Those systems that are available are of small diameter (150/225mm) and therefore unsuitable to cope with the projected development flows.

Pipe sizes do increase further to the west however the network also passes through multiple pumping stations which affect the sizing.

#### 3.6.3 Connection/Discharge Points

At this stage it is anticipated that two opportunities exist for the disposal of foul drainage from the three site options as set out below. The following comments can be taken as applying to all three sites.



### Discharge to Local Watercourse via New Treatment Works

In view of the potential size of the development, it may be considered economic to provide a standalone treatment works which can discharge to the local watercourse network.

Site 1 has a tributary of the River Clyst running approximately through the centre of the site.

Site 2 benefits from the same tributary on its northern boundary as noted for Site 1, and from the Grindle Brook passing through the southern part of the site.

Site 3 has the Grindle Brook passing just within the northern boundary of the site area. An additional watercourse lies within the southern part of the site however it is likely to be too minor and possibly discontinuous to act as a receptor for treated water.

As a very high level guide, a new waste water treatment works may require an area of some 3 ha and have a potential overall cost of circa £10m. This option would also be subject to obtaining the necessary approvals from the Environment Agency.

### Connect to Existing South West Water Sewerage Network

As noted above, there are existing foul and combined sewers in and around the various site options. None at present will be of a sufficient size to cater for the proposed development flows.

Assuming that a point of connection is to be made to the existing network, it is evident that significant upgrades will be required to the system. Under normal charging arrangements, such upgrade works would be carried out by South West Water at their own cost under the assumption that they will recoup their costs through standard charges for new house connections etc. However, this only applies from the point on the existing network where the size of the sewer is 'like for like' for the pipe diameter needed to serve the development on its own. In this instance, and using the estimated flows set out in section 2.2.2 above, this would approximately equate to a 700mm diameter pipe.

From an inspection of the available sewer record plans, there is no point on the existing network where a connection could be made to a 700mm diameter pipe. On this basis the developer would be responsible for all costs relating to the upgrading of the existing network.

The alternative could be to requisition a new outfall sewer purely serving the development site to the treatment works at Countess Wear. Given their relative locations, Site 1 would have a slightly longer distance and therefore potential greater cost than Sites 2 and 3 however this is likely to be relatively insignificant as a whole.

Improvements are likely to be required to the existing Countess Wear treatment works given the scale of the proposed development. These works would be undertaken by South West Water as part of their 5 year Asset management Plan (AMP) for the relevant period.

## 3.7 Water and Sewerage Alternative Delivery models

### 3.7.1 NAV Operators

New appointments and variations ("NAVs") allow companies to offer water, sewerage or water and sewerage services to a specific geographic area instead of the existing incumbent company. As a result, similarly to the

electricity market, developers and large business customers can choose their supplier for these services and enjoy the benefits of this competitive market.

Although the main Source of Water (SoW) will ultimately come from a South West Water supply such as a reservoir or trunk main network, the ownership, operation, maintenance and wholesale of the water supply will then be under the chosen NAV. Therefore any issues with supply, quality of service, leaks, faults etc with the new water network will not be with South West Water to resolve, but the newly appointed provider.

The process involves the chosen NAV company applying to Ofwat with evidence of a supporting large or significant consumer who would support their case for becoming the monopoly wholesale provider, and undergoing a detailed assessment on their application, including a public consultation of no less than 28 calendar days.

The interactions usually required between applicants and existing appointees, the Consumer Council for Water (CCWater), the Drinking Water Inspectorate (DWI), the Environment Agency (EA) and the Market Operator Services Limited (MOSL) during the application process.

Any Limited company can become a NAV operator, although there are a few already operating across the UK, allowing them to give confidence of their service levels through a track record.

The current list of active companies is:

- Albion Water Limited
- Albion Eco Limited
- County Water Limited
- Icosa Water Services Limited
- Independent Water Networks Ltd
- Leep Networks (Water) Ltd
- Severn Trent Services (Water and Sewerage) Ltd
- Veolia Water Projects Ltd

### 3.8 Telecommunications

Procurement of telecoms services is a low-risk item and is relatively straightforward to complete. To procure new telecoms connections, the site will need to be registered with Openreach to allow a survey to be completed, and dialogue to open for Openreach to assess the sites requirements ahead of providing a service proposal.

Openreach are the UK largest telecommunications provider and have the greatest infrastructure across the country. The key benefit Openreach offer is other service providers can use Openreach's infrastructure to service the site, therefore, it is recommended to engage with Openreach for new connections at this early stage.

To procure new telecoms connections, the site will need to be registered with Openreach to allow a survey to be completed and dialogue to open for Openreach to assess the sites requirements.

At a later stage, additional and alternative providers (e.g. Virgin Media) can be engaged to ensure a variety of service providers are able to service the site.

Typically, BT Openreach, Virgin Media (who own and manage most of the existing telecoms infrastructure around the UK) plus an increasing number of independent companies, will install fibre infrastructure to new developments at heavy discounts based on projected revenue.

Openreach offer free issue fibre to the premise (FTTP) connections for all new build residential schemes with over 20 units. This includes free issue cabling and ducting. Fibre to the Premise enables superfast broadband to be delivered directly into a property. Fibre is run from the local exchange, terminating in a cabinet. From here, fibre lines connect each property to the cabinet to provide superfast speeds.

For purely commercial developments Openreach typically require a contribution to the cost of installing fibre to the premise (FTTP). This is a bespoke cost to each development which Openreach will review on receipt of confirmed site plans and registration of the site. Fibre to the Premise enables superfast broadband to be delivered directly into a property. Fibre is run from the local exchange, terminating in a cabinet. From here, fibre lines connect the building to the cabinet to provide superfast speeds.

For sites that contain a mix of residential and commercial units, Openreach will provide FTTP at no cost to the developer where there are 30 or more units.

It is also recommended to install a secondary comms supplier in order to provide resilience to the site and more options to the end occupants of the building in terms of the internet service providers available to them. There are a number of different companies that can be approached.

The traditional model for servicing a site, and buildings, with telecoms is for the service provider (e.g., Openreach) to run a fibre to a local cabinet (FTTC) and then run copper cables from the cabinet to serve individual units. This generally achieves between 67MBps to 100MBps. The step up from FTTC is fibre to the premise (FTTP), replacing the previous copper cable from the cabinet with a fibre connection. FTTP can provide speeds of up to 300MBps. FTTP can also provide speeds of up to 950MBps with the Jurassic fibre offer.

Hyperfast Broadband providers can offer speeds of up to 1GBps and guarantee connections for customers from day 1. These types of providers are, more so than Openreach, enabling a futureproofed digital network within which new communities can be serviced with data connections suitable for a fast-moving data-focused communications landscape.

All three site options will be equally suitable for competitively tendered fibre offerings given the number of new residential and business customers that will be connecting to the networks.

### 3.8.1 Telephone Exchanges

Site 1: Openreach's local exchange, Sowton (WWSOWT) is located c. 7km south west of the site and is fibre enabled.

Site 2: Openreach's local exchange, Woodbury (WWWOOD) is located c. 4.5km south of the site but does not currently offer fibre to the cabinet (FTTC) or fibre to the premises (FTTP).

Site 3: Openreach's local exchange, Topsham (WWTOPS) is located c. 3.5km south west of the site and is fibre enabled.

## 4. EXISTING UTILITY INFRASTRUCTURE

This section aims to provide an overview of existing utilities infrastructure which may pose constraints predominantly with regards to spatial limitations (ie. easements and safety clearance distances to be adhered to within layout designs), thus feeding in to the scoring of the sites' feasibilities with regards to the extent of the impacts or limitations posed and/or expected financial impact of reducing or removing such constraints through infrastructure diversions.

Option 2 has the most significant constraints, including a National Grid high pressure (HP) pipeline which is considered by the HSE as a "major accident hazard pipeline" or "hazardous installation".

Option 2 is therefore considered to be the least viable for development of the 3 sites, although not impossible to proceed with.

It is important to note that while existing onsite infrastructure poses some design considerations, in general it also presents opportunities for connections and upgrades to provide for a new town. With a Utility requirement this large, a lack of onsite infrastructure would be, in this sense, more problematic than an abundance.

### 4.1 Existing Utility Infrastructure Options Summary

#### Option 1: [3 - Medium Impact]

- Option 1 has a large amount of electrical infrastructure and relatively small amounts of other utilities infrastructure.
- A significant number of 11kV & 33kV cabling routes are present throughout the site. As most of the assets do not follow existing highways, it is assumed they are distributed via overhead lines. Therefore, diversions would likely be required to clear them from site or incorporate them into the masterplan with clearance strips.
- Hill Barton Primary Substation exists within the Hill Barton Business Park/industrial estate.
- A service corridor containing intermediate pressure gas, telecoms and a water main runs through the western half of the area. These mostly run in or near to existing highways and it should be possible to avoid any diversions. However, asset record information is indicative only and although aims to be as accurate as possible, the exact positioning can sometimes differ when onsite investigations are completed i.e. ground penetrating radar surveys or trial holes. Therefore it may transpire that these routes don't fully run in the highways and may required diversions if they cannot be accommodated with the masterplan.
- The intermediate gas main could pose to be a key constraint depending on what portion is outside of the highways due to the high costs and long timescales to divert.
- Some foul drainage is present around the perimeter of this area.

#### Option 2: [1 - Significant Impact]

- Option 2 has the most significant constraints (HP and IP gas mains and EHV cabling) which will need to be designed around due to the cost and time implications of diverting them.
- A high pressure gas main is located in the south east corner of the site. There are limitations to what can and can't be built within the proximity of a HP gas main and the HSE will be a statutory



consultee for any development proposals within the vicinity of this network as it is deemed a hazardous installation.

- EHV (132kV) overhead cabling routes through the site, which is a spatial constraint. Asset specific clearance distances must be kept between the cables and any permanent structure, and between cables and the ground. Additionally, a 30m zone must be kept free around the base of each tower for access for maintenance.
- Figure 6 shows the areas covered by the inner, middle and outer consultation zones, determined by the HSE. The HSE has a land use methodology that determines whether they would advise against or not advise against development in these areas depending on the vulnerability of sensitivity of proposed building types.
- An intermediate gas main routes through various areas of this site. This could be a spatial design constraint depending on how much runs within highways and what portions impact the masterplan. An easement and no-build strip would need to be considered within any site layout designs.
- A wider network of 33kV and 11kV cables are located in multiple locations across the area, which will likely require diversions.
- Foul water and potable water mains are present across this area. The potable water mains look to run within existing highways.
- Comms is present in this area and it's anticipated these will be within existing highways and therefore no diversions will be required.

### Option 3: [3 - Medium Impact]

- Option 3 has a higher density of services than Option 1 however, a number of these look to run within existing highways and may in turn require a fewer number of diversions.
- Various 11kV & 33kV cabling route through the site. As most of the assets do not follow existing highways, it is assumed they are distributed via overhead lines. Therefore, diversions would likely be required to clear them from site or incorporate them into the masterplan.
- Multiple water mains are present with a primary route running through the centre of the site. The water mains generally look to be within existing highways which could limit the number of diversions required.
- Foul water drainage routes through the northern edge of this area.

## 4.2 Option 1

### 4.2.1 Electricity - WPD

WPD are the incumbent electricity distribution network operator for this service area.

#### 4.2.1.1 Existing infrastructure

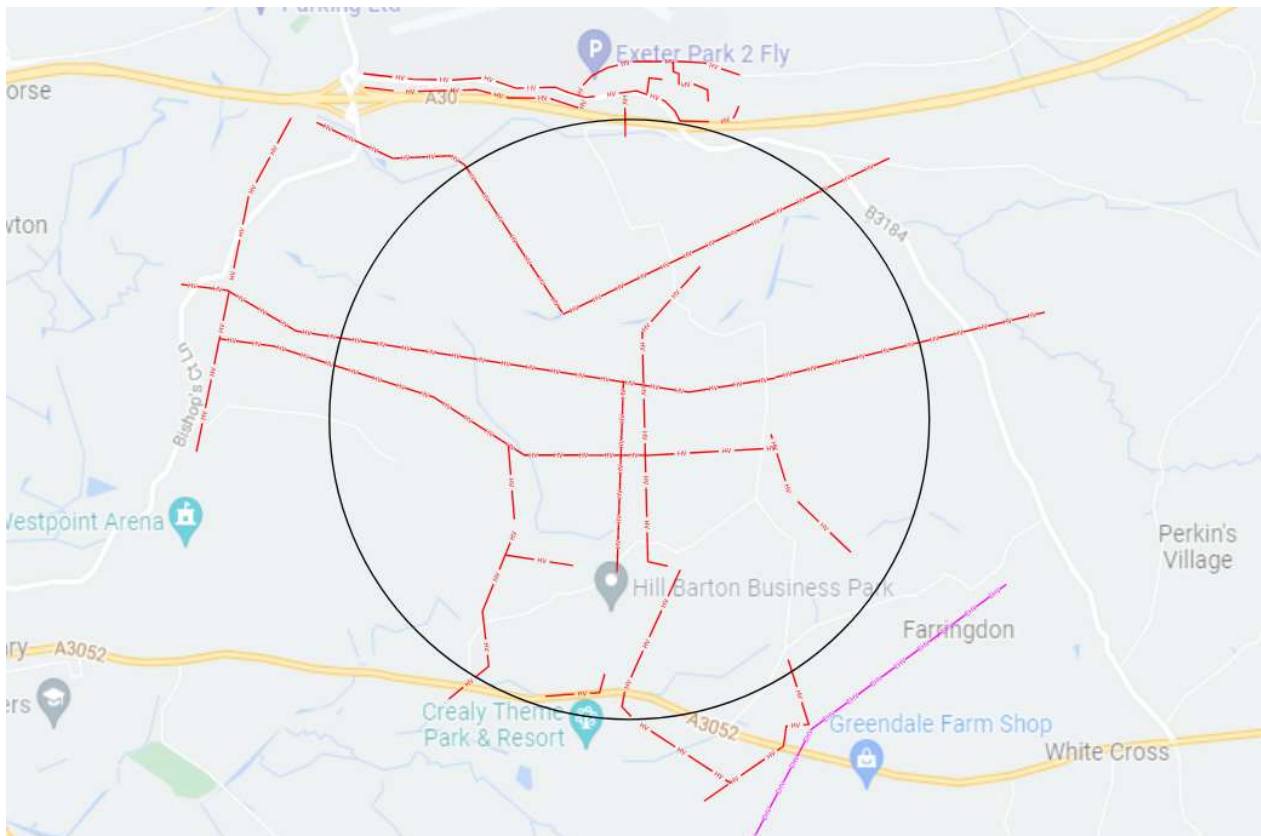


Figure 2 - Overview of key WPD infrastructure within the site vicinity

Records received from WPD show:

- Various 11kV and 33kV cabling routes throughout Site 1;
- LV routes and supply cables also present within the site although too numerous to show on the overview drawing in Figure 1.

#### 4.2.1.2 Conflict assessment

Several 11kV and 33kV overhead cable routes are located throughout Site 1. It is anticipated diversions will be required for all of the overhead services to clear the site ready for the new development. In order to minimise diversion costs, grounding the cables to run within new highways through the site may be preferable than diverting around the site entirely.

Some assets look to serve existing substations/ buildings in the area. If these services are to be retained, diversions may be required to bury the cabling in suitable service corridors as to not impose with the new masterplan.

Two of the cabling routes looks to be strategic running across the site as part of a wider circuit, and do not necessarily serve any existing buildings. An option could be explored to divert the entire section of cabling around the site to best clear the site of existing infrastructure. However, this will likely impose higher diversion costs than incorporating the cable routes within new highways installed as part of the new masterplan. Alternatively, the cable routes could be incorporated into the masterplan, with the necessary clearance distances adhered to, in order to avoid diversion costs if required.

#### 4.2.2 Gas - Cadent

Cadent Gas are the incumbent gas distribution operator for this service area.

##### 4.2.2.1 Existing infrastructure

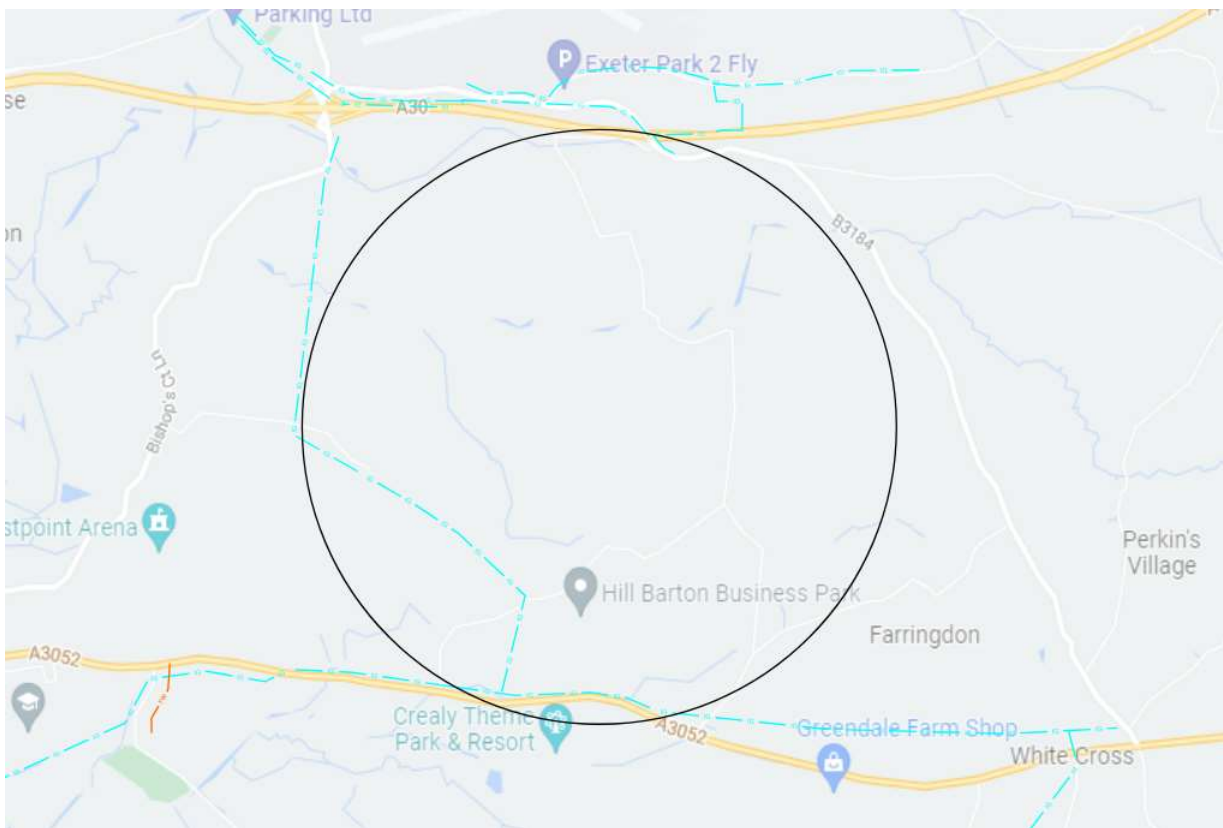


Figure 3 - Overview of key Cadent infrastructure within the site vicinity

Records received from Cadent show:

- An Intermediate Pressure (IP) gas main routes through the south-west corner of Site 1;
- There is a network of low pressure (LP) pipes within the area, which are not shown in Figure 2 drawing but should be noted as the masterplan develops.

#### 4.2.2.2 Conflict assessment

The Cadent IP gas main routes through the site and looks to run within or alongside the existing highways. This main may be a key constraint depending on what portion of the main is within the highways. It is possible to divert sections that interact with the proposed masterplan.

Diverting an IP gas main is an expensive and long process and they are not commonly diverted due to these implications. Cadent can be engaged to confirm the implications of diverting the asset via a budget diversion application.

If the IP main is to remain, it will have associated easements and wayleaves. An indicative easement is estimated to be between 4-8m either side of the main, however, the exact easement for this specific asset can be confirmed by Cadent.

#### 4.2.3 Water - South West Water

SWW are the incumbent gas distribution operator for this service area.

##### 4.2.3.1 Existing infrastructure

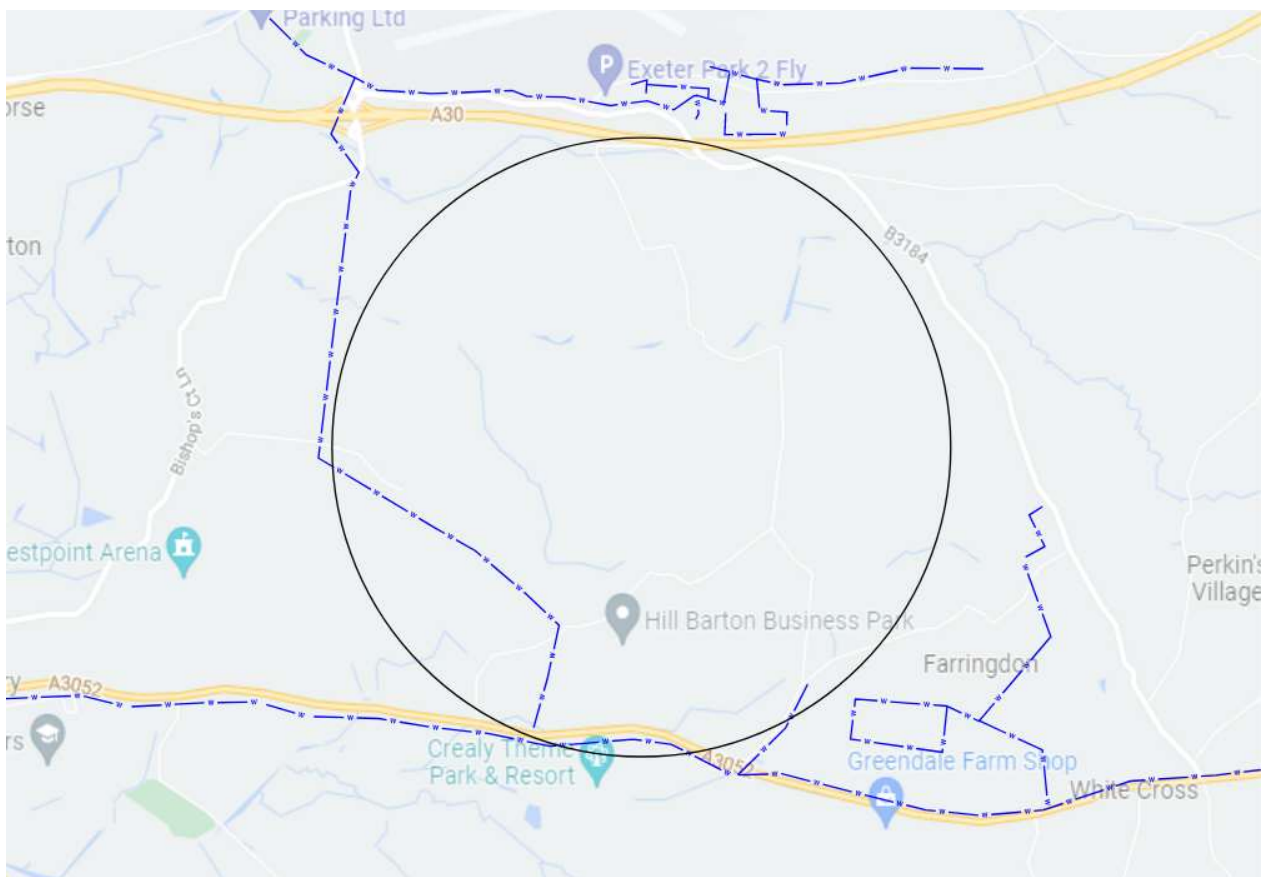


Figure 4 - Overview of key SWW apparatus within the site vicinity

Records received from SWW show:

- A water main routes through the south-west corner of Site 1.



- There will be other service mains within the area, which are not shown in Figure 3 drawing but should be noted as the masterplan develops.

#### 4.2.3.2 Conflict assessment

The SWW water main routes through the site and looks to run within or alongside the existing highways. A diversion may be avoided if the main routes entirely within the highways. However, if a portion runs outside of the highways and interacts with the site, these sections could be diverted in order to clear the site ready for development.

#### 4.2.4 Telecommunications – Openreach

Openreach manage and install the infrastructure for telecommunication services. BT are the branch of the company that provides telecoms service throughout the UK.

##### 4.2.4.1 Existing infrastructure

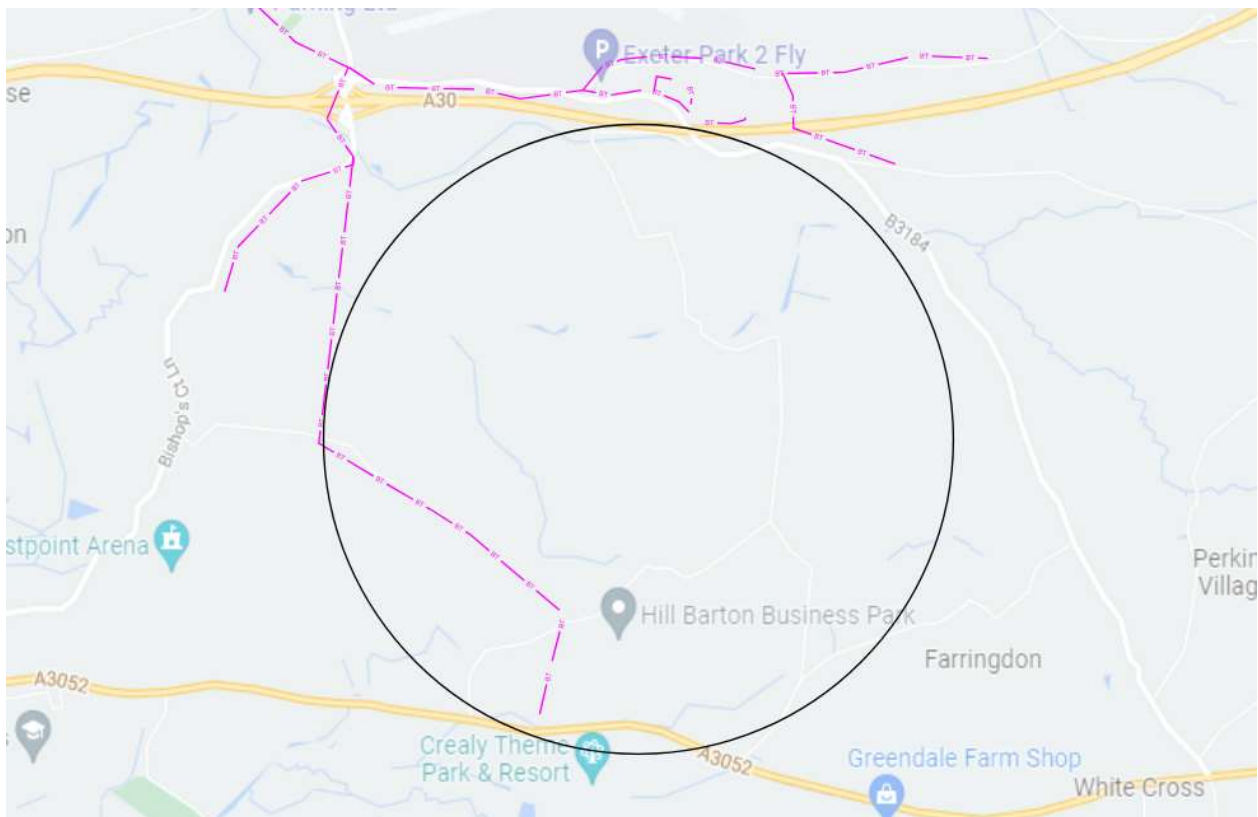


Figure 5 - Overview of key Openreach apparatus within the site vicinity

Records received from Openreach show:

- Openreach telecoms infrastructure runs through the south-west corner of Site 1.

##### 4.2.4.2 Conflict Assessment

The Openreach telecoms infrastructure routes through the site but it is anticipated this will route within existing highways. Therefore, a diversion is not anticipated.

Should a diversion be required, Openreach in the first instance will need to conduct a site survey to establish the extent of any work required and which apparatus will need to be diverted. This survey will be chargeable.

If a new site access road or any changes in levels are proposed over the route of existing services then the cables must retain the minimum level of cover required by the NJUG guidelines: 350mm in the footway and 600mm in the carriageway.

## 4.3 Option 2

### 4.3.1 Electricity - WPD

WPD are the incumbent electricity distribution network operator for this service area.

#### 4.3.1.1 Existing infrastructure

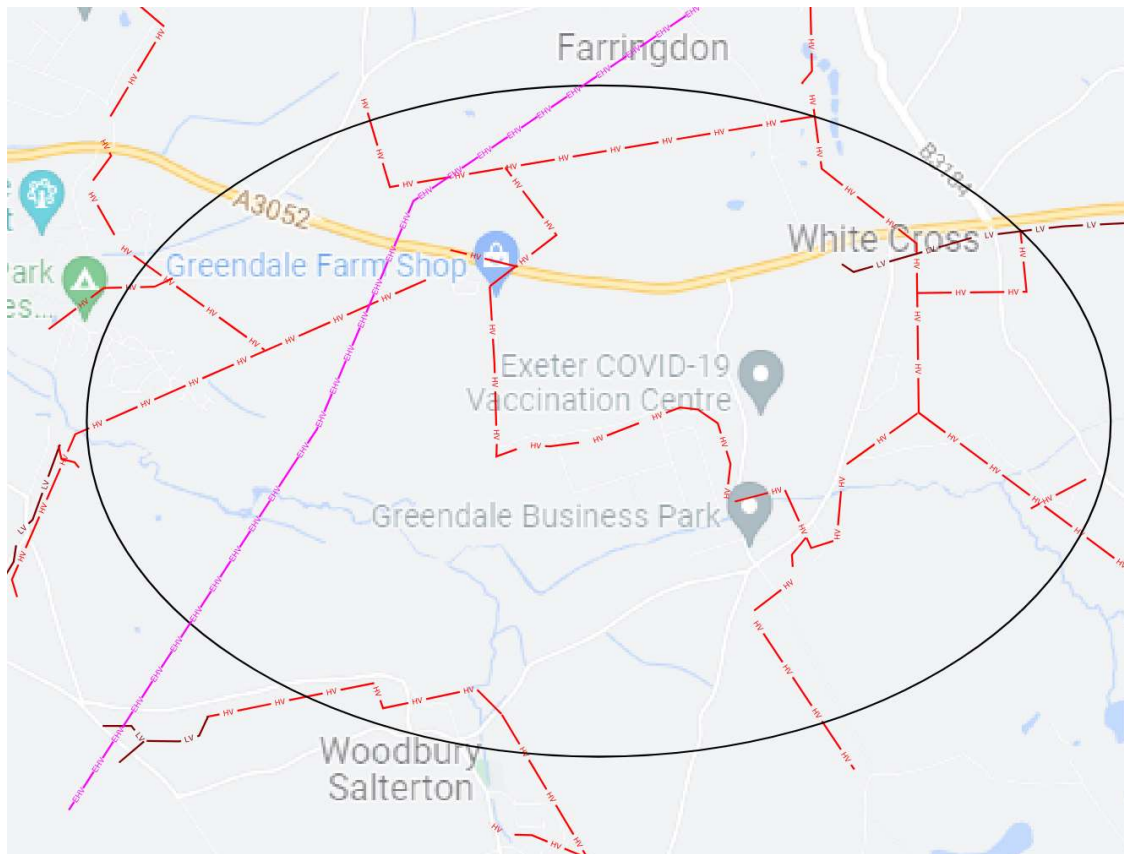


Figure 6 - Overview of key WPD infrastructure within the site vicinity

Records received from WPD show:

- 132kV overhead cabling routes through Site 2 from north to south;
- Various 11kV and 33kV cabling routes throughout Site 2.

#### 4.3.1.2 Conflict assessment

The key constraint in terms of electrical infrastructure for Site 2 is the 132kV overhead cable route (illustrated as pink line). 132kV assets are expensive and timely to divert and although a diversion could be explored, it would be recommended this asset is designed into the masterplan.

Leaving the 132kV assets in place presents a number of implications. WPD will need to complete a 'swing and sag' assessment of the overhead cables to determine the clearance distances which must be maintained during development. The clearance distances include distances between cables and the ground (e.g. 7.3m), in addition to distance between cables and any object/ building on which a person may stand from (e.g. 5.3m). The distances are site specific and depend on things such as the length of cable, the natural sag of the cables and

local weather conditions. This requires the scheme architect to liaise with WPD's plant protection team to work through the 'swing and sag' assessment to work out clearances, which the architect can then incorporate into their parameters plan. Furthermore, a circular zone (e.g. 30m) will be required at the base of each tower for maintenance. Landscaping in the areas beneath the overhead cabling will need to be considered with only low growing species of trees/ shrubs being permitted to avoid risk of contact with the cables.

Various 11kV and 33kV overhead cabling routes throughout Site 2. It is anticipated diversions will be required for all of the overhead services to clear the site ready for the new development. In order to minimise diversion costs, grounding the cables to run within highways through the site may be preferable than diverting around the site entirely.

Some of these 11kV/ 33kV assets look to serve existing substations/ buildings in the area. If these services are to be retained, diversions may be required to bury the cabling in suitable service corridors as to not impose with the new masterplan.



### 4.3.2 Gas - Cadent

Cadent are the incumbent gas distribution operator for this service area.

#### 4.3.2.1 Existing infrastructure

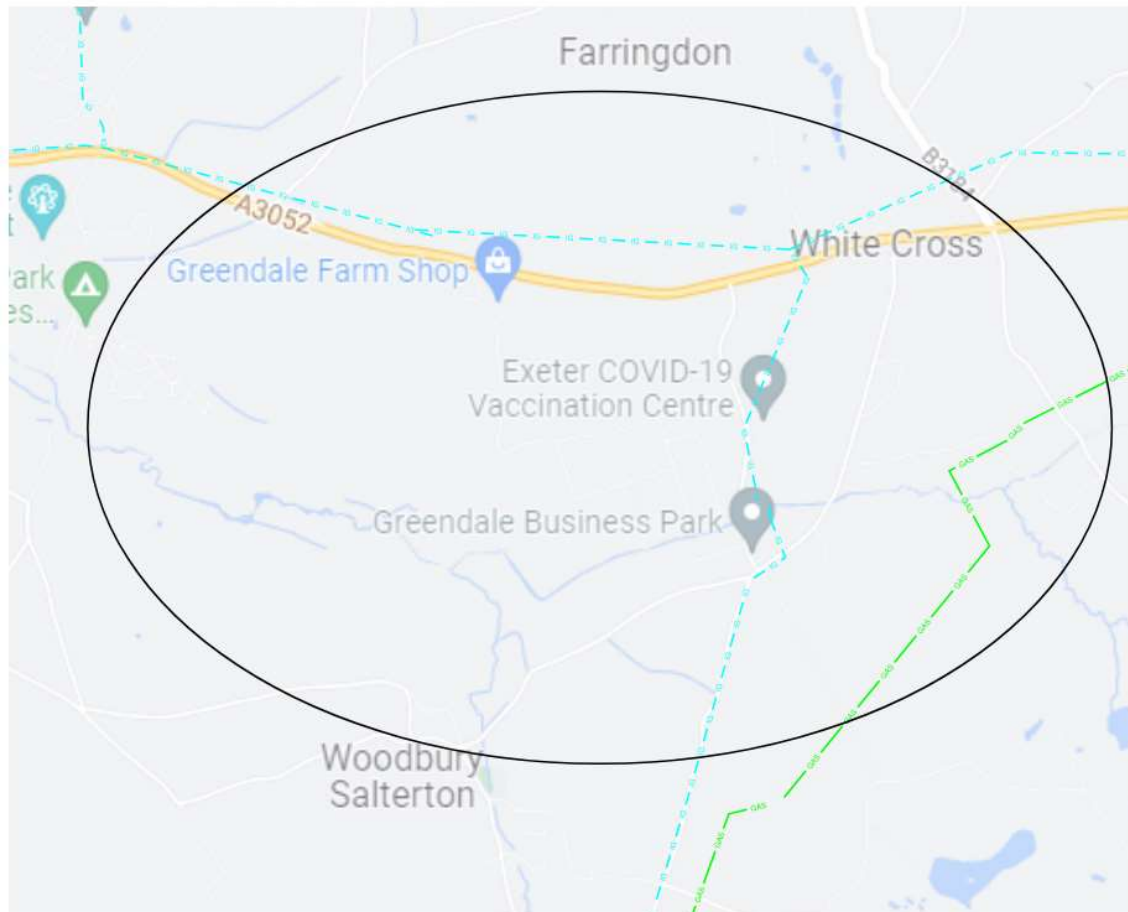


Figure 7 - Overview of key Cadent infrastructure within the site vicinity

Records received from Cadent show:

- High pressure (HP) and Intermediate Pressure (IP) gas mains route throughout Site 2.

#### 4.3.2.2 Conflict assessment

The HP gas main route, which is classed by the Health and Safety Executive as a “major accident hazard pipeline presents a major constraint on the site and the design, particularly with regards to proposals for public residence.

HP gas mains have certain safety zones, with the relevant radius depending on a number of factors (gas pressure, pipe material/wall thickness, installation context), of which the governmental Health and Safety Executive (HSE) may advise the relevant planning authority not to grant planning permission under certain developmental circumstances, based on grounds of public safety. The HSE's is treated as a Statutory Consultee

in the Planning process and their feedback is compulsory to each site that contains a 'hazardous installation', and cannot be contested.

The risks of building within proximity of a 'hazardous installation' can be assessed by consulting with the HSE, and by using their land use planning methodology; PADHI guidelines (Planning Advice for Development near Hazardous Installations); which provides design and safety advice on what types of development are acceptable within each of the 'Consultation (safety) Zones.'

The PADHI Consultation Zones (CZ) are 3no distinctive areas (noted as the 'inner', 'middle' and 'outer' zones,) that are defined and assessed by the impact of an accident on the public in its vicinity. The Inner Zone (IZ) is the area of land immediately surrounding the pipeline. This zone has the highest risk to public safety due to its proximity to the apparatus. The Middle Zone (MZ) is the area of land surrounding both sides of the IZ and poses a medium risk to public safety. The Outer Zone (OZ) is a specified distance of land located thereafter; posing a lesser risk. Each pipeline, and each CZ, has its own safety distance. Some smaller diameter pipes may incur a CZ that is the same for the IZ, MZ and OZ.

Figure 6 provides an illustration of the consultation zones at Site 2 assessed by HSE.

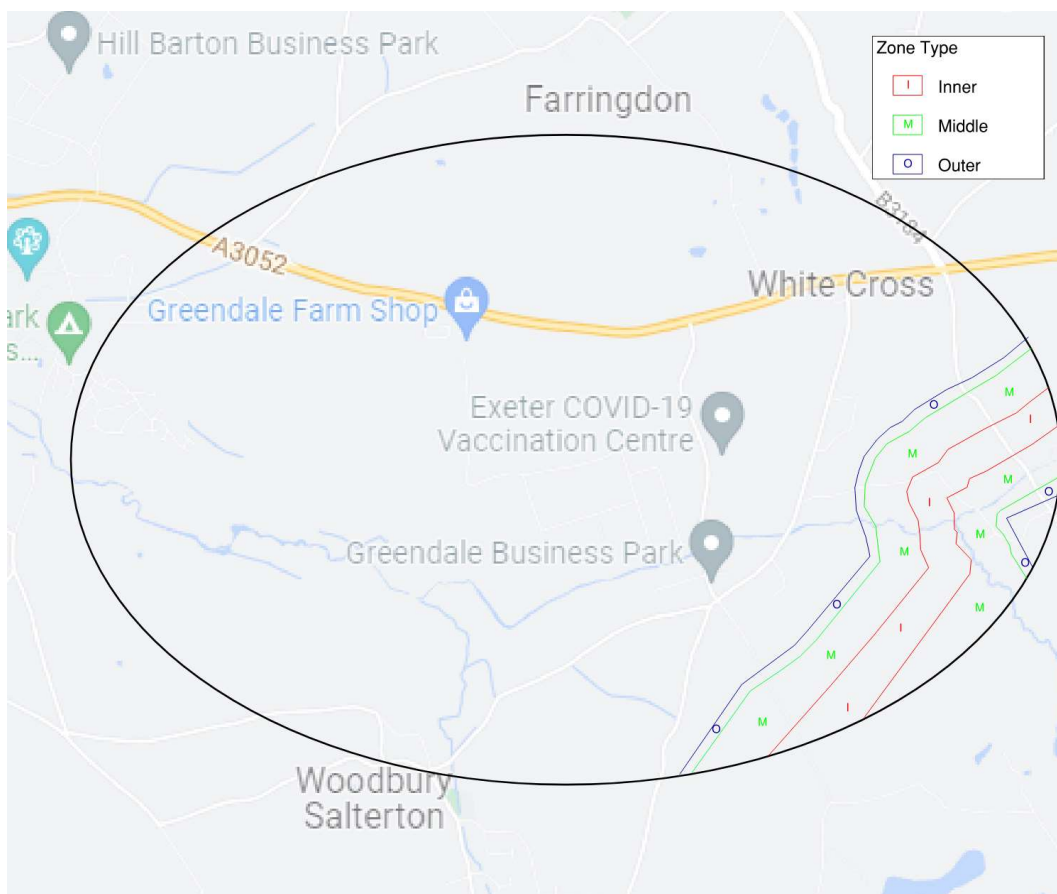


Figure 8 – Illustration of HSE gas consultation zones

In determining what can be built within each zone, the HSE have established different sensitivity levels for different development types. These sensitivity levels are shown in Table 1, and are ranked between 1-4 (4 being the most sensitive). For example, a 24hr care home for the elderly is rated a level 4 sensitivity due to the practicality of physically being able to safely remove all occupants from the building within a timely manner. A

sensitivity level 4 build type would not therefore be permitted within the Inner Zone of a hazardous installation due to the obvious safety risks, and would be 'advised against' by the HSE. In contrast, a car park with 10no spaces would pose less of a risk to public safety if built within an IZ and would therefore be rated as a less sensitive build type (type 1). A sensitivity level 1 build would achieve a 'don't advise against' HSE rating for the IZ and would be approved for planning.

Level of sensitivity	Development in Inner Zone	Development in Middle Zone	Development in Outer Zone
1	DAA	DAA	DAA
2	AA	DAA	DAA
3	AA	AA	DAA
4	AA	AA	AA

Table 1 - HSE CZ Decision Matrix  
 DAA = Don't advise against (permissible)  
 AA = Advise against development (not permitted)

Examples of which forms of development lie within which Sensitivity Level are given in Table 2 below. Please note that this list is not exhaustive, and more information, including special cases and exclusions, can be found within the HSE PADHI guidelines.

Development	Detail	Sensitivity Level
<b>Residential</b>	<b>3- 30 dwelling units and at a density of no more than 40 per hectare</b>	2
	<2 dwellings	1
	>30 dwellings	3
	Density of 40 dwellings (and more) per hectare	3
	Temporary accommodation (hotels, hostels, camping) of more than 100 beds or 33 caravans/pitches	3
	Institutional accommodation (hospitals, convalescent homes, nursing homes, sheltered housing)	3
<b>Employment (building level)</b>	Less than 100 occupants and less than 3 storeys	1
	100 or more occupants or 3 or more storeys	2
<b>Commercial</b>	Total floor space 250m <sup>2</sup> – 5000m <sup>2</sup> (less than 250m <sup>2</sup> is level 1)	2
	5000m <sup>2</sup> plus total floor space	3
<b>Education</b>	Schools (exc. Nurseries, which are a level 4)	3
<b>Car park, estate and access roads, park and ride</b>	With no associated facilities	1

Table 2 - Sensitivity levels for particular forms of development. The proposed development currently lies within the **bolded category**.

HSE would need to be engaged to confirm these consultation zones and then the development carefully designed accordingly to avoid conflict with the PADHI guidelines.

The Cadent IP gas mains routes through the site in three areas. Asset records indicate the primary pipeline traces the A3052 but sections of the main will interact with development site. These sections could be a key constraint. Diversions may be required for sections of this main depending on its impact to the proposed masterplan.

The section of IP main which routes south from this primary route looks to run existing highways, therefore, a diversion is not anticipated for this section of infrastructure.

The shortest length of IP pipe routes north from the primary route and looks to serve the existing Hill Barton Business Park, and mostly runs within highways. This section may need to be retained and incorporated within the masterplan to maintain the existing supplies.

Diverting an IP gas main is an expensive and long process and they are not commonly diverted due to these implications. Cadent can be engaged to confirm the implications of diverting the asset via a budget diversion application.

If the IP main is to remain, it will have associated easements and wayleaves. The easement is estimated to be between 4-8m either side of the main, however, the exact easement for this specific asset can be confirmed by Cadent.



### 4.3.3 Water - south west water

SWW are the incumbent gas distribution operator for this service area.

#### 4.3.3.1 Existing infrastructure

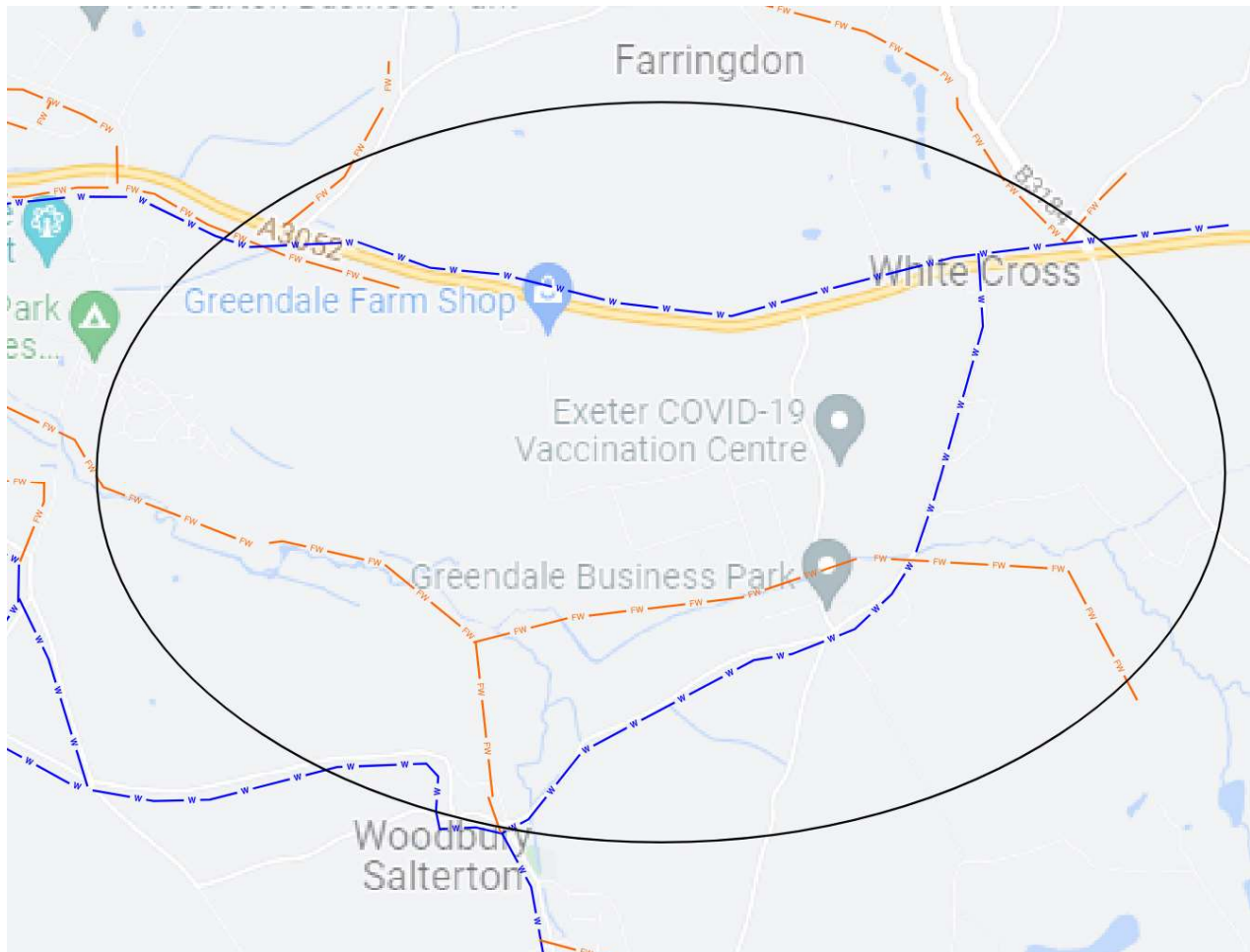


Figure 9 - Overview of key SWW infrastructure within the site vicinity

Records received from SWW show:

- Various potable water mains route throughout Site 2;
- Two foul water services are present within Site 2.

#### 4.3.3.2 Conflict assessment

The SWW potable water mains route through the site and look to run within or alongside the existing highways. It is anticipated diversions will not be required if the mains route entirely within the highways. However, if a portion runs outside of the highways and interacts with the site, these sections could be diverted in order to clear the site ready for development.

Assessment of the foul sewer network is excluded from this report and is recommended that advice is sought from by a Civil Engineer.

#### 4.3.4 Telecommunications – Openreach

Openreach manage and install the infrastructure for telecommunication services.

##### 4.3.4.1 Existing infrastructure

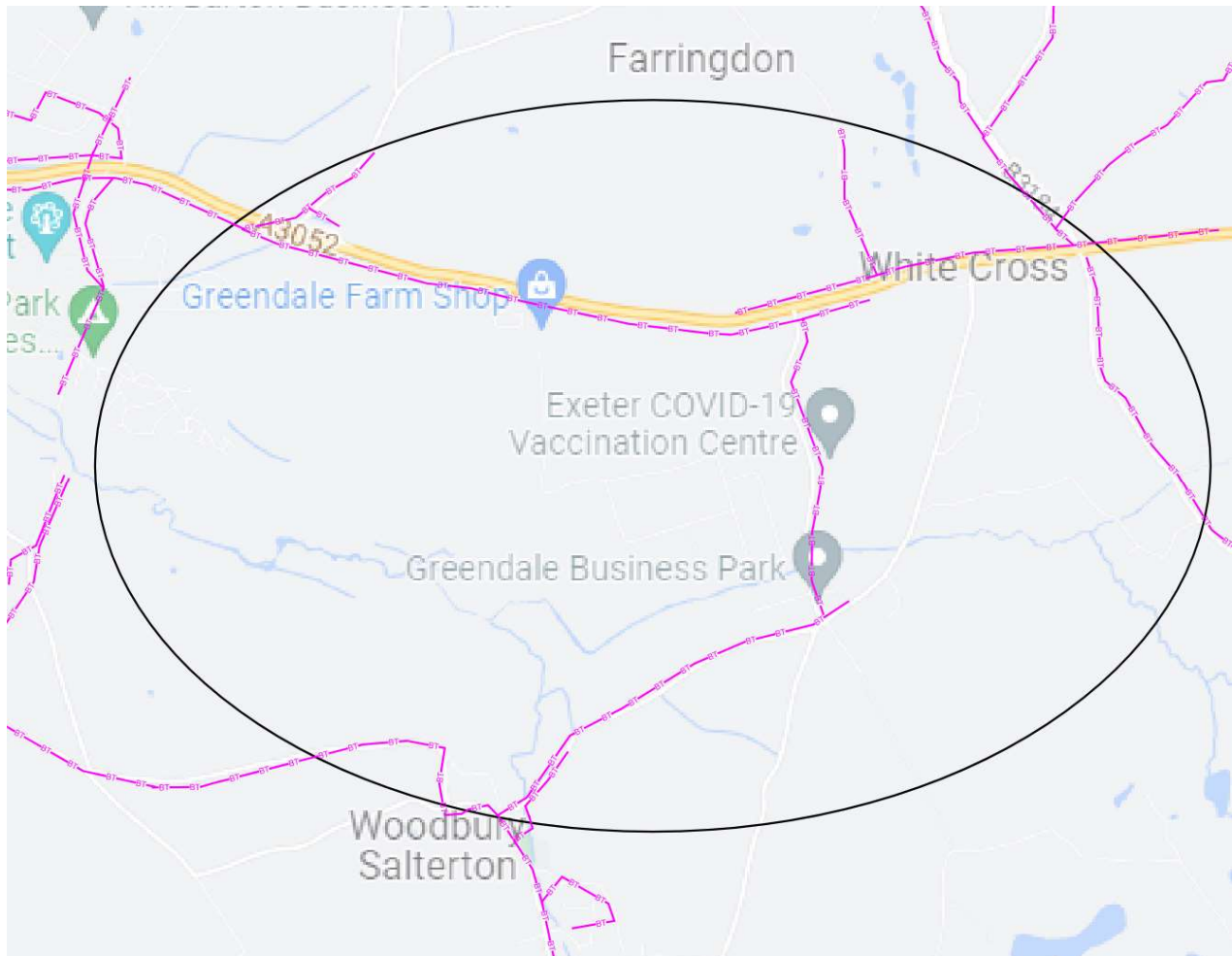


Figure 10 - Overview of key Openreach infrastructure within the site vicinity

Records received from Openreach show:

- Openreach telecoms infrastructure are present throughout Site 2.

##### 4.3.4.2 Conflict Assessment

The Openreach telecoms infrastructure routes through the site but it is anticipated this will route within existing highways. Therefore, diversions are not anticipated.

Openreach, in the first instance, will need to conduct a site survey to establish the extent of any work required and which apparatus will need to be disconnected. This survey will be chargeable. Typically, Openreach remove their infrastructure free of charge when there is no live line left in use.

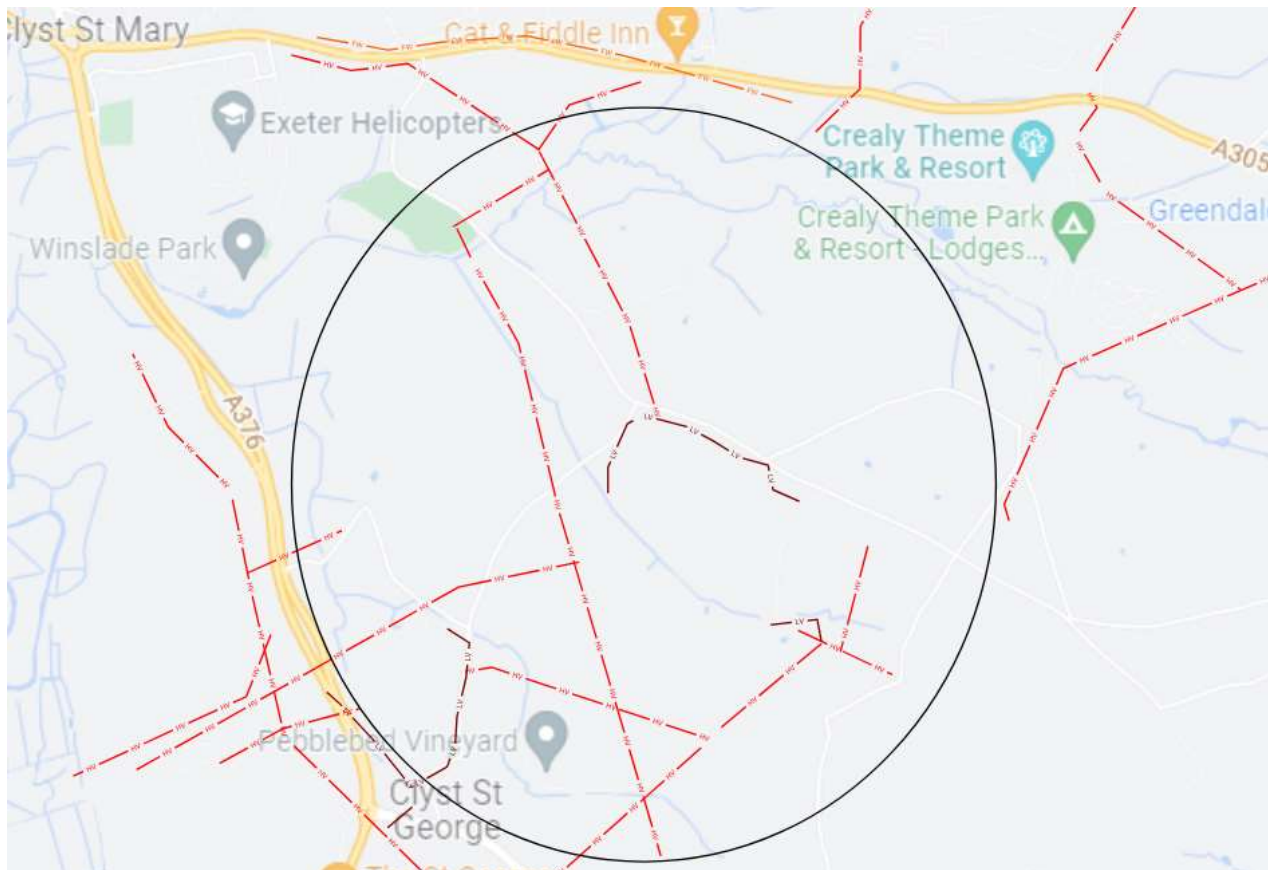
If a new site access road or any changes in levels are proposed over the route of existing services then the cables must retain the minimum level of cover required by the NJUG guidelines: 350mm in the footway and 600mm in the carriageway.

## 4.4 Option 3

### 4.4.1 Electricity - WPD

WPD are the incumbent electricity distribution network operator for this service area.

#### 4.4.1.1 Existing infrastructure



Records received from WPD show:

- Various 11kV and 33kV cabling routes are present throughout Site 3;
- LV networks are present in areas of Site 3.

#### 4.4.1.2 Conflict assessment

Several 11kV/ 33kV overhead cable routes are located throughout Site 3. It is anticipated diversions will be required for all of the overhead services to clear the site ready for the new development. In order to minimise diversion costs, grounding the cables to run within new or existing highways through the site may be preferable than diverting around the site entirely.

Many of these 11kV/ 33kV assets look to serve existing substations/ buildings in the area. If these services are to be retained, diversions may be required to bury the cabling in suitable service corridors as to not impose with the new masterplan.

One of the cabling routes looks to be strategic running across the site as part of a wider circuit, and may not necessarily serve any existing buildings. An option could be explored to divert the entire section of cabling

around the site to best clear the site of existing infrastructure. However, this will likely impose higher diversion costs than incorporating the cable routes within new highways installed as part of the new masterplan.

#### 4.4.2 Gas - Cadent

Cadent are the incumbent gas distribution operator for this service area.

##### 4.4.2.1 Existing infrastructure

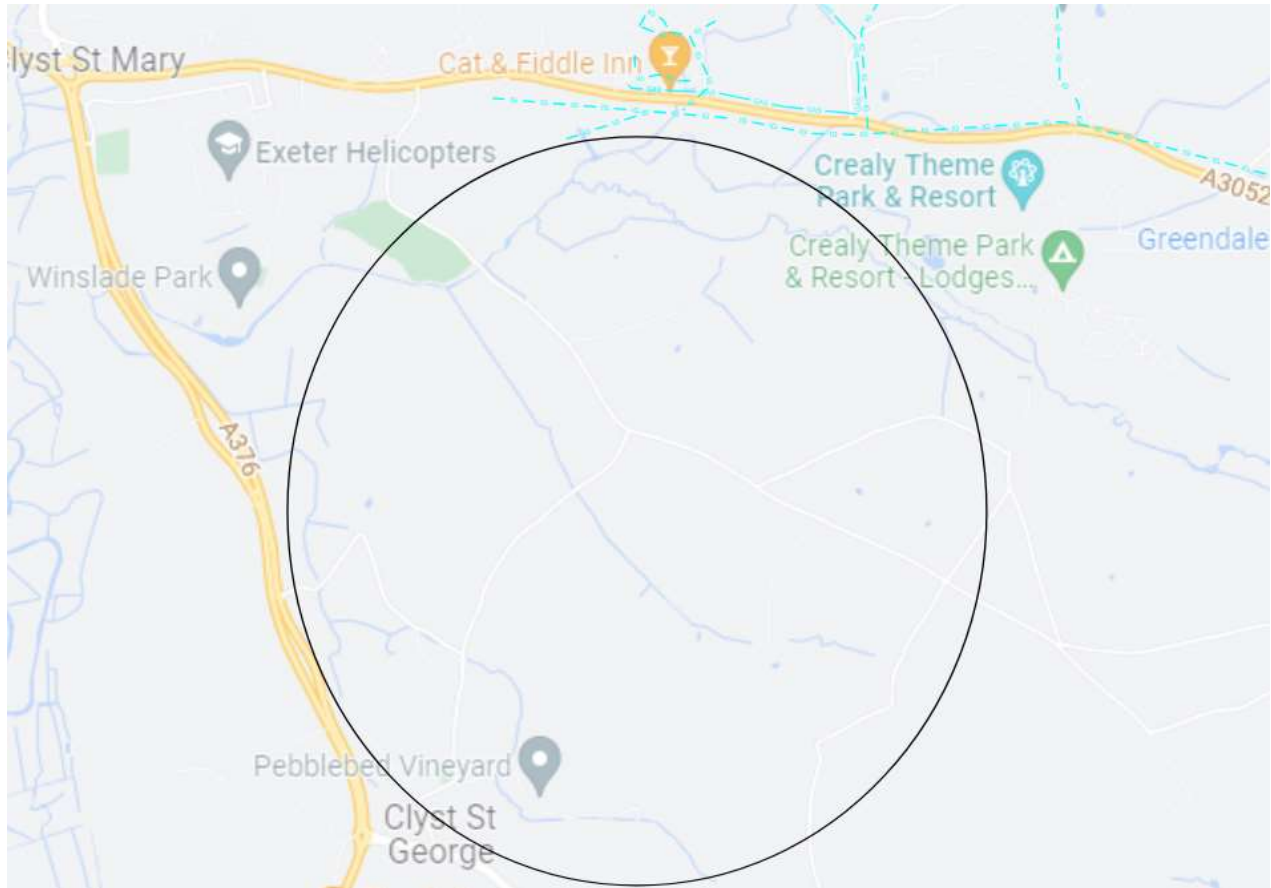


Figure 12 - Overview of key Cadent infrastructure within the site vicinity

Records received from Cadent show:

- An IP gas main is present on the northern edge of Site 3, south of the A3052.

##### 4.4.2.2 Conflict assessment

The Cadent IP gas main runs across the most northerly plot within Site 3. Asset records indicate this traces the A3052, depending on its proximity it may be possible to leave in place to avoid a diversion. If it does impact the proposed masterplan, the section could be diverted, though this would be an expensive and timely process as noted previously in this report.

Cadent can be engaged to confirm the implications of diverting the asset via a budget diversion application.

If the IP main is to remain, it will have associated easements and wayleaves. The easement is estimated to be between 4-8m either side of the main, however, the exact easement for this specific asset can be confirmed by Cadent.



### 4.4.3 Water - South West Water

SWW are the incumbent gas distribution operator for this service area.

#### 4.4.3.1 Existing infrastructure

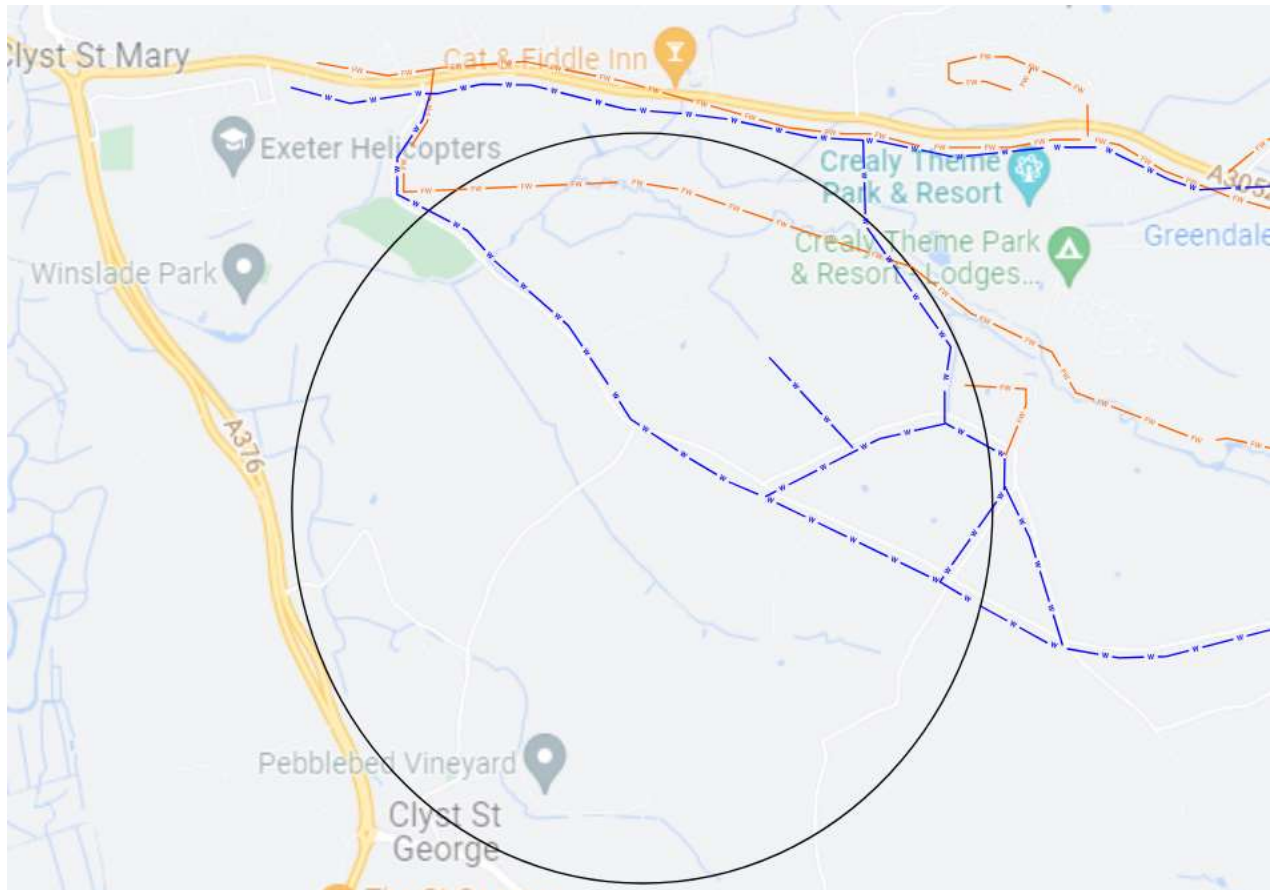


Figure 13 - Overview of key SWW infrastructure within the site vicinity

Records received from SWW show:

- Potable water mains routes through Site 3;
- Foul water mains are present within Site 3.

#### 4.4.3.2 Conflict assessment

The SWW water main routes through the site and looks to run within or alongside the existing highways. The majority of the infrastructure looks to run within the existing highways therefore a diversion is not anticipated in these sections. However, diversions are possible for any sections which impact the proposed masterplan.

One section branches from the highways routed infrastructure to serve an existing customer. It is possible to divert this main if it impacts the proposed masterplan in order to maintain the existing customer. If the existing customer vacates the site, this branch could be disconnected.

Assessment of the foul sewer network is excluded from this report and is recommended that advice is sought from by a Civil Engineer.

#### 4.4.4 Telecommunications – Openreach

Openreach manage and install the infrastructure for telecommunication services.

##### 4.4.4.1 Existing infrastructure

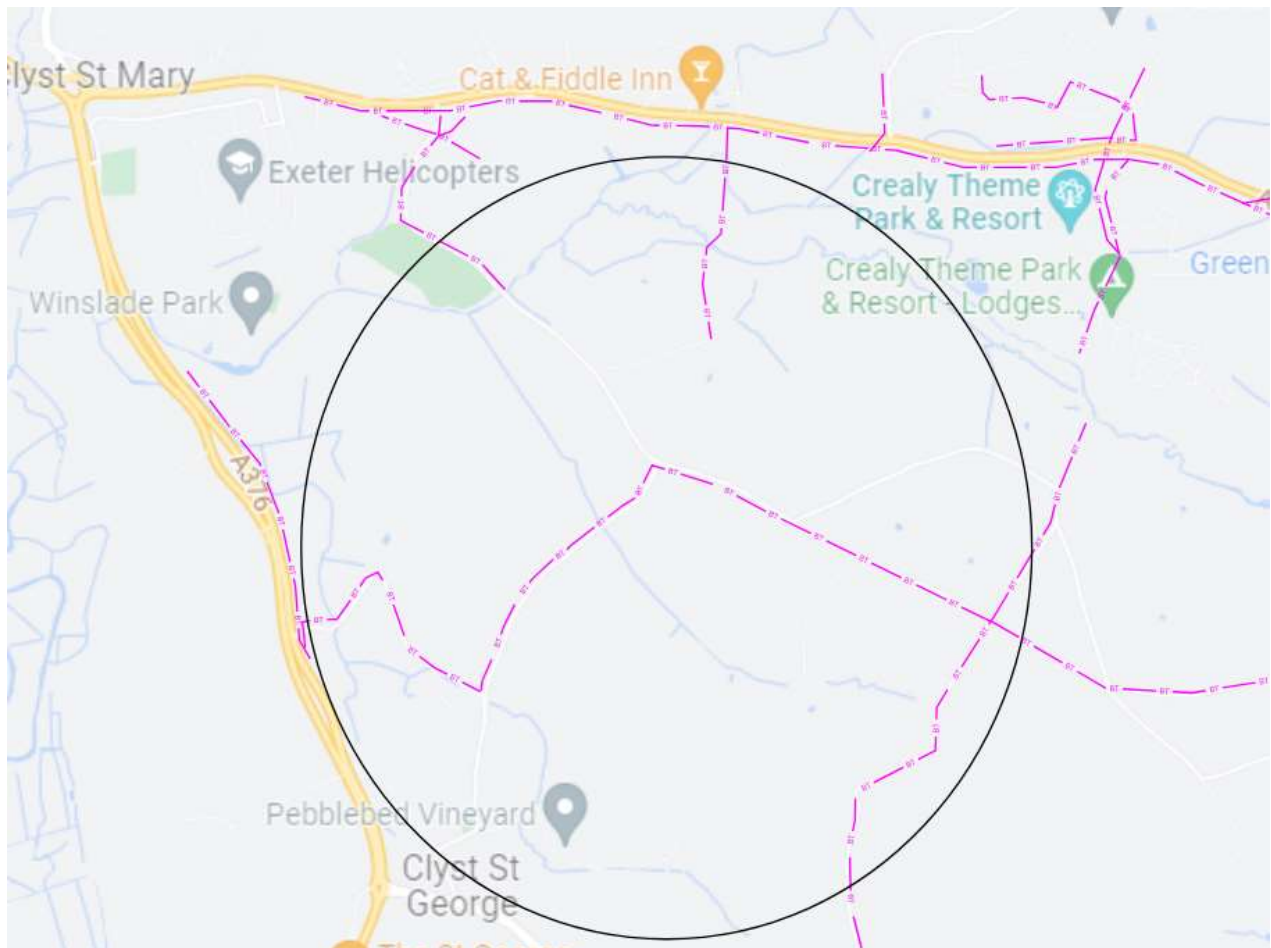


Figure 14 - Overview of key Openreach infrastructure within the site vicinity

Records received from Openreach show:

- Openreach telecoms infrastructure is present in various areas of Site 3.

##### 4.4.4.2 Conflict Assessment

The Openreach telecoms infrastructure routing through the site is mostly situated within highways, therefore diversions are not anticipated for these sections.

One leg of infrastructure routes south from the A3052 spine to serve an existing customer. It is possible to divert this main if it impacts the proposed masterplan in order to maintain the existing customer. If the existing customer vacates the site, this branch could be disconnected.

Openreach, in the first instance, will need to conduct a site survey to establish the extent of any work required and which apparatus will need to be diverted/ disconnected. This survey will be chargeable. Typically, Openreach remove their infrastructure free of charge when there is no live line left in use.

If a new site access road or any changes in levels are proposed over the route of existing services then the cables must retain the minimum level of cover required by the NJUG guidelines: 350mm in the footway and 600mm in the carriageway.





# East Devon New Community

## Net Zero and Climate Risk Review of Option Sites

*For East Devon District Council c/o CBRE*

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Date: 17 October 2022

Doc ref: 22462-HYD-ESUS-Y-RP-4000-P01



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# 1. INTRODUCTION

## 1.1 Overview

1.1.1 This Net Zero and Climate Risk document has been prepared by Hydrock on behalf of East Devon District Council (EDDC) as an initial exercise to help shape and inform discussions regarding the location of a potential new community of up to 8,000 new homes in the western part of East Devon, to the east of Exeter.

1.1.2 The new community will be shaped by a vision which places an emphasis on net zero and climate resilience, in line with emerging Local Plan objectives. This report explores the opportunities and constraints at each potential location to provide an overview of potential contribution to net zero and highlight any future climate risks which may impact the technical or commercial viability of the new town.

1.1.3 The report is based upon desktop assessment for feasibility of energy generation technologies and interpretation of UK climate projection data. Further detailed investigation will be required upon site selection and as part of masterplanning stages.

## 1.2 Report Structure

1.2.1 The structure of the report is as follows:

Section 2: Policy Context and Objectives

Section 3: Contribution to Net Zero

Section 4: Climate Change Risk and Resilience

Section 5: Conclusion and Next Steps

## 1.3 Site Locations

1.3.1 The three site locations are all in the western part of the EDDC area, to the east of Exeter, and are shown indicatively at Figure 1.

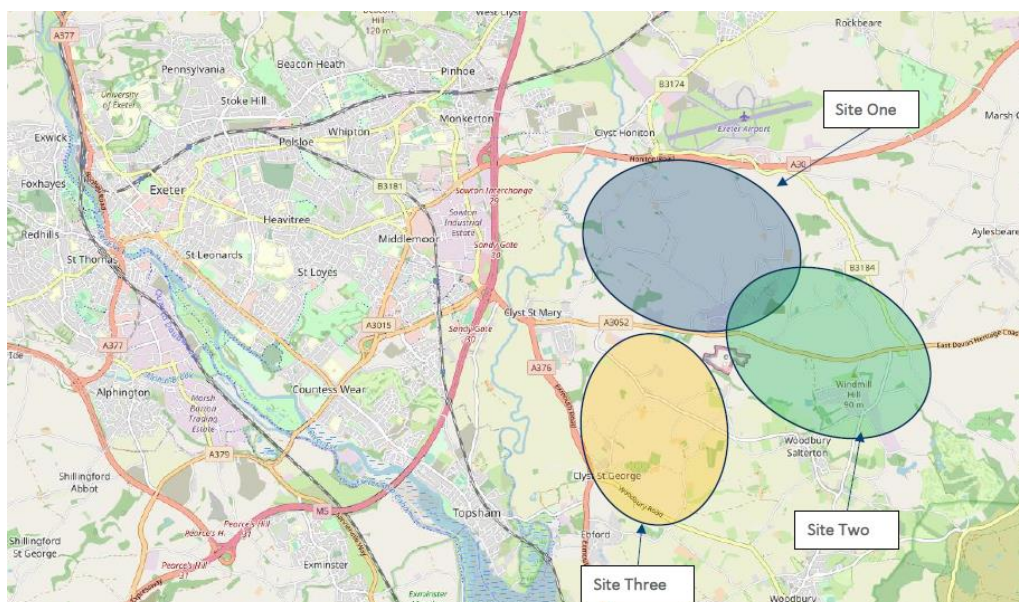


Figure 1 Indicative site option locations



- 1.3.2 **Site Option 1** (521.0 ha) is located approximately 7km east of Exeter city centre and 3km east of the M5. The A30 is to the north of the site and the A3052 is to the south of the site; Exeter Airport is also located less than 500m north of the site's northern boundary.
- 1.3.3 **Site Option 2** (521.5 ha) is located approximately 9km south-east of Exeter city centre and has the potential to be bisected by the A3052. The village of Woodbury Salterton is located south of the site's indicative boundary, with Greendale Business Park and Greendale Farm shop located within the site area.
- 1.3.4 **Site Option 3** (523.2 ha) is located adjacent to the A376, in between Clyst St George (to the south-west) and Clyst St Mary (to the north-west). The site is 2km east of Topsham, which offers a rail link to Exeter and Exmouth via the Avocet Line.

## 2. POLICY CONTEXT AND OBJECTIVES

### 2.1 National Policy

2.1.1 The energy and carbon performance expectations for new developments are rapidly evolving as the UK moves towards a legislated net zero commitment by 2050.

#### *National Planning Policy Framework*

2.1.2 The National Planning Policy Framework (NPPF or the Framework) was introduced in March 2012 to set out government planning policy for England, removing all regional level planning policy in favour of ‘a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.’

2.1.3 A number of iterations have since been published. The Framework was revised on the 20 July 2021, replacing the previous update in February 2019. All new Local and Neighbourhood Plans and reviews must align with the policies of the Framework 2021.

2.1.4 The Framework states clearly that the purpose of planning is to help deliver sustainable development and defines three mutually dependent pillars that must be equally considered in order to achieve this:

- o Economic;
- o Social; and
- o Environmental.

2.1.5 There is a clear focus upon:

- o Promoting high-quality design for new homes and places;
- o Offering stronger protection for the environment;
- o Constructing the right number of homes in the right places; and
- o Focusing on greater responsibility and accountability of councils and developers for housing delivery.

#### *Building Regulations Part L*

2.1.6 The Building Regulations drive minimum energy efficiency and carbon reduction improvements in new buildings.

2.1.7 New development will need to meet the standards set within Building Regulations Approved Document Part L 2021 - Conservation of Fuel and Power in New Dwellings/New Buildings other than Dwellings, respectively for the residential and non-residential elements.

2.1.8 A minimum level for regulated carbon emissions is defined by the Target Emission Rate (TER) which relates to a ‘Notional Building’ automatically generated as part of the Standard Assessment Procedure (SAP) and Simplified Building Energy Model (SBEM) toolkits.

2.1.9 The resulting Dwelling Emission Rate (DER) or Building Emission Rate (BER) must be less than the relevant TER in order to comply. In addition, there are minimum levels of fabric efficiency set by the Target Fabric Energy Efficiency rating (TFEE) for dwellings under the SAP methodology.

2.1.10 It was the intention via progressive changes to Part L to require zero carbon homes by 2016. However, in July 2015 the Government Productivity Plan (“Fixing the Foundations”) announced that it would not proceed with the allowable solutions carbon offsetting scheme, or the proposed 2016 increase in on-

site energy efficiency standards. Part L 2013 remained ‘current’ for a number of years whilst the UK Government kept standards ‘under review’.

- 2.1.11 In late 2020 the Government consulted on an update to Part L for new dwellings and following a substantial review of comments received, the new interim update to Part L (2021) came into effect in June 2022, requiring a circa 30% carbon reduction from Part L 2013 to achieve compliance.
- 2.1.12 As part of the interim update, there has also been an uplift to Part F (ventilation) as well as a new Approved Document O to mitigate the risk of overheating in new homes.

#### *SAP 2012 vs. SAP 10.2*

- 2.1.1 The carbon factor for grid supplied electricity was significantly outdated within the Building Regulations methodology and not reflective of the power sectors efforts to decarbonise through an increase in renewable generation feeding into the grid as well as the winding down of a number of fossil fuel power plants. The carbon intensity of grid electricity has reduced by circa 75% over the past decade and will continue towards net zero emissions, with plans for a net zero grid by 2030.
- 2.1.2 The carbon factors from SAP are utilised across Building Regulations Part L calculations. The latest update includes key changes to these under the new SAP 10.2 version under which natural gas has a higher carbon factor than electricity for the first time (see Table 1).

*Table 1 - Carbon Factors for Gas and Electricity*

kgCO2/kWh	SAP 2012 (Part L 2013)	SAP 10.2 (Interim Part L 2021)
<b>Gas</b>	0.216	0.210
<b>Electricity</b>	0.519	0.136

#### *The Future Homes and Buildings Standards*

- 2.1.3 The interim Part L and the updates to SAP carbon factors will lay the groundwork for the Future Homes Standard (FHS) and the Future Building Standard (FBS) to be introduced in 2025.
- 2.1.4 FHS has been confirmed as requiring a circa 75% carbon reduction for new homes from Part L to demonstrate compliance.
- 2.1.5 A key feature of the Future Homes Standard will be that it will no longer be possible to demonstrate the required carbon reductions through the use of gas heating systems.
- 2.1.6 The FHS will be an important consideration when considering appropriate heating strategies for future development. It is likely that uptake of direct electric or heat pump derived heating and hot water will increase and become the standard industry approach for future developments as the UK moves away from the use of fossil fuels.
- 2.1.7 A Fabric Energy Efficiency Standard will also be utilised to ensure a minimum level of building fabric performance across new homes.
- 2.1.8 It is likely that no further updates to the Building Regulations will take place after the introduction of FHS and FBS.

## *UK Climate Change Risk Assessment*

- 2.1.9 Climate Change Risk Assessments (CCRA) act as a bridge between climate science research and climate change policy. They allow risks associated with climate change to be identified, forming the basis for planning and decision making. In the UK, the Climate Change Act 2008 requires the UK government to publish a CCRA report every five years, the third and most recent of these was published in January 2022.
- 2.1.10 The supporting Technical Reports of the latest CCRA show that more action is needed in the majority of risk areas and there are many actions we can take to improve resilience that are low cost, 'low regret actions'.
- 2.1.11 The evidence shows that we must do more to build climate change into any decisions that have long-term effects, such as in new housing or infrastructure, to avoid often costly remedial actions in the future. And we must consider low probability but high impact events arising from, for example, high warming scenarios and interdependent or cascading risks.

## **2.2 Local Policy**

### *Climate Emergency – 2040 Carbon Neutral Target*

- 2.2.1 The climate change agenda and the climate emergency declarations of local authorities necessitate that firm commitments are made to achieving net zero in the earliest possible timeframe. EDDC declared a climate emergency in 2019 and committed to becoming carbon neutral by 2040, with a five-year strategy and action plan in place to support this goal.
- 2.2.2 The built environment and associated energy and green infrastructure has a large part to play in tackling climate change.
- 2.2.3 The district risks missing the 2040 target by a substantial margin unless current energy efficiency behaviours are significantly altered, low and zero carbon technologies are embraced and the approach to masterplanning and development is adjusted.

### *Adopted East Devon Local Plan (2013-2031)*

- 2.2.4 The East Devon Local Plan (2013-2031) was adopted in January 2016 and sets out a vision for East Devon's 'West End', with an aim to provide large-scale development to complement the role of the City of Exeter.
- 2.2.5 Large scale development at the Exeter and East Devon 'Growth Point' has already commenced, with the area now host to developments including Exeter Science Park, SkyPark and the Cranbrook new community.
- 2.2.6 Given that the new town proposals are aligned to the development of the emerging Local Plan, the adopted EDDC energy and sustainability policies are acknowledged, but are not outlined in detail.

### *Emerging East Devon Local Plan (2020 to 2040)*

- 2.2.7 The Draft Local Plan (January 2022) was first presented to Strategic Planning Committee in December 2021 and its preparation by EDDC is ongoing.
- 2.2.8 The strategic policies of the emerging plan seek a concentration of new development on the western side of East Devon to include an additional new town (in addition to Cranbrook).



2.2.9 **Strategic Policy 25 – Climate Emergency** provides an overarching policy requiring that developments support East Devon becoming carbon neutral by 2040, through:

1. Delivering net-zero development;
2. Maximising opportunities for delivery of renewable energy, district heat networks, zero-carbon energy and energy storage facilities; and
3. Calculating the impact of embodied carbon and retaining existing buildings where possible.

2.2.10 **Strategic Policy 26 – Net-Zero Carbon Development** will require that all new residential and commercial development delivers net-zero carbon emissions. Developers would be required to submit a ‘carbon statement to demonstrate how this is achieved, in accordance with the energy hierarchy (see Figure 2). There will also be a requirement to maximise opportunities for renewable energy, and ensure that in-use energy performance is as close as possible to design intent.

2.2.11 A currently rejected alternative approach (Option b) is to require a higher standard of development, conforming for example to the more strictly defined and less flexible Passivhaus. EDDC note however that there is insufficient evidence to suggest that all development could viably meet this standard and that it will be explored in viability work going forward.

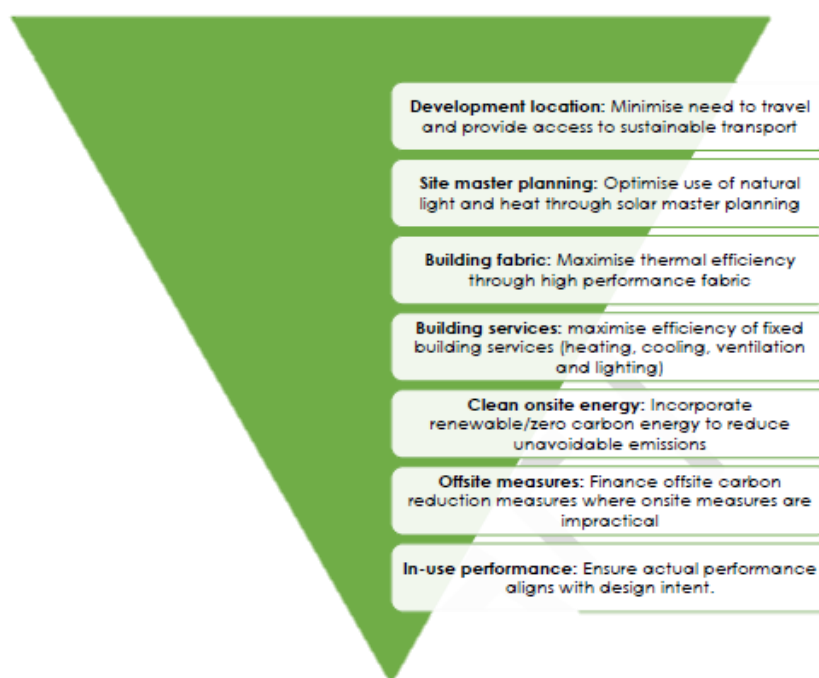


Figure 2 - Proposed Energy Hierarchy for East Devon

2.2.12 **Strategic Policy 27 – Promoting renewables and zero carbon energy** will support the development of zero carbon and renewable energy schemes within the District, encouraging the use of community-led schemes. Development of non-renewable forms of energy generation will only be supported in exceptional circumstances where all reasonable opportunities for using renewables have been exhausted.

2.2.13 The scale of resource available for solar energy within East Devon is vast and despite some schemes coming forward, remains largely untapped. The intention of this policy will be to create an environment

which gives certainty to the industry as to where schemes will be acceptable, which should translate into a greater number of schemes coming forward.

#### *East Devon District Council Climate Change Action Plan 2020 – 2040*

2.2.14 The EDDC Action Plan is in place to achieve a carbon neutral position, covering themes where the Council can make meaningful climate change interventions such as: energy supply and consumption; permitting and encouraging low carbon development; protecting and enhancing the natural environment; water supply and flood protection; transport and travel and community resilience.

2.2.15 Key actions around GHG reductions include:

- Having a robust policy for granting permissions for low energy buildings;
- Delivering large scale zero carbon development in the West End of the District;
- Gathering evidence and policy ideas for consideration as part of the review of the East Devon Local Plan for specific measures to address climate change in new developments in the district in the future;
- Develop heat supply networks to deliver low carbon heat.
- Encourage the use of smart meters and energy storage solutions.
- Increase the amount of energy generated locally using renewable technologies.

2.2.16 EDDC also make a commitment to work with Exeter, Teignbridge and Mid-Devon Councils on developing strategic planning policies for inclusion in the Greater Exeter Strategic Plan that set a framework for directly and indirectly reducing the risks of climate change on the communities of East Devon.

#### *East Devon New Community Committee Papers*

2.2.17 An EDDC strategic planning committee meeting took place on 8th March 2022, focusing on the provision of a new community and infrastructure. An outcome of the committee meeting was the recommendation that members 'agree in principle to the inclusion of a new community as part of the spatial strategy within the working draft Local Plan subject to this being reviewed as further evidence comes forward'. This recommendation followed a previous request (8th February 2022) from members for a further report on the proposed option of a new community in order to support it.

2.2.18 The committee meeting report states that consultants have been commissioned to produce work which will help assess the options for a new community - namely, the appointment of a CBRE-led consortium including Tibbalds and Hydrock, leading to the production of this report as part of the evidence base for an initial options appraisal and development of the preferred delivery option/model.

#### *West End Low Carbon Study*

2.2.19 A Low Carbon Study for the West End area was prepared by The Centre for Energy and the Environment at the University of Exeter, published in December 2019. The report pre-dates the full details of the Building Regulations 2021 update and the announcement of the Future Homes and Buildings Standards.

2.2.20 As outlined in Table 2, the report includes assumptions on heat and electricity demand per home (and upscaled to 20,000 and 30,000 homes). However, this does not appear to factor in key considerations of the energy transition, whereby we see the electrification of heat and transport.

Table 2 - Low Carbon Study demand assessment summary

Annual demand (MWh)	Per home	20,000 homes	30,000 homes
Heat	5.7	114,000	171,000
Electricity	2.8	56,000	84,000

- 2.2.21 A requirement for EV charging at plot level would increase power demand. Further commentary on this is provided within the utilities report.
- 2.2.22 With respect to heat, the impact of new and emerging legislation will be two-fold; with a reduction in demand seen as result of improved building fabric and a change of fuel units consumed from gas to electricity (noting that technology choices will also impact demand as a result of conversion efficiency e.g. direct electric heating vs heat pumps).
- 2.2.23 Reviewing the report, the energy consumption figures quoted for heating and electricity are higher than what we have anticipated for Building Regulation Part L 2021 compliance, and should therefore be reviewed against this new regulation. We would suggest that the current figures reflect a Part L 2013 compliant building with an Energy Use Intensity (EUI) of approx. 120 kWh/m<sup>2</sup>/yr.
- 2.2.24 Whilst most of the assessed electrical demand is from plug in equipment and therefore wouldn't substantially reduce, with improved insulation and u-values, the total EUI for current Part 2021 compliant building envelope is estimated from our work to date to be around 70 kWh/m<sup>2</sup>/yr. In addition, a space heating consumption of around 30 kWh/m<sup>2</sup>/yr, which translates to a space heating demand of 90 kWh/m<sup>2</sup> (COP of ASHP is 3).
- 2.2.25 The above results in an annual consumption for heating of 2.1 MWh/year and electricity of 2.8 MWh/year, totalling 4.9 MWh/year.
- 2.2.26 Further detail on the use of EUI targets is outlined under section 2.3 Best Practice.
- 2.2.27 It is important to differentiate between demand and consumption, the former being the required load (e.g. heat load to combat heat loss) before system efficiency is applied. This is to force fabric first principles, and not rely on extra efficient heating systems such as heat pumps to make up for poor design.
- 2.2.28 The main focus of the previous report was on the potential for large scale solar thermal incorporating thermal storage to replicate the solar thermal power plants seen in Denmark which contribute to meeting heating demands through heat networks.

*Climate Risk Assessment for Devon, Cornwall and the Isles of Scilly (DCIoS)*

- 2.2.29 RSK are currently commissioned to undertake a regional level climate risk assessment for the DCIoS which will provide strategic level indications of climate risk, sitting above authority level or site-specific assessments.
- 2.2.30 Hydrock have engaged with this piece of work during the preparation of the technical workstream for EDDC and whilst our interest on behalf of the Council was received positively, the risk assessment is not yet sufficiently advanced or likely to be granular enough to inform the site selection process for the new town.

## 2.3 Industry Best Practice

### *Energy Use Intensity*

- 2.3.1 Currently, Building Regulations use carbon as the key metric to assess the energy efficiency and sustainability of a building; this can create a number of problems for designers, contractors and occupants.
- 2.3.2 Energy Use Intensity (EUI), measured in kilowatt hours per m<sup>2</sup> per year (kWh/m<sup>2</sup>/annum) is the total amount of energy consumed by a building over a year divided by floor area, allowing easy and direct comparison of building performance. The EUI metric removes 'carbon intensity' which has less relevance as fossil fuels are removed for heating; it is widely adopted by best practice guidance such as the LETI Climate Emergency Design Guide<sup>1</sup>, the UK Green Building Council Net Zero Buildings Framework<sup>2</sup> and the RIBA 2030 Climate Challenge<sup>3</sup> targets
- 2.3.3 EUI also considers unregulated energy use which will be an important consideration for future net zero targets.

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<sup>1</sup> Climate Emergency Design Guide, London Energy Transformation Initiative (January 2020)

<sup>2</sup> UK Green Building Council Net Zero Framework, UKGBC (April 2019)

<sup>3</sup> RIBA 2030 Climate Challenge version 2, Royal Institute of British Architects (2021)



### 3. CONTRIBUTION TO NET ZERO

- 3.1.1 Emerging Strategic Policy 26 (Net-Zero Carbon Development) will require that all new residential and commercial development deliver net-zero carbon emissions. In addition, future development must maximise opportunities for delivery of renewable energy, district heat networks, zero-carbon energy and energy storage facilities.
- 3.1.2 Based upon expected delivery timescales, the new town for East Devon will require compliance with the incoming Future Homes and Buildings standards as a minimum and must deliver upon the emerging policy requirement for net zero from the outset to ensure that no further energy efficiency retrofit work will be necessary to make buildings zero-carbon as the electricity grid decarbonises.
- 3.1.3 Energy demand reduction provides the greatest opportunity for minimising CO<sub>2</sub> emissions which in turn also helps to address concerns with respect to fuel poverty as buildings with lower energy demand require less heating. This begins with appropriate passive design features at site level such as orientation, form and massing which must be considered from the earliest stages to benefit the masterplanning response.
- 3.1.4 In addition, carbon sequestration as part of offsetting for net zero in initial phases of development requires further assessment, influenced by the existing landscape and the ecology and biodiversity work by TEP.
- 3.1.5 Whilst passive design considerations and carbon sequestration contributions to net zero will predominantly be addressed by masterplanning and building performance design at the chosen site, this section considers the site options in terms of opportunities and constraints for technologies and infrastructure that could contribute to achieving net zero.
- 3.1.6 Each Option has been provided with a score across three key areas; network capacity (generation), zero or low carbon energy technologies and energy storage.

#### 3.2 Existing Baseline

- 3.2.1 Based upon the data within the 'Knowing East Devon' Report 2019, the district has one of the lowest per capita (head of population) CO<sub>2</sub> output of all the districts across Devon. In 2016, this amounted to 5.04 tonnes of CO<sub>2</sub> emissions per capita, the Devon average was 5.03 tonnes and the national average was 5.29 tonnes.
- 3.2.2 Comparison with 2019 figures available from the Office for National Statistics<sup>4</sup> shows an overall total of 622.25 kt CO<sub>2</sub>, equivalent to 4.25 tonnes of CO<sub>2</sub> emissions per capita for East Devon showing a continued trend for reducing in CO<sub>2</sub> emissions. However, more than a quarter of this total (c. 1.41 tonnes CO<sub>2</sub> per capita) is still contributed by the domestic sector.
- 3.2.3 By area, East Devon in 2019 emitted a lower than UK average of 0.8 kt/km<sup>2</sup> of CO<sub>2</sub> in 2019 which is comparable to surrounding rural districts such as Mid Devon and Dorset.

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<sup>4</sup> UK local authority carbon dioxide emissions estimates 2019, National Statistics, Department for Business, Energy and Industrial Strategy, June 2021

### Energy Generation and Storage

Existing energy generation in the vicinity of the three sites is limited.

Based upon desktop review, there are no significant existing ground mount PV arrays in proximity to the site search area.

However, there are a small number of energy generation or low carbon heat technologies operating in the wider area including:

- Gorst Energy, Enfield Farm Anaerobic Digestion plant at Oil Mill Ln, Clyst St Mary;
- Brook Energy, Biomass plant at Hill Barton Industrial Estate.
  - The proposals for a 7.5km district heating interconnector from this facility should be taken in to consideration so that the available 37Mth of heat is utilised, this is detailed further in section 3.4.

A public consultation was also undertaken in June 2022 in relation to a large solar farm (29ha) known as Ford Oaks Solar & Green Infrastructure Facility, proposed off Wescott Lane, close to Exeter Airport and Marsh Green village and bounding the A30. The planning application associated with the proposals is yet to be determined by EDDC but has met with a significant level of local objection at this location.



Figure 3 Submitted proposals for Ford Oaks Solar & Green Infrastructure Facility

### 3.3 Network Capacity (Generation)

3.3.1 The energy and utility infrastructure for the new town must be developed in a way that delivers:

- A significant reduction in energy use and carbon emissions;
- Affordability and cost competitiveness of energy;
- Security and resilience of supply.

3.3.2 Given the need to include energy generation within the new town proposals, an assessment of network capacity for export to the national grid will aid the decision-making process with respect to the net zero target.

3.3.3 The WPD upstream bulk supply points (BSP) assessed for supply have therefore also been reviewed for generation headroom. Where existing infrastructure cannot accommodate the theoretical output of the energy generation being exported onto its network then the DNO will not allow connection without first upgrading the equipment.

3.3.4 The BSPs from the existing WPD network in the vicinity of the site Options have been assessed for reverse power headroom (the amount of generation that can go back through the transformer) to provide an indication of the capacity for connection of new generators to export to the grid:

#### Sowton BSP

- **Reverse Power Headroom: -8.54MVA**
- Substation Reverse Power Capability: 45.76 MVA
- Connected Generation: 27.95 MVA
- Accepted not yet connected: 45.12 MVA
- Offered not yet accepted: 0.39 MVA

#### 2. Exeter Main BSP (132/33kV)

- **Reverse Power Headroom: -13.27 MVA**
- Substation Reverse Power Capability : 45.00 MVA
- Connected Generation: 73.77 MVA
- Accepted not yet connected: 11.50 MVA
- Offered not yet accepted: 15.86 MVA

#### 3. Exmouth BSP (132/33kV)

- **Reverse Power Headroom: -0.16 MVA**
- Substation Reverse Power Capability : 44.60 MVA
- Connected Generation: 18.90 MVA
- Accepted not yet connected: 36.00 MVA
- Offered not yet accepted: N/A

3.3.5 The results indicate that the available export capacity at Sowton BSP and Exeter Main BSP is committed by existing connection agreements for generators connecting upstream in the network and that network upgrades will be required to accommodate large scale new generation. This is likely to impact all site Options, noting however that there is some inconsistency with how future export connections and upgrades are presented with some included at a budget application (for which connection dates are often delayed) and some only at formal offer stage.

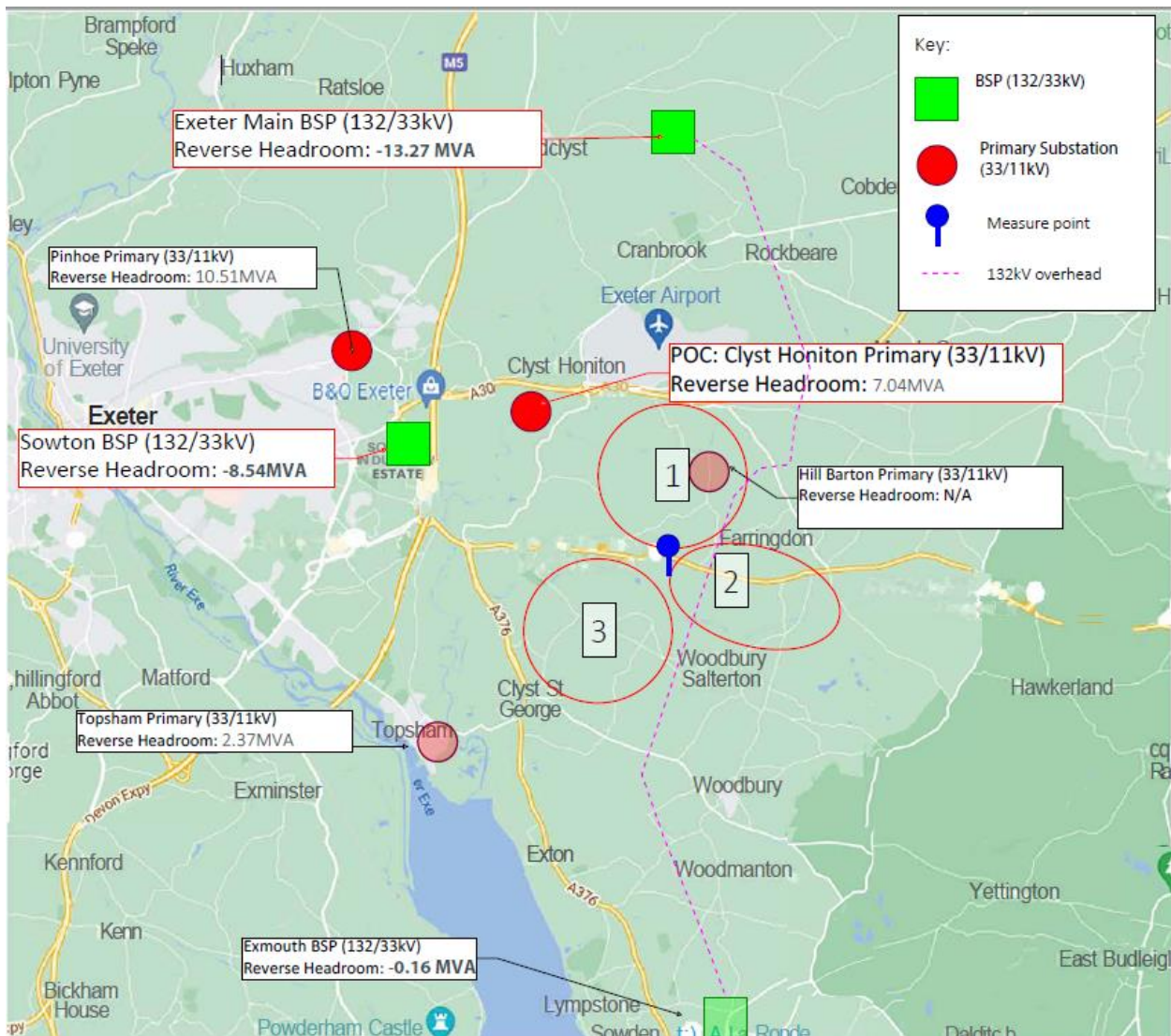


Figure 4 - summary of reverse power headroom for export to grid

- 3.3.6 Whilst the upstream constraints must be acknowledged, at primary substation level there is some export capacity remaining at Clyst Honiston (7.04MVA) and Pinhoe (10.51MVA), both in closest proximity to site Option One and also at Topsham (2.37MVA), in relation to Option Three.
- 3.3.7 Further details are needed in relation to the Hill Barton Primary substation indicated on the WPD network map which would be most easily accessed by site Options Two and One. Further detail is provided within the Utilities report.
- 3.3.8 On-site renewable energy generation ‘behind the meter’ for self-consumption within the site is more likely to be able to accept a certain level of export limitation (as a result of network constraints) when considering the significant carbon and cost savings against grid supplied power. Solar inverters can also be used to monitor and control the utilisation of power to the site (see Energy Storage).
- 3.3.9 It may be possible to secure some export capacity so that the limitation process is not activated the moment generation exceeds demand whilst allowing upgrade costs to be avoided or shared between stakeholders though ‘fault levels’ for the network would also need to be taken into consideration to ensure loss of power to connected customers is avoided.



3.3.10 A WPD budget estimate for the selected site option will inform the solution and provide budgetary costs, however, a formal application will need to be submitted for WPD to determine the exact export solution for the site.

### 3.4 Zero or low carbon energy technologies

3.4.1 Alongside the need to reduce CO<sub>2</sub> emissions, there are additional drivers for using renewable sources of electricity. Energy prices are increasing, traditional fuel stocks, such as gas, are in decline, whilst the UK's existing fleet of coal-fired and nuclear power stations are all progressively coming offline over the next decade.

3.4.2 There is also the need to ensure a mix of energy supply, whereby we are not overly reliant on one form of energy production to meet our energy needs. At the micro and decentralised scale, additional benefits of renewable and low carbon sources of energy can include reduced energy bills and community ownership.

3.4.3 As such, creating the right low or zero carbon technology mix for the new town will be essential. An emphasis is placed upon technology options that can aid the decarbonisation of heat as well options for onsite power generation.

#### Decarbonisation of Heat

3.4.4 Where housing densities and heat demands are sufficient, low temperature site-wide heat networks, following the Danish model can provide efficient and cost-effective low carbon heat to homes and buildings.

3.4.5 Air source heat pumps could be equally incorporated across all sites, with potential to install commercial scale heat pumps within energy centres to serve specific phases with a centralised system. This technology is not discussed further at this stage as its implementation is unlikely to affect the decision-making process in terms of the site options.

#### Geothermal

3.4.6 The potential use of ground source heat pumps presents a key opportunity for the new town. There are a number of different ways to implement the technology, some of which may be influenced by the site selection.

3.4.7 Ground loop systems can operate as follows:

- Closed loop: in either horizontal or vertical configuration use the relatively constant temperature of the earth to heat refrigerant fluid instead of the outside air temperature.
- Open Loop: Extracts groundwater which passes through a heat pump where heat is extracted. Running in reverse during summer months can also 'recharge' the ground, making it easier for a centralised system to work efficiently through the winter months (see Figure 5).



Figure 5 - BGI Ground Source Heat Viability Screening Tool

3.4.8 Two of the three sites (Options One and Three) demonstrate potential locations for open loop ground source technology which could be utilised as part of a technology mix for a low carbon heat network.

3.4.9 Option One includes areas at the north and west of the location which are underlain by a moderately productive aquifer (12L/s) which is also captured by the western boundary of Option Three. Option Two is underlain by rocks with no or very low levels of groundwater which would limit ground source heat pump technology potential to closed loop systems.

3.4.10 Table 3 shows a performance summary of each site option in relation to open loop systems.

Table 3 - site performance summary for open loop systems

Site Option	Potential for Ground Source Heat (Open Loop)	Commentary
One	some	Potentially feasible technology at towards northern and western boundaries as a result of the site location laying partially over moderately productive aquifer (up to 12 L/s).
Two	none	No site areas suitable for technology as underlain by rocks with no or very low levels of groundwater.
Three	some	Some feasibility for technology near western boundary of the site location at the edge of moderately productive aquifer (up to 12 L/s).

- 3.4.11 Where space is limited, vertical boreholes can be used in place of ground loop systems. This is usually more expensive than digging trenches and would require specialist ground (thermogeological) survey work to be undertaken to confirm the suitability of the chosen site. Borehole depth depends on the heat demand of a property and the underlying site geology.
- 3.4.12 Hybrid models combining both ground and air heat sources could be explored further for the chosen site to balance upfront costs with low operating costs, resulting in maximum system efficiency, cost effectiveness, and the potential for net zero emissions.
- 3.4.13 Whilst a heat network solution may offer improvements in carbon reductions, this must be considered alongside the potential increased cost of the infrastructure as well as ongoing operation and maintenance of the network. The extensive works undertaken to date by Devon County Council and East Devon County Council on the extension to the Monkerton scheme and the connection of the Cranbrook scheme should be taken in to consideration. Heat network delivery, would be influenced further by site phasing and the heating (and cooling) demand profiles within each phase.
- 3.4.14 Decentralised dwelling level systems represent the lowest CAPEX when compared to site scale solutions, due mainly to the additional costs associated with the buried infrastructure of a district heat network.

#### *Solar Thermal*

- 3.4.15 The Low Carbon Study details the potential for Solar Thermal generation following the Danish Solar thermal interfacing with heat networks model. This solution has the potential to benefit any of the three sites however it is highly dependent on the selection of a heat network to deliver heat to the residences.
- 3.4.16 As highlighted in 3.4.13 the selection of this delivery method may be dismissed due to the high capital outlay of the technology. If heat network delivery is a selected technology than solar thermal has the potential to lower heat price tariffs for residents. However as detailed in the next section it may not be the best use of land if Energy from Waste is able to provide the full load heating demand.
- 3.4.17 Should heat network delivery not be selected in favour of a low CAPEX alternative, solar thermal should be reconsidered at an individual plot level for residential buildings alongside potential for “behind the meter” microgrids as discussed under section 3.5.

#### *Energy from Waste*

- 3.4.18 Devon County Council and East Devon Council have undertaken extensive feasibility and development works in relation to a potential heat network connector solution to deliver heat from the Hill Barton Energy from Waste (EfW) facilities which are presently under construction.
- 3.4.19 The combined heat output of the EfW plants is 37MWth and therefore connecting to this heat supply should be considered when selecting the site.
- 3.4.20 Due to the EfW plant location at Hill Barton each of the sites would be suitable for connection to the heat network interconnector/ extension, the performance summary of each site option in relation to connection to an EfW supplied District Heating Network (DHN) is provided in Table 4.

3.4.21 Connecting to this scheme would allow the “PipeCo” (a special purpose vehicle owned by Devon County Council for ownership and management of the buried infrastructure) and the potential future ESCo operator of the network to provide competitive heat tariffs in line with tariffs proposed for the existing users and with the potential benefit of reductions due to the economy of scale presented by connecting the new development.

Table 4 - site performance summary for EfW DHN

Site Option	Potential for connection to EfW supplied District Heating Network	Commentary
One	excellent	The proposed route of the interconnector transits site option one
Two	good	The EfW plants are on the boundary of Site option two
Three	some	Site three sits to the South of the proposed interconnector and EfW plants but the distance is not prohibitive

### Onsite Power Generation

3.4.22 Onsite energy generation is at the point of use, within the boundary of the site where it is to be consumed. When used in conjunction with low energy use buildings (designed to a specific low EUI target), the provision of onsite generation to match annual site demand is the simplest way to demonstrate net zero carbon in operation and avoid the complexities of grid supplied energy of varying carbon intensity.

### Solar PV

3.4.23 As detailed within the Low Zero Carbon Study, energy and site area data from utility scale PV farms in Devon indicates an energy-land intensity of 389 MWh per hectare.

3.4.24 All three site Options fall broadly within areas previously assessed as suitable for solar energy. The suitable areas identified within the study highlight that Option 3 has highest overall coverage of suitability for solar. All Options will require also further consideration of landscape and visual impacts.

3.4.25 Where possible within the constraints of identified land, ground mount arrays are recommended in order to most easily and efficiently accommodate a site wide power generation approach which could utilise microgrid technology across the development proposals.



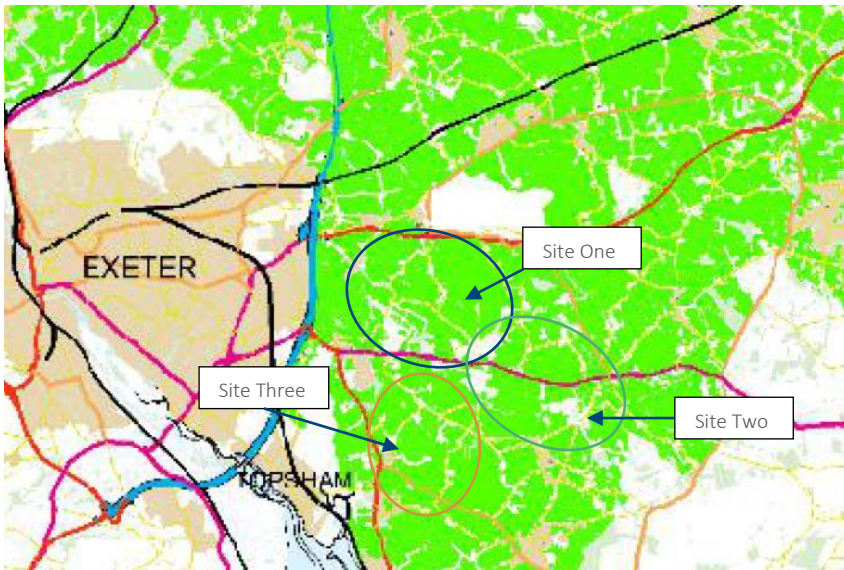


Figure 6 - Extract from EDDC Low Carbon Study showing areas suitable for solar energy

3.4.26 Table 5 shows a performance summary of each site option in terms of the ability to accommodate a large-scale PV installation.

Table 5 - site performance summary for solar energy

Site Option	Potential for large-scale Ground Mount Solar PV Array	Commentary
One	good	Some areas previously identified as unsuitable for solar at the south and south western areas of the site.
Two	good	Some areas previously identified as unsuitable for solar at the north western areas of the site.
Three	excellent	Only existing highways infrastructure present as non-opportunity areas within or near the site.

### Wind

3.4.27 The areas identified by the previous Low Carbon Study as suitable for wind energy are very limited when compared to the potential for solar PV generation (see Figure 7).

3.4.28 Standoff distances to residential properties would need to be carefully considered for the technology, particularly with respect to noise (to meet ETSU-R-97 noise limits). It is unlikely that wind could be deployed at a sufficient scale to address the full energy demands of the site and that it would only form part of a technology mix to diversify on-site generation.

3.4.29 Additional consideration would also need to be given to the influence that large scale wind infrastructure could have on the Exeter Airport operations. As shown in Figure 7 the area applicable for wind generation may have the potential to affect the flight path and radar operations.

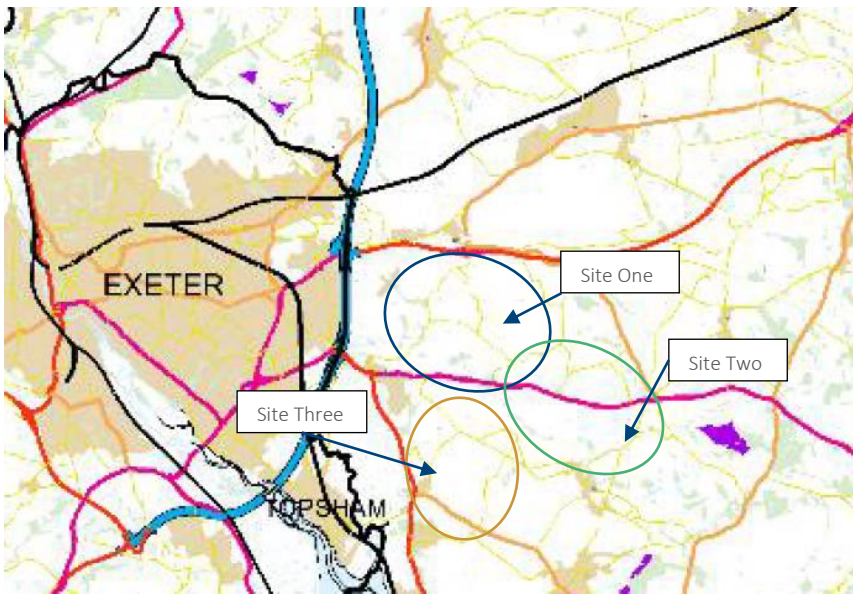


Figure 7 - Extract from EDDC Low Carbon Study showing areas suitable for wind energy

3.4.30 Table 6 shows a performance summary of each site option for utilising energy from wind.

Table 6 - site performance summary for wind energy

Site Option	Potential for wind turbines on or near site	Commentary
One	none	No areas suitable for energy located within or near the site.
Two	limited	One area suitable for energy located c. 2km from the south eastern extents of the site.
Three	none	No areas suitable for energy located within or near the site.

### Anaerobic Digestion

3.4.31 As identified in the Land Requirements for Network-based Zero Carbon Energy Solutions in East Devon report, the generation of heat and power from anaerobic digestion (AD) of the food waste associated with a development of this scale is unlikely to deliver a significant enough contribution to the development to be considered commercially viable.

3.4.32 Therefore, it is recommended that the waste food refuse generated be handled by collection and delivery through the existing infrastructure within the local area rather than within a new AD facility.

3.4.33 Based on the above, this technology option is not assessed further.

### 3.5 Energy Storage

- 3.5.1 Energy storage forms an essential element of the replacement of fossil fuels for heat and transport with renewable or low carbon energy alternatives.
- 3.5.2 The draft policies within the emerging Local Plan support proposals for renewable and zero carbon energy storage systems in principle. A number of criteria will need to be met with respect to mitigating landscape impacts, not having an unacceptable impact on designated heritage or nature sites and not emitting excessive noise which would harm amenity for nearby residents.
- 3.5.3 Grid connected battery storage naturally compliments on-site generation as it provides a platform for moderating and managing the intermittency of renewable technologies and providing a number of benefits for development:
- o Flexibility to match generation and demand
  - o Shift generated energy from off peak times to when it is needed.
  - o Grid stabilisation to maintain voltage and frequency levels.
  - o Continued resilience of supply in the event of grid failure.
  - o Rationalising on-site generation from PV and use of renewable electricity.
- 3.5.4 These grid connected ('In front of the meter') battery storage solutions are essentially viewed as generators and the demand and export capacities are critical components of viability. Based upon the assessment undertaken, grid connected batteries is not currently recommended at any of the site Option locations.
- 3.5.5 With respect to 'behind the meter' applications, all site Options have the potential to use battery storage in 'island mode' and as part of a microgrid solution for the development. Further detail on development mix and phasing is needed to undertake a more detailed assessment.
- 3.5.6 Table 7 shows a performance summary of each site option for 'behind the meter' battery storage.

*Table 7 - performance summary of each site option for 'behind the meter' battery storage*

Site Option	Potential for 'behind the meter' battery storage	Commentary
One	good	Opportunity level equal across all site options - More detailed assessment is needed with clarity on development mix and phasing.  'Behind the meter' battery storage is however recommended as an element of site infrastructure.
Two	good	
Three	good	

## *Models for Operation*

- 3.5.7 Establishing an Energy Service Company (ESCo) would be necessary to utilise energy storage within a microgrid arrangement or to manage the delivery of heat through a district heating network. An ESCo would provide a commitment to deliver the benefits of energy to a specified level of performance and reliability whilst providing long-term revenue streams.
- 3.5.8 There are already examples of Local Authority owned ESCos in the UK, for example the creation of [Energetik](#), by Enfield council in 2015. ESCo's such as this are driven predominantly by the need to address fuel poverty and a desire to create social benefit and shape local energy systems to deliver on their carbon reduction objectives.
- 3.5.9 ESCo's can be delivered in the form of many different commercial structures with each project having different specifications and requirements. There is no 'one size fits all' commercial structure that can be applied to every project. EDDCS could act as 'Project Sponsor' which would enable the enter in to one of the following 'shell structures':
1. 3rd Party Esco – The Project Sponsor enters into an Energy Services Agreement (ESA) with a 3rd party that will deliver the low carbon energy scheme through an ESCo entity, such as the existing arrangement with Eon on the Monkerton scheme.
  2. Concessions – The Project Sponsor enters into a Concession Agreement (CA) with a 3rd party ESCo to deliver the low carbon energy scheme.
  3. Joint Venture (JV) – The Project Sponsor jointly establishes an ESCo entity with a Joint Venture Partner to deliver the low carbon energy scheme.
  4. Project Sponsor ESCo – The Project Sponsor establishes a wholly owned ESCo to deliver the low carbon energy scheme.
  5. In-House Delivery – The Project Sponsor develops the low carbon energy scheme without establishing a stand-alone delivery vehicle (such as an ESCo).
- 3.5.10 Establishing an ESCo at the new town can introduce both opportunity and risk for the development. We would recommend that this model is explored in further detail both during site selection and in development of the masterplan. Whilst investigations are underway it is recommended that stakeholder engagement sessions are coordinated to explore the appetite for community owned elements to be adopted in to the ESCo.



### 3.6 Site Options Assessment of Contribution to Net Zero

The three option sites have been analysed based on three categories; network capacity for generation (export), low or zero carbon technologies and energy storage. The outcome of the scored assessment is provided in the Table below where the opportunity level is scored as follows:

High – 5

Medium-high - 4

Medium – 3

Low-medium - 2

Low (limited) - 1

Table 8 - Contribution to Net Zero - scored assessment

Assessment Category	Option 1	Option 2	Option 3
Network Capacity (Generation)	2	2	2
Low or Zero Carbon Energy Technologies	5	2	4
Energy Storage	3	3	3
<b>Overall (/15)</b>	<b>10</b>	<b>7</b>	<b>9</b>

Source: Hydrock (2022)

Options 1 and 3 both perform strongly in relation to low and zero carbon energy technologies, with Option 1 performing marginally better. Option 2 would require the greatest level of intervention, and in our assessment provides the lowest opportunity to contribute to net zero.

A number of recommendations are made throughout the detailed Technical Report (Document ref. 22462-HYD-ESUS-Y-RP-4000-P01) for further work, much of which is required after site selection in alignment with the masterplanning process.

## 4. CLIMATE CHANGE RISK AND RESILIENCE

- 4.1.1 In addition to the contribution to net zero, the Sustainability Appraisal as part of the emerging Local Plan evidence base considers climate adaptation but predominantly in relation to flood risk. Whilst in our experience, specific climate change risks and broader environmental, social and economic challenges local to the site options will be key to ensuring the future resilience of the new town proposals, there can and should be consideration of future climate risks to infrastructure within the site selection process.
- 4.1.2 The latest scientific evidence and industry guidance, including Met Office UK Climate Projections (UKCP18) data, IEMA and UKGBC guidance and the most recent Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6)<sup>5</sup> as well as the ongoing development of the third National Adaptation Programme (NAP3) by Defra have formed the basis of an assessment of future climate risk to infrastructure as relevant to the West End site options.
- 4.1.3 There are numerous infrastructure related climate risks and opportunities, identified by the IPCC, that can be considered at this stage to influence site selection for the new town. These include:
- Risks to infrastructure networks (water, energy, transport, ICT) from cascading failures
  - Risks to infrastructure services from river, surface water and groundwater flooding
  - Risks to bridges and pipelines from flooding and erosion
  - Risks to transport networks from slope and embankment failure
  - Risks to subterranean and surface infrastructure from subsidence
  - Risks to public water supplies from reduced water availability
  - Risks to energy, transport and digital services from high and low temperatures, high winds, lightning
- 4.1.4 This assessment remains independent to the findings of the Sustainability Appraisal as there is no site assessment information available yet from ED (due late September), which will add additional criteria on environmental constraints, utility/net zero carbon infrastructure and deliverability.
- 4.1.5 Current risks are considered under the appropriate sub-headings within Environmental Constraints work prepared by CBRE.
- ### 4.2 UK Climate Projections (UKCP)
- 4.2.1 The UK Climate Projections (UKCP) is a set of climate analysis tools and data forming part of the Met Office Hadley Centre Climate Programme that can be used to show how the UK climate may change and aid decision makers in assessing their exposure and vulnerability to future risk.
- 4.2.2 The latest probabilistic projections for the UK (included within the UKCP18 datasets) provide useful information on anticipated atmospheric conditions such as precipitation levels and air temperature and assess the broadest range of outcomes.

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<sup>5</sup> IPCC, 2021, Sixth Assessment Report, <https://www.ipcc.ch/report/ar6/wg1/>

- 4.2.3 Given it is not possible to exactly predict future global GHG emissions, the UKCP18 climate projections make assumptions about the economic, social and physical changes to our environment that will influence climate change and factor in uncertainty.
- 4.2.4 Representative Concentration Pathways (RCPs) are the established method for capturing those assumptions with a set of global emissions scenarios and are adopted by most climate change reporting and guidance documents. RCPs specify concentrations of greenhouse gases that will ultimately result in a change in global temperature as outlined in Table 8.

Table 9 - Representative Concentration Pathways

RCP	Change in temperature by 2081-2100 (°C)
RCP 2.6	1.6 (0.9-2.3)
RCP 4.5	2.4 (1.7-3.2)
RCP 6.0	2.8 (2.0-3.7)
RCP 8.5	4.3 (3.2-5.4)

- 4.2.5 Utilising the above RCPs, Met Office UK Climate Projection data (UKCP18) at regional resolution can be used to predict the likely effects of climate change which may have an impact upon the new town development proposals.

### 4.3 Assessment Methodology

- 4.3.1 Using UKCP18 data, potential future conditions have been established over the assumed construction period (2030-2049) and during occupation, well within the design life of the development (2080-2099) in the RCP 4.5 emissions and central probability (i.e. 50%) scenario.
- 4.3.2 Changes to summer and winter temperatures and precipitation levels within the South West are significant when compared to other regions, showing that after 2080, the new town could face an increase in summer mean temperatures of 3.5°C, that the change in winter precipitation is predicted to increase by 16% and that summer mean precipitation is predicted to reduce by 29% (see Table 9). In addition, extreme weather events are likely to be more common across the whole of the UK.
- 4.3.3 Based upon this, key climate drivers and physical risks for more detailed consideration across the site options are:
- **Drought:** reduced water availability, ground movement/subsidence, soil erosion and reduced ground permeability
  - **Heatwaves:** extreme or prolonged high temperatures, wildfires
  - **Extreme precipitation:** ground saturation [increased surface water runoff], soil erosion
  - **Storm events (high winds):** soil erosion

Table 10 - UKCP18 Projections (RCP 4.5, 50% probability)

Parameter	Projection (Construction)	Projection (Occupation)
Temperature	Increase in winter mean temperature of 1.0°C	Increase in winter mean temperature of 2.0°C
	Increase in summer mean temperature of 1.2°C	Increase in summer mean temperature of 3.5°C
	Increase in annual mean temperature of 1.0°C	Increase in annual mean temperature of 2.5°C
Rainfall	Increase in winter mean precipitation of 8%	Increase in winter mean precipitation of 16%
	Decrease in summer mean precipitation of 15%	Decrease in summer mean precipitation of 29%

4.3.4 Armed with this high-level climate risk data we have undertaken further desktop analysis across a number of areas to understand exposure and vulnerability and potential additional impacts to infrastructure beyond those caused by (though in some cases linked to) higher temperatures and changes in rainfall at the three site Options.

#### 4.4 Drought

##### *Water availability*

- 4.4.1 The South West Water (SWW) Drought Plan was updated in September 2022 and confirms that all three site Options sit within the Colliford Water Resource Zone (WRZ).
- 4.4.2 Within the SWW supply area, surface water abstraction dominates, with 90% of total abstraction being from rivers and reservoirs with a 50:50 split (accounting for some variation depending on the weather experienced). Groundwater abstraction accounts for the other 10% and these groundwater sources are more likely to be constrained by licence than water availability.
- 4.4.3 SWW operate a conjunctive use system with links between and within WRZs, which enables transfer of water from less stressed to more stressed areas and optimisation and use of existing resources prior to the need for drought management actions.
- 4.4.4 SWW also have a detailed Climate Adaptation Plan in place, published in December 2021 which highlights the following measures in response to risks to public supply as a result of drought and low river levels:
  - 50% leakage reduction plan
  - New resource development
  - Smart metering
  - Smarter operation
  - Helping customers to use less water



- 4.4.5 As detailed within the Utilities report with respect to potable water supply, SWW’s strategic team have been made aware of the proposals and have expressed their keenness to engage with EDDC on infrastructure upgrades. It is recommended that these discussions consider opportunities to action some of the above measures in tandem with the new town development.
- 4.4.6 Site Options One and Three may have increased opportunity for new ground water abstraction resource development. All Options may contribute to leakage reduction where the inclusion of new water supply infrastructure could also give rise to leakage detection and planning for repair activities.

*Ground movement/subsidence*

- 4.4.7 Subsidence can occur in any location, but certain soil types are more susceptible, including clay, silt, sand and gravel soils.

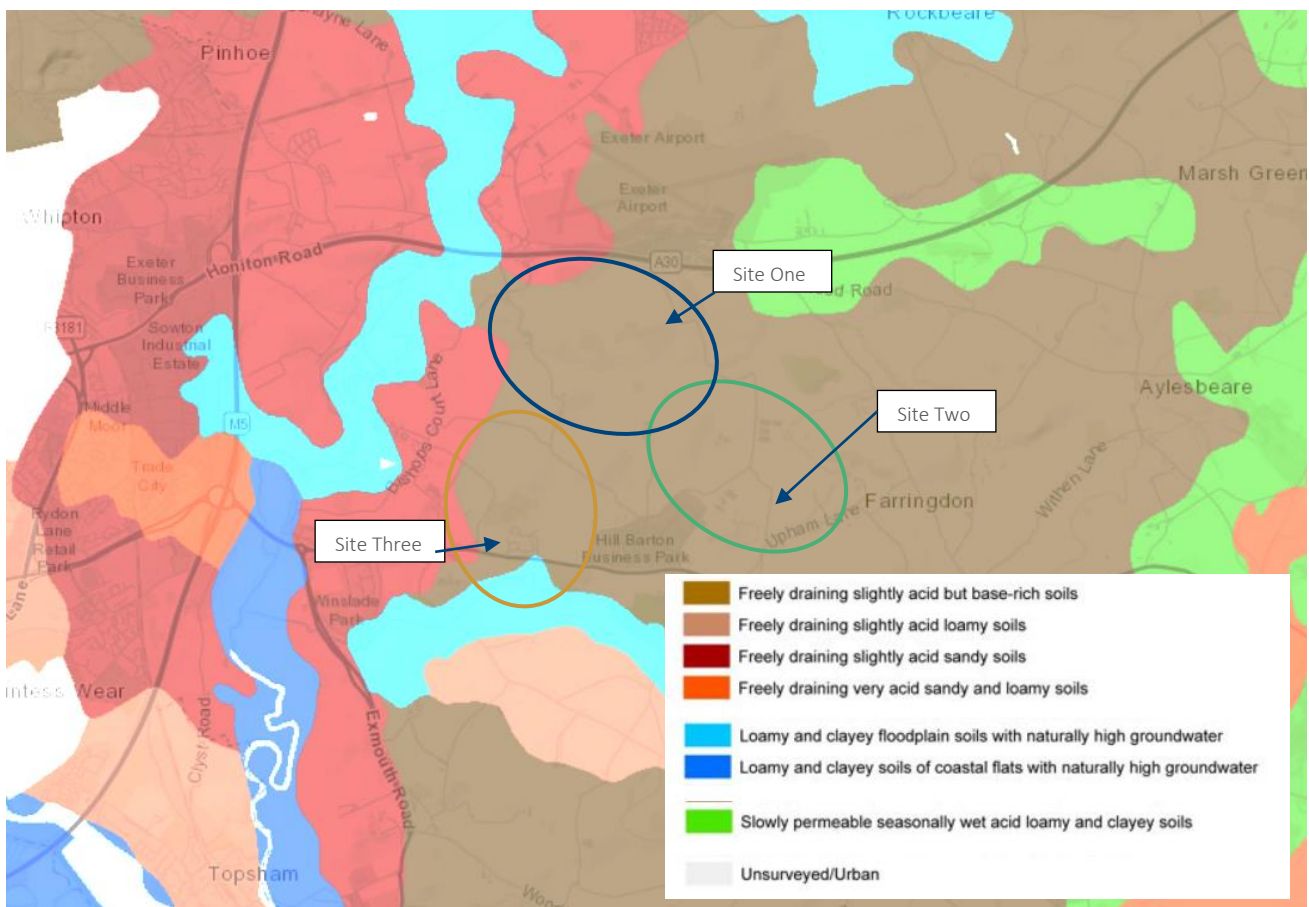


Figure 8 - extract from UK Soil Observatory Map, British Geological Society –Soilscapes for England and Wales

- 4.4.8 Clay and silt are ‘cohesive’ soils, which means that their volume will vary depending on their moisture content – they’ll swell when wet and shrink when dry. As many as 75% of UK ground subsidence cases are caused by soil shrinkage and as the UK climate warms, these soils will be more at risk of shrinkage.
- 4.4.9 Sand and gravel are non-cohesive soils, which means that they don’t vary in size depending on moisture content but can be washed away by water flow putting them at higher risk during periods of heavy rain or flooding, or if they are located near a body of water.

- 4.4.10 Figure 8 provides an indication of the soil types across site Options One to Three, utilising the UK Soil Observatory (UKSO) mapping from the British Geological Society. The underlying conditions of the sites are considered a strong indicator to determine their future vulnerability.
- 4.4.11 An initial assessment of ground permeability and saturation is also made based upon the UKSO mapping.
- 4.4.12 Option 3 contains the largest mix of soil types which may present additional challenges or require a variety of design approaches in terms of mitigating the effects of future climate change against subsidence that could impact subterranean and surface infrastructure.
- 4.4.13 All site Options would be likely to require further consideration of soil geology in order to ensure the delivery of climate resilient development.

*Soil erosion (water)*

- 4.4.14 The UKSO mapping includes information on water erosion risk to bare soil.
- 4.4.15 Figure 9 provides an indication of the risk across site Options One to Three. Whilst the future conditions at the new town are unlikely to be bare soil, this information is useful to determine the vulnerability of each site to this risk and potential impact upon the design and cost of key infrastructure such as roads.
- 4.4.16 Site Option One appears least favourable, given the presence of significant areas of moderate and high risk. Option Three is the least constrained from a soil erosion perspective.

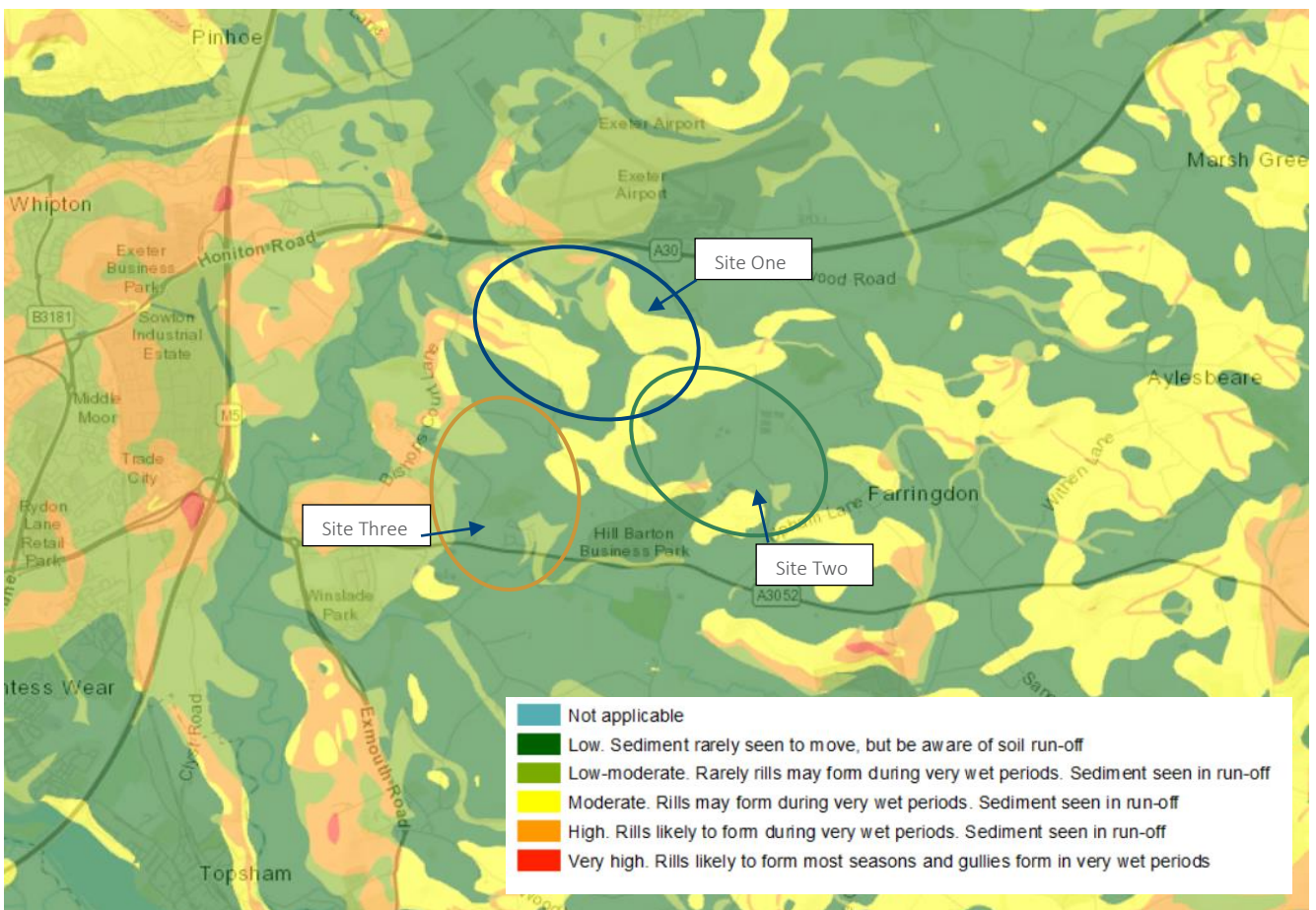


Figure 9 - UK Soil Observatory Map, British Geological Society – Bare soil water erosion risk

## 4.5 Heatwaves

### *Extreme or prolonged high temperatures*

- 4.5.1 Infrastructure operators are on the frontline of efforts to ensure we are resilient to extreme weather including extremes of temperature. The majority of Distribution Network Operators (DNOs) have well progressed adaptation plans in place or in preparation.
- 4.5.2 The WPD Climate Resilience Strategy has included an initiative to ensure that new overhead lines are designed to a higher temperature rating by specifying taller poles to allow for more conductor sag whilst maintaining clearance requirements.
- 4.5.3 An information request was submitted to WPD to obtain additional data on heat impacts to the WPD network to ensure detailed power network risks are identified and reviewed following site selection. This request has not yet been fulfilled.
- 4.5.4 Consideration should be given to on-site energy infrastructure such as batteries and energy compounds which may operate independently of the DNO. No further assessment has been undertaken in relation to the site options at this stage.

### *Wildfires*

- 4.5.5 In July 2022, the Devon and Somerset Fire and Rescue Services attended 322 fires in the open against a five-year average for July of 272. The risk of fires in the open is affected by the weather and the type of vegetation but are of note due to the potential severity of the impact to energy and transport infrastructure where they cannot be controlled.
- 4.5.6 No further assessment has been undertaken in relation to the site options at this stage.

## 4.6 Extreme Precipitation

### *Surface water*

- 4.6.1 Social flood risk at neighbourhood scale is a 'group' measure which incorporates the chance of flooding occurring in the floodplain (accounting for defences), the number of people living within the floodplain and the overall social vulnerability of the neighbourhood. A high score identifies neighbourhoods where large numbers of the most vulnerable people are exposed to flooding.
- 4.6.2 In the Climate Resilience Strategy published by Western Power Distribution (WPD) in June 2021, it is noted that predicted climate change impacts are an important consideration when planning new installations or safeguarding existing key equipment. The flood protection currently provided is designed to be resilient to the end of this century based upon current Environmental forecasting models.
- 4.6.3 When social flood risk index information is overlaid upon EA recorded flood outlines as in Figures 10 and 11, there is an indication that Option Three presents the greatest risk of increased future surface water impacts as a result of development where no mitigation is in place as a result of drainage infrastructure design.
- 4.6.4 Any potential interaction of surface water drainage, power distribution and access and movement strategies for the selected site must be a key consideration during the masterplanning activities to ensure that the site is not locked in to an approach that could cause cascading failures to infrastructure networks.



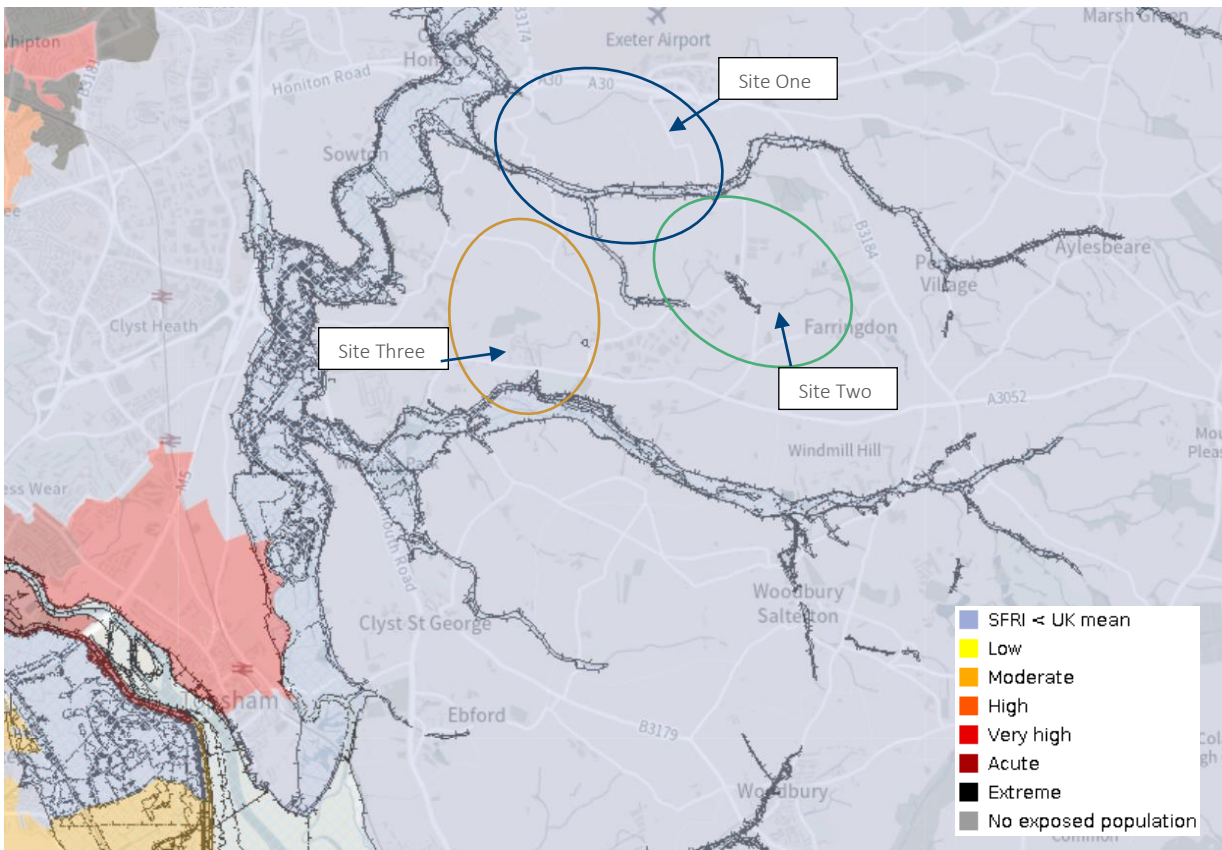


Figure 10 - Surface water (Group) Future 2050s 2°C scenario and EA recorded flood outlines

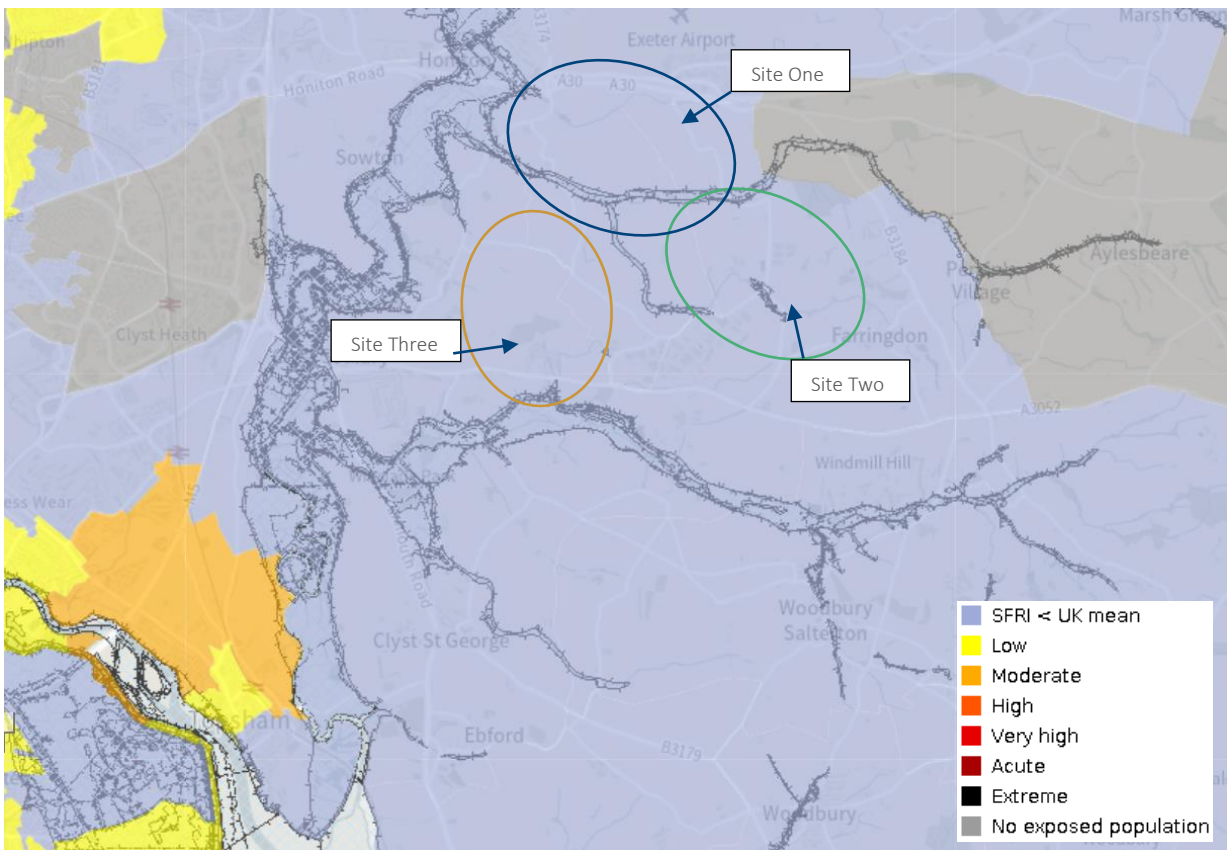


Figure 11 - River & Coastal (Group) Future 2050s 2°C scenario and EA recorded flood outlines



## 4.7 Storm events

### *High winds and lightning*

- 4.7.1 In the UK, most wind-driven rain is associated with winter storms and the intensity and frequency of these will increase which will in turn lead to an increased risk of wind driven rain.
- 4.7.2 Projections for wind-speed are less clearly defined within UKCP18 but an increase in wind-driven rain should be considered as this also increases the risk of water penetration of vertical structures.
- 4.7.3 An information request was submitted to WPD to obtain additional data on storm impacts to the WPD network to ensure detailed power network risks are identified and reviewed following site selection. This request has not yet been fulfilled.

### *Soil erosion (wind)*

- 4.7.4 The UKSO mapping includes information on wind erosion risk to bare soil.
- 4.7.5 Figure 12 provides an indication of the risk across site Options One to Three. Whilst the future conditions at the new town are unlikely to be bare soil, this information is useful to determine the vulnerability of each site to this risk and potential impact upon the design and cost of key site infrastructure.
- 4.7.6 Site Options One and Three are similarly affected by areas prone to soil wind erosion. Option Two is the least constrained from a wind soil erosion perspective.



Figure 12 UK Soil Observatory Map, British Geological Society – Bare soil wind erosion risk

## 4.8 Site Options Assessment of Key Climate Risks for Infrastructure

- 4.8.1 Any site Option which brings forward ground mount solar PV arrays at scale should consider any additional risk or additional drainage design mitigation to ensure future resilience against surface water runoff from the panels.
- 4.8.2 Based upon desktop analysis in sections 4.4-4.7, each site has been assessed qualitatively for its ability to respond to a variety of risks to infrastructure as a result of future climate change.
- 4.8.3 To quantify the assessment in relation to the site selection process, Table 7 shows a performance assessment of each site option against key considerations at site level where:
- Low exposure/vulnerability or high opportunity – 5
  - Low-medium exposure/vulnerability or medium-high opportunity - 4
  - **Medium** exposure/vulnerability or medium opportunity – 3
  - **Medium-high** exposure/vulnerability or low-medium opportunity -2
  - High exposure/vulnerability or low opportunity – 1
- 4.8.4 In terms of future climate risk for infrastructure, Option Two has been assessed as the best performing site option on the basis that it provides the highest overall level of resilience through lower exposure and/or vulnerability.

Table 11 – Site Options performance assessment against future climate risks

Future Climate Risk	Key Considerations for Infrastructure	Option One	Option Two	Option Three
<b>Drought</b>	water availability	4	3	4
	ground movement/ subsidence	3	4	2
	soil erosion (water)	2	3	5
	ground permeability	3	4	2
<b>Heatwaves</b>	extreme or prolonged high temperatures	not assessed	not assessed	not assessed
	wildfires	not assessed	not assessed	not assessed
<b>Extreme precipitation</b>	surface water	2	3	2
	Ground saturation	3	4	2
<b>Storm events</b>	high winds	not assessed	not assessed	not assessed
	Soil erosion (wind)	2	3	2
<b>Overall (/35)</b>		<b>19</b>	<b>24</b>	<b>19</b>

## 5. CONCLUSION AND NEXT STEPS

5.1.1 The EDDC new town will be shaped by a vision which places an emphasis on net zero and climate resilience, in line with emerging Local Plan objectives. This report explores the opportunities and constraints at each potential location to provide an overview of potential contribution to net zero and highlight any future climate risks which may impact the technical or commercial viability of the new town from an infrastructure perspective.

### Contribution to Net Zero

5.1.2 The three option sites have been analysed based on three categories; network capacity for generation (export), low or zero carbon technologies and energy storage. The outcome of the scored assessment is provided in Table below.

Table 12 - Contribution to Net Zero site performance summary

Assessment Category	Option 1	Option 2	Option 3
Network Capacity (Generation)	2	2	2
Low or Zero Carbon Energy Technologies	5	2	4
Energy Storage	3	3	3
Overall (/15)	10	7	9

5.1.3 Options One and Three both perform strongly in relation to low and zero carbon energy technologies, with Option One performing marginally better. Option Two would require the greatest level of intervention, and in our assessment provides the lowest opportunity to contribute to net zero.

5.1.4 A number of recommendations are made throughout the section for further work, much of which is more appropriate to undertake in alignment with the masterplanning process.

### Future Climate Risk

5.1.5 The desktop assessment highlights the need for EDDC to ensure strategic dialogue is continued with site developers, land owners, statutory organisations and utilities providers so that appropriate climate mitigation and adaptation measures are considered early in the design and development stage to reduce exposure to future risk.

5.1.6 In terms of future climate risk for infrastructure, Option Two has been assessed as the best performing site option on the basis that it provides the highest overall level of resilience through lower exposure and/or vulnerability.



- 5.1.7 As further detail or a preferred site option emerges, key questions should be asked by EDDC to ensure that the climate resilient vision is maintained:
- *Is the proposed infrastructure/utilities being built to withstand the projected future climate expected in the development's lifetime?*
  - *Is the proposed infrastructure/utilities exacerbating any current identified risk within the region?*
  - *Will the proposed infrastructure/utilities increase other risks (e.g. increase the risk of flooding due to changes in the landscape, or increased non-permeable surfaces etc.)*
  - *Are synergies between both mitigation and adaptation objectives being considered with sufficient weight given to climate adaptation alongside the net zero target?*

Report to: Strategic Planning Committee



Date of Meeting 5 December 2023

Document classification: Part A Public Document

Exemption applied: None

Review date for release N/A

## Joint Strategy for East Devon, Exeter, Mid Devon and Teignbridge

### Report summary:

A joint strategy covering the local authority areas of East Devon, Exeter, Mid Devon and Teignbridge has been prepared following resolutions to undertake this work by the partner authorities in 2021. The strategy is intended to document the key shared issues which we are working together on. It seeks to help to address the requirements of the duty to co-operate but also to stand as a document that can be issued to illustrate to other organisations and to government the on-going joint working between the authorities to support funding bids and other work.

Members are asked approve the joint strategy.

### Is the proposed decision in accordance with:

Budget Yes  No

Policy Framework Yes  No

### Recommendation:

That Strategic Planning Committee approves the Joint Strategy (Appendix 1) subject to this being agreed by the partner authorities, with delegated authority given to the Assistant Director Planning Strategy and Development Management in consultation with the Portfolio Holder Strategic Planning to make any amendments arising from the resolution of the other authorities provided these do not materially alter the content of the document.

### Reason for recommendation:

To enable the prepared joint strategy to be recognised as an agreed statement of joint ambitions that the partner authorities are working together to achieve.

Officer: Ed Freeman – Assistant Director Planning Strategy and Development Management

Portfolio(s) (check which apply):

- Climate Action and Emergency Response
- Coast, Country and Environment
- Council and Corporate Co-ordination
- Communications and Democracy
- Economy
- Finance and Assets
- Strategic Planning
- Sustainable Homes and Communities

Culture, Leisure, Sport and Tourism

**Equalities impact** Low Impact

**Climate change** Medium Impact

The Joint Strategy includes shared ambitions to help mitigate the effects of and adapt to climate change and move towards a net zero carbon future.

Climate change mitigation and adaptation should form a key part of joint planning work. By its nature, climate change cannot be addressed by one authority working in isolation. Measures to tackle climate change also need to acknowledge cross- boundary transport movements and other strategic matters. The Joint Strategy supports the Devon Carbon Plan and considers the carbon emissions and climate change impacts of development and transport over a wider area than just Mid Devon. Because of this, the Joint Strategy can be more beneficial to climate change policy compared with seeking to achieve carbon neutrality in just one district

**Risk:** Low Risk;

The Joint Strategy has been jointly prepared by four authorities, with support from Devon County Council. This means that Committee decisions will be required from the four authorities at similar times to enable the Joint Strategy to be adopted across the Exeter, East Devon Mid Devon and Teignbridge area. There is a risk that one or more of the authorities does not approve the Joint Strategy. To help avoid this eventuality, officers have been working with their relevant Cabinet Members / Portfolio Holders to discuss the Joint Strategy's content and intended purpose and the decision making pathway for its adoption.

A risk of not adopting the Joint Strategy is that the Council will be without a jointly agreed document with other Councils that will be capable of being used to demonstrate continued collaborative working and shared ambitions across a range of strategic priorities and for the delivery of infrastructure. This may be to detriment of seeking to secure funding for infrastructure projects from Government and other potential sources.

**Links to background information** [Agenda item - Joint Strategy for East Devon, Exeter, Mid Devon and Teignbridge - East Devon; Agenda for Cabinet on Wednesday, 14th July, 2021, 6.00 pm - East Devon; Agenda for Council on Tuesday, 27th July, 2021, 6.00 pm - East Devon](#)

**Link to [Council Plan](#)**

Priorities (check which apply)

- Better homes and communities for all
- A greener East Devon
- A resilient economy

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## **1.0 About the Joint the Strategy**

- 1.1 Consultants LDA Design have prepared a non-statutory Joint Strategy, called 'Our Shared Coordinates', following instruction from East Devon, Exeter City, Mid Devon and Teignbridge district Councils and which has been supported by Devon County Council. This has followed decisions taken by each Council's respective committee(s) in the summer / autumn of 2021, which gave approval for the preparation of a Joint Strategy for the planning administrative areas of the four authorities. Strategic Planning Committee originally

recommended that the council prepare the joint strategy at their meeting on 22<sup>nd</sup> June 2021 and this recommendation was subsequently agreed by Cabinet at their meeting on the 14<sup>th</sup> July 2021 and Council on the 27<sup>th</sup> July 2021. Subsequent reports document the challenges of resourcing this work which led to consultants being appointed to undertake this work in July 2022.

- 1.2 The Joint Strategy reflects the ambitions and proposals of existing and emerging Local Plans. It sets out shared ambitions across a range of strategic planning matters across the four local authority planning areas, together with a high-level list of infrastructure matters that have cross-boundary significance for supporting the delivery of planned new homes, jobs, services, transport and other development.
- 1.3 Approval of the Joint Strategy will demonstrate the commitment to ongoing joint working across the area on strategic matters. This will help to show the Council's compliance with the duty to cooperate, which is a requirement of preparing planning policy. Preparing the joint strategy will therefore support the preparation of the new East Devon Local Plan.
- 1.4 Exeter City Council, East Devon and Teignbridge District Councils are taking equivalent reports through their committee processes in late 2023.

## **2.0 The purpose and content of the Joint Strategy**

2.1 The purpose of the Joint Strategy is to:

- Demonstrate the joined-up strategy and policy approach the Councils have taken across the functional area.
- Articulate the clear benefits of working together as a cohesive area to address strategic opportunities and challenges.
- Serve as the starting point for identifying key strategic infrastructure and funding challenges.
- Provide a framework for more wider collaboration with key stakeholders who are central to the spatial place-making agenda in the area

2.2 The Joint Strategy will benefit the four Councils through helping to establish a recognisable 'brand' and serve as a prospectus for the area, which may assist when making bids for Government (or other) infrastructure and delivery funding.

2.3 The Joint Strategy is a prospectus-style document, which includes a 'Vision', a 'spatial strategy' and an ambition to position the area as one of the best places to live and work in the UK. In order to achieve this ambition, the Joint Strategy identifies six 'shared coordinates' for delivering sustainable growth which responds to the area's strategic challenges and opportunities:

- Net Zero
- Quality Places
- Jobs and Prosperity
- Nature
- Homes
- Connectivity



2.4 Each of the six shared coordinates are explained in their respective chapters, together with references to initiatives for each that are supported through existing and emerging Local Plans. The Joint Strategy is not a development plan document, and as such does not set policies for the development and use of land and buildings, or include site allocations for development. It will not be used as a decision making tool for planning applications. This will be the role of Local Plans prepared by the four authorities and neighbourhood plans prepared by local communities.

2.5 The importance of investment in infrastructure (such as transport, green infrastructure, utilities and health care) to support growth is a cross cutting theme throughout the document. To this end the Joint Strategy includes a high level list of strategic infrastructure matters that have cross boundary significance, where the four authorities will continue to work in partnership and with Government agencies, transport and utilities providers to secure funding and investment. These infrastructure themes are:

- SANGS (Suitable Alternative Natural Green Space) and nature recovery network provision.
- Strategic waste water and water supply improvements
- Strategic energy grid improvements for import, export and distribution.
- District heating investments and renewable energy projects.
- Education improvements-primary, secondary, further, higher and special educational needs.
- Strategic healthcare provision.
- New railway stations and line improvements.
- Strategic active travel routes and trails.
- Improvements to the Strategic Road Network
- Multi-modal Exeter transport package.

More detail about infrastructure matters can be included in each authority's Infrastructure Funding Statements and Infrastructure Delivery Plans.

2.6 The Joint Strategy will be capable of being updated overtime, including its high-level list of infrastructure matters.

### **3.0 Stakeholder engagement**

3.1 The Joint Strategy (**Appendix 1**) has been subject to a focused consultation with identified key stakeholders. The focused consultation with key stakeholders has served to raise awareness of the Joint Strategy and its intended purpose. Key stakeholders have included:

- Natural England
- Historic England
- Environment Agency
- National Health Service

- South West Water
- National Grid
- Western Power (now National Grid Electricity Distribution)
- Network Rail
- National Highways
- Active Travel England
- Devon County Council (as Local Education Authority, Local Transport Authority, and Minerals and Waste Planning Authority)
- Devon Housing Commission
- Heart of South West Local Enterprise Partnership
- Blackdown Hills AONB Partnership
- East Devon AONB Partnership

3.2 Comments have been received from 11 of the key stakeholders consulted. These comments are detailed in **Appendix 2**, together with responses to these and changes made to the Joint Strategy where it has been agreed these are necessary.

3.3 The Joint Strategy has not been subject to a public consultation since it is a non-statutory document and it does not introduce new policy or alter the content of existing and emerging Local Plans, which have themselves already been subject to public consultations at key stages in their preparation and also, in some cases, independent examinations.

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**Financial implications:**

No direct financial implications.

**Legal implications:**

The legal implications are set out in the report.

# Our Shared Coordinates

A joint strategy for East Devon, Exeter, Mid Devon and Teignbridge

Draft November 2023



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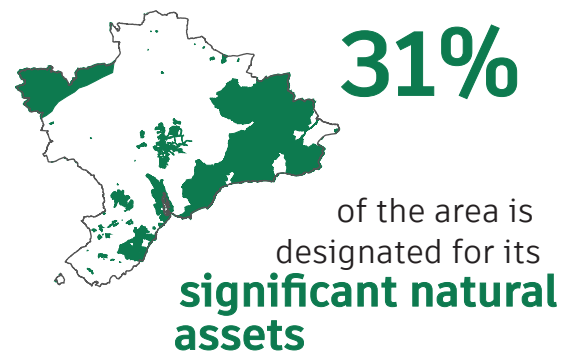
In partnership with



# An exceptional place

The strengths of our unique area are built on its exceptional living environment offering a connected network of a thriving city, characterful towns and picturesque villages set within some of the best natural environments in the country. In a world that places an ever-greater premium on quality of life, the attractive natural assets, character of the area, and the significant economic opportunities are becoming its greatest competitive advantage. The remarkable growth, investment, and cultural development we have seen in recent years' shows how powerful and compelling our area's offer already is.

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The historic city of Exeter lies at the heart of our area, acting as the driver for economic growth and the retail and cultural hub for the surrounding districts. Its world-renowned university has helped catalyse a fast-growing knowledge-based economy, which is helping to raise prosperity and boost graduate retention.

**Exeter**  
is forecast to be the



UK city for GVA growth in 2023

and grow with up to

**21,000**

new jobs between 2020 & 2040



Exeter is linked by road and rail to a network of historic market and coastal towns, many of which are important economic hubs in their own right. Together the city, towns and villages operate as one single functional area for housing, economy and travel.

The attractive living environment makes our area a magnet for relocators looking for a better quality of life, business investors and tourists. Such is the attractiveness of the area that the resident population (approx. 500k people) is forecast to increase by 8.5% over the next decade, compared to just 4% across England as a whole.







**NORTH DEVON  
BIOSPHERE  
RESERVE**

EGGSFORD  
FOREST

**EXE  
VALLEY**

KNIGHTSHAYES  
COURT

GRAND  
WESTERN  
CANAL

CULM  
VALLEY

**BLACKDOWN HILLS**  
AREA OF OUTSTANDING  
NATURAL BEAUTY

HEMBURY  
FORT

SHOBROOKE  
PARK

RADDON  
HILLS

KILLERTON

ASHCLYST  
FOREST

**EAST DEVON**  
AREA OF OUTSTANDING  
NATURAL BEAUTY

UNIVERSITY  
OF EXETER

CLYST  
VALLEY  
REGIONAL  
PARK

PEBBLEBED  
HEATHS

**THE JURASSIC COAST**

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CASTLE  
DROGO

**TEIGN  
VALLEY**

**HALDON  
HILLS**

WOODBURY  
COMMON

**DARTMOOR**

PARKE

STOVER  
COUNTRY  
PARK

ASHCOMBE  
FOREST

DAWLISH  
WARREN

THE SW COAST PATH

As we plan to meet economic, social and environmental needs, we must make sure that the area holds on to the distinctive qualities that are its greatest assets for success. Our strengths and opportunities are significant and should act as a catalyst for future sustainable growth and support the differentiation of our area as a place to invest and live.



Change does bring challenge though and we need to address these to achieve sustainable growth that ensures our area remains successful:



**Infrastructure** – sustainable growth cannot be achieved without significant investment in infrastructure that simultaneously helps us address all the challenges below.



**Climate change** – reducing our carbon emissions and adapting to the impacts already locked into our climate requires urgent action utilising innovative and radical solutions.



**Economy** – whilst employment levels are high, wages are lower than national average and we need to shift towards a more diverse, knowledge-based economy to boost prosperity.



**Transport** – the rural nature of much of the area means that many residents rely on private motor vehicles. We need to transition to more sustainable connectivity to reduce carbon emissions and congestion whilst enabling healthier lives.



**Nature recovery** – our wildlife habitats are largely disconnected and have been damaged by human activity, and they require urgent action to be protected and enhanced.



**Housing affordability** – average house prices are over 10 times average earnings, making them unaffordable for many local people.



**Ageing population** – parts of the area have a significantly higher percentage of over 65-year olds compared to the national average which is projected to increase. We need to ensure we can both accommodate this trend, whilst attracting and retaining younger working people.



**Landscape and heritage** – accommodating growth within a high quality built and natural environment

**'Shared coordinates'** represents the ambitious commitments of East Devon, Exeter, Mid Devon and Teignbridge to ensure that the area develops as a prosperous, resilient and innovative economy and an unbeatable place to live, work and visit, which retains its competitive edge to attract investment. The purpose of this document is to:

- Demonstrate the joined-up strategy and policy approach the Councils have taken across the functional area.
- Articulate the clear benefits of working together as a cohesive area to address strategic opportunities and challenges.
- Serve as the starting point for identifying key strategic infrastructure and funding challenges.
- Provide a framework for more wider collaboration with key stakeholders who are central to the spatial place-making agenda in the area.

This document reflects the ambitions and proposals of existing and emerging Local Plans. However it is not a statutory plan nor a decision-making tool for development management purposes. Our vision and six coordinates on the following pages set out the direction of travel which will influence how we respond to our shared strategic opportunities and challenges.

# Our Vision

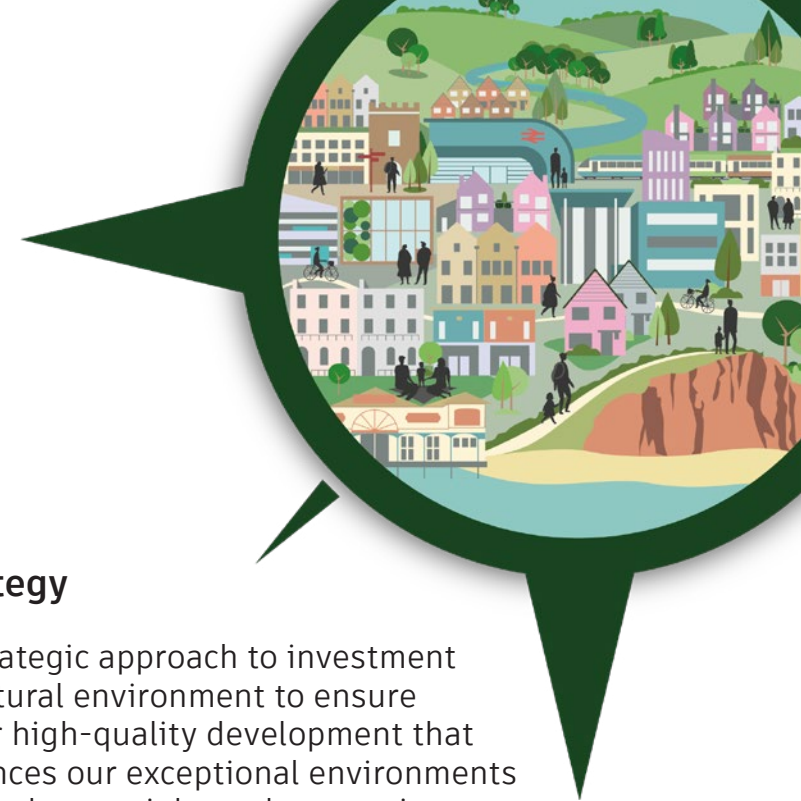
*In 2040 we are a sustainable and prosperous area of distinct and well-connected regional capital, urban and rural communities.*

*Our local economy is carbon neutral and attracts investment, clean growth and innovative businesses.*

*We invest in our citizens, celebrate the area's beauty and heritage, and continue to work together for mutual long-term benefit.*

*We fully utilise our unique southwestern city-town-country-coast environment and our growing academic and skills base for smart growth.*

*We enable prosperous and healthy lives through high quality homes, jobs and more self-sufficient communities with direct access to nature and a reliable, sustainable transport and communications network.*








## Our spatial strategy

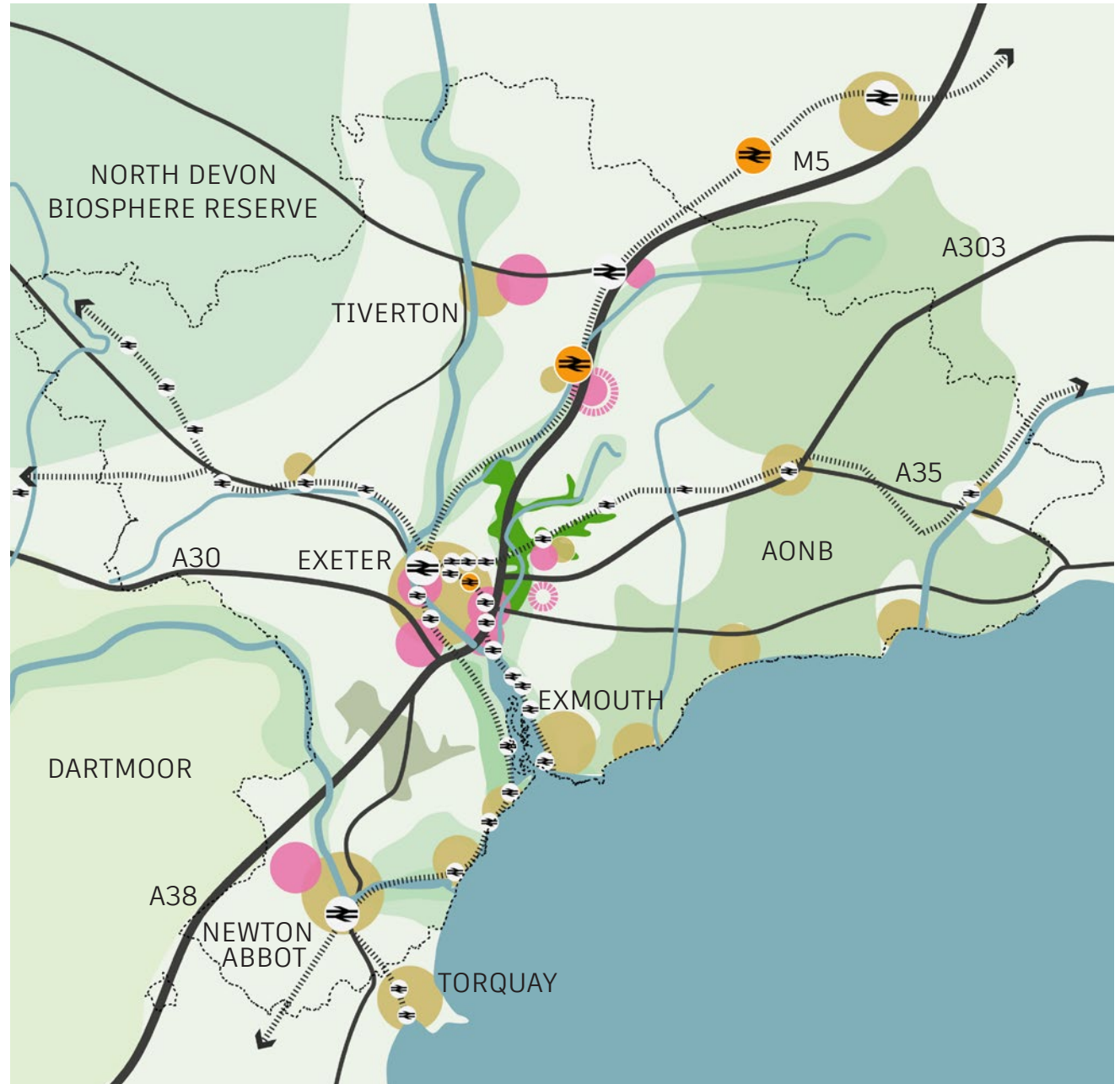
We are taking a strategic approach to investment in our built and natural environment to ensure that we can deliver high-quality development that protects and enhances our exceptional environments whilst providing the homes, jobs and prosperity our communities need. This is why our ambitious spatial strategy concentrates large scale new development around strategic growth areas in the most sustainable locations. It combines significant brownfield development with providing large scale new communities that together can drive transformative benefits for the whole area.

The strategic growth areas will enable us to capitalise on and invest to improve existing connectivity networks to shift towards a low carbon, cleaner and healthier way of moving around. They also allow us to take a strategic approach to invest in nature recovery and better access to nature whilst avoiding development in our most special landscapes. And they enable us to unlock brownfield growth and investment in existing settlements alongside new settlements to support more self-sufficient, resilient and thriving communities.

Exeter is the regional capital and acts as the engine for growth of our dynamic and diverse urban and rural area. As Exeter becomes more successful, the potential to extend this success to settlements in its travel to work area is considerable. Therefore, we have located strategic growth across our area where it can support investment in our important market towns alongside the growth of Exeter.

- Brownfield development in Exeter near the City Centre and along the River Exe
- New and expanded settlements on the edge or near Exeter
- The Newton Abbot and Kingsteignton Garden Community
- The northern gateway: The Culm Garden Village. Tiverton urban extension and M5 Junction 27

- Existing settlements 
- Major growth areas 
- Potential major growth areas 
- Existing train stations 
- Potential/planned new train stations 





# Our shared coordinates

Our ambition is to position our area as one of the best places to live and work in the UK, creating jobs and opportunities that raise our resident's quality of life whilst protecting and enhancing our unique natural environment for generations to come. Part of the strategic response to the long-term growth of our sub-regional economy entails rebalancing housing and employment growth towards brownfield regeneration opportunities in Exeter alongside strengthening existing communities and creating new neighbourhoods in sustainable locations. A focus on higher density living in mixed use and walkable neighbourhoods close to existing public transport nodes and city/town centre jobs and services, is an essential component of a low carbon and successful economy.

In order to achieve our ambition, we have identified 6 shared coordinates for delivering sustainable growth which responds to our areas strategic challenges and opportunities. The importance of investment in infrastructure (such as transport, green infrastructure, utilities and health care) to support growth, is a cross-cutting theme throughout the document.



Net Zero



Quality Places



Jobs & Prosperity



Nature



Homes



Connectivity



# Net zero



# Net-zero

**We will act on climate change by working to achieve a net zero carbon future, whilst devising and implementing appropriate responses to help communities adapt to its impacts**



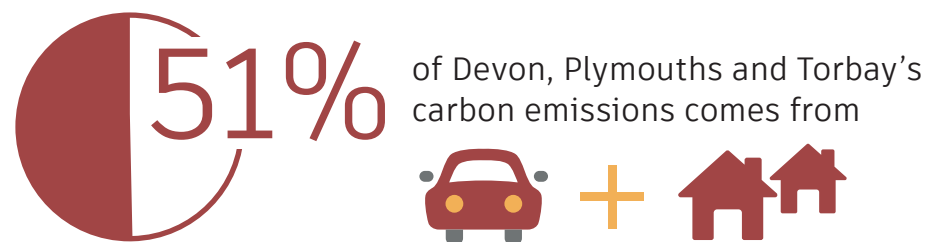
Our area has the largest concentration of climate change expertise in the UK, making us uniquely positioned to become a global leader in responding to the challenges. The establishment of the Joint Centre of Excellence in Environmental Intelligence, a research collaboration between the University of Exeter and the Met Office, will help to reinforce this position.

Spatial planning has a clear role to play in shifting society towards net zero living whilst also making our communities more resilient to the impacts of climate change. This role ranges from identifying sustainable locations for growth that enable low carbon transport and low carbon utilities, through to securing net zero standards in the design of buildings. Linked to this, our rural areas will be supported to provide the resources and ecosystem services needed for our larger urban areas.

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Transitioning to net zero\* has implications for everything we do. It provides one of the greatest opportunities of our time to achieve clean and inclusive growth and has the potential to support the creation of thousands of new jobs locally. We are committed to achieving net zero ahead of the 2050 national target and have signed up to the Devon Carbon Plan which sets out our approach to achieving this by:

- Using less energy by making it easy to drive less and delivering more energy efficient buildings;
- Shifting to renewable energy to reduce harmful emissions and boost our energy security;
- Developing a resilient local, circular economy using resources wisely and reducing waste; and
- Maximising natural carbon storage and solar and temperature regulation through interventions such as tree planting and habitat restoration.



Source: Devon Carbon Plan

Through our Local Plans we will encourage renewable energy installations where it is acceptable to do so. We will also require a Carbon Statement is submitted with planning applications for residential and commercial developments outlining how the proposals are designed; will be constructed; and will perform to deliver carbon neutrality. More fundamentally, the spatial strategy for the area, as being set out in Local Plans, will have a significant impact on minimising carbon emissions.

## What we are doing

Across the area we continue to pioneer approaches to zero and low carbon design that demonstrate the latest in innovation and technology, setting the benchmarks that we encourage developers and others to follow. Such initiatives include the delivery of:

- Much of our housing requirement on brownfield sites in highly accessible locations for active travel and public transport;
- Low carbon district heating systems serving homes and workplaces in Monkerton, Cranbrook, Exeter Science Park and Skypark;
- An Energy from Waste Facility in Marsh Barton, which is supplying electricity nationally whilst avoiding waste going to landfill. It is also set up to provide district heating for future developments nearby;
- Hybrid electric demonstration flights launched from Exeter Airport. This forms part of the airport's ambition to act as a test bed and transition to low carbon aviation; and
- Passivhaus homes in Exeter, which are helping to cut carbon emissions in the city while reducing fuel poverty for residents.
- Piloting carbon neutral modular homes – including 6 social rented units at Shapland Place, Tiverton.
- In Exeter a smart grid and storage project of 3,700 solar panels is powering the City Council's electric vehicle fleet, recycling centre and offices with green energy.

## St.Sidwell's Point

St.Sidwell's Point, the UK's first passivhaus leisure centre and one of only a handful worldwide, opened to the public in April 2022. It is one of the most sustainable leisure centres ever constructed. Situated in the heart of Exeter, this landmark new building represents a key milestone in the Council's ambition to create a net zero carbon city while supporting the physical activity, health and well-being of its residents.

**The building has been designed to be highly energy efficient and climate resilient to 2080.**







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# Jobs & prosperity



# Jobs & prosperity



**We will protect and create the conditions for high-value, well paid jobs and a clean, diverse and thriving local economy**



page 604

Our area is experiencing fast employment growth, current predictions are for around 35,000 new jobs between now and 2040. This is driven largely by the emergence of more knowledge-based sectors. This is particularly apparent in the numbers of spin out businesses linked to the University of Exeter's specialisms in applied environmental science, digital innovation, data analytics and high-performance computing. Given Exeter's strong research, education institutions and growing innovation ecosystem, the rapid expansion of the knowledge economy will continue.

Across our area there is a shared ambition to boost prosperity by supporting higher value jobs. We want to make sure that these jobs are accessible to local people whilst also attracting new talent to the area. This requires a skills and education infrastructure that is fully aware of, and responsive to, the needs of growth sectors, particularly in the delivery of science, technology, engineering, maths and medicine (STEMM) subjects, whilst also supporting health, social care, farming and tourism.

Our area is large and diverse geographically, and yet functions as a coherent economic unit. There is a significant opportunity to ensure that the benefits of growth in and around Exeter are shared across our whole area, To ensure our towns, villages and coastal and rural areas can thrive. This will include:

- regeneration of our town centres to suit changing consumer behaviour and spending patterns;
- farmers to continue their key role as custodians of the natural environment providing locally produced food, whilst encouraging diversification where this helps to protect and enhance the landscape and support the local economy; and
- higher-value, year-round and green tourism offer that helps boost the resilience of rural and coastal communities.

## What we are doing

We are working across the area and with a range of partners to deliver against our economic development objectives.

Examples of our work include:

- Our strategic employment allocations at Exeter Science Park and Skypark (part of the Exeter and East Devon Enterprise zone), are fostering growth in new and emerging employment sectors;
- Our economic development teams have worked with the Heart of the South West Local Enterprise Partnership (LEP) and continue to work with Exeter University, our Regional Growth Hub and other partners to deliver advice, training, research and development and innovation support to start up and existing businesses to enable them to scale and grow;
- We are providing residents with the opportunity to develop the skills that our growth sectors will require going forward. One example of this is the Future Skills Centre, operated by Exeter College, which offers training and education opportunities in future-facing high-tech jobs in engineering, digital, construction and clean growth;
- We are undertaking masterplanning exercises with local residents and businesses in communities across our area to explore how our town centres can adapt to changing needs and behaviours, including allowing for a more diverse range of uses and more pedestrian friendly environments.
- Supporting a prosperous economy at smaller centres and in the rural areas. This includes sponsoring the annual Taste East Devon Festival, celebrating our amazing locally produced artisan food.

## Exeter Science Park

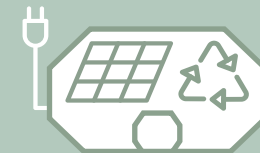
Exeter Science Park is the South West's centre for STEM sectors, a nationally and globally significant location for incubation and grow-on space for businesses, research and academia.

**In 2035 the ambition is to be home to 3,500+ people working for companies with a combined turnover of £350+ million**

The Science Park is also home to the Met Office's new supercomputer which enables unrivalled expertise in climate modelling and weather forecasting. The supercomputer is a catalyst for growth in our area, supporting collaboration and partnerships between science, business and academia.



Home to the UK's most powerful supercomputer



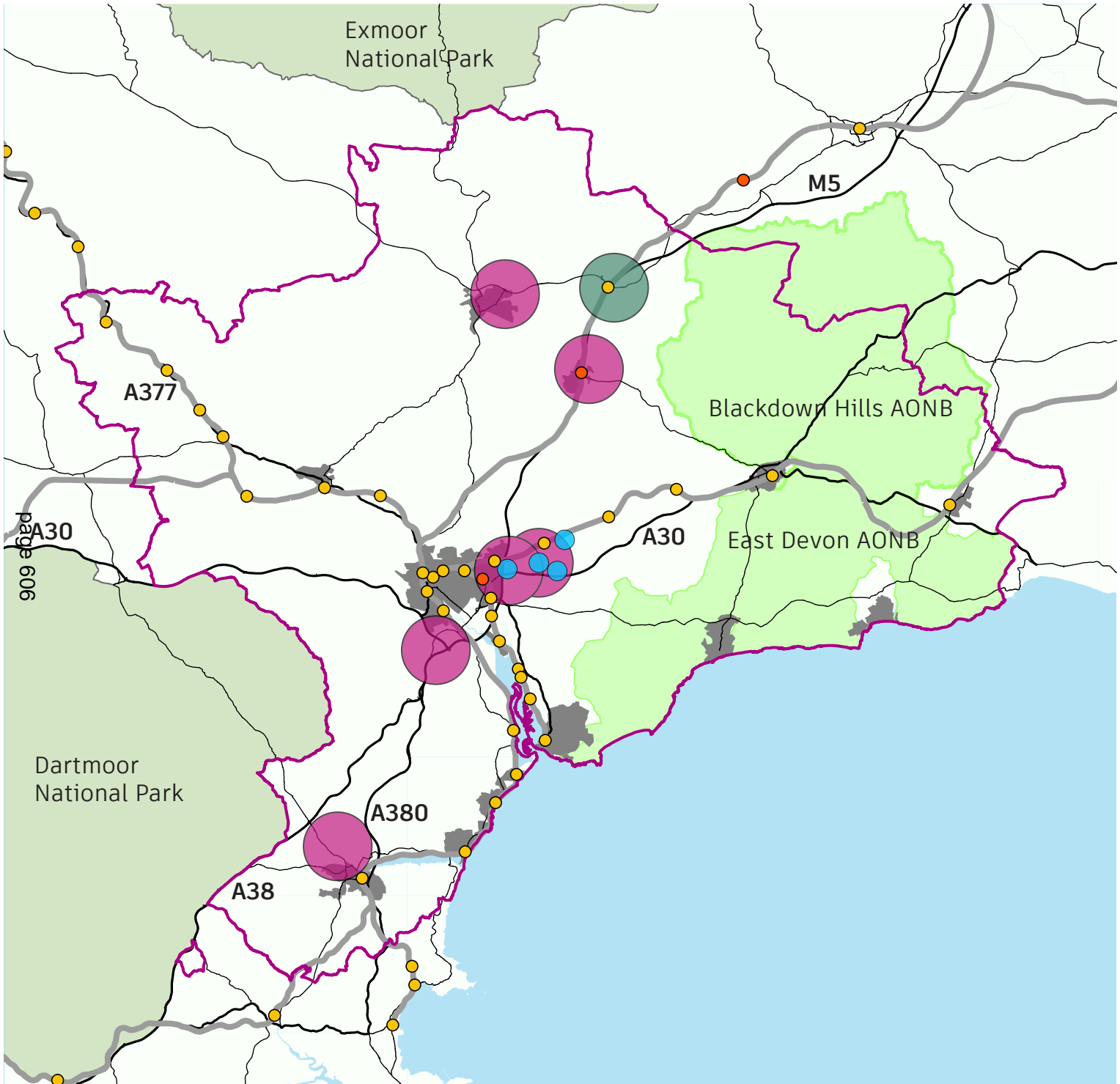
Two innovative Net Zero Carbon buildings completed



# Jobs & Prosperity Plan

## Legend

-  The Area
-  Major tourism opportunity
-  Strategic employment sites
-  Sites within Enterprise Zone
-  Area of Outstanding Natural Beauty (AONB)
-  National Parks
-  Major settlements
-  Major roads
-  Railway
-  Existing train stations
-  Planned train stations



Sources: Ordnance Survey (0100031673), Natural England





page 607

# Homes



# Homes



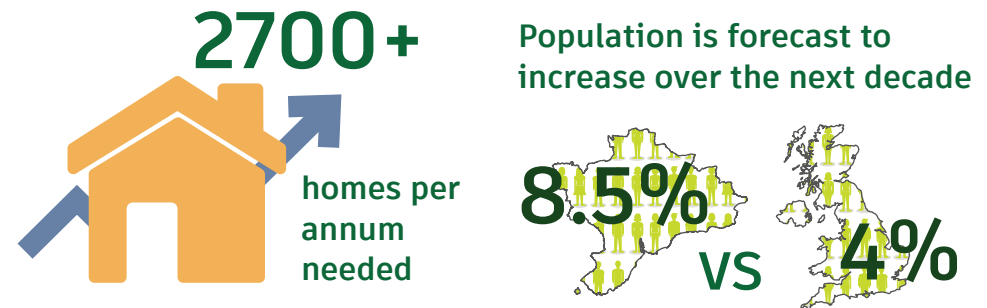
We will support a diverse range of high-quality, affordable homes in the most sustainable locations which meets ambitious national housing targets and the needs of local communities, and attracts the workforce we need for the future.

Our area has got an exceptional diversity of places to live, from apartments and townhouses in a vibrant city or town to homes in picturesque villages, all with easy access to nature. As the area grows, it is important that these unique qualities act as catalysts for successful growth that both deliver the new homes needed whilst creating beautiful places where people want to live.

Our spatial strategy is clear: we are committed to locating homes in well-connected, sustainable locations where they can support our net zero transition, deliver key infrastructure, help to protect and enhance our most valuable environments and support healthy, thriving local communities. Our new homes need to be supported by the right type of infrastructure, including transport, utilities, flood resilience, sustainable water management, healthcare and recreation, and we will set out strategic priorities and seek targeted investment and funding to ensure we can meet our high ambition.

Our strategic housing growth areas are:

- Brownfield development in Exeter
- New and expanded settlements near Exeter
- Newton Abbot and Kingsteignton Garden Community
- The northern gateway: The Culm Garden Village and Tiverton urban extension

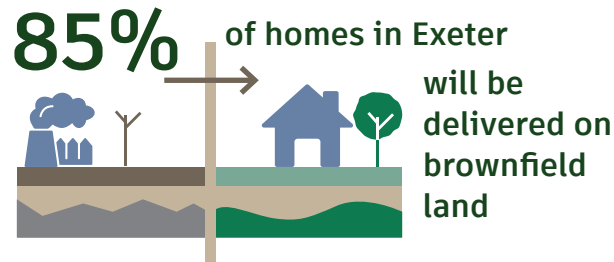


We will support delivery methods which can provide more and a wider variety of higher quality affordable homes as well as providing a more diverse range of homes and improved choice which meets the needs of local communities. This includes:

- encouraging SME developers to supply a larger proportion of homes within the area and promoting employment and skills plans;
- policies which require affordable homes, accessible homes and self-build and custom-build homes;
- higher density, higher quality living including co-living and student housing;
- support for housing to meet special needs and new gypsy and traveller accommodation;
- support for modern methods of construction; and
- local authority interventions to directly deliver homes.

## What we are doing:

We have been hugely successful in securing funding for several new Garden Communities including the Culm Garden Village proposal, Liveable Exeter Garden City and Newton Abbot & Kingsteignton Garden Community. Together these will deliver approximately 22,400 homes.



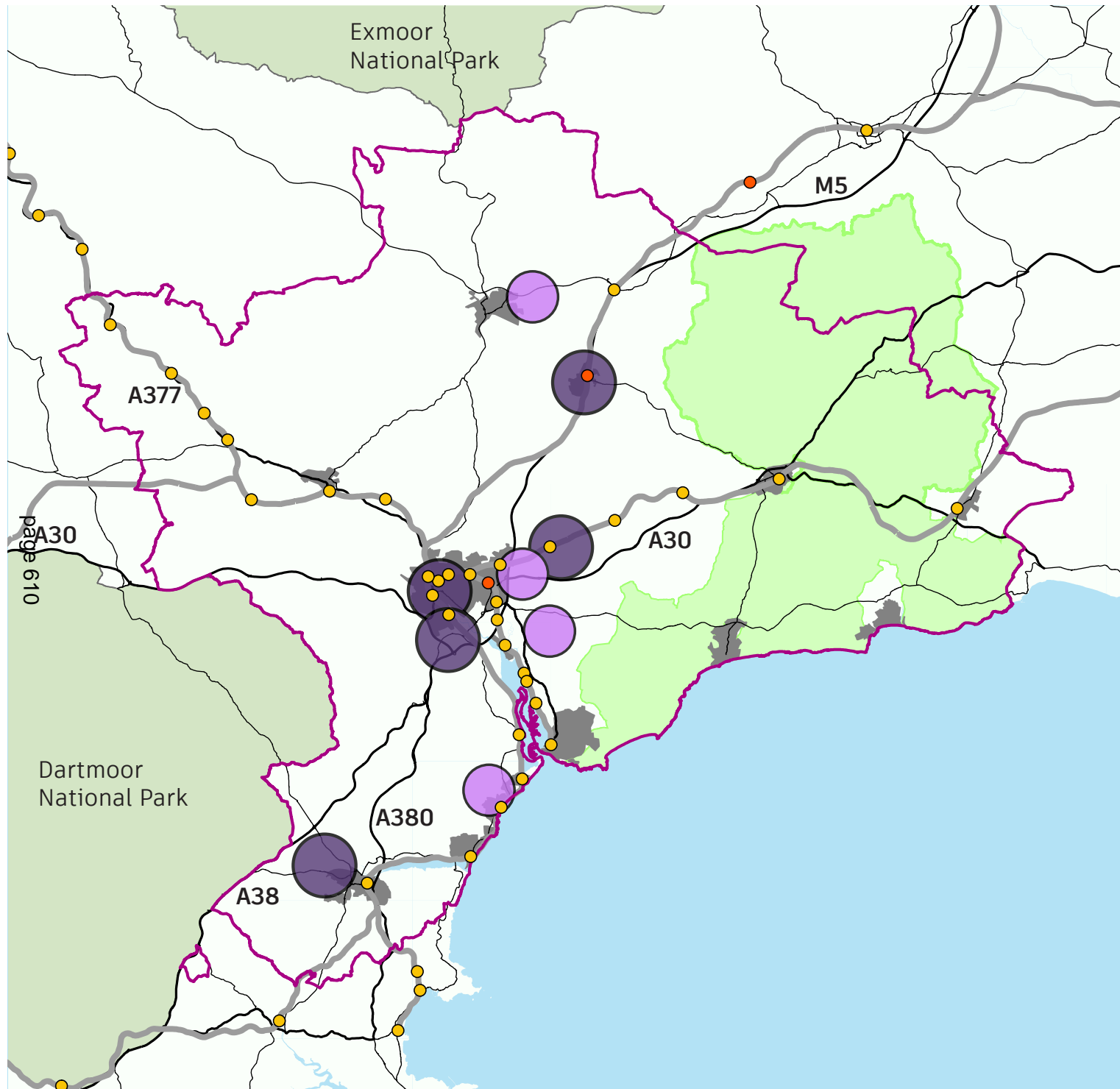
We have taken an ambitious and joined up approach to ensure that growth delivers real benefits for people. Far from just delivering homes, they will provide new sustainable connections and key infrastructure, enhance natural areas and support regeneration. We already have a track record of delivering new successful settlements at scale with our new town Cranbrook, which includes a new train station, district heating networks, strategic cycle routes and a new country park.

We are demonstrating our commitment to delivering affordable, energy efficient homes in well-connected places, with Exeter City Council aiming to deliver 500 affordable homes per year for the next ten years. We are also at the forefront of delivering self-build and custom-build homes; Teignbridge District Council was the first authority in England to include a policy requirement for serviced plots, setting a national exemplar.

## Culm Garden Village

The Culm Garden Village proposal will deliver 5000 new homes in a country park landscape next to a re-opened Cullompton train station. A 'one town approach' has been used to ensure the new development is fully integrated with the existing town of Cullompton and growth directly benefits local people. New homes, workplaces and improved connectivity will support more local services and help make Cullompton more self-sufficient. The development will deliver improved active travel connectivity across the M5, the railway and the river Culm whilst also helping to reconnect the town with the river Culm and enhance nature for both people and wildlife. A strategic intervention at Junction 28 is also needed to support delivery of the Culm Garden Village.





# Homes Plan

## Legend

- The Area
- Strategic housing sites
  - <3000
  - >3000
- Area of Outstanding Natural Beauty (AONB)
- National Parks
- Major settlements
- Major roads
- Railway
- Existing train stations
- Planned train stations





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# Quality places

# Quality places



**We will support high-quality developments with a strong sense of place which support healthy, thriving communities and our transition to net zero and respect and enhance our local environments.**

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Our area's rich built heritage and natural landscapes are integral to the character, appeal and success of our area. New developments must create new beautiful places which people will love and look after if we are to continue being a place where people want to live, and businesses want to invest in. Raising the quality of development is also essential to achieving greater local support for growth.

We are committed to significantly improving the quality and sustainability of new developments in our area. We expect new developments to have a strong identity and a sense of place that harness the positive features of sites and their wider context. We also expect development to enable healthy, resilient, safe and thriving communities. We will support this ambition through innovative design coding, strong collaboration with partners and support for innovative delivery methods such as custom-build and direct Local Authority interventions, which raise the bar of development quality.

## What we are doing

We have successfully capitalised on the national drive towards high-quality developments, and we are progressing with design codes for several of our strategic growth areas. We took part in the National Model Design Code Pilot to test the new National Model Design Code in our local context. This pilot has provided vital lessons learnt on stakeholder engagement, balancing flexibility with clear requirements and embedding coding within local policy. In the emerging Exeter Plan we have included Liveable Exeter principles that enshrine quality into strategic policy.

Regenerating our existing towns and communities to raise quality and local pride is hugely important to us. We are progressing town centre masterplans for several settlements, including Tiverton and Newton Abbot and interventions for growth to benefit existing communities is integral to our Garden Communities Programme.

### Newton Abbot Design Code Pilot

Our Newton Abbot and Kingsteignton Garden Community Programme is part of the Design Code Pathfinder Programme, a trailblazing government initiative to empower communities to have their say on new homes, buildings and amenities. Our innovative approach explores:

- Embedding design guidance in policy
- Developing a blueprint for securing community input
- Creating a framework for delivering new district scale parks and confirming long-term stewardship solutions
- Standards for low carbon construction and operation
- An innovative energy strategy



# Nature





# Nature



**We will protect and enhance our exceptional natural environment for the benefit of both people and wildlife, to tackle the climate and nature emergency and to protect the landscape setting of our settlements.**



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The residents of East Devon, Exeter, Mid Devon and Teignbridge know their area as a place with a beautiful natural landscape offering a high quality of life. We enjoy our long stretches of undeveloped coastline, undulating green hills, woodlands, rivers, valleys and estuaries. We also know that this unique natural environment is fundamental to our area's prosperity and success. It is key to attracting talent and high-value jobs, supporting tourism and local communities, improving people's health and wellbeing and tackling the climate and nature emergency.

We are committed to protecting and enhancing our special landscape through ambitious policies and development requirements within our local plans, as well as actively seeking out opportunities for investment in nature recovery. We will create bigger, higher quality, and better-connected natural areas which support a thriving wildlife and create better access to nature. This will include new woodlands, restoring our rivers, new wetlands and new public green spaces and trails. Our natural spaces will be multi-functional

and provide a wide range of functions from flood resilience and carbon storage to food production and recreation. We will seek developer contributions, funding and investment in green and blue infrastructure, nature recovery and delivery of biodiversity net gain as an integral part of delivering our sustainable growth ambition. We will continue to work in strong collaboration with local and national partners to ensure we can maximise the positive benefits of funding and investments.

Our communities benefit from large areas of coastline along the south of the region, stretching from Teignmouth and Dawlish, through the Exe Estuary and into East Devon and encompassing the world famous Jurassic Coast. However, our coastal environment is extremely vulnerable to physical changes through erosion, coastal landslip, permanent inundation and coastal accretion (e.g. accumulation of sand) over the next 100 years. We need to ensure that we reduce the risks arising from these changes by avoiding inappropriate development in vulnerable areas or adding to the impacts of physical changes to the coast.



## What we are doing

We have a strong track record of planning and delivering new country parks (Suitable Alternative Natural Green Space/SANG) alongside new developments through our shared Habitat Mitigation Strategy. This is required to minimise the impact of development on our internationally significant sites: Dawlish Warren, the Exe Estuary and Pebblebed Heath. We have delivered these through developer contributions and working in close partnership across authority boundaries and with regional, national and community partners. Ridgetop Park in South West Exeter opened in 2022 and is the latest addition of SANG providing recreational areas to the new communities and existing population. We are currently updating the Habitat Mitigation Strategy which will inform future projects to unlock growth that we will seek funding and contributions for.

We are also collaborating with authorities across the region, Natural England and Defra on the Devon Local Nature Recovery Strategy. This strategy will include local habitat maps and set out opportunities and priorities for enhancing biodiversity and how these can provide wider benefits such as carbon storage. We will use it to inform our Biodiversity Net Gain (BNG) strategies for development sites and to guide which strategic projects we seek investment and funding for.

In our Garden Communities Programme we have taken an innovative approach to attracting investment to deliver enhanced local green spaces alongside new growth: The Connect with Nature project in the Newton Abbot and Kingsteignton Garden Community will create new habitats, provide outdoor play and improve carbon storage. We also have ambitious plans for improving our Valley Parks in Exeter, including at Northbrook, for both people and wildlife and through the 'Connecting the river Culm' project we are tackling the river catchments challenges of flooding, drought, water quality, declining biodiversity and poor access for local residents.

## Clyst Valley Regional Park

The ambition for Clyst Valley Regional Park (CVRP) is to create the best regional park in the world. Our 25-year masterplan for the park proposes to restore nature and historic buildings, create new multi-use public trails including the regionally important Clyst Valley Trail, increase the size of the park and improve water quality. We have recently purchased 10HA land to unlock growth and deliver future SANG. It now needs the support of developers, landowners, statutory agencies and the public to deliver future projects. The plans for the CVRP are testament to our commitment to enable growth through a landscape-led approach and ensure early investment and delivery of nature assets to support new and existing communities.

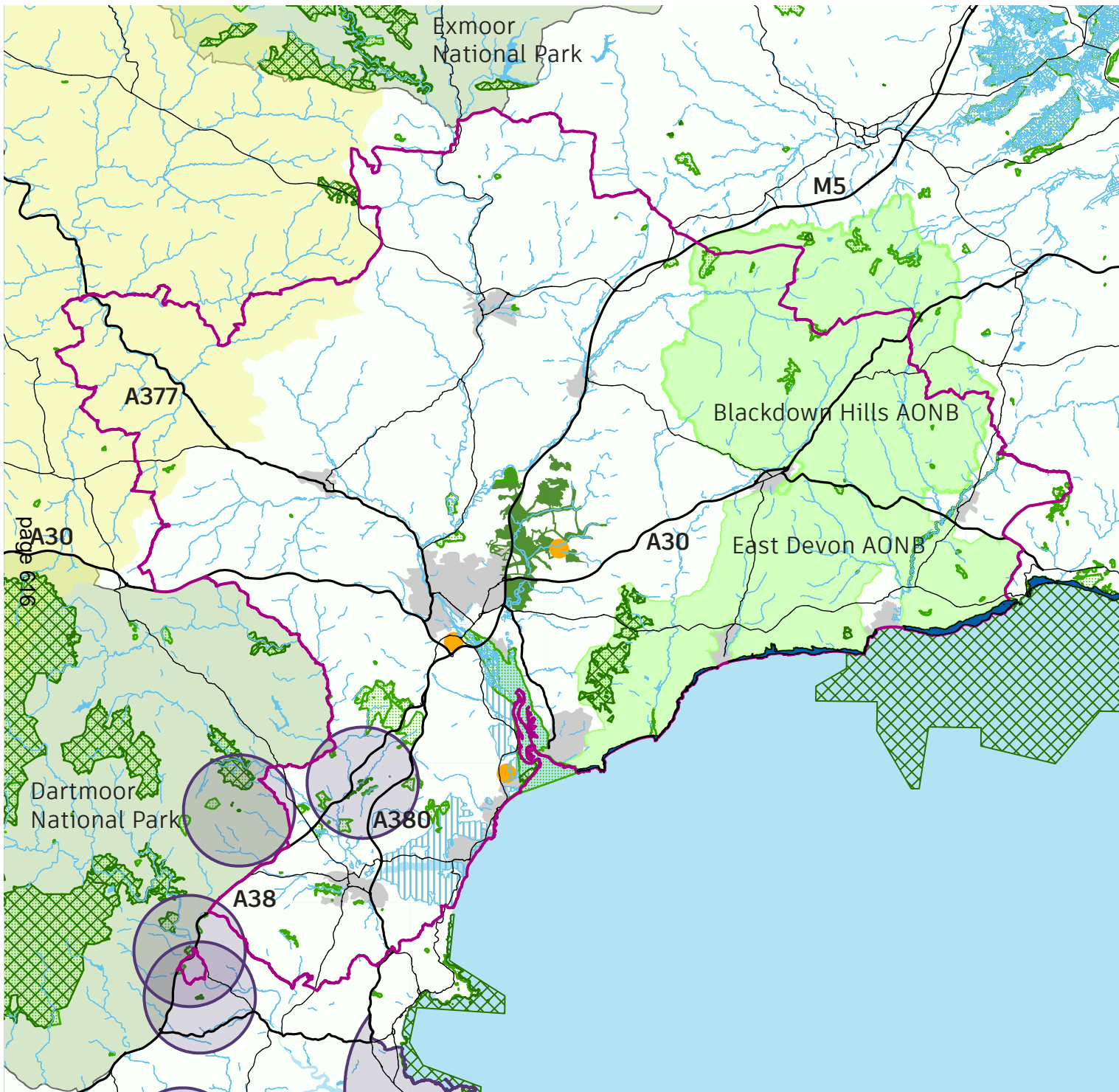
The Great Trees in the Clyst Valley project has provided

 **2200** new trees  
and **2** new orchards 

**2338 HA**





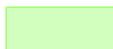
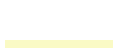
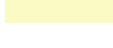







 Almost the same size as Exeter





# Nature Plan

## Legend

-  The Area
-  Water Areas and Rivers
-  Major settlements
-  National Parks
-  Area of Outstanding Natural Beauty (AONB)
-  North Devon Biosphere Reserve
-  Special Areas of Conservation (SAC)
-  Special Protection Areas (SPA)
-  Sites of Special Scientific Interest (SSSI)
-  South Hams SAC Sustenance Zones
-  Suitable Alternative Natural Greenspace (SANG)
-  Clyst Valley Regional Park
-  Jurassic Coast World Heritage Site
-  Undeveloped Coast



# Connectivity





# Connectivity



**We will create a joined up high-quality physical and digital network which reduces the need to travel and makes walking, cycling, public transport, low carbon and shared mobility the preferred choice for most journeys.**

Covering 2,200 square kilometres of city, towns, villages, coast and countryside our area is large and diverse yet it functions as a single economic area. This is not least demonstrated by Exeter's large Travel to Work Area, the 2nd largest in the country with 37,000 daily commuters. Our area is already connected by rail, road and active travel routes but to fully realise our areas potential we need to create a high-quality and net-zero carbon, physical and digital network which seamlessly and efficiently connects our whole area. This strategic connectivity is crucial for the economic success of the area.

We are committed to delivering a step-change in physical and digital connectivity to significantly reduce our dependency on private cars and high-carbon transport, whilst also improving people's health and wellbeing. We will develop plans and seek investment to:

- Reduce the need to travel by co-locating homes, jobs and local services, whilst also planning and investing in high-speed and reliable digital infrastructure. This will support more self-sufficient neighbourhoods where people can access most of their daily needs close to home.
- Support and prioritise active travel. This will be enabled by creating mixed-use neighbourhoods and locating growth where high levels of active travel can be achieved. We will deliver local and long-distance walking and cycling routes and join these routes with public and shared transport to broaden their reach.
- Work with our partners to plan and invest in improved public transport and shared mobility through new stations, more frequent, reliable services, simpler ticketing and technical innovation.
- Plan and invest in highway enhancements which support improved road safety and result in overall reduction in car use. We will support delivery of infrastructure for electric vehicles to enable low carbon mobility in urban and rural areas.





## What we are doing

We have an ambitious transport strategy for the 'Exeter travel to work' area:

- Within Exeter, active travel and public transport will be the main modes of travel, enabled through low traffic neighbourhoods and active travel priority routes which are well-connected with public transport.
- Longer distance multi-use trails will enable people in nearby towns and villages to cycle to Exeter and better public transport will reduce the need to use private cars.
- Park and Ride/Change and mobility hub facilities on all major transport corridors, alongside EV charging infrastructure, will allow people from lower density areas to travel more sustainably.

We are already well underway with our 'Cycling and Multi-use Trail Network Strategy' to deliver long distance trails between settlements. The Exe Estuary Trail is nearly complete, public consultation has been undertaken for the Clyst Valley Trail and work is underway to deliver the remaining sections of the Teign Estuary Trail. We have recently completed Local Cycling and Walking Infrastructure Plans (LCWIP's) for both Exeter and the Newton Abbot and Kingsteignton Garden Community to support local journeys in two of our largest urban areas. We are also working on LCWIP's for the West of East Devon, Tiverton and Cullompton.



We are working with partners on the Devon Metro project to improve connectivity with major steps achieved in the last few years: Marsh Barton station opened in July 2023 giving train access to a large employment area and future mixed-use development. Plans to re-open the Cullompton Train Station are well progressed to serve Cullompton as well as the proposed Culm Garden Village. And we are developing a business case for delivering more frequent services between Exeter and the main towns to the east, which will support significant growth along this corridor.

Alongside rail we have secured significant capital funding to deliver a Bus Service Improvement Plan to improve bus priority and more reliable journey times on key corridors in Exeter. Our strategic bus routes, such as Plymouth to Bristol along the M5 are important to connect communities, jobs and services outside the rail network.

To tackle poor digital connectivity in rural areas we are partners in the 'Connecting Devon and Somerset' program to deliver full fibre broadband and in our new local plans we will require digital connectivity to be considered an essential utility in new development.

### Exe Estuary Trail

The Exe Estuary Trail has been a huge success for the area connecting homes, jobs, neighbourhood centres and recreation on both sides of the estuary. The trail links up with the bus, train and ferry network enabling car-free travel around the whole Exe Estuary. It is a unique demonstration of what prioritising active travel and creating routes for all users means on the ground. There is an opportunity to expand this network through the construction of the Teign Estuary Trail from Dawlish to Newton Abbot.



### Connectivity Plan

**Legend**

- Existing Multi Use Trail
- Aspirational Multi Use Trail
- Major Roads
- Proposed improvements to road junction
- Railway

**Devon Metro:**

- Existing train stations
- Planned train stations
- Main bus routes
- Major settlements

# Making it happen

Our spatial vision and shared coordinates create a strong common purpose and a united direction of travel for our area. They will ensure we make consistent decisions on which strategic projects we prioritise and what we seek funding and investment for.

We know that individual sites and infrastructure projects can't be designed and delivered in isolation. To ensure delivery, we will capitalise on our strong partnership and collaboration with local, national, and regional bodies such as the Environment Agency, Natural England, Homes England, Active Travel England and National Highways. Together we will be guided by our shared coordinates at all stages from concept to planning to implementation. Although each local authority area will develop its own Local Plan, they will do so within the framework set by our spatial vision and shared coordinates. In this way we ensure that local action delivers the key outcomes that will keep our whole area strong, successful, and attractive to investment alongside meeting local needs.

We will continue our strong track record of collaborating across our local authority boundaries because we know this is the best way of delivering successful outcomes. We will do this with both formal and informal partnerships including local, regional and national partners when suitable. To address our shared planning and delivery challenges we will explore a set of actions including:

- Compiling a list of strategic infrastructure proposals to support our shared coordinates which we will seek funding and investment for. A list is included as an appendix to this document, however this list will be updated regularly as new opportunities get identified.
- Focused delivery of our Net Zero target including engaging with utility companies
- Securing financial contributions to support our Shared Coordinates
- Deciding the most optimum delivery vehicle for accelerating growth and ensuring quality of place
- Implementing cross boundary infrastructure strategies
- Cooperating on emerging Local Plans, particularly proposals for large scale new housing developments
- Delivering Habitat Mitigation and Nature Recovery Strategies once these are finalised.
- Investigating a City Development Fund at Exeter City Council, an innovative way of leveraging in additional infrastructure funding and recycling.



# Infrastructure delivery list

The successful implementation of development plans that have informed the Joint Strategy, and delivery of planned new homes, jobs, services, transport and other development across Exeter City, Teignbridge, East and Mid Devon will be dependent on funding and investment in infrastructure improvements. The following high-level strategic infrastructure matters that have cross boundary significance have been identified, where Local Planning Authorities will continue to work in partnership and with Government agencies, transport and utilities providers to secure funding and investment. This list can be updated and more detail included in each Council's respective Infrastructure Funding Statements and Infrastructure Delivery Plans:

- Suitable Alternative Natural Greenspace (SANG) and nature recovery network provision.
- Strategic waste water and water supply improvements.
- Strategic energy grid improvements for import, export and distribution.
- District heating investments and renewable energy projects.
- Education improvements-primary, secondary, further, higher and special educational needs.
- Strategic healthcare provision.
- New railway stations and line improvements.
- Strategic active travel routes and trails.
- Multi-modal Exeter transport package.
- Improvements to the Strategic Road Network







## **Joint Strategy for East Devon, Exeter, Mid Devon and Teignbridge**

**Consultation with key stakeholders - comments received and responses to these**

**November 2023**

Respondent	Comments received	Response
Heart of SW LEP	<p>Thank you for the opportunity to comment on “Our Shared Co-ordinates”, a joint strategy for East Devon, Exeter, Mid Devon and Teignbridge. We welcome the initiative of producing a joint strategy covering the area of four districts, centred on the city of Exeter. Working through the draft document in turn we offer a number of comments below, which we hope will be helpful.</p> <p><u>An exceptional place</u></p> <p>Without wanting to detract from the strategic nature of the document we wonder whether it might be helpful on this introductory page to include the current population and employee numbers on this page.</p>	<p>Comment noted.</p> <p>The last sentence on page 2 last has been amended to read "Such is the attractiveness of the area that the resident population (approx. 500k people) is forecast to increase by 8.5% ....."</p> <p>and the first sentence on page 12 has been amended to read "Our area is experiencing fast employment growth, current predictions are for around 35,000 new jobs between now and 2040. This is driven largely by the emergence of more knowledge-based sectors...."</p>



Respondent	Comments received	Response
	<p><u>Context map</u></p> <p>There is no key to this map, and there are some inaccuracies/ inconsistencies with later maps. For example, Tiverton Parkway station is shown in the wrong location; the railway line to Okehampton is not shown at all; the A35 trunk road is not shown.</p> <p><u>Our Vision</u></p> <p>We endorse the vision statement. The map on page 6 again omits the Okehampton railway line, and some of the railway stations.</p> <p><u>Net Zero</u></p> <p>Page 10 highlights initiatives such as standards for new housing, hybrid electric aviation, etc. It should be pointed out that the greater contribution in moving towards net zero is likely to come from retro-fitting existing housing (insulation, heat pumps) and from facilitating the transition to electric vehicles, given that</p>	<p>Comment noted.</p> <p>The diagram on page 2 is for illustrative purposes only, designed to show the key strategic assets of the district. Further detail is provided with an accompanying key on the map on page 6.</p> <p>The map has been amended to show Tiverton Parkway in the correct location, the railway line to Okehampton and the A35 Trunk Road</p> <p>The map on page 6 has been amended to include the Okehampton railway line and stations</p> <p>Comments noted. The ambitions on Page 9 reflect the targets we have collectively signed up to in the Devon Carbon Plan. The ambitions are focused on what the planning system can actively influence. As such, notwithstanding that retrofit is an important aspect of addressing energy security, it is not a strategic planning issue associated with this strategy.</p>

Respondent	Comments received	Response
	<p>domestic heating and land transport currently constitute a significant proportion of total carbon emissions.</p> <p><u>Jobs and Prosperity</u></p> <p>Mention might also be made of the need to improve productivity, generally, but particularly in sectors such as agriculture and tourism.</p> <p>Also, there should be an acknowledgement of the importance of health and social care within the economy of the area, and the likely growth in demand given the age demographic mentioned elsewhere in the document.</p> <p>The map on page 14 shows a “Major tourism opportunity” with no other narrative. This merits some explanation.</p>	<p>These are agreed as key issues but it is considered that reference to agriculture and tourism is sufficiently covered on Page 12. The first bullet on page 16 has been amended to read: ‘Encouraging SME developers to supply a larger proportion of homes within the area and promoting employment and skills plans’.</p> <p>Page 12 has been amended to include the following text: ‘This requires a skills and education infrastructure that is fully aware of, and responsive to, the needs of growth sectors, particularly in the delivery of science, technology, engineering, maths and medicine (STEMM) subjects, whilst also supporting health, social care, farming and tourism’.</p> <p>Comment noted. The notation relates to the Mid Devon Local Plan proposal for a major tourism, leisure, and retail development at Junction 27 on the M5 motorway. It is not considered necessary to repeat the detail of local plan proposals in the Joint Strategy,</p>

Respondent	Comments received	Response
	<p><u>Homes</u></p> <p>It is not clear whether the development ‘circles’ on the map on page 18 reflect the total size of those development areas, including housing already delivered, or the numbers of dwellings which will in future be delivered at those locations.</p> <p><u>Nature</u></p> <p>The map on page 24 includes areas within South Hams and Torbay as part of “The Area”. This deserves some explanation.</p> <p>The blue colour of the Jurassic Coast is not evident on the plan.</p> <p><u>Connectivity</u></p> <p>The text on page 27 states Marsh Barton station will open – it actually opened in July 2023. The map on page 28 appears to have a number of inaccuracies. For example, the first section of the A361 North Devon Link Road is incorrectly shown; the A35 trunk road from Honiton to Axminster and beyond is not shown.</p>	<p>The notation used sets an arbitrary threshold of 3,000 homes and is indicative of the scale of development (recently completed, committed and proposed in locations) across the area.</p> <p>The map is clear in defining the area to which the Joint Strategy applies by means of a red line. It is appropriate to show notation beyond the Joint Strategy area which can help provide context to discussions with stakeholders in neighbouring areas, which supports the purpose of the Joint Strategy.</p> <p>The plan on page 24 has been amended to show the Jurassic Coast more clearly.</p> <p>The text has been updated to indicate the Marsh Barton station opened in July 2023.</p>

Respondent	Comments received	Response
Active Travel England	<p>Thank you for your email.</p> <p>Active Travel England does not currently have a strategic Pre-Planning offer, and so we cannot comment or consult on your Joint Strategy.</p> <p>In the meantime, what I can suggest is that when you come to thinking about individual sites, we would want to encourage / embed use of the Planning Assessment toolkit to assess proposals – and so we are offering the the tools and guidance to enable planners, transport officers and developers to assess their proposals against the latest best practice and policy requirements.</p> <p>The planning application assessment toolkit helps local planning authorities to gather evidence and assess the active travel merits – walking, wheeling and cycling – of a development proposal.</p> <p>These tools have been developed over the last year or so bringing together the expertise and expertise of planning professionals working in our development management team, but also planning authorities, highway authorities, transport consultants and internally, within ATE, the DfT and DLUHC.</p>	<p>Comment noted that Active Travel England cannot comment on the Joint Strategy.</p> <p>The links provided to Active Travel England’s Planning Assessment toolkit are noted. However, these are not needed for this consultation since the Joint Strategy is not a development plan and does not allocate development sites.</p>



Respondent	Comments received	Response
	<p>Whilst the planning assessment is integral to our standing advice offer this is also the tool that ATE will be using to assess Planning Application proposals.</p> <p>ATE's Development Management will be attaching our toolkit summary report to our formal responses where we recommend standing advice.</p> <p>ATE also considers it would be hugely beneficial if developers were to include these assessments in their pre-application and planning application submissions.</p> <p><b>ATE Planning Application Assessment Toolkit (PAAT): Checklist User Manual <a href="#">Active Travel England: planning application assessment toolkit - GOV.UK (www.gov.uk)</a></b></p> <p>The planning application assessment toolkit helps to gather evidence and assess the active travel merits – walking, wheeling and cycling – of a development proposal. It should be used by local authority planning and transport officers in conjunction with the applicant.</p> <p>When making a planning application assessment, you should also refer to:</p> <ul style="list-style-type: none"> <li>• <a href="#">Active Travel England: development management</a></li> </ul>	

Respondent	Comments received	Response
	<ul style="list-style-type: none"> <li>• <a href="#">Active Travel England: sustainable development advice notes</a></li> </ul> <p>A checklist user manual and a tutorial video have been produced to help you understand how to complete the assessment.</p> <p><b>Development Management Procedural Note for Local Planning Authorities <a href="#">Development Management Procedural Note for Local Planning Authorities (publishing.service.gov.uk)</a></b></p> <p>This procedural note for local planning authorities sets out how Active Travel England (ATE) will approach planning casework.</p> <p>It is designed to provide context to our remit and support the formal comments that the ATE team may make as a part of the statutory consultee process.</p> <p>When making a planning application assessment, you should also refer to:</p> <ul style="list-style-type: none"> <li>• <a href="#">Active Travel England: planning application assessment toolkit</a></li> <li>• <a href="#">Active Travel England: sustainable development advice notes</a></li> </ul> <p><b>Active Travel England Standing Advice Note: Active travel and sustainable development <a href="#">Active Travel</a></b></p>	

Respondent	Comments received	Response
	<p><b><u><a href="#">England Standing Advice Note: Active travel and sustainable development (publishing.service.gov.uk)</a></u></b></p> <p>Two advice notes have been produced to reflect the different considerations that apply within and outside of London.</p> <p>These standing advice notes provide guidance for local planning authorities on how planning applications should be considered when Active Travel England (ATE) will not undertake a detailed assessment of development proposals.</p> <p>When making a planning application assessment, you should also refer to:</p> <ul style="list-style-type: none"> <li>• <a href="#">Active Travel England: planning application assessment toolkit</a></li> <li>• <a href="#">Active Travel England: development management</a></li> </ul> <p><b>Manual for Streets: <u><a href="#">Designing and modifying residential streets - GOV.UK (www.gov.uk)</a></u></b></p> <p>This manual provides guidance about the:</p> <ul style="list-style-type: none"> <li>• design</li> <li>• construction</li> <li>• adoption</li> </ul>	

Respondent	Comments received	Response
	<ul style="list-style-type: none"> <li>• maintenance</li> </ul> <p>of new residential streets. Information inside it can also be applied when redesigning existing residential streets.</p> <p>The 'Manual for streets' has won a Royal Town Planning Institute prize. The award recognises that the document is radically changing designers' and local authorities' approach to residential street design for the better.</p> <p><b><u><a href="https://www.gov.uk/government/publications/local-transport-note-120-cycle-infrastructure-design">LTN1/20: Cycle infrastructure design (LTN 1/20) - GOV.UK (www.gov.uk)</a></u></b></p> <p>This local transport note (LTN) provides guidance to local authorities on delivering high quality, cycle infrastructure including:</p> <ul style="list-style-type: none"> <li>• planning for cycling</li> <li>• space for cycling within highways</li> <li>• transitions between carriageways, cycle lanes and cycle tracks</li> <li>• junctions and crossings</li> <li>• cycle parking and other equipment</li> <li>• planning and designing for commercial cycling</li> <li>• traffic signs and road markings</li> <li>• construction and maintenance</li> </ul>	



Respondent	Comments received	Response
	<p><b>Inclusive Mobility - <a href="#">Inclusive mobility: making transport accessible for passengers and pedestrians - GOV.UK (www.gov.uk)</a></b></p> <p>This document gives the latest guidance on designing and improving the accessibility and inclusivity of public transport and pedestrian infrastructure.</p> <p>This guidance was informed by <a href="#">research that the Department for Transport (DfT) published in February 2020</a>.</p> <p>The purpose is to provide good access for disabled people and meet the needs of many other people.</p> <p><b>Pedestrian Comfort</b></p> <p>ATE has no specific guidance relating to Pedestrian Comfort however I can signpost you to TfL's <a href="#">Pedestrian Comfort Guidance for London (tfl.gov.uk)</a></p> <p><b>Women and Girls' Safety</b></p> <p>Likewise, ATE has no published guidance relating to Women and Girls' Safety – the Council should look to apply their own guidance / policies developed in response to the government's <a href="#">Tackling violence against women and girls strategy - GOV.UK (www.gov.uk)</a> and Safer Streets initiatives</p>	

Respondent	Comments received	Response
	<p><b>Active Travel Local Authority Toolkit</b> <a href="#">Active travel: local authority toolkit - GOV.UK (www.gov.uk)</a></p> <p>Best Wishes</p>	
<p>Devon County Council – Transportation Planning</p>	<p>I have provided the below comments to the non-statutory consultation document on behalf of Devon County Council's Transport Planning Team.</p> <p>Overall the vision aligns with the vision and objectives of our developing Local Transport Plan update and is therefore supported. It is good that recognised the need to reduce travel as well as switching to more sustainable modes.</p> <ul style="list-style-type: none"> <li>Page 27 mentions more park and ride / change facilities which was initially identified in the Exeter Transport Strategy and published pre-Covid. Following the pandemic there has been a very slow return to using the park and ride services in Exeter which has resulted in a reduced service. The development of new park and ride services will be subject to the speed of recovery of the existing sites and integrated with the management of parking provision in Exeter City Centre. The sites also serve as multimodal interchanges for other sustainable forms of travel such as cycling and will provide electric charging facilities. It is suggested this section is reworded</li> </ul>	<p>Comment noted. No change is needed to the Vision.</p> <p>The text in the third bullet of text on page 27 has been replaced with the following text:</p> <p>“Park and Ride/Change and mobility hub facilities....”</p>

Respondent	Comments received	Response
	<p>slightly to reflect this and focus on mobility hubs as opposed to park and rides.</p> <ul style="list-style-type: none"> <li>• Some of the pieces of work have progressed since the drafting of the report.</li> <li>• The LCWIPS for Exeter and Newton Abbot have been completed and are awaiting Cabinet approval before being published. (They did go to Cabinet last week but have been delayed following the plan for drivers document).</li> <li>•</li> <li>• The LCWIPS for the West of East Devon and Tiverton / Cullompton are under way and we are looking at going to public consultation shortly.</li> <li>•</li> <li>•</li> <li>• Marsh Barton station opened in July 2023.</li> <li>• Not sure what the planned station in Exeter is on page 28 as we are not actively looking at any more stations. Is this one that has already been delivered?</li> <li>•</li> <li>• The report mentions a strategic infrastructure proposals list in an Appendix but I have not seen this to be able to comment.</li> </ul>	<p>The text has been updated with the factual correction.</p> <p>The text has been updated with the factual correction.</p> <p>The text has been updated with the factual correction.</p> <p>The proposed new station shown on the map (page 28) of the Joint Strategy is 'Monkerton', which was identified in the Devon Metro programme. Exeter City Council has safeguarded land for this new station.</p> <p>An infrastructure delivery list is included on page 30 of the Joint Strategy.</p>

Respondent	Comments received	Response
Historic England	<p>Thank you for sharing this document with us, which outlines the joined-up strategy and policy approach that the Councils are taking and which is informed by the emerging Local Plans. We look forward to publication of the associated Local Plans and would be willing to engage and potentially collaborate on topics relevant to our statutory role.</p> <p>We offer the following limited comments on the joint strategy:</p> <p><b>Challenges on page 4</b></p> <p>We think that this would benefit from an additional heading highlighting that there is a need to accommodate new development, potentially at higher densities, in a way that is sensitive to the characteristics of the area that make it special. For example, the historic environment of Exeter and rural towns and villages. This would integrate well with the 'Quality Places' section of the report.</p> <p>We have published some useful research on <a href="#">Increasing Residential Density in Historic Environments</a> which could assist the Council's in developing their thinking in this area.</p>	<p>An additional 'challenge' has been added on page 4.</p> <p><b>"Landscape and heritage – accommodating growth within a high quality built and natural environment"</b></p> <p>Local plans can include policies in relation to the density of new development, which would not be appropriate for inclusion in the Joint Strategy.</p>



Respondent	Comments received	Response
	<p>We have also produced an advice note on <a href="#">Tall Buildings</a> which is a key resource to inform research and policies relating to e.g. tall buildings, views and skyline.</p> <p><b>Vision</b></p> <p>We would welcome greater recognition of the environment in the shared vision – in terms of the value of its natural, built and historic assets.</p> <p>Likewise mention of the historic environment in the spatial strategy that accompanies the vision would be positive.</p> <p><b>Net-zero</b></p> <p>It would be beneficial if this section could highlight the fact that a large proportion of our building stock is already in existence and that retrofit of existing buildings (including buildings of traditional/historic construction) will play an important role in achieving net zero. Reuse and conversion of existing buildings is also encouraged by NPPF paragraph 152. Historic England has a range of <a href="#">associated guidance</a> online and we will soon be publishing our draft Climate Change Advice Note.</p> <p><b>Quality places</b></p>	<p>The words “and heritage” have been added after the words “..celebrate the area’s beauty”</p> <p>No change needed as the spatial strategy includes reference to “exceptional environments”, which is sufficiently broad to include historic environment.</p> <p>The ambitions on Page 9 reflect the targets the partner Councils have collectively signed up to in the Devon Carbon Plan. The ambitions are focused on what the planning system can actively influence. As such, notwithstanding that retrofit is an important aspect of addressing energy security, it is not a strategic planning issue associated with this strategy.</p>

Respondent	Comments received	Response
	<p>We are supportive of inclusion of this theme which seeks to respect and enhance local character and the environment through new development.</p> <p>Our suggestions in relation to the challenges of the area, and our associated research on residential densities and guidance on tall buildings are also relevant here.</p> <p><b>Nature</b></p> <p>We welcome the reference in this section to protecting the landscape setting of the settlements of the area.</p> <p>Many thanks,</p>	<p>Comments noted.</p> <p>Local plans can include policies in relation to the density of new development and tall buildings, which would not be appropriate for inclusion in the Joint Strategy</p> <p>Comment noted.</p>
National Highways	<p><b>Our Shared Coordinates Consultation</b></p> <p>Thank you for consulting us on the September 2023 draft of 'Our Shared Coordinates – A joint strategy for East Devon, Exeter, Mid Devon and Teignbridge'.</p> <p>National Highways has been appointed by the Secretary of State under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). It is in this context our comments are made.</p> <p>With a coverage of East Devon, Mid Devon, Exeter and Teignbridge this non-statutory plan includes sections of</p>	

Respondent	Comments received	Response
	<p>the M5 motorway, A38, A30, A35 and A303 trunk roads, which form part of the SRN. These routes perform a key function in enabling strategic connectivity. They have priority both in terms of strategic through-traffic that is vital for the south-west peninsula, but also in terms of supporting economic performance and growth.</p> <p><b>Spatial Strategy</b></p> <p>The document proposes the authorities will focus large scale new development around strategic growth areas – including Exeter (and surrounds), Newton Abbot &amp; Kingsteignton, Cullompton, Tiverton and M5 Junction 27.</p> <p>As identified in the consultation document, Exeter has the 2nd largest travel to work area in the UK, with 37,000 daily commuters – with a dominant reliance on private car. Growth both within/near Exeter and in the market towns surrounding rely on SRN to enable access to employment opportunities the city offers. The emerging transport evidence that is being developed to support the Greater Exeter Local Plans indicates growth related increases of traffic demand will affect SRN performance around Exeter. It is necessary that the transport evidence quantifies these impacts, and where necessary, capacity enhancements are identified as part of the plan-making process<sup>1</sup>. <sup>1</sup> As set out in DfT policy, Circular 01/2022 This provides the best opportunity to consider the cumulative impacts of development and to</p>	<p>Comments noted. The Joint Strategy, and its Infrastructure Delivery List, have been informed through the content of existing and emerging Local Plans which have themselves been prepared using technical evidence in relation to traffic and road transport infrastructure, and in consultation with National Highways.</p> <p>Comment noted. The Infrastructure delivery list on page 30 has been amended to include an additional bullet:</p> <ul style="list-style-type: none"> <li>• Improvements to the Strategic Road Network</li> </ul>

Respondent	Comments received	Response
	<p>identify appropriate mechanisms for the delivery of strategic highway infrastructure. National Highways would expect the findings of this work to inform the 'Infrastructure Delivery List' of this document.</p> <p><b>Jobs and Prosperity</b></p> <p>National Highways recognises that prosperity depends on our roads, so aims to support growth and facilitate development based on an understanding of traffic conditions and behaviour, to manage the effects of development and ensure road safety.</p> <p>In alignment with the proposed spatial strategy, a number of strategic employment sites are identified around Exeter, and then along the M5 at Junction 28 (Cullompton) and Junction 27 (near Tiverton). While access to the M5 may be attractive for new employment growth, if travel impacts from proposed growth cannot be mitigated, the reliability of the network could become a potential constraint, affecting both the prosperity of the new sites, but also importantly, the existing productivity of the whole area. As above, evidence needs to be developed to ensure the impact of proposed growth on the SRN is understood, and also where necessary, mitigation plans in place to ensure growth is sustainable.</p> <p><b>Homes</b></p>	<p>Comments noted. The Joint Strategy has been informed through the content of existing and emerging Local Plans which have themselves been prepared using technical evidence in relation to traffic and road transport infrastructure, and in consultation with National Highways.</p>



Respondent	Comments received	Response
	<p>See comments above regarding 'Spatial Strategy'.</p> <p>It is notable that the Culm Garden Village section has no mention of the strategic intervention that is needed at M5 Junction 28 to enable the delivery of this scheme.</p> <p><b>Connectivity</b></p> <p>The consultation document focuses on providing digital networks to reduce the need to travel, and seeks to make walking, cycling, public transport and shared mobility the preferred choice for most journeys. These principles are in accordance with National Highways guiding planning policy document, DfT Circular 01/2022, which identifies in plan-making local authorities should facilitate high quality places and ensure that developments optimise the potential of sites to support local facilities and sustainable transport networks. This too forms a component of developing a 'vision-led' approach to transport planning which sets an outcome communities want to achieve and provides the transport solution to deliver those outcomes.</p> <p>We would like to stress however that whilst facilities and services can be provided locally for new development, along with sustainable transport offer, additional development will still create some demand for trips (particularly long-distance journeys) made by private car, potentially using the SRN. The principle purpose of the SRN, to enable safe, reliable, efficient, often long</p>	<p>The text on page 17 has been amended to include reference to the need for a strategic intervention at Junction 28 to support the delivery of the Culm Garden Village.</p>

Respondent	Comments received	Response
	<p>distance, journeys of both people and goods in England, needs to be maintained. It may be necessary to deliver highway investment to ensure the SRN can continue to function as needed for both the Greater Exeter authorities, but also the wider peninsula, if growth is identified as having an impact on safety and performance</p> <p>The 'Connectivity Plan' includes a 'proposed improvement to road junction' marker on the M5 north of Junction 27. We presume this should in fact be indicated at M5 Junction 28, associated with the LLM bid for a strategic intervention to deliver growth at Cullompton.</p> <p>The 'Connectivity Plan' also has no mention of the MRN scheme to improve connectivity between the A38 and Newton Abbot.</p> <p><b>Making it Happen / Infrastructure Delivery List</b></p> <p>National Highways endorse the Greater Exeter local planning authorities working together to consider cumulative and cross boundary impacts associated with their local plan growth. As identified in the consultation document, the 'Infrastructure Delivery List' will need to be updated in light of the transport evidence work being done to support the local plans – we anticipate this to include detailed consideration of how impacts on the</p>	<p>The Connectivity Plan on page 28 has been amended so that the 'Proposed improvements to road junction' notation is moved to the position of Junction 28, M5, at Cullompton</p> <p>The Connectivity Plan on page 28 has been amended to include the A382 from Newton Abbot to the A38 .</p> <p>Comment noted.</p> <p>The text on page 30 makes clear the Infrastructure delivery list can be updated.</p>

Respondent	Comments received	Response
	<p>SRN are to be mitigated with funding mechanisms identified.</p> <p>We hope these comments are useful and look forward to continuing to work with the Greater Exeter local authorities in developing sustainable proposals in their Local Plans.</p> <p>Yours sincerely</p>	
Natural England	<p><b>Planning consultation:</b> Consultation on a Joint Strategy for East Devon, Exeter, Mid Devon and Teignbridge / Comments invited from Natural England</p> <p>Thank you for your consultation on the above dated 26 September 2023.</p> <p>Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.</p> <p>Natural England welcomes the opportunity to comment on the emerging Joint Strategy at this stage. We would like to make the following comments:</p> <p>Natural England supports the emergence of this collaborative document which highlights shared</p>	

Respondent	Comments received	Response
	<p>ambitions across a range of strategic planning matters for the area.</p> <p>It would be a beneficial addition to the document to specifically acknowledge coastal change and the impacts this will have on nature and strategic plans. This would include coastal processes such as erosion and flooding and key coastal planning tools such as Coastal Change Management Areas (CCMAs) and Shoreline Management Plans (SMPs).</p> <p>The NPPF maintains that local planning authorities should reduce risk from coastal change by avoiding inappropriate development in vulnerable areas or adding to the impacts of physical changes to the coast.</p> <p>Coastal Change Management Areas (CCMAs) have been identified as a key coastal planning tool. They are to be defined in Local Plans as areas likely to be affected by coastal change, such as physical change to the shoreline through erosion, coastal landslip, permanent inundation, or coastal accretion (e.g. accumulation of sand), over the next 100 years. Policies and guidance to support this approach are set out in the</p>	<p>The following text has been added in the Nature section: “Our communities benefit from large areas of coastline along the south of the region, stretching from Teignmouth and Dawlish, through the Exe Estuary and into East Devon and encompassing the world famous Jurassic Coast. However, our coastal environment is extremely vulnerable to physical changes through erosion, coastal landslip, permanent inundation and coastal accretion (e.g. accumulation of sand) over the next 100 years. We need to ensure that we reduce the risks arising from these changes by avoiding inappropriate development in vulnerable areas or adding to the impacts of physical changes to the coast.”</p>



Respondent	Comments received	Response
	<p>National Planning Policy Framework (NPPF - <a href="#">Here</a>) and its associated Planning Practice Guidance (PPG - <a href="#">Here</a>).</p> <p>The Shoreline Management Plan (SMP - <a href="#">Here</a>) is a key document for CCMA's. It provides the analysis and recommendation for a defined area which may need to be designated as a CCMA. These recommendations when adopted and detailed in Development Plan Documents are for those areas likely to be affected by coastal change, such as physical change to the shoreline through erosion, coastal landslip, permanent inundation, or coastal accretion.</p> <p>We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us.</p> <p>For any queries relating to the specific advice in this letter only please contact Jemma Short on <a href="mailto:jemma.short@naturalengland.org.uk">jemma.short@naturalengland.org.uk</a>. For any new consultations, or to provide further information on this consultation please send your correspondences to <a href="mailto:consultations@naturalengland.org.uk">consultations@naturalengland.org.uk</a>.</p> <p>Yours sincerely</p>	

Respondent	Comments received	Response
Network Rail	<p>Thank you for your time and for consulting Network rail.</p> <p>I have read the document, which is well instrumented, and with the exception of the additional station at Exeter which is proposed in the document but unknown to me , everything else looks good and exciting.</p> <p>I would appreciate if you could clarify the proposed station position.</p>	<p>Network Rail has been advised that the proposed new station shown on the map (page 28) of the Joint Strategy is 'Monkerton', which was identified in the Devon Metro programme. Exeter City Council has safeguarded land for this new station.</p> <p>Network rail has confirmed it does not have any further comments.</p>
Environment Agency	<p>Thank you for the opportunity to provide some comments on this joint strategy for East Devon, Exeter, Mid Devon and Teignbridge.</p> <p>In general we are supportive of this strategy. It acknowledges the shared challenges all four districts will face over the coming decades. From an Environment Agency perspective we are especially pleased to see inclusion of climate change, nature recovery and infrastructure acknowledged as key challenges. Specifically with regard to climate change it is good to see that the challenge is acknowledged not just in respect of meeting Net Zero but also the challenge of adapting to the climate change that is already 'locked in'.</p> <p>It's great that Net Zero and Nature are two of the six 'shared coordinates' that will need to be addressed to achieve your Councils' ambitions. However, on Net</p>	

Respondent	Comments received	Response
	<p>Zero, except for within the text below the title (e.g. ‘...help communities adapt to its impacts...’), there’s little else regarding to climate change adaptation/resilience. The section notes brownfield redevelopment. Redevelopment in the districts’ city and town centres present ‘must do’ opportunities to make these communities resilient and sustainable for the future especially where these correspond with areas at risk of flooding.</p> <p>On Nature it is good to see reference to the emerging Devon LNRS and that it will be used to inform your BNG strategies for development sites. The shared strategy presents an opportunity to develop a shared approach to delivery of BNG (in line with the LNRS) in a way which allows a wider catchment and/or landscape approach to be taken unhindered by administrative boundaries.</p> <p>I hope you find these comments helpful.</p>	<p>Page 9, para 3: Spatial planning has a clear role to play in shifting society towards net zero living whilst also making our communities more resilient to the impacts of climate change.</p> <p>Reference to resilience has been added to the last sentence on page 5: “And they enable us to unlock brownfield growth and investment in existing settlements alongside new settlements to support more self-sufficient, resilient and thriving communities. Page 20 – the word “character” in the first sentence of the second paragraph has been replaced with “sustainability”.</p>
<p>Blackdown Hills AONB Partnership</p>	<p>I’m supportive of the joint approach and shared strategic aims, and it is hard to disagree with any of the ambition.</p> <p>My key point is that the Blackdown Hills AONB has not been mapped correctly – in all cases throughout the</p>	<p>Comment noted.</p> <p>The relevant maps included in the Joint Strategy have been updated to include the correct extent of the Blackdown Hills AONB.</p>

Respondent	Comments received	Response
	document. It looks like only the extent in East Devon has been included.	
South West Water	<p>Thank you for the invitation to comment on the Draft Joint Strategy for East Devon, Exeter, Mid Devon and Teignbridge. Pennon Group PLC write on behalf of South West Water limited [SWW] in their function as Statutory Water &amp; Sewerage Undertaker for all four Local Planning Authority areas.</p> <p>To be consistent with our 2025-2030 business plan (available here: <a href="#">Business plan 2025-30   South West Water</a>), SWW wish to highlight some high-level issues and opportunities pertinent to achieving the vision described within the draft document. Some of issues and opportunities have been addressed within the current draft, for which SWW fully support. These high-level aspects include:</p> <ul style="list-style-type: none"> <li>- Water Efficiency: <ul style="list-style-type: none"> <li>o Reuse;</li> <li>o Recycle;</li> <li>o Rainwater Harvesting;</li> </ul> </li> <li>- Drought Resilience: <ul style="list-style-type: none"> <li>o Flood and Drought Cycle Resilience;</li> </ul> </li> <li>- Combined Sewer Connection Restrictions: <ul style="list-style-type: none"> <li>o Adherence to the Disposal Hierarchy;</li> </ul> </li> <li>- Green Infrastructure Principles:</li> </ul>	<p>Comments noted.</p> <p>The words “sustainable water management’ have been added between the words “flood resilience,” and “healthcare and recreation,” in the second paragraph on page 16.</p> <p>The inclusion of reference to “sustainable water management” is sufficiently broad to cover the specific points made by South West Water.</p>



Respondent	Comments received	Response
	<ul style="list-style-type: none"> <li>○ Water Quality;</li> <li>○ Soil Stability;</li> <li>○ Nutrient Neutrality; and</li> <li>○ Slow the Flow.</li> </ul> <p>SWW support the inclusion of sustainable water management through the inclusion of permeable paving, rain gardens and flood resiliency. As Climate Change progresses, we are seeing increased impacts on our water resources and on the landscape itself. With the expected trend of hotter and drier summers, and wetter and milder winters, there is an increased risk of flood and drought cycles becoming a more regular occurrence. Utilising permeable paving and rain gardens will aid in reducing surface water run-off during flood events, reducing potential flows into the sewer network.</p> <p>It is a strategic priority of the business to reduce the current use of Combined Sewer Overflows (see more here: <a href="#">storm-overflows-and-pollutions.pdf</a> (<a href="#">southwestwater.co.uk</a>)). Reducing potential surface water flows from development sites into the combined sewer network will be crucial to achieving this aim. The need for evidenced justification to discount unsuitable surface water disposal methods from the hierarchy, as described within PPG (para 7-056) and Devon County guidance (<a href="#">Sustainable Drainage System - Guidance for Devon - Flood Risk Management</a>), will assist in ensuring the use of combined sewer connections is solely used as a last resort. Additionally, maximising the use of</p>	

Respondent	Comments received	Response
	<p>surface and rainwater on-site will aid in reducing flows entering the sewer network.</p> <p>SWW support the use of water efficiency and water conservation planning policy requirements for development within existing local plans, and would support specific policy encouraging/requiring water reuse, greywater recycling and rainwater harvesting. The promotion of these types of water efficiency techniques are a priority for SWW. As part of SWW's drive towards this aim, SWW have given away 240,000 free water efficiency devices along with the promotion of our Stop the Drop scheme (more info available: <a href="#">water-quality-and-resilience.pdf</a> (<a href="#">southwestwater.co.uk</a>)). All of which aid in maximising the sustainable use of water resources and reducing stress on the sewer network.</p> <p>An area SWW would encourage further exploration of opportunities would be through the use of multi-functional green infrastructure. It is noted within the 'Nature' chapter that multi-functional green spaces will provide 'a wide range of functions from flood resilience and carbon storage to food production and recreation'. This goal is additionally supported by SWW in the relation to the water quality, soil stability and nutrient neutrality benefits associated with the use of nature-based solutions and multi-functional green infrastructure, when partnered with Sustainable Drainage Systems. Earlier this year, SWW published our Green First Framework, which sets out SWWs intention</p>	

Respondent	Comments received	Response
	<p>to prioritise the use of nature-based solutions where possible and practical (more info available: <a href="https://southwestwater.co.uk/our-green-first-framework_final.pdf">our-green-first-framework_final.pdf</a> (<a href="https://southwestwater.co.uk">southwestwater.co.uk</a>)).</p> <p>The current draft includes use of urban trees for carbon storage; however, SWW would also highlight their use for solar and temperature regulation. Particularly within urban centres where the urban heat island effect will be exacerbated by Climate Change. The use of strategic deciduous tree placement would enable solar regulation during summers and maximum solar gain during winters. Especially during the summer period, reducing the impact of the urban heat island effect will assist in reducing the need for water to compensate for the increased temperatures; assisting in the sustainable management of our water resources.</p> <p>The vision for Net Zero, as stated within the draft document is supported by SWW. It is essential that Net Zero is achieved to minimise the impacts of Climate Change, of which some have been discussed above. Net Zero is similarly a priority for SWW; during the process of building our 2025-2030 business plan a survey of SWW customers found 9 out of 10 consider it important that SWW are an environmental leader in the region (<a href="https://southwestwater.co.uk/net-zero-and-environmental-gains.pdf">net-zero-and-environmental-gains.pdf</a> (<a href="https://southwestwater.co.uk">southwestwater.co.uk</a>)). Progress has already been made in this sector through SWWs continuing transition</p>	<p>The words “, and solar and temperature regulation,” have been added between the words “carbon storage” and “such as...” in the fourth bullet on page 9.</p>

Respondent	Comments received	Response
	<p>to an all-electric vehicle fleet and increasing our sustainable energy generation capacity.</p> <p>It is noted within the Net Zero chapter that the use of a district heat network is proposed within the councils' vision. To further understand the impacts this could have on SWWs water resources, we would like further information on the scope of use for this type of infrastructure.</p> <p>Thank you again for the opportunity to comment on this draft document, and we look forward to further collaboration with you in future.</p>	
East Devon AONB Partnership	<p>Thanks again for sharing.</p> <p>As you say, it's at such a high level its hard to make any significant comments other than welcoming the sense of direction and the coordinated approach and the role that AONBs can play in helping to achieve the vision. There are obvious questions on some of the statements around how and who..... But that's not for discussion at this level.</p>	Comments noted.



Respondent	Comments received	Response
	<p>We welcome the strategic joint approach and reinforce the important role protected landscapes can play in driving its vision.</p>	
<p>National Health Service</p>	<p>Thank you very much for forwarding the Consultation on the Joint Strategy for East Devon, Exeter, Mid Devon and Teignbridge and please accept our apologies for the late response.</p> <p>We have noted the following references to Health Care Infrastructure and thought it worth providing some context, not necessarily for inclusion in the strategy although may help to support the statements below.</p> <p>Page 7: The importance of investment in infrastructure (such as transport, green infrastructure, utilities and <b>health care</b>) to support growth, is a cross-cutting theme throughout the document.</p> <ul style="list-style-type: none"> <li>• Page 16: Our new homes need to be supported by the right type of <b>infrastructure</b>, including transport, utilities, flood resilience, <b>healthcare</b> and recreation, and we will set out strategic priorities and seek targeted investment and funding to ensure we can meet our high ambition.</li> <li>• Page 30: Infrastructure delivery list:- <b>Strategic healthcare provision</b>.</li> </ul>	<p>Comments noted.</p> <p>There will be continued engagement with the National Health Service in relation to strategic planning and infrastructure across the four local authority areas.</p>

Respondent	Comments received	Response
	<p>The Devon health system has been rated as NOF4 in the NHS Oversight Framework. This means that Devon receives 'intensive' support from NHS England, which includes additional reporting requirements and financial controls with the aim of improving its financial and operational performance. The NHS providers across Devon have been and continue to work collaboratively to address the issues highlighted and improve our overall improvement. We have established a system-wide programme of work to deliver the performance and financial improvements needed to allow Devon to move out of NOF4.</p> <p>One area of focus is both the condition and capacity of the existing health care infrastructure and identified that there is a capital investment requirement of £3bn (2024 and 2030) but are only likely to receive £82m of funding available which will have to be prioritised for our high and critical risk backlog leaving little for investment projects or to increase capacity.</p> <p>We appreciate the collective support provided by all of the Local Planning Authorities across Devon and look forward to being part of and contributing to each Local Plan ensuring that we have the right infrastructure and capacity to support both existing and future residents of Devon.</p>	

Respondent	Comments received	Response
	Please do not hesitate to contact us for any further information or engagement.	

Report to: **Strategic Planning Committee**

Date of Meeting: 5 December 2023

Document classification: Part A Public Document

Exemption applied: None

Review date for release N/A



## **Teignbridge Local Plan – Publication Plan (Regulation 19) addendum consultation**

### **Report summary:**

Teignbridge District Council have already undertaken consultation on their local plan at the Regulation 19, Publication stage, of plan making. They have, however, now issued an addendum consultation for this stage of plan making work. In this report to Strategic Planning Committee the officer recommendation is that the Council object to a specific detail of the Teignbridge plan in respect of the way it addresses Suitable Alternative Natural Greenspaces (SANGs) and specifically the small physical extent/size of SANGs that are sought under plan policy.

### **Is the proposed decision in accordance with:**

Budget Yes  No

Policy Framework Yes  No

### **Recommendation:**

That committee endorse the proposed response to the Teignbridge local plan consultation and approves its submission to Teignbridge District Council.

### **Reason for recommendation:**

To ensure officer concerns are highlighted and that objections can be made to the Teignbridge local plan consultation.

Officer: Ed Freeman – Assistant Director, Planning Strategy and Development Management, e-mail – [efreeman@eastdevon.gov.uk](mailto:efreeman@eastdevon.gov.uk), Tel 01395 517519

Portfolio(s) (check which apply):

- Climate Action and Emergency Response
- Coast, Country and Environment
- Council and Corporate Co-ordination
- Democracy, Transparency and Communications
- Economy and Assets
- Finance
- Strategic Planning
- Sustainable Homes and Communities
- Tourism, Sports, Leisure and Culture

**Equalities impact** Low Impact



**Climate change** Low Impact

**Risk:** Low Risk;

### **Links to background information**

The addendum Publication draft of the Teignbridge local plan, text in pdf format, can be viewed at: [teignbridge-local-plan-2020-2040-proposed-submission-addendum\\_opt.pdf](#)

Links to other documents that are referred to (if any) are set out in the body of this report.

### **Link to Council Plan**

Priorities (check which apply)

- Better homes and communities for all
  - A greener East Devon
  - A resilient economy
- 

## **1. Teignbridge local plan consultation**

- 1.1 Earlier in 2023 Teignbridge District Council undertook consultation on a Publication draft of their local plan. At that stage East Devon District Council made specific comments on the plan, see committee report at: [2. Response to Teignbridge Plan Reg 19 consultationV4.pdf \(eastdevon.gov.uk\)](#), around issues of housing provision in the plan and potential issues associated with the way the plan was addressing accommodation of possible unmet housing need arising from Torbay, in Teignbridge district. We had concerns about possible implications for East Devon in the way that Teignbridge had referenced Torbay matters and inferences that East Devon might accommodate Torbay housing.
- 1.2 Teignbridge council have now issued an addendum consultation document. This addendum includes changes to their plan that address the key concerns that East Devon District Council expressed around the housing numbers. Though there remains ambiguity around the issue of accommodation of any unmet housing need from Torbay. Objections already raised by East Devon District Council will be submitted to the planning inspector undertaking Examination of their plan.
- 1.3 The Teignbridge addendum consultations runs from 8 November 2023 to 5pm on 22 December 2023.

## **2. Habitat Regulations and mitigation measures in the Teignbridge Plan**

- 2.1 Members of Committee will be aware that East Devon District Council, Exeter City Council and Teignbridge District Council have an existing joint mitigation strategy that addresses adverse impacts from development, that in the absence of mitigation, would otherwise arise on key wildlife sites. The sites the strategy applies to are the Pebblebed Heaths, The Exe Estuary and Dawlish Warren, they are designated as Special Areas for Conservation/Special Protection Areas and as

such fall in the highest tier of wildlife sites in the United Kingdom. There are specific Habitat Regulations that apply to these site designations and compliance with the regulations, to avoid adverse impacts from development, has led to the collective joint approach to mitigation.

2.2 Having reviewed proposed changes in the Teignbridge local plan addendum we would wish to raise a matter related to how the plan deals with mitigation measures and specifically the provision of Suitable Alternative Natural Greenspaces (SANGs).

### **3. The proposed response to the consultation by East Devon District Council**

3.1 In the highlighted text below we set out a proposed response to the Teignbridge addendum local plan consultation by East Devon District Council. This response provides details of the concerns highlighted by officers.

3.2 Subject to Strategic Planning Committee approval we will submit this response to Teignbridge District Council.

East Devon District Council welcomes the addendum consultation on the Teignbridge local plan. However, we do wish to raise objection around the issue of Suitable Alternative Natural Greenspaces (SANGs) provision and referencing in the plan.

New text in the plan, at Paragraph 6.68, usefully references the fact that the partner authorities (East Devon, Exeter and Teignbridge) are currently updating the joint mitigation strategy. This work is being undertaken by consultants to cover new local plans running to 2040, and the work is progressing to strategy completion in the early part of 2024.

As you will be aware SANGs are now an established and widely used approach to providing mitigation. The basic principle behind SANGs is that they will provide an alternative destination to go to for people that would otherwise go to and undertake damaging recreational activities on the highest tier of designated wildlife sites. Of greatest concern is dog walking and the adverse impacts that dogs can have on wildlife interests. The SANGs provide an alternative destination, of lower (non-designated) wildlife value, thus reducing use and net negative impacts on the designated sites.

In the addendum plan, in Policy EN14, it is welcomed that new text now refers to provision of SANGs, in line with best practice, to levels that equates to 8 hectares of SANGs per every 1,000 persons that new developments will accommodate (equating to the equivalent of 184 square metres of provision for each new dwelling).

We endorse these levels of provision, however, to be effective any SANGs does need to be appealing to dog walkers (and to dogs) and to achieve this they need to be of at least a certain minimum size and generally speaking bigger is more effective and will be more appealing to dog walking and as such will draw more people/dogs away from the designated wildlife sites.

Natural England have issued guidance in respect of SANGs for the Thames Basin Heaths Special Protection Area and this guidance as now widely used and applied across England, it forms a standard benchmark to work to, see: [Natural England SANG quality guidance \(bracknell-forest.gov.uk\)](http://bracknell-forest.gov.uk)

The Natural England guidance advises, amongst other matters, that to be effective and work “SANG should aim to supply a choice of routes of around 2.3 - 2.5km in length with both shorter and longer routes of at least 5km as part of the choice, where space permits.” To achieve these lengths of walk requires SANGs, from our experience and looking at best practice elsewhere, to be at least around 10 hectares in size. This minimum 10 hectare size threshold should be specified in plan policy to ensure SANGs are of a viable size. Under item c. the plan policy wording should be amended to read (our proposed text in red):

*“c. In addition to the Habitat Mitigation Contribution, development of residential or holiday accommodation within 10km of one of more of the protected sites, as shown on the Policies Map, will be required to provide and maintain Suitable Alternative Natural Greenspace (SANG) in perpetuity, either:*

- i. In accordance with SANG provision as set out in a development plan allocation (which is equivalent to 8 ha per 1000 population or 184 square metres per dwelling), at the expense of the development and early in the delivery of the site, **with any new SANG measuring at least 10 hectares in size to ensure that viable walking trails of 2.3 to 2.5 km in length will be achieved;***
- ii. ....”*

East Devon District Council would wish to raise significant concerns about agreeing to a joint mitigation strategy without this SANGs size threshold in place. This may prevent a joint strategy being agreed and therefore render changes shown in paragraph 6.68 of the plan inaccurate. We would highlight that small scale SANGs, as allocation policies in your plan currently include, will not only fail to work they will also divert funding away from appropriately sized SANGs, thus threatening the delivery of genuine SANGs and prejudicing the ability to secure appropriate mitigation for the wildlife designated sites. The absence of mitigation could result in the stalling of housing delivery. We note that changes detailed above will require changes to specific development allocation policies in your plan, including EE4, V2, V3 and V16 and also changes proposed in paragraph 6.71 will need to be reviewed.

### **Financial implications:**

No current direct financial implications at this consultation stage. As a partner in the joint Habitat Mitigation Strategy, East Devon currently jointly funds SANGs and other mitigation strategies through received Section 106 and CIL contributions.

### **Legal implications:**

There are no legal implications arising other than as set out in the report.

Report to: **Strategic Planning Committee**

Date of Meeting: 5 December 2023

Document classification: Part A Public Document

Exemption applied: None

Review date for release N/A



## **Employment of agency staff in the Planning Policy team**

### **Report summary:**

Members will be aware of the extensive work to be undertaken in preparing the Local Plan and that we have been unable to fill a vacant post in the Planning Policy team despite a number of attempts through advertisements and interviews. A staffing deficit comes at a time when a realistic but tight and challenging new timetable for local plan production has been agreed. The long term preference is to appoint a new staff member into the team. However, to overcome a shorter term need it is proposed that we seek to appoint an agency planner for an interim period, suggested to be for a six to twelve month period. Agreement is sought for funding with a recommendation of this committee to be made to Cabinet to agree this expenditure.

### **Is the proposed decision in accordance with:**

Budget Yes  No

Policy Framework Yes  No

### **Recommendation:**

That Strategic Planning Committee agree to recommend to Cabinet that funding of £55,000 be committed to appointing an agency planning officer on an interim basis to work in the Planning Policy team to support Local Plan production and cover the vacant Planning Officer post in the team.

### **Reason for recommendation:**

To ensure that the Planning Policy team has a sufficient staff resource to produce the local plan in accordance with agreed timetables.

Officer: Ed Freeman – Assistant Director, Planning Strategy and Development Management, e-mail – [efreeman@eastdevon.gov.uk](mailto:efreeman@eastdevon.gov.uk), Tel 01395 517519

Portfolio(s) (check which apply):

- Climate Action and Emergency Response
- Coast, Country and Environment
- Council and Corporate Co-ordination
- Democracy, Transparency and Communications
- Economy and Assets
- Finance
- Strategic Planning



- Sustainable Homes and Communities
- Tourism, Sports, Leisure and Culture

**Equalities impact** Low Impact

**Climate change** Low Impact

**Risk:** Low Risk;

**Links to background information** [local plan timetable and LDS.pdf \(eastdevon.gov.uk\)](#)

### **Link to Council Plan**

Priorities (check which apply)

- Better homes and communities for all
  - A greener East Devon
  - A resilient economy
- 

## **1. Local Plan timetable and staffing in the Planning Policy team**

- 1.1 At Strategic Planning Committee on 31 October 2023 members agreed to a revised local plan making timetable. This timetable was informed by two critical dates, noting that the government are proposing a new local plan making system and that plans to be made under the current system have to meet deadlines that state:
- Plans have to be submitted for Examination by the end of June 2025, at the latest; and
  - Plans have to be Adopted before the end of December 2026, at the latest.
- 1.2 Meeting these deadlines is realistic, but it is not without challenges and amongst other matters will require an appropriate staffing resource in the Planning Policy team. For most of 2023 the Planning Policy team was running with the absence of a Planning Policy Officer. The previous post holder resigned and despite placing adverts and holding interviews we have been unable to appoint a suitably qualified and experienced replacement staff member. The report on the Local Plan timetable highlighted this issue and stated that we were considering options around whether to appoint an agency planner to the team or send work out to consultants. We have reviewed these options and favour keeping work in-house as much as possible since our experience with consultants has been mixed in terms of the quality of work and the amount of our officer time that has been involved in managing the commission. The use of consultants is also very expensive and should be limited to work where we do not have the expertise in-house whereas the issue here is capacity rather than capability.
- 1.3 Based on previous poor/limited responses to past advertisements there is seen to be little merit in re-advertising again now directly for this post. The post has

respect of securing a permanent position we would see greater merit in looking in the future at appealing to both qualified planners and non-planners (for example geography graduates) in any future job advert. This would be with a programme of offering career progression and training (through the apprenticeship route/day release at university) to a non-qualified planner, if appointed. This 'grow-your-own' approach to securing staff has been running effectively in the planning service for some time now and is proving to be a successful model.

- 1.4 To overcome a shorter term recruitment challenge, however, it is seen as appropriate to go down an agency route to get an appropriately qualified staff member in post to assist with local plan work.

## **2. Current Planning Policy budgets**

- 2.1 Planning Policy budgets show a current reserve, coded against consultancy fees, of just under £128,000 and this financial year (2023/24) we have a net remaining budget (discounting around £40,000 spent so far) of around £80,000 for consultancy fees. Added to this a proposed (suggested) budget for 2025/26 of £122,400 gives a grand total consultancy fees budget of around £330,400 that will take us through to the end of the 2026 financial year.

- 2.2 We do, however, have existing outstanding consultancy spend commitments, with work underway on various studies and also future local plan essential commissions being paid for through planning policy budgets. This work includes:

- Strategic flood risk assessment
- Water cycle study
- Housing needs assessment update
- Gypsy and traveller accommodation needs assessment
- Plan assessment under the Habitat regulations, and
- Local plan viability assessment.

It should be noted that this list is not a definitive final list and is likely to be added to. There is, and will also be, other external Council commissions that will not be covered through Planning Policy budgets but that will provide evidence for use in supporting the local plan.

- 2.3 Although final costs are an unknown it will be prudent to set aside an estimated £200,000 to cover the above and any future external commissions that are needed. Deducting this figure from the £330,400 leaves a net figure of around £130,400 for the period up to financial year end of 2026. However, this does not take into account the fees charged by the Planning Inspectorate for undertaking local plan Examination, nor any other associated costs related to the Examination. Extra costs will include appointment of a Programme Officer, who works variable hours providing essential administrative support for the efficient running of the Examination process. Examination costs will come from the consultancy budget.

- 2.4 The Planning Inspector and other Examination costs are an unknown, they depend hugely on how complex and lengthy an Examination may end up being. But with

high housing numbers proposed in East Devon, a complex new town to plan for through the local plan and high levels of interest from local communities and from developers it is reasonable to assume it will be a more complex, rather than less complex, plan Examination.

- 2.5 It is suggested that the figure of £130,400 should be looked upon as a reasonable estimate of plan Examination costs, hopefully an upper estimate, though reiterating the unknowns and real potential for final costs to be higher.
- 2.6 It is also highlighted that the plan Examination is likely to extend beyond the end of the 2026 financial year and so some Examination costs might be met through budgeting in the 2026/27 financial year. But that is a long way off.
- 2.7 Based on the above assessment it can be seen that there is likely to be an appropriate sum of money, all-be-it with significant unknowns attached, to cover production costs of the local plan. But that is only applicable assuming that additional costs are not incurred. With appointment of an agency planner there would be additional costs and therefore agreement is sought to secure additional funding.

### **3. Employment of an agency planner**

- 3.1 An agency planner, someone with relevant experience in planning policy work (though not necessarily at higher senior or management level) might cost the Council up to £100,000 for a year. We currently have budget for the vacant Planning Officer post which equates to approximately £45,000 per annum based on a mid-point on the pay scale and including on-costs leaving a budget shortfall of up to £55,000 per annum to cover the post through agency staff. At this stage it would be prudent to consider having an agency planner in position for at least six months, but given the importance of progressing the Local Plan and pressing timescales to do this under the current plan making system it is considered prudent to budget for 12 months so that the arrangement can be readily extended if required.
- 3.2 An agency planner would pick up on specific and dedicated work streams and areas required to support local plan production as well as more overarching general work areas. For example, with further (Regulation 18) consultation planned in Spring 2024, there will be considerable work to be undertaken in preparation of consultation and assessing feedback received in the first half of 2024.
- 3.3 Subject to this committee agreeing to the appropriateness of employment of an agency planner it would form a recommendation, supported by this Committee paper, that would go on to and seek Cabinet approval for identifying and agreeing to funding.
- 3.4 We would want to work to a timetable of gaining Cabinet approval in January 2024 and then moving swiftly on to appointment with a start date ideally in February 2024.

**Financial implications:**

The current budget figures have been supplied by finance and all financial considerations are considered within the recommendation and body of the report.

**Legal implications:**

There are no legal implications requiring comment.



