FOOTPRINT ECOLOGY

South East Devon Wildlife – Joint Habitats Sites Mitigation Strategy (2024)

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Summary

This strategy sets out the mitigation requirements relating to impacts from recreation (associated with new housing and tourism development) on the Exe Estuary Special Protection Area (SPA)/Ramsar site, Dawlish Warren Special Area of Conservation (SAC) and the East Devon Pebblebed Heaths SAC/East Devon Heaths SPA. These are sites of exceptional nature conservation importance, and the strategy ensures the relevant local authorities (East Devon District Council, Exeter City Council and Teignbridge District Council) meet legislative requirements and adequately protect the sites when permitting development.

This strategy will replace and supercede the previous strategy (established in 2014). New housing (within 10km of the European sites) is anticipated at around 2,000 new dwellings per annum over the period 2025-2030, and this update ensures the level of mitigation is appropriate to the level of growth anticipated. Mitigation measures are set out in detail and comprise:

- SAMMS (Strategic Access Management and Monitoring); and
- Off-site infrastructure (including SANGs – 'Suitable Alternative Natural Greenspace' and local projects).

This strategy covers the period 2025-2030 and will be updated on a rolling basis every 5 years, providing the opportunity to check the mitigation, scale of growth and update any costs. As such the strategy provides a long-term solution to recreation impacts. By addressing risks up front, the strategy provides a proactive, cross-boundary solution that ensures cumulative impacts of growth are taken into account. The strategy ensures necessary resources and costs are identified and provides clarity for developers when bringing forward sites for development.

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1. Introduction

1.1 This strategy primarily relates to housing growth in the South East Devon area. It covers the period 2025-2030 and sets out the mitigation requirements relating to the impacts from recreation on the important nature conservation sites. It ensures that East Devon District Council, Exeter City Council and Teignbridge District Council are adequately protecting the relevant wildlife sites from the impacts of recreation while also ensuring that housing is not delayed. The strategy provides clarity for developers when bringing forward sites for development.

Background

1.2 The Exe Estuary, Dawlish Warren and the East Devon Heaths are three sites of exceptional nature conservation importance that are covered by several international designations. Located close to Exeter, the sites are adjacent to a large human population and are popular sites for recreation. Urban development in the vicinity of the sites and increasing recreation use brings particular risks. This strategy addresses these risks, ensuring local planning authorities meet legislative requirements when permitting housing development. By addressing risks up front, the strategy provides a proactive, cross-boundary solution that ensures cumulative impacts of growth are taken into account and that the necessary resources and costs are identified.

1.3 A strategic approach to mitigation was established in 2014, developed with partnership working between East Devon, Exeter City and Teignbridge local planning authorities, with input from a number of wider organisations involved in the protection and management of the three European sites. The 2014 strategy set out a zone of influence (i.e. the evidence based zone within which it is deemed that mitigation measures are required) and a series of mitigation measures that work together to provide robust protection for the three European sites. The strategic approach was planned to run over the lifetime of the relevant Local Plans, and then beyond as a continual rolling programme, but with interim reviews. Since 2014, the strategy has been progressed by the three local planning authorities and dedicated staff are in place to facilitate implementation. There has been some very positive delivery of measures, and some aspects of mitigation have inevitably been identified as needing refinement.

1.4 A review and update of the mitigation strategy is necessary to ensure continued protection for the relevant European sites and to ensure the strategy is appropriate to the level of growth coming forward in the relevant Local Plans.

Legislative context

1.5 This strategy has been produced in order to meet particular legislative requirements. Habitats sites are those afforded the highest level of legislative protection for biodiversity. Public bodies, including local planning authorities, have specific duties in terms of avoiding deterioration of habitats and species for which sites are designated or classified, and stringent tests have to be met before plans and projects can be permitted. Importantly, the combined effects of individual plans or projects must be taken into account. For local planning authorities, this means that the combined effect of individual development proposals needs to be assessed collectively for their cumulative impact.

1.6 The designation, protection and restoration of habitats sites is embedded in the Conservation of Habitats and Species Regulations 2017, as amended, which are commonly referred to as the 'Habitats Regulations'. They include Special Protection Areas (SPA) classified under the 1979 Birds Directive and Special Areas of Conservation (SAC) designated under the 1992 Habitats Directive[1]. In addition, Ramsar sites are afforded the same level of protection as habitats sites, through long-established Government policy[2]. In this strategy we use the term 'European site' to refer to both habitats sites and Ramsar sites.

[1] For the avoidance of doubt, the list of statutory European sites also comprises: A site submitted by the UK to the European Commission (EC) before Exit Day (a candidate SAC or cSAC) as eligible for selection as a Site of Community Importance (SCI) but not yet entered on the ECs list of SCI, until such time as the Appropriate Authority has designated the site or it has notified the statutory nature conservation body that it does not intend to designate the site. After Exit Day, no further cSACs will be submitted to the EU. Statutory European sites also include SCI included on a list of such sites by the European Commission from cSACs submitted by the UK before the UK left the EU, until such time as the UK designates the site when it will become a fully designated SAC.

[2] ODPM Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (16 August 2005), to be read in conjunction with the current NPPF, other Government guidance and the current version of the Habitats Regulations.

1.7 European sites are the cornerstone of UK nature conservation policy. Each forms part of a 'national network' of sites that are afforded the highest degree of protection in domestic policy and law. Public bodies are referred to as 'competent authorities' within the legislation. The duties set out within the Habitats Regulations in relation to the consideration of plans and projects are applicable in situations where the competent authority is undertaking or implementing a plan or project, or authorising others to do so.

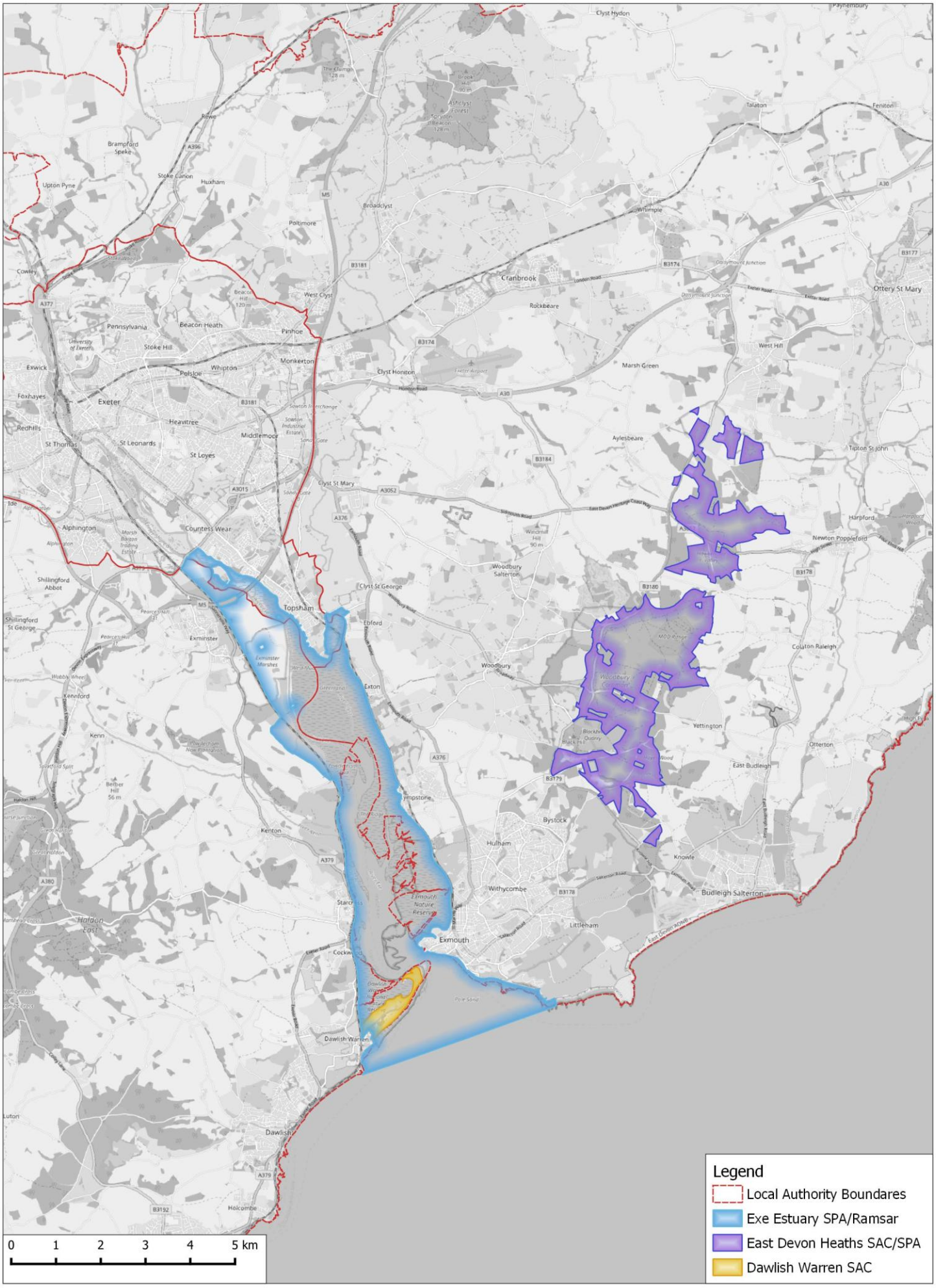
1.8 The legislation is founded on the 'precautionary principle' and it is necessary to rule out harm, rather than demonstrate impacts. Assessment (Habitats Regulations Assessment) requires consideration of effects either alone or in-combination, and this strategy therefore relates to the cumulative effects of plan-led development across the combined authorities.

Relevant European Sites

1.9 This strategy is focussed on three European sites lying in close proximity towards the south of Exeter (Map 1). These relevant European sites are:

- The Exe Estuary SPA/Ramsar site
- Dawlish Warren SAC
- The East Devon Pebblebed Heaths SPA/SAC.

Map 1: European sites



The Exe Estuary

1.10 The Exe estuary is of international importance for wintering and migratory wetland birds which use the intertidal sand and mud flats and associated saltmarshes, reedbeds and grazing marshes.

1.11 The Estuary is classified as an SPA for the following non-breeding birds:

- Grey Plover *Pluvialis squatarola,*
- Dark-bellied Brent Goose *Branta bernicla bernicla,*
- Pied Avocet *Recurvirostra avosetta*,
- Black-Tailed Godwit *Limosa limosa islandica,*
- Dunlin *Calidris alpina alpina*,
- Slavonian Grebe *Podiceps auritus,*
- Eurasian Oystercatcher *Haematopus ostralegus,*
- And in addition for the wintering waterbird assemblage.

1.12 The estuary is also a Ramsar site, listed for the following:

- Assemblage of international importance (under criterion 5); wintering waterfowl assemblage
- *Branta bernicla bernicla* Dark-bellied Brent Goose (under criterion 6)

1.13 The SPA and Ramsar have the same boundaries and cover some 2,345.71ha. Full details of the SPA and Ramsar can be accessed on the Natural England website[3].

Dawlish Warren

1.14 Dawlish Warren is a geomorphologically important sand spit which protects the mouth of the Exe estuary. The spit holds a mosaic of sand dune, grassland and wetland habitats and supports several rare plants.

1.15 Dawlish Warren is designated as an SAC for:

- H2190 Humid dune slacks;
- S1395 Petalwort Petalophyllum ralfsii
- H2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes");
- H2130 Fixed dunes with herbaceous vegetation ("grey dunes").

[3] See Natural England website

1.16 The SAC (58.84ha) falls within the Exe Estuary SPA and Ramsar. Full details of Dawlish Warren and its interest features can be accessed on the Natural England website[4].

The East Devon Heaths

1.17 The East Devon Heaths form the largest block of lowland heath in Devon, and they are internationally important for the wet and dry heathland habitats present. The diversity of heathland reflects the varied topography, geology, hydrology and water chemistry of the area, and supports associated plant and animal communities. Among the 21 breeding dragonfly species recorded at the site is the southern damselfly and there is an important assemblage of birds, including breeding Nightjar and Dartford Warbler.

1.18 The Heaths are designated as an SAC ('The East Devon Pebblebed Heaths SAC') for:

- H4030 European dry heaths;
- S1044 *Coenagrion mercuriale* Southern damselfly;
- H4010 Northern Atlantic wet heaths with *Erica tetralix.*

1.19 The Heaths are classified as an SPA ('The East Devon Heaths SPA') for

- A302(B) *Sylvia undata* Dartford Warbler;
- A224(B) *Caprimulgus europaeus* European Nightjar.

1.20 The SPA and SAC boundaries are identical and cover 1,119.94ha. We use 'East Devon Heaths SAC/SPA' throughout the strategy to refer to the SAC and SPA together. Conservation objectives, site condition and the relevant citations are available on the Natural England website[5].

Mitigation to date and need for this update

1.21 A strategic and plan led approach to protecting sites from the impact of recreation is now widely recognised as being more effective than dealing with these impacts on a development-by-development basis. Strategic mitigation approaches have been established around the country (for example on the Dorset Heaths, the Thames Basin Heaths, the Solent, the Suffolk Coast, Poole Harbour, the South Pennine Moors, the Chilterns Beechwoods and the Durham Coast). Recreation pressure is complex as the

[4] See Natural England website
[5] See Natural England website

way visitors use a site can change with time and the distribution of the qualifying features can also change. Furthermore, to ensure effectiveness, mitigation needs to include a package of measures that work together in an integrated way. For example, educating visitors, reinforcing messages with site-based staff, and providing the right infrastructure to meet visitor needs and influence visitor behaviour could all fit together as part of a mitigation package, but are the kinds of measures that cannot be delivered in a piecemeal way, implemented by individual developments.

1.22 Collective funding is essential for on-site measures, and these are then in turn supported by the provision of the right alternative green infrastructure to make a meaningful reduction in visits to the European sites.

1.23 A strategic approach also ensures that mitigation can be secured in a way to maximise benefits for local communities and wildlife, ensuring a positive approach that provides for recreation use and ensures long-term protection for the European sites.

1.24 A strategic mitigation approach was first established in South East Devon 2014 through the initial South East Devon Joint Mitigation Strategy (Liley *et al.*, 2014). This strategy included mitigation measures relating to the Exeter Core Strategy, the East Devon Local Plan and the Teignbridge District Local Plan, which then proposed a total level of housing growth of around 40,000 new homes (over the period 2006-2026 for East Devon and Exeter City and 2013-2033 for Teignbridge District).

1.25 Mitigation measures have been funded by developer contributions, with contributions required from many types of residential and tourist accommodation[6]. The three local authorities used a combination of Community Infrastructure Levy (CIL) and Section 106/111 to secure the funding.

1.26 Whilst approval of the overall Strategy rests with respective Councils, decision making powers to deliver the Strategy have been delegated to the South and East Devon Habitat Regulations Executive Committee. The Committee's responsibilities include: agreeing a 5-year programme of

[6] For example, including: all houses and flats (but not extensions), affordable housing, tied accommodation, student housing (with the exception of purpose built accommodation in Exeter), housing for the 'mobile' elderly, hotels, B&Bs and static caravans. Care homes for the infirmed who have significantly reduced mobility have been excluded.

mitigation and monitoring, an annual business plan, budget allocation, stakeholder cooperation and securing complementary funding.

1.27 This strategy will replace and supercede the previous strategy. It covers the period 2025-2030 and brings the relevant mitigation requirements, contributions and approach up to date with the housing growth now coming forward in the relevant authorities. It has been brought together with the involvement of a wide range of stakeholders, through a series of workshops and meetings.

2. Impacts of development

2.1 Impacts of development and the particular risks to the relevant European sites are discussed in detail in a range of previous reports (see Lake, 2010; Liley *et al.*, 2014; Liley, Panter and Underhill-Day, 2016) and are summarised here in Table 1. This strategy focuses on the cumulative effects of housing growth in terms of recreation impacts. It does not address other impacts from plan-led growth, for example impacts associated with air quality or water quality, which are beyond the scope of this strategy.

2.2 It should be noted there is uncertainty around the scale of potential impacts, given the length of time the development will last and factors such as climate change which are likely to impact the distribution of the qualifying features, exacerbate risks such as fire incidence, change recreation patterns and fundamentally change the coast and surrounding habitats. The legislation requires the Local Planning Authorities to be able to rule out harm, and the strategy provides a means to address such uncertainty.

Table 1: Summary of risks to the relevant European sites from recreation and urban effects

Impact	Exe Estuary SPA/Ramsar	Dawlish Warren SAC	East Devon Heaths SPA/SAC	Notes	References and examples
Disturbance to breeding birds			✓	Risks from reduced breeding success and avoidance of otherwise suitable habitat.	Murison (2002); Liley & Clarke (2003); Murison *et al.* (2007).
Disturbance to wintering waterbirds	✓			Risks from avoidance of otherwise suitable areas, reduced feeding rate, stress and increased energetic costs.	Goss-Custard & Verboven (1993); Stillman *et al.* (2001); West *et al.* (2002); Liley *et al.* (2011)
Increased fire risk		✓	✓	Fire risk linked to recreation through discarded cigarettes, BBQs etc.	Kirby & Tantram (1999); Lake (2010)
Trampling and wear		✓	✓	Heavy footfall can result in vegetation wear, soil compaction & erosion.	Lowen *et al.* (2008); Lake (2010)
Interaction with predators	?		✓	Species such as Crows and Magpies may be drawn to areas with greater human activity or occur at higher densities; redistribution of birds may result in greater vulnerability to predation.	Marzluff & Neatherlin (2006)
Nutrient enrichment from dog fouling		✓	✓	Risks from dog fouling resulting in increased soil nutrient levels and changes in vegetation.	Bonner & Agnew (1983); Taylor *et al.* (2005); De Frenne *et al.* (2022)
Fly tipping/litter		?	✓	Short-term impacts to interest features likely to be minimal but risks of long-term contamination, particularly from introduced species from garden waste a risk. Also risks of staff time drawn from other essential duties.	

Impact	Exe Estuary SPA/Ramsar	Dawlish Warren SAC	East Devon Heaths SPA/SAC	Notes	References and examples
Contamination of water bodies from dogs		✓	✓	Dogs swimming in ponds and other waterbodies brings potential risks from increased turbidity and pollution from flea treatments etc	Groome *et al.* (2018); Denton & Groome (2017); Perkins *et al.* (2020)
Disruption of management		✓	✓	Disruption such as dog attacks to livestock; gates left open; theft of equipment/material; all issues to be expected at more urban sites or those with more recreation	
Public opposition/objection to management	✓	✓	✓	Management interventions such as tree or scrub removal, water level management etc. can be sensitive and opposed by local residents, leading to issues achieving the necessary management	Woods (2002)
Damage to infrastructure, vandalism etc.	✓	✓	✓	Direct damage can occur through graffiti and deliberate vandalism which tend to be issues at more urban sites	
Predation by pet cats			✓	Increased housing may lead to increases in local cat population; pet cats can range widely and predate a variety of bird and mammal species. Unlikely as a risk for Exe Estuary?	Hall *et al.* (2016);

3. Mitigation delivery to date and implications looking forward

Overview

3.1 In this section we consider the potential for the strategy to evolve to address the additional housing levels and consider the wider context that might be relevant in bringing the strategy up to date.

Mitigation delivery to date

3.2 Mitigation to date, in line with the current strategy, has achieved:

- Recruitment of a dedicated Delivery Manager, responsible for implementing the strategy;
- Two wardens: 'Wildlife Wardens' (roles started in October 2016; staff changes / changes to job titles have occurred since) with a dedicated vehicle. The two wardens spoke to over 2,000 people between November 2016 and November 2017[7] and they have become a familiar sight at the relevant European sites. Their role has been to talk to visitors and engage with those undertaking potentially damaging activities (such as not picking up after their dog). They have done training with the police and are certificated to issue warnings to people about infringements.
- A dedicated website[8] and social media presence now established including Twitter[9], Facebook[10] and Instagram[11].
- The 'Devon Loves Dogs' project launched in July 2017, with a dog walking code, recommended walks and information for dog walkers. The project has its own website[12] and its own social media presence that includes Facebook[13], Twitter[14] and Instagram[15]

[7] Figures from Annual Business Plan report, see minutes of Habitats Mitigation Executive Committee Jan 2018
[8] https://www.southeastdevonwildlife.org.uk/
[9] See @SEDwildlife, with 858 followers as of December 2022
[10] See https://www.facebook.com/SEDwildlife/South East Devon Wildlife with 557 followers as of December 2022
[11] See with sedwildlife 554 followers as of December 2022
[12] https://www.devonlovesdogs.co.uk/
[13] See Devon Loves Dogs with 1,600 followers as of December 2022
[14] See @DevonLovesDogs with 515 followers as of December 2022
[15] See devonlovesdogs with 1,189 followers as of December 2022

- A patrol boat, purchased for use on the Exe Estuary to ensure people remain within the speed limit and follow codes of conduct.
- Wildlife Refuges on the Exe Estuary, near the Duck Pond and at Dawlish Warren, these were subject to a public consultation, have been marked out with buoys and monitoring has been undertaken (Saunders. and Liley, 2021).
- Codes of conduct[16] for the Exe Estuary to help promote a safe and responsible approach to carrying out activities in the area.
- A Pebblebed Heaths Visitor Management Plan, including visitor survey data and recommendations for mitigation measures specific to the East Devon Heaths.
- Pebblebed Heaths visitor access improvements, consisting of a car park strategy, stakeholder and public consultation and a multi-year programme of construction/landscaping spanning the heaths.
- Redesign and installation of new interpretation boards across the Heaths, at each of the main car parks, including car park entrance signage.
- Additional dog bins on the East Devon Heaths at 6 parking areas.
- Provision of SANGs, with Dawlish Countryside Park SANG (26ha) opened to the public in 2017 and other sites including the Ridgetop Park Exeter, Old Park Farm and Pinbrook Country Park. A complete list of current and proposed SANG is provided in Appendix 1.
- Liaison with other strategic mitigation projects, such as Dorset Heaths, Thames Basin Heaths and the Solent, developing links and sharing best practice.
- A visitor survey of the three European sites (Caals, Panter and Liley, 2022)

Commentary on measures in place and opportunities to expand

3.3 From discussion with various parties involved in setting up and running the current Strategy, and a review of information and literature available, the following points are relevant.

Visitor numbers and need for a package of mitigation measures

3.4 Visitor survey results from the European sites in South east Devon have shown a marked increase compared to previous years (Caals, Panter and Liley, 2022). In general, this pattern reflects the national picture, whereby greenspaces in the UK have seen a marked surge in recreation as a result of the Covid pandemic (McGinlay *et al.*, 2020; Burnett *et al.*, 2021; Natural

[16] Available to download from the Exe Estuary Partnership Website

England and Kantar Public, 2021) and many changes, such as increased dog ownership (Morgan *et al.*, 2020) may have long-lasting effects.

3.5 Recreation patterns, in terms of types of activity will also change over time. Wild swimming (Bates and Moles, 2022), paddleboarding (Baker *et al.*, 2021) and e-bikes (Rérat, 2021) are becoming increasingly popular while improvements in wetsuit materials and technology can allow people to spend more time in the water. Such changes may mean people access sites in novel ways, at different times of day or different weather conditions.

3.6 In order to ensure resilience in the face of such change and the necessary confidence to conform with the regulations, a range of mitigation measures are likely to be necessary. It is unlikely that any one single intervention will work on its own to address all possible risks.

Climate change

3.7 Climate change adds to uncertainty through changes to the estuary and adjacent areas. Dawlish Warren will continue to change with the beach continuing to lower, increasing flood and erosion risk across the estuary. The spit is anticipated to lose its wave barrier function making the estuary less sheltered and more vulnerable to storm events and there is some disagreement about the how site should be managed (see Environment Agency, 2023 for background).

3.8 Dawlish Warren holds one of the major wader roosts on the estuary and the changes to the estuary may affect the distribution of birds, availability of roost sites and distribution of food (Clausen and Clausen, 2014). In addition, climate change will affect the distribution of birds and choice of wintering location at a fly-way/regional level (e.g. Maclean *et al.*, 2008).

3.9 Climate change is also likely to be a driver of change in recreational use (McEvoy *et al.*, 2008; Coombes and Jones, 2010), for example milder winter weather could lead to increased watersport use.

Functionally linked-land and resilience

3.10 There have been some marked changes on and around the estuary in recent years. Both mussel and cockle stocks (a key food for some SPA bird species such as Oystercatcher) have crashed (Morten *et al.*, 2022) and there have been major erosion events at Dawlish Warren. In the context of climate change with more storms and rising sea-levels, the dynamic nature of the coast means that the distribution of birds within the SPA/Ramsar is likely to

shift. Low-lying land around the SPA has the potential to provide safe roost and feeding sites for the bird interest and such functionally-linked land[17] may become more important in the long-term in terms of providing feeding and roost sites.

3.11 Facilitating management of these areas and ensuring disturbance is minimised is likely to help relieve pressure on the SPA that may be subjected to changes in key habitats over time. By securing greater habitat capacity outside site boundaries, there can be greater confidence in maintaining the favourable conservation status of the bird interest into the long term.

3.12 There is on-going research to understand Oystercatcher movements around the Exe Estuary, and birds have been colour-ringed and some have been fitted with GPS trackers (Morten *et al.*, 2022). Such studies will help to show how birds move around the estuary and identify any key locations outside the SPA that are functionally-linked to the SPA, by providing habitat that is essential to the SPA birds.

3.13 As the strategy evolves and as the estuary changes, there may be opportunities to focus on functionally-linked land more. Increasing the resilience of the SPA will contribute towards site conservation objectives and there will be a level at which this should clearly be done in order to meet the maintain and restore duties within the legislation, rather than mitigation. Careful consideration of whether there are additional opportunities that could form part of the strategy warrants further investigation, for example through mapping functionally-linked land. Clear demonstration of additionality will be paramount.

Long-term security

3.14 The need for mitigation is likely to last indefinitely. A long-term perspective is clearly important. Proactive work around influencing dog walkers and managing dogs off leads has taken place at Dawlish Warren since the 1970s and the restrictions on dogs beyond groyne 9 on the beach were first instigated in the 1990s (P. Chambers, *pers. comm.*). The need to keep promoting and reinforcing the messaging still remains, highlighting how important it is that measures are implemented for the long-term.

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[17] 'Functional linkage' refers to the role or 'function' that land or sea beyond the boundary of a European site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. See Chapman & Tyldesley (2016) for further background.

3.15 A consistent challenge across this and other European site mitigation strategies has been how best to ensure effective mitigation for the lifetime of the development, particularly when measures involve the management of green infrastructure or employment of staff that need funding on an annual basis. Securing in-perpetuity funding means ring-fencing money for future delivery, yet it can be hard to determine the right amounts to set aside. Clarity on the duration that measures are required for clearly has a major impact on the overall cost of mitigation.

3.16 The current mitigation strategy does not include any security in terms of the Delivery Manager's post, which was envisaged to be a 5-year post. Given the continuing need to bring a wide range of stakeholders together, report to the Executive Committee, manage the budget and oversee mitigation delivery, there is scope for this post to be extended. Without this post, there is the risk that the Wildlife Wardens spend less time out on site and are stretched too thinly.

3.17 There have also been some delays in delivering mitigation, for example in the case of the purchase of the patrol boat and in establishing the wildlife refuges. Sufficient resources and staff time are necessary to enable measures to happen. As such there is scope for ensuring enough staff and sufficient budget to make sure measures can be implemented. In addition, there needs to be sufficient flexibility to easily redistribute resources to respond to particular circumstances or opportunities.

Wildlife wardens

3.18 Wildlife wardens undertake a ranger role as well as undertaking awareness raising work around the sites. They patrol in pairs due to health & safety concerns and while this works well it does mean that spatial coverage is essentially limited. In recent years there have been lengthy periods of time where only one wildlife warden has been in post and this has required other staff (e.g. delivery manager) to join them on patrols at least 1 day per week, taking time away from other duties.

3.19 There is clear scope to expand the warden team to provide better coverage. To date, warden time has been split seasonally, with a focus on the Heaths during the spring/summer and the Estuary during the autumn/winter. While this has helped ensure the right focus, the restriction of only being able to cover one place at a time due to staffing and the challenges of organising leave and sickness cover mean the current team of two is stretched.

Furthermore, attendance at events, shows and more public-facing elements, while important in themselves, can mean that time actually on the European sites themselves is further reduced. The travel time and distances also add to the challenges as the estuary makes it harder to switch locations quickly and efficiently (i.e. moving between Dawlish Warren and the East Devon Heaths).

3.20 It is perhaps useful to compare other mitigation strategies to check the level of provision. On the Solent (where a mitigation ranger team has been long established), the ranger team has included around 7 staff over the winter (covering some 250km of coast) and the level of annual growth (around 3,400 dwellings), equates to around 30 minutes ranger time per new dwelling per winter (Liley *et al.*, 2023). That figure takes into account the actual time rangers spend out and on the Solent coast, and the rangers are not paired. That level of provision was considered relatively low in the review by Liley *et al.* (2023).

3.21 In South East Devon the wardens need to cover around 27km of shoreline along the Exe Estuary plus an area of around 1,200ha (the combined area of the East Devon Heaths and Dawlish Warren). A team size of just 2 wardens, if out patrolling around 25 hours a week, might achieve around 1,300 hours[18] on patrol per year. With levels of development around 1,941 per annum, that level of coverage is around 40 minutes per new development per year and would seem low. Wardens on the Solent can engage with around 6 groups of people per hour (Liley *et al.*, 2023), assuming similar timings for the South East Devon sites would suggest 2 wardens might achieve the equivalent of 4 interactions with visitors for each new dwelling built. These calculations are relatively simplistic but highlight the current provision is too low and is likely to need to at least double to achieve a better level of coverage.

Monitoring

3.22 Monitoring data reflect the level of mitigation achieved, website hits, social media engagement etc. and have also included visitor surveys (Caals, Panter and Liley, 2022) and monitoring of wildlife refuges on the Exe Estuary (Saunders. and Liley, 2021).

[18] i.e. 25 multiplied by 52, made on the assumption the rangers operate as a pair rather than separately

3.23 Looking to the future, there is scope to review the monitoring that is integrated within the mitigation strategy and potential for additional monitoring to help target warden time, the patrol boat time and other measures, in order to help hone and inform mitigation delivery. The original strategy included visitor questionnaire work at five-year intervals and regular counts of visitor numbers, however the budget was not sufficient to allow these to be fully implemented as planned.

Stakeholders and engagement

3.24 A key element in the mitigation delivery has been stakeholder engagement and the need to involve and work closely with a wide range of people and organisations. These include both internal stakeholders (within the relevant local authorities) and external parties. For the mitigation package to work smoothly and be successful it has to involve local landowners, the public, visitors to the sites, community groups, user groups, developers, nature conservation bodies, statutory agencies, relevant forums and partnerships, local authority staff (including those involved in green infrastructure, communications, strategic planners, development management, legal and tourism) and elected Council members. The Wildlife Wardens and Delivery Manager clearly have an important role to play in bringing stakeholders together and keeping them informed, however there is potential to communicate to the various groups further, extending reach and ensuring the mitigation package works in its totality.

3.25 The Exe Estuary Management Partnership ran the consultation on the wildlife refuges, as well as the code of conduct consultation. Having a third party able to bring together users, local businesses etc. was potentially very important in this instance. Looking to the future, bringing together different groups and establishing opportunities to communicate widely to stakeholders will be important.

3.26 Exeter City Council is seeking a Harbour Revision Order (HRO) which is likely to be in place in the 5 year period covered by this strategy. The HRO will provide new powers including the potential to update byelaws and apply Special Directions for specific instances or occasions. This will involve consultation with users and the potential for new updated legislation and guidance for users.

3.27 Looking ahead, the Devon Local Nature Recovery Strategy (LNRS) will provide supporting evidence for local plans and cover the whole of the county. The

LNRS will set priorities for future focus in terms of geographic areas, species and habitats and will involve planners, developers and others. There may well be opportunities within the LNRS to link to the measures in this mitigation strategy.

Devon Loves Dogs

3.28 Devon Loves Dogs has been successful and has been gathering momentum and recognition. It is however constrained by resources in terms of staff time, vehicle etc. The original strategy included an annual cost to run the Project of £2,000 and there is clearly scope for this to be increased and for more events and greater levels of engagement to be achieved. The county-wide branding brings recognition and scope for growth (e.g. funding to include cover at other sites), but this risks the core sites for mitigation delivery being missed.

Parking on the Pebblebed Heaths and visitor infrastructure

3.29 Given that the majority of visitors come by car, the car parking capacity on the East Devon Heaths provides a means ultimately to limit visitor numbers. Verge parking is minimal now and there have been reductions in the number of car-parks, from 22 car parks around 2000, to about 17 now. There is a difficult balancing act to ensure in the long-term sufficient, adequate parking for a sustainable amount of visitor use, with those car-parks in the right places so that visitor footfall is not focussed in the most sensitive places and is distributed appropriately across the site.

3.30 Clinton Devon Estates have been formalising some car parks, improving efficient use of space/routing of traffic, so that they know better what their total capacity is, and can monitor how close to full they actually come. New signs, height restriction barriers and changes to layout and design have also been incorporated. The redesign helps with mitigation as it provides a physical limit to the amount of parking at particular locations, facilitates engagement (by ensuring signs, bins, path routing etc is all integrated into the design) and makes it clear to visitors the site is well managed and looked after, reducing the risk of antisocial behaviour.

3.31 One factor potentially influencing visitor use of the heaths is the lack of parking charges, meaning it is one of the few countryside areas in the region where it is possible to park for free. There is scope to review how this might influence visitor use and to consider the implications and relative merits of changing this over time. Charging for parking may help visitors appreciate

the challenges in looking after the Heaths and may influence visitor perceptions of the site, as well as possibly changing how often and when people visit. It should however be noted that charging may not necessarily reduce visitor numbers (Weitowitz *et al.*, 2019), but it may also generate revenue to help with the long term funding of management on the Heaths.

Suitable Alternative Natural Greenspace (SANGs)

3.32 SANGs provide additional greenspace for recreation, providing space for recreational use away from European sites. As such they work as mitigation when they provide an alternative that draws users who would otherwise visit the European site. There are various approaches to how SANGs can be delivered, for example new (or enhanced) green space can be created and managed strategically by a local authority, or new open space can be provided by developers alongside new housing. A list of existing, emerging and potential SANGs is provided in Appendix 1.

3.33 The main SANG site so far established is Dawlish Countryside Park, which has been purchased by Teignbridge District Council. The site has been flagged in the dog walking code of conduct for the Exe Estuary, and as such it is being actively promoted to dog walkers using the estuary. Visitor data (Caals, Panter and Liley, 2022) shows the SANG to be working well. For example, 44% of interviewees on the Exe Estuary had visited Dawlish Countryside Park. Furthermore, when asked which single alternative location visitors at the SANG would have gone to instead, Dawlish Warren was the most popular alternative (cited by 13 interviewees, 19% of interviewees at the SANG). Postcode data show the SANG draws visitors from the local area, including Dawlish and from as far afield as Exeter and Newton Abbot.

3.34 Other SANGs include Ridgetop Park near Matford. The total SANG area that has been secured will be almost 40ha and is being delivered by the local authority (partnership). Phase 1 was formally opened in 2023 and is around 21ha.

3.35 There has been limited SANG delivery to date on the east side of the Exe Estuary. This may in part be due to it proving difficult to find suitable locations, and means that there is a disparity in SANGs provision and the SANGs element of the existing strategy has not worked smoothly. The gap in SANGs east of a line between Exmouth and Exeter is a priority for the future.

3.36 In other areas such as the Thames Basin Heaths a formulaic approach to SANGs is clearly set out and rigidly adhered to. The formulas set out the level

of SANG provision per dwelling (8ha per 1,000 new residents) alongside detailed prescriptions of how SANGs should work, including guidelines for site size, parking provision, distance from development, design etc. In the original South East Devon strategy such an approach was avoided as it was recognised that there were different issues around the coast, where SANGs potentially play less of a role in an overall mitigation package due to the unique draw of the coast. Evidence is growing on the effectiveness of SANGs in a coastal location (e.g. Caals, Panter and Liley, 2022) and looking to the future there is a need to provide greater clarity about the level of SANG provision required from different developments and clear guidance on what SANG should look like and how it should work.

3.37 It is also now becoming increasingly recognised that there is a role for SANGs to be multi-functional in that they can provide for some other benefits alongside a primary purpose of mitigation for recreation impacts. Defra's Environmental Improvement Plan (2023) recognises the importance of spending time in nature and sets a commitment that everyone should live within a 15 minute walk of a green or blue space. Access to the countryside is now recognised as bringing wide benefits to society that include benefits to mental/physical health (Pretty *et al.*, 2005; White *et al.*, 2019; Kondo *et al.*, 2020; Mental Health Foundation, 2021; Nghiem *et al.*, 2021) and economic benefits (ICRT, 2011; ICF GHK, 2013; Keniger *et al.*, 2013; The Land Trust, 2018). There is also scope for SANGs to provide benefits around ecosystem services (water quality, flood protection, carbon sequestration) or biodiversity net gain that are not incompatible with a primary aim of recreation provision. As such there are perhaps opportunities for wider funding and better promotion of the potential benefits of SANGs.

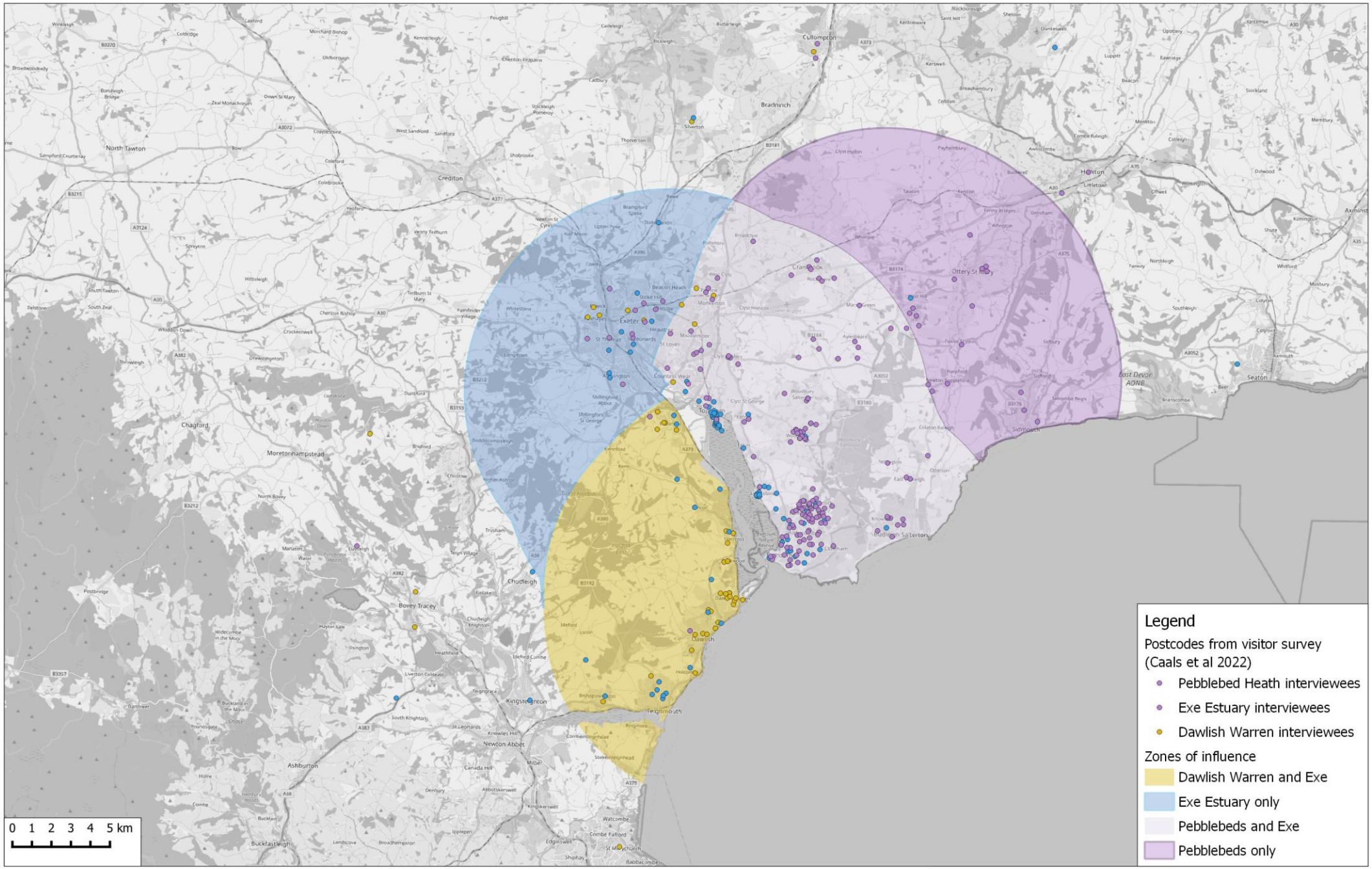
4. Zones of influence

4.1 The original strategy is based on zones of influence around each of the European sites. The zones reflect the area where new development is likely to result in increased access to the European sites and therefore trigger likely significant effects and a need to secure mitigation.

4.2 The zones were drawn at 10km, based on visitor survey data (Liley, Fearnley and Cruickshanks, 2010; Cruickshanks and Liley, 2012), primarily the results from a postal survey. The rationale behind the zones (and detailed consideration of alternatives) are described in the original strategy. In simple terms, 10km captured the majority of visitors, around 70-80% for the East Devon Heaths and the Exe Estuary and lower for Dawlish Warren. The zones resulted in a relatively complex, Venn-diagram like approach, with some areas falling within one zone of influence and other areas falling within two zones.

4.3 Since the previous mitigation strategy further visitor data have become available (Caals, Panter and Liley, 2022). The visitor postcodes from that survey are shown in Map 2, which shows the zones work well to reflect the more recent postcode data (which were collected at a relevant times of year for each European site). In total, 76% of those interviewed at the Exe survey points (including Dawlish Warren) had home postcodes within 10km of the SPA/Ramsar boundary. For those interviewees at Dawlish Warren 60% lived within 10km and for the East Devon Heaths 86% lived within 10km. Caals et al suggest no reason to change the zones of influence.

Map 2: Zones of influences and recent postcode data



5. Scale of future development

5.1 The scale of growth in the relevant local plans is summarised in Table 2 (period 2025-2040) and Table 3 (2025-2030). The totals are approximate and reflect the overall scale of growth that needs to be mitigated. These show nearly 30,000 new dwellings are likely to come forward 2025-2040 within one of the relevant zones, this equates to around 1,941 dwellings per annum. Within the first 5 years (2025-2030), the level of anticipated growth is slightly higher, at just over 2,000 dwellings per annum.

Table 2: Approximate scale of growth in relevant plans within relevant zones of influence, 2025-2040. Data provided by relevant local authorities to provide an estimate of level of growth requiring mitigation

Local authority	Anticipated housing 2025-2040 and within 1+ zones	Estimate within Exe Estuary 10km zone	Estimate within East Devon Heaths 10km zone	Estimate within Dawlish 10km zone
East Devon	14,400	12,486	14,392	0
Exeter	8,607	8,607	2,325	0
Teignbridge	6,104	6,104	0	2,395
Total	**29,111**	**27,197**	**16,717**	**2,395**
Yearly average	1,941	1,813	1,114	160

Table 3: Approximate scale of growth in relevant plans within relevant zones of influence, 2025-2030. Data provided by relevant local authorities to provide an estimate of level of growth requiring mitigation

Local authority	Anticipated housing 2025-2030 and within 1+ zones	Estimate within Exe Estuary 10km zone	Estimate within East Devon Heaths 10km zone	Estimate within Dawlish 10km zone
East Devon	4,374	3,821	4,370	0
Exeter	3,618	3,618	1,475	0
Teignbridge	2,033	2,033	0	1,281
Total	**10,025**	**9,472**	**5,845**	**1,281**
Yearly average	2,005	1,894	1,169	256

5.2 Table 4 summarises the potential level of growth (2025-2040) in relation to the number of dwellings (as of 2023) in each zone and the zones combined. It can be seen that the proposed level of growth represents a change of nearly 30% for the Exe Estuary and around 25% for the East Devon Heaths. This clearly represents a marked uplift in local housing around those sites. The proposed growth is more focussed on the east of the Estuary as opposed to the west.

5.3 Very large uplifts in housing at specific locations in East Devon (Cranbrook and the new town proposed west of Farringdon) to the east of Exeter will have particular implications for the East Devon Heaths. Housing growth is proposed in relatively close proximity and with good, direct road links marked uplifts in recreation use are likely. Rapid changes are likely at what are currently quite rural feeling heaths.

Table 4: Potential change in housing numbers. Dwellings in 2023 extracted from national postcode database and reflect the number of residential delivery points.

Local authority	Total in 2023	Anticipated 2025-2040	% change
All three zones combined	129,712	29,111	22.4
Estimate within Exe Estuary 10km zone	92,114	27,197	29.5
Estimate within East Devon Heaths 10km zone	66,722	16,717	25.1
Estimate within Dawlish 10km zone	21,734	2,395	11.0

6. Mitigation measures

6.1 Mitigation measures are split into:

- SAMMS (Strategic Access Management and Monitoring); and
- Off-site infrastructure (including SANGs – 'Suitable Alternative Natural Greenspace' and local projects).

6.2 Figure 1 provides an overview of the key elements of the strategy.

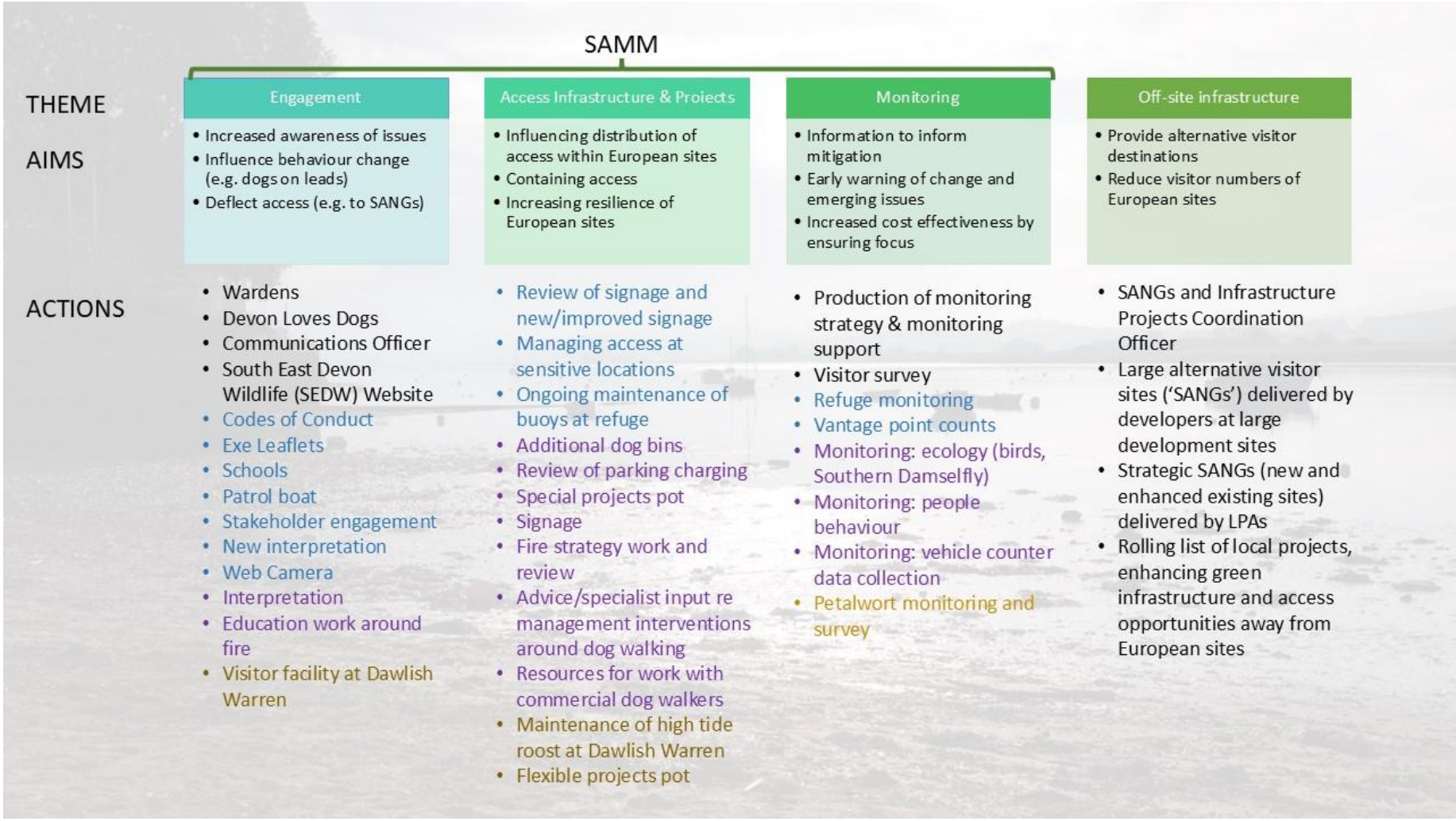


Figure 1: Summary of mitigation measures. Actions in blue text relate to those that are Exe Estuary specific, those in purple are East Devon Heaths specific and gold reflects those specific to Dawlish Warren. Actions in black apply across all 3 sites.

Strategic Access Management and Monitoring (SAMMS)

6.3 SAMMs measures fall within three broad themes, namely:

- Engagement;
- Access Infrastructure and Projects; and
- Monitoring.

6.4 The measures are set out in Table 5.

6.5 The warden team is fundamental to the mitigation delivery. The warden team's core work will involve providing a presence on-site through their patrols of the relevant European sites. This provides the confidence that mitigation is targeted towards direct engagement with those visiting the European sites and the ability to directly influence those spending time on those sites. The funds provide the wardens with the necessary resources (such as vehicles and the patrol boat) to deliver this mitigation. Warden time should be ring-fenced and focussed on maximising their time out on the heaths, the estuary and at Dawlish Warren.

6.6 Warden time should be closely monitored and levels of engagement with visitors and interactions carefully logged. This will enable future updates of the strategy to ensure warden provision is adequate, with the team being increased (or decreased) over time as necessary.

6.7 Alongside the wardens, other mitigation measures include the refuges, signage, interpretation and funding that can be used for discrete 'special' projects and allows relevant delivery bodies to be able to draw down on funds.

6.8 The SAMM measures are able to shift and adapt with time, which is essential given likely changes at the sites, for example with respect to climate change. Warden time can be focussed as most relevant and project funds can be directed to where they are needed. Engagement for example through social media provides further opportunity to reinforce messaging and influence behaviour in a targeted and dynamic way.

6.9 The marked uplifts in housing growth proposed in the area to the east of Exeter mean the east side of the Estuary and the East Devon Heaths are likely to see particular changes in access. Alongside the flexible warden provision and other engagement (which can be ramped up/targeted as appropriate), it will be necessary for infrastructure changes to address issues as they arise. Parking around the East Devon Heaths is a particular case in

point. Managing parking will provide a means to influence visitor use in terms of both numbers of people and where they go. Reviewing parking charging and instigating measures to address roadside parking (such as establishing clearways on relevant roads) may be necessary. Developer contributions will be available to fund the costs as and when they are necessary.

Table 5: SAMMs measures. Shading reflects those specific to the Exe Estuary (pale blue), East Devon Heaths (purple) and Dawlish Warren (yellow).

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
All	Delivery Manager	Full time post managing warden team and providing overall steer for mitigation delivery and link to partners, stakeholders, planners etc. Role also proving strategic links and wider policy work/liaison	SEDHRP	Manager post key to ensuring smooth delivery and oversight of implementation	
All	Wardens, team to scale up to 5	Warden team expanded from 2 to 5 FTE and including team leader post. Key function is patrolling on the European sites and directly engaging with visitors to those sites	SEDHRP	Wardens are a cornerstone of the mitigation. Additional wardens needed to provide year round cover and work effectively. Requirement to be paired, plus scale of area and pivotal importance of the warden team means team size needs to increase. Team of 5 allows for 2 on the heath and 2 on the estuary.	Currently more emphasis in summer as bird breeding season. More presence in winter necessary and clear immediate priority to boost team size. Scope to have on bikes in future?
All	Vehicles for warden team	Running costs to cover vehicle and other running costs for events etc	SEDHRP	Budget required for transport and operational work	
All	Devon Loves Dogs staffing costs	Team to expand to 2 fte	SEDHRP	Additional staffing required to build project and focus on key user group. Dog walkers main user group to influence and one with biggest impact	
All	Resources for Devon Loves Dogs	Running costs to cover vehicle and other running costs for events etc	SEDHRP	Budget required for transport and operational work	
All	Communications Officer staffing costs	Mitigation relies on effective behaviour change through communication of key messages - focused, specialist work on social media, press, newsletters.	SEDHRP	Budget required for operational work, targeted comms planning, campaigns, social media, newsletter and	

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
				promotional/networking opportunities.	
All	DLD Website	Website for Devon Loves Dogs	SEDHRP	Necessary to cover regular updates, refresh and content	
All	South East Devon Wildlife (SEDW) Website	Website for work of wardens	SEDHRP	Necessary to cover regular updates, refresh and content	
All	DLD Brand refresh	Pulse of work to update branding, covering graphic design and overall refresh	SEDHRP	Ensures public face of mitigation works and conveys right messages	Every 10 years
All	SEDW Brand refresh	Pulse of work to update branding, covering graphic design and overall refresh	SEDHRP	Ensures public face of mitigation works and conveys right messages	Every 10 years
All	Wardens projects	Operational budget for warden team	SEDHRP	Necessary to ensure warden team can utilise new ways of engaging and purchase required resources. Allows scope for seasonal campaigns and fresh material.	
All	Production of monitoring strategy & monitoring support	Consultancy support to work with SEDHRP and stakeholders to design monitoring programme and recording to cover data collection by warden team, other relevant data (e.g. volunteer bird surveys), reporting protocols and report production	SEDHRP	Will ensure monitoring is conducted efficiently and data available to feed into mitigation delivery	
All	Visitor survey	Visitor survey to cover all European sites and surrounding GI (SANGs etc) at 5 year intervals	SEDHRP	Provides data on changing use patterns, demographics, visitor numbers and visitor origins.	

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
All	SANGs and Infrastructure Projects Coordination Officer	Post to oversee SANG provision, delivery, design and maintain oversight	SEDHRP, EDDC, ECC, TDC	Necessary to ensure coherent and joined up approach to SANG and alternative green infrastructure provision, with role liaising with developers, planners, Natural England and other stakeholders	
All	Admin and accountancy support	Budget to cover annual accounting and monitoring of housing totals	SEDHRP, EDDC, ECC, TDC	Necessary to ensure in-perpetuity costs set aside appropriately and administration of finances	
Exe	Codes of Conduct	Codes updated, with potential for additional codes (drones/personal aircraft), also printing and distribution costs	SEDHRP, EEMP	Codes fulfil an important role in terms of information on how visitors are expected to behave and guidance. It is essential they are up to date, relevant and fit for purpose	Paper leaflets may be less likely to be used over time and essential information also available interactively on the web
Exe	Exe Leaflets	Budget for refresh and reprints of 4 existing leaflets: Exe Explorer, Exe Wildlife, Exe Activities and Exe Heritage.	SEDHRP, EEMP	Leaflets well used resource providing information on where to go, public transport, access etc alongside key messages such as location of refuges. Essential that they are up to date, accurate and relevant	Paper leaflets potentially less likely to be used over time and essential information also available interactively on the web. Update scheduled in 2023/24 so further update potentially necessary for around 2030
Exe	Schools	Review of education provision and material, and budget for creation of new material to support education work around estuary	EDDC, TDC, EEMP	Working with schools and young people a good way to reach local community	Work was undertaken prior to Covid and packs were produced at the time. There is a range of packs etc already on the web. EEMP and a range of other

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
					bodies run existing education work. Scope for mitigation partnership to support through provision of material
Exe	Managing access at sensitive locations	Budget to cover series of small projects relating to access infrastructure around the estuary. Some initial work required to produce costed, prioritised plan (Delivery Manager). Locations/measures potentially relevant could include: Imperial Recreation Ground (measures relating to managing access onto the intertidal, creation of barrier/hedge or similar on the revetment to keep access back from shore), Eaels Dock (project relating to boat use and reducing disturbance risks), Cockwood steps (signage), Dawlish Warren (temporary fencing), range of locations (new/improved bird hides, screens or similar). Also potential to include measures to reduce disturbance on functionally-linked land outside Estuary.	various	Distribution of birds and ways people access shoreline change over time. Projects involve targeted interventions at specific locations to help influence behaviour and where people go. Options at Dawlish will allow quick response to changes in habitat there which may influence access and recreation impacts.	Some projects may require budget for annual maintenance, for example a low hedge at the Imperial Recreation Ground would need cutting. Projects on functionally-linked land should only be funded if they work to reduce disturbance on SPA birds, for example rerouting footpaths so as to avoid disturbance risks to existing roost site.
Exe	Patrol boat	Review of current patrol boat use and costs to implement changes following review. Potential to switch to different boat type to facilitate use.	SEDHRP	Boat can target watersports and those out on the water and provides a visible presence reducing particularly damaging/disturbing activities	Current boat has high sides and a cabin. Parking is difficult in the marina and the boat isn't ideal in strong winds. Review necessary to consider costs and explore options with budget to allow swap to a different craft.
Exe	Ongoing repair/maintenance of buoys at refuge	Upkeep of refuge buoys and new interpretation on the buoys		Refuges provide core areas with wildlife focus. Buoys mark these areas but need upkeep and	

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
				repair. Interpretation/signage on buoys will make it clear what their role is	
Exe	Stakeholder engagement	Costs cover engagement with organisations, groups, clubs and businesses around the Estuary to ensure awareness and understanding of mitigation	SEDHRP, EEMP	Wide range of bodies, organisations etc with an interest in the Estuary. Regular dialogue ensures smooth delivery of mitigation.	
Exe	Review of signage and new/improved signage	Estuary wide review of signs followed by implementation of new signage as required	Multiple, including landowners	Signage needs to evolve and change over time. Signs help with wayfinding and inform behaviour (e.g. dogs on leads, launching points, shoreline access etc) and to direct people (e.g. to SANGs). Potential for new/improved signage at range of locations including groyne 9 at Dawlish Warren, Dawlish Warren car park and potentially other points around estuary.	A number of signs have been added to the Exe Estuary site by a variety of organisations since the last signage review in 2018 by the EEMP
Exe	New interpretation	Interpretation panels to provide information on wildlife interest, sensitivity and access information	Multiple including landowners	Scope for new panels outside the Centre on Dawlish Warren and in the buffer zone at Dawlish Warren and other locations around the estuary.	
Exe	Refuge monitoring	Core counts undertaken at 5 yearly intervals, as per previous monitoring		Checks of incursions into refuges, impacts of activities around periphery and check on bird use. Feeds into long term	Programming of this work potentially informed by monitoring strategy

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
				provision, management and design of refuges.	
Exe	Vantage point counts	Vantage point counts (as used in refuge monitoring) extended to cover whole estuary, with counts undertaken by Wardens. Aim to provide monitoring protocol to pick up changes in activity and behaviour		Continuation of existing monitoring, undertaken by wardens and providing key baseline as to use of refuges and surrounding area	Design and scale to be informed by monitoring review, counts undertaken by wardens
Exe	Web Camera	Provision of web camera for 5 year period to highlight and showcase wildlife	Various	Cameras provide opportunity for people to experience the wildlife without undue disturbance. Camera could show wader roost and footage would help people understand frequency of disturbance and potential risks	Railway saltmarsh and the main roost at Dawlish Warren potential locations
East Devon Heaths	Additional dog bins	4 additional dog bins with costs to empty	CDE, RSPB, DWT	Bins are currently often full and overflowing. Need for additional capacity	Needs further consideration of the relevant locations
East Devon Heaths	Review of parking charging	Dedicated review to come up with recommendations relating to whether to charge for parking and any other parking considerations. Review would need to consider the impact of charging at other sites (coast, estuary, woods nearby) while the parking at the Pebblebeds remains free. Review would need to extend to consideration of infrastructure, charging approaches, messaging and provision of dedicated facilities such as charging for electric vehicles.	CDE, RSPB, DWT	Concern that current free parking provision results in site drawing recreation use from less sensitive locations that charge	
East Devon Heaths	Special projects pot	Mechanism available to fund mitigation measures in the future such as clearways (legal fees), projects relating to fire (e.g. hydrants), provision of	CDE, RSPB, DWT	Recognition that access patterns are changing and different opportunities may emerge, along	These projects dependent on other factors or monitoring results

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
		alternative parking and further improvements or changes to parking		with some uncertainty around the outcomes from the parking charges review. Pot would allow part or complete funding for measures that have mitigation benefit and ensure mitigation targeted to maximise benefit.	
East Devon Heaths	Signage	Rolling budget to cover additional signs and waymarkers where required	CDE, RSPB, DWT	Low key markers and waymarkers to help people follow routes	
East Devon Heaths	Interpretation	New or updated interpretation at 5 locations	CDE, RSPB, DWT	Interpretation to convey key messages and raise awareness of conservation importance	
East Devon Heaths	Fire strategy work and review	Piece of work to review risks, emerging issues and recommendations for mitigation measures as necessary - e.g. around reducing fire load, better fire access, education/awareness raising etc	CDE, RSPB, DWT	Fire an increasing threat with climate change. Funds would cover specialist consultancy support to review current management and procedures	
East Devon Heaths	Education work around fire	Targeted awareness raising work, potentially extending to local schools and community groups to raise awareness of risks of fire and causes	SEDHRP, CDE	Fire an increasing threat with climate change. Important to ensure local community aware of risks	May be potential to learn from Firewise project undertaken around the Dorset Heaths
East Devon Heaths	Advice/specialist input re management interventions around dog walking	To date measures have been very much focussed around dog fouling and the need to pick up. Scope to expand measures to encompass dogs keeping to paths and responsible dog walking. Advice will be used to inform warden resources, campaign material and interventions through the special projects pot	CDE, RSPB, DWT	Dogs ranging widely off lead a potential issue in relation to livestock, Nightjar and Dartford Warbler. Specialist support needed to ensure messaging and communication approaches are right and proportionate.	

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
East Devon Heaths	Resources for work with commercial dog walkers	Current system in place for permits etc. This needs to expand to provide clear guidance on behaviour requirements and as necessary scope to revoke permits	CDE, RSPB, DWT	Clear gap in current visitor management	
East Devon Heaths	Monitoring: ecology (birds, Southern Damselfly)	Already undertaken but budget to ensure additional coverage/support for volunteers etc	CDE, RSPB, DWT	Ensures any gaps are filled and good coverage achieved	
East Devon Heaths	Monitoring: people behaviour	Observation survey	SEDHRP	Dedicated piece of work to assess current levels of compliance and prevalence of particular behaviours (such as not picking up, dogs off leads, bikes away from cycle routes etc); potential to check compliance with different signs and following particular campaigns	
East Devon Heaths	Monitoring: vehicle counter data collection	Vehicle counters in sample of main car parks to provide robust standardised data over time on levels of use	SEDHRP	Provides metric for how levels of use are changing, and means to check implications of different interventions	
Dawlish Warren	Visitor facility at Dawlish Warren	Some kind of focus for visitor engagement	TDC	There is a need for new facilities at Dawlish Warren to provide focal point for visitors, wardens and site-based staff for engagement.	Some uncertainty around design, function, location etc to be addressed over time
Dawlish Warren	Flexible projects pot	Budget to cover series of small projects relating to access management at the site, in particular scope to purchase and erect temporary fencing.	TDC	The dynamic front edge to the dune system creates a challenge in managing access. Infrastructure needs to change	

Site	Mitigation measure	Description	Parties involved in delivery	Justification	Notes
				with time and needs can be unpredictable. Following storms and marked change, sudden response is often necessary, often requiring new fencing, temporary signage etc.	
Dawlish Warren	Petalwort monitoring and survey	Some funds for ongoing monitoring as needed	TDC	Regular and more systematic funding covered by Natural England but costs here to cover additional surveys and specialist support as needed and informed by monitoring strategy	Greenland lake the only population remaining. Translocation may take place in future.
Dawlish Warren	Maintenance of high tide roost at Dawlish Warren	Measures to improve, enhance and protect roost at Dawlish Warren with potential to add shingle, remove vegetation or better protect	TDC	The Dawlish Warren roost is one of the key roost sites on the estuary. Given changes at Dawlish Warren roost is vulnerable and over time there may be further opportunities to maintain in the short-term and ensure disturbance free roost site available.	

Off-site infrastructure

6.10 Off-site infrastructure will provide access or enhance existing land away from the European sites, with the aim of drawing some visitors and recreation use to alternative destinations. Three different approaches (see Figure 2) are possible and relevant to different types of development.

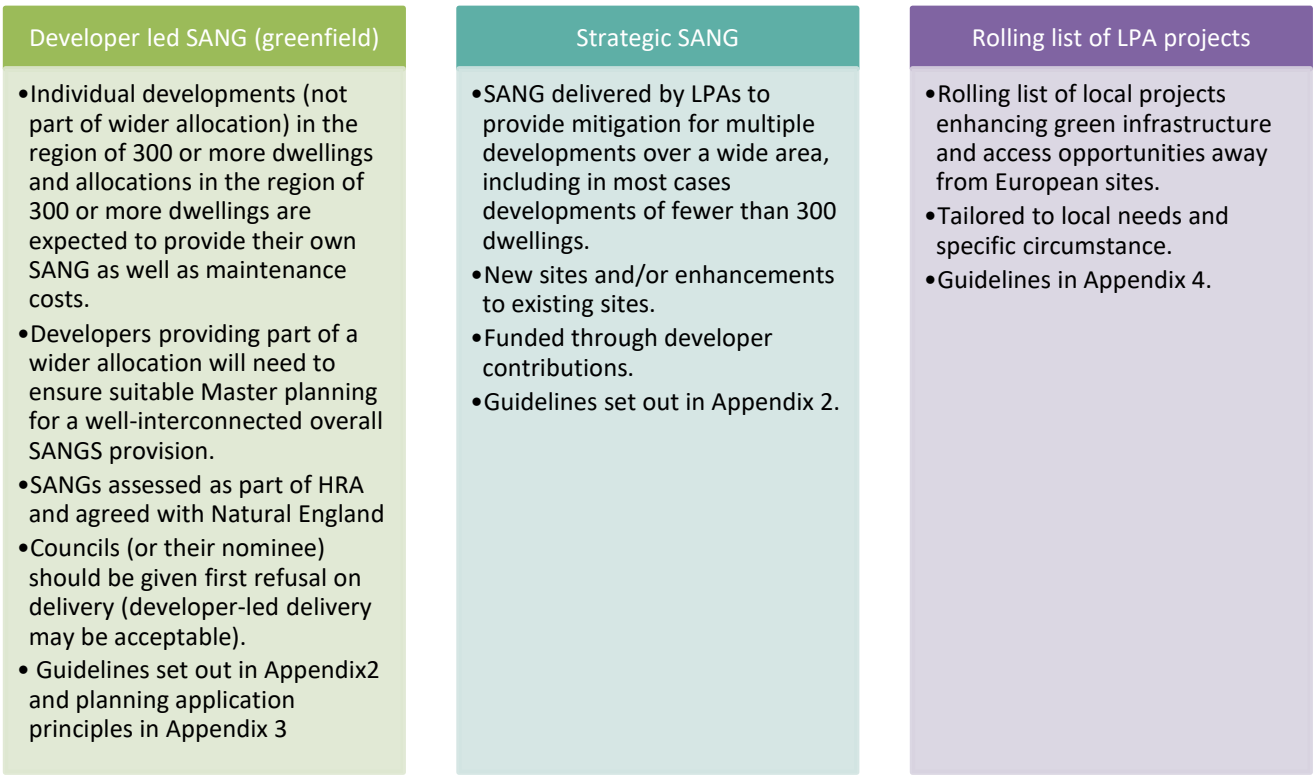


Figure 2: Different off-site infrastructure

6.11 Developer-led SANGs will be delivered directly by developers through on-site provision. Other types of infrastructure will be led by the local planning authority and funded from contributions. Guidelines for SANG design and implementation are provided in Appendices 2-4. These may be updated over time and/or supplementary guidance produced by the relevant local planning authority.

6.12 For large sites in the region of 300 or more dwellings, provision of SANGs should form part of the overall infrastructure provision of that site, particularly where urban extensions or new settlements are proposed. This approach would also be anticipated where adjacent sites or clusters of sites come forward separately. These developer led SANG will be incorporated

into the site design and master planning from the outset. SANGs provision should be delivered in advance of occupation of dwellings, however for larger proposals mitigation may be structured so as to tie in with development phasing.

6.13 The costs for establishment of these developer-led SANGs will be met by the developer and a means to secure the long-term maintenance and management will also need to be secured. This provision will need to be agreed with the relevant Planning Authority and Natural England, and checked as part of the HRA. The Councils (or their nominee) should be given first refusal on delivery to ensure long term security.

6.14 Small sites and brownfield sites within the built-up area are unlikely to be able to accommodate the scale of space required for a SANG and would therefore make a contribution towards strategic SANG or a contribution towards a range of discrete projects enhancing existing access.

6.15 Strategic SANG will provide large destination sites and are likely to be the most effective in drawing alternative recreation use. Dawlish Countryside Park provides an effective model to replicate. Such LPA led sites are likely to be better quality greenspaces and provide a different visitor experience to most developer-led greenspace which will be typically local to large developments. Such sites can have a council ranger presence ensuring community engagement.

6.16 A rolling list of projects will be produced by each authority, tailored to fit with the local needs for access and demand in the local area, and will fill any remaining mitigation need (alongside Developer-led SANG and Strategic SANG). How local greenspaces are managed will have implications for the European sites, for example dog bans on beaches could deflect use to the heaths, or footpaths that are poorly maintained are unlikely to be used. The rolling list of projects could include measures such as new footpath links, improved parking, fenced dog exercise/training areas, communication to visitors, improved path infrastructure, better access (road crossings or bridges) etc.

6.17 Such projects would be appropriate in the urban areas of Exeter where the recreational behaviour of urban residents may differ to those outside the city and there are limited opportunities to create large new greenspace. Such projects will also be more appropriate in more rural areas where small levels of growth and windfall come forward in locations where there is no strategic SANG.

6.18 Each authority will ensure a list of projects is agreed with Natural England and updated as needed. The list may well overlap with green infrastructure strategies but will be separate and clearly identified as mitigation. Costs and relevant levels of contribution will be determined by each authority. Potential projects within Exeter are listed in Appendix 5 (provided by the Council).

6.19 These different options provide a tiered approach to off-site infrastructure and over time will ensure robust mitigation by increasing the quality and availability of accessible natural greenspace outside European sites. The different options will mean a range of infrastructure is available to local residents including destination sites with car parks and a range of facilities, to more local and small-scale provision. The aim should be to deliver a network of inspiring greenspace that delivers the necessary mitigation and, as appropriate, fulfils a range of other functions such as climate change resilience, reduced need for car travel, nature recovery and health benefits.

7. Implementation

7.1 There is an already established approach to governance and implementation. The South and East Devon Habitat Regulations Executive Committee provides oversight and governance, and there is an officer working group that brings relevant organisations together and provides advice and recommendations. The Delivery Manager provides the key point of contact between the different groups and oversees the delivery of much of the mitigation on the ground.

7.2 It will be important, looking forward, that there is flexibility and regular review as to how money is spent and what is needed on the ground. A number of factors (such as Covid, extreme weather conditions, the cost of living crisis) have had an impact on visitor behaviour, visitor numbers, access infrastructure and/or the European sites themselves in recent years. Changes in housing delivery will affect how much mitigation revenue is collected. There is uncertainty as to how priorities might need to change in the future, and such uncertainty can only be addressed through good monitoring, adaptive mitigation and regular review.

7.3 Certain elements within the mitigation package have the scope to adapt and flex as conditions and priorities change. Furthermore, it is possible that additional opportunities may arise, for example as a result of changing land ownership. It is important therefore that the governance is flexible and responsive enough to enable developer contributions to be shifted to different components of the strategy easily. Annual reviews of budgets and the ability for the Delivery Manager to adjust finances as appropriate (with rapid approval from the Executive Committee) will be key.

7.4 We also highlight the importance of the various delivery partners, for example at Dawlish Warren, and on the East Devon Heaths there are experienced staff with the ability to deliver mitigation on the ground. It would be ideal for such organisations to work with the Delivery Manager and be able to directly bid to the Executive Committee for money for particular projects that have a clear mitigation benefit and fit with the strategy.

Developer contributions and in-perpetuity costs

7.5 Mitigation is secured for the duration of the impact and it is assumed the implementation of the mitigation will run for as long as it is required, with money set aside to provide long-term stability and in-perpetuity delivery. The

strategy will operate on a rolling basis into the future, adjusting as necessary to changing levels of house building and impacts arising.

7.6 Some measures in this strategy are short-term, one-off measures while others need to run for many years, often extending well outside the Plan period. Changes to access infrastructure, the provision of SANGs (which are secured indefinitely) alongside the increased awareness raising and education work should ensure that the need and annual cost for SAMM can decrease with time. As SANGs become better used and the refuges etc more accepted, the need for the patrol boat, high levels of warden time and other such measures should change. It will be important for regular review and revision of costs as necessary to adjust the amount set aside for long term funding of mitigation measures. As such SAMM is highly unlikely to need to be constant over time. We have derived costs for different measures to cover different lengths of time (see Appendix 6) and these will be reviewed and adjusted on a 5 yearly basis.

7.7 Costs for the SAMM component of the strategy are summarised Table 6 and listed by measure in Appendix 6. The overall cost of the SAMM is £25,548,729 with this being split such that £23,907,129 relates to measures that are spread across all three European sites.

Table 6: Summary of SAMM costs per European site

SAMM components	Total cost	Total dwellings in relevant zone	Per dwelling cost
All sites	£23,907,129	29,111	£821.24
Exe specific	£832,600	27,197	£30.61
East Devon Heaths specific	£809,000	16,717	£48.39
Dawlish specific	£300,000	2,395	£125.26
Total	**£25,548,729**		

7.8 The figures in Table 6 enable the SAMM costs per dwelling to be determined for a given zone. All dwellings will contribute to the measures relating to all European sites, whereas only those within 10km of the Exe Estuary will contribute to the Exe Estuary specific components etc. Per dwelling costs based on location are given in Table 7.

Table 7: Summary of costs by location

SAMM components	Total cost per dwelling (SAMM)
East Devon Heaths 10km only	£870
East Devon Heaths and Exe Estuary 10km	£900
Exe Estuary 10km only	£852
Exe Estuary and Dawlish Warren 10km	£977

7.9 Per dwelling costs will need to be adjusted to take into account any reserves held by the partnership at the point at which the new strategy supersedes the previous one. The tariff will be further adjusted on an annual basis to take into account inflation, any administrative costs and any other adjustments necessary (e.g. in relation to changing costs or variations in housing delivery).

Types of development

7.10 This strategy applies to any future development granted planning permission that results in a net increase in residential units (i.e. C3 Use Class), located within 10km of the East Devon Heaths SAC/SPA, the Exe Estuary SPA/Ramsar and Dawlish Warren SAC.

7.11 While the strategy is focussed towards C3 Use Class, there are other uses and forms of development that may have impacts on the European site and could trigger likely significant effects for relevant European sites. Examples of other uses that may need to provide mitigation within the context of this strategy are listed below:

- Houses in Multiple Occupation (sui generis);
- Residential institutions within the C2 Use Class where the residents are not severely restricted by illness or mobility;
- Student accommodation;
- Sites for gypsy, travellers and travelling showpeople;
- Tourist accommodation, including self-catering, caravan and touring holiday accommodation.

7.12 For the above types of development, this strategy provides a means of ensuring effective mitigation can be delivered, but each will need to be assessed on a case-by-case basis. While in general each unit for the above could be considered a single dwelling, there may be a need to adjust the rate of SAMM contribution for different types and off-site infrastructure provision will need to be considered on a case-by-case basis. For example, the SAMM rate could be adapted according to occupancy rates for tourist

accommodation. Project level HRA for tourist applications will need to consider the location and type of use with respect to the relevant European sites, as for example a city centre hotel in Exeter would have a very different impact compared to accommodation focussed around watersports use in Exmouth.

Review and timing

7.13 The strategy will operate indefinitely on a rolling basis, with this strategy commencing from spring/summer 2025 and running to 2030. The strategy has, however, been written in the context of local plans and the levels of growth likely to around 2040. The strategy will be reviewed and updated approximately every 5 years, with these reviews checking housing numbers, delivery, costs and mitigation priorities. The reviews will inform the 1 year and 5 year business plan that underpins the work of the partnership and their staff.

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Appendix 1: Existing and potential SANGs

This Appendix summarises SANG sites, highlighting those that are existing and operational as well as those that have been formally proposed, and some key sites that may have potential for SANG, or where further evidence is required are also included.

Site Name	Existing area (ha)	Proposed area (ha)	Notes
Old Park Farm – Site A, (EDDC)	Approx. 6		Integrated with development
Pinbrook Country Park (Minerva) (Tithe barn) – Site B (EDDC)	9 approx		Integrated with development. 7 in Clyst Valley Regional Park
Dawlish Countryside Park SANG (TDC)	26		Well established SANG opened in 2017. Managed by the Land Trust.
Ridgetop Park, Exminster (TDC)	38	30	Now managed by the Land Trust. A further 30ha of SANG is allocated in the TDC Local Plan.
Cranbrook E – Cobdens (EDDC)		28	One quadrant of SANGs for expanded Cranbrook. At planning application stage.
Cranbrook SE – Grange (EDDC)		15	As above. Awaiting application.
Cranbrook W – Bluehayes plus NT Elbury land (EDDC)		18	As above. Planning application due for determination soon.
Cranbrook SW – Treasebeare (EDDC)		17	As above. Planning application.
HF1 Hayes Farm, Clyst Honiton – Site C (EDDC)		14	Possible SANGs in CVRP Masterplan. S106 already requires laying out of paths.
Broadclyst Station new SANGs (EDDC)	9		Recently purchased by EDDC but not yet open to public
Ludwell Valley Park (EC)	26		Existing site with potential for enhancement to provide some SANG capacity
Mincinglake Valley Park (EC)	13		Existing site with potential for enhancement to provide some SANG capacity
Northbrook Valley Park (EC)	5		Existing site with potential for enhancement to provide some SANG capacity
West Exe Country Park (TDC)		50	Potential proposal in Teignbridge Local Plan Review
Attewells Farm, Exeter (TDC)		6	Potential proposal in Teignbridge Local Plan Review. NE have raised concerns about accessibility.

Appendix 2: Suitable Accessible Natural Greenspace (SANGs) guidelines

Developer led SANGs and strategic SANGs will be the main forms of off-site infrastructure. This appendix provides guidance on SANG design. The guidance may be superseded or updated at a later date by relevant partners.

The role of SANGs is to provide an alternative destination to those visitors who would otherwise visit the relevant European sites: Dawlish Warren, the Exe Estuary or the East Devon Heaths. They will be most effective if targeted to those visitors who have a big impact, such as dog walkers.

The effectiveness of SANGs will depend very much on the design and location, these need to work such that the SANGs has a draw equal to or greater than the European sites. In these guidelines we set out design and selection criteria for SANGs, drawing on that produced for other areas such as the Dorset Heaths (Dorset Council and BCP Council, 2020) or the Thames Basin Heaths (anon, 2021). The guidelines do not address or preclude other functions of green space, such as biodiversity net gain. Other functions may be provided within SANGs as long as these do not conflict with the specific function of mitigation.

SANGs may be created from:

- Existing land of suitable size and quality, with no existing or limited public access. Such sites would be 'opened' for public access and promoted as such.
- Land in other uses, such as golf courses, which could be converted into SANGs.

Habitat & character of the relevant European sites

The East Devon Heaths cover some 1,400 ha and make up the largest block of lowland heath in Devon. They are open, relatively undulating and attractive heathlands, with patches of woodland, scattered trees and in places extensive views (Figure 3). Archaeological interest includes the hill fort at Woodbury Castle and a tumulus. While part of the shoreline of the Exe Estuary is built up, most shoreline areas are attractive countryside, with shoreline paths providing views across the estuary and surrounding landscape of grazing marsh (Exminster Marshes) and rolling countryside comprised of pasture, hedges and woodland. There are extensive sand dunes at Dawlish Warren.

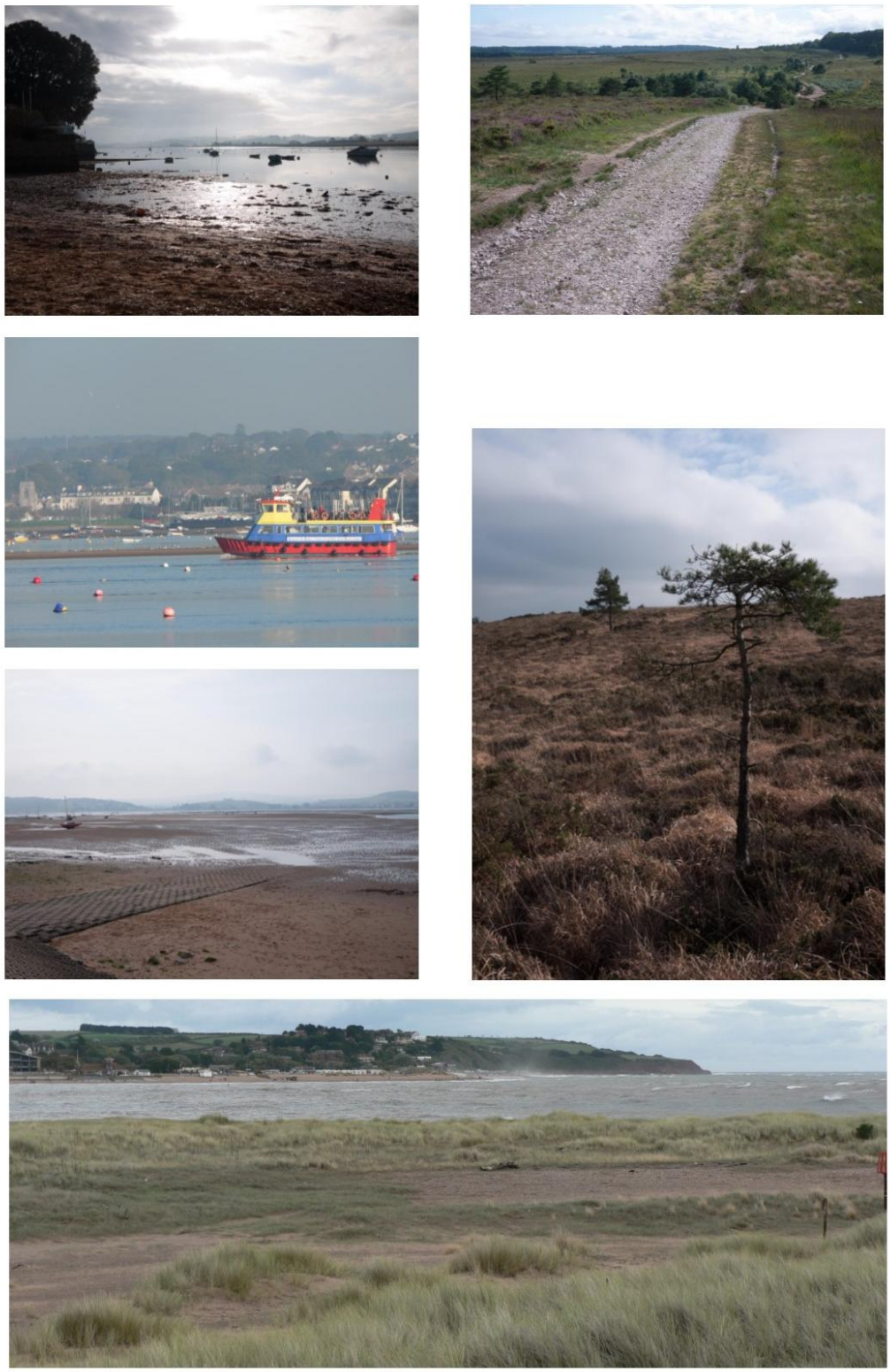

Figure 3: Character of relevant European sites. Top left: 3 images of Exe Estuary; top right: 2 images of the East Devon Heaths; lower image Dawlish Warren.

Access on the relevant European Sites

Visitor surveys on the relevant European sites have involved interviews with a random sample of visitors (Liley, Fearnley and Cruickshanks, 2010; Liley, Panter and Underhill-Day, 2016; Caals, Panter and Liley, 2022) and provide context for SANGs design. Drawing on the results from Caals, Panter and Liley (2022), dog walking is clearly a target group to focus on (the main activity for 69% of visitors at Dawlish Warren, 36% at the Exe Estuary and 63% at the East Devon Heaths). Visits are typically short (less than an hour) and interviewees tended to visit frequently (for example the percentage of interviewees visiting at least daily was 28% at Dawlish Warren, 14% at the Exe Estuary and 16% at the East Devon Heaths). The majority of interviewees (ranging from 46% at the Exe to 97% at the East Devon Heaths) travelled by car and the choice of location was driven by proximity to home as well as the scenery/variety of views and habit/familiarity. Median route length (i.e. length of walk/cycle/jog, all activities combined) was 2.1km at Dawlish Warren, 3.0km at the Exe Estuary and 2.5km at the East Devon Heaths. Home postcode data showed a median distance (postcode to survey point) of 9.2km for Dawlish Warren, 3km for the Exe Estuary and 5.3km for the East Devon Heaths.

Attributes of SANGs

In order to have confidence that greenspace is of a suitable size and quality the following attributes will need to be met:

- SANG should be provided at a minimum target rate of 8ha per 1,000 new residents; this per ha standard is equivalent to 0.0192ha per dwelling (assuming an occupancy rate of 2.4 people per dwelling) or 1.9ha per 100 dwellings.
- SANGs should be effective and available to local residents at the point of occupancy.
- Sites with sports grounds, playing fields or children's play areas are unlikely to meet the criteria for SANG or if such features are present they should not be counted towards the per ha standard.
- Where sites have existing visitor use, this existing use will need to be taken into account when applying the per ha standard. This will require visitor survey data to be available. Sites are likely to have additional capacity where average visitor use is less than 1 person per ha per hour[19]. Where existing sites are already well used, there will be a need to demonstrate that the measures will be effective, and this may require some delivery upfront.

[19] This provides a guide or approximate benchmark, typically busier than the relevant European sites but less than an urban park (see Liley, Panter and Rawlings, 2015). Sites will need to be considered on a case-case basis.

- The focus for the SANGs should be large sites of at least 40ha (which will accommodate suitably long routes), however smaller sites may work, depending on the location and quality.
- SANGs should provide parking that is free or significantly cheaper than parking at the European sites (noting that parking at all the East Devon Heaths car-parks is currently free). A guide to parking provision should be in the region of 1.5 spaces per ha of SANG[20].
- They should be quiet countryside locations, away from traffic noise, industrial sites, the airport etc. They should have a sense of space, openness and be viable alternatives to the European sites.
- They should contain a variety of habitats and be scenic, ideally with views.
- They should provide attractive, informal areas for dog walking: a range of walk lengths on relatively dry terrain, including at least 3km where dogs can be safely off the lead during the whole walk.
- They should provide routes that attract walkers, potentially including families. Walks are likely to need to be circuits with some interest (such as viewpoints, heritage features etc.).
- The site(s) should provide access all year round, without paths becoming waterlogged or inaccessible due to wet or muddy terrain.
- They should provide routes that work for cycling, potentially accommodating family cycling groups and mountain bikes as a low-key destination.
- Access points to the SANG(s) should be primarily within a 5km radius or 10 minute drive and easily accessible by road from the development they are intended to mitigate. Some direct foot access and good access routes for cyclists would be ideal. Direct access on foot would mean some SANG provision within around 500m radius of proposed housing locations.
- New SANGs should be recognisable as a 'destination' such that sporadic visitors are drawn from a wide area and such that the site also attracts more regular (at least weekly) visitors. As such they will need to be positively promoted and welcoming.
- On-site infrastructure could include the following as appropriate:

    - Small scale visitor centre/shelter (not necessarily staffed);
    - Interpretation (providing information about the area);
    - Wayfinding infrastructure to direct people around the site;
    - Some surfaced paths/boardwalks;
    - Wildlife viewing facilities (such as screens);

[20] This figure will depend on how close the SANG is to housing and the proportion of visitors that might arrive on foot or by bicycle. A busy SANG site might be expected to have up to 1 person visiting per ha per hour. Visitor data from the East Devon Heaths suggests on average a group would spend a little over an hour per visit and groups of 1.5 per car, suggesting a level of parking provision of around 0.6 spaces per ha to accommodate 1 person per ha per hour. Given that visitor numbers will not be constant every hour (i.e. there will be peak times of visiting) and easy parking is likely to be an important draw (meaning a need to ensure confidence to park), we suggest 1.5 spaces per ha.

    - Range of paths (some waymarked) that provide a range of different routes and circuits, potentially including some longer routes for cycling (perhaps family groups and relatively low-key mountain bike circuits) but not such that other access (e.g. appeal to dog walkers) is compromised;
    - Access to water for dogs to drink, bathe and splash in;
    - Benches/informal seating;
    - Viewpoints;
    - Natural Play (particularly for larger, strategic SANG);
    - Catering facilities (particularly for larger, strategic SANG).

- SANGs will need to be promoted through a range of different ways, including signage, so that they are easy to find and local residents (both new and existing) are well aware of the site.
- SANGs will need to provide access in perpetuity, and therefore require some legal mechanism to ensure this.
- Sites with significant nature conservation interest (SSSI) or particularly vulnerable species present are unlikely to be suitable as SANG.
- Provision of Sustainable Drainage Systems (SuDS) ponds within SANGs is not appropriate. SANGs provision is a separate obligation to public open space/SuDs policy requirements and is secured via different maintenance means other than resident fees.

Appendix 3: SANGs planning application principles (where SANG delivery is developer-led)

The following principles are adapted from the advice issued in Dorset (Dorset Council and BCP Council, 2020), with changes to reflect the local circumstance. The principles summarise the details that will be required by Natural England and the Local Planning Authority (LPA) at the time at which a proposal is considered, this may be either at outline or a full application where outline has not been submitted. Natural England will need to advise the authority that full details of the mitigation proposed are considered and secured:

1) SANG maintenance and function should be secured and demonstrated to be in place for perpetuity (effectively the development needs to maintain a level of mitigation for the duration of any impact, extending to at least 80 years).
2) Applications for developments requiring a SANG are likely to require a Change of Use application for the SANG itself. This may be done through a separate planning application.
3) When the Local Authority considers the application for the development that the SANG is designed to mitigate, it will need to be certain that the SANG:

    - meets the SANG criteria;
    - is deliverable, i.e. ownership and appropriate management is secured;
    - can be managed in a suitable condition in perpetuity;
    - will be monitored for the first 5 years.

    This typically involves a draft Section 106 agreement, an implementation plan, long-term management plan and monitoring arrangements being submitted for agreement with Natural England and the LPA.

4) Where the application for development is at an outline stage the applicant will need to provide sufficient information on the SANG to allow the SANG proposal to be considered.
5) The SANG land will have been assessed for its biodiversity features and the applicant will have confirmed that the proposal will not in principle lead to net harm to biodiversity. Where harm to biodiversity features is predicted then the capacity of the SANG will need to be adjusted.
6) A full SANG Management Plan will be required as part of a reserved matters application if not previously provided at outline stage. This will set out the implementation and maintenance of the SANG – it will record initial infrastructure (photographically) and management objectives by compartment. This will allow for future evolution of the SANG within the broad SANG criteria rather than a rigid approach.

7) If part or all of the SANG is already accessible to the public a visitor survey will need to be submitted as part of the application (outline or full where no-outline is submitted), and the SANG capacity discounted if necessary
8) Where a SANG is not co-located with a proposal Natural England will provide advice to the applicant concerning the SANG capacity/catchment on a case by case basis. Guidance is available from the Thames Basin Heaths mitigation approach.

Natural England will provide written confirmation to the relevant authority that the proposed measures (SANG, SAMM) are appropriate to secure the necessary avoidance and mitigation measures and have been secured for a duration proportionate to the timescale of the development's effects.

SANG Visitor Monitoring

Large developments may come forward in phases, so monitoring should commence prior to first occupation where there is existing SANG use. It need not be when the land has no existing public access. Monitoring should be phased at two/three years after each substantive phase and also at five years after the development is completed. It may be the case that monitoring will need to include nearby European sites. The primary aims of visitor monitoring are to inform the SANG delivery and allow for adjustments as well as demonstrating the SANGs functionality and use by existing local residents. Effective monitoring will provide a robust baseline which can be observed in future strategic monitoring events.

From 5 years after the final phase of a development future SANG monitoring will be incorporated into the ongoing SAMM programme on a strategic basis. SANG monitoring methodology may include visitor questionnaires, remote sensors and observational studies.

Strategic Access Management and Monitoring (SAMM)

SANGs are not intended to avoid all new residents accessing the protected sites, rather to enable a neutral level of visitor pressure with an equal proportion of existing European site visitors users being diverted. It is therefore necessary, as established in the Thames Basin Heaths area and Dorset, for applicants to secure SAMM relative to the level of residential development. As for SANGs, the mitigation needs to be secured in perpetuity.

Appendix 4: Guidance for other off-site infrastructure projects

For small developments where there are no options for strategic SANG (and developments within Exeter where there is limited space and opportunities for new SANG), other infrastructure projects will be delivered by the LPA. These could include (but are not limited to):

- New footpath links, potentially joining up areas of existing space to make longer routes possible;
- Increases to the parking capacity or improvements to parking at existing sites;
- Dedicated facilities for dogs, such as fenced exercise areas, dog training areas etc;
- Improved access within sites – such as boardwalks, better paths, improved drainage etc to open up areas previously under-used or inaccessible;
- Better access to sites, such as road crossings, bridges, access routes etc.;
- Better promotion of existing sites, highlighting where new works or facilities have been undertaken (e.g. through events, gazetteers, road signs etc.);
- Making sites feel more safe and welcoming, for example by addressing anti-social behaviour, litter, dog mess or other issues.

Each LPA will maintain a rolling list of projects that will provide sufficient and effective mitigation for the growth coming forward and be in suitable locations to be relevant to new housing growth. The list could include projects within a green infrastructure strategy and ideas for projects could be generated from parish councils, community groups, NGOs and other suitable delivery bodies. Projects that are included on the list will need to have sufficient housing growth within a suitable catchment to ensure they can be funded, and delivery may need to be phased to ensure mitigation in line with local housing growth. Some projects may need to be established in advance of housing delivery if there is uncertainty around their effectiveness or potential for delivery. This would allow monitoring to determine the effectiveness.

Appendix 5: Draft Exeter City Council Project List

The table below has been provided by Exeter City Council and is a list of potential mitigation projects providing off-site green infrastructure

Project Name/Location	Project Description
Riverside Valley Park Access Improvement Project	*"There is significant value in attempting to increase the recreational capacity of the park, where appropriate, especially given that visitors numbers are expected to increase in the future due to nearby development allocations."* New unsurfaced paths in underutilised areas in the south of the survey area to spread usage. Improve links, connectivity and signage between Riverside, Northbrook Valley Park and Ludwell Valley Park. Improve signage outside the Valley Park to better advertise the location of the Valley Park and associated car parking. Additional car parking facilities, where feasible
Riverside Valley Park Visitor Facilities and Information Hub Project	*"The creation of a visitor centre would likely encourage more visits from existing users and new users in the future. The centre could function as an educational hub as well as provide amenity services, including toilet facilities and food and drink provision"*
Riverside Valley Park Water Sports Improvement Project	*"The possibility of improving the park for water sports users could also be considered, as this is one of the activities that causes disturbance to the European sites, particularly the Exe Estuary SPA"* New access points New routes Work with businesses Existing Exeter Quayside information point.
Whitycombe Valley Park Access Improvement Project	*"Whilst the site is not suitable for SANG, the site still has a strategic role in providing publicly accessible natural greenspace for the surrounding communities who have relatively limited access to such sites in their local area. As such, enhancing access into the site may encourage more people to visit the park, rather than travelling to other sites, potentially including more sensitive European sites."* Improvement to existing access points, Measures to ameliorate muddy path surfaces Provision of dog bins
Duryard Valley Park (Belvidere Meadows)	*"Whilst Belvidere Meadows is not suitable for SANG, the site still has a strategic role in providing naturalistic, nature-rich greenspace in close proximity to large residential areas. The site may provide some of the functions associated with a*

Project Name/Location	Project Description
Access Improvement Project	*SANG site by allowing people to walk their dogs, access nature and enjoy far reaching views close to their homes, rather than travelling to other greenspaces such as European sites."* Improve existing access points to make them suitable for wheelchairs, pushchairs, or other users with mobility issues. Additional signage / interpretation boards installation of dog bins could help encourage responsible use of the site by dog-walkers.
Targeted Advertising Campaign	*"It is considered essential to advertise the presence of the Valley Parks, especially for new residents in Exeter who don't have familiarity with the local area. It is considered the deliverability of the option is high. This could be delivered through the Habitat Mitigation Strategy as LPA Projects."* Leaflet to reach each new home with map. Function could be added to DWT's webpage page for the Valley Parks which could allow users to enter their postcode to determine which Valley Park is closest to their location. Estimated Cost: £20,000

Appendix 6: SAMM costs

The table below summarises the mitigation measures as set out in the strategy and the relevant costs for each. These have been used to calculate the overall cost of mitigation. Costs are estimates only and intended to provide the overall level to set tariff, costs to be reviewed and updated as strategy implemented, and budgets adjusted according to housing growth.

Site	Mitigation measure	One-off/ Capital cost	Rolling cost	Multiplier for rolling cost	Total cost	Notes on how cost calculated
All	Delivery Manager		£65,750	20	£1,315,000	£45,000 annual salary, plus 35% (to cover NI, superannuation, etc.) and £5,000 per annum support costs. 20 year timing covers plan period and just beyond, ensuring monitoring over key period taking place at least.
All	Wardens, team to scale up to 5		£210,625	80	£16,850,000	5 posts. £27,500 annual salary, plus 35% (to cover NI, superannuation, etc.) and £5,000 per annum support costs. 80 year period ensures large budget for warden team. Potentially scope for size of team to be regularly reviewed and potential for it to shrink or expand as priorities require and ensure in perpetuity coverage.
All	Vehicles for warden team		£15,500	80	£1,240,000	2 x vehicle costs at: £250 per month to lease per electric vehicle, £1,500 for livery, £2,000 p.a. insurance, 5,000 miles p.a. at 0.25p per mile running costs/charging.
All	Devon Loves Dogs staffing costs		£91,000	25	£2,275,000	2 posts. £30,000 annual salary, plus 35% (to cover NI, superannuation, etc.) and £5,000 per annum support costs. 25 year period ensures financial stability and long term employment well beyond current plan period
All	Resources for Devon Loves Dogs		£12,750	25	£318,750	vehicle costs at: £250 per month to lease per electric vehicle, £1,500 for livery, £2,000 p.a. insurance, 5,000 miles p.a. at 0.25p per mile running costs/charging. Additional costs of £5,000 to cover resources and equipment
All	Communications Officer staffing costs		£45,704	10	£457,039	1 post. £30,000 annual salary, plus 35% (to cover NI, superannuation, etc.) and £5,000 per annum support costs. 10 year period to cover pulse of enhanced engagement work shift in comms.
All	DLD Website	£21,420	£1,000	20	£41,420	Indicative, estimated budget to cover creation of content, design, coding etc Costs cover whole plan period and extend beyond
All	South East Devon Wildlife (SEDW) Website	£21,420	£1,000	20	£41,420	Indicative, estimated budget to cover creation of content, design, coding etc Costs cover whole plan period and extend beyond

Site	Mitigation measure	One-off/ Capital cost	Rolling cost	Multiplier for rolling cost	Total cost	Notes on how cost calculated
All	DLD Brand refresh	£7,500	£7,500	3	£30,000	Indicative budget to cover basic design. Overall cost allows for 3 refreshes (assuming potentially every 5-10 years. New gazebo/table/display equipment cyclical replacement every 5 years - £1,500
All	SEDW Brand refresh		£7,500	3	£22,500	Indicative budget to cover basic design. Overall cost allows for 3 refreshes (assuming potentially every 5-10 years.
All	Wardens projects		£5,000	25	£125,000	Flexible budget to cover acquisition of equipment (temporary signage, banners, art work, optics, tables, gazebos, display boards etc) or external support as needed. Varying per year as to relevant campaigns etc.
All	Production of monitoring strategy & monitoring support	£7,000	£2,000	25	£57,000	Initial budget to cover support to warden team and delivery manager to ensure robust monitoring protocol and recording forms; with small annual budget to help with reporting in subsequent years
All	Visitor survey		£30,000	5	£150,000	Cost allows for 5 repeat surveys - potentially one survey every 5 years for 25 years.
All	SANGs and Infrastructure Projects Coordination Officer		£53,600	15	£804,000	£36,000 annual salary, plus 35% (to cover NI, superannuation, etc.) and £5,000 per annum support costs. 15 year timing covers plan period.
All	Admin and accountancy support		£3,600	50	£180,000	£3,300 per year for accounting and £300 per year for housing monitoring
Exe	Codes of Conduct	£14,000			£14,000	6 existing codes plus one new code; £2,000 per code to cover design, printing and distribution. Some consultation with user groups may be required. Potential for economies of scale (e.g. re distribution)
Exe	Exe Leaflets		£800	2	£1,600	4 leaflets, £1,500 for each leaflet to cover printing and design/refresh (SEDHRP/EEMP quote 2022).
Exe	Schools	£5,000	£2,000	20	£45,000	Rounded figure providing sufficient budget to allow review of existing education work around the estuary and work to produce new education material. Rolling costs allow annual budget to help cover cost of supporting school visits etc. Assumption is that other funding (e.g. from schools) may be available and delivery by existing staff/organisations, potentially with some input from warden team. Timing to cover at least Plan period
Exe	Managing access at sensitive locations		£10,000	20	£200,000	Some work required to confirm costs and nature of projects and these likely to change over time. Indicative budget that may need review and further refinement over time. Costs could be pooled across years.
Exe	Patrol boat	£10,000	£8,000	25	£210,000	Capital costs to cover necessary replacement. Estimated at £10k to cover swapping of current boat for RIB (Highfield Patrol 540 or similar). Over time likely requirement to

Site	Mitigation measure	One-off/ Capital cost	Rolling cost	Multiplier for rolling cost	Total cost	Notes on how cost calculated
						change to electric outboard. Rolling costs to expand use and cover fuel, officer training, maintenance and other associated costs (marina berth). Costed to cover well beyond Plan period.
Exe	Ongoing repair/maintenance of buoys at refuge	£15,000	£2,000	25	£65,000	One off cost to cover repairs to existing buoys, design and production of lettering to go on buoys to ensure clear guidance for anyone approaching the refuge (e.g. canoeists, folk on paddleboards, walkers etc); rolling cost to provide budget for replacement, repair and maintenance (actual cost likely to vary between years)
Exe	Stakeholder engagement		£2,000	25	£50,000	Role of Delivery Manager to undertake more strategic engagement, additional costs required for wider costs on annual basis, such as venue hire and support for other bodies such as EEMP and the forum (held twice a year)
Exe	Review of signage and new/improved signage	£12,000			£12,000	Role for Delivery Manager to undertake review and identify locations, with budget to cover implementation where required. New signage likely to involve discs or similar to convey specific instructions (such as dogs on leads) or way-marking.
Exe	New interpretation	£30,000	£30,000	2	£90,000	£3,000 per board for production of timber frame and graphic panel, delivery and installation. Estimate of 10 boards across Warren and Exe. Rolling cost assumes 10 year lifespan per board with costs staggered over time
Exe	Refuge monitoring		£20,000	4	£80,000	Estimated cost of £20000 per survey by consultancy or similar in line with previous surveys to allow direct comparison, budget allows for 4 repeats
Exe	Vantage point counts		£250	20	£5,000	Low cost but budget necessary to provide printed forms or hosting/software etc if done on tablets. 20 year timing covers plan period and just beyond, ensuring monitoring over key period taking place at least.
Exe	Web Camera		£12,000	5	£60,000	Estimated cost based on other examples/projects. 5 year period provides opportunity to use as a novel way to raise awareness and promote importance of estuary for wildlife
East Devon Heaths	Additional dog bins	£2,000	£2,000	25	£52,000	Costs to cover provision and emptying
East Devon Heaths	Review of parking charging	£15,000			£15,000	Estimated budget for review

Site	Mitigation measure	One-off/ Capital cost	Rolling cost	Multiplier for rolling cost	Total cost	Notes on how cost calculated
East Devon Heaths	Special projects pot		£25,000	15	£375,000	Estimated rolling budget to provide annual budget for specific projects, targeted as needed
East Devon Heaths	Signage		£2,000	25	£50,000	Rolling budget with potential to pool across years and extending well beyond plan period
East Devon Heaths	Interpretation	£44,000	£4,400	15	£110,000	£3,000 per board for production of "Primary" timber frame and graphic panels, estimate of 10 boards. £2,000 per board for production of "Secondary" timber frame and graphic panels, estimate of 7 boards. Rolling cost assumes 10 year lifespan per board with costs staggered over time
East Devon Heaths	Fire strategy work and review	£15,000			£15,000	Cost to provide budget for consultancy to undertake review
East Devon Heaths	Education work around fire	£10,000	£5,000	25	£135,000	Initial cost to provide funds to develop material with rolling budget to cover implementation (e.g. schools visits etc) and extending well beyond plan period
East Devon Heaths	Advice/specialist input re management interventions around dog walking	£5,000			£5,000	Budget to cover specialist consultancy input
East Devon Heaths	Resources for work with commercial dog walkers	£10,000			£10,000	Budget to cover specialist consultancy input
East Devon Heaths	Monitoring: ecology (birds, Southern Damselfly)	£2,000			£2,000	Budget to simply help supplement existing work - e.g. mileage for volunteers
East Devon Heaths	Monitoring: people behaviour	£10,000			£10,000	Budget to commission single survey involving direct observation of visitors from a range of vantage points, to cover a range of times and days
East Devon Heaths	Monitoring: vehicle counter data collection	£20,000	£500	20	£30,000	Cost for around 10 counters for a selection of car parks, assuming £1,000 per counter, replaced every 10 years with additional budget for installation. Costs for basic counter with data logger in protective housing (post).

Site	Mitigation measure	One-off/ Capital cost	Rolling cost	Multiplier for rolling cost	Total cost	Notes on how cost calculated
Dawlish Warren	Visitor facility at Dawlish Warren	£100,000			£100,000	Uncertainty around design, location etc. Indicative figure allowing contribution towards larger cost (e.g. match funding) for visitor centre or could be used to fund lower key shelter or similar to act as focal point for engagement. Budget sufficient to fund a roofed shelter rather than full-scale centre but how funding used dependent on opportunities and how Dawlish Warren continues to change.
Dawlish Warren	Flexible projects pot		£10,000	15	£150,000	Indicative budget that may need review and further refinement over time. Costs could be pooled across years.
Dawlish Warren	Petalwort monitoring and survey		£2,000	10	£20,000	Cost dependent on monitoring strategy; indicative cost allows for specialist consultancy and small surveys and assumption of 10 repeats.
Dawlish Warren	Maintenance of high tide roost at Dawlish Warren	£30,000			£30,000	Indicative cost and will be dependent on how the roost changes over time. Potential to implement anything will be dependent on the outcomes of Environment Agency work and may not be possible.