Marlcombe Transport Vision

East Devon New Community

September 2025

Prepared for:
CBRE

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Project Number:
22462

Document control sheet

Issued by	**Stantec Hydrock Limited** UNITED KINGDOM stantec.com	+44(0) 1209 719037 stantec.com
Client	East Devon Council	
Project name	East Devon New Community	
Title	Transport Vision	
Doc ref	22462-HYD-XX-XX-TP-RP-3001	
Project number	22462	
Status	S3	
Date	19 September 2025	

Document production record

Issue number	P07	Name
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Document revision record

Issue number	Status	Date	Revision details
P01	S3	22/08/2025	For comment and review
P02	S3	28/08/2025	For comment and review
P03	S3	08/09/2025	For comment and review
P04	S3	10/09/2025	Updated to reflect client comments and input
P05	S3	12/09/2025	Updated to reflect EDDC comments and input
P06	S3	18/09/2025	Additional updates to reflect EDDC comments and input
P07	S3	19/09/2025	Additional updates to reflect EDDC comments and input

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1 Non-Technical Summary

1.1 Context

1.1.1 Marlcombe presents a unique opportunity as part of the Unified Project to consider and influence extant issues, neatly summarised in DCC's Accessibility Strategy

1.1.2 This brings together known issues concerning

- access to Exeter
- deficiencies in local highways and junctions
- the local rail network
- potential improvements to active travel

1.1.3 The opportunity is further enhanced by the adjacency of the airport and technological advancements, primarily in the fields of information exchange, movement technology and influencing movement behaviour.

1.1.4 Critical to the strategy is the concept of internalisation, forcing the provision of built facilities at a sufficiently early stage to avoid Marlcombe becoming a dormitory town

1.2 Introduction

1.2.1 Marlcombe will be a town of 8,000 new homes, with approximately 18,000 residents. In terms of comparison towns within Devon, the long-term population of Marlcombe will fall between Brixham (16,700) and Tiverton(21,300) and would be the eighth largest settlement in the county (excluding Plymouth).The ambition is for it to be a place which provides for the majority of its residents' daily needs and where travelling by walking, wheeling, cycling or public transport is the logical choice for most journeys.

1.2.2 The Transport Vision sets out a framework to ensure that this ambition is realised. The roll out and ongoing management of the Transport Vision will be governed by a Transport Working Group (TWG). Although the exact management and delivery arrangements for Marlcombe are yet to be finalised, it is likely that this would come under the responsibilities of the overall Marlcombe Master Developer delivery body or Development Corporation (TBC).

1.2.3 In a well-planned, carefully balanced town, delivery of jobs, services and leisure facilities, etc. will keep pace with the construction and occupation of new houses. A town of this size will have a significant degree of self-containment. With a balanced community and relatively minimal modal shift, based on the evidence examined, it is anticipated that in the AM peak approximately 70% of all trips across all modes would be internalised. This high level of internalisation is largely driven by local provision of education facilities. In the PM peak, this internalisation would be 49% trips and over the course of a full day, 54% of trips would be internalised.

1.2.4 In terms of car trips (as opposed to trips across all modes), the resulting external trips before any modal shift is achieved are around 38% lower than gross movements over a day, rising as high as 57% internalisation in the morning peak. With a minimal level of modal shift achieved, this would be reduced by an additional 3-4%, rising to an 11-16% reduction with more ambitious targets achieved.

1.2.5 The Transport Vision provides an overarching strategy allowing and encouraging people to reduce their car use, whilst still being able to travel freely and economically. Within the site, this is largely focussed around a compact, well-laid out town, with low speed limits and high quality active travel infrastructure. Mobility hubs will be distributed around the site, giving people access to electric bikes allowing them to travel to local centres or connect to frequent bus and rail services to Exeter.

1.2.6 External trips will be accommodated through a series of mitigation measures to cater for people making longer journeys. These will primarily be aimed at giving people an alternative to driving but will also include capacity improvements at key junctions. At an early stage, the development will provide Park and Ride sites adjacent to the A30 and A3052, intercepting existing trips into Exeter and unlocking highway capacity on these routes. This approach will also allow high-frequency bus routes to be established in advance of the occupation of the new homes.

1.2.7 Marlcombe will provide a huge opportunity to improve access to Exeter from the east. The historic centre of the city has very little capacity to accommodate more traffic and over time, it will be necessary to reallocate space away from low occupancy private vehicles to allow the roads to be used more efficiently. Key to this will be providing public transport and active travel improvements. Bus and rail services will need to offer time savings and bus priority measures will be required. As above, space has been allocated within the new town for two park and ride sites, intercepting existing trips. Over time, this should be accompanied by bus priority measures, particularly on the A3052.

1.2.8 The new town will also strengthen the case for rail improvements through the Devon Metro project. Active transport links to Cranbrook and Digby and Sowton stations, along with coordinated bus services, timed to connect conveniently, will increase the potential user-base, and therefore benefits of these rail improvements.

1.2.9 Moving house is a significant life event and provides an opportunity to form new habits. It is therefore vital that the appropriate transport measures are in place when people first move to Marlcombe. The delivery of the transport measures outlined below will be set over a number of phases to keep pace with the build out and occupation of the town. Given the likely timeframe to complete the town, the Transport Vision will need to remain a live, flexible strategy, able to adapt to and adopt new transport technologies as they emerge (e.g. drone deliveries, self-driving cars, etc.).

1.2.10 The proximity of Exeter Airport to Marlcombe will be attractive to businesses wishing to relocate to the new town. It will also offer new residents access to a regional airport by sustainable travel modes. In addition, the airport provides employment opportunities, particularly when combined with the adjacent Skypark business park. Sustainable transport links will be provided to facilitate this.

1.3 Targets

1.3.1 In addition to the 54% internalisation of all trips within the town (38% of car trips), reductions in external Marlcombe-related car use would be achieved by the various measures set out in this Transport Vision. At the lower end (the minimal change scenario), these would equate to a further 3-4% reduction in external car use, rising to an 11-16% reduction under the most ambitious scenario.

2 Transport Vision and Phasing Summary

2.1 Introduction

2.1.1 This section provides a high-level, non-technical summary of the elements included within the Transport Vision in order to minimise and mitigate the transport-related impacts of Marlcombe. These measures aim to reduce reliance on the private car and encourage use of active travel and public transport where possible. Appropriate mitigation will also be provided for residual car trips. The phasing of these measures is also discussed.

2.2 Internalisation

2.2.1 The town must be built-out and delivered in a way that balances occupation of new homes with creation of an appropriate amount of commercial, leisure and educational facilities. If only houses are delivered at first, then Marlcombe will initially be a 'dormitory estate' with residents travelling elsewhere for their daily needs. Education is a key driver of peak hour travel, so, as a minimum, primary school places must be available within the new town from day one. Secondary school pupils should also be provided for in order to minimise school travel costs. It is likely that the commercial, leisure and community uses will need to be managed flexibly at first, along with incentives for businesses to relocate. This could for example be incentivised rents to set up a 'pop up' shop within a community facility or visiting medical practitioners holding on-site clinics. There may also be a need to share some facilities with nearby Cranbrook in these early stages. Over time, as more residents populate the town, business and facilities will become viable in their own right and can relocate to bespoke new buildings.

2.3 High Quality Active Travel Infrastructure

2.3.1 Marlcombe will be a compact town, no more than a 10-15 minute cycle from one-end to another. For travel within the site, active transport should be the first choice for residents who have the ability to do so. They will be supported in this choice by inclusive street design, a dense network of high-quality active travel routes, segregated where appropriate, and though a blanket 20mph speed limit covering the whole town.

2.3.2 Consistency of design and quality will be governed by a Design Code for the town. Attractive landscaping will make Marlcombe an attractive place to walk, cycle or wheel, with street planting also providing shade and shelter. Crucially, the Transport Working Group will ensure ongoing management and maintenance of these facilities.

2.3.3 Infrastructure design will take account of all users, including older people, wheelchair and pushchair users and people with visual or cognitive impairments.

2.4 Public Transport Strategy

2.4.1 The strategy includes two new park and ride sites on the A30 and A3052 to intercept car trips into Exeter, reducing congestion and emissions. An internal circular bus service will connect residential areas with key destinations, operating at high frequency with low-emission vehicles. Bus priority measures will be provided along the A3052 to ensure that bus journey times are minimised and are as reliable as possible.

2.4.2 Integration with rail infrastructure at Cranbrook and Digby & Sowton stations ensures regional connectivity. Real-time information, contactless payment and inclusive design features will enhance user experience. Over time new passing loops on the West of England Line and, through the Devon Metro project, Avocet Line will double rail service frequencies and line capacities.

2.5 Mobility Hubs

2.5.1 Mobility hubs will be distributed across Marlcombe, ensuring every dwelling is within 640 meters of a hub (this is an 8 minute walk). A hierarchical network of primary, secondary and mini hubs will support multimodal travel and reduce reliance on private vehicles. Depending on their size, these hubs will offer bike hire, EV charging, car club access, parcel lockers and real-time travel information. This will help people to travel easily to local centres and facilities, as well as to high-frequency public transport services.

2.6 Behaviour Change and Travel Planning

2.6.1 Behavioural interventions will begin at the point of occupation, leveraging the 'fresh start effect' to embed sustainable habits. Community engagement will include Travel Welcome Packs, local champions, mobility forums and gamified incentives (such as points, challenges or daily travel streaks). Schools and workplaces will implement tailored Travel Plans, supported by infrastructure and digital tools. Continuous feedback and monitoring will ensure responsiveness and improvement. This will all be managed through the Transport Working Group.

2.7 Electric Vehicles and Shared Mobility

2.7.1 EV infrastructure will include residential and public charging points, integrated with mobility hubs and park and ride sites. Shared EVs and car clubs will be promoted to reduce private car ownership. Digital platforms will manage booking, payment and usage data to inform expansion and adaptation.

2.8 Freight and Servicing Strategy

2.8.1 Freight operations will be managed to minimise environmental and social impacts. Designated HGV routes, time-based restrictions and low-emission vehicles will be used. Freight hubs co-located with mobility hubs will support consolidated deliveries and last-mile logistics via cargo bikes and electric vans. Retail servicing will be coordinated to avoid disruption, with compact loading infrastructure, operational guidance and increase flexibility for small businesses.

2.9 Town Construction

2.9.1 The size of Marlcombe will mean that construction work could extend over 15 or more years. This will mean that residents will be living alongside ongoing construction. This will need to be carefully managed in general to avoid adverse impacts such as noise and dust. In transport terms, the key impacts would be the movement of vehicles and materials to the site, particularly via HGVs. This will all be covered by a Construction Traffic Management Plan but will be managed by the Transport Working Group under the overall Transport Vision. It is critical that HGVs are safely and considerately routed in order to avoid discouraging active travel and to minimise impacts on neighbouring communities.

2.10 Implementation and Monitoring

2.10.1 Transport infrastructure will be delivered in phases aligned with development. Early delivery of park and ride services and mobility hubs will support sustainable travel from the outset. The Transport Working Group governance body will oversee implementation, supported by performance indicators and digital feedback mechanisms. Annual reviews will ensure the strategy remains responsive and aligned with community needs.

2.11 Phased Delivery

2.11.1 The transport impacts of Marlcombe will emerge over a relatively long period as construction and occupation of the new homes and businesses takes place. Devon County Council (DCC) has therefore developed a phasing plan for delivery of the mitigation measures.

2.11.2 Trip internalisation, where journeys are made within the settlement rather than extending into the wider region, is a fundamental element of Marlcombe Transport Vision. It supports reduced car dependency, encourages active travel and enhances the viability of public transport. In order to encourage internalisation of trips where possible, the delivery of employment, retail, education and community facilities must be carefully staged to keep pace with housing delivery.

2.11.3 Retail and commercial uses may face viability challenges in early phases. Mitigation includes flexible space design, temporary uses and support for local enterprises. Public sector investment or forward funding is likely to be needed to catalyse development. Education-related trips are also a key driver of internalisation and schools also need to be provided very early within the development programme.

2.11.4 Poor integration of land uses can lead to isolated pockets of activity and increased travel demand. Mitigation includes cohesive masterplanning, design codes and active travel connectivity. The plan and delivery should retain some element of flexibility to respond to future changes or challenges.

2.11.5 The anticipated delivery phases are set out below, with each phase identifying likely trigger points (numbers of dwellings) along with the associated non-residential elements of the town and transport measures that would be required at each stage to encourage internalisation and modal shift. It should be noted that the reasons for this phasing are not solely transport-focussed and other factors such as social cohesion, have also been considered.

Phase 0

2.11.6 Phase 0 refers to works that are currently ongoing or are delivered in parallel with the ongoing build out and occupation of Marlcombe. As a result, there are no specific triggers for this phase. It comprises electrification of the bus fleet within Devon and the existing DevonBus Enhanced Partnership between DCC and local bus operators. This provides additional control and influence over timetable, routes and fares on bus services within the county.

2.11.7 In addition, Phase 0 also refers to the on-going delivery of mobility hubs and active travel infrastructure within Marlcombe. This will be managed by the Transport Working Group, with additional control provided by the Design Guide and planning process.

Phase 1 – Pre-Commencement and Initial Occupation

Triggers

Dwellings	Non-Residential
Prior to 1st dwelling occupation	Education Campus

2.11.8 Education trips make up a significant proportion of movements, particularly in the morning peak, when more than 50% of trips are likely to be education-related. Early provision of the education campus will accommodate these movements within the town and therefore prevent them from having any impacts on the wider highway network.

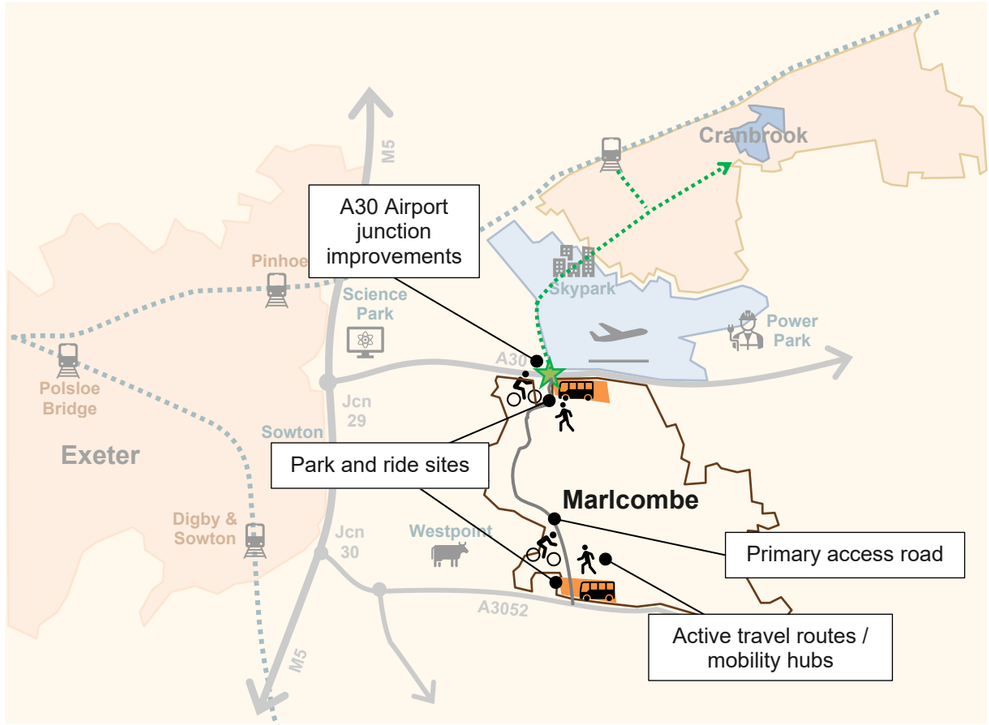
2.11.9 In terms of transport, Phase 1 has a strong emphasis on infrastructure provision. The primary access road though the town will be constructed (including segregated cycle lanes), along with improvements to the A30 Airport junction and new junction with the A3052 to the south. The A30 junction improvements will include active travel links towards Cranbrook. The primary access road will not only provide for future residents but also create a safe route for construction traffic. The primary access road itself will require ground levelling works, as well as bridges over the watercourses running east to west through Marlcombe. It is likely that some of the landscaping along the route will also be implemented at this early stage, allowing plants and trees to become established before the majority of residents move in.

2.11.10 Once the primary access road is completed, the two park and rides sites on the A30 and A3052 will also be delivered, along with regular bus services into Exeter. These park and rides will intercept existing trips into the city, helping to relieve congestion and creating 'headroom' for vehicles from Marlcombe as occupations start to take place. Depending on the routes developed, the buses could operate as back and forth shuttle buses into the city or could operate circular routes via the new primary access road.

2.11.11 As homes and businesses start to be delivered and occupied within Marlcombe, they will initially be clustered around the southern and northern ends of the site, placing the park and ride sites within easy reach. High quality pedestrian and cycle infrastructure will be constructed alongside any new properties, along with mobility hubs, allowing new residents easy access to regular bus services into Exeter. At this early stage, there may need to be financial incentives (e.g. discounted tickets) in order to encourage bus use by residents, as bus priority measures will be delivered in later phases.

2.11.12 The Phase 1 measures are summarised in the following table and diagram (note that the built out area of Marlcombe shown in all diagrams is indicative only):

Item	Rationale
Marlcombe primary access road (including A3052 junction)	Facilitates construction and more flexible approach to bus routing
A30 Airport junction improvements	Future proof for growth of Marlcombe, improve active travel links to Cranbrook allowing shared use of facilities and services. Connect primary access road to A30.
Park and Ride sites on A30 and A3052	Intercept existing trips to Exeter , unlock capacity along A30 and A3052 and across M5. Allow frequent bus services to be established at an early stage so that they are available to Marlcombe residents as they move in.
Active travel routes and mobility hubs within site	Facilitate access to park and ride services for residents.



Phase 2

Triggers

Dwellings	Non-Residential
Pre 500 dwellings	Community centre Convenience store Market square Meanwhile uses for e.g. family hub, start-up enterprise 10,000sqm employment floorspace GI, sport and play

2.11.13 With 500 dwellings occupied, Marlcombe will have a population similar to that of Exton or Beer and the community will start to become well-established. Local businesses and facilities may need an element of funding support to be fully viable at this stage, helping them to become properly established as the town grows.

2.11.14 As more dwellings are occupied, a greater number of on-site facilities will be required. Some of these will have direct transport benefits by keeping trips within Marlcombe (e.g. food shopping and employment), whilst others are primarily community-driven (market square, community centre, etc.).

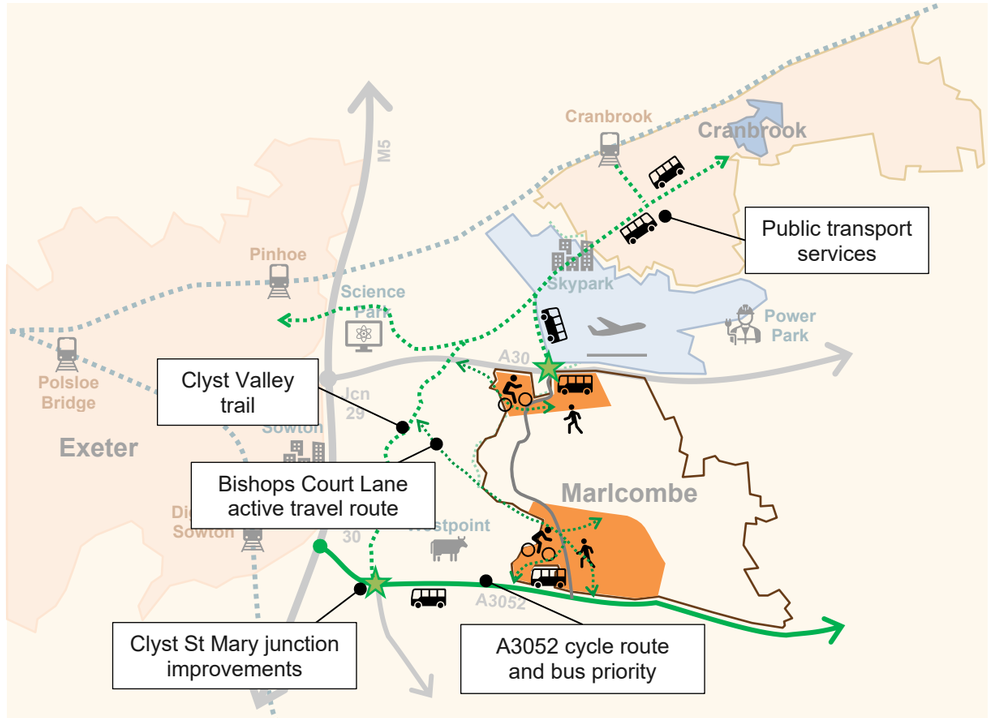
2.11.15 Leisure-related trips, personal business, shopping and commuting trips account for significant proportions of people's daily travel (67% of all daily movements combined based on National Travel Survey Data). The more that these uses can be provided for with Marlcombe, the less people will have to travel outside the town.

2.11.16 In terms of mitigation, Phase 2 largely concentrates on off-site transport measures but ensures that active travel links and mobility hubs within Marlcombe continue to expand as more of the town is constructed and occupied. These will allow people to travel easily to facilities within the town as they come forward, as well as connecting to Cranbrook and bus services to Exeter.

2.11.17 During these relatively early stages of occupation, high quality, reliable bus services to Exeter will be of fundamental importance. It will be vital that buses offer people journey time savings, making them the logical choice for travel into Exeter. This will be achieved through bus priority measures along the A3052. These priority measures will be accompanied by a segregated cycle route along the A30522, linking to Sowton and beyond into Exeter. Sowton would be a cycle ride of approximately 20 minutes via this route. The frequency of the park and ride services would be increased to every 15 minutes (if not already achieved). New residents will continue to receive discounted bus travel until bus priority measures are completed.

2.11.18 In order to further encourage active travel, the Clyst Valley Trail will be completed, and Bishops Court Lane will be converted to an active travel route, with motorised vehicles removed (except for access). The Phase 2 measures are summarised in the following table and diagram:

Item	Rationale
A3052 Clyst St Mary junction improvements	Future proof for growth of Marlcombe and general growth in traffic levels on the network
A376/A3052 Bus Priority to M5 Jct 30 / Sowton Ind Estate	Ensure that park and ride and general bus services experience faster and more reliable journey times into Exeter (including Sowton), making them an attractive modal choice and reducing car use.
A3052 protected cycle path	Provide a safe cycle route into Exeter and Sowton, encouraging cycle use. Sowton would be a cycle ride of approximately 20 minutes via this route.
Clyst Valley Trail active travel route	Facilitate access to park and ride services for residents.
Bishops Court Lane active travel route	Attractive north-south active travel route
Expansion of active travel routes and mobility hubs within site	Ensure that residents can continue to access high frequency bus routes as development delivery continues.
Public transport links	Links Marlcombe to Cranbrook and employment opportunities (e.g. Skypark, Logistics Park, Sowton, City Centre)



Phase 3

Triggers

Dwellings	Non-Residential
Pre 1,000 dwellings	In addition: Health provision 10,000 sqm employment 500 sqm E class town centre space GI, sport and play

2.11.19 With 1,000 dwellings occupied, Marlcombe would have a population roughly equivalent to small market town or large village such as Buckfastleigh or Combe Martin. Local businesses and shops become viable in their own right and would start to move into dedicated facilities.

2.11.20 Phase 3 continues the expansion of facilities within Marlcombe. More jobs will be provided, along with health care and general town centre uses. This means increasing the retail and town centre offer and building on leisure and sport facilities. These businesses will be more viable as dwelling occupation increases and employment provision expands.

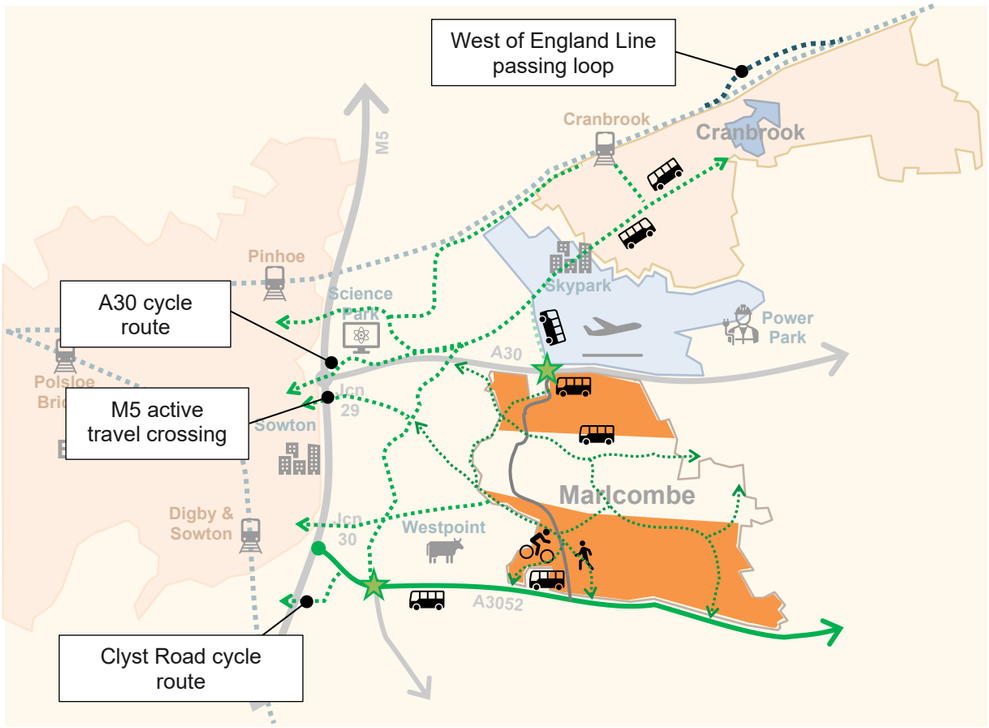
2.11.21 In terms of off-site transport infrastructure, key among these will be a passing loop on the West of England rail line and a new active travel crossing of the M5 in the Sowton area.

2.11.22 The rail passing loop will allow service frequencies to be increased to two trains per hour between Exeter and Axminster. This increase in service frequency will not only reduce overall journey times, but also double the capacity of the line, making journeys more comfortable. This will need to be supported by enhanced active travel links to Cranbrook station, alongside appropriately timed bus services, possibly with combined ticketing arrangements.

2.11.23 A new crossing of the M5 will provide a direct link to Sowton and beyond into Exeter. This is important for people living in the centre of Marlcombe, for whom the A3052 route would be less convenient. Again, this will offer journey times of around 20 minutes. Extension of the Clyst Valley Trail along Clyst Road will create an additional route into southern Exeter and towards Topsham.

2.11.24 The Phase 3 measures are summarised in the following table and diagram (again the built out area of Marlcombe is indicative only):

Item	Rationale
Devon Metro (Rail): West of England Line Passing Loop	Allows increase rail frequency (two trains per hour between Exeter and Axminster), helping to address longer distance travel.
New pedestrian/cycle crossing of M5	Providing a more direct route to Sowton and Exeter from the heart of Marlcombe, maintaining similar journey times for those living further from the southern end of the town.
A30 Honiton Road & Sowton Lane protected cycle path	Provide a safe cycle route into Exeter and Sowton for people living towards the northern end of Marlcombe. Will also provide a route for people living in Cranbrook.
E13 Clyst Road Cycle Route	Alternative connection into Exeter and towards Topsham



Phase 4 - – Up to 3,500 dwellings

Triggers

Dwellings	Non-Residential
Pre 3,500 dwellings	In addition: Second Primary School 40,000sqm employment Supermarket 1000sqm E class town centre space GI, sport and play Dry-side leisure centre

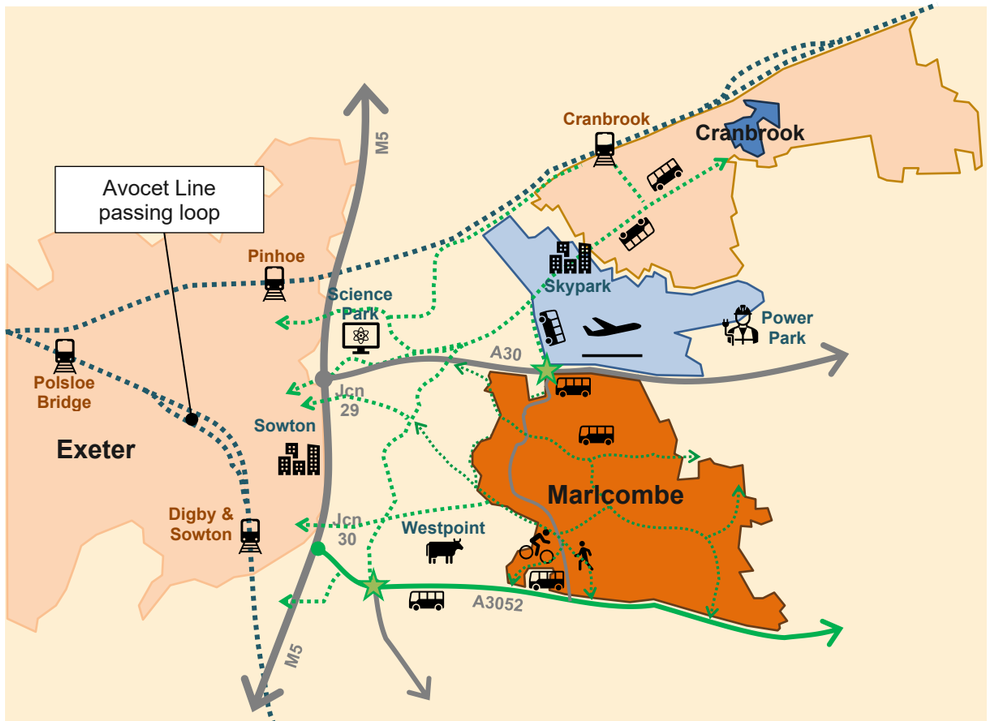
2.11.25 At this stage, Marlcombe starts to become a significant town in its own right, with a population of around 9,000 people – broadly equivalent to Ilfracombe or Totnes. Local businesses, employers and retail facilities will naturally start to expand, and this will be encouraged through the planning process and possibly through mechanisms such as reduced business rates, etc.

2.11.26 Additional education facilities will be provided to cater for the increase population. Larger-scale food retail becomes viable, alongside more town centre uses and a higher level of employment. These aim to maintain internalisation as more people become residents of Marlcombe.

2.11.27 The final stage of mitigation will be the addition of a passing loop on the Avocret Line, which connects Exeter to Exmouth via Digby & Sowton. This allows frequencies to be doubled to four trains per hour. As with the West of England rail line improvements, this reduces overall journey times for people using the Avocet Line and doubles its capacity to carry passengers. This will need to be supported by enhanced active travel links to Digby & Sowton station, alongside appropriately timed bus services, possibly with combined ticketing arrangements.

2.11.28 The Phase 4 measures are summarised in the following table and diagram:

Item	Rationale
Devon Metro (Rail): Avocet Line Passing Loop	Allows increased rail frequency (two trains per hour between Exeter and Axminster), helping to address longer distance travel.



2.12 Strategic Highway Network

2.12.1 In addition to the above off-site mitigations, it is also likely that improvement measures will be required at or around Junctions 29 and 30 of the M5. Although Marlcombe will add to vehicle numbers at these junctions, the impact is relatively minor and the improvements will be needed in any event to accommodate general traffic growth on the strategic highway network managed by National Highways (in this area, the M5 and A30). The design and timing of these improvements is currently under consideration by National Highways.

3 Transport Vision Introduction

3.1.1 This Transport Vision sets out a bold, practical Transport Vision for Marlcombe, which is a new settlement of 8,000 homes and associated commercial development east of Exeter. It aims to create a place where most daily journeys can be made by walking, wheeling, cycling or public transport, reducing reliance on private cars and supporting a healthier, greener lifestyle.

3.1.2 The Transport Vision sits alongside the wider delivery strategy for Marlcombe and will be further refined and agreed as part of the evolution of the wider strategy. The intention is that it should remain a 'live', flexible document, able to adapt to new challenges and technologies as they emerge.

3.1.3 The Vision aligns with national and local policy objectives, including:

- National Planning Policy Framework (NPPF)
- Devon and Torbay Local Transport Plan 4
- Exeter Transport Strategy

3.1.4 The Vision is guided by three core principles:

- Self-containment - Ensuring residents can access jobs, schools, shops and services locally
- Sustainable travel - Prioritising walking and wheeling, cycling and public transport
- Future-ready mobility **-** Supporting electric vehicles and smart travel choices

3.1.5 It also incorporates the conclusions and outputs of an extensive and detailed highway modelling exercise undertaken by Devon County Council (DCC). The purpose of the modelling exercise was to identify likely impacts and suitable mitigation measures, either in terms of reducing car trips, or highway works at key locations.

3.1.6 There may also be a need for works around Junctions 29 and 30 of the M5, as well as the A30 Airport Junction. The latter will be one of the primary access points into Marlcombe (as well as needing to accommodate general and Cranbrook-related traffic growth). The exact nature of the required improvements will be determined though the planning process but are likely to involve enlargement of the grade-separated roundabout elements of the junction, along with potential signalisation.

3.1.7 Discussions remain ongoing with National Highways as to the nature of the works around the M5 junctions. The DCC modelling exercise has shown that, whilst traffic associated with the new town does have some impacts, M5 improvements works are likely to be required in any event in order to accommodate growth in traffic on the strategic highway network whether or not Marlcombe comes forward. As the new town does not 'trigger' the need for these works, they are not considered further within this document.

3.1.8 A key aim of the Vision is to ensure that the new town is as self-sufficient as possible, with facilities for everyday needs, jobs, education, retail and open space provided conveniently and near people's homes. The town will need to be delivered in a balanced way in order to ensure that a high level of internalisation is delivered at an early stage.

3.1.9 Marlcombe will also aim to improve access to Exeter from the east by addressing existing transport issues by providing two new park and ride sites for Exeter. This will allow people driving to the city along the A30 and A3052 to swap to buses, avoiding city centre parking charges and benefiting from reduced journey times thanks to bus priority measures.

3.1.10 New and improved public transport services to Exeter will be provided, along with new pedestrian and cycle routes to important destinations such as Sowton Industrial Estate and Exeter Airport. Over time, rail frequencies will also be doubled at Cranbrook and Digby & Sowton stations.

3.1.11 Within Marlcombe itself, pedestrians and cyclists will be prioritised with high quality infrastructure and a 20mph speed limit throughout.

3.1.12 Key features include:

- A network of safe, direct walking, wheeling and cycling routes
- 20mph speed limit throughout Marlcombe
- Frequent, reliable bus services connecting to Exeter and surrounding areas
- Mobility hubs offering bike hire, EV charging and real-time travel information
- Infrastructure to support electric vehicles and shared mobility

4 Marlcombe and Its Residents

4.1 Marlcombe Description

4.1.1 The town of Marlcombe will be a long-term strategic development that will start being built out during the life of this local plan, but with development extending beyond the life of this plan.

4.1.2 Marlcombe is located to the east of Exeter, between the A30 and A3052, to the west of the M5. It benefits from nearby rail stations at Cranbrook and Digby & Sowton stations. It lies close to existing employment centres at Hill Barton Business Park, Sowton Estate and Exeter Airport Business Park. Its proximity to Exeter Airport itself will be attractive for businesses and will also mean that residents have access to a regional airport by sustainable travel modes.

4.1.3 Designed to accommodate initially up to 8,000 homes, Marlcombe will ultimately need to accommodate at least 10,000 new homes and associated mixed use development and infrastructure. It will be of a scale that can support the services, infrastructure and employment needed for a self-sufficient, thriving community.

4.1.4 These homes will come forward over time. The settlement will be developed in phases, with around 3,300 new homes up to 2042 and around 4,700 additional homes following beyond the lifespan of this local plan.

4.1.5 Services and employment provision will also be phased with the delivery of at least 16.5 hectares of land for office, industrial and warehouse sectors (E) up to 2042.

4.1.6 Facilities and services will be delivered early, and the first phase will provide at least 5 hectares of land including operational town centre uses, specifically to include retail, business and community uses. Marlcombe will build on the lessons learned from Cranbrook—drawing from its successes and challenges to create a healthier, more sustainable future for East Devon.

4.2 Future Residents

4.2.1 Users of transport have different needs, preferences and behaviour traits. To capture this diversity and consider the impact that this should have on policy and decision making, the Department for Transport (DfT) has developed 12 different ‘personas’ to reflect nine groups / segments of people[1].

4.2.2 Typically, each group is represented by a single persona (a fictional character) that provides an illustration of the people that belong to that segment; some are represented by two personas to display diversity.

4.2.3 These segments were developed from existing research that was validated and updated by a large-scale survey and ethnographic research in 2022. They break up the population into smaller clusters to define their individual traits when using transport. The personas were published in July 2023 and are summarised in the illustration overleaf. These personas make up differing proportions of the UK’s population.

4.2.4 For each persona, the DfT developed a detailed information pack, setting out their key characteristics, habits, concerns, motivations and opportunities for change. These profiles also include the enablers and barriers to different transport modes. For ease of reference, a summary has been provided as Figure 4.1 of this report.

[1] https://www.gov.uk/guidance/transport-user-personas-understanding-different-users-and-their-needs

4.2.5 These personas have been used to inform the development of this Transport Vision, ensuring that the measures and initiatives designed to meet the core principles are fair and reflect the range of future residents.

4.2.6 A Technical Note considering the personas in greater detail and examining the potential impacts on trip making beyond Marlcombe is included as Appendix A .

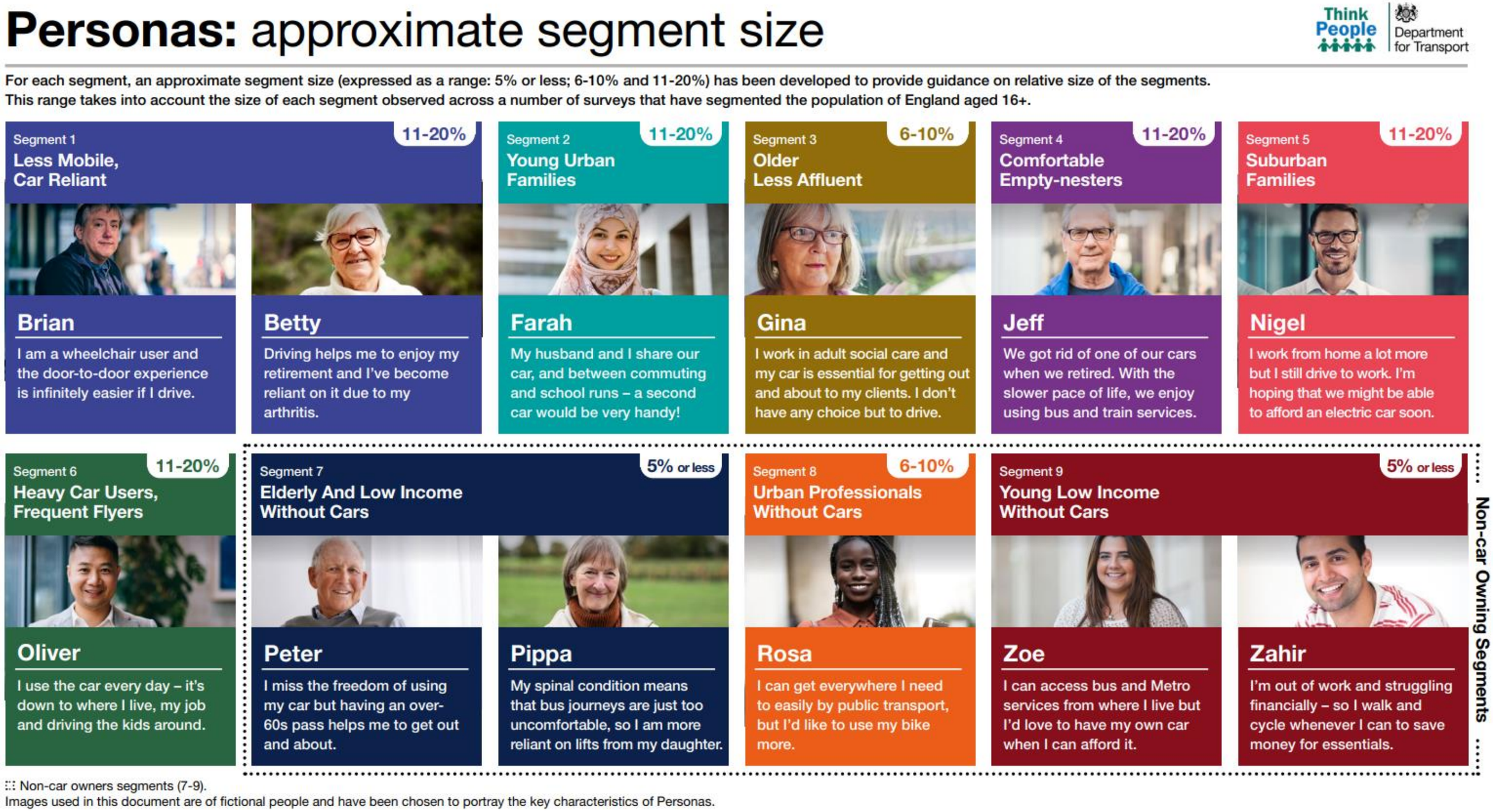


Figure 4.1 DfT Personas Summary Sheet

4.2.7 These personas have different abilities and desires to change how, when and if they travel and these also vary by trip purpose. These motivations and abilities have been closely examined in order to derive 'Minimal Change' and 'Target Change' scenarios for how travel habits could change, facilitated by this Transport Vision. For robustness, all highway modelling and assessment work is closely aligned to the Minimal Change scenario. However, through the comprehensive range of measures set out in this document, the aspiration is that the more ambitious Target Change scenario will be achieved.

4.2.8 The modal shifts for these two scenarios are detailed in Appendix A and are summarised overleaf:

Table 4.1: Mode shifts for Minimal Change Scenario

	Trip Types							
	Commuting	**Business**	**Education**	**Escort Education**	**Shopping**	**Other work / escort & personal business**	**Visiting friends / entertainment / sport**	**Holiday / Day trip / other**
% Change in Walking	+10%	+9%	+10%	+11%	+13%	+12%	+11%	+10%
% Change in Cycling Pedal cycle	+10%	+9%	+10%	+11%	+13%	+12%	+11%	+10%
% Change in Car or van driver	Varies by time and purpose and is derived from combines increases in other modes and reductions in trip making. Broadly equates to a 3-4% reduction in overall off-site trips.							
% Change in Car or van passenger	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Motorcycle	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other private transport	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other local bus	+7%	+6%	+5%	+4%	+6%	+6%	+6%	+6%
% Change in Surface Rail	+6%	+6%	+4%	+3%	+5%	+6%	+6%	+6%
% Change in Taxi or minicab	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Overall Trips by All modes	**-3%**	**-2%**	**-1%**	**-2%**	**-3%**	**-3%**	**-3%**	**-1%**

Table 4.2: Mode shifts for Target Scenario

	Trip Types							
	Commuting	**Business**	**Education**	**Escort Education**	**Shopping**	**Other work / escort & personal business**	**Visiting friends / entertainment / sport**	**Holiday / Day trip / other**
% Change in Walking	+25%	+21%	+24%	+27%	+32%	+29%	+27%	+25%
% Change in Cycling Pedal cycle	+25%	+21%	+24%	+27%	+32%	+29%	+27%	+25%
% Change in Car or van driver	Varies by time and purpose and is derived from combines increases in other modes and reductions in trip making. Broadly equates to a 11-16% reduction in overall off-site trips.							
% Change in Car or van passenger	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Motorcycle	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other private transport	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other local bus	+223%	+209%	+156%	+138%	+203%	+214%	+214%	+214%
% Change in Surface Rail	+9%	+9%	+5%	+4%	+8%	+8%	+8%	+8%
% Change in Taxi or minicab	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Overall Trips by All modes	**-6%**	**-4%**	**-2%**	**-4%**	**-7%**	**-5%**	**-5%**	**-2%**

5 Vision and Objectives

5.1 Vision Statement

5.1.1 To create a community where sustainable travel is the default choice, where streets are safe and welcoming and where residents can live, work and thrive without needing to rely on or own private cars.

5.1.2 Recognising the importance of access and mobility, the following 'Transport Vision' has been developed. This presents the guiding principles on which the Transport Vision is developed. These are set out below:

1. Understand the role of access and mobility in delivering sustainable, cohesive, self-sufficient, balanced and inclusive community.
2. Minimise the need for travel.
3. Adopt 20-minute neighbourhoods.
4. Provide a transport network that prioritises services of a standard which encourages use by all.
5. Contribute to public transport services of a standard which encourages use by all,
6. Recognise the health and wellbeing benefits of active travel and provide the infrastructure that creates a healthy lifestyle culture amongst residents/visitors.
7. Provide a network which is future proofed to facilitate a growing uptake of emerging sustainable technologies.
8. Recognise changing travel behaviours and maximise the opportunity that has arisen out of the COVID-19 pandemic. Influence and design for a new 'norm'.
9. Recognise and maximise the synergies that exist between co-locating new residential development adjacent to services and amenities.
10. Form a relationship with neighbours and in turn:
    a. Enhance local infrastructure for neighbouring residents – minimise the distances that they need to travel to local services and amenities.
    b. Enhance existing transport networks for neighbouring residents – provide greater access to sustainable travel options compared to those that currently exist.
11. Contribute positively to the declared Climate Emergency in neighbouring authorities.
12. Seek to address road safety and congestion to create a more pleasant, less car-dominated environment.
13. Incorporate active travel interventions into highway mitigation measures through holistic design and sympathetic junction treatment.

5.2 Inclusive Design, for All Ages and Abilities

5.2.1 Marlcombe's transport systems and infrastructure will be designed to serve users of all abilities throughout their lives. Children and families will benefit from safe routes to school, pushchair and wheelchair accessible buses and family-friendly mobility hubs. Older adults will have access to regular seating, clear signage and assistance services; people with disabilities (both visible and less visible) will benefit from step-free access, tactile surfaces, strong visual contrasts and audible information. Young professionals and students will enjoy fast, reliable services with digital integration.

5.3 Partnerships and Governance

5.3.1 A successful Transport Vision will require collaboration between public authorities, developers, transport providers and community stakeholders. This forms a key tenet in the management of Marlcombe.

5.3.2 At this stage, the vision sets out the importance of a management process, which will develop Governance structures to support integrated planning and delivery, with mechanisms for monitoring and adapting land use and transport strategies over time.

5.3.3 The eventual form of the governance is yet to be determined, but could be a management company, development corporation, town council, or other non-profit entity. At this stage it is understood that a Master Developer or Development Corporation are being considered. This body will be responsible for service quality, infrastructure upkeep and user engagement. It will seek to maintain high standards of user experience. Although the management body will have far wider responsibilities, transport is a key element of the new town's success and therefore a specialist Transport Working Group will be formed. For conciseness within this Transport Vision, this is referred to as the TWG.

5.3.4 The first steps of the management process are likely to be governed by a Supplementary Planning Document (SPD), development brief or outline planning application, but there will need to be an ongoing management arrangement.

5.3.5 Although the details are yet to be determined, the TWG will maintain a digital platform for transport. As a minimum, this would be a social media presence to allow for the distribution of transport-related information (e.g. bus timetables and fares) and for users to provide feedback and suggestions.

5.3.6 Ideally, the digital platform would be significantly more ambitious than this, with 'Mobility as a Service' (MaaS) capabilities. This could include:

- an intermodal journey planner (providing combinations of different transport modes car-sharing, car rental, underground, rail, bus, bike-sharing, taxi, etc.) that operates in real-time
- a single payment portal, whereby users can pay as they go or else buy a 'service bundle' in advance
- a booking system incorporating the entire end-to-end journey stages (e.g. car club, cycle hire, etc.)

5.3.7 The Department for Transport published a MaaS Code of Conduct in 2023. This references the following UK case studies:

Solent Transport, Breeze (Portsmouth, Southampton, South Hampshire, Isle of Wight, UK)

The Solent Transport Breeze app is part of the funding allocated from DfT's FTZ programme.

Solent Transport set out to create a MaaS solution that would have every transport mode and option in one place, be designed to be easy and attractive to use, and leave complex technical integrations between systems behind the scenes and not burdensome by users.

The initial specification for the platform included the following 5 areas:

- *integration with public transport operators and services and micromobility services as they become available*
- *multimodal journey planning*

- *integration of car and driving options within the MaaS environment*
- *comparative journey planning by price, sustainability, time and ease*
- *multimodal booking, ticket and payments*
- *collaboration with research partners (University of Portsmouth and University of Southampton) to continuously assess and improve the application*

A beta version of the MaaS app was launched in November 2021 to a closed testing group. This included basic functionality and limited mobility services and was used as part of a comprehensive test plan to ensure functionality and user experience are as expected and to identify any issues or improvements that were required to be made.

HITRANS and Mobilleo, Go-Hi (The Highlands and Islands, Scotland UK)

Go-Hi was launched in summer 2021 in the Highlands and Islands of Scotland and allows users to plan, book and pay for an end-to-end, multimodal journey in a single transaction using their smartphone or desktop devices.

The Go-Hi MaaS app is designed to make it easier for residents, tourists and business users to switch between different modes of sustainable transport to increase the use of public transport, car club and car hire and encourage active travel. The scheme also includes access to planes, ferries and demand-responsive transport to offer a solution to some of Scotland's most rural areas and islands and allows tourists to book hotels as part of their trip to support sustainable tourism in the Highlands.

Alongside a focus on providing services to the whole community, the Go Hi project also generates data for operators and the HITRANS transport authority to better understand the needs of users and make decisions to ensure the long-term viability of the transport services.

Citymapper, main roads walking route

The Citymapper app offers users and enterprise customers the option of walking routes that prioritise main roads, which is usually a good proxy for being well-lit and avoiding parks. This helps users both when navigating a city after dark and when they're in an unfamiliar area and want to keep the turns simple. Citymapper also offers a 'share trip' functionality that enables users to share their live location and estimated time of arrival (ETA) with friends, combined with turn-by-turn navigation. The aim of these features is to help everyone navigate their city confidently at all times of the day.

Citymapper journey planning includes the CO2 savings for each transport option compared to taking the same trip by car, both per trip and overall, across all the trips a user has taken. Citymapper has found that giving users quantifiable ways to understand the environmental benefits of their transport choices and gamifying this with features, such as a cumulating scorecard, can provide important behavioural nudges to support users in adopting greener travel habits.

Native booking functionality allows users to pay for and access transport services, for example, ride-hail and micromobility, directly within the app. This is integrated with the navigation functionality to create a frictionless end-to-end travel experience. Citymapper also offers public transport ticketing using EMV contactless technology, enabling users to access transit with a tap of their phone. Both of these systems are powered by Citymapper's MaaS accounts platform that combines public transport with micromobility, ride-hail and the likes in flexible bundles, subscriptions and personalised offers for consumers. With all mobility payments in one place, this accounts-based platform enables the creation of multimodal products that reflect how users travel in real-life.

Whim

Whim utilises both monthly subscriptions and pay-as-you-go tickets as well as bundles designed specifically for Whim users. With Whim, the user can combine, for example, a 30-day public transport subscription and a 30- or 60-minute e-scooter ride. Whim was designed to allow urban users to travel more conveniently without a car, but also to make the decision not to buy a car easier. In the Whim user study 2020, 24% of users say Whim has helped them either get rid of or avoid buying a new car.

Swift (Transport for West Midlands)

Over the past 10 years, Swift in the West Midlands has grown to be the largest smart ticketing scheme outside of London. With 190,000 active smartcard holders and 45 million journeys over the past 12 months, Swift strives to make all kinds of transport accessible to its citizens, adapt to new transport trends and make the region more sustainable. Swift cards can be used as a ticket for train, bus or tram, and pay as you go for bus, tram and car parking; you can load season tickets and credit onto your Swift card.

Swift provides the technical infrastructure and the know-how to the user-facing MaaS application. Swift's multimodal and multi-operator capping solution forms the future-proof payment method for all existing and upcoming MaaS integrations. Both 3- and 7-day capping has arrived as a feature across bus and tram to support more flexible working. Swift's reporting suite is well-equipped as a foundation to build on for long-term behaviour change through nudging transport users towards more sustainable transport modes.

5.3.8 While Mobility as a Service (MaaS) offers significant potential to transform how people access and use transport, it remains an emerging and evolving concept. Current systems vary in scope and functionality, and many are still in pilot or early deployment stages. As technologies, user expectations, and integration capabilities develop, it will be important to monitor progress closely. The new town's transport strategy will remain flexible to adopt emerging best practice, ensuring that MaaS solutions are implemented in ways that genuinely enhance accessibility, sustainability, and user experience.

5.3.9 Digital integration is key to enhancing user experience. A unified MaaS platform would allow users to plan journeys, access real-time updates and make payments. The platform will support account-based ticketing, enabling users to manage subscriptions and travel history. Mobile apps will include accessibility features such as screen reader compatibility, voice commands and adjustable text sizes. Interactive kiosks at mobility hubs will provide multilingual support and intuitive navigation. Feedback mechanisms will be embedded in digital tools, allowing users to report issues and suggest improvements directly.

5.3.10 The platform could also potentially provide a feedback loop (e.g. cycle use tracking) to enable 'gamification' of travel, personalisation of services and iterative improvement of transport provision within the town. Gamification would include elements such as points, levels, leaderboards, badges, challenges/quests, onboarding, and engagement loops.

5.3.11 This may be facilitated through advertising, data provision, ticketing commission, links with local retailers, etc. but will require initial set up funding and expertise. The platform will need to be scalable as the new town is built out and occupied. It may be that this falls under a wider 'Marlcombe' app driven by the Development Corporation (or alternative body) that offers access to services such as sports facilities, local business, etc. If available at an early stage (ideally pre-occupation) this could be a valuable tool in shaping behaviours and receiving resident and business feedback.

5.4 Maintenance Strategies

5.4.1 Maintenance protocols will include regular cleaning, graffiti removal and prompt repair of damaged facilities. Audits will be conducted periodically, and lighting will be maintained to ensure visibility and security. Community involvement will be encouraged through volunteer programs and local feedback forums. Performance indicators such as satisfaction scores, accessibility compliance, incident reports and user feedback will guide continuous improvement.

5.5 Long-Term Monitoring and Evaluation Strategies

5.5.1 Sustained success requires robust monitoring and evaluation. The TWG will adopt the following strategies:

- Key Performance Indicators (KPIs) such as ridership levels, accessibility audits and user satisfaction scores
- Annual accessibility reviews
- User journey mapping to identify pain points and opportunities for improvement
- Integration with town-wide data platforms to track modal shift, emissions and service reliability

5.5.2 These measures will ensure that transport services evolve in line with user expectations and policy goals, maintaining high standards of inclusivity and performance.

5.6 Targets

5.6.1 Through careful planning and delivery of a balanced town, providing locally for its residents' needs, it is anticipated that approximately 53% of daily Marlcombe-related trips across all modes would be internalised, rising as high as 69% in the AM peak. This high level of internalisation is largely driven by local provision of education facilities. In the PM peak, this internalisation would be 48% trips and over the course of a full day, 53% of trips would be internalised.

5.6.2 Car trips are likely to be longer-distance movements, so are intrinsically more likely to be external. For car trips, the internalisation figures would be 58% (AM peak), 29% (PM peak) and 37% (all day). Again, much of the AM peak internalisation is driven by local provision of schools.

5.6.3 Further reductions in Marlcombe-related car use would be achieved by the various measures set out in this transport vision. At the lower end (the minimal change scenario), these would equate to a further 3-4% reduction in external car use, rising to a 11-15% reduction under the most ambitious scenario.

5.6.4 The proposed park and ride facilities will also act to intercept existing trips into Exeter, freeing up highway capacity for Marlcombe-relate trips.

6 Land Use and Trip Patterns

6.1 Introduction

6.1.1 Marlcombe presents a rare opportunity to embed sustainable transport principles from the outset. One of the most effective strategies for reducing external travel demand and mitigating impacts on the surrounding highway network is the promotion of mixed land uses. This approach involves the deliberate integration of residential, commercial, educational, recreational and civic functions within walkable neighbourhoods, enabling residents to meet most of their daily needs locally.

6.1.2 Marlcombe's layout will support short, local trips. Mixed-use development will place homes near schools, shops, workplaces and community facilities. This reduces the need to travel long distances and encourages active travel.

6.1.3 Trip internalisation, where journeys are made within the settlement rather than extending into the wider region, is a fundamental element of Marlcombe Transport Vision. It supports reduced car dependency, encourages active travel and enhances the viability of public transport.

6.2 Trip Internalisation

6.2.1 Trip internalisation is the principle that providing for people's needs within the town will mean that they do not have to travel so far to meet these needs (i.e. they will generally travel to the nearest closest facility).

6.2.2 As detailed above, the overall development will be a town slightly larger than Tiverton. Many people will live and work in the same area, and may also go to school, shop, etc. within the settlement on a regular basis. These 'internalised' trips will not affect the wider highway network and only take place within the town itself.

6.2.3 People travel for a range of different purposes and these reasons will vary by time. For example, travel for education will be high in the 0800-0900 time period, but lower between 1600-1700 as schools generally finish before this time. Data from the National Travel Survey shows how trip purposes vary over the day within the UK:

Table 6.1: Trip Purpose by Start Time

Start time	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)	Total (%)
0700-0800	41	4	15	8	4	14	5	9	100
0800-0900	16	2	28	25	5	13	4	7	100
0900-1000	10	4	2	5	22	24	16	18	100
1600-1700	21	3	7	6	14	20	17	12	100
1700-1800	26	3	3	2	14	20	21	11	100
1800-1900	17	2	1	1	16	17	31	15	100
All day	16	3	9	8	16	17	18	13	100

6.2.4 Different trip purposes will have different levels of internalisation. For instance, holiday trips will typically be eternal, while primary education will typically be internal. The level of internalisation will also vary by mode of transport used – walking trips are likely to be shorter than car trips for example. Understanding trip purpose and mode is key to understanding internalisation.

6.2.5 The note included as Appendix A sets out a detailed discussion of internalisation. With a balanced community and relatively minimal modal shift, based on the evidence examined, it is anticipated that in the AM peak approximately 70% of all trips across all modes would be internalised. This high level of internalisation is largely driven by local provision of education facilities. In the PM peak, this internalisation would be 49% trips and over the course of a full day, 54% of trips would be internalised. For car trips, the internalisation figures would be 57% (AM peak), 31% (PM peak) and 37% (all day). The proportion of car trips that are internalised is lower as longer external trips are less likely to be undertaken by walking and cycling.

6.2.6 These internalisation figures result simply from developing a well-balanced community, prior to the introduction of transport-specific interventions. Transport interventions tend to result in a switch of modes rather than a change in trip destination (e.g. a new cycle route may lead to people cycling instead of driving, but they will still want to travel to the same place). Shaping the movement patterns and mode choices associated with Marlcombe is therefore a matter of both balanced community development and targeted transport interventions.

6.2.7 Any internalised trips are highly beneficial in terms of limiting impacts on the surrounding highway network. Creation of a vibrant, well-planned community that expands facilities and employment opportunities as it grows is therefore of critical importance.

6.3 Policy Context and Strategic Alignment

6.3.1 Mixed-use development is strongly supported by national and regional planning policy. The National Planning Policy Framework (NPPF) encourages planning authorities to promote sustainable transport and reduce the need to travel, especially by car. Paragraph 111 of the NPPF states that planning policies should "*support an appropriate mix of uses across an area and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities*".

6.3.2 At the regional level, the Devon Local Transport Plan and East Devon District Council's Local Plan both advocate for compact, well-connected communities that support walking, cycling and public transport.

6.4 Principles of Mixed Land Use Planning

6.4.1 Successful mixed land use planning requires thoughtful integration of:

- Residential areas with varying densities and housing types
- Employment spaces, including offices, workshops and flexible co-working hubs
- Retail and commercial services, such as shops and cafés
- Education and childcare facilities, including nurseries, primary and secondary schools
- Health and community services, such as GP surgeries, libraries and community centres
- Leisure and cultural amenities, including parks, sports facilities and event spaces

6.4.2 The goal is to create complete neighbourhoods where residents can live, work, learn, shop and socialise within a short distance, typically a 20-minute walk, wheel, or cycle.

6.5 Benefits of Mixed Land Uses

Trip Internalisation and Reduced Car Dependency:

6.5.1 The most direct transport benefit of mixed land uses is the internalisation of trips within the new settlement. When daily destinations are located within Marlcombe, residents are less likely to travel to Exeter or other surrounding settlements for work, education, or shopping. This reduces potential traffic growth on routes such as the A30, A3052 and M5, alleviating congestion and lowering emissions.

Support for Active and Public Transport Modes:

6.5.2 Mixed-use environments are inherently more suitable for walking, wheeling and cycling. Short distances between homes and destinations make active travel the most convenient and logical option. Additionally, concentrated demand along mixed-use corridors supports frequent and reliable public transport services, improving accessibility for all residents, including those without access to a car.

Economic Vitality and Local Employment:

6.5.3 By integrating employment spaces within Marlcombe, mixed-use planning supports local job creation and economic resilience. Residents can work closer to home, reducing commuting distances and travel times. Local businesses benefit from a steady customer base and the community becomes more economically self-sufficient and attractive to investors.

Social Cohesion and Community Wellbeing:

6.5.4 Mixed-use neighbourhoods encourage social interaction and community engagement. Streets and public spaces are more active throughout the day, enhancing safety and a sense of community. Access to local services and amenities improves people's quality of life.

Efficient Land Use and Infrastructure Provision:

6.5.5 Compact, mixed-use development makes more efficient use of land and infrastructure. It reduces the need for extensive road networks and large parking areas, freeing up space for green infrastructure, public space and space for nature.

6.6 Design and Planning Considerations

Spatial Structure and Neighbourhood Design:

6.6.1 Marlcombe will be structured around a series of neighbourhood centres, each serving approximately 2,000–3,000 homes, with one of the centres being larger and offering a wider range of amenities. These centres will include a mix of uses and be connected by high-quality walking and cycling routes.

6.6.2 The undulating nature of the site lends itself to landmark buildings and features in key locations, which will be visible from much of the town. This will aid wayfinding and subliminally encourage walking and cycling by making the layout of the new town legible from ground level.

Density and Diversity:

6.6.3 The town will be arranged around three distinct neighbourhoods each with their own character. Streets and spaces will be designed to encourage social interaction and will be well-connected with an integrated active travel network with comprehensive links to nearby employment, surrounding countryside, Cranbrook and the city of Exeter. The Town Centre will follow the local tradition of compact town centres consisting of high density linked terraces with a traditional market square.

6.6.4 Higher residential densities near centres and transport nodes support mixed-use viability and reduce travel distances. A diverse mix of housing types ensures inclusivity and supports a range of lifestyles and travel behaviours.

6.6.5 In Marlcombe specifically, the town will have an average density of at least 45 dwellings per hectare, with distinct changes in density and character ranging from 20 dwellings per hectare to 75+ dwellings per hectare. Densities will be at least 55- 60 dwellings per hectare in and around the town and neighbourhood centres, transport hubs and key destinations subject to site specific sensitivities such as landscape, character and heritage.

Street Design and Public Realm:

6.6.6 Streets will be designed as multi-functional spaces that prioritise pedestrians and cyclists. Active frontages, street-level retail and public seating areas encourage walking and social interaction. Traffic calming measures and low-speed environments enhance safety and accessibility.

Integration with Transport Infrastructure:

6.6.7 Mixed-use areas should be co-located with bus interchanges. This maximises accessibility and supports modal shift. Cycle parking, EV charging and Mobility Hubs should be integrated into mixed-use developments to support sustainable travel choices.

6.7 Phasing and Delivery

6.7.1 The masterplan allows for a mix of uses built around three local centres, avoiding rigid separation of functions. Mixed-use corridors and areas will be identified early in the planning process and protected through appropriate design codes and development briefs.

6.7.2 The town must be built-out and delivered in a way that balances occupation of new homes with creation of an appropriate amount of commercial, leisure and educational facilities. If only houses are delivered at first, then Marlcombe will initially be a ‘dormitory estate’ with residents travelling elsewhere for their daily needs. Education is a key driver of peak hour travel, so, as a minimum, primary school places must be available within the new town from day one. Secondary school pupils should also be provided for in order to minimise school travel costs.

6.7.3 It is likely that the commercial, leisure and community uses will need to be managed flexibly at first, along with some incentives for businesses to relocate. This could for example be incentivised rents to set up a ‘pop up’ shop within a community facility or visiting medical practitioners holding on-site clinics. There may also need to share some facilities with nearby Cranbrook in these early stages. Over time, as more residents populate the town, business and facilities are more likely to become viable in their own right and can relocate to bespoke new buildings.

6.8 Risks and Mitigation

6.8.1 If mixed-use elements are not delivered early or at sufficient scale, residents may rely on external destinations, undermining trip internalisation and establishing poor travel habits. Mitigation includes robust planning conditions, infrastructure funding agreements and early activation strategies.

6.8.2 Retail and commercial uses may face viability challenges in early phases. Mitigation includes flexible space design, temporary uses and support for local enterprises. Public sector investment or forward funding is likely to be needed to catalyse development.

6.8.3 Poor integration of land uses can lead to isolated pockets of activity and increased travel demand. Mitigation includes cohesive masterplanning, design codes and active travel connectivity. The plan and delivery should retain some element of flexibility to respond to future changes or challenges.

7 Off-Site Mitigation and Phased Delivery

7.1 Phased Delivery

7.1.1 The transport impacts of Marlcombe will emerge over a relatively long period as construction and occupation of the new homes and businesses takes place. However, it also offers the opportunity to improve access to Exeter from the east. It does this by providing two park and ride sites on the A30 and A3052, intercepting existing trips to the city. In addition, it strengthens the case for bus priority measures, active travel infrastructure and improved rail services, alongside capacity increases at key junctions. The delivery of transport infrastructure and services will need to keep pace with housing delivery.

7.1.2 As described in the previous section, it is also vital that the community remains as balanced as possible during the construction period, with early provision of uses that attract significant numbers of trips, in particular education / schools, retail leisure and employment.

7.1.3 The graph overleaf shows the internalised trip rates (i.e. number of arrival and departure trips per dwelling) for car or van (driver) travel split by purpose of trip and time of day (derived from the data determined in Appendix A). The higher the internal trip rate, the greater the potential benefits of providing for these trips within the development. If not provided within Marlcombe, these trips would instead become external trips.

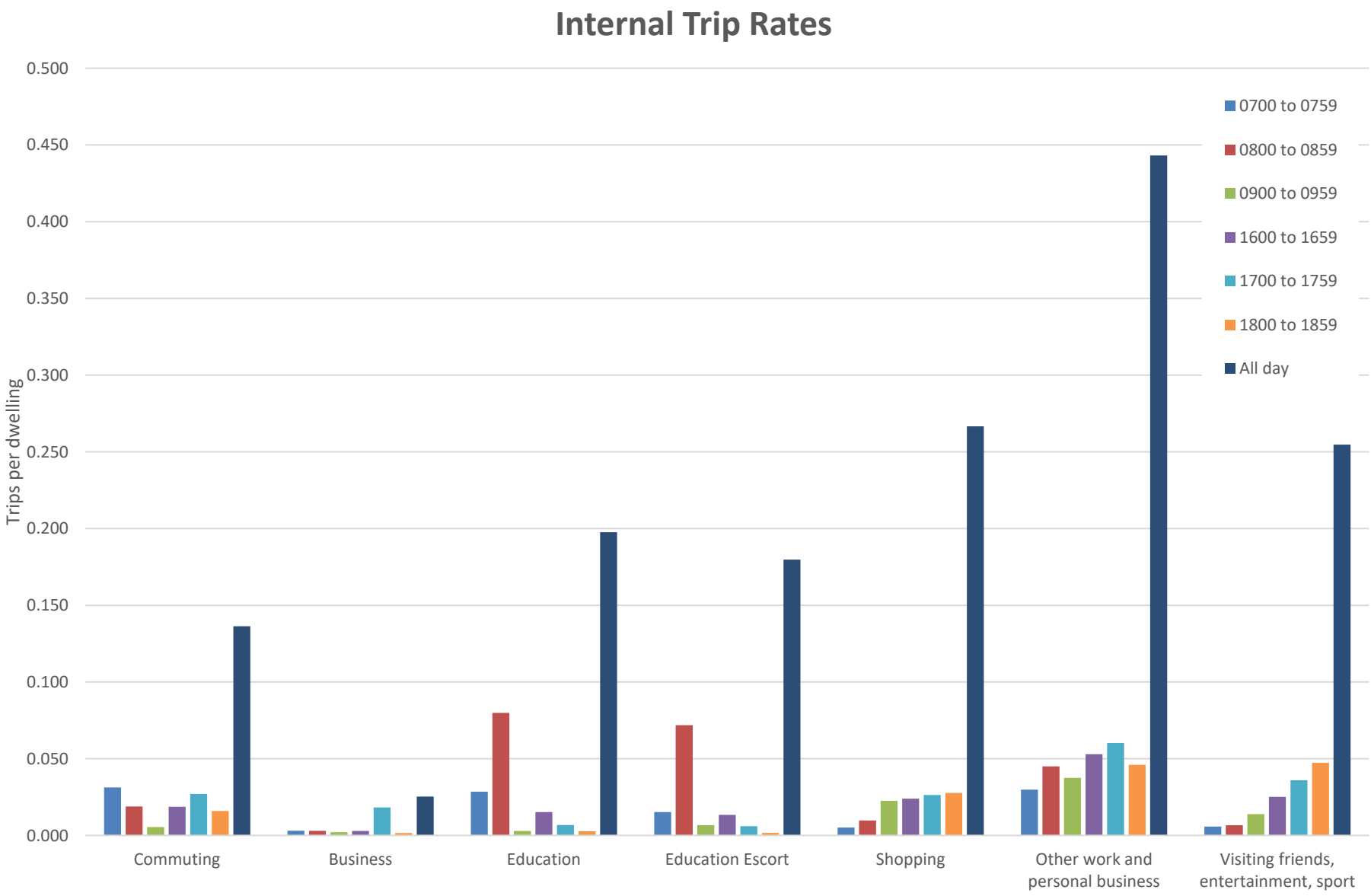
7.1.4 For example, in the morning peak (shown in red), the combined ‘Education’ and ‘Education Escort’ trips are high, demonstrating that there are significant benefits in providing on-site schools at an early stage.

7.1.5 The graph shows that, although less important in the morning peak, there is a strong benefit in providing for sport, leisure and community facilities at an early stage, as these attract significant trips over the course of a day and are also important drivers for internalisation. Again, there are transport benefits in providing for these at an early stage.

7.1.6 Whilst on-site jobs are important to limit commuting trips, it is reasonably likely that people will continue to work at other locations, even if jobs are available close by. This means that, in transport terms, on-site jobs are less important than might initially be anticipated. They do however remain important for social reasons and may become more important in transport terms over time, as people move to jobs that are more convenient to travel to.

7.1.7 In transport terms, early provision of schools, retail, community, sports and leisure are key drivers of internalisation. On-site employments and job opportunities are also significant, but less important in the initial phases. However, there are good social and community based reasons for ensuring that jobs are available, alongside other facilities such as healthcare uses. The development phases described below are not based solely on transport considerations.

7.1.8 Devon County Council (DCC) has developed the following phasing plan for delivery of the mitigation measures and access improvements into Exeter. These phases are indicative only at this stage and may need to be flexible but will remain ambitious. This sits alongside a build out of homes, education, community and commercial uses that aims to maximise internalisation. It should however be emphasised that the reasons for the build out phasing are not solely transport-focussed and other factors, such as social cohesion, have also been considered.


Internal Trip Rates
Trips per dwelling
0.500
0.450
0.400
0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
0700 to 0759
0800 to 0859
0900 to 0959
1600 to 1659
1700 to 1759
1800 to 1859
All day
Commuting
Business
Education
Education Escort
Shopping
Other work and personal business
Visiting friends, entertainment, sport

7.2 Phase 0

7.2.1 Phase 0 refers to works that are currently ongoing or are delivered in parallel with the ongoing build out and occupation of Marlcombe. As a result, there are no specific triggers for this phase. It comprises electrification of the bus fleet within Devon and the DevonBus Enhanced Partnership between DCC and local bus operators. This provides additional control and influence over timetable, route and fares on bus services within the county.

7.2.2 In addition, Phase 0 also refers to the on-going delivery of mobility hubs and active travel infrastructure within Marlcombe. This will be managed by the Transport Working Group, with additional control provided by the Design Guide and planning process.

7.3 Phase 1 – Pre-Commencement and Initial Occupation

Triggers

Dwellings	Non-Residential
Prior to 1st dwelling occupation	Education Campus

7.3.1 Education-related trips make up the majority of trips in the 0800-0900 morning peak (53% of all movements based on 2023 National Travel Survey data). Provision of education facilities on-site is therefore vital for trip internalisation. If a school is not constructed, these trips would all be external to Marlcombe.

7.3.2 In practical terms, it should also be considered that, as switching schools is relatively rare, if children are initially registered at an external school, then these external trips would essentially be 'fixed' for the duration of their time at school. For example, if no school were available, children may be enrolled at Clyst St Mary Primary School and would continue to travel there (external to the development) whilst attending Years 1-6. Conversely, if the school is available from day one, then these trips would all be internalised.

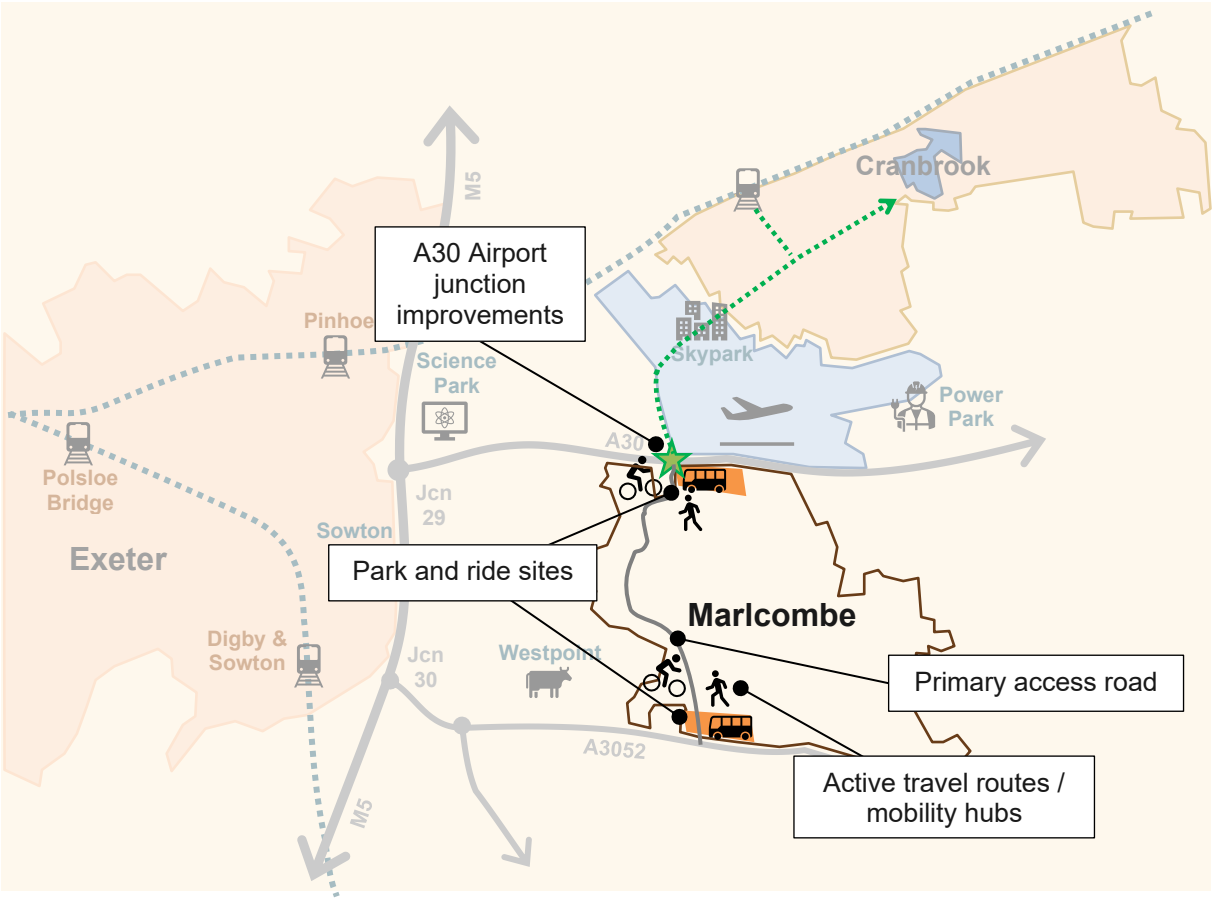
7.3.3 Phase 1 also has a strong emphasis on infrastructure provision. The primary access road though the town will be constructed (including segregated cycle lanes), along with improvements to the A30 Airport junction and new junction with the A3052 to the south. The A30 junction improvements will include active travel links towards Cranbrook. The primary access road will not only provide for future residents but also create a safe route for construction traffic. The primary access road itself will require ground levelling works, as well as bridges over the watercourses running east to west through Marlcombe. It is likely that some of the landscaping along the route will also be implemented at this early stage, allowing plants and trees to become established before the majority of residents move in.

7.3.4 Once the primary access road is completed, the two park and rides sites on the A30 and A3052 will be delivered, along with regular bus services into Exeter. These park and rides will intercept existing trips into the city, helping to relieve congestion and creating some 'headroom' for vehicles from Marlcombe as occupations start to take place. Depending on the routes developed, the buses could operate as back and forth shuttle buses into the city or could operate circular routes via the new road.

7.3.5 As homes and businesses start to be delivered and occupied within Marlcombe, they will initially be clustered around the southern and northern ends of the site, placing the park and ride sites within easy reach. High quality pedestrian and cycle infrastructure will be constructed alongside any new properties, along with mobility hubs, allowing new residents easy access to regular bus services into Exeter. At this early stage, there may need to be financial incentives (e.g. discounted tickets) in order to encourage bus use by residents, as bus priority measures will be delivered in later phases.

7.3.6 The Phase 1 measures are summarised in the following table and diagram:

Item	Rationale
Marlcombe Primary Access Road (including A3052 junction)	Facilitates construction and more flexible approach to bus routing
A30 Airport junction improvements	Future proof for growth of Marlcombe, improve active travel links to Cranbrook allowing shared use of facilities and services. Connect primary access road to A30.
Park and Ride sites on A30 and A3052	Intercept existing trips to Exeter , unlock capacity along A30 and A3052 and across M5. Allow frequent bus services to be established at an early stage so that they are available to Marlcombe residents as they move in.
Active travel routes and mobility hubs within site	Facilitate access to park and ride services for residents.



7.4 Phase 2

Triggers

Dwellings	Non-Residential
Pre 500 dwellings	Community centre Convenience store Market square Meanwhile uses for e.g. family hub, start-up enterprise 10,000sqm employment floorspace GI, sport and play

7.4.1 With 500 dwellings occupied, Marlcombe will have a population similar to that of Exton or Beer and the community will start to become well-established. Local businesses and facilities may need an element of funding support to be full viable at this stage, helping them to become fully established as the town grows.

7.4.2 The National Travel Survey shows that, although less significant in the morning peak, the following trip purposes are important over a full day:

- Visiting friends, entertainment and sport – 18% of all trips
- Other work, other escort and personal business – 17% of all trips
- Shopping – 16% of all trips
- Commuting – 16% of all trips

7.4.3 Starting to provide for these purposes on the site will therefore build on the internalisation encouraged by Phase 1. However, this needs to be balanced against other considerations such as viability. For example, in terms of internalising trips, it would be highly desirable to have a vibrant town centre offering a range of retail and leisure opportunities. However, this would not be viable with only 500 dwellings occupied, as the customer base would be insufficient for these businesses to survive. A more realistic view therefore needs to be taken of what is practical, whilst ensuring that what is provided is genuinely useful to residents. There may need to be flexible approach to how some facilities are provided. For example, the convenience store may initially be co-located within the community centre.

7.4.4 Provision of employment opportunities within the site is less important in terms of trip making, as people may continue to at their current place of work. However, over time, they may choose to work closer to come. Employees within Marlcombe will also help to add to the viability of local businesses, such as convenience stores.

7.4.5 In terms of infrastructure, Phase 2 largely concentrates on off-site measures but ensures that active travel links and mobility hubs within Marlcombe continue to expand as more of the town is constructed and occupied. These will allow people to travel easily to facilities within the town as they come forward, as well as connecting to Cranbrook and bus services to Exeter.

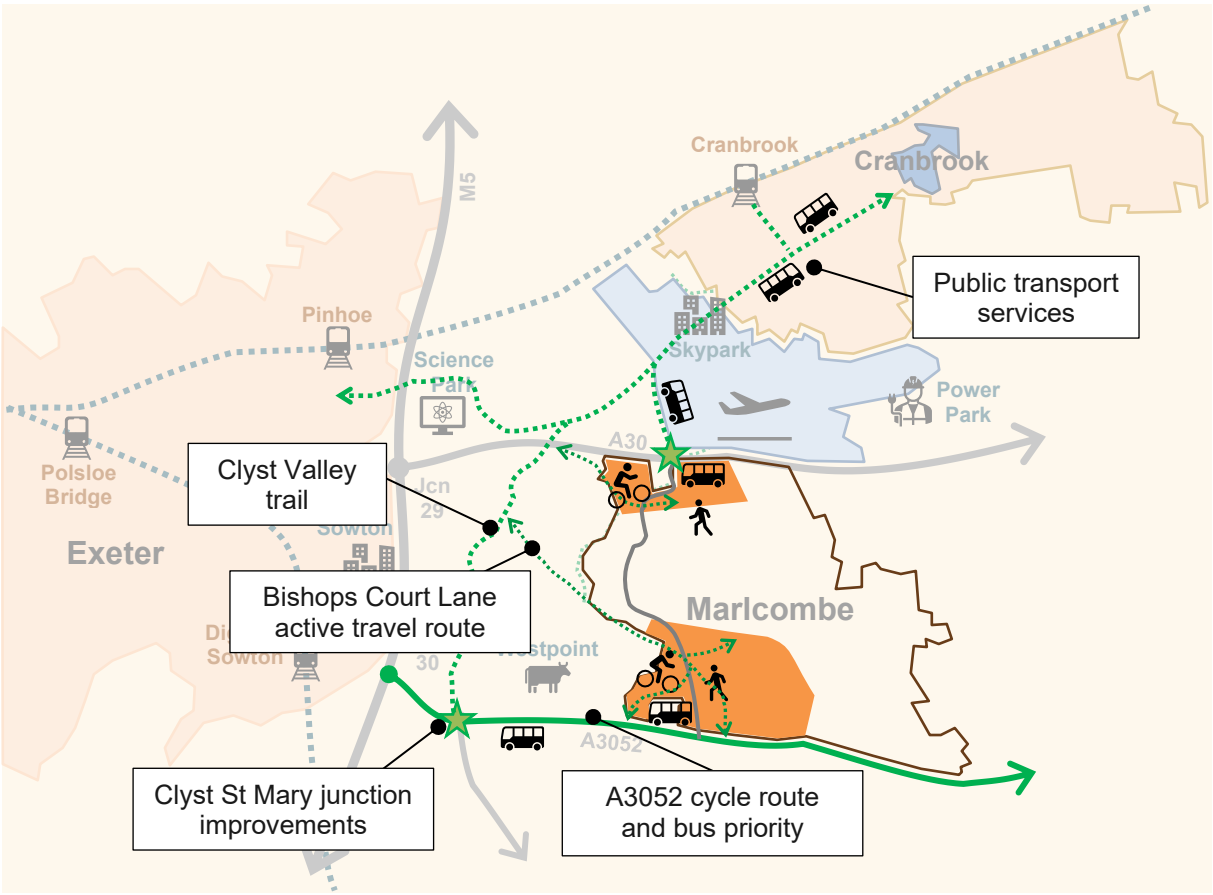
7.4.6 During these relatively early stages of occupation high quality, reliable bus services to Exeter will be of fundamental importance. It will be vital that buses offer people journey time savings, making them the logical choice for travel into Exeter. This will be achieved through bus priority measures along the A3052. These priority measures will be accompanied by a segregated cycle route along the A30522, linking to Sowton and beyond into Exeter. Sowton would be a cycle ride of approximately 20 minutes via this route. The frequency of the park and ride services would be increased to every 15 minutes (if not already achieved). New residents will continue to receive discounted bus travel until bus priority measures are completed.

7.4.7 In order to further encourage active travel, the Clyst Valley Trail will be completed, and Bishops Court Lane will be converted to an active travel route, with motorised vehicles removed (except for access).

7.4.8 The Clyst St Mary junction is a key local capacity constraint and will be addressed at this early stage to mitigate residual off-site impacts.

7.4.9 The Phase 2 measures are summarised in the following table and diagram:

Item	Rationale
A3052 Clyst St Mary junction improvements	Future proof for growth of Marlcombe and general growth in traffic levels on the network
A376/A3052 Bus Priority to M5 Jct 30 / Sowton Ind Estate	Ensure that park and ride and general bus services experience faster and more reliable journey times into Exeter (including Sowton), making them an attractive modal choice and reducing car use.
A3052 protected cycle path	Provide a safe cycle route into Exeter and Sowton, encouraging cycle use. Sowton would be a cycle ride of approximately 20 minutes via this route.
Clyst Valley Trail active travel route	Facilitate access to park and ride services for residents. This will also act as a leisure facility very close to the site, limiting the length and impact of eternal trips for this purpose.
Bishops Court Lane active travel route	Attractive north-south active travel route
Expansion of active travel routes and mobility hubs within site	Ensure that residents can continue to access high frequency bus routes as development delivery continues.


Cranbrook
Cranbrook
Public transport services
Pinhoe
Science
Skypark
Power Park
M5
A30
Polsloe Bridge
Clyst Valley trail
Exeter
Bishops Court Lane active travel route
Marlcombe
A3052
Clyst St Mary junction improvements
A3052 cycle route and bus priority

7.5 Phase 3

Triggers

Dwellings	Non-Residential
Pre 1,000 dwellings	In addition: Health provision 10,000sqm employment 500sqm E class town centre space GI, sport and play

7.5.1 With 1,000 dwellings occupied, Marlcombe would have a population roughly equivalent to small market town or large village such as Buckfastleigh or Combe Martin. Local businesses and shops become viable in their own right and would start to move into dedicated facilities.

7.5.2 In terms of internalisation, Phase 3 expands on how Marlcombe caters for the trip purposes set out at paragraph 7.4.1. This means increasing the retail and town centre offer and building on leisure and sport facilities. These businesses will be more viable as dwelling occupation expands and employment provision increases.

7.5.3 Health provision will also be offered. Although less significant in terms of trip-making, this is important to reduce pressures on existing services.

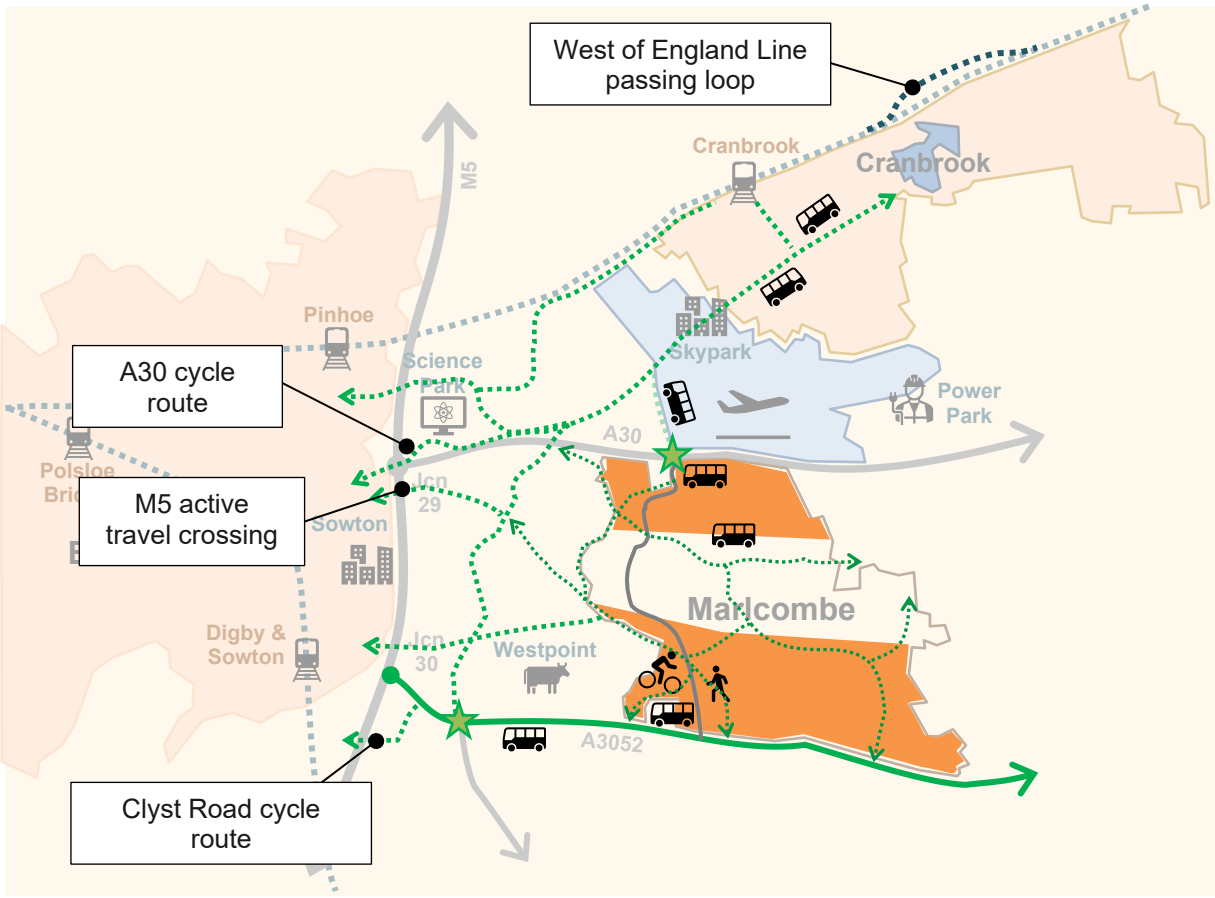
7.5.4 The expansion of facilities within Marlcombe sits alongside the delivery of off-site infrastructure. Key among these will be a passing loop on the West of England line and a new active travel crossing of the M5 in the Sowton area.

7.5.5 The rail passing loop will allow service frequencies to be increased to two trains per hour between Exeter and Axminster. This increase in service frequency will not only reduce overall journey times, but also double the capacity of the line, making journeys more comfortable. This will need to be supported by enhanced active travel links to Cranbrook station, alongside appropriately timed bus services, possibly with combined ticketing arrangements.

7.5.6 A new crossing of the M5 will provide a direct link to Sowton and beyond into Exeter. This is important for people living in the centre of Marlcombe, for whom the A3052 route would be less convenient. Again, this will offer journey times of around 20 minutes. Extension of the Clyst Valley Trail along Clyst Road will create an additional route into southern Exeter and towards Topsham.

7.5.7 The Phase 3 measures are summarised in the following table and diagram:

Item	Rationale
Devon Metro (Rail): West of England Line Passing Loop	Allows increase rail frequency (two trains per hour between Exeter and Axminster), helping to address longer distance travel.
New pedestrian/cycle crossing of M5	Providing a more direct route to Sowton and Exeter from the heart of Marlcombe, maintaining similar journey times for those living further from the southern end of the town.
A30 Honiton Road & Sowton Lane protected cycle path	Provide a safe cycle route into Exeter and Sowton for people living towards the northern end of Marlcombe. Will also provide a route for people living in Cranbrook.
E13 Clyst Road Cycle Route	Alternative connection into Exeter and towards Topsham



7.6 Phase 4

Triggers

Dwellings	Non-Residential
Pre 3,500 dwellings	In addition: Second Primary School 40,000 sqm employment Supermarket 1000 sqm E class town centre space GI, sport and play Dry-side leisure centre

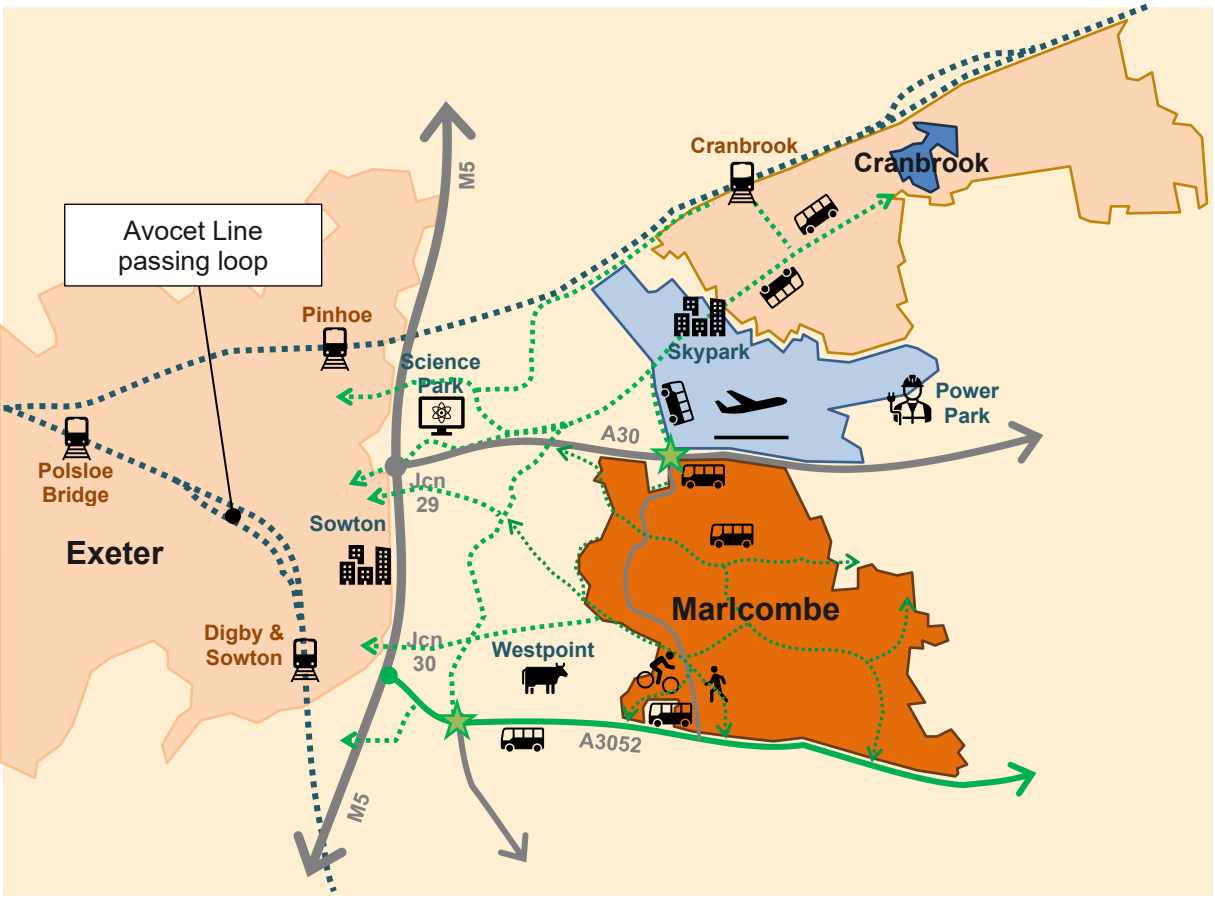
7.6.1 At this stage, Marlcombe starts to become a significant town in its own right, with a population of around 9,000 people – broadly equivalent to Ilfracombe or Totnes. Local businesses, employers and retail facilities will naturally start to expand, and this will be encouraged through the planning process and possibly through mechanisms such as reduced business rates, etc. The town will continue to expand beyond this, growing to become the eight largest settlement in Devon (excluding Plymouth). The population when complete (8,000 dwellings) would be between that of Brixham (16,700) and Tiverton (21,300).

7.6.2 Education facilities will be further expanded to continue to accommodate these trips within the site. A full supermarket alongside a wider town-centre offer would become viable and self-sustaining, again acting to internalise trip making.

7.6.3 In terms of transport mitigation, the final stage of mitigation will be the addition of a passing loop on the Avocet Line, which connects Exeter to Exmouth via Digby & Sowton. This allows frequencies to be doubled to four trains per hour. As with the West of England line improvements, this reduces overall journey times for people using the Avocet Line and doubles its capacity to carry passengers.

7.6.4 The Phase 4 measures are summarised in the following table and diagram:

Item	Rationale
Devon Metro (Rail): Avocet Line Passing Loop	Allows increase rail frequency (two trains per hour between Exeter and Axminster), helping to address longer distance travel.



7.7 Strategic Highway Network

7.7.1 In addition to the above off-site mitigations, it is also likely that improvement measures will be required at Junctions 29 and 30 of the M5. Although Marlcombe will add to vehicle numbers at these junctions, the impact is relatively minor and the improvements will be needed in any event to accommodate general traffic growth on the strategic highway network managed by National Highways (in this area, the M5 and A30). The design and timing of these improvements is currently under consideration by National Highways and is not considered in any detail within this document.

8 Walking, Wheeling and Cycling

8.1 Introduction

8.1.1 Creating an inclusive community where walking, wheeling[2] and cycling are the natural, preferred modes of travel is central to achieving a sustainable, low-carbon transport system. In Marlcombe, the strategy for maximising active travel is centred around accessibility, safety, comfort and integration with land use and public transport.

8.1.2 The town is relatively compact, approximately 2.4km from its northern to southern extents. This is a walk of around half an hour, or a cycle ride of around 10 minutes. The local centres are far closer than this, around a 20 minute walk or 6-7 minute bike ride apart. The beneficial impacts of these short distances will be further promoted by the balanced mix of uses promoted in the previous section.

8.1.3 Walking and cycling will be the easiest and most attractive ways to get around the town. All streets will be designed for people first. To ensure that this is the case, Marlcombe will feature:

- Segregated cycleways and footpaths
- Safe crossings and traffic-calmed streets with consistent 20mph speed limits
- Secure cycle parking at key destinations
- Modal filters to discourage through traffic (balanced against placemaking considerations)
- Attractive public spaces
- Landmark buildings and features in key locations to aid wayfinding
- Inclusive design that considers the needs of people with disabilities, including cognitive impairments (e.g. dementia).

8.1.4 Integration of pedestrian and cycle infrastructure will be discussed in the following section.

8.2 Infrastructure Quality and Safety

8.2.1 The street network will be permeable and legible, allowing direct routes for pedestrians and cyclists. Filtered permeability will limit motor traffic on certain links, prioritising active travel through modal filters and low-traffic neighbourhoods.

8.2.2 Design principles will follow guidance from Manual for Streets and LTN 1/20, ensuring that attractive infrastructure supports safe convenient movement for all users. Lighting, passive surveillance and clear sightlines will enhance safety and perceptions of security, particularly for evening and winter travel.

8.2.3 Dedicated cycle infrastructure will include physically segregated cycleways, protected junctions and continuous routes. These facilities will cater to cyclists of all ages and abilities, reducing conflict with motor vehicles.

8.2.4 Infrastructure and parking design should include allowance for larger or adapted cycles, as set out in LTN1/20.

[2] Some people who use wheeled mobility aids, for example a wheelchair or mobility scooter user, may not identify with the term walking and may prefer to use the term wheeling. Wheeling is defined to only cover modes that use pavement space at a similar speed to walking.

8.2.5 On quieter and lightly trafficked streets and where desirable from an urban design perspective it may be possible for cycles to share carriageway space with motorised vehicles as outlined in LT1/20. This will however be minimised.

8.2.6 Similarly, the use of unsegregated, shared pedestrian / cycle facilities will be minimised as they can discourage pedestrian use (particularly for those with mobility of visual impairments) whilst also making cycling slower and less desirable as a mode of transport.

8.2.7 Pedestrian priority areas will be established in local centres, near schools and in public spaces. Features such as wide footways, raised crossings and pedestrian-priority streets will create a welcoming environment.

8.2.8 Pedestrians, cyclists, pushchair and wheelchair users should also be considered though elements such as the landscaping strategy, providing attractive routes through public spaces and including elements such as street trees to provide shade and shelter. Building design codes should allow for publicly available sheltered areas during rainy conditions.

8.2.9 Regular signage will be provided highlighting pedestrian and cycle routes between key destinations and landmarks. This will include journey times in minutes and should be highly legible, with a clear design language (e.g. colour codes routes, etc.).

8.2.10 Regular resting places will allow people of all ages to walk and wheel, encouraging healthy lifestyles and promoting community cohesion. Designs should be clear and legible and consider the needs of people with physical, visual or cognitive impairments. Engagement with local support groups during design sessions and development of design codes will help to ensure that this is considered at an early stage and throughout the design process.

8.2.11 There will be a mix of leisure and utility routes. Leisure route will concentrate on recreation use and may be less direct, with more of a focus on the surroundings (e.g. through parks, etc.). Utility routes will be as direct as possible for convenience, with strong intervisibility and regular lighting to foster a feeling of safety. This would further be encouraged by ensuring that routes are overlooked during both the day and night.

8.3 Monitoring and Adaptation

8.3.1 The walking and cycling network will be set through the masterplan and the necessary infrastructure provided at an early stage, prior to occupation and ideally in advance of vehicular provision. This will enable positive travel habits to be established at an early stage.

8.3.2 However, the network does need to be flexible and respond to changing demands or alterations to the development mix. Any changes should be data-driven. Walking and cycling flows will be monitored using surveys, monitoring equipment / sensors (suitably anonymised) or via the TWG digital platform. Data will inform ongoing improvements and identify gaps in provision.

8.3.3 Responsive design will allow infrastructure to adapt to changing needs. Evaluation frameworks and user feedback will assess the effectiveness of interventions, supporting evidence-based decision-making and continuous improvement.

8.4 Links Beyond Marlcombe

8.4.1 Exeter lies within around 9km to the east of Marlcombe. Although too far to be regularly walked by most people, this is a cycle ride just 35-45 minutes, so would be wholly practical as a commuting time (and comparable to existing driving times during peak hours). Much of this is on existing cycle facilities, although these are of a variable standard.

8.4.2 The M5 represents a potential barrier to cycle trips to Exeter. There is an existing dedicated cycle bridge at Blackhorse Lane, close to Exeter Science Park (M5 Junction 29), with Old Rydon Lane offering relatively quiet route to the south. An additional crossing of the M5 into the Sowton area is being considered, but is complicated by the width of the motorway in this section and the levels to the east and west,

8.4.3 High-quality and consistent routes are vital to encourage people visiting Exeter to do so by bike, including secure cycle parking provision. This is currently being discussed with DCC and will be incorporated into the next update of the Devon LCWIP. This will require funding input from future developers within the town and potentially forward funding to ensure that the links are available at an early stage.

8.5 Cycle Hire

8.5.1 The aspiration is that a short-term cycle hire system will be in operation across the town (similar to the TfL / Santander scheme in London). This will include electric cycles. Access to the scheme would be likely to be through the TWG digital platform, although a private operator may also be considered.

8.5.2 There are many such schemes in operation across the UK, and they are highly successful in achieving and supporting modal shift. There can however be issued with vandalism, antisocial use of the equipment and poor cycle parking (blocking pedestrian infrastructure, etc.). These can largely be addressed through careful management and requiring users to leave bikes in designated parking areas, which also simplifies collection, maintenance and charging.

8.5.3 Electrically assisted bicycles offer significant advantages to users, overcoming the challenges of steeper gradients and making it practical to cycle in everyday clothes.

8.5.4 Ideally, the scheme would be integrated with a similar scheme within Exeter and local rail stations. This will be explored by TWG.

8.6 Conclusion

8.6.1 Maximising walking and wheeling in Marlcombe is essential to creating a sustainable, inclusive and healthy community. Through thoughtful design, quality infrastructure, integration with public transport and cultural change, active travel can become the norm.

8.6.2 This strategy provides a roadmap for embedding walking and cycling in the physical and societal fabric of Marlcombe, supporting environmental goals and enhancing quality of life for all residents.

9 Public Transport

9.1 Introduction

9.1.1 A high-quality bus network will connect Marlcombe to Exeter and nearby employment centres. This will be delivered through the DevonBus enhanced bus partnership arrangement that DCC has in place (or its successor if required). Features will include:

- Bus priority measures (both within Marlcombe and on routes into Exeter)
- Real-time information at stops
- Integration with mobility hubs
- Convenient, integrated and competitively priced ticketing

9.1.2 A vital component of the eventual public transport strategy will be appropriate engagement with the public transport operators, in particular bus operators though DevonBus. They will be an important stakeholder as the public transport strategy is developed.

9.1.3 The enhanced bus partnership arrangements allow DCC far greater ability to place requirements on operators, including specifying vehicles and livery; information and publicity; timetable change dates; ticketing; and arrangements about the operation of the scheme.

9.1.4 DCC may specify what sort of tickets are available, including multi-operator versions and, to some extent, their prices which are then exempt from normal competition legislation.

9.2 Park and Ride Strategy (A30 and A3052)

9.2.1 The strategic placement of park and ride (P&R) sites at the northern and southern access points of Marlcombe, on the A30 and A3052 respectively, offers a critical opportunity to intercept car-based trips into Exeter and reduce pressure on the surrounding road network, particularly at M5 Junctions 29 and 30. These sites will serve both external commuters and internal town residents, forming a key component of the community's sustainable transport framework.

Purpose and Strategic Function

9.2.2 The primary function of the park and ride sites is to intercept existing car trips destined for Exeter, particularly those originating from East Devon and the surrounding rural hinterland. By encouraging drivers to transfer to bus services at the edge of the new community, the strategy aims to:

- Reduce congestion at M5 Junctions 29 and 30
- Improve air quality and reduce carbon emissions
- Support modal shift away from private vehicles
- Enhance the efficiency of Exeter's urban transport network

9.2.3 These sites will also serve as mobility access points for residents and workers within Marlcombe, who can reach them via the internal circular bus service or active travel modes supported by mobility hub infrastructure.

9.2.4 The existing latent demand from passing journeys is expected to make these services viable at an early stage, allowing them to be delivered and operate commercially at an early stage of Marlcombe build out and occupation.

9.2.5 The ability to commission and shape new bus services is significantly strengthened by DCC's DevonBus Enhanced Partnership with local bus operators (formed in 2022) under its role as Local Transport Authority (LTA)

9.2.6 Enhanced Bus Partnerships (EPs) are a statutory mechanism introduced under the Bus Services Act 2017, enabling LTAs in England to collaborate more closely with bus operators to improve services. Unlike franchising, EPs are built on mutual agreement and shared objectives, allowing LTAs to set service standards, infrastructure commitments, and operational requirements while operators retain commercial freedom. EPs are designed to be flexible and responsive to local needs, and they have become a central feature of the UK Government's National Bus Strategy, *Bus Back Better*, which encourages LTAs to use EPs to deliver Bus Service Improvement Plans (BSIPs).

9.2.7 EPs give LTAs a range of powers to shape local bus services. These include the ability to specify minimum service levels, introduce multi-operator ticketing, set fare structures (such as price caps or flat fares), and require common branding or passenger charters. LTAs can also mandate infrastructure improvements like bus lanes or priority measures. Importantly, EPs provide a regulatory framework that allows LTAs to impose conditions on operators, ensuring alignment with broader transport and environmental goals. However, LTAs must conduct a bespoke competition test to ensure that EP measures do not significantly harm market competition, and the Competition and Markets Authority (CMA) acts as a statutory consultee and can investigate EPs if concerns arise.

9.2.8 The EP model is evolving, and its success depends on effective governance, stakeholder engagement, and long-term funding. Reports from regional bodies like Transport for the South East highlight how EPs have empowered LTAs and operators to collaborate more strategically, improving service quality and public perception of buses. Regular board meetings between LTAs and operators have enhanced transparency and responsiveness. While EPs are not a one-size-fits-all solution, they offer a viable alternative to franchising, particularly in areas where full control of services may not be feasible. As national policy continues to develop, EPs are expected to remain a key tool for delivering better, more integrated bus services across England.

Service Design and Frequency

9.2.9 A 'turn up and go' 15-minute service frequency is proposed for the park and ride buses, ensuring that users experience minimal wait times and high reliability. Services will operate throughout the day, potentially with lower frequencies outside of peak commuting periods.

9.2.10 To avoid duplication and competition with existing public bus services, the park and ride routes will be integrated with existing commercial services. This may involve shared branding, coordinated timetables and joint ticketing arrangements. Such integration will ensure that resources are used efficiently and that passengers benefit from a coherent and user-friendly network.

Infrastructure and User Amenities

9.2.11 Each park and ride site will be designed to offer:

- Secure and ample parking capacity, including spaces with charging points for electric vehicles
- Sheltered waiting areas, real-time information displays and ticketing kiosks
- Cycle parking and pedestrian access, supporting active travel connections
- Lighting, CCTV and signage, ensuring safety and ease of use

9.2.12 The design will also consider future scalability, allowing for expansion as demand grows. This could potentially be via decked parking to make efficient use of land.

Bus Priority Measures

9.2.13 The success of the park and ride strategy depends on the reliability and competitiveness of the bus journey into Exeter. To support this, bus priority measures, including dedicated lanes, signal priority and congestion bypasses, are currently under review by Devon County Council for inclusion in their next Bus Service Improvement Plan (BSIP).

9.2.14 These measures will be critical in ensuring that park and ride services offer a genuine time and cost advantages over driving into Exeter, particularly during peak hours. The BSIP framework also provides opportunities for funding and partnership working to deliver infrastructure improvements.

9.2.15 DCC is currently developing bus prioritisation plans for the B3052,which will be vital in ensuring fast and reliable bus journey times from the southern park and ride site. Not only will this benefit Marlcombe but also make the park and ride service a more attractive option for existing drivers heading into Exeter.

9.3 Internal Circular Bus Service

9.3.1 A well-designed internal bus network is essential for ensuring that all residents and visitors can move efficiently within Marlcombe. The proposed circular bus service will form the backbone of local mobility, connecting residential neighbourhoods with key destinations such as commercial centres, retail areas, schools, healthcare facilities and recreational spaces.

9.3.2 At an early stage of the development (prior to the delivery of a circular highway route within Marlcombe), a similar impact could be achieved by running the park and ride buses in a fully circular route heading into and out of Exeter via the A30 or A3052, routing back to Marlcombe via the A3052 and A30 respectively before passing through Marlcombe via the primary access road.

Service Coverage and Route Design

9.3.3 The circular service will be designed to provide comprehensive coverage of the local centres and residential areas. The route will be planned to pass through:

- Residential areas, including higher-density housing
- Commercial and employment areas, such as business parks and mixed-use developments
- Retail centres, including supermarkets, high streets and local centres
- Educational institutions
- Healthcare and community services
- Recreational spaces, such as parks, sports facilities and community / cultural venues
- The park and ride locations, facilitating the interchange between routes/modes

9.3.4 Stops will be spaced to balance accessibility and efficiency, with walking distances kept within 640m (8 minute walk) for most residents.

Service Frequency and Reliability

9.3.5 To encourage regular use, the circular service will operate at high frequency, with buses every 10 minutes during peak hours and every 15–20 minutes off-peak. The use of real-time tracking and dynamic scheduling will allow timetable adjustments based on demand, ensuring reliability and reducing wait times.

9.3.6 Priority will be given to low-emission or zero-emission vehicles, such as electric or hydrogen-powered buses, aligning with Marlcombe's sustainability goals. These vehicles will also reduce noise pollution and improve air quality in residential areas. Trials of hydrogen buses are currently ongoing in a number of locations across the UK and there would be benefits in converting the wider Devon bus fleet to hydrogen or electric vehicles.

Accessibility and Inclusivity

9.3.7 All buses will be fully accessible, with low floors, wheelchair spaces and audio-visual announcements. Stops will be designed with shelters, seating, lighting and real-time information displays, ensuring comfort and safety for all users, including older adults, children and those with disabilities.

Technology and User Experience

9.3.8 The TWG digital platform will provide fare and timetable information as a minimum. In future, it is anticipated that passengers will be able to plan journeys and track buses using a dedicated mobile app or integrated Mobility-as-a-Service (MaaS) platform. Contactless payment, multi-modal journey planning and service alerts will enhance convenience and encourage uptake.

9.3.9 Over time, it may be possible to incorporate Demand Responsive Transport (DRT) services, maximising convenience for public transport users. This is more likely to become viable towards the latter stages of development delivery as new technologies emerge. The Transport Vision will need to remain live to these developments, which remain aspirational at this stage.

9.4 Strategic Integration with Rail Infrastructure

9.4.1 It is important that people living and working at Marlcombe can connect effectively with the wider regional and national transport network. Two key nodes in this network are Cranbrook and Digby & Sowton rail stations, which provides access to Exeter, Salisbury, Exmouth and London Waterloo.

Existing Rail Services

9.4.2 Cranbrook station, located approximately 5 km from Marlcombe, is served by Southwestern Railway with typically two trains per hour to Exeter St Davids and onward to London. Digby & Sowton station, slightly closer to Exeter, also benefits from frequent services, with around 17 trains per day connecting the Exeter and Exmouth. Frequency increases are understood to be planned on both lines. These frequencies offer a strong foundation for multimodal integration, with bus services and cycle facilities (including secure parking) providing links to these rail stations.

9.4.3 The service frequency increases will be facilitated by constructing passing loops on the West of England and Avocet lines. This will allow service frequencies to be doubled on both lines. This not only reduced overall journey times but also doubles passenger capacity. The Avocet improvements will be delivered as part of DCC's ongoing Devon Metro project whilst the West of England Line works are likely to be part of national rail resilience works.

Timetable Integration and Transfer Minimisation

9.4.4 To maximise the utility of these rail connections, bus services from Marlcombe must be carefully timed to align with train arrivals and departures. This requires close coordination between bus operators and rail timetabling. Minimising transfer times will be critical to ensuring a seamless passenger experience and encouraging modal shift – in future this may include integrated ticketing arrangements, potentially via the TWG digital platform.

9.4.5 Bus stops serving rail stations should be located as close as possible to station entrances, with sheltered waiting areas, real-time information displays and accessible pathways.

9.4.6 Where feasible, bus priority measures, such as dedicated lanes, signal priority at junctions and congestion bypass routes, should be implemented between Marlcombe and both rail stations. These interventions will help maintain reliable journey times, particularly during peak hours and reinforce the competitiveness of public transport over private car use.

9.5 User Experience and Accessibility

9.5.1 Creating a public transport system that is not only efficient but also inclusive, safe and user-friendly is central to the success of Marlcombe's Transport Vision. By designing services that are aligned to the DfT personas Marlcombe can ensure that services are inclusive and responsive to real-world needs.

9.5.2 Over time, these could be refined through user feedback, usage data and survey information. This will ensure that provision remains relevant, competitive and attractive.

Comfort and Safety

9.5.3 Passenger comfort begins with well-designed infrastructure: sheltered waiting areas with seating and lighting, clean and well-maintained environments with regular removal of graffiti and litter and overlooked and well-lit spaces to enhance personal safety, especially at night.

9.5.4 Safety is also supported by clear sightlines, avoidance of hidden corners and consistent maintenance of surfaces and signage. Lighting will be provided at all stops and hubs, with CCTV will be installed where appropriate. User feedback would help to ensure that these standards are upheld.

Accessibility Features

9.5.5 All transport infrastructure will adhere to inclusive design standards, including step-free access to buses and mobility hubs, tactile paving and tonal contrast for visually impaired users, audible announcements and visual displays for real-time information, accessible seating and boarding areas at stops and interchanges and cycle infrastructure designed to accommodate adaptive cycles and mobility aids. Inclusive Mobility published by the Department for Transport provides detailed specifications for accessible pedestrian and transport infrastructure, which will be adopted throughout Marlcombe.

Information Provision

9.5.6 Real-time information is critical for user confidence and convenience. Marlcombe's transport system will offer digital displays at bus stops and mobility hubs, mobile apps with live tracking, journey planning and service alerts, printed timetables, maps and signage in accessible formats. Wayfinding will be designed using clear fonts, high contrast and logical placement, with a consistent design language.

Ticketing and Payment

9.5.7 To simplify access and reduce barriers, Marlcombe will implement contactless payment systems across all services, integrated ticketing for bus, rail and shared mobility options, subscription models for mobility hub services managed by the TWG or a non-profit entity and concessionary fares and discounts for eligible groups including older adults, students and low-income residents. Digital platforms will support account-based ticketing, allowing users to manage travel and subscriptions through a single interface.

Feedback and Continuous Improvement

9.5.8 User feedback will be actively sought through surveys and focus groups aligned with the DfT's persona framework, digital feedback tools and community engagement events to gather input on service changes and infrastructure upgrades. Performance metrics such as user satisfaction, accessibility audits and incident reports will inform ongoing improvements.

9.6 Expanded Feedback and Service Adaptation Mechanisms

9.6.1 To ensure services remain responsive to user needs, the TWG will implement a multi-channel feedback system:

- Digital feedback portals accessible via mobile apps and websites
- QR codes or similar at bus stops and mobility hubs linking to quick surveys
- Regular community forums and focus groups to gather qualitative insights
- Partnerships with local schools, employers and care providers to identify emerging needs

9.6.2 Feedback will be analysed alongside service usage data to inform route adjustments, infrastructure upgrades and communication strategies.

9.7 Flexibility and Demand Responsiveness

9.7.1 Throughout all phases, the strategy will remain flexible and responsive to demand. Key mechanisms include:

- Real-time monitoring of ridership, service reliability and user feedback.
- Dynamic scheduling and route adjustments based on occupancy and land use changes.
- Digital engagement tools to gather insights and communicate updates.
- Scalable infrastructure that can expand or contract based on usage.

9.8 Public Transport Infrastructure

Introduction

9.8.1 Public transport infrastructure is a powerful tool for shaping perceptions, influencing behaviour and reinforcing the identity of a place. In the context of Marlcombe, where sustainable mobility is a foundational principle, the design and delivery of public transport infrastructure must go beyond utility. It must actively encourage use, build trust and make public transport the most visible, convenient and attractive option for everyday travel.

Visibility and Legibility

9.8.2 One of the most effective ways to encourage public transport use is to make it highly visible in the urban landscape. When bus stops, shelters and mobility hubs are prominent, well-designed and consistently branded, they signal that public transport is a core part of Marlcombe's identity and daily life.

Key Measures:

- Consistent Design Language: All public transport infrastructure will follow a unified visual identity, including colour schemes, signage, materials and branding. This consistency builds recognition and trust, making it easier for users to navigate the system.
- Prominent Placement: Bus stops and shelters will be in high-footfall areas, such as local centres, retail zones and near schools and workplaces.
- Architectural Quality: Infrastructure will be designed to a high standard, using durable, attractive materials that reflect Marlcombe's design ethos. Well-designed stops and shelters convey professionalism and reliability, encouraging use.

Real-Time Information and Digital Integration

9.8.3 Confidence in public transport is closely tied to certainty and predictability. Real-time information systems reduce anxiety, improve journey planning and make services feel modern and responsive.

Key Measures:

- Real-Time Displays: All major stops and mobility hubs will feature digital displays showing live arrival times, service updates and disruption alerts. These displays will be legible, accessible and updated dynamically.
- Mobile Integration: Real-time data will be integrated into the TWG's Mobility-as-a-Service (MaaS) platform (if applicable), allowing users to plan multimodal journeys, receive alerts and track vehicles via smartphone.
- Audio-Visual Announcements: For accessibility, real-time information will be provided in both visual and audible formats, supporting users with visual or hearing impairments (including next stop announcements on vehicles).
- Predictive Tools: Over time, the system will incorporate predictive analytics to inform users of likely delays or crowding, helping them make informed choices.

Clear Signposting and Wayfinding

9.8.4 Even the most efficient transport system can be underused if it is difficult to understand or navigate. Clear, intuitive wayfinding is essential for encouraging new users and supporting occasional or vulnerable travellers.

Key Measures:

- Standardised Signage: All stops, shelters and hubs will use a consistent signage system, with clear fonts, high contrast and logical placement. Signage will include route maps, fare information and directional arrows.
- Multilingual Support: Where appropriate, signage will include multiple languages to support diverse communities and visitors.
- Tactile and Visual Cues: Wayfinding will include tactile paving, tonal contrast and pictograms to support users with visual or cognitive impairments.
- Integrated Urban Design: Signage will be embedded into the wider public realm, with directional cues from key pedestrian routes, cycleways and public spaces.

Comfort, Safety and Appropriateness of Scale

9.8.5 Public transport infrastructure must be comfortable, safe and appropriately scaled to its context. These qualities influence not only whether people use services, but how they feel while doing so.

Key Measures:

- Shelters and Seating: All stops will include shelters with seating, weather protection and lighting. Shelters will be designed to accommodate different user needs, including wheelchair users and those with prams or mobility aids.
- Lighting and Surveillance: Stops and hubs will be well-lit and, where appropriate, equipped with CCTV or passive surveillance from nearby buildings. This enhances personal safety, particularly during early morning and evening hours.
- Correct Sizing: Infrastructure will be scaled to match expected demand. High-traffic stops will include larger shelters, multiple boarding points and queuing space. Smaller stops will be compact but still offer core amenities.
- Maintenance and Cleanliness: Regular cleaning, graffiti removal and responsive maintenance will ensure that infrastructure remains welcoming and functional.

Co-Location with Mobility Hubs and Cycle Facilities

9.8.6 Public transport use increases when it is integrated with other modes, enabling seamless, multimodal journeys. Co-locating bus stops with mobility hubs and cycle parking supports first-mile/last-mile connectivity and reduces reliance on private cars.

Key Measures:

- Mobility Hub Integration: Major stops will be located within or adjacent to mobility hubs, allowing users to switch easily between bus, bike, car club and walking. Hubs will include real-time information, journey planning tools and ticketing services.
- Cycle Parking and Hire: Secure, covered cycle parking will be provided at all major stops, with space for standard and adaptive bikes. Where demand supports it, cycle hire stations will also be co-located.
- Wayfinding Between Modes: Signage and digital tools will guide users between transport modes, ensuring that transfers are intuitive and efficient.
- Shared Amenities: Hubs and stops will share amenities such as seating, lighting and shelter, reducing duplication and enhancing the user experience.

Psychological and Social Cues

9.8.7 Infrastructure also plays a psychological role in shaping perceptions of public transport. When stops and shelters are well-designed, well-used and well-maintained, they signal that public transport is a valued and normal part of life.

Key Measures:

- Social Visibility: Stops will be in active, overlooked areas, reinforcing safety and normalising public transport use.
- Design for Dignity: Infrastructure will be designed to support all users with dignity and comfort, avoiding the utilitarian or marginalised feel that can deter use.
- Community Involvement: Local residents may be involved in the design or stewardship of stops, particularly in residential areas, fostering a sense of ownership and pride.

Flexibility and Futureproofing

9.8.8 As Marlcombe grows and travel patterns evolve, infrastructure must be able to adapt. Modular, scalable designs will allow for expansion, relocation, or reconfiguration as needed.

Key Measures:

- Modular Shelters: Designed for easy expansion or relocation as demand grows or shifts.
- Digital Infrastructure: Real-time systems will be cloud-based and updateable, allowing for new features and integrations.
- Data-Driven Planning: Usage data will inform decisions about stop upgrades, relocations, or service changes.
- Climate Resilience: Materials and designs will account for weather extremes, ensuring durability and comfort in all seasons.

9.9 Implementation and Phasing

9.9.1 Delivery will follow a phased approach aligned with Marlcombe's as a whole development. This will require planning, fully integrated with the wider delivery team and their respective considerations. The phasing set out here is therefore concept only at this stage. Phase 1 will establish core infrastructure and pilot services; Phase 2 will expand coverage and integrate digital tools; Phase 3 will consolidate operations and scale up. More detail is provided in Section 16 of this document. Funding will come from government grants, developer contributions and public-private partnerships. Governance will involve Devon County Council, the TWG and transport operators.

9.9.2 This phased implementation plan ensures that public transport services are available and attractive from the outset, supporting sustainable travel behaviours and reducing car dependency. By prioritising early delivery of park and ride services, integrating mobility hubs and scaling internal networks in line with development, the strategy will evolve with Marlcombe, delivering a resilient, inclusive and future-ready transport system.

9.9.3 Key performance indicators will track ridership, reliability, accessibility and environmental impact. Risks such as funding gaps, low uptake and service disruptions will be mitigated through contingency planning, stakeholder coordination and adaptive design.

9.10 Marlcombe Public Transport Strategy Summary

9.10.1 This transport strategy sets out a comprehensive framework for delivering a high-quality, sustainable and inclusive bus-based public transport system in Marlcombe. The Vision is designed to reduce car dependency, improve regional and local connectivity and support Marlcombe's growth in alignment with environmental and social objectives.

Key Components:

- Park and Ride Strategy
  Park and ride sites at the A30 and A3052 will intercept car trips into Exeter, relieving pressure on M5 Junctions 29 and 30. These sites will be integrated with internal bus services and mobility hubs, offering secure parking, EV charging and real-time information. Services will run every 15 minutes and be coordinated with existing public bus routes to avoid competition.

- Internal Circular Bus Service
  A high-frequency circular bus route will serve residential, commercial, educational, healthcare and recreational areas within Marlcombe, linking to the mobility hubs. The service will ensure coverage within 640m (8 minute walk) of most dwellings. Low-emission vehicles, accessible stops and digital journey planning tools will support sustainability and inclusivity.

- Strategic Rail Integration
  Marlcombe will be connected to Cranbrook and Digby & Sowton rail stations via frequent, well-timed bus services. These stations offer direct access to Exeter and London. Bus timetables will be coordinated with train schedules to minimise transfer times and infrastructure improvements such as bus priority measures and real-time information will enhance reliability and user experience. Coordinated through-ticketing will be explored.

- User Experience and Accessibility
  The strategy prioritises comfort, safety and inclusivity. Infrastructure will meet national accessibility standards, with features such as step-free access, tactile paving and audio-visual announcements. Real-time information, contactless payment and account-based ticketing will enhance convenience. Feedback mechanisms will guide service design and continuous improvement.

10 Mobility Hubs

10.1 Introduction

10.1.1 Mobility hubs are a cornerstone of Marlcombe's sustainable transport strategy, designed to facilitate seamless, multimodal travel and reduce reliance on private vehicles. These hubs will form an integrated network across the town, offering a range of services and facilities tailored to local context and user needs. The hubs will allow easy connections to high frequency public transport corridors such as the park and ride sites.

10.2 What Are Mobility Hubs?

10.2.1 A mobility hub is a physical location where multiple transport modes and services converge, enabling users to switch easily between walking, cycling, public transport, shared mobility and personal vehicles. They are designed to support last-mile connectivity, improve accessibility and enhance the overall travel experience.

10.2.2 Benefits of enhancing last mile connectivity are explored further in the Freight and Servicing Strategy chapter.

10.2.3 These connections will allow people to access frequent buses easily as they can potentially travel further to a stop to access more frequent routes. This not only benefits their own journey times but also allows bus routes to be more direct and less convoluted, reducing overall journey times for passengers.

10.2.4 Mobility hubs typically include:

- Public transport stops or interchanges
- Bike hire (including electric bikes and cargo bikes) and secure cycle parking
- Car club bays and EV charging stations
- Real-time travel information and wayfinding
- Parcel lockers and community services
- Sheltered waiting areas and seating
- Digital platforms for journey planning and payment

10.2.5 They also tie into and improve the public realm, with public art and planting. They will be future proofed to consider emerging technologies such as drones.

10.2.6 Electric scooter hire may be considered. This is currently only legally possible in designated trial areas but may become more widespread if legislation changes. Whilst these scooters can be popular and offer journey time reductions, they can be off-putting to other road users and tend to be used for relatively short trips which would otherwise be undertaken on foot (reducing overall activity levels). The relative advantages and disadvantages are not clear at this stage but will be accounted for as more evidence emerges from the trials.

10.3 Hierarchy of Hubs in Marlcombe

10.3.1 Marlcombe will feature a hierarchical network of mobility hubs, ranging from large interchanges at key locations through to smaller, localised facilities:

- Primary Hubs: Located at major nodes such as the local centres, park and ride sites and the education campus, these will serve as full-service interchanges with comprehensive facilities including bus stops, EV charging, car clubs, bike hire and parcel hubs.
- Secondary Hubs: Positioned near retail centres, healthcare facilities and employment zones, these will offer a subset of services such as bike hire, bus stops (depending on location), real-time information and car club access.
- Mini Hubs: Distributed throughout residential areas, these will provide essential services like EV bike hire, secure cycle parking and wayfinding. Their compact design ensures accessibility without requiring large physical footprints.

10.4 Coverage and Accessibility

10.4.1 The mobility hub network will be planned to ensure that every dwelling and commercial building is within 640 metres (approximately a five minute walk) of a hub. This proximity supports active travel and ensures that sustainable transport options are always within reach.

10.5 Benefits of Mobility Hubs

10.5.1 Mobility hubs offer a wide range of benefits:

- Modal Shift: By making sustainable transport more convenient, hubs encourage users to shift from private cars to public and shared modes
- Reduced Emissions: Integration of low-carbon transport options contributes to air quality and climate goals
- Social Inclusion: Hubs improve access for those without cars, including young people, older adults and low-income households
- Economic Vitality: Enhanced connectivity supports local businesses and employment by improving access to jobs and services
- Urban Efficiency: Hubs reduce the need for extensive parking infrastructure and support compact, mixed-use development

10.6 Technology and Integration

10.6.1 Mobility hubs will be supported by the TWG digital platform that allow users to:

- Plan multimodal journeys
- Access real-time service updates
- Book shared vehicles or bikes
- Pay for services via subscription or pay-as-you-go

10.7 Governance and Subscription Models

10.7.1 To ensure long-term viability and user engagement, the TWG will explore the development of a subscription model. This may include:

- Monthly or annual plans covering bike hire, car club access and public transport discounts
- Tiered pricing based on usage and household size and income
- Integration with employer schemes and student packages

10.7.2 The subscription system is likely to be managed by the TWG, ensuring transparency, affordability and alignment with community goals.

10.8 Conclusion

10.8.1 The mobility hub network will be a defining feature of Marlcombe's transport landscape, enabling flexible, inclusive and low-carbon travel. By offering a range of services tailored to local needs and ensuring universal access, the hubs will support Marlcombe's vision of a connected, sustainable and people-focused urban environment.

11 Behaviour Change and Travel Planning

11.1 Introduction

11.1.1 This section sets out the potential for change to behaviour through Travel Planning. It is purposefully aspirational, and it is recognised that there will be competing tensions to manage as the Vision becomes realised. This includes the potential for the mode share of private car use to rise early on. However, as is set out below, it is vital that the Vision seeks to instil sustainable transport habits and behaviours from as early as possible. The TWG will ensure that the measures set out in the Vision are in place as early as possible to help people form new habits when they move to Marlcombe. The Transport Vision is a live, adaptable document and the TWG will continue to work with the residents and stakeholders to form a 'virtuous circle' of continuous feedback and improvement, as well as being open to new and emerging technologies.

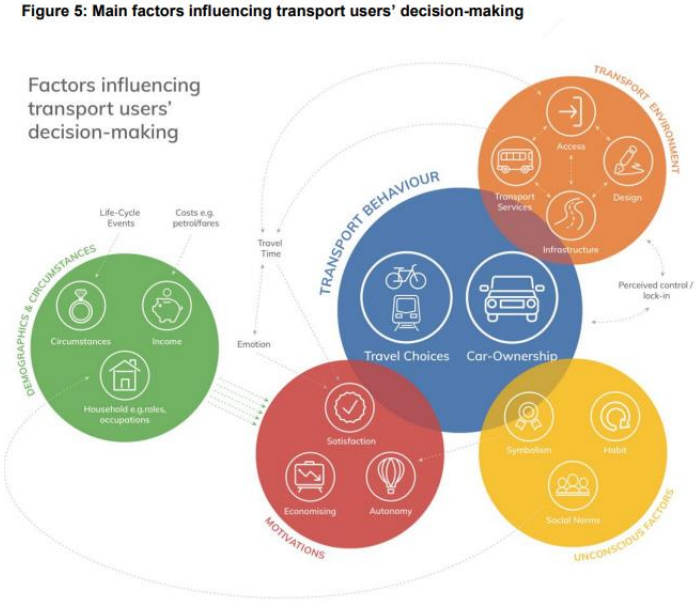
11.2 Principles and Theory of Change

11.2.1 Marlcombe offers a unique and powerful opportunity to embed sustainable travel behaviours from the outset. Unlike retrofitting transport interventions into an existing urban fabric (where entrenched car dependency and legacy infrastructure often limit impact) this strategy can shape mobility patterns from day one. The town's design, infrastructure, services and messaging will work in concert to encourage internalisation of trips, walking, cycling, public transport and shared mobility as the default choices, with private car use, particularly single-occupancy trips, positioned as less attractive.

11.2.2 At the heart of this approach is the recognition that behaviour change is most effective during life transitions, particularly when individuals move home. This is supported by a large body of behavioural science, which identifies the "fresh start effect", a phenomenon where people are more open to adopting new habits during moments of change, such as starting a new job, moving house, or entering a new phase of life. These transitions disrupt existing routines and create a psychological openness to re-evaluating choices, including how one travels.

11.2.3 This is emphasised in the report Future of Mobility Decision Making in the UK Transport System prepared by the Government Office for Science in January 2019. Figure 5 of the document is reproduced below and summarises the factors that influence decision-making.

Figure 5: Main factors influencing transport users' decision-making



Note: 'Motivations' (red circle) encompass self-reported factors, while unconscious factors (yellow) are also shown to influence transport behaviour (blue), along with both physical (orange) and demographic (green) structural factors.

11.2.4 It is clear that there is a significant opportunity to have a strong influence when people move to the new community (life event) and that it will be critical that the 'transport environment' is in place to help people form new habits and social norms (unconscious factors).

11.2.5 In the context of Marlcombe, this means that new residents are especially receptive to forming sustainable travel habits. If the right infrastructure, information and incentives are in place from the moment they arrive, these habits can become embedded and long-lasting. Conversely, if car use is the most visible, convenient, or supported option during early occupation, it risks becoming the default behaviour, undermining Marlcombe's sustainability goals and requiring costly retroactive interventions.

11.2.6 To harness this window of opportunity, the Vision will adopt a multi-layered approach to behaviour change, combining physical infrastructure, personalised travel planning, community engagement and digital tools. The goal is not simply to provide alternatives to car use, but to make sustainable travel the easiest, most attractive and most socially supported choice. This approach sits alongside the Phasing Strategy outlined in Section 7.

11.2.7 Key principles guiding this approach include:

- Timeliness: Behavioural interventions must begin before or at the point of occupation, not after habits have formed. Welcome packs, onboarding sessions and early engagement will be critical. Sustainable transport infrastructure should be visible from a prospective resident's first viewing.

- Personalisation: Travel planning must reflect individual circumstances, household composition, work and school locations, mobility needs and lifestyle preferences.

- Visibility and Accessibility: Sustainable modes must be clearly signposted, physically prioritised and easy to access. Infrastructure should reinforce these choices through design cues and convenience.

- Positive Reinforcement: Incentives, rewards and feedback loops will encourage continued use of sustainable modes. These may include discounts, loyalty schemes, or recognition programmes.

- Community and Social Norms: Behaviour is shaped by what people see others doing. Local champions, peer networks and community events will help normalise sustainable travel.

- Digital Integration: Real-time information, journey planning and feedback tools will be embedded in the TWG digital platform, ensuring that users can make informed choices easily.

11.2.8 Importantly, this Vision recognises that behaviour change is not a one-time event, but a continuous process. As Marlcombe grows and diversifies, travel needs will evolve. The behaviour change programme must therefore be adaptive and responsive, using data, feedback and engagement to refine interventions over time.

11.2.9 Infrastructure itself will play a critical role in shaping behaviour. Streets, mobility hubs and public spaces will be designed to nudge users toward sustainable choices, through prioritisation of active modes, reduced visibility of car parking and seamless integration of multimodal options. The built environment will function as a silent guide, reinforcing the message that walking, cycling and public transport are not just viable, they are preferable.

11.3 Community Involvement and Engagement

11.3.1 The success of the new Marlcombe's Transport Vision depends not only on infrastructure and services, but also on the active involvement of the community. Sustainable travel behaviours are more likely to take root and endure when they are supported by social norms and shared values. Community engagement is therefore a central pillar of the town-wide Travel Plan, ensuring that residents, students, employees and stakeholders are empowered to shape, support and sustain the mobility ecosystem.

11.4 Residential Engagement

11.4.1 Managed and coordinated by the TWG, the Residential Travel Plan will include a robust programme of community engagement to support behaviour change and foster local ownership of sustainable mobility. Key initiatives will include:

- Welcome and Onboarding
  - New residents will receive travel welcome packs with maps, service information and digital access to journey planning tools
  - Orientation events will introduce mobility hubs, active travel routes and public transport options
- Local Travel Champions
  - Volunteer residents will be trained to promote sustainable travel, support neighbours and liaise with TWG
  - Champions will lead walking groups, cycle rides and transport-themed community events
- Neighbourhood Mobility Forums
  - Regular meetings where residents can discuss transport issues, suggest improvements and co-design local initiatives
  - Forums will be supported by data dashboards showing usage patterns and performance metrics
- Digital Engagement Tools
  - Mobile apps and online portals will allow residents to provide feedback, report issues and participate in surveys
  - QR codes at bus stops and mobility hubs will link to quick feedback forms and service updates
- Gamification and Incentives
  - Points-based systems for sustainable travel choices, with rewards such as local discounts, free bike hire or recognition in community newsletters.

11.5 Workplace Engagement

11.5.1 Through their Travel Plans, employers will play a key role in supporting sustainable commuting, with engagement programmes tailored to business needs and employee preferences. Key initiatives will include:

- Employer Travel Planning Support
  - TWG will provide templates, guidance and technical assistance for site-specific travel plans
  - Employers will be encouraged to set mode share targets and report annually on progress
- Staff Engagement Campaigns
  - Internal communications, posters and events will promote active travel, public transport and shared mobility
  - Employers may host “Sustainable Commute Days” or offer incentives for low-carbon travel
- Employee Feedback Channels
  - Digital tools will allow staff to report issues, suggest improvements and participate in travel surveys
  - Anonymised data will be shared with employers to inform planning and engagement
- Workplace Mobility Forums
  - Regular meetings between employers, transport providers and the TWG company to coordinate services and share best practices
- Recognition and Incentives
  - Employers may offer subsidised travel, cycle-to-work schemes, or car club memberships.
  - Businesses demonstrating leadership in sustainable mobility may be recognised through Marlcombe-wide awards or publicity

11.6 School Engagement

11.6.1 Schools will be active partners in promoting sustainable travel, with engagement programmes designed for students, parents and staff. Key initiatives will include:

- Student Travel Councils
  - Pupils will participate in school-based councils to promote walking, cycling and microscooting.
  - Student Councils will help design “play on the way” routes and organise events such as “Walk to School Week”
- Parent Engagement
  - Workshops and communications will inform parents about safe routes, cycle parking and the benefits of active travel
  - Parents will be invited to participate in walking buses and school travel audits
  - Schools will incorporate infrastructure and designs that assist parents (e.g. covered waiting areas, car free streets, etc.
- Curriculum Integration
  - Lessons on sustainability, transport and urban design will reinforce the importance of low-carbon mobility
  - Schools will partner with transport providers for educational visits and interactive sessions
- School Travel Champions
  - Staff or parent volunteers will coordinate travel planning activities, liaise with the TWG and support student-led initiatives
- Feedback and Monitoring
  - Schools will conduct annual travel surveys and participate in data collection efforts
  - Results will inform service adjustments and infrastructure improvements

11.7 Community Events and Campaigns

11.7.1 To build momentum and visibility, TWG will host regular events and campaigns that celebrate sustainable travel and engage the wider community.

- Mobility Festivals: Featuring guided walks, cycle rides, transport exhibitions and family activities
- Sustainability Weeks: Coordinated campaigns across schools, workplaces and neighbourhoods
- Pop-Up Mobility Hubs: Temporary installations highlighting services, offering demos and gathering feedback
- Transport ‘Hackathons’ / workshops: Collaborative events where residents and stakeholders co-design solutions to mobility challenges

11.8 Governance and Continuous Engagement

11.8.1 Community involvement will be embedded into the governance of the Travel Plan through:

- Community Advisory Panels: Representing residents, schools and employers, these panels will advise on strategy, monitor progress and ensure accountability
- Annual Engagement Reports: Summarising activities, feedback and outcomes, published by the TWG
- Responsive Service Design: Feedback and data will be used to adapt services, infrastructure and communications in real time

11.8.2 Community involvement is central to the success of Marlcombe Transport Vision. By empowering residents, students and employees to shape and support sustainable mobility, the TWG will foster a culture of participation, ownership and continuous improvement. Through inclusive engagement, transparent governance and creative programming, the Travel Plan will become a living framework, responsive to community needs and resilient in the face of change.

11.9 Residential Travel Planning and Behavioural Support

11.9.1 As thousands of new households settle into Marlcombe over time, their daily mobility choices, how they commute, shop, access services and engage socially, will shape the town's transport dynamics and environmental footprint.

A Unified and Coordinated Approach

11.9.2 The Residential Travel Plan will form part of the overarching Town-Wide Travel Plan, ensuring consistency across all land uses while tailoring interventions to the specific needs of residents. It will be delivered collaboratively by the TWG, transport operators, developers and local authorities, with clear governance structures and performance monitoring. Key objectives include:

- Supporting residents in forming sustainable travel habits from day one
- Reducing reliance on private cars, especially single-occupancy trips
- Promoting walking, cycling, public transport and shared mobility
- Ensuring equitable access to transport options for all demographics
- Embedding travel planning into the fabric of community life

Personalised Journey Planning

11.9.3 The Residential Travel Plan will include personalised journey planning for every household. This service will be offered at the point of occupation and updated as Marlcombe evolves. It will include:

- Welcome Travel Packs: Distributed to new residents, these will include maps, timetables, mobility hub locations, car club access details and guidance on walking and cycling routes
- Digital Journey Planning Tools: Integrated into the TWG digital platform - residents will be able to plan multimodal journeys, access real-time updates and manage subscriptions.
- One-to-One Travel Advice: Optional consultations with travel advisors will help residents identify the most sustainable and convenient options for their daily routines.
- Household Mobility Profiles: Residents will be encouraged to complete short surveys to generate tailored mobility recommendations based on work, school, lifestyle and accessibility needs.

11.9.4 This personalised approach ensures that sustainable travel is not just available, it is relevant, convenient and easy to adopt.

Early Engagement and Habit Formation

11.9.5 To maximise impact, travel planning support will begin **before or at the point of move-in**. Developers will work with The TWG to ensure that transport information is embedded into the home-buying or rental process. This may include:

- Pre-occupation travel briefings during sales or handover.
- Digital onboarding via apps or portals.
- Incentives for early adoption, such as free bus passes, bike hire credits, or car club discounts for the first six months.

11.9.6 These interventions will leverage the “fresh start effect,” helping residents form new habits before car-dependent routines become established.

Monitoring and Continuous Improvement

11.9.7 The Residential Travel Plan will be subject to ongoing monitoring and refinement, using data and feedback to adapt to changing needs. Key mechanisms include:

- Annual Resident Travel Surveys: Tracking mode share, satisfaction and barriers to use
- Usage Data: From MaaS platforms, mobility hubs and transport operators.
- Feedback Channels: QR codes at stops, digital portals and community forums.
- Performance Indicators: Including modal shift, emissions reduction and accessibility compliance.

11.9.8 Insights will inform service adjustments, infrastructure upgrades and future engagement strategies.

Conclusion

11.9.9 The Residential Travel Plan is a cornerstone of Marlcombe's Transport Vision, ensuring that sustainable travel is not just an aspiration, but a lived reality for every resident. Through personalised support, community engagement, inclusive design and continuous improvement, the community will foster a culture of low-carbon mobility that endures from the first day of occupation and grows with the community.

11.10 School Travel Planning

11.10.1 Schools play a pivotal role in shaping travel behaviour, not only for students, but also for parents and staff. The School Travel Plan will focus on active travel, safety and independence, with infrastructure and programmes designed to make walking, cycling and microscooting the default modes for school journeys.

Integration with the Residential Travel Plan

11.10.2 The School and Travel Plans will be fully integrated with the Residential Travel Plan to ensure consistency and constructive collaboration across all land uses. This integration will be achieved through:

- Shared infrastructure: Mobility hubs, bus services and active travel routes will serve both residential and institutional users.
- Unified digital platforms: Journey planning, service alerts and feedback tools will be delivered through the TWG digital platform.
- Coordinated incentives: Discounts, loyalty schemes and subscription models will apply across home, school and work contexts.
- Consistent messaging: Communications and engagement campaigns will reinforce common values and behaviours across all user groups.

11.10.3 This comprehensive approach ensures that sustainable travel is not fragmented by land use, but experienced as a coherent, town-wide system.

Key Components

- Prominent and Secure Cycle and Microscooter Parking
  - Located at school entrances and designed for visibility and ease of access
  - Covered, well-lit and monitored by CCTV or passive surveillance
  - Includes storage for adaptive cycles and scooters
- **"**Play on the Way" Infrastructure
  - Routes to school will incorporate playful elements such as interactive pavement markings, climbing features and sensory landscaping
  - These features encourage walking and cycling by making the journey enjoyable and engaging for children
  - Designed in collaboration with student councils, educators and child development specialists

- Safe Routes to School
    - Segregated cycle lanes, pedestrian crossings, traffic calming and car-free streets near school zones
    - Wayfinding signage and real-time journey information at mobility hubs
    - Coordination with the internal circular bus service for older students and staff
- School Travel Champions
    - Staff or parent volunteers trained to promote sustainable travel, organise walking buses and support events
    - Peer-led events such as “Cycle Fridays” or “Scooter Week” to build enthusiasm and routine
- Curriculum Integration
    - Lessons and projects on sustainability, transport and urban design
    - Partnerships with local transport providers for educational visits and workshops
- Digital Engagement
    - Gamified challenges and rewards for active travel participation.

11.11 Workplace Travel Planning

11.11.1 Workplaces, including offices, retail centres, healthcare facilities and business parks, will be supported through a comprehensive Workplace Travel Plan. This plan will focus on commuter behaviour, employer engagement and infrastructure provision, ensuring that sustainable travel is a viable and attractive option for employees.

- Showers and Changing Facilities
    - All workplaces will be encouraged or required to provide high-quality facilities for active commuters
    - Includes secure lockers, drying rooms and gender-inclusive amenities
    - Located near cycle parking and mobility hubs
- Cycle Parking and EV Car Club Bays
    - Secure, covered cycle parking at all employment sites
    - Dedicated bays for shared EVs
    - Real-time availability and booking via the TWG digital platform
- Each major employer will align with the town-wide strategy.
    - Includes staff surveys, mode share targets and annual reporting.
    - Supported by The TWG with templates, guidance and technical assistance

- Flexible Working and Staggered Hours
  - Employers will be encouraged to adopt flexible schedules to reduce peak-hour travel
  - Coordination with public transport timetables to optimise service efficiency
- Incentives and Subsidies
  - Employers may offer subsidised bus passes, bike hire credits or car club memberships
  - Tax-efficient schemes such as cycle-to-work programmes and mobility subscriptions
- Digital Tools and Data Integration
  - Employees will access journey planning, service alerts and feedback tools via the TWG digital platform
  - Employers will receive anonymised data on staff travel patterns to inform planning and engagement

11.12 Monitoring and Continuous Improvement

11.12.1 Both School and Workplace Travel Plans will be subject to ongoing monitoring and refinement, coordinated through the town-wide governance framework. Key mechanisms include:

- Annual travel surveys for students, staff and employees
- Usage data from mobility hubs, the TWG digital platform and transport operators
- Feedback channels including QR codes, digital portals and stakeholder forums
- Performance indicators such as mode share, emissions reductions and infrastructure and service utilisation

11.12.2 Insights will inform service adjustments, infrastructure upgrades and future engagement strategies.

11.13 Conclusion

11.13.1 School and Workplace Travel Plans are essential components of Marlcombe‘s sustainable transport strategy. By aligning with the Residential Travel Plan and making the most of shared infrastructure, digital tools and behavioural insights, these plans will ensure that sustainable travel is embedded across all aspects of daily life. From playful school routes to commuter showers and car clubs, Marlcombe will offer a cohesive, inclusive and future-ready mobility system.

12 Electric Vehicles and Shared Mobility

12.1 Introduction

12.1.1 While Marlcombe is designed to prioritise sustainable transport modes such as walking, wheeling, cycling and public transport, it also recognises the evolving role of electric vehicles (EVs) in reducing emissions and supporting flexible mobility. EVs, particularly when shared, can complement the town's low-carbon goals by offering cleaner alternatives to conventional car use, especially for trips that cannot be easily made by other modes. This strategy outlines how EV infrastructure and services will be integrated into Marlcombe's transport framework in a way that supports reduced car dependency, multimodal travel and inclusive access.

12.1.2 While the strategy aims to reduce car dependency, it recognises the role of electric vehicles. Marlcombe will provide:

- EV charging points in homes and public areas
- Support for car clubs and shared EVs
- Integration with mobility hubs

12.1.3 This strategy is in line with current national policy, which will aim to end new petrol and diesel sales by 2035, with all new cars full zero-emission by 2035.

12.1.4 According to data published by DCC[3], between 2016 and 2021, there was an 870% increase in the number of ULEVs registered in Devon, with 6,482 vehicles registered in 2021. Although no more recent local data is available, the UK Government's Zero Emission Vehicle Mandate requires that 80% of vehicles sold by 2030 must be EVs.

12.2 EV Charging Infrastructure

12.2.1 To ensure that EVs are a viable and convenient option for residents and visitors, Marlcombe will provide a comprehensive network of charging points across both private and public domains.

Residential Charging

- All new homes will be equipped with access to EV charging capability, either through dedicated wall-mounted units or provisioned cabling for future installation.
- In line with Building Regulations Part S, charging infrastructure will be designed to accommodate both on-plot and communal parking arrangements, ensuring equitable access across housing types.

[3] https://www.devon.gov.uk/haveyoursay/consultations/devon-electric-vehicle-charging-strategy/

Public Charging

- Public EV charging stations will be installed at key destinations including:
  - Mobility hubs
  - Retail centres
  - Healthcare facilities
  - Leisure and recreational areas
- Public charging points will include rapid chargers, with clear signage, lighting and digital payment options.
- Slower charging options will be available in places where dwell times are likely to be longer (e.g. close to workplaces). These will be more competitively priced to reduce grid demands whilst still promoting EV ownership.
- Locations will be selected to support trip chaining, allowing users to charge vehicles while accessing other services.

Park and Ride Integration

- EV charging bays will be provided at both A30 and A3052 park and ride sites, supporting early adoption and enabling commuters to switch to low-emission travel.

12.3 Shared EVs and Car Clubs

12.3.1 To reduce private car ownership and promote efficient use of vehicles, the TWG will support the development of EV-based car clubs and shared mobility services. The DfT research document *Car Clubs Rapid Evidence Assessment* concludes that car clubs reduce both car ownership and car mileage:

- *Car club users in the US, UK and Europe reported relinquishing a household vehicle (between 9.5% and 33.1% of members).*
- *Car club users tended not to acquire an additional household vehicle (27% of UK car club members claimed they would have bought or leased a car if they had not joined a car club).*
- *One UK study highlighted that the average car club member reduced their annual distance travelled by car by 170 miles.*
- *A UK study drawing on car club fleet analysis indicated that in 2020, the average car club car emitted 27% less CO2e per kilometre than the average car in the UK.*

Car Club Provision

- Dedicated car club bays will be located at mobility hubs, residential clusters and employment zones.
- Vehicles will be electric or hybrid, with booking and access managed via the TWG digital platform.
- Subscription models will be offered to residents, with discounted rates for low-income households and students.

Integration with Mobility Hubs

- Car club services will be co-located with other transport modes, enabling seamless transfers between walking, cycling, bus and EV use.
- Real-time availability, booking and payment will be accessible through digital kiosks and the TWG digital platform.

12.4 Monitoring and Adaptation

12.4.1 Usage data from EV chargers and car clubs will be monitored to assess demand, inform expansion and prevent over-provision.

12.4.2 Charging infrastructure will be scalable, allowing for phased delivery aligned with occupation and vehicle uptake.

12.5 Conclusion

12.5.1 Electric vehicles will play a supporting role in Marlcombe's Transport Vision, providing clean, flexible mobility options without compromising the core goals of sustainability and reduced car dependency. Through integrated charging infrastructure, shared EV services and alignment with mobility hubs, Marlcombe will ensure that EVs enhance rather than dilute its vision of a connected, low-carbon urban environment.

13 Parking Strategy Overview

13.1 Introduction

13.1.1 The parking strategy within Marlcombe will need to be compliant with the relevant local and national standards in place when any planning applications are determined. It may therefore need to be flexible. This section provides an overview of its aims and strategies, but a detailed, bespoke strategy will be developed when appropriate.

13.1.2 The overall aims of the strategy will be to help reduce car dependency, promote sustainable travel and ensuring safe and efficient use of public space whilst balancing the needs of businesses and minimising unsightly and inappropriate on-street parking. An under-provision of parking in residential areas can obstruct emergency services and degrade the public realm, but limiting provision at destinations and workplaces can help to encourage sustainable travel.

13.1.3 Inappropriate on-street parking can obstruct roads and reduce safety. Design-led solutions such as mews lanes and shared surfaces will be used where possible, including landscaping within parking areas to reduce visual impacts. The use of rear parking courts will be limited, as experience shows that they are often not used as intended.

13.1.4 There will be complementary use of parking, with different uses occupying the parking at different times of day. For example, centralised retail parking may be used for charging of residents' EVs at night or could provide additional parking for community uses. This reduces the overall amount of parking required.

13.1.5 Emerging parking standards for East Devon are set out in Policy TR04 the Proposed East Devon Local Plan 2020 to 2042 – Draft Reg 19 Plan. This gives the following standards for non-residential uses (different levels can be accepted through robust assessment demonstrating that alternative levels are more desirable and appropriate):

Type/Use	Car Parking	Short Stay Cycle Parking (obvious, easily accessed and close to destination)	Long Stay Cycle Parking (secure and ideally covered)
Class B2/E(g)	1 per 30 sqm	1 per 1,000 sqm	1 per 500 sqm
Class B8	1 per 200 sqm	1 per 1,000 sqm	1 per 500 sqm
Class E(a) Non-food retail and general retail	1 per 20 sqm	1 per 6 staff	1per 200 sqm
Class E(a) supermarket/ Food retail	1 per 14 sqm	1 per 6 staff	1per 200 sqm
Class E(b)/ Sui Generis Hot food takeaways (including drive throughs)	1 per 25 sqm	2 per establishment	1 per 8 staff
Class C1	1 per bedroom	1 space per 10 bedrooms	1 space per 10 staff

13.2 Short-Stay Parking Zones

13.2.1 High quality, secure cycle parking will be provided throughout Marlcombe. This will be placed in locations that benefit from natural surveillance, including within mobility hubs. For longer stay cycle parking (e.g. at commuter destinations) this will be covered.

13.2.2 To discourage long-term car use and encourage regular turnover of spaces for retail and business access, short-stay car parking (maximum 1–2 hours) will be implemented across the local and town centres.

13.2.3 These are likely to be controlled though a pay and display type ticketing system, as this simplifies and reduces the cost of enforcement. The ticketing system is likely to largely via phone payment apps, but ticketing or permits will be available for non-phone-users (this could be from local retailers).

13.2.4 Similar arrangements will be in place at community and leisure facilities, with the maximum stays varied to suit the activity.

13.2.5 Parking bays will be provided for blue badge holders close to key destinations and in line with EDDC parking standards (generally 5% of overall provision).

13.3 School Parking

13.3.1 Parents will not be permitted to drop off within school grounds and parking will be provided for staff only in line with local standards.

13.3.2 It is likely that ‘school streets’ or similar will be adopted, with any parents who do chose to drive dropping off some distance from the school and children having a traffic-free route to school.

13.3.3 Ample cycle and scooter parking will be provided, prominently and conveniently located close to school entrances, in a position that benefits from natural surveillance.

13.4 Residential Parking Strategy

13.4.1 Parking for new homes will vary according to size (number of bedrooms). The emerging parking standards mandate a minimum of Average of 1.7 spaces per dwelling (rounded up to the nearest whole number in individual applications). For cycle parking, the minimum is 1 space per bedroom

13.4.2 This would offer considerable scope for variation across Marlcombe, with smaller, higher density areas around the centres, where car use is less likely to be required, likely to have a lower standard of provision in order to make efficient use of the land.

13.4.3 Similarly, there are likely to be larger properties in more peripheral locations where more parking would be appropriate.

13.4.4 Residential car parking is likely to be a mix of on-plot and on-street provision. All residential cycle parking provision will be on-plot for security reasons. This will include secure communal cycle storage areas for higher density and flatted areas.

13.5 Parking Controls

13.5.1 Although street design and landscaping will act to deter inappropriate parking, it is likely that on-street parking restrictions will be required within Marlcombe to prevent uncontrolled parking – particularly around transport hubs or employment areas. These would either be conventional 'yellow line' type restrictions or Controlled Parking Zones (CPZs) could be introduced.

13.5.2 CPZs are areas which are signed on entry and only allow parking in marked bays. They reduce street clutter by reducing the amount of markings required.

13.5.3 Any on-street restrictions would require Traffic Regulation Orders to be legally enforceable. There is a set process for implementing these orders which is likely to be undertaken as part of the Section 38 adoption process for any new roads.

13.6 Enforcement and Monitoring

13.6.1 On-street parking in Devon was decriminalised in 2008 and is now enforced by the DCC's Civil Enforcement Officers. This will be undertaken in a manner consistent with other towns within the county.

13.6.2 In off-street areas, parking will be privately enforced. This could be by occupiers or through the TWG. In residential areas, it may be possible to add further controls through leasehold or tenancy agreements, or via residential covenants.

13.6.3 To avoid unnecessary conflicts, this off-street enforcement will follow an escalating process, with initial reminder stickers or notices rising to stricter penalties for persistent offenders. This should include a dispute resolution mechanism.

13.7 Community Engagement and Education

13.7.1 Community involvement is essential for the success of parking controls. Residents and businesses will be consulted during the design and implementation phases. Educational campaigns will promote sustainable travel choices and explain the rationale behind parking restrictions. Feedback mechanisms will be established to allow ongoing dialogue and refinement of the strategy.

13.8 Conclusion

13.8.1 High quality, secure cycle and 'wheeled' (e.g. pushchair) parking will be provided throughout the development. This will make it easy and convenient for people who wheel to park at their destination. There should be no concern over cycle or other wheeled parking availability.

13.8.2 A positive approach to car parking is vital for the success of Marlcombe. A degree of parking is necessary to create vibrant, commercially and economically sustainable community, but this needs to be carefully managed in order to discourage excessive car use.

13.8.3 Short stay bays will turn over regularly, making it easier for people who need to park and helping businesses. This regular turn over will also reduce drivers circulating when looking for spaces.

13.8.4 Parking will be provided in line with local standards, with lower residential parking ratios in higher density and more accessible locations.

13.8.5 On-street parking enforcement will be undertaken by DCC, whilst off-street management will be via the TWG, via an escalating process for persistent (including a despite management facility).

14 Freight and Servicing Strategy

14.1 Purpose of the Freight and Servicing Strategy

14.1.1 As Marlcombe is planned around principles of sustainability, liveability and reduced car dependency, it is essential to ensure that freight and servicing operations, while vital to Marlcombe's functionality, do not undermine these goals. This strategy sets out a framework for managing the movement of goods, waste and service vehicles in a way that supports the town's economic and operational needs while minimising environmental and social impacts.

14.1.2 Freight and servicing activities encompass a wide range of functions, including refuse collection, domestic parcel deliveries, commercial logistics and retail servicing. These operations are necessary to maintain public health, support commerce and meet the expectations of residents and businesses. However, if unmanaged, they can contribute to noise pollution, air quality degradation, road safety concerns and a diminished public realm.

14.1.3 This strategy aims to proactively address these challenges by embedding freight and servicing considerations into Marlcombe's design, infrastructure and operational planning from the outset. In Marlcombe, these operations will support:

- Public services, including waste collection, recycling and maintenance
- Residential needs, such as parcel deliveries, furniture transport and home services
- Commercial activity, including deliveries to shops, supermarkets, offices and industrial premises
- Construction and development, particularly during the early phases of Marlcombe build-out

14.1.4 Without efficient and reliable freight and servicing systems, Marlcombe cannot meet its operational requirements or maintain a high quality of life for residents. However, the challenge lies in delivering these services in a way that is compatible with the town's transport hierarchy, which prioritises walking, cycling and public transport.

14.1.5 To achieve this, freight and servicing must be carefully planned, routed and timed to avoid conflict with active travel and residential amenity. Infrastructure must be designed to accommodate necessary vehicle movements without compromising safety or comfort for other users.

14.2 Balancing Operational Efficiency with Environmental and Social Sustainability

14.2.1 The strategy recognises the need to balance operational efficiency, ensuring that deliveries and collections are timely, cost-effective and dependable, with environmental and social sustainability. This balance will be achieved through:

- Vehicle management: Encouraging the use of low-emission vehicles, including electric vans, cargo bikes and hydrogen-powered HGVs
- Routing and access control: Directing heavy vehicles away from residential streets and sensitive areas through designated freight corridors
- Time-based restrictions: Limiting deliveries and collections to specific windows to reduce noise and congestion during peak hours

- Infrastructure integration: Designing servicing areas, loading bays and waste collection points to minimise disruption and visual impact
- Digital coordination: Using smart logistics platforms to optimise delivery schedules, reduce vehicle mileage and consolidate trips.

14.3 Strategic Objectives

14.3.1 To guide the implementation of the Freight and Servicing Strategy, the following objectives have been established:

- Minimise Noise and Air Pollution
  - Promote the use of electric and low-emission vehicles for all servicing and delivery operations
  - Restrict vehicle access during sensitive times (e.g. early mornings, evenings, school hours)
  - Design servicing infrastructure to reduce idling, queuing and unnecessary engine use
- Reduce Severance and Intimidation
  - Avoid routing heavy vehicles through residential streets, school zones and pedestrian-priority areas
  - Use traffic calming, signage and physical barriers to separate freight movements from vulnerable users
  - Design public spaces to prioritise pedestrian comfort and safety, even in mixed-use environments
- Support Low-Carbon Logistics
  - Encourage consolidation of deliveries through freight hubs located at mobility hubs
  - Promote last-mile delivery by cargo bike or electric van
  - Provide infrastructure for shared logistics services and subscription-based delivery models
  - Co-locate parcel lockers, freight consolidation points and delivery bays with mobility hubs
- Ensure Flexibility and Scalability
  - Design freight systems that can adapt to changing demand as Marlcombe grows
  - Monitor performance and adjust routing, scheduling and infrastructure as needed
  - Engage with logistics providers, retailers and residents to refine operations over time

14.4 Refuse Collection Strategy

Overview

14.4.1 Refuse collection is a vital service that underpins public health and environmental management. In a community designed around sustainability and reduced car dependency, the refuse collection system must be carefully planned to align with these principles. This includes minimising the environmental and social impacts of collection vehicles, ensuring efficient and unobtrusive operations and integrating waste infrastructure seamlessly into the urban fabric.

Vehicle Types and Emissions

14.4.2 To reduce the environmental footprint of waste collection, Marlcombe will prioritise the use of electric or low-emission refuse collection vehicles (RCVs). These vehicles offer significant benefits in terms of:

- Noise reduction, particularly during early morning or evening collections
- Improved air quality, especially in residential and pedestrian-priority areas
- Lower carbon emissions, supporting Marlcombe's climate goals

14.4.3 Where full electrification is not immediately feasible, hybrid or hydrogen-powered alternatives will be considered. The TWG will work with DCC and waste service providers to phase in electric RCVs as part of procurement and fleet renewal strategies. Charging infrastructure will be provided, with potential for shared use with other municipal (e.g. road sweepers) or logistics fleets.

Bin Storage and Access Design

14.4.4 The design of bin storage and access points is critical to ensuring that waste collection is efficient, unobtrusive and compatible with high-quality urban design. The following measures will be implemented:

- Residential Areas:
    - Integrated bin stores in residential blocks and higher-density housing, designed to be screened, ventilated and easily accessible for both residents and collection crews
    - Kerbside collection points for lower-density housing, with clear wayfinding and step-free access
    - Shared bin compounds in courtyard or mews-style developments, located to minimise visual impact and odour
- Commercial Areas:
    - Dedicated waste bays located away from public entrances and pedestrian routes
    - Servicing access designed to accommodate RCVs without obstructing footways or cycle paths
    - Provision for recycling and food waste, with clear separation and signage
    - All bin storage areas will be designed to discourage fly-tipping, support recycling and maintain a clean and attractive public realm

Underground and Semi-Underground Waste Systems

14.4.5 In higher-density or mixed-use areas, Marlcombe will explore the use of underground or semi-underground waste systems. These systems offer several advantages:

- Reduced visual clutter, as bins are stored below ground level
- Improved odour control, through sealed containers and ventilation
- Space efficiency, freeing up surface area for public realm or landscaping
- Enhanced hygiene and pest control, due to enclosed storage

14.4.6 These systems are particularly suitable for local centres, apartment complexes and mobility hub zones. Their feasibility will be assessed during detailed design stages, considering cost, maintenance and operational compatibility.

Monitoring and Continuous Improvement

14.4.7 The refuse collection strategy will be subject to ongoing monitoring and refinement. Key performance indicators (KPIs) will include:

- Collection reliability (missed collections, delays)
- Resident satisfaction (survey results, complaint volumes)
- Environmental performance (vehicle emissions, recycling rates)
- Operational efficiency (route optimisation, fuel use)

14.4.8 Annual service reviews will be conducted in partnership with waste service providers, DCC, the TWG and community representatives.

14.5 Domestic Deliveries and Freight Hubs

Overview

14.5.1 Domestic deliveries are a growing component of urban freight activity and can offer benefits by reducing shopping trips. In a new town designed to minimise car dependency and prioritise environmental quality, the challenge is to accommodate this demand without allowing delivery traffic to dominate residential streets or undermine the pedestrian-friendly public realm. While not seeking to replace private deliveries, design choices will ensure that the impact of these operations can be minimised.

14.5.2 This strategy proposes a network of freight hubs co-located with larger mobility hubs, enabling consolidation of deliveries and facilitating low-impact last-mile distribution. Last mile delivery is the final step in the logistics chain, where goods are transported from a local distribution centre to the end customer. It is often the most expensive and complex part of the delivery process due to traffic, route inefficiencies and the need for speed and accuracy. Innovations like drones, electric vehicles and smart routing systems are helping companies improve last mile delivery by making it faster, more sustainable and better suited to customer expectations.

14.5.3 By shifting delivery activity away from individual doorsteps and into shared, well-managed spaces, Marlcombe can reduce van traffic, improve air quality and support more sustainable logistics models.

Freight Hub Design and Location

14.5.4 Freight hubs will be strategically located at larger mobility hubs, which already serve as multimodal access points for residents. This co-location offers several advantages:

- Shared infrastructure: Parcel lockers, electric van bays, cargo bike stations and digital wayfinding can be integrated with public transport and active travel facilities
- Reduced residential traffic: By intercepting deliveries at the edge of neighbourhoods, freight hubs prevent repeated van trips into quiet residential streets
- Efficient last-mile logistics: Consolidated deliveries can be distributed via electric vans, cargo bikes, or walking couriers, reducing emissions and noise
- Convenient access for residents: Mobility hubs are within 640 metres of all dwellings, ensuring that parcel collection or delivery is easy and accessible

14.5.5 Freight hubs will be designed to accommodate secure parcel storage, temporary holding areas for larger items and facilities for logistics operators. They will be monitored, well-lit and integrated into the TWG digital platform.

Parcel Lockers and Resident Access

14.5.6 To reduce door-to-door delivery traffic, Marlcombe will promote the use of parcel lockers located at freight hubs. These lockers will:

- Support deliveries from multiple carriers and retailers
- Be accessible 24/7 with secure digital access
- Include refrigerated compartments for grocery deliveries, where feasible
- Be integrated with Marlcombe's MaaS platform for notifications and tracking

14.5.7 Residents will be encouraged to opt for locker delivery through incentives, subscription models and awareness campaigns. This approach reduces failed deliveries, improves convenience and supports consolidated logistics.

Last-Mile Delivery Vehicles

14.5.8 Last-mile deliveries from freight hubs to homes will be conducted using low-impact vehicles, including:

- Smaller electric vans, with charging infrastructure provided at freight hubs
- Cargo bikes, suitable for small parcels and groceries
- Walking couriers, particularly in high-density or pedestrian-priority zones

14.5.9 These vehicles will be quiet, clean and compatible with Marlcombe's active travel infrastructure. Routing will be planned to avoid conflict with pedestrians and cyclists and delivery times will be managed to minimise disruption.

Delivery Time Management

14.5.10 To further reduce the impact of domestic deliveries, Marlcombe will implement time-based restrictions in sensitive areas. These may include:

- No deliveries during school drop-off/pick-up times near education zones
- Restricted access to pedestrian-priority streets during peak footfall hours
- Encouraged off-peak delivery windows for residential areas

Integration with Residential Travel Planning

14.5.11 Domestic delivery management will be coordinated with the Residential Travel Plan, ensuring that:

- Residents are informed about sustainable delivery options at move-in
- Parcel locker locations and access are included in onboarding materials
- Subscription models for consolidated deliveries are promoted alongside other mobility services
- Feedback on delivery services is collected through the same digital channels used for transport

14.5.12 This integration ensures that domestic logistics are treated as part of Marlcombe's overall mobility ecosystem, not as a separate or conflicting activity.

Monitoring and Continuous Improvement

14.5.13 The performance of freight hubs and domestic delivery systems will be monitored through:

- Usage data from parcel lockers and delivery platforms
- Resident feedback via digital portals and community forums
- Environmental metrics, including emissions, noise and traffic volumes
- Operator compliance, with delivery time windows and vehicle standards

14.5.14 Insights will be used to refine hub design, adjust delivery policies and support innovation in low-carbon logistics.

14.6 Commercial HGV Access and Routing

Overview

14.6.1 HGVs are essential to the functioning of Marlcombe's economy, enabling the delivery of goods to supermarkets, retail centres, employment zones and service providers. However, unmanaged HGV movements can negatively impact residential amenity, air quality and perceptions of safety, particularly in areas prioritised for walking, cycling and public transport.

Designated HGV Routes

14.6.2 To ensure that HGVs can access commercial and employment areas efficiently, without passing through residential neighbourhoods, Marlcombe will establish a network of designated HGV routes. These routes will:

- Connect directly to the strategic road network (e.g. A30, A3052) and key access points to the town.
- Serve employment zones, supermarkets, retail parks and logistics facilities.
- Avoid residential streets, school zones and pedestrian-priority areas wherever possible.
- Be designed to accommodate the turning radii, weight and clearance requirements of large vehicles.

14.6.3 These routes will be clearly marked on physical signage and digital navigation platforms and will be incorporated into planning guidance for commercial developers and logistics operators.

Signage

14.6.4 Signage will be installed at key junctions and entry points, clearly indicating:

- Permitted HGV routes
- Weight and size restrictions
- Time-based access controls
- Alternative routes for through-traffic

Time-Based Restrictions

14.6.5 To further reduce the impact of HGV movements on residents and vulnerable road users, the TWG will implement time-based restrictions in specific areas. These may include:

- No HGV access during school drop-off and pick-up times (e.g. 08:00–09:00 and 15:00–16:00) near schools
- Restricted delivery hours in mixed-use or residential-adjacent retail areas (e.g. no deliveries before 07:00 or after 19:00)
- Night-time restrictions in areas with high residential density to reduce noise disturbance.

Low-Emission HGVs and Charging Infrastructure

14.6.6 To align with Marlcombe's climate and air quality goals, the strategy will actively promote the use of low-emission and zero-emission HGVs. Measures include:

- Procurement and planning guidance encouraging businesses and logistics providers to adopt electric, hydrogen, or hybrid HGVs.
- Electric HGV charging infrastructure at key commercial sites, including:
  - Supermarkets and retail parks
  - Employment areas and logistics hubs
  - Shared-use charging depots for smaller operators

14.6.7 Marlcombe will work with energy providers and commercial landlords to ensure that charging infrastructure is future-proofed and scalable. Where feasible, charging facilities will be co-located with other freight and servicing infrastructure to maximise efficiency.

Monitoring and Enforcement

14.6.8 To ensure compliance and support continuous improvement, the town will implement a robust monitoring and enforcement framework, including:

- GPS and telematics data from logistics operators to track vehicle movements and identify non-compliance
- ANPR cameras at key access points to monitor entry into restricted zones (if required)
- Resident and business feedback channels to report issues or suggest improvements
- Annual freight audits to assess performance against key indicators, including
    - HGV traffic volumes in residential areas.
    - Emissions from commercial freight.
    - Compliance with time-based restrictions.

14.6.9 Findings will inform updates to routing policies, infrastructure investment and engagement strategies.

14.7 Retail and Supermarket Servicing

Overview

14.7.1 Retail and supermarket servicing is a vital component of Marlcombe's freight and servicing strategy. These premises require regular deliveries to maintain stock levels and meet consumer demand. However, unmanaged servicing, particularly in mixed-use or residential-adjacent areas, can lead to congestion, noise and safety concerns. This strategy aims to ensure that retail servicing is efficient, unobtrusive and compatible with the town's design principles, while offering flexibility for smaller retailers and independent businesses.

Servicing Design for Supermarkets and Large Retailers

14.7.2 Supermarkets and large-format retail units typically require frequent deliveries by medium to large goods vehicles. To accommodate these needs while minimising disruption to the public realm and residential amenity, the following design principles will be applied:

- All large retail units will be required to provide off-street loading and unloading facilities as part of their planning approval
- On-street servicing will be discouraged and if required, likely to be time restricted, particularly in high-footfall zones and prohibited in pedestrian-priority areas
- Where adjacent to residential uses, acoustic screening and noise-reducing surface treatments will be used to mitigate disturbance

Delivery Time Management

14.7.3 To reduce the impact of retail servicing on residents and other street users, Marlcombe will implement time-based delivery restrictions tailored to the context of each retail site. These may include:

- Off-peak delivery windows, avoiding early mornings, evenings and school travel times
- Restricted delivery hours in residential-adjacent retail areas, particularly where noise or vehicle movements may cause disturbance
- Staggered delivery slots for retail clusters to prevent congestion and vehicle queuing

14.7.4 Retailers will be encouraged to coordinate deliveries to avoid clustering and to use scheduling tools to manage vehicle arrivals. These restrictions will be enforced through planning conditions and operational agreements with logistics providers.

Flexible Servicing for Smaller Retailers

14.7.5 Smaller retailers, including independent shops, cafés and service providers, often rely on more flexible and informal delivery arrangements. Marlcombe will support these businesses by offering flexible access for smaller businesses. The TWG will:

- Engage directly with businesses to understand their delivery needs, constraints and opportunities for consolidation
- Provide guidance and support on sustainable logistics practices, including shared deliveries, off-peak scheduling and low-emission vehicle adoption
- Offer flexibility in access where justified by operational requirements, particularly for small or independent businesses
- Facilitate coordination between retailers, logistics providers and the TWG to optimise delivery schedules and reduce vehicle trips

14.7.6 This collaborative approach ensures that freight management enhances, rather than hinders, Marlcombe's economic vitality.

14.7.7 Smaller delivery vehicles (e.g. vans, microvans, cargo bikes) will be permitted to access pedestrian-priority zones during designated windows, typically outside peak pedestrian hours.

14.7.8 Time-limited loading bays will be provided near clusters of small retailers, allowing short-term access for deliveries without obstructing footways or cycle routes.

14.7.9 These bays will be designed to accommodate small vehicles and hand trolleys, with clear signage and designated time slots.

Compact Loading Infrastructure

14.7.10 Compact loading areas will be integrated into high street and mixed-use designs, allowing for short-term drop-offs without compromising pedestrian flow or public space quality.

14.7.11 These areas will include surface markings bollards and wayfinding to ensure safe and efficient use. Where possible, they will provide a level surface to facilitate trolley movements and allow the bays to be used by pedestrians and cyclists when not occupied.

Operational Guidance and Support

14.7.12 The TWG will provide guidance to small businesses on best practices for delivery coordination, including:

- Scheduling deliveries during permitted windows
- Sharing delivery services with neighbouring businesses
- Communicating with suppliers about access restrictions and preferred vehicle types

14.7.13 This approach ensures that small retailers can continue to operate effectively while contributing to Marlcombe's goals of reduced vehicle impact and enhanced public realm quality.

14.8 Enforcement and Compliance

14.8.1 To ensure compliance with restricted zones and delivery time windows, Marlcombe will implement a combination of:

- Signage and physical design, clearly indicating restrictions and guiding vehicle behaviour
- Digital permitting and geofencing, allowing access only to authorised vehicles during permitted times
- Operator agreements, requiring logistics providers to adhere to routing and scheduling policies
- Community feedback channels, enabling residents and businesses to report issues and suggest improvements.

14.8.2 These measures will be coordinated by the TWG in partnership with local authorities and logistics operators.

14.9 Monitoring, Enforcement and Continuous Improvement

Overview

14.9.1 Effective freight and servicing management requires more than just well-designed infrastructure and policies, it also depends on robust systems for monitoring, enforcement and continuous improvement. These systems ensure that the strategy remains responsive to real-world conditions, that rules are followed and that Marlcombe can adapt to changing technologies, behaviours and demands over time.

Enforcement Protocols

14.9.2 To ensure that freight and servicing policies are respected, Marlcombe will establish clear and proportionate enforcement protocols, including:

- Penalty Framework
  - Fines or warnings issued for violations (subject to an appropriate legal framework) such as
    - HGVs using residential streets without a permit
    - Deliveries occurring outside approved time windows
    - Vehicles idling in loading bays beyond permitted durations

- Enforcement actions will be proportionate and focused on education and compliance rather than punishment.

- On-the-Ground Enforcement
  - Conducted by enforcement officers, supported by digital tools and community reporting
  - Officers will also provide guidance to drivers and businesses to support understanding of local rules.

Community and Business Feedback

14.9.3 Residents and businesses are key partners in the success of the freight and servicing strategy. Their experiences and insights will be used to refine policies and address emerging issues. Engagement mechanisms will include:

- Community Forums
  - Regular meetings with residents, business owners and logistics providers to discuss performance, share updates and co-design solutions.
- Business Liaison Officers
  - Appointed to maintain ongoing dialogue with retailers, service providers and logistics operators
  - Responsible for gathering feedback, resolving issues and supporting compliance.

14.10 Annual Review and Adaptation

14.10.1 The freight and servicing strategy will be reviewed annually to ensure it remains effective, equitable and aligned with Marlcombe's broader transport and sustainability goals. The review process will include:

- Performance Indicators
  - Volume and type of freight movements
  - Compliance rates with access and time restrictions
  - Resident and business satisfaction
  - Emissions and noise levels from freight activity
- Data Analysis
  - Use of monitoring data to identify trends, hotspots and opportunities for improvement
  - Evaluation of pilot projects and new technologies
- Policy and Infrastructure Updates
  - Adjustments to delivery windows, routing policies, or enforcement protocols based on evidence
  - Investment in new infrastructure or digital tools as needed

- Reporting and Transparency
  - Publication of an annual Freight and Servicing Report summarising performance, changes and future priorities
  - Shared with the community and stakeholders to maintain accountability and build trust

15 Town Construction

15.1 Overview

15.1.1 Marlcombe is expected to be delivered over approximately 15 years, with residents and businesses occupying plots while construction continues in adjacent areas. This overlapping of construction and occupation presents a significant challenge: how to deliver a large-scale, complex build-out while maintaining a high standard of residential amenity, safety and accessibility.

15.1.2 To ensure that the town functions effectively throughout this period, development must be phased in a proportionate and coordinated manner, with housing, infrastructure, services and employment space delivered in tandem. This strategy sets out how phasing will be managed to support liveability, economic vitality and sustainable growth.

15.2 Coordinated Delivery of Homes, Infrastructure and Services

15.2.1 Each phase of development will be structured to ensure that essential infrastructure and services are delivered alongside new homes, avoiding situations where residents are left without access to transport, education, healthcare, open space, or retail.

15.2.2 Key principles for phasing from a transport perspective include:

- Primary infrastructure first: Pedestrian and cycle routes, roads, drainage, utilities and public transport corridors will be delivered ahead of or in parallel with housing.
- Mobility hubs and public transport: Bus services and mobility hubs will be operational early in each phase to support sustainable travel from first occupation.
- Education and healthcare: Schools, nurseries and GP surgeries will be phased in line with population growth, with temporary facilities considered where permanent provision lags.
- Retail and employment: Local centres, supermarkets and employment zones will be delivered early in each phase to support self-containment and reduce out-commuting.

15.2.3 It is recognised that a multitude of additional factors will impact on phasing, but as set out in the Behaviour Change and Travel Planning Section, timing is vital for transport and so a strong Vision is required. Phasing plans will be agreed with developers and local authorities and secured through planning conditions, Section 106 agreements, or other legal mechanisms.

15.3 Occupation Thresholds and Trigger Points

15.3.1 To ensure timely delivery of non-residential elements, the strategy will define occupation thresholds that trigger the provision of key facilities.

15.3.2 These thresholds will be identified through the planning process, tailored to each phase and reviewed regularly to reflect actual occupancy and demand.

15.4 Employment and Commercial Space Delivery

15.4.1 To support economic development and reduce reliance on commuting, the Transport Vision sets out that employment and commercial space will be delivered in parallel with residential growth. This will be subject to the commercial viability and other considerations. Key factors include:

- Business parks and mixed-use zones: Brought forward early in the build-out to attract employers and support local job creation.
- Flexible workspace and start-up units: Provided in early phases to support new businesses and local services.
- Retail and hospitality: Phased to match population growth, with anchor tenants secured early to support viability.

15.4.2 This approach ensures that Marlcombe develops as a balanced, self-contained community.

15.5 Flexibility and Responsive Phasing

15.5.1 While the strategy sets out clear expectations for coordinated delivery, it must also be flexible and responsive to changing conditions. Mechanisms include:

- Regular phasing reviews: Conducted annually to assess progress, occupancy and service demand.
- Adaptive infrastructure planning: Allowing for temporary facilities or accelerated delivery where needed.
- Stakeholder coordination: Ongoing dialogue between developers, service providers and The TWG to adjust plans as required.

15.5.2 This ensures that the town remains resilient and responsive throughout its build-out, maintaining high standards of liveability and service provision.

15.6 Construction Management and Residential Amenity

Construction Access and Routing

15.6.1 To prevent construction traffic from impacting residential areas, Marlcombe will implement a dedicated Construction Traffic Management Plan (CTMP), including:

- Designated haul routes: Insofar as it is possible to achieve, construction vehicles will use predefined routes that connect directly to the surrounding road network, avoiding residential streets, schools and pedestrian-priority areas.
- Where appropriate and necessary, temporary access roads will be established at the edges of development parcels to separate construction traffic from occupied areas.

15.6.2 These routes will be clearly signed and enforced through planning conditions and construction management plans.

15.6.3 The overall CTMP is likely to be delivered via the planning process. However, overall management of the CTMP will be via the TWG, as this will allow developers to coordinate their activities more easily, minimising overall disruption for residents and businesses.

Working Hours and Noise Control

15.6.4 To protect residents from excessive noise and disruption, construction activities will be subject to strict controls, in line with the Considerate Contractors scheme and Local Council regulations

- Permitted working hours:
  - Weekdays: 08:00–18:00
  - Saturdays: 08:00–13:00
  - No work on Sundays or public holidays (except in exceptional circumstances by prior agreement)
- Noise mitigation measures:
  - Use of low-noise equipment and acoustic barriers where construction is adjacent to occupied homes.
  - Phased working to avoid prolonged exposure to high-noise activities in any one location.
  - Real-time noise monitoring in sensitive areas, with thresholds agreed in advance.

15.6.5 Contractors will be required to submit Construction Environmental Management Plans (CEMPs) detailing how noise, vibration and other impacts will be controlled.

Dust, Vibration and Air Quality

15.6.6 Construction can generate dust and emissions that affect air quality and comfort. To mitigate these impacts:

- Dust suppression:
  - Use of water sprays, wheel-washing facilities and covered loads.
  - Regular cleaning of roads and access points.
- Air quality monitoring:
  - Installation of sensors near occupied areas to track particulate levels.
  - Responsive measures if thresholds are exceeded.
- Vibration control:
  - Limiting the use of heavy machinery near sensitive receptors.
  - Advance notification to residents of any high-vibration activities (e.g. piling).
  - These measures will be monitored by the TWG and enforced through planning conditions.

Site Safety and Separation

15.6.7 To ensure the safety of residents, workers and visitors:

- Secure site boundaries will be maintained at all times, with fencing, signage and controlled access.
- Pedestrian and cycle routes will be maintained or diverted safely around construction zones, with clear wayfinding.
- Lighting and surveillance will be provided at site perimeters to deter trespass and maintain visibility.

15.6.8 Where construction sites are adjacent to schools, parks, or community facilities, additional safeguarding measures will be implemented in consultation with stakeholders.

Communication and Community Engagement

15.6.9 Transparent and proactive communication is essential to maintaining trust and minimising frustration. Marlcombe will establish a Construction Liaison Framework, including:

- Dedicated liaison officers to function as points of contact for residents and businesses.
- Regular newsletters and digital updates on construction progress, upcoming works and mitigation measures.
- Community drop-in sessions and online forums to gather feedback and address concerns.
- Advance notice of disruptive activities (e.g. road closures, crane operations) via signage, email and social media.

15.6.10 A centralised Construction Information Portal – possibly via the TWG digital platform - will provide real-time updates, contact details and a reporting tool for issues or complaints.

15.7 Delivery of Construction Materials

Consolidation and Staging of Deliveries

15.7.1 To reduce the number of vehicle movements and improve efficiency, Marlcombe will adopt a consolidation and staging strategy for construction materials:

- Consolidation centres / set down areas will be used to group materials from multiple suppliers before delivery to Marlcombe. This allows for fewer, fuller loads and better coordination.
- Staging areas will be established at the periphery of active construction zones. These areas will:
  - Serve as temporary holding zones for materials.
  - Allow for timed release of deliveries to specific plots.
  - Reduce the need for vehicles to circulate within residential or mixed-use areas.

15.7.2 This approach supports just-in-time delivery, reduces congestion and improves site safety. It will also provide an element of buffer storage for materials, ensuring that construction delays due to late deliveries are minimised.

Routing and Access Management

15.7.3 Construction material deliveries will be subject to strict routing and access controls to prevent disruption to occupied areas:

- Designated delivery routes will connect directly to the strategic road network and avoid residential streets, schools and pedestrian-priority zones.
- Time-based access restrictions will be applied to sensitive areas, with no deliveries permitted during school drop-off/pick-up times or peak pedestrian hours.
- Geofencing and GPS tracking will be used to monitor vehicle movements and enforce compliance with routing policies.

15.7.4 Delivery routes will be clearly signed and communicated to suppliers, contractors and drivers, with enforcement managed by Marlcombe's construction logistics team.

Vehicle Type and Emissions

15.7.5 To reduce environmental impacts, Marlcombe will encourage the use of low-emission and appropriately sized delivery vehicles, including:

- Electric or hybrid HGVs and vans, particularly for short-haul deliveries from consolidation centres.
- Smaller vehicles for final delivery into constrained or sensitive areas.
- Covered and well-maintained vehicles to reduce dust and noise.

15.7.6 Where feasible and appropriate, electric charging infrastructure will be provided at staging areas and construction compounds to support fleet transition.

Scheduling and Coordination

15.7.7 Deliveries will be scheduled and coordinated to avoid congestion and ensure efficient site operations:

- Digital scheduling platforms will be used to allocate delivery slots and prevent overlap.
- Staggered delivery windows will be applied to large sites or multi-phase developments.
- Real-time communication between site managers and delivery drivers will allow for adjustments based on site conditions.

15.7.8 Contractors will be required to submit Construction Traffic Management Plans (CTMPs) detailing how deliveries will be managed, including contingency measures for delays or disruptions.

Safety and Public Realm Protection

15.7.9 To protect residents, workers and the public realm during material deliveries:

- Temporary traffic management measures (e.g. marshals, signage, barriers) will be used at delivery points.
- Pedestrian and cycle routes will be maintained or safely diverted around active delivery zones.
- Surface protection will be applied to roads and pavements used by heavy vehicles to prevent damage.

15.7.10 Regular inspections will be conducted to ensure compliance and identify areas requiring maintenance or adjustment.

15.8 Conclusion

15.8.1 The construction of the new town east of Exeter represents a transformative opportunity to deliver a sustainable, well-connected and inclusive community. However, the scale and duration of the build-out, anticipated to span approximately 15 years, requires a carefully managed approach to ensure that development is not only efficient, but also sensitive to the needs of early residents and businesses.

15.8.2 This strategy sets out a clear framework for phased and proportionate delivery, ensuring that homes are supported by timely infrastructure, public services and commercial amenities. By aligning occupation thresholds with the delivery of schools, healthcare, retail and employment space, Marlcombe will avoid the pitfalls of under-serviced development and foster a sense of completeness at every stage.

15.8.3 Equally important is the commitment to construction management that protects residential amenity. Through designated access routes, strict working hours, noise and dust mitigation and proactive community engagement, Marlcombe will maintain a high standard of liveability even as construction continues. The delivery of construction materials will be coordinated through consolidation centres, digital scheduling and routing protocols to minimise disruption and environmental impact.

16 Transport Vision Implementation and Monitoring

16.1 Phased Delivery Aligned with Development

16.1.1 The successful implementation of the Transport Vision for Marlcombe will be intrinsically linked to the phasing of development as described in Section 7. Transport infrastructure and services will be delivered in tandem with housing and employment growth to ensure that sustainable travel options are available from the outset. This approach will:

- Encourage early adoption of sustainable travel behaviours
- Prevent car dependency from becoming embedded
- Ensure infrastructure investment is cost-effective and demand-responsive

16.1.2 Each phase of development will be accompanied by a corresponding transport delivery package, including walking and cycling infrastructure, bus services, mobility hubs and electric vehicle (EV) charging provision.

16.1.3 Implementation of the public transport infrastructure and services will need to be established at an early stage and linked to delivery of development. There will need to be an element of flexibility to adapt to any changing circumstances. At this early stage, the following high-level programme is suggested, noting that it is indicative and to be agreed, with consideration of other issues such as commerciality and placemaking.

Phase 0: Pre-construction

16.1.4 This covers ongoing schemes within Devon and preparation of the management arrangements for the management of Marlcombe. It comprises electrification of the bus fleet within Devon and the existing DevonBus Enhanced Partnership between DCC and local bus operators. This provides additional control and influence over timetable, route and fares on bus services within the county.

16.1.5 In addition, Phase 0 also refers to the on-going delivery of mobility hubs and active travel infrastructure within Marlcombe

Phase 1: Pre-Occupation - Early Delivery and Enabling Infrastructure

16.1.6 Establishing foundational services and infrastructure to support initial occupation and intercept existing travel demand.

- **Primary Access Road**
  - Construction of the primary access road to facilitate use by buses, future residents and to aid construction

  Key Actions:

  - Road to include segregated cycle and pedestrian facilities
  - Will require improvements to A30 airport junction and active travel links towards Cranbrook

- **Education Campus**
  - Education related trips make up the majority of AM peak movements. Providing education within the site prevents the need for these trips to leave the site and impacting surrounding infrastructure

  Key Actions:

  - Provide Education Campus prior to occupation of 1st dwelling.

- **Park and Ride Services (A30 and A3052)**
  - Park and ride sites will be prioritised for early delivery due to their early commercial viability and potential to intercept existing car trips into Exeter. These services will:
    - Serve commuters from East Devon and the rural hinterland
    - Provide sustainable travel options for early residents of Marlcombe
    - Reduce pressure on M5 Junctions 29 and 30

  Key Actions:

  - Construct Park and ride facilities with secure parking, shelters, real-time information and EV charging
  - Launch high-frequency bus services (ideally every 15 minutes) to Exeter, coordinated with existing commercial routes (via DevonBus partnership).
  - Integrate with mobility hubs to enable walking, cycling and internal bus access for new residents

- **Initial Mobility Hubs**
  - Primary and secondary mobility hubs will be delivered at strategic locations, including park and ride sites and early residential clusters. These hubs will:
    - Support first-mile/last-mile connectivity
    - Offer bike hire, secure cycle parking and real-time journey planning tools
    - Provide wayfinding and digital access to transport services

  Key Actions:

  - Install modular, scalable hub infrastructure
  - Launch TWG digital platform for journey planning and payment

Phase 2: Up to 500 dwellings - Responsive Expansion and Internal Connectivity

16.1.7 Scaling internal services and infrastructure in line with population growth and land use development.

- **Additional facilities with Marlcombe to maximise internalisation**
  - Community centre
  - Convenience store
  - Market square
  - Meanwhile uses for e.g. family hub, start-up enterprise
  - 10,000sqm employment floorspace
  - GI, sport and play

  Key Actions:
  - Use planning mechanisms to ensure phased delivery with appropriate trigger points
  - Some facilities may require forward funding
- **A3052 Clyst St Mary Junction Improvements**
  - Identified as a requirement within DCC planning exercise

  Key Actions:
  - Identify and agree layout of junction
  - Likely to require forward funding
- **A376/A3052 Bus Priority to M5 Jct 30 / Sowton Ind Estate**
  - Ensure that park and ride and general bus services experience faster and more reliable journey times into Exeter (including Sowton), making them an attractive modal choice and reducing car use.

  Key Actions:
  - Identify and agree layout of bus priority measures
- **A3052 protected cycle path**
  - Provide a safe cycle route into Exeter and Sowton, encouraging cycle use. Sowton would be a cycle ride of approximately 20 minutes via this route.

  Key Actions:
  - Identify and agree layout of cycle route

- **Clyst Valley Trail and Bishops Court Lane active travel routes**
  - Facilitate access to park and ride services for residents and provide an attractive north-south active travel route
  - Accommodate some leisure trips close to site

  Key Actions:

  - Progress schemes through LCWIP process
- **Internal / Cranbrook Circular Bus Service**
  - As residential and commercial areas begin to populate, the internal circular bus service will be introduced to connect key destinations within Marlcombe and Cranbrook. This may initially be part of the Park and Ride offering to reduce operating costs.
  - This allows use of shared facilities within Cranbrook before they are available within Marlcombe.

  Key Actions:

  - Launch route with 10-minute peak and 15–20 minute off-peak frequencies
  - Use electric or hydrogen-powered buses to align with sustainability goals
  - Adjust routes and frequencies based on real-time demand data and occupancy levels
- **Secondary and Mini Mobility Hubs**
  - Mobility hubs will be expanded to ensure every dwelling and workplace is within 640 metres of a hub.

  Key Actions:

  - Deploy mini hubs in residential areas with secure cycle parking and wayfinding
  - Add services such as parcel lockers, car club bays and community amenities
  - Monitor usage and adapt services through digital feedback and performance metrics

Phase 3: Pre 1,000 dwellings - Full Integration and Optimisation

- **Continued expansion of facilities with Marlcombe to maximise internalisation**
  - Health provision
  - 10,000 sqm employment
  - 500 sqm E class town centre space
  - GI, sport and play

  Key Actions:

  - Use planning mechanisms to ensure phased delivery with appropriate trigger points

- **Rail Integration**
  - As demand stabilises, bus services will be optimised to align with train timetables at Cranbrook and Digby & Sowton stations.
  - Passing loop provided on West of England Line , doubling rail frequency and capacity a Cranbrook Station
- Key Actions:
  - Implement appropriately timetabled bus connections to rail stations
  - Explore through-ticketing options for seamless multimodal journeys
  - Enhance station access with improved bus stops, shelters and pedestrian pathways
  - Begin subscription model trials for shared mobility services
  - Pursue West of England Line Loop through national rail resilience works

Phase 4: Pre 3,500 dwellings – Further Rail Integration and Optimisation

- **Continued expansion of facilities with Marlcombe to maximise internalisation**
  - Second Primary School
  - 40,000sqm employment
  - Supermarket
  - 1000sqm E class town centre space
  - GI, sport and play
  - Dry-side leisure centre

  Key Actions:
  - Use planning mechanisms to ensure phased delivery with appropriate trigger points
- **Rail Integration**
  - As demand stabilises, bus services will be optimised to align with train timetables at Cranbrook and Digby & Sowton stations.
  - Passing loop provided on avocet Line , doubling rail frequency and capacity a Digby & Sowton Station
- Key Actions:
  - Implement appropriately timetabled bus connections to rail stations
  - Pursue Avocet Line Loop through Devon Metro project

16.2 Governance and Delivery Mechanism

16.2.1 A single, unified delivery body (TWG) will oversee the Vision. As set out previously, the precise form of this stewardship is still to be determined, but it will be responsible for coordinating implementation across all development parcels. This body will:

- Maintain a single overarching Transport Vision
- Provide a framework for developers to sign up to and contribute towards
- Ensure consistency in design standards, branding and service levels
- Function as the central point of contact for residents, developers and transport operators

16.2.2 This governance model will support long-term stewardship and adaptability, ensuring the transport system evolves with the community's needs.

16.3 Monitoring Framework

16.3.1 A robust monitoring framework will be established to track progress against the Vision's objectives and inform future interventions. Key Performance Indicators (KPIs) will include:

- Mode Share Targets: Proportion of trips made by walking, cycling, public transport and private car
- Bus Ridership: Patronage levels on local and regional bus services, including the internal circular route and park & ride services
- EV Uptake: Number and proportion of households with electric vehicles and usage of public charging infrastructure
- Resident Satisfaction: Overall satisfaction with transport services and infrastructure, measured through regular surveys.

16.4 Data Collection and Feedback Mechanisms

16.4.1 Monitoring will be underpinned by a combination of quantitative and qualitative data sources:

- Household Travel Surveys: Conducted at regular intervals to assess travel behaviour, satisfaction and barriers to sustainable travel.
- Customer Satisfaction Surveys: Targeted at users of specific services (e.g. bus passengers) to identify areas for improvement.
- Digital Feedback and Reporting Platform: An online system will allow residents to report defects (e.g. damaged infrastructure, service issues) and submit suggestions for service enhancements.

16.4.2 This feedback loop will ensure that the Vision remains responsive to user needs and emerging trends.

16.5 Review and Adaptation

16.5.1 The Transport Vision will be a living document, subject to periodic review and refinement. Annual monitoring reports will be published, summarising performance against KPIs and recommending adjustments where necessary. These reviews will:

- Inform future phases of development and infrastructure delivery.
- Enable proactive responses to underperformance or emerging challenges.
- Maintain alignment with wider policy objectives, including decarbonisation and health.

Appendix A Trip Rates Note

Stantec

Transport Vision – Trip Rate Appendix

Marlcombe

September 2025

Prepared for:
CBRE

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Project Number:
22462-TCAM

Document control sheet

Issued by	**Stantec Hydrock Limited** UNITED KINGDOM stantec.com	+44(0) 1209 719037 stantec.com
Client	East Devon Council	
Project name	East Devon New Community	
Title	Transport Visioning – Trip Rate Appendix	
Doc ref	22462-HYD-XX-XX-TP-RP-3002	
Project number	22462	
Status	S3	
Date	18 September 2025	

Document production record

Issue number	P04	Name
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Document revision record

Issue number	Status	Date	Revision details
P01	S3	30/07/2025	For comment and review
P02	S3	09/09/2025	Minor updates
P03	S3	12/09/2025	Minor updates for consistency with Transport Vision
P04	S3	18/09/2025	Updates to reflect client comments

Contents

Figures

Tables

Appendices

1 Introduction

1.1.1 This Trip Rate Appendix (TRA) forms an addition to the Transport Vision (TV) has been prepared by Hydrock now Stantec (HnS) on behalf of East Devon Council (EDC). The TV sets out potential paths to achieve a modal shift away from private car use for the Marlcombe, a new settlement of approximately 8,000 homes. This TRA describes the work undertaken and data sources used to derive suitable trip rates for Marlcombe

1.1.2 The trip rates are used in a network modelling exercise being carried out by WSP on behalf of Devon County Council (DCC), the local highway authority. The purpose of the modelling is to understand the impacts of the new community on the surrounding highway network and to identify if and where mitigation schemes (e.g. junction capacity improvement) may be required. This process is separately documented by WSP and not covered in this note.

1.1.3 The 2021 Census recorded an average occupancy of 2.26 people per household in East Devon, equating to a likely population of around 18,250 people for Marlcombe. In terms of comparison towns within Devon, this falls between Brixham (16,700) and Tiverton (21,300) and would be the eight largest settlement in the county (excluding Plymouth).

1.1.4 A town of this size will have a significant degree of self-containment. For many people, their day to day needs and employment are served by the town in which they live, with less-frequent trips made to other destinations. Although there is a need for people to be able to move freely around the town itself, this self-containment significantly limits impacts on the wider highway network.

1.1.5 Traditionally, the impacts of new developments have been mitigated though highway capacity increases to address any ‘pinch points’ identified through traffic modelling. This ‘predict and provide’ approach largely assumes that people’s existing travel habits will remain unchanged and provides additional highway capacity to accommodate this. This approach is called ‘Predict and Provide’.

1.1.6 However, continued expansion of private car travel and associated highway capacity increases are neither sustainable nor cost effective. There is also a significant body of evidence which shows that increasing highway capacity leads to 'induced demand' as there are few disincentives to reduce driving.

1.1.7 As a result of this, and a range of environmental and health impacts, there has been a move away from Predict and Provide and toward a ‘Decide and Provide’ approach where every effort is made to influence people's travel choices towards sustainable modes, significantly reducing traffic impacts and car reliance. Crucially, this approach is not set around restricting people’s travel choices but rather enhancing the range of modes that they able to choose from and improving mobility for those who do not own or are unable to use a car. In short, it is an approach that makes the conscious decision to prioritise provision for sustainable modes.

1.1.8 Encouraging sustainable modal choice is not only a policy-compliant approach, but also a logical and effective method of mitigating development impacts. As a result, the new community will be shaped by a vision which places an emphasis on active travel, greater connectivity, and innovative transport and home-working technologies, in line with the Exeter Transport Strategy (2021).

1.1.9 The need for this approach is further enhanced by the constrained nature of the surrounding highway network, where the potential for capacity improvements is limited:

1.1.10 Recognising the importance of access and mobility, HnS has developed the following 'Transport Vision'. This presents the guiding principles on which the access and movement strategy is developed. These are set out below:

1. Understand the role of access and mobility in delivering sustainable, cohesive, self-sufficient, balanced and equitable community.
2. Minimise the need for travel.
3. Adopt 20-minute neighbourhoods.
4. Provide a transport network that prioritises services of a standard which encourages use by all.
5. Contribute to public transport services of a standards which encourages use by all,
6. Recognise the health and wellbeing benefits of active travel and provide the infrastructure that creates a healthy lifestyle culture amongst residents/visitors.
7. Provide a network which is future proofed to facilitate a growing uptake of emerging sustainable technologies.
8. Recognise changing travel behaviours and maximise the opportunity that has arisen out of the COVID-19 pandemic. Influence and design for a new 'norm'.
9. Recognise and maximise the synergies that exist between co-locating new residential development adjacent to services and amenities.
10. Form a relationship with neighbours, and in turn:
    a. Enhance local infrastructure for neighbouring residents – minimise the distances that they need to travel to local services and amenities.
    b. Enhance existing transport networks for neighbouring residents – provide greater access to sustainable travel options compared to those that exist at the moment.
11. Contribute positively to the declared Climate Emergency in neighbouring authorities.
12. Seek to address road safety and congestion to create a more pleasant, less car-dominated environment.
13. Incorporate active travel interventions into highway mitigation measures through holistic design and sympathetic junction treatment.

1.1.11 In stakeholder discussions, National Highways (NH) has been clear that it acknowledges the limited ability to deliver traffic capacity improvements at some junctions and that a more holistic approach will need to be adopted.

1.1.12 Crucially NH wish this to be considered from the users' perspectives – how will people living and working in the community travel and what will influence these decisions. This is to be aligned with DfT guidance on 'transport user personas'.

1.1.13 This document sets out the first principles approach used to understand the impact of Marlcombe on the surrounding transport network, including consideration of the situation from the viewpoint of future occupants.

2 Scenarios Examined

2.1 'Business As Normal' (BAN) Scenario

2.1.1 This scenario would be based on a 'typical town' located in Devon. In line with existing travel habits within much of Devon, car travel would be the predominant mode of transport for many people.

2.1.2 There would be a normal range of services and facilities, with no particular restrictions on traffic or car use. In short, this would be a development that operates as many established communities currently do, and it would therefore have similar travel habits to those identified in data sources such as the National Travel Survey (NTS) and Census 2011.

2.2 New Community (minimal change) Scenario

2.2.1 This evolves the BAN scenario above but finesses it through moderate adjustments to reflect the adoption of a more progressive approach to transport planning and provision. This includes measures to reduce the travel demand, such as ensuring that dwellings include a space for home working, as well as high-quality telecommunications infrastructure.

2.2.2 Designed to be integral to the layout, the New Community will be provided with a high-quality and well-connected active travel network, with a full and comprehensive walking, wheeling and cycling network that provides priority over the private car as recently reinforced within the Hierarchy of Road Users in the Highway Code.

2.2.3 The development will include active travel hire bikes, e-bikes and scooters. In addition, it will offer a strong range of services and facilities, including shops, schools, leisure, healthcare and co-working spaces. Furthermore, commercial and domestic deliveries will be consolidated at local centres, with Mobility Hubs providing a range of sustainable travel opportunities. The site layout will prioritise sustainable travel , walking, wheeling and cycling, by providing these modes with the most direct routes.

2.2.4 These measures will allow and encourage people to make more considered choices about how they travel. They will affect different people and different trips in different ways.

2.2.5 This scenario describes realistic outcomes with a truly mixed-use development, balancing residential with a variety of employment, education and leisure uses. This would be supported by good quality, well-considered infrastructure connecting to key local destinations.

2.2.6 The minimal change scenario would be readily achievable through relatively modest transport planning measures.

2.3 New Community (target) Scenario

2.3.1 The ambition for Marlcombe is for it to go beyond minimal change and for it to be an exemplar development, which strongly promotes and facilitates modern local living. Development phasing and investment is critical to the success of this, with local employment, education, retail and leisure opportunities being delivered in tandem with housing growth so that people have an opportunity to develop new travel habits from the day they move in.

2.3.2 A strong range of transport measures and incentives will be implemented, encouraging modal switch away from the private car.

2.3.3 This is the approach set out within the main Transport Vision document, but it should be emphasised that the modelling work is based on the minimal change scenario as it is readily achievable and therefore presents a robust assessment of potential impacts.

3 Methodology

3.1 Business as Normal (BAN) Scenario

3.1.1 As described in previous documentation, the approach used to identify the traffic impact associated with the new development comprises seven-steps:

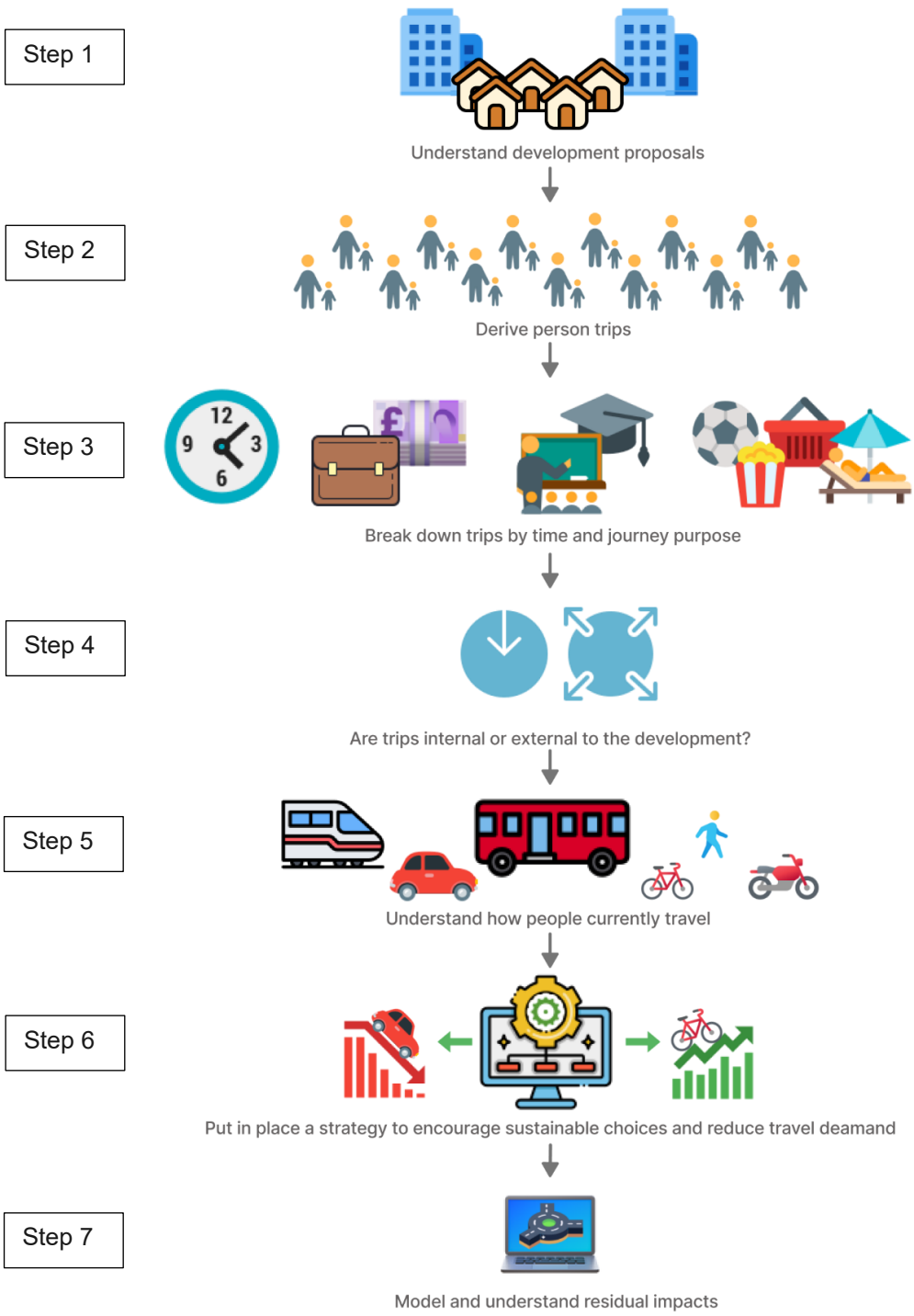

Figure 3.1 Trip level calculation process

3.1.2 Business as Normal is covered by the first five of the above steps and represents how a typical community of this size would operate. A normal town will have a mix of land-uses, including residential and employment, retail, education, leisure, etc. For many people, day-to-day travel, particularly in the peak hours would be within their local town, with longer-distance trips made less frequently.

3.1.3 Although they would use local roads within the town, these 'internal' movements would not affect the surrounding highway network and would need to be excluded from the DCC modelling exercise.

3.1.4 It is important to have a good understanding of what this level of internalisation would be. To what extent would the town be self-sufficient in catering for its residents' needs and allowing them to use local facilities rather than having to travel further away?

3.1.5 For the Business as Normal operation, this has been determined by reference to data available for existing settlements. It should be emphasised that these are 'normal' comparison towns and communities, without any unusual or exceptional transport facilities. The steps carried out are described below, along with the data sources used.

Step 1: Derive Person Trips

3.1.6 The first step is to identify how may person trips are associated with each dwelling. This is the number of people leaving each home, no matter how they choose to travel.

Derive person trips

Data Sources:

3.1.7 The industry-standard TRICS database has been consulted in order to derive average total person trip rates (i.e. trips across all modes of transport) for the residential element of the development.

3.1.8 The TRICS database is an extensive record of travel surveys across a wide range of land-uses and locations. It allows the user to select suitable comparison sites by filtering across a range of parameters. The selected parameters used were:

- Land Use - Residential – Housing Privately Owned (generally provides higher and therefore more robust rates than affordable housing developments)
- Development Region - All regions excluding Greater London and Ireland
- Development Location - Suburban Area, Edge of Town, and Neighbourhood Centre – All Zones
- Survey Days - Monday – Friday
- Dates of Survey - 01/01/13 – 27/09/22 (most recent ten years)
- Development size - 200 – 1817 residential units (this is the maximum number of units available on the TRICS database)

3.1.9 These parameters resulted in 21 suitable comparison sites. On closer review, one of these sites was manually removed due to the survey taking place on a date that was within the Covid 19 work from home guidance.

3.1.10 This exercise gave the following all person trip rates and trips (full outputs included as Appendix A):

Table 3.1: Baseline all person trip rates and trips

Time Period	Residential Total Person Trip Rates (per dwelling)			Total People Trip Demand (8,000 dwellings)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
0700-0800	0.102	0.517	0.619	816	4,136	4,952
0800-0900	0.200	0.750	0.950	1,600	6,000	7,600
0900-1000	0.192	0.257	0.449	1,536	2,056	3,592
1600-1700	0.491	0.250	0.741	3,928	2,000	5,928
1700-1800	0.582	0.264	0.846	4,656	2,112	6,768
1800-1900	0.484	0.276	0.760	3,872	2,208	6,080
12 Hours	3.573	3.602	7.175	28,584	28,816	57,400

Step 2: Understand Trip Purpose

3.1.11 The trips identified above will be made for a range of different purposes and these reasons will vary by time. For example, travel for education will be high in the 0800-0900 time period, but lower between 1600-1630 as schools generally finish before this time.

Break down trips by time and journey purpose

3.1.12 Different trip purposes will also have different levels of internalisation. For instance, holiday trips will typically be external, while primary education will typically be internal. Understanding trip purpose is key to understanding internalisation.

Data Sources:

3.1.13 The National Travel Survey (NTS) has been used to identify the different reasons for which trips are made for each hour. Reference has been made to *Table NTS0502a – Start time by journey purpose* for 2023 (the most recent data available). This splits journeys into the following categories:

- Commuting
- Business
- Education
- Escort education
- Shopping

- Other work, other escort and personal business
- Visiting friends, entertainment and sport
- Holiday, day trip and other
- All purposes

3.1.14 The resulting percentage splits are as follows:

Table 3.2: Trip Purpose by Start Time

Start time	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)	Total (%)
0700-0800	41	4	15	8	4	14	5	9	100
0800-0900	16	2	28	25	5	13	4	7	100
0900-1000	10	4	2	5	22	24	16	18	100
1600-1700	21	3	7	6	14	20	17	12	100
1700-1800	26	3	3	2	14	20	21	11	100
1800-1900	17	2	1	1	16	17	31	15	100
All day	16	3	9	8	16	17	18	13	100

Step 3: How do People currently Travel

3.1.15 Different trip purposes are undertaken by different models of transport. For example, education escort trips (school runs) have a high proportion of walking, as many primary schools have a small catchment area.

Understand how people currently travel

3.1.16 There is a wide variety of data available on how people travel for different reasons, and the most appropriate source varies by purpose. These sources are described below. It should be noted that all rail travel has been taken as external as there is no on-site rail station.

Data Sources:

3.1.17 The National Travel Survey (NTS) has been used to identify the different ways that people travel for different journey purposes. Reference has been made to *Table NTS0409a: 2023 Average number of trips by purpose and main mode* (trips per person per year) to derive a modal split for each of the above journey purposes. Travel via London Bus or Underground has been removed from the data.

3.1.18 There is a need to adjust these national characteristics to reflect local travel habits and accessibility. This was achieved by reference to 2011 Census data Travel to Work by Mode across 'East Devon 006', 'East Devon 013', and 'East Devon 014' (2011 data was used to avoid the distorting impacts of Covid on travel habits). The NTS Commuting mode split was

factored to match the local Census data. The factoring process first identified that local car use for commuting is 17% higher in these areas than it is at a national level (70% locally versus 60% nationally). Car use across all trip purposes was therefore factored up by 17%, with the difference being pro-rated across other modes to retain the same overall number of trips.

3.1.19 This exercise produced a set of localised modal splits by journey purpose. These splits were then applied to the trips rates and purpose splits derived at Steps 1 and 2.

Step 4: Are Trips Internal or External

3.1.20 As detailed above, the overall development will be a town slightly larger than Tiverton. Many people will live and work in the same area, and may also go to school, shop, etc. within the settlement on a regular basis. These 'internalised' trips will not affect the wider highway network so do not need to be incorporated in the network modelling exercise.

Are trips internal or external to the development?

3.1.21 The level of internalisation will vary by trip purpose. For example, almost all education trips will be internalised due to the school provision within the development. In contrast, trips for days out or holidays are very unlikely to be internalised. Different data sources were therefore used for different journey purposes.

Data Sources – Commuting and Business Travel

3.1.22 Reference was made to Census 2011 Table DC7701EWla - Method of travel to work (2001 specification) by distance travelled to work. This is available at local authority level, so East Devon was selected as the comparison area. The table sets out the distances travelled to work via different modes. For example, cycle trips are generally significantly shorter than car trips. Any trips shorter than 2km were taken to be internalised within the development, with all other trips externalised.

3.1.23 As the data is only available at local authority level, this is considered to be highly robust, as it will include people living rurally within East Devon, who are likely to have longer commutes than people living in urban areas such as the New Community. It was identified that 14% of car driver commuter trips would be internalised.

Data Sources – Education and Escort Education

3.1.24 School places will be provided within Marlcombe for all children living there. Any primary or secondary school travel (including sixth form) will be therefore make internal trips.

3.1.25 It is likely that there will be some residents in tertiary education and may be travelling further. This proportion was set to 3% which reflects the proportion of UK population falling into the DfT "Young Low Income Without Cars" Persona, as this is the population segment most likely to be in tertiary education.

3.1.26 Escort Education is trips accompanying children to school. This will almost exclusively be for younger children, so could realistically be assumed to be fully internalised. However, it has been set to match the 3% allowance made for education trips.

Data Sources – Shopping

3.1.27 In order to understand shopping habits, reference has been made to TRICS surveys of Cambourne Village. The purpose of the Cambourne surveys was expressly to gain an insight as to the likely level of internalisation for different land uses in a new, mixed-use new community.

3.1.28 Cambourne is a substantial free-standing community in Cambridgeshire, and at the time of the survey (June 2018) had a total site area of 400 hectares. The development comprised 4,250 new homes, split between 2,975 privately owned and 1,275 non-privately owned dwellings. In addition, the site included a varied mix of non-residential developments, including retail, schools, a hotel, a sports centre, a community centre and other uses. Construction of the site commenced in 1998.

3.1.29 Detailed surveys of the developments within Cambourne were undertaken in June 2018. These surveys recorded mode of travel (walk, cycle, driving, motorcycle or taxi) and whether people had travelled from within or outside the community. These surveys were tabulated across the day and internal and external splits derived for each mode of transport. Across all of the retail units surveyed, this showed the following levels of internalisation for retail trips:

- Walking – 85%
- Cycling – 77%
- Driving – 41%
- Motorcycle – 57%
- Taxi - 100%

Data Sources – Other work, personal business, visiting friends, entertainment, sport

3.1.30 The Cambourne surveys were also used to identify internalisation rates for the other land uses available. These are a church, community centre, fitness centre and library & health centre. Although these do not fully represent all of the other business, sport and visiting friends trips that could be made, they do cover a range of different land uses and are considered to represent an appropriate proxy.

3.1.31 This yielded the following levels of internalisation:

- Walking – 99%
- Cycling – 97%
- Driving – 57%
- Motorcycle – 83%
- Taxi - 0% (no trips made)

Data Sources - Holiday, day trip and other

3.1.32 For this trip purpose, it is unlikely that they would be internal to the development. All trips across all modes were therefore assumed to be external trips.

Business as Normal Summary

3.1.33 All of the person trips associated with the new dwellings have been split down into journey purpose and mode. The resulting trips have then factored by their likelihood to remain internal to Marlcombe. In all cases, reference has been made to recognised data sources adjustments made to reflect local accessibility.

3.1.34 Because all of the data and comparison sites are from typical, average sites with no exceptional transport schemes or interventions, the resulting trips represent the operation of a conventional town of this size in a location of this nature. They would therefore intrinsically include an allowance for an average level of accessibility in terms of public transport frequency, pedestrian and cycle infrastructure etc.

3.1.35 Full output sheets from this exercise are included as Appendix B . The resulting external car trips are around 38% lower than gross movements over a day, rising as high as 57% internalisation in the morning peak. This is largely driven by internalising education-related trips. The rates and trips are summarised as follows:

Table 3.3: All Movement and External Car Trip Rates by Start Time

Time	Baseline All Trips All purposes			Baseline External Trips All purposes		
	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	0.049	0.247	0.296	0.038	0.194	0.233
0800 to 0859	0.096	0.358	0.454	0.041	0.152	0.193
0900 to 0959	0.092	0.123	0.214	0.063	0.084	0.147
1600 to 1659	0.235	0.119	0.354	0.161	0.082	0.243
1700 to 1759	0.278	0.126	0.404	0.198	0.090	0.287
1800 to 1859	0.231	0.132	0.363	0.159	0.091	0.250
All day	1.707	1.721	3.428	1.067	1.075	2.142

Table 3.4: All Movement and External Car Trips by Start Time

Time	Baseline All Trips All purposes			Baseline External Trips All purposes		
	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	390	1,976	2,366	307	1555	1,862
0800 to 0859	764	2,866	3,631	325	1218	1,542
0900 to 0959	734	982	1,716	504	675	1,179
1600 to 1659	1,876	955	2,832	1,289	6,56	1,945
1700 to 1759	2,224	1,009	3,233	1,581	717	2,299
1800 to 1859	1,850	1,055	2,904	1,272	726	1,998
All day	13,655	13,766	27,420	8,535	8,604	17,138

3.1.36 It can be seen that, once internalisation is accounted for, external trip rates for a normal town of this size are already very close to the allowances incorporated in the DCC modelling. This should give a high degree of comfort that the work carried out is robust and the trip rates achievable.

3.2 New Community (minimal change) Scenario

3.2.1 This looks at how moderate adjustments can be made to reflect the adoption of a more progressive approach to transport planning and provision. This includes implementing moderate measures to reduce the travel demand and encourage uptake of sustainable transport modes.

Step 6: How much can people change?

3.2.2 Different groups of people will have different abilities to change how, when or if they travel. For example, a retired person may have more discretion as to when they shop than a person who is employed and has a young family. Their ability to switch may also vary by mode. People in an older age range may have higher levels of mobility impairments and therefore be less likely to switch to active travel modes.

Put in place a strategy to encourage sustainable choices and reduce travel deamand

3.2.3 As set out in paragraph 1.1.11, NH wishes for any proposed interventions to be considered from a user perspective in order to understand how they will affect people's travel choices.

DfT Personas

3.2.4 Users of transport have different needs, preferences and behaviour traits. To capture this diversity and consider the impact that this should have on policy and decision making, the DfT has developed 12 different 'personas' to reflect 9 groups / segments of people[1].

3.2.5 Typically, each group is represented by a single persona (a fictional character) that provides an illustration of the people that belong to that segment; some are represented by two personas to display diversity.

3.2.6 These segments were developed from existing research that was validated and updated by a large-scale survey and ethnographic research in 2022. They break up the population into smaller clusters to define their individual traits when using transport. The personas were published in July 2023 and are summarised in the illustration overleaf. These personas make up differing proportions of the UK's population.

3.2.7 For each persona, the DfT developed a detailed information pack, setting out their key characteristics, habits, concerns, motivations and opportunities for change. These profiles also include the enablers and barriers to different transport modes. For ease of reference, these have been reproduced as Appendix C of this report.

It has been assumed that no switch would be made to motorcycle, scooter, moped, taxi or other method of travel. Mode switch has been determined for buses, rail, walking and cycling. People's ability to internalise their trip, travel outside of peak hours or not to travel (e.g. working from home or internet shopping) has also been considered.

[1] https://www.gov.uk/guidance/transport-user-personas-understanding-different-users-and-their-needs

Personas: approximate segment size

Think People | Department for Transport

For each segment, an approximate segment size (expressed as a range: 5% or less; 6-10% and 11-20%) has been developed to provide guidance on relative size of the segments.
This range takes into account the size of each segment observed across a number of surveys that have segmented the population of England aged 16+.

Segment 1 — 11-20%
Less Mobile, Car Reliant

Brian
I am a wheelchair user and the door-to-door experience is infinitely easier if I drive.

Betty
Driving helps me to enjoy my retirement and I've become reliant on it due to my arthritis.

Segment 2 — 11-20%
Young Urban Families

Farah
My husband and I share our car, and between commuting and school runs – a second car would be very handy!

Segment 3 — 6-10%
Older Less Affluent

Gina
I work in adult social care and my car is essential for getting out and about to my clients. I don't have any choice but to drive.

Segment 4 — 11-20%
Comfortable Empty-nesters

Jeff
We got rid of one of our cars when we retired. With the slower pace of life, we enjoy using bus and train services.

Segment 5 — 11-20%
Suburban Families

Nigel
I work from home a lot more but I still drive to work. I'm hoping that we might be able to afford an electric car soon.

Segment 6 — 11-20%
Heavy Car Users, Frequent Flyers

Oliver
I use the car every day – it's down to where I live, my job and driving the kids around.

Segment 7 — 5% or less
Elderly And Low Income Without Cars

Peter
I miss the freedom of using my car but having an over-60s pass helps me to get out and about.

Pippa
My spinal condition means that bus journeys are just too uncomfortable, so I am more reliant on lifts from my daughter.

Segment 8 — 6-10%
Urban Professionals Without Cars

Rosa
I can get everywhere I need to easily by public transport, but I'd like to use my bike more.

Segment 9 — 5% or less
Young Low Income Without Cars

Zoe
I can access bus and Metro services from where I live but I'd love to have my own car when I can afford it.

Zahir
I'm out of work and struggling financially – so I walk and cycle whenever I can to save money for essentials.

Non-car Owning Segments

⁝⁝ Non-car owners segments (7-9).
Images used in this document are of fictional people and have been chosen to portray the key characteristics of Personas.

Figure 3.2 DfT Personas Summary Sheet

3.2.8 For each persona, mode and trip purpose, their propensity to swich has been rated on a six-point scale (None, Very Low, Low, Medium, High, Very High), scoring 0-5 points. An extract from this exercise is shown below:

Persona			Proportion in Employment	Segement Size			Ability to Change	Commuting
				Upper	Lower	Average		
Brian		Less Mobile, Car Reliant	53%	11%	20%	16%	Base Car Trips	Low
							Shift to Bus	High
							Shift to Rail	Medium
							Active Travel	Very Low
Betty							Vary Time	Medium
							Internalise	Medium
							Remove trip	High

Figure 3.3 Propensity to shift extract

3.2.9 This scoring was carried out in an internal workshop, with reference to the DfT Persona Packs for each segment, taking account of the group characteristics (mobility, use of home delivery, employment status, etc.).

3.2.10 For each trip purpose and mode, a combined weighted average was derived by weighting the scoring by the average size of each segment to derive a total score across all future residents of the New Community.

3.2.11 It should be noted that these weighted averages do not represent the anticipated modal switch, but instead are a factor used to modify the maximum achievable shifts, as outlined below.

Upper Limit of Change - 'Minimal Change'

3.2.12 For each mode, an upper limit of potential shift was identified by reference to relevant policies or documentation. These figures are intended to represent the upper limit of what could be achieved through moderate transport planning measures under ideal conditions and would be reduced appropriately to reflect the above personas scoring. These minimal change maximum levels are as follows (sources also provided):

- % Change in Walking – Maximum shift 20%
  - DfT Gear Change suggests government ambitions for up to 50% shift to active modes
  - This figure is also stated as the target for Exeter in the Devon and Torbay Local Transport Plan 4: Consultation draft (Section 5.3)
  - A 20% maximum increase is a conservative value relative to this target
- % Change in Cycling Pedal cycle – Maximum shift 20%
  - DfT Gear Change suggests government ambitions for up to 50% shift to active modes
  - A 20% maximum increase is a conservative value relative to this target
- % Change in Car or van driver – Maximum shift not specified
  - Derived from shift towards all other modes
  - The increases in use of all other modes, along with the potential to remove the trips are applied as a reduction in car use.

- % Change in Car or van passenger – no change
    - Car use is likely to reduce due to accessibility measures and travel planning, but the proportion of shared journeys is likely to increase. It is assumed that these two effects would balance, and no net change would result.
- % Change in Motorcycle – no change assumed
- % Change in Other private transport – no change assumed
- % Change in local bus - Maximum shift 10%
    - Devon County Council Bus Service Improvement Plan (June 2024) Table 5.1 targets a 10% modal share target for 2030 (2022 baseline – 3%)
    - This is a target across the county and should be easier to achieve in a new, planned community
    - The 10% modal share target represents a 333% increase in bus use (relative to the 3% baseline).
    - 10% switch therefore represents a very conservative value for Marlcombe
- % Change in Surface Rail - Maximum shift 10%
    - Assumed to be consistent with bus modal shift target
    - Devon and Torbay Local Transport Plan 4: Consultation draft states that rail use in Devon and Torbay is now 50% higher than in 2010
    - Frequency increases are proposed from both Digby & Sowton and Cranbrook stations
- % Change in Taxi or minicab – no change assumed
- % Change in Overall Trips by All modes - Maximum shift -5%
    - Assumed to be the maximum reduction in trips in the peak hours resulting from a combination of internalising the trip, shifting the time of travel or not travelling
    - NTS shows an average of 915 trips per person per year (2023 data), equating to 17.6 per week.
    - A 5% reduction is equivalent to slightly less than 1 trip per week per person

3.2.13 Each maximum potential shift was multiplied by the weighted averages from the personas and their ability to remove the trip. An example calculation is shown below:

Combined weighted ability across personas to shift towards bus travel for commuting – 67%

Maximum potential shift towards bus travel – 10%

Resulting modal shift toward buses for commuting = 6.7% (67% x 10%).

3.2.14 The resulting factors were then applied to each mode, along with the ability to remove or internalise that trip. The Personas Propensity to change exercise is included as Appendix D and the associated trip calculations form Appendix E . The resulting shift in modes across all persona types is summarised overleaf:

Table 3.5: Mode shifts for Minimal Change Scenario

	Trip Types							
	Commuting	**Business**	**Education**	**Escort Education**	**Shopping**	**Other work / escort & personal business**	**Visiting friends / entertainment / sport**	**Holiday / Day trip / other**
% Change in Walking	+10%	+9%	+10%	+11%	+13%	+12%	+11%	+10%
% Change in Cycling Pedal cycle	+10%	+9%	+10%	+11%	+13%	+12%	+11%	+10%
% Change in Car or van driver	-	-	-	-	-	-	-	-
% Change in Car or van passenger	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Motorcycle	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other private transport	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other local bus	+7%	+6%	+5%	+4%	+6%	+6%	+6%	+6%
% Change in Surface Rail	+6%	+6%	+4%	+3%	+5%	+6%	+6%	+6%
% Change in Taxi or minicab	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Overall Trips by All modes	-3%	-2%	-1%	-2%	-3%	-3%	-3%	-1%

3.2.15 Applying these factors yielded the following vehicle trip rates that were approximately 3-4% lower than those identified at Table 3.4:

Table 3.6: Baseline and Minimal Change Adjusted External Car Trip Rates by Start Time

Time	Baseline External Trips All purposes			Minimal Change Adjusted External Trips All purposes		
	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	0.038	0.194	0.233	0.037	0.186	0.223
0800 to 0859	0.041	0.152	0.193	0.039	0.146	0.185
0900 to 0959	0.063	0.084	0.147	0.061	0.082	0.143
1600 to 1659	0.161	0.082	0.243	0.156	0.079	0.235
1700 to 1759	0.198	0.090	0.287	0.191	0.086	0.277
1800 to 1859	0.159	0.091	0.250	0.154	0.088	0.241
All day	1.067	1.075	2.142	1.032	1.040	2.072

Table 3.7: Baseline and Minimal Change Adjusted External Car Trips by Start Time

Time	Baseline External Trips All purposes			Minimal Change Adjusted External Trips All purposes		
	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	307	1555	1,862	294	1,492	1,786
0800 to 0859	325	1218	1,542	312	1,171	1,483
0900 to 0959	504	675	1,179	488	654	1,142
1600 to 1659	1,289	6,56	1,945	1,244	634	1,878
1700 to 1759	1,581	717	2,299	1,524	691	2,216
1800 to 1859	1,272	726	1,998	1,229	701	1,930
All day	8,535	8,604	17,138	8,253	8,320	16,573

3.3 New Community - Target Scenario

3.3.1 The ambition for Marlcombe is for it to go beyond minimal change and for it to be an exemplar development, which strongly promotes and facilitates modern local living and sustainable transport. For a development of the size proposed, this would mean that a range of physical, infrastructure measures would be incorporated into the design (e.g. high-quality, direct cycle routes).

3.3.2 There would also be a strong range of regular, affordable buses to key destinations, ideally offering better journey times than the private car. Alongside this would be a network of mobility hubs, giving people access to electric bikes and scooters for local trips and to assist with access to other transport facilities such as bus stops. The range of measures to be employed is discussed in detail in the Transport Vision.

3.3.3 The methodology employed to derive the potential additional mode shift is described here. It follows the same approach as the 'Minimal Change' Scenario described above, using the DfT Personas, examining their potential to change and applying this to the maximum achievable shifts. For this scenario, the maximum achievable shifts are modified to reflect more ambitious transport planning measures.

DfT Personas

3.3.4 No matter what transport measures are implemented for the Marlcombe, the mix of people living there is unlikely to change significantly. Their relative abilities and motivations to change their travel habits are also likely to remain similar. As a result. the DfT personas described in Section 3.2 above are used in the same way, with the propensity to shift for each group remaining consistent between the target and minimal change scenarios. The combined weighted averages for each mode and purpose are unchanged from the previous assessment. As previously, this is included as Appendix D .

Upper Limit of Change – Target Scenario

3.3.5 As with the minimal change scenario, an upper limit of potential shift was identified by reference to relevant policies. In this instance however, the limits are more ambitious (whilst remaining grounded in reality).

3.3.6 These figures are intended to represent the upper limit of what could be achieved through enhanced transport planning measures under ideal conditions and would be reduced appropriately with the above personas scoring. These maximum levels were as follows (sources also provided):

- % Change in Walking – Maximum shift 50%
  - DfT Gear Change suggests government ambitions for up to 50% shift to active modes
- % Change in Cycling Pedal cycle – Maximum shift 50%
  - DfT Gear Change suggests government ambitions for up to 50% shift to active modes
- % Change in Car or van driver – Maximum shift not specified
  - Derived from shift towards all other modes
  - The increases in use of all other modes, along with the potential to remove the trips are applied as a reduction in car use.

- % Change in Car or van passenger – no change
    - Car use is likely to reduce due to accessibility measures and travel planning, but the proportion of shared journeys is likely to increase. It is assumed that these two effects would balance, and no net change would result.
- % Change in Motorcycle – no change assumed
- % Change in Other private transport – no change assumed
- % Change in local bus - Maximum shift 333%
    - Devon County Council Bus Service Improvement Plan (June 2024) Table 5.1 targets a 10% modal share target for 2030, equivalent to a 333% increase in bus use (taking into account the low level of existing use)
    - This has been taken as the target modal shift as a reflection of DCC's ambitions
- % Change in Surface Rail - Maximum shift 15%
    - The planned frequency increases are proposed from both Digby & Sowton and Cranbrook stations are significant and a well-connected bus service and / or cycle route would make this an attractive option.
    - Lack of rail station on-site does limit the amount of mode shift that could be achieved.
    - 15% is considered an ambitious, but not unrealistic, target
- % Change in Taxi or minicab – no change assumed
- % Change in Overall Trips by All modes - Maximum shift -10%
    - Equivalent to a reduction of two trips per week per person

3.3.7 As previously, each maximum potential shift was multiplied by the weighted averages from the personas and their ability to remove the trip. The resulting factors were then applied to each mode, along with the ability to remove or internalise that trip. This full exercise is included as Appendix F . The resulting shift in modes across all persona types is summarised overleaf.

Table 3.8: Mode shifts for Target Scenario

	Trip Types							
	Commuting	**Business**	**Education**	**Escort Education**	**Shopping**	**Other work / escort & personal business**	**Visiting friends / entertainment / sport**	**Holiday / Day trip / other**
% Change in Walking	+25%	+21%	+24%	+27%	+32%	+29%	+27%	+25%
% Change in Cycling Pedal cycle	+25%	+21%	+24%	+27%	+32%	+29%	+27%	+25%
% Change in Car or van driver	-	-	-	-	-	-	-	-
% Change in Car or van passenger	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Motorcycle	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other private transport	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Other local bus	+223%	+209%	+156%	+138%	+203%	+214%	+214%	+214%
% Change in Surface Rail	+9%	+9%	+5%	+4%	+8%	+8%	+8%	+8%
% Change in Taxi or minicab	0%	0%	0%	0%	0%	0%	0%	0%
% Change in Overall Trips by All modes	**-6%**	**-4%**	**-2%**	**-4%**	**-7%**	**-5%**	**-5%**	**-2%**

3.3.8 Applying these factors yielded the following vehicle trip rates that were approximately 11-16% lower than those identified at Table 3.7

Table 3.9: Minimal Change and Target External Car Trip Rates by Start Time

Time	Minimal Change Adjusted External Trips All purposes			Target Adjusted External Trips All purposes		
	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	0.037	0.186	0.223	0.031	0.159	0.190
0800 to 0859	0.039	0.146	0.185	0.034	0.127	0.160
0900 to 0959	0.061	0.082	0.143	0.055	0.073	0.128
1600 to 1659	0.155	0.079	0.234	0.137	0.070	0.206
1700 to 1759	0.190	0.086	0.277	0.166	0.075	0.241
1800 to 1859	0.153	0.087	0.241	0.135	0.077	0.212
All day	1.030	1.038	2.068	0.912	0.919	1.831

Table 3.10: Minimal Change and Target External Car Trips by Start Time

Time	Minimal Change Adjusted External Trips All purposes			Target Adjusted External Trips All purposes		
	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	294	1,490	1,784	251	1271	1521
0800 to 0859	311	1,168	1,480	270	1013	1284
0900 to 0959	488	653	1,140	438	586	1023
1600 to 1659	1,242	633	1,875	1093	557	1649
1700 to 1759	1,522	691	2,213	1326	602	1928
1800 to 1859	1,227	700	1,926	1079	615	1694
All day	8,238	8,305	16,542	7296	7356	14652

3.3.9 For clarity, the above trips represent the ambition for Marlcombe, but the 'Minimal Change' scenario is the one most closely reflected in the DCC network modelling.

4 Summary

4.1.1 This appendix supports the broader Transport Vision for Marlcombe, a proposed settlement of approximately 8,000 homes. It outlines the methodology used to derive trip rates for transport modelling, which is being conducted by WSP for Devon County Council (DCC).

4.1.2 As a moderately large town, Marlcombe will have a high degree of self-containment, with many trips going no further than the site itself, limiting impacts on the surrounding transport network.

4.1.3 Trip rates are identified and modified appropriately based on a range of available data sources, including the TRICS database, National Travel Survey (NTS) data and Census outputs.

4.1.4 In order to understand the perspectives of individual residents, reference is made to the DfT's Personas work, with their ability and willingness to change travel habits examined in detail.

4.1.5 Three scenarios are examined:

- Business As Normal (BAN) Scenario:
  - Reflects typical travel habits in Devon, with relatively high car dependency.
  - Approximately 38% of trips are internalised over a day, rising as high as 57% internalisation in the morning peak (largely driven by internalised education-related trips)
  - Once internalisation is accounted for, the resulting external car trips are marginally higher those understood to be used in DCC's modelling exercise
- Minimal Change Scenario:
  - Introduces moderate interventions like active travel infrastructure, home-working support, and mobility hubs.
  - Achieves a 3–4% reduction in external car trips when compared to BAN.
  - Once these moderate mode shifts are incorporated, then the resulting external car trips are marginally lower those understood to be used in DCC's modelling exercise
- Target Scenario:
  - Envisions Marlcombe as an exemplar of sustainable living, with ambitious infrastructure and behavioural change targets.
  - Achieves a 11–16% reduction, when compared to BAN/Minimal Change reflecting more ambitious planning.

4.2 Conclusion

4.2.1 The approach adopted provides a robust, data-driven foundation for transport modelling of the East Devon New Community. It supports a shift toward sustainable transport planning by demonstrating how moderate and ambitious interventions can significantly reduce car dependency.

4.2.2 The work shows that the trip rates adopted within the DCC modelling are realistic and achievable with relatively minimal transport interventions.

Appendix A TRICS Outputs

Calculation Reference: AUDIT-540501-230607-0653

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	HC	HAMPSHIRE	1 days
	KC	KENT	2 days
	SC	SURREY	1 days
	SP	SOUTHAMPTON	1 days
	WS	WEST SUSSEX	2 days
04	EAST ANGLIA		
	NF	NORFOLK	9 days
05	EAST MIDLANDS		
	DY	DERBY	1 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 212 to 1817 (units:)
Range Selected by User: 200 to 1817 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 27/09/22

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	3 days
Tuesday	8 days
Wednesday	6 days
Thursday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	20 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	17
Neighbourhood Centre (PPS6 Local Centre)	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	10 days - Selected
Servicing vehicles Excluded	13 days - Selected

Secondary Filtering selection:

Use Class:

C3	20 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	6 days
10,001 to 15,000	6 days
15,001 to 20,000	4 days
20,001 to 25,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	2 days
50,001 to 75,000	3 days
75,001 to 100,000	4 days
125,001 to 250,000	6 days
250,001 to 500,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	14 days
1.6 to 2.0	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	14 days
No	6 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	20 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 DY-03-A-01 MIXED HOUSES DERBY
RADBOURNE LANE
DERBY

Edge of Town
Residential Zone
Total No of Dwellings: 371
Survey date: TUESDAY *10/07/18* *Survey Type: MANUAL*

2 ES-03-A-03 MIXED HOUSES & FLATS EAST SUSSEX
SHEPHAM LANE
POLEGATE

Edge of Town
Residential Zone
Total No of Dwellings: 212
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

3 HC-03-A-24 MIXED HOUSES & FLATS HAMPSHIRE
STONEHAM LANE
EASTLEIGH

Edge of Town
Residential Zone
Total No of Dwellings: 243
Survey date: WEDNESDAY *10/11/21* *Survey Type: MANUAL*

4 KC-03-A-06 MIXED HOUSES & FLATS KENT
MARGATE ROAD
HERNE BAY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 363
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

5 KC-03-A-07 MIXED HOUSES KENT
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total No of Dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

6 NE-03-A-02 SEMI DETACHED & DETACHED NORTH EAST LINCOLNSHIRE
HANOVER WALK
SCUNTHORPE

Edge of Town
No Sub Category
Total No of Dwellings: 432
Survey date: MONDAY *12/05/14* *Survey Type: MANUAL*

7 NF-03-A-06 MIXED HOUSES NORFOLK
BEAUFORT WAY
GREAT YARMOUTH
BRADWELL
Edge of Town
Residential Zone
Total No of Dwellings: 275
Survey date: MONDAY *23/09/19* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 NF-03-A-08 MIXED HOUSES & FLATS NORFOLK
SIR ALFRED MUNNINGS RD
NEAR NORWICH
COSTESSEY
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 1817
Survey date: THURSDAY *19/09/19* *Survey Type: MANUAL*

9 NF-03-A-09 MIXED HOUSES & FLATS NORFOLK
ROUND HOUSE WAY
NORWICH
CRINGLEFORD
Edge of Town
Residential Zone
Total No of Dwellings: 984
Survey date: TUESDAY *24/09/19* *Survey Type: MANUAL*

10 NF-03-A-23 MIXED HOUSES & FLATS NORFOLK
SILFIELD ROAD
WYMONDHAM

Edge of Town
Out of Town
Total No of Dwellings: 514
Survey date: WEDNESDAY *22/09/21* *Survey Type: MANUAL*

11 NF-03-A-28 MIXED HOUSES & FLATS NORFOLK
ATLANTIC AVENUE
NORWICH
SPROWSTON
Edge of Town
Residential Zone
Total No of Dwellings: 1146
Survey date: THURSDAY *22/09/22* *Survey Type: MANUAL*

12 NF-03-A-30 MIXED HOUSES NORFOLK
BRANDON ROAD
SWAFFHAM

Edge of Town
Residential Zone
Total No of Dwellings: 266
Survey date: THURSDAY *23/09/21* *Survey Type: MANUAL*

13 NF-03-A-38 MIXED HOUSES NORFOLK
BEAUFORT WAY
GREAT YARMOUTH
BRADWELL
Edge of Town
Residential Zone
Total No of Dwellings: 537
Survey date: TUESDAY *20/09/22* *Survey Type: MANUAL*

14 NF-03-A-39 MIXED HOUSES NORFOLK
HEATH DRIVE
HOLT

Edge of Town
Residential Zone
Total No of Dwellings: 212
Survey date: TUESDAY *27/09/22* *Survey Type: MANUAL*

15 NF-03-A-46 MIXED HOUSES & FLATS NORFOLK
BURGH ROAD
AYLSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 300
Survey date: TUESDAY *14/09/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

16 SC-03-A-08 MIXED HOUSES SURREY
REIGATE ROAD
HORLEY

Edge of Town
Residential Zone
Total No of Dwellings: 790
Survey date: WEDNESDAY *04/05/22* *Survey Type: MANUAL*

17 SP-03-A-02 MIXED HOUSES & FLATS SOUTHAMPTON
BARNFIELD WAY
NEAR SOUTHAMPTON
HEDGE END
Edge of Town
Out of Town
Total No of Dwellings: 250
Survey date: TUESDAY *12/10/21* *Survey Type: MANUAL*

18 ST-03-A-07 DETACHED & SEMI-DETACHED STAFFORDSHIRE
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total No of Dwellings: 248
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

19 WS-03-A-11 MIXED HOUSES WEST SUSSEX
ELLIS ROAD
WEST HORSHAM
S BROADBRIDGE HEATH
Edge of Town
Residential Zone
Total No of Dwellings: 918
Survey date: TUESDAY *02/04/19* *Survey Type: MANUAL*

20 WS-03-A-15 MIXED HOUSES WEST SUSSEX
HILLAND ROAD
BILLINGSHURST

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 380
Survey date: TUESDAY *23/11/21* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
HC-03-A-26	24/06/21	Covid 19

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.69

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.073	20	527	0.311	20	527	0.384
08:00 - 09:00	20	527	0.140	20	527	0.381	20	527	0.521
09:00 - 10:00	20	527	0.130	20	527	0.153	20	527	0.283
10:00 - 11:00	20	527	0.108	20	527	0.125	20	527	0.233
11:00 - 12:00	20	527	0.116	20	527	0.121	20	527	0.237
12:00 - 13:00	20	527	0.139	20	527	0.135	20	527	0.274
13:00 - 14:00	20	527	0.138	20	527	0.125	20	527	0.263
14:00 - 15:00	20	527	0.147	20	527	0.155	20	527	0.302
15:00 - 16:00	20	527	0.229	20	527	0.157	20	527	0.386
16:00 - 17:00	20	527	0.261	20	527	0.154	20	527	0.415
17:00 - 18:00	20	527	0.349	20	527	0.159	20	527	0.508
18:00 - 19:00	20	527	0.298	20	527	0.156	20	527	0.454
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.128			2.132			4.260

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	212 - 1817 (units:)
Survey date date range:	01/01/13 - 27/09/22
Number of weekdays (Monday-Friday):	21
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.002	20	527	0.002	20	527	0.004
08:00 - 09:00	20	527	0.005	20	527	0.005	20	527	0.010
09:00 - 10:00	20	527	0.002	20	527	0.002	20	527	0.004
10:00 - 11:00	20	527	0.001	20	527	0.001	20	527	0.002
11:00 - 12:00	20	527	0.001	20	527	0.001	20	527	0.002
12:00 - 13:00	20	527	0.001	20	527	0.001	20	527	0.002
13:00 - 14:00	20	527	0.001	20	527	0.001	20	527	0.002
14:00 - 15:00	20	527	0.002	20	527	0.001	20	527	0.003
15:00 - 16:00	20	527	0.004	20	527	0.003	20	527	0.007
16:00 - 17:00	20	527	0.002	20	527	0.003	20	527	0.005
17:00 - 18:00	20	527	0.002	20	527	0.002	20	527	0.004
18:00 - 19:00	20	527	0.002	20	527	0.002	20	527	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.025			0.024			0.049

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.001	20	527	0.001	20	527	0.002
08:00 - 09:00	20	527	0.002	20	527	0.002	20	527	0.004
09:00 - 10:00	20	527	0.002	20	527	0.002	20	527	0.004
10:00 - 11:00	20	527	0.002	20	527	0.002	20	527	0.004
11:00 - 12:00	20	527	0.002	20	527	0.001	20	527	0.003
12:00 - 13:00	20	527	0.002	20	527	0.002	20	527	0.004
13:00 - 14:00	20	527	0.002	20	527	0.002	20	527	0.004
14:00 - 15:00	20	527	0.002	20	527	0.001	20	527	0.003
15:00 - 16:00	20	527	0.001	20	527	0.002	20	527	0.003
16:00 - 17:00	20	527	0.002	20	527	0.001	20	527	0.003
17:00 - 18:00	20	527	0.001	20	527	0.001	20	527	0.002
18:00 - 19:00	20	527	0.001	20	527	0.000	20	527	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.017			0.037

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.001	20	527	0.001	20	527	0.002
08:00 - 09:00	20	527	0.001	20	527	0.001	20	527	0.002
09:00 - 10:00	20	527	0.001	20	527	0.001	20	527	0.002
10:00 - 11:00	20	527	0.000	20	527	0.000	20	527	0.000
11:00 - 12:00	20	527	0.001	20	527	0.001	20	527	0.002
12:00 - 13:00	20	527	0.000	20	527	0.000	20	527	0.000
13:00 - 14:00	20	527	0.001	20	527	0.001	20	527	0.002
14:00 - 15:00	20	527	0.001	20	527	0.001	20	527	0.002
15:00 - 16:00	20	527	0.001	20	527	0.001	20	527	0.002
16:00 - 17:00	20	527	0.001	20	527	0.001	20	527	0.002
17:00 - 18:00	20	527	0.001	20	527	0.001	20	527	0.002
18:00 - 19:00	20	527	0.000	20	527	0.000	20	527	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.009			0.009			0.018

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.003	20	527	0.006	20	527	0.009
08:00 - 09:00	20	527	0.002	20	527	0.012	20	527	0.014
09:00 - 10:00	20	527	0.002	20	527	0.003	20	527	0.005
10:00 - 11:00	20	527	0.002	20	527	0.002	20	527	0.004
11:00 - 12:00	20	527	0.001	20	527	0.002	20	527	0.003
12:00 - 13:00	20	527	0.002	20	527	0.002	20	527	0.004
13:00 - 14:00	20	527	0.002	20	527	0.001	20	527	0.003
14:00 - 15:00	20	527	0.003	20	527	0.002	20	527	0.005
15:00 - 16:00	20	527	0.006	20	527	0.002	20	527	0.008
16:00 - 17:00	20	527	0.008	20	527	0.005	20	527	0.013
17:00 - 18:00	20	527	0.008	20	527	0.005	20	527	0.013
18:00 - 19:00	20	527	0.006	20	527	0.004	20	527	0.010
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.045			0.046			0.091

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.089	20	527	0.457	20	527	0.546
08:00 - 09:00	20	527	0.177	20	527	0.649	20	527	0.826
09:00 - 10:00	20	527	0.171	20	527	0.227	20	527	0.398
10:00 - 11:00	20	527	0.150	20	527	0.181	20	527	0.331
11:00 - 12:00	20	527	0.163	20	527	0.174	20	527	0.337
12:00 - 13:00	20	527	0.194	20	527	0.184	20	527	0.378
13:00 - 14:00	20	527	0.192	20	527	0.171	20	527	0.363
14:00 - 15:00	20	527	0.220	20	527	0.207	20	527	0.427
15:00 - 16:00	20	527	0.403	20	527	0.223	20	527	0.626
16:00 - 17:00	20	527	0.431	20	527	0.225	20	527	0.656
17:00 - 18:00	20	527	0.525	20	527	0.231	20	527	0.756
18:00 - 19:00	20	527	0.436	20	527	0.242	20	527	0.678
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.151			3.171			6.322

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.010	20	527	0.030	20	527	0.040
08:00 - 09:00	20	527	0.018	20	527	0.065	20	527	0.083
09:00 - 10:00	20	527	0.016	20	527	0.018	20	527	0.034
10:00 - 11:00	20	527	0.014	20	527	0.014	20	527	0.028
11:00 - 12:00	20	527	0.014	20	527	0.013	20	527	0.027
12:00 - 13:00	20	527	0.016	20	527	0.013	20	527	0.029
13:00 - 14:00	20	527	0.017	20	527	0.016	20	527	0.033
14:00 - 15:00	20	527	0.022	20	527	0.023	20	527	0.045
15:00 - 16:00	20	527	0.057	20	527	0.024	20	527	0.081
16:00 - 17:00	20	527	0.032	20	527	0.016	20	527	0.048
17:00 - 18:00	20	527	0.030	20	527	0.025	20	527	0.055
18:00 - 19:00	20	527	0.027	20	527	0.026	20	527	0.053
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.273			0.283			0.556

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.001	20	527	0.019	20	527	0.020
08:00 - 09:00	20	527	0.001	20	527	0.019	20	527	0.020
09:00 - 10:00	20	527	0.003	20	527	0.007	20	527	0.010
10:00 - 11:00	20	527	0.003	20	527	0.006	20	527	0.009
11:00 - 12:00	20	527	0.004	20	527	0.006	20	527	0.010
12:00 - 13:00	20	527	0.004	20	527	0.004	20	527	0.008
13:00 - 14:00	20	527	0.004	20	527	0.004	20	527	0.008
14:00 - 15:00	20	527	0.007	20	527	0.004	20	527	0.011
15:00 - 16:00	20	527	0.014	20	527	0.005	20	527	0.019
16:00 - 17:00	20	527	0.019	20	527	0.003	20	527	0.022
17:00 - 18:00	20	527	0.014	20	527	0.003	20	527	0.017
18:00 - 19:00	20	527	0.011	20	527	0.003	20	527	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.085			0.083			0.168

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.000	20	527	0.005	20	527	0.005
08:00 - 09:00	20	527	0.000	20	527	0.005	20	527	0.005
09:00 - 10:00	20	527	0.000	20	527	0.002	20	527	0.002
10:00 - 11:00	20	527	0.001	20	527	0.001	20	527	0.002
11:00 - 12:00	20	527	0.001	20	527	0.001	20	527	0.002
12:00 - 13:00	20	527	0.001	20	527	0.001	20	527	0.002
13:00 - 14:00	20	527	0.001	20	527	0.001	20	527	0.002
14:00 - 15:00	20	527	0.001	20	527	0.000	20	527	0.001
15:00 - 16:00	20	527	0.002	20	527	0.001	20	527	0.003
16:00 - 17:00	20	527	0.002	20	527	0.000	20	527	0.002
17:00 - 18:00	20	527	0.005	20	527	0.000	20	527	0.005
18:00 - 19:00	20	527	0.005	20	527	0.000	20	527	0.005
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.019			0.017			0.036

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL COACH PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.000	20	527	0.000	20	527	0.000
08:00 - 09:00	20	527	0.000	20	527	0.000	20	527	0.000
09:00 - 10:00	20	527	0.000	20	527	0.000	20	527	0.000
10:00 - 11:00	20	527	0.000	20	527	0.000	20	527	0.000
11:00 - 12:00	20	527	0.000	20	527	0.000	20	527	0.000
12:00 - 13:00	20	527	0.000	20	527	0.000	20	527	0.000
13:00 - 14:00	20	527	0.000	20	527	0.000	20	527	0.000
14:00 - 15:00	20	527	0.000	20	527	0.000	20	527	0.000
15:00 - 16:00	20	527	0.000	20	527	0.000	20	527	0.000
16:00 - 17:00	20	527	0.000	20	527	0.000	20	527	0.000
17:00 - 18:00	20	527	0.000	20	527	0.000	20	527	0.000
18:00 - 19:00	20	527	0.000	20	527	0.000	20	527	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.001	20	527	0.024	20	527	0.025
08:00 - 09:00	20	527	0.002	20	527	0.025	20	527	0.027
09:00 - 10:00	20	527	0.003	20	527	0.010	20	527	0.013
10:00 - 11:00	20	527	0.004	20	527	0.007	20	527	0.011
11:00 - 12:00	20	527	0.005	20	527	0.007	20	527	0.012
12:00 - 13:00	20	527	0.006	20	527	0.006	20	527	0.012
13:00 - 14:00	20	527	0.005	20	527	0.005	20	527	0.010
14:00 - 15:00	20	527	0.008	20	527	0.004	20	527	0.012
15:00 - 16:00	20	527	0.017	20	527	0.005	20	527	0.022
16:00 - 17:00	20	527	0.021	20	527	0.003	20	527	0.024
17:00 - 18:00	20	527	0.019	20	527	0.003	20	527	0.022
18:00 - 19:00	20	527	0.016	20	527	0.003	20	527	0.019
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.107			0.102			0.209

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.69

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.102	20	527	0.517	20	527	0.619
08:00 - 09:00	20	527	0.200	20	527	0.750	20	527	0.950
09:00 - 10:00	20	527	0.192	20	527	0.257	20	527	0.449
10:00 - 11:00	20	527	0.170	20	527	0.204	20	527	0.374
11:00 - 12:00	20	527	0.184	20	527	0.196	20	527	0.380
12:00 - 13:00	20	527	0.217	20	527	0.204	20	527	0.421
13:00 - 14:00	20	527	0.216	20	527	0.193	20	527	0.409
14:00 - 15:00	20	527	0.252	20	527	0.237	20	527	0.489
15:00 - 16:00	20	527	0.483	20	527	0.254	20	527	0.737
16:00 - 17:00	20	527	0.491	20	527	0.250	20	527	0.741
17:00 - 18:00	20	527	0.582	20	527	0.264	20	527	0.846
18:00 - 19:00	20	527	0.484	20	527	0.276	20	527	0.760
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.573			3.602			7.175

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CARS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.058	20	527	0.277	20	527	0.335
08:00 - 09:00	20	527	0.117	20	527	0.347	20	527	0.464
09:00 - 10:00	20	527	0.110	20	527	0.134	20	527	0.244
10:00 - 11:00	20	527	0.090	20	527	0.106	20	527	0.196
11:00 - 12:00	20	527	0.099	20	527	0.102	20	527	0.201
12:00 - 13:00	20	527	0.121	20	527	0.116	20	527	0.237
13:00 - 14:00	20	527	0.120	20	527	0.106	20	527	0.226
14:00 - 15:00	20	527	0.128	20	527	0.139	20	527	0.267
15:00 - 16:00	20	527	0.205	20	527	0.132	20	527	0.337
16:00 - 17:00	20	527	0.232	20	527	0.134	20	527	0.366
17:00 - 18:00	20	527	0.315	20	527	0.142	20	527	0.457
18:00 - 19:00	20	527	0.276	20	527	0.142	20	527	0.418
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.871			1.877			3.748

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.011	20	527	0.028	20	527	0.039
08:00 - 09:00	20	527	0.014	20	527	0.022	20	527	0.036
09:00 - 10:00	20	527	0.015	20	527	0.015	20	527	0.030
10:00 - 11:00	20	527	0.014	20	527	0.014	20	527	0.028
11:00 - 12:00	20	527	0.014	20	527	0.015	20	527	0.029
12:00 - 13:00	20	527	0.014	20	527	0.015	20	527	0.029
13:00 - 14:00	20	527	0.014	20	527	0.015	20	527	0.029
14:00 - 15:00	20	527	0.013	20	527	0.011	20	527	0.024
15:00 - 16:00	20	527	0.016	20	527	0.016	20	527	0.032
16:00 - 17:00	20	527	0.023	20	527	0.014	20	527	0.037
17:00 - 18:00	20	527	0.027	20	527	0.012	20	527	0.039
18:00 - 19:00	20	527	0.017	20	527	0.010	20	527	0.027
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.192			0.187			0.379

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL MOTOR CYCLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	527	0.001	20	527	0.002	20	527	0.003
08:00 - 09:00	20	527	0.000	20	527	0.004	20	527	0.004
09:00 - 10:00	20	527	0.000	20	527	0.000	20	527	0.000
10:00 - 11:00	20	527	0.001	20	527	0.001	20	527	0.002
11:00 - 12:00	20	527	0.001	20	527	0.001	20	527	0.002
12:00 - 13:00	20	527	0.001	20	527	0.001	20	527	0.002
13:00 - 14:00	20	527	0.001	20	527	0.001	20	527	0.002
14:00 - 15:00	20	527	0.001	20	527	0.001	20	527	0.002
15:00 - 16:00	20	527	0.002	20	527	0.002	20	527	0.004
16:00 - 17:00	20	527	0.002	20	527	0.001	20	527	0.003
17:00 - 18:00	20	527	0.003	20	527	0.001	20	527	0.004
18:00 - 19:00	20	527	0.003	20	527	0.001	20	527	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Appendix B Internalisation Data and Trip Calculations

DC7701EWla - Method of travel to work (2001 specification) by distance travelled to work

Source ONS Crown Copyright Reserved [from Nomis on 23 July 2025]
Population All usual residents aged 16 and over in employment the week before the census
Units Persons

date	2011										
geography	East Devon										
measures	value										
Distance travelled to work	All categories: Distance travelled to work	Less than 2km	2km to less than 5km	5km to less than 10km	10km to less than 20km	20km to less than 30km	30km to less than 40km	40km to less than 60km	60km and over	Work mainly at or from home	Other
Method of travel to work											
All categories: Method of travel to work (2001 specification)	60,554	10,830	5,865	7,206	12,601	3,749	1,402	781	2,204	10,383	5,533
Work mainly at or from home	10,383	0	0	0	0	0	0	0	0	10,383	0
Train, underground, metro, light rail or tram	1,487	135	24	73	589	152	47	24	310	0	133
Bus, minibus or coach	1,562	141	313	324	508	99	44	5	43	0	85
Driving a car or van	35,060	4,162	4,068	5,832	10,061	3,131	1,169	691	1,502	0	4,444
Passenger in a car or van	2,814	496	518	490	711	177	61	26	53	0	282
Bicycle	1,293	466	314	190	176	24	12	6	38	0	67
On foot	6,700	5,103	476	147	312	119	52	22	213	0	256
All other methods of travel to work	1,255	327	152	150	244	47	17	7	45	0	266

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies

Percentage distance travel split by mode.

	All Trips (excluding WFH and other)	Less than 2km	2km to less than 5km	5km to less than 10km	10km to less than 20km	20km to less than 30km	30km to less than 40km	40km to less than 60km	60km and over
All categories: Method of travel to work (2001 specification)	44,638	24%	13%	16%	28%	8%	3%	2%	5%
Train, underground, metro, light rail or tram	1,354	10%	2%	5%	44%	11%	3%	2%	23%
Bus, minibus or coach	1,477	10%	21%	22%	34%	7%	3%	0%	3%
Driving a car or van	30,616	14%	13%	19%	33%	10%	4%	2%	5%
Passenger in a car or van	2,532	20%	20%	19%	28%	7%	2%	1%	2%
Bicycle	1,226	38%	26%	15%	14%	2%	1%	0%	3%
On foot	6,444	79%	7%	2%	5%	2%	1%	0%	3%
All other methods of travel to work	989	33%	15%	15%	25%	5%	2%	1%	5%

Internalised commuting trips assumed to comprise all under 2km. All other trips are external.

	Internalised	External
All categories: Method of travel to work (2001 specification)	24%	76%
Train, underground, metro, light rail or tram	10%	90%
Bus, minibus or coach	10%	90%
Driving a car or van	14%	86%
Passenger in a car or van	20%	80%
Bicycle	38%	62%
On foot	79%	21%
All other methods of travel to work	33%	67%

Cambourne Village Retail Surveys

All trips

	Walking	Cycling	Driving a Car or Van	Motorcycle, Scooter or Moped	Taxi or minicab
0700-0730	27	2	116	0	0
0730-0800	44	6	157	1	0
0800-0830	50	2	203	2	2
0890-0900	53	6	242	6	5
0900-0930	102	3	321	5	3
0930-1000	72	4	313	5	2
1600-1630	173	5	298	3	2
1630-1700	93	1	370	4	4
1700-1730	81	1	392	2	2
1730-1800	84	4	414	8	2
1800-1830	59	6	414	6	3
1830-1900	55	3	323	7	1
TOTAL	**893**	**43**	**3563**	**49**	**26**

Internal trips

	Walking	Cycling	Driving a Car or Van	Motorcycle, Scooter or Moped	Taxi or minicab
0700-0730	20	2	49	0	0
0730-0800	36	5	110	1	0
0800-0830	40	1	121	2	2
0890-0900	42	6	150	6	5
0900-0930	80	3	154	4	3
0930-1000	63	2	155	2	2
1600-1630	162	4	97	1	2
1630-1700	77	0	94	1	4
1700-1730	70	1	148	2	2
1730-1800	74	3	158	5	2
1800-1830	50	4	123	2	3
1830-1900	46	2	93	2	1
TOTAL	**760**	**33**	**1452**	**28**	**26**
Split	**85.11%**	**76.74%**	**40.75%**	**57.14%**	**100.00%**

Bus trips assumed to mimic car trips

No internal rail trips

External trips

	Walking	Cycling	Driving a Car or Van	Motorcycle, Scooter or Moped	Taxi or minicab
0700-0730	7	0	67	0	0
0730-0800	8	1	47	0	0
0800-0830	10	1	82	0	0
0890-0900	11	0	92	0	0
0900-0930	22	0	167	1	0
0930-1000	9	2	158	3	0
1600-1630	11	1	201	2	0
1630-1700	16	1	276	3	0
1700-1730	11	0	244	0	0
1730-1800	10	1	256	3	0
1800-1830	9	2	291	4	0
1830-1900	9	1	230	5	0
TOTAL	**133**	**10**	**2111**	**21**	**0**
Split	**14.89%**	**23.26%**	**59.25%**	**42.86%**	**0.00%**

All Trips

CAMBOURNE VILLAGE SURVEY

An analysis of a number of surveys that we undertook on Thursday 7th June 2018 in Cambourne, Cambridgeshire.

Return to the TRICS Members Area

Development

Multi-Select Mode Reset

Switch to Single-Select

- Church
- Community Centre
- Fitness Centre
- Just for Pets
- Library & Health Centre
- Morrisons
- Pound World

Time

Multi-Select Mode Reset

Switch to Single-Select

- 0900-0930
- 0930-1000
- 1000-1030
- 1030-1100
- 1100-1130
- 1130-1200
- 1200-1230
- 1230-1300
- 1300-1330
- 1330-1400
- 1400-1430
- 1430-1500
- 1500-1530
- 1530-1600
- 1600-1630

User

Multi-Select Mode

Switch to Single-Select

- Live
- Servicing
- Visitor
- Work
- Work-Live

Origin

Multi-Select Mode

Switch to Single-Select

- External
- Internal

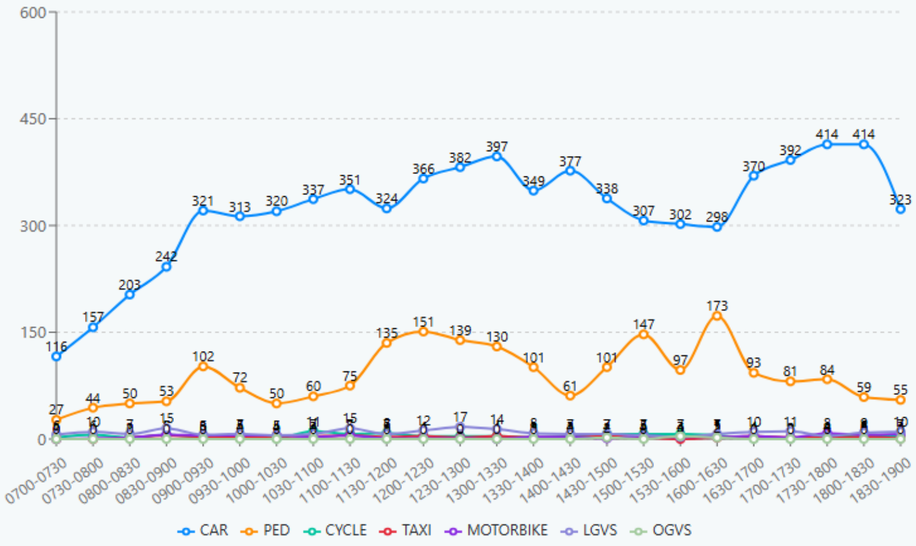
Direction

Multi-Select Mode

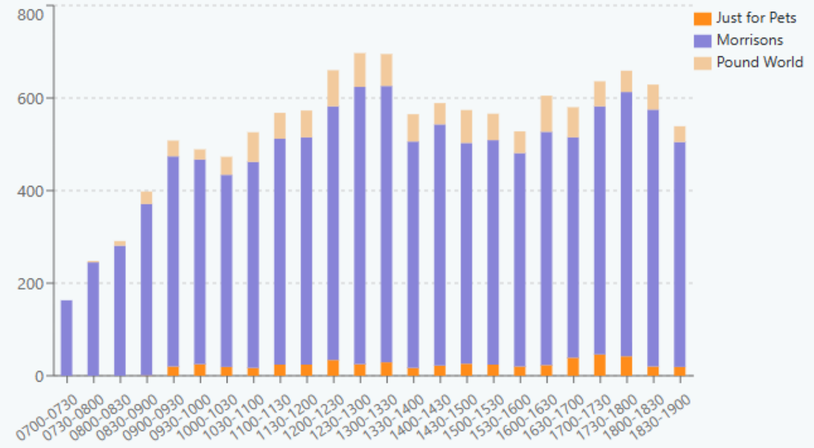
Switch to Single-Select

- In
- Out

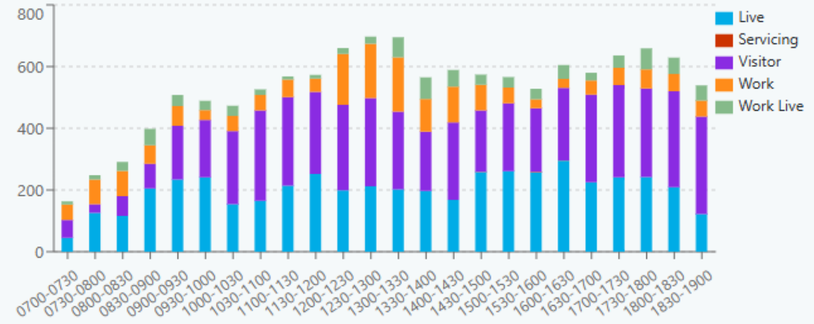
Mode Choice Flow Profile



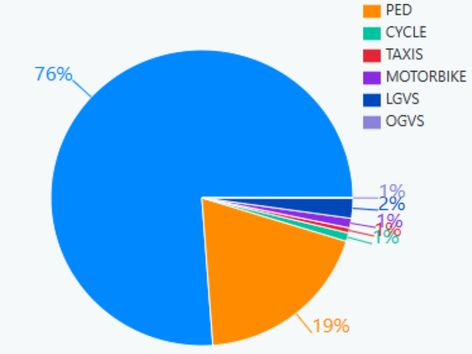
Person Trips Per Development



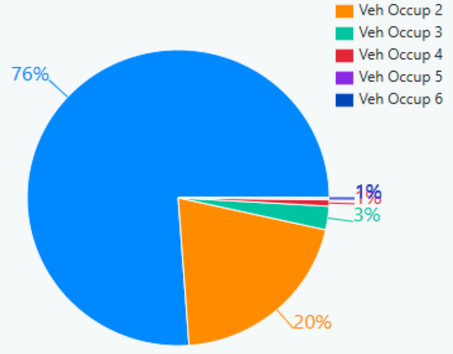
Person Trips by User Type



Mode Split For Selected Time



Vehicle Occupancy For Selected Time



Additional Information

Version: 1.06 Updated: 20/05/20

Any Time changes only affect the 2 pie charts "Mode Split For Selected Time" and "Vehicle Occupancy For Selected Time"

View Cambourne Village technical report

Internal Trips

CAMBOURNE VILLAGE SURVEY

An analysis of a number of surveys that we undertook on Thursday 7th June 2018 in Cambourne, Cambridgeshire.

Return to the TRICS Members Area

Development

Multi-Select Mode Reset

Switch to Single-Select

- Church
- Community Centre
- Fitness Centre
- Just for Pets
- Library & Health Centre
- Morrisons
- Pound World

User

Multi-Select Mode

Switch to Single-Select

- Live
- Servicing
- Visitor
- Work
- Work-Live

Origin

Multi-Select Mode Reset

Switch to Single-Select

- External
- Internal

Time

Multi-Select Mode Reset

Switch to Single-Select

- 0900-0930
- 0930-1000
- 1000-1030
- 1030-1100
- 1100-1130
- 1130-1200
- 1200-1230
- 1230-1300
- 1300-1330
- 1330-1400
- 1400-1430
- 1430-1500
- 1500-1530
- 1530-1600
- 1600-1630

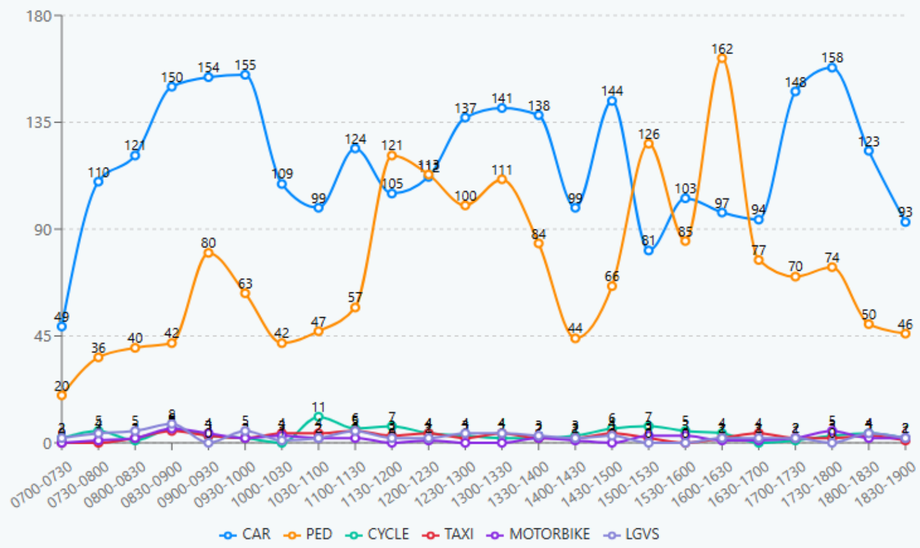
Direction

Multi-Select Mode

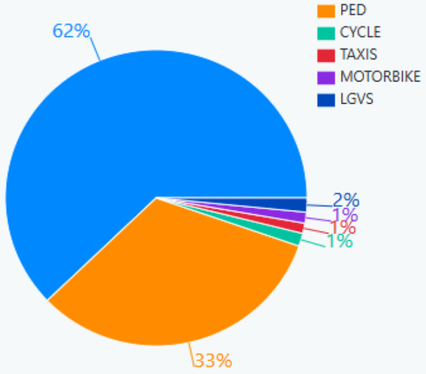
Switch to Single-Select

- In
- Out

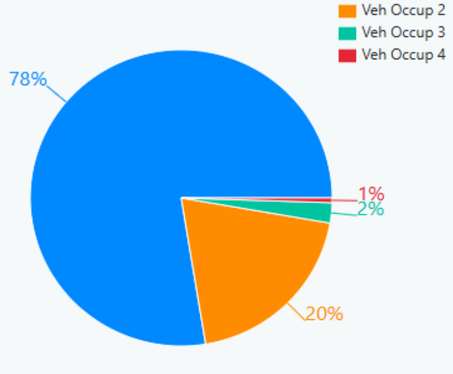
Mode Choice Flow Profile



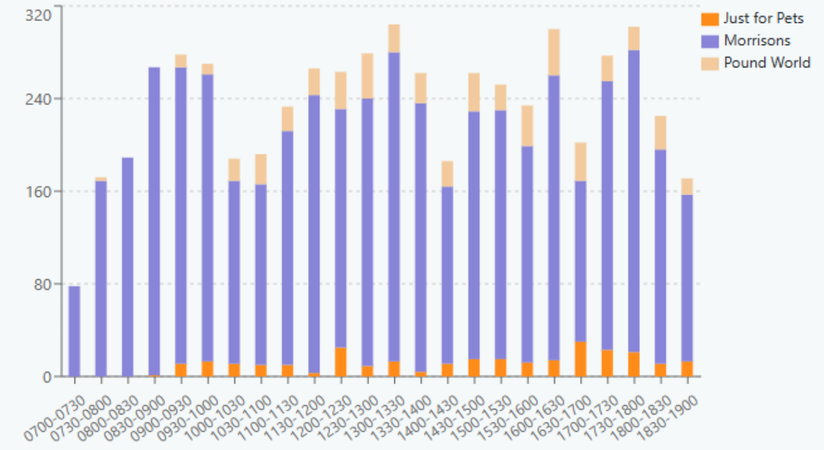
Mode Split For Selected Time



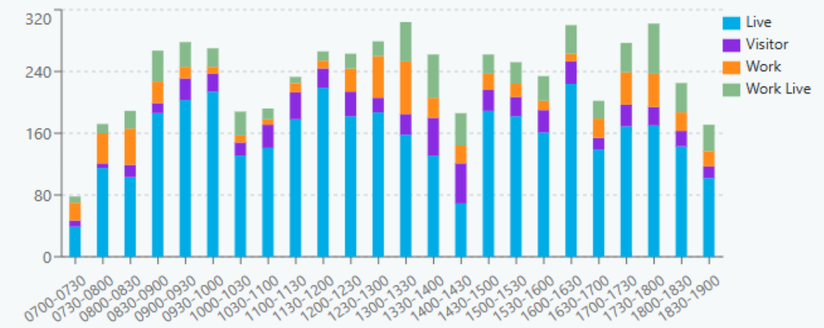
Vehicle Occupancy For Selected Time



Person Trips Per Development



Person Trips by User Type



Additional Information

Version: 1.06 Updated: 20/05/20

Any Time changes only affect the 2 pie charts "Mode Split For Selected Time" and "Vehicle Occupancy For Selected Time"

View Cambourne Village technical report

External Trips

CAMBOURNE VILLAGE SURVEY

An analysis of a number of surveys that we undertook on Thursday 7th June 2018 in Cambourne, Cambridgeshire.

Return to the TRICS Members Area

Development

Multi-Select Mode Reset

Switch to Single-Select

- Church
- Community Centre
- Fitness Centre
- Just for Pets
- Library & Health Centre
- Morrisons
- Pound World

Time

Multi-Select Mode Reset

Switch to Single-Select

- 0900-0930
- 0930-1000
- 1000-1030
- 1030-1100
- 1100-1130
- 1130-1200
- 1200-1230
- 1230-1300
- 1300-1330
- 1330-1400
- 1400-1430
- 1430-1500
- 1500-1530
- 1530-1600
- 1600-1630

User

Multi-Select Mode

Switch to Single-Select

- Live
- Servicing
- Visitor
- Work
- Work-Live

Origin

Multi-Select Mode Reset

Switch to Single-Select

- External
- Internal

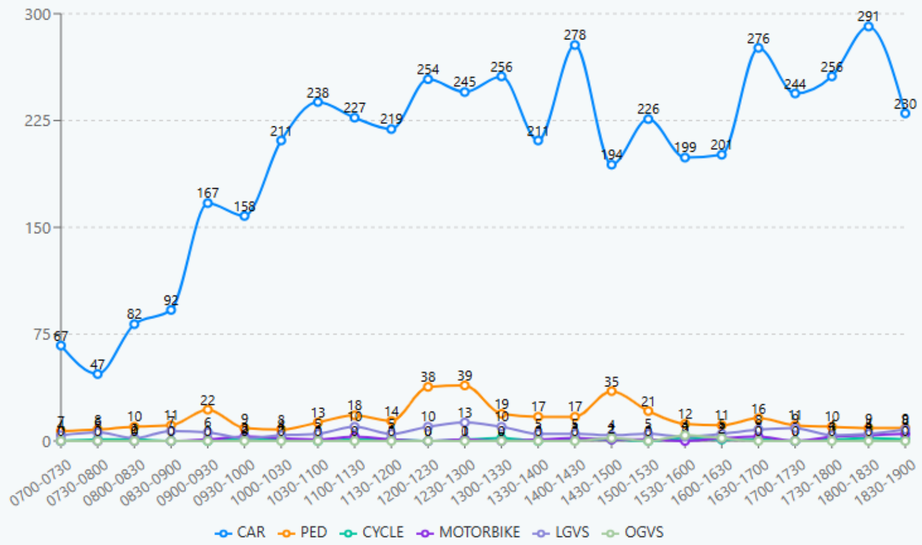
Direction

Multi-Select Mode

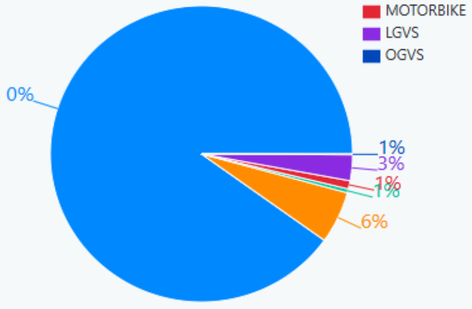
Switch to Single-Select

- In
- Out

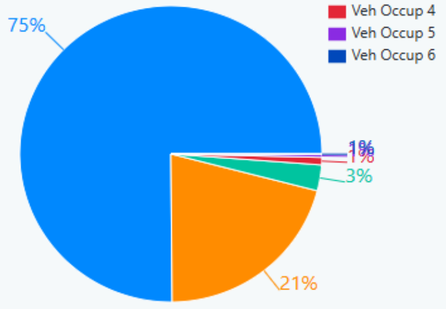
Mode Choice Flow Profile



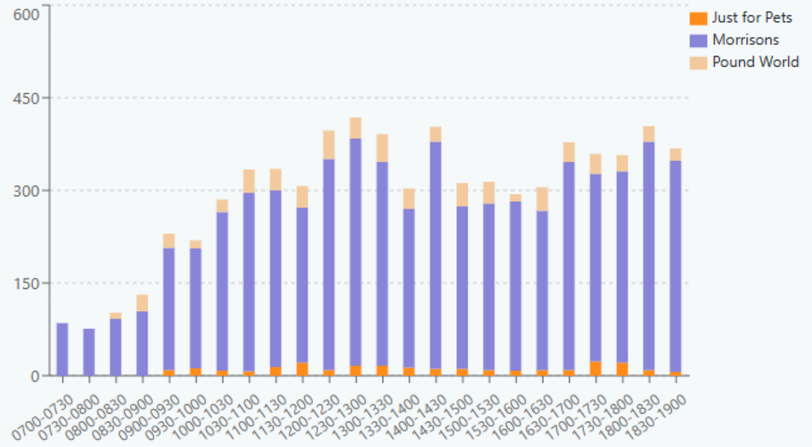
Mode Split For Selected Time



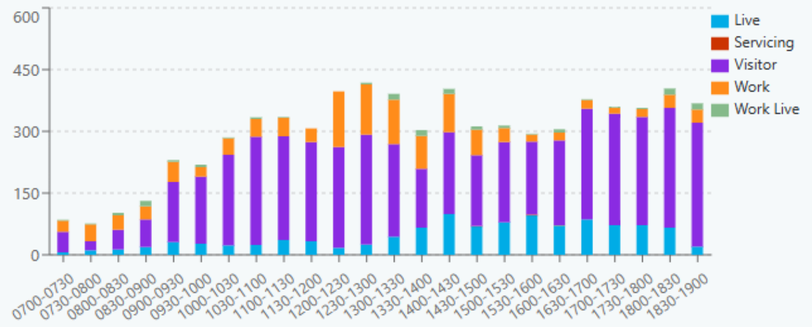
Vehicle Occupancy For Selected Time



Person Trips Per Development



Person Trips by User Type



Additional Information

Version: 1.06 Updated: 20/05/20

Any Time changes only affect the 2 pie charts "Mode Split For Selected Time" and "Vehicle Occupancy For Selected Time"

View Cambourne Village technical report

Cambourne Village Other Surveys

All trips

	Walking	Cycling	Driving a Car or Van	Motorcycle, Scooter or Moped	Taxi or minicab
0700-0730	6	1	18	1	0
0730-0800	11	2	17	0	0
0800-0830	8	10	21	0	0
0890-0900	20	1	28	1	1
0900-0930	33	5	62	1	0
0930-1000	50	5	29	0	0
1600-1630	33	19	50	0	0
1630-1700	24	8	42	1	0
1700-1730	34	8	58	1	0
1730-1800	22	9	82	0	0
1800-1830	34	5	92	0	0
1830-1900	25	3	62	1	0
TOTAL	**300**	**76**	**561**	**6**	**1**

Internal trips

	Walking	Cycling	Driving a Car or Van	Motorcycle, Scooter or Moped	Taxi or minicab
0700-0730	6	1	10	1	0
0730-0800	11	2	8	0	0
0800-0830	8	10	9	0	0
0890-0900	20	1	17	1	0
0900-0930	32	5	33	1	0
0930-1000	50	5	14	0	0
1600-1630	33	18	21	0	0
1630-1700	23	8	22	0	0
1700-1730	34	8	42	1	0
1730-1800	21	9	53	0	0
1800-1830	34	4	49	0	0
1830-1900	25	3	40	1	0
TOTAL	**297**	**74**	**318**	**5**	**0**
Split	**99.00%**	**97.37%**	**56.68%**	**83.33%**	**0.00%**

External trips

	Walking	Cycling	Driving a Car or Van	Motorcycle, Scooter or Moped	Taxi or minicab
0700-0730	0	0	8	0	0
0730-0800	0	0	9	0	0
0800-0830	0	0	12	0	0
0890-0900	0	0	11	0	1
0900-0930	1	0	29	0	0
0930-1000	0	0	15	0	0
1600-1630	0	1	29	0	0
1630-1700	1	0	20	1	0
1700-1730	0	0	16	0	0
1730-1800	1	0	29	0	0
1800-1830	0	1	43	0	0
1830-1900	0	0	22	0	0
TOTAL	**3**	**2**	**243**	**1**	**1**
Split	**1.00%**	**2.63%**	**43.32%**	**16.67%**	**100.00%**

All Trips

CAMBOURNE VILLAGE SURVEY

An analysis of a number of surveys that we undertook on Thursday 7th June 2018 in Cambourne, Cambridgeshire.

Return to the TRICS Members Area

Development

Multi-Select Mode Reset

Switch to Single-Select

- Church
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- Fitness Centre
- Just for Pets
- Library & Health Centre
- Morrisons
- Pound World

User

Multi-Select Mode

Switch to Single-Select

- Live
- Servicing
- Visitor
- Work
- Work-Live

Origin

Multi-Select Mode

Switch to Single-Select

- External
- Internal

Time

Multi-Select Mode Reset

Switch to Single-Select

- 1200-1230
- 1230-1300
- 1300-1330
- 1330-1400
- 1400-1430
- 1430-1500
- 1500-1530
- 1530-1600
- 1600-1630
- 1630-1700
- 1700-1730
- 1730-1800
- 1800-1830
- 1830-1900

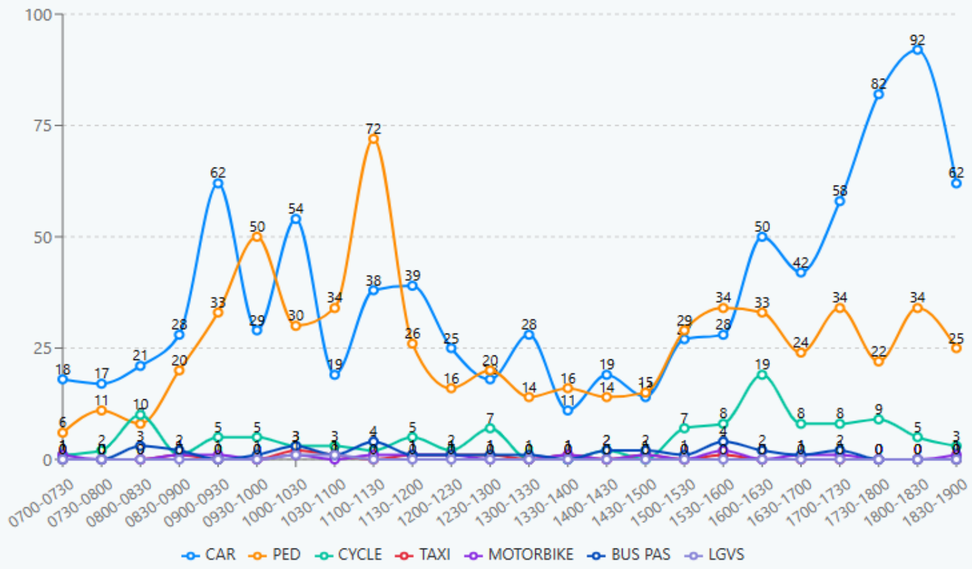
Direction

Multi-Select Mode

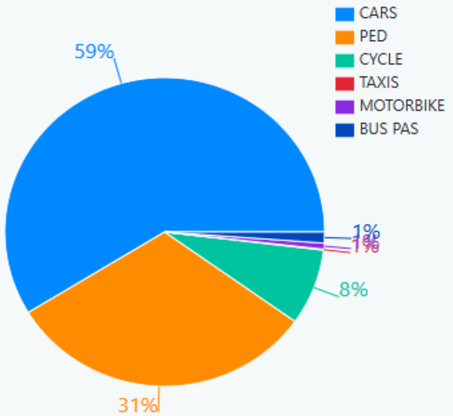
Switch to Single-Select

- In
- Out

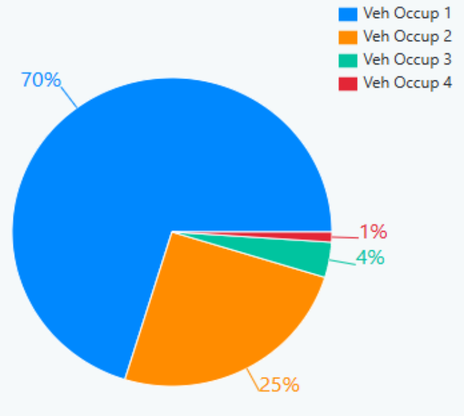
Mode Choice Flow Profile



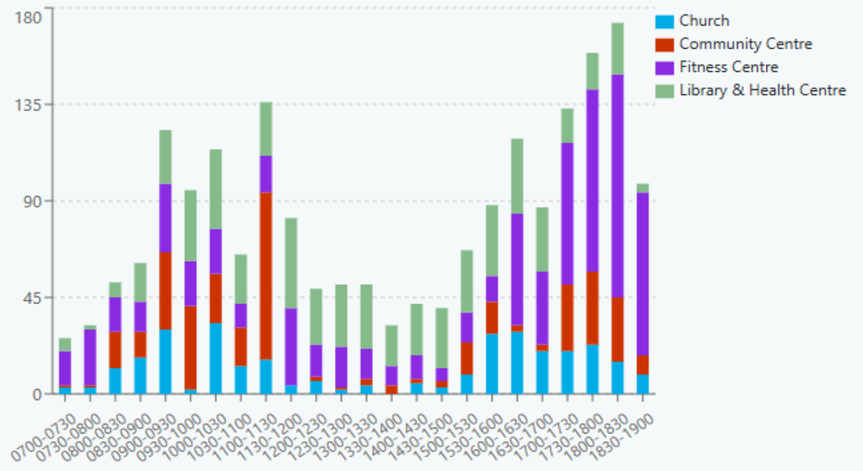
Mode Split For Selected Time



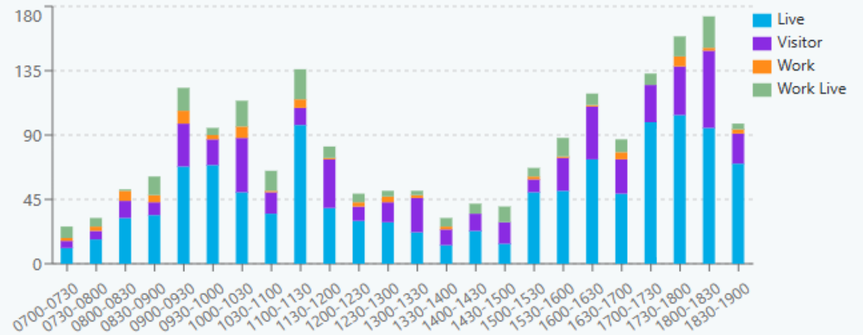
Vehicle Occupancy For Selected Time



Person Trips Per Development



Person Trips by User Type



Additional Information

Version: 1.06 Updated: 20/05/20

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View Cambourne Village technical report

Internal Trips

CAMBOURNE VILLAGE SURVEY

An analysis of a number of surveys that we undertook on Thursday 7th June 2018 in Cambourne, Cambridgeshire.

Return to the TRICS Members Area

Development

Multi-Select Mode Reset

Switch to Single-Select

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- Morrisons
- Pound World

User

Multi-Select Mode

Switch to Single-Select

- Live
- Servicing
- Visitor
- Work
- Work-Live

Origin

Multi-Select Mode Reset

Switch to Single-Select

- External
- Internal

Time

Multi-Select Mode Reset

Switch to Single-Select

- 1200-1230
- 1230-1300
- 1300-1330
- 1330-1400
- 1400-1430
- 1430-1500
- 1500-1530
- 1530-1600
- 1600-1630
- 1630-1700
- 1700-1730
- 1730-1800
- 1800-1830
- 1830-1900

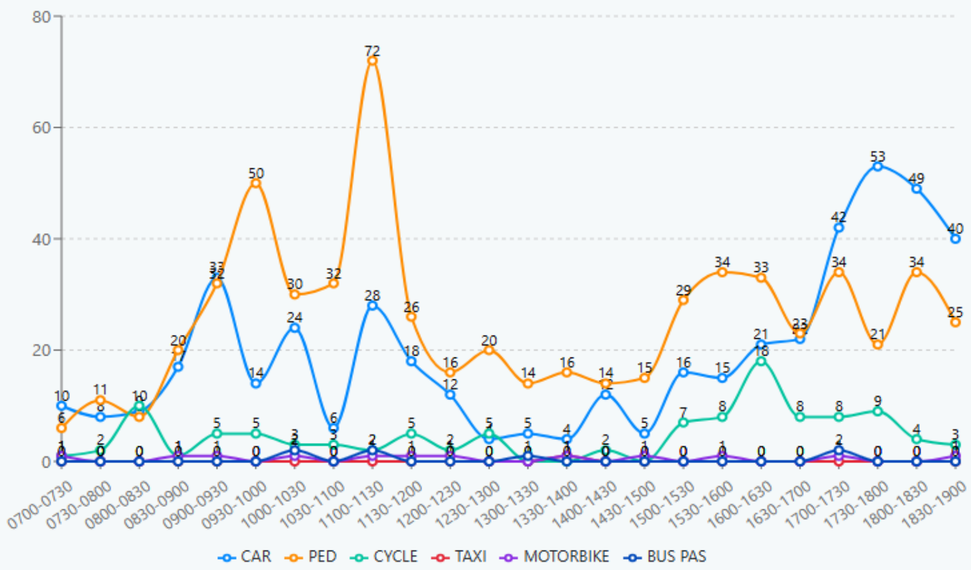
Direction

Multi-Select Mode

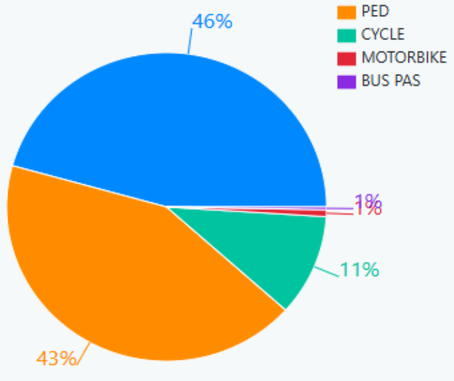
Switch to Single-Select

- In
- Out

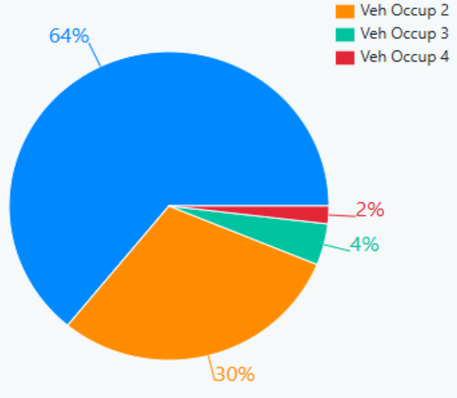
Mode Choice Flow Profile



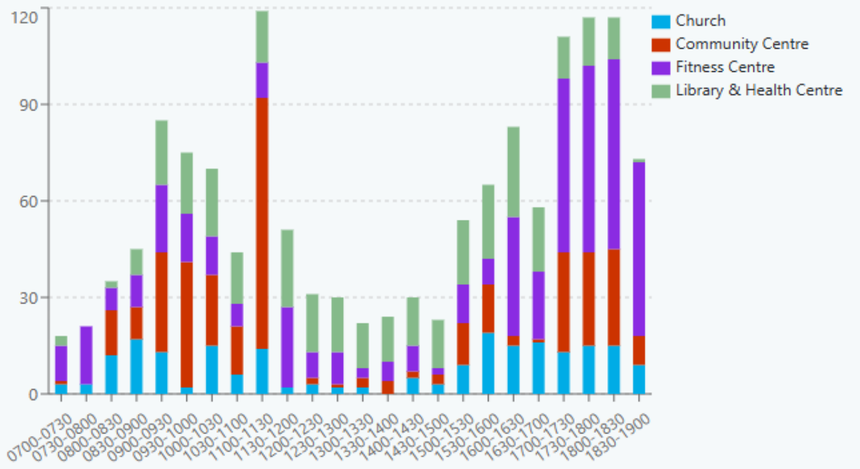
Mode Split For Selected Time



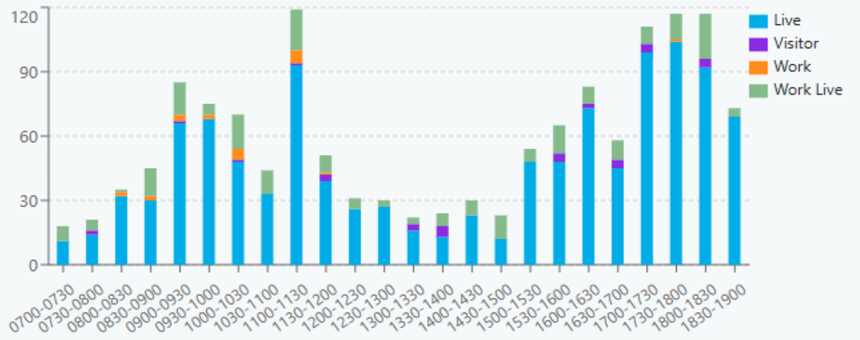
Vehicle Occupancy For Selected Time



Person Trips Per Development



Person Trips by User Type



Additional Information

Version: 1.06 Updated: 20/05/20

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View Cambourne Village technical report

External Trips

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Development

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User

Multi-Select Mode

Switch to Single-Select

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- Visitor
- Work
- Work-Live

Origin

Multi-Select Mode Reset

Switch to Single-Select

- External
- Internal

Time

Multi-Select Mode Reset

Switch to Single-Select

- 1200-1230
- 1230-1300
- 1300-1330
- 1330-1400
- 1400-1430
- 1430-1500
- 1500-1530
- 1530-1600
- 1600-1630
- 1630-1700
- 1700-1730
- 1730-1800
- 1800-1830
- 1830-1900

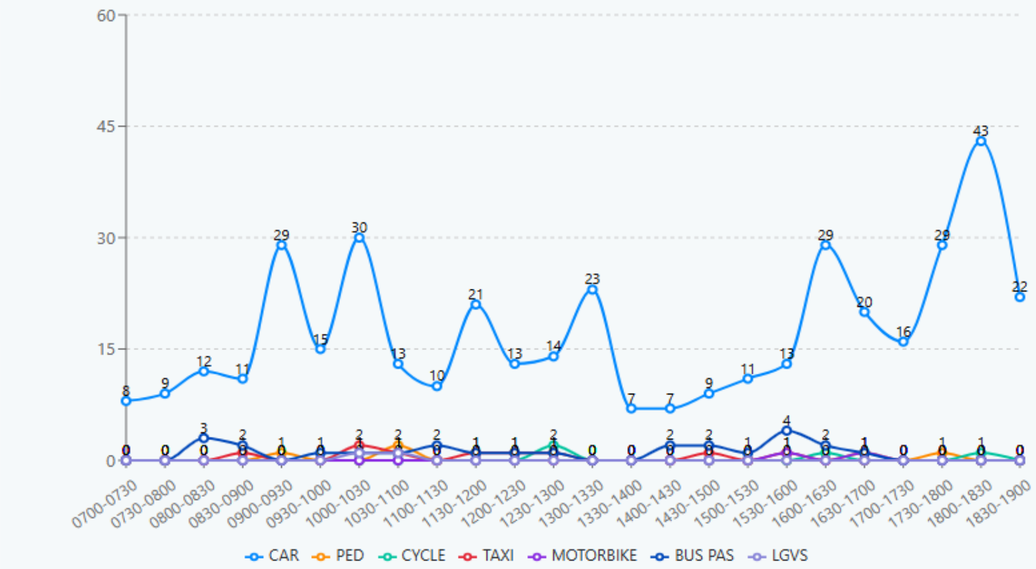
Direction

Multi-Select Mode

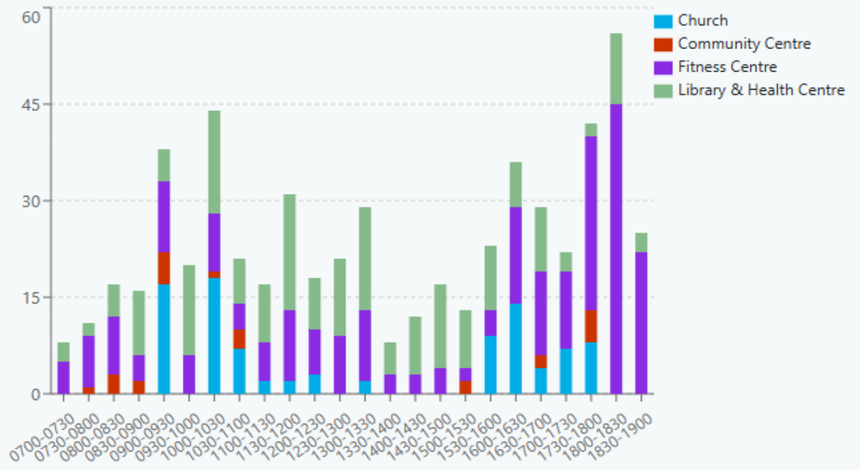
Switch to Single-Select

- In
- Out

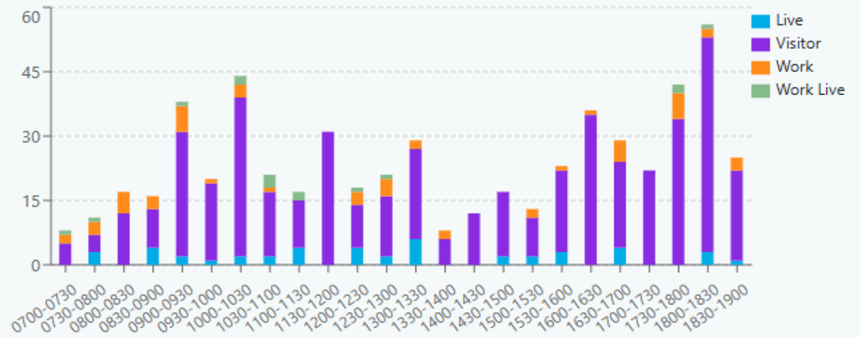
Mode Choice Flow Profile



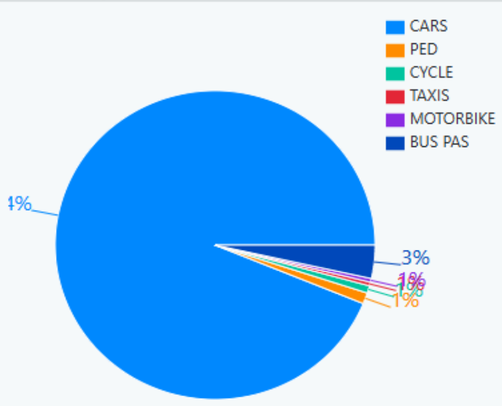
Person Trips Per Development



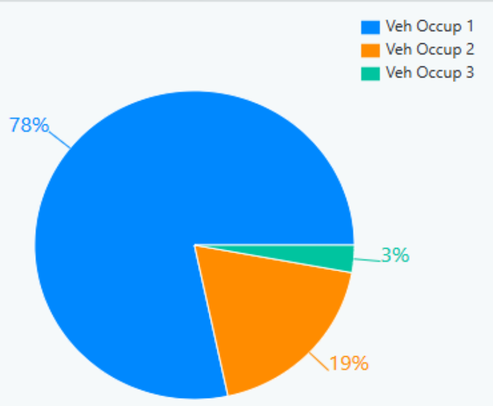
Person Trips by User Type



Mode Split For Selected Time



Vehicle Occupancy For Selected Time



Additional Information

Version: 1.06 Updated: 20/05/20

Any Time changes only affect the 2 pie charts "Mode Split For Selected Time" and "Vehicle Occupancy For Selected Time"

View Cambourne Village technical report

TRICS All Person Trip Rates

Time Period	Residential Total Person Trip Rates (per dwelling)			3500 dwellings Total People Trip Demand (3,500 dwellings)			8000 dwellings Total People Trip Demand (8,000 dwellings)		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700-0800	0.102	0.517	0.619	357	1810	2167	816	4136	4952
0800-0900	0.200	0.750	0.950	700	2625	3325	1600	6000	7600
0900-1000	0.192	0.257	0.449	672	900	1572	1536	2056	3592
1600-1700	0.491	0.250	0.741	1719	875	2594	3928	2000	5928
1700-1800	0.582	0.264	0.846	2037	924	2961	4656	2112	6768
1800-1900	0.484	0.276	0.760	1694	966	2660	3872	2208	6080
12 Hours	3.573	3.602	7.175	12506	12607	25113	28584	28816	57400

NTS0502a_start_time_by_purpose (2023)

Start time	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)	All purposes (%)
0700 to 0759	41	4	15	8	4	14	5	9	100
0800 to 0859	16	2	28	25	5	13	4	7	100
0900 to 0959	10	4	2	5	22	24	16	18	100
1600 to 1659	21	3	7	6	14	20	17	12	100
1700 to 1759	26	3	3	2	14	20	21	11	100
1800 to 1859	17	2	1	1	16	17	31	15	100
All day	16	3	9	8	16	17	18	13	100

All Person Trip Rate Split by Purpose

Start time	Commuting (%)			Business (%)			Education (%)			Escort education (%)			Shopping (%)			Other work, other escort and personal business (%)			Visiting friends, entertainment and sport (%)			Holiday, day trip and other (%)			All purposes (%)		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	0.04	0.21	0.26	0.00	0.02	0.02	0.02	0.08	0.10	0.01	0.04	0.05	0.00	0.02	0.02	0.01	0.07	0.08	0.00	0.02	0.03	0.01	0.05	0.06	0.10	0.52	0.62
0800 to 0859	0.03	0.12	0.15	0.00	0.02	0.02	0.06	0.21	0.27	0.05	0.19	0.24	0.01	0.03	0.04	0.03	0.10	0.13	0.01	0.03	0.03	0.01	0.05	0.06	0.20	0.75	0.95
0900 to 0959	0.02	0.03	0.04	0.01	0.01	0.02	0.00	0.01	0.01	0.01	0.01	0.02	0.04	0.06	0.10	0.05	0.06	0.11	0.03	0.04	0.07	0.03	0.05	0.08	0.19	0.26	0.45
1600 to 1659	0.10	0.05	0.15	0.01	0.01	0.02	0.03	0.02	0.05	0.03	0.02	0.04	0.07	0.04	0.11	0.10	0.05	0.15	0.08	0.04	0.13	0.06	0.03	0.09	0.49	0.25	0.74
1700 to 1759	0.15	0.07	0.22	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.02	0.08	0.04	0.12	0.12	0.05	0.17	0.12	0.06	0.18	0.06	0.03	0.09	0.58	0.26	0.85
1800 to 1859	0.08	0.05	0.13	0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.01	0.08	0.04	0.12	0.08	0.05	0.13	0.15	0.09	0.24	0.07	0.04	0.11	0.48	0.28	0.76
All day	0.56	0.56	1.12	0.09	0.10	0.19	0.33	0.33	0.66	0.30	0.30	0.60	0.59	0.59	1.18	0.62	0.63	1.25	0.64	0.64	1.28	0.45	0.45	0.90	3.57	3.60	7.18

NTS0409a: 2023 Average number of trips by purpose and main mode (trips per person per year)

Main mode	Commuting	Business	Education or escort education	Shopping	Other escort	Personal business	Leisure [note 2]	Other including just walk	All purposes
Walk	14	2	48	46	10	18	39	86	263
Pedal cycle	4	[low]	2	1	[low]	1	6	0	15
Car or van driver	65	14	30	78	46	35	94	[low]	363
Car or van passenger	10	1	26	30	22	18	78	[low]	185
Motorcycle	1	[low]	[low]	[low]	[low]	[low]	1	0	2
Other private transport	1	[low]	2	1	[low]	1	2	[low]	7
Bus in London	3	[low]	3	3	[low]	1	3	0	14
Other local bus	5	1	5	6	1	2	6	[low]	25
Non-local bus	0	0	0	[low]	0	0	[low]	0	[low]
London Underground	5	1	1	1	[low]	1	3	0	10
Surface Rail	7	1	2	1	[low]	1	6	0	18
Taxi or minicab	1	[low]	1	1	[low]	1	4	0	9
Other public transport	[low]	[low]	[low]	1	[low]	[low]	1	0	3
All modes	117	20	121	169	80	78	243	87	915
All modes excluding London Bus and Tube	109	19	117	165	80	76	237	87	891

NTS0409a expressed as % (excluding London) and collated to reflect NTS0502a categories

Main mode	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)	All purposes (%)
Walk	13%	10%	41%	41%	28%	18%	39%	16%	30%
Pedal cycle	4%	1%	2%	2%	1%	1%	2%	3%	2%
Car or van driver	60%	72%	26%	26%	47%	52%	29%	40%	41%
Car or van passenger	9%	7%	23%	23%	18%	25%	24%	33%	21%
Motorcycle	1%	0%	0%	0%	0%	0%	0%	0%	0%
Other private transport	1%	0%	2%	2%	1%	1%	1%	1%	1%
Other local bus	5%	3%	4%	4%	4%	2%	2%	2%	3%
Non-local bus	0%	0%	0%	0%	0%	0%	0%	0%	0%
Surface Rail	6%	5%	2%	2%	1%	1%	2%	3%	2%
Taxi or minicab	1%	1%	1%	1%	1%	1%	1%	2%	1%
Other public transport	0%	0%	0%	0%	0%	0%	0%	0%	0%
All modes	100%	100%	100%	100%	100%	100%	100%	100%	100%

Locally adjusted Mode Split by Purpose (Adjusted based on Census Travel to Work Mode Split for existing areas to reflect accessibility pre-improvements)

Mode	Census Mode Split ('East Devon 006', 'East Devon 013', and 'East Devon 014')	Commuting localisation factors (based on commuting mode split)	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)	All purposes (%)
Walking	9%	0.68	9%	6%	38%	38%	23%	14%	36%	15%	26%
Cycling	3%	0.73	3%	1%	2%	2%	1%	1%	2%	2%	2%
Driving a Car or Van	70%	1.17	70%	84%	30%	30%	56%	61%	34%	46%	48%
Passenger in a Car or Van	5%	0.56	5%	4%	21%	21%	15%	21%	22%	29%	18%
Motorcycle, Scooter or Moped	2%	2.52	2%	0%	0%	0%	0%	0%	0%	0%	0%
Other Method of Travel	3%	5.12	3%	0%	2%	2%	1%	1%	1%	1%	1%
Bus, Minibus or Coach	4%	0.82	4%	2%	4%	4%	3%	1%	2%	2%	3%
Train	4%	0.64	4%	3%	2%	2%	0%	0%	2%	2%	2%
Taxi	0%	0.00	0%	1%	1%	1%	1%	1%	1%	2%	1%
Total	100%	1.00	100%	100%	100%	100%	100%	100%	100%	100%	100%

Baseline Trip Rates by Time, Mode and Purpose (based on locally adjusted Mode Split by Pupose)

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	**Walking**	0.004	0.019	0.023	0.000	0.001	0.001	0.006	0.030	0.036	0.003	0.016	0.019	0.001	0.004	0.005	0.002	0.010	0.012	0.002	0.009	0.010	0.001	0.007	0.008	0.027	0.135	0.161
	Cycling	0.001	0.006	0.008	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.002	0.008	0.009
	Driving a Car or Van	0.030	0.150	0.179	0.003	0.016	0.020	0.005	0.024	0.029	0.003	0.013	0.015	0.002	0.011	0.013	0.008	0.043	0.051	0.002	0.008	0.010	0.004	0.022	0.027	0.049	0.247	0.296
	Passenger in a Car or Van	0.002	0.011	0.013	0.000	0.001	0.001	0.003	0.017	0.020	0.002	0.009	0.011	0.001	0.003	0.003	0.003	0.015	0.017	0.001	0.005	0.007	0.003	0.014	0.017	0.019	0.095	0.113
	Motorcycle, Scooter or Moped	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
	Other Method of Travel	0.001	0.006	0.008	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.005	0.006
	Bus, Minibus or Coach	0.002	0.009	0.010	0.000	0.000	0.000	0.001	0.003	0.004	0.000	0.002	0.002	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.003	0.013	0.016
	Train	0.002	0.009	0.010	0.000	0.001	0.001	0.000	0.001	0.002	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.002	0.009	0.011
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.005	0.006
	Total	0.042	0.214	0.256	0.004	0.019	0.023	0.016	0.079	0.095	0.008	0.043	0.051	0.004	0.019	0.023	0.014	0.070	0.084	0.005	0.024	0.029	0.010	0.048	0.058	0.102	0.517	0.619
0800 to 0859	**Walk**	0.003	0.011	0.014	0.000	0.001	0.001	0.021	0.080	0.102	0.019	0.072	0.092	0.002	0.008	0.010	0.004	0.015	0.018	0.003	0.010	0.012	0.002	0.007	0.009	0.052	0.195	0.247
	Pedal cycle	0.001	0.004	0.005	0.000	0.000	0.000	0.001	0.003	0.004	0.001	0.003	0.004	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.001	0.000	0.001	0.001	0.003	0.011	0.015
	Car or van driver	0.023	0.085	0.108	0.004	0.015	0.019	0.017	0.063	0.080	0.015	0.057	0.072	0.005	0.019	0.024	0.016	0.061	0.078	0.002	0.009	0.011	0.006	0.023	0.029	0.096	0.358	0.454
	Car or van passenger	0.002	0.006	0.008	0.000	0.001	0.001	0.012	0.045	0.056	0.011	0.040	0.051	0.001	0.005	0.007	0.006	0.021	0.026	0.002	0.006	0.008	0.004	0.015	0.018	0.037	0.137	0.174
	Motorcycle	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
	Other private transport	0.001	0.004	0.005	0.000	0.000	0.000	0.001	0.004	0.006	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.007	0.009
	Other local bus	0.001	0.005	0.006	0.000	0.000	0.000	0.002	0.009	0.011	0.002	0.008	0.010	0.000	0.001	0.001	0.000	0.001	0.002	0.000	0.000	0.001	0.000	0.001	0.001	0.005	0.019	0.024
	Surface Rail	0.001	0.005	0.006	0.000	0.000	0.001	0.001	0.004	0.005	0.001	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.001	0.002	0.004	0.014	0.017
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.007	0.009
	All modes	0.032	0.122	0.154	0.005	0.018	0.022	0.056	0.210	0.267	0.051	0.189	0.240	0.009	0.034	0.043	0.027	0.100	0.127	0.007	0.026	0.034	0.013	0.050	0.063	0.200	0.750	0.950
0900 to 0959	**Walk**	0.002	0.002	0.004	0.000	0.001	0.001	0.002	0.002	0.004	0.004	0.005	0.009	0.010	0.013	0.023	0.007	0.009	0.015	0.011	0.014	0.025	0.005	0.007	0.012	0.050	0.067	0.117
	Pedal cycle	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.004	0.007
	Car or van driver	0.013	0.018	0.031	0.006	0.008	0.013	0.001	0.002	0.003	0.003	0.004	0.007	0.024	0.032	0.055	0.028	0.037	0.065	0.010	0.014	0.024	0.016	0.021	0.037	0.092	0.123	0.214
	Car or van passenger	0.001	0.001	0.002	0.000	0.000	0.001	0.001	0.001	0.002	0.002	0.003	0.005	0.006	0.009	0.015	0.009	0.013	0.022	0.007	0.009	0.016	0.010	0.013	0.024	0.035	0.047	0.082
	Motorcycle	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
	Other private transport	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.002	0.002	0.004
	Other local bus	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.005	0.006	0.011
	Surface Rail	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.005	0.008
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.004
	All modes	0.019	0.026	0.045	0.007	0.009	0.016	0.004	0.006	0.010	0.010	0.013	0.022	0.043	0.057	0.100	0.045	0.061	0.106	0.030	0.040	0.070	0.035	0.046	0.081	0.192	0.257	0.449
1600 to 1659	**Walk**	0.009	0.005	0.014	0.001	0.000	0.001	0.013	0.007	0.019	0.011	0.006	0.017	0.016	0.008	0.025	0.014	0.007	0.022	0.030	0.015	0.045	0.009	0.004	0.013	0.128	0.065	0.193
	Pedal cycle	0.003	0.002	0.005	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.002	0.001	0.001	0.002	0.007	0.004	0.011
	Car or van driver	0.071	0.036	0.107	0.012	0.006	0.019	0.010	0.005	0.015	0.009	0.005	0.013	0.039	0.020	0.059	0.061	0.031	0.091	0.029	0.015	0.043	0.027	0.014	0.041	0.235	0.119	0.354
	Car or van passenger	0.005	0.003	0.008	0.001	0.000	0.001	0.007	0.004	0.011	0.006	0.003	0.009	0.011	0.005	0.016	0.020	0.010	0.031	0.019	0.010	0.028	0.017	0.009	0.026	0.090	0.046	0.135
	Motorcycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002
	Other private transport	0.003	0.002	0.005	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.005	0.002	0.007
	Other local bus	0.004	0.002	0.006	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.001	0.002	0.002	0.001	0.003	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.001	0.002	0.012	0.006	0.019
	Surface Rail	0.004	0.002	0.006	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.002	0.001	0.001	0.002	0.009	0.005	0.013
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.004	0.002	0.007
	All modes	0.101	0.052	0.153	0.015	0.007	0.022	0.034	0.017	0.051	0.030	0.015	0.045	0.070	0.036	0.106	0.099	0.050	0.150	0.084	0.043	0.126	0.059	0.030	0.089	0.491	0.250	0.741
1700 to 1759	**Walk**	0.014	0.006	0.020	0.001	0.000	0.001	0.006	0.003	0.009	0.005	0.002	0.008	0.019	0.009	0.027	0.017	0.008	0.025	0.045	0.020	0.065	0.009	0.004	0.014	0.151	0.069	0.220
	Pedal cycle	0.005	0.002	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.003	0.001	0.001	0.002	0.009	0.004	0.013
	Car or van driver	0.107	0.048	0.155	0.013	0.006	0.018	0.005	0.002	0.007	0.004	0.002	0.006	0.044	0.020	0.065	0.072	0.032	0.104	0.042	0.019	0.062	0.030	0.013	0.043	0.278	0.126	0.404
	Car or van passenger	0.008	0.003	0.011	0.001	0.000	0.001	0.003	0.001	0.005	0.003	0.001	0.004	0.012	0.005	0.018	0.024	0.011	0.035	0.028	0.013	0.040	0.019	0.008	0.027	0.106	0.048	0.155
	Motorcycle	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002
	Other private transport	0.005	0.002	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.005	0.002	0.008
	Other local bus	0.006	0.003	0.009	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.003	0.002	0.001	0.002	0.002	0.001	0.003	0.001	0.001	0.002	0.015	0.007	0.021
	Surface Rail	0.006	0.003	0.009	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.003	0.002	0.001	0.002	0.011	0.005	0.015
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.002	0.001	0.000	0.002	0.005	0.002	0.008
	All modes	0.152	0.069	0.221	0.015	0.007	0.022	0.016	0.007	0.023	0.014	0.006	0.020	0.080	0.036	0.116	0.117	0.053	0.170	0.124	0.056	0.180	0.064	0.029	0.093	0.582	0.264	0.846
1800 to 1859	**Walk**	0.007	0.004	0.012	0.000	0.000	0.001	0.002	0.001	0.004	0.001	0.001	0.002	0.018	0.010	0.029	0.012	0.007	0.019	0.054	0.031	0.085	0.011	0.006	0.017	0.126	0.072	0.198
	Pedal cycle	0.002	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.001	0.003	0.002	0.004	0.002	0.001	0.003	0.007	0.004	0.012
	Car or van driver	0.058	0.033	0.091	0.006	0.004	0.010	0.002	0.001	0.003	0.001	0.001	0.002	0.043	0.025	0.068	0.051	0.029	0.079	0.052	0.029	0.081	0.033	0.019	0.052	0.231	0.132	0.363
	Car or van passenger	0.004	0.002	0.007	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.000	0.001	0.012	0.007	0.019	0.017	0.010	0.027	0.034	0.019	0.053	0.021	0.012	0.033	0.089	0.050	0.139
	Motorcycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002
	Other private transport	0.002	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.002	0.001	0.000	0.001	0.005	0.003	0.007
	Other local bus	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.004	0.001	0.001	0.002	0.003	0.001	0.004	0.002	0.001	0.002	0.012	0.007	0.019
	Surface Rail	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.003	0.002	0.004	0.002	0.001	0.003	0.009	0.005	0.014
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.003	0.001	0.001	0.002	0.004	0.003	0.007
	All modes	0.083	0.047	0.131	0.007	0.004	0.012	0.006	0.003	0.009	0.003	0.002	0.005	0.078	0.044	0.122	0.083	0.047	0.130	0.151	0.086	0.238	0.072	0.041	0.113	0.484	0.276	0.760
All day	**Walk**	0.050	0.050	0.100	0.006	0.006	0.011	0.125	0.126	0.252	0.114	0.115	0.229	0.137	0.139	0.276	0.090	0.091	0.181	0.229	0.231	0.460	0.066	0.066	0.132	0.930	0.937	1.867
	Pedal cycle	0.017	0.017	0.033	0.001	0.001	0.001	0.005	0.005	0.011	0.005	0.005	0.010	0.004	0.004	0.009	0.003	0.003	0.007	0.011	0.011	0.023	0.010	0.010	0.021	0.055	0.055	0.110
	Car or van driver	0.389	0.392	0.781	0.080	0.080	0.160	0.099	0.100	0.198	0.090	0.091	0.181	0.326	0.328	0.654	0.381	0.384	0.764	0.217	0.219	0.436	0.208	0.210	0.418	1.707	1.721	3.428
	Car or van passenger	0.028	0.028	0.056	0.003	0.004	0.007	0.069	0.070	0.140	0.063	0.064	0.127	0.089	0.090	0.178	0.129	0.130	0.259	0.143	0.144	0.286	0.131	0.132	0.263	0.653	0.659	1.312
	Motorcycle	0.011	0.011	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.002	0.008	0.008	0.016
	Other private transport	0.017	0.017	0.033	0.000	0.000	0.001	0.007	0.007	0.014	0.006	0.006	0.013	0.006	0.006	0.011	0.004	0.004	0.008	0.005	0.005	0.009	0.004	0.004	0.008	0.033	0.034	0.067
	Other local bus	0.022	0.022	0.045	0.001	0.001	0.003	0.014	0.014	0.027	0.012	0.012	0.025	0.017	0.018	0.035	0.009	0.009	0.018	0.011	0.011	0.022	0.010	0.010	0.020	0.090	0.091	0.180
	Surface Rail	0.022	0.022	0.045	0.003	0.003	0.005	0.006	0.006	0.012	0.006	0.006	0.011	0.003	0.003	0.005	0.003	0.003	0.006	0.012	0.012	0.023	0.011	0.011	0.022	0.065	0.065	0.130
	Taxi or minicab	0.000	0.000	0.000	0.001	0.001	0.001	0.003	0.003	0.005	0.002	0.002	0.005	0.003	0.003	0.006	0.004	0.004	0.008	0.008	0.008	0.016	0.007	0.008	0.015	0.033	0.033	0.065
	All modes	0.556	0.560	1.116	0.095	0.095	0.190	0.328	0.331	0.660	0.299	0.301	0.600	0.587	0.591	1.178	0.623	0.628	1.252	0.637	0.642	1.279	0.449	0.452	0.901	3.573	3.602	7.175

Baseline Trips by Time, Mode and Purpose 3500 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	13	67	81	1	4	5	21	106	127	11	57	68	3	16	19	7	36	43	6	31	37	5	25	29	93	471	564
	Cycling	4	22	27	0	0	1	1	5	5	0	2	3	0	0	1	0	1	2	0	2	2	1	4	5	5	28	33
	Driving a Car or Van	103	523	627	11	57	68	17	84	100	9	45	54	7	37	44	30	150	180	6	29	35	15	78	94	171	864	1035
	Passenger in a Car or Van	7	37	45	0	2	3	12	59	70	6	32	38	2	10	12	10	51	61	4	19	23	10	49	59	65	331	396
	Motorcycle, Scooter or Moped	3	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	5
	Other Method of Travel	4	22	27	0	0	0	1	6	7	1	3	4	0	1	1	0	2	2	0	1	1	0	2	2	3	17	20
	Bus, Minibus or Coach	6	30	36	0	1	1	2	11	14	1	6	7	0	2	2	1	3	4	0	1	2	1	4	4	9	46	54
	Train	6	30	36	0	2	2	1	5	6	1	3	3	0	0	0	0	1	1	0	2	2	1	4	5	6	33	39
	Taxi or minicab	0	0	0	0	0	1	0	2	3	0	1	1	0	0	0	0	2	2	0	1	1	1	3	3	3	16	20
	Total	148	748	895	13	68	81	55	278	333	29	149	178	13	67	80	49	246	295	17	85	102	33	169	202	357	1810	2167
0800 to 0859	Walk	10	38	49	1	4	5	75	281	356	67	253	321	7	28	35	14	51	64	9	33	42	7	26	32	182	683	865
	Pedal cycle	3	13	16	0	0	1	3	12	15	3	11	14	0	1	1	1	2	2	0	2	2	1	4	5	11	40	51
	Car or van driver	80	298	378	14	52	66	59	222	281	53	199	253	18	66	83	57	215	272	8	32	40	22	81	103	334	1254	1588
	Car or van passenger	6	21	27	1	2	3	42	156	197	37	140	178	5	18	23	19	73	92	6	21	26	14	51	64	128	480	608
	Motorcycle	2	9	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	7
	Other private transport	3	13	16	0	0	0	4	15	20	4	14	18	0	1	1	1	2	3	0	1	1	0	2	2	7	25	31
	Other local bus	5	17	22	0	1	1	8	30	38	7	27	35	1	4	4	1	5	6	0	2	2	1	4	5	18	66	84
	Surface Rail	5	17	22	0	2	2	4	14	17	3	12	16	0	1	1	0	2	2	0	2	2	1	4	5	13	48	60
	Taxi or minicab	0	0	0	0	0	1	2	6	8	1	5	7	0	1	1	1	2	3	0	1	2	1	3	4	6	24	30
	All modes	114	426	540	16	62	78	196	737	933	177	663	840	32	119	150	94	351	445	25	93	117	47	175	221	700	2625	3325
0900 to 0959	Walk	6	8	14	1	2	3	6	7	13	13	17	30	35	47	82	23	31	54	38	50	88	18	24	41	175	234	409
	Pedal cycle	2	3	5	0	0	0	0	0	1	1	1	1	1	1	3	1	1	2	2	2	4	3	4	7	10	14	24
	Car or van driver	47	63	110	20	27	47	4	6	10	10	14	24	83	111	194	97	130	227	36	48	83	56	75	131	321	430	751
	Car or van passenger	3	4	8	1	1	2	3	4	7	7	10	17	23	30	53	33	44	77	23	31	55	35	47	82	123	164	287
	Motorcycle	1	2	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	2	3
	Other private transport	2	3	5	0	0	0	0	0	1	1	1	2	1	2	3	1	1	2	1	1	2	1	2	3	6	8	15
	Other local bus	3	4	6	0	0	1	1	1	1	1	2	3	4	6	10	2	3	5	2	2	4	3	4	6	17	23	40
	Surface Rail	3	4	6	1	1	2	0	0	1	1	1	1	1	1	2	1	1	2	2	3	4	3	4	7	12	16	28
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	2	1	2	3	2	3	5	6	8	14
	All modes	67	90	156	24	32	56	15	19	34	34	45	79	149	200	349	159	213	371	105	140	244	121	162	282	672	900	1572
1600 to 1659	Walk	32	16	48	3	2	4	45	23	68	40	20	60	57	29	87	50	26	76	105	54	159	30	15	46	447	228	675
	Pedal cycle	11	5	16	0	0	1	2	1	3	2	1	3	2	1	3	2	1	3	5	3	8	5	2	7	26	13	40
	Car or van driver	248	126	375	43	22	65	35	18	54	31	16	47	136	69	206	212	108	320	100	51	151	96	49	145	821	418	1239
	Car or van passenger	18	9	27	2	1	3	25	13	38	22	11	33	37	19	56	72	37	108	66	33	99	60	31	91	314	160	474
	Motorcycle	7	4	11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	1	4	2	6
	Other private transport	11	5	16	0	0	0	2	1	4	2	1	3	2	1	4	2	1	3	2	1	3	2	1	3	16	8	24
	Other local bus	14	7	21	1	0	1	5	2	7	4	2	6	7	4	11	5	2	7	5	3	7	5	2	7	43	22	65
	Surface Rail	14	7	21	1	1	2	2	1	3	2	1	3	1	1	2	2	1	3	5	3	8	5	3	7	31	16	47
	Taxi or minicab	0	0	0	0	0	1	1	0	1	1	0	1	1	1	2	2	1	3	4	2	6	3	2	5	16	8	24
	All modes	355	181	535	51	26	77	118	60	178	104	53	156	245	125	370	347	177	523	293	149	442	206	105	312	1719	875	2594
1700 to 1759	Walk	48	22	70	3	1	4	21	9	30	19	8	27	66	30	95	59	27	86	156	71	227	33	15	48	530	240	771
	Pedal cycle	16	7	23	0	0	1	1	0	1	1	0	1	2	1	3	2	1	3	8	3	11	5	2	8	31	14	45
	Car or van driver	373	169	543	44	20	64	16	7	24	15	7	21	156	71	226	250	114	364	148	67	215	104	47	151	973	441	1414
	Car or van passenger	27	12	39	2	1	3	12	5	17	10	5	15	42	19	62	85	38	123	97	44	141	65	30	95	372	169	541
	Motorcycle	11	5	16	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	1	1	0	1	5	2	7
	Other private transport	16	7	23	0	0	0	1	1	2	1	0	1	3	1	4	3	1	4	3	1	5	2	1	3	19	9	28
	Other local bus	21	10	31	1	0	1	2	1	3	2	1	3	8	4	12	6	3	8	7	3	11	5	2	7	51	23	74
	Surface Rail	21	10	31	1	1	2	1	0	1	1	0	1	1	1	2	2	1	3	8	4	12	5	2	8	37	17	54
	Taxi or minicab	0	0	0	0	0	1	0	0	1	0	0	1	2	1	2	3	1	4	6	3	8	4	2	5	19	8	27
	All modes	533	242	775	53	24	76	54	25	79	49	22	71	280	127	407	410	186	596	434	197	631	224	102	326	2037	924	2961
1800 to 1859	Walk	26	15	41	2	1	2	8	5	12	5	3	7	64	36	100	42	24	66	191	109	299	37	21	58	441	251	692
	Pedal cycle	9	5	14	0	0	0	0	0	1	0	0	0	2	1	3	2	1	2	9	5	15	6	3	9	26	15	41
	Car or van driver	204	116	320	22	12	34	6	4	10	4	2	6	151	86	238	177	101	278	181	103	284	117	67	184	809	461	1271
	Car or van passenger	15	8	23	1	1	1	4	3	7	3	1	4	41	24	65	60	34	94	119	68	186	73	42	115	310	177	486
	Motorcycle	6	3	9	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	2	1	0	1	4	2	6
	Other private transport	9	5	14	0	0	0	0	0	1	0	0	0	3	1	4	2	1	3	4	2	6	2	1	4	16	9	25
	Other local bus	12	7	18	0	0	1	1	0	1	1	0	1	8	5	13	4	2	6	9	5	14	6	3	9	43	24	67
	Surface Rail	12	7	18	1	0	1	0	0	1	0	0	0	1	1	2	1	1	2	10	6	15	6	3	9	31	17	48
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	3	7	4	11	4	2	7	15	9	24
	All modes	291	166	457	26	15	41	21	12	33	12	7	19	272	155	428	290	165	455	530	302	832	252	144	395	1694	966	2660
All day	Walk	175	176	351	19	20	39	439	442	881	399	403	802	481	485	966	316	319	634	801	808	1609	230	231	461	3254	3281	6535
	Pedal cycle	58	59	117	2	2	5	19	19	38	17	17	34	15	15	31	12	12	24	39	40	79	36	36	73	191	192	383
	Car or van driver	1361	1372	2734	279	281	560	346	349	694	315	317	632	1140	1150	2290	1332	1343	2675	761	767	1528	729	735	1465	5974	6022	11996
	Car or van passenger	97	98	195	12	12	24	243	245	488	221	223	445	311	314	625	451	455	906	499	503	1002	458	462	920	2287	2305	4592
	Motorcycle	39	39	78	0	0	1	1	1	1	1	1	1	4	4	8	2	2	4	5	5	9	4	4	8	28	28	56
	Other private transport	58	59	117	2	2	3	24	24	49	22	22	44	20	20	40	13	13	27	16	16	32	15	15	30	117	118	235
	Other local bus	78	78	156	5	5	10	47	48	95	43	43	87	61	62	123	31	31	62	38	38	76	35	35	70	314	317	631
	Surface Rail	78	78	156	9	9	18	22	22	43	20	20	39	9	9	19	11	11	21	41	41	82	38	38	75	226	228	454
	Taxi or minicab	0	0	0	2	2	5	9	9	19	8	8	17	11	11	22	14	14	28	28	29	57	26	26	53	114	115	229
	All modes	1945	1961	3905	331	334	665	1149	1159	2308	1046	1055	2101	2053	2070	4123	2182	2200	4382	2229	2247	4475	1570	1583	3153	12506	12607	25113

Baseline Trip Rates by Time, Mode and Purpose 8000 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	**Walking**	30	154	184	2	9	11	48	243	291	26	130	156	7	36	43	16	81	98	14	70	84	11	56	67	212	1076	1289
	Cycling	10	51	61	0	1	1	2	10	12	1	6	7	0	1	1	1	3	4	1	3	4	2	9	11	12	63	76
	Driving a Car or Van	236	1196	1432	26	130	156	38	191	229	20	102	123	17	85	102	68	344	411	13	67	80	35	179	214	390	1976	2366
	Passenger in a Car or Van	17	85	102	1	6	7	27	135	161	14	72	86	5	23	28	23	116	139	9	44	52	22	112	135	149	756	906
	Motorcycle, Scooter or Moped	7	34	41	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2	9	11
	Other Method of Travel	10	51	61	0	1	1	3	13	16	1	7	9	0	1	2	1	3	4	0	1	2	1	4	4	8	39	46
	Bus, Minibus or Coach	13	68	82	0	2	3	5	26	31	3	14	17	1	5	5	2	8	9	1	3	4	2	8	10	21	104	125
	Train	13	68	82	1	4	5	2	12	14	1	6	8	0	1	1	1	3	3	1	4	4	2	9	11	15	75	90
	Taxi or minicab	0	0	0	0	1	1	1	5	6	1	3	3	0	1	1	1	4	4	0	2	3	1	6	8	7	38	45
	Total	337	1709	2046	31	155	185	125	636	761	67	341	408	30	153	183	111	563	674	38	195	233	76	385	461	816	4136	4952
0800 to 0859	**Walk**	23	88	111	2	8	10	171	643	814	154	578	733	17	64	80	31	116	147	20	76	97	16	58	74	416	1561	1978
	Pedal cycle	8	29	37	0	1	1	7	28	35	7	25	31	1	2	3	1	4	5	1	4	5	2	9	12	24	92	116
	Car or van driver	182	682	864	32	119	151	135	506	642	122	456	578	40	151	191	131	491	621	19	72	92	49	185	235	764	2866	3631
	Car or van passenger	13	49	62	1	5	7	95	356	451	86	321	406	11	41	52	44	166	210	13	47	60	31	116	147	293	1097	1390
	Motorcycle	5	19	25	0	0	0	0	1	1	0	1	1	0	1	1	0	1	1	0	0	1	0	1	1	4	13	17
	Other private transport	8	29	37	0	1	1	9	35	45	9	32	40	1	3	3	1	5	6	0	2	2	1	4	5	15	56	71
	Other local bus	10	39	49	1	2	3	18	69	88	17	62	79	2	8	10	3	11	14	1	4	5	2	9	11	40	151	191
	Surface Rail	10	39	49	1	4	5	8	32	40	8	28	36	0	1	2	1	4	5	1	4	5	3	10	12	29	109	138
	Taxi or minicab	0	0	0	0	1	1	4	14	17	3	12	15	0	1	2	1	5	7	1	3	3	2	7	8	15	55	69
	All modes	260	974	1234	38	141	179	449	1684	2132	404	1516	1920	72	271	343	214	803	1018	57	212	268	106	399	505	1600	6000	7600
0900 to 0959	**Walk**	14	18	32	3	4	7	13	17	30	29	39	69	80	107	187	53	70	123	86	115	201	40	54	94	400	535	935
	Pedal cycle	5	6	11	0	1	1	1	1	1	1	2	3	3	3	6	2	3	5	4	6	10	6	9	15	23	31	55
	Car or van driver	107	143	250	46	61	107	10	13	23	23	31	54	189	253	443	222	297	518	82	109	191	128	172	300	734	982	1716
	Car or van passenger	8	10	18	2	3	5	7	9	16	16	22	38	52	69	121	75	100	175	53	72	125	81	108	188	281	376	657
	Motorcycle	3	4	7	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	0	1	1	1	1	2	3	5	8
	Other private transport	5	6	11	0	0	1	1	1	2	2	2	4	3	4	8	2	3	5	2	2	4	3	3	6	14	19	34
	Other local bus	6	8	14	1	1	2	1	2	3	3	4	7	10	14	24	5	7	12	4	5	9	6	8	14	39	52	90
	Surface Rail	6	8	14	1	2	3	1	1	1	1	2	3	2	2	4	2	2	4	4	6	10	7	9	15	28	37	65
	Taxi or minicab	0	0	0	0	1	1	0	0	1	1	1	1	2	2	4	2	3	5	3	4	7	5	6	11	14	19	33
	All modes	153	205	358	54	73	127	33	45	78	77	103	180	341	456	797	363	486	849	239	320	559	276	370	646	1536	2056	3592
1600 to 1659	**Walk**	73	37	110	7	3	10	103	52	155	90	46	136	131	67	198	115	58	173	241	122	363	69	35	104	1022	520	1543
	Pedal cycle	24	12	37	1	0	1	4	2	7	4	2	6	4	2	6	4	2	6	12	6	18	11	6	16	60	31	90
	Car or van driver	568	289	857	98	50	148	81	41	122	71	36	108	311	159	470	484	246	730	228	116	345	219	112	331	1876	955	2832
	Car or van passenger	41	21	61	4	2	6	57	29	86	50	26	76	85	43	128	164	83	247	150	76	226	138	70	208	718	366	1084
	Motorcycle	16	8	24	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	1	1	2	1	1	2	9	4	13
	Other private transport	24	12	37	1	0	1	6	3	9	5	3	8	5	3	8	5	2	7	5	2	7	4	2	7	37	19	55
	Other local bus	32	17	49	2	1	3	11	6	17	10	5	15	17	8	25	11	6	17	11	6	17	10	5	16	99	50	149
	Surface Rail	32	17	49	3	2	5	5	3	8	4	2	7	3	1	4	4	2	6	12	6	19	11	6	17	71	36	107
	Taxi or minicab	0	0	0	1	0	1	2	1	3	2	1	3	3	2	5	5	3	8	9	4	13	8	4	12	36	18	54
	All modes	811	413	1224	117	59	176	270	137	407	237	121	357	561	285	846	793	404	1196	669	341	1010	472	240	712	3928	2000	5928
1700 to 1759	**Walk**	110	50	159	7	3	10	48	22	69	42	19	62	150	68	218	136	62	197	357	162	519	75	34	109	1212	550	1761
	Pedal cycle	37	17	53	1	0	1	2	1	3	2	1	3	5	2	7	5	2	7	18	8	26	12	5	17	71	32	103
	Car or van driver	853	387	1240	101	46	147	37	17	54	33	15	49	355	161	517	572	260	832	339	154	492	238	108	346	2224	1009	3233
	Car or van passenger	61	28	89	4	2	6	26	12	38	24	11	34	97	44	141	194	88	282	222	101	323	149	68	217	851	386	1238
	Motorcycle	24	11	35	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	2	1	3	1	1	2	10	5	15
	Other private transport	37	17	53	1	0	1	3	1	4	2	1	3	6	3	9	6	3	8	7	3	10	5	2	7	44	20	63
	Other local bus	49	22	71	2	1	3	5	2	7	5	2	7	19	9	28	13	6	19	17	8	24	11	5	16	117	53	170
	Surface Rail	49	22	71	3	1	5	2	1	3	2	1	3	3	1	4	5	2	7	18	8	26	12	6	18	84	38	122
	Taxi or minicab	0	0	0	1	0	1	1	0	1	1	0	1	3	2	5	6	3	9	13	6	18	9	4	12	42	19	62
	All modes	1219	553	1772	120	54	175	124	56	181	111	50	161	640	290	930	937	425	1362	992	450	1443	512	232	744	4656	2112	6768
1800 to 1859	**Walk**	60	34	94	3	2	5	18	10	28	11	6	17	146	83	229	96	55	151	435	248	684	84	48	132	1008	575	1582
	Pedal cycle	20	11	31	0	0	1	1	0	1	0	0	1	5	3	7	4	2	6	21	12	34	13	8	21	59	34	93
	Car or van driver	466	266	732	50	28	78	14	8	22	8	5	13	346	197	543	405	231	636	413	236	649	267	152	420	1850	1055	2904
	Car or van passenger	33	19	52	2	1	3	10	6	16	6	3	9	94	54	148	137	78	215	271	155	426	168	96	264	708	404	1112
	Motorcycle	13	8	21	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	3	1	4	2	1	2	9	5	14
	Other private transport	20	11	31	0	0	0	1	1	2	1	0	1	6	3	9	4	2	6	9	5	14	5	3	9	36	21	57
	Other local bus	27	15	42	1	1	1	2	1	3	1	1	2	19	11	29	9	5	15	21	12	32	13	7	20	97	56	153
	Surface Rail	27	15	42	2	1	3	1	1	1	1	0	1	3	2	4	3	2	5	22	13	35	14	8	22	70	40	110
	Taxi or minicab	0	0	0	0	0	1	0	0	1	0	0	0	3	2	5	4	2	7	15	9	24	10	5	15	35	20	55
	All modes	666	380	1045	59	34	93	47	27	75	28	16	44	623	355	978	663	378	1041	1211	691	1902	576	328	904	3872	2208	6080
All day	**Walk**	400	403	803	44	45	89	1003	1011	2014	913	920	1833	1100	1109	2209	722	728	1450	1832	1847	3679	525	529	1053	7439	7499	14938
	Pedal cycle	133	134	268	5	5	11	43	43	86	39	39	78	35	35	70	27	27	54	90	91	181	83	83	166	436	440	876
	Car or van driver	3112	3137	6248	638	643	1280	790	797	1587	719	725	1445	2607	2628	5235	3045	3070	6115	1739	1753	3492	1667	1681	3348	13655	13766	27420
	Car or van passenger	222	224	446	28	28	56	556	560	1116	506	510	1016	711	717	1428	1031	1040	2071	1141	1150	2291	1047	1055	2102	5227	5269	10496
	Motorcycle	89	90	179	1	1	2	1	1	3	1	1	2	9	9	18	5	5	9	11	11	21	10	10	19	64	64	128
	Other private transport	133	134	268	4	4	7	55	56	111	50	51	101	45	45	90	30	31	61	37	37	74	34	34	68	267	270	537
	Other local bus	178	179	357	11	12	23	108	109	217	98	99	198	140	141	280	70	71	141	86	87	173	79	80	159	719	725	1443
	Surface Rail	178	179	357	21	21	42	49	50	99	45	45	90	22	22	43	24	24	48	93	94	188	86	87	172	517	521	1039
	Taxi or minicab	0	0	0	5	5	11	21	21	42	19	19	39	25	25	51	32	32	64	65	66	131	60	60	120	260	262	523
	All modes	4445	4481	8926	757	763	1521	2627	2649	5276	2391	2410	4801	4693	4731	9424	4987	5028	10015	5094	5135	10229	3589	3618	7208	28584	28816	57400

External Trip Allowances

Mode	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)
	From Census 2001 Trips <2km	To match commuting	Externalisation Allowance to match potential tertiary eductation Persona. 3%	To match eductaion	Externalisation Allowance from Cambourne Retail Surveys	Externalisation Allowance from Cambourne Other Uses Surveys	To match Other work, other escort and personal business	Externalisation Allowance - assumed all are external 100%
Walking	21%	21%	1%	1%	15%	1%	1%	100%
Cycling	62%	62%	0%	0%	23%	3%	3%	100%
Driving a Car or Van	86%	86%	1%	1%	59%	43%	43%	100%
Passenger in a Car or Van	80%	80%	1%	1%	59%	43%	43%	100%
Motorcycle, Scooter or Moped	67%	67%	0%	0%	43%	17%	17%	100%
Other Method of Travel	67%	67%	0%	0%	43%	17%	17%	100%
Bus, Minibus or Coach	90%	90%	0%	0%	59%	43%	43%	100%
Train (no internalisaton)	100%	100%	100%	100%	100%	100%	100%	100%
Taxi	20%	20%	0%	0%	0%	100%	100%	100%

Baseline External Trip Rates by Time, Mode and Purpose (based on locally adjusted Mode Split by Pupose)

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	**Walking**	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007	0.008	0.002	0.013	0.015
	Cycling	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.005	0.006
	Driving a Car or Van	0.025	0.129	0.155	0.003	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.008	0.004	0.019	0.022	0.001	0.004	0.004	0.004	0.022	0.027	0.038	0.194	0.233
	Passenger in a Car or Van	0.002	0.009	0.010	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.001	0.006	0.008	0.000	0.002	0.003	0.003	0.014	0.017	0.007	0.034	0.040
	Motorcycle, Scooter or Moped	0.001	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.004
	Other Method of Travel	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.005	0.006
	Bus, Minibus or Coach	0.002	0.008	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.010	0.012
	Train	0.002	0.009	0.010	0.000	0.001	0.001	0.000	0.001	0.002	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.003	0.013	0.016
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.002
	Total	0.033	0.169	0.203	0.003	0.016	0.019	0.000	0.002	0.002	0.000	0.001	0.001	0.002	0.009	0.011	0.005	0.026	0.032	0.001	0.007	0.008	0.010	0.048	0.058	0.055	0.279	0.334
0800 to 0859	**Walk**	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.007	0.009	0.003	0.013	0.016
	Pedal cycle	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.004	0.005
	Car or van driver	0.020	0.074	0.093	0.003	0.013	0.016	0.000	0.000	0.001	0.000	0.000	0.001	0.003	0.011	0.014	0.007	0.027	0.034	0.001	0.004	0.005	0.006	0.023	0.029	0.041	0.152	0.193
	Car or van passenger	0.001	0.005	0.006	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.004	0.002	0.009	0.011	0.001	0.003	0.003	0.004	0.015	0.018	0.009	0.035	0.044
	Motorcycle	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
	Other private transport	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.003	0.004
	Other local bus	0.001	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.007	0.009
	Surface Rail	0.001	0.005	0.006	0.000	0.000	0.001	0.001	0.004	0.005	0.001	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.001	0.002	0.004	0.015	0.019
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.002
	All modes	0.026	0.096	0.122	0.004	0.014	0.018	0.001	0.005	0.007	0.001	0.005	0.006	0.004	0.016	0.021	0.010	0.038	0.048	0.002	0.008	0.010	0.013	0.050	0.063	0.062	0.233	0.295
0900 to 0959	**Walk**	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.007	0.012	0.007	0.010	0.017
	Pedal cycle	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.002	0.003
	Car or van driver	0.012	0.015	0.027	0.005	0.007	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.019	0.033	0.012	0.016	0.028	0.004	0.006	0.010	0.016	0.021	0.037	0.063	0.084	0.147
	Car or van passenger	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.005	0.009	0.004	0.005	0.010	0.003	0.004	0.007	0.010	0.013	0.024	0.022	0.029	0.051
	Motorcycle	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
	Other private transport	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002
	Other local bus	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001	0.002	0.003	0.004	0.007
	Surface Rail	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.004	0.007
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.003
	All modes	0.015	0.020	0.035	0.006	0.007	0.013	0.000	0.000	0.000	0.000	0.000	0.001	0.021	0.028	0.048	0.017	0.023	0.040	0.009	0.012	0.020	0.035	0.046	0.081	0.102	0.136	0.238
1600 to 1659	**Walk**	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.004	0.013	0.014	0.007	0.021
	Pedal cycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.003	0.002	0.005
	Car or van driver	0.061	0.031	0.093	0.011	0.005	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.012	0.035	0.026	0.013	0.040	0.012	0.006	0.019	0.027	0.014	0.041	0.161	0.082	0.243
	Car or van passenger	0.004	0.002	0.006	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.003	0.009	0.009	0.005	0.013	0.008	0.004	0.012	0.017	0.009	0.026	0.045	0.023	0.068
	Motorcycle	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.002
	Other private transport	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.003	0.002	0.005
	Other local bus	0.004	0.002	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.000	0.001	0.001	0.001	0.002	0.008	0.004	0.012
	Surface Rail	0.004	0.002	0.006	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.002	0.001	0.001	0.002	0.009	0.005	0.014
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.003	0.001	0.004
	All modes	0.080	0.041	0.121	0.012	0.006	0.018	0.001	0.000	0.001	0.001	0.000	0.001	0.034	0.017	0.051	0.037	0.019	0.056	0.024	0.012	0.036	0.059	0.030	0.089	0.248	0.126	0.374
1700 to 1759	**Walk**	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.009	0.004	0.014	0.016	0.007	0.023
	Pedal cycle	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.005	0.002	0.007
	Car or van driver	0.092	0.042	0.134	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.012	0.038	0.031	0.014	0.045	0.018	0.008	0.027	0.030	0.013	0.043	0.198	0.090	0.287
	Car or van passenger	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.003	0.010	0.010	0.005	0.015	0.012	0.005	0.017	0.019	0.008	0.027	0.055	0.025	0.079
	Motorcycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003
	Other private transport	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.004	0.002	0.006
	Other local bus	0.006	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.002	0.010	0.005	0.014
	Surface Rail	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.003	0.002	0.001	0.002	0.011	0.005	0.017
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.001	0.002	0.001	0.000	0.002	0.003	0.002	0.005
	All modes	0.121	0.055	0.175	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.039	0.018	0.056	0.044	0.020	0.064	0.036	0.016	0.052	0.064	0.029	0.093	0.304	0.138	0.442
1800 to 1859	**Walk**	0.002	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.002	0.004	0.000	0.000	0.000	0.001	0.000	0.001	0.011	0.006	0.017	0.016	0.009	0.024
	Pedal cycle	0.002	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003	0.003	0.002	0.005
	Car or van driver	0.050	0.029	0.079	0.005	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.015	0.040	0.022	0.012	0.034	0.022	0.013	0.035	0.033	0.019	0.052	0.159	0.091	0.250
	Car or van passenger	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.004	0.011	0.007	0.004	0.012	0.015	0.008	0.023	0.021	0.012	0.033	0.054	0.031	0.084
	Motorcycle	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002
	Other private transport	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.003	0.002	0.005
	Other local bus	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.000	0.001	0.001	0.001	0.002	0.002	0.001	0.002	0.008	0.004	0.012
	Surface Rail	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.003	0.002	0.004	0.002	0.001	0.003	0.009	0.005	0.014
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.001	0.003	0.001	0.001	0.002	0.004	0.002	0.006
	All modes	0.066	0.038	0.103	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.021	0.059	0.031	0.018	0.049	0.044	0.025	0.069	0.072	0.041	0.113	0.256	0.146	0.403
All day	**Walk**	0.010	0.010	0.021	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.001	0.002	0.020	0.021	0.041	0.001	0.001	0.002	0.002	0.002	0.005	0.066	0.066	0.132	0.103	0.104	0.207
	Pedal cycle	0.010	0.010	0.021	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.001	0.010	0.010	0.021	0.022	0.023	0.045
	Car or van driver	0.336	0.339	0.675	0.069	0.069	0.138	0.001	0.001	0.001	0.001	0.001	0.001	0.193	0.195	0.388	0.165	0.166	0.331	0.094	0.095	0.189	0.208	0.210	0.418	1.067	1.075	2.142
	Car or van passenger	0.022	0.023	0.045	0.003	0.003	0.006	0.000	0.000	0.001	0.000	0.000	0.001	0.053	0.053	0.106	0.056	0.056	0.112	0.062	0.062	0.124	0.131	0.132	0.263	0.327	0.330	0.657
	Motorcycle	0.007	0.007	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.010	0.010	0.019
	Other private transport	0.011	0.011	0.022	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.001	0.002	0.004	0.004	0.008	0.020	0.020	0.039
	Other local bus	0.020	0.020	0.040	0.001	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.010	0.021	0.004	0.004	0.008	0.005	0.005	0.009	0.010	0.010	0.020	0.050	0.051	0.101
	Surface Rail	0.022	0.022	0.045	0.003	0.003	0.005	0.006	0.006	0.012	0.006	0.006	0.011	0.003	0.003	0.005	0.003	0.003	0.006	0.012	0.012	0.023	0.011	0.011	0.022	0.065	0.065	0.130
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.008	0.008	0.008	0.016	0.007	0.008	0.015	0.020	0.020	0.040
	All modes	0.440	0.444	0.884	0.078	0.078	0.156	0.008	0.009	0.017	0.008	0.008	0.015	0.283	0.285	0.569	0.233	0.235	0.468	0.184	0.185	0.369	0.449	0.452	0.901	1.683	1.697	3.380

Baseline External Trips by Time, Mode and Purpose 3500 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	3	14	17	0	1	1	0	1	1	0	1	1	0	2	3	0	0	0	0	0	0	5	25	29	9	44	53
	Cycling	3	14	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	4	18	22
	Driving a Car or Van	89	452	541	10	49	59	0	1	1	0	0	0	4	22	26	13	65	78	2	13	15	15	78	94	134	681	815
	Passenger in a Car or Van	6	30	36	0	2	2	0	0	0	0	0	0	1	6	7	4	22	26	2	8	10	10	49	59	23	118	141
	Motorcycle, Scooter or Moped	2	10	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	11	13
	Other Method of Travel	3	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	17	21
	Bus, Minibus or Coach	5	27	32	0	1	1	0	0	0	0	0	0	0	1	1	0	2	2	0	1	1	1	4	4	7	35	42
	Train	6	30	36	0	2	2	1	5	6	1	3	3	0	0	0	0	1	1	0	2	2	1	4	5	9	47	56
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	1	1	3	3	1	6	7
	Total	117	592	709	11	56	66	1	7	9	1	4	5	6	32	39	18	92	110	5	25	30	33	169	202	193	976	1169
0800 to 0859	Walk	2	8	10	0	1	1	1	3	3	1	2	3	1	4	5	0	1	1	0	0	0	7	26	32	12	44	56
	Pedal cycle	2	8	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	3	13	16
	Car or van driver	69	258	327	12	45	57	0	2	2	0	2	2	10	39	49	25	93	118	4	14	17	22	81	103	142	533	675
	Car or van passenger	5	17	22	0	2	2	0	1	1	0	1	1	3	11	13	8	31	40	2	9	11	14	51	64	33	123	155
	Motorcycle	2	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	8
	Other private transport	2	9	11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	2	3	11	14
	Other local bus	4	15	20	0	1	1	0	0	0	0	0	0	1	2	3	1	2	3	0	1	1	1	4	5	7	25	32
	Surface Rail	5	17	22	0	2	2	4	14	17	3	12	16	0	1	1	0	2	2	0	2	2	1	4	5	14	53	67
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	1	2	1	3	4	2	6	8
	All modes	90	338	428	14	51	64	5	19	24	5	17	22	15	57	72	35	132	167	7	27	34	47	175	221	217	815	1032
0900 to 0959	Walk	1	2	3	0	0	1	0	0	0	0	0	0	5	7	12	0	0	1	0	1	1	18	24	41	25	34	59
	Pedal cycle	1	2	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	4	7	4	6	10
	Car or van driver	40	54	95	17	23	40	0	0	0	0	0	0	49	66	115	42	56	98	15	21	36	56	75	131	220	295	516
	Car or van passenger	3	4	6	1	1	2	0	0	0	0	0	0	13	18	31	14	19	33	10	14	24	35	47	82	76	102	179
	Motorcycle	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3
	Other private transport	1	2	3	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	2	3	3	5	8
	Other local bus	2	3	6	0	0	1	0	0	0	0	0	0	3	4	6	1	1	2	1	1	2	3	4	6	10	13	23
	Surface Rail	3	4	6	1	1	2	0	0	1	1	1	1	1	1	2	1	1	2	2	3	4	3	4	7	10	14	25
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	3	2	3	5	4	6	10
	All modes	53	71	124	19	26	46	0	1	1	1	1	2	72	96	168	59	80	139	30	40	71	121	162	282	356	477	833
1600 to 1659	Walk	7	3	10	1	0	1	0	0	1	0	0	1	9	4	13	1	0	1	1	1	2	30	15	46	48	25	73
	Pedal cycle	7	3	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	2	7	12	6	18
	Car or van driver	215	109	324	37	19	56	0	0	0	0	0	0	81	41	122	92	47	138	43	22	65	96	49	145	564	287	851
	Car or van passenger	14	7	22	2	1	2	0	0	0	0	0	0	22	11	33	31	16	47	28	14	43	60	31	91	158	80	238
	Motorcycle	5	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6	3	9
	Other private transport	7	4	11	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	0	0	1	2	1	3	11	6	17
	Other local bus	13	7	19	1	0	1	0	0	0	0	0	0	4	2	7	2	1	3	2	1	3	5	2	7	27	14	40
	Surface Rail	14	7	21	1	1	2	2	1	3	2	1	3	1	1	2	2	1	3	5	3	8	5	3	7	33	17	50
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	4	2	6	3	2	5	9	5	14
	All modes	281	143	424	42	21	63	3	2	5	3	1	4	118	60	179	130	66	196	85	43	128	206	105	312	868	442	1309
1700 to 1759	Walk	10	5	15	0	0	0	0	0	0	0	0	0	10	4	14	1	0	1	2	1	2	33	15	48	55	25	80
	Pedal cycle	10	4	14	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	2	8	16	7	23
	Car or van driver	322	146	469	0	0	0	0	0	0	0	0	0	92	42	134	108	49	158	64	29	93	104	47	151	692	314	1006
	Car or van passenger	21	10	31	0	0	0	0	0	0	0	0	0	25	11	37	37	17	53	42	19	61	65	30	95	191	87	277
	Motorcycle	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8	4	12
	Other private transport	11	5	16	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	0	1	2	1	3	15	7	22
	Other local bus	19	9	28	0	0	0	0	0	0	0	0	0	5	2	7	2	1	4	3	1	5	5	2	7	35	16	51
	Surface Rail	21	10	31	0	0	0	1	0	1	1	0	1	1	1	2	2	1	3	8	4	12	5	2	8	40	18	58
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	6	3	8	4	2	5	12	5	17
	All modes	422	192	614	0	0	0	1	1	2	1	1	2	135	61	196	153	70	223	125	57	182	224	102	326	1063	482	1546
1800 to 1859	Walk	5	3	9	0	0	0	0	0	0	0	0	0	10	5	15	0	0	1	2	1	3	37	21	58	55	31	86
	Pedal cycle	5	3	9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	3	9	12	7	19
	Car or van driver	176	100	277	19	11	29	0	0	0	0	0	0	90	51	141	77	44	120	78	45	123	117	67	184	557	317	874
	Car or van passenger	12	7	18	1	0	1	0	0	0	0	0	0	24	14	38	26	15	41	51	29	81	73	42	115	188	107	295
	Motorcycle	4	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5	3	8
	Other private transport	6	3	9	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	2	1	4	10	6	16
	Other local bus	11	6	17	0	0	1	0	0	0	0	0	0	5	3	8	2	1	3	4	2	6	6	3	9	27	15	42
	Surface Rail	12	7	18	1	0	1	0	0	1	0	0	0	1	1	2	1	1	2	10	6	15	6	3	9	31	18	49
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	7	4	11	4	2	7	13	7	20
	All modes	231	132	362	21	12	33	1	0	1	0	0	0	131	75	206	109	62	170	153	87	240	252	144	395	898	512	1409
All day	Walk	36	37	73	4	4	8	4	4	8	4	4	8	72	72	144	3	3	6	8	8	16	230	231	461	361	364	725
	Pedal cycle	36	36	73	1	1	3	0	0	0	0	0	0	4	4	7	0	0	1	1	1	2	36	36	73	79	79	158
	Car or van driver	1176	1186	2362	241	243	484	3	3	5	2	2	5	676	681	1357	577	582	1159	330	332	662	729	735	1465	3734	3764	7498
	Car or van passenger	78	79	157	10	10	20	1	1	3	1	1	2	184	186	370	195	197	392	216	218	434	458	462	920	1144	1154	2298
	Motorcycle	26	26	52	0	0	1	0	0	0	0	0	0	2	2	3	0	0	1	1	1	2	4	4	8	33	34	67
	Other private transport	39	39	78	1	1	2	0	0	0	0	0	0	8	9	17	2	2	4	3	3	5	15	15	30	68	69	137
	Other local bus	70	71	141	5	5	9	0	0	0	0	0	0	36	36	73	13	13	27	16	16	33	35	35	70	175	177	352
	Surface Rail	78	78	156	9	9	18	22	22	43	20	20	39	9	9	19	11	11	21	41	41	82	38	38	75	226	228	455
	Taxi or minicab	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	14	14	28	28	29	57	26	26	53	69	70	139
	All modes	1540	1553	3093	272	274	546	30	30	60	27	27	54	991	999	1990	816	823	1640	644	649	1293	1570	1583	3153	5890	5938	11828

Baseline External Trips by Time, Mode and Purpose 8000 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	6	32	38	0	2	2	0	2	3	0	1	1	1	5	6	0	1	1	0	1	1	11	56	67	20	101	120
	Cycling	6	32	38	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	11	8	42	50
	Driving a Car or Van	204	1034	1238	22	113	135	0	1	2	0	1	1	10	50	60	29	149	178	6	29	35	35	179	214	307	1555	1862
	Passenger in a Car or Van	14	69	82	1	5	5	0	1	1	0	0	0	3	14	16	10	50	60	4	19	23	22	112	135	53	270	323
	Motorcycle, Scooter or Moped	5	23	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	24	29
	Other Method of Travel	7	34	41	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	4	4	8	40	48
	Bus, Minibus or Coach	12	62	74	0	2	3	0	0	0	0	0	0	1	3	3	1	3	4	0	1	2	2	8	10	16	80	96
	Train	13	68	82	1	4	5	2	12	14	1	6	8	0	1	1	1	3	3	1	4	4	2	9	11	21	107	128
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	4	0	2	3	1	6	8	3	13	15
	Total	267	1354	1621	25	127	152	3	16	20	2	9	11	15	74	88	42	211	252	11	56	67	76	385	461	440	2232	2672
0800 to 0859	Walk	5	18	23	0	2	2	2	6	8	1	6	7	3	9	12	0	1	1	0	1	1	16	58	74	27	101	128
	Pedal cycle	5	18	23	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	9	12	8	29	36
	Car or van driver	157	589	747	27	103	130	1	4	5	1	3	4	24	89	113	57	212	269	8	31	40	49	185	235	325	1218	1542
	Car or van passenger	10	39	50	1	4	5	1	2	2	0	2	2	6	24	31	19	72	91	5	21	26	31	116	147	75	280	355
	Motorcycle	3	13	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	15	19
	Other private transport	5	20	25	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	4	5	7	26	33
	Other local bus	9	35	45	1	2	2	0	0	0	0	0	0	1	5	6	1	5	6	0	2	2	2	9	11	15	57	73
	Surface Rail	10	39	49	1	4	5	8	32	40	8	28	36	0	1	2	1	4	5	1	4	5	3	10	12	32	121	154
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	7	1	3	3	2	7	8	4	15	19
	All modes	206	772	978	31	116	147	12	43	55	10	39	50	35	131	166	80	301	381	16	61	78	106	399	505	496	1862	2358
0900 to 0959	Walk	3	4	7	1	1	2	0	0	0	0	0	1	12	16	28	1	1	1	1	1	2	40	54	94	58	77	135
	Pedal cycle	3	4	7	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	6	9	15	10	14	24
	Car or van driver	92	124	216	40	53	92	0	0	0	0	0	0	112	150	262	96	128	224	35	47	83	128	172	300	504	675	1179
	Car or van passenger	6	8	14	2	2	4	0	0	0	0	0	0	31	41	72	33	44	76	23	31	54	81	108	188	175	234	408
	Motorcycle	2	3	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2	3	4	8
	Other private transport	3	4	7	0	0	0	0	0	0	0	0	0	1	2	3	0	0	1	0	0	1	3	3	6	8	11	18
	Other local bus	6	7	13	1	1	2	0	0	0	0	0	0	6	8	14	2	3	5	2	2	4	6	8	14	22	30	52
	Surface Rail	6	8	14	1	2	3	1	1	1	1	2	3	2	2	4	2	2	4	4	6	10	7	9	15	24	32	56
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	3	4	7	5	6	11	10	13	24
	All modes	121	162	283	45	60	104	1	1	2	2	3	5	165	220	385	136	182	318	69	92	161	276	370	646	814	1089	1903
1600 to 1659	Walk	15	8	23	1	1	2	1	0	1	1	0	1	20	10	30	1	1	2	2	1	4	69	35	104	111	56	167
	Pedal cycle	15	8	23	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	11	6	16	28	14	42
	Car or van driver	490	250	740	85	43	128	1	0	1	1	0	1	184	94	278	210	107	316	99	50	149	219	112	331	1289	656	1945
	Car or van passenger	33	17	49	3	2	5	0	0	0	0	0	0	50	26	76	71	36	107	65	33	98	138	70	208	360	184	544
	Motorcycle	11	6	16	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2	13	7	20
	Other private transport	16	8	25	0	0	1	0	0	0	0	0	0	2	1	3	1	0	1	1	0	1	4	2	7	25	13	38
	Other local bus	29	15	44	2	1	2	0	0	0	0	0	0	10	5	15	5	2	7	5	2	7	10	5	16	61	31	92
	Surface Rail	32	17	49	3	2	5	5	3	8	4	2	7	3	1	4	4	2	6	12	6	19	11	6	17	75	38	113
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	8	9	4	13	8	4	12	22	11	33
	All modes	642	327	969	96	49	144	7	4	11	6	3	9	271	138	408	297	151	448	193	98	292	472	240	712	1983	1010	2993
1700 to 1759	Walk	23	10	33	0	0	0	0	0	1	0	0	1	22	10	32	1	1	2	4	2	5	75	34	109	126	57	183
	Pedal cycle	23	10	33	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	12	5	17	36	16	53
	Car or van driver	737	334	1072	1	0	1	0	0	0	0	0	0	211	96	306	248	112	360	147	67	213	238	108	346	1581	717	2299
	Car or van passenger	49	22	71	0	0	0	0	0	0	0	0	0	57	26	83	84	38	122	96	44	140	149	68	217	436	198	634
	Motorcycle	16	7	24	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2	19	8	27
	Other private transport	24	11	36	0	0	0	0	0	0	0	0	0	3	1	4	1	0	1	1	1	2	5	2	7	34	15	50
	Other local bus	44	20	64	0	0	0	0	0	0	0	0	0	11	5	16	6	3	8	7	3	11	11	5	16	80	36	116
	Surface Rail	49	22	71	0	0	0	2	1	3	2	1	3	3	1	4	5	2	7	18	8	26	12	6	18	91	41	132
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	9	13	6	18	9	4	12	27	12	40
	All modes	965	438	1403	1	0	1	3	1	5	3	1	4	309	140	449	351	159	510	287	130	417	512	232	744	2430	1102	3533
1800 to 1859	Walk	12	7	20	1	0	1	0	0	0	0	0	0	22	12	34	1	1	2	4	2	7	84	48	132	125	71	196
	Pedal cycle	12	7	19	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	13	8	21	28	16	43
	Car or van driver	403	230	632	43	24	67	0	0	0	0	0	0	205	117	322	175	100	275	179	102	281	267	152	420	1272	726	1998
	Car or van passenger	27	15	42	2	1	3	0	0	0	0	0	0	56	32	88	59	34	93	117	67	184	168	96	264	429	245	674
	Motorcycle	9	5	14	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	1	2	12	7	18
	Other private transport	13	8	21	0	0	0	0	0	0	0	0	0	3	1	4	1	0	1	1	1	2	5	3	9	24	13	37
	Other local bus	24	14	38	1	0	1	0	0	0	0	0	0	11	6	17	4	2	6	9	5	14	13	7	20	61	35	97
	Surface Rail	27	15	42	2	1	3	1	1	1	1	0	1	3	2	4	3	2	5	22	13	35	14	8	22	72	41	113
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	7	15	9	24	10	5	15	29	17	46
	All modes	527	301	828	48	28	76	1	1	2	1	0	1	300	171	472	248	141	390	350	200	549	576	328	904	2052	1170	3222
All day	Walk	83	84	167	9	9	18	10	10	19	9	9	17	164	165	329	7	7	15	18	18	37	525	529	1053	825	831	1656
	Pedal cycle	83	83	166	3	3	7	0	0	0	0	0	0	8	8	16	1	1	1	2	2	5	83	83	166	180	181	361
	Car or van driver	2689	2710	5399	551	555	1106	6	6	12	5	5	11	1544	1557	3101	1319	1330	2649	753	759	1513	1667	1681	3348	8535	8604	17138
	Car or van passenger	179	180	359	22	23	45	3	3	6	3	3	5	421	425	846	447	450	897	494	498	992	1047	1055	2102	2616	2637	5253
	Motorcycle	60	60	119	1	1	1	0	0	0	0	0	0	4	4	8	1	1	2	2	2	4	10	10	19	76	77	153
	Other private transport	89	90	179	2	2	5	0	0	0	0	0	0	19	19	39	5	5	10	6	6	12	34	34	68	156	157	313
	Other local bus	161	162	323	10	10	21	0	0	0	0	0	0	83	83	166	30	31	61	37	38	75	79	80	159	401	404	805
	Surface Rail	178	179	357	21	21	42	49	50	99	45	45	90	22	22	43	24	24	48	93	94	188	86	87	172	517	522	1039
	Taxi or minicab	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	32	32	64	65	66	131	60	60	120	158	159	317
	All modes	3521	3549	7070	621	626	1247	68	68	136	62	62	124	2265	2283	4548	1866	1881	3748	1472	1484	2956	3589	3618	7208	13464	13573	27036

Appendix C DfT Persona Packs

Segment 1

Less Mobile, Car Reliant

Think People | Department for Transport

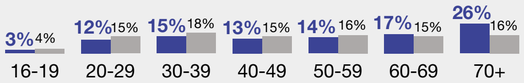
■ Segment 1 ■ All segments

Who are they?

Gender

Male ♂52% 49% Female ♀48% 51%

Age



Mobility difficulties impacting travel

Ethnicity

90% 88% White 10% 11% Ethnic Minority

Household finances

Under £25,000	45% 40%
£25,000 - £59,999	32% 33%
Over £60,000	14% 13%

People in this segment are likely to have a mobility impairment and tend to use a car as their primary mode of transport; this also includes mobility cars or vehicles that have been adapted for their mobility needs. Choosing which mode of transport to use is often influenced by convenience. Typical journeys are short (under 10 miles), to the shops or to see family. They travel primarily by car as it's more convenient and accessible compared with using public transport. Cars also provide space to transport large shopping bags and other heavy objects.

This segment has seen little in the way of major changes in transport use during the pandemic, beyond a reduction in some frequent journeys. In some cases, those in employment are working from home several days a week. They prefer to use public health precautions when on public transport.

Enablers and barriers to different transport modes

Car

- ✓ Convenience
- ✓ Flexibility
- ✓ Spontaneity
- ✓ Transporting heavy items
- ⊗ Traffic
- ⊗ Lack of parking spaces

Walking

- ✓ For short distances
- ✓ For leisure
- ⊗ Mobility issues
- ⊗ Poor weather

Public Transport

- ✓ Train was perceived as more suitable for long distance journeys
- ✓ Bus was perceived as more suitable for short, local journeys (e.g. to hospital)
- ✓ Bus fares were perceived as more affordable (especially with a bus pass)
- ✓ Train was perceived as a fast option for public transport travel
- ✓ An enjoyable way to travel
- ✓ No parking concerns
- ⊗ Distance to station/bus stops
- ⊗ Lack of regular services (delays, cancellations)
- ⊗ Bus services were perceived as slow
- ⊗ Train fares were perceived as expensive
- ⊗ Anxiety inducing for some (safety concerns, lack of control, lack of familiarity)
- ⊗ Lack of space for carrying heavy items

Brian

- **Age:** 51
- **Lives:** Darwen, Lancashire
- **Household composition:** Married, living with wife and two children
- **Employment:** Works part-time (3 days/ week), fully remotely; admin officer for Preston City Council
- **Disability/Health:** Full-time wheelchair user
- **Tenure:** Homeowner, without mortgage
- **Interests and concerns:** Spending time with daughters but concerned how his mobility is going to impact them

General transport habits

- **Majority of trips are by car,** which is adapted to Brian's needs.
- **Driving less** since becoming a permanent homeworker following the pandemic.
- **Occasionally uses the bus** when going for a family day out.
- **Uses train** if going on a short city break in the UK.
- **Prefers to drive on a motorway than around the village** because he feels that local roads need more maintenance and the quality of other people's driving on local roads is bad.

Betty

- **Age:** 71
- **Lives:** Near Lowestoft, Suffolk
- **Household composition:** Married, living with husband; two adult children, one lives in London, the other in Canada
- **Employment:** Retired for 10 years, former medical secretary
- **Disability/Health:** Arthritis of the hip which impacts her ability to travel actively
- **Tenure:** Homeowner, without mortgage
- **Interests and concerns:** Loves seeing her grandchildren but worried about their future – prices going up, global instability...

General transport habits

- **Very reliant on the car** for everyday travel.
- **Very few journeys are long distance** – usually a short drive to the shops or to visit family and friends locally.
- **Uses public transport for very specific trips**: once or twice a year she will get the train into London to visit her son and see the sights or use the bus to get to and from the hospital to avoid parking charges.
- **Public transport is generally unappealing**, with concerns about the behaviour of other passengers which has been exacerbated due to the pandemic.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 1

Less Mobile, Car Reliant

Brian

- **Age:** 51
- **Lives:** Darwen, Lancashire
- **Household composition:** Married, living with wife and two children
- **Employment:** Works part-time (3 days/ week), fully remotely; admin officer for Preston City Council
- **Disability/Health:** Full-time wheelchair user
- **Tenure:** Homeowner, without mortgage
- **Interests and concerns:** Spending time with daughters but concerned how his mobility is going to impact them

General transport habits

Most of Brian's trips are by car, which is adapted to his needs. He drives less now, since becoming a permanent homeworker following the pandemic. He and his family might use the bus when going for a day out to a nearby town. And they will use a train if going on a short city break within the UK. Brian would rather drive on a motorway than around the village because he finds the quality of other people's driving is bad and has diminished since the pandemic. While Brian acknowledges recent local repairs, he feels like the local roads need more maintenance.

Frequent journey

The school run for his two daughters 5 times a week by car.

- ✓ Familiar with routes and traffic patterns
- ✓ No need to plan
- ⊗ Parking is limited outside schools
- ⊗ Roads often in poor condition

> "The condition of the roads is a bit mixed - one of the main roads on the school run has recently been re-laid, so it's good. However other bits are in a much poorer condition and collapsing into potholes."

Less frequent journey

UK city break with family via train, 1 to 2 times a year.

- ✓ More accessible than flying
- ✓ Local station has more accessible infrastructure
- ✓ Can chose accessible seating at no extra cost
- ✓ Can book ahead for support at station and on train
- ⊗ Staff experience at station and on-board can be very variable
- ⊗ Local train operators not equipped to help

> "It depends on the station. Even though you've booked assistance, the guards on the local trains don't know you're getting on the train. There's usually a bit of a panic, will they have a ramp etc?"

Opportunities for Change

Key factors in decision making:

- **Accessibility - support at hubs or on separate modes**
- **Convenience - impact of poor weather, familiarity with route, likelihood of traffic, frequency of services**

Would like to use buses more:

- ⊗ Infrequent services – often 30 mins between buses
- ⊗ Limited space for wheelchair users – only one per bus
- ⊗ Weather/lack of shelter between services

Would like to use trains more:

- ✓ Good access at local station (supportive staff, lifts that work, ramps, etc)
- ✓ Mainline station staff are helpful
- ⊗ Poor support on local services – staff aren't equipped to help
- ⊗ Lift doesn't always work
- ⊗ Rail replacement services
- ⊗ Stressful

Segment 1

Less Mobile, Car Reliant

Betty

- **Age:** 71
- **Lives:** Near Lowestoft, Suffolk
- **Household composition:** Married, living with husband; two adult children, one lives in London, the other in Canada
- **Employment:** Retired for 10 years, former medical secretary
- **Disability/Health:** Arthritis of the hip which impacts her ability to travel actively
- **Tenure:** Homeowner, without mortgage
- **Interests and concerns:** Loves seeing her grandchildren but worried about their future – prices going up, global instability...

General transport habits

Betty is very reliant on the car (as driver and as passenger) for everyday travel, though few journeys she makes are long distance – it's usually a short drive to the shops or to visit family and friends locally. She uses public transport for very specific trips: once or twice a year, she'll get the train into London to visit her son and see the sights; or she will use the bus to get to and from the hospital, therefore avoiding the associated parking charges. Public transport is generally unappealing to Betty, with concerns about the behaviour of other passengers.

She also tries to avoid taking public transport during rush hour due to worries about Covid and struggles to stay active due to arthritis of the hip.

> "Last time I went on the bus I was the only person on it wearing a mask."

Frequent journey

The "big shop" once a week by car.

- ✓ Car required to transport heavy bags
- ✓ No need to walk and aggravate hip condition
- ⊗ Doesn't like home delivery – prefers to select her own groceries
- ⊗ Walking to shops not an option with hip condition and heavy bags
- ⊗ Buses not an option with heavy bags

> "I don't use the high street for food shopping because you've got to carry it back. So I tend to go in a car when I go to get groceries and things because you can't carry it back, and I like to do a big shop."

Less frequent journey

Drive to the airport for holiday abroad, once a year.

- ✓ Local airport nearby
- ✓ Only an hour's drive
- ✓ Long stay parking is easily accessible
- ✓ Get home quickly after long flight
- ⊗ Public transport would be complicated, multistage, and impossible late at night

> "When you get off the plane, 20 minutes later you're driving home, and you're home in an hour. An hour-and-a-half after you get off the plane, you're making a cup of tea, that's lovely. So, being near an airport that went somewhere would be nice."

Opportunities for Change

Key factors in decision making:

- **Reason for trip - transporting heavy items, need for parking, spontaneity**
- **Distance - short distances allow for walking**

Would like to use buses more:

- ⊗ Crowded services – can't carry heavy bags
- ⊗ Infrequent or lack of direct services to desired destination
- ⊗ Uncomfortable with proximity to lots of other passengers
- ⊗ Weather / lack of shelter between services

Would like to use trains more:

- ✓ Long distance trips
- ✓ Driving not viable (i.e. driving into London)
- ⊗ Doesn't go to useful destinations (i.e. hospital or airport)

> "The bus has to run much more regularly. But, even then [...] a return trip to the hospital would involve having to intersect with another bus route, wait around for another bus, and then do the same thing going back, so it would be very time consuming."

Segment 1

Less Mobile, Car Reliant

Think People | Department for Transport

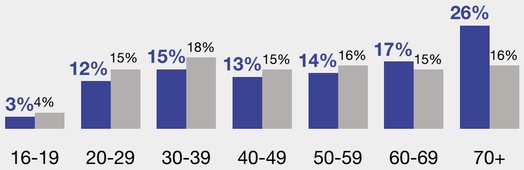
■ Segment 1 ■ All segments

Who are they?

Gender

Male ♂ 52% 49% | Female ♀ 48% 51%

Age



Mobility difficulties impacting travel

93%

25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

67% 17%	42% 12%	33% 9%	77% 25%
Go out on foot	Use local buses	Get in or out of a car	Ride a bike*

Mental health/physical health condition:

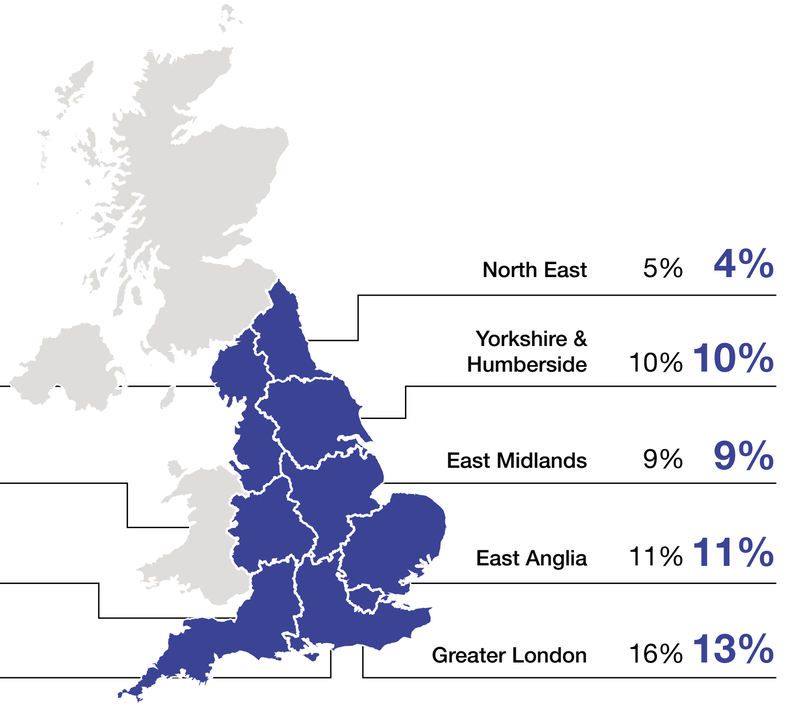
35% 20%	67% 29%
Mental health condition	Physical health condition

Ethnicity

90% 88% White | 10% 11% Ethnic Minority

Location

Urban	Rural
76% 78%	16% 14%

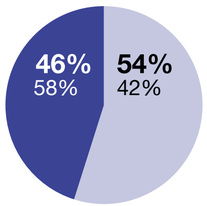


14% 13%	North West	North East	5% 4%
11% 10%	West Midlands	Yorkshire & Humberside	10% 10%
10% 10%	South West	East Midlands	9% 9%
17% 16%	South East	East Anglia	11% 11%
		Greater London	16% 13%

Employment & working patterns

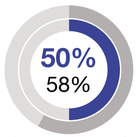
Working

- 31% 39% Full-time employed
- 9% 14% Part-time employed
- 6% 6% Self employed

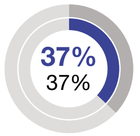


Not working

- 32% 23% Retired
- 14% 10% Unemployed
- 5% 5% Parent-homemaker
- 4% 5% Student/Pupil



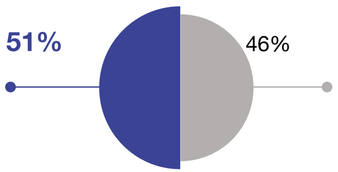
Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping



Household & financials

Household

65% 65%	32% 31%	37% 37%
Homeowners	Renting	Children in household

Household finances

Under £25,000	45% 40%
£25,000 - £59,999	32% 33%
Over £60,000	14% 13%

Technology & media

Use of smartphones

88% 91%

Consumption of news

74% 70%	42% 40%	34% 34%	31% 32%	33% 27%
TV	Radio	Digital newspaper	Social media	Traditional newspaper

Social media

63% 61%	Facebook	27% 27%	Twitter
48% 53%	WhatsApp	18% 17%	Snapchat
40% 42%	YouTube	17% 13%	Google+
37% 37%	Instagram	11% 12%	LinkedIn

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 1

Less Mobile, Car Reliant

Think People | Department for Transport

■ Segment 1 ■ All segments

Access to transport

Distance to nearest bus stop (mins walk)

	Segment 1	All segments
< 5 mins	41%	50%
5 – 13 mins	42%	38%
> 14 mins	14%	11%

Distance to nearest railway station (mins walk)

	Segment 1	All segments
< 14 mins	34%	33%
14 – 43 mins	37%	40%
> 44 mins	25%	23%

Parking their vehicles

	Segment 1	All segments
Space I own or that is allocated to me/us	63%	68%
On a road or street	17%	17%
Communal or shared car park at the property	11%	8%
Private car park	7%	4%
Public or council car park	2%	2%
Where a friend or family member lives	*	*
Other	1%	1%

Access to:

	Segment 1	All segments
Bicycle (including e-bike)	33%	30%

** represents figures < 1%*

People in this segment tend to use a car as their primary mode of transport. This also includes mobility cars or vehicles that have been adapted for their mobility needs.

Number of cars in household

	Segment 1	All segments
One car	65%	46%
Two cars	23%	25%
Three or more cars	12%	8%

Car type

	Segment 1	All segments
Petrol	59%	64%
Diesel	27%	27%
EV/Hybrid	12%	8%

Number of miles driven per year

	Segment 1	All segments
Under 5,000 miles	54%	44%
5,000 - 8,999 miles	18%	23%
Over 9,000 miles	21%	25%

Strategic Road Network usage (Motorways and A-roads)

	Segment 1	All segments
At least once per week	48%	40%

Understanding transport choices

Journey planning. Smartphones are used for:

	Segment 1	All segments
Maps/ navigation/ satnavs	53%	60%
Route planning/route planning apps	44%	50%
Finding out about services available in the area	43%	52%
Checking traffic updates	35%	36%
Checking live travel times	33%	44%
Buying public transport tickets online	25%	32%
Booking a taxi or minicab using an app	23%	26%
Buying flight tickets online	20%	23%
None of these	17%	16%

Mode use and frequency

Modes used once a week or more (last 6 months)

	Segment 1	All segments
Car/van as a driver	72%	63%
Car/van as a passenger	59%	53%
Walking to a destination or wheeling by a wheelchair or motorised scooter	39%	51%
Bus	29%	28%
Cycling (including e-bike)	26%	19%
Informal car-pooling	24%	14%
Taxi	23%	15%
App-based minicab services	21%	14%
Ride-sharing apps	21%	12%
Train	20%	15%
Underground rail/metro	20%	15%
Motorbike/moped	19%	11%
Car club	19%	10%
Coach	19%	9%
Tram	16%	10%
Ferry/other water-based	16%	9%
Aeroplane/flying	13%	6%

Top 5 journey purposes (last 6 months)

	Segment 1	All segments
Shopping for food/ grocery items	69%	80%
Shopping for non-food/ grocery items such as buying books, music, clothes, holidays, or insurance	44%	56%
Visiting friends/ relatives	61%	69%
Travel to access services e.g. hairdressers, libraries, estate agents and banks	43%	46%
Travelling to medical, hospital or dentist appointments	61%	56%

Flight taken in last 12 months

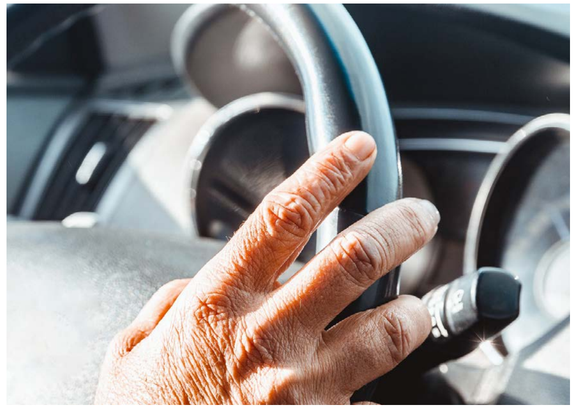
	Segment 1	All segments
Short-haul	24%	25%
Long-haul	11%	12%
None	57%	57%

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 1

Less Mobile, Car Reliant

■ Segment 1 ■ All segments



This segment has seen little in the way of major changes in transport use during the pandemic, beyond a reduction in some frequent journeys. While they are travelling less overall, they still have regular routines. In some cases, those in employment are travelling less due to working from home several days a week. Any travelling that they do is primarily done by car (or mobility vehicle). There is a belief that the roads are becoming more dangerous, with concerns about the conduct of other road users. They prefer to use public health precautions when on public transport.

54% 51% | Happy about lifestyle and contribution to climate change

36% 37% | Would like to do a bit more to reduce my impact

8% 9% | Would like to do a lot more to reduce my impact

Enablers and barriers to different transport modes

Car

- ✓ Convenience
- ✓ Flexibility
- ✓ Spontaneity
- ✓ Transporting heavy items
- ✗ Traffic
- ✗ Lack of parking spaces

Walking

- ✓ For short distances
- ✓ For leisure
- ✗ Mobility issues
- ✗ Poor weather

Public Transport

- ✓ Train was perceived as more suitable for long distance journeys
- ✓ Bus was perceived as more suitable for short, local journeys (e.g. to hospital)
- ✓ Bus fares were perceived as more affordable (especially with a bus pass)
- ✓ Train was perceived as a fast option for public transport travel
- ✓ An enjoyable way to travel
- ✓ No parking concerns
- ✗ Distance to station/bus stops
- ✗ Lack of regular services (delays, cancellations)
- ✗ Bus services were perceived as slow
- ✗ Train fares were perceived as expensive
- ✗ Anxiety inducing for some (safety concerns, lack of control, lack of familiarity)
- ✗ Lack of space for carrying heavy items

Attitudes towards transport and climate

This segment is relatively unconcerned with the environmental impact of their car use. This is partly due to their reliance on using cars (as drivers and as passengers), and their belief that there is a lack of convenient or practical alternatives. Developments such as low emission zones and electric vehicles are seen as good things, but there is also a sense that electric vehicles are too expensive and, therefore, inaccessible to them as alternatives to their current modes of transport.

"I think that some of my visits to the allotment could possibly be done with an e-bike. But that's about the only thing that would be. Maybe some of my journeys to the supermarket could possibly done with an e-bike or a motorbike. But again, there's costs involved in the acquiring of such things. So it's not something that I'm immediately considering." (Male, 68, Southampton)

"I wouldn't shop in any other way because it would be impractical to do that. The regular journey to visit my mother-in-law, I use public transport anyway. The other one particular regular journey I do once a week is a walk with my friend. I suppose we could not drive somewhere and walk, we could walk from our home. That's the journey that you could easily do without the transport." (Female, 67, Great Yarmouth)

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 2

Young Urban Families

Think People | Department for Transport

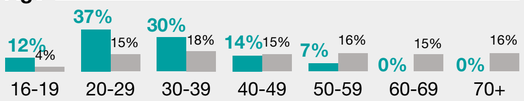
■ Segment 2 ■ All segments

Who are they?

Gender

Male ♂46% 49% Female ♀54% 51%

Age



Mobility difficulties impacting travel

3% 25%

Ethnicity

81% 88% White 18% 11% Ethnic Minority

Household finances

Under £25,000	36%	40%
£25,000 - £59,999	38%	33%
Over £60,000	8%	13%

People in this segment are part of young families who live in urban areas in England. They have children in the household and their routines are built around balancing childcare and work responsibilities.

They are one-car households and use the car as their primary mode of transport, rarely making use of public transport modes. Despite having good access to public transport in their local area, driving is their preferred mode of transport. It is seen as more convenient and cost-effective for their personal needs and circumstances. They drive to work, for school drops and pick-ups, for shopping at big supermarkets and to see friends and family.

Enablers and barriers to different transport modes

Car

- ✓ Convenient
- ✓ Time-efficient
- ✓ More cost-effective than using public transport when travelling as a family
- ✓ Personal choice/ preference for driving
- ✓ Familiarity/ Confidence
- ✗ Safety concerns (rural roads, evening driving on roads with poor lighting)
- ✗ Cost of fuel
- ✗ Parking availability
- ✗ Confidence driving on less familiar routes

Walking

- ✓ Recreation/leisure
- ✓ Suitable for short journeys
- ✓ Health benefits
- ✓ Cheapest mode
- ✓ Environmental benefits
- ✓ More suitable in summer
- ✗ Convenience
- ✗ Time/journey duration
- ✗ Not suitable for long journeys
- ✗ Poor weather

Cycling

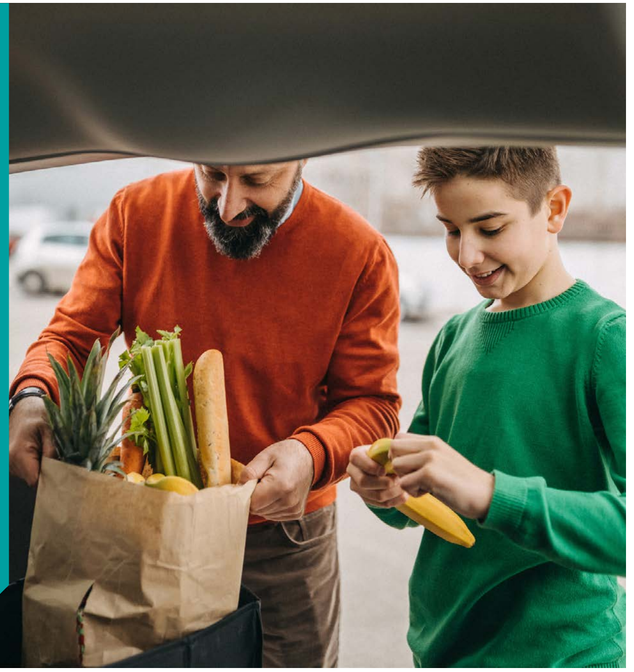
- ✓ Bike sharing with family members (reduced cost)
- ✓ Health benefits: recreation/ keeping fit
- ✓ Environmental benefits
- ✗ Personal choice
- ✗ Past negative experiences e.g. fear of bike being stolen
- ✗ Competition from more convenient modes, e.g. car

Public Transport

- ✓ Can provide an opportunity for disconnecting/catch-up on work
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ Cheaper/discounted travel
- ✓ Environmental benefits
- ✓ Perceived as more suitable for long journeys
- ✗ Concerns about personal safety
- ✗ Cost – of trains, in particular
- ✗ Regularity and reliability of services
- ✗ Duration of journeys - longer compared with car
- ✗ Can be stress-inducing when services crowded

Farah

- **Age:** 35
- **Lives:** Little Horton, Bradford
- **Household composition:** Married, living with husband, 7 year old daughter, and their dog
- **Employment:** Works full time in recruitment, 2-4 days per week works at home
- **Disability/Health:** No
- **Tenure:** Shared ownership (with housing association)
- **Interests and concerns:** Concerned about cost of living and the economy



General transport habits

- **One car household** – Farah and her husband split their use of the car depending on when they need to go to their respective places of work.
- **Only uses car for trips** to the larger **supermarkets or for work**.
- **Often have to plan ahead** who needs the car as they also need to take their daughter to school.
- **Farah's office is in Leeds**, which is a 30 minute drive via the M62.
- **Likes to walk to local shops** for groceries and to walk the dog.
- Farah feels that **public transport is less convenient and more expensive** than driving.
- She would use trains for **less frequent journeys**, or when the car is not available
- Farah is **not keen on cycling**, but she is open to sharing a bike with other members of the family and use it for short and/or leisure trips.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 2

Young Urban families

Farah

- **Age:** 35
- **Lives:** Little Horton, Bradford
- **Household composition:** Married, living with husband, 7 year old daughter, and their dog
- **Employment:** Works full time in recruitment, 2-4 days per week works at home
- **Disability/Health:** No
- **Tenure:** Shared ownership (with housing association)
- **Interests and concerns:** Concerned about cost of living and the economy

General transport habits

Farah and her husband are a one car household – they share the car between the days they each need to commute, with Farah tending to avoid doing so on Mondays and Fridays. Her husband also works mostly from home – they arrange it so they go into work on different days and balance who does the school run. Farah's office is in Leeds, which is a 30 minute drive via the M62.

Aside the commute, Farah typically uses her car for trips to large supermarkets. There are plenty of local shops for groceries within walking distance. Farah feels that public transport is less convenient and more expensive than driving, especially for getting her daughter to and from school.

Frequent journey

Driving to work, dropping daughter off at school on the way; twice a week, typically.

- ✓ Easy to do in one go – school is a 10 minute drive from home
- ✓ Drop daughter off, then head to the M62 to get to Leeds
- ✓ No need to plan – has a good sense of when things are busy and how long each leg takes
- ⊗ Might set off 15 minutes early to account for potential traffic congestion

> "To be honest, we don't plan it that much other than just check the roads to see if there have been any accidents or anything like that. So I might put it into Google Maps or something just to check the route. It's a journey that we've done a lot over the years."

Less frequent journey

Train trip to London to see family; once every 3-4 months.

- ✓ Easy to use if travelling alone, without the children
- ✓ Straightforward connections: bus (or walk) to Bradford, local train to Leeds, InterCity to London
- ✓ No need to worry about parking the car
- ⊗ Train feels more expensive than driving
- ⊗ Uses public transport to get around London, though doesn't enjoy crowding
- ⊗ Generally cutting back on these trips to save money

> "There have been occasions where I have got the train […] and it's only a two-minute walk from the train station to my office, but on the whole, it tends to be car because it's convenient to use it. Train prices have crept up as well so I wouldn't want to be frequently getting the train.."

Opportunities for Change

Key factors in decision making:

- **Convenience - speed of journey, ease of travelling with daughter**
- **Cost - cheaper is better, increasingly aware of rising prices**
- **Familiarity - frequently used modes or routes are preferred to trying new and more risky options**

Would like to use public transport more:

- ⊗ More expensive than driving
- ⊗ Might move away from urban areas, to somewhere less well-connected
- ⊗ Second child might reduce scope for leisure use of public transport

> "I didn't really use the car that much because I pretty much live where I work for most of the week. If we move and I start doing longer journeys, or my husband does longer journeys, we'll need another car."

Potential for becoming heavier car user in the future – might get a second car if:

- Have a second child
- Moving out of Bradford - will need a car to get around
- Change job with more time in the office
- Too expensive to travel as a family by train

Segment 2

Young Urban Families

Think People | Department for Transport

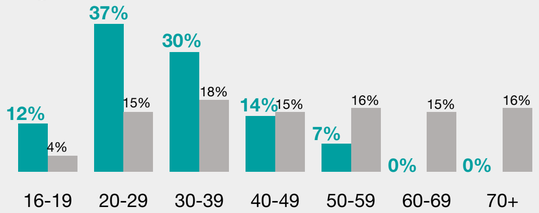
Segment 2 | All segments

Who are they?

Gender

Male ♂ 46% 49% | Female ♀ 54% 51%

Age



Mobility difficulties impacting travel

3% | 25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

Go out on foot	Use local buses	Get in or out of a car	Ride a bike*
1% 17%	2% 12%	1% 9%	3% 25%

Mental health/physical health condition:

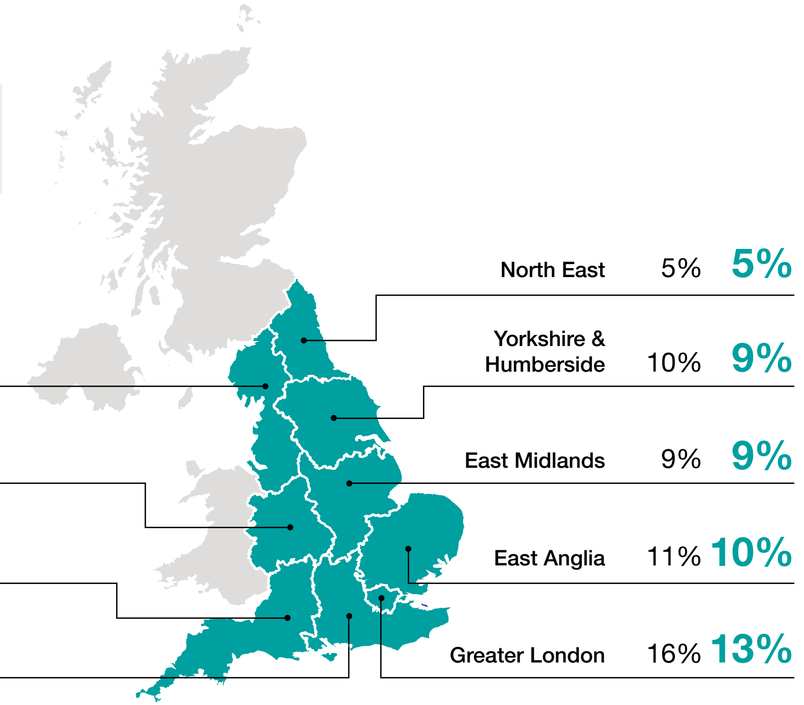
Mental health condition	Physical health condition
23% 20%	11% 29%

Ethnicity

81% 88% White | 18% 11% Ethnic Minority

Location

Urban	Rural
78% 78%	9% 14%

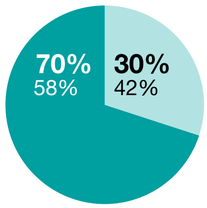


North West	12% 13%	
West Midlands	12% 10%	
South West	12% 10%	
South East	18% 16%	
North East	5%	5%
Yorkshire & Humberside	10%	9%
East Midlands	9%	9%
East Anglia	11%	10%
Greater London	16%	13%

Employment & working patterns

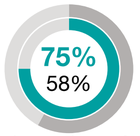
Working

- 47% 39% Full-time employed
- 19% 14% Part-time employed
- 4% 6% Self employed

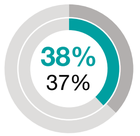


Not working

- 14% 5% Student/Pupil
- 7% 10% Unemployed
- 7% 5% Parent-homemaker
- 1% 23% Retired



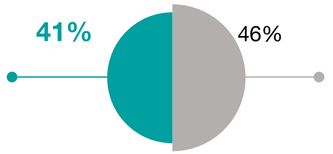
Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping



Household & financials

Household

Homeowners	Renting	Children in household
50% 65%	43% 31%	51% 37%

Household finances

Under £25,000	36% 40%
£25,000 - £59,999	38% 33%
Over £60,000	8% 13%

Technology & media

Use of smartphones

91% | 97%

Consumption of news

TV	Radio	Digital newspaper	Social media	Traditional newspaper
62% 70%	32% 40%	29% 34%	43% 32%	15% 27%

Social media

62% 61% Facebook		31% 27% Twitter	
63% 53% WhatsApp		33% 17% Snapchat	
55% 42% YouTube		14% 13% Google+	
56% 37% Instagram		11% 12% LinkedIn	

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 2

Young Urban Families

Segment 2 All segments

Access to transport

Distance to nearest bus stop (mins walk)

	Segment 2	All segments
< 5 mins	55%	50%
5 – 13 mins	33%	38%
> 14 mins	9%	11%

Distance to nearest railway station (mins walk)

	Segment 2	All segments
< 14 mins	37%	33%
14 – 43 mins	40%	40%
> 44 mins	19%	23%

Parking their vehicles

	Segment 2	All segments
Space I own or that is allocated to me/us	54%	68%
On a road or street	23%	17%
Communal or shared car park at the property	13%	8%
Private car park	6%	4%
Public or council car park	4%	2%
Where a friend or family member lives	*	*
Other	–	1%

Access to:

	Segment 2	All segments
Bicycle (including e-bike)	30%	30%

** represents figures < 1%*

People in this segment are car owners and driving is their preferred way of travel. They use public transport modes, but believe services can be less regular, unreliable and expensive. They walk to bus stops/train stations, for leisure, or with their pets. Cycling is used for short journeys or for leisure, however, past negative experiences (such as theft) can negatively impact attitudes to cycling.

Number of cars in household

	Segment 2	All segments
One car	75%	46%
Two cars	21%	25%
Three or more cars	4%	8%

Car type

	Segment 2	All segments
Petrol	64%	64%
Diesel	28%	27%
EV/Hybrid	6%	8%

Number of miles driven per year

	Segment 2	All segments
Under 5,000 miles	42%	44%
5,000 - 8,999 miles	21%	23%
Over 9,000 miles	19%	25%

Strategic Road Network usage (Motorways and A-roads)

	Segment 2	All segments
At least once per week	45%	40%

Understanding transport choices

Journey planning. Smartphones are used for:

	Segment 2	All segments
Maps/ navigation/ satnavs	71%	60%
Finding out about services available in the area	59%	52%
Route planning/route planning apps	52%	50%
Checking live travel times	49%	44%
Checking traffic updates	40%	36%
Buying public transport tickets online	40%	32%
Booking a taxi or minicab using an app	32%	26%
Buying flight tickets online	27%	23%
None of these	7%	16%

Mode use and frequency

Modes used once a week or more (last 6 months)

	Segment 2	All segments
Car/van as a passenger	65%	53%
Car/van as a driver	59%	63%
Walking to a destination or wheeling by a wheelchair or motorised scooter	56%	51%
Bus	30%	28%
Cycling (including e-bike)	19%	19%
Train	18%	15%
Informal car-pooling	18%	14%
Taxi	16%	15%
Underground rail/metro	16%	15%
App-based minicab services	16%	14%
Ride-sharing apps	12%	12%
Motorbike/moped	10%	11%
Tram	10%	10%
Car club	9%	10%
Coach	8%	9%
Ferry/other water-based	7%	9%
Aeroplane/flying	5%	6%

Top 5 journey purposes (last 6 months)

	Segment 2	All segments
Shopping for food/ grocery items	79%	80%
To go on a day trip somewhere	59%	51%
Visiting friends/ relatives	72%	69%
Travelling to access entertainment / arts	53%	46%
Shopping for non-food/ grocery items such as buying books, music, clothes, holidays, or insurance	64%	56%

Flight taken in last 12 months

	Segment 2	All segments
Short-haul	27%	25%
Long-haul	12%	12%
None	50%	57%

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 2

Young Urban Families

Segment 2 All segments

Aside from working from home more and commuting less, the COVID-19 pandemic seems to have had a minimal impact on transport behaviours for people in this segment. Instead, they reported modal changes as a result of different life events – for example, moving house or getting a driving licence. In both instances, there was an increase in driving, to the detriment of using other transport modes such as app-based minicab services, trains and/or walking. Reflecting on the recent increase in prices, there is a perception that taxis/app-based minicab services and public transport modes are more expensive compared with driving a personal car.

People in this segment are concerned about the cost of living situation. They are making more considered choices about their journeys, although these are balanced against convenience – e.g. shorter journeys – and being comfortable and having reduced stress levels when travelling. Working from home patterns provide the opportunity to make fewer journeys and save money on transport.

43% 51% | Happy about lifestyle and contribution to climate change

45% 37% | Would like to do a bit more to reduce my impact

9% 9% | Would like to do a lot more to reduce my impact

Enablers and barriers to different transport modes

Car

- **Convenient**
- **Time-efficient**
- **More cost-effective than using public transport when travelling as a family**
- **Personal choice/ preference for driving**
- **Familiarity/ Confidence**
- Safety concerns (rural roads, evening driving on roads with poor lighting)
- Cost of fuel
- Parking availability
- Confidence driving on less familiar routes

Walking

- **Recreation/leisure**
- **Suitable for short journeys**
- **Health benefits**
- **Cheapest mode**
- **Environmental benefits**
- **More suitable in summer**
- Convenience
- Time/journey duration
- Not suitable for long journeys
- Poor weather

Cycling

- **Bike sharing with family members (reduced cost)**
- **Health benefits: recreation/ keeping fit**
- **Environmental benefits**
- Personal choice
- Past negative experiences e.g. fear of bike being stolen
- Competition from more convenient modes, e.g. car

Public Transport

- **Can provide an opportunity for disconnecting/catch-up on work**
- **Frequent and reliable services**
- **Bus stops/train stations in close proximity**
- **Cheaper/discounted travel**
- **Environmental benefits**
- **Perceived as more suitable for long journeys**
- Concerns about personal safety
- Cost – of trains, in particular
- Regularity and reliability of services
- Duration of journeys - longer compared with car
- Can be stress-inducing when services crowded

Attitudes towards transport and climate

Cost of living, politics and housing are top concerns for people in this segment. They are less concerned about environmental issues but acknowledge the environmental benefits of active travel modes and public transport modes.

Making public transport, and in particular train services, more affordable was an important objective for people in this segment. There is a feeling that some public transport modes are more accessible to those faring better financially.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 3

Older Less Affluent

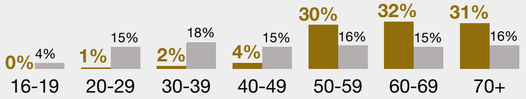
■ Segment 3 ■ All segments

Who are they?

Gender

Male ♂53% 49% Female ♀47% 51%

Age



Mobility difficulties impacting travel

0% 25%

Ethnicity

97% 88% White 3% 11% Ethnic Minority

Household finances

Under £25,000 57% 40%

£25,000 - £59,999 29% 33%

Over £60,000 2% 13%

People in this segment are older (50+ years old), car owners and live in two-person households with partners in urban and rural areas.

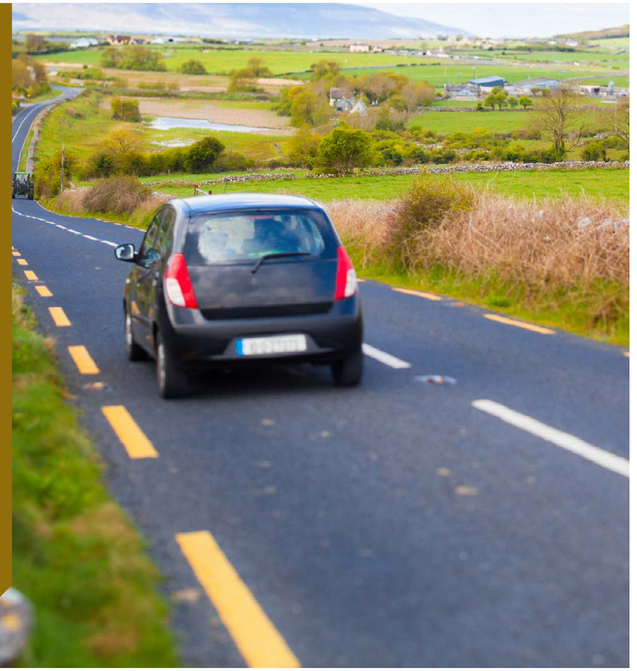
They are approaching retirement but still working, either in full-time or part-time employment. They use the car as their main mode of transport with driving seen as an enjoyable and convenient activity – it gives control over start time, frequency and location of stops/breaks, and the opportunity to listen to the radio. Less enjoyable aspects of driving are the delays associated with roadworks.

People in this segment use the car for commuting to a place of work, shopping trips, local trips and when socialising. They enjoy using public transport, with frequency and reliability of services being key factors in encouraging use of these services.

Walking is perceived to be suitable for very short distances to places in the town/local area. Attitudes towards cycling are negative – for people in this segment, cycling is not an enjoyable activity or a safe way of travelling.

Gina

- **Age:** 62
- **Lives:** Ashburton, Devon
- **Household composition:** Married, living with husband, two adult children no longer living with them
- **Employment:** Full time in adult social care, works one day per week at home
- **Disability/Health:** No
- **Tenure:** Homeowner, no mortgage
- **Interests and concerns:** Enjoys socialising with friends and going to the cinema; worries about increased cost of living, the environment, education



Enablers and barriers to different transport modes

Car

- ✓ Convenience
- ✓ Enjoyable way to travel
- ✓ Personal attitudes/ preference for driving
- ✓ Lack of reliable public transport services
- ⊗ Roadworks and traffic
- ⊗ Cost of parking
- ⊗ Cost of fuel

Walking

- ✓ Health benefits – mental health and physical health
- ✓ Avoiding traffic
- ✓ Suitable for short-distance journeys
- ✓ Availability of facilities nearby
- ⊗ Convenience
- ⊗ Not suitable for longer journeys
- ⊗ Poor health (own health or partner's)
- ⊗ Not an enjoyable activity

Public Transport

- ✓ An alternative for driving in situations where the car is not available
- ✓ An enjoyable way to travel – comfortable, and can be a nice, sociable environment on familiar routes
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ Cheaper fares
- ✓ Bus lanes can help navigate through heavy traffic quicker
- ✓ Avoiding the need to find a car park and the cost of parking
- ⊗ Reliability of services
- ⊗ Poor connections
- ⊗ Cost
- ⊗ Convenience provided by alternative transport modes, such as car
- ⊗ Duration of journeys – multiple stops along route compared to a direct journey

General transport habits

- **Works in adult social care, so is on the road four days a week seeing clients** – a car is necessary as local public transport is neither fast, frequent nor sufficiently well-connected.
- **Typically walks to local shops** for grocery shopping and other chores.
- **Two adult children** – she occasionally travels by train to visit her youngest daughter at university in Bristol.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 3

Older Less Affluent

Gina

- **Age:** 62
- **Lives:** Ashburton, Devon
- **Household composition:** Married, living with husband, two adult children no longer living with them
- **Employment:** Full time in adult social care, works one day per week at home
- **Disability/Health:** No
- **Tenure:** Homeowner, no mortgage
- **Interests and concerns:** Enjoys socialising with friends and going to the cinema; worries about increased cost of living, the environment, education

General transport habits

Gina lives with her husband in a two-bed semi in Devon. They have two adult children – their youngest daughter at university in Bristol and their eldest daughter lives and works locally. Gina is originally from Scotland and might move back once she has retired. She works in adult social care, so is on the road four days a week seeing clients – a car is necessary as local public transport is neither fast, frequent, nor sufficiently well-connected. Gina typically walks to local shops for grocery shopping and other chores.

Frequent journey

Driving to see clients for work, four days a week.

- ✓ Driving is the only option – no way to do this job with public transport
- ✓ Needs to make a number of journeys to multiple locations every day
- ✓ Enjoys the time driving between clients
- ⊗ Roadworks seem to be increasing and delays make Gina worried about being late for appointments

> "I love driving. I don't mind even going on the motorway on my own. I'm a little apprehensive but then I settle into it. The roadworks at the moment, though. Wherever you go there's always a hold-up for some reason, whether it's water, electric, roadworks. In general, it's just the roadworks that are an issue."

Less frequent journey

Train trip to Bristol to visit her daughter, once every two months.

- ✓ Quicker than driving
- ✓ Comfortable, and relaxing way to travel
- ✓ Drive to Totnes or Torquay and park car there – or get a taxi if finances allow
- ⊗ Worries about increasing unreliability of trains – feels like increasing cancellations and cuts to services
- ⊗ Train tickets getting more expensive, so worries about seeing daughter less than she'd like

> "You'll get there probably quicker and it's just comfortable. There's usually a buffet carriage onboard. Clean, comfortable, easy, can watch the world go by whilst somebody else is driving. I like trains."

Opportunities for Change

Key factors in decision making:

- **Cost - i.e. car feels cheaper than other forms, both in terms of money and time**
- **Convenience - speed of travel and being available immediately are important factors**

Would like to use more trains and buses:

- ✓ Sometimes would prefer not to drive – to be able to read a book during a journey
- ✓ No health fears about using public transport
- ⊗ Local public transport is infrequent – car always feels like the easier option
- ⊗ Feels like it's cheaper to drive

> "You choose your own time to leave. You have your own choice of when to stop, where to stop. When the roads are in a good condition I just quite enjoy it. I have my own radio station I can choose. Things like that really."

Reducing car use in the future:

- Moving home - downsizing to smaller accomodation in Glasgow, to be closer to family
- Less need - better public transport in a big city means less need for a car

Segment 3

Older Less Affluent

Think People | Department for Transport

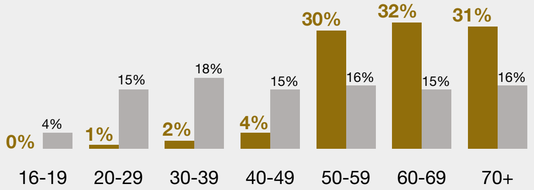
■ Segment 3 ■ All segments

Who are they?

Gender

Male ♂53% 49% Female ♀47% 51%

Age



Mobility difficulties impacting travel

0% 25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

Go out on foot	Use local buses	Get in or out of a car	Ride a bike*
–% 17%	–% 12%	–% 9%	14% 25%

Mental health/physical health condition:

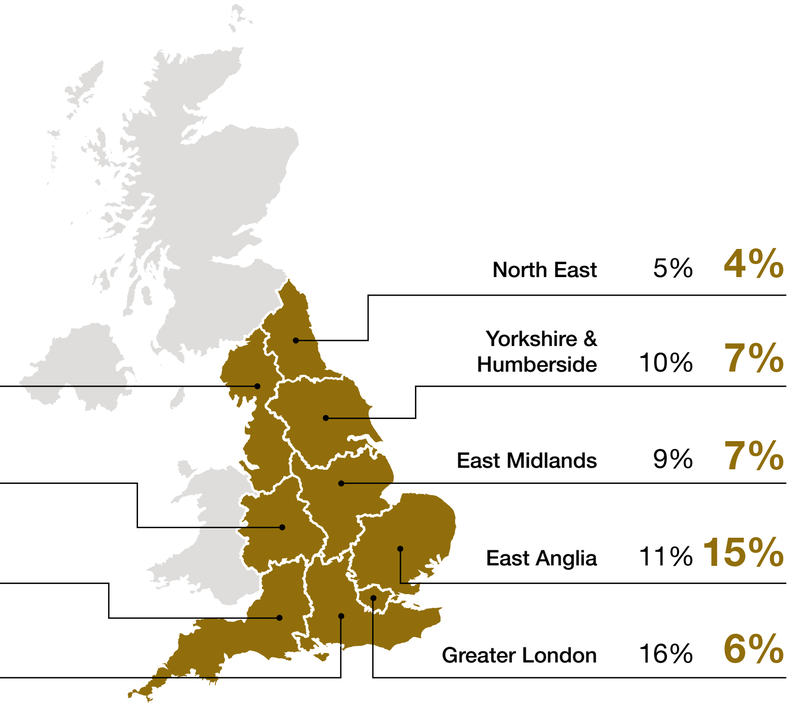
Mental health condition	Physical health condition
9% 20%	22% 29%

Ethnicity

97% 88% White | 3% 11% Ethnic Minority

Location

Urban	Rural
73% 78%	23% 14%

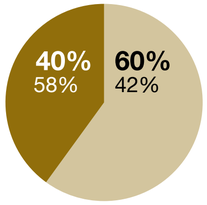


North West	14% 13%	
West Midlands	11% 10%	
South West	18% 10%	
South East	18% 16%	
North East	5%	4%
Yorkshire & Humberside	10%	7%
East Midlands	9%	7%
East Anglia	11%	15%
Greater London	16%	6%

Employment & working patterns

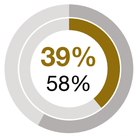
Working

- 22% 39% Full-time employed
- 14% 14% Part-time employed
- 4% 6% Self employed

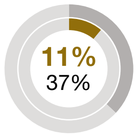


Not working

- 44% 23% Retired
- 8% 10% Unemployed
- 8% 5% Parent-homemaker
- 1% 5% Student/Pupil



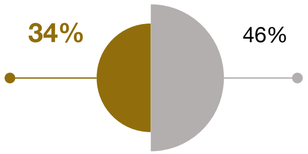
Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping



Household & financials

Household

Homeowners	Renting	Children in household
74% 65%	25% 31%	15% 37%

Household finances

Under £25,000	57% 40%
£25,000 - £59,999	29% 33%
Over £60,000	2% 13%

Technology & media

Use of smartphones

89% 91%

Consumption of news

TV	Radio	Digital newspaper	Social media	Traditional newspaper
86% 70%	46% 40%	20% 34%	21% 32%	28% 27%

Social media

66% 61%	Facebook	18% 27%	Twitter
45% 53%	WhatsApp	4% 17%	Snapchat
33% 42%	YouTube	11% 13%	Google+
15% 37%	Instagram	5% 12%	LinkedIn

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 3

Older Less Affluent

Segment 3 All segments

Access to transport

Distance to nearest bus stop (mins walk)

	Segment 3	All segments
< 5 mins	51%	50%
5 – 13 mins	36%	38%
> 14 mins	12%	11%

Distance to nearest railway station (mins walk)

	Segment 3	All segments
< 14 mins	22%	33%
14 – 43 mins	44%	40%
> 44 mins	30%	23%

Parking their vehicles

	Segment 3	All segments
Space I own or that is allocated to me/us	73%	68%
On a road or street	15%	17%
Communal or shared car park at the property	5%	8%
Private car park	2%	4%
Public or council car park	3%	2%
Where a friend or family member lives	*	*
Other	1%	1%

Access to:

	Segment 3	All segments
Bicycle (including e-bike)	20%	30%

** represents figures < 1%*

People in this segment are car owners approaching retirement. Driving is their preferred way of travel as they feel in control of their journeys, and it is an enjoyable way to travel. They make use of public transport modes, particularly if services are frequent and reliable, and they prefer to walk for short distances in the local area.

Number of cars in household

	Segment 3	All segments
One car	75%	46%
Two cars	23%	25%
Three or more cars	3%	8%

Car type

	Segment 3	All segments
Petrol	69%	64%
Diesel	26%	27%
EV/Hybrid	4%	8%

Number of miles driven per year

	Segment 3	All segments
Under 5,000 miles	53%	44%
5,000 - 8,999 miles	29%	23%
Over 9,000 miles	14%	25%

Strategic Road Network usage (Motorways and A-roads)

	Segment 3	All segments
At least once per week	33%	40%

Understanding transport choices

Journey planning. Smartphones are used for:

	Segment 3	All segments
Maps/ navigation/ satnavs	50%	60%
Finding out about services available in the area	44%	52%
Route planning/route planning apps	40%	50%
Checking traffic updates	33%	36%
Checking live travel times	31%	44%
Buying public transport tickets online	15%	32%
Buying flight tickets online	14%	23%
Booking a taxi or minicab using an app	13%	26%
None of these	27%	16%

Mode use and frequency

Modes used once a week or more (last 6 months)

	Segment 3	All segments
Car/van as a driver	79%	63%
Car/van as a passenger	51%	53%
Walking to a destination or wheeling by a wheelchair or motorised scooter	43%	51%
Bus	17%	28%
Cycling (including e-bike)	12%	19%
Informal car-pooling	4%	14%
Taxi	3%	15%
Underground rail/metro	3%	15%
Tram	3%	10%
Train	2%	15%
App-based minicab services	2%	14%
Motorbike/moped	2%	11%
Ride-sharing apps	1%	12%
Car club	1%	10%
Coach	1%	9%
Ferry/other water-based	1%	9%
Aeroplane/flying	1%	6%

Top 5 journey purposes (last 6 months)

	Segment 3	All segments
Shopping for food/ grocery items	91%	80%
To go on a day trip somewhere	53%	51%
Visiting friends/ relatives	74%	69%
Shopping for non-food/ grocery items such as buying books, music, clothes, holidays, or insurance	52%	56%
Travelling to medical, hospital or dentist appointments	56%	56%

Flight taken in last 12 months

	Segment 3	All segments
Short-haul	15%	25%
Long-haul	5%	12%
None	76%	57%

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Segment 3

Older Less Affluent

■ Segment 3 ■ All segments

People in this segment did not make any significant changes to the way they travelled in the past 3 years. During the COVID-19 pandemic, they had a tendency to avoid public transport due to social distancing rules, thus becoming more reliant on the car. More recently, a perception that public transport services are not reliable, has reinforced their car reliance. Changes in employment or in personal circumstances – for example, a car being unavailable/under repair – can provide an opportunity to use the occasional public transport mode to commute to work. Regardless of changes, the car is their primary mode of transport and they expect this to remain the case for the foreseeable future.

The cost of living has led people in this segment to consider how they travel and to make more efficient journeys. For example, in order to save money on fuel, some go to all the shops in one day rather than spread it out over multiple days. Also, people in this segment have reduced their travel, cutting back on socialising, cultural activities, or recreational trips. People also described becoming more conscious of their electricity use around the house, turning off electrical equipment and doing batch cooking to save money on electricity bills.

60%	51%	Happy about lifestyle and contribution to climate change
30%	37%	Would like to do a bit more to reduce my impact
7%	9%	Would like to do a lot more to reduce my impact

Enablers and barriers to different transport modes

Car

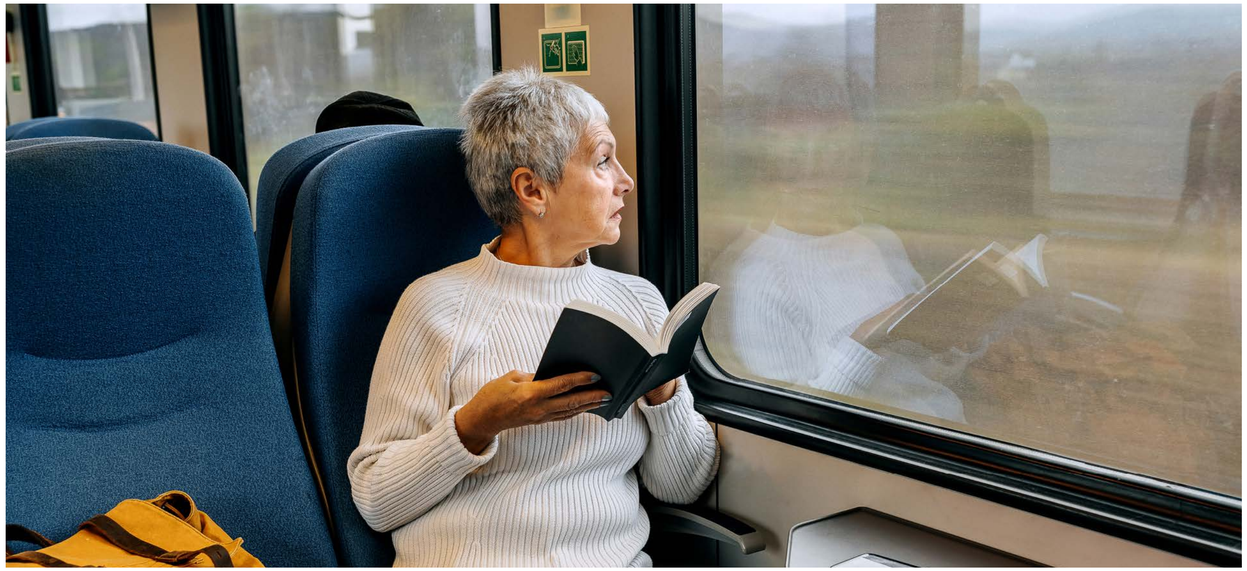
- ✓ Convenience
- ✓ Enjoyable way to travel
- ✓ Personal attitudes/ preference for driving
- ✓ Lack of reliable public transport services
- ⊗ Roadworks and traffic
- ⊗ Cost of parking
- ⊗ Cost of fuel

Walking

- ✓ Health benefits – mental health and physical health
- ✓ Avoiding traffic
- ✓ Suitable for short-distance journeys
- ✓ Availability of facilities nearby
- ⊗ Convenience
- ⊗ Not suitable for longer journeys
- ⊗ Poor health (own health or partner's)
- ⊗ Not an enjoyable activity

Public Transport

- ✓ An alternative for driving in situations where the car is not available
- ✓ An enjoyable way to travel – comfortable, and can be a nice, sociable environment on familiar routes
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ Cheaper fares
- ✓ Bus lanes can help navigate through heavy traffic quicker
- ✓ Avoiding the need to find a car park and the cost of parking
- ⊗ Reliability of services
- ⊗ Poor connections
- ⊗ Cost
- ⊗ Convenience provided by alternative transport modes, such as car
- ⊗ Duration of journeys – multiple stops along route compared to a direct journey



Attitudes towards transport and climate

People in this segment do not express much concern about the environment. However, there is a sense they would be open to more sustainable travel modes, if public transport provision was improved and services become more reliable.

"I will carry on using my car for the foreseeable future as public transport is not always available when I need it. Perhaps when I retire, I may choose differently as time keeping won't be a priority. I will certainly use bus travel as the stops are fairly near me and affordable. Train journeys are a treat." (Female, 61, East Anglia)

"Yesterday we did not go out anywhere on public transport. We were going to do a little bit of shopping, but we checked our finances and realised we couldn't afford it, so we stayed at home, and we are staying at home again today." (Female, 67, North West)

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 4

Comfortable Empty-nesters

Think People | Department for Transport

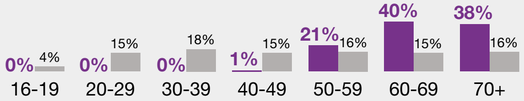
■ Segment 4 ■ All segments

Who are they?

Gender

Male ♂47% 49% Female ♀53% 51%

Age



Mobility difficulties impacting travel

0% 25%

Ethnicity

96% 88% White 4% 11% Ethnic Minority

Household finances

Under £25,000	39%	40%
£25,000 - £59,999	39%	33%
Over £60,000	7%	13%

People in this segment are older (60+ years old), predominantly from a white background and either approaching retirement or recently retired.

They own a car and live in more affluent areas of rural and suburban England. People in this segment use a mix of car, public transport and active travel modes. Use of active travel modes is influenced by attitudes towards health, the environment, and cost.

The car is seen as a convenient way to travel and is commonly used for shorter door-to-door trips or for leisure. In rural areas, where public transport infrastructure is less available, driving to different locations is a necessity. Public transport use is more sporadic and seen as more suitable for longer trips. For those who are able to benefit from a free bus pass, public transport is more appealing. However, this is heavily influenced by availability and reliability of services.

Jeff

- **Age:** 64
- **Lives:** Macclesfield, Cheshire
- **Household composition:** Married, living with wife and a cat; two adult children no longer living with them
- **Employment:** Retired, former Barrister
- **Disability/Health:** No
- **Tenure:** Homeowner, no mortgage
- **Interests and concerns:** Enjoys the weekly pub quiz and going to the theatre; worries about the NHS, the increased cost of living, and global instability

Enablers and barriers to different transport modes

Car

- ✓ Convenience
- ✓ Lack of reliable public transport services
- ✓ Lack of active travel facilities when attending social events
- ✓ Cost-effective on longer journeys (compared to public transport alternatives)
- ⊗ Positive attitudes towards the environment
- ⊗ Preference for public transport /active travel – personal preference or cost
- ⊗ Life habits and beliefs towards active travel modes – health benefit

Walking

- ✓ Convenience/saving time
- ✓ Distance to facilities and services in the local area
- ✓ Perceived as suitable for shorter, daytime journeys
- ⊗ Safety concerns
- ⊗ Poor weather
- ⊗ Not suitable for longer journeys
- ⊗ Not an enjoyable activity

Cycling

- ✓ Positive attitudes towards the environment
- ✓ Health benefits – keeping fit/exercising
- ✓ Fast and cost-effective way of travelling
- ✓ Life habits/personal preference
- ⊗ Lack of facilities for changing - suitable for travelling to social and work events
- ⊗ Safety concerns

Public Transport

- ✓ A more environmentally friendly alternative to driving
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ An enjoyable way to travel
- ⊗ Reliability of services
- ⊗ Poor connections and journey duration
- ⊗ Convenience provided by the car
- ⊗ Cost (particularly trains)
- ⊗ Lack of space for luggage/bikes

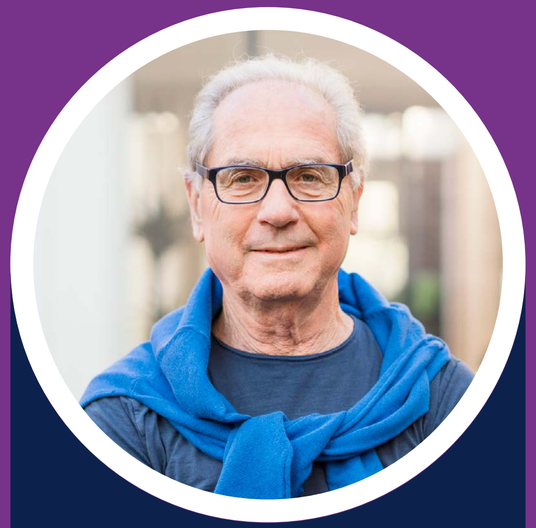
General transport habits

- **Recently retired** from his career as a barrister for the civil service.
- **Used to be a two-car household** but they've gone down to one as no longer needed with both retired.
- **Jeff is the main driver** – his wife's eye condition means that they feel it is no longer safe for her to drive.
- **Jeff uses public transport now more for leisure** – for example, going into Manchester for the theatre or getting the bus to go shopping locally.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 4

Comfortable Empty-nesters



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- **Household composition:** Married, living with wife and a cat; two adult children no longer living with them
- **Employment:** Retired, former Barrister
- **Disability/Health:** No
- **Tenure:** Homeowner, no mortgage
- **Interests and concerns:** Enjoys the weekly pub quiz and going to the theatre; worries about the NHS, the increased cost of living, and global instability

General transport habits

Jeff is recently retired from his career as a barrister for the civil service. He and his wife, Cheryl, live in a four bedroom house in Macclesfield, with their cat. Their adult children live and work in Liverpool and London. Jeff uses public transport now for purposes other than commuting – for example, going into Manchester for the theatre or getting the bus to go shopping locally. Theirs used to be a two-car household but they've gotten rid of one as they are both retired. It also saves them money. Jeff is the main driver – Cheryl's eyesight is getting worse and they feel her driving is unsafe.

Frequent journey

Train trip to Manchester to go to the theatre, once a fortnight.

- ✓ Check timings on app, make sure train is running and on time
- ✓ An easy 10 minutes walk to the station
- ✓ Only 25-30 minutes into Manchester, every 15 minutes
- ✓ Usually get a seat now that he's no longer travelling at rush hour
- ⊗ Don't like hanging around at the station

"I check the website to make sure the trains are on time, or to find out the time of the next train, particularly when they go to 30 minutes on a Sunday, so that we know we're not hanging about the station too long."

Less frequent journey

Driving to the seaside at Southport, once every couple of months.

- ✓ Spontaneous – don't need to plan, can just decide it's a nice enough day
- ✓ No need to look into taking the train
- ⊗ Don't enjoy the state of some of the more rural roads – lots of potholes

"It's not something that we do as a matter of course, I wouldn't have a clue about how the trains work to get there. It was just that Cheryl and I were out in the car already, and it was such a lovely day, we decided to stay out."

Opportunities for Change

Key factors in decision making:

- **Spontaneity - important to be able to travel as and when he wants, rather than planning and waiting**
- **Speed - no longer has to commute so prefers to go somewhere as quickly as possible**

Would like to maintain public transport use:

- ✓ Retiring has been a big change
- ✓ No longer spending time commuting on public transport
- ⊗ More free time to drive to places spontaneously – places perhaps less well-served by public transport
- ⊗ Public transport less integral to their lives now

Would like to cycle more:

- ✓ Would be great for keeping fit
- ✓ Likes following cycling as a sport
- ✓ Jeff sees cycling as a leisure activity he'd share with his wife
- ⊗ But Cheryl's eyesight isn't great nowadays and Jeff wouldn't want to cycle alone

"Her eyesight is rubbish. She can't judge distances, being long-sighted in one eye and short-sighted in the other. So that's not a good idea for driving or cycling, It is safety, and it is confidence. She doesn't want to be in an accident."

Segment 4

Comfortable Empty-nesters

Think People | Department for Transport

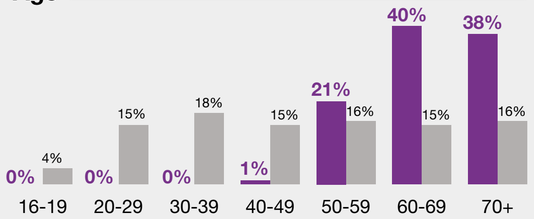
■ Segment 4 ■ All segments

Who are they?

Gender

Male ♂ 47% 49% | Female ♀ 53% 51%

Age



Mobility difficulties impacting travel

0%

25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

–% 17%	–% 12%	–% 9%	17% 25%
Go out on foot	Use local buses	Get in or out of a car	Ride a bike*

Mental health/physical health condition:

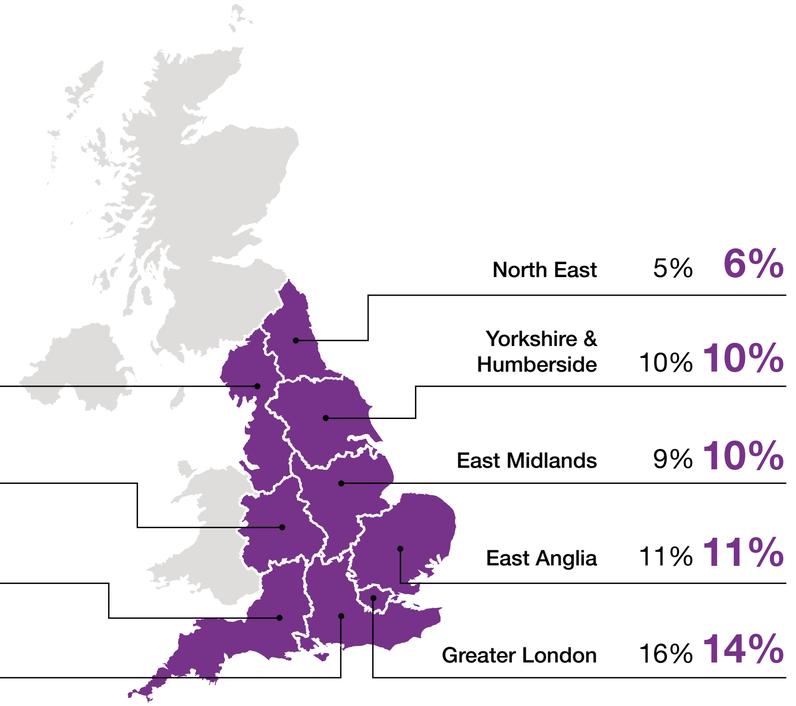
8% 20%	22% 29%
Mental health condition	Physical health condition

Ethnicity

96% 88% White | 4% 11% Ethnic Minority

Location

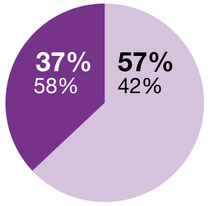
Urban	Rural
79% 78%	20% 14%



Employment & working patterns

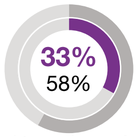
Working

- 18% 39% Full-time employed
- 13% 14% Part-time employed
- 5% 6% Self employed

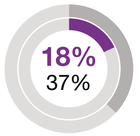


Not working

- 57% 23% Retired
- 2% 10% Unemployed
- 3% 5% Parent-homemaker
- – 5% Student/Pupil



Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping

Household & financials

Household

90% 65%	8% 31%	5% 37%
Homeowners	Renting	Children in household

Household finances

Under £25,000	39% 40%
£25,000 - £59,999	39% 33%
Over £60,000	7% 13%

Technology & media

Use of smartphones

90% 91%

Consumption of news

87% 70%	49% 40%	34% 34%	15% 32%	37% 27%
TV	Radio	Digital newspaper	Social media	Traditional newspaper

Social media

58% 61%	Facebook	15% 27%	Twitter
44% 53%	WhatsApp	2% 17%	Snapchat
24% 42%	YouTube	8% 13%	Google+
14% 37%	Instagram	7% 12%	LinkedIn

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Segment 4

Comfortable Empty-nesters

Segment 4 All segments

Access to transport

Distance to nearest bus stop (mins walk)

	Segment 4	All segments
< 5 mins	53%	50%
5 – 13 mins	40%	38%
> 14 mins	6%	11%

Distance to nearest railway station (mins walk)

	Segment 4	All segments
< 14 mins	23%	33%
14 – 43 mins	44%	40%
> 44 mins	30%	23%

Parking their vehicles

	Segment 4	All segments
Space I own or that is allocated to me/us	76%	68%
On a road or street	17%	17%
Communal or shared car park at the property	4%	8%
Private car park	1%	4%
Public or council car park	–	2%
Where a friend or family member lives	*	*
Other	1%	1%

Access to:

	Segment 4	All segments
Bicycle (including e-bike)	17%	30%

** represents figures < 1%*

People in this segment own a car and see it as a convenient way to travel, particularly for door-to-door trips or leisure trips. In rural areas with poor public transport infrastructure, travelling by car is a necessity. Walking is a good way of getting around the local area and to exercise. They also reported walking to local bus stops/train station.

Number of cars in household

	Segment 4	All segments
One car	71%	46%
Two cars	26%	25%
Three or more cars	3%	8%

Car type

	Segment 4	All segments
Petrol	70%	64%
Diesel	23%	27%
EV/Hybrid	7%	8%

Number of miles driven per year

	Segment 4	All segments
Under 5,000 miles	59%	44%
5,000 - 8,999 miles	23%	23%
Over 9,000 miles	13%	25%

Strategic Road Network usage (Motorways and A-roads)

	Segment 4	All segments
At least once per week	26%	40%

Understanding transport choices

Journey planning. Smartphones are used for:

	Segment 4	All segments
Maps/ navigation/ satnavs	53%	60%
Route planning/route planning apps	45%	50%
Finding out about services available in the area	42%	52%
Checking live travel times	36%	44%
Checking traffic updates	30%	36%
Buying public transport tickets online	19%	32%
Buying flight tickets online	13%	23%
Booking a taxi or minicab using an app	11%	26%
None of these	30%	16%

Mode use and frequency

Modes used once a week or more (last 6 months)

	Segment 4	All segments
Car/van as a driver	79%	63%
Walking to a destination or wheeling by a wheelchair or motorised scooter	49%	51%
Car/van as a passenger	44%	53%
Bus	16%	28%
Cycling (including e-bike)	9%	19%
Underground rail/metro	5%	15%
Train	4%	15%
Taxi	2%	15%
Informal car-pooling	2%	14%
Motorbike/moped	2%	11%
Tram	2%	10%
Car club	2%	10%
App-based minicab services	1%	14%
Ride-sharing apps	1%	12%
Coach	1%	9%
Ferry/other water-based	1%	9%
Aeroplane/flying	0%	6%

Top 5 journey purposes (last 6 months)

	Segment 4	All segments
Shopping for food/ grocery items	93%	80%
Shopping for non-food/ grocery items such as buying books, music, clothes, holidays, or insurance	58%	56%
Visiting friends/ relatives	79%	69%
To go on a day trip somewhere	55%	51%
Travelling to medical, hospital or dentist appointments	66%	56%

Flight taken in last 12 months

	Segment 4	All segments
Short-haul	20%	25%
Long-haul	6%	12%
None	72%	57%

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 4

Comfortable Empty-nesters

■ Segment 4 ■ All segments

Life events, such as retirement, have had an impact on travel behaviour, with public transport now used much more for leisure purposes than commuting. Hybrid working has meant that those still using public transport to commute to work, do so less often.

Similarly, travel restrictions during the COVID-19 pandemic meant that people reduced their frequency of travel and mode use.

Despite being a more affluent group which lives comfortably, people in this segment described themselves as being frugal, making savings during their lifetime and thus not feeling the current rise in costs has had any impact on themselves or their finances. They feel they can be more spontaneous and can afford to take leisure trips, go out for meals, the theatre or cinema, and socialise.

"We knew we fancied going for breakfast, which we do occasionally. When you don't have a set routine, it's nice to say, 'well, let's go for breakfast tomorrow', if you've got nothing in, or just to get out of the house." (Female, 60, North West)

60% 51% | Happy about lifestyle and contribution to climate change

31% 37% | Would like to do a bit more to reduce my impact

7% 9% | Would like to do a lot more to reduce my impact

Enablers and barriers to different transport modes

Car

- ✓ Convenience
- ✓ Lack of reliable public transport services
- ✓ Lack of active travel facilities when attending social events
- ✓ Cost-effective on longer journeys (compared to public transport alternatives)
- ⊗ Positive attitudes towards the environment
- ⊗ Preference for public transport /active travel – personal preference or cost
- ⊗ Life habits and beliefs towards active travel modes – health benefit

Walking

- ✓ Convenience/saving time
- ✓ Distance to facilities and services in the local area
- ✓ Perceived as suitable for shorter, daytime journeys
- ⊗ Safety concerns
- ⊗ Poor weather
- ⊗ Not suitable for longer journeys
- ⊗ Not an enjoyable activity

Cycling

- ✓ Positive attitudes towards the environment
- ✓ Health benefits – keeping fit/exercising
- ✓ Fast and cost-effective way of travelling
- ✓ Life habits/personal preference
- ⊗ Lack of facilities for changing - suitable for travelling to social and work events
- ⊗ Safety concerns

Public Transport

- ✓ A more environmentally friendly alternative to driving
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ An enjoyable way to travel
- ⊗ Reliability of services
- ⊗ Poor connections and journey duration
- ⊗ Convenience provided by the car
- ⊗ Cost (particularly trains)
- ⊗ Lack of space for luggage/bikes

Attitudes towards transport and climate

People in this segment hold strong views towards the environment and expressed concern about the future. They have taken some personal actions to reduce their use of the car and have increased their use of other, more environmentally friendly travel modes.

"Cycling has always been the main way of travel. […] I'm just trying to move some of my car journeys onto public transport. Because I think it's more environmental, it's out of guilt." (Male, 52, Greater London)

People who cycled throughout their life, expressed an intention to continue this as they move into older age. They mentioned some physical difficulty in using a bike, particularly in hilly areas, and contemplated/planned for acquiring an e-bike in the future.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 5

Suburban Families

Think People | Department for Transport

■ Segment 5 ■ All segments

Who are they?

Gender

Male ♂48% 49% Female ♀52% 51%

Age

16-19	20-29	30-39	40-49	50-59	60-69	70+
1% 4%	11% 15%	30% 18%	37% 15%	19% 16%	2% 15%	0% 16%

Mobility difficulties impacting travel

6% 25%

Ethnicity

87% 88% White 11% 11% Ethnic Minority

Household finances

Under £25,000	19% 40%
£25,000 - £59,999	38% 33%
Over £60,000	30% 13%

People in this segment are in their 30s and 40s, have a university degree and live with their partners and children in households in urban and suburban areas.

They are car owners and make use of a mix of transport modes including public transport and active travel. People in this segment describe having flexible working patterns, with some working from home 5 days a week. When they commute to work, they are likely to drive (particularly in rural areas) or use public transport. The car is seen as a convenient way to travel, especially with children in the household, and people also describe using this mode for leisure trips. They make use of public transport modes, although in some cases, these modes are seen as more expensive when travelling as a family, especially train services. They prefer walking in the local area and will go out on bike rides with the children.

Enablers and barriers to different transport modes

Car

- ✓ Convenience/saving time
- ✓ Lack of reliable public transport services
- ✓ Cheaper than other modes of transport (particularly when travelling as a family)
- ✗ Positive attitudes towards the environment
- ✗ Cost of fuel
- ✗ Active lifestyles / positive attitudes to active travel modes
- ✗ Parking availability

Walking

- ✓ Positive attitudes towards the environment
- ✓ Health benefits – recreational and keeping fit/ exercising
- ✓ Lifestyle/preference for walking
- ✓ Suitable for short-distance journeys in the local area/to bus stops or train stations
- ✓ Saving money
- ✗ Convenience/saving time
- ✗ Journeys with multiple stops along the way (school drop-off/pick-up, work, shopping)
- ✗ Not suitable for longer journeys
- ✗ Poor weather

Cycling

- ✓ Positive attitudes towards the environment
- ✓ Life habits/personal preference
- ✓ Good weather
- ✓ Leisure/outdoor family activity
- ✗ Personal preference/ lifestyle
- ✗ Lack of infrastructure
- ✗ Local relief (hilly areas require more effort when cycling)
- ✗ Availability for more convenient travel modes – car and/or public transport
- ✗ Preference for walking/ other ways of exercising and keeping fit

Public Transport

- ✓ Positive attitudes towards the environment
- ✓ An enjoyable way to travel
- ✓ No need for parking services
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ Feeling of safety while using public transport services
- ✗ Availability of services
- ✗ Poor connections
- ✗ Convenience provided by alternative transport modes (car), particularly when travelling with children
- ✗ Cost (particularly trains)

Nigel

- **Age:** 44
- **Lives:** Harrogate, Yorkshire
- **Household composition:** Lives with his husband and young daughter
- **Employment:** Full time Marketing Consulant, works 2 days per week at home
- **Disability/Health:** No
- **Tenure:** Homeowner, with mortgage
- **Interests and concerns:** Likes watching sport; worries about inflation and global instability

General transport habits

- **Works full-time** as a Marketing consultant and typically spends **2 days a week working from home**. When commuting, he drives to his office in York.
- **His daughter goes to nursery 3 days a week** and either Nigel or his husband **will walk her there** if the weather is nice or drive if not.
- **Most of their grocery shopping is done online**, though there are plenty of local amenities if a top up is needed. Outside of the local neighbourhood, Nigel tends to drive wherever he is going. He would like to purchase an electric car in the future.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 5

Suburban Families

Nigel

- **Age:** 44
- **Lives:** Harrogate, Yorkshire
- **Household composition:** Lives with his husband and young daughter
- **Employment:** Full time Marketing Consulant, works 2 days per week at home
- **Disability/Health:** No
- **Tenure:** Homeowner, with mortgage
- **Interests and concerns:** Likes watching sport; worries about inflation and global instability

General transport habits

Nigel, his partner James and his three year old daughter live close to Harrogate in a semidetached house that they own. Nigel works from home two days a week, typically, with the remaining days spent commuting into York or visiting clients. James is studying for a Masters and his daughter is at nursery three days a week. Either Nigel or James will walk her there if the weather is nice or drive if not. Most of their grocery shopping is done online, though there are plenty of local amenities if a top up is needed. Outside of the local neighbourhood, Nigel tends to drive wherever he is going.

Frequent journey

Commuting to work in York, 2-3 times a week.

- ✓ Increasingly Nigel's preferred option due to concerns about reliability of train services
- ✓ Getting to York is really easy by car; it's usually under an hour, if traffic is light
- ✗ But traffic can be unpredictable in mornings and evenings nowadays

> "Travelling at this time in the morning is always difficult as you cannot judge what the traffic is going to be like on the motorway. On a good run it can take 45 minutes but has been known to take nearly 2 hours on a bad day."

Less frequent journey

Business trip via train, 2-3 times per month.

- ✓ Harrogate well-connected to Manchester by train
- ✓ Onward travel by bus once in Manchester works well
- ✓ Especially useful if Nigel is likely to be socialising after work
- ✗ Becoming less reliable – lots of cancelled services recently
- ✗ And also becoming less comfortable – trains feel much more crowded now, so less likely to get a seat

> "I would love to have an electric version of what I currently drive. That would be fantastic. But I can't see any way that we could possibly afford it at the moment."

Opportunities for Change

Key factors in decision making:

- **Reliability - travelling for work requires being on time**
- **Reason for trip - leisure travel allows for more relaxed forms of transport**

Would like to get an electric vehicle:

- ✓ Concerned about environmental impact of using current car
- ✓ Feels that an EV would be cheaper to run than current vehicle
- ✗ Upfront cost of a new EV isn't affordable and is waiting for prices to come down

> "[driving less in the last 3 years]...I wasn't consciously trying to change the way I travelled. It's just a product of circumstances and what works with our family life."

Would like to use the train more for leisure:

- ✓ Enjoyable and relaxing way to travel when services are reliable / not overcrowded
- ✗ Feels cheaper, quicker, and more reliable to drive to York, Manchester, or further afield if all three of them on a day trip
- ✗ "A bit of a faff" to get the train with a young child

Segment 5

Suburban Families

Think People | Department for Transport

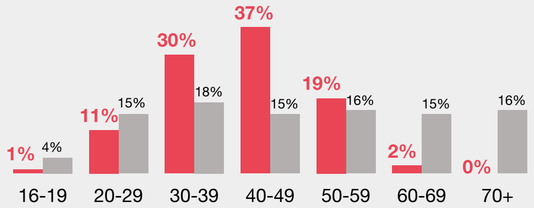
■ Segment 5 ■ All segments

Who are they?

Gender

Male ♂ 48% 49% | Female ♀ 52% 51%

Age



Mobility difficulties impacting travel

6%

25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

Go out on foot	Use local buses	Get in or out of a car	Ride a bike*
4% 17%	3% 12%	3% 9%	4% 25%

Mental health/physical health condition:

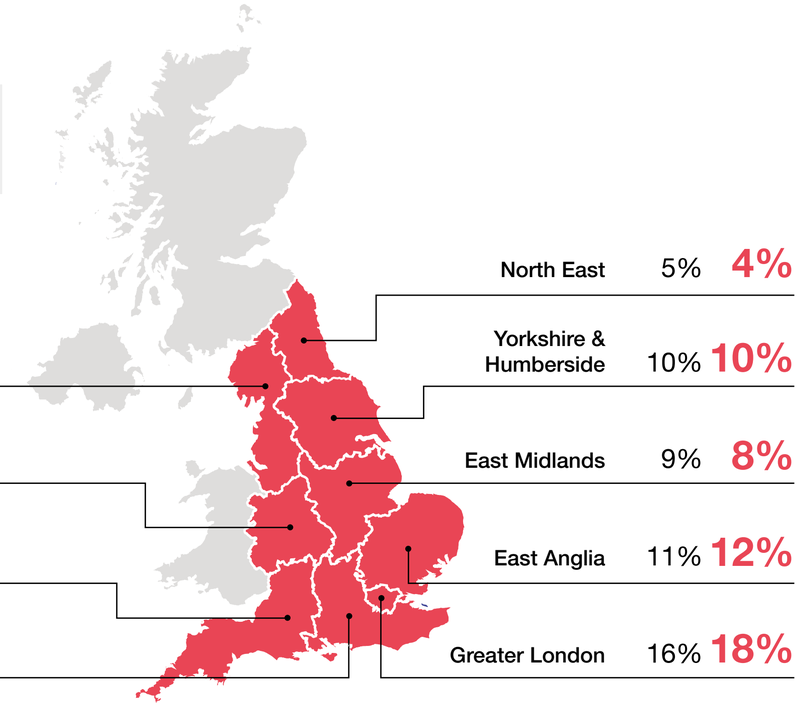
Mental health condition	Physical health condition
14% 20%	15% 29%

Ethnicity

87% 88% White | 11% 11% Ethnic Minority

Location

Urban	Rural
80% 78%	15% 14%

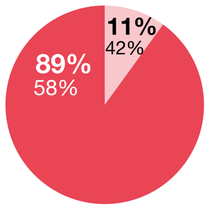


North West	13%	13%
West Midlands	10%	10%
South West	9%	10%
South East	16%	16%
North East	5%	4%
Yorkshire & Humberside	10%	10%
East Midlands	9%	8%
East Anglia	11%	12%
Greater London	16%	18%

Employment & working patterns

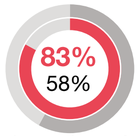
Working

- 65% 39% Full-time employed
- 17% 14% Part-time employed
- 7% 6% Self employed

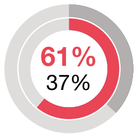


Not working

- 4% 5% Parent-homemaker
- 3% 10% Unemployed
- 3% 23% Retired
- 1% 5% Student/Pupil



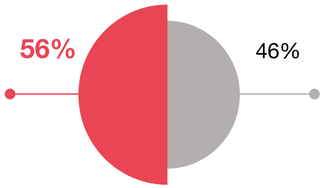
Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping



Household & financials

Household

Homeowners	Renting	Children in household
78% 65%	18% 31%	59% 37%

Household finances

Under £25,000	19% 40%
£25,000 - £59,999	38% 33%
Over £60,000	30% 13%

Technology & media

Use of smartphones

91% | 98%

Consumption of news

TV	Radio	Digital newspaper	Social media	Traditional newspaper
69% 70%	44% 40%	45% 34%	40% 32%	25% 27%

Social media

65% 61%	Facebook	34% 27%	Twitter
65% 53%	WhatsApp	16% 17%	Snapchat
46% 42%	YouTube	14% 13%	Google+
48% 37%	Instagram	21% 12%	LinkedIn

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 5

Suburban Families

Think People | Department for Transport

Segment 5 All segments

Access to transport

Distance to nearest bus stop (mins walk)

	Segment 5	All segments
< 5 mins	47%	50%
5 – 13 mins	40%	38%
> 14 mins	12%	11%

Distance to nearest railway station (mins walk)

	Segment 5	All segments
< 14 mins	36%	33%
14 – 43 mins	43%	40%
> 44 mins	21%	23%

Parking their vehicles

	Segment 5	All segments
Space I own or that is allocated to me/us	70%	68%
On a road or street	16%	17%
Communal or shared car park at the property	7%	8%
Private car park	4%	4%
Public or council car park	2%	2%
Where a friend or family member lives	*	*
Other	*	1%

Access to:

	Segment 5	All segments
Bicycle (including e-bike)	46%	30%

** represents figures < 1%*

People in this segment have access to a range of transport modes. They are car owners and make use of the car as their main mode of transport. Those living in urban areas are likely to have a bus stop, train or underground/metro station in closer proximity to their home, while access to public transport can be patchy in rural areas. People in this segment also make use of active travel modes (walking and cycling).

Number of cars in household

	Segment 5	All segments
One car	55%	46%
Two cars	43%	25%
Three or more cars	2%	8%

Car type

	Segment 5	All segments
Petrol	62%	64%
Diesel	30%	27%
EV/Hybrid	9%	8%

Number of miles driven per year

	Segment 5	All segments
Under 5,000 miles	32%	44%
5,000 - 8,999 miles	26%	23%
Over 9,000 miles	34%	25%

Strategic Road Network usage (Motorways and A-roads)

	Segment 5	All segments
At least once per week	58%	40%

Understanding transport choices

Journey planning. Smartphones are used for:

	Segment 5	All segments
Maps/ navigation/ satnavs	72%	60%
Finding out about services available in the area	63%	52%
Route planning/route planning apps	62%	50%
Checking traffic updates	53%	36%
Checking live travel times	50%	44%
Buying public transport tickets online	43%	32%
Booking a taxi or minicab using an app	31%	26%
Buying flight tickets online	30%	23%
None of these	8%	16%

Mode use and frequency

Modes used once a week or more (last 6 months)

	Segment 5	All segments
Car/van as a driver	83%	63%
Car/van as a passenger	60%	53%
Walking to a destination or wheeling by a wheelchair or motorised scooter	57%	51%
Cycling (including e-bike)	25%	19%
Bus	22%	28%
Train	19%	15%
Underground rail/metro	18%	15%
Taxi	16%	15%
App-based minicab services	16%	14%
Ride-sharing apps	15%	12%
Informal car-pooling	14%	14%
Motorbike/moped	12%	11%
Tram	11%	10%
Car club	11%	10%
Coach	9%	9%
Ferry/other water-based	9%	9%
Aeroplane/flying	6%	6%

Top 5 journey purposes (last 6 months)

	Segment 5	All segments
Shopping for food/ grocery items	84%	80%
To go on a day trip somewhere	66%	51%
Visiting friends/ relatives	79%	69%
Commuting to place of work	62%	40%
Shopping for non-food/ grocery items such as buying books, music, clothes, holidays, or insurance	67%	56%

Flight taken in last 12 months

	Segment 5	All segments
Short-haul	32%	25%
Long-haul	15%	12%
None	47%	57%

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 5

Suburban Families

■ Segment 5 ■ All segments

People in this segment have reduced their driving and use of public transport modes less as a result of increased work from home. In some cases, moving to a large city has facilitated a reliance on public transport. They have also reduced their travel abroad and have looked to holiday in places closer to home.

People in this segment reported being affected and making a few changes as a result of the cost-of-living pressures. They are giving up having a second car, making fewer journeys by car to save on fuel and looking for cheaper transport alternatives. They are also being careful with their energy usage, cancelling subscriptions and generally being more mindful about how they manage their finances.

"So, the obvious one is we got rid of the second vehicle and then we're just paying attention to direct debits. I've cancelled a few subscriptions." (Male, 39, rural, South West)

43%	51%	Happy about lifestyle and contribution to climate change
44%	37%	Would like to do a bit more to reduce my impact
12%	9%	Would like to do a lot more to reduce my impact

Enablers and barriers to different transport modes

Car

- ✓ Convenience/saving time
- ✓ Lack of reliable public transport services
- ✓ Cheaper than other modes of transport (particularly when travelling as a family)
- ✗ Positive attitudes towards the environment
- ✗ Cost of fuel
- ✗ Active lifestyles/positive attitudes to active travel modes
- ✗ Parking availability

Walking

- ✓ Positive attitudes towards the environment
- ✓ Health benefits – recreational and keeping fit/ exercising
- ✓ Lifestyle/preference for walking
- ✓ Suitable for short-distance journeys in the local area/to bus stops or train stations
- ✓ Saving money
- ✗ Convenience/saving time
- ✗ Journeys with multiple stops along the way (school drop-off/pick-up, work, shopping)
- ✗ Not suitable for longer journeys
- ✗ Poor weather

Cycling

- ✓ Positive attitudes towards the environment
- ✓ Life habits/personal preference
- ✓ Good weather
- ✓ Leisure/outdoor family activity
- ✗ Personal preference/lifestyle
- ✗ Lack of infrastructure
- ✗ Local relief (hilly areas require more effort when cycling)
- ✗ Availability for more convenient travel modes – car and/or public transport
- ✗ Preference for walking/ other ways of exercising and keeping fit

Public Transport

- ✓ Positive attitudes towards the environment
- ✓ An enjoyable way to travel
- ✓ No need for parking services
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ Feeling of safety while using public transport services
- ✗ Availability of services
- ✗ Poor connections
- ✗ Convenience provided by alternative transport modes (car), particularly when travelling with children
- ✗ Cost (particularly trains)

Attitudes towards transport and climate

People in this segment hold positive attitudes towards the environment and they actively try to make more use of environmentally friendly transport modes and less use of cars. The car is used mainly for journeys where it is cheaper, more convenient, and when public transport provision is poor. They enjoy walking for exercise and because of the positive benefits on the environment. They are interested in switching to an electric vehicle but feel that this is unaffordable at present.

Cycling is more sporadic and dependent on personal circumstances and convenience (i.e. location/area where they live).

"For environmental reasons really. Well, cost as well, but I believe that you should walk if you can, or use other forms of transport if you can." (Female, 48, rural, West Midlands)

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 6

Heavy Car Users, Frequent Flyers

Think People | Department for Transport

■ Segment 6 ■ All segments

Who are they?

Gender

Male ♂52% 49% Female ♀47% 51%

Age

16-19	20-29	30-39	40-49	50-59	60-69	70+
4% 4%	20% 15%	29% 18%	22% 15%	17% 16%	6% 15%	1% 16%

Mobility difficulties impacting travel

8% 25%

Ethnicity

88% 88% White 11% 11% Ethnic Minority

Household finances

Under £25,000	14% 40%
£25,000 - £59,999	41% 33%
Over £60,000	31% 13%

People in this segment are aged between 30 and 50, in employment, and live with their family (partner and children) in suburban or rural areas.

They are likely to own 2-3 cars, and this is their main mode of transport. Occasionally, they will make use of public transport and active travel modes.

People in this segment are likely to have flexible and hybrid working patterns. They use the car to commute to work because this is seen as a convenient and cheaper way to travel, particularly when travelling longer distances. They are likely to live with a partner and children, so part of their daily travel will also involve taking children to school, sport activities, appointments or travelling somewhere as a family. Driving is also an enjoyable way to travel. They will make use of public transport for longer work journeys, although some perceive it to be time consuming and unreliable.

Oliver

- **Age**: 42
- **Lives**: Ide Hill, Sevenoaks, Kent
- **Household composition**: Married, living with wife and three children
- **Employment:** Full time Finance Director, works 1-2 days per week at home
- **Disability/Health**: No
- **Tenure**: Homeowner, with mortgage
- **Interests and concerns**: Likes motorsport and classic cars; worries about housing, the cost of living pressures (particularly for his children), and the future of Britain

Enablers and barriers to different transport modes

Car

- ✓ Convenience
- ✓ Saving time
- ✓ Ability to carry items/ luggage
- ✓ Enjoyable way of travelling
- ✓ Sense of control over the journey and its duration
- ✓ Lack of reliable public transport services
- ✓ Cheaper than public transport (particularly when travelling with family)
- ⊗ Cost of fuel
- ⊗ Parking availability and cost
- ⊗ Roadworks

Walking

- ✓ Positive attitudes towards the environment
- ✓ Health benefits – recreational and keeping fit/ exercising
- ✓ Lifestyle/preference for walking
- ✓ Suitable for short-distance journeys in the local area/to bus stops or train stations
- ✓ Feeling of control over the journey length and duration
- ⊗ Convenience/saving time
- ⊗ Perceived as suitable for shorter journeys locally
- ⊗ Poor weather

Cycling

- ✓ Positive attitudes towards the environment
- ✓ Good infrastructure
- ✓ Leisure/holiday family activity
- ✓ Life habits/personal preference
- ⊗ Lack of infrastructure
- ⊗ Safety concerns
- ⊗ Availability of more convenient travel modes – car and/or public transport
- ⊗ Perceived as not suitable for longer (work) journeys

Public Transport

- ✓ An enjoyable way to travel (nice activity with children, and/or opportunity to relax/work)
- ✓ A good opportunity to use as part of a longer/multi-stage journey
- ✓ Bus stops/train stations in close proximity
- ✓ No need for parking services
- ✓ Can be a cheaper alternative to car journeys
- ✓ Positive attitudes towards the environment
- ✓ Good infrastructure
- ⊗ Can be unreliable
- ⊗ Leisure/holiday family activity
- ⊗ Life habits/personal preference

General transport habits

- **Two older children walk to the local high school, with the youngest taken by car to primary school** which is a 10 minute drive.
- **Three cars in the household** – one for Oli's daily use, one for his wife, and another for Oli's oldest kid who has recently passed his driving test.
- **Walks to local shop when only grabbing "bits and pieces",** otherwise the family gets groceries delivered.
- **Goes on holiday two to three times per year, they usually drive to the airport** – typically Gatwick or Stansted – and leave the car in the long-stay car park.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 6

Heavy Car Users, Frequent Flyers

Think People | Department for Transport

Oliver

- **Age:** 42
- **Lives:** Ide Hill, Sevenoaks, Kent
- **Household composition:** Married, living with wife and three children
- **Employment:** Full time Finance Director, works 1-2 days per week at home
- **Disability/Health:** No
- **Tenure:** Homeowner, with mortgage
- **Interests and concerns:** Likes motorsport and classic cars; worries about housing, the cost of living pressures (particularly for his children), and the future of Britain

General transport habits

Oli, his wife, and their three children live in a five bedroom house in Sevenoaks. The two older children walk or get the bus to their schools, and Oli's wife does the daily school run for their youngest.

There are three cars in the household – one for Oli's daily use, one for his wife, and another for their oldest child who has recently passed his driving test. Usually, Oli walks to the local supermarket when only grabbing "bits and pieces", otherwise the family gets groceries delivered.

For the 3-4 times a year the family goes on holiday, they typically fly overseas. They usually drive to the airport – most likely Gatwick or Stansted – and leave the car in the long-stay car park.

Frequent journey

Driving to his office in Maidstone, 3-4 times a week.

- ✓ Enjoys the 45-60 minutes between home and office to just drive and relax
- ✓ Once or twice a week, he'll pick up a colleague on the way in order to reduce their mutual car use and be more environmentally-friendly
- ⊗ Sometimes hits heavy traffic and his satnav could be better at offering alternative routes

"I had a longer journey today. Starting from home, I picked up a colleague near Tunbridge Wells, then headed on to Maidstone. Then did the same in reverse. I would say this sort of journey happens at least a couple of times a week."

Less frequent journey

Taking one of the cars for an MOT, 2-3 times a year.

- ✓ Should be a relatively short journey – garage only 15 miles away
- ⊗ Frequent roadworks double the journey time and no alternative route as live in relatively rural area
- ⊗ Can waste a day's work if roadworks combine with garage not having a courtesy car available to drive home – poor WiFi at the garage so can't work remotely from there

"I didn't really want to spend all day at the garage. I mean, yes, I could've taken my laptop. I could've probably dialled into his Wi-fi and worked but there was no point really."

Opportunities for Change

Key factors in decision making:

- **Enjoyment - likes driving cars**
- **Convenience - work vs leisure, distance covered, family present or not**

Buying an electric vehicle:

- ✓ Recently had an electric charging point installed at home
- ✓ Kids and wife want to get an EV in order to be more green
- ⊗ He's been reluctant in the past but has started to reconsider
- ⊗ Would like to know more about functionality first

"If they were a bit more flexible, you know, to families travelling during the peak hour. We have a reasonably good train network and could reach most destinations, It just purely comes down to cost, to be honest."

Using public transport more frequently:

- ✓ Likes to get the train on a family trip as it's less stressful
- ✓ Used to get buses locally as kids enjoyed sitting on top deck
- ⊗ Less so now as they are getting a bit older
- ⊗ Too expensive to travel as a family by train

Segment 6

Heavy Car Users, Frequent Flyers

Think People | Department for Transport

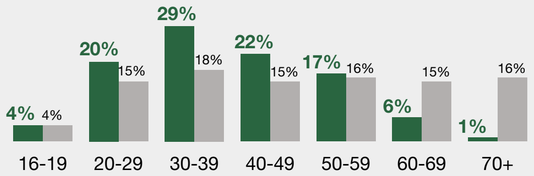
■ Segment 6 ■ All segments

Who are they?

Gender

Male ♂52% 49% Female ♀47% 51%

Age



Mobility difficulties impacting travel

8%

25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

Go out on foot	Use local buses	Get in or out of a car	Ride a bike*
5% 17%	5% 12%	4% 9%	8% 25%

Mental health/physical health condition:

Mental health condition	Physical health condition
17% 20%	16% 29%

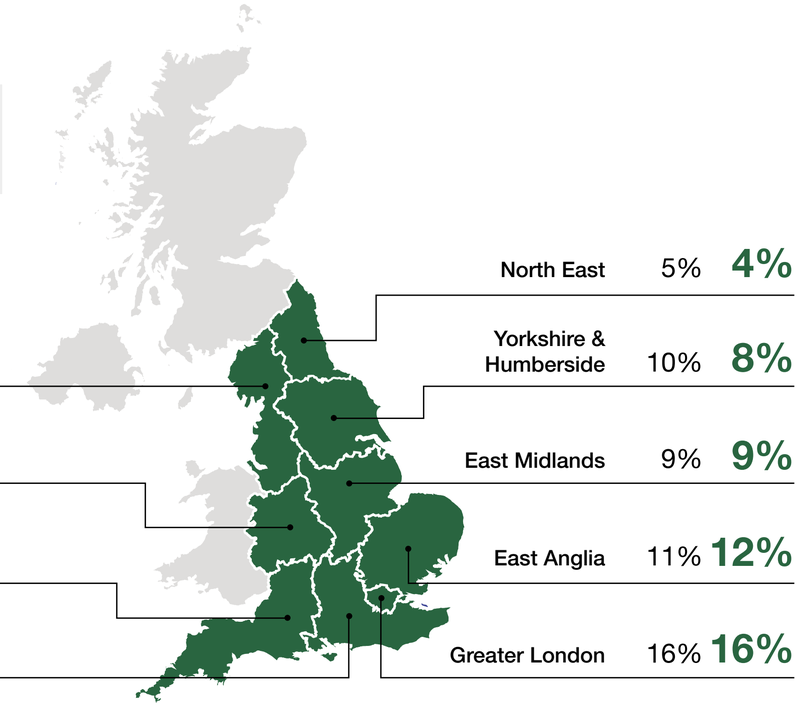
Ethnicity

88% 88% White

11% 11% Ethnic Minority

Location

Urban	Rural
72% 78%	19% 14%

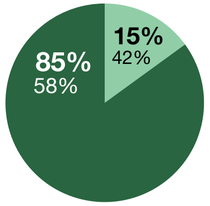


North West	12%	13%
West Midlands	11%	10%
South West	7%	10%
South East	20%	16%
North East	5%	4%
Yorkshire & Humberside	10%	8%
East Midlands	9%	9%
East Anglia	11%	12%
Greater London	16%	16%

Employment & working patterns

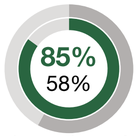
Working

- 63% 39% Full-time employed
- 15% 14% Part-time employed
- 7% 6% Self employed

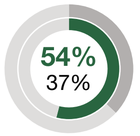


Not working

- 5% 5% Student/Pupil
- 4% 23% Retired
- 4% 10% Unemployed
- 2% 5% Parent-homemaker



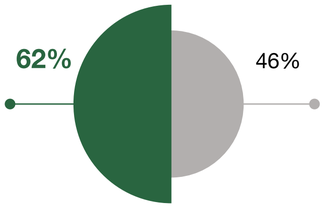
Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping



Household & financials

Household

Homeowners	Renting	Children in household
80% 65%	16% 31%	49% 37%

Household finances

Under £25,000	14% 40%
£25,000 - £59,999	41% 33%
Over £60,000	31% 13%

Technology & media

Use of smartphones

91% 98%

Consumption of news

TV	Radio	Digital newspaper	Social media	Traditional newspaper
70% 70%	49% 40%	38% 34%	48% 32%	29% 27%

Social media

69% 61%	Facebook	37% 27%	Twitter
65% 53%	WhatsApp	29% 17%	Snapchat
49% 42%	YouTube	19% 13%	Google+
54% 37%	Instagram	24% 12%	LinkedIn

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 6

Heavy Car Users, Frequent Flyers

Think People | Department for Transport

■ Segment 6 ■ All segments

Access to transport

Distance to nearest bus stop (mins walk)

	Segment 6	All segments
< 5 mins	50%	50%
5 – 13 mins	36%	38%
> 14 mins	12%	11%

Distance to nearest railway station (mins walk)

	Segment 6	All segments
< 14 mins	33%	33%
14 – 43 mins	40%	40%
> 44 mins	27%	23%

Parking their vehicles

	Segment 6	All segments
Space I own or that is allocated to me/us	75%	68%
On a road or street	13%	17%
Communal or shared car park at the property	7%	8%
Private car park	3%	4%
Public or council car park	1%	2%
Where a friend or family member lives	*	*
Other	–	1%

Access to:

	Segment 6	All segments
Bicycle (including e-bike)	43%	30%

** represents figures < 1%*

People in this segment own 2-3 cars, and this is their main mode of transport. They enjoy driving and feel it is a convenient way to commute to work. Part of their frequent journeys will also be about taking children to school, sport activities, dentist/doctor appointments or travelling somewhere as a family.

Number of cars in household

	Segment 6	All segments
One car	10%	46%
Two cars	55%	25%
Three or more cars	35%	8%

Car type

	Segment 6	All segments
Petrol	60%	64%
Diesel	32%	27%
EV/Hybrid	7%	8%

Number of miles driven per year

	Segment 6	All segments
Under 5,000 miles	23%	44%
5,000 - 8,999 miles	27%	23%
Over 9,000 miles	46%	25%

Strategic Road Network usage (Motorways and A-roads)

	Segment 6	All segments
At least once per week	65%	40%

Understanding transport choices

Journey planning. Smartphones are used for:

	Segment 6	All segments
Maps/ navigation/ satnavs	76%	60%
Finding out about services available in the area	69%	52%
Route planning/route planning apps	67%	50%
Checking traffic updates	55%	36%
Checking live travel times	51%	44%
Buying public transport tickets online	40%	32%
Booking a taxi or minicab using an app	35%	26%
Buying flight tickets online	33%	23%
None of these	5%	16%

Mode use and frequency

Modes used once a week or more (last 6 months)

	Segment 6	All segments
Car/van as a driver	91%	63%
Car/van as a passenger	72%	53%
Walking to a destination or wheeling by a wheelchair or motorised scooter	50%	51%
Cycling (including e-bike)	23%	19%
Bus	22%	28%
Train	22%	15%
Taxi	22%	15%
Informal car-pooling	21%	14%
Underground rail/metro	20%	15%
App-based minicab services	20%	14%
Ride-sharing apps	18%	12%
Motorbike/moped	18%	11%
Car club	16%	10%
Coach	15%	9%
Ferry/other water-based	15%	9%
Tram	14%	10%
Aeroplane/flying	10%	6%

Top 5 journey purposes (last 6 months)

	Segment 6	All segments
Shopping for food/ grocery items	84%	80%
To go on a day trip somewhere	68%	51%
Visiting friends/ relatives	79%	69%
Commuting to place of work	66%	40%
Shopping for non-food/ grocery items such as buying books, music, clothes, holidays, or insurance	70%	56%

Flight taken in last 12 months

	Segment 6	All segments
Short-haul	34%	25%
Long-haul	23%	12%
None	40%	57%

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Segment 6

Heavy Car Users, Frequent Flyers

■ Segment 6 ■ All segments

People in this segment did not report any substantial changes to their use of transport modes in recent years. However, there was a sense that lifestyle changes – e.g. changes in employment, children growing up – could potentially influence future transport choices.

Some people in this segment reported trying to make less use of their car, due to a rise in fuel prices. They also look for cheaper train fares as an alternative to driving longer distances and will book in advance to save money. They are also more conscious about not wasting food and being more economical in general, spending money only on things that are necessary for the family's needs. They do most of their shopping online, including clothing, as the delivery fee is cheaper than the cost of fuel and parking.

Enablers and barriers to different transport modes

Car

- ✓ Convenience
- ✓ Saving time
- ✓ Ability to carry items/ luggage
- ✓ Enjoyable way of travelling
- ✓ Sense of control over the journey and its duration
- ✓ Lack of reliable public transport services
- ✓ Cheaper than public transport (particularly when travelling with family)
- ⊗ Cost of fuel
- ⊗ Parking availability and cost
- ⊗ Roadworks

Walking

- ✓ Positive attitudes towards the environment
- ✓ Health benefits – recreational and keeping fit/ exercising
- ✓ Lifestyle/preference for walking
- ✓ Suitable for short-distance journeys in the local area/to bus stops or train stations
- ✓ Feeling of control over the journey length and duration
- ⊗ Convenience/saving time
- ⊗ Perceived as suitable for shorter journeys locally
- ⊗ Poor weather

Cycling

- ✓ Positive attitudes towards the environment
- ✓ Good infrastructure
- ✓ Leisure/holiday family activity
- ✓ Life habits/personal preference
- ⊗ Lack of infrastructure
- ⊗ Safety concerns
- ⊗ Availability of more convenient travel modes – car and/or public transport
- ⊗ Perceived as not suitable for longer (work) journeys

Public Transport

- ✓ An enjoyable way to travel (nice activity with children, and/or opportunity to relax/work)
- ✓ A good opportunity to use as part of a longer/multi-stage journey
- ✓ Bus stops/train stations in close proximity
- ✓ No need for parking services
- ✓ Can be a cheaper alternative to car journeys
- ✓ Positive attitudes towards the environment
- ✓ Good infrastructure
- ⊗ Can be unreliable
- ⊗ Leisure/holiday family activity
- ⊗ Life habits/personal preference

Attitudes towards transport and climate

People in this segment expressed some concern about the environment but transport choices were always based on what is more practical and most suited to their travel needs. However, people in this segment are open to using more sustainable transport modes and having the appropriate infrastructure in place would encourage favourable attitudes towards greener transport choices. For example, installation of an electrical vehicle charge point could encourage people to buy an electrical vehicle in future.

"I think, you know, the more things get greener, the more electric cars, the more people wanting to offset their carbon footprint, etc, it might come into it, but again, I think it would always come down to convenience and whether or not that particular service is meeting my needs in terms of where I needed to be." (Male, 46, employed full-time, East Anglia)

I do have an electric charging point at home but don't currently have an electric car. We park all cars on the driveway." (Male, 46, employed full-time, East Anglia)

48%	51%	Happy about lifestyle and contribution to climate change
43%	37%	Would like to do a bit more to reduce my impact
8%	9%	Would like to do a lot more to reduce my impact

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 7

Elderly And Low Income Without Cars

Think People | Department for Transport

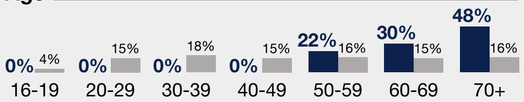
■ Segment 7 ■ All segments

Who are they?

Gender

Male ♂42% 49% Female ♀58% 51%

Age



Mobility difficulties impacting trave

25% 52%

Ethnicity

95% 88% White 4% 11% Ethnic Minority

Household finance

Under £25,000	78% 40%
£25,000 - £59,999	10% 33%
Over £60,000	*% 13%

People in this segment are older, likely to live alone, and often have one or multiple health conditions. They do not own a car.

Their health is impacting their mobility and they make fewer journeys compared to people in other segments. They rely on public transport or on other family members to drive them to destinations which are less accessible by public transport. Getting the bus is seen as a great option for short journeys in the local area or to neighbouring towns. It is also a cost-effective option, as people in this segment are likely to own a free bus pass.

Enablers and barriers to different transport modes

Car

- ✓ Convenient, especially for short journeys to see friends and family
- ✓ Availability of taxi services in the local area
- ✓ Comfortable way to travel
- ✓ A safer alternative for evening travel
- ⊗ Physical health conditions
- ⊗ Cost of using taxi services
- ⊗ Loss of driving licence (e.g. on medical grounds)

Walking

- ✓ Health benefits - stayin active/keeping fi
- ✓ Recreation and socialising – walking pets alone/with friends
- ✓ No cost associated with it
- ✓ Environmental benefit
- ⊗ Health condition (physical or mental health)

Cycling

- ⊗ Life stage
- ⊗ Physical health conditions
- ⊗ Roads in poor condition and associated safety concerns
- ⊗ Not cheaper than public transport thanks to free bus pass

Public Transport

- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ Discounted/free travel
- ✓ Environmental benefit
- ⊗ Public transport provision in the local area
- ⊗ Distance to nearest bus stop/ train station
- ⊗ Safety concerns – e.g. travelling late in the evening
- ⊗ Health concerns – for those in a vulnerable health group
- ⊗ Roads in poor condition

Peter

- **Age:** 67
- **Lives:** Dudley, West Midlands
- **Household composition:** Divorced, lives alone in terraced house, one adult daughter
- **Employment:** Recently retired, formerly worked as a builder
- **Disability/Health:** Osteoarthritis; hip replacement
- **Tenure:** Homeowner, no mortgage
- **Interests and concerns:** A season ticket holder at Wolverhampton Wanderers; worries about the rising cost of living
- **Driving licence:** Yes, full

General transport habits

- **Can't afford his own car** nowadays and misses the freedom it used to give him.
- Is able to access **free local transport via free bus pass.**
- **Mainly travels within the West Midlands**, either taking the bus or getting a lift with his friends to watch Wolverhampton FC.
- **Tends to go out less than he used to** as things are more expensive, especially intercity trains.
- **Tends to do his weekly shop in person to save on the delivery fee** – the walk to the shops also allows him to do some of the exercise he needs to help with his arthritis.

Pippa

- **Age:** 76
- **Lives:** Aldsworth, Gloucestershire
- **Household composition:** Widowed, lives alone with her dog
- **Employment:** Retired for 18 years, former Midwife
- **Disability/Health:** A visual impairment and a spinal condition
- **Tenure:** Renting a retirement apartment
- **Interests and concerns:** Loves literature and writes short stories; worries about climate change and the cost of energy bills
- **Driving licence:** Yes, full

General transport habits

- **Has a free bus pass but struggles to use it** – her spinal condition makes bus journeys uncomfortable.
- **Her primary journeys are trips to the hospital and to the vets** (daughter drives her).
- Due to health conditions she is **unable to walk very far**, on a good day she takes the dog for a walk.
- Used to drive but **visual impairments and headaches** means she cannot do this and no longer owns a car.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 7

Elderly And Low Income Without Cars

Think People | Department for Transport

Peter

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- **Tenure:** Homeowner, no mortgage
- **Interests and concerns:** A season ticket holder at Wolverhampton Wanderers; worries about the rising cost of living
- **Driving licence:** Yes, full

General transport habits

Peter can't afford his own car nowadays and misses the freedom it used to give him – travelling by car nowadays means getting a lift from friends or family. But he does have free local transport – on buses and local trains – thanks to his free bus pass. His primary journeys are usually all within the West Midlands, especially taking the bus to Wolverhampton to watch the football, around which his social life is built. Peter tends to go out less than he used to as things are more expensive, especially intercity trains. He also tends to do his weekly shop in person to save on the delivery fee – the walk to the shops also allows him to do some of the exercise he needs to help with his arthritis.

Frequent journey

Getting the bus to the match, weekly.

- ✓ No need to plan – familiar with routes and timings
- ✓ Free local trains with his Senior railcard
- ✓ Can get the bus from the end of his road, before changing onto another bus, then walking a short distance to the ground
- ⊗ Timings not always reliable, so often leaves earlier than he'd like to ensure he doesn't miss kick off

"I have a very good transport system where I live. Regular buses to local villages and large towns. I catch the bus from the top of my road, very convenient."

Less frequent journey

Getting the train to the occasional away game, once a month.

- ✓ Relatively easy access to mainline station, from where it is possible to travel anywhere in the country
- ✓ Local travel – bus and train – is free with his free bus pass
- ⊗ Appearance of trains in need of improvement
- ⊗ Intercity trains are expensive, even with his over-60s railcard – Peter feels he can afford this less than he used to

"It's all worn out anyway. Put in fresh upholstery. It's going to cost them a few bob. And look at the outside of the carriage, all covered in graffiti. Absolutely terrible."

Opportunities for Change

Key factors in decision making:

- **Destination - local or further afiel**
- **Cost - longer distance travel is getting more expensive**
- **Safety - doesn't trust the state of roads**

Would like to use trains more:

- ✓ Great to get around the country
- ✓ Would also enable him to visit his grandchildren more easily
- ⊗ Intercity trains are expensive

"I used to do a lot of cycling. But I don't trust the roads anymore. They have all these potholes, it's always raining. So I thought, do I keep the bike and continue to cycle, get pneumonia? Or use the free travel pass? It's a no brainer, really, isn't it?"

Would like to cycle more:

- ✓ Healthy, cheap, and green
- ✓ Used to cycle into Dudley regularly to shop and see friends
- ⊗ Public transport is free for Peter nowadays, reducing appeal of cycling
- ⊗ State of roads makes it dangerous
- ⊗ Unsure about cycling with his arthritis
- ⊗ Poor weather
- ⊗ No longer owns a bike

Segment 7

Elderly And Low Income Without Cars

Pippa

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- **Household composition:** Widowed, lives alone with her dog
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- **Disability/Health:** A visual impairment and a spinal condition
- **Tenure:** Renting a retirement apartment
- **Interests and concerns:** Loves literature and writes short stories; worries about climate change and the cost of energy bills
- **Driving licence:** Yes, full

General transport habits

Pippa has a free bus pass but struggles to use it – her spinal condition makes bus journeys uncomfortable, and even waiting at a bus stop is challenging. Her primary journeys are trips to the hospital and to the vets, for which she usually needs a lift from her daughter. Due to her health conditions, she is unable to walk very far. On a good day she takes the dog for a walk.

Pippa used to drive but, due to worsening visual impairments and headaches, had to give it up. She got rid of her car 8 years ago. Previous to that, she had used her car frequently to meet up with friends and family. Without her car she hardly goes out unless it is necessary, and as a result she feels isolated from friends and family.

Frequent journey

Getting a lift to the hospital, every fortnight.

- ✓ Car is comfortable for her spinal problem; walking to the bus stop is not an option and the bus journey is uncomfortable
- ✓ Car lift is free, a taxi journey would cost her £30 each way and she's not aware of dial-a-ride services
- ⊗ Two nearest train stations are 9-10 miles away, so not accessible to Pippa
- ⊗ Daughter has to make a long round trip in car to take Pippa – 25 miles to pick Pippa up, then drive to the hospital, then drop Pippa home and drive another 25 miles back

"I can't get there without my daughter driving me to Salisbury. I just had to cancel an important appointment at the hospital because I simply couldn't get there and she wasn't able to help me that day. So it's being delayed by 4 months."

Less frequent journey

Emergency taxi trips to look after grandchildren, every couple of months.

- ✓ Local taxi firm is available to get Pippa to her daughter's house when her daughter is called away for work unexpectedly
- ⊗ Is expensive, especially if traffic is bad, sometimes around £100
- ⊗ Can be very stressful as taxis aren't always available immediately or sometimes arrive late
- ⊗ Means leaving the dog alone unexpectedly as taxis won't take the dog

"Any travel presents me with so many problems I have kind of given up and don't attempt any journey alone. Car is the only real option for me but I can't drive with my vision problem."

Opportunities for Change

Key factors in decision making:

- **Need – trip to hospital or vets**
- **Limitations – various health conditions make walking very difficul**

Would like to use trains more:

- ⊗ Extreme discomfort on board the train due to spinal condition
- ⊗ Hard to walk any distance
- ⊗ Lack of local train station

"In my dreams I can use a mobility scooter to go to my local station – it used to be a mile away – and I'd be able to get a train to Salisbury, my home town. It will never happen but it's the only way I could ever hope to travel independently."

Potential for switching to car use in the future:

- ✓ Would enable spontaneous trips to shops or to visit friends and family
- ✓ Would make going to the vets or the hospital much easier
- ⊗ Health is too poor to drive herself – visual impairment; not allowed to drive
- ⊗ Worried about the state of the roads – too dangerous for her, even if she was physically able to drive

Segment 7

Elderly And Low Income Without Cars

Think People | Department for Transport

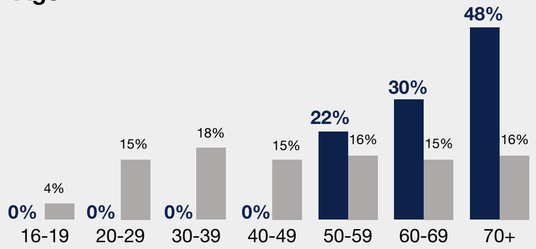
■ Segment 7 ■ All segments

Who are they?

Gender

Male ♂42% 49% | Female ♀58% 51%

Age



Mobility difficulties impacting trave

52%

25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) t

Go out on foot	Use local buses	Get in or out of a car	Ride a bike*
46% 17%	25% 12%	18% 9%	68% 25%

Mental health/physical health condition:

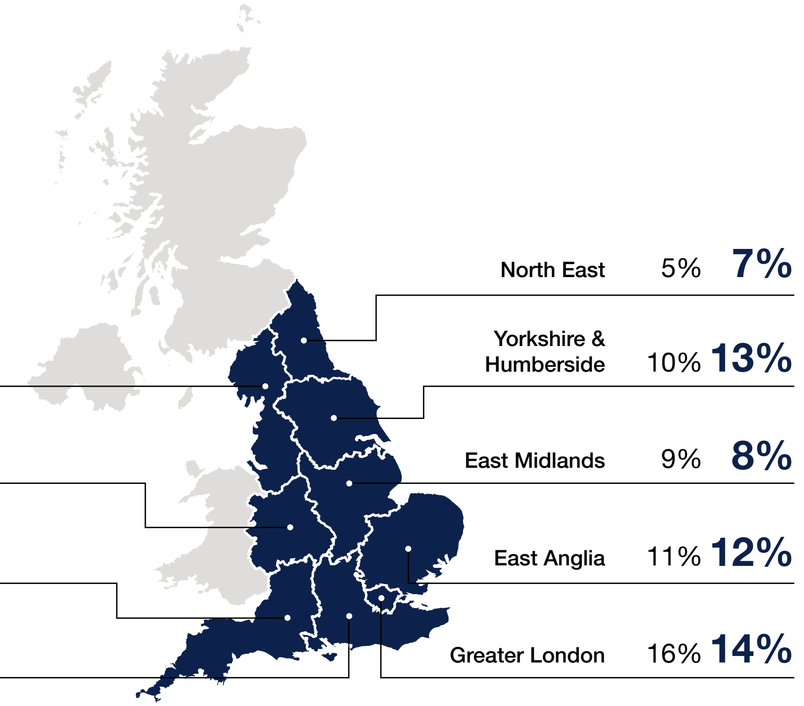
Mental health condition	Physical health condition
27% 20%	69% 29%

Ethnicity

95% 88% White | 4% 11% Ethnic Minority

Location

Urban	Rural
90% 78%	9% 14%

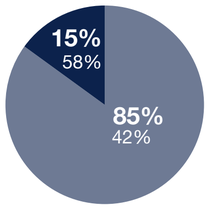


North West	16%	13%	7%	North East
West Midlands	9%	10%	13%	Yorkshire & Humberside
South West	11%	10%	8%	East Midlands
South East	11%	16%	12%	East Anglia
			14%	Greater London

Employment & working patterns

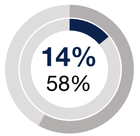
Working

- 8% 39% Full-time employed
- 3% 14% Part-time employed
- 3% 6% Self employed

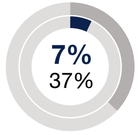


Not working

- 59% 23% Retired
- 25% 10% Unemployed
- 1% 5% Parent-homemaker
- – 5% Student/Pupil



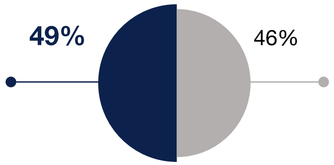
Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping



Household & financial

Household

Homeowners	Renting	Children in household
49% 65%	48% 31%	5% 37%

Household finance

Under £25,000	78% 40%
£25,000 - £59,999	10% 33%
Over £60,000	*% 13%

Technology & media

Use of smartphones

77% 91%

Consumption of news

TV	Radio	Digital newspaper	Social media	Traditional newspaper
82% 70%	33% 40%	24% 34%	12% 32%	31% 27%

Social media

58% 61%	Facebook	14% 27%	Twitter
36% 53%	WhatsApp	1% 17%	Snapchat
25% 42%	YouTube	7% 13%	Google+
14% 37%	Instagram	3% 12%	LinkedIn

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 7

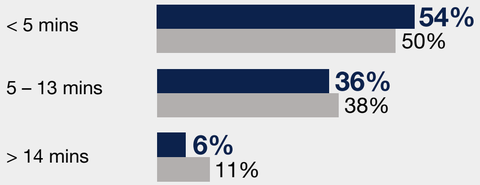
Elderly And Low Income Without Cars

Think People | Department for Transport

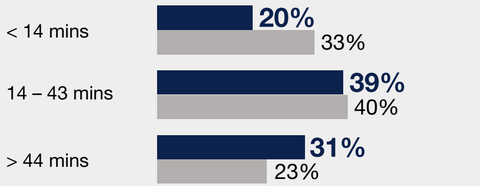
■ Segment 7 ■ All segments

Access to transport

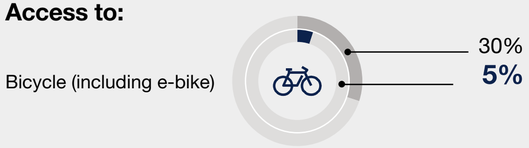
Distance to nearest bus stop (mins walk)



Distance to nearest railway station (mins walk)



Access to:



"Any travel presents me with so many problems I have given up and don't attempt any journey alone. Car is the only real option for me but I can't drive with my vision problem. I can use a mobility scooter but had one for nearly a year and only used it once because its too stressful with the pavements being so bumpy and people parking blocking dropped kerbs." Female, 69, South West

People in this segment don't drive anymore and are reliant on public transport modes or family and friends to help them travel to places. There are two key factors that influence people's transport choices – (i) people in this segment don't or can't drive anymore and (ii) reliance on local transport provision. The bus is a good and cost-effective option for short journeys.

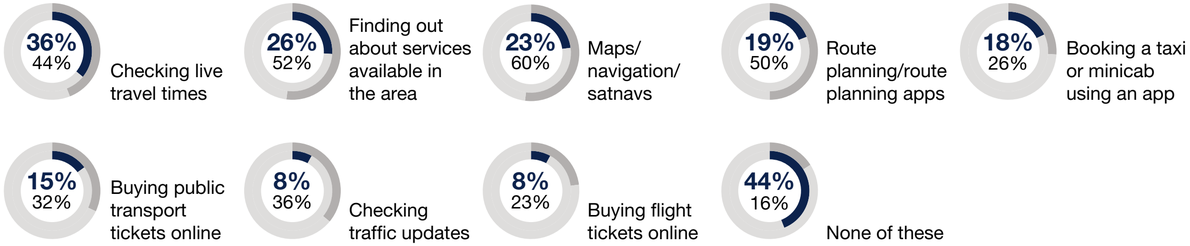
"[I would only take a taxi] If I need to get to, say, a follow up hospital appointment or my daughter needed me for grandma duty. They're very reliable, but very, very rarely do I need a taxi." Female, 70, East Anglia

Public transport modes are less suitable for those with more severe health conditions, as they can experience discomfort and pain while travelling, thus making them more dependent on friends and family for travel. Trains are used for longer journeys.

For people with less severe health conditions, walking is a great way to keep fit and build strength following a surgery that requires them to keep active – for example, a hip or knee replacement. Cycling on a standard bicycle is not seen as a suitable travel option due to it requiring more intense physical activity.

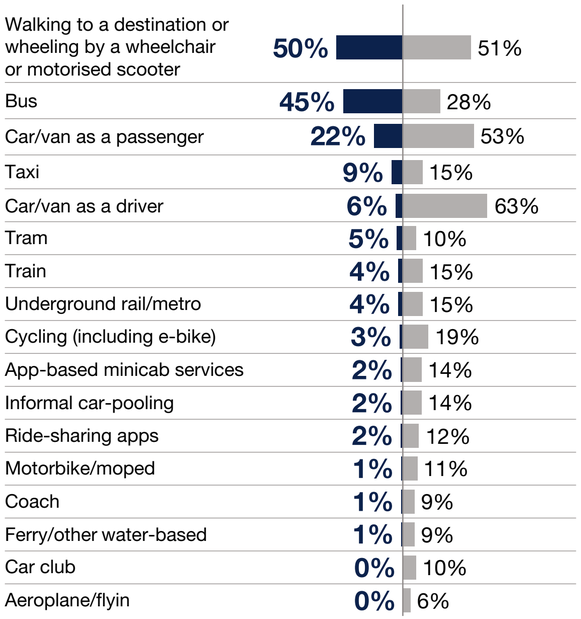
Understanding transport choices

Journey planning. Smartphones are used for:



Mode use and frequency

Modes used once a week or more (last 6 months)



Top 5 journey purposes (last 6 months)

75% 80%
Shopping for food/ grocery items

44% 56%
Shopping for non-food/ grocery items such as buying books, music, clothes, holidays, or insurance

66% 56%
Travelling to medical, hospital or dentist appointments

33% 46%
Travel to access services e.g. hairdressers, libraries, estate agents and banks

44% 69%
Visiting friends/ relatives

Flight taken in last 12 months

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 7

Elderly And Low Income Without Cars

■ Segment 7 ■ All segments

People in this segment have reduced the amount of travel they do in recent years. This is partly due to giving up driving, changes made following medical advice during the Covid-19 pandemic, and the effects of the pandemic more broadly such as socialising less.

Public transport has served as a good replacement for driving, but driving less has led to people living more isolated lives. In some cases, there has been a shift from cycling to public transport, due to cycling requiring more energy and physical effort but also because many people in this segment can access discounted/free public transport.

For people in the segment, the pandemic significantly reduced how often they travelled, to avoid becoming ill. People who were part of a vulnerable group during the COVID-19 pandemic and were advised by their doctor to avoid public transport or crowded places, still have concerns about using public transport or meeting friends. Thus, they have reduced their travel significantly and are continuing to avoid using some public transport modes. They are also more likely to have continued the use of face coverings/masks for protection.

62% 51% | Happy about lifestyle and contribution to climate change

21% 37% | Would like to do a bit more to reduce my impact

11% 9% | Would like to do a lot more to reduce my impact

Enablers and barriers to different transport modes

Car

- ✓ **Convenient, especially for short journeys to see friends and family**
- ✓ **Availability of taxi services in the local area**
- ✓ **Comfortable way to travel**
- ✓ **A safer alternative for evening travel**
- ⊗ Physical health conditions
- ⊗ Cost of using taxi services
- ⊗ Loss of driving licence (e.g. on medical grounds)

Walking

- ✓ **Health benefits - stayin active/keeping fi**
- ✓ **Recreation and socialising – walking pets alone/with friends**
- ✓ **No cost associated with it**
- ✓ **Environmental benefit**
- ⊗ Health condition (physical or mental health)

Cycling

- ⊗ Life stage
- ⊗ Physical health conditions
- ⊗ Roads in poor condition and associated safety concerns
- ⊗ Not cheaper than public transport thanks to free bus pass

Public Transport

- ✓ **Frequent and reliable services**
- ✓ **Bus stops/train stations in close proximity**
- ✓ **Discounted/free travel**
- ✓ **Environmental benefit**
- ⊗ Public transport provision in the local area
- ⊗ Distance to nearest bus stop/ train station
- ⊗ Safety concerns – e.g. travelling late in the evening
- ⊗ Health concerns – for those in a vulnerable health group
- ⊗ Roads in poor condition

Attitudes towards transport and climate

People in this segment expressed mixed levels of concern about the environment and this rarely influenced their transport choices. The cost of living, and recent political issues are seen as more important issues facing society today. Whilst acknowledging the environment is an important concern, using more environmentally-friendly modes (public transport, walking) is more a consequence of life stage, health condition and access to transport in the local area, rather than an environmental choice.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 8

Urban Professionals Without Cars

Think People | Department for Transport

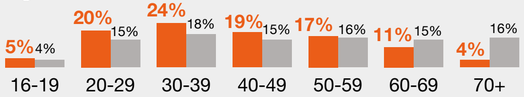
■ Segment 8 ■ All segments

Who are they?

Gender

Male ♂47% 49% Female ♀52% 51%

Age



Mobility difficulties impacting travel

9% 25%

Ethnicity

77% 88% White 20% 11% Ethnic Minority

Household finances

Under £25,000	48% 40%
£25,000 - £59,999	24% 33%
Over £60,000	7% 13%

People in this segment are young urbanites who live near bus stops and/or train stations.

Choosing which transport mode to use is influenced by distance to destination, cost and, in the case of cycling, by weather conditions. Distance to the nearest bus stop/train station is less of a concern as this segment can easily access public transport.

Changes in employment (since the pandemic) are one of the main drivers of change in transport behaviour. Hybrid and flexible working arrangements mean commuting takes place 2-3 days per week.

People in this segment use active travel modes for a mix of commuting and leisure purposes.

Enablers and barriers to different transport modes

Car

- ✓ Flexibility/freedom
- ✓ For getting out of the city
- ✗ Traffic
- ✗ Lack of parking spaces

Walking

- ✓ Short local journeys, up to 20 minutes
- ✓ Physical exercise
- ✓ Mental health
- ✗ Doesn't feel safe early in morning or late at night
- ✗ Poor weather

Cycling

- ✓ Exercise
- ✓ Speed
- ✓ Environmentally friendly
- ✗ Lack of confidence in self, infrastructure, other road users
- ✗ Safety concerns
- ✗ Not for everyone – "it's not particularly something that interests me"
- ✗ Poor weather

Public Transport

- ✓ Environmentally friendly compared with car use
- ✓ Bus seen as more suitable for familiar routes
- ✓ Bus seen as affordable
- ✓ Train seen as more suitable for long journeys
- ✓ Train was perceived as faster
- ✓ An enjoyable way to travel
- ✗ Train fares seen as expensive
- ✗ Bus services seen as slow
- ✗ Unreliable services (delays, cancellations)
- ✗ Crowded services / lack of available seats
- ✗ Not well connected

Rosa

- **Age:** 35
- **Lives:** Hendon, North London
- **Household composition:** Married, living with husband
- **Employment:** Works full time as a E-commerce Manager; hybrid and flexible working pattern - commutes 2-3 days/week, works from home 2-3 days/week
- **Disability/Health:** No
- **Tenure:** Tenant, private rent
- **Interests and concerns:** Environmentally conscious; worried about international conflict and rising prices at home
- **Driving licence:** Yes, full

General transport habits

- **Rosa does lots of walking** – Hendon is very walkable for local amenities and to get to various public transport options.
- **Likes to walk some of the way home** from work for the exercise.
- **Commutes to work on the Tube** – it's fast, convenient, and the station is only a 10-minute walk from home.
- The **one-hour commute** allows her **time to read**.
- **Has a driving licence but does not own a car.**
- She also uses the bus on occasions, but the Tube is more reliable in terms of timings.
- **Feels that she has no need for a car** – commuting is much cheaper than owning and running a car.
- **She would only consider getting an electric car** due to environmental reasons.
- **Use of public transport hasn't really changed because of the pandemic.** Decided not to wear mask on public transport as soon as they were no longer mandatory.

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 8

Urban Professionals Without Cars

Rosa

- **Age:** 35
- **Lives:** Hendon, North London
- **Household composition:** Married, living with husband
- **Employment:** Works full time as a E-commerce Manager; hybrid and flexible working pattern - commutes 2-3 days/ week, works from home 2-3 days/week
- **Disability/Health:** No
- **Tenure:** Tenant, private rent
- **Interests and concerns:** Environmentally conscious; worried about international conflict and rising prices at home
- **Driving licence:** Yes, full

General transport habits

Rosa does lots of walking – Hendon is very walkable for local amenities such as shops, bars, and restaurants, and to get to various public transport options. Occasionally, Rosa likes to walk some of the way home from work for the exercise.

Rosa commutes to work on the Tube – it's fast, convenient, and the station is only a 10-minute walk from her house. The one-hour commute allows her time to read. She also uses the bus on occasions, but the Tube is more reliable in terms of timings. While Rosa has a driver's license, she does not own a car. She feels that she has no need for one, living in London – it's a conscious decision not to get a vehicle of her own, as she believes commuting is much cheaper than owning and running a car. She would only consider getting an electric car due to environmental reasons.

Frequent journey

Commuting to and from work on the Tube 2-3 times a week.

- ✓ Reliable every day
- ✓ Within an hour door-to-door
- ✓ Time to read
- ✓ Easy to stay updated via apps and live in-journey information
- ✗ Can be very busy during rush hour

"As long as I get a seat and I can read my book, I'm fine."

"Apps like Citymapper, or Google Maps also help me plan my trip. That means I'm not wasting time, and I can plan my day. I think that's very helpful."

Less frequent journey

One-off train trip to a friends wedding.

- ✓ Easy to plan in advance
- ✓ Book ahead for a good deal
- ✓ Reliable services
- ✗ Expensive if booking at short notice
- ✗ Limited transport options when going to and from hotel and wedding venue

"It cost £70. I like that you can see the price beforehand, but it does feel slightly expensive."

Opportunities for Change

Key factors in decision making:

- **Familiarity - prefers a route that she knows. Especially at night**
- **Cost - trying to save money, so cheaper options are preferred**
- **Convenience - reliability and somewhere to sit down are important, especially for commute to work**

Would like to cycle more:

- ✓ Cost saving
- ✓ Freedom / flexibility
- ✓ Improved fitness
- ✓ Good for environment
- ✗ Bike could get stolen when chained up outside destination
- ✗ Infrastructure feels unsafe / proximity to other road users
- ✗ Pollution from other vehicles

"It's only spoilt by cars speeding by and pollution levels. My journey would have been better if there were fewer cars on the road. I cycled it yesterday and it was a long cycle."

Potential for switching to car use in the future:

- If moving to somewhere with fewer, less reliable public transport options
- If deciding to have children
- If EVs become cheaper and more practical (i.e. more reliable infrastructure)

Segment 8

Urban Professionals Without Cars

Think People | Department for Transport

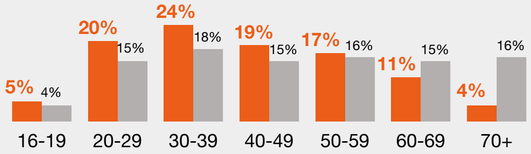
■ Segment 8 ■ All segments

Who are they?

Gender

Male ♂ 47% 49% Female ♀ 52% 51%

Age



Mobility difficulties impacting travel

9%

25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

Go out on foot	Use local buses	Get in or out of a car	Ride a bike*
6% 17%	5% 12%	2% 9%	8% 25%

Mental health/physical health condition:

Mental health condition	Physical health condition
18% 20%	16% 29%

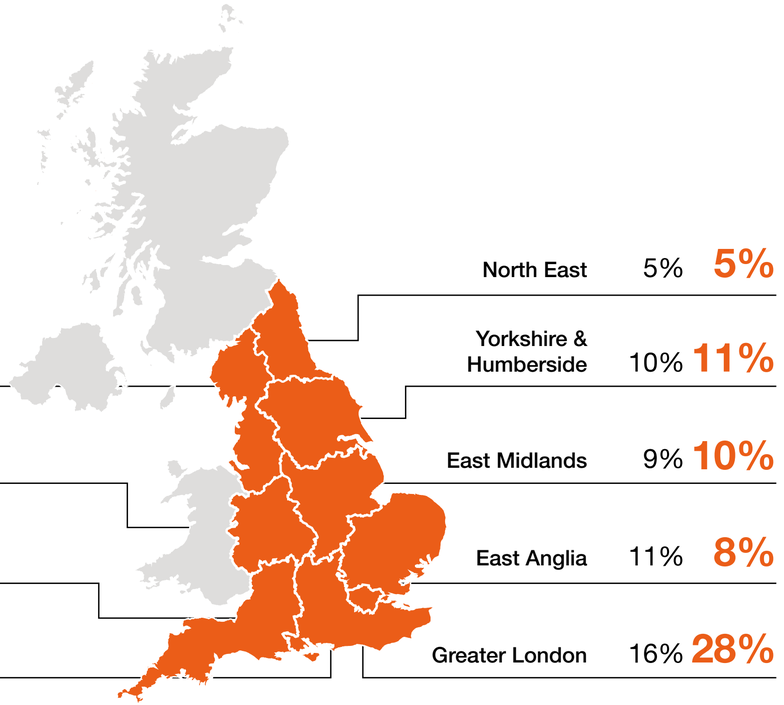
Ethnicity

77% 88% White

20% 11% Ethnic Minority

Location

Urban	Rural
84% 78%	4% 14%

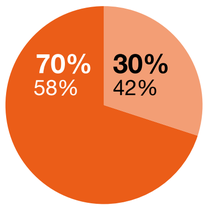


North East	5%	5%
Yorkshire & Humberside	10%	11%
East Midlands	9%	10%
East Anglia	11%	8%
Greater London	16%	28%
North West	14%	13%
West Midlands	8%	10%
South West	7%	10%
South East	11%	16%

Employment & working patterns

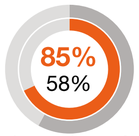
Working

- 44% 39% Full-time employed
- 19% 14% Part-time employed
- 8% 6% Self employed

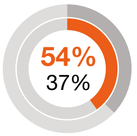


Not working

- 11% 10% Undemployed
- 9% 23% Retired
- 6% 5% Student/Pupil
- 4% 5% Parent-homemaker



Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping

Household & financials

Household

Homeowners	Renting	Children in household
33% 65%	58% 31%	32% 37%

Household finances

Under £25,000	48% 40%
£25,000 - £59,999	24% 33%
Over £60,000	7% 13%

Technology & media

Use of smartphones

89% 91%

Consumption of news

TV	Radio	Digital newspaper	Social media	Traditional newspaper
52% 70%	27% 40%	36% 34%	33% 32%	23% 27%

Social media

55% 61% Facebook		29% 27% Twitter	
49% 53% WhatsApp		13% 17% Snapchat	
50% 42% YouTube		11% 13% Google+	
38% 37% Instagram		14% 12% LinkedIn	

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 8

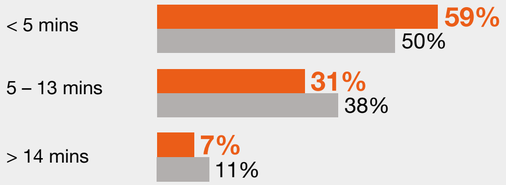
Urban Professionals Without Cars

Think People | Department for Transport

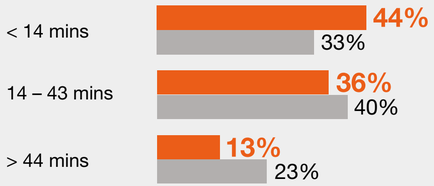
Segment 8 All segments

Access to transport

Distance to nearest bus stop (mins walk)



Distance to nearest railway station (mins walk)



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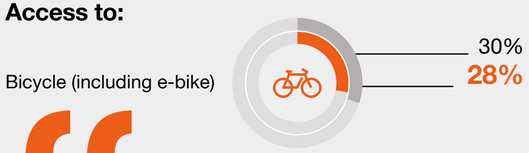


"I primarily take the bus for my commute. It's the most convenient and cost effective as otherwise it would be a 45–50 minute walk which is not necessarily feasible if it's late night or early morning. Even though there can be issues with delays it is usually quite a consistent regular service." (Male, 45, Manchester)

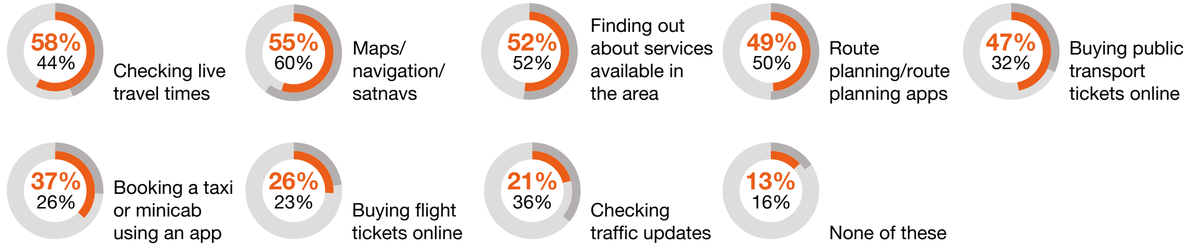
People in this segment are young, live in large urban areas in England, and in close proximity to bus stops and/or train stations. This provides them with more choice about which transport modes to use, allowing them to adapt their travel according to needs, i.e. the fastest or most affordable routes available. They make use of public transport, active travel, and, occasionally, of app-based taxi services such as Uber, or share rides with friends. People in this segment don't own a car, although some have a driving licence and can drive.

"I live in an area where there are excellent connections to go anywhere in London. The nearest station is a very convenient 5 minute walk from my house. Within a 5 minute walk radius, there are 18 bus stops that go to Central London." (Female, 37, London)

"My place of work is approximately 9 miles away. Since the pandemic I have worked from home at least 2-3 days a week. When I do travel into work I typically cycle although this has become more of a burden as I now have to transport my computer and other work equipment. Sometimes I do combine cycling with public transport." (Male, 45, Manchester)

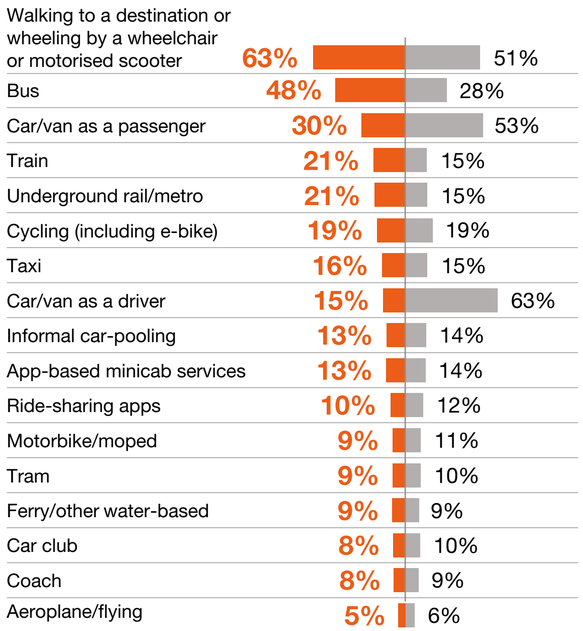
Understanding transport choices

Journey planning. Smartphones are used for:



Mode use and frequency

Modes used once a week or more (last 6 months)



Top 5 journey purposes (last 6 months)

Flight taken in last 12 months

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 8

Urban Professionals Without Cars

■ Segment 8 ■ All segments

Enablers and barriers to different transport modes

Car

- ✓ Flexibility/freedom
- ✓ For getting out of the city
- ✗ Traffic
- ✗ Lack of parking spaces

Walking

- ✓ Short local journeys, up to 20 minutes
- ✓ Physical exercise
- ✓ Mental health
- ✗ Doesn't feel safe early in morning or late at night
- ✗ Poor weather

Cycling

- ✓ Exercise
- ✓ Speed
- ✓ Environmentally friendly
- ✗ Lack of confidence in self, infrastructure, other road users
- ✗ Safety concerns
- ✗ Not for everyone – "it's not particularly something that interests me"
- ✗ Poor weather

Public Transport

- ✓ Environmentally friendly compared with car use
- ✓ Bus seen as more suitable for familiar routes
- ✓ Bus seen as affordable
- ✓ Train seen as more suitable for long journeys
- ✓ Train was perceived as faster
- ✓ An enjoyable way to travel
- ✗ Train fares seen as expensive
- ✗ Bus services seen as slow
- ✗ Unreliable services (delays, cancellations)
- ✗ Crowded services / lack of available seats
- ✗ Not well connected

Attitudes towards transport and climate

People in this segment express concerns about the environment and make use of active travel modes. However, the cost of transport, confidence in using some modes more than others, as well as convenience (often defined as fastest and most direct route), take priority when choosing which transport mode people use for their journeys.

"First of all, I don't have a car. So, I am a commuter here in the UK. I take all modes of transportation possible, but first and foremost it's the Tube, because I feel that it's the fastest. Second would be bus, because I sometimes just feel, like, 'Okay, I just want to sit down on top of the bus and look out at the different buildings, and look at the streets, and what people are doing every day,' because it's something you don't see when you're underground." (Female, 37, London)

Changes in employment (since the pandemic) are one of the main driver of changes in transport behaviour. Hybrid and flexible working arrangements mean commuting takes place 2-3 days per week. Use of active travel modes is a mix of commuting and leisure.

48%	51%	Happy about lifestyle and contribution to climate change
33%	37%	Would like to do a bit more to reduce my impact
11%	9%	Would like to do a lot more to reduce my impact

"Because I don't own a car, if I do have meetings, I'm only 15 minutes away from a bus station, so locality and distance is a huge thing for me." (Female, 30, Portsmouth)

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 9

Young Low Income Without Cars

Think People | Department for Transport

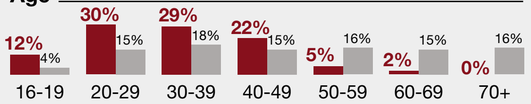
■ Segment 9 ■ All segments

Who are they?

Gender

Male ♂55% 49% Female ♀42% 51%

Age



Mobility difficulties impacting travel

25% 61%

Ethnicity

76% 88% White 18% 11% Ethnic Minority

Household finances

Under £25,000	66% 40%
£25,000 - £59,999	12% 33%
Over £60,000	3% 13%

People in this segment are younger adults, living in urban areas. They are most likely to be students, unemployed and looking for work, or in low paid jobs, thus finding it difficult to manage financially.

Active travel modes and public transport are a popular choice among people in this segment as they are affordable and transport provision is good in their local area. Occasionally, they share car rides with family and friends, or colleagues. Most common journeys involve trips to school, volunteering activities, school drops and commuting to a place of work. Bus and, where available, tram services are a favourite among this segment, mostly due to being affordable and convenient, particularly for commuting and shopping trips. People in this segment also expressed a preference for walking, especially for short journeys.

Enablers and barriers to different transport modes

Car

- ✓ Getting lifts from friends, family, and colleagues
- ✓ Convenient way to travel
- ✗ Cost is a consideration for future potential purchases
- ✗ Cost of car (fuel and ownership)
- ✗ Lack of driving licence
- ✗ Lack of parking availability, and cost
- ✗ Availability of cheaper alternatives – public transport, active travel modes”

Walking

- ✓ A good alternative for non-drivers
- ✓ Suitable for short journeys/as part of longer journeys
- ✓ Health benefits - staying active/keeping fit
- ✓ No cost associated with it
- ✓ Environmental benefits
- ✗ Poor weather conditions
- ✗ Perceived as not suitable for long distances

Cycling

- ✓ Cost-effective compared with other transport modes
- ✓ Faster compared with other public transport modes
- ✓ Health benefits: recreation/ keeping fit
- ✓ Environmental benefits
- ✗ Seen more as a recreational activity (with children)
- ✗ Not an activity shared with social group
- ✗ Cost of buying and charging an e-bike
- ✗ Discomfort due to poor condition of roads
- ✗ Competition from public transport alternatives which are perceived as more convenient
- ✗ Poor weather conditions

Public Transport

- ✓ Convenient – a good alternative for non-drivers
- ✓ Frequent and reliable services
- ✓ Bus stops/train stations in close proximity
- ✓ Cheaper/discounted travel
- ✓ Environmental benefits
- ✗ Cost
- ✗ Duration of journeys and delays
- ✗ Lack of space for prams
- ✗ Safety concerns
- ✗ Health concerns associated with risk of respiratory infections

Zoe

- **Age:** 21
- **Lives:** Gosforth, Newcastle
- **Household composition:** Lives with her 1 year old daughter in her Mum’s rented flat
- **Employment:** Student, training as a Teaching Assistant
- **Disability/Health:** No
- **Tenure:** Rented from Local Authority
- **Interests and concerns:** Enjoys knitting and reading; worries about climate change, poverty, and global peace
- **Driving licence:** Yes, provisional

General transport habits

- **Zoe typically uses the Metro**, bus and walks when going to her local college.
- There are lots of shops nearby, so **Zoe usually does the grocery shop on foot**, often with her Mum.
- **Hopes to have a car eventually**, once she has qualified and moved into her own place with her daughter.

Zahir

- **Age:** 26
- **Lives:** Watford, Hertfordshire
- **Household composition:** Shares with 3 other people
- **Employment:** Unemployed
- **Disability/Health:** Depression and anxiety
- **Tenure:** Renting
- **Interests and concerns:** Enjoys riding his bike, playing football, and socialising with friends; worries about the cost of living, jobs / unemployment, and the NHS
- **Driving licence:** No

General transport habits

- **Most of his trips are local** – in and around Watford and North London where he can walk, cycle, or take the bus.
- **Slightly longer journeys** include seeing friends in Harpenden, **he will use the Overground or local train services.**
- **Many of his friends are in Harpenden** nowadays and he wants to get a job near there soon.

Where percentages do not add up to 100%, this is due to rounding or exclusion of ‘Don’t know’ and ‘Prefer not to say’ answer codes.

Segment 9

Young Low Income Without Cars

Zoe

- **Age:** 21
- **Lives:** Gosforth, Newcastle
- **Household composition:** Lives with her 1 year old daughter in her Mum's rented flat
- **Employment:** Student, training as a Teaching Assistant
- **Disability/Health:** No
- **Tenure:** Rented from Local Authority
- **Interests and concerns:** Enjoys knitting and reading; worries about climate change, poverty, and global peace
- **Driving licence:** Yes, provisional

General transport habits

Zoe lives in Gosforth with her one year old daughter and her Mum. She's currently halfway through a two year course, training to be a Teaching Assistant. When going to college, Zoe typically uses the Metro and walks. She also uses the bus when needed. There are lots of shops nearby, so Zoe usually does the grocery shop on foot, and occasionally by bus, although this can be tricky with a buggy.

Zoe hopes to have a car eventually, once she has qualified and moved into her own place with her daughter. She intends to stay in the North East as she wants to stay close to her Mum and sisters.

Frequent journey

Going to and from college, 4 days a week.

- ✓ The local Metro station is within easy walking distance
- ✓ A short Metro ride into Newcastle
- ✓ Then a short walk to college
- ⊗ Sometimes the Metro isn't running, so needs to take the bus – traffic is often bad adding 20 minutes to the journey

> "Depending on the time or the day, traffic can be either good or bad. So, it can either be a very short bus journey or it's really long – and the traffic is usually bad in the morning rush hour. There's not really any in-between."

Less frequent journey

Getting the bus to Ikea, once a month.

- ✓ Occasionally wants to get things for the flat
- ✓ Nearest Ikea is across the river in Gateshead
- ✓ Zoe feels reasonably well connected – it's only two bus rides
- ⊗ Frequent bad traffic can often double journey time
- ⊗ Would prefer to use car, which would make it much easier to get larger, bulkier items which she finds difficult to carry on the bus or with her daughter and a buggy in tow

> "It was really quick last time, which was nice. There were no road works actually, which was a bit shocking."

Opportunities for Change

Key factors in decision making:

- **Destination influences available modes**
- **Cost - always tries the cheapest option**

Potential for switching to car in the future:

- ✓ Passing her driving test and getting a car will give her a sense of independence and be less reliant on public transport
- ✓ Would allow her to move elsewhere and access a greater pool of jobs
- ⊗ Currently too expensive for her to own a car or to learn to drive
- ⊗ Little awareness of car clubs

> "I can see why it would be better for the environment but for me personally, I'd rather walk. And if it's wet, it can be slippy, and a bike doesn't really stand a chance against a car or a bus. So I'd probably still take the bus than cycle."

Unlikely to cycle more:

- ⊗ Concerned about safety – especially when traffic is heavy
- ⊗ Only seems relevant to local trips, where she could walk anyway
- ⊗ Can't afford a bike – and would prefer to get the bus or the Metro even if she had a bike because they are more convenient

Segment 9

Young Low Income Without Cars

Zahir

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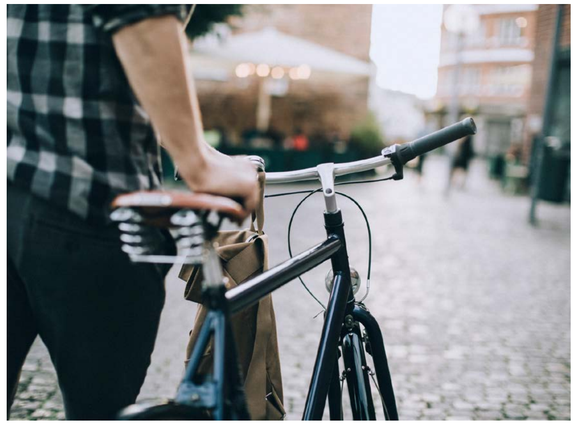
- **Employment:** Unemployed
- **Disability/Health:** Depression and anxiety
- **Tenure:** Renting
- **Interests and concerns:** Enjoys riding his bike, playing football, and socialising with friends; worries about the cost of living, jobs / unemployment, and the NHS
- **Driving licence:** No

General transport habits

Zahir lives in a shared house with three other people in Watford. Most of his trips are local where he can walk, cycle, or take the bus. He enjoys cycling and feels confident doing so on the streets he grew up around. For Zahir, a slightly longer journey might be to go and see friends in Harpenden, for which he'll use the train.

Zahir is currently unemployed, which has exacerbated his poor mental health. Many of his friends are in Harpenden nowadays and he wants to get a job near there soon – this will be good for him, he hopes.



Frequent journey

Doing chores around town, daily.

- ✓ Familiar with local streets, knows how to avoid heavy traffic when cycling
- ✓ No need to plan – completely spontaneous
- ✓ Can get the bus if weather is really bad
- ✓ Easy to combine chores with visiting his mum, who also lives locally
- ✓ Walking and cycling means it's easy to keep his financial outlay to a minimum
- ⊗ Worries about his bike being stolen while he's in a shop

"The high street tends to be quiet on rainy days. The shops are a mix of normal high street stores and quite a lot of charity shops. I tend to shop at those quite often."

Less frequent journey

Going to Harpenden to play football, once a month.

- ✓ It's a straightforward trip that doesn't require much planning – a walk to the train station, then a connection to a bus
- ✓ Zahir worries about the cost of the train ticket, but it's too far to cycle
- ⊗ Poor weather is often an excuse to avoid the walk at either end

"The football games are usually in Harpenden, so it's the train then a bus. There's a couple of pitches that we go to, and one of them is at least a 20 minute walk from that bus stop. It's not too bad for me, except in bad weather."

Opportunities for Change

Key factors in decision making:

- **Need – local trips to shops**
- **Cost – Zahir is unemployed**

Would like to use trains more:

- ✓ Quicker way to travel to see friends
- ✓ Would give him wider options when job hunting
- ⊗ Expensive to use relative to income right now

"The cost of it means I can't own a car right now. Obviously it's quite expensive to get started up, pay for lessons, and tax and insurance and all of that. And then petrol and the car itself to start with."

Potential for switching to car in the future:

- ✓ Would like a job in Harpenden, near friends
- ✓ Driving would be more necessary there – quicker, cheaper, and more convenient than taking the train and the bus
- ✓ Would allow him to look even further afield for work
- ⊗ Driving lessons could be expensive

Segment 9

Young Low Income Without Cars

Think People | Department for Transport

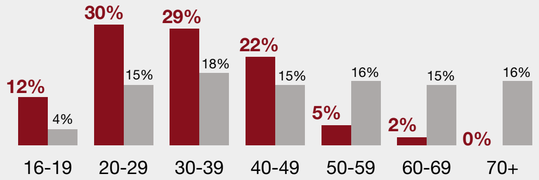
■ Segment 9 ■ All segments

Who are they?

Gender

Male ♂ 55% 49% | Female ♀ 42% 51%

Age



Mobility difficulties impacting travel

61%

25%

Disability/long standing health condition that makes it difficult (*impossible/difficult) to:

- 35% 17% Go out on foot
- 35% 12% Use local buses
- 18% 9% Get in or out of a car
- 41% 25% Ride a bike*

Mental health/physical health condition:

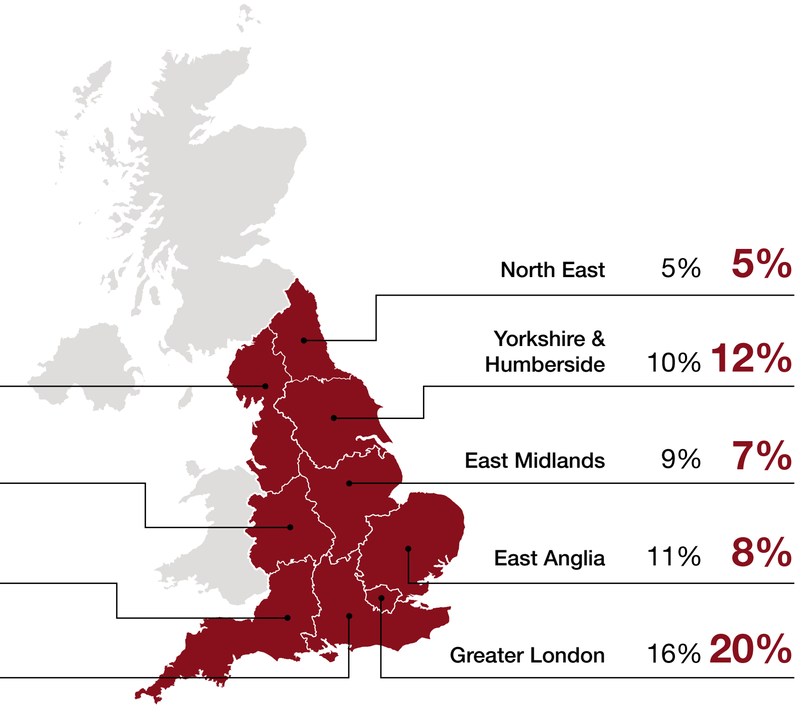
- 41% 20% Mental health condition
- 36% 29% Physical health condition

Ethnicity

76% 88% White | 18% 11% Ethnic Minority

Location

Urban		Rural	
75%	78%	5%	14%

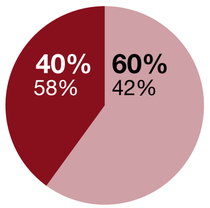


12%	13%	North West	
13%	10%	West Midlands	
9%	10%	South West	
16%	16%	South East	
		North East	5% 5%
		Yorkshire & Humberside	10% 12%
		East Midlands	9% 7%
		East Anglia	11% 8%
		Greater London	16% 20%

Employment & working patterns

Working

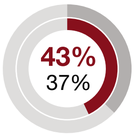
- 28% 39% Full-time employed
- 9% 14% Part-time employed
- 3% 6% Self employed



Not working

- 37% 10% Unemployed
- 15% 5% Student/Pupil
- 7% 5% Parent-homemaker
- 2% 23% Retired

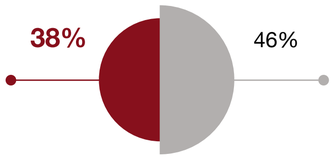
Travel to a place of work at least once a week



Work from home at least once a week

Shopping behaviours

Regularly use home delivery for food or non-food shopping



Household & financials

Household

- 15% 65% Homeowners
- 68% 31% Renting
- 44% 37% Children in household

Household finances

Under £25,000	66%	40%
£25,000 - £59,999	12%	33%
Over £60,000	3%	13%

Technology & media

Use of smartphones

77% | 91%

Consumption of news

40%	19%	27%	32%	19%
70%	40%	34%	32%	27%
TV	Radio	Digital newspaper	Social media	Traditional newspaper

Social media

45%	61%	Facebook	24%	27%	Twitter
43%	53%	WhatsApp	25%	17%	Snapchat
49%	42%	YouTube	16%	13%	Google+
35%	37%	Instagram	8%	12%	LinkedIn

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 9

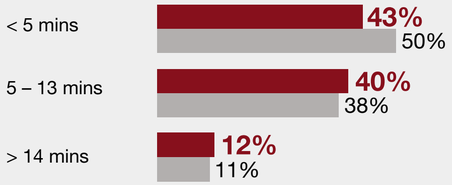
Young Low Income Without Cars

Think People | Department for Transport

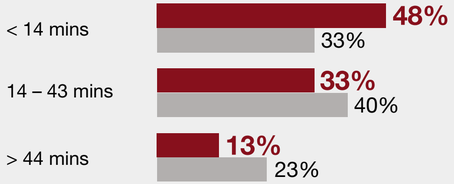
■ Segment 9 ■ All segments

Access to transport

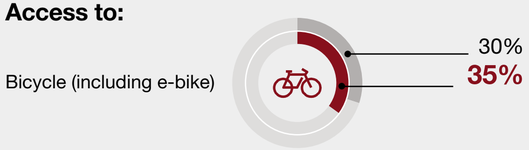
Distance to nearest bus stop (mins walk)



Distance to nearest railway station (mins walk)



Access to:



"I've been getting the train more recently, and it is impacting cost of living because the prices are not cheap right now compared to what it used to be. Money's tighter than it used to be." (Female, 24, unemployed, East Anglia)

People in this segment don't own a car and rely on public transport and active travel modes to travel to places. Affordability of transport and convenience are key factors influencing transport decisions, thus making bus and tram services (where available) a preferred choice among people in this segment. They use train services for less frequent journeys – for example, socialising and meeting friends in other towns, as train services are perceived as faster albeit more expensive compared to other public transport modes.

"Probably reliability because some buses don't turn up. If I ring a taxi, they could take their time to come, and obviously, if I've got to be there at 6, and I'm rushing, as I normally am every morning, they're always late, so I just tend to get my bike and go because I can get around all the cars, buses, traffic, I haven't got to wait for nobody, I can just go, leg it as quick as I can." (Male, 26, employed, West Midlands)

People in this segment walk for short journeys, and some prefer to cycle when they're in a rush, to avoid traffic and any potential public transport delays.

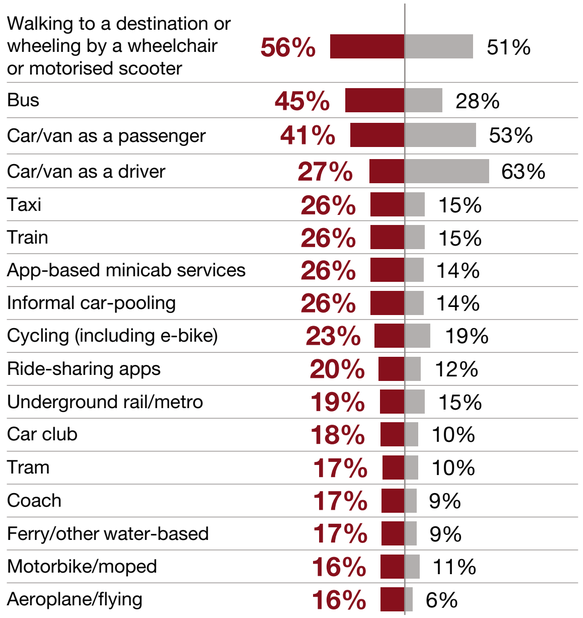
People in this segment also have aspirations of buying/owning a car. When possible, they share car rides with family, friends or colleagues.

Understanding transport choices

Journey planning. Smartphones are used for:

Mode use and frequency

Modes used once a week or more (last 6 months)



Top 5 journey purposes (last 6 months)

Flight taken in last 12 months

Where percentages do not add up to 100%, this is due to rounding or exclusion of 'Don't know' and 'Prefer not to say' answer codes.

Segment 9

Young Low Income Without Cars

■ Segment 9 ■ All segments

Those who have finished school over recent years and are now students or training for a role, have switched from walking to school to using more public transport to get to destinations further afield. Others have reduced their use of buses and taxis, in favour of cycling. The COVID-19 pandemic brought a reduction in travel and an awareness of potential risks associated with public transport. For example, they might increase their use of trains and decrease their use of buses as they feel the train is a better option for social distancing.

People in this segment are acutely concerned by the recent increase in prices. They are constantly making cost-efficient decisions concerning their travel (making use of student discounts, travelling off-peak, looking for offers) and food shopping – for example, some people reported cutting down on weekly meat consumption.

They have also reduced their use of taxis as this was seen as more expensive compared with public transport alternatives or active travel modes.

41% 51% | Happy about lifestyle and contribution to climate change

32% 37% | Would like to do a bit more to reduce my impact

16% 9% | Would like to do a lot more to reduce my impact

Enablers and barriers to different transport modes

Car

- Getting lifts from friends, family, and colleagues
- Convenient way to travel
- Cost is a consideration for future potential purchases
- Cost of car (fuel and ownership)
- Lack of driving licence
- Lack of parking availability, and cost
- Availability of cheaper alternatives – public transport, active travel modes”

Walking

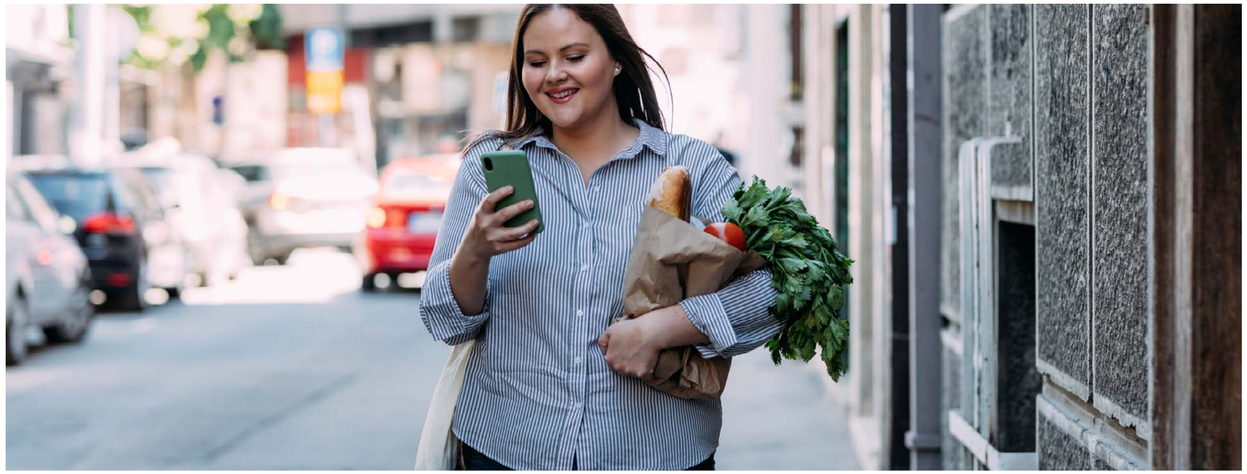
- A good alternative for non-drivers
- Suitable for short journeys/ as part of longer journeys
- Health benefits - staying active/keeping fit
- No cost associated with it
- Environmental benefits
- Poor weather conditions
- Perceived as not suitable for long distances

Cycling

- Cost-effective compared with other transport modes
- Faster compared with other public transport modes
- Health benefits: recreation/ keeping fit
- Environmental benefits
- Seen more as a recreational activity (with children)
- Not an activity shared with social group
- Cost of buying and charging an e-bike
- Discomfort due to poor condition of roads
- Competition from public transport alternatives which are perceived as more convenient
- Poor weather conditions

Public Transport

- Convenient – a good alternative for non-drivers
- Frequent and reliable services
- Bus stops/train stations in close proximity
- Cheaper/discounted travel
- Environmental benefits
- Cost
- Duration of journeys and delays
- Lack of space for prams
- Safety concerns
- Health concerns associated with risk of respiratory infections



Attitudes towards transport and climate

People in this segment are broadly concerned about the environment. However, this is not a key factor in their choice of transport. Whilst they acknowledge the environmental benefits of their chosen transport modes, convenience and cost are the primary factors influencing decision-making for people in this segment.

“Yes, I love it [cycling] because I’m lazy. The only problem is there’s no suspension on it so I feel every bump, every stone, everything.” (Male, 26, employed, West Midlands)

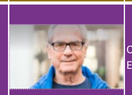
“Well, I definitely use the bus more because when I was in school still, I walked because it wasn’t far. When I entered college and now training, it’s too far so I’ve got to catch the bus.” (Female, 18, student, East Midlands)

Where percentages do not add up to 100%, this is due to rounding or exclusion of ‘Don’t know’ and ‘Prefer not to say’ answer codes.

Appendix D Persona Propensity to Change Assessment

DfT Personas - Propensity to Change Martix

Stantec

Persona			Proportion in Employment	Segement Size			Ability to Change	Trip Types									Notes
				Upper	Lower	Average		Commuting	Business	Education	Escort Education	Shopping	Other work / escort & personal business	Visiting friends / entertainment / sport	Holiday / Day trip / other		
Brian		Less Mobile, Car Reliant	53%	11%	20%	16%	**Base Car Trips**	Low	Low	Very Low	Low	Medium	Medium	Medium	Medium	Car-owning Segments	93% of this segment have mobility issues meaning that active travel will be limited.
							Shift to Bus	High	Medium	High	High	High	High	High	High		Keen to uses more buses and trains
							Shift to Rail	Medium	Medium	Medium	Low	Medium	Medium	Medium	Medium		Limited concerns over car use
Betty							Active Travel	Very Low	Very Low	Very Low	Very Low	Very Low	Very Low	Very Low	Very Low		Higher proportion of bus pass holders
							Vary Time	Medium	Medium	None	None	High	High	High	High		Relatively low car miles per year
							Internalise	Medium	Medium	Very Low	Very High	High	Medium	Medium	None		Relatively high homeworking
							Remove trip	High	High	Low	Very Low	Very Low	Very Low	Very Low	None		
Farah		Young Urban Families	70%	11%	20%	16%	**Base Car Trips**	High	Medium	High	Very High	Medium	Medium	Medium	Medium		Relatively young, few mobility issues
							Shift to Bus	Medium	Medium	Medium	Low	Medium	Low	Low	Low		Public transport felt to be less convenient and more expensive than driving
							Shift to Rail	Medium	High	Medium	Low	Low	Low	Low	Low		Would like to use more public transport, but 2 x children make this unlikely for leisure.
							Active Travel	Low	Low	Very High	High	Very High	Medium	Low	Low		Above average numbers in in education
							Vary Time	Medium	Very Low	None	None	Medium	Medium	Medium	Medium		Acknowledge the environmental benefits of active travel modes and public transport modes
							Internalise	Medium	Medium	High	High	Medium	Medium	Medium	None		Would like to do a bit more to reduce impact
							Remove trip	Medium	Very Low	Very Low	Very Low	Medium	Very Low	Very Low	None		
Gina		Older Less Affluent	40%	6%	10%	8%	**Base Car Trips**	Low	Low	None	Very Low	Medium	Medium	Medium	Medium		No mobility issues
							Shift to Bus	High	Medium	None	None	High	High	High	High		Higher proportion of bus pass holders
							Shift to Rail	Medium	Medium	None	None	Medium	Medium	Medium	Medium		Prefer to walk for short distances
							Active Travel	Medium	Low	None	Low	High	High	Medium	Very Low		Use public transport if frequent and reliable
							Vary Time	Very High	Low	None	None	Very High	Very High	Very High	Very High		Relatively high car use
							Internalise	Low	Low	None	Very High	Very High	Medium	Low	None		Little concern about environment but open to change if services frequent and reliable
							Remove trip	Low	Low	None	Very Low	Low	Very Low	Very Low	None		Low proportion in education, no children at home
Jeff		Comfortable Empty-nesters	37%	11%	20%	16%	**Base Car Trips**	Low	Low	None	Very Low	Medium	Medium	Medium	Medium		No mobility issues
							Shift to Bus	High	High	None	None	High	High	High	High		High concern for the environment
							Shift to Rail	High	High	None	None	High	High	High	High		Keen on cycling and e-bikes
							Active Travel	High	High	None	High	High	High	High	High		Keen on public transport and active travel
							Vary Time	Very High	Low	None	None	Very High	Very High	Very High	Very High		Tend to limit car use
							Internalise	Very Low	Very Low	None	Very High	Medium	Medium	Low	None		Empty nesters
							Remove trip	Low	Low	None	Very Low	Low	Low	Low	None		
Nigel		Suburban Families	89%	11%	20%	16%	**Base Car Trips**	High	High	High	High	Low	Medium	Medium	Medium		Use a mix of modes
							Shift to Bus	High	High	High	High	Low	High	High	High		Have children
							Shift to Rail	Medium	Medium	Low	Low	Low	High	High	High		Positive attitudes to environment
							Active Travel	High	Low	High	Medium	High	High	High	High		Most grocery shopping is online, supplemented with local trips
							Vary Time	Medium	Low	Very Low	None	Low	Low	Low	Low		Keen on public transport, cycling and walking but put off by poor infrastructure
							Internalise	Medium	Low	High	Very High	High	Medium	Medium	None		Very few mobility issues.
							Remove trip	Medium	Medium	None	Very Low	High	Low	Low	None		Adult may be in education
Oliver		Heavy Car Users, Frequent Flyers	85%	11%	20%	16%	**Base Car Trips**	Very High	Very High	Medium	High	Low	High	High	High		Heavy car users
							Shift to Bus	Very Low	Very Low	Low	Very Low	Very Low	Very Low	Very Low	Very Low		Limited concern for environment
							Shift to Rail	Low	Low	Very Low	Very Low	Low	Very Low	Very Low	Very Low		Strong emphaisis on convenience
							Active Travel	Very Low	Very Low	Medium	Low	Low	Low	Low	Low		Regularly use home delivery for shopping
							Vary Time	Very High	Low	None	None	Low	Low	Low	Low		Few mobility issues
							Internalise	Low	Very Low	High	Very High	High	Medium	Medium	None		Flexible working patterns
							Remove trip	High	Medium	None	Very Low	High	Low	Low	None		Children at home
Peter		Elderly And Low Income Without Cars	15%	0%	5%	3%	**Base Car Trips**	Very Low	Very Low	None	Very Low	None	None	None	None	Non-car owning segments	Mixed feeling on environment, but modal choice influenced by facilities and convenience
							Shift to Bus	High	High	None	None	High	High	High	High		Hi bus pass holders
							Shift to Rail	Low	Low	None	None	Low	Low	Low	Low		Relatively high mobility issues
Pippa							Active Travel	Very Low	Very Low	None	Low	Very Low	Very Low	Medium	Very Low		Regularly use home delivery for shopping
							Vary Time	Low	Very Low	None	None	Very High	Very High	Very High	Very High		Not keen on cycling
							Internalise	Medium	Very Low	None	Very High	High	Medium	Low	None		Walk for recreation
							Remove trip	Very Low	Very Low	None	Very Low	High	Low	Very Low	None		
Rosa		Urban Professionals Without Cars	70%	6%	10%	8%	**Base Car Trips**	Low	Low	Low	Low	Low	Low	Low	Low		Low mobility issues
							Shift to Bus	High	High	High	High	High	High	High	High		Non car owners
							Shift to Rail	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium		Cost and convenience influence choices
							Active Travel	High	High	High	High	High	High	High	High		Some concerns about environment
							Vary Time	High	Very Low	Very Low	None	Medium	Medium	Medium	Medium		Lack of infrastrucure deters cycling
							Internalise	Medium	Very Low	High	Very High	Low	Medium	Medium	None		
							Remove trip	Medium	Low	None	None	High	Low	Low	None		
Zoe		Young Low Income Without Cars	40%	0%	5%	3%	**Base Car Trips**	Low	Low	Medium	None	Low	Low	Low	Low		High proportion of students. Education trips likely to be off-site.
							Shift to Bus	Medium	High	High	None	High	High	High	High		Concerned about environment, but cost and convenience key drivers
							Shift to Rail	Medium	Medium	Medium	None	Medium	Medium	Medium	Medium		High mobility issues
Zahir							Active Travel	Low	Low	Low	None	Low	Low	Low	Low		Low use of online shopping
							Vary Time	Low	Very Low	Low	None	High	High	High	High		Non car owners
							Internalise	High	Very Low	Very Low	None	Low	Medium	Medium	None		Discounted travel is attractive
							Remove trip	Very Low	Very Low	None	None	Low	Low	Low	None		
Weighted Blend							**Base Car Trips**	High	Medium	Medium	Medium	Medium	Medium	Medium	Medium		
							Shift to Bus	High	High	Medium	Medium	High	High	High	High		
							Shift to Rail	Medium	High	Low	Low	Medium	Medium	Medium	Medium		
							Active Travel	Medium	Medium	Medium	Medium	High	Medium	Medium	Medium		
							Vary Time	High	Low	Very Low	None	High	High	High	High		
							Internalise	Medium	Low	Medium	Very High	High	Medium	Medium	None		
							Remove trip	Medium	Medium	Very Low	Very Low	Medium	Low	Low	None		
Resulting Adjustments to Baseline External Residential Trips Minimal Change Scenario							% Change in Walking	+10%	+9%	+10%	+11%	+13%	+12%	+11%	+10%		Upper bound taken as 20% increase in walking. Gear Change Plan suggests up to 50%.
							% Change in Cycling Pedal cycle	+10%	+9%	+10%	+11%	+13%	+12%	+11%	+10%		Upper bound taken as 20% increase in cycling. Gear Change Plan suggests up to 50%.
							% Change in Car or van driver	-	-	-	-	-	-	-	-		Reductons derived separately by combining increases in other modes and overall reductions
							% Change in Car or van passenger	0%	0%	0%	0%	0%	0%	0%	0%		Overall car use will reduce and lift sharing increase. These impacts are assumed to balance - no change.
							% Change in Motorcycle	0%	0%	0%	0%	0%	0%	0%	0%		No change assumed.
							% Change in Other private transport	0%	0%	0%	0%	0%	0%	0%	0%		No change assumed.
							% Change in Other local bus	+7%	+6%	+5%	+4%	+6%	+6%	+6%	+6%		Upper bound taken as 10% increase in bus use. This is signifcantly below Devon BSIP 2024 (333% increase targeted).
							% Change in Surface Rail	+6%	+6%	+4%	+3%	+5%	+6%	+6%	+6%		Upper bound taken as 10% increase in rail use to be consistent with maximum bus increases.
							% Change in Taxi or minicab	0%	0%	0%	0%	0%	0%	0%	0%		No change assumed.
							% Change in Overall Trips by All modes	-3%	-2%	-1%	-2%	-3%	-3%	-3%	-1%		Trip removed, internalised or shifted outside peak. Upper bound 5% reduction in external trips - equivalent to just under 1 trip per person per week.
Resulting Adjustments to Baseline External Residential Trips Target Change Scenario							% Change in Walking	+25%	+21%	+24%	+27%	+32%	+29%	+27%	+25%		Upper bound taken as 50% increase in walking. Gear Change Plan suggests up to 50%.
							% Change in Cycling Pedal cycle	+25%	+21%	+24%	+27%	+32%	+29%	+27%	+25%		Upper bound taken as 50% increase in cycling in accordance with Gear Change Plan.
							% Change in Car or van driver	-	-	-	-	-	-	-	-		Reductons derived separately by combining increases in other modes and overall reductions
							% Change in Car or van passenger	0%	0%	0%	0%	0%	0%	0%	0%		Overall car use will reduce and lift sharing increase. These impacts are assumed to balance - no change.
							% Change in Motorcycle	0%	0%	0%	0%	0%	0%	0%	0%		No change assumed.
							% Change in Other private transport	0%	0%	0%	0%	0%	0%	0%	0%		No change assumed.
							% Change in Other local bus	+223%	+209%	+156%	+138%	+203%	+214%	+214%	+214%		Upper bound taken as 333% increase in bus use, equivalent to 10% mode share as per DCC BSIP.
							% Change in Surface Rail	+9%	+9%	+5%	+4%	+8%	+8%	+8%	+8%		Upper bound taken as 15% increase in rail use relecting service frequency improvements but lack of on-site rail.
							% Change in Taxi or minicab	0%	0%	0%	0%	0%	0%	0%	0%		No change assumed.
							% Change in Overall Trips by All modes	-6%	-4%	-2%	-4%	-7%	-5%	-5%	-2%		Trip removed, internalised or shifted outside peak. Upper bound 10% reduction in external trips, equivalent to 2 trips per person per week.

Appendix E Minimal Change Trip Calculations

Minimal Change External Modal Shift Factors

Mode	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)
Walking	+110%	+109%	+110%	+111%	+100%	+112%	+111%	+110%
Cycling	+110%	+109%	+110%	+111%	+100%	+112%	+111%	+110%
Driving a Car or Van	Derived from shifts to other modes							
Passenger in a Car or Van	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Motorcycle, Scooter or Moped	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Other Method of Travel	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Bus, Minibus or Coach	+107%	+106%	+105%	+104%	+100%	+106%	+106%	+106%
Train (no internalisaton)	+106%	+106%	+104%	+103%	+100%	+106%	+106%	+106%
Taxi	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Overall External Trip Reduction	+97%	+98%	+99%	+98%	+100%	+97%	+97%	+99%

Minimal Change Adjusted External Trip Rates by Time, Mode and Purpose

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.008	0.009	0.003	0.014	0.016
	Cycling	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.006	0.007
	Driving a Car or Van	0.024	0.123	0.148	0.003	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.008	0.004	0.018	0.022	0.001	0.003	0.004	0.004	0.021	0.025	0.037	0.186	0.223
	Passenger in a Car or Van	0.002	0.008	0.010	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.001	0.006	0.007	0.000	0.002	0.003	0.003	0.014	0.017	0.007	0.033	0.040
	Motorcycle, Scooter or Moped	0.001	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.004
	Other Method of Travel	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.005	0.006
	Bus, Minibus or Coach	0.002	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.010	0.012
	Train	0.002	0.009	0.011	0.000	0.001	0.001	0.000	0.002	0.002	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.003	0.014	0.016
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.002
	Total	0.032	0.164	0.196	0.003	0.016	0.019	0.000	0.002	0.002	0.000	0.001	0.001	0.002	0.009	0.011	0.005	0.026	0.031	0.001	0.007	0.008	0.009	0.048	0.057	0.054	0.272	0.326
0800 to 0859	Walk	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.008	0.010	0.004	0.014	0.017
	Pedal cycle	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.004	0.005
	Car or van driver	0.019	0.070	0.089	0.003	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.011	0.014	0.007	0.026	0.033	0.001	0.004	0.005	0.006	0.022	0.028	0.039	0.146	0.185
	Car or van passenger	0.001	0.005	0.006	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.004	0.002	0.009	0.011	0.001	0.003	0.003	0.004	0.014	0.018	0.009	0.034	0.044
	Motorcycle	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
	Other private transport	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.003	0.004
	Other local bus	0.001	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.007	0.009
	Surface Rail	0.001	0.005	0.006	0.000	0.001	0.001	0.001	0.004	0.005	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.002	0.004	0.016	0.020
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.002
	All modes	0.025	0.093	0.118	0.004	0.014	0.018	0.001	0.005	0.007	0.001	0.005	0.006	0.004	0.016	0.021	0.010	0.037	0.046	0.002	0.007	0.009	0.013	0.049	0.062	0.061	0.228	0.288
0900 to 0959	Walk	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.007	0.013	0.008	0.010	0.018
	Pedal cycle	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.002	0.003
	Car or van driver	0.011	0.015	0.026	0.005	0.006	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.019	0.033	0.012	0.016	0.027	0.004	0.006	0.010	0.015	0.020	0.035	0.061	0.082	0.143
	Car or van passenger	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.005	0.009	0.004	0.005	0.009	0.003	0.004	0.007	0.010	0.013	0.023	0.022	0.029	0.050
	Motorcycle	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
	Other private transport	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002
	Other local bus	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001	0.002	0.003	0.004	0.007
	Surface Rail	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.004	0.007
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.003
	All modes	0.015	0.020	0.034	0.005	0.007	0.013	0.000	0.000	0.000	0.000	0.000	0.001	0.021	0.028	0.048	0.017	0.022	0.039	0.008	0.011	0.020	0.034	0.046	0.080	0.100	0.134	0.234
1600 to 1659	Walk	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.005	0.014	0.015	0.008	0.022
	Pedal cycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.004	0.002	0.006
	Car or van driver	0.059	0.030	0.088	0.010	0.005	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.012	0.035	0.025	0.013	0.038	0.012	0.006	0.018	0.026	0.013	0.039	0.155	0.079	0.234
	Car or van passenger	0.004	0.002	0.006	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.003	0.009	0.009	0.004	0.013	0.008	0.004	0.012	0.017	0.009	0.026	0.044	0.023	0.067
	Motorcycle	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.002
	Other private transport	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.003	0.002	0.005
	Other local bus	0.004	0.002	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.002	0.008	0.004	0.012
	Surface Rail	0.004	0.002	0.006	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.002	0.001	0.001	0.002	0.010	0.005	0.015
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.002	0.001	0.000	0.001	0.003	0.001	0.004
	All modes	0.078	0.040	0.117	0.012	0.006	0.018	0.001	0.000	0.001	0.001	0.000	0.001	0.034	0.017	0.051	0.036	0.018	0.054	0.024	0.012	0.036	0.058	0.030	0.088	0.243	0.124	0.367
1700 to 1759	Walk	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.010	0.005	0.015	0.017	0.008	0.024
	Pedal cycle	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.002	0.005	0.002	0.007
	Car or van driver	0.088	0.040	0.128	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.012	0.038	0.030	0.014	0.044	0.018	0.008	0.026	0.028	0.013	0.041	0.190	0.086	0.277
	Car or van passenger	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.003	0.010	0.010	0.005	0.015	0.012	0.005	0.017	0.018	0.008	0.027	0.054	0.024	0.078
	Motorcycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003
	Other private transport	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.004	0.002	0.006
	Other local bus	0.006	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.000	0.001	0.001	0.001	0.002	0.001	0.001	0.002	0.010	0.005	0.015
	Surface Rail	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.003	0.002	0.001	0.002	0.012	0.005	0.017
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.001	0.002	0.001	0.000	0.002	0.003	0.002	0.005
	All modes	0.117	0.053	0.170	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.039	0.018	0.056	0.043	0.019	0.062	0.035	0.016	0.051	0.063	0.029	0.092	0.297	0.135	0.432
1800 to 1859	Walk	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.002	0.004	0.000	0.000	0.000	0.000	0.001	0.001	0.011	0.007	0.018	0.017	0.010	0.026
	Pedal cycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003	0.004	0.002	0.006
	Car or van driver	0.048	0.027	0.075	0.005	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.015	0.040	0.021	0.012	0.033	0.022	0.012	0.034	0.032	0.018	0.050	0.153	0.087	0.241
	Car or van passenger	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.004	0.011	0.007	0.004	0.011	0.014	0.008	0.022	0.021	0.012	0.033	0.053	0.030	0.083
	Motorcycle	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002
	Other private transport	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.003	0.002	0.005
	Other local bus	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.000	0.001	0.001	0.001	0.002	0.002	0.001	0.003	0.008	0.005	0.012
	Surface Rail	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.003	0.002	0.004	0.002	0.001	0.003	0.009	0.005	0.014
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.001	0.003	0.001	0.001	0.002	0.004	0.002	0.006
	All modes	0.064	0.036	0.100	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.021	0.059	0.030	0.017	0.047	0.043	0.024	0.067	0.071	0.041	0.112	0.252	0.143	0.395
All day	Walk	0.011	0.011	0.022	0.001	0.001	0.002	0.001	0.001	0.003	0.001	0.001	0.002	0.020	0.021	0.041	0.001	0.001	0.002	0.002	0.002	0.005	0.071	0.072	0.143	0.110	0.111	0.221
	Pedal cycle	0.011	0.011	0.022	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.001	0.011	0.011	0.023	0.024	0.024	0.049
	Car or van driver	0.321	0.324	0.645	0.067	0.068	0.135	0.000	0.000	0.001	0.000	0.000	0.001	0.193	0.195	0.388	0.160	0.161	0.321	0.091	0.091	0.182	0.197	0.199	0.396	1.030	1.038	2.068
	Car or van passenger	0.022	0.022	0.043	0.003	0.003	0.006	0.000	0.000	0.001	0.000	0.000	0.001	0.053	0.053	0.106	0.054	0.055	0.109	0.060	0.061	0.121	0.129	0.130	0.260	0.322	0.324	0.646
	Motorcycle	0.007	0.007	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.009	0.009	0.019
	Other private transport	0.011	0.011	0.022	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.001	0.002	0.004	0.004	0.008	0.019	0.019	0.038
	Other local bus	0.021	0.021	0.042	0.001	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.010	0.021	0.004	0.004	0.008	0.005	0.005	0.010	0.010	0.010	0.021	0.052	0.052	0.104
	Surface Rail	0.023	0.023	0.046	0.003	0.003	0.005	0.006	0.006	0.013	0.006	0.006	0.011	0.003	0.003	0.005	0.003	0.003	0.006	0.012	0.012	0.024	0.011	0.011	0.022	0.066	0.067	0.133
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.008	0.008	0.008	0.016	0.007	0.007	0.015	0.019	0.020	0.039
	All modes	0.426	0.430	0.856	0.076	0.077	0.153	0.008	0.008	0.017	0.008	0.008	0.015	0.283	0.285	0.569	0.227	0.229	0.456	0.179	0.181	0.360	0.444	0.447	0.891	1.652	1.665	3.316

Minimal Change Adjusted External Trips by Time, Mode and Purpose 3500 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	3	15	18	0	1	1	0	1	1	0	1	1	0	2	3	0	0	0	0	0	0	5	27	32	9	47	57
	Cycling	3	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	4	20	23
	Driving a Car or Van	85	432	517	9	48	57	0	0	0	0	0	0	4	22	26	12	63	76	2	12	15	15	74	89	129	652	781
	Passenger in a Car or Van	6	29	35	0	2	2	0	0	0	0	0	0	1	6	7	4	21	26	2	8	10	10	49	58	23	116	139
	Motorcycle, Scooter or Moped	2	10	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	10	12
	Other Method of Travel	3	15	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	17	20
	Bus, Minibus or Coach	6	28	33	0	1	1	0	0	0	0	0	0	0	1	1	0	2	2	0	1	1	1	4	5	7	36	43
	Train	6	31	37	0	2	2	1	5	6	1	3	3	0	0	0	0	1	1	0	2	2	1	4	5	9	48	58
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	1	1	3	3	1	5	7
	Total	113	574	687	11	54	65	1	7	9	1	4	5	6	32	39	18	90	107	5	24	29	33	167	200	188	952	1140
0800 to 0859	Walk	2	9	11	0	1	1	1	3	4	1	3	3	1	4	5	0	1	1	0	0	0	7	28	35	13	48	60
	Pedal cycle	2	8	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	6	4	13	17
	Car or van driver	66	246	312	12	44	56	0	1	1	0	1	1	10	39	49	24	90	114	4	13	17	20	77	97	136	511	647
	Car or van passenger	4	17	21	0	2	2	0	1	1	0	1	1	3	11	13	8	31	39	2	9	11	13	50	64	32	120	152
	Motorcycle	1	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	8
	Other private transport	2	8	11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	2	3	11	14
	Other local bus	4	16	20	0	1	1	0	0	0	0	0	0	1	2	3	1	2	3	0	1	1	1	4	5	7	26	33
	Surface Rail	5	18	22	0	2	2	4	14	18	3	13	16	0	1	1	0	2	2	0	2	2	1	4	6	14	54	69
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	1	1	1	3	4	2	6	8
	All modes	87	327	414	13	50	63	5	19	24	4	17	21	15	57	72	34	128	162	7	26	33	46	173	219	212	796	1009
0900 to 0959	Walk	1	2	3	0	0	1	0	0	0	0	0	0	5	7	12	0	0	1	0	1	1	19	26	45	27	36	63
	Pedal cycle	1	2	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	4	7	5	6	11
	Car or van driver	39	52	90	17	23	39	0	0	0	0	0	0	49	66	115	41	55	95	15	20	35	53	71	124	213	286	499
	Car or van passenger	3	3	6	1	1	2	0	0	0	0	0	0	13	18	31	14	19	32	10	13	23	35	47	81	75	101	176
	Motorcycle	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3
	Other private transport	1	2	3	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	2	3	3	5	8
	Other local bus	3	3	6	0	0	1	0	0	0	0	0	0	3	4	6	1	1	2	1	1	2	3	4	7	10	13	24
	Surface Rail	3	4	6	1	1	2	0	0	1	1	1	1	1	1	2	1	1	2	2	3	5	3	4	7	11	14	25
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	3	2	3	5	4	6	10
	All modes	51	69	120	19	26	45	0	0	1	1	1	2	72	96	168	58	77	135	29	39	69	119	160	279	350	469	819
1600 to 1659	Walk	7	4	11	1	0	1	0	0	1	0	0	1	9	4	13	1	0	1	1	1	2	33	17	50	52	26	78
	Pedal cycle	7	4	11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	3	8	13	7	20
	Car or van driver	205	104	309	36	18	55	0	0	0	0	0	0	81	41	122	89	45	134	42	21	63	91	46	137	543	277	820
	Car or van passenger	14	7	21	1	1	2	0	0	0	0	0	0	22	11	33	30	15	46	28	14	42	60	30	90	155	79	234
	Motorcycle	5	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6	3	8
	Other private transport	7	4	10	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	0	0	1	2	1	3	11	5	16
	Other local bus	13	7	20	1	0	1	0	0	0	0	0	0	4	2	7	2	1	3	2	1	3	5	2	7	28	14	42
	Surface Rail	15	7	22	1	1	2	2	1	3	2	1	3	1	1	2	2	1	3	6	3	8	5	3	8	34	17	51
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	4	2	6	3	2	5	9	5	14
	All modes	272	139	411	41	21	62	3	2	5	3	1	4	118	60	179	126	64	191	82	42	124	204	104	308	850	433	1283
1700 to 1759	Walk	11	5	15	0	0	0	0	0	0	0	0	0	10	4	14	1	0	1	2	1	2	36	16	52	59	27	85
	Pedal cycle	11	5	15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	3	8	17	8	25
	Car or van driver	308	140	448	0	0	0	0	0	0	0	0	0	92	42	134	105	48	153	62	28	90	98	45	143	666	302	968
	Car or van passenger	21	9	30	0	0	0	0	0	0	0	0	0	25	11	37	36	16	52	41	19	60	65	29	94	187	85	272
	Motorcycle	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8	4	12
	Other private transport	10	5	15	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	0	1	2	1	3	15	7	21
	Other local bus	20	9	29	0	0	0	0	0	0	0	0	0	5	2	7	3	1	4	3	1	5	5	2	8	36	16	52
	Surface Rail	22	10	32	0	0	0	1	0	2	1	0	1	1	1	2	2	1	3	8	4	12	6	3	8	41	19	60
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	5	2	8	4	2	5	12	5	17
	All modes	409	186	595	0	0	0	1	1	2	1	1	2	135	61	196	149	68	217	122	55	178	221	100	322	1040	472	1512
1800 to 1859	Walk	6	3	9	0	0	1	0	0	0	0	0	0	10	5	15	0	0	1	2	1	3	40	23	63	58	33	92
	Pedal cycle	6	3	9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	4	10	13	7	20
	Car or van driver	168	96	264	18	10	29	0	0	0	0	0	0	90	51	141	74	42	117	75	43	118	111	63	174	537	306	843
	Car or van passenger	11	6	18	1	0	1	0	0	0	0	0	0	24	14	38	25	14	40	50	29	79	73	41	114	185	105	290
	Motorcycle	4	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5	3	8
	Other private transport	6	3	9	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	2	1	4	10	6	16
	Other local bus	11	6	17	0	0	1	0	0	0	0	0	0	5	3	8	2	1	3	4	2	6	6	3	9	28	16	44
	Surface Rail	12	7	19	1	0	1	0	0	1	0	0	0	1	1	2	1	1	2	10	6	16	6	4	10	32	18	51
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	7	4	10	4	2	7	13	7	20
	All modes	224	127	351	21	12	33	1	0	1	0	0	0	131	75	206	106	60	166	149	85	234	249	142	391	880	502	1382
All day	Walk	39	39	78	4	4	9	5	5	9	4	4	8	72	72	144	3	3	7	9	9	17	250	252	502	385	389	774
	Pedal cycle	39	39	78	2	2	3	0	0	0	0	0	0	4	4	7	0	0	1	1	1	2	39	40	79	85	85	170
	Car or van driver	1124	1133	2257	235	237	471	1	1	3	1	1	3	676	681	1357	560	564	1124	317	319	636	690	696	1386	3604	3633	7237
	Car or van passenger	76	76	152	10	10	19	1	1	3	1	1	2	184	186	370	190	192	382	211	212	423	453	456	909	1126	1135	2261
	Motorcycle	25	25	51	0	0	1	0	0	0	0	0	0	2	2	3	0	0	1	1	1	2	4	4	8	32	33	65
	Other private transport	38	38	76	1	1	2	0	0	0	0	0	0	8	9	17	2	2	4	3	3	5	15	15	29	67	67	134
	Other local bus	73	73	146	5	5	9	0	0	0	0	0	0	36	36	73	14	14	28	17	17	34	36	37	73	181	182	363
	Surface Rail	80	81	160	9	9	19	22	22	44	20	20	40	9	9	19	11	11	22	42	42	85	39	40	79	233	235	467
	Taxi or minicab	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	14	14	27	28	28	56	26	26	52	68	68	136
	All modes	1493	1505	2997	266	268	534	29	30	59	27	27	53	991	999	1990	795	801	1596	627	633	1260	1553	1565	3118	5780	5827	11607

Minimal Change Adjusted External Trips by Time, Mode and Purpose 8000 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	7	34	41	0	2	2	0	3	3	0	1	2	1	5	6	0	1	1	0	1	1	12	61	73	21	108	130
	Cycling	7	34	41	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	12	9	45	54
	Driving a Car or Van	195	988	1182	22	110	131	0	1	1	0	0	1	10	50	60	28	144	173	5	28	33	33	169	203	294	1490	1784
	Passenger in a Car or Van	13	67	80	1	4	5	0	1	1	0	0	0	3	14	16	10	49	59	4	18	22	22	111	133	52	264	317
	Motorcycle, Scooter or Moped	4	22	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	24	28
	Other Method of Travel	7	33	40	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	4	4	8	39	46
	Bus, Minibus or Coach	13	64	77	0	2	3	0	0	0	0	0	0	1	3	3	1	4	4	0	1	2	2	9	11	16	83	99
	Train	14	70	84	1	4	5	2	12	15	1	6	8	0	1	1	1	3	3	1	4	4	2	10	12	22	110	132
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	4	0	2	3	1	6	8	2	13	15
	Total	259	1312	1571	25	124	149	3	16	19	2	9	10	15	74	88	40	205	245	11	55	66	75	381	456	429	2176	2605
0800 to 0859	Walk	5	19	25	0	2	2	2	7	8	2	6	8	3	9	12	0	1	2	0	1	1	17	63	80	29	109	138
	Pedal cycle	5	19	24	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	10	13	8	31	39
	Car or van driver	150	563	713	27	100	127	1	2	3	1	2	3	24	89	113	55	206	261	8	30	38	47	175	222	311	1168	1480
	Car or van passenger	10	38	48	1	4	5	0	2	2	0	2	2	6	24	31	19	70	89	5	20	25	31	115	146	73	275	348
	Motorcycle	3	13	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	14	18
	Other private transport	5	19	24	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	4	5	7	25	32
	Other local bus	10	36	46	1	2	3	0	0	0	0	0	0	1	5	6	1	5	6	0	2	2	2	9	12	16	59	75
	Surface Rail	11	40	51	1	4	5	9	32	41	8	29	36	0	1	2	1	4	5	1	4	5	3	10	13	33	124	157
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	6	1	3	3	2	7	8	4	14	18
	All modes	199	748	947	30	114	144	11	43	54	10	38	49	35	131	166	78	293	371	16	60	76	105	394	500	485	1820	2306
0900 to 0959	Walk	3	4	7	1	1	2	0	0	0	0	0	1	12	16	28	1	1	1	1	1	2	44	59	103	62	82	144
	Pedal cycle	3	4	7	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	7	9	16	11	15	26
	Car or van driver	88	118	207	38	52	90	0	0	0	0	0	0	112	150	262	93	125	218	34	45	79	121	162	284	488	653	1140
	Car or van passenger	6	8	14	2	2	4	0	0	0	0	0	0	31	41	72	32	42	74	23	30	53	80	107	186	172	230	402
	Motorcycle	2	3	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2	3	4	7
	Other private transport	3	4	7	0	0	0	0	0	0	0	0	0	1	2	3	0	0	1	0	0	1	3	3	6	8	10	18
	Other local bus	6	8	13	1	1	2	0	0	0	0	0	0	6	8	14	2	3	5	2	2	4	6	9	15	23	31	54
	Surface Rail	6	8	15	2	2	4	1	1	1	1	2	3	2	2	4	2	2	4	5	6	11	7	9	16	25	33	58
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	3	4	7	5	6	11	10	13	23
	All modes	117	157	274	44	58	102	1	1	2	2	3	5	165	220	385	132	177	309	67	90	157	273	365	638	801	1072	1872
1600 to 1659	Walk	16	8	24	2	1	2	1	1	2	1	0	1	20	10	30	1	1	2	3	1	4	75	38	113	118	60	178
	Pedal cycle	16	8	24	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	12	6	18	30	15	45
	Car or van driver	469	239	707	83	42	125	0	0	1	0	0	0	184	94	278	203	104	307	95	48	144	207	106	313	1242	633	1875
	Car or van passenger	32	16	48	3	2	5	0	0	0	0	0	0	50	26	76	69	35	104	63	32	95	136	69	205	354	180	535
	Motorcycle	11	5	16	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2	13	6	19
	Other private transport	16	8	24	0	0	1	0	0	0	0	0	0	2	1	3	1	0	1	1	0	1	4	2	7	24	12	37
	Other local bus	30	15	46	2	1	3	0	0	0	0	0	0	10	5	15	5	3	8	5	3	8	11	6	17	63	32	95
	Surface Rail	33	17	50	3	2	5	5	3	8	4	2	7	3	1	4	4	2	6	13	6	19	12	6	18	77	39	116
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	7	8	4	13	8	4	12	21	11	32
	All modes	622	317	939	94	48	141	7	4	10	6	3	9	271	138	408	289	147	436	188	96	284	467	238	704	1943	989	2932
1700 to 1759	Walk	24	11	35	0	0	0	0	0	1	0	0	1	22	10	32	1	1	2	4	2	6	81	37	118	134	61	195
	Pedal cycle	24	11	35	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	13	6	19	39	18	56
	Car or van driver	704	319	1024	1	0	1	0	0	0	0	0	0	211	96	306	241	109	350	141	64	205	225	102	327	1522	691	2213
	Car or van passenger	47	22	69	0	0	0	0	0	0	0	0	0	57	26	83	82	37	119	94	43	136	148	67	215	428	194	623
	Motorcycle	16	7	23	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2	18	8	26
	Other private transport	24	11	34	0	0	0	0	0	0	0	0	0	3	1	4	1	0	1	1	1	2	5	2	7	33	15	48
	Other local bus	46	21	66	0	0	0	0	0	0	0	0	0	11	5	16	6	3	9	8	3	11	12	5	17	82	37	120
	Surface Rail	50	23	73	0	0	0	2	1	3	2	1	3	3	1	4	5	2	7	19	9	27	13	6	19	94	42	136
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	9	12	6	18	8	4	12	27	12	39
	All modes	935	424	1360	1	0	1	3	1	5	3	1	4	309	140	449	341	155	496	279	127	406	506	230	736	2378	1079	3456
1800 to 1859	Walk	13	8	21	1	0	1	0	0	0	0	0	0	22	12	34	1	1	2	5	3	7	92	52	144	133	76	210
	Pedal cycle	13	8	21	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	14	8	23	30	17	47
	Car or van driver	385	219	604	42	24	66	0	0	0	0	0	0	205	117	322	170	97	267	172	98	270	253	144	397	1227	700	1926
	Car or van passenger	26	15	41	2	1	3	0	0	0	0	0	0	56	32	88	58	33	91	114	65	180	166	95	261	422	241	662
	Motorcycle	9	5	14	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	1	2	11	6	18
	Other private transport	13	7	20	0	0	0	0	0	0	0	0	0	3	1	4	1	0	1	1	1	2	5	3	8	23	13	36
	Other local bus	25	14	39	1	0	1	0	0	0	0	0	0	11	6	17	4	2	7	9	5	14	13	8	21	63	36	100
	Surface Rail	27	16	43	2	1	3	1	1	1	1	0	1	3	2	4	3	2	5	23	13	36	14	8	23	74	42	116
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	7	15	9	24	9	5	15	29	16	45
	All modes	511	291	802	47	27	74	1	1	2	1	0	1	300	171	472	241	138	379	341	194	535	569	325	894	2012	1147	3160
All day	Walk	89	90	178	10	10	20	10	10	21	9	10	19	164	165	329	8	8	16	20	20	40	571	576	1147	881	888	1769
	Pedal cycle	88	89	177	4	4	7	0	0	0	0	0	0	8	8	16	1	1	2	3	3	5	90	91	181	193	195	388
	Car or van driver	2569	2589	5158	537	541	1078	3	3	7	3	3	6	1544	1557	3101	1280	1290	2570	724	730	1454	1578	1591	3168	8238	8305	16542
	Car or van passenger	173	175	348	22	22	44	3	3	6	3	3	5	421	425	846	435	438	873	481	485	967	1035	1043	2078	2573	2594	5167
	Motorcycle	58	58	116	1	1	1	0	0	0	0	0	0	4	4	8	1	1	2	2	2	3	10	10	19	74	75	149
	Other private transport	87	87	174	2	2	5	0	0	0	0	0	0	19	19	39	5	5	10	6	6	12	33	34	67	153	154	306
	Other local bus	166	168	334	11	11	22	0	0	0	0	0	0	83	83	166	31	32	63	39	39	78	83	84	167	414	417	830
	Surface Rail	183	184	367	22	22	43	50	51	101	45	46	91	22	22	43	25	25	50	96	97	193	90	90	180	532	536	1068
	Taxi or minicab	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	31	31	63	63	64	127	59	60	119	155	156	311
	All modes	3412	3440	6851	608	613	1221	67	68	135	61	61	122	2265	2283	4548	1816	1831	3648	1434	1446	2880	3549	3578	7126	13212	13319	26531

Appendix F Target Change Trip Calculations

Target Change External Modal Shift Factors

Mode	Commuting (%)	Business (%)	Education (%)	Escort education (%)	Shopping (%)	Other work, other escort and personal business (%)	Visiting friends, entertainment and sport (%)	Holiday, day trip and other (%)
Walking	+125%	+121%	+124%	+127%	+100%	+129%	+127%	+125%
Cycling	+125%	+121%	+124%	+127%	+100%	+129%	+127%	+125%
Driving a Car or Van	Derived from shifts to other modes							
Passenger in a Car or Van	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Motorcycle, Scooter or Moped	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Other Method of Travel	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Bus, Minibus or Coach	+323%	+309%	+256%	+238%	+100%	+314%	+314%	+314%
Train (no internalisation)	+109%	+109%	+105%	+104%	+100%	+108%	+108%	+108%
Taxi	+100%	+100%	+100%	+100%	+100%	+100%	+100%	+100%
Overall External Trip Reduction	+94%	+96%	+98%	+96%	+100%	+95%	+95%	+98%

Target Change Adjusted External Trip Rates by Time, Mode and Purpose

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	0.001	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.009	0.010	0.003	0.015	0.018
	Cycling	0.001	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.006	0.007
	Driving a Car or Van	0.020	0.102	0.123	0.003	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.008	0.003	0.017	0.020	0.001	0.003	0.004	0.003	0.018	0.021	0.031	0.159	0.190
	Passenger in a Car or Van	0.002	0.008	0.010	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.001	0.006	0.007	0.000	0.002	0.003	0.003	0.014	0.016	0.006	0.032	0.039
	Motorcycle, Scooter or Moped	0.001	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.003
	Other Method of Travel	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.005	0.006
	Bus, Minibus or Coach	0.005	0.023	0.028	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.001	0.001	0.001	0.003	0.004	0.006	0.030	0.035
	Train	0.002	0.009	0.010	0.000	0.001	0.001	0.000	0.002	0.002	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.003	0.014	0.016
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.002
	Total	0.031	0.159	0.190	0.003	0.015	0.018	0.000	0.002	0.002	0.000	0.001	0.001	0.002	0.009	0.011	0.005	0.025	0.030	0.001	0.007	0.008	0.009	0.047	0.056	0.052	0.265	0.317
0800 to 0859	Walk	0.001	0.003	0.003	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.009	0.011	0.004	0.015	0.019
	Pedal cycle	0.001	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.004	0.005
	Car or van driver	0.016	0.058	0.074	0.003	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.011	0.014	0.006	0.024	0.030	0.001	0.003	0.004	0.005	0.018	0.023	0.034	0.127	0.160
	Car or van passenger	0.001	0.005	0.006	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.004	0.002	0.009	0.011	0.001	0.002	0.003	0.004	0.014	0.018	0.009	0.034	0.043
	Motorcycle	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
	Other private transport	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.003	0.004
	Other local bus	0.004	0.013	0.017	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.002	0.000	0.001	0.001	0.001	0.003	0.004	0.005	0.020	0.026
	Surface Rail	0.001	0.005	0.006	0.000	0.001	0.001	0.001	0.004	0.005	0.001	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.002	0.004	0.016	0.020
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.002
	All modes	0.024	0.091	0.115	0.004	0.014	0.018	0.001	0.005	0.007	0.001	0.005	0.006	0.004	0.016	0.021	0.009	0.036	0.045	0.002	0.007	0.009	0.013	0.049	0.062	0.059	0.222	0.282
0900 to 0959	Walk	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.008	0.014	0.008	0.011	0.020
	Pedal cycle	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.002	0.002	0.004
	Car or van driver	0.009	0.012	0.021	0.005	0.006	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.019	0.033	0.011	0.014	0.025	0.004	0.005	0.009	0.013	0.017	0.029	0.055	0.073	0.128
	Car or van passenger	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.005	0.009	0.004	0.005	0.009	0.003	0.004	0.006	0.010	0.013	0.023	0.021	0.028	0.050
	Motorcycle	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
	Other private transport	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002
	Other local bus	0.002	0.003	0.005	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.001	0.002	0.002	0.003	0.005	0.007	0.009	0.016
	Surface Rail	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.004	0.007
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.003
	All modes	0.014	0.019	0.033	0.005	0.007	0.012	0.000	0.000	0.000	0.000	0.000	0.001	0.021	0.028	0.048	0.016	0.022	0.038	0.008	0.011	0.019	0.034	0.045	0.079	0.098	0.132	0.230
1600 to 1659	Walk	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.011	0.005	0.016	0.016	0.008	0.025
	Pedal cycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003	0.004	0.002	0.006
	Car or van driver	0.049	0.025	0.073	0.010	0.005	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.012	0.035	0.024	0.012	0.035	0.010	0.005	0.016	0.021	0.011	0.032	0.137	0.070	0.206
	Car or van passenger	0.004	0.002	0.006	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.003	0.009	0.008	0.004	0.013	0.008	0.004	0.012	0.017	0.009	0.025	0.044	0.022	0.066
	Motorcycle	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.002
	Other private transport	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.003	0.002	0.004
	Other local bus	0.011	0.006	0.017	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.002	0.001	0.003	0.002	0.001	0.003	0.004	0.002	0.006	0.021	0.010	0.031
	Surface Rail	0.004	0.002	0.006	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.002	0.001	0.001	0.002	0.010	0.005	0.015
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.002	0.001	0.000	0.001	0.003	0.001	0.004
	All modes	0.075	0.038	0.114	0.011	0.006	0.017	0.001	0.000	0.001	0.001	0.000	0.001	0.034	0.017	0.051	0.035	0.018	0.053	0.023	0.012	0.035	0.058	0.029	0.087	0.238	0.121	0.359
1700 to 1759	Walk	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.001	0.004	0.000	0.000	0.000	0.001	0.000	0.001	0.011	0.005	0.017	0.018	0.008	0.027
	Pedal cycle	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003	0.005	0.002	0.008
	Car or van driver	0.073	0.033	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.012	0.038	0.028	0.013	0.040	0.015	0.007	0.022	0.023	0.011	0.034	0.166	0.075	0.241
	Car or van passenger	0.006	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.003	0.010	0.010	0.005	0.014	0.011	0.005	0.017	0.018	0.008	0.027	0.053	0.024	0.076
	Motorcycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003
	Other private transport	0.003	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.004	0.002	0.006
	Other local bus	0.017	0.008	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.002	0.001	0.003	0.003	0.001	0.004	0.004	0.002	0.006	0.027	0.012	0.040
	Surface Rail	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.002	0.001	0.003	0.002	0.001	0.002	0.012	0.005	0.017
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.001	0.002	0.001	0.000	0.002	0.003	0.001	0.005
	All modes	0.113	0.051	0.165	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.039	0.018	0.056	0.042	0.019	0.060	0.034	0.015	0.049	0.063	0.028	0.091	0.291	0.132	0.423
1800 to 1859	Walk	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.002	0.004	0.000	0.000	0.000	0.001	0.000	0.001	0.013	0.007	0.020	0.018	0.010	0.029
	Pedal cycle	0.002	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003	0.004	0.002	0.006
	Car or van driver	0.040	0.023	0.063	0.005	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.015	0.040	0.020	0.011	0.031	0.019	0.011	0.029	0.026	0.015	0.041	0.135	0.077	0.212
	Car or van passenger	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.004	0.011	0.007	0.004	0.011	0.014	0.008	0.022	0.021	0.012	0.032	0.052	0.030	0.081
	Motorcycle	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002
	Other private transport	0.002	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.003	0.002	0.004
	Other local bus	0.009	0.005	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.002	0.001	0.002	0.003	0.002	0.005	0.005	0.003	0.008	0.020	0.012	0.032
	Surface Rail	0.003	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.003	0.002	0.004	0.002	0.001	0.003	0.009	0.005	0.015
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.001	0.003	0.001	0.001	0.002	0.004	0.002	0.006
	All modes	0.062	0.035	0.097	0.006	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.021	0.059	0.029	0.017	0.046	0.041	0.024	0.065	0.070	0.040	0.110	0.247	0.141	0.387
All day	Walk	0.012	0.012	0.025	0.001	0.001	0.003	0.001	0.001	0.003	0.001	0.001	0.003	0.020	0.021	0.041	0.001	0.001	0.002	0.003	0.003	0.006	0.080	0.081	0.161	0.121	0.122	0.243
	Pedal cycle	0.012	0.012	0.024	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.001	0.013	0.013	0.025	0.027	0.027	0.054
	Car or van driver	0.266	0.269	0.535	0.063	0.063	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.193	0.195	0.388	0.148	0.149	0.297	0.078	0.079	0.157	0.163	0.165	0.328	0.912	0.919	1.831
	Car or van passenger	0.021	0.021	0.042	0.003	0.003	0.005	0.000	0.000	0.001	0.000	0.000	0.001	0.053	0.053	0.106	0.053	0.053	0.106	0.059	0.059	0.118	0.128	0.129	0.257	0.316	0.319	0.635
	Motorcycle	0.007	0.007	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.009	0.009	0.018
	Other private transport	0.010	0.011	0.021	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.004	0.008	0.019	0.019	0.037
	Other local bus	0.061	0.061	0.122	0.004	0.004	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.010	0.021	0.011	0.011	0.023	0.014	0.014	0.028	0.030	0.031	0.061	0.131	0.132	0.263
	Surface Rail	0.023	0.023	0.046	0.003	0.003	0.005	0.006	0.006	0.013	0.006	0.006	0.011	0.003	0.003	0.005	0.003	0.003	0.006	0.012	0.012	0.024	0.011	0.011	0.023	0.067	0.067	0.134
	Taxi or minicab	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.008	0.008	0.008	0.016	0.007	0.007	0.015	0.019	0.019	0.038
	All modes	0.413	0.416	0.829	0.074	0.075	0.149	0.008	0.008	0.017	0.007	0.007	0.015	0.283	0.285	0.569	0.221	0.223	0.443	0.175	0.176	0.350	0.439	0.442	0.881	1.620	1.633	3.253

Target Change Adjusted External Trips by Time, Mode and Purpose 3500 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	3	16	20	0	1	1	0	1	1	0	1	1	0	2	3	0	0	1	0	0	0	6	30	36	10	53	63
	Cycling	3	16	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	6	4	22	26
	Driving a Car or Van	71	359	429	9	45	54	0	0	0	0	0	0	4	22	26	12	58	70	2	10	13	12	61	73	110	556	666
	Passenger in a Car or Van	6	28	34	0	2	2	0	0	0	0	0	0	1	6	7	4	21	25	2	8	9	9	48	58	22	113	136
	Motorcycle, Scooter or Moped	2	9	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	10	12
	Other Method of Travel	3	14	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	16	20
	Bus, Minibus or Coach	16	82	98	1	3	3	0	0	0	0	0	0	0	1	1	1	4	5	0	2	2	2	11	14	20	104	124
	Train	6	31	37	0	2	2	1	5	6	1	3	3	0	0	0	0	1	1	0	2	2	1	4	5	9	48	58
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	1	1	3	3	1	5	6
	Total	110	556	665	11	53	64	1	7	8	1	4	4	6	32	39	17	87	104	5	23	28	33	165	197	183	927	1110
0800 to 0859	Walk	3	9	12	0	1	1	1	3	4	1	3	4	1	4	5	0	1	1	0	0	1	8	31	40	14	53	67
	Pedal cycle	2	9	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	6	4	15	19
	Car or van driver	55	204	259	11	41	52	0	0	0	0	0	0	10	39	49	22	83	106	3	11	14	17	64	80	118	443	562
	Car or van passenger	4	16	20	0	2	2	0	1	1	0	1	1	3	11	13	8	30	38	2	9	11	13	50	63	31	118	150
	Motorcycle	1	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	8
	Other private transport	2	8	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	2	3	11	14
	Other local bus	12	47	59	1	3	3	0	0	0	0	0	0	1	2	3	2	6	8	1	2	3	3	12	15	19	72	91
	Surface Rail	5	17	22	0	2	2	4	14	18	3	12	16	0	1	1	0	2	2	0	2	2	1	4	6	14	54	69
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	1	1	1	3	4	2	6	8
	All modes	84	317	401	13	49	62	5	19	24	4	16	21	15	57	72	33	125	158	7	25	32	45	171	216	208	778	986
0900 to 0959	Walk	1	2	3	0	0	1	0	0	0	0	0	0	5	7	12	0	0	1	0	1	1	22	29	51	30	40	69
	Pedal cycle	1	2	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	5	8	5	7	12
	Car or van driver	32	43	75	16	21	37	0	0	0	0	0	0	49	66	115	38	50	88	13	17	30	44	59	103	191	256	448
	Car or van passenger	3	3	6	1	1	2	0	0	0	0	0	0	13	18	31	13	18	31	10	13	22	34	46	81	74	99	173
	Motorcycle	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3
	Other private transport	1	2	3	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	3	3	4	8
	Other local bus	7	10	17	1	1	2	0	0	0	0	0	0	3	4	6	3	4	7	2	3	5	8	11	19	24	32	57
	Surface Rail	3	4	6	1	1	2	0	0	1	1	1	1	1	1	2	1	1	2	2	3	5	3	4	7	11	14	25
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	3	2	3	5	4	6	10
	All modes	50	67	116	19	25	44	0	0	1	1	1	2	72	96	168	56	75	132	29	38	67	118	158	276	345	461	806
1600 to 1659	Walk	8	4	12	1	0	1	1	0	1	0	0	1	9	4	13	1	0	1	1	1	2	37	19	56	57	29	86
	Pedal cycle	8	4	12	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	3	9	14	7	22
	Car or van driver	170	87	257	34	17	51	0	0	0	0	0	0	81	41	122	82	42	124	36	18	54	75	38	113	478	243	722
	Car or van passenger	13	7	20	1	1	2	0	0	0	0	0	0	22	11	33	29	15	44	27	14	41	59	30	89	152	78	230
	Motorcycle	4	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5	3	8
	Other private transport	7	3	10	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	0	0	1	2	1	3	10	5	16
	Other local bus	39	20	59	2	1	3	0	0	0	0	0	0	4	2	7	6	3	9	6	3	10	14	7	21	72	37	109
	Surface Rail	15	7	22	1	1	2	2	1	3	2	1	3	1	1	2	2	1	3	6	3	8	5	3	8	34	17	51
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	4	2	5	3	2	5	9	5	14
	All modes	264	134	398	40	20	61	3	2	4	3	1	4	118	60	179	123	63	185	80	41	121	202	103	305	833	424	1256
1700 to 1759	Walk	12	5	17	0	0	0	0	0	0	0	0	0	10	4	14	1	0	1	2	1	3	40	18	58	65	29	94
	Pedal cycle	12	5	17	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	3	9	19	9	27
	Car or van driver	256	116	372	0	0	0	0	0	0	0	0	0	92	42	134	97	44	141	53	24	78	82	37	119	580	263	843
	Car or van passenger	20	9	29	0	0	0	0	0	0	0	0	0	25	11	37	35	16	51	40	18	58	64	29	93	184	83	267
	Motorcycle	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8	4	11
	Other private transport	10	5	15	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	0	0	1	2	1	3	14	6	21
	Other local bus	58	27	85	0	0	0	0	0	0	0	0	0	5	2	7	7	3	11	9	4	14	15	7	22	96	43	139
	Surface Rail	22	10	32	0	0	0	1	0	2	1	0	1	1	1	2	2	1	3	8	4	12	6	3	8	41	19	60
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	4	5	2	8	4	2	5	11	5	17
	All modes	396	180	576	0	0	0	1	1	2	1	1	2	135	61	196	145	66	211	119	54	173	219	99	318	1017	461	1479
1800 to 1859	Walk	6	4	10	0	0	1	0	0	0	0	0	0	10	5	15	1	0	1	2	1	4	45	26	71	64	37	101
	Pedal cycle	6	4	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	7	4	11	14	8	23
	Car or van driver	140	80	219	17	10	27	0	0	0	0	0	0	90	51	141	69	39	108	65	37	102	92	52	144	472	269	741
	Car or van passenger	11	6	17	1	0	1	0	0	0	0	0	0	24	14	38	25	14	39	49	28	77	72	41	113	181	103	285
	Motorcycle	4	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5	3	8
	Other private transport	5	3	9	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	2	1	4	10	6	16
	Other local bus	32	18	50	1	1	2	0	0	0	0	0	0	5	3	8	5	3	8	12	7	18	17	10	27	72	41	113
	Surface Rail	12	7	19	1	0	1	0	0	1	0	0	0	1	1	2	1	1	2	10	6	16	6	4	10	32	18	51
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	6	4	10	4	2	6	12	7	19
	All modes	216	123	340	20	12	32	1	0	1	0	0	0	131	75	206	103	59	161	145	83	228	246	140	387	863	492	1355
All day	Walk	43	43	86	5	5	9	5	5	10	5	5	9	72	72	144	4	4	8	10	10	19	281	283	564	423	427	850
	Pedal cycle	43	43	85	2	2	3	0	0	0	0	0	0	4	4	7	0	0	1	1	1	3	44	45	89	94	94	188
	Car or van driver	933	940	1873	220	222	442	0	0	1	0	0	1	676	681	1357	518	522	1039	274	276	550	572	576	1148	3192	3218	6410
	Car or van passenger	73	74	147	9	9	19	1	1	3	1	1	2	184	186	370	185	187	372	205	207	412	448	451	899	1107	1116	2223
	Motorcycle	24	25	49	0	0	1	0	0	0	0	0	0	2	2	3	0	0	1	1	1	1	4	4	8	32	32	63
	Other private transport	37	37	74	1	1	2	0	0	0	0	0	0	8	9	17	2	2	4	3	3	5	14	15	29	65	66	131
	Other local bus	213	215	428	13	14	27	0	0	0	0	0	0	36	36	73	40	40	79	49	49	98	106	107	213	458	461	919
	Surface Rail	79	80	160	9	10	19	22	22	45	20	20	39	9	9	19	11	11	22	42	42	84	40	40	80	233	235	468
	Taxi or minicab	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	13	13	27	27	27	54	26	26	51	66	67	133
	All modes	1445	1457	2902	261	263	523	29	29	58	26	26	52	991	999	1990	773	779	1552	611	616	1227	1535	1547	3082	5670	5716	11386

Target Change Adjusted External Trips by Time, Mode and Purpose 8000 dwellings

Time	Mode	Commuting			Business			Education			Escort education			Shopping			Other work, other escort and personal business			Visiting friends, entertainment and sport			Holiday, day trip and other			All purposes		
		Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
0700 to 0759	Walking	7	38	45	0	2	3	1	3	3	0	2	2	1	5	6	0	1	1	0	1	1	14	69	83	24	120	144
	Cycling	7	37	45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11	13	10	50	59
	Driving a Car or Van	162	820	981	20	103	123	0	0	0	0	0	0	10	50	60	26	133	160	5	24	29	28	140	168	251	1271	1521
	Passenger in a Car or Van	13	64	77	1	4	5	0	1	1	0	0	0	3	14	16	9	48	57	4	18	21	22	110	131	51	259	310
	Motorcycle, Scooter or Moped	4	21	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	23	27
	Other Method of Travel	6	32	39	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	4	4	7	38	45
	Bus, Minibus or Coach	37	187	224	1	6	8	0	0	0	0	0	0	1	3	3	2	10	12	1	4	5	5	26	31	47	237	284
	Train	14	70	84	1	4	5	2	12	15	1	6	8	0	1	1	1	3	3	1	4	4	2	10	12	22	110	132
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	2	3	1	6	8	2	12	15
	Total	251	1270	1521	24	122	146	3	16	19	2	8	10	15	74	88	39	199	239	11	53	64	74	377	451	418	2119	2537
0800 to 0859	Walk	6	21	27	1	2	3	2	7	9	2	7	9	3	9	12	0	1	2	0	1	1	19	71	90	32	121	153
	Pedal cycle	6	21	27	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	11	14	9	34	43
	Car or van driver	125	467	592	25	94	119	0	1	1	0	1	1	24	89	113	51	191	241	7	26	33	39	145	184	270	1013	1284
	Car or van passenger	10	37	47	1	4	5	0	2	2	0	2	2	6	24	31	18	68	86	5	20	25	30	114	144	72	270	342
	Motorcycle	3	12	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	14	17
	Other private transport	5	18	23	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	4	5	7	25	31
	Other local bus	28	107	135	2	6	7	0	0	0	0	0	0	1	5	6	4	15	18	1	5	6	7	27	34	44	164	208
	Surface Rail	11	40	50	1	4	5	9	32	41	8	28	36	0	1	2	1	4	5	1	4	5	3	10	13	33	124	157
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	6	1	3	3	2	6	8	4	14	18
	All modes	193	724	917	30	111	141	11	43	54	10	38	48	35	131	166	76	285	360	15	58	74	104	390	494	474	1779	2253
0900 to 0959	Walk	3	5	8	1	1	2	0	0	0	0	0	1	12	16	28	1	1	2	1	1	2	49	66	116	68	90	158
	Pedal cycle	3	4	8	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	8	10	18	12	16	29
	Car or van driver	73	98	171	36	48	84	0	0	0	0	0	0	112	150	262	86	115	201	29	39	69	100	135	235	438	586	1023
	Car or van passenger	6	8	13	2	2	4	0	0	0	0	0	0	31	41	72	31	41	72	22	29	51	79	105	184	169	227	396
	Motorcycle	2	3	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2	3	4	7
	Other private transport	3	4	7	0	0	0	0	0	0	0	0	0	1	2	3	0	0	1	0	0	1	3	3	6	8	10	18
	Other local bus	17	22	39	2	3	5	0	0	0	0	0	0	6	8	14	7	9	15	5	7	12	19	25	44	55	74	130
	Surface Rail	6	8	15	2	2	4	1	1	2	1	2	3	2	2	4	2	2	4	5	6	11	7	9	16	25	33	58
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	3	4	7	4	6	11	10	13	23
	All modes	114	152	266	43	57	100	1	1	2	2	3	4	165	220	385	129	172	301	65	88	153	270	361	631	787	1054	1842
1600 to 1659	Walk	18	9	27	2	1	2	1	1	2	1	1	2	20	10	30	1	1	2	3	1	4	84	43	127	130	66	196
	Pedal cycle	18	9	27	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	13	7	20	33	17	50
	Car or van driver	389	198	587	77	39	117	0	0	0	0	0	0	184	94	278	188	96	284	82	42	124	172	87	259	1093	557	1649
	Car or van passenger	31	16	46	3	2	5	0	0	0	0	0	0	50	26	76	67	34	101	62	31	93	135	68	203	348	177	525
	Motorcycle	10	5	15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2	12	6	19
	Other private transport	15	8	23	0	0	1	0	0	0	0	0	0	2	1	3	1	0	1	1	0	1	4	2	7	24	12	36
	Other local bus	89	45	134	5	2	7	0	0	0	0	0	0	10	5	15	14	7	22	15	7	22	32	16	48	165	84	248
	Surface Rail	33	17	50	3	2	5	5	3	8	4	2	7	3	1	4	4	2	6	13	6	19	12	6	18	77	39	117
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	8	4	12	8	4	12	21	11	31
	All modes	603	307	909	92	47	138	7	3	10	6	3	9	271	138	408	281	143	424	183	93	277	461	235	696	1903	969	2872
1700 to 1759	Walk	27	12	39	0	0	0	1	0	1	0	0	1	22	10	32	2	1	2	4	2	6	92	42	133	148	67	215
	Pedal cycle	27	12	39	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	14	7	21	43	19	62
	Car or van driver	584	265	849	1	0	1	0	0	0	0	0	0	211	96	306	222	101	323	122	55	177	186	85	271	1326	602	1928
	Car or van passenger	46	21	67	0	0	0	0	0	0	0	0	0	57	26	83	79	36	116	91	41	133	146	66	212	420	191	611
	Motorcycle	15	7	22	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2	18	8	26
	Other private transport	23	10	33	0	0	0	0	0	0	0	0	0	3	1	4	1	0	1	1	1	2	5	2	7	32	15	47
	Other local bus	134	61	194	0	0	0	0	0	0	0	0	0	11	5	16	17	8	25	22	10	32	35	16	50	218	99	317
	Surface Rail	50	23	72	0	0	0	2	1	3	2	1	3	3	1	4	5	2	7	19	8	27	13	6	19	94	42	136
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	8	12	5	17	8	4	12	26	12	38
	All modes	906	411	1316	1	0	1	3	1	5	3	1	4	309	140	449	332	151	483	272	123	395	500	227	727	2325	1055	3380
1800 to 1859	Walk	15	8	23	1	0	1	0	0	0	0	0	0	22	12	34	1	1	2	5	3	8	103	59	162	147	84	231
	Pedal cycle	15	8	23	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	16	9	25	33	19	52
	Car or van driver	319	182	501	39	22	62	0	0	0	0	0	0	205	117	322	157	90	247	149	85	234	210	120	329	1079	615	1694
	Car or van passenger	25	14	39	2	1	3	0	0	0	0	0	0	56	32	88	56	32	88	111	64	175	164	94	258	415	236	651
	Motorcycle	8	5	13	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	1	2	11	6	17
	Other private transport	13	7	20	0	0	0	0	0	0	0	0	0	3	1	4	1	0	1	1	1	2	5	3	8	23	13	35
	Other local bus	73	42	115	2	1	4	0	0	0	0	0	0	11	6	17	12	7	19	26	15	42	39	22	61	164	93	257
	Surface Rail	27	16	43	2	1	3	1	1	1	1	0	1	3	2	4	3	2	5	23	13	36	15	8	23	74	42	116
	Taxi or minicab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	6	15	8	23	9	5	15	28	16	44
	All modes	495	282	777	46	26	73	1	1	2	1	0	1	300	171	472	235	134	369	332	189	521	563	321	884	1973	1125	3098
All day	Walk	98	99	197	11	11	21	12	12	23	11	11	21	164	165	329	9	9	18	22	22	44	642	647	1290	968	976	1944
	Pedal cycle	97	98	195	4	4	8	0	0	0	0	0	0	8	8	16	1	1	2	3	3	6	101	102	203	214	216	430
	Car or van driver	2132	2149	4280	503	507	1010	1	1	2	1	1	2	1544	1557	3101	1183	1193	2376	626	631	1256	1307	1317	2624	7296	7356	14652
	Car or van passenger	168	169	337	21	22	43	3	3	6	3	3	5	421	425	846	423	426	849	469	473	941	1023	1031	2055	2531	2551	5082
	Motorcycle	56	56	112	1	1	1	0	0	0	0	0	0	4	4	8	1	1	1	2	2	3	9	10	19	72	73	145
	Other private transport	84	84	168	2	2	5	0	0	0	0	0	0	19	19	39	5	5	10	6	6	12	33	33	66	149	150	299
	Other local bus	488	492	979	31	31	62	0	0	1	0	0	0	83	83	166	90	91	182	111	112	224	243	245	488	1046	1055	2101
	Surface Rail	182	183	365	22	22	44	51	51	102	45	45	90	22	22	43	25	25	50	96	97	193	91	92	183	532	537	1069
	Taxi or minicab	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	30	31	61	62	62	124	58	59	117	152	153	304
	All modes	3303	3330	6633	595	600	1196	66	67	133	59	60	119	2265	2283	4548	1767	1781	3548	1396	1408	2804	3508	3537	7045	12961	13066	26026