

Highways Site Appraisal
December 2021

The logo consists of a dark blue square with the letters 'EAS' in white, bold, sans-serif font centered within it.

EAS

Land to the west of Papworth (Site A)

Papworth Everard, Cambridgeshire

Varrier-Jones Foundation

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1 Introduction

- 1.1 EAS has been commissioned by the Varrier-Jones Foundation to prepare a Site Appraisal for land to the west of Papworth Everard, Cambridgeshire, Site A. This document has been prepared to inform site representations to the Greater Cambridge Local Plan Regulation 18 Issues and Options consultation. The contents of this report form a preliminary assessment of the site in terms of highways and transport.
- 1.2 Site A is located to the west of the existing settlement of Papworth Everard and is enclosed to the west by the A1198 Papworth Everard bypass and to the east by the existing Papworth Everard village boundary. There is a brook that runs along the northern half of boundary between the site and Papworth Everard and then bisects the southern site half.
- 1.3 The 40ha site is currently greenfield, a location plan is contained within **Appendix A**. For the purposes of this report, it is proposed that the site will comprise of a residential development of between 301 – 452 dwellings.
- 1.4 This report is set out as follows:
- Section 2 – sets out the relevant policy background;
 - Section 3 – reviews the existing Papworth Everard settlement facilities, transport network and travel characteristics;
 - Section 4 - discusses the site proposals including accessibility to Papworth Everard and the wider network;
 - Section 5 - sets out the likely transport implications; and
 - Section 6 – summarises the findings of the report.

2 Policy Background

Introduction

- 2.1 This section sets out the policy context for the proposed development at national and local level. Sustainable development is to be achieved by encouraging walking, cycling and public transport use.

National Planning Policy Framework (NPPF) (2019)

- 2.2 The revised National Planning Policy Framework was published in February 2019 and updated in July 2021, sets out the government's planning policies for England and how these are expected to be applied. The revised Framework replaces the previous National Planning Policy Frameworks published in March 2012 and July 2018.
- 2.3 The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- 2.4 In respect of that, Paragraph 10 of the NPPF states:

“So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.”

- 2.5 Section 9 of the NPPF relates to promoting sustainable transport and paragraphs 104 to 106 say:

“104. Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.*

105. The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.

106. *Planning policies should:*

a) 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;

b) be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;

c) identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;

d) provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);

e) provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements; and

f) recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government’s General Aviation Strategy.”

2.6 Paragraphs 107 and 108 discuss parking standards:

“107. If setting local parking standards for residential and non-residential development, policies should take into account:

a) the accessibility of the development;

b) the type, mix and use of development;

c) the availability of and opportunities for public transport;

d) local car ownership levels; and

e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles

108. Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of this Framework). In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists.”

2.7 Paragraphs 110 to 113 state that, when considering development proposals in relation to transport:

“110. In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users; and

c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”

111. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”

112. Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.”

113. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”

The Cambridgeshire Local Transport Plan (LTP3) 2011-2031

2.8 The **Cambridgeshire Local Transport Plan (LTP3)** seeks to address existing transport challenges as well the needs generated by new development, and plan for the delivery of new transport infrastructure, such as road improvements. This third LTP comprises 3 documents:

- Policies and Strategies (2018);
- The Long-Term Transport Strategy (July 2015) (previously the Implementation Plan); and
- The Transport Delivery Programme (updated annually).

2.9 LTP3 addresses the County Council's latest priorities, as well as strategic objectives carried forward from LTP2. These are:

- Supporting and protecting people when they need it most;
- Helping people to live independent and healthy lives in their communities;
- Developing our local economy for the benefit of all;
- Enabling people to thrive, achieve their potential and improve quality of life;
- Supporting and protecting vulnerable people;
- Managing and delivering the growth and development of sustainable communities;
- Promoting improved skills levels and economic prosperity across the county, helping people into jobs and encouraging enterprise; and
- Meeting the challenges of climate change and enhancing the natural environment.

2.10 The Cambridgeshire Long Term Transport Strategy 2011-2031 identifies the major infrastructure requirements that are needed to address existing problems and capacity constraints on Cambridgeshire's transport network, and the further infrastructure that is required to cater for the transport demand associated with planned growth. It includes the following schemes will improve the connectivity of Papworth Everard:

- Strategic and local cycle network improvement between Huntingdon-Papworth Everard-Cambourne;
- Area action plans for the A14 Trunk Road in Huntingdonshire and South Cambridgeshire delivering:
 - New A14 trunk road, local road capacity, cycle and pedestrian routes;
 - Area action plan for the A428 Trunk Road in Huntingdonshire and South Cambridgeshire. This includes:
 - A428 Caxton Gibbet to Black Cat dualling by 2021, including a grade separated junction at the A1 Black Cat roundabout;
 - Bus priority measures Caxton Gibbet – West Cambourne, A428 to Bourne airfield;
 - A428 park and ride; and
 - A428 and A1198 junction improvements.

The South Cambridgeshire Local Plan (2018)

2.11 **Policy HQ/1 on Design Principles** states that all new development must be of high-quality design, with a clear vision as to its positive contribution to its local and wider context. As regards transport, proposals must:

- Achieve a permeable development with ease of movement and access for all users and abilities, with user friendly and conveniently accessible streets and other routes both within the development and linking with its surroundings and existing and proposed facilities and services, focusing on delivering attractive and safe opportunities for walking, cycling, public transport and, where appropriate, horse riding;

- Provide safe and convenient access for all users and abilities to public buildings and spaces, including those with limited mobility or those with other impairment such as of sight or hearing;
- Ensure that car parking is integrated into the development in a convenient, accessible manner and does not dominate the development and its surroundings or cause safety issues; and
- Provide safe, secure, convenient and accessible provision for cycle parking and storage, facilities for waste management, recycling and collection in a manner that is appropriately integrated within the overall development.

2.12 **Policy TI/2 on Planning for Sustainable Travel** states that development must be located and designed to reduce the need to travel, particularly by car, and promote sustainable travel appropriate to its location. Planning permission will only be granted for development likely to give rise to increased travel demands where the site has (or will attain) sufficient integration and accessibility by walking, cycling or public and community transport, including:

- Provision of safe, direct routes within permeable layouts that facilitate and encourage short distance trips by walking and cycling between home and nearby centres of attraction, and to bus stops or railway stations, to provide real travel choice for some or all of the journey, in accordance with Policy HQ/1 above;
- Provision of new cycle and walking routes that connect to existing networks, including the wider Rights of Way network, to strengthen connections between villages, Northstowe, Cambridge, market towns, and the wider countryside;
- Protection and improvement of existing cycle and walking routes, including the Rights of Way network, to ensure the effectiveness and amenity of these routes is maintained, including through maintenance, crossings, signposting and waymarking, and, where appropriate, widening and lighting;
- Provision of secure, accessible and convenient cycle parking in accordance with Policy TI/3 below;
- Securing appropriate improvements to public and community transport (including infrastructure requirements) in accordance with the aims of the Cambridgeshire Local Transport Plan and South Cambridgeshire Community Transport Strategy.

2.13 The Policy also requires developers to demonstrate they will make adequate provision to mitigate the likely impacts (including cumulative impacts) of their proposal including environmental impacts (such as noise and pollution) and impact on amenity and health. This will be achieved through direct improvements and Section 106 contributions and/or the Community Infrastructure Levy (CIL), to address transport infrastructure in the wider area including across the district boundary.

2.14 Developers of larger developments (i.e. with over 20 dwellings), or where a proposal is likely to have significant transport implications, will be required to demonstrate they have maximised opportunities for sustainable travel and will make adequate provision to mitigate the likely impacts through provision of a Transport Assessment and Travel Plan. All other developments will be required to submit a Transport Statement. Where a Transport

Assessment or Statement or a Travel Plan is required, a Low Emissions Strategy Statement should be integrated.

- 2.15 Travel Plans must have measurable outputs, be related to the aims and objectives in the Local Transport Plan and provide monitoring and enforcement arrangements. Planning obligations may be an appropriate means of securing the provision of some or all of a Travel Plan, including the requirement for an annual monitoring and progress report. Submission of area-wide Travel Plans will be considered in appropriate situations. Outline planning applications are required to submit a framework for the preparation of a Travel Plan.
- 2.16 **Policy TI/3 on Parking Provision** states that parking should be provided through a designed approach in accordance with the standards reproduced in Table 2.1.

Indicative car parking provision	Minimum cycle parking provision	Notes
2 spaces per dwelling – 1 space to be allocated within the curtilage	1 space per bedroom	Additional provision may be needed for visitors, service vehicles, salesmen.

Table 2.1: Residential parking standards (South Cambridgeshire Local Plan 2018, Figure 11)

- 2.17 Car parking provision will take into consideration the site location, type and mix of uses, car ownership levels, availability of local services, facilities and public transport, and highway and user safety issues, as well as ensuring appropriate parking for people with impaired mobility as set out in national standards and guidance.
- 2.18 The Council will encourage innovative solutions to car parking, including shared spaces where the location and patterns of use permit, and incorporation of measures such as car clubs and electric charging points.
- 2.19 Residential garages will only be counted towards car and cycle parking provision where they meet a minimum size requirement of 3.3 by 6.0 metres for a car with an additional one metre at the end, or 0.65 – 0.75 metres at the side, to park cycles.
- 2.20 All parking provision must be provided in a manner that accords with Policy HQ/1 above and the developer must provide clear justification for the level and type of parking proposed in the Design and Access Statement and/or Travel Plan.

The Papworth Everard Village Design Guide (January 2020)

- 2.21 This document has been prepared by South Cambs District Council with the local community of Papworth Everard. Community design priorities for the Village Design Guide includes:
- Protect and add to existing off-road paths and connections across the village, also to protect and add to the village's trees and hedgerows in a way that is right for the village.
- 2.22 Section 6 deals with Connections with key existing and proposed connections shown in Figure 12, reproduced in **Appendix B**. Paragraphs 6.1 to 6.3 state objectives for paths:
- “6.1 The pedestrian, cycle and equestrian network within the village should be enhanced or added to wherever possible, including upgrading footpaths to bridleways and adding further safe crossings.*

6.2 Paths should be as accessible as possible. Within developments and on routes intended for heavy pedestrian use (e.g. which might be used to reach school) this means wide (2m) tarmac or paved paths.

6.3 Proposals for new or enhanced off-road routes should show how they integrate with the wider village network and how they enhance it."

Draft HELAA

- 2.23 The site under consideration was reviewed as part of the Greater Cambridge HELAA submission, which commented as follows:

"Site Access - Amber

The proposed site is acceptable in principle subject to detailed design.

There are potential access constraints, but these could be overcome through development.

Transport and Roads - Amber

The corridor is very congested towards Cambridge and cannot accommodate the large level of growth this site is proposing. It is anticipated that this site will be heavily car dominated which the Highway Authority cannot support. The applicant will have to consider with and without the Highways England Black Cat to Caxton Gibbet scheme.

The applicant will have to consider how the site will promote sustainable travel to local services, St Neots and Cambridge as the Cambourne to Cambridge Scheme is not proposed to feed the site. A high sustainable mode share must be achieved to allow this site to be developed, however, the current cycle mode share Cambourne is low. A direct walking and cycling link connecting to St Neots and Cambourne will be expected. There is potential to improve the Bridleway routing through Elsworth.

The applicant should be aware of some local major accident clusters located at the A428/St Neots Road/B1040 junction and at the A428 Caxton Gibbet junction.

Any potential impact on the functioning of trunk roads and/or local roads could be reasonably mitigated."

- 2.24 It is shown within this document that safe access can be provided into the site without entering the built-up area of Papworth Everard.
- 2.25 It is accepted that the site will have to consider mitigation measures in line with major nearby schemes, including reviewing of the National Highways (formerly Highways England) Black Cat to Caxton Gibbet scheme. National Highways will be consulted as part of the potential planning application.
- 2.26 It is also noted that accident clustering around the main nearby junctions will be taken into consideration, and improvements in relation to these proposed to ameliorate the existing situation, especially in light of the additional traffic being generated through these junctions. It is relevant to add that none of the collisions involved cycles, and that these collisions involved vehicles and powered two-wheelers, indicating that the high speed nature of these junctions play an element in this clustering.

3 Existing Site Assessment

Introduction

- 3.1 Papworth Everard is a village of approximately 4,000 people in South Cambridgeshire, close to the border with Huntingdonshire. The village is set along Ermine Street which bisects the village and runs roughly 2km south to north. There is a roundabout at either end that provides access to the A1198 western bypass of the village.
- 3.2 Papworth Everard is known as the location of the Papworth Hospital. This cardiothoracic hospital is famous for heart and lung transplants. The hospital was relocated to the Cambridge Biomedical Campus near Addenbrookes in Cambridge in 2019. In 2015, Papworth hospital employed about 1500 staff. The hospital site lies in the south-east of Papworth Everard, adjacent to the Papworth Business School. The site is now largely empty.

Site Location

- 3.3 Site A is located to the west of the existing settlement of Papworth Everard and is enclosed to the west by the A1198 Papworth Everard bypass and to the east by the existing Papworth Everard village boundary. There is a brook that runs along the northern half of boundary between the site and Papworth Everard and then bisects the southern site half.
- 3.4 The 40ha. site is currently greenfield, a location plan is contained within **Appendix A**. For the purposes of this report it is proposed that the site will comprise of a residential development of between 465-655 dwellings.

Local Facilities

- 3.5 Pendrill Court on Ermine Street at the centre of Papworth Everard provides a local shopping centre with shops and businesses including:
- a local NISA food store and post office;
 - Papworth Library;
 - Papworth Surgery (GP centre);
 - Fish and chip shop;
 - Restaurants;
 - Hairdressers;
 - Pharmacist; and
 - A number of small businesses and shops.
- 3.6 There is one primary school, Pendragon Primary School, in Papworth Everard, which has capacity for 420 pupils (equivalent to 2-form entry). This is located on Varrier-Jones Drive in the north-west part of Papworth Everard. The primary school site also includes the Pendragon Pre-School. There is also the Children's Ark Day Nursery, which has spaces for up to 39 children aged 0-5 years old in the south-east section of Papworth Everard close to the former hospital site.

3.7 There are no secondary schools with Papworth Everard. The village falls within the catchment of Swavesey Village College but is closer to Cambourne Village College. There are school buses from Ermine Street providing access to the secondary schools.

3.8 **Appendix C** contains a facilities plan.

Walking and Cycle Routes

3.9 There is an extensive walking network with Papworth Everard that connects the village centre to the surrounding residential areas and provides access into the surrounding countryside. The Papworth Everard Village Design Guide connections plan in **Appendix B** shows local rights of way.

3.10 At the centre of Papworth Everard is Pendrill Court on the eastern side of Ermine Street. There are footways on both sides of Ermine Street providing access northwards alongside Ermine Street North and southwards along Ermine Street South.

3.11 Residential streets and footways provide access to the residential areas, eastwards and westwards, either side of Ermine Street. Beyond the settlement areas to the east and west, footpaths extend out into the countryside including into Papworth Wood to the east and into the Ancient Village to the west. The ancient village is the original settlement of the village, clustered around St Peters Church as described in the Papworth Village Design Guide (SCDC April 2019 Draft SPD).

3.12 To the west of the village there is a footpath running north-south along the line of a brook. This footpath extends from the A1198 south of Papworth Everard and runs through open space to the south-west of Papworth, crossing an east-west footpath from Church Road by St Peters Church, and then connects to the north-western village residential area where it meets "The School Walk". This is a formal paved route connecting the north-west Papworth residential areas to Pendragon Primary School. The School Walk is approximately 500m in length and is a 2m wide paved and well-lit footpath running from Church Road to beyond Varrier-Jones Drive.

3.13 There is also a public bridleway from Ermine Street to the south of Papworth Everard running close to the south-western A1198 bypass that crosses the north-south footpath and then provides access west of Papworth Everard, crossing the A1198 bypass at the roundabout with the B1040.

3.14 All streets within Papworth Everard are suitable for cycling. There are cycle lanes along sections of Ermine Street and sections of the Ermine Street footways are designated for shared cycle use.

3.15 A shared equestrian, foot and cycle facility, at least 2.5m in width, is currently under development to the south of the village, linking Papworth to the Cambourne and the other local areas to the south. This route starts at the southern end of the village on Ermine Street South, near the roundabout junction of this road with the A1198, and will link the existing footway through the roundabout towards the cycleway just north of the Caxton Gibbet roundabout with the A428.

Local Bus Services

3.16 There are bus stops along the length of Ermine Street serving Papworth Everard.

- 3.17 The X3 and 8 bus services serve Papworth Everard, stopping along Ermine Street and providing services to Cambridge, Camborne and Huntingdon.
- 3.18 There are eight X3 bus services and two 8 bus services per day on weekdays and a total of seven Saturday services.
- 3.19 There are morning and evening school bus services along Ermine Street.

Road Connections and Existing Traffic Conditions

- 3.20 Ermine Street through Papworth Everard is a single carriageway 30mph speed limit street with a width of circa 7m. There is a central 350m section centred on Pendrill Court with a speed limit of 20mph with traffic calming including road humps and speed activated warning signs. Ermine Street terminates north and south of Papworth Everard at roundabouts with the A1198 which provides a western bypass to the village. The A1198 joins the A428 at the Caxton Gibbet roundabout 1.5km south of the village. The A4218 provides access to Cambourne and Cambridge eastwards and to St Neots, Bedford and Milton Keynes westwards. To the north, the A1198 joins the A14 at Huntingdon.
- 3.21 A site visit was made between 7am and 10am on Tuesday 28 January 2020 to observe typical morning peak traffic conditions. Observations were:
- There was little traffic within the village on Ermine Street within the morning peak hour, with the exception of around 8:30am when there was some activity on Ermine Street and Varrier-Jones Drive during the morning drop off at Pendragon Primary School;
 - 4 school buses were observed on Ermine Street using various bus stops at around 7am, two northbound and two southbound, there may have been others not observed;
 - There were few queues observed at any junctions around Papworth Everard including:
 - The roundabout junction of A1198/B1040 and Ermine Street north of Papworth Everard;
 - The roundabout junction of A1198 bypass and B1040 west of Papworth Everard;
 - The roundabout junction of A1198 bypass and Ermine Street south of Papworth Everard; and
 - The signal junction between Ermine Street, Summers Hill Road and Stirling Way (Papworth Business Park).
 - There was queueing at the Caxton Gibbet A1198/A428 roundabout south of Papworth Everard from 7am until 9am including:
 - A queue of 1.5km extending back on the A1198 to the A1198/Ermine Street roundabout between 7:15 and 7:30;
 - A queue on the A1198 from the Caxton Gibbet roundabout back towards Papworth Everard of approximately 750m at 7:45am to 8:00am, falling gradually to around 250m at 9am;
 - Smaller queues on the eastbound approach of the A428 and northbound A1198 Caxton Gibbet roundabout approach over this time period of up to 100m; and
 - No queueing on the westbound A428 approach.

- 3.22 Travel time surveys undertaken on the site visit gave an estimated 6 minutes to travel in the queue from the southern A1198 bypass roundabout to the A1198/A428 Caxton Gibbet roundabout at 7:30am when the queue was at its peak, and then approximately 3 minutes delay between 8 and 9am when the queue was roughly 50% of the peak distance.
- 3.23 In summary, the observations confirm that:
- the A1198 bypass has removed any traffic congestion from Papworth and this includes the Business Park junction which appears to have significant spare capacity;
 - the three bypass roundabouts have significant spare capacity; and
 - the A428/A1198 Caxton Gibbet roundabout is operating at or over capacity in the morning peak with estimated delays on the A1198 southern arm of between 3 and 6 minutes.

A14 Improvements and Traffic Diversions through Papworth Everard

- 3.24 The major works to improve the A14 between the Huntingdon and Cambridge north of Papworth Everard have now been substantially completed, with finishing works currently ongoing.
- 3.25 The works along the A14 necessitated the creation of a variety of local traffic diversions for the duration of the works. These diversions have significantly affected traffic in the Papworth Everard area and along the A428 corridor. One key diversion takes traffic from the A14 north of Cambridge via the A428 and the A1198 Papworth Everard bypass. It is expected that sometime after the works are fully completed, traffic will settle into an amended equilibrium with less queues and delays local to Papworth Everard.
- 3.26 For these reasons, no baseline traffic counts were undertaken for this assessment. An analysis has been carried out to estimate expected generated traffic, including an assignment based on Census travel to work data. Some conclusions are drawn regarding likely impacts based upon the site visit during the morning peak period described above, but these have been made based on the existing traffic conditions which are not typical of future, longer term traffic.

Other Strategic Transport Improvements

- 3.27 **East West Rail:** The east west rail proposal will provide a new rail service to connect Oxford, Milton Keynes, Bedford and Cambridge. The Western section of the route is already underway with a section open between Oxford and enabling works taking place for the route to Bedford. The Eastern section between Bedford and Cambridge will be routed via Cambourne, passing around 3km to the south of the site. Public consultation began last year for this section and the next stage will be route options and it is considered that construction could begin in 2025.
- 3.28 The East West Rail would interchange with several main lines giving passengers access to local and long-distance destinations across the UK, such as Reading, Norwich, Kettering, Leeds, Corby and Nottingham, as well as several stations in London.
- 3.29 The impact on Papworth Everard and the surrounding villages will be a reliable rail link which would be expected to be accessible via a short bus ride from the village. The East West rail would therefore be expected to have a positive impact on the sustainability of new

development in Papworth Everard providing a much greater level of access to employment, education, leisure, and retail possibilities without the need for medium to long car journeys.

- 3.30 **A428 Black Cat to Caxton Gibbet improvements:** The Caxton Gibbet roundabout is located 1.5km to the south of Papworth Everard and provides access to the wider road network via the A428. The A428 is currently the only stretch of single carriageway between Cambridge and Milton Keynes, providing an important strategic link and access for local communities between Bedford, St Neots, Cambourne and Cambridge.
- 3.31 The route can experience large volume s of traffic leading to delays, due to the limited East West options available. As such Highways England are proposing to upgrade the route between the Black Cat roundabout and Caxton Gibbet with a new 10-mile dual carriageway. This is expected to cut the average commute between Black Cat and Caxton Gibbet junctions by more than a third, saving up to 10 minutes on every trip.
- 3.32 The Development Consent Order application is currently undergoing its hearings and examinations process, with the end of examination period for this application expected to be in mid-February 2022. The new road link would significantly improve future resident's access to the wider road network.
- 3.33 **Cambourne to Cambridge Public Transport Route and New Park and Ride Site:** A number of options are being considered by the Greater Cambridge Partnership (GCP) to improve journeys from the west of Cambridge into the city. This follows a successful public consultation with options soon to be presented for approval to the GCP Board for approval.
- 3.34 Phase 1 includes:
- public transport route between Cambourne and Cambridge, providing reliable and sustainable services bypassing general traffic congestion;
 - A new Park & Ride site off the A428/A1303; and
 - New cycling and walking facilities.
- 3.35 Phase 2 includes: the link west of Madingley Mulch roundabout to Bourn Airfield and on to Cambourne, and a new Park & Ride facility. The Park and ride options include two sites to the west of Cambridge off the A428 (Scotland Farm & Madingley Mulch roundabout / Water works site).
- 3.36 Should the scheme be improved it is expected that the bus services from Papworth which already pass though Cambourne and Cambridge would make use of the potential busway/public transport route, greatly improving the journey time for public transport journeys in and out of the city. The addition of the new park and ride will also provide access to further regular bus services direct into the city which could be used by the new residents.
- 3.37 It is clear from the above that major investment is being made in the A428 corridor which would support additional development in Papworth and make journeys between Papworth, Cambridge and wider destinations open to additional sustainable options for travel.

Census Data

- 3.38 The census data has been used to provide an overview of commuter travel to and from Papworth. The data is from 2011, which is prior to Papworth hospital relocation to the Cambridge Biomedical Campus near Addenbrookes in Cambridge in 2019. It is also prior to a substantial increase in population due to new housing at Summers Hill. In 2015, Papworth hospital employed about 1500 staff.
- 3.39 **Figure 3.1** shows outward commuting patterns for residents of the study area. It shows that, in 2011, 21% of residents in employment worked in the study area. The remainder show a clear northwest to southeast arc associated with the A14/M11 and A428 transport corridors. Few residents commute into the centre of Cambridge but a notable proportion travel to the Cambridge Biomedical Campus (adjacent to Addenbrooke's Hospital), which is likely to have increased with the relocation of Papworth Hospital. Nearer to home, a notable proportion work in and around Cambourne with a smaller number travelling north to Huntingdon.

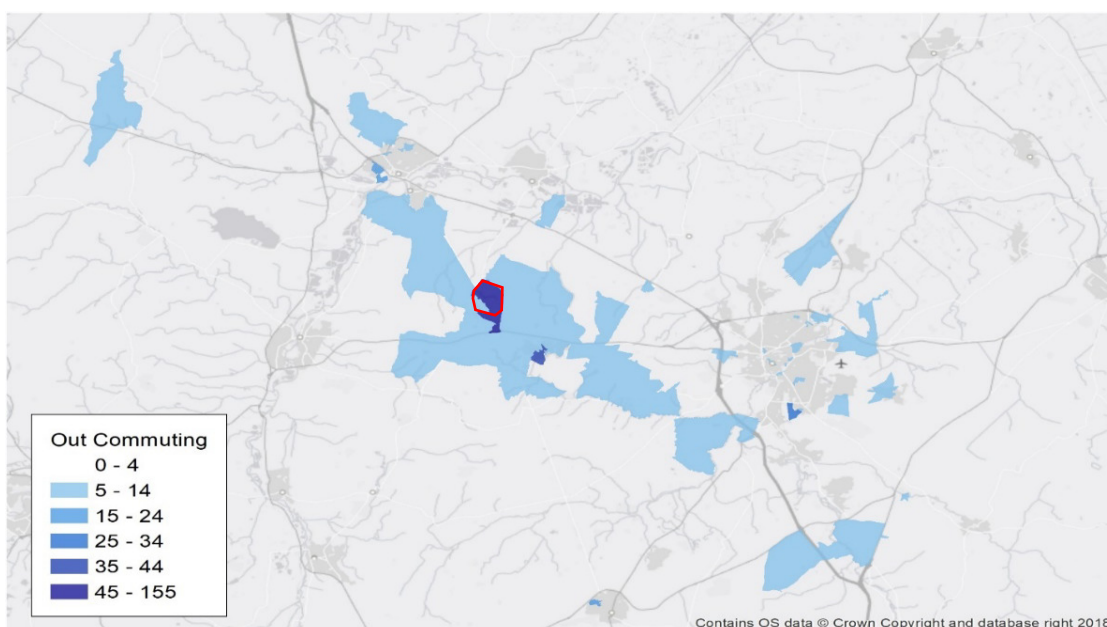


Figure 3.1: Outcommuting from Papworth Everard, 2011 Census

- 3.40 **Figure 3.2** shows some 13% of workplaces in the study area filled by those living in Papworth Everard the study area; there are approximately 1.7 workplaces in the study area for every resident in employment. Of those commuting into the study area, clearly most come from the northeast. St Ives appears to be a particularly preferred location, possibly because of the B1040 providing good direct access across the A14 and lower house prices.

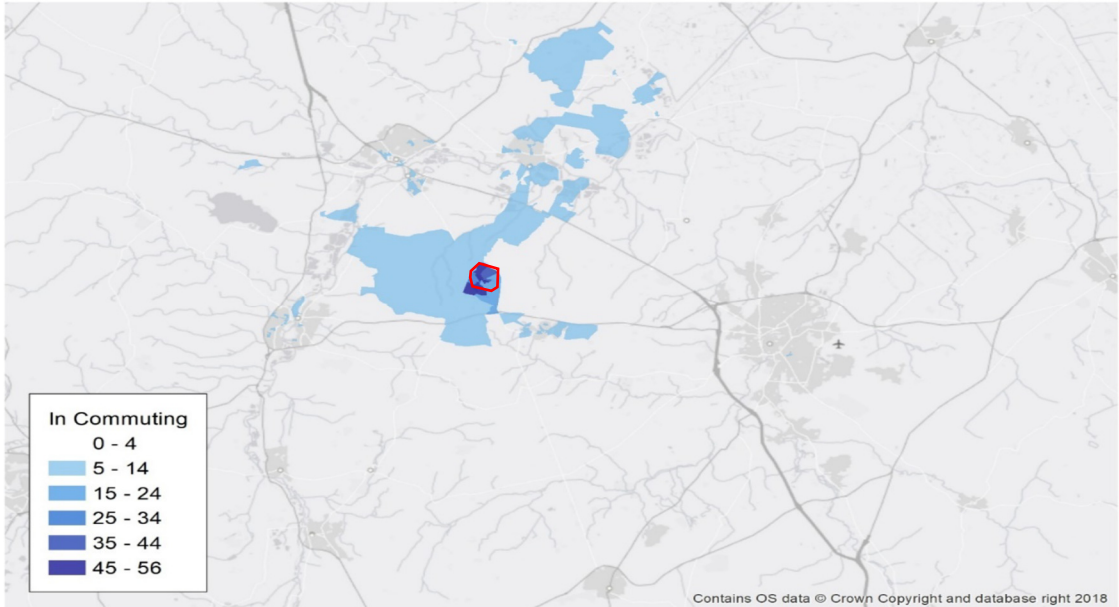


Figure 3.2: In commuting to Papworth Everard, 2011 Census

3.41 Figure 3.3 shows the modes of travel to work in 2011.

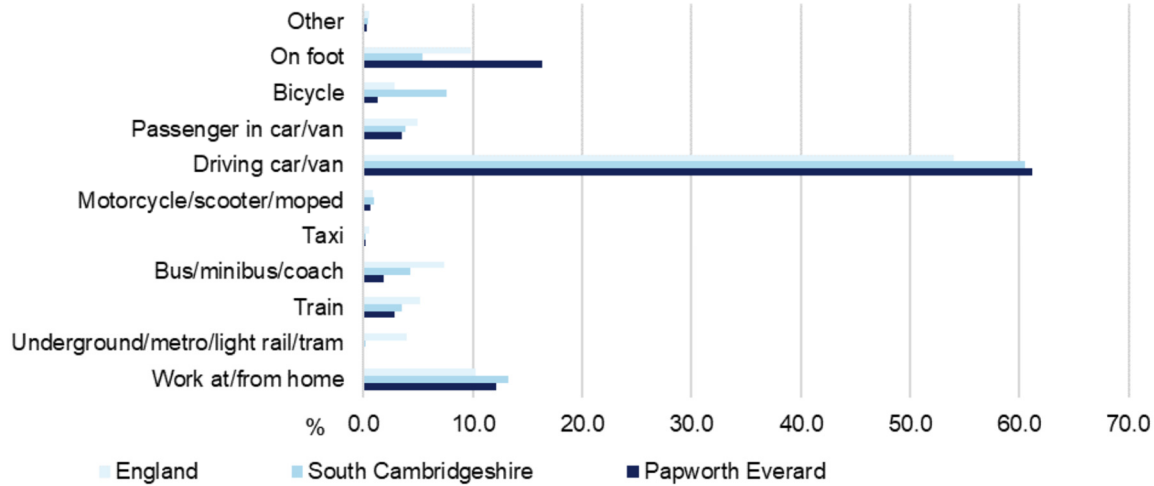


Figure 3.3: Mode of travel to work, 2011 Census

3.42 Figure 3.3 shows that just over 60% of residents travel to work by car with a further 5% as a passenger. A significant proportion of around 16% walk to work which is around three times the average in the district. Relatively few commute by bus or train.

3.43 The travel patterns could be expected to change should the public transport improvements identified above take place making commuting in and out of the centre of Cambridge much easier for residents.

4 The Proposed Development

Introduction

- 4.1 It is proposed to develop Site A for between 301 - 452 dwellings. The proposed developable areas are spread within the site into a number of discrete areas as shown on the illustrative masterplan in **Appendix D**.
- 4.2 This section describes the proposed connections for the development site to Papworth Everard and in particular the extension into the site of the existing excellent walking and cycling facilities in and around the village.

Pedestrian and Cycle Access

- 4.3 Papworth Everard has good existing pedestrian and cycle provision and the development site represents an excellent opportunity to further strengthen Site A's connections to the existing village. A pedestrian and cycle route will be provided running from north to south through the site centre, including use of the existing route through the ancient village area around St Peters Church. This route will link the existing settlement to Site A at a series of points including at the northern end close to Pendragon Primary School and at the southern end linking to Papworth Business Park.
- 4.4 Pedestrian and cycle links are proposed from the site as shown on the layout in **Appendix D**, to include:
- access to Ermine Street at the southern site vehicle access where the existing bridleway crosses Ermine Street, providing access on foot towards the Papworth Business Park;
 - access to Summers Hill Drive at its south-western corner;
 - access between the public open space within the southern section of the site from the Summers Hill Estate at its north-western corner;
 - access via the existing footpath extending from Church Road through the middle section of the site;
 - access at Church Road via the existing public footpath that crosses the A1198 bypass close to the A1198/B1040 roundabout; and
 - two accesses across the existing brook in the north of the site providing access to the northern half of Papworth Everard, linking up with the "School Walk" and Pendragon Primary School.
- 4.5 The two proposed pedestrian accesses between the northern site area and the existing Papworth Everard network would require footbridges across the brook. These would be achievable and would provide convenient, relatively level, pedestrian and cycle access between the northern section of Site A and the northern and central sections of Papworth Everard, which includes the majority of Papworth local facilities including the primary school and local shops and businesses in Pendrill Court.
- 4.6 The central pedestrian and cycle routes, including the proposed extensions at Church Road and across the public open space to the north-west of Summers Hill Estate, are across a

significant gradient up towards Papworth from the site. These connections use existing public foot paths and would be suitable for leisure trips.

- 4.7 The connections between the southern site area and the Summershill Estate and to Ermine Street at the proposed left in left out access would be at a level gradient and would be suitable as formal footway connections between the site and the Summershill Estate and Papworth Business Park.
- 4.8 The internal cycle/pedestrian route linking the development site and the accesses to Papworth Everard is also shown on the plan in **Appendix D**.

Proposed foot and cycle improvements

- 4.9 Proposed footway and cycleway access will follow the guidance set out in the Draft Papworth Everard Village Design Guide and will be 2m wide tarmac or paved routes where appropriate (through the public open space to the south, more informal routes may be appropriate).
- 4.10 Proposals to enhance the existing excellent footway and cycleway connections will be considered. These could include providing lighting for The School Walk along its northern most section to the north of Pendragon Primary School. This would be particularly appropriate if the existing Primary school were to be extended.
- 4.11 Other improvements could include an improved pedestrian crossing across Ermine Street at the site southern end. This could be an improved crossing at the existing bridleway crossing point or it could be a footway along the A1198 western side from the proposed vehicle access to the existing signal junction crossing point at Summers Hill Drive.

Vehicle access

- 4.12 Vehicle access will be provided from a new fourth arm on the A1198/B1040 bypass roundabout. There is currently a spur where the new arm will be placed, however to meet the required design standards the ICD of the roundabout would need to be increased to facilitate access to the development site. A plan illustrating the proposed new roundabout design with larger ICD is included in **Appendix F**.
- 4.13 A second vehicle access point is proposed to the south of Papworth Everard on Ermine Street between the Business Park signal junction and the A1198/Ermine Street roundabout. This is also illustrated in Appendix F. This second access will be a priority junction which may be required limited to left turn in and out only to avoid conflict with the signal junction, subject to future design and discussion with the highway authority.

Bus Improvements

- 4.14 The existing bus services could be extended into the site. For example, the existing 8 bus starts in Papworth Everard and provides services to Cambridge via villages north of Papworth Everard including Hilton, Elsworth and Boxworth. This service could be extended to start within the site and continue to Ermine Street via the proposed southern site left in left out junction as shown in the plan in **Appendix E**.

- 4.15 This extended bus service would provide a bus service within approximately 400m walk of all of the new site developed area. This would be subject to agreement with the bus operator.
- 4.16 Alternatively, bus routes X2 and X3 (which run between Huntingdon and Cambridge) can also both be diverted into the site via the amended roundabout off the A1198 and the new Ermine Street access, thereby expanding its potential catchment area, making this service more viable. Again the diverted service can bring a bus route within 400m walk of all dwellings on the site.
- 4.17 It is also not excluded that the proposed development on site could fund an improved bus frequency on either of these routes, through the introduction of new services. It is noted that the development quantum of the scheme under consideration would allow for such funding to be allocated appropriately.

Parking

- 4.18 Car and cycle parking will be provided in accordance with the standards in the South Cambridgeshire Local Plan (2018) unless agreed otherwise with the Planning Authority at a Reserved Matters stage.

5 Transport impact

Introduction

- 5.1 This section provides an overview of expected traffic generated by the proposed development and the likely distribution on the local road network.
- 5.2 Note that due to the A14 diversions as described in section 3, no baseline traffic counts have been undertaken for this assessment. This section describes an analysis estimating expected generated traffic, including an assignment based on Census travel to work data. Some conclusions are drawn regarding likely impacts based upon the site visit during the morning peak period described in section 3, but these have been made based on the existing traffic conditions which are not typical of future, longer term traffic.

Trip Generation Forecasting

- 5.3 The TRICS database was used to estimate person trip rates for privately owned housing, using data for suburban, edge of town and neighbourhood centre sites in East Anglia and southeast England. Table 6.1 shows the trip rates obtained and the estimated trip numbers for a development of 655 houses which is the maximum expected development quantum. **Appendix G** shows the full TRICS output.

	08:00 – 09:00			17:00 – 18:00			07:00 – 19:00		
	In	Out	Total	In	Out	Total	In	Out	Total
Trip rates	0.215	0.831	1.046	0.630	0.285	0.915	4.125	4.241	8.366
Trips	141	544	685	413	187	599	2702	2778	5480

Table 5.1: Person trip rates (all modes) and estimated trip numbers for a development of 655 private houses (TRICS 7.5.4)

- 5.4 The expected mode shares predicted from the TRICS data is shown in table 5.2 alongside the census commuting to work mode share.

	AM	PM	All day	Census
Car drivers	50%	55%	56%	69%
Car passengers	31%	27%	26%	4%
Pedestrians	14%	12%	13%	20%
Cyclists	2%	3%	2%	1%
Bus	2%	2%	2%	2%
Rail	1%	1%	1%	3%
Total	100%	100%	100%	100%

Table 5.2: Predicted Modal splits

- 5.5 The TRICS data predicts lower car mode share and significantly higher passenger mode share than the census. This is to be expected as the census is specifically commuter travel where passenger numbers will be lower than for other types of journey, including for example the school run or leisure trips, where there are likely to be passengers.
- 5.6 Table 5.3 shows the estimated car driver trips based upon the TRICS data for peak hours and daily.

	08:00 – 09:00			17:00 – 18:00			07:00 – 19:00		
	In	Out	Total	In	Out	Total	In	Out	Total
Car drivers	90	252	342	227	103	331	1525	1554	3079

Table 5.3: Estimated car driver trips for 655 private houses

Assigning the Development Traffic

- 5.7 Car driver trips were assigned using Census origin-destination data with the origin or home area taken to be the Middle Layer Super Output Area (MSOA) South Cambridgeshire 21, containing Papworth Everard. Flows to workplaces in MSOAs in South Cambridgeshire, and to local authority areas outside the District, were assigned to roads on an all or nothing basis, according to journey time. Within MSOA South Cambridgeshire 003 itself, flows were distributed equally to the village centre, to Caxton Gibbet and to the Papworth Business Park as representing the three main employment attractors. Table 5.4 shows the predicted traffic distribution based on the assignment analysis. The full analysis is included in Appendix H.

	percent	08:00 - 09:00			17:00 - 18:00			07:00 - 19:00		
		In	Out	Total	In	Out	Total	In	Out	Total
A1198 North	18%	17	46	62	42	19	60	278	284	562
B1040 North	5%	4	12	17	11	5	16	74	75	149
B1040 south	11%	10	27	36	24	11	35	162	165	328
A428 east	55%	49	138	187	124	57	181	834	850	1683
A428 west	0%	0	0	0	0	0	0	0	0	0
A1198 South	5%	4	12	16	11	5	16	73	75	148
Ermine Street	3%	3	9	12	8	4	11	52	53	104
Business Park	3%	3	9	12	8	4	11	52	53	104
total		90	252	342	227	103	331	1525	1554	3079

Table 5.4: Development traffic assignment

- 5.8 Table 5.4 suggests that an estimated 60% of development traffic will use the A1198 southwards with 55% heading west along the A428 and 5% heading south along the A1198.

Impact on the Junctions

- 5.9 No impact assessments have been undertaken as no baseline or existing traffic counts were possible due to the A14 works as described in section 3. However, the majority of the new trips will use the proposed new fourth arm at the A1198/B1040 roundabout. This will mean up to an additional 342 morning peak hour trips and 331 evening peak hour trips on this roundabout and the A1198 bypass north and southbound. These are slightly below six additional trips per minute. Based upon on site observations, there is sufficient capacity on the existing bypass and on existing local junctions to cope with this additional traffic, with the exception of the Caxton Gibbet A428/A1198 roundabout which is already congested.
- 5.10 The development is expected to add approximately 150 additional vehicles to the southbound A1198 approach to Caxton Gibbet roundabout in the morning peak hour, with a similar number in the hour 7 to 8am. These additional vehicles per hour would result in an additional 2 to 3 vehicles per minute at peak times southbound on the A1198. Based upon an observed queuing time of 6 minutes from the A1198 Papworth Everard southern

roundabout to the Caxton Gibbet roundabout, these flows could be expected to increase southbound queues at the most congested time around 7:30am by between 12 to 15 vehicles and between 8 and 9am by about 5 to 10 vehicles.

- 5.11 These estimates are valid for the observed situation, where a potentially significant proportion of the traffic at the Caxton Gibbet roundabout has diverted from the A14. If this traffic were to re-assign post completion of the A14 works, then the existing observed queues would be smaller, and the additional delay caused by additional development traffic would be lower.
- 5.12 Even with the current congested conditions, there is sufficient road space to store the additional traffic on the A1198 bypass and so the development traffic will increase delays to some extent but will not fundamentally affect existing junction operation or capacity.
- 5.13 No assessment of the evening peak period has been undertaken but it is expected that the morning peak period would represent the period experiencing the greatest congestion.

6 Summary and Conclusions

Summary

- 6.1 This document has been prepared to inform site representations to the Greater Cambridge Local Plan Regulation 18 Issues and Options consultation. The contents of this report form a preliminary assessment of Papworth Everard site A in terms of highways and transport.
- 6.2 The site is located to the west of the existing settlement of Papworth Everard and is enclosed to the west by the A1198 Papworth Everard bypass and to the east by the existing Papworth Everard village boundary. The 40ha site is currently greenfield. For the purposes of this report it is proposed that the site will comprise of a residential development of between 301 - 452 dwellings.
- 6.3 Papworth Everard has good existing pedestrian and cycle provision and the development site represents an excellent opportunity to further strengthen the development area's connections to the existing village. A pedestrian and cycle route will be provided running from north to south through the site centre, including use of the existing route through the ancient village area around St Peters Church. This route will link the existing settlement to the development site at a series of points including at the northern end close to Pendragon Primary School and at the southern end linking to Papworth Business Park.
- 6.4 Proposals to enhance the existing excellent footway and cycleway connections will be considered. These could include providing lighting for The School Walk along its northern most section to the north of Pendragon Primary School. This would be particularly appropriate if the existing Primary school were to be extended.
- 6.5 Other improvements could include an improved pedestrian crossing across Ermine Street at the site southern end. This could be an improved crossing at the existing bridleway crossing point or it could be a footway along the A1198 western side from the proposed vehicle access to the existing signal junction crossing point at Summers Hill.
- 6.6 The existing bus services could be extended into the site. For example, the existing 8 bus terminates in Papworth Everard and provides services to Cambridge via Cambourne could enter the site from the proposed Ermine Street access and loop through the site before continuing through Papworth via the A1198 bypass.
- 6.7 Vehicle access will be provided from a new fourth arm on the A1198/B1040 bypass roundabout. There is currently a spur where the new arm will be placed, however to meet the required design standards the ICD of the roundabout would need to be increased to facilitate access to the development site.
- 6.8 A second vehicle access point is proposed to the south of Papworth Everard on Ermine Street between the Business Park signal junction and the A1198/Ermine Street roundabout. This second access will be a priority junction which may be required limited to left turn in and out only to avoid conflict with the signal junction, subject to future design and discussion with the highway authority.
- 6.9 The majority of the new trips generated by the development will use the proposed new fourth arm at the A1198/B1040 roundabout. This will mean up to an additional 342 morning peak hour trips and 331 evening peak hour trips on this roundabout and the A1198 bypass north and southbound. These are slightly below six additional trips per minute. There is expected to be sufficient capacity on the existing bypass and on existing local junctions to

cope with this additional traffic, with the exception of the Caxton Gibbet A428 A1198 roundabout which is currently congested due to the A14 diversions.

- 6.10 The development is expected to add approximately 150 additional vehicles to the southbound A1198 approach to Caxton Gibbet roundabout in the morning peak hour, with a similar number in the hour 7 to 8am. These additional vehicles per hour would result in an additional 2 to 3 vehicles per minute at peak times southbound on the A1198. Based upon an observed queuing time of 6 minutes from the A1198 Papworth Everard southern roundabout to the Caxton Gibbet roundabout, these flows could be expected to increase southbound queues at the most congested time around 7:30am by between 12 to 15 vehicles and between 8 and 9am by about 5 to 10 vehicles.
- 6.11 These estimates are valid for the observed situation, where a potentially significant proportion of the traffic at the Caxton Gibbet roundabout has diverted from the A14. If this traffic were to re-assign post completion of the A14 works, then the existing observed queues would be smaller and the additional delay caused by additional development traffic would be lower.
- 6.12 Even with the current congested conditions, there is sufficient road space to store the additional traffic on the A1198 bypass and so the development traffic will increase delays to some extent but will not fundamentally affect existing junction operation or capacity.
- 6.13 A number of improvements are proposed to the A428 corridor as discussed in this report which are expected to be built out over the next decade. This includes the East West Rail scheme and the Cambourne to Cambridge Public Transport Route and New Park and Ride Site. These major works would provide a much greater degree of sustainable travel options for the new residents, particularly for access in and out of Cambridge; and would therefore further support development in Papworth Everard.

Conclusion

- 6.14 Papworth Everard is a sustainable settlement and site A has excellent connections to the village and its facilities. Site A is therefore a sustainable location suitable for the proposed up to 452 new dwellings.

7 Appendices

Appendix: A – Location Plan
Appendix: B – Village Design Guide connections plan
Appendix: C – Local Facilities Plan
Appendix: D – Illustrative Masterplan
Appendix: E – Proposed Bus Route Extension
Appendix: F – Proposed Access Plans
Appendix: G – TRICS Data
Appendix: H – Trip Distribution



Appendix: A – Location Plan



- LEGEND**
- Red line boundaries (A,B and C)
 - Existing roads
 - Drainage channel
 - Existing Public Rights of Way
 - Conservation Area
 - Existing woodland
 - Existing significant woodland / SSSI
 - Existing informal open space
 - Scheduled ancient monument
 - Overhead electricity line
 - Existing allotments
 - Protected amenity
 - Pendragon Community Primary School
 - Existing LAP and 100m isochrone
 - ✱ Grade II Listed Building
 - ✱ Grade II* Listed Building
 - Existing bus stop
 - ▲ Potential vehicular access
 - ▴ Potential pedestrian / cycle access

Rev.	Date.	Details.

Do not scale from this drawing. All dimensions to be checked on site. This plan is to be read with all accompanying documentation. © Bidwells 2019



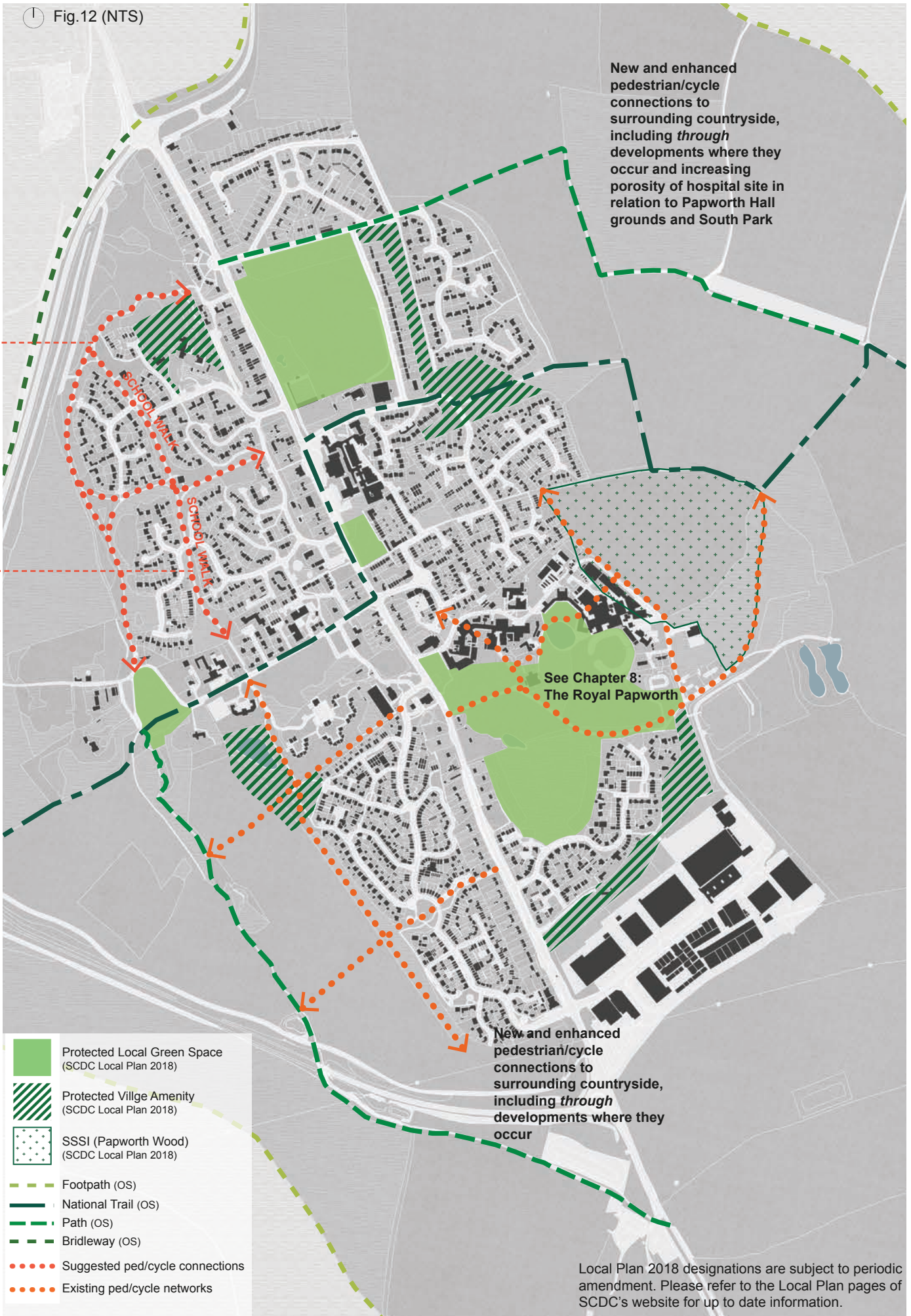
**PAPWORTH ESTATE
VARRIER JONES FOUNDATION
PAPWORTH EVERARD CONTEXT**

Job Code: 45598	OS License Number: 100017734	
Drawing Scale: NTS	Date: 11.03.19	Drawn By: HD
Drawing Number: UDS45598-A3-0101	Checked By: DP	Revision: -



Appendix: B – Village Design Guide connections plan

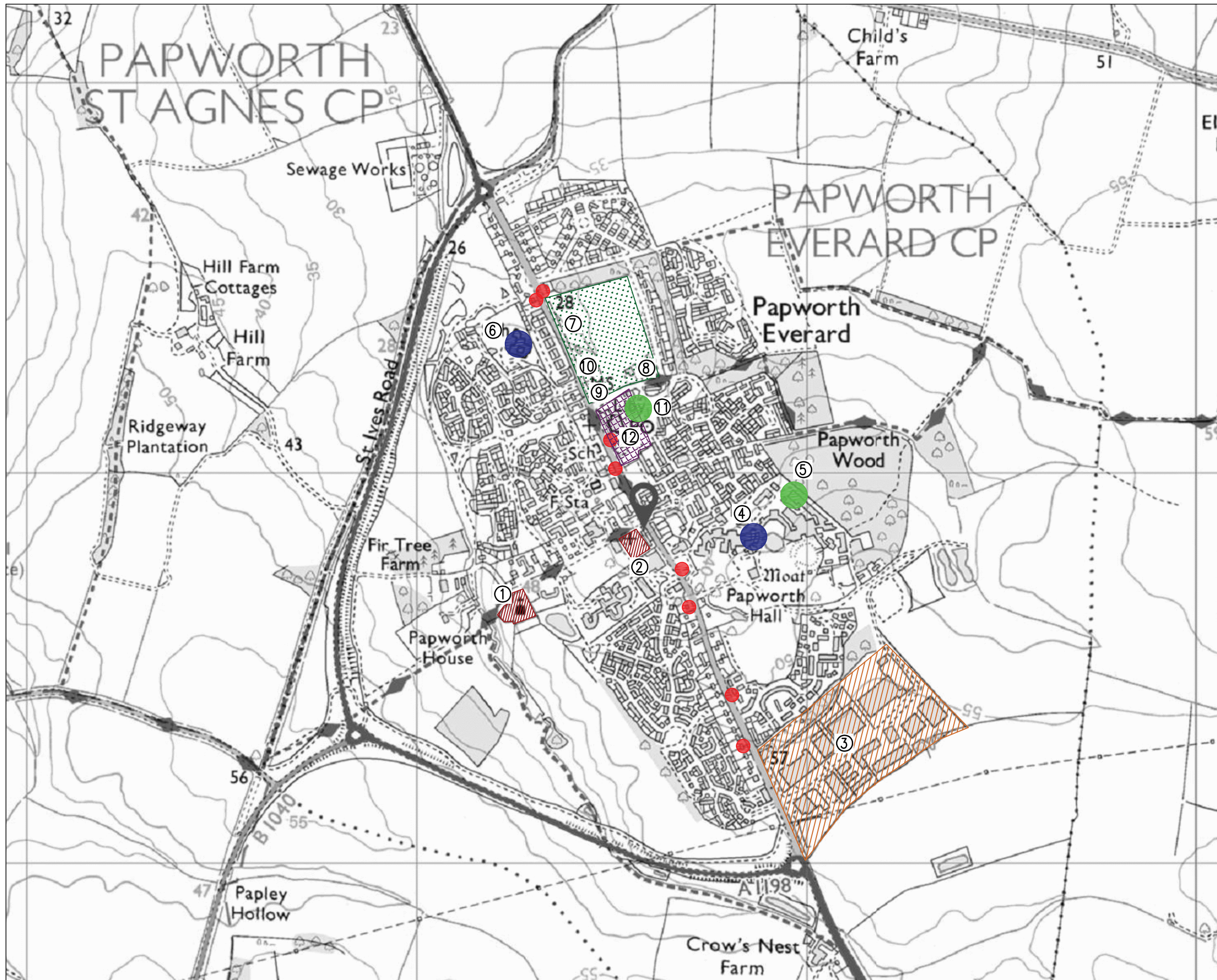
Fig.12 (NTS)



Local Plan 2018 designations are subject to periodic amendment. Please refer to the Local Plan pages of SCDC's website for up to date information.



Appendix: C – Local Facilities Plan



KEY:

- BUS STOPS
- SCHOOLS
- HEALTH CARE
- RELIGIOUS BUILDINGS
- LOCAL SHOPS
- LEISURE FACILITIES
- BUSINESS PARK

REV	DATE	BY	DESCRIPTION	CHK	APD

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EAS

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Tel: 01920 871777
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CLIENT:

ARCHITECT:

PROJECT:

PAPWORTH EVERARD

TITLE:

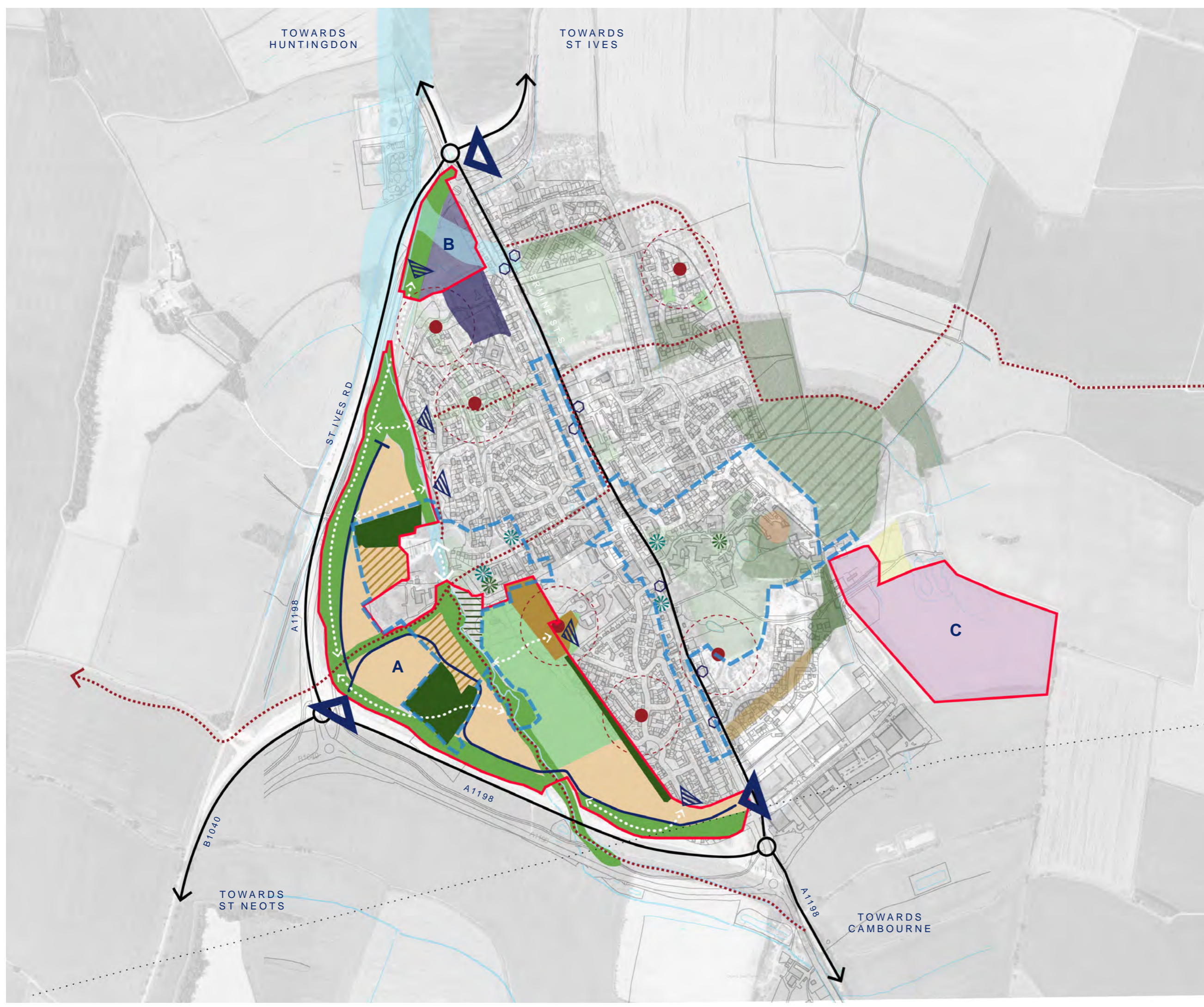
LOCAL FACILITIES WITHIN PAPWORTH EVERARD

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> 1. ST PETERS CHURCH 2. ST THOMAS INDIAN ORTHODOX CHURCH 3. PAPWORTH BUSINESS PARK 4. CHILDREN ARK DAY NURSERY 5. PAPWORTH CLINIC 6. PENDRAGON COMMUNITY PRIMARY SCHOOL | <ul style="list-style-type: none"> 7. PAPWORTH EVERARD PLAYGROUND AND PADDLING POOL 8. PAPWORTH BLASTERS FOOTBALL CLUB 9. PAPWORTH TENNIS CLUB 10. PAPWORTH BOWLING GREEN 11. PAPWORTH SURGERY | <ul style="list-style-type: none"> 12. LOCAL SHOPPING AREA INCLUDING: <ul style="list-style-type: none"> . NORFOLK STREET DELI . PAPWORTH LIBRARY . ASHCROFT VETINARY SURGERY . MAP BIOPHARMA LIMITED . NISA LOCAL . LUKES TRADITIONAL FISH AND CHIPS |
|---|---|---|

SCALE @ A3: 1:10000	DESIGN-DRAWN: ET	DATE: 11/02/2020
PROJECT No:	DRAWING No: FIG03	



Appendix: D – Illustrative Masterplan



- LEGEND**
- Red line boundaries (A,B and C)
 - Existing roads
 - Drainage channel
 - Existing Public Rights of Way
 - Conservation Area
 - Existing significant woodland
 - Existing significant woodland / SSSI
 - Existing informal open space
 - Scheduled ancient monument
 - Overhead electricity line
 - Potential employment (C)
 - Existing allotments
 - Protected Village Amenity Area
 - Pendragon Community Primary School
 - Existing LAP and 100m isochrone
 - Grade II Listed Building
 - Grade II* Listed Building
 - Existing bus stop
 - Potential vehicular access
 - Potential pedestrian / cycle access
 - Potential vehicular route
 - Potential developable area (A)
 - Potential developable area within Conservation Area (A)
 - Green link / edge including SuDS
 - Potential woodland
 - Potential pedestrian / cycle route
 - Potential open space / school expansion (B)

SITE A -	
Potential developable area:	18.70 ha
Potential new dwellings:	465 - 655 (25 - 35dph)

Rev.	Date.	Details.

Do not scale from this drawing. All dimensions to be checked on site. This plan is to be read with all accompanying documentation. © Bidwells 2019

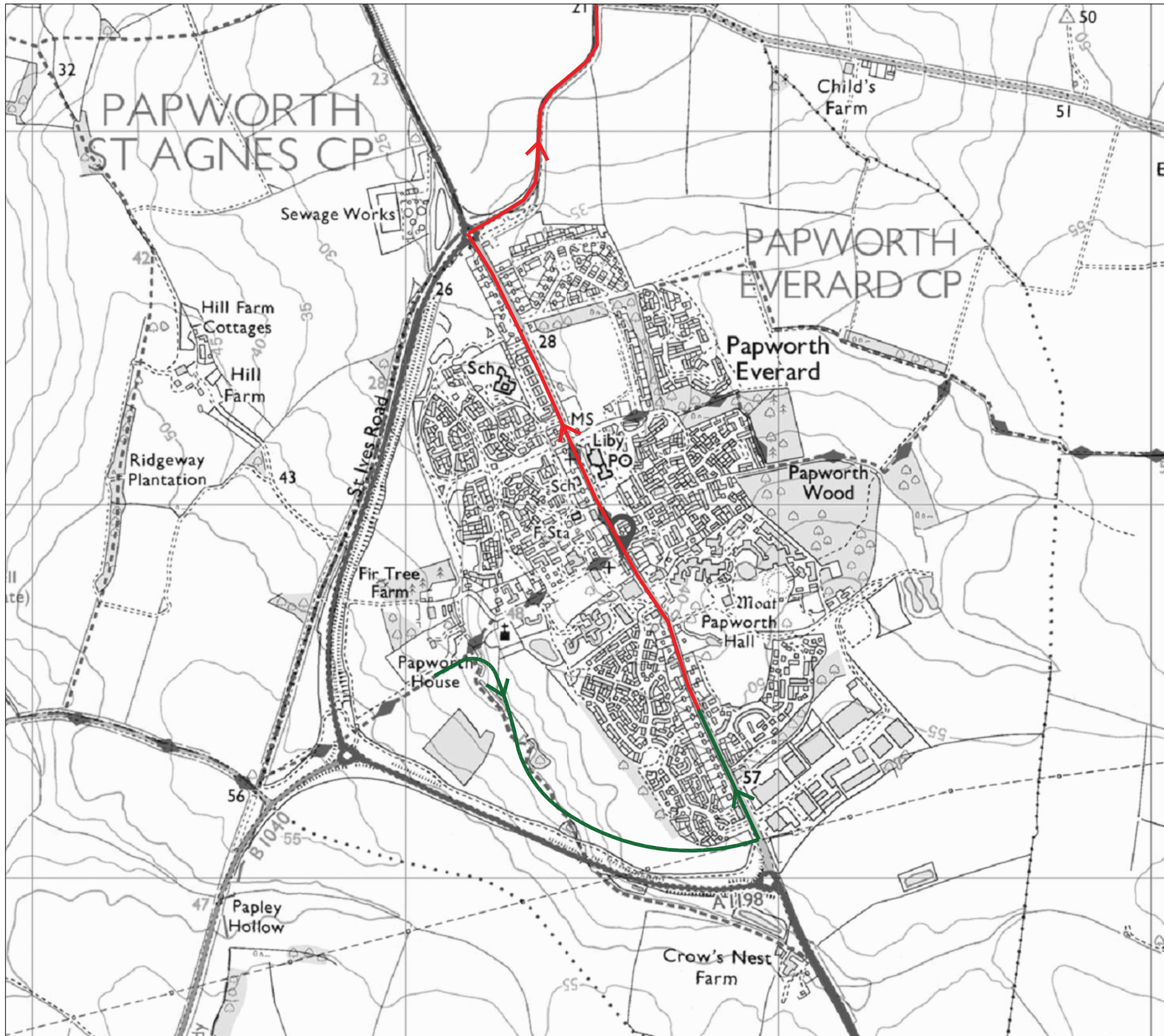




**PAPWORTH ESTATE
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CONCEPT STRATEGY**

Job Code: 45598	OS License Number: 100017734
Drawing Scale: NTS	Date: 11.03.19
Drawn By: HD	Checked By: DP
Drawing Number: UDS45598-A3-0102	Revision: -



Appendix: E – Proposed Bus Route Extension



-  EXISTING BUS ROUTE NO. 8
-  EXTENSION TO BUS ROUTE NO. 8 TO INCLUDE SITE A.

REV	DATE	BY	DESCRIPTION	CHK	APD

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PROJECT:
PAPWORTH EVERARD

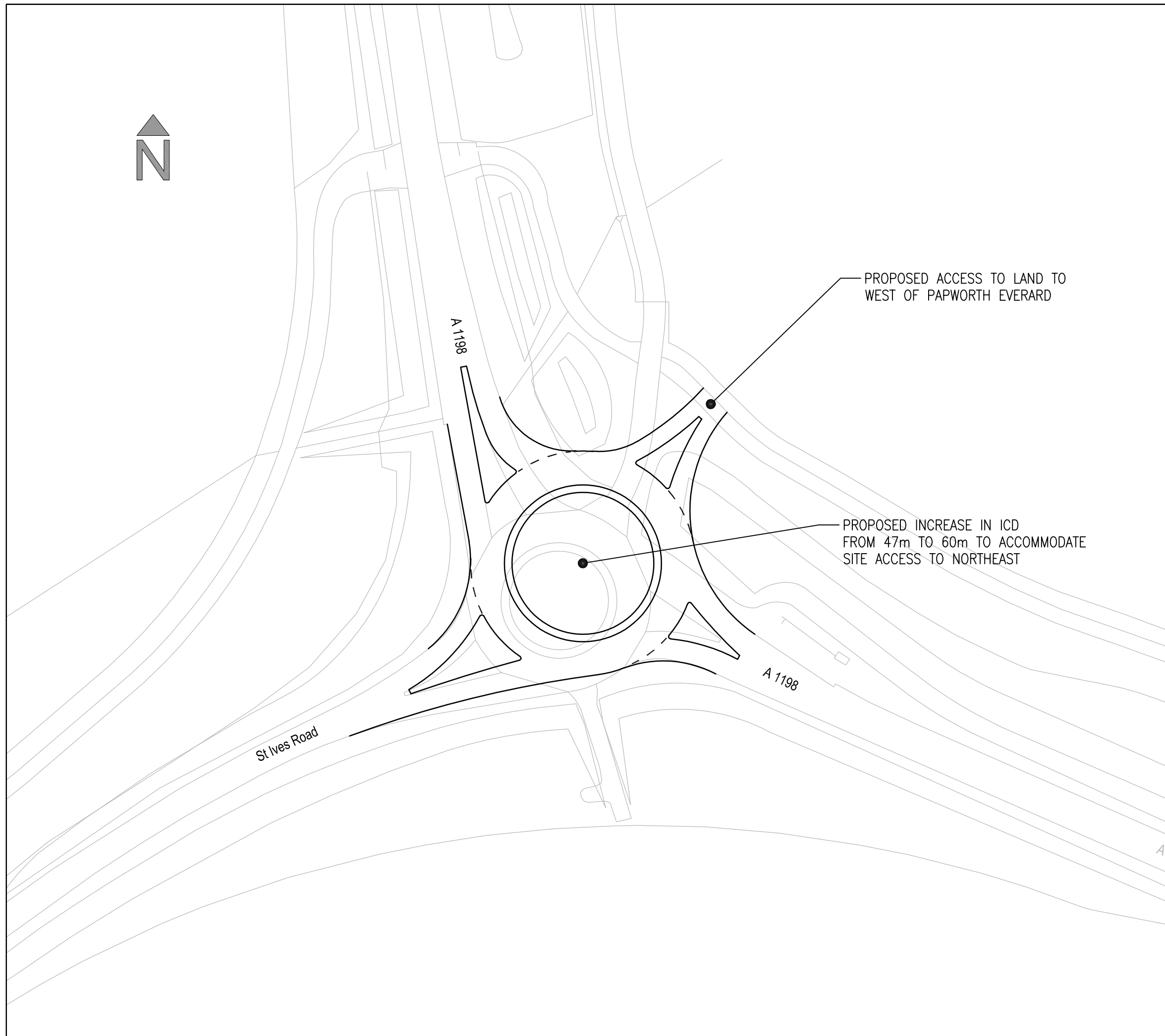
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PROJECT No:	DRAWING No: FIG03
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Appendix: F – Proposed Access Plans



PROPOSED ACCESS TO LAND TO WEST OF PAPWORTH EVERARD

PROPOSED INCREASE IN ICD FROM 47m TO 60m TO ACCOMMODATE SITE ACCESS TO NORTHEAST

REV	DATE	BY	DESCRIPTION	CHK	APD
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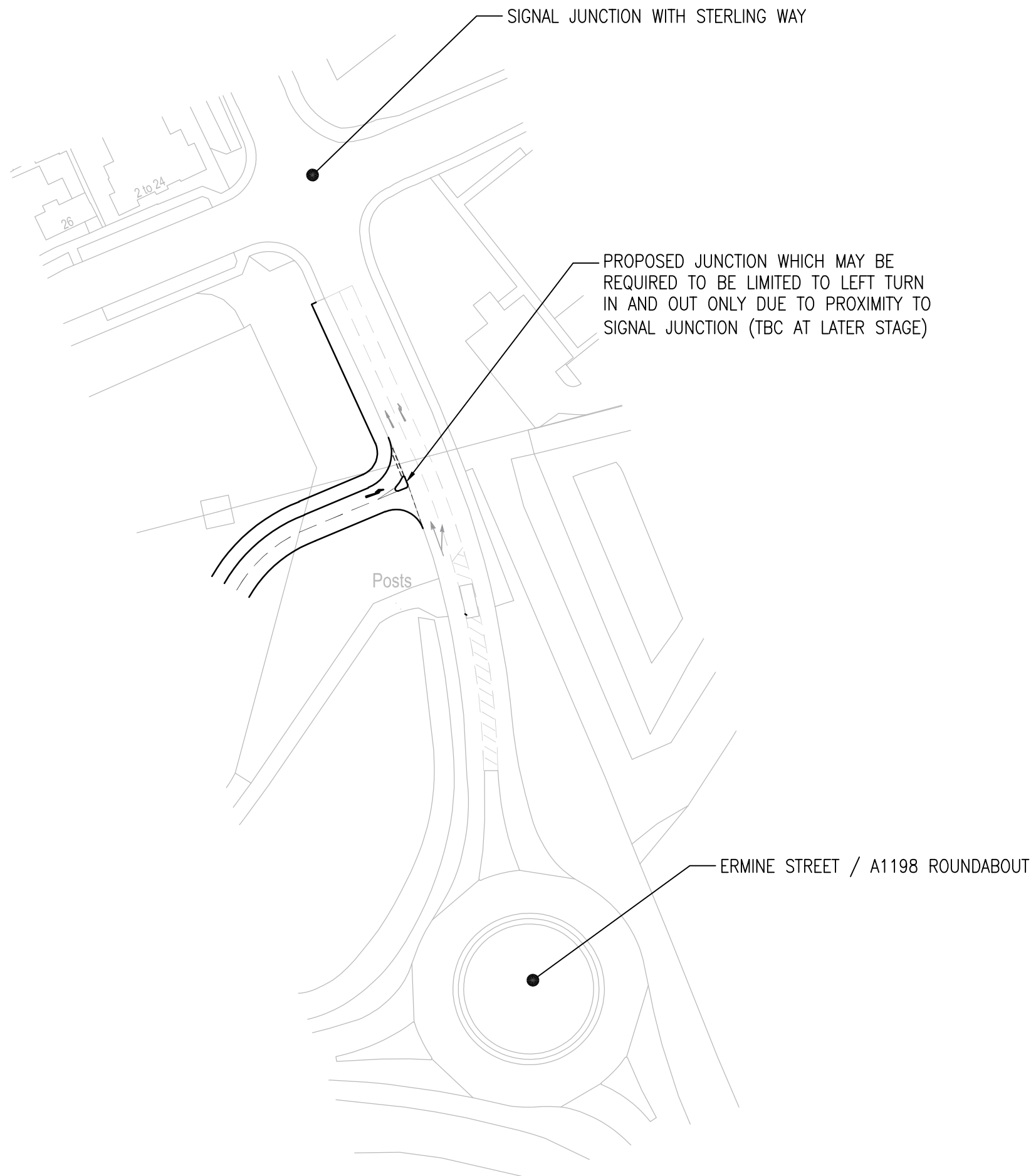
LAND TO THE WEST OF
PAPWORTH EVERARD

TITLE:

A1198 / ST IVES ROAD ROUNDABOUT
PROPOSED WORKS TO ADD ADDITIONAL
ACCESS TO NORTHEAST

SCALE © A3: 1:1000	DESIGN-DRAWN: SA	DATE: 12/02/2020
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PROJECT No: 2582	DRAWING No: SK01
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REV	DATE	BY	DESCRIPTION	CHK	APD
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Tel: 01920 871777
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CLIENT:

ARCHITECT:

PROJECT:

LAND TO THE WEST OF
PAPWORTH EVERARD

TITLE:

PROPOSED ACCESS OFF ERMINE STREET

SCALE © A3: 1:1000	DESIGN-DRAWN: SA	DATE: 12/02/2020
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PROJECT No: 2582	DRAWING No: SK02
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Appendix: G – TRICS Data

Calculation Reference: AUDIT-743101-190219-0242

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	3 days
	HC HAMPSHIRE	1 days
	KC KENT	5 days
	SC SURREY	1 days
	WS WEST SUSSEX	6 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	2 days
	NF NORFOLK	3 days
	SF SUFFOLK	3 days

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

Secondary 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: Number of dwellings
 Actual Range: 7 to 805 (units:)
 Range Selected by User: 7 to 805 (units:)

Parking Spaces Range: Selected: 16 to 1726 Actual: 16 to 1726

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 20/11/18

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	4 days
Wednesday	5 days
Thursday	7 days
Friday	5 days

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

Selected survey types:

Manual count	24 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	9
Edge of Town	12
Neighbourhood Centre (PPS6 Local Centre)	3

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.

Selected Location Sub Categories:

Residential Zone	21
Village	3

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.

Secondary Filtering selection:

Use Class:

C3 23 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,000 or Less	2 days
1,001 to 5,000	4 days
5,001 to 10,000	5 days
10,001 to 15,000	5 days
15,001 to 20,000	3 days
20,001 to 25,000	5 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	1 days
25,001 to 50,000	4 days
50,001 to 75,000	4 days
75,001 to 100,000	5 days
100,001 to 125,000	1 days
125,001 to 250,000	9 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	17 days
1.6 to 2.0	2 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	7 days
No	17 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	24 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-A-04	DETACHED		CAMBRI DGESHI RE
	PETERBOROUGH			
	THORPE PARK ROAD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		9	
	<i>Survey date: TUESDAY</i>		<i>18/10/11</i>	<i>Survey Type: MANUAL</i>
2	CA-03-A-05	DETACHED HOUSES		CAMBRI DGESHI RE
	EASTFIELD ROAD			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		28	
	<i>Survey date: MONDAY</i>		<i>17/10/16</i>	<i>Survey Type: MANUAL</i>
3	ES-03-A-02	PRIVATE HOUSING		EAST SUSSEX
	SOUTH COAST ROAD			
	PEACEHAVEN			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		37	
	<i>Survey date: FRIDAY</i>		<i>18/11/11</i>	<i>Survey Type: MANUAL</i>
4	ES-03-A-03	MIXED HOUSES & FLATS		EAST SUSSEX
	SHEPHAM LANE			
	POLEGATE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		212	
	<i>Survey date: MONDAY</i>		<i>11/07/16</i>	<i>Survey Type: MANUAL</i>
5	ES-03-A-04	MIXED HOUSES & FLATS		EAST SUSSEX
	NEW LYDD ROAD			
	CAMBER			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		134	
	<i>Survey date: FRIDAY</i>		<i>15/07/16</i>	<i>Survey Type: MANUAL</i>
6	HC-03-A-20	HOUSES & FLATS		HAMPSHIRE
	CANADA WAY			
	LIPHOOK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		62	
	<i>Survey date: TUESDAY</i>		<i>20/11/18</i>	<i>Survey Type: MANUAL</i>
7	KC-03-A-03	MIXED HOUSES & FLATS		KENT
	HYTHE ROAD			
	ASHFORD			
	WILLESBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		51	
	<i>Survey date: THURSDAY</i>		<i>14/07/16</i>	<i>Survey Type: MANUAL</i>
8	KC-03-A-04	SEMI-DETACHED & TERRACED		KENT
	KILN BARN ROAD			
	AYLESFORD			
	DITTON			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		110	
	<i>Survey date: FRIDAY</i>		<i>22/09/17</i>	<i>Survey Type: MANUAL</i>
9	KC-03-A-05	DETACHED & SEMI-DETACHED		KENT
	ROCHESTER ROAD			
	NEAR CHATHAM			
	BURHAM			
	Neighbourhood Centre (PPS6 Local Centre)			
	Village			
	Total Number of dwellings:		8	
	<i>Survey date: FRIDAY</i>		<i>22/09/17</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

10	KC-03-A-06 MARGATE ROAD HERNE BAY	MIXED HOUSES & FLATS		KENT
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 363 <i>Survey date: WEDNESDAY 27/09/17</i>			
11	KC-03-A-07 RECVLVER ROAD HERNE BAY	MIXED HOUSES		KENT
	Edge of Town Residential Zone Total Number of dwellings: 288 <i>Survey date: WEDNESDAY 27/09/17</i>			
12	NF-03-A-01 YARMOUTH ROAD CAISTER-ON-SEA	SEMI DET. & BUNGALOWS		NORFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 27 <i>Survey date: TUESDAY 16/10/12</i>			
13	NF-03-A-02 DEREHAM ROAD NORWICH	HOUSES & FLATS		NORFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 98 <i>Survey date: MONDAY 22/10/12</i>			
14	NF-03-A-03 HALING WAY THETFORD	DETACHED HOUSES		NORFOLK
	Edge of Town Residential Zone Total Number of dwellings: 10 <i>Survey date: WEDNESDAY 16/09/15</i>			
15	SC-03-A-04 HIGH ROAD BYFLEET	DETACHED & TERRACED		SURREY
	Edge of Town Residential Zone Total Number of dwellings: 71 <i>Survey date: THURSDAY 23/01/14</i>			
16	SF-03-A-04 NORMANSTON DRIVE LOWESTOFT	DETACHED & BUNGALOWS		SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 7 <i>Survey date: TUESDAY 23/10/12</i>			
17	SF-03-A-05 VALE LANE BURY ST EDMUNDS	DETACHED HOUSES		SUFFOLK
	Edge of Town Residential Zone Total Number of dwellings: 18 <i>Survey date: WEDNESDAY 09/09/15</i>			

LIST OF SITES relevant to selection parameters (Cont.)

18	SF-03-A-06 BURY ROAD KENTFORD	DETACHED & SEMI -DETACHED		SUFFOLK
	Neighbourhood Centre (PPS6 Local Centre) Village			
	Total Number of dwellings:		38	
	<i>Survey date: FRIDAY</i>		<i>22/09/17</i>	<i>Survey Type: MANUAL</i>
19	WS-03-A-04 HILLS FARM LANE HORSHAM BROADBRIDGE HEATH	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone			
	Total Number of dwellings:		151	
	<i>Survey date: THURSDAY</i>		<i>11/12/14</i>	<i>Survey Type: MANUAL</i>
20	WS-03-A-05 UPPER SHOREHAM ROAD SHOREHAM BY SEA	TERRACED & FLATS		WEST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone			
	Total Number of dwellings:		48	
	<i>Survey date: WEDNESDAY</i>		<i>18/04/12</i>	<i>Survey Type: MANUAL</i>
21	WS-03-A-06 ELLIS ROAD WEST HORSHAM S BROADBRIDGE HEATH	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone			
	Total Number of dwellings:		805	
	<i>Survey date: THURSDAY</i>		<i>02/03/17</i>	<i>Survey Type: MANUAL</i>
22	WS-03-A-07 EMMS LANE NEAR HORSHAM BROOKS GREEN	BUNGALOWS		WEST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Village			
	Total Number of dwellings:		57	
	<i>Survey date: THURSDAY</i>		<i>19/10/17</i>	<i>Survey Type: MANUAL</i>
23	WS-03-A-08 ROUNDSTONE LANE ANGMERING	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone			
	Total Number of dwellings:		180	
	<i>Survey date: THURSDAY</i>		<i>19/04/18</i>	<i>Survey Type: MANUAL</i>
24	WS-03-A-09 LITTLEHAMPTON ROAD WORTHING WEST DURRINGTON	MIXED HOUSES & FLATS		WEST SUSSEX
	Edge of Town Residential Zone			
	Total Number of dwellings:		197	
	<i>Survey date: THURSDAY</i>		<i>05/07/18</i>	<i>Survey Type: MANUAL</i>

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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.076	24	125	0.306	24	125	0.382
08:00 - 09:00	24	125	0.138	24	125	0.384	24	125	0.522
09:00 - 10:00	24	125	0.151	24	125	0.177	24	125	0.328
10:00 - 11:00	24	125	0.126	24	125	0.162	24	125	0.288
11:00 - 12:00	24	125	0.143	24	125	0.156	24	125	0.299
12:00 - 13:00	24	125	0.157	24	125	0.149	24	125	0.306
13:00 - 14:00	24	125	0.174	24	125	0.162	24	125	0.336
14:00 - 15:00	24	125	0.165	24	125	0.189	24	125	0.354
15:00 - 16:00	24	125	0.261	24	125	0.174	24	125	0.435
16:00 - 17:00	24	125	0.280	24	125	0.169	24	125	0.449
17:00 - 18:00	24	125	0.347	24	125	0.158	24	125	0.505
18:00 - 19:00	24	125	0.310	24	125	0.187	24	125	0.497
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.328			2.373			4.701

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.

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Parameter summary

Trip rate parameter range selected:	7 - 805 (units:)
Survey date date range:	01/01/10 - 20/11/18
Number of weekdays (Monday-Friday):	24
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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.002	24	125	0.002	24	125	0.004
08:00 - 09:00	24	125	0.003	24	125	0.003	24	125	0.006
09:00 - 10:00	24	125	0.002	24	125	0.001	24	125	0.003
10:00 - 11:00	24	125	0.002	24	125	0.002	24	125	0.004
11:00 - 12:00	24	125	0.002	24	125	0.002	24	125	0.004
12:00 - 13:00	24	125	0.002	24	125	0.002	24	125	0.004
13:00 - 14:00	24	125	0.002	24	125	0.002	24	125	0.004
14:00 - 15:00	24	125	0.002	24	125	0.003	24	125	0.005
15:00 - 16:00	24	125	0.006	24	125	0.005	24	125	0.011
16:00 - 17:00	24	125	0.004	24	125	0.004	24	125	0.008
17:00 - 18:00	24	125	0.002	24	125	0.002	24	125	0.004
18:00 - 19:00	24	125	0.002	24	125	0.002	24	125	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.031			0.030			0.061

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.000	24	125	0.000	24	125	0.000
08:00 - 09:00	24	125	0.002	24	125	0.002	24	125	0.004
09:00 - 10:00	24	125	0.003	24	125	0.002	24	125	0.005
10:00 - 11:00	24	125	0.004	24	125	0.004	24	125	0.008
11:00 - 12:00	24	125	0.002	24	125	0.003	24	125	0.005
12:00 - 13:00	24	125	0.001	24	125	0.002	24	125	0.003
13:00 - 14:00	24	125	0.002	24	125	0.001	24	125	0.003
14:00 - 15:00	24	125	0.001	24	125	0.002	24	125	0.003
15:00 - 16:00	24	125	0.000	24	125	0.000	24	125	0.000
16:00 - 17:00	24	125	0.001	24	125	0.001	24	125	0.002
17:00 - 18:00	24	125	0.001	24	125	0.001	24	125	0.002
18:00 - 19:00	24	125	0.000	24	125	0.000	24	125	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.018			0.035

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.000	24	125	0.000	24	125	0.000
08:00 - 09:00	24	125	0.000	24	125	0.000	24	125	0.000
09:00 - 10:00	24	125	0.000	24	125	0.000	24	125	0.000
10:00 - 11:00	24	125	0.000	24	125	0.000	24	125	0.000
11:00 - 12:00	24	125	0.000	24	125	0.000	24	125	0.000
12:00 - 13:00	24	125	0.000	24	125	0.000	24	125	0.000
13:00 - 14:00	24	125	0.000	24	125	0.000	24	125	0.000
14:00 - 15:00	24	125	0.000	24	125	0.000	24	125	0.000
15:00 - 16:00	24	125	0.000	24	125	0.000	24	125	0.000
16:00 - 17:00	24	125	0.000	24	125	0.000	24	125	0.000
17:00 - 18:00	24	125	0.000	24	125	0.000	24	125	0.000
18:00 - 19:00	24	125	0.000	24	125	0.000	24	125	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.

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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.006	24	125	0.011	24	125	0.017
08:00 - 09:00	24	125	0.006	24	125	0.013	24	125	0.019
09:00 - 10:00	24	125	0.001	24	125	0.004	24	125	0.005
10:00 - 11:00	24	125	0.003	24	125	0.003	24	125	0.006
11:00 - 12:00	24	125	0.003	24	125	0.004	24	125	0.007
12:00 - 13:00	24	125	0.005	24	125	0.004	24	125	0.009
13:00 - 14:00	24	125	0.002	24	125	0.003	24	125	0.005
14:00 - 15:00	24	125	0.003	24	125	0.003	24	125	0.006
15:00 - 16:00	24	125	0.009	24	125	0.006	24	125	0.015
16:00 - 17:00	24	125	0.010	24	125	0.010	24	125	0.020
17:00 - 18:00	24	125	0.018	24	125	0.010	24	125	0.028
18:00 - 19:00	24	125	0.010	24	125	0.008	24	125	0.018
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.076			0.079			0.155

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.095	24	125	0.432	24	125	0.527
08:00 - 09:00	24	125	0.177	24	125	0.671	24	125	0.848
09:00 - 10:00	24	125	0.194	24	125	0.249	24	125	0.443
10:00 - 11:00	24	125	0.166	24	125	0.225	24	125	0.391
11:00 - 12:00	24	125	0.184	24	125	0.221	24	125	0.405
12:00 - 13:00	24	125	0.211	24	125	0.210	24	125	0.421
13:00 - 14:00	24	125	0.244	24	125	0.225	24	125	0.469
14:00 - 15:00	24	125	0.224	24	125	0.257	24	125	0.481
15:00 - 16:00	24	125	0.453	24	125	0.249	24	125	0.702
16:00 - 17:00	24	125	0.461	24	125	0.249	24	125	0.710
17:00 - 18:00	24	125	0.525	24	125	0.230	24	125	0.755
18:00 - 19:00	24	125	0.455	24	125	0.283	24	125	0.738
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.389			3.501			6.890

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.016	24	125	0.034	24	125	0.050
08:00 - 09:00	24	125	0.032	24	125	0.113	24	125	0.145
09:00 - 10:00	24	125	0.042	24	125	0.044	24	125	0.086
10:00 - 11:00	24	125	0.037	24	125	0.042	24	125	0.079
11:00 - 12:00	24	125	0.030	24	125	0.031	24	125	0.061
12:00 - 13:00	24	125	0.037	24	125	0.034	24	125	0.071
13:00 - 14:00	24	125	0.036	24	125	0.028	24	125	0.064
14:00 - 15:00	24	125	0.033	24	125	0.047	24	125	0.080
15:00 - 16:00	24	125	0.111	24	125	0.046	24	125	0.157
16:00 - 17:00	24	125	0.072	24	125	0.044	24	125	0.116
17:00 - 18:00	24	125	0.067	24	125	0.041	24	125	0.108
18:00 - 19:00	24	125	0.048	24	125	0.048	24	125	0.096
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.561			0.552			1.113

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.001	24	125	0.014	24	125	0.015
08:00 - 09:00	24	125	0.000	24	125	0.022	24	125	0.022
09:00 - 10:00	24	125	0.002	24	125	0.008	24	125	0.010
10:00 - 11:00	24	125	0.003	24	125	0.004	24	125	0.007
11:00 - 12:00	24	125	0.001	24	125	0.004	24	125	0.005
12:00 - 13:00	24	125	0.003	24	125	0.004	24	125	0.007
13:00 - 14:00	24	125	0.004	24	125	0.003	24	125	0.007
14:00 - 15:00	24	125	0.005	24	125	0.003	24	125	0.008
15:00 - 16:00	24	125	0.015	24	125	0.005	24	125	0.020
16:00 - 17:00	24	125	0.014	24	125	0.004	24	125	0.018
17:00 - 18:00	24	125	0.012	24	125	0.002	24	125	0.014
18:00 - 19:00	24	125	0.015	24	125	0.004	24	125	0.019
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.075			0.077			0.152

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.001	24	125	0.006	24	125	0.007
08:00 - 09:00	24	125	0.000	24	125	0.012	24	125	0.012
09:00 - 10:00	24	125	0.000	24	125	0.004	24	125	0.004
10:00 - 11:00	24	125	0.000	24	125	0.003	24	125	0.003
11:00 - 12:00	24	125	0.000	24	125	0.001	24	125	0.001
12:00 - 13:00	24	125	0.000	24	125	0.003	24	125	0.003
13:00 - 14:00	24	125	0.001	24	125	0.001	24	125	0.002
14:00 - 15:00	24	125	0.001	24	125	0.000	24	125	0.001
15:00 - 16:00	24	125	0.002	24	125	0.001	24	125	0.003
16:00 - 17:00	24	125	0.004	24	125	0.001	24	125	0.005
17:00 - 18:00	24	125	0.008	24	125	0.001	24	125	0.009
18:00 - 19:00	24	125	0.006	24	125	0.001	24	125	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.034			0.057

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.000	24	125	0.000	24	125	0.000
08:00 - 09:00	24	125	0.000	24	125	0.000	24	125	0.000
09:00 - 10:00	24	125	0.000	24	125	0.000	24	125	0.000
10:00 - 11:00	24	125	0.000	24	125	0.000	24	125	0.000
11:00 - 12:00	24	125	0.000	24	125	0.000	24	125	0.000
12:00 - 13:00	24	125	0.000	24	125	0.000	24	125	0.000
13:00 - 14:00	24	125	0.000	24	125	0.000	24	125	0.000
14:00 - 15:00	24	125	0.000	24	125	0.000	24	125	0.000
15:00 - 16:00	24	125	0.001	24	125	0.000	24	125	0.001
16:00 - 17:00	24	125	0.000	24	125	0.000	24	125	0.000
17:00 - 18:00	24	125	0.000	24	125	0.000	24	125	0.000
18:00 - 19:00	24	125	0.000	24	125	0.000	24	125	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.000			0.001

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.002	24	125	0.020	24	125	0.022
08:00 - 09:00	24	125	0.000	24	125	0.034	24	125	0.034
09:00 - 10:00	24	125	0.002	24	125	0.012	24	125	0.014
10:00 - 11:00	24	125	0.003	24	125	0.006	24	125	0.009
11:00 - 12:00	24	125	0.001	24	125	0.005	24	125	0.006
12:00 - 13:00	24	125	0.003	24	125	0.006	24	125	0.009
13:00 - 14:00	24	125	0.005	24	125	0.004	24	125	0.009
14:00 - 15:00	24	125	0.006	24	125	0.003	24	125	0.009
15:00 - 16:00	24	125	0.018	24	125	0.006	24	125	0.024
16:00 - 17:00	24	125	0.018	24	125	0.005	24	125	0.023
17:00 - 18:00	24	125	0.020	24	125	0.003	24	125	0.023
18:00 - 19:00	24	125	0.022	24	125	0.005	24	125	0.027
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.100			0.109			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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.119	24	125	0.497	24	125	0.616
08:00 - 09:00	24	125	0.215	24	125	0.831	24	125	1.046
09:00 - 10:00	24	125	0.238	24	125	0.309	24	125	0.547
10:00 - 11:00	24	125	0.208	24	125	0.276	24	125	0.484
11:00 - 12:00	24	125	0.219	24	125	0.261	24	125	0.480
12:00 - 13:00	24	125	0.256	24	125	0.254	24	125	0.510
13:00 - 14:00	24	125	0.287	24	125	0.260	24	125	0.547
14:00 - 15:00	24	125	0.266	24	125	0.309	24	125	0.575
15:00 - 16:00	24	125	0.591	24	125	0.306	24	125	0.897
16:00 - 17:00	24	125	0.561	24	125	0.308	24	125	0.869
17:00 - 18:00	24	125	0.630	24	125	0.285	24	125	0.915
18:00 - 19:00	24	125	0.535	24	125	0.345	24	125	0.880
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.125			4.241			8.366

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 Servicing Vehicles

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	125	0.013	24	125	0.006	24	125	0.019
08:00 - 09:00	24	125	0.012	24	125	0.007	24	125	0.019
09:00 - 10:00	24	125	0.016	24	125	0.011	24	125	0.027
10:00 - 11:00	24	125	0.014	24	125	0.015	24	125	0.029
11:00 - 12:00	24	125	0.013	24	125	0.015	24	125	0.028
12:00 - 13:00	24	125	0.012	24	125	0.011	24	125	0.023
13:00 - 14:00	24	125	0.017	24	125	0.019	24	125	0.036
14:00 - 15:00	24	125	0.010	24	125	0.018	24	125	0.028
15:00 - 16:00	24	125	0.011	24	125	0.011	24	125	0.022
16:00 - 17:00	24	125	0.008	24	125	0.009	24	125	0.017
17:00 - 18:00	24	125	0.006	24	125	0.008	24	125	0.014
18:00 - 19:00	24	125	0.005	24	125	0.006	24	125	0.011
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.137			0.136			0.273

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: H – Trip Distribution

TRICS 7.5.4

Trip Rate Parameter: Number of dwellings

Transcribed from PDF output

Site A

655 houses

Trip rates	08:00 - 09:00			17:00 - 18:00			07:00 - 19:00		
	In	Out	Total	In	Out	Total	In	Out	Total
Vehicles	0.138	0.384	0.522	0.347	0.158	0.505	2.328	2.373	4.701
Taxis	0.003	0.003	0.006	0.002	0.002	0.004	0.031	0.03	0.061
OGVs	0.002	0.002	0.004	0.001	0.001	0.002	0.017	0.018	0.035
PSVs	0	0	0	0	0	0	0	0	0
Occupants	0.177	0.671	0.848	0.525	0.23	0.755	3.389	3.501	6.89
Pedestrians	0.032	0.113	0.145	0.067	0.041	0.108	0.561	0.552	1.113
Cyclists	0.006	0.013	0.019	0.018	0.01	0.028	0.076	0.079	0.155
Bus	0	0.022	0.022	0.012	0.002	0.014	0.075	0.077	0.152
Coach	0	0	0	0	0	0	0.001	0	0.001
Rail	0	0.012	0.012	0.008	0.001	0.009	0.023	0.034	0.057
Total people	0.215	0.831	1.046	0.63	0.285	0.915	4.125	4.241	8.366

Site A

Trips	08:00 - 09:00			17:00 - 18:00			07:00 - 19:00		
	In	Out	Total	In	Out	Total	In	Out	Total
Vehicles	90	252	342	227	103	331	1525	1554	3079
Taxis	2	2	4	1	1	3	20	20	40
OGVs	1	1	3	1	1	1	11	12	23
PSVs	0	0	0	0	0	0	0	0	0
Occupants	116	440	555	344	151	495	2220	2293	4513
Car passengers	26	188	214	117	47	164	695	739	1434
Pedestrians	21	74	95	44	27	71	367	362	729
Cyclists	4	9	12	12	7	18	50	52	102
Bus	0	14	14	8	1	9	49	50	100
Coach	0	0	0	0	0	0	1	0	1
Rail	0	8	8	5	1	6	15	22	37
Total people	141	544	685	413	187	599	2702	2778	5480

Modal splits:

08:00 - 09:00	07:00 - 18:00	07:00 - 19:00
50%	55%	56%
81%	83%	82%
31%	27%	26%
14%	12%	13%
2%	3%	2%
2%	2%	2%
0%	0%	0%
1%	1%	1%
100%	100%	100%

	percent	08:00 - 09:00			17:00 - 18:00			07:00 - 19:00		
		In	Out	Total	In	Out	Total	In	Out	Total
A1198 North	18%	17	46	62	42	19	60	278	284	562
B1040 North	5%	4	12	17	11	5	16	74	75	149
B1040 south	11%	10	27	36	24	11	35	162	165	328
A428 east	55%	49	138	187	124	57	181	834	850	1683
A428 west	0%	0	0	0	0	0	0	0	0	0
A1198 South	5%	4	12	16	11	5	16	73	75	148
Ermine St	3%	3	9	12	8	4	11	52	53	104
Business Park	3%	3	9	12	8	4	11	52	53	104
total		90	252	342	227	103	331	1525	1554	3079

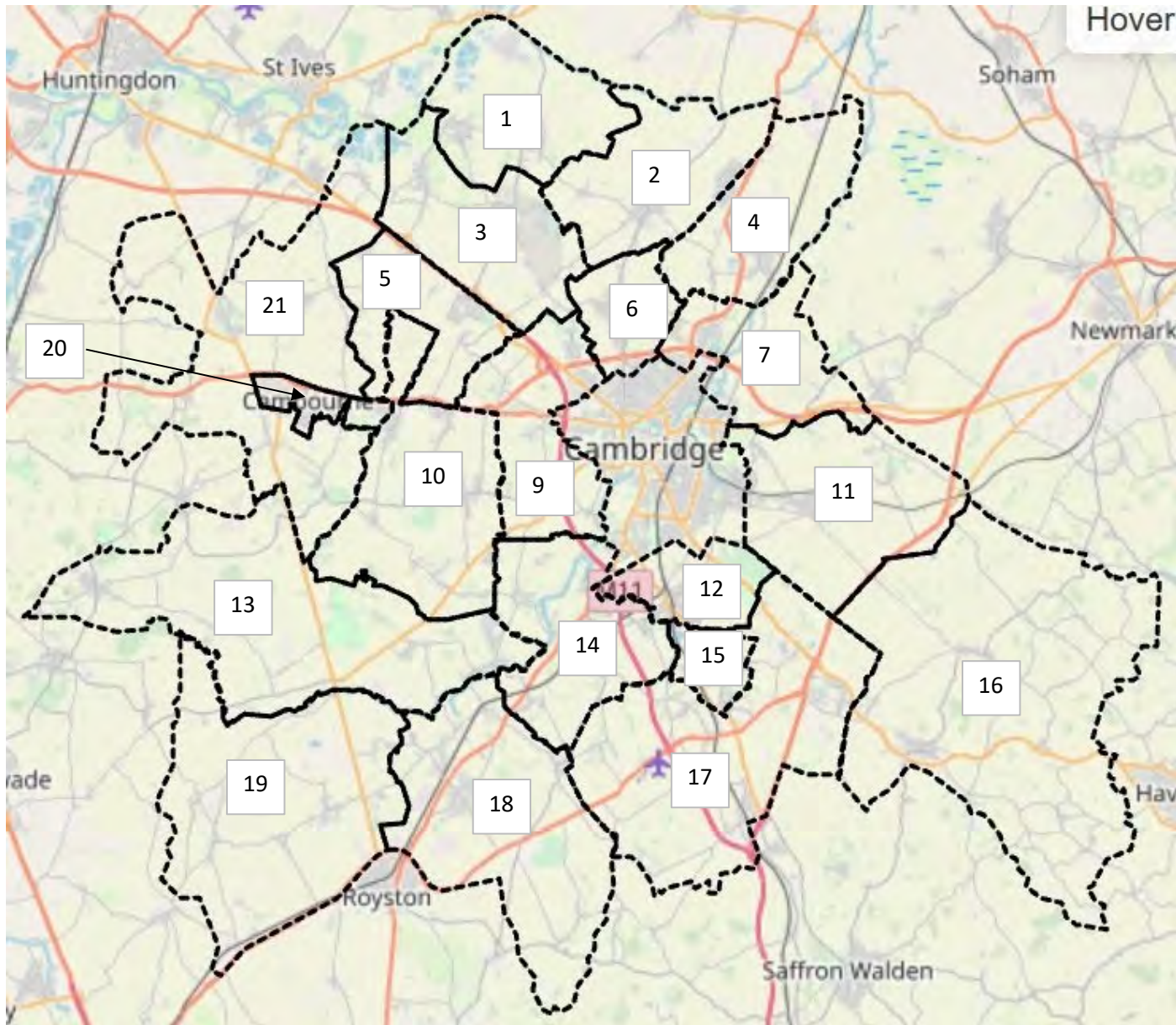
WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

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population All usual residents aged 16 and over in employment the week before the census
 units Persons
 date 2011
 usual residence E02006874 : South Cambridgeshire 021 (2011 super output area - middle layer)

place of work	All categories: Method of travel to work (2001 specification)	Work mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other method of travel to work
E02003775 : South Cambridgeshire 001	14	0	0	0	0	0	0	13	0	1	0	0
E02003776 : South Cambridgeshire 002	9	0	0	0	0	0	0	9	0	0	0	0
E02003777 : South Cambridgeshire 003	53	0	0	0	0	0	0	48	3	1	1	0
E02003778 : South Cambridgeshire 004	29	0	0	0	0	1	0	23	2	2	1	0
E02003779 : South Cambridgeshire 005	53	0	0	0	2	0	1	47	3	0	0	0
E02003780 : South Cambridgeshire 006	53	0	0	1	0	0	0	44	5	0	3	0
E02003781 : South Cambridgeshire 007	123	0	0	0	2	0	2	111	4	4	0	0
E02003783 : South Cambridgeshire 009	33	0	0	0	0	0	2	26	5	0	0	0
E02003784 : South Cambridgeshire 010	66	0	0	0	4	0	0	56	2	0	4	0
E02003785 : South Cambridgeshire 011	34	0	0	0	0	0	0	33	0	0	1	0
E02003786 : South Cambridgeshire 012	17	0	0	0	0	0	0	15	1	0	1	0
E02003787 : South Cambridgeshire 013	15	0	0	0	0	0	0	15	0	0	0	0
E02003788 : South Cambridgeshire 014	24	0	0	0	0	0	0	22	1	0	1	0
E02003789 : South Cambridgeshire 015	23	0	0	0	0	0	0	21	1	0	1	0
E02003790 : South Cambridgeshire 016	6	0	0	0	0	0	0	5	0	0	1	0
E02003791 : South Cambridgeshire 017	68	0	0	0	1	0	0	63	4	0	0	0
E02003792 : South Cambridgeshire 018	28	0	0	0	0	0	0	28	0	0	0	0
E02003793 : South Cambridgeshire 019	29	0	0	1	0	0	0	23	2	0	3	0
E02006873 : South Cambridgeshire 020	188	0	0	0	3	0	1	125	19	6	34	0
E02006874 : South Cambridgeshire 021	494	0	0	4	0	0	0	166	12	28	283	1
Cambridge	863	0	0	1	90	1	14	687	39	15	12	4
Huntingdonshire	483	0	0	0	1	0	8	448	14	7	5	0
North Hertfordshire	96	0	0	0	0	0	1	93	1	0	1	0
Westminster, City of London	82	0	2	68	0	0	0	10	0	0	2	0
Bedford	52	0	0	1	0	1	0	48	1	0	1	0
Central Bedfordshire	51	0	0	0	0	0	0	46	4	0	1	0
East Cambridgeshire	41	0	0	0	1	0	0	37	2	0	0	1
Peterborough	40	0	0	0	0	0	0	38	2	0	0	0
Uttlesford	32	0	0	0	0	0	0	32	0	0	0	0
Stevenage	20	0	0	0	0	0	0	19	1	0	0	0
Forest Heath	19	0	0	0	0	0	0	16	2	0	0	1
Camden	18	0	0	16	0	0	0	2	0	0	0	0
Welwyn Hatfield	16	0	0	0	0	0	0	16	0	0	0	0
Fenland	15	0	0	0	1	0	0	11	3	0	0	0
East Hertfordshire	15	0	0	0	0	0	0	15	0	0	0	0
St Edmundsbury	14	0	0	0	0	0	0	14	0	0	0	0
Milton Keynes	14	0	0	0	1	0	0	13	0	0	0	0
Luton	13	0	0	0	0	0	0	13	0	0	0	0
Tower Hamlets	11	0	0	8	1	0	0	2	0	0	0	0
Total	3,254	0	2	100	107	3	29	2,453	133	64	356	7

place of work	Vehicles	A1198 Nor B1040	Nor B1040 sou	A428 east	A428 west	A1198 Sou	Ermine St	Business Park		
E02003775 : South Cambridgeshire 001	13		13							
E02003776 : South Cambridgeshire 002	9			9						
E02003777 : South Cambridgeshire 003	48		48							
E02003778 : South Cambridgeshire 004	23			23						
E02003779 : South Cambridgeshire 005	47		47							
E02003780 : South Cambridgeshire 006	44			44						
E02003781 : South Cambridgeshire 007	111			111						
E02003783 : South Cambridgeshire 009	26			26						
E02003784 : South Cambridgeshire 010	56			56						
E02003785 : South Cambridgeshire 011	33			33						
E02003786 : South Cambridgeshire 012	15			15						
E02003787 : South Cambridgeshire 013	15					15				
E02003788 : South Cambridgeshire 014	22			22						
E02003789 : South Cambridgeshire 015	21			21						
E02003790 : South Cambridgeshire 016	5			5						
E02003791 : South Cambridgeshire 017	63			63						
E02003792 : South Cambridgeshire 018	28					28				
E02003793 : South Cambridgeshire 019	23					23				
E02006873 : South Cambridgeshire 020	125			125						
E02006874 : South Cambridgeshire 021	166						83	83		
Cambridge	687			687						
Huntingdonshire	448	448								
North Hertfordshire	93		93							
Westminster, City of London	10		10							
Bedford	48		48							
Central Bedfordshire	46		46							
East Cambridgeshire	37			37						
Peterborough	38		38							
Uttlesford	32			32						
Stevenage	19					19				
Forest Heath	16			16						
Camden	2					2				
Welwyn Hatfield	16					16				
Fenland	11		11							
East Hertfordshire	15					15				
St Edmundsbury	14			14						
Milton Keynes	13		13							
Luton	13		13							
Tower Hamlets	2			2						
Totals	2,453	448	119	261	1,341	0	118	83	83	2,453
percent	100%	18%	5%	11%	55%	0%	5%	3%	3%	100%



QS701EW - Method of travel to work

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population All usual residents aged 16 to 74
 units Persons
 date 2011
 rural urban Total

Method of Travel to Work	E0009218	E0009219	E0009219	E0009219	E0017079	E0017080	E0017081	E0017083	sum	employed	%age	
	9	0	3	4	5	4	4	7				
All categories: Method of travel to work	280	254	294	303	226	220	249	230	2,056	1,556	100%	1,466
Work mainly at or from home	12	17	4	23	4	4	15	11	90	90	6%	
Underground, metro, light rail	1	0	0	0	0	0	0	0	1	1	0%	1
Train	5	8	2	16	2	6	4	2	45	45	3%	45
Bus, minibus or coach	3	1	9	4	4	2	7	4	34	34	2%	34
Taxi	0	0	2	0	0	1	0	0	3	3	0%	3
Motorcycle, scooter or moped	1	1	1	1	1	0	1	3	9	9	1%	9
Driving a car or van	114	140	123	155	69	135	147	111	994	994	64%	994
Passenger in a car or van	6	6	8	7	10	7	3	9	56	56	4%	56
Bicycle	3	2	7	2	2	2	2	1	21	21	1%	21
On foot	29	26	46	38	45	30	15	62	291	291	19%	291
Other method of travel to work	0	0	2	2	1	0	7	0	12	12	1%	12
Not in employment	106	53	90	55	88	33	48	27	500			
car driver	994	69%										
car passenger	56	4%										
pedestrians	291	20%										
cyclists	21	1%										
bus	34	2%										
rail	46	3%										
total	1,442											