Land Off Ambrose Way, Impington

Initial Transport Assessment

Client: Martin Grant Homes

i-Transport Ref: JDW/IN/ITB14652-002A

Date: 03 December 2021

Land Off Ambrose Way, Impington

Initial Transport Assessment

Client: Martin Grant Homes

i-Transport Ref: JDW/IN/ITB14652-002A

Date: 03 December 2021

i-Transport LLP
The Square
Basing View
Basingstoke
Hampshire
RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

Quality Management

Report No.	Comments	Date	Author	Authorised
ITB14652-002	Draft	26/11/2021	PL/IN	JDW
ITB14652-002A	For Issue	03/12/2021	PL/IN	JDW

File Ref: T:\Projects\14000 Series\14652ITB Land off Ambrose Way, Histon\Admin\Report and Tech Notes\ITB14652-002 Initial Transport Assessment jdw.docx

Contents

Figures

Drawings

Appendices

Section 1 Executive Summary

1.1.1 Martin Grant Homes are promoting Land off Ambrose Way, Impington, for a residential development of up to 177 residential dwellings. i-Transport have been appointed to provide highway and transport advice in relation to the proposed development site.

1.1.2 The administrative districts of Cambridge and South Cambridgeshire are in the process of preparing a new joint Greater Cambridge Local Plan (GCLP), as set out in the adopted Greater Cambridge Local Development Scheme. The Proforma for the HELAA Sites (Appendix 4) which supports the emerging GCLP assess the site at a high level and concludes that:

- In terms of accessibility to services and facilities, the site provides good accessibility to key local services, transport, and employment opportunities and is in line with policies;
- That the access link to the public highway (i.e., Ambrose Way) is unsuitable to serve the number of units proposed;
- That access to the highway network is substandard with little opportunity for improvement at the B1049 junction;
- Walking, cycling and public transport opportunities and enhancements to Cambridge should be considered; and
- As the site is located within National Highways (formerly Highways England) Zone 3 (A14 CNB), the site would need to ensure that there is no net increase on the Strategic Road Network.

1.1.3 The Initial Transport Assessment (ITA), demonstrates that technical assessments in relation to the transport and highways elements of the site have been undertaken and show that:

- The access arrangements have been considered in detail and reviewed by officers at Cambridgeshire County Council, who raised no insurmountable issues (Section 4);
- The site can be accessed by all users and provides safe and suitable access arrangements for all (Section 4 and 5);
- The site is located within the existing fabric of Impington and in a highly sustainable, area, in close proximity to high quality dedicated public transport facilities (section 5);
- There are extensive opportunities for sustainable modes of transport to be used to travel to/from the site (Section 5);
- Delivery of development in Impington brings forward an opportunity to deliver sustainable travel interventions which would benefit not only future residents but also existing ones (section 5 and 6);
- The site can be brought forwards in a way that accords with the latest design standards (Section 4);
- The traffic impacts of the proposed development on the local and strategic highway network are likely to be negligible and are certainly not 'severe' (Section 6);
- Any residual impact where necessary can be cost effectively mitigated (Section 6).

1.1.4 Consequently, it can be seen that the concerns raised in the HELAA have been addressed through the technical assessments in the ITA. As such, there are no highway or transport reasons that the proposed development should not be allocated.

Section 2 Introduction

2.1.1 Martin Grant Homes are promoting Land off Ambrose Way, Impington, for a residential development of up to 177 residential dwellings.

2.1.2 The administrative districts of Cambridge and South Cambridgeshire are in the process of preparing a new joint Greater Cambridge Local Plan, as set out in the adopted Greater Cambridge Local Development Scheme. The Council is undertaking a consultation on the 'Greater Cambridge Local Plan – First Proposals between 1st November 2021 and 13th December 2021, through which, there is the opportunity to provide comment on proposals and supporting evidence base.

2.1.3 i-Transport have been appointed to provide highway and transport advice in relation to the proposed development site at Ambrose Way and specifically the impact of developing the site for circa 177 dwellings.

2.1.4 This Initial Transport Assessment (ITA) has been prepared to provide early transport and access guidance and to demonstrate how the Site can be developed in a manner that can satisfy policy considerations, particularly the four key transport tests set out in paragraph 108 of the National Planning Policy Framework (NPPF), which require development proposals to ensure that:

- Safe and sustainable access is provided for all people;
- Opportunities for sustainable transport modes have been taken up;
- The design of streets, parking areas, other transport elements can be provided in line with prevailing standards; and
- There is no severe residual cumulative transport impact.

2.1.5 This Initial Transport Assessment also addresses concerns raised in relation to the proposed development site in the Greater Cambridge Housing and Economic Land Availability Assessment (HELAA), which provides an assessment of the potential sites in terms of their suitability, availability and achievability.

2.1.6 Any application for development of the site would be accompanied by a Full Transport Assessment (TA) and Residential Travel Plan (RTP), both of which would be scoped with the relevant authorities in advance of a submission.

2.1.7 The Proforma for the HELAA Sites (Appendix 4) assess the site at a high level and concludes that:

- In terms of accessibility to services and facilities, the site provides good accessibility to key local services, transport, and employment opportunities and is in line with policies;
- That the access link to the public highway (i.e., Ambrose Way) is unsuitable to serve the number of units proposed;
- That access to the highway network is substandard with little opportunity for improvement at the B1049 junction;
- Walking, cycling and public transport opportunities and enhancements to Cambridge should be considered; and
- As the site is located within National Highways (formerly Highways England) Zone 3 (A14 CNB), the site would need to ensure that there is no net increase on the Strategic Road Network.

2.1.8 This ITA, demonstrates that technical assessments in relation to the transport and highways elements of the site have been undertaken and show that:

- The access arrangements have been considered in detail and reviewed by officers at Cambridgeshire County Council, who raised no insurmountable issues;
- The site can be accessed by all users and provides safe and suitable access arrangements for all;
- The site is located within the existing fabric of Impington and in a highly sustainable, area, in close proximity to high quality dedicated public transport facilities;
- There are extensive opportunities for sustainable modes of transport to be used to travel to/from the site;
- Delivery of development in Impington brings forward an opportunity to deliver sustainable travel interventions which would benefit not only future residents but also existing ones;
- The site can be brought forwards in a way that accords with the latest design standards;
- The traffic impacts of the proposed development on the local and strategic highway network are likely to be negligible and are certainly not 'severe'
- Any residual impact where necessary can be cost effectively mitigated.

2.1.9 Consequently, it can be seen that the concerns raised in the HELAA have been addressed through the technical assessments in this ITA. As such, there are no highway or transport reasons that the proposed development should not be allocated.

1.1 Report Structure

1.1.1 The remainder of this transport overview strategy is presented as follows:

- Section 2 - Policy Context;
- Section 3 – Site Access;
- Section 4 – Sustainable Transport Strategy Principles;
- Section 5 – Traffic Impacts; and
- Section 6 – Summary and Conclusions.

Section 3 Policy Overview

National Planning Policy Framework (Jul 2021)

3.1.1 The NPPF sets out the Government's planning policies and provides information on how these are expected to be applied.

3.1.2 The NPPF confirms that at the forefront of planning is the 'presumption in favour' of sustainable development:

> ***"at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11)."***

3.1.3 Paragraph 113 requires that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment.

3.1.4 Paragraph 110 outlines the primary transport tests for new development proposals, stating that in assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- ***"appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;***
- ***safe and suitable access to the site can be achieved for all users;***
- ***the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and***
- ***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.***

3.1.5 Paragraph 111 states that proposals should only be refused on transport grounds if there would be an unacceptable impact on highway safety or the residual cumulative impacts on the road network would be severe.

Cambridgeshire Local Transport Plan 2011-2031 (LTP3)

3.1.6 Cambridgeshire County Council's third Local Transport Plan (LTP3) covers the period from 2011-2031 and sets out the overarching vision for the county:

> ***"Creating communities where people want to live and work: now and in the future"***

3.1.7 The LTP3, seeks to address existing transport challenges as well as setting out policies and strategies to ensure that planned large-scale development can take place in the county in a sustainable way.

3.1.8 Eight main transport challenges have been identified as part of the Local Transport Plan, these are as follows:

- ***"Improving the reliability of journey times by managing demand for road space, where appropriate and maximising the capacity and efficiency of the existing network;***
- ***Reducing the length of the commute and the need to travel by private car;***
- ***Making sustainable modes of transport a viable and attractive alternative to the private car;***
- ***Future-proofing our maintenance strategy and new transport infrastructure to cope with the effects of climate change;***
- ***Ensuring people – especially those at risk of social exclusion – can access the services they need within reasonable time, cost and effort wherever they live in the county;***
- ***Addressing the main causes of road accidents in Cambridgeshire;***
- ***Protecting and enhancing the natural environment by minimising the environmental impact of transport;***
- ***Influencing national and local decisions on land-use and transport planning that impact on routes through Cambridgeshire."***

South Cambridge Local Plan (2018)

3.1.9 The South Cambridgeshire Local Plan replaces the South Cambridgeshire Local Development Framework; the Local Plan's policies and proposals cover the period from 2011-2031.

3.1.10 Policy S/1 of the Local Plan sets out the vision for the development across South Cambridgeshire, as follows:

"South Cambridgeshire will continue to be the best place to live, work and study in the country. Our district will demonstrate impressive and sustainable economic growth. Our residents will have a superb quality of life in an exceptionally beautiful, rural and green environment."

3.1.11 In order to achieve this, a set of six objectives have been developed within the Local Plan, set out below:

- To support economic growth by supporting South Cambridgeshire's position as a world leader in research and technology based industries, research, and education; and supporting the rural economy;

- To protect the character of South Cambridgeshire, including its built and natural heritage, as well as protecting the Cambridge Green Belt. New development should enhance the area, and protect and enhance biodiversity;
- To provide land for housing in sustainable locations that meets local needs and aspirations, and gives choice about type, size, tenure and cost;
- To deliver new developments that are high quality and well-designed with distinctive character that reflects their location, and which responds robustly to the challenges of climate change;
- To ensure that all new development provides or has access to a range of services and facilities that support healthy lifestyles and well-being for everyone, including shops, schools, doctors, community buildings, cultural facilities, local open space, and green infrastructure; and
- To maximise potential for journeys to be undertaken by sustainable modes of transport including walking, cycling, bus and train.

3.1.12 Chapter 10 relates to promoting and delivering sustainable transport infrastructure. Policies TI/2: Planning for Sustainable Travel and TI/8: Infrastructure and New Developments are relevant to the potential development site.

3.1.13 Policy TI/2: Planning for Sustainable Travel states that:

- ***1. Development must be located and designed to reduce the need to travel, particularly by car, and promote sustainable travel appropriate to its location.***
- ***2. 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 [...]***
- ***3. Developers will be required to demonstrate they will make adequate provision to mitigate the likely impacts (including cumulative impacts) of their proposal [...]***
- ***4. Developers of 'larger developments'1 or where a proposal is likely to have 'significant transport implications'2 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. [...].***

3.1.14 Policy TI/8: Infrastructure and New Developments states that:

- ***1. Planning permission will only be granted for proposals that have made suitable arrangements for the improvement or provision of infrastructure necessary to make the scheme acceptable in planning terms. The nature, scale and phasing of any planning obligations and/or Community Infrastructure Levy (CIL) contributions***

sought will be related to the form of the development and its potential impact upon the surrounding area.

- ***2. Contributions may also be required towards the future maintenance and upkeep of facilities either in the form of initial support or in perpetuity in accordance with Government guidance.***

Greater Cambridge Local Development Scheme (Oct 2018)

3.1.15 The Local Development Scheme (LDS) was produced in line with the Planning and Compulsory Purchase Act (2004) and provides information on the documents that Councils intend to produce to form their planning policy framework. It also sets out a timetable for their production.

3.1.16 The LDS is prepared and agreed by both Cambridge City Council and South Cambridgeshire District Council and contains a list of Development Plan Documents (DPDs) to be produced by both Local Planning Authorities.

Transport Strategy for Cambridge and South Cambridgeshire (2014)

3.1.17 The Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) focuses on the sustainable transport capacity and what needs to be provided in around the city and within the communities where people live and access services.

3.1.18 The purpose of the TSCSC is to:

- ***"provide a detailed policy framework and programme of schemes for the area, addressing current problems, and consistent with the policies of the LTP3;***
- ***support the Cambridge and South Cambridgeshire Local Plans, taking into account the committed and predicted growth levels, detailing the transport infrastructure and services necessary to deliver this growth".***

3.1.19 A series of eight objectives have been identified within the strategy, as follows:

- ***"To ensure that the transport network supports the economy and acts as a catalyst for sustainable growth.***
- ***To enhance accessibility to, from and within Cambridge and South Cambridgeshire (and beyond the strategy area).***
- ***To ensure good transport links between new and existing communities, and the jobs and services people wish to access.***
- ***To prioritise sustainable alternatives to the private car in the strategy area, and reduce the impacts of congestion on sustainable modes of transport.***
- ***To meet air quality objectives and carbon reduction targets, and preserve the natural environment.***

- ***To ensure that changes to the transport network respect and conserve the distinctive character of the area and people's quality of life.***
- ***To ensure the strategy encourages healthy and active travel, supporting improved wellbeing.***
- ***To manage the transport network effectively and efficiently."***

3.1.20 These objectives are designed to mitigate the challenges set out in the strategy including accessibility, managing demand, safety, travel information, environment and sourcing funding to deliver transport improvements.

3.1.21 The most relevant policies in the TSCSC document are policies 7 and 12.

3.1.22 Policy 7 (Supporting sustainable growth) states that the transport network shall be developed to provide capacity while still protecting the area's distinctive character and environment. New developments will improve transport infrastructure and maximise access by walking, cycling, and public transport where appropriate.

3.1.23 Policy 12 (encouraging cycling and walking) states that the capacity, quality and safety of walking and cycling networks should be increased to promote healthy travel. The highest possible standard of cycling and walking infrastructure will be pursued when appropriate. All new development must provide safe and convenient pedestrian and cyclist environments including cycle parking and ensuring integration with the wider network.

Transport Assessment Requirements (September 2019)

3.1.24 The Transport Assessment Requirements document has been produced by Cambridgeshire County Council and sets out the guidance to applicants, developers, their agents and local authority officers on when a Transport Assessment (TA) is required and what it should contain. Guidance is also included on what information should be provided for smaller applications that require a Transport Statement (TS).

3.1.25 The guidance regarding a residential development, land use C3, states that a Transport Assessment and Travel Plan are required for sites containing >80 dwellings.

Highway Development Management General Principles for Development (May 2021)

3.1.26 The Highway Development Management General Principles for Development sets out the requirements to applicants, developers, their agents and local authority officers in relation to new highway, access and adoptable infrastructure across Cambridgeshire. This includes matters relating to: visibility splays, junction and link design, adoptable standards, pedestrian and cycle infrastructure, shared surfaces, and turning areas.

Section 4 Site Access Strategy

4.1 Strategy

4.1.1 The site benefits from direct frontage onto:

- Ambrose Way; and
- Mill Lane.

4.1.2 Ambrose Way is a residential cul-de-sac serving around 12 dwellings with a circa 5.5m carriageway and footways on both sides. It is street lit and subject to a 30mph speed limit. Ambrose Way forms a priority junction with the B1049 Glebe Way to the northwest which provides access to the wider highway network.

4.1.3 Mill Lane has a circa 4.8m carriageway (wide enough for a large vehicle to pass a car) and footways on at least one side of the road (mainly on the west side). It is street lit and subject to a 30mph speed limit. Its northern end runs into a private road accessing Mill Lane Farm. There is on-street parking at the southern end of Mill Lane reducing its effective width. Traffic accessing the wider highway network (Glebe Way and beyond) has the choice of using the southern end of Mill Lane or Orchard Road.

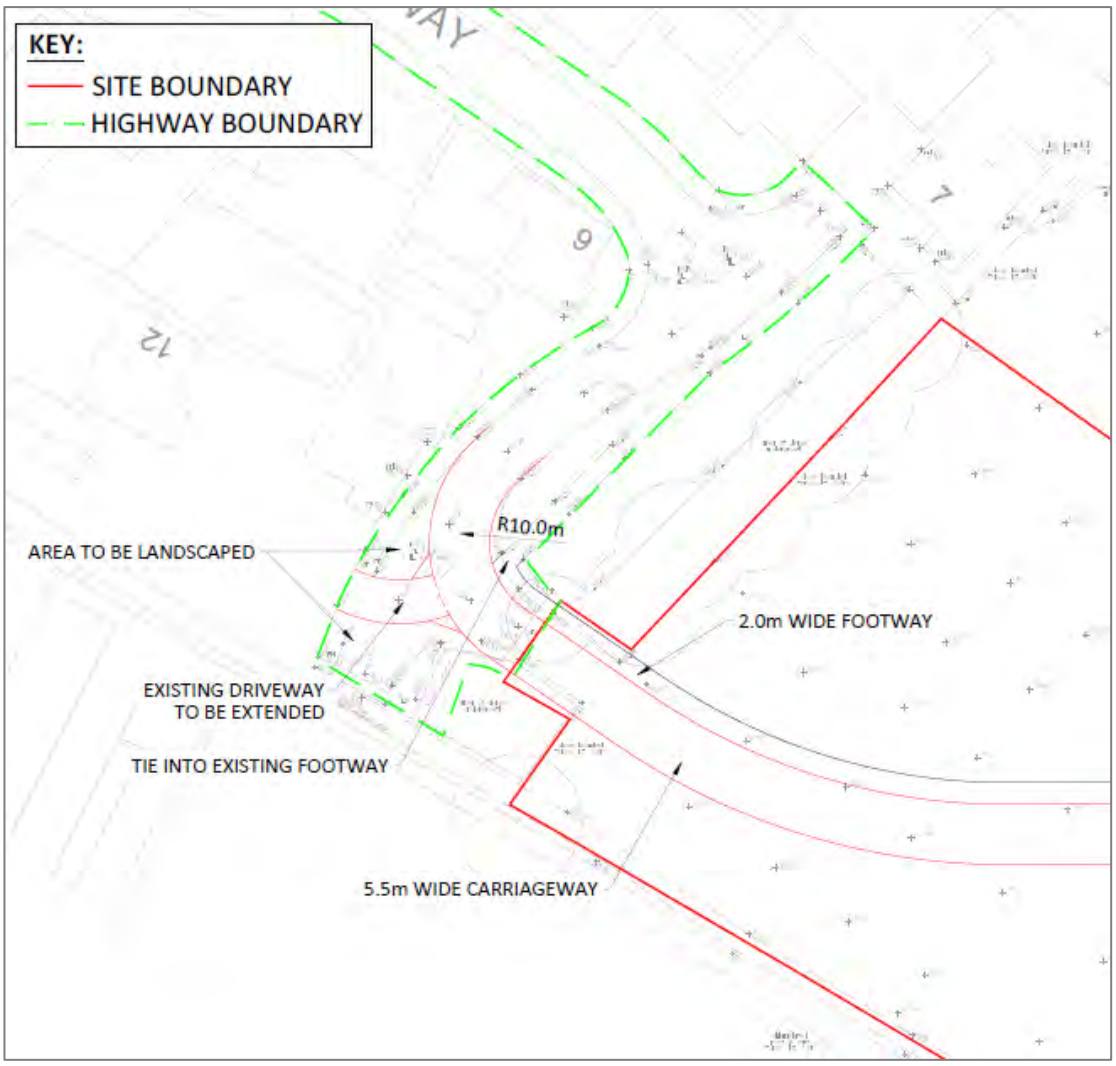
4.2 Vehicular Access

4.2.1 It is proposed to take vehicular access from Ambrose Way. Access can be achieved to the site from the eastern side of Ambrose Way in the vicinity of the turning head. The new access would form a continuation of Ambrose Way. A 5.5m carriageway and a 2.0m wide footway on the north/western side of the carriageway can be delivered. This is in accordance with Cambridgeshire County Council's Highway Development Management General Principles for Development document, which identifies that a 5.5m wide carriageway is suitable to serve a development of 100-300 units and that footways should be 2.0m wide.

4.2.2 Pre-Application Advice has been sought from Cambridgeshire County Council's Highways Adoption Team, who have confirmed that the proposed geometry of the new access road and that the existing geometry of Ambrose Way is considered suitable to accommodate the proposed quantum of development. The email correspondence with CCC is included at **Appendix A.**

4.2.3 This potential site access arrangement is shown on drawing **ITB14652-GA-005 Rev A** and is extracted as **Image 3.1**.

Image 3.1: Potential Access Arrangement from Ambrose Way



Source: i-Transport Drawing ITB14652-GA-005 Rev A

Pedestrian and Cycle Access

4.2.4 To deliver a permeable, connected and integrated development, a number of potential pedestrian and cycle accesses are proposed as part of the strategy comprising:

- A 2.0m wide pedestrian connection alongside the proposed vehicular access off Ambrose Way; and
- A 3.7m wide shared pedestrian / cycle access onto Mill Lane. This access could also be used as an emergency access which compiles with CCC's requirement for an emergency link for a development of more than 100 dwellings.

4.3 Development Concept

4.3.1 The development concept is shown on **Image 3.2** and included at **Appendix B.**

Image 3.2: Site Access Strategy and Development Concept

Source: Pegasus Design (Drawing: edp5518_d023c)

4.4 Summary

4.4.1 A summary of the of access strategy is shown in **Table 3.1.**

Table 3.1: Summary Table

Summary	
Vehicular Access	The site has direct frontage onto Ambrose Way and Mill Lane. Vehicular access can be provided in the form of a continuation from Ambrose Way. It is proposed that the new access road would 5.5m wide, which is in accordance with CCC's guidance for major access roads serving 100-300 dwellings. Pre-application advice in relation to the proposed geometry of the access road with CCC has also been undertaken which confirms that the proposed form of the access road and the existing geometry of Ambrose Way is considered acceptable for the level of development proposed.
Pedestrian and Cycle Access	A 2.0m wide pedestrian access is proposed alongside the vehicular access on Ambrose Way. A second shared pedestrian / cycle / emergency access to Mill Lane could also be provided, which would measure 3.7m. This would be in line with CCC's guidance on emergency vehicle access for developments of >100 dwellings.
Conclusion	**The access strategy can deliver safe access for all users, including pedestrians and cyclists and can be provided in line with prevailing design standards.**

Section 5 Sustainable Transport Strategy

5.1.1 In promoting sustainable transport, it is important to consider the reasons why future residents of the proposed development will make journeys.

5.1.2 The Department for Transport's (DfT) National Travel Survey identifies the reasons why people travel. The proportion of all trips by purpose (by all modes) is summarised in **Table 4.1.**

Table 4.1: Proportion of Trips per Year by Journey Purpose (all modes)

Journey Purpose	Proportion of Trips
Leisure	26%
Shopping	19%
Commuting / Business	18%
Education / Escort Education	13%
Personal Business	9%
Other Escort	9%
Other (Including Just Walk)	6%

Source: Table NTS0409 Average number of trips by purpose and main mode: England NTS – 2019 Edition

5.1.3 It is evident that travel demand is well spread between a number of journey purposes including leisure, shopping, commuting / business and education / escort education trips which account for around two thirds of all journeys.

5.2 Walking Distances

1.1.2 Paragraph 4.4.1 of the Manual for Streets identifies that ***"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas" and "this is not an upper limit and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2km."***

1.1.3 It is important to note that 2km is not however a maximum walking distance.

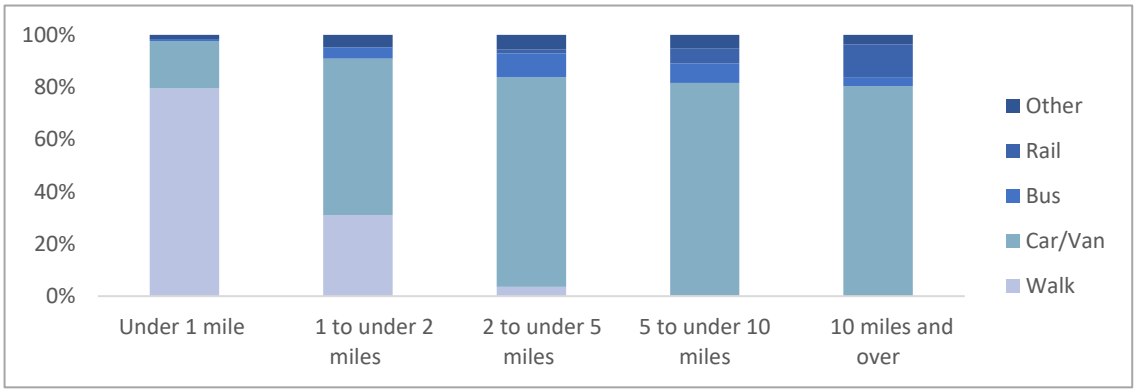
5.2.1 The Chartered Institution of Highways and Transportation (CIHT) guidance 'Planning for Walking' (2015) states:

"Across Britain, approximately 80% of journeys shorter than 1 mile are made wholly on foot – something that has changed little in 30 years. The main reason for the decline in walking is the fall in the total number of journeys shorter than 1 mile, which has halved in thirty years. It is not that people are less likely to make short journeys on foot but rather that fewer of the journeys they make can be accomplished on foot. If destinations are within walking distance, people are more likely to walk if walking is safe and comfortable and the environment is attractive."

5.2.2 This is consistent with the year-on-year findings of the National Travel Survey (NTS) which identifies the mode share of journeys of different lengths (**Image 5.1**)

5.2.3 The NTS finds that the vast majority (80%) of trips up to one mile (1.6km) are undertaken on foot, and that approximately 31% of journeys between one and two miles (3.2 km) will also be on foot, i.e., a significant proportion of people are prepared to walk for journeys up to two miles.

Image 5.1: Mode Share of Trips by Main Mode for Different Trip Lengths: England



Source: National Travel Survey: England 2019

5.2.4 Therefore, facilities and services within one mile (1.6km) will provide the greatest opportunity for trips to be made by walking. That is not to say that one mile is the maximum that people are prepared to walk, or that development must be located within a mile of everything as it is clear from the NTS data that around one-third of journeys between one and two miles (1.6km-3.2km) are undertaken on foot. Against this background, the following walking distances are identified:

- 800m – A comfortable walking distance which provides a walkable neighbourhood as identified in the Manual for Streets guidance.
- 1,600m - a distance where most people (circa 80%) will walk and offers "the greatest potential to replace short car trips"; and
- 3,200m – i.e., the distance within which a significant proportion (circa one-third) of journeys will be on foot.

1.1.4 As described in section 4.4 and shown in **Table 4.2**, a large range of local services and facilities are within a reasonable walking distance of the centre of the site including education, employment, retail and leisure opportunities.

5.3 Cycle Distances

5.3.1 Data provided within the National Travel Survey (2019) demonstrates that the average distance per journey by bike is approximately 4.4km, with the current average length of an employment and leisure cycle trip some 5.2km. For the purpose of this assessment, a 5km cycle distance will be used to represent a 'reasonable' cycle distance.

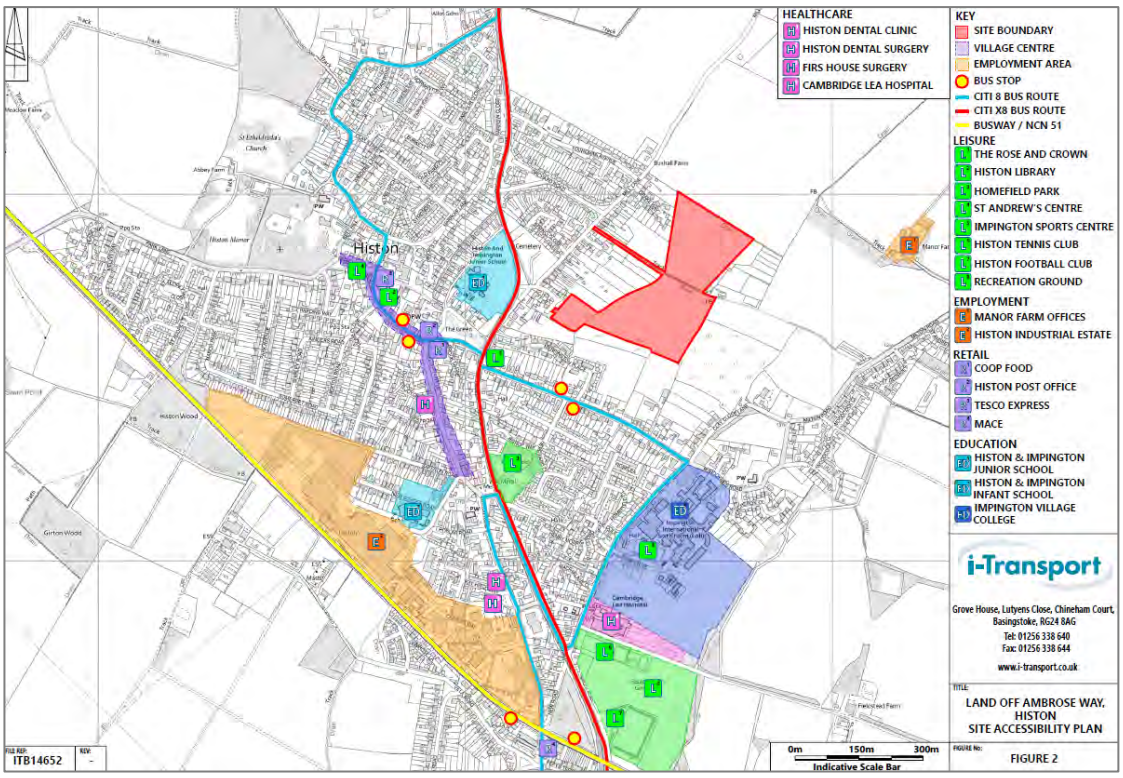
5.3.2 A cycling distance of up to around 5km (3 miles) therefore offers the greatest potential to replace cars trips and is therefore a "reasonable" cycling distance, although commuter journeys may be longer at 8km (5 miles). Cycling also regularly forms part of a longer journey in combination with public transport.

5.3.3 The distance travelled by cyclists and the propensity for more trips to be undertaken by bike is also increasing as a result of ebikes which offer riders the ability to go longer distances in a shorter time, with less effort.

5.4 Proximity to Local Facilities and Services

5.4.1 The site would provide a sustainable north-eastern extension to Impington and would be well located to a variety of everyday services and facilities. The location of these facilities is shown on **Figure 2** extracted as **Image 4.2**.

Image 4.2: Extract of Local Facilities and Services Plan



5.4.2 A preliminary review of the proximity of the site to local facilities has been carried out and is presented in **Table 4.2**. The assessment has considered the distance to each facility from the centre of the site as well as the estimated walking and cycling time.

5.4.3 As shown in **Table 4.2**, the site is well located to a variety of leisure, retail, healthcare and education services with a large industrial estate providing employment opportunities located within both walking and cycling distances of the centre of the site.

5.4.4 Additional services and facilities are located in Cambridge approximately 6km to the south, accessible via local bus services, the Guided Busway and/or by bike on the NCN51.

Table 4.2: Local Services and Facilities

Essential facilities				
Type	**Name**	**Distance to (m)**	**Walking time (mins)**	**Cycle time (mins)**
Education	Histon & Impington Junior School	1,000	12	4
	Histon & Impington Infant School	1,400	17	5
	Impington Village College	1,500	18	6
Health	Histon Dental Clinic	1,100	13	4
	Histon Dental Surgery	1,400	17	5
	Firs House Surgery	1,500	18	6
	Cambridge Lea Hospital	1,800	21	7
Supermarkets / Food Stores	Coop Food	950	11	4
	Tesco Express	1,100	13	4
	Mace	1,900	23	7
Transport Link	Cambridgeshire Busway and NCN 51	1,900	23	7
Employment	Impington Industrial Estate	1,800	21	7
Leisure	The Rose and Crown	750	9	3
	Histon Library	1,100	13	4
	Homefield Park	1,100	13	4
	St Andrew's Centre	1,200	14	5
	Impington Sports Centre	1,600	19	6
	Histon Tennis Club	1,800	21	7
	Histon Football Club	1,900	23	7
	Histon Recreation Ground	1,900	23	7

Source: Consultant Estimates (measured from the centre of the site)

5.5 Walking and Cycling Facilities

Existing Faculties

5.5.1 Ambrose Way is located at the southwestern extent of the site and currently serves as a residential cul-de-sac. Footways are provided on both sides of the carriageway and tie into existing footways on Mill Lane and Glebe Way to the west. Street lighting is present throughout the local highway network in the vicinity of the site.

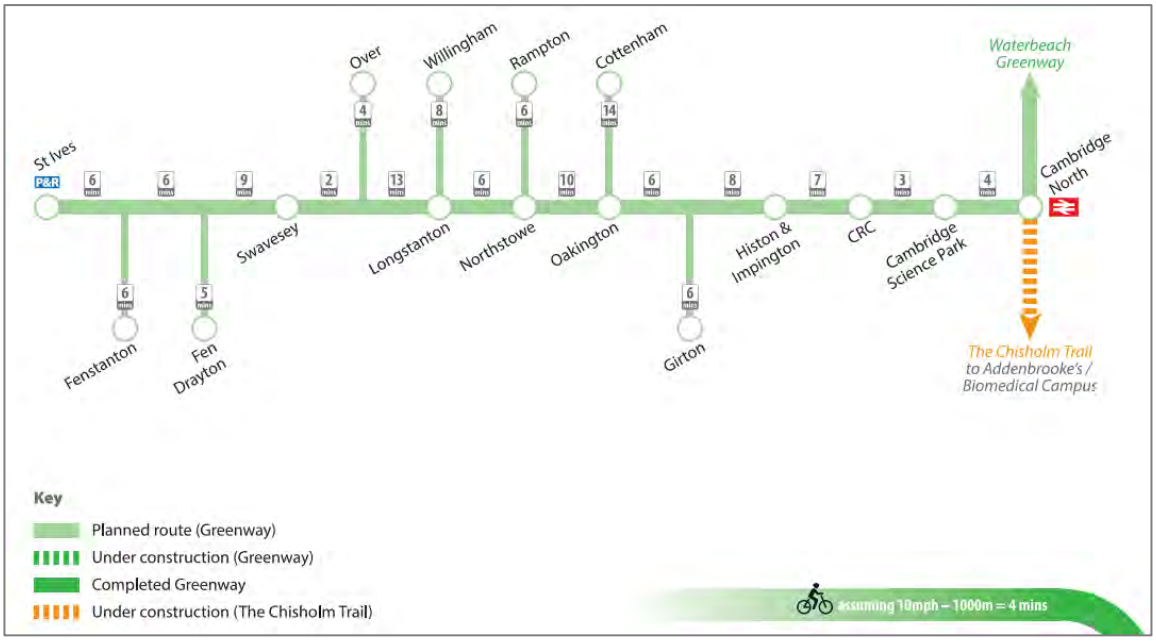
5.5.2 Mill Lane provides footways on both sides of the carriageway southbound towards the centre of Histon and Cambridge. Mill Lane also routes north, providing a connection to a number of residential streets via a single footway on the western side of the carriageway.

5.5.3 Glebe Way forms part of the main north-south link through Histon, becoming Cottenham Road to the north and Water Lane and Bridge Road to the south. The carriageway is approximately 7.8m in width. A shared footway / cycleway is provided on the eastern side of the carriageway which runs between Cottenham to the north and joins the carriageway just to the north of the signalised junction with The Green. Dropped kerbs and tactile paving are provided at the majority of the crossing points between Glebe Way and the residential streets it serves. Furthermore, there is a pedestrian refuge island on Ambrose Way at the junction with Glebe Way. To the south of the site, at the signalised junction between Glebe Way, The Green and Water Lane, pelican crossings are provided on all arms of the junction.

5.5.4 Footways and cycle lanes are provided on both sides of the carriageway southwards along Water Lane. A puffin crossing is provided just south of the priority junction between Water Lane, Station Road and Bridge Road. An additional crossing in the form of an uncontrolled pedestrian refuge island with dropped kerbs and tactile paving is accessible approximately just to the north of School Lane. Continuing south, a pelican crossing is provided on Bridge Road at the signalised junction between Bridge Road and Chequers Road. Finally, a toucan crossing is available to the south of the New Road/Bridge Road junction which pedestrians and cyclists can use to access Histon Tennis Club, Football Club and Recreation Ground on the eastern side of Bridge Road and can access the Busway via New Road to the south west. Continuing along Bridge Road to the South, a single footway is provided on the western side of the carriageway, over the Busway and National Cycle Route (NCN) 51.

5.5.5 NCN 51 is accessible approximately 1.9km to the southwest of the site, just to the south of the junction between Station Road and New Road. The NCN 51 is a circa 209 mile cycle route that connects Oxford to Bedford and Huntingdon to Colchester via Felixstowe. Between St Ives and Cambridge, the cycleway follows the Guided Busway and is blacktopped over its entire length and can be used by horse riders (St Ives to Milton Road, Cambridge only), pedestrians and cyclists. In June 2020, the St Ives Greenway was approved, which will make it easier for walkers, cyclists and horse riders to travel from St Ives into Cambridge (via Histon and Impington). The Greenway broadly follows the busway, but with new links to make it more accessible from local centres. An indicative plan of the St Ives into Cambridge Greenway is provided as **Image 4.3** below, along with approximate cycle journey times between destinations.

Image 4.3: Extract of St Ives to Cambridge Greenway

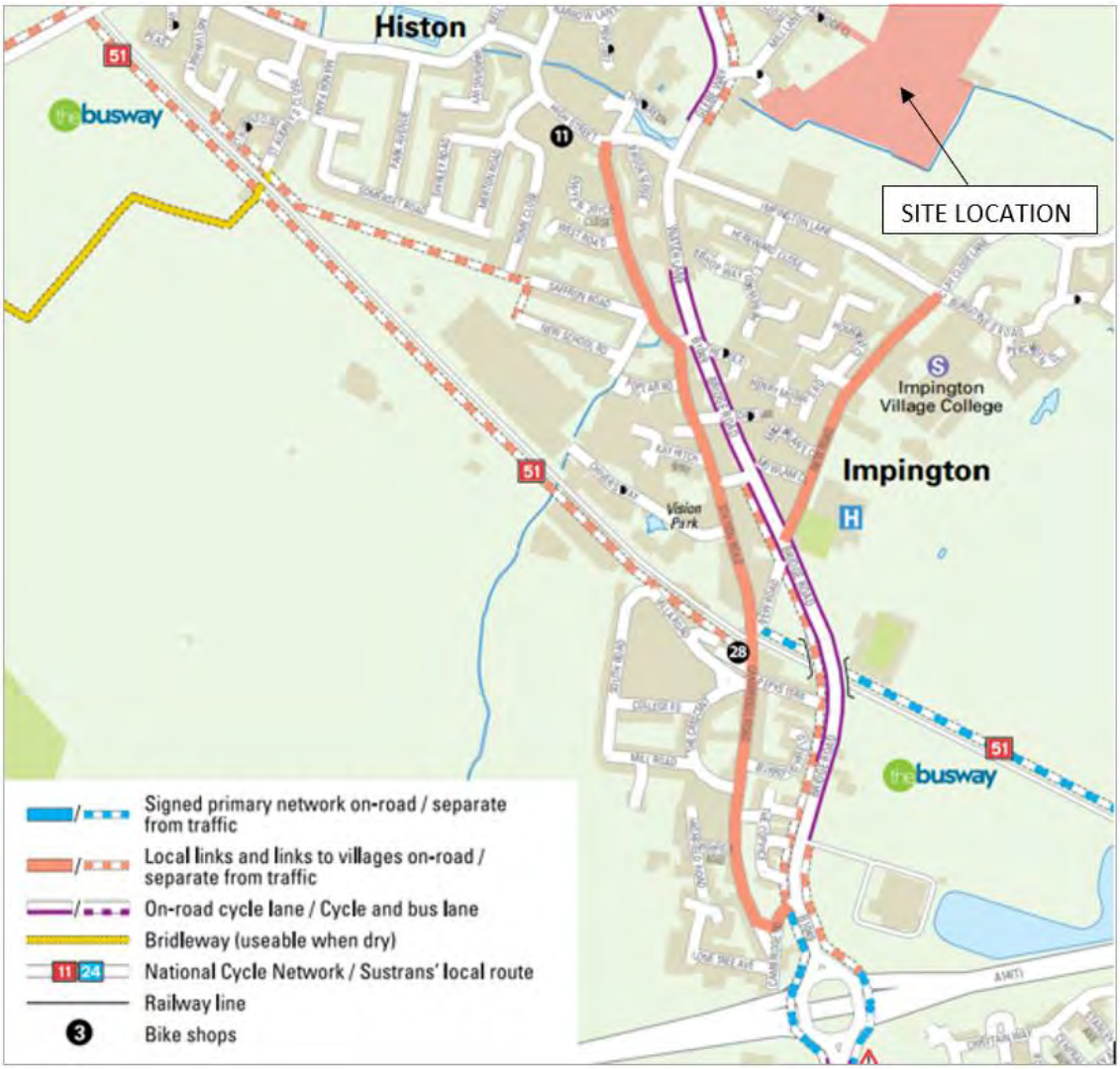


5.5.6 **Image 4.3** demonstrates that key destinations such as Cambridge Regional College and Cambridge Science Park are located within a 10-minute cycle of Histon and Impington on the Greenway.

5.5.7 Furthermore, there are 40 covered, well-lit and CCTV monitored cycle parking spaces available at the Histon Busway stop, therefore linked trips by bike and bus could occur to access the City Centre and other destinations slightly further afield, both to the north and south.

5.5.8 The cycle facilities in Histon and Impington are shown on the 'Histon and Girton' Cycle Map produced by Cambridgeshire County Council, an extract of which is shown below on **Image 4.4.**

Image 4.4: Extract of Histon and Girton Cycle Map



Source: Cambridgeshire County Council

Potential Walking and Cycling Improvements

5.5.9 The Cambridgeshire Local Cycling and Walking Infrastructure Plan (LCWIP) identifies that currently 38% of people in Greater Cambridgeshire cycle and 47% feel that they should cycle more. The plan focuses on priority routes for cycling using census data to identify where funding could have the greatest effect in terms of where people live and work. A number of potential improvements to cycle routes within Histon and Impington have been identified within the Plan, these include:

Between Histon Busway and Impington Village College

- Resurfacing of New Road (south);
- Provision of a shared use path from the Bridge Road junction crossing to New Road (north).

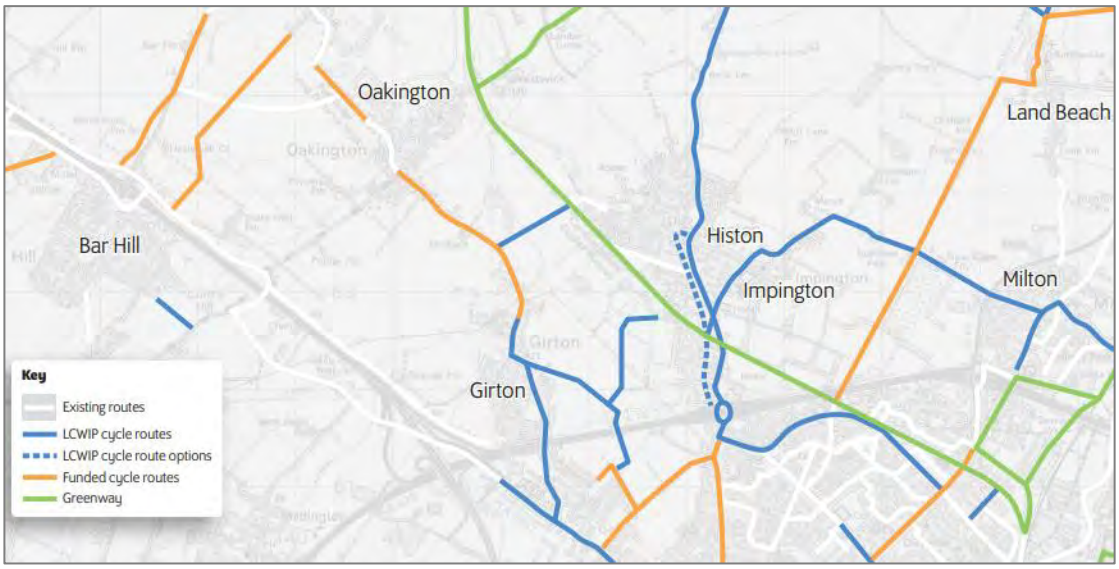
- To help improve the access to the Secondary School along New Road, options to widen the footway to provide a shared use path with a narrowing of the carriageway to provide a single way working arrangement could be provided; and
- Formalise the cut through from the busway to New Road via Histon FC car park to provide direct route for those coming from the Orchard Park area;

Between Histon Busway and Kings Hedges Road Junction

- Review on-street car parking on Station Road to improve safety or consider modal filter on Station Road / Cambridge Road junction.
- Widen the cycle lanes on Water Lane and Bridge Road where possible and surface in red, or alternatively consider a shared path on east side to New Road to facilitate wo-way cycling to access Impington College.
- Make improvements to the shared path around the roundabout where possible (this has already been implemented as part of the A14 junction 32 improvements).

5.5.10 A map showing the LCWIP cycle routes is included as **Image 4.5**:

Image 4.5: LCWIP Cycle Map – North South Cambridgeshire



Source: Cambridgeshire Local Cycling and Walking Infrastructure Plan consultation – Appendix 1 Cycle Maps

5.5.11 Appendix 2 of the LCWIP provides a prioritisation matrix for the cycle routes in each area. With regards to the prioritisation criteria for the potential Histon Improvements the LCWIP identifies that:

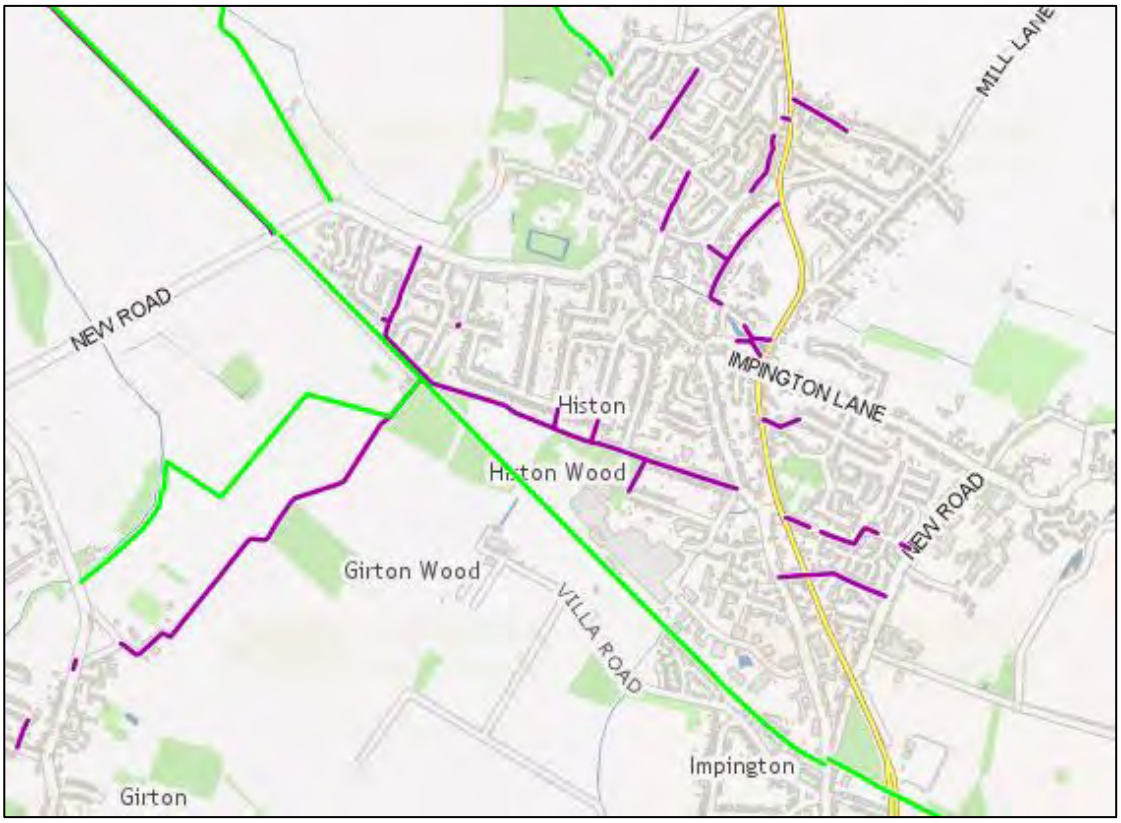
- Partial funding for these schemes is available, although some developer funding would be required;
- These schemes have the potential to increase the number of cyclists by 200-500+ cyclists per day;
- The schemes would improve key routes to schools; and
- Provide links to two or more other cycle links and fill in important missing links on the cycle network.

5.5.12 As such, the proposed development could help provide contributions towards the identified improvement schemes to deliver improved cycle infrastructure within Histon and to help enable cycle connections to destinations further afield such as Cambridge to both future and existing residents of Histon and Impington.

Public Rights of Way

5.5.13 In addition to the local walking and cycling facilities outlined above, a number of public rights of way (PROW) are also available in the vicinity of the site as shown in **Image 4.6**.

Image 4.6: Local PROW Network



Source: Cambridgeshire County Council

5.5.14 Given the good pedestrian and cycle connectivity to and from the site, the internal layout can be designed to maximise walking and cycling opportunities and minimise journey distances. A permeable network of streets will be provided to promote use by sustainable modes of travel.

5.6 Access to Public Transport

5.6.1 The closest bus stop to the site is located circa 500m from the centre of the site on Glebe Way. This stop provides a direct morning service to the centre of Cambridge on Monday to Saturdays in time to reach Cambridge at start of the typical working day (9am).

5.6.2 The closest regular bus service to the site is located circa 1km from the centre of the site on Histon High Street. This stop is served by the Citi 8 bus service which connects Cambridge and Cottenham and has a service frequency of approximately 20 minutes throughout the day.

5.6.3 The Cambridge Busway is also accessible from the site. The stops are located approximately 1.9km south for westbound services and 2km to the south for eastbound services. The stops are served by routes A, B and D.

1.1.5 **Table 4.3** outlines the times and frequencies for the local bus services.

Table 4.3: Local Bus Service Details

Service	Route	Typical Frequency		
		Monday - Friday	Saturdays	Sundays
Citi 8	Cambridge - Histon - Cottenham	Every 30 minutes between 07:09 and 18:09; then hourly between 19:09 and 23:09	Every 30 minutes between 07:09 and 18:09; then hourly between 19:09 and 23:09	Every hour First service 09:09 Last service 18:24
	Cottenham – Histon – Cambridge	Every 30 minutes between 06:33 and 18:33 and then hourly between 17:33 and 22:33	Every 30 minutes between 06:33 and 18:33 and then hourly between 17:33 and 22:33	Every hour First service 08:33 Last service 19:09
A, B, C the busway	Trumpington - Cambridge – St. Ives - Huntingdon	Every 5-15 minutes First service (A) 06:47 Last service (B) 00:12	Every 5-15 minutes First service (A) 06:47 Last service (B) 00:12	Every 15-60 minutes First service (B) 09:33 Last service (B) 23:03
	Huntingdon – St. Ives – Cambridge – Trumpington	Every 5-15 minutes First service (B) 05:57 Last service (B) 23:01	Every 7-30 minutes First service (B) 05:57 Last service (B) 23:01	Every 15-60 minutes First service (B) 08:26 Last service (B) 21:56

Source: Traveline

5.6.4 **Table 4.3** demonstrates there are a number of frequent bus services within a walkable distance from the site, providing access to central Cambridge to the south and destinations further afield such as Huntingdon and St. Ives to the northwest. Future residents will therefore have a realistic opportunity to use sustainable modes of transport as a viable alternative to private vehicle use.

5.6.5 This is recognised in the Greater Cambridge Local Plan Transport Evidence Report, which identifies that Histon and Impington are located along a High Quality Public Transport Route (HQPT).

5.6.6 While the identified bus stops may be outside of the typical 400m walk distance it is evident that public transport users are likely to walk substantially further than 400m to access a frequent service, especially one which is at a 'turn up and go' frequency, as is provided from the Busway. This is confirmed by a recent paper on walking and cycling distances summarised in Local Transport Today, based on data extracted from the National Travel Survey which identifies that the mean walking distance to a bus stop is 580m while the 85th percentile walking distance to a bus stop is some 810m, both of which are notably longer than the much quoted CIHT guidance.

5.6.7 Histon is located on the St Ives Greenway. In total, 13 Greenways have been approved by the Greater Cambridgeshire Partnership Executive Board and are intended to make it easier both to travel in a pleasant and sustainable way into and out of Cambridge. The Greenway Review identified a number of improvements to the route in the vicinity of Histon and Impington including:

- Improved signage; and
- Improved and new links between the existing busway / greenway and Saffron Road and St Audreys Close, as well as upgrading the informal route adjacent to the football ground, and improving the of Bridge Road for those on New Road.

5.6.8 As such, the proposed development could help provide contributions towards the identified improvement schemes to deliver improved access to the busway / greenway within Histon.

5.7 Sustainable Transport Strategies

5.7.1 The location of the site relevant to local facilities and benefiting from the good sustainable connections described in Sections 3.1 - 3.3, means that the development offers a significant opportunity to create a sustainable and integrated development that will not rely upon the private car. This is recognised in the HELAA proforma for the Land at Ambrose Way, Impington site, as well as within the Greater Cambridge Local Plan Transport Evidence Report.

5.7.2 To build on the site's excellent location relevant to local services, the development will be brought forward alongside a Sustainable Transport Strategy comprising a package of improvements to enhance access opportunities by all modes of travel.

5.7.3 The detail of the Sustainable Transport Strategy will be developed as the proposal progresses; **Table 4.4** identifies a series of strategy principles which will be applied.

Table 4.4: Sustainable Transport Strategy Principles

Principle	Measure
Facilitate home working	Ensure dwellings provide adequate space for home working, and that they are provided with appropriate infrastructure (i.e., broadband).
Improved Footway / cycleway provision	Undertake a non-motorised user audit and identify gaps in pedestrian and cycle network, especially towards Histon and Impington Village centres and the guided busway. The development is also well located to provide contributions towards cycle infrastructure improvements in the LCWIP.
Improved Access to the Guided Busway / Greenway	The proposed development is well located to access frequent and direct bus services to large service centres such as Cambridge. The development could also help to provide contributions towards improvements identified in the Greenway Review which would provide benefits to both future residents of the development and existing residents of Histon and Impington.
Facilitate improvements to public rights of way	Provide sensitive and appropriate surfacing and access improvements to local footpaths and bridleways to facilitate access to the countryside, and Histon and Impington Centre.
Promote Smarter Choices	Promote a package of travel incentives, travel planning services and travel information to encourage sustainable travel.

5.8 Summary

5.8.1 A summary of the Site Accessibility is shown in **Table 4.5.**

Table 4.5: Summary Table

Summary	
Proximity to Local Facilities and Services	Good access to local facilities and services within walking cycling distance from the centre of the site.
Walking and Cycling Facilities	Existing provision along Ambrose Way and Glebe Way providing a walking route to the local facilities on The Green and High Street. Signalised pedestrian crossing points are provided on all arms of the Glebe Way / Impington Lane / Water Lane / The Green junction. A number of suitable cycling routes within close proximity to the site, including signed cycle routes along Glebe Way, Water Lane, and Bridge Road which provide a link to the National Cycle Network Route 51.

Summary	
Access to Public Transport	A bus stop on Glebe Way in close proximity to the site, served by the Citi 8 / X8 routes provide a frequent service (circa 20min) which connect Cambridge and Cottenham. The Cambridge Busway is also accessible from the site and provides frequent services (every 5-10 minutes during weekdays) to the center of Cambridge.
Sustainable Transport Strategy Principles	The development will be brought forward alongside a sustainable transport strategy comprising a package of improvements to enhance sustainable travel, this could include schemes identified within the LCWIP. Sustainable travel options will therefore be taken up.

Section 6 Traffic Impact Assessment

6.1 Overview

6.1.1 To consider the potential traffic impacts of the development of the Site, an initial and high-level appraisal has been carried out and is summarised in this section.

6.1.2 Whilst the development proposals at this stage consist of 177 dwellings, this traffic impact assessment considers traffic associated with 180 dwellings to provide a robust assessment. The assessment concludes that the local highway network could adequately accommodate the additional traffic associated the proposed development.

6.2 Traffic Generation

Person Trip Rates

6.2.1 Residential person trip rates have been obtained from TRICS, which identifies the total person trip rates generated by a residential development. Using these trip rates, the likely trip generation for 180 dwellings has been calculated. The total person trip rates and associated trip generation is presented in **Table 5.1.**

Table 5.1: Total Person Trip Rates and Generation

	Morning Peak Period			Evening Peak Period		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Trip Rate (per dwelling)	0.216	0.754	0.970	0.605	0.250	0.855
Trip Generation (180 dwellings)	39	136	175	109	45	154

6.2.2 **Table 5.1** demonstrates that the proposed development would generate between 154 - 175 two-way person trips during the busiest periods of the day across all modes of travel.

Journey Purpose

6.2.3 Using journey purpose by time of day data from the NTS, the journey purpose proportions for each category and the percentage use across each hour are set out below in **Table 5.2.**

Table 5.2: Journey Purpose by Time of Day

Time Period	Commuting / Business	Education	Shopping	Other Work, escort and personal	Leisure
Morning Peak	24.2%	51.2%	4.0%	14.0%	6.7%
Evening Peak	37.0%	5.0%	12.1%	20.0%	26.2%

Source: NTS0502-2017

6.2.4 To understand in further detail the different trips within each category, the categories presented in **Table 5.2** (education, shopping and leisure) are split further. These proportions are presented in **Table 5.3**.

Table 5.3: Journey Purpose – Category Breakdown

Education		Shopping		Leisure	
State-funded nursery and primary education	48.7%	Food shopping	45%	Visiting friends/family	50%
State-funded Secondary education	35.0%	Non-food shopping	55%	Sport / Entertainment	23%
Special needs education	1.1%			Holidays / Days out	13%
Private education	15.2%			Other inc. walking cycling etc	14%
State-funded Secondary education - ages 11-16	30.6%				
State-funded Secondary education - Sixth Form	4.4%				

6.2.5 Therefore, based on the further breakdown in **Table 5.3** and the journey purpose by time of day for each category in **Table 5.2**, the journey purpose by time is summarised in **Table 5.4.**

Table 5.4: Journey Purpose by Time Summary

	Hour Beginning	08:00	17:00
Commuting	**All**	**24.2%**	**37.0%**
Education	**All**	**51.2%**	**5.0%**
	Nursery / Primary	24.9%	2.4%
	Secondary	15.7%	1.5%
	Sixth Form	2.3%	0.2%
	Special Needs	0.6%	0.1%
	Independent	7.8%	0.8%
Shopping	**All**	**4.0%**	**12.1%**
	Food	1.8%	5.4%
	Non-Food	2.2%	6.7%
Other Escort	**All**	**14.0%**	**20.0%**
Leisure	**All**	**6.7%**	**26.2%**
	Visits	3.4%	13.1%
	Sports / Entertainment	1.5%	6.0%
	Holidays / Days Out	0.9%	3.4%
	Other	0.9%	3.7%

6.2.6 Using the total person trip generation presented in **Table 5.1,** and the journey purpose percentages set out in **Table 5.4,** the total number of person trips has been divided across each category and is presented at **Table 5.5.**

Table 5.5: Total Person Trips – Journey Purpose

	Hour Beginning	08:00		17:00	
		In	Out	In	Out
Commuting	**All**	**9**	**33**	**40**	**17**
Education	**All**	**20**	**69**	**5**	**2**
	Nursery / Primary	10	34	3	1
	Secondary	6	21	2	1
	Sixth Form	1	3	0	0
	Special Needs	0	1	0	0
	Independent	3	11	1	0
Shopping	**All**	**2**	**5**	**13**	**5**
	Food	1	2	6	2
	Non-Food	1	3	7	3
Other Escort	**All**	**5**	**19**	**22**	**9**
Leisure	**All**	**3**	**9**	**29**	**12**
	Visits	1	5	14	6
	Sports / Entertainment	1	2	7	3
	Holidays / Days Out	0	1	4	2
	Other	0	1	4	2

Modal Split

6.2.7 From the Sustainable Transport Strategy Outlined above (Section 4), it is clear that there is a great opportunity for future residents to access local facilities and services by non-car modes of transport. Therefore, the site is extremely well located to take advantage of:

- Local facilities in Histon and Impington including convenience store, post office, Bank, cafes, restaurants and public houses, doctors surgery, pharmacy and employment areas;
- Schools within walking and cycling distance including Histon and Impington Brook Primary School, Histon and Impington Park Primary School and Impington Village College;
- Existing cycling infrastructure to Cambridge along the NCN 51 guided busway; and
- Public transport – frequent bus services from Histon High Street and along the guided bus way providing access to Cambridge.

6.2.8 The site is also expected to bring forward a package of pedestrian, and cycle improvements, improving the sites accessibility to existing local facilities and public transport provision, to assist in minimising car travel.

6.2.9 The modal splits for South Cambridgeshire output area 006 (which includes the proposed development site) have been derived and are set out **Table 5.6** using information from 2011 census data.

Table 5.6: Travel to Work Mode Splits

Mode	South Cambridgeshire 006
Underground	0%
Train	2%
Bus, minibus or coach	8%
Taxi	0%
Motorcycle	2%
Driving a car or van	55%
Passenger in a car or van	5%
Bicycle	21%
On foot	8%
Other Method	0%
Total	100%

6.2.10 On the basis of the sites location, the modal splits presented above, recent and planned improvements to public transport, walking and cycling infrastructure, information contained within the Cycle Propensity tool and the aspirations of the site in terms of sustainable travel (to improve on existing modal split levels), based on the journey purpose, each category has been split and assumptions have been applied for the mode of travel. This is presented at **Table 5.7.**

Table 5.7: Assumed Modal Split

Modal Split by journey purpose - external	Walk	Cycle	Car Driver	Car Passenger	Local Bus	Rail	Total
Commuting / Business	10%	25%	45%	5%	15%	-	100%
Nursery / Primary	80%	-	10%	10%	-	-	100%
Secondary	80%	10%	5%	5%	-	-	100%
Sixth Form	80%	10%	5%	5%	-	-	100%
Special Needs	-	-	40%	50%	10%	-	100%
Independent	-	-	40%	50%	10%	-	100%
Food	10%	10%	40%	20%	20%	-	100%
Non-Food	5%	15%	40%	20%	20%	-	100%
Other Escort	5%	10%	35%	30%	10%	-	90%
Leisure / Other	10%	15%	35%	30%	10%	-	100%

6.2.11 On the basis of **Table 5.7,** the number of vehicle trips by journey purpose has been calculated and is presented in **Table 5.8.**

Table 5.8: Vehicle Trips Generated by the Site by Purpose

	Hour Beginning	08:00		17:00	
		In	Out	In	Out
Total External Person Trips		39	136	109	45
Commuting	**All**	**4**	**15**	**18**	**7**
Education	**All**	**3**	**9**	**1**	**0**
	Nursery / Primary	1	3	0	0
	Secondary	0	1	0	0
	Sixth Form	0	0	0	0
	Special Needs	0	0	0	0
	Independent	1	4	0	0
Shopping	**All**	**1**	**2**	**5**	**2**
	Food	0	1	2	1
	Non-Food	0	1	3	1
Other Escort	**All**	**2**	**7**	**8**	**3**
Leisure	**All**	**1**	**3**	**10**	**4**
	Visits	0	2	5	2
	Sports / Entertainment	0	1	2	1
	Holidays / Days Out	0	0	1	1
	Other	0	0	1	1
Total External Vehicle Trips		14	50	58	24

6.2.12 It can be seen that the proposed development is anticipated to generate circa 64 two-way vehicle movements in the morning peak and 82 two-way vehicle movements in the evening peak hour . This equates to just over one vehicle movement per minute in the morning peak hour and one vehicle movement circa every 40 seconds during the evening peak hour.

6.3 Distribution

6.3.1 The likely journey purpose for the generated car driver peak hour trips can be identified using the National Travel Survey (NTS) 2019 (DfT). The proportion of peak hour trips by journey purpose by car is presented in **Table 5.9**.

Table 5.9: Proportion of Peak Hour Trips by Journey Purpose (Car Driver Only)

Trip Purpose	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Commuting / Business	37.6%	43.9%
All Other Journey Purpose	62.4%	56.1%
Total	**100%**	**100%**

Source: Car driver trip start time by trip purpose (Monday to Friday only): Great Britain, 2014/18, National Travel Survey, DfT, 2019.

6.3.2 Some 38% of the total vehicular trips generated by the residential development will be for employment journeys in the morning peak hour period. The remaining 62% of the vehicle trips will be all other purposes, including education, shopping, leisure and personal business trips. In the evening peak hour, 44% of journeys are employment related with other journeys comprising 56% of the total vehicular trips.

6.3.3 For the purpose of this assessment, the analysis has been undertaken on the basis that 44% of the total vehicular trip generated by the residential development will be for employment journeys and the remaining 56% of the vehicle trips will be for all other purposes for both the morning and evening peak hours. This provides a robust estimate because it assumes a greater proportion of non-local journeys.

6.3.4 In order to provide an accurate assessment of the likely distribution of traffic from the site, separate methodologies will be applied to consider the destinations of commuting and business trips to other trip purposes from the South Cambridge 006 MSOA:

- For commuting and business trips, the National Census Journey to Work statistics (for car drivers) is to be used. These identify the location of existing resident's employment locations and so identify existing commuting patterns; and

- For other journey purpose trips, a P/T^2 gravity model will be undertaken using the population of key urban areas (from the 2011 census) within a 45-minute drive from the site (estimated from Google Maps Direction facility).

6.3.5 An assessment of the 2011 Census Journey to Work data for South Cambridge 006 Mid-Layer Super Output Area, which comprises Histon and Impington has been reviewed to identify the likely destinations that development traffic is likely to travel to for work. The South Cambridge 006 MSOA area is shown in **Image 5.1.**

Image 5.1: South Cambridge 006 Middle Super Output Area

Source: Nomisweb

6.3.6 **Table 5.10** demonstrates that the highest proportion of local trips is to Cambridge followed by Histon and Impington. These local trips within Histon and Impington and those in Cambridge which is served by the busway are the easiest trips to influence when considering modal shift to non-car modes.

Table 5.10: Destination of Resident Trips

Destination	Work (44%)	Non-Work (56%)	Combined
Cambridge	18.8%	35.2%	54.0%
Histon and Impington	3.1%	15.1%	18.2%
South Cambridgeshire	7.1%	0.4%	7.5%
Milton	3.8%	1.1%	4.8%
Huntingdon	1.7%	0.4%	2.2%
Cottenham	0.9%	0.8%	1.7%
Girton	-	1.7%	1.7%
Waterbeach	0.9%	0.1%	1.0%
Hertfordshire	1.0%	-	1.0%
Ely	0.9%	0.2%	1.0%
Other*	5.8%	1.0%	6.9%
Total	**44.0%**	**56.0%**	**100.0%**

Source: 2011 Census Data – Journey to Work

6.4 Traffic Assignment

6.4.1 The traffic expected to be generated by the site (see **Table 5.8**) has been assigned to the local highway network using the distribution identified in **Table 5.10**.

6.4.2 To determine the routing of trips to these destinations, reference has been made to the Google Maps 'Directions' Facility. Within the Directions facility, a morning peak hour start time for journeys was utilised to ensure that peak period traffic conditions are reflected.

6.4.3 **Table 5.11** provides a summary of the traffic routing from the of development site whilst **Table 5.12** provides a summary of the Traffic Assignment.

Table 5.11: Traffic Routing

Route 1 (Site Access)		Route 2		Route 3		Route 4	
Ambrose Way	100.0%	Mill Lane West	100.0%	Glebe Way North	7.5%	Water Lane	78.8%
				Glebe Way South	92.5%	Histon Road	4.8%
						The Green	8.2%
						Impington Lane	5.5%
						-	2.7%
Total	**100.0%**	**Total**	**100.0%**	**Total**	**100.0%**	**Total**	**100.0%**

Source: Consultants Estimates

Table 5.12: Traffic Assignment – Two-Way trips

Route 1 (Site Access)		Route 2		Route 3		Route 4	
Morning Peak							
Ambrose Way	65	Mill Lane West	65	Glebe Way North	5	Water Lane	51
				Glebe Way South	60	Histon Road	3
						The Green	5
						Impington Lane	4
						-	2
Total	**65**	**Total**	**65**	**Total**	**65**	**Total**	**65**
Evening Peak							
Ambrose Way	82	Mill Lane West	82	Glebe Way North	6	Water Lane	64
				Glebe Way South	75	Hoston Road	4
						The Green	7
						Impington Lane	4
						-	2
Total	**82**	**Total**	**82**	**Total**	**82**	**Total**	**82**

6.4.4 **Table 5.12** demonstrates that the largest impact would occur on Ambrose Way and Mill Lane to the west of the development site with circa 65-82 two-way vehicle movements in the morning and evening peak hours. Beyond this, the majority of the proposed development traffic would route south on Glebe Way, with circa 60 vehicle movements in the morning peak and 75 in the evening peak. This equates to on average one vehicle movement every minute during the morning peak and one vehicle movement 45 seconds in the evening peak.

6.5 Junction Capacity Assessments

6.5.1 The traffic impact of the development proposal on the local highway junctions has been assessed using the PICADY module of TRL's Junctions 10 software. The performance of the junctions has been evaluated based on the principal outputs from the model which include the Ratio of Flow to Capacity (RFC), Queue Length and Delay.

6.5.2 For this Initial Transport Assessment, the junctions assessed include Ambrose Way / Mill Lane junction and Mill Lane / Glebe Way junction. The geometric parameters of these junctions used in the PICADY models have been measured from Ordnance Survey (OS) mapping.

Baseline Traffic Flows

6.5.3 Manual Classified Count (MCC) surveys at the junctions discussed above were undertaken on 12th October 2021 between 07:00 – 10:00 in the morning period and 16:00 – 19:00 in the evening period to obtain the AM and PM peak period traffic flows.

6.5.4 The recorded traffic flows showed the AM peak hour occurs between 08:00 - 09:00 and the PM peak hour occurs between 16:45 - 17:45. The recorded traffic flows during the AM and PM peak periods are provided at **Appendix C**.

Assessment Scenarios

6.5.5 In addition to 2021 Baseline year (the year traffic survey was undertaken), junction assessments have been undertaken for two future years; 2025 (estimated opening year) and 2041 (end of Local Plan period). The resulting junction assessment scenarios are as follows:

- 2021 Baseline;
- 2025 'without development', i.e., allowing for background traffic growth to 2025;
- 2025 'with development' i.e., allowing for background traffic growth to 2025 and the development proposal;
- 2041 'without development', i.e., allowing for background traffic growth to 2041; and
- 2041 'with development' i.e., allowing for background traffic growth to 2041 and the development proposal.

TEMPro Growth Factors

6.5.6 Factors to allow for background traffic growth from 2021 (the year the traffic surveys were undertaken) to future years 2025 (the proposed opening year of the development) and 2041 (end of local plan period) have been derived using the TEMPro software for the South Cambridgeshire 006 mid-layer super output area (MSOA).

6.5.7 The unadjusted TEMPro growth factors are set out in **Table 5.13**.

Table 5.13: TEMPro Growth Factors – South Cambridgeshire 006 MSOA

Date Range	Morning Peak Period	Evening Peak Period
2021-2025	1.0691	1.0735
2021-2041	1.1832	1.1952

Source: TEMPro

Ambrose Way / Mill Lane Junction

6.5.8 The T-junction between Ambrose Way and Mill Lane has been modelled using Junctions 10 and the results are summarised in **Table 5.14** and the full PICADY output report is provided at **Appendix D**.

Table 5.14: Ambrose Way / Mill Lane Junction

Approach	AM Peak (08:00-09:00)			PM Peak (16:45-17:45)		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2021 Baseline						
Mill Lane (N)	0.16	<1	9	0.09	<1	8
Ambrose Way (E)	0.00	0	6	0.00	0	0
2025 Without Development						
Mill Lane (N)	0.18	<1	9	0.10	<1	8
Ambrose Way (E)	0.00	0	6	0.00	0	0
2025 With Development						
Mill Lane (N)	0.18	<1	9	0.10	<1	8
Ambrose Way (E)	0.00	0	6	0.00	0	0
2041 Without Development						
Mill Lane (N)	0.20	<1	9	0.11	<1	8
Ambrose Way (E)	0.00	0	6	0.00	0	0
2041 With Development						
Mill Lane (N)	0.20	<1	9	0.12	<1	9
Ambrose Way (E)	0.00	0	6	0.00	0	0

6.5.9 The results demonstrate that the Ambrose Way / Mill Lane junction is currently operating within capacity and will continue to operate within capacity in all future year scenarios. The results of the 'with development' scenarios demonstrate that the proposed development will only have a very small impact on the operation of the junction with an increase in delay of 1 second in the 2041 evening peak and no impact in the morning peak.

Mill Lane / Glebe Way Junction

6.5.10 The ghost island priority T-junction between Mill Lane and Glebe Way has been modelled using Junctions 10. The junction capacity assessment results are summarised in **Table 5.15** and the full output report is provided at **Appendix D**.

Table 5.15: Mill Lane / Glebe Way Junction

Approach	AM Peak (08:00-09:00)			PM Peak (16:45-17:45)		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2021 Baseline						
Mill Lane (E)	0.09	<1	8	0.07	<1	7
Glebe Way (S)	0.04	0	8	0.08	<1	7
2025 Without Development						
Mill Lane (E)	0.10	<1	8	0.08	<1	7
Glebe Way (S)	0.05	0	8	0.09	<1	7
2025 With Development						
Mill Lane (E)	0.22	<1	9	0.12	<1	7
Glebe Way (S)	0.08	<1	9	0.20	<1	8
2041 Without Development						
Mill Lane (E)	0.12	<1	9	0.09	<1	7
Glebe Way (S)	0.05	<1	9	0.10	<1	8
2041 With Development						
Mill Lane (E)	0.23	<1	10	0.14	<1	8
Glebe Way (S)	0.09	<1	9	0.21	<1	9

6.5.11 The results demonstrate that the Mill Lane / Glebe Way junction is currently operating within capacity and will continue to do so in both future years. The results of the 'with development' scenarios demonstrate that the proposed development will only have a very small impact on the operation of the junction.

Capacity Assessments Summary

6.5.12 Following the above, it is considered that the development proposal will have immaterial impact on the queues and delays and these junctions will continue to operate within capacity with the development traffic in both future years.

6.6 Strategic Network Impact

6.6.1 The A14 trunk road is a major strategic route in the area which runs east to west to the south of the site bypassing Cambridge. It is a busy dual carriageway linking the Port of Felixstowe, Suffolk in the east and the M1/M6 Catthorpe Interchange in the west.

6.6.2 The A14 forms a grade separated signalised junction (Histon Interchange - Junction 32) with Bridge Road and Cambridge Road. Bridge Road routes north to Histon and Impington where the site is located and Cambridge Road which routes south from the interchange provides access towards Cambridge.

6.6.3 The grade separated junction has recently been improved as part of the A14 Cambridge to Huntingdon Improvement Scheme, which involved increasing the width of the Bridge Road and A14 Eastbound off slip arm, as well as providing improved cycle and pedestrian facilities at the junction.

6.6.4 A percentage impact assessment at this (recently improved) junction has been undertaken as part of this ITA. The methodology and results of the assessment are set out in the following paragraphs.

Baseline Traffic Flows

6.6.5 A Transport Assessment (TA) was prepared to assess the impacts of the A14 Cambridge to Huntingdon improvement scheme on the strategic and local highway network in 2014 by a consortium consisting of Jacobs, Arup and AECOM, on behalf of the Highways Agency (now National Highways).

6.6.6 Traffic flows for the 2020 'Do Something' (i.e., with the improvement scheme implemented) scenario have been extracted and utilised as baseline traffic flows for the purposes of this assessment. These are provided at **Appendix C** of this ITA.

TEMPro Growth Factors

6.6.7 As previously identified TEMPRO has been used to calculate future year growth rates. Factors to allow for background traffic growth from 2020 to future years of 2025 and 2041 have been derived using the TEMPro software for the South Cambridgeshire 006 mid-layer super output area (MSOA).

6.6.8 The unadjusted TEMPro growth factors are set out in **Table 5.16**.

Table 5.16: TEMPro Growth Factors – South Cambridgeshire 006 MSOA

Date Range	Morning Peak Period	Evening Peak Period
2020-2025	1.1095	1.1150
2020-2041	1.2161	1.2294

Source: TEMPro

Percentage Impact Assessment

6.6.9 The results of the percentage impact assessment of the development traffic on the A14 Junction 32 (Histon Interchange) for future years 2025 and 2041 are set out in **Table 5.17** below.

Table 5.17: Bridge Road / A14 / Cambridge Road % Impact Assessment (2025)

	Morning Peak				Evening Peak			
	2025	Dev	2025 + Dev	% Impact	2025	Dev	2025 Dev	% Impact
2025								
A14 West (2-way)	2392	5	2397	0.2%	1959	6	1965	0.3%
Bridge Road (2-way)	2534	48	2582	1.9%	2491	59	2550	2.4%
A14 East (2-way)	1530	17	1547	1.1%	2322	21	2343	0.9%
Cambridge Road (2-way)	3909	26	3935	0.7%	3820	32	3852	0.8%
Junction Total	5191	48	5239	0.9%	5307	59	5366	1.1%
2041								
A14 West (2-way)	2622	5	2627	0.2%	2160	6	2166	0.3%
Bridge Road (2-way)	2778	48	2826	1.7%	2747	59	2806	2.1%
A14 East (2-way)	1677	17	1694	1.0%	2561	21	2582	0.8%
Cambridge Road (2-way)	4284	26	4310	0.6%	4212	32	4244	0.8%
Junction Total	5690	48	5738	0.8%	5852	59	5911	1.0%

6.6.10 The results show that, with the development, Bridge Road will experience increases in two-way traffic flows by up to 2.4% of the future years baseline flows, with traffic flow increases of less than one vehicle per minute across the busiest periods of the day. The percentage impacts on the remaining three arms are approximately 1% or less. Similarly, the percentage impact in terms of overall traffic flows through the junction also remains around 1% in all scenarios.

6.6.11 Therefore, it can be seen that the development would add only a relatively small amount of traffic through the junction, which is unlikely to have a material impact on the operation of this junction.

6.6.12 Nevertheless, being mindful of this limited impact, the developer would be willing to make an appropriate and proportionate financial contribution to bring forward the planned cycle infrastructure improvements as set out in **Section 4.5** of this report to encourage car drivers to make a modal shift to cycling. The following section sets out how these improvements would help to result in a 'no net impact' at this junction.

Net Impact Assessment

6.6.13 As outlined above, the proposed development would generate the following movements at the Histon Interchange junction:

- A14 West – 5 to 6 two-way movements during the morning and evening peak hours;
- Bridge Road – 48 to 59 two-way movements during the peak hours;
- A14 East – 17 to 21 in the morning and evening peak hours; and
- Cambridge Road – 26 to 32 two-way movements during the peak hours.

6.6.14 As such, there would be a total of the 22-27 two-way vehicle movements on the A14 (strategic road network) during the peak hours.

6.6.15 The HELAA identifies that the Greater Cambridgeshire Councils and Highways England (now National Highways), collaborated to assess the impact of development proposals on the strategic road network (SRN). Annex 2 of the HELAA provides an overview of methodology used to assess the SRN, which involved a zonal approach around key junctions which were then assigned a Red, Amber, Green (RAG) score according to how the junctions perform in terms of their capacity to accommodate additional traffic.

6.6.16 Histon and Impington fall within Zone 3 'A14 Cambridge Northern Bypass', which is identified as having:

> ***"No capacity for growth. Sites would need to ensure no net increase in vehicles trips on the Strategic Road Network."***

6.6.17 The HELAA does not provide a copy of junction capacity assessment results on which this assessment is based, and these are not available in the public domain for review.

6.6.18 Nevertheless, the proposed development impact could be mitigated through walking and cycling improvements which would result in a mode shift away from the private car. Section 4.5 of this report set out the potential improvements highlighted in the Cambridgeshire Local Cycling and Walking Infrastructure Plan (LCWIP) which would improve access to Guided Busway / future St Ives to Cambridge Greenway. These improvements were identified as being able to increase the number of cyclists by 200 – 500+ per day, with there being corresponding decreases in other modes of transport, primarily car drivers as a result. A number of these schemes are identified as requiring developer funding in order to help deliver these benefits.

6.6.19 Consequently, the proposed development would be ideally positioned to provide a contribution towards these improvements, which would not only help to create a modal shift for the proposed development trips, but also help encourage existing drivers to switch to cycling and thus reduce the background level of trips on the local and SRN and junctions associated with the SRN, which have knock of effects to its operation. With the proposed development only generating circa 22-27 two-way vehicle movements on the A14 (strategic road network) during the peak hours of the day, and circa 240 vehicle movements across a day, implementation of these improvements is very likely to result in the development resulting in 'no net impact' on the SRN.

6.6.20 The cycle propensity tool (CPT) was designed to assist transport planners and policy makers in England and Wales to prioritise investments and interventions to promote cycling. The tool helps to identify where cycling has the greatest potential to grow. In the tool, cycling potential is calculated using a function based on trip distance (people are more likely to cycle a shorter trip than a longer trip) and hilliness (people are less likely to cycle a trip involving hills). Currently, the data shows that circa 20% of residents from Histon and Impington (South Cambridgeshire 006 MSOA) commute by bicycle, whereas neighbouring residentials on the northern edge of Cambridge achieve in excess of a 30% mode share.

6.6.21 Five scenarios have been developed in the CPT to explore possible changes in the number of people cycling associated with the removal of different infrastructural, cultural, and technological barriers that currently prevent cycling being the natural mode of choice for trips of short to medium distances A summary of four of the scenarios are provided below, whilst a summary of the potential impact on cycling and change in car drivers is provided in **Table 5.18**:

- The Government Target (Equality) and Government Target (Near Market) scenarios both model a doubling of cycling nationally, corresponding to the proposed target in the English Department for Transport's draft Cycling Delivery Plan to double cycling in England between 2013 to 2025. They differ in that Equality scenario models the increase as occurring solely as a function of trip distance and hilliness, i.e., equitably across age, sex, and other socio-demographic groups. Whereas the Near Market scenario models the increase as occurring as a function of trip distance and hilliness, plus a number of sociodemographic and geographical characteristics (including age, sex, ethnicity, car ownership, income deprivation).

- Go Dutch - The Go Dutch scenario represents what would happen if English and Welsh people were as likely as Dutch people to cycle a trip of a given distance and level of hilliness. This scenario thereby captures the proportion of commuters that would be expected to cycle if all areas of England and Wales had the same infrastructure and cycling culture as the Netherlands (but retained their hilliness and commute distance patterns).
- Ebikes - The Ebikes scenario models the additional increase in cycling that would be achieved through the widespread uptake of electric cycles ('ebikes'). This scenario is built as an extension of the Go Dutch scenario, making the further assumption that all cyclists in the Go Dutch scenario own an ebike. This scenario accounts for ebike users cycling longer distances, more hilly routes and simultaneously long distance and hilly routes.

Table 5.18: Summary of Cycle Propensity Tool Scenario Impacts in Histon and Impington (South Cambridgeshire 006 MSOA)

Scenario Name	Cyclists (%)	Change from Baseline (%)	Change in car drivers
Government Target (Equality)	25%	+5%	-171
Government Target (Near Market)	27%	+7%	-233
Go Dutch	33%	+13%	-463
Ebikes	38%	+18%	-644

6.6.22 **Table 5.18** demonstrates that the proportion of cyclists in Histon and Impington (South Cambridgeshire 006 MSOA) could increase by 5-18% with additional cycle infrastructure investment, which could result in a reduction of 171 to 644 car drivers.

6.6.23 Therefore, as previously noted, the proposed development would be well positioned to provide a contribution towards cycle infrastructure improvements in Histon and Impington and thus result in a mode shift from people commuting via car to bicycle. Consequently, this provides further evidence that investment in cycle improvements is very likely to result in the development resulting in 'no net impact' on the SRN.

Section 7 Summary and Conclusions

7.1 Summary

7.1.1 Martin Grant Homes are promoting Land off Ambrose Way, Impington, for a residential development of 177 residential dwellings.

7.1.2 The administrative districts of Cambridge and South Cambridgeshire are preparing a new joint Greater Cambridge Local Plan, as set out in the adopted Greater Cambridge Local Development Scheme. The Council is undertaking a consultation on the 'Greater Cambridge Local Plan – First Proposals between 1st November 2021 and 13th December 2021, through which, there is the opportunity to provide comment on proposals and supporting evidence base.

7.1.3 i-Transport have been appointed to provide highway and transport advice in relation to the development Site and specifically the impact of developing the site for circa 177 dwellings.

7.1.4 This Initial Transport Assessment (ITA) has been prepared to provide early transport and access guidance and to demonstrate how the Site can be developed in a manner that can satisfy policy considerations, particularly the four key transport tests set out in paragraph 108 of the National Planning Policy Framework (NPPF), which require development proposals to ensure that:

- Safe and sustainable access is provided for all people;
- Opportunities for sustainable transport modes have been taken up;
- The design of streets, parking areas, other transport elements can be provided in line with prevailing standards; and
- There is no severe residual cumulative transport impact.

7.1.5 This Transport Assessment also addresses concerns raised in relation to the proposed development site in the Greater Cambridge Housing and Economic Land Availability Assessment (HELAA), which A provides an assessment of the potential sites in terms of their suitability, availability and achievability.

7.1.6 Local highway junctions between Ambrose Way /Mill Lane and Glebe Way / Mill Lane and the A14 Junction 32 – Histon Interchange which is part of Strategic Route Network have been assessed for traffic impact for future years 2025 (anticipated opening year) and 2041 (end of Local Plan period).

7.1.7 PICADY assessment results of Ambrose Way / Mill Lane junction and Glebe Way / Mill Lane demonstrate that the development proposal will have immaterial impact on the queues and delays at these junctions and these junctions will continue to operate within capacity with the development traffic in the future years.

7.1.8 Percentage impact assessment of the A14 Junction 32 (Histon Interchange) indicates that the proposed development will result in an increase in two-way traffic flows on Bridge Road by 2.5%. However, in overall, the increase in total traffic through the junction is anticipated to be approximately 1%. These levels of additional traffic are not anticipated to have severe impact in the operation of this junction.

7.1.9 A number of potential cycle infrastructure improvements have been identified within the LCWIP which would increase the number of local cyclists (resulting in a mode shift away from the private car). This approach is supported by the CPT tool. Consequently, the proposed development could provide a contribution towards delivering these local improvements, which would not only result in an increase in the number of cyclists from the proposed development, but would also help result in a modal shift for existing residents of Histon and Impington, such that the proposed development is likely to have no net impact on the strategic highway network.

7.2 Conclusion

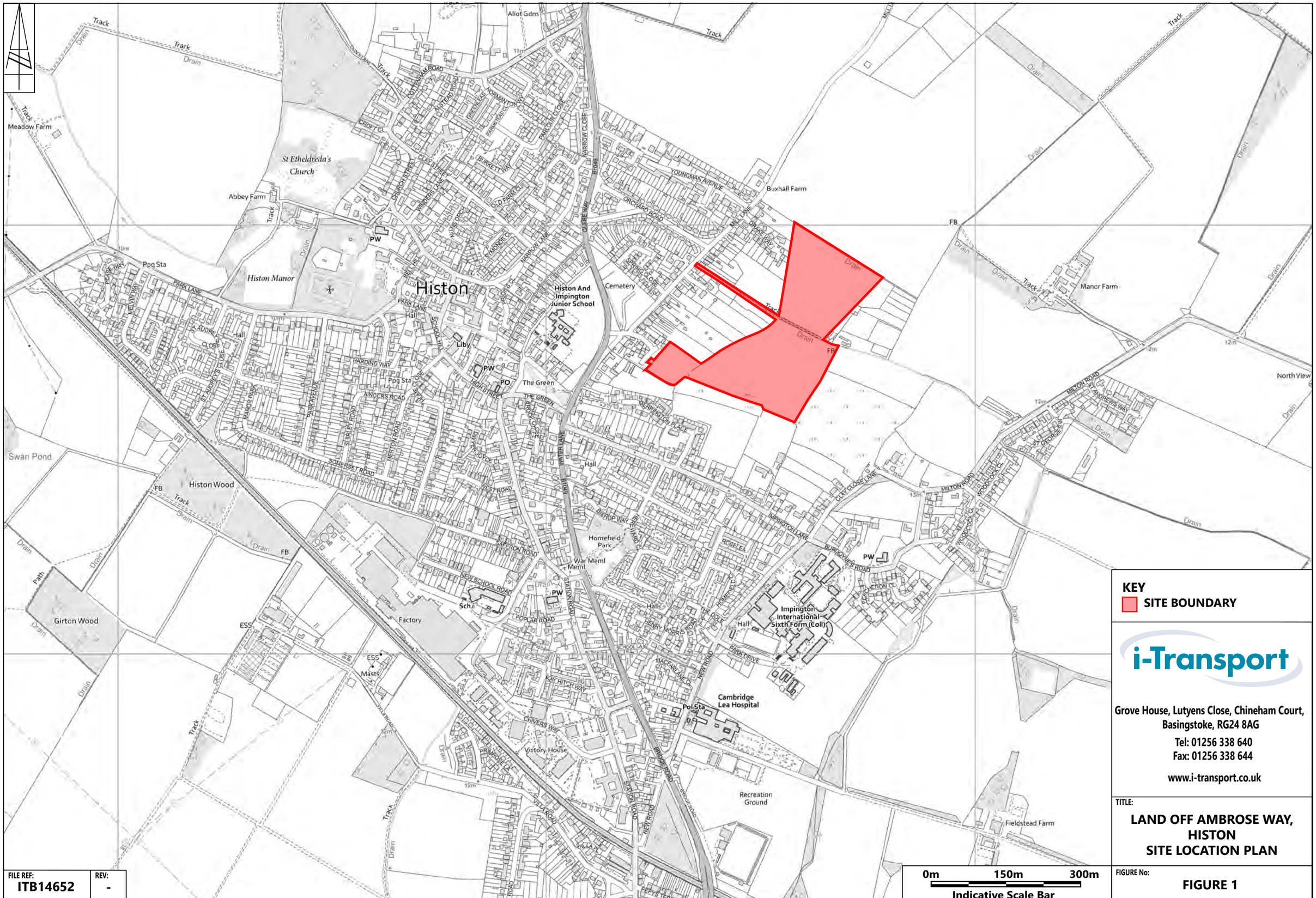
7.2.1 In summary it is evident that:

- The site is located within the existing fabric of Impington and in a highly sustainable, area, in close proximity to high quality dedicated public transport facilities. This conclusion confirmed within the HELAA which identifies that the site provides good accessibility to key local services, transport, and employment opportunities and is in line with policies;
- Site access arrangements have been considered in detail and the geometries of the proposed access have been reviewed by officers at Cambridgeshire County Council, who raised no insurmountable issues;
- Capacity testing of the Ambrose Way / Mill Lane and B1049 Glebe Way / Mill Lane junction has been undertaken and identifies that the junctions will operate within capacity; and as such should not be a barrier to developing the site;

- There are opportunities for the development to contribute financially to the delivery of identified walking, cycling and public transport improvements, which will provide increased opportunities for existing and future residents to access facilities by active modes and public transport, rather than relying on their car;
- Impacts on the local highway network will be negligible;
- Impacts on the Strategic Route Network and specifically the A14 Histon Interchange are negligible. These minor impacts can be off set through the promotion of sustainable travel modes, leading to a nil detriment impact.

7.2.2 Against this background, it is evident that the proposed development site can be delivered in a manner that satisfies the four key tests set out in paragraph 110 of the National Planning Policy Framework (NPPF). As such, the concerns raised in the HELAA proforma relating to the site access and the impact on the local highway network strategic road have been demonstrated to be unsubstantiated. Consequently, there are no highway or transport reasons that the proposed development should not be allocated.

FIGURES



KEY

SITE BOUNDARY

i-Transport

Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG

Tel: 01256 338 640

Fax: 01256 338 644

www.i-transport.co.uk

TITLE:

LAND OFF AMBROSE WAY, HISTON
SITE LOCATION PLAN

FIGURE No:

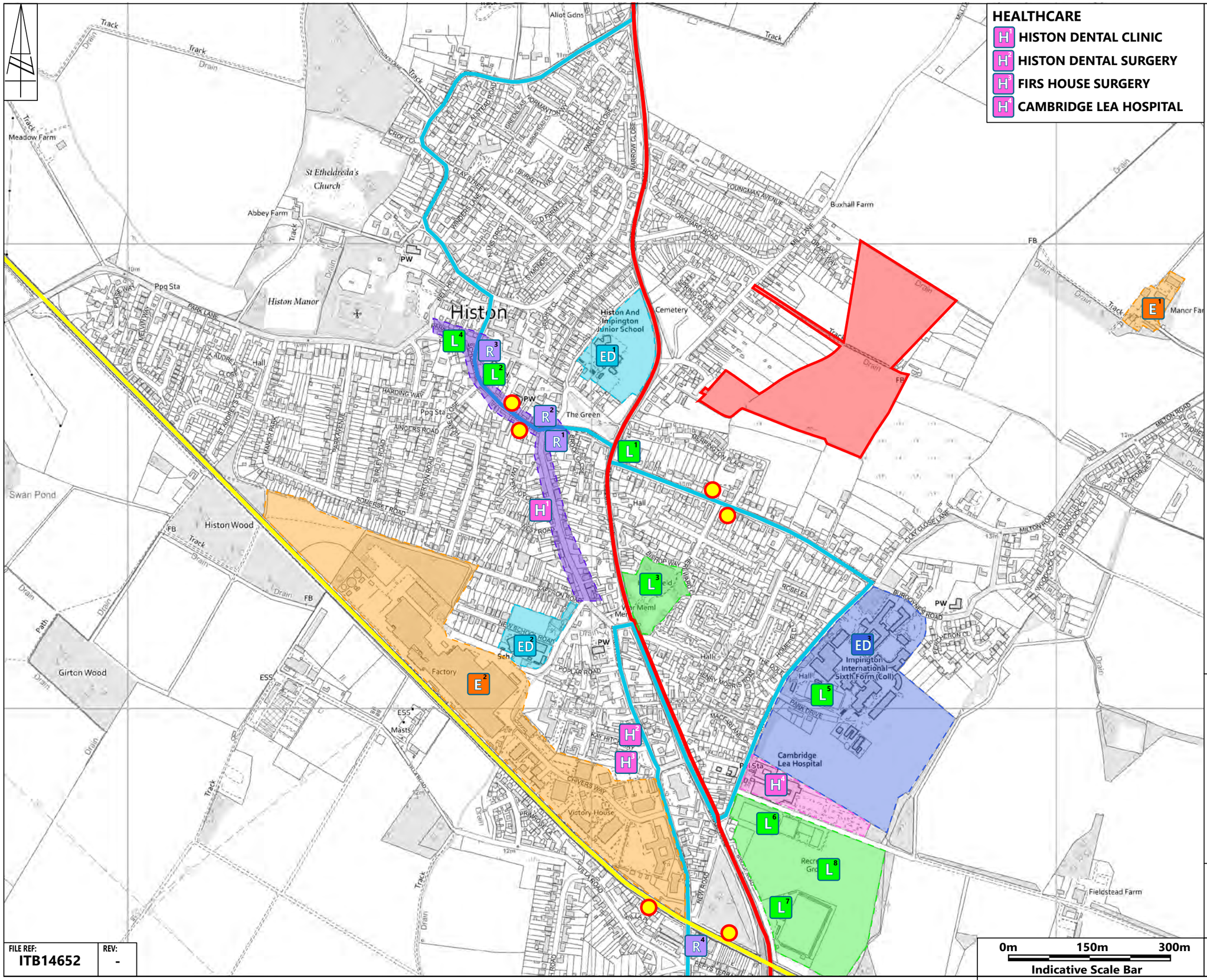
FIGURE 1

FILE REF: **ITB14652**

REV: **-**

0m 150m 300m

Indicative Scale Bar



HEALTHCARE

- H1 HISTON DENTAL CLINIC
- H2 HISTON DENTAL SURGERY
- H3 FIRS HOUSE SURGERY
- H4 CAMBRIDGE LEA HOSPITAL

KEY

- SITE BOUNDARY
- VILLAGE CENTRE
- EMPLOYMENT AREA
- BUS STOP
- CITI 8 BUS ROUTE
- CITI X8 BUS ROUTE
- BUSWAY / NCN 51

LEISURE

- L1 THE ROSE AND CROWN
- L2 HISTON LIBRARY
- L3 HOMEFIELD PARK
- L4 ST ANDREW'S CENTRE
- L5 IMPINGTON SPORTS CENTRE
- L6 HISTON TENNIS CLUB
- L7 HISTON FOOTBALL CLUB
- L8 RECREATION GROUND

EMPLOYMENT

- E1 MANOR FARM OFFICES
- E2 HISTON INDUSTRIAL ESTATE

RETAIL

- R1 COOP FOOD
- R2 HISTON POST OFFICE
- R3 TESCO EXPRESS
- R4 MACE

EDUCATION

- ED1 HISTON & IMPINGTON JUNIOR SCHOOL
- ED2 HISTON & IMPINGTON INFANT SCHOOL
- ED3 IMPINGTON VILLAGE COLLEGE

i-Transport

Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG

Tel: 01256 338 640
Fax: 01256 338 644

www.i-transport.co.uk

TITLE:

LAND OFF AMBROSE WAY, HISTON
SITE ACCESSIBILITY PLAN

FIGURE No:

FIGURE 2

FILE REF: ITB14652

REV: -

0m 150m 300m

Indicative Scale Bar

DRAWINGS

KEY:

SITE BOUNDARY

HIGHWAY BOUNDARY

AREA TO BE LANDSCAPED

R10.0m

2.0m WIDE FOOTWAY

EXISTING DRIVEWAY TO BE EXTENDED

TIE INTO EXISTING FOOTWAY

5.5m WIDE CARRIAGEWAY

14m FORWARD VISIBILITY

17m FORWARD VISIBILITY

DRAWING ISSUED FOR FEASIBILITY CONSIDERATION AND PLANNING PURPOSES ONLY. DRAWING NOT TO BE USED FOR CONSTRUCTION. I-TRANSPORT LLP ACCEPT NO RESPONSIBILITY FOR ERRORS MADE BY OTHERS IN SCALING FROM THIS DRAWING. MEASUREMENTS SHOULD BE TAKEN FROM FIGURED DIMENSIONS ONLY. CDM REQUIREMENTS CONSIDERED AT FEASIBILITY STAGE ONLY. FURTHER CONSIDERATION REQUIRED BY DETAILED DESIGN TEAM.

SCALE BAR @ 1:500

0 5 10 25 50

i-Transport

Grove House, Lutyens Close, Chineham
Basingstoke, Hampshire, RG24 8AG

Tel: 01256 338640
Fax: 01256 338644

www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
A	07.04.21	SH	NOTES UPDATED	IN	IN

STATUS: FOR INFORMATION

TITLE: SITE ACCESS ARRANGEMENT
EXTENSION OF AMBROSE WAY INTO THE SITE

PROJECT: AMBROSE WAY, HISTON

CLIENT: MARTIN GRANT HOMES

SCALE @ A3:	CHECKED:	APPROVED:
1:500	IN	JDW
FILE REF:	DRAWN:	DATE:
ITB14652	JD	17.11.20

DRAWING No: ITB14652-GA-005

PROJECT No: ITB14652

REV: A

T:\Projects\14000 Series\14652\TB Land off Ambrose Way, Histon\Tech\Acad\i-Transport Drawings\Working Drawings\GA\ITB14652-GA-005 Rev A.dwg

APPENDIX A. Email Correspondence with CCC

Imogen Nicholson

From: Victoria Keppey [redacted] >
Sent: 12 May 2021 14:07
To: Imogen Nicholson
Cc: Tam Parry; Jon Williams; Jon Finney
Subject: RE: Ambrose Way, Histon

Dear Imogen,

Further to my email dated 5th May regarding the above.

I can confirm that I have now spoken with Jon and the geometry leading onto Ambrose Way in respect to circa 190 units, may be acceptable in principal as shown on Drawing number: ITB14652-GA-005 with 2m footways and 5.5m carriageway – Please refer to my comments dated 1st December 2020 in respect to this drawing.

Although as I am sure you are already aware mitigation measures may be required once Cambridgeshire County Councils Major Developments Team have received the modelling information with regards to the proposed development.

Note: These are officer comments only giving an informal opinion about the principle of the proposal and the main issues involved from the perspective of the Local Highway Authority. The views expressed will not bind the decision of Members of the Local Planning Authority should a planning application be submitted, nor prejudice the formal decision making process of the Local Planning Authority.

If you require any further clarification please do not hesitate to contact me.

Kind regards

Vikki Keppey
Development Management Engineer

APPENDIX B. Concept Masterplan

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

date	19 NOVEMBER 2021
drawing number	edp5518_d023c
scale	1:2500
drawn by	CG
checked	PW
QA	-

client
Martin Grant Homes

project title
Ambrose Way, Impington

drawing title
Concept Masterplan

APPENDIX C. Traffic Flows

Traffic Flows - Morning Peak Period

Junction 1: Mill Lane / Ambrose Way

A Mill Lane W B Mill Lane N C Ambrose Way E

Total Vehicles

2021 Observed Traffic Flows			
	A	B	C
A	-	22	2
B	74	-	0
C	6	3	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	24	2
B	79	-	0
C	6	3	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	26	2
B	88	-	0
C	7	4	-

Development Traffic Flows			
	A	B	C
A	-	0	14
B	0	-	0
C	50	0	-

2025 With Development Traffic Flows			
	A	B	C
A	-	24	16
B	79	-	0
C	56	3	-

2041 With Development Traffic Flows			
	A	B	C
A	-	26	16
B	88	-	0
C	57	4	-

HGVs

2021 Observed Traffic Flows			
	A	B	C
A	-	1	0
B	0	-	0
C	0	0	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	1	0
B	0	-	0
C	0	0	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	1	0
B	0	-	0
C	0	0	-

Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

2025 With Development Traffic Flows			
	A	B	C
A	-	1	0
B	0	-	0
C	0	0	-

2041 With Development Traffic Flows			
	A	B	C
A	-	1	0
B	0	-	0
C	0	0	-

Junction 2: Mill Lane / Glebe Way

A Glebe Way N B Mill Lane E C Glebe Way S

Total Vehicles

2021 Observed Traffic Flows			
	A	B	C
A	-	5	620
B	8	-	34
C	326	18	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	5	663
B	9	-	36
C	349	19	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	6	734
B	9	-	40
C	386	21	-

Development Traffic Flows			
	A	B	C
A	-	1	0
B	4	-	47
C	0	13	-

2025 With Development Traffic Flows			
	A	B	C
A	-	6	663
B	13	-	83
C	349	32	-

2041 With Development Traffic Flows			
	A	B	C
A	-	7	734
B	13	-	87
C	386	34	-

HGVs

2021 Observed Traffic Flows			
	A	B	C
A	-	0	23
B	0	-	0
C	18	0	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	0	25
B	0	-	0
C	19	0	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	0	27
B	0	-	0
C	21	0	-

Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

2025 With Development Traffic Flows			
	A	B	C
A	-	0	25
B	0	-	0
C	19	0	-

2041 With Development Traffic Flows			
	A	B	C
A	-	0	27
B	0	-	0
C	21	0	-

Junction 3: A14 / Bridge Road / Cambridge Road

A A14 Slips W B Bridge North N C A14 Slips E D Cambridge Road S

Total Vehicles (Do-Minimum)

2020 Traffic Flows				
	A	B	C	D
A	5	322	1	972
B	194	0	178	832
C	5	241	5	535
D	534	405	226	4

2025 Without Development Traffic Flows				
	A	B	C	D
A	6	357	1	1078
B	215	0	197	923
C	6	267	6	594
D	592	449	251	4

2041 Without Development Traffic Flows				
	A	B	C	D
A	6	392	1	1182
B	236	0	216	1012
C	6	293	6	651
D	649	493	275	5

Development Traffic Flows				
	A	B	C	D
A	0	1	0	0
B	4	0	13	20
C	0	4	0	0
D	0	6	0	0

2025 With Development Traffic Flows				
	A	B	C	D
A	6	358	1	1078
B	219	0	210	943
C	6	271	6	594
D	592	455	251	4

2040 With Development Traffic Flows				
	A	B	C	D
A	6	393	1	1182
B	240	0	229	1032
C	6	297	6	651
D	649	499	275	5

Total Vehicles (Do-Something)

2020 Traffic Flows				
	A	B	C	D
A	6	361	2	966
B	238	0	237	778
C	7	298	7	562
D	576	372	266	3

2025 Without Development Traffic Flows				
	A	B	C	D
A	7	401	2	1072
B	264	0	263	863
C	8	331	8	624
D	639	413	295	3

2041 Without Development Traffic Flows				
	A	B	C	D
A	7	439	2	1175
B	289	0	288	946
C	9	362	9	683
D	700	452	323	4

Development Traffic Flows				
	A	B	C	D
A	0	1	0	0
B	4	0	13	20
C	0	4	0	0
D	0	6	0	0

2025 With Development Traffic Flows				
	A	B	C	D
A	7	402	2	1072
B	268	0	276	883
C	8	335	8	624
D	639	419	295	3

2040 With Development Traffic Flows				
	A	B	C	D
A	7	440	2	1175
B	293	0	301	966
C	9	366	9	683
D	700	458	323	4

Traffic flows taken from A14 Cambridge to Huntingdon improvement scheme TA, Appendix D and E

Traffic Flows - Evening Peak Period

Junction 1: Mill Lane / Ambrose Way

A Mill Lane W B Mill Lane N C Ambrose Way E

Total Vehicles

2021 Observed Traffic Flows			
	A	B	C
A	-	49	2
B	41	-	1
C	4	0	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	53	2
B	44	-	1
C	4	0	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	59	2
B	49	-	1
C	5	0	-

Development Traffic Flows			
	A	B	C
A	-	0	58
B	0	-	0
C	24	0	-

2025 With Development Traffic Flows			
	A	B	C
A	-	53	60
B	44	-	1
C	28	0	-

2041 With Development Traffic Flows			
	A	B	C
A	-	59	60
B	49	-	1
C	29	0	-

HGVs

2021 Observed Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

2025 With Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

2041 With Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

Junction 2: Mill Lane / Glebe Way

A Glebe Way N B Mill Lane E C Glebe Way S

Total Vehicles

2021 Observed Traffic Flows			
	A	B	C
A	-	1	341
B	6	-	31
C	608	40	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	1	366
B	6	-	33
C	653	43	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	1	408
B	7	-	37
C	727	48	-

Development Traffic Flows			
	A	B	C
A	-	4	0
B	2	-	22
C	0	53	-

2025 With Development Traffic Flows			
	A	B	C
A	-	5	366
B	8	-	55
C	653	96	-

2041 With Development Traffic Flows			
	A	B	C
A	-	5	408
B	9	-	59
C	727	101	-

HGVs

2021 Observed Traffic Flows			
	A	B	C
A	-	0	3
B	0	-	0
C	7	0	-

2025 Without Development Traffic Flows			
	A	B	C
A	-	0	3
B	0	-	0
C	8	0	-

2041 Without Development Traffic Flows			
	A	B	C
A	-	0	4
B	0	-	0
C	8	0	-

Development Traffic Flows			
	A	B	C
A	-	0	0
B	0	-	0
C	0	0	-

2025 With Development Traffic Flows			
	A	B	C
A	-	0	3
B	0	-	0
C	8	0	-

2041 With Development Traffic Flows			
	A	B	C
A	-	0	4
B	0	-	0
C	8	0	-

Junction 3: A14 / Bridge Road / Cambridge Road

A A14 Slips W B Bridge North N C A14 Slips E D Cambridge Road S

Total Vehicles (Do-Minimum)

2020 Observed Traffic Flows				
	A	B	C	D
A	7	251	1	552
B	391	3	240	419
C	0	258	3	281
D	872	702	451	4

2025 Without Development Traffic Flows				
	A	B	C	D
A	8	280	1	615
B	436	3	268	467
C	0	288	3	313
D	972	783	503	4

2041 Without Development Traffic Flows				
	A	B	C	D
A	9	309	1	679
B	481	4	295	515
C	0	317	4	345
D	1072	863	554	5

Development Traffic Flows				
	A	B	C	D
A	0	4	0	0
B	2	0	6	9
C	0	15	0	0
D	0	23	0	0

2025 With Development Traffic Flows				
	A	B	C	D
A	8	284	1	615
B	438	3	274	476
C	0	303	3	313
D	972	806	503	4

2041 With Development Traffic Flows				
	A	B	C	D
A	9	313	1	679
B	483	4	301	524
C	0	332	4	345
D	1072	886	554	5

Total Vehicles (Do-Something)

2021 Observed Traffic Flows				
	A	B	C	D
A	6	266	2	715
B	243	2	438	379
C	0	369	8	470
D	525	537	796	4

2025 Without Development Traffic Flows				
	A	B	C	D
A	7	297	2	797
B	271	2	488	423
C	0	411	9	524
D	585	599	888	4

2041 Without Development Traffic Flows				
	A	B	C	D
A	7	327	2	879
B	299	2	538	466
C	0	454	10	578
D	645	660	979	5

Development Traffic Flows				
	A	B	C	D
A	0	4	0	0
B	2	0	6	9
C	0	15	0	0
D	0	23	0	0

2025 With Development Traffic Flows				
	A	B	C	D
A	7	301	2	797
B	273	2	494	432
C	0	426	9	524
D	585	622	888	4

2041 With Development Traffic Flows				
	A	B	C	D
A	7	331	2	879
B	301	2	544	475
C	0	469	10	578
D	645	683	979	5

Traffic flows taken from A14 Cambridge to Huntingdon improvement scheme TA, Appendix D and E

APPENDIX D. Junction Capacity Assessments

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Ambrose Way - Mill Lane Junction.j10
Path: T:\Projects\14000 Series\14652ITB Land off Ambrose Way, Histon\Tech\Junction Assessments\Picady
Report generation date: 17/11/2021 16:01:43

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	Ambrose Way - Mill Way Junction - 2021 Observed							
Stream B-AC	0.2	8.72	0.16	A	0.1	8.01	0.09	A
Stream C-AB	0.0	6.00	0.00	A	0.0	0.00	0.00	A
	Ambrose Way - Mill Way Junction - 2025 Without Development							
Stream B-AC	0.2	8.84	0.18	A	0.1	8.08	0.10	A
Stream C-AB	0.0	6.01	0.00	A	0.0	0.00	0.00	A
	Ambrose Way - Mill Way Junction - 2025 With Development							
Stream B-AC	0.2	9.12	0.18	A	0.1	8.47	0.10	A
Stream C-AB	0.0	5.77	0.00	A	0.0	0.00	0.00	A
	Ambrose Way - Mill Way Junction - 2041 Without Development							
Stream B-AC	0.2	9.07	0.20	A	0.1	8.21	0.11	A
Stream C-AB	0.0	6.00	0.00	A	0.0	0.00	0.00	A
	Ambrose Way - Mill Way Junction - 2041 With Development							
Stream B-AC	0.2	9.35	0.20	A	0.1	8.58	0.12	A
Stream C-AB	0.0	5.78	0.00	A	0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	Ambrose Way, HIston
Site number	
Date	29/10/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	ITB14652
Enumerator	I-TRANSPORT\basingstoke.hotdesk
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Observed	AM	ONE HOUR	07:45	09:15	15
D2	2021 Observed	PM	ONE HOUR	16:30	18:00	15
D3	2025 Without Development	AM	ONE HOUR	07:45	09:15	15
D4	2025 Without Development	PM	ONE HOUR	16:30	18:00	15
D5	2025 With Development	AM	ONE HOUR	07:45	09:15	15
D6	2025 With Development	PM	ONE HOUR	16:30	18:00	15
D7	2041 Without Development	AM	ONE HOUR	07:45	09:15	15
D8	2041 Without Development	PM	ONE HOUR	16:30	18:00	15
D9	2041 With Development	AM	ONE HOUR	07:45	09:15	15
D10	2041 With Development	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Ambrose Way - Mill Way Junction	100.000

Ambrose Way - Mill Way Junction - 2021 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		6.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.14	A

Arms

Arms

Arm	Name	Description	Arm type
A	Mill Lane (W)		Major
B	Mill Lane (N)		Minor
C	Ambrose Way (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Ambrose Way (E)	5.51			50.3	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Mill Lane (N)	One lane	3.06	18	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	499	0.093	0.234	0.147	0.335
B-C	644	0.101	0.255	-	-
C-B	603	0.239	0.239	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Observed	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	24	100.000
B - Mill Lane (N)		✓	74	100.000
C - Ambrose Way (E)		✓	7	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	22	2
	B - Mill Lane (N)	74	0	0
	C - Ambrose Way (E)	6	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	5	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.16	8.72	0.2	A
C-AB	0.00	6.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	56	496	0.112	55	0.1	8.163	A
C-AB	0.76	602	0.001	0.75	0.0	5.990	A
C-A	5			5			
A-B	17			17			
A-C	2			2			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	67	495	0.134	66	0.2	8.395	A
C-AB	0.91	601	0.002	0.91	0.0	5.995	A
C-A	5			5			
A-B	20			20			
A-C	2			2			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	81	494	0.165	81	0.2	8.711	A
C-AB	1	601	0.002	1	0.0	6.001	A
C-A	7			7			
A-B	24			24			
A-C	2			2			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	81	494	0.165	81	0.2	8.718	A
C-AB	1	601	0.002	1	0.0	6.003	A
C-A	7			7			
A-B	24			24			
A-C	2			2			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	67	495	0.134	67	0.2	8.406	A
C-AB	0.91	601	0.002	0.91	0.0	5.995	A
C-A	5			5			
A-B	20			20			
A-C	2			2			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	56	496	0.112	56	0.1	8.185	A
C-AB	0.76	602	0.001	0.76	0.0	5.993	A
C-A	5			5			
A-B	17			17			
A-C	2			2			

Ambrose Way - Mill Way Junction - 2021 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		3.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.62	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Observed	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	51	100.000
B - Mill Lane (N)		✓	42	100.000
C - Ambrose Way (E)		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	49	2
	B - Mill Lane (N)	41	0	1
	C - Ambrose Way (E)	4	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	0	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.09	8.01	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	498	0.064	31	0.1	7.719	A
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	37			37			
A-C	2			2			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	497	0.076	38	0.1	7.841	A
C-AB	0	592	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	44			44			
A-C	2			2			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	496	0.093	46	0.1	8.007	A
C-AB	0	590	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	54			54			
A-C	2			2			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	496	0.093	46	0.1	8.008	A
C-AB	0	590	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	54			54			
A-C	2			2			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	497	0.076	38	0.1	7.845	A
C-AB	0	592	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	44			44			
A-C	2			2			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	498	0.064	32	0.1	7.730	A
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	37			37			
A-C	2			2			

Ambrose Way - Mill Way Junction - 2025 Without Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		6.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.22	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2025 Without Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	26	100.000
B - Mill Lane (N)		✓	79	100.000
C - Ambrose Way (E)		✓	7	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	24	2
	B - Mill Lane (N)	79	0	0
	C - Ambrose Way (E)	6	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	5	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.18	8.84	0.2	A
C-AB	0.00	6.01	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	496	0.120	59	0.1	8.235	A
C-AB	0.76	601	0.001	0.75	0.0	5.994	A
C-A	5			5			
A-B	18			18			
A-C	2			2			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	71	495	0.143	71	0.2	8.486	A
C-AB	0.91	601	0.002	0.91	0.0	5.999	A
C-A	5			5			
A-B	22			22			
A-C	2			2			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	87	494	0.176	87	0.2	8.833	A
C-AB	1	600	0.002	1	0.0	6.006	A
C-A	7			7			
A-B	26			26			
A-C	2			2			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	87	494	0.176	87	0.2	8.840	A
C-AB	1	600	0.002	1	0.0	6.009	A
C-A	7			7			
A-B	26			26			
A-C	2			2			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	71	495	0.143	71	0.2	8.499	A
C-AB	0.91	601	0.002	0.91	0.0	6.002	A
C-A	5			5			
A-B	22			22			
A-C	2			2			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	496	0.120	60	0.1	8.259	A
C-AB	0.76	601	0.001	0.76	0.0	5.994	A
C-A	5			5			
A-B	18			18			
A-C	2			2			

Ambrose Way - Mill Way Junction - 2025 Without Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		3.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.64	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2025 Without Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	55	100.000
B - Mill Lane (N)		✓	45	100.000
C - Ambrose Way (E)		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	53	2
	B - Mill Lane (N)	44	0	1
	C - Ambrose Way (E)	4	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	0	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.10	8.08	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	497	0.068	34	0.1	7.763	A
C-AB	0	593	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	40			40			
A-C	2			2			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	496	0.082	40	0.1	7.896	A
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	48			48			
A-C	2			2			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	495	0.100	49	0.1	8.074	A
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	58			58			
A-C	2			2			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	495	0.100	50	0.1	8.078	A
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	58			58			
A-C	2			2			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	496	0.082	41	0.1	7.902	A
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	48			48			
A-C	2			2			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	497	0.068	34	0.1	7.774	A
C-AB	0	593	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	40			40			
A-C	2			2			

Ambrose Way - Mill Way Junction - 2025 With Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		4.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.01	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2025 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	41	100.000
B - Mill Lane (N)		✓	79	100.000
C - Ambrose Way (E)		✓	60	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	24	17
	B - Mill Lane (N)	79	0	0
	C - Ambrose Way (E)	59	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	5	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.18	9.12	0.2	A
C-AB	0.00	5.77	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	487	0.122	59	0.1	8.398	A
C-AB	0.81	625	0.001	0.81	0.0	5.764	A
C-A	44			44			
A-B	18			18			
A-C	13			13			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	71	485	0.146	71	0.2	8.694	A
C-AB	0.98	630	0.002	0.98	0.0	5.726	A
C-A	53			53			
A-B	22			22			
A-C	15			15			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	87	482	0.181	87	0.2	9.111	A
C-AB	1	636	0.002	1	0.0	5.674	A
C-A	65			65			
A-B	26			26			
A-C	19			19			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	87	482	0.181	87	0.2	9.120	A
C-AB	1	636	0.002	1	0.0	5.676	A
C-A	65			65			
A-B	26			26			
A-C	19			19			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	71	485	0.146	71	0.2	8.707	A
C-AB	0.98	630	0.002	0.98	0.0	5.728	A
C-A	53			53			
A-B	22			22			
A-C	15			15			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	487	0.122	60	0.1	8.424	A
C-AB	0.81	625	0.001	0.81	0.0	5.766	A
C-A	44			44			
A-B	18			18			
A-C	13			13			

Ambrose Way - Mill Way Junction - 2025 With Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		2.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.01	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2025 With Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	116	100.000
B - Mill Lane (N)		✓	45	100.000
C - Ambrose Way (E)		✓	29	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	53	63
	B - Mill Lane (N)	44	0	1
	C - Ambrose Way (E)	29	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	0	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.10	8.47	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	483	0.070	34	0.1	8.004	A
C-AB	0	582	0.000	0	0.0	0.000	A
C-A	22			22			
A-B	40			40			
A-C	47			47			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	480	0.084	40	0.1	8.196	A
C-AB	0	578	0.000	0	0.0	0.000	A
C-A	26			26			
A-B	48			48			
A-C	57			57			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	475	0.104	49	0.1	8.463	A
C-AB	0	573	0.000	0	0.0	0.000	A
C-A	32			32			
A-B	58			58			
A-C	69			69			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	475	0.104	50	0.1	8.466	A
C-AB	0	573	0.000	0	0.0	0.000	A
C-A	32			32			
A-B	58			58			
A-C	69			69			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	480	0.084	41	0.1	8.201	A
C-AB	0	578	0.000	0	0.0	0.000	A
C-A	26			26			
A-B	48			48			
A-C	57			57			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	483	0.070	34	0.1	8.016	A
C-AB	0	582	0.000	0	0.0	0.000	A
C-A	22			22			
A-B	40			40			
A-C	47			47			

Ambrose Way - Mill Way Junction - 2041 Without Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		6.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2041 Without Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	28	100.000
B - Mill Lane (N)		✓	88	100.000
C - Ambrose Way (E)		✓	8	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	26	2
	B - Mill Lane (N)	88	0	0
	C - Ambrose Way (E)	7	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	5	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.20	9.07	0.2	A
C-AB	0.00	6.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	495	0.134	66	0.2	8.367	A
C-AB	0.76	601	0.001	0.75	0.0	5.993	A
C-A	5			5			
A-B	20			20			
A-C	2			2			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	495	0.160	79	0.2	8.657	A
C-AB	0.91	601	0.002	0.91	0.0	5.998	A
C-A	6			6			
A-B	23			23			
A-C	2			2			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	97	494	0.196	97	0.2	9.061	A
C-AB	1	601	0.002	1	0.0	6.004	A
C-A	8			8			
A-B	29			29			
A-C	2			2			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	97	494	0.196	97	0.2	9.069	A
C-AB	1	601	0.002	1	0.0	6.004	A
C-A	8			8			
A-B	29			29			
A-C	2			2			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	495	0.160	79	0.2	8.671	A
C-AB	0.91	601	0.002	0.91	0.0	6.000	A
C-A	6			6			
A-B	23			23			
A-C	2			2			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	495	0.134	66	0.2	8.395	A
C-AB	0.76	601	0.001	0.76	0.0	5.993	A
C-A	5			5			
A-B	20			20			
A-C	2			2			

Ambrose Way - Mill Way Junction - 2041 Without Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		3.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.54	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2041 Without Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	61	100.000
B - Mill Lane (N)		✓	50	100.000
C - Ambrose Way (E)		✓	5	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	59	2
	B - Mill Lane (N)	49	0	1
	C - Ambrose Way (E)	5	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	0	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.11	8.21	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	496	0.076	37	0.1	7.846	A
C-AB	0	592	0.000	0	0.0	0.000	A
C-A	4			4			
A-B	44			44			
A-C	2			2			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	495	0.091	45	0.1	7.999	A
C-AB	0	590	0.000	0	0.0	0.000	A
C-A	4			4			
A-B	53			53			
A-C	2			2			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	494	0.112	55	0.1	8.207	A
C-AB	0	587	0.000	0	0.0	0.000	A
C-A	6			6			
A-B	65			65			
A-C	2			2			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	494	0.112	55	0.1	8.210	A
C-AB	0	587	0.000	0	0.0	0.000	A
C-A	6			6			
A-B	65			65			
A-C	2			2			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	495	0.091	45	0.1	8.006	A
C-AB	0	590	0.000	0	0.0	0.000	A
C-A	4			4			
A-B	53			53			
A-C	2			2			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	496	0.076	38	0.1	7.859	A
C-AB	0	592	0.000	0	0.0	0.000	A
C-A	4			4			
A-B	44			44			
A-C	2			2			

Ambrose Way - Mill Way Junction - 2041 With Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		4.38	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.38	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2041 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	42	100.000
B - Mill Lane (N)		✓	88	100.000
C - Ambrose Way (E)		✓	58	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	26	16
	B - Mill Lane (N)	88	0	0
	C - Ambrose Way (E)	57	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	5	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.20	9.35	0.2	A
C-AB	0.00	5.78	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	487	0.136	66	0.2	8.526	A
C-AB	0.81	624	0.001	0.80	0.0	5.775	A
C-A	43			43			
A-B	20			20			
A-C	12			12			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	485	0.163	79	0.2	8.861	A
C-AB	0.98	628	0.002	0.98	0.0	5.739	A
C-A	51			51			
A-B	23			23			
A-C	14			14			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	97	482	0.201	97	0.2	9.335	A
C-AB	1	634	0.002	1	0.0	5.690	A
C-A	63			63			
A-B	29			29			
A-C	18			18			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	97	482	0.201	97	0.2	9.346	A
C-AB	1	634	0.002	1	0.0	5.692	A
C-A	63			63			
A-B	29			29			
A-C	18			18			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	79	485	0.163	79	0.2	8.878	A
C-AB	0.98	628	0.002	0.98	0.0	5.741	A
C-A	51			51			
A-B	23			23			
A-C	14			14			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	487	0.136	66	0.2	8.557	A
C-AB	0.81	624	0.001	0.81	0.0	5.775	A
C-A	43			43			
A-B	20			20			
A-C	12			12			

Ambrose Way - Mill Way Junction - 2041 With Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Ambrose Way (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ambrose Way - Mill Lane	T-Junction	Two-way	Two-way	Two-way		2.17	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.17	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2041 With Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Mill Lane (W)		✓	119	100.000
B - Mill Lane (N)		✓	50	100.000
C - Ambrose Way (E)		✓	29	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	59	60
	B - Mill Lane (N)	49	0	1
	C - Ambrose Way (E)	29	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Mill Lane (W)	B - Mill Lane (N)	C - Ambrose Way (E)
From	A - Mill Lane (W)	0	0	0
	B - Mill Lane (N)	0	0	0
	C - Ambrose Way (E)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.12	8.58	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	483	0.078	37	0.1	8.073	A
C-AB	0	582	0.000	0	0.0	0.000	A
C-A	22			22			
A-B	44			44			
A-C	45			45			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	479	0.094	45	0.1	8.283	A
C-AB	0	578	0.000	0	0.0	0.000	A
C-A	26			26			
A-B	53			53			
A-C	54			54			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	475	0.116	55	0.1	8.576	A
C-AB	0	572	0.000	0	0.0	0.000	A
C-A	32			32			
A-B	65			65			
A-C	66			66			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	475	0.116	55	0.1	8.579	A
C-AB	0	572	0.000	0	0.0	0.000	A
C-A	32			32			
A-B	65			65			
A-C	66			66			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	479	0.094	45	0.1	8.289	A
C-AB	0	578	0.000	0	0.0	0.000	A
C-A	26			26			
A-B	53			53			
A-C	54			54			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	483	0.078	38	0.1	8.088	A
C-AB	0	582	0.000	0	0.0	0.000	A
C-A	22			22			
A-B	44			44			
A-C	45			45			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Mill Lane - Glebe Way Junction.j10
Path: T:\Projects\14000 Series\14652ITB Land off Ambrose Way, Histon\Tech\Junction Assessments\Picady
Report generation date: 17/11/2021 16:08:51

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	Mill Lane - Glebe Way Junction - 2021 Observed							
Stream B-AC	0.1	8.02	0.09	A	0.1	6.75	0.07	A
Stream C-AB	0.0	8.06	0.04	A	0.1	7.22	0.08	A
	Mill Lane - Glebe Way Junction - 2025 Without Development							
Stream B-AC	0.1	8.43	0.10	A	0.1	6.88	0.08	A
Stream C-AB	0.0	8.29	0.05	A	0.1	7.36	0.09	A
	Mill Lane - Glebe Way Junction - 2025 With Development							
Stream B-AC	0.3	9.29	0.22	A	0.1	7.21	0.12	A
Stream C-AB	0.1	8.60	0.08	A	0.3	8.45	0.20	A
	Mill Lane - Glebe Way Junction - 2041 Without Development							
Stream B-AC	0.1	8.96	0.12	A	0.1	7.26	0.09	A
Stream C-AB	0.1	8.71	0.05	A	0.1	7.62	0.10	A
	Mill Lane - Glebe Way Junction - 2041 With Development							
Stream B-AC	0.3	9.97	0.23	A	0.2	7.62	0.14	A
Stream C-AB	0.1	9.02	0.09	A	0.3	8.71	0.21	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	Ambrose Way, Histon
Site number	
Date	29/10/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	ITB14652
Enumerator	I-TRANSPORT\basingstoke.hotdesk
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Observed	AM	ONE HOUR	07:45	09:15	15
D2	2021 Observed	PM	ONE HOUR	16:30	18:00	15
D3	2025 Without Development	AM	ONE HOUR	07:45	09:15	15
D4	2025 Without Development	PM	ONE HOUR	16:30	18:00	15
D5	2025 With Development	AM	ONE HOUR	07:45	09:15	15
D6	2025 With Development	PM	ONE HOUR	16:30	18:00	15
D7	2041 Without Development	AM	ONE HOUR	07:45	09:15	15
D8	2041 Without Development	PM	ONE HOUR	16:30	18:00	15
D9	2041 With Development	AM	ONE HOUR	07:45	09:15	15
D10	2041 With Development	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Mill Lane - Glebe Way Junction	100.000

Mill Lane - Glebe Way Junction - 2021 Observed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		0.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.46	A

Arms

Arms

Arm	Name	Description	Arm type
A	Glebe Way (N)		Major
B	Mill Lane (E)		Minor
C	Glebe Way (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Glebe Way (S)	7.60		✓	2.20	94.2	✓	6.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Mill Lane (E)	One lane	3.95	23	94

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	582	0.099	0.249	0.157	0.356
B-C	748	0.107	0.270	-	-
C-B	629	0.227	0.227	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Observed	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	625	100.000
B - Mill Lane (E)		✓	42	100.000
C - Glebe Way (S)		✓	344	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	5	620
	B - Mill Lane (E)	8	0	34
	C - Glebe Way (S)	326	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	4
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.09	8.02	0.1	A
C-AB	0.04	8.06	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	565	0.056	31	0.1	6.749	A
C-AB	14	518	0.026	13	0.0	7.137	A
C-A	245			245			
A-B	4			4			
A-C	467			467			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	536	0.070	38	0.1	7.230	A
C-AB	16	496	0.033	16	0.0	7.499	A
C-A	293			293			
A-B	4			4			
A-C	557			557			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	495	0.093	46	0.1	8.017	A
C-AB	20	466	0.042	20	0.0	8.060	A
C-A	359			359			
A-B	6			6			
A-C	683			683			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	495	0.093	46	0.1	8.020	A
C-AB	20	466	0.042	20	0.0	8.060	A
C-A	359			359			
A-B	6			6			
A-C	683			683			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	536	0.070	38	0.1	7.236	A
C-AB	16	496	0.033	16	0.0	7.500	A
C-A	293			293			
A-B	4			4			
A-C	557			557			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	564	0.056	32	0.1	6.756	A
C-AB	14	518	0.026	14	0.0	7.140	A
C-A	245			245			
A-B	4			4			
A-C	467			467			

Mill Lane - Glebe Way Junction - 2021 Observed, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		0.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.52	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Observed	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	342	100.000
B - Mill Lane (E)		✓	37	100.000
C - Glebe Way (S)		✓	648	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	1	341
	B - Mill Lane (E)	6	0	31
	C - Glebe Way (S)	608	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	1
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.07	6.75	0.1	A
C-AB	0.08	7.22	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	28	621	0.045	28	0.0	6.061	A
C-AB	30	570	0.053	30	0.1	6.667	A
C-A	458			458			
A-B	0.75			0.75			
A-C	257			257			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	602	0.055	33	0.1	6.328	A
C-AB	36	558	0.064	36	0.1	6.893	A
C-A	547			547			
A-B	0.90			0.90			
A-C	307			307			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	41	574	0.071	41	0.1	6.745	A
C-AB	44	542	0.081	44	0.1	7.223	A
C-A	669			669			
A-B	1			1			
A-C	375			375			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	41	574	0.071	41	0.1	6.745	A
C-AB	44	542	0.081	44	0.1	7.223	A
C-A	669			669			
A-B	1			1			
A-C	375			375			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	602	0.055	33	0.1	6.332	A
C-AB	36	558	0.064	36	0.1	6.897	A
C-A	547			547			
A-B	0.90			0.90			
A-C	307			307			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	28	621	0.045	28	0.0	6.065	A
C-AB	30	570	0.053	30	0.1	6.673	A
C-A	458			458			
A-B	0.75			0.75			
A-C	257			257			

Mill Lane - Glebe Way Junction - 2025 Without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		0.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.48	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2025 Without Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	668	100.000
B - Mill Lane (E)		✓	45	100.000
C - Glebe Way (S)		✓	368	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	5	663
	B - Mill Lane (E)	9	0	36
	C - Glebe Way (S)	349	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	4
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.10	8.43	0.1	A
C-AB	0.05	8.29	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	552	0.061	34	0.1	6.944	A
C-AB	14	510	0.028	14	0.0	7.258	A
C-A	263			263			
A-B	4			4			
A-C	499			499			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	521	0.078	40	0.1	7.495	A
C-AB	17	487	0.035	17	0.0	7.658	A
C-A	314			314			
A-B	4			4			
A-C	596			596			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	477	0.104	49	0.1	8.420	A
C-AB	21	455	0.046	21	0.0	8.286	A
C-A	384			384			
A-B	6			6			
A-C	730			730			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	477	0.104	50	0.1	8.425	A
C-AB	21	455	0.046	21	0.0	8.288	A
C-A	384			384			
A-B	6			6			
A-C	730			730			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	521	0.078	41	0.1	7.499	A
C-AB	17	487	0.035	17	0.0	7.660	A
C-A	314			314			
A-B	4			4			
A-C	596			596			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	552	0.061	34	0.1	6.954	A
C-AB	14	510	0.028	14	0.0	7.261	A
C-A	263			263			
A-B	4			4			
A-C	499			499			

Mill Lane - Glebe Way Junction - 2025 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		0.53	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.53	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2025 Without Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	367	100.000
B - Mill Lane (E)		✓	39	100.000
C - Glebe Way (S)		✓	696	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	1	366
	B - Mill Lane (E)	6	0	33
	C - Glebe Way (S)	653	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	1
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.08	6.88	0.1	A
C-AB	0.09	7.36	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	29	617	0.048	29	0.0	6.123	A
C-AB	32	565	0.057	32	0.1	6.749	A
C-A	492			492			
A-B	0.75			0.75			
A-C	276			276			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	596	0.059	35	0.1	6.415	A
C-AB	39	553	0.070	39	0.1	6.998	A
C-A	587			587			
A-B	0.90			0.90			
A-C	329			329			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	43	566	0.076	43	0.1	6.877	A
C-AB	47	536	0.088	47	0.1	7.365	A
C-A	719			719			
A-B	1			1			
A-C	403			403			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	43	566	0.076	43	0.1	6.878	A
C-AB	47	536	0.088	47	0.1	7.365	A
C-A	719			719			
A-B	1			1			
A-C	403			403			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	596	0.059	35	0.1	6.419	A
C-AB	39	553	0.070	39	0.1	7.003	A
C-A	587			587			
A-B	0.90			0.90			
A-C	329			329			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	29	617	0.048	29	0.1	6.127	A
C-AB	32	565	0.057	32	0.1	6.758	A
C-A	492			492			
A-B	0.75			0.75			
A-C	276			276			

Mill Lane - Glebe Way Junction - 2025 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		1.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2025 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	669	100.000
B - Mill Lane (E)		✓	98	100.000
C - Glebe Way (S)		✓	382	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	6	663
	B - Mill Lane (E)	13	0	85
	C - Glebe Way (S)	349	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	4
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.22	9.29	0.3	A
C-AB	0.08	8.60	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	568	0.130	73	0.1	7.260	A
C-AB	25	510	0.049	25	0.1	7.415	A
C-A	263			263			
A-B	5			5			
A-C	499			499			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	538	0.164	88	0.2	7.995	A
C-AB	30	487	0.061	30	0.1	7.872	A
C-A	314			314			
A-B	5			5			
A-C	596			596			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	495	0.218	108	0.3	9.278	A
C-AB	36	455	0.080	36	0.1	8.594	A
C-A	384			384			
A-B	7			7			
A-C	730			730			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	495	0.218	108	0.3	9.293	A
C-AB	36	455	0.080	36	0.1	8.598	A
C-A	384			384			
A-B	7			7			
A-C	730			730			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	88	538	0.164	88	0.2	8.012	A
C-AB	30	487	0.061	30	0.1	7.876	A
C-A	314			314			
A-B	5			5			
A-C	596			596			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	74	568	0.130	74	0.2	7.286	A
C-AB	25	510	0.049	25	0.1	7.425	A
C-A	263			263			
A-B	5			5			
A-C	499			499			

Mill Lane - Glebe Way Junction - 2025 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		1.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2025 With Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	372	100.000
B - Mill Lane (E)		✓	64	100.000
C - Glebe Way (S)		✓	752	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	6	366
	B - Mill Lane (E)	8	0	56
	C - Glebe Way (S)	653	99	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	1
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.12	7.21	0.1	A
C-AB	0.20	8.45	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	48	622	0.077	48	0.1	6.267	A
C-AB	75	564	0.132	74	0.2	7.330	A
C-A	492			492			
A-B	5			5			
A-C	276			276			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	58	601	0.096	57	0.1	6.625	A
C-AB	89	552	0.161	89	0.2	7.770	A
C-A	587			587			
A-B	5			5			
A-C	329			329			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	570	0.124	70	0.1	7.203	A
C-AB	109	535	0.204	109	0.3	8.443	A
C-A	719			719			
A-B	7			7			
A-C	403			403			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	570	0.124	70	0.1	7.207	A
C-AB	109	535	0.204	109	0.3	8.453	A
C-A	719			719			
A-B	7			7			
A-C	403			403			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	58	601	0.096	58	0.1	6.629	A
C-AB	89	552	0.161	89	0.2	7.783	A
C-A	587			587			
A-B	5			5			
A-C	329			329			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	48	622	0.077	48	0.1	6.277	A
C-AB	75	564	0.132	75	0.2	7.352	A
C-A	492			492			
A-B	5			5			
A-C	276			276			

Mill Lane - Glebe Way Junction - 2041 Without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		0.50	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.50	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2041 Without Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	740	100.000
B - Mill Lane (E)		✓	49	100.000
C - Glebe Way (S)		✓	407	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	6	734
	B - Mill Lane (E)	9	0	40
	C - Glebe Way (S)	386	21	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	4
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.12	8.96	0.1	A
C-AB	0.05	8.71	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	539	0.068	37	0.1	7.163	A
C-AB	16	497	0.032	16	0.0	7.473	A
C-A	291			291			
A-B	5			5			
A-C	553			553			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	44	504	0.087	44	0.1	7.818	A
C-AB	19	472	0.040	19	0.0	7.947	A
C-A	347			347			
A-B	5			5			
A-C	660			660			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	456	0.118	54	0.1	8.959	A
C-AB	23	437	0.053	23	0.1	8.704	A
C-A	425			425			
A-B	7			7			
A-C	808			808			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	456	0.118	54	0.1	8.962	A
C-AB	23	437	0.053	23	0.1	8.706	A
C-A	425			425			
A-B	7			7			
A-C	808			808			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	44	504	0.087	44	0.1	7.825	A
C-AB	19	472	0.040	19	0.0	7.949	A
C-A	347			347			
A-B	5			5			
A-C	660			660			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	539	0.068	37	0.1	7.171	A
C-AB	16	497	0.032	16	0.0	7.477	A
C-A	291			291			
A-B	5			5			
A-C	553			553			

Mill Lane - Glebe Way Junction - 2041 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		0.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.55	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2041 Without Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	409	100.000
B - Mill Lane (E)		✓	44	100.000
C - Glebe Way (S)		✓	775	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	1	408
	B - Mill Lane (E)	7	0	37
	C - Glebe Way (S)	727	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	1
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.09	7.26	0.1	A
C-AB	0.10	7.62	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	603	0.055	33	0.1	6.312	A
C-AB	36	558	0.065	36	0.1	6.891	A
C-A	547			547			
A-B	0.75			0.75			
A-C	307			307			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	579	0.068	39	0.1	6.671	A
C-AB	43	544	0.079	43	0.1	7.181	A
C-A	654			654			
A-B	0.90			0.90			
A-C	367			367			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	48	544	0.089	48	0.1	7.253	A
C-AB	53	525	0.101	53	0.1	7.613	A
C-A	800			800			
A-B	1			1			
A-C	449			449			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	48	544	0.089	48	0.1	7.256	A
C-AB	53	525	0.101	53	0.1	7.616	A
C-A	800			800			
A-B	1			1			
A-C	449			449			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	579	0.068	40	0.1	6.676	A
C-AB	43	544	0.079	43	0.1	7.184	A
C-A	654			654			
A-B	0.90			0.90			
A-C	367			367			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	603	0.055	33	0.1	6.321	A
C-AB	36	558	0.065	36	0.1	6.901	A
C-A	547			547			
A-B	0.75			0.75			
A-C	307			307			

Mill Lane - Glebe Way Junction - 2041 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		0.99	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.99	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2041 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	741	100.000
B - Mill Lane (E)		✓	100	100.000
C - Glebe Way (S)		✓	420	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	7	734
	B - Mill Lane (E)	13	0	87
	C - Glebe Way (S)	386	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	4
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.23	9.97	0.3	A
C-AB	0.09	9.02	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	75	553	0.136	75	0.2	7.523	A
C-AB	26	497	0.051	25	0.1	7.627	A
C-A	291			291			
A-B	5			5			
A-C	553			553			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	90	519	0.173	90	0.2	8.386	A
C-AB	31	472	0.065	31	0.1	8.160	A
C-A	347			347			
A-B	6			6			
A-C	660			660			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	110	471	0.234	110	0.3	9.954	A
C-AB	37	436	0.086	37	0.1	9.020	A
C-A	425			425			
A-B	8			8			
A-C	808			808			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	110	471	0.234	110	0.3	9.973	A
C-AB	37	436	0.086	37	0.1	9.024	A
C-A	425			425			
A-B	8			8			
A-C	808			808			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	90	519	0.173	90	0.2	8.409	A
C-AB	31	472	0.065	31	0.1	8.167	A
C-A	347			347			
A-B	6			6			
A-C	660			660			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	75	553	0.136	75	0.2	7.550	A
C-AB	26	497	0.051	26	0.1	7.635	A
C-A	291			291			
A-B	5			5			
A-C	553			553			

Mill Lane - Glebe Way Junction - 2041 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Mill Lane - Glebe Way	T-Junction	Two-way	Two-way	Two-way		1.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.06	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2041 With Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Glebe Way (N)		✓	413	100.000
B - Mill Lane (E)		✓	68	100.000
C - Glebe Way (S)		✓	828	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	5	408
	B - Mill Lane (E)	9	0	59
	C - Glebe Way (S)	727	101	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Glebe Way (N)	B - Mill Lane (E)	C - Glebe Way (S)
From	A - Glebe Way (N)	0	0	1
	B - Mill Lane (E)	0	0	0
	C - Glebe Way (S)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.14	7.62	0.2	A
C-AB	0.21	8.71	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	51	608	0.084	51	0.1	6.460	A
C-AB	76	557	0.136	75	0.2	7.460	A
C-A	547			547			
A-B	4			4			
A-C	307			307			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	61	583	0.105	61	0.1	6.893	A
C-AB	91	544	0.167	91	0.2	7.945	A
C-A	654			654			
A-B	4			4			
A-C	367			367			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	75	547	0.137	75	0.2	7.613	A
C-AB	111	525	0.212	111	0.3	8.699	A
C-A	800			800			
A-B	6			6			
A-C	449			449			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	75	547	0.137	75	0.2	7.617	A
C-AB	111	525	0.212	111	0.3	8.709	A
C-A	800			800			
A-B	6			6			
A-C	449			449			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	61	583	0.105	61	0.1	6.898	A
C-AB	91	544	0.167	91	0.2	7.959	A
C-A	654			654			
A-B	4			4			
A-C	367			367			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	51	608	0.084	51	0.1	6.473	A
C-AB	76	557	0.136	76	0.2	7.483	A
C-A	547			547			
A-B	4			4			
A-C	307			307			

i-Transport – Basingstoke | Manchester | London | Leeds
www.i-transport.co.uk