



Land at Cottage Farm, Lovedean Lane, Lovedean
Transport Assessment

Client: Bargate Homes

i-Transport Ref: SJ/BB/ITB11383-006C

Date: 20 May 2020

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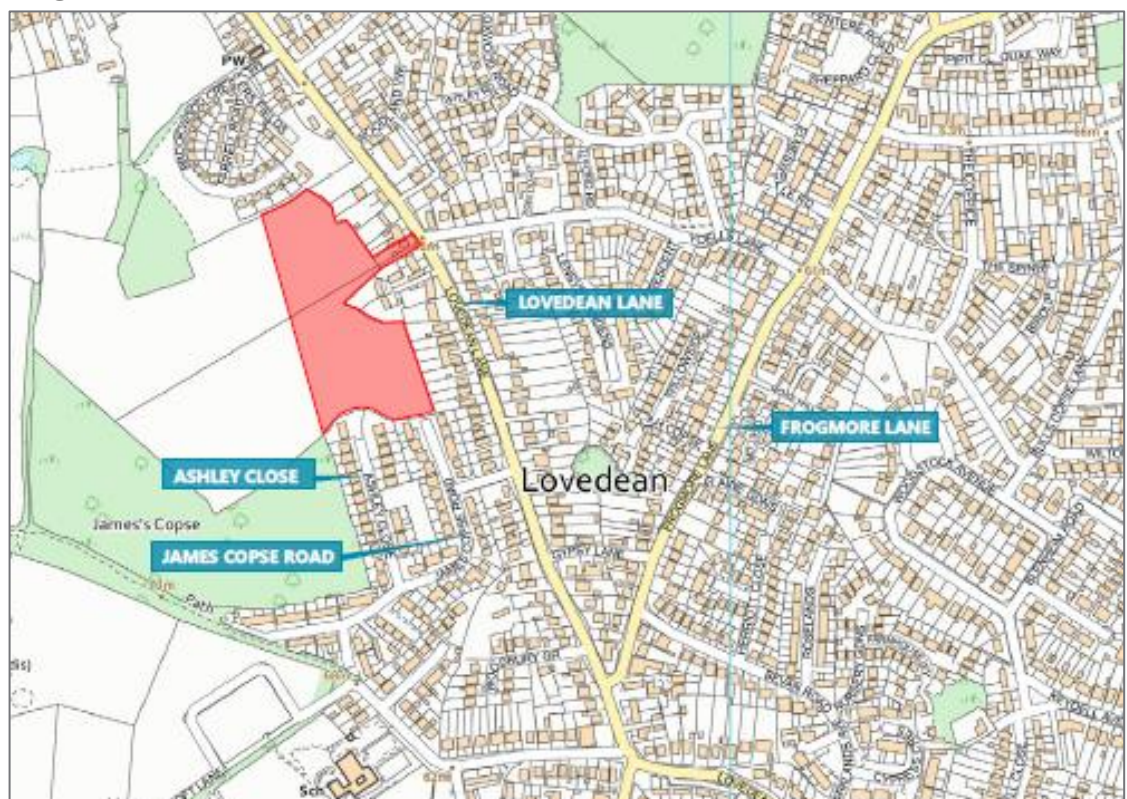
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SECTION 1 INTRODUCTION

- 1.1 Bargate Homes has appointed i-Transport to produce a Transport Assessment (TA) to support a planning application for residential development of up to 56 dwellings located to the west of Lovedean Lane, Lovedean. A site location plan is provided in **Figure 1** and is shown as an extract below in **Image 1**. The site is allocated for development in the Draft East Hampshire District Council (EHDC) Local Plan as Site SA36 – Land at Cottage Farm. The draft allocation is for 75-85 dwellings.

Image 1: Site Location Extract



Source: i-Transport – Figure 1

1.2 Approach to Transport Appraisal

- 1.2.1 In line with the requirements of the National Planning Policy Framework (NPPF) and the National Planning Practice Guidance (NPPG), this Transport Assessment (TA) has been prepared to consider the transport impacts that may arise from the proposed development of the site, and to consider the proposal against relevant transport policies and guidance documents.
- 1.2.2 Specifically, this TA has been prepared to consider the three critical transport tests outlined in paragraphs 108 / 109 of the NPPF, namely:

- Will the opportunities for sustainable travel be appropriately taken up given the type of development and its location?
- Will safe and suitable access be provided for all users?
- Will the transport impacts of the site be adequately mitigated, such that the residual cumulative impact will be acceptable (i.e. not severe), and not result in unacceptable safety impacts?

1.2.3 Pre-application engagement has been carried out with Hampshire County Council (HCC) to inform the scope and methodology of the TA and to help shape the site access strategy.

1.2.4 In terms of site access specifically, a Pre-Application Design Review (PADR) submission was made and agreed by HCC in 2016. Following this further work was put in hand by the applicant to address some points of detail raised in HCC's PADR report (**Appendix A**), the further work is described in Section 4.

1.2.5 More recently, in November 2019 a TA Scoping Note (Report Reference ITB11383-004 TN) was submitted to HCC (**Appendix B**). HCC responded to the TA Scoping Note on 30 December 2019 (**Appendix C**) and following that, further work was put in hand by the applicant to ensure all matters raised by HCC were addressed prior to submitting the planning application. A meeting was held with HCC on 10 January 2020 where this was discussed further.

1.3 Pre-application summary of points raised

1.3.1 The comments of HCC are summarised in **Table 1.1** along with a summary of how they have been addressed and where the information is presented within TA.

Table 1.1: Summary of pre-application input

Comment	Raised by	
	HCC	Addressed
<u>Access design</u> Ensuring the site access road has a level gradient for 15m Consider re-surfacing Yoells Lane to provide a high skid resistant surface course Assess drainage at the junction Relocate telegraph poles from within junction Consider parking restrictions within junction Re-align access road 'as far south as possible' to reduce see through	Yes	✓ Section 4 and drawings ITB11383-101 Rev B ITB11383-102 Rev A ITB11383-104 Rev A
Include A3 Portsmouth Road and A3 / B2149 Catherington Lane in traffic assessment study area	Yes	✓ Discussed at meeting on 11.1.20 and dealt with in Section 3 and 6
A non-motorised user audit is required for the route to the bus stops at Blackbird Close	Yes	✓ Discussed at meeting on 11.1.20 and dealt with Section 5 and Appendix F
Extend the Personal Injury Accident study area to include A3 Portsmouth Road and A3 / B2149 Catherington Lane	Yes	✓ Discussed at meeting on 11.1.20 and dealt with Section 3
Pedestrian visibility splays at the site access junction should be shown at a 1.5m 'x' distance	Yes	✓ Section 4 & Drawing ITB11383-GA-001 Rev B
Trip rates should be based on the trip rates used in the historic assessment work completed for the 179-189A Lovedean Lane site.	Yes	✓ Discussed at meeting on 11.1.20 and dealt with in Section 6
Trip distribution and assignment should be carefully considered given there are a number of route choices	Yes	✓ Discussed at meeting on 11.1.20 and dealt with Section 6
TEMPRO growth should be 5-years post application date.	Yes	✓ Section 6

Source: HCC / i-Transport

1.4 Transport Assessment Structure

1.4.1 The remainder of the TA is structured as follows:

- **Section 2:** Provides an overview of local and national transport policy to provide the context of the TA;
- **Section 3:** Describes the existing transport conditions near the site including opportunities to travel via walking, cycling and public transport and presents an overview of the characteristics of the local highway network;
- **Section 4:** Describes the development proposal including the proposed site access, parking provision, refuse collection and servicing arrangements;
- **Section 5:** Considers accessibility to everyday facilities and services;
- **Section 6:** Considers the vehicular traffic generation of the site and provides an assessment of the impact of the proposal on the local road network; and
- **Section 7:** Summarises the report and its conclusions

SECTION 2 POLICY REVIEW AND CONTEXT

2.1 To provide context for the assessment, this section of the TA provides a review of the national and local transport planning policies that are relevant to the proposed development. This review considers the following;

- **National**
 - National Planning Policy Framework (February 2019); and
 - The web-based national Planning Practice Guidance (PPG).
- **Local**
 - East Hampshire District Council Local Plan: Second Review 2006;
 - East Hampshire District Council Local Plan (Part 1) – Core Strategy (2014);
 - East Hampshire District Council Local Plan (Part 2) – Housing and Employment Allocations (2016)
 - Draft East Hampshire District Council Local Plan 2036;
 - East Hampshire District Council Vehicle Parking Standards SPD (2018);
 - HCC Local Transport Plan 3; and
 - East Hampshire District Council Transport Statement.

2.2 National Planning Policy Framework February 2019 (NPPF)

2.2.1 The revised NPPF sets out the Government’s planning policies and how these are expected to be applied. It also constitutes guidance for local planning authorities and decision takers both in drawing up plans and as a material consideration in determining applications.

2.2.2 The NPPF stresses that at the forefront of planning is the ‘presumption in favour’ of sustainable development. Paragraph 10-14 states:

“at the heart of the Framework is a presumption in favour of sustainable development”.

2.2.3 The NPPF requires in paragraph 111 and that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment.

2.2.4 Paragraph 108 also presents the primary transport tests for new development proposals, stating that plans and specific applications for development should ensure that:

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

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

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

2.2.5 Paragraph 109 of the revised NPPF presents a demanding test for assessing transport impacts. Only if there would be an 'unacceptable impact on highway safety' or when residual cumulative impacts are '**severe**' should proposals be refused on transport grounds.

2.3 National Planning Practice Guidance (NPPG) – March 2014

2.3.1 Various planning practice guidance, including guidance on the role of Travel Plans and TA's in decision-making was moved to an on-line portal, known as the Planning Practice Guidance (PPG) in 2014. This was accompanied by a Written Ministerial Statement that includes a list of the previous planning practice guidance documents cancelled when the site was launched. The PPG provides guidance to support and expand on policies within the NPPF, including guidance on interpretation of policy, and, in that sense, does not provide additional policy but rather more detailed consideration of how policies within the NPPF should be approached and met. The guidance covers all relevant planning policy areas under separate topics and is updated online as and when required.

2.3.2 The NPPG sets out the key roles of Transport Assessments/ Statements:

"Transport Assessments and Statements are ways of assessing the potential transport impacts of developments (and they may propose mitigation measures to promote sustainable development. Where that mitigation relates to matters that can be addressed by management measures, the mitigation may inform the preparation of Travel Plans).

Transport Assessments are thorough assessments of the transport implications of development, and Transport Statements are a 'lighter-touch' evaluation to be used where this would be more proportionate to the potential impact of the development (i.e. in the case of developments with anticipated limited transport impacts)."

2.3.3 This TA complies with the PPG in terms of the requirements for Transport Assessments, in particular the following key principles:

“Travel Plans, Transport Assessments and Statements should be:

- ***Proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;***
- ***Established at the earliest practicable stage of a development proposal;***
- ***Be tailored to particular local circumstances (other locally-determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);***
- ***Be brought forward through collaborative ongoing working between the Local Planning Authority/Transport Authority, transport operators, Rail Network Operators, Highways Agency where there may be implications for the strategic road network and other relevant bodies. Engaging communities and local businesses in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can encourage greater social inclusion, community cohesion and healthier communities).”***

2.4 Local Policy

Local Plan: Second Review 2006

2.4.1 The EHDC Local Plan: Second Review was adopted at the end of March 2006 and remains part of the Development Plan. A review of the East Hampshire District Local Plan: Second Review Policy H2 shows that the proposed site was known as “HAR6 Land North of James Copse Close, Lovedean”.

2.4.2 The 2006 Local Plan notes that the site consists of an open field on rising ground on the west side of Lovedean Lane and to the north of the cul-de-sac development at Ashley Close allocated for residential development of about 85 smaller dwellings as a reserve site. The former plan noted that:

- ***Access to the site should be taken from James Copse Road and Lovedean Lane and there is scope to provide a cycleway link from the site to the junction of Lovedean Lane/Yoells Lane.***

East Hampshire District Council Local Plan (Part 1) – Core Strategy (2014)

2.4.3 The East Hampshire District Council Local Plan (Part 1) was adopted in April 2014 with a focus to provide a policy framework that plans for new development to deliver the vision that has been developed alongside the Sustainable Community Strategy. Policy CP2 sets out the Spatial Strategy and notes:

- ***New development growth in the period up to 2028 will be directed to the most sustainable and accessible locations in the District in accordance with the Spatial Strategy shown on the Key Diagram.***

2.4.4 A sustainable hierarchy of settlements is set out in Policy CP2 based upon the accessibility of settlements, the availability of a broad range of facilities, their economic role, and the environmental constraints to development. In terms of the Southern Parishes, Lovedean is identified as a third-tier settlement in the hierarchy.

2.4.5 Policy CP31 of the Local Plan focuses on transport, noting that through implementation of the Hampshire Local Transport Plan (2011 – 2031), ***"the fullest possible use of sustainable modes of transport (including cycling, walking and public and community transport) and reduced dependence on the private car will be encouraged"***.

2.4.6 Policy CP31 also notes that development proposals will include a range of mitigating measures and, where appropriate, will be required to:

- a) enhance the quality, viability, availability, accessibility and frequency of public transport and alternative community transport provision, especially in rural areas, to ensure that those without access to a private car have access to services and facilities necessary for their well-being;***
- b) protect and provide safe and convenient cycle and pedestrian links that integrate with existing cycle and pedestrian networks, such as the South Downs Way and Shipwrights Way, and reflect the amenity and rural character of the area;***
- c) ensure that highway design and associated signing meets the needs of vehicular traffic and the need for safety whilst also placing a high priority on meeting the needs of pedestrians, cyclists and public transport users and without detriment to the quality of the environment;***
- d) plan for new highway infrastructure that will reduce congestion, improve highway safety, increase accessibility to the District's town and district centres and enhance economic prosperity of the District;***
- e) improve access to rail stations at Rowlands Castle, Petersfield, Liss, Liphook, Alton and Bentley Station by sustainable modes of transport and, where appropriate, provide additional car and cycle parking at rail stations;***
- f) provide adequate, convenient and secure vehicle and cycle parking in accordance with adopted standards;***
- g) ensure that the type and volume of traffic generated would not harm the countryside or the rural character of local roads;***
- h) protect sunken and rural/green lanes so that their convenience and safety are enhanced for their users, and their ecological, landscape and recreational value are enhanced;***

- i) improve access for people with impaired mobility to all forms of transport and to all developments to which the public will reasonably expect to have access; and*
- j) produce and implement transport assessments and travel plans for proposals that are likely to have significant transport implications;*
- k) include measures, to be funded by the developer, that address the impact of the new development so as to ensure the continued safe and efficient operation of the strategic and local road networks.*

East Hampshire District Council Local Plan (Part 2) – Housing and Employment

Allocations (2016)

2.4.7 The East Hampshire District Local Plan: Housing and Employment Allocations (Site Allocations Plan) is the second part of a series of development plan documents and follows on from the Joint Core Strategy. Its primary purpose is to identify specific sites to meet the individual housing and employment targets set out in the Joint Core Strategy (JCS), and to set out guidance for the development of these sites.

2.4.8 Land to the north of this site is identified for the development of 40 new dwellings (Reference Policy HN2). That site is currently under construction by the applicant. The supporting text in the Part 2 Local Plan notes that:

- ***The reserve housing site listed in the saved East Hampshire District Local Plan: Second Review Policy H2, North of James Copse Road, will remain and the Settlement Policy Boundary adjusted accordingly*** (Ref: paragraph 4.3).

Draft East Hampshire District Council Local Plan 2036

2.4.9 The Draft Local Plan is envisaged to be adopted by the end of 2020 and will replace the current Local Plan. The Local Plan review will consider all development needs and, review and update all current planning policies. This consultation is the first statutory stage (Regulation 18) of the Local Plan review.

2.4.10 The purpose of the Local Plan is to:

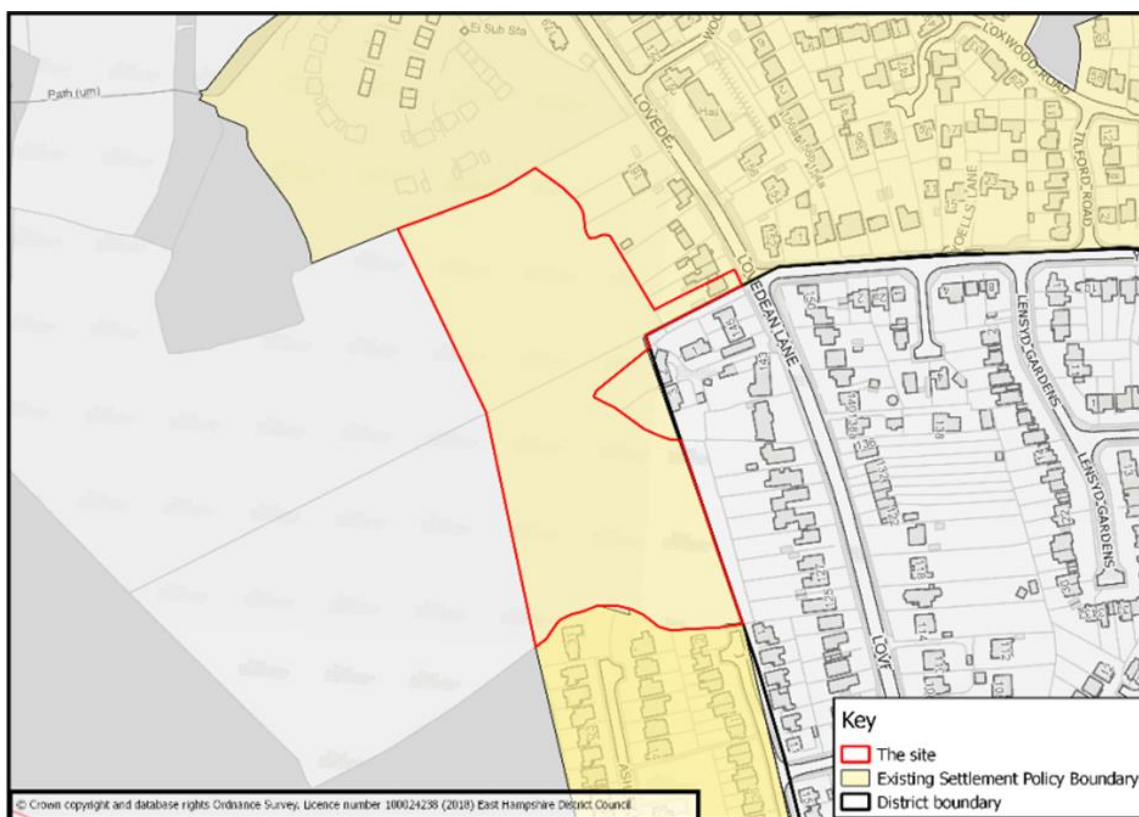
- sets out a long-term vision and objectives;
- provides a strategy for growth, new homes, employment, facilities and infrastructure to meet the area's needs; and
- includes policies to manage change while protecting and enhancing the area's heritage and natural environment.

2.4.11 The site is identified in the draft 2036 Local Plan as **Site SA36 - Land at Cottage Farm, James Copse Close**. The supporting text notes:

- **Vehicle access to the site is to be via Lovedean Lane;**
- **Ensure any significant negative traffic impact is mitigated on the local road network; and**
- **Provide an on-site movement layout suitable for all potential users, linked to existing external routes**

2.4.12 An extract from the draft 2036 Local Plan showing the identified location of this site (Site SA36) is shown in **Image 2.1**.

Image 2.1 Site location as shown in EHDC draft 2036 Local Plan



Source: Draft EHDC Local Plan

Havant Local Plan (2011-2026)

2.4.13 As part of the site access is within Havant Borough, the planning application will also be submitted to Havant Borough Council (HBC). The HBC borough boundary is shown on **Image 2.1** and for this reason the HBC adopted Local Plan has been reviewed.

2.4.14 The HBC Local Plan is made up of the Core Strategy 2011 – 2026, which is the principal document outlining how planning will be managed in the borough until 2026.

2.4.15 Policy CS20 of the Core Strategy 'Transport and Access Strategy' states,

Development will be permitted that:

1. Is consistent with and contributes to the implementation of the 'Reduce, Manage and Invest' strategy.

2. Does not increase congestion and promotes better use of existing transport networks.

3. Improves accessibility to goods, services and employment and promotes equality in the transport system.

4. Provides transport management measures to ensure the safe and efficient operation of the strategic and local road network.

5. Ensures that highway design responds positively to the characteristics of the area and delivers a high quality public realm for all users.

6. Maintains or improves the range of transport modes accessible to the users of the development site with specific emphasis on public transport, especially high quality/frequency buses and includes walking and cycling where appropriate. assesses the non-transport infrastructure requirements to support the proposed new development [.....]

7. [.....]

2.4.16 Havant Borough Local Plan (Allocations) document 2014 - 2026 follows on from the Core Strategy and identifies sites for specific uses including, housing, employment, retail, recreation and green infrastructure up to 2026.

Havant Borough Council's Pre-Submission Local Plan (2018 – 2036)

2.4.17 More latterly, HBC have prepared a new Local Plan and the 'Pre-Submission Havant Borough Local Plan 2036' was approved by the Full Council on 30 January 2019 and consulted on between 1 February and 18 March 2019. The Pre-Submission Local Plan is the version of the plan which the council considers to be 'sound' having been informed by extensive research, before it is formally submitted for examination. It takes account of the comments made during previous consultations and takes many of the suggested changes on board. The Local Plan will now be submitted to the Secretary of State for Housing, Communities and Local Government, together with the comments received and the Local Plan's Examination will start. This is expected in 2020.

East Hampshire District Council Vehicle Parking Standards SPD (2018)

- 2.4.18 The SPD sets out the residential and non-residential vehicle parking standards for new development within East Hampshire.
- 2.4.19 The proposed parking provision as part of development proposals seeking planning permission will be assessed against the parking guidance set out within the SPD which are as set out in **Table 2.1**.

Table 2.1: EHDC Car Parking Standards

Dwelling / Use	Minimum Standards	
	Allocated	Visitor / accessible
1 bed dwelling	1 space per dwelling	1 visitor space per 5 dwellings
2 bed dwelling	2 spaces per dwelling	
3 bed dwelling	2 spaces per dwelling	
4+ bed dwelling	3 spaces per dwelling	

Source: EHDC Parking SPD / EHDC Draft Local Plan

HCC Local Transport Plan 3

- 2.4.20 HCC's transport strategy for the next 20 years is set out in its LTP. The document also outlines how the LTP will contribute to the Council's corporate priorities and includes a three-year implementation plan. The three main priorities in the LTP for the next 20 years. These are to:

"Support economic growth by ensuring the safety, soundness, and efficiency of the transport network in Hampshire;

Provide a safe, well-maintained, and more resilient road network in Hampshire, as the basic transport infrastructure of the County, on which all forms of transport directly or indirectly depend, and the key to continued casualty reduction; and

Manage traffic to maximise the efficiency of the existing network capacity, improving journey time reliability and reducing emissions, and thereby supporting the efficient and sustainable movement of people and goods."

East Hampshire District Council Transport Statement

- 2.4.21 This HCC report sets out the transport objectives and delivery priorities for the East Hampshire district area. The document recognises that the southern-most part of the district (mainly Clanfield, Rowlands Castle and Horndean – where this site is located) falls within the South Hampshire Sub-Region, covered by the Solent LEP and the Partnership for Urban South Hampshire (PUSH).

2.4.22 The report notes that East Hampshire does not experience extensive or wide-spread congestion, with congestion typically confined to a number of main junctions along the key roads, these include the B2149 Horndean access to the A3(M).

SECTION 3 EXISTING TRANSPORT CONDITIONS

3.1 Introduction

- 3.1.1 This section of the TA sets out the existing transport conditions in the local area. This includes a review of the opportunities to use non-car modes, as well as the current operation of the existing highway network.

3.2 Site Location

- 3.2.1 The site is bounded to the north by dwellings that form part of the current development by Bargate Homes (which is accessed from Lovedean Lane), to the south by dwellings fronting onto James Copse Road and Ashley Close and to the west by mature woodland.
- 3.2.2 The location of the site in the context of the local highway network is presented in **Figure 1**.

3.3 Walking facilities

- 3.3.1 There are existing street lit footway approximately 1.7m in width on either side of Lovedean Lane in the immediate vicinity of the site frontage. To the north of the site, the footway continues for circa 450m where it ends just north of New Road. To the south of the site access, a continuous street lit footway provides safe pedestrian access to other local services and facilities to the south including those at Milton Road.
- 3.3.2 On the western side of Lovedean Lane, there is a continuous footway with dropped kerb crossings across James Copse Road, Woodbury Grove and Woodcroft Lane. The footway then continues south onto Milton Road. Lovedean Lane continues west until it meets the A3, with footways on either side of the road, street lighting and dropped kerb crossings along the length of the road.
- 3.3.3 Milton Road is a main pedestrian route to local facilities, with a very generous footway width running along the western side of Milton Road along the frontage of the local shops (circa 5.5m). The road is street lit and there are two well designed dropped kerb crossings with tactile paving provided to cross Milton Road between the Lovedean Lane / Milton Road priority junction and the Milton Road / Eagle Avenue mini roundabout.

- 3.3.4 At the Milton Road / Eagle Avenue mini roundabout dropped kerb crossings with tactile paving are provided across all three arms. Eagle Avenue can be followed west towards the Blackbird Close bus stop. After passing the shop frontages the footway along Eagle Avenue narrows to approximately 1.7m in length.
- 3.3.5 Eagle Avenue has 1.7m wide footways and street lighting on both sides of the carriageway. There is a dropped kerb crossing with tactile paving allowing crossing of Huntsman Close to the Blackbird Close bus stop – this is predominantly a stop for alighting services. Services from this bus stop and that opposite at the rear of the Milton Road shops are summarised in Section 3.4.
- 3.3.6 Yoells Lane is opposite the site access and will be reachable via dropped kerb crossings with tactile paving, which have been proposed as a part of the site access plan (Section 4). Yoells Lane is street lit and includes footways on either side of the carriageway that measure approximately 1.8m in width. There are dropped kerb crossing points provided to cross the side roads on both sides of Yoells Lane.
- 3.3.7 Yoells Lane joins Frogmore Lane circa 450m east of the site access. Frogmore Lane has street lighting and continuous footways on either side of the carriageway, with dropped kerb crossing points allowing crossing of side roads. To the south, Frogmore Lane joins Lovedean Lane. To the north, the footway allows pedestrian access to Victory Avenue. Victory Avenue features street lighting and a continuous shared footway / cycleway circa 3m in width along the northern side of the street. There are eight crossing points across Victory Avenue, each with tactile paving. On the southern side of Victory Avenue there is a continuous 1.5m wide footway, with tactile paved dropped kerb crossing points to cross the side roads.
- 3.3.8 Victory Avenue meets Catherington Lane to the west, where the shared footway / cycleway temporarily terminates, and becomes a footway 1.5m in width. Catherington Lane features footways on both sides of the carriageway and street lighting. Circa 175m north of the Victory Avenue / Catherington Lane junction, there is a traffic signal- controlled pedestrian crossing with guard railing, allowing safe crossing of Catherington Lane. The 3m width shared surface resumes to the north of the crossing and runs west along Barton Cross to Horndean Technology College. Barton Close has street lighting with tactile paved dropped kerb crossing points allowing crossing of two side road arms.

3.4 Cycling Facilities

3.4.1 Cycle travel is appropriate on many of the surrounding roads given the current speeds and traffic flows (see section 3). Manual for Streets (MfS) guidance suggests:

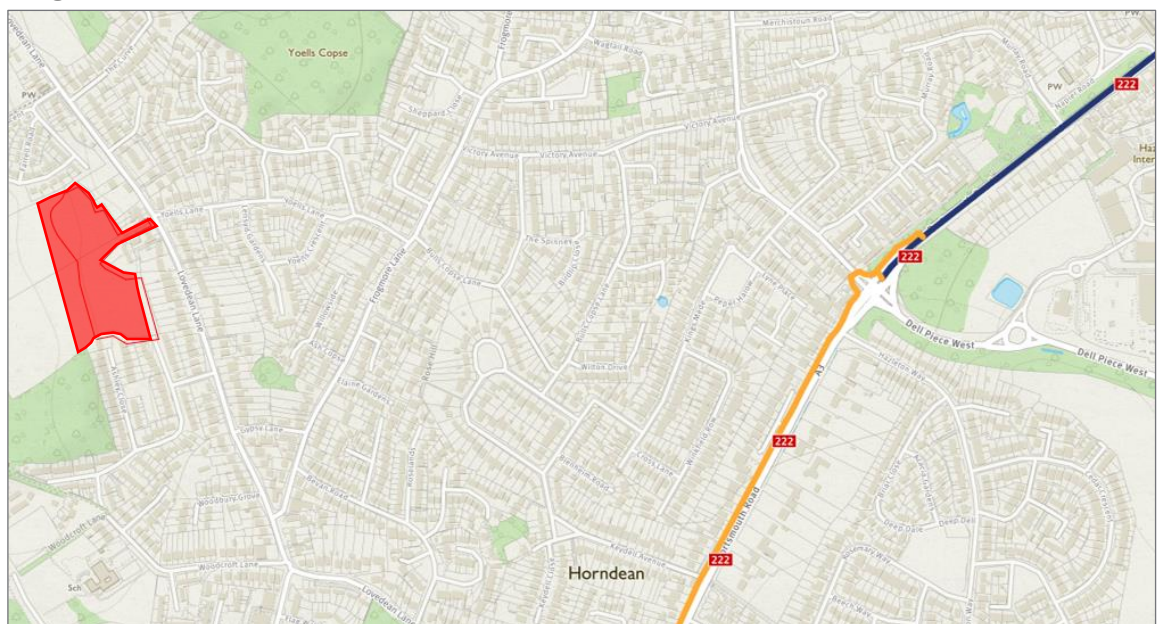
“Cyclists should generally be accommodated on the carriageway. In areas with low traffic volumes and speeds, there should not be any need for dedicated cycle lanes on the street” (MfS, para. 6.4.1).

3.4.2 On this basis the surrounding roads including Lovedean Lane, Yoells Lane and Frogmore Lane are appropriate for on street cycling.

3.4.3 An off-road cycle route is also provided along Victory Lane in the form of a shared footway / cycleway. This temporarily becomes on-road on Catherington Lane before returning to off-road north of the previously mentioned pedestrian crossing on Catherington Lane.

3.4.4 The National Cycle Network can also be accessed within 1,300m of the site by following Lovedean Lane south until reaching the A3. The NCN Route 222 connects Petersfield to Portsmouth and routes along the A3 via Horndean, Cowplain, Waterlooville and Purbrook as show in **Image 3.1**. There is also a six-mile cycle trail between Horndean and Havant, which utilises bridleway route 123 to cross the A3(M) into Havant via Leigh Park.

Image 3.1 NCN 222



Source: www.ordnancesurvey.co.uk

3.5 Public Transport

Bus

3.5.1 The closest bus stop to the site are located adjacent to Blackbird Close and to the rear of the Milton Road shops, which are accessible by a 850m walk from the site access. The bus stop infrastructure includes a bus stop flag and a bus shelter with associated timetable information and seating. This stop provides access to bus services 7 The Star and 39. These services operate at a frequency of one service every 12-15 minutes Monday to Saturday. The frequency of services enables access to higher order centres for commuting purposes, as well as leisure, retail and educational purposes.

3.5.2 **Table 3.1** outlines a summary of the bus services operating in the local area.

Table 3.1: Local Bus Services

Stop	No.	Route	Weekday	Saturday	Sunday
Blackbird Close (850m distant)	39	Wecock – Waterlooville- Havant Bus Station	Every 12 minutes – first departure 05:37, last return 23:00	Every 12 minutes -first departure 06:11, last return 23:00	Hourly – first departure 07:38, last return 18:55-
	7 The Star	Wecock – Waterlooville – Portsmouth city centre	Every 12 minutes – first departure 05:00, last return 23:04	Every 15 minutes – first departure 05:27, last return 23:04	Every 15 minutes – first departure 06:38, last return 23:04-

Source: Traveline Southeast

3.5.3 The site is well connected to the local bus network, ensuring that residents will be offered frequent and realistic opportunities for bus travel to a range of destinations including Havant, Portsmouth and Waterlooville. Of particular note is the 7 The Star service, which provides bus services at less than 15-minute frequencies throughout the course of an entire week.

Rail

3.5.4 The nearest railway station to the site is Havant, which is located circa 9.8km from the centre of the site – bus service 39 provides 7-day access. It is served by trains operated by Southern and Southwestern Railway, which together provide frequent services to a number of destinations including London Waterloo, Chichester, Brighton, Portsmouth & Southsea and Southampton Central. **Table 3.2** provides a summary of railway services available from Havant railway station.

Table 3.2: Summary of available rail services from Havant station

Destination	Frequency		Journey time (minutes)
	Peak	Off-peak	
London Waterloo	4	3	80
Chichester	6	5	13
Brighton	3	2	68
Portsmouth & Southsea	7	6	13
Southampton Central	3	2	41

Source: National Rail

- 3.5.5 Access to Havant station can be achieved by the number 39 bus service, which operates from the existing bus stop at Blackbird Close. The bus service operates at a 12-minute frequency Monday to Friday and stops at Havant bus station, which is a less than a 5-minute walk from Havant railway station.

3.6 Local Highway Network

Overview

- 3.6.1 Lovedean Lane is a two-way single carriageway road some 5.5m in width that passes along the eastern frontage of the site. Circa 800m to the north of the site access the roads speed limit becomes derestricted, but for the entire length of the road south of this point (including the site access), there is a 30mph speed limit. Lovedean Lane extends north towards Clanfield and extends southwards towards the village centre and meets the A3 1.2km from the site access.
- 3.6.2 Approximately 600m south of the site access, Milton road forms a ghost island priority junction with Lovedean Lane. Milton Road has a 30mph speed limit and provides access to the Wecock centre and extends southwards to meet B2150 Hambledon Road at a four-arm roundabout. Following Lovedean lane westbound past the junction with Milton Road leads to the A3, where Lovedean Lane meets the A3 at a ghost island priority junction. The A3 extends southwards towards Portsmouth, which is 15km away. Following the A3 northwards, the A3(M) J2 can be accessed via the B2149. To the south the A3(M) meets the A27, which serves various destinations on the South Coast, such as Portsmouth, Chichester, Brighton. To the west of Portsmouth, the A27 becomes the M27, which serves Southampton. To the north, the A3(M) becomes to A3, which provides a route to London.

3.6.3 An alternative route to the A3(M) is possible by travelling along Yoells Lane, Frogmore Lane, Victory Avenue and Catherington Lane respectively, and joining the B2149 to access J2 of the A3(M). All four roads proceeding the B2149 are two-way single carriageway roads, accessed via priority junctions. Following the B2149 over the A3(M) and southwards provides access to Havant.

Traffic Volumes and Speeds

3.6.4 To establish the baseline traffic conditions on the local highway network, a series of traffic surveys were undertaken between 30 September 2019 and 8 October 2019. The surveys included:

- Manual Classified Count (MCC) surveys at:
 - the Lovedean Lane / Yoells Lane priority junction;
 - the Yoells Lane / Frogmore Lane priority junction; and
 - the Lovedean Lane / Milton Road priority junction.

3.6.5 In addition, two seven-day long Automatic Traffic Counter (ATC) surveys were undertaken on Lovedean Lane. These ATC surveys provide an understanding of the existing traffic conditions and vehicle speeds along Lovedean Lane. The baseline traffic flows are illustrated in **Figures TF1 and TF2** and summarised in **Table 3.3**.

Table 3.3: Existing Traffic Flows

Road	Direction	Morning Peak Period (07:45-08:45)	Evening Peak Period (17:00-18:00)
Lovedean Lane (North of Yoells Lane)	NB	335	238
	SB	218	274
Lovedean Lane (West of Milton Road)	NB	550	556
	SB	556	447
Lovedean Lane (East of Milton Road)	EB	317	288
	WB	375	468
Yoells Lane	EB	87	94
	WB	120	70
Frogmore Lane	NB	278	200
	SB	268	185
Milton Road	NB	468	511
	SB	532	582

Source: Traffic Surveys, October 2019

- 3.6.6 A summary of the vehicle speeds recorded during the duration of the two ATC surveys is presented in **Table 3.4**.

Table 3.4 Recorded traffic speeds (7-day 24 hours)

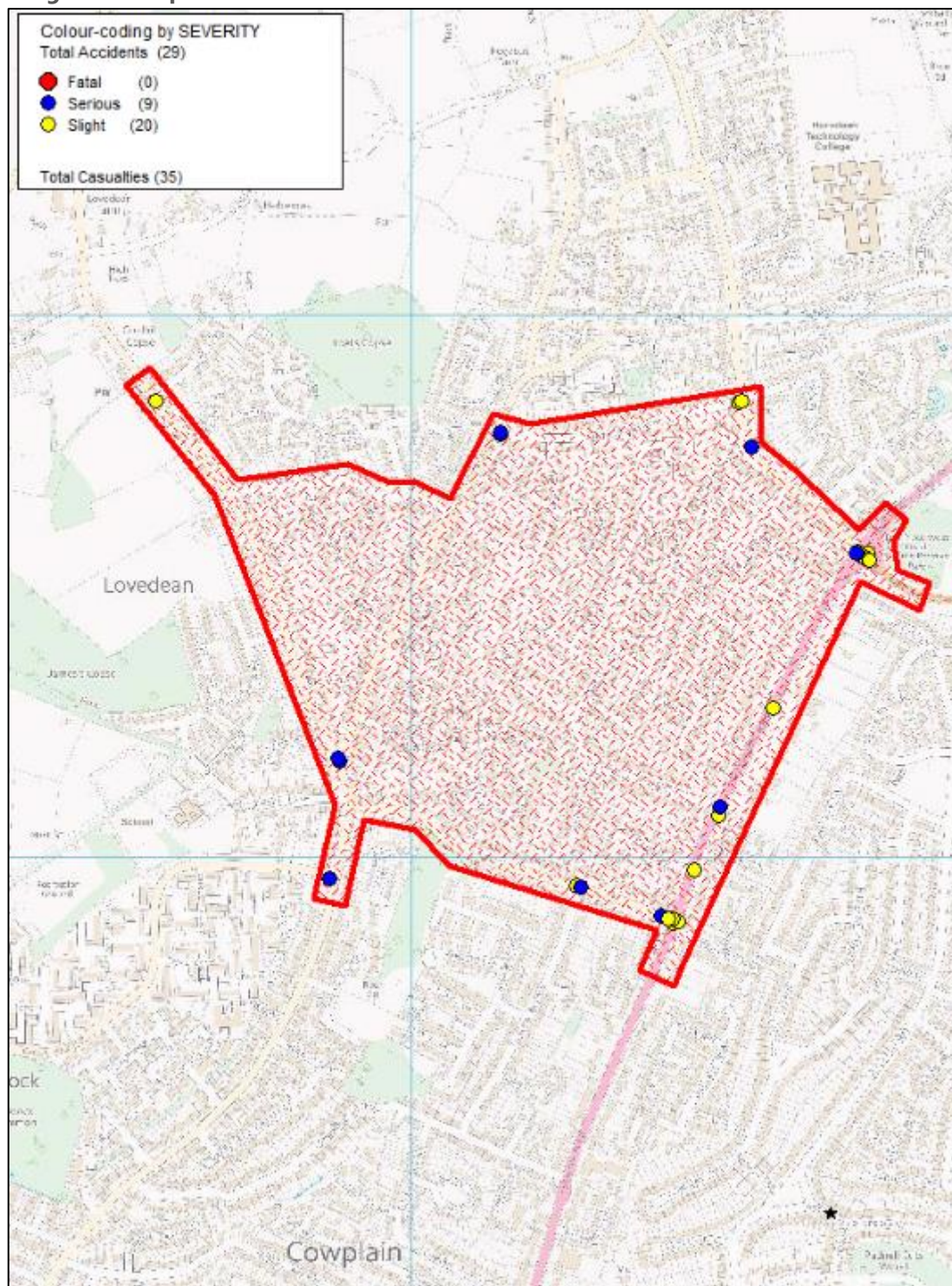
Link	Direction	Average Speeds (mph)	85th % Wet Weather Speed (mph)
Lovedean Lane (North of Yoells Lane)	Northbound	28.6	33.5
	Southbound	30.1	34.9
Lovedean Lane (South of Yoells Lane)	Northbound	29.8	34.9
	Southbound	28.6	33.3

Source: ATC Surveys – October 2019 (No wet weather adjustment made as some rain fell in week)

3.7 Highway Safety

- 3.7.1 As agreed with HCC, Personal Injury Accident (PIA) data has been obtained from Hampshire Constabulary for the most recently available five-year period between July 2014 and July 2019. The study area is shown in **Image 3.2** and a copy of the collision data is provided at **Appendix D**.

Image 3.2: PIA plot



Source: Hampshire Constabulary

3.7.2 The data provides information on all recorded PIA over the last five years and includes the full extent that HCC required in their Pre-Application response of 30 December 2019. Analysis of the data has been undertaken, and **Table 3.5** provides a summary of the PIAs that have occurred. **Appendix D** provides the full PIA report.

Table 3.5: PIA Data Summary

Vehicle	Fatal	Serious	Slight	Total
Motor Vehicle	0	2	16	18
2 Wheeled Motor Vehicle	0	4	2	6
Pedestrians	0	2	1	3
Pedal Cycle	0	1	1	2
Total	0	9	20	29

Source: Hampshire Constabulary

3.7.3 A total of 29 collisions were recorded and were spread out across the study area. 9 of collisions resulted in 'serious' injury and 20 resulted in 'slight' injury. A summary of the collisions is provided below:

Lovedean Lane

3.7.4 No accidents occurred at the junction of Lovedean Lane and Yoells Lane.

3.7.5 Five injury accidents were recorded over the last five-year period along the wider length of Lovedean Lane, with two slight in severity and three serious in severity. Details regarding each accident are listed below:

- One 'slight' injury collision involved a car failing to stop in time and striking the rear of the car in front waiting to turn.
- Two 'serious' injury collisions happened at the junction of Lovedean Lane / Frogmore lane. One involved a car failing to see a cyclist as it turned into Frogmore Lane, causing the cyclist to fall. The second involved a car cutting into the opposite lane as it turned into Frogmore Lane, colliding with a motorcyclist and knocking them off their motorcycle.
- One 'slight' injury collision involved a car striking the nearside of a car waiting to turn right.
- One 'serious' injury collision involved a motorcyclist failing to stop in time and striking the rear of a car waiting to turn right.

3.7.6 It should be noted that of the five accidents, none occurred at the junction of Lovedean Lane and Yoells Lane, where the site access is proposed.

Frogmore Lane

3.7.7 Two injury accidents were recorded over the last five-year period along Frogmore Lane, with one slight in severity and one serious in severity. Both accidents occurred at the junction of Frogmore lane and Victory Avenue and both involved motorcyclists. Details regarding each accident are listed below:

- The 'slight' injury collision occurred as a result of a van trying to reverse after realising, they had made a wrong turning, failing to see the motorcyclist behind and colliding with them in the process.
- The 'serious' injury collision occurred due to a car pulling out of Victory Avenue into the path of a motorcyclist traveling southwards along Frogmore Lane having failed to see them.

Catherington Lane

3.7.8 Three injury accidents were recorded over the last five-year period along Catherington Lane between the Victory Avenue junction and A3 London Road junction with B2149 / Catherington Lane. Two were slight in severity and one serious in severity, and no accidents involved a pedestrian, cyclist or motorcyclist. Details regarding each accident are listed below:

- Both 'slight' injury collision occurred due to a car colliding with another vehicle waiting to make a turn.
- The 'serious' injury collision occurred as a result of an intoxicated driver losing control and colliding with a tree and parked cars.

A3 London Road junction with B2149 / Catherington Lane

3.7.9 Seven injury accidents were recorded over the last five-year period at the A3 London Road junction with B2149 / Catherington Lane. Six were slight in severity and one serious in severity, and no accidents involved a pedestrian, cyclist or motorcyclist. Details regarding each accident are listed below:

- One 'slight' injury collision occurred as a result of a driver losing control of their car and colliding with the central reservation.
- One 'slight' injury collision occurred due to an on-call emergency vehicle colliding with a car at the junction.

- One 'slight' injury collision occurred as the result of a car misinterpreting a filter traffic signal and turning right onto B2149 Bell Piece, striking a car travelling southbound on the other side of the carriageway.
- Two 'slight' injury collisions occurred as a result of a car failing to stop in time, resulting in a 'shunt' type collision with the car in front.
- One 'slight' injury collision occurred as a result of a vehicle disobeying a traffic signal whilst trying to turn right into Catherington Lane, resulting in a collision with another car traveling north on London Road.
- The one 'serious' injury collision occurred as a result of a vehicle turning right out of B2149 Bell Piece disobeying traffic signal and getting struck by another car travelling northbound on London Road

3.7.10 It should be noted that there were no collisions which occurred on the Catherington Lane arm of the junction, with the exception of a vehicle turning into this arm disobeying a traffic signal.

A3 London Road junction with Lovedean Lane

3.7.11 Seven injury accidents were recorded over the last five-year period at the A3 London Road junction with Lovedean Lane. Six were slight in severity and one serious in severity, and four involved a pedestrian, cyclist or motorcyclist. Details regarding each accident are listed below:

- One 'slight' injury accident occurred as a result of a car failing to stop in time, shunting the car in front into another car which was waiting to turn right.
- One 'slight' injury accident occurred as a result of car colliding with the nearside of a pedal cyclist as the car came to a stop at the junction, causing the cyclist to fall.
- One 'slight' injury accident occurred as a result of a car colliding with the offside of another car waiting to turn right.
- One 'slight' injury accident occurred as a result of a car moving off striking the nearside of a motorcycle.
- One 'slight' injury accident occurred as a result of van turning left striking the nearside of a car which was already proceeding along London Road.
- One 'slight' injury accident occurred as a result of a cyclist failing to stop in time and colliding with a car at the junction.

- The 'serious' injury accident occurred as a result of a young child leaving the pavement on a scooter into the path of a car travelling south on London Road.

Summary

3.7.12 Whilst it is regrettable that a number of these collisions involved a vulnerable road user (pedestrian or cyclist) it is evident from the collision records that no patterns in collisions are currently present.

3.8 Summary

3.8.1 The site is very well located to the existing pedestrian network within Lovedean. There is a good provision of footways along all local roads connecting to the site. The site is within the vicinity of the National Cycle Network, and conditions on local roads support on carriageway cycling.

3.8.2 There are a number of regular bus services accessible from the site, which serve some key areas i.e. Portsmouth and Havant. These local bus services run for approximately 18 hours of the day. Havant rail station is also accessible by bus from the site and provides connections to destinations further afield such as Portsmouth, Brighton and London.

3.8.3 Existing highway conditions have been considered through collection of a traffic flow data which identifies generally low traffic volumes and low traffic speeds. A detailed review of the most recently available accident data has been undertaken and does not identify any specific road safety problems within the local area. The analysis in Section 6 of the TA carefully assesses the traffic impact of the proposal to identify whether the proposal will result in a material change in the way the local highway network operates.

SECTION 4 PROPOSED DEVELOPMENT

4.1 Overview

- 4.1.1 This section of the TA provides details of the proposed development and access arrangements. Information is provided on the likely parking and servicing provision. The proposed development consists of up to 56 dwellings.

4.2 Site Access Arrangements

- 4.2.1 Vehicular, along with pedestrian and cycle access, will be achieved from Lovedean Lane. A new priority junction is proposed, which will result in a slightly off-set crossroads type arrangement being established between Lovedean Lane / Yoells Lane and the proposed site access junction. The location is shown in **Image 4.1**.

Image 4.1 Location of proposed site access on Lovedean Lane



Source: i-Transport site photograph

- 4.2.2 The junction has been designed in accordance with Manual for Streets (MfS) for a 60kph (37.5mph) design speed. This design methodology is appropriate for the recorded 85th

percentile wet weather vehicle speeds along Lovedean Lane and there are no Departures from Standard sought with the proposed design. The design has previously been agreed with HCC under the pre-application design review process.

4.2.3 The proposed access is shown in principle on i-Transport drawing number: **ITB11383-GA-101 Rev C**. A summary of the key features of the proposed site access is provided below, whilst an extract of drawing number **ITB11383-GA-101 Rev C** is provided at **Image 4.2**.

- 5.5m wide carriageway width;
- 2m footways on either side of the carriageway, which tie into the existing footways on either side of Lovedean Lane;
- 8m kerb radii; and
- 2.4m x 59.0m visibility splays in either direction along Lovedean Lane (plotted to an offset of 0.5m).

4.2.4 In addition, to facilitate safe pedestrian crossing of the carriageway, two dropped kerb pedestrian crossings are proposed to the north and south of the proposed junction respectively.

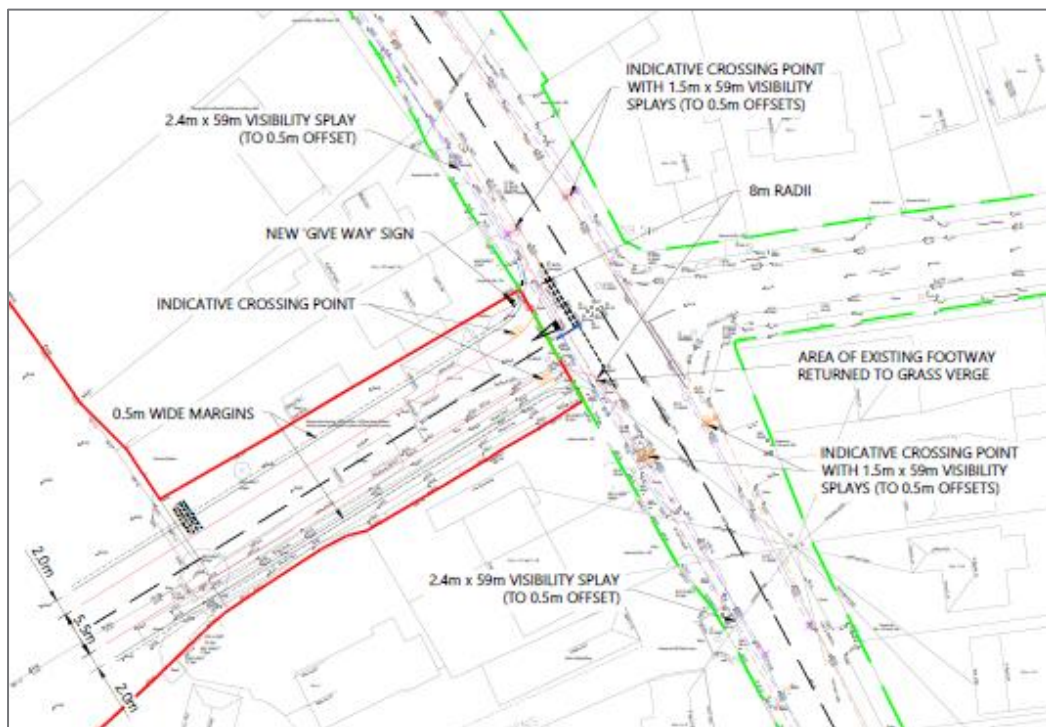
4.2.5 The proposed site access was submitted to HCC as part of the Pre-Application Design Check Review process in 2016 and was subsequently agreed 'in principle'. HCC produced a Pre-Application Design Check Report (**Appendix A**) which identified the following points to be addressed at the next stage:

- Ensuring the site access road has a level gradient for 15m;
- Consider re-surfacing Yoells Lane to provide a high skid resistant surface course;
- Assess drainage at the junction;
- Relocate telegraph poles from within junction;
- Consider parking restrictions within junction; and
- Re-align access road 'as far south as possible' to reduce see through

4.2.6 As part of HCC's pre-application Transport Assessment Scoping response (**Appendix B**) it was requested that pedestrian visibility splays were shown at the site access. This has been included on drawing number **ITB11383-GA-101 Rev C** along with the forward visibility of a vehicle turning into the site access.

- 4.2.7 All points raised by HCC have been incorporated into the proposed access arrangement shown on drawing number **ITB11383-GA-101 Rev C** and is extracted at **Image 4.2**.
- 4.2.8 The re-alignment of the junction 'as far as possible' south is to be viewed within the context of HCC's acceptance of the 'crossroads form' of junction and whilst the scope for realignment is limited, the design has been rotated within the site boundary and a much alignment has been achieved which creates a 4m stagger and eliminates the 'see through' issue.

Image 4.2: Proposed Site Access



Source: Extract of drawing ITB11383-GA-101 Rev C

- 4.2.9 Swept path analysis has been undertaken using the relevant super large refuse vehicle. The details are shown on drawing number **ITB11383-GA-102 Rev A**.
- 4.2.10 The proposed junction has also been tested with swept path analysis using a scenario where large private cars wish to access the site. The drawing is presented as on drawing number **ITB11383-GA-104 Rev A** and demonstrates that the slightly offset crossroads arrangement results in a 'non-hooking' right / left stagger where all movements can safely interact.
- 4.2.11 The design of the proposed site access was subject to a Stage 1 Road Safety Audit (compliant with what is now GG 119). The road safety audit is presented at **Appendix E**. Both of the commissioned Auditor's recommendations were accepted and a package of specific measures suggested in response, as noted with integral designer's response.

4.3 Site Layout and Parking Provision

Street Layout and Servicing Arrangements

- 4.3.1 The site layout will be developed in line with the principles set out within MfS with carriageway widths of 5.5m on the primary route through the development. In order to demonstrate that refuse vehicles and emergency vehicles are able to manoeuvre safely within the site and egress in a forward gear, swept path analysis of such vehicles will be undertaken as part of a Reserved Matters planning application.
- 4.3.2 However, to provide some comfort at this outline application stage, swept path analysis of a refuse vehicle throughout the conceptual site layout has been undertaken. The swept path analysis is presented as drawing number **ITB11383-GA-107** and demonstrates that a refuse vehicle will be able to manoeuvre safely within the site and egress onto Lovedean Lane in a forward gear.

Visibility

- 4.3.3 As part of any Reserved Matters Planning application, the site layout will be designed to ensure sufficient visibility is provided on internal streets and at junctions. Visibility to the primary road through the site will be provided at 2.4m x 25m, commensurate with a design speed of 20mph which MfS requires. It will also be demonstrated that 17m forward visibility will be achieved within the site around any bends, commensurate with a design speed of 15mph.

Parking Provision

Car Parking

- 4.3.4 The details on car parking will be provided during a Reserved Matters planning application. Car parking will be provided in accordance with East Hampshire District Council's Residential Car and Cycle Parking Standards SPD. The car parking standards are set out in **Table 4.1**.

Table 4.1: EHDC Car Parking Standards

Dwelling	Allocated	Visitors
1 bed dwelling	1	1 visitor space per 5 dwellings
2 bed dwelling	2	
3 bed dwelling	2	
4+ bed dwelling	3	

Source: EHDC Residential Car and Cycle Parking Standards

Cycle Parking

- 4.3.5 Cycle parking will also be provided in line with East Hampshire District Council's cycle parking standards which are set out within **Table 4.2** and further detailed will be provided during a Reserved Matters planning application.

Table 4.2: EHDC Cycle Parking Standards

Dwelling	Individual Long Stay Storage	Short Stay (visitor)
1 bed dwelling	1	Visitor cycle spaces will be expected at 10% of the long stay cycle spaces in developments of 5 units or more
2/3 bed dwelling	2	
4+ bed dwelling	2	

Source: EHDC Residential Car and Cycle Parking Standards

4.4 **Summary**

- 4.4.1 Access to the site will be via Lovedean Lane in the form of a new, simple priority junction. The access has been carefully designed in conjunction with HCC and in accordance with relevant design standards. An independent road safety audit has been undertaken which raises no residual safety concerns.
- 4.4.2 The internal layout will be designed in line with Manual for Street standards and will positively provide for all users with dedicated footways and some shared surface environments provided through the site. The proposed layout will also allow for the turning around of a refuse vehicle and provides for effective emergency vehicle access. Car and cycle parking are to be provided in line with EHDC parking standards.

SECTION 5 ACCESSIBILITY

5.1 Introduction

- 5.1.1 This section of the transport assessment provides a review of the accessibility of the proposed development to local facilities by walking, cycling and public transport including employment, leisure and shopping.

5.2 Journey Purpose

- 5.2.1 In promoting sustainable travel, it is important to consider the reasons why future residents of the proposed development will make journeys. The Department for Transport's National Travel Survey identifies the proportion of all trips by purpose as set out in **Table 5.1** below.

Table 5.1: Proportion of Trips per Year by Journey Purpose

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 – 2018 Edition

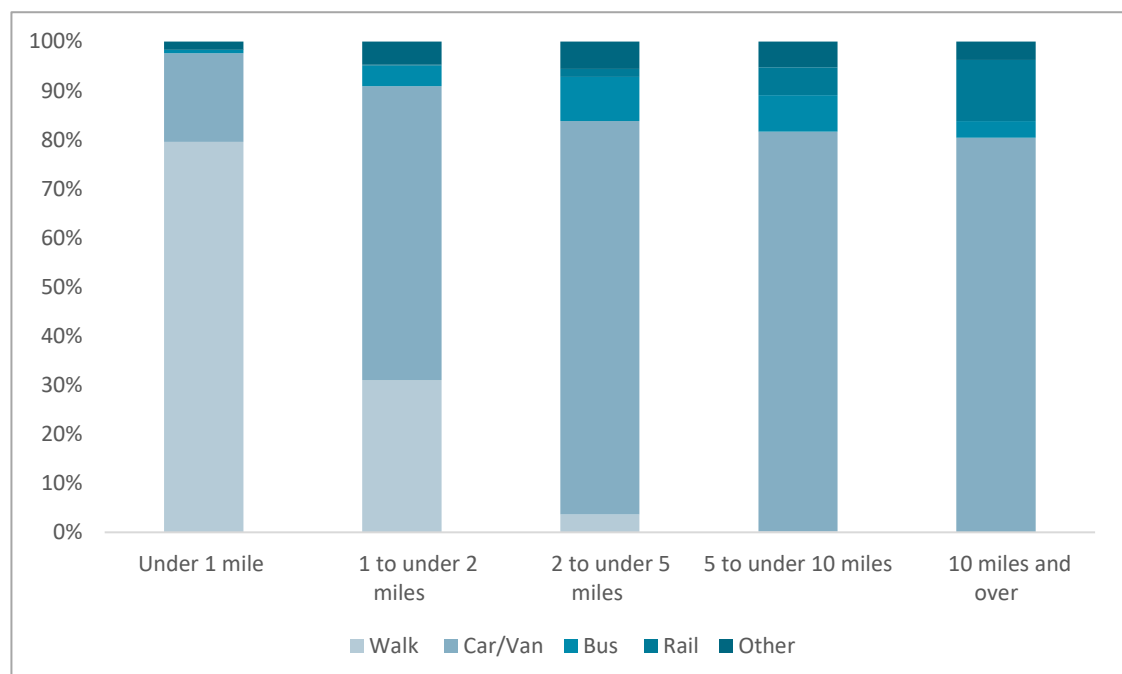
- 5.2.2 **Table 5.1** demonstrates that trips are made up of a number of different journey purposes, and each type of journey will have different requirements in terms of destination, time constraints and route choice.
- 5.2.3 This TA therefore considers the opportunities available to the potential residents of the site to access local facilities and services by a choice of transport modes.

5.3 Walking and Cycling

Walking Distances

- 5.3.1 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”**.
- 5.3.2 MfS continues to note **“this is not an upper limit and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2km.”**
- 5.3.3 The National Travel Survey (NTS) 2018 identifies the mode share journeys of different lengths. This is repeated in **Image 5.1** and demonstrates that the vast majority (80%) of trips of up to one mile (1.6km) are undertaken on foot for journeys. This is corroborated by the CIHT guidance ‘Planning for Walking’. The NTS data also shows that 33% of journeys between 1 and 2 miles will be on foot, i.e. a significant proportion of people are prepared to walk for journeys of up to 2 miles (3.2km).

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



Source: NTS 2018 (NTS0308)

- 5.3.4 DMRB TD91/05 ‘Provision for Non-Motorised Users’, identifies that walking is a ‘normal’ mode of transport for journeys undertaken within a range of two miles:

“Walking is used to access a wide variety of destinations including educational facilities, shops, and places of work, normally within a range of up to 2 miles. Walking and rambling can also be undertaken as a leisure activity, often over longer distances”. (Para 2.3)

5.3.5 Against all of this background, the following walking distances are identified:

- Up to **800m** – A comfortable walking distance;
- Up to **2,000m** – A reasonable walking distance i.e. the distance that “offers the greatest potential to replace short car trips”, and where the majority of trips are undertaken on foot; and
- Up to **3,200m** – A maximum regular walking distance i.e. the distance within which a significant proportion (circa one-third) of journeys will be on foot.

Cycling Distances

5.3.6 Paragraph 1.5.1 of LTN 02/08 ‘Cycle Infrastructure Design’ discusses typical cycle trip distances and states that local highway networks are primarily for local journeys and many utility cycle journeys are under three miles (4.8km) although for commuter journeys a trip distance of 5 miles (8km) is not uncommon.

5.3.7 DMRB TA 91/05 “Provision for Non-Motorised Users” paragraph 2.11 states:

“Cycling is used for accessing a variety of different destinations, including educational facilities, shops and places of work, up to a range of around 5 miles. Cycling is also undertaken as a leisure activity, often over much longer distances. As well as being a mode of transport in its own right, cycling frequently forms part of a journey in combination with cars and public transport.”

5.3.8 The National Travel Survey 2016 (NTS0306) identifies that the average trip length by bicycle is 3.5miles, or 5.6km.

5.3.9 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 a number of cycle journeys may be longer at 8km (5 miles). Cycling also frequently forms part of a longer journey in combination with public transport.

5.3.10 For the purposes of this assessment, a 5km cycling distance is considered to represent a ‘reasonable’ cycle distance, with 8km considered to be a ‘maximum’ cycling distance.

5.4 Local Facilities and Services

5.4.1 The location of existing facilities and services in the local area is shown in **Figure 2**.

5.4.2 **Table 5.2** provides an assessment of the travel distance to reach the identified local facilities, and the time such journeys would take by walking and cycling.

Table 5.2: Key Local Destinations

Destination Type	Destination		Approx. Distance (m)	Walking Time (Minutes)	Cycling Time (Minutes)
Education	Woodcroft Pre- School	ED1	800	10	3
	Woodcroft Primary School	ED2	800	10	3
	Horndean Technology College	ED3	1600	19	6
	Horndean Infants and Junior School	ED4	2000	24	8
Health	Rowlands Pharmacy	H1	700	8	3
	The Village Surgery	H2	1800	21	7
	Cowplain Dental Practice	H3	1800	21	7
Retail	Central Convenience Store	R1	550	7	2
	Tesco Express	R2	600	7	2
	Costcutter	R3	750	9	3
	Co-Op Store	R4	1300	15	5
	Morrisons	R5	2200	26	8
Employment	Wessexgate Industrial Estate	E1	1700	20	6
	Westfield Industrial Estate	E2	2000	24	8
Leisure	Lovedean Village Hall	L1	180	2	1
	The Bird in Hand Pub	L2	800	10	3
	Jubilee Hall Community Centre	L3	1500	18	6
	Crouch Lane Park	L4	1500	18	6
	Acorn Community Centre	L5	1700	20	6
	Horndean Football and Social Club	L6	2300	27	9
	Five Heads Recreation Ground	L7	2400	29	9

Source: Consultants Estimates

5.4.3 The analysis demonstrates that the site benefits from its location close to a range of everyday services and facilities located within acceptable walking and cycling distance of the site. The site is in a sustainable location and offers many opportunities for sustainable travel.

5.4.4 The following local facilities and services are available within a 'reasonable' walking distance:

- Woodcroft Pre-School;
- Woodcroft Primary School;
- Rowlands Pharmacy;
- Central Convenience Store;
- Tesco Express;
- Costcutter;
- Lovedean Village Hall; and
- The Bird in Hand Pub.

5.5 Suitability of Walking and Cycling Routes

5.5.1 To assess the ability of residents to safely and conveniently access local facilities by quality walking and cycling infrastructure, a Pedestrian and Cycle Audit (i-Transport report reference ITB11383-005 TN) was carried out (**Appendix F**). The scope of this was expanded prior to submission to include the route to the Morrisons Superstore which has been considered for access by cycle only in recognition of the type of destination and the proximity of other everyday food shopping opportunities being much closer to the site.

5.5.2 The audit considers the suitability of local walking and cycling routes, comprising:

- **Route 1** – Towards Woodcroft Primary School;
- **Route 2** – Towards Horndean Technology College; and
- **Route 3** – To Morrisons Superstore (cycle only).

5.5.3 The audit has been undertaken with reference to five core principles, common to both pedestrians and cyclists, identified within the Department for Transport (DfT) Local Transport Note (LTN) 1/04 'Policy, Planning and Design for Walking and Cycling' (004), and the Chartered Institute of Highways and Transportation (CIHT) 'Designing for Walking' (March 2015) Guidance.

- 5.5.4 The audit demonstrates that, in general, existing walking and cycling infrastructure fulfils the needs of both pedestrians and cyclists in a safe and attractive manner. Notwithstanding this, the Audit identifies a series of possible improvement measures on some of the local routes which could be delivered, and which would maximise opportunities for sustainable travel. These measures are outlined in **Table 5.3**.

Table 5.3: Potential Walking and Cycling Improvements

Route	Improvement
1	Tactile paving to be proposed on James Copse Road / Lovedean Lane junction
	A formal crossing to Woodcroft Primary School e.g. tactile paving and dropped kerbs from the opposite side of Woodcroft Lane across to the school's pedestrian access.
2	Dropped kerbs and tactile paving to be proposed on Lovedean Lane, allowing a safer, more formal crossing from pedestrians leaving the proposed site.
	Dropped kerb and tactile paving crossing across Frogmore Lane to access victory Avenue.

Source: Walking and Cycling Audit i-Transport report reference: ITB11383-005 TN

5.6 Public Transport

- 5.6.1 As set out in Section 3, the site is well located to existing bus stops situated at Blackbird Close (off Milton Road/ Eagle Avenue - circa 850m south of the site). These stops are serviced by very regular bus services to destinations including Portsmouth City Centre and Havant. Buses run from these stop some 18 hours of the day with a peak frequency of one every 12-minutes.
- 5.6.2 Havant rail station is also accessible by bus and offers services to destinations such as Portsmouth, Brighton and London.
- 5.6.3 The development proposal will connect the site to the existing footway network along Lovedean Lane. This provides a realistic opportunity for pedestrian to walk to the existing bus stops and gain access to Havant rail station.

5.7 Summary

- 5.7.1 The site is accessible to a wide range of facilities that residents may use on a day to day basis by a range of travel modes, including on foot and by cycle. Local bus services are accessible to the site with a short walk, providing access to local destinations further afield to Havant and Portsmouth.
- 5.7.2 Havant rail station is also accessible from the site by bus and provides services to key destinations such as Portsmouth, Brighton and London offering a realistic opportunity for residents to travel via sustainable modes.
- 5.7.3 Potential improvements to local walking routes have been identified and the development could help bring these measures forward. On this basis, opportunities for sustainable transport have and can be taken up in accordance with paragraph 108 of the NPPF.

SECTION 6 TRAFFIC IMPACT

6.1 This section of the TA established the likely traffic generation of the proposed development and assesses the vehicular traffic impact of the proposed development on the local highway network.

6.2 Baseline Conditions

6.2.1 As set out in Section 3, to establish the baseline traffic conditions on the local highway network, a series of traffic surveys (including MCC and ATC surveys) were undertaken between 30 September 2019 and 8 October 2019. The baseline traffic flows are illustrated in **Figures TF1 and TF2**.

6.3 Traffic Growth and Committed Development

6.3.1 Factors to allow for background traffic growth from 2019 (the years the traffic surveys were undertaken) to 2023 (the opening year) and 2025 (five years post application) have been derived using the TEMPRO software for the East Hampshire 014 mid-layer super output area (MSOA) and the TEMPRO calculations are provided in **Appendix G** and shown on **Figure TF3-6**.

Table 6.1: Growth Factors – East Hampshire 014 MSOA

Date Range	Morning Peak Period	Evening Peak Period
2019-2023	1.0531	1.0521
2019-2025	1.0819	1.0817

Source: TEMPRO

6.3.2 There is an approved development for 288 homes at Woodcroft Farm, Wecock (*Havant Borough Council Ref: APP/13/00804*), which was identified in Havant Borough Council's Adopted Core Strategy document (adopted 2011) as a strategic site. The approved development is therefore included in the growth forecasts derived within the TEMPRO database and as such, in order to avoid any instance of double-counting, no specific committed development traffic flows for the approved development have been considered.

6.4 Proposed Development Trip Generation

6.4.1 In order to determine the likely vehicular traffic generation of the proposed residential development, the TRICS database has been interrogated. The trip rates have been obtained using the following parameters:

- **Region** – all of England (excluding Greater London);
- **Size Relevance** – developments with a range of 50 to 100 dwellings;
- **Time Period** – surveys for the last 7-year period;
- **Location Relevance** – surveys in ‘suburban’ / ‘edge of town’ locations only; and
- **Date Relevance** – surveys undertaken during weekdays only.

6.4.2 A summary of the vehicular trip rates are provided in **Table 6.2**, and the full TRICS output report is presented in **Appendix H**.

Table 6.2: Proposed Traffic Generation – Residential

	Morning Peak (0800-0900)			Evening Peak (1700-1800)			Daily (0700-1900)		
	Arrive	Depart	Total	Arrive	Depart	Total	Arrive	Depart	Total
Trip Rate	0.134	0.407	0.541	0.352	0.158	0.510	2.225	2.302	4.527
Trips	8	24	32	21	9	31	134	138	272

Source: TRICS

Note: The traffic generation figures in Table 6.2 are based upon a development of up to 60 dwellings and are therefore robust.

6.4.3 **Table 6.2** demonstrates that the proposed residential development at the site is likely to generate some 32 two-way vehicle movements in the morning peak period and some 31 two-way movements during the evening peak period. This broadly equates to one additional vehicle movement every two minutes in the morning and evening peak periods respectively.

6.5 Traffic Distribution and Assignment

6.5.1 To distribute the development generated traffic onto the local highway network, the Travel to Work data contained within the 2011 Census has been reviewed to identify the likely destinations for employment journeys.

6.5.2 The likely journey purpose for the generated car driver peak hour trips has been determined using data derived from the National Travel Survey (NTS) 2018 (DFT), the proportion of the peak hour trips by journey purpose by car is presented in **Table 6.3**.

Table 6.3: Proportion of Peak Hour Trips by Journey (Car Driver Only)

Trip Purpose	AM Peak (0800-0900)	PM Peak (1700-1800)
Commuting / Business	37.6%	43.9%
All Other Journey Purposes	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, 2018

- 6.5.3 The NTS 2018 data set out above has been used to distribute the development generated traffic. The analysis has been undertaken on the basis that 43.9% of vehicular trips generated by the development will be for employment journeys and the remaining 56.1% of vehicle journeys will be for other purposes for both the morning and evening peak hour periods.

Commuting Journeys

- 6.5.4 Travel to Work data contained within the 2011 Census has been reviewed to identify the likely destinations for employment journeys. The data for the residents of East Hampshire 014 mid-layer super output area (MSOA) has been used, which comprises the proposed development site and the surrounding residential area. The analysis is summarised in **Table 6.4** and presented in full in **Appendix I**.

Table 6.4: Summary of Work Trips Distribution (Travel by Car)

Destination	Percentage of Trips to Work	Percentage of All Trips
Waterlooville	10.55%	4.63%
Havant	10.51%	4.61%
Other North	8.93%	3.92%
Petersfield	7.58%	3.33%
Portsea / Central Portsmouth	5.50%	2.42%
Hilsea	5.37%	2.36%
Rowlands Castle	4.56%	2.00%
Other Southeast	4.51%	1.98%
Horndean	4.33%	1.90%
Port Solent	4.24%	1.86%
Cosham	3.07%	1.35%
Clanfield	2.03%	0.89%
Fareham	1.85%	0.81%
Denmead	1.67%	0.73%
Winchester	1.58%	0.69%
Milton	1.44%	0.63%
Whitely	1.40%	0.61%
Bedhampton	1.35%	0.59%
Somerstown	1.31%	0.57%
Alton	1.22%	0.53%
Emsworth	1.22%	0.53%
Bordon	1.17%	0.51%
Tipner	1.17%	0.51%
Central Southampton	1.04%	0.46%
Other	12.40%	5.45%
Total	100.0%	43.90%

Source: Census 2011

6.5.5 The distribution of non-employment trips has been estimated using a P/T^2 gravity model. This considers destinations within a 20-minute drive time of the site to reflect the more local nature of the likely destinations of these trips.

6.5.6 The population of key urban areas (likely destination for non-employment trips) has been estimated from the 2011 Census. Journey times were then estimated using journey planning software from the Google Maps Directions facility, based on peak hour journey times.

6.5.7 A summary of the distribution of trips for non-employment journey purpose by destination is presented in **Table 6.5**. The gravity model is presented in full in **Appendix I**.

Table 6.5: Distribution of Other Journey Purposes (Car Drivers Only)

Destination	Percentage of Trips to Work	Percentage of All Trips
Horndean	20.17%	11.32%
Waterlooville	16.56%	9.29%
Havant	9.25%	5.19%
Denmead	6.60%	3.70%
Fareham	5.50%	3.09%
Baffins (Portsmouth)	4.01%	2.25%
Cosham	3.81%	2.14%
Hayling Island	3.39%	1.90%
Bedhampton	3.10%	1.74%
Tipner	2.96%	1.66%
Hilsea	2.80%	1.57%
Emsworth	2.67%	1.50%
Portsea	2.63%	1.47%
Portchester	2.55%	1.43%
Milton (Portsmouth)	2.52%	1.42%
Other	11.48%	6.4%
Total	100.0%	56.10%

Source: Census 2011

Combined Distribution

6.5.8 The traffic distribution associated with the employment and non-employment trips have been combined and the overall traffic distributions for the development traffic are summarised in **Table 6.6** and presented in full in **Appendix I**.

Table 6.6: Combined Distribution (Travel by Car)

Destination	Percentage of all Trips – Work	Percentage of All Trips – Non-Work	Percentage of All Trips
Waterlooville	4.63%	9.29%	13.92%
Havant	4.61%	5.19%	9.80%
Other North	3.92%	-	3.92%
Petersfield	3.33%	1.03%	4.35%
Portsea	2.42%	1.47%	3.89%
Hilsea	2.36%	1.57%	3.92%
Rowlands Castle	2.00%	0.67%	2.67%
Other Southeast	1.98%	-	1.98%
Horndean	1.90%	11.32%	13.22%
Port Solent	1.86%	0.91%	2.77%
Cosham	1.35%	2.14%	3.49%
Clanfield	0.89%	0.65%	1.54%
Fareham	0.81%	3.09%	3.90%
Denmead	0.73%	3.70%	4.43%
Winchester	0.69%	-	0.69%
Milton (Portsmouth)	0.63%	1.42%	2.05%
Whiteley	0.61%	-	0.61%
Bedhampton	0.59%	1.74%	2.33%
Somerstown	0.57%	-	0.57%
Alton	0.53%	-	0.53%
Emsworth	0.53%	1.50%	2.03%
Bordon	0.51%	-	0.51%
Tipner	0.51%	1.66%	2.17%
Central Southampton	0.46%	-	0.46%
Other	5.45%	8.76%	14.21%
Total	43.90%	56.10%	100.0%

Source: Census 2011

6.5.9 The traffic expected to be generated by the site (ref: **Table 6.2**) has been distributed across the local network to the destinations summarised in **Table 6.6** and identified fully in **Appendix I**.

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

6.5.11 **Table 6.7** provides a summary of the assignment of development generated trips and the assigned trips are illustrated in **Figures TF7 to TF13**

Table 6.7: Summary of Traffic Assignment

Decision Points	Destination	Routing	Morning Peak Period			Evening Peak Period		
			In	Out	Two-Way	In	Out	Two-Way
1 (Site Access)	Lovedean Lane North	13.9%	1	3	4	3	1	4
	Lovedean Lane South	64.8%	5	16	21	14	6	20
	Yoells Lane	21.3%	2	5	7	4	2	6
Total		100%	8	24	32	21	9	30
2	Frogmore Lane North	21.3%	2	5	7	4	2	6
	Lovedean Lane East	41.7%	3	10	13	9	4	13
	Milton Road	23.1%	2	6	8	5	2	7
Total		86.1%	7	21	28	18	8	26
3	Portsmouth Road North	15.9%	1	4	5	3	1	4
	Portsmouth Road South	25.8%	2	6	8	5	2	7
	Stonechat Road	14.0%	1	3	4	3	1	4
	Victory Avenue	7.3%	1	2	3	2	1	3
Total		63.0%	5	15	20	13	5	18

Source: Consultant's Calculations

Note: The traffic generation figures in Table 6.7 are based upon a development of up to 60 dwellings and are therefore robust

6.5.12 Based on the above, it can be seen that:

- 4 two-way vehicle movements are forecast to route north along Lovedean Lane during the morning peak period and 4 two-way vehicle movements during the evening peak period. This equates to around one vehicle movement every 15 minutes;
- 21 two-way vehicle movements are forecast to route south along Lovedean Lane during the morning peak period and 20 two-way vehicle movements during the evening peak period. This equates to around one vehicle movement every 3 minutes;
- 7 two-way vehicle movements are forecast to route east along Yoells Lane during the morning peak period and 6 two-way vehicle movements during the evening peak period. This equates to around one vehicle movement every 9 minutes;

- 8 two-way vehicle movements are forecast to route along Milton Road during the morning peak period and 7 two-way vehicle movements during the evening peak period. This equates to broadly one vehicle movements every 9 minutes;
- 5 two-way vehicle movements are forecast to route north along Portsmouth Road toward the Portsmouth Road / Dell Piece Way / Catherington Lane four-arm traffic signal-controlled junction during the morning peak period and 4 two-way vehicle movements during the evening peak period. This equates to around one vehicle movement every 12 minutes; and
- 3 two-way vehicle movements are forecast to route toward the Catherington Lane arm of the Portsmouth Road / Dell Piece Way / Catherington Lane four-arm traffic signal-controlled junction during the morning peak period and 3 two-way vehicle movements during the evening peak period. This equates to around one vehicle movement every 20 minutes.

6.6 Development Traffic Impact

- 6.6.1 To put the level of increase into context, **Table 6.11** provides a traffic impact assessment on the surrounding local highway network for the 2023 opening year.

Table 6.11: Net Traffic Impact Assessment (2023 Opening Year)

Link	Morning Peak Period				Evening Peak Period			
	2023	Dev	2023 + Dev	% Impact	2023	Dev	2023 + Dev	% Impact
Lovedean Lane (North of Site)	582	4	586	0.7%	539	4	543	0.7%
Yoells Lane	218	7	225	3.2%	172	6	178	3.5%
Lovedean Lane (South of Site)	484	21	505	4.3%	509	20	529	3.9%
Lovedean Lane (East of Milton Road)	729	13	742	1.8%	795	13	808	1.6%
Milton Road	1053	8	1061	0.8%	1150	7	1157	0.6%
Frogmore Lane (North of Yoells Lane)	681	7	688	1.0%	428	6	434	1.4%
Frogmore Lane (South of Yoells Lane)	574	0	574	0.0%	405	0	405	0.0%
Catherington Lane*	566	3	569	0.5%	290	3	293	1.0%
Portsmouth Road (North of Lovedean Lane)*	1146	5	1151	0.4%	740	4	744	0.5%

Source: Consultant's Calculations

* Data obtained from traffic survey data presented within the Transport Assessment submitted in support of the approved strategic development at Woodcroft Farm (*Havant Borough Council Ref: APP/13/00804*),

Note: The development traffic impact is based upon a development of up to 60 dwellings and is therefore robust. The impact of the development proposals is therefore likely to be lower in reality.

6.6.2 **Table 6.11** shows that the greatest increase in traffic will be experienced along Lovedean Lane (South of the Site), with a circa 4.3% increase during the morning peak period and circa 3.9% during the evening peak period. This broadly equates to one additional vehicle movement every 3 minutes and is therefore not considered to be material.

6.6.3 Further afield, the impact of the proposed development on the wider highway network reduces even further, for example the impact on:

- **Lovedean Lane (North of the Site)** will be circa 0.7% - broadly equating to one additional vehicle every 15 minutes;

- **Yoells Lane** will be circa 3.5% - broadly equating to one additional vehicle every 9 minutes;
- **Lovedean Lane (East of Milton Road)** will be circa 1.8% - broadly equating to one additional vehicle every 5 minutes;
- **Milton Road** will be circa 0.8% - broadly equating to one additional vehicle movement every 8 minutes;
- **Frogmore Lane (North of Yoells Lane)** will be circa 1.4% - broadly equating to one additional vehicle every 9 minutes;
- **Catherington Lane** will be circa 1.0% - broadly equating to one additional vehicle every 20 minutes; and
- **Portsmouth Road (North of Lovedean Lane)** will be circa 0.5% - broadly equating to one additional vehicle movement every 12 minutes.

6.6.4 These levels of traffic increase are, under any reasonable assessment, very low and demonstrate the proposed development will have a minimal impact on the wider highway network.

6.6.5 **Table 6.12** also shows that in the 2025 future year scenario, the proposed development will again have a minimal impact on the wider highway network during the peak periods.

Table 6.12: Net Traffic Impact Assessment (2025 Future Year)

Link	Morning Peak Period				Evening Peak Period			
	2025	Dev	2025 + Dev	% Impact	2025	Dev	2025 + Dev	% Impact
Lovedean Lane (North of Site)	598	4	602	0.7%	554	4	558	0.7%
Yoells Lane	225	7	232	3.1%	177	6	183	3.4%
Lovedean Lane (South of Site)	498	21	519	4.2%	523	20	543	3.8%
Lovedean Lane (East of Milton Road)	749	13	762	1.7%	817	13	830	1.6%
Milton Road	1082	8	1090	0.7%	1181	7	1188	0.6%
Frogmore Lane (North of Yoells Lane)	700	7	707	1.0%	441	6	447	1.4%
Frogmore Lane (South of Yoells Lane)	591	0	591	0.0%	416	0	416	0.0%
Catherington Lane*	566	3	569	0.5%	290	3	293	1.0%
Portsmouth Road (North of Lovedean Lane)*	1146	5	1151	0.4%	740	4	744	0.5%

Source: Consultant's Calculations

* Data obtained from traffic survey data presented within the Transport Assessment submitted in support of the approved strategic development at Woodcroft Farm (*Havant Borough Council Ref: APP/13/00804*),

Note: The development traffic impact is based upon a development of up to 60 dwellings and is therefore robust. The impact of the development proposals is therefore likely to be lower in reality.

6.7 Junction Capacity Testing

6.7.1 To further assess the impact of the development proposal on the local highway network, junction capacity analysis has been undertaken using the TRL software Junctions 9 at the following junctions:

- The proposed site access priority junction onto Lovedean Lane; and
- The Lovedean Lane / Milton Road priority junction.

6.7.2 The detailed modelling assessments have been undertaken considering the following scenarios:

- 2019 Baseline;

- 2023 Opening Year 'without development' i.e. allowing for background traffic growth;
- 2025 Future Year 'without development';
- 2023 Opening Year 'with development' i.e. allowing for background traffic growth and the development proposal; and
- 2025 Future Year 'with development'.

6.7.3 **Appendix J** presents the junction modelling output and results of the assessments are summarised in the following paragraphs.

Site Access onto Lovedean Lane

6.7.4 The principal outputs derived from the model are the Ratio of Flow to Capacity (RFC), Queue Length and Delay. The junction has been modelled as a crossroads arrangement within the PICADY module of Junctions 9, the capacity assessment results are summarised in **Table 6.13**.

Table 6.13: Site Access onto Lovedean Lane

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2023 with Development						
Yoells Lane	0.37	1	15	0.22	0.3	12
Lovedean Lane (N)	0.00	0	6	0.01	0.0	5
Site access	0.08	0	11	0.03	0.0	11
Lovedean Lane (S)	0.07	0	6	0.12	0.2	6
2025 with Development						
Yoells Lane	0.38	1	15	0.23	0	13
Lovedean Lane (N)	0.00	0	6	0.01	0	5
Site access	0.08	0	12	0.03	0	11
Lovedean Lane (S)	0.07	0	6	0.12	0	6

Source: Junction s9

6.7.5 The results demonstrate that the proposed site access arrangement will operate well within capacity (i.e. with minimal queuing and delay), during the opening year and future year with development scenarios.

Lovedean Lane / Milton Road

6.7.6 The Lovedean Lane / Milton Road priority junction is located some 600m to the southeast of the proposed site access and takes the form of a simple priority junction with a short right-turn lane. The junction has been modelled using the PICADY module of Junctions 9 and the junction capacity assessment results are summarised in **Table 6.14**.

Table 6.14: Lovedean Lane / Milton Road

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Observed 2019						
Milton Road	0.91	6	67	1.01	14	128
Lovedean Lane	0.77	4	24	0.67	2	18
2023 Baseline						
Milton Road	1.02	15	135	1.09	24	200
Lovedean Lane	0.82	6	30	0.71	3	20
2025 Baseline						
Milton Road	1.07	20	174	1.14	31	248
Lovedean Lane	0.85	7	34	0.73	3	22
2023 with Development						
Milton Road	1.03	16	145	1.11	27	218
Lovedean Lane	0.84	6	31	0.72	3	21
2025 with Development						
Milton Road	1.08	21	186	1.16	34	268
Lovedean Lane	0.86	7	37	0.74	3	23

Source: Junctions 9

6.7.7 The results demonstrate that, during the observed 2019 scenario, the Milton Road arm of the junction currently operates above desirable capacity (i.e. an RFC value above 0.85) in the morning peak period and above capacity (i.e. an RFC value above 1.00) in the evening peak period.

6.7.8 After allowing for baseline traffic growth, in addition to the impacts of committed development, the results of the baseline 2023 and baseline 2025 scenarios demonstrate that the Milton Road arm of the junction operates above capacity during both the morning and evening peak periods.

6.7.9 However, the results of the 2023 and 2025 with development scenarios demonstrate that the impacts of the proposed development on the operation of the junction are small. These impacts are summarised below:

- In both the 2023 and 2025 with development scenarios, the proposed development results in only a 1% increase in the RFC value of the Milton Road arm of the junction during the morning peak period. In turn, this 1% increase corresponds with an average of one to two additional vehicles in any queue along Milton Road; and
- In both the 2023 and 2025 with development scenarios, the proposed development results in a maximum increase in RFC of only 2% on the Milton Road arm of the junction during the evening peak period. This corresponds with a maximum of three additional vehicles in any queue along Milton Road.

6.7.10 When considered in the context of the 2023 and 2025 baseline scenarios, the impacts of the proposed development on the operation of the junction is immaterial and is certainly not severe.

Lovedean Lane / Milton Road – Woodcroft Farm Improvement Scheme

6.7.11 The Lovedean Lane / Milton Road priority junction was identified to be working at theoretical capacity within the Transport Assessment prepared in support of the, now approved, strategic development at Woodcroft Farm (*Havant Borough Council Ref: APP/13/00804*). A mitigation scheme, involving the modification of the junction to form a mini-roundabout, was prepared and presented within the Transport Assessment. Subsequent junction capacity assessments demonstrated that the introduction of a mini-roundabout design would improve the operation of the junction, particularly at the Milton Road arm.

6.7.12 To ensure that a consistent approach to junction capacity analysis is undertaken, the impact of the proposed development has also been assessed in the context of the mini-roundabout scheme presented within the Woodcroft Farm Transport Assessment. The results of the junction capacity assessment results are summarised in **Table 6.15**.

Table 6.15: Lovedean Lane / Milton Road – Woodcroft Farm Mini-Roundabout Scheme

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2023 Baseline						
Lovedean Lane (East)	0.68	2	18	0.80	4	26
Milton Road	0.82	4	29	0.87	6	38
Lovedean Lane (North)	0.83	5	27	0.68	2	15
2025 Baseline						
Lovedean Lane (East)	0.71	2	19	0.83	5	31
Milton Road	0.84	5	33	0.90	7	45
Lovedean Lane (North)	0.86	5	31	0.70	2	16
2023 with Development						
Lovedean Lane (East)	0.69	2	18	0.82	4	28
Milton Road	0.82	4	30	0.89	7	42
Lovedean Lane (North)	0.86	5	31	0.69	2	15
2025 with Development						
Lovedean Lane (East)	0.72	2	20	0.85	5	33
Milton Road	0.85	5	34	0.91	8	51
Lovedean Lane (North)	0.88	6	36	0.71	2	16

Source: Junctions 9

6.7.13 The results demonstrate that, in the baseline 2023 and 2025 scenarios, the junction operates within capacity during both the morning and evening peak periods. The busiest arms are:

- On the Lovedean Lane (North) arm during the morning peak period in the baseline 2025 scenario – where there is a 5- vehicle queue; and
- On the Milton Road arm of the junction during the evening peak period in the baseline 2023 and 2025 scenarios – where there is an 7-vehicle queue.

6.7.14 The results demonstrate a significant improvement in the operation of the junction as a mini-roundabout when compared to the existing priority junction arrangement.

6.7.15 Much like the results of the junction capacity analysis for the existing priority junction arrangement, the results of the 2023 and 2025 with development scenarios demonstrate that the impacts of the proposed development on the operation of the junction are very small. The impacts are summarised below:

- During the morning peak period, the proposed development results in a maximum increase in RFC of 3% on the Lovedean Lane (North) arm of the junction. This corresponds with no material increase in vehicle queue lengths or vehicle delay in either the 2023 or 2025 with development scenarios; and
- During the evening peak period, the proposed development results in a maximum increase in RFC of 2% on the Milton Road arm of the junction. This also results in no material increase in vehicle queue lengths or vehicle delay in either the 2023 or 2025 with development scenarios.

6.7.16 When considered in the context of the 2023 and 2025 baseline scenarios, the impacts of the proposed development on the operation of the junction is immaterial and is certainly not severe.

6.8 Sensitivity Tests

6.8.1 At the request of HCC, the following sensitivity tests have been undertaken. The extent of the sensitivity tests were agreed during the pre-application highways meeting, which occurred on 10th January 2020.

- The use of a higher evening peak hour trip rate; and
- A wider traffic impact assessment – assuming a scenario where all proposed development traffic routing south from the site travels east along Lovedean Lane before arriving at the Portsmouth Road (A3) arm of the Portsmouth Road / Dell Piece Way / Catherington Lane four-arm traffic signal-controlled junction.

Sensitivity Test – Increased Evening Peak Hour Trip Rate

6.8.2 **Table 6.16** compares the forecast evening peak hour traffic generation of the proposed development between the following trip rates:

- The extracted TRICS trip rates (ref: **Table 6.2**); and
- The higher evening peak hour trip rates – extracted from the Transport Statement submitted in support of the approved Bargate Homes development at 179-181 Lovedean Lane.

Table 6.16: Evening Peak Hour Trip Generation Comparison

	Extracted TRICS Trip Rates (Ref: Table 6.2)			TRICS Trip Rates (Sensitivity)		
	Arrive	Depart	Two-Way	Arrive	Depart	Two-Way
Trip Rate	0.352	0.158	0.510	0.388	0.225	0.613
Trips	21	9	31	23	14	37

Source: Consultant's Calculations

- 6.8.3 The results of the sensitivity test demonstrate that, with use of a higher TRICS trip rate for the evening peak period, a total of 6 additional two-way vehicle movements could be generated by the proposed development.
- 6.8.4 An increase of 6 vehicle movements broadly equates to one additional vehicle every 10 minutes. Under any reasonable assessment this increase would be considered as very low and therefore would not have any significant implications on the likely impact of the proposed development on the wider highway network.

Sensitivity Test – Wider Traffic Impact Assessment

- 6.8.5 This sensitivity assessment assumes a scenario where all proposed development traffic routing south from the site would travel east along Lovedean Lane (beyond the Lovedean Lane / Milton Road junction), before travelling north along Portsmouth Road and arriving at the Portsmouth Road (A3) arm of the Portsmouth Road / Dell Piece Way / Catherington Lane four-arm traffic signal-controlled junction.
- 6.8.6 **Table 6.17** presents the results of the sensitivity test for the 2025 future year scenario.

Table 6.17: Wider Traffic Impact Assessment – Sensitivity Test

Link	Morning Peak Period				Evening Peak Period			
	2025	Dev	2025 + Dev	% Impact	2025	Dev	2025 + Dev	% Impact
Lovedean Lane (North of Site)	598	4	602	0.7%	554	4	558	0.7%
Yoells Lane	225	7	232	3.1%	177	6	183	3.4%
Lovedean Lane (South of Site)	498	21	519	4.2%	523	20	543	3.8%
Lovedean Lane (East of Milton Road)	749	21	762	2.8%	817	20	830	2.4%
Milton Road	1082	0	1090	0.0%	1181	0	1188	0.0%
Frogmore Lane (North of Yoells Lane)	700	7	707	1.0%	441	6	447	1.4%
Frogmore Lane (South of Yoells Lane)	591	0	591	0.0%	416	0	416	0.0%
Catherington Lane*	566	3	569	0.5%	290	3	293	1.0%
Portsmouth Road (North of Lovedean Lane)*	1146	21	1151	1.8%	740	20	744	2.7%

Source: Consultant's Calculations

* Data obtained from traffic survey data presented within the Transport Assessment submitted in support of the approved strategic development at Woodcroft Farm (*Havant Borough Council Ref: APP/13/00804*),

6.8.7 **Table 6.17** shows that, in the sensitivity test scenario, the maximum increase in traffic along Lovedean Lane (East of Milton Road) will be circa 2.8%, whilst the maximum increase in traffic along Portsmouth Road (North of Lovedean Lane) will be circa 2.7%.

6.8.8 When compared to the traffic impact assessments presented in **Tables 6.11** and **6.12**, these increases broadly equate to one additional vehicle movement every 3 minutes along Portsmouth Road (North of Lovedean Lane), rather than broadly one additional vehicle movement every 12 minutes. In the context of the existing highway conditions along Portsmouth Road, this increase is not significant.

SECTION 7 SUMMARY AND CONCLUSIONS

7.1 Summary

Background

- 7.1.1 Bargate Homes have appointed i-Transport to produce a Transport Assessment (TA) to support a planning application for residential development of up to 56 dwellings located to the west of Lovedean Lane, Lovedean. The site is allocated in the draft Local Plan for 75-85 dwellings.
- 7.1.2 Pre-application engagement has been carried out with Hampshire County Council (HCC) to inform the scope and methodology of the TA and to agree the site access strategy.

Policy Context

- 7.1.3 The NPPF confirms that there is a presumption in the favour of sustainable development. Taken together, national and local transport planning policy requires new development to be accessible by a range of modes of transport including walking, cycling and public transport, so as to minimise the number and length of car journeys. Safe and suitable access to sites should be achieved for all people. Account should be taken of whether the opportunities for sustainable transport modes have been taken up, depending on the nature and location of the site, to ensure the need to travel will be minimised and the use of sustainable transport modes can be maximised. Transport Assessments should take account of whether improvements can be undertaken within the transport network that cost-effectively limit the significant impacts of the development and that development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

Existing Conditions

- 7.1.4 The site is very well located to the existing pedestrian network within Lovedean. There is a good provision of footways along all local roads connecting to the site. The site is within the vicinity of the National Cycle Network, and conditions on local roads support on carriageway cycling.
- 7.1.5 There are a number of regular bus services accessible from the site, which serve some key areas i.e. Portsmouth and Havant. These local bus services run for approximately 18 hours of the day. Havant rail station is also accessible by bus from the site and provides connections to destinations further afield such as Portsmouth, Brighton and London.

- 7.1.6 Existing highway conditions have been considered through collection of a traffic flow data which identifies generally low traffic volumes and low traffic speeds. A detailed review of the most recently available accident data has been undertaken and does not identify any specific road safety problems within the local area.

Proposed Site Access Arrangements, Site Layout, Parking and Refuse Collection Arrangements

- 7.1.7 Access to the site will be via Lovedean Lane in the form of a new, simple priority junction. The access has been carefully designed in conjunction with HCC and in accordance with relevant design standards. An independent road safety audit has been undertaken which raises no residual safety concerns.
- 7.1.8 The internal site layout will be designed in line with Manual for Street standards and will positively provide for all users with dedicated footways and some shared surface environments provided through the site. The proposed layout will also allow for the turning around of a refuse vehicle and provides for effective emergency vehicle access – this has been tested for the illustrative layout to provide early comfort to HCC and EHDC. Car and cycle parking are to be provided in line with EHDC parking standards.
- 7.1.9 Safe and suitable access is provided in accordance with paragraph 108 of the NPPF.

Promoting Sustainable Transport

- 7.1.10 The site is accessible to a wide range of facilities that residents may use on a day to day basis by a range of travel modes, including on foot and by cycle. Local bus services are accessible to the site with a short walk, providing access to local destinations further afield to Havant and Portsmouth.
- 7.1.11 Havant rail station is also accessible from the site by bus and provides services to key destinations such as Portsmouth, Brighton and London offering a realistic opportunity for residents to travel via sustainable modes.
- 7.1.12 Potential improvements to local walking routes have been identified and the development could help bring these measures forward. On this basis, opportunities for sustainable transport have and can be taken up in accordance with paragraph 108 of the NPPF.

Traffic Impact

- 7.1.13 The traffic impact of the proposed development has been assessed on the local highway network for an area agreed with the local highway authority, HCC.

Trip generation / additional traffic

- 7.1.14 The traffic generation parameters of the proposal have been discussed and agreed with HCC as part of the pre-application discussions. The development is anticipated to generate a maximum of 32 two-way vehicle movements during the weekday peak hour periods equating to approximately one extra movement per minute.

Trip distribution / assignment

- 7.1.15 The development traffic has been assigned to the local highway network using a distribution based on a combination of the 2011 Census Travel to Work Data (for the proportion of peak hour trips that are work journeys) and a gravity model (for other journey purposes). The distribution and assignment of development generated traffic has been discussed and agreed with HCC as part of pre-application discussions.

Junction capacity impact

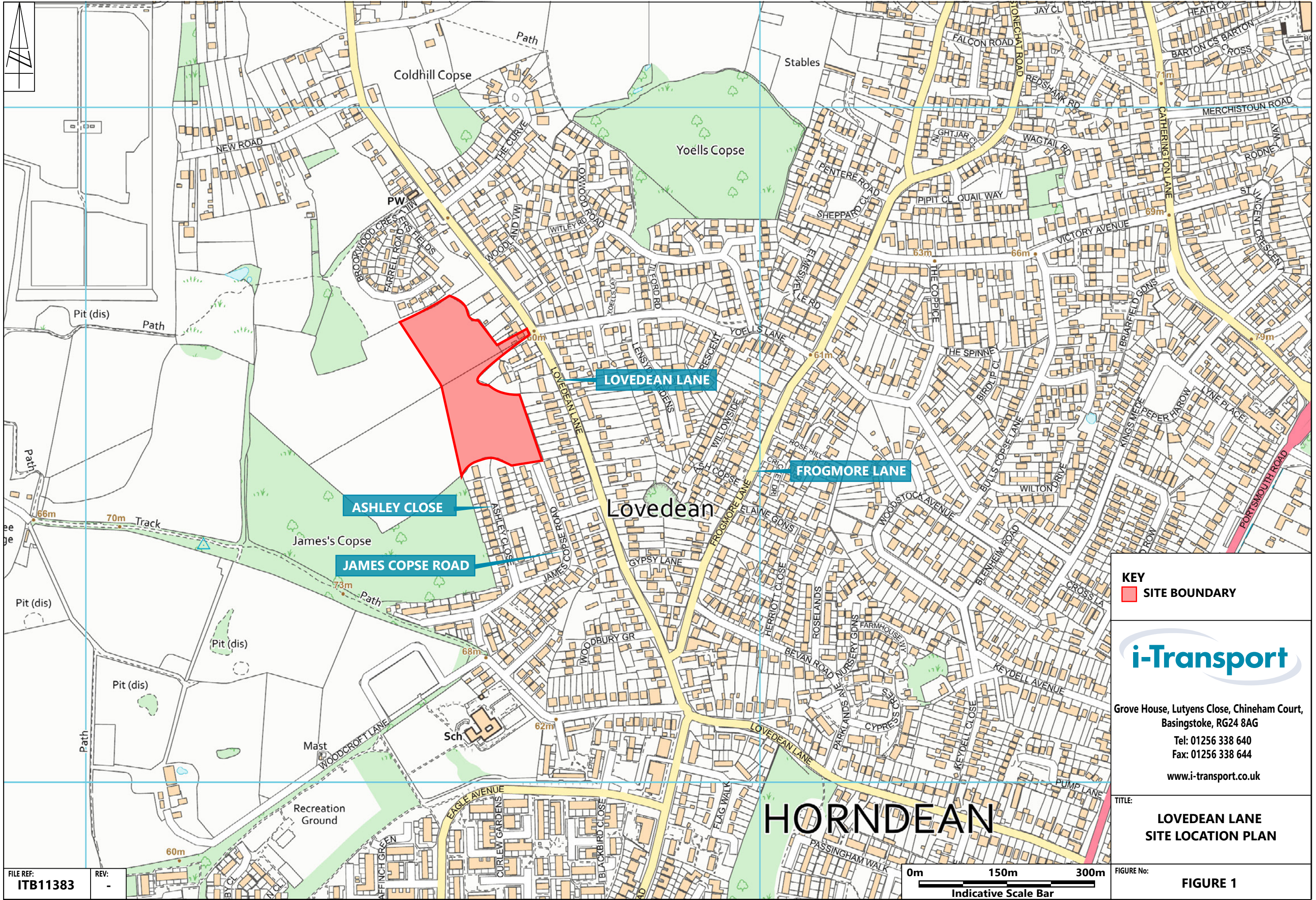
- 7.1.16 The proposed access junction has been tested using Junctions 9 and has been demonstrated to serve the development with ample spare capacity.
- 7.1.17 Operational assessments have also been undertaken on Lovedean Lane at the Milton Road junction for the 2023 and 2025 “without development” and 2023 and 2025 “with development” scenarios. The analysis has demonstrated that in the “without development” scenarios, i.e. assuming build out of local committed developments and growth the junction will be operating close to or in excess of its capacity, however the addition of development traffic results in a minimal (almost immeasurable) impact beyond this.
- 7.1.18 In addition, a committed mitigation scheme at the junction, involving the modification of the junction to form a mini-roundabout, has been tested and the junction capacity assessments demonstrate that the introduction of the mini-roundabout scheme would significantly improve the operation of the junction, particularly on the Milton Road arm and the improvement is shown to readily accommodate the very limited additional traffic from the proposed development.

- 7.1.19 A further traffic sensitivity test has been undertaken using a higher evening peak hour trip rate and a wider traffic impact assessment – assuming all proposed development traffic routing south from the site travels east along Lovedean Lane before arriving at the Portsmouth Road (A3) arm of the Portsmouth Road / Dell Piece Way / Catherington Lane four-arm traffic signal-controlled junction.
- 7.1.20 In the sensitivity test scenario, the maximum increase in traffic along Lovedean Lane (East of Milton Road) will be circa 2.8%, whilst the maximum increase in traffic along Portsmouth Road (North of Lovedean Lane) will be circa 2.7%. When compared to the traffic impact assessments presented the ‘non sensitivity test’ scenario, these increases broadly equate to one additional vehicle movement every 3 minutes along Portsmouth Road (North of Lovedean Lane), rather than broadly one additional vehicle movement every 12 minutes. In the context of the existing highway conditions along Portsmouth Road, this increase is not significant.
- 7.1.21 Against this background, the development generated traffic can be accommodated on the local highway network and the residual impacts of the development falls far short of the “severe” test set by the National Planning Policy Framework.

7.2 Conclusion

- 7.2.1 Having regard to the analysis contained in this document, it is concluded that there are no highway or transport reasons for objecting to the proposed development and the development proposal (*ref: NPPF paragraph 108/109*):
- Will have safe and acceptable access for all people;
 - Will provide residents with appropriate opportunities to access a range of everyday facilities and destinations by sustainable travel; and
 - Will not have a ‘severe’ residual highways or unacceptable road safety impact.

FIGURES



KEY
SITE BOUNDARY



Grove House, Lutyens Close, Chineham Court,
Basingstoke, RG24 8AG
Tel: 01256 338 640
Fax: 01256 338 644
www.i-transport.co.uk

TITLE:
**LOVEDEAN LANE
SITE LOCATION PLAN**

FIGURE No: **FIGURE 1**

FILE REF:
ITB11383

REV:
-



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- KEY**
- SITE BOUNDARY
 - HORNDEAN LOCAL CENTRE
 - EMPLOYMENT AREA
 - BUS STOP
- LEISURE**
- LOVEDEAN VILLAGE HALL
 - THE BIRD IN HAND PUB
 - JUBILLE HALL COMMUNITY CENTRE
 - CROUCH LANE PARK
 - ACORN COMMUNITY CENTRE
 - HORNDEAN FOOTBALL AND SOCIAL CLUB
 - FIVE HEADS RECREATION GROUND
- EMPLOYMENT**
- WESSEXGATE INDUSTRIAL ESTATE
 - WESTFIELD INDUSTRIAL ESTATE
- RETAIL**
- CENTRAL CONVINIENCE STORE
 - TESCO EXPRESS
 - COSTCUTTER
 - CO-OP STORE
 - MORRISONS
- EDUCATION**
- WOODCROFT PRE-SCHOOL
 - WOODCROFT PRIMARY SCHOOL
 - HORNDEAN TECHNOLOGY COLLEGE
 - HORNDEAN INFANT AND JUNIOR SCHOOL
- HEALTHCARE**
- ROWLANDS PHARMACY
 - THE VILLAGE SURGERY
 - COWPLAIN DENTAL PRACTICE



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TITLE:

LOVEDEAN LANE
LOCAL FACILITIES PLAN

FIGURE No:

FIGURE 2

- BUS SERVICES**
- BUS SERVICE 7
 - BUS SERVICE 69
 - BUS SERVICE 8
 - BUS SERVICE 37X

