



Kingscroft Farm, Havant

Transport Assessment

Client: Foreman Homes Ltd

i-Transport Ref: TW/BB/ITB15443-002C R

Date: 23 June 2022

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1.1 Introduction

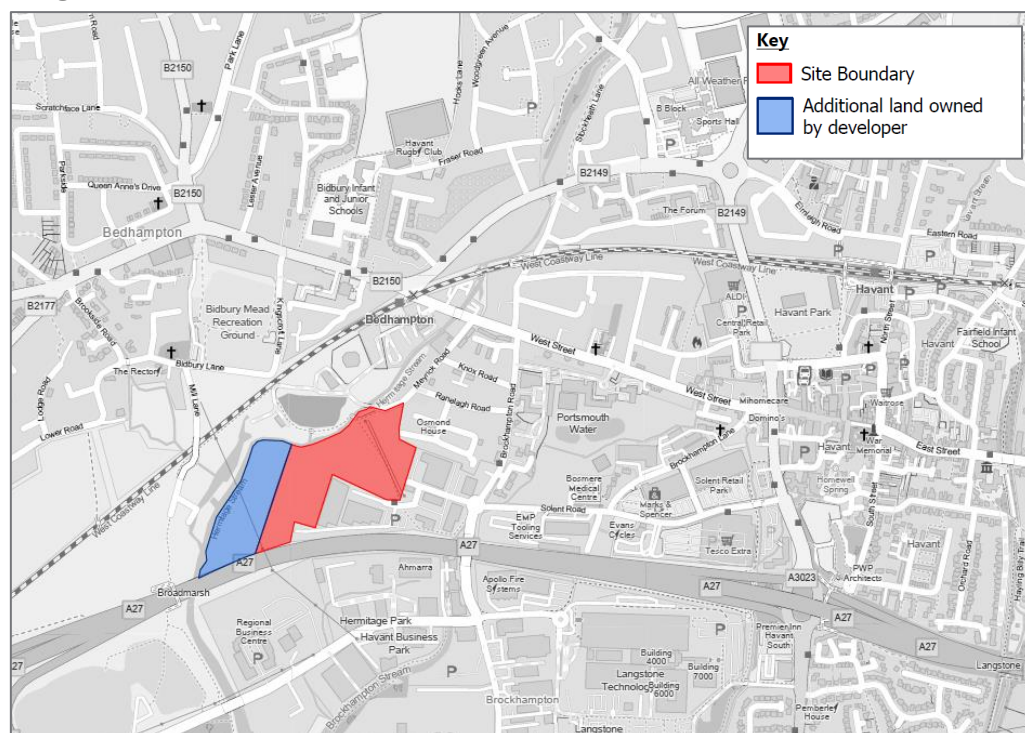
1.1.1 Foreman Homes Ltd have appointed i-Transport LLP to provide transport and highways advice in relation to a planning application for a residential development of up to 140 dwellings at Kingscroft Farm, Havant.

1.1.1 The Site is located in south Bedhampton, southwest of Havant in Hampshire.

1.1.2 The Site bounded to the north by Meyrick Road, to the west by the Hermitage Stream, to the south and east by light industrial units within Kingscroft Business Park and the A27, and by dwellings that form part of a recently completed residential scheme at Abrams Way.

1.1.3 The location of the site in the context of the local highway network is presented in **Figure 1**, an extract of which is illustrated as **Image 1.1**.

Image 1.1: Site Location Plan



Source: Extract of Figure 1

1.3 Planning Background

- 1.3.1 The site is allocated for employment development in the adopted Havant Borough Council (HBC) Local Plan under Policy HB2 as Site BD19 – Kingscroft Farm. The allocation is for 12,000sqm of employment floorspace, with reference made within Policy BD19 to the development of manufacturing and/or warehousing units.
- 1.3.2 This allocation remains extant, but no planning applications have been progressed at the site.

1.4 Pre-Application Engagement

- 1.4.1 Initial engagement was carried out with officers at Havant Borough Council, and with the Havant Development Consultation Forum where the proposals were presented in January 2020.
- 1.4.2 Pre-application engagement has also been carried out with Hampshire County Council (HCC) as local highway authority to inform the scope and methodology of the TA and to help shape the site access strategy. A Transport Assessment Scoping Note (i-Transport report reference: ITB15443-001B R) was submitted to HCC in October 2020 (**Appendix A**).
- 1.4.3 A pre-application scoping meeting was subsequently held on 23rd October 2020 to discuss the proposal and the TA Scoping Note. HCC provided a formal response to the contents of the TA Scoping Note on 13th November 2020 (**Appendix B**) and dialogue continued with HCC to agree the scope and parameters of the assessments required.

1.5 Pre-application Summary of Points Raised

- 1.5.1 The comments made by HCC are summarised in **Table 1.1** along with a summary of how each is addressed within the Transport Assessment.

Table 1.1: Summary of Pre-Application Input

Comment	Addressed
<u>Development Traffic Distribution</u> Development trip distribution should be reviewed to further consider the volume of development traffic that might route via New Road to the north and east of the application site.	Distribution model revisited and amended to show additional development traffic using New Road. The revised distribution model has subsequently been agreed with HCC.

Comment	Addressed
<u>Committed Development</u> Consider the impact of the proposed development at Langstone Tech Park, which includes some redistribution of trips to the west onto Brockhampton Road / Brookside Road / Southmoor Lane / Harts Farm Way roundabout junction.	A methodology to account for committed development traffic associated with the Langstone Tech Park has been agreed with HCC and is set out in Section 6.6 of the TA.
<u>Net Reduction of Trips</u> HCC do not accept the use of a net reduction in vehicle trips argument. Comparing the proposed development with the existing allocation of 12,000sqm of employment floorspace.	An assessment of the development generated traffic as entirely 'new' trips onto the local highway network has been undertaken. A net reduction in trips has not been applied.
<u>Additional Junction Assessments</u> HCC suggested that further junction capacity assessments may be required at the A27 / Harts Farm Way teardrop junction and advised reviewing the proposed development distribution prior to further discussions.	An assessment of traffic impact on the A27 / Harts Farm Way teardrop junction has been undertaken and is set out in Section 6.9. Detailed modelling of the junction is not necessary as agreed with HCC.
<u>Access Comments</u> The retained Portsmouth Water access will need to be tracked and details of its likely use provided. A Stage One Road Safety Audit will need to be undertaken in support of the development proposals.	The Portsmouth Water access has been improved and swept path analysis for an articulated vehicle has been provided to demonstrate ease of access for HGVs. A Stage One Road Safety Audit will follow as part of any Reserved Matters submission.

Source: i-Transport

- 1.5.2 Aside from the matters raised by HCC, and summarised in **Table 1.1**, all other technical matters contained within the TA Scoping Note were agreed.

1.6 Structure of Report

- 1.6.1 The remainder of this Transport Assessment is structured as follows:

- **Section 2:** sets out the relevant national and local transport policies
- **Section 3:** reviews the existing transport conditions in the vicinity of the site
- **Section 4:** summarises the development proposal, including site access strategy
- **Section 5:** sets out the proposed measures for promoting sustainable transport
- **Section 6:** assessed the traffic impacts of the development proposal
- **Section 7:** provides a summary of the Transport Assessment and draws conclusions

SECTION 2 POLICY CONTEXT

2.1.1 To provide context for the assessment, a review of the national and local transport planning policies relevant to the proposed development has been undertaken to consider:

- **National**
 - National Planning Policy Framework (July 2021)
 - The web-based national Planning Practice Guidance (PPG)
- **Local**
 - Havant Borough Council Local Plan: Core Strategy – Adopted March 2011
 - Havant Borough Council Local Plan: Allocations – Adopted July 2014
 - Havant Borough Council – ‘Parking’ Supplementary Planning Document – Adopted July 2016 (partially updated September 2019)
 - Hampshire County Council Local Transport Plan

2.2 National Planning Policy Framework July 2021 (NPPF)

2.2.1 The National Planning Policy Framework (NPPF) sets out overarching planning policy. Paragraph 10 of the NPPF sets out that there is a presumption in favour of sustainable development:

“So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development (paragraph 10).”

2.2.2 Paragraph 110 sets out the key transport requirements that must be met at new developments:

- 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;***
- c) ***The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Mode Design Code; and***
- d) ***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.***

2.2.3 Paragraph 110 therefore identifies the key transport tests for new development which are considered in the TA, and which can be summarised as follows:

- a Will the opportunities for travel by sustainable modes available be taken up?
- b Will safe and suitable access be provided for all users?
- c Will the site layout be acceptable?
- d Will the residual cumulative transport impacts, particularly in terms of traffic, be acceptable, i.e. less than severe, and not result in an unacceptable safety impact?

2.2.4 Paragraph 111 confirms the conditions for refusing development on transport grounds, stating:

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

2.2.5 The purpose of this paragraph of the NPPF is to set a ‘high bar’ for preventing development from coming forward for transport reasons. It is only where the transport impacts are very significant that development should be prevented.

2.3 National Planning Practice Guidance (NPPG) – March 2014

2.3.1 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).”

2.3.2 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

Havant Borough Council Local Plan – Core Strategy (Adopted March 2011)

2.4.1 The HBC Local Plan is made up of the Core Strategy (2011-2026) and Allocations Plan (2013-2026). The Core Strategy describes the council's long term vision and objectives for the borough and is the principal document outlining how development will be managed in the borough.

2.4.2 Policy CS20 of the Core Strategy addresses 'Transport and Access Strategy' and 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 that safe and efficient operation of the strategic and local road network.

5. Ensures that highway design responds possibility 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.

7. Improves highway, cycling and pedestrian links between the western built up area of the borough (Waterlooville) and the eastern area of the borough (centred on Havant) to create a strong east/west communication axis that passes through Dunsbury Hill Farm / Leigh Park."

2.4.3 Policy CS21 'Developer Requirements' concerns developer contributions and states:

“Development will be permitted if on-site and/or off-site infrastructure requirements are met.

Where new or improved infrastructure is essential for planning permission to be granted the council will require the on-site or off-site provision and/or contributions through planning obligations, agreements or tariffs in accordance with the relevant legislation for off-site provision. [...]

Where appropriate the council will seek on-site provision or financial contributions to ensure the timely off-site or on-site delivery of all types of infrastructure [...]

2.4.4 Policy DM11 concerns ‘Planning for More Sustainable Travel’ and states:

“The council will seek to ensure that every opportunity is taken to increase integration of sustainable travel modes and availability of non-motorised modes by appropriate measures including:

- 1. Securing on-site and/or off-site interventions that promote integrated travel and access by non-motorised modes.***
- 2. Requiring safe and secure vehicular and cycle parking and turning facilities to adopted standards.***
- 3. Securing appropriate improvements to public and community transport (including infrastructure requirements) in accordance with the Hampshire Local Transport Plan and (where applicable) the relevant sub-regional transport strategy.***
- 4. Proposals for reducing opportunities for informal parking in the area surrounding the development where this would impact on the capacity, operation and safety of the local highway network and/or the amenity of the locality.***
- 5. Ensuring that new developments are located and designed at the outset to encourage lower vehicle speeds and safe, permeable, inclusive layouts that integrate with existing pedestrian, cycle and public transport routes. This will facilitate and encourage short distance trips by cycle and walking, including to public transport interchanges.”***

2.4.5 Policy DM12 addresses ‘Mitigating the Impacts of Travel’ and states:

“New developments will be required to mitigate their travel impact, including the environmental impacts of travel (such as noise, air and visual pollution) and impacts on amenity, health and climate change by ensuring that, where relevant, the following criteria are met:

- 1. Adequate provision is made for integrated and improved transport infrastructure or appropriate mitigation measures, through direct improvements and S106 contributions in accordance with the Hampshire County Council Transport Contributions Policy.***
- 2. The submission of a transport assessment and travel plan alongside any planning application on proposals for major development or where a proposal is likely to have significant transport implications.***

3. The submission of a transport statement must accompany planning applications to explain changes to travel demand.

4. A bond is provided which will be used to mitigate negative travel impacts of the development, should the travel plan fail to achieve its targets. This bond will be held by the relevant local transport authority.

5. In relation to outline planning applications, a framework for the preparation of travel assessments and travel plans will be submitted with the planning application proposals."

2.4.6 Policy DM13 concerns 'Car and Cycle Parking on Residential Development' and states:

"Residential development will only be permitted where it provides car parking and cycle storage in accordance with the standards set out in the Residential Car Parking and Cycle Provision Supplementary Planning Document."

2.4.7 The car and cycle parking standards from the SPD are set out in **Table 2.1** and **Table 2.2** of this section respectively.

Havant Borough Council Local Plan – Allocations Plan (Adopted July 2014)

2.4.8 The HBC Allocations Plan document (2013-2026) follows on from the Core Strategy and identifies sites for specific uses including housing, employment, retail, recreation and green infrastructure up until 2026.

2.4.9 The application site is allocated for development within the document under Policy Number BD19 – Kingscroft Farm. The allocation is for 12,000sqm of employment floorspace, with reference made within Policy BD19 to the development of manufacturing and/or warehousing units. This allocation remains extant.

Havant Borough Council Parking Supplementary Planning Document (July 2016)

2.4.10 The SPD sets out HBC's off-street parking standards relating to new. The car parking standards for residential developments are summarised in **Table 2.1**.

2.4.11 Whilst these are minimum required standards, Section 3 of the SPD sets out that car parking requirements should reflect the fact that some areas of the Borough are closer to shops and services and are more accessible by non-car means, i.e. Havant Town Centre and Waterlooville Town Centre. Where proposals are located within such locations, a lower level of car parking provision will be considered.

Table 2.1: HBC Residential Car Parking Standards

Dwelling Size	Minimum Standard	
	Minimum Requirement	Visitor
1 Bedroom	1 space per dwelling	An additional 20% of car parking should be provided as an unallocated provision for visitors
2 Bedrooms	2 spaces per dwelling	
3 Bedrooms	2 spaces per dwelling	
4+ Bedrooms	3 spaces per dwelling	

Source: HBC Parking SPD

2.4.12 The cycle parking standards for residential developments are summarised in **Table 2.2**.

Table 2.2: HBC Residential Cycle Parking Standards

Dwelling Size	Minimum Standard	
	Long Stay	Short Stay
1 Bedroom	1 space per dwelling	In larger developments (schemes of 10 or more dwellings), short-term visitor parking will be expected at 20% of the long-term cycle parking standard
2 Bedrooms	2 spaces per dwelling	
3 Bedrooms	2 spaces per dwelling	
4+ Bedrooms	2 spaces per dwelling	

Source: HBC Parking SPD

Hampshire County Council's Local Transport Plan 3

2.4.13 HCC's transport strategy for the next 20 years is set out in its Local Transport Plan (LTP).

2.4.14 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 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."

2.4.15 HCC is currently developing a new draft Local Transport Plan (LTP4), which sets out their vision for 2050. The draft LTP4 is currently out for formal consultation, to identify whether any changes are required before it is considered for adoption.

2.5 Summary

- 2.5.1 Taken together, national and local policy requires new residential development to be well located to a range of facilities and services by a range of modes of transport including walking, cycling and public transport so as to minimise the number and length of car journeys.
- 2.5.2 There is an overwhelming presumption in favour of sustainable development, and development should only be refused on highways grounds if there would be an unacceptable impact on highway safety or if the residual cumulative impacts of the development are 'severe'.
- 2.5.3 The application site is allocated within BD19 'Kingscroft Farm' of the Adopted Local Plan, ensuring that the principle of sustainable development at the site is established.

SECTION 3 EXISTING CONDITIONS

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 for walking, cycling and public transport-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 Meyrick Road, to the west by Hermitage Stream, to the south by light industrial units within Kingscroft Business Park and to the east by dwellings that form part of a recent residential development at Abrams Way, and industrial units at Marples Way

3.2.2 The location of the site in the context of the local highway network is presented in **Figure 1**.

3.3 Walking Opportunities

3.3.1 To consider the availability and suitability of local walking facilities (as well as facilities for cycling and horse riding) a Walking, Cycling and Horse Riding Assessment Report has been prepared and is presented at **Appendix G**.

3.3.2 Within immediate vicinity of the site, Meyrick Road is under private ownership by Portsmouth Water and therefore does not form part of the adopted public highway, providing access into an adjacent area of land owned by Portsmouth Water. The southern section of Meyrick Road is mostly unmade, and of 5m in width, without any formal pedestrian facilities.

3.3.3 To the north of the priority junction with Knox Road, Meyrick Road forms part of the adopted public highway and is laid out in a conventional road construction. Footways are present on either side of the Meyrick Road. The footways benefit from street lighting and are approximately 1.5m in width for the majority of their length.

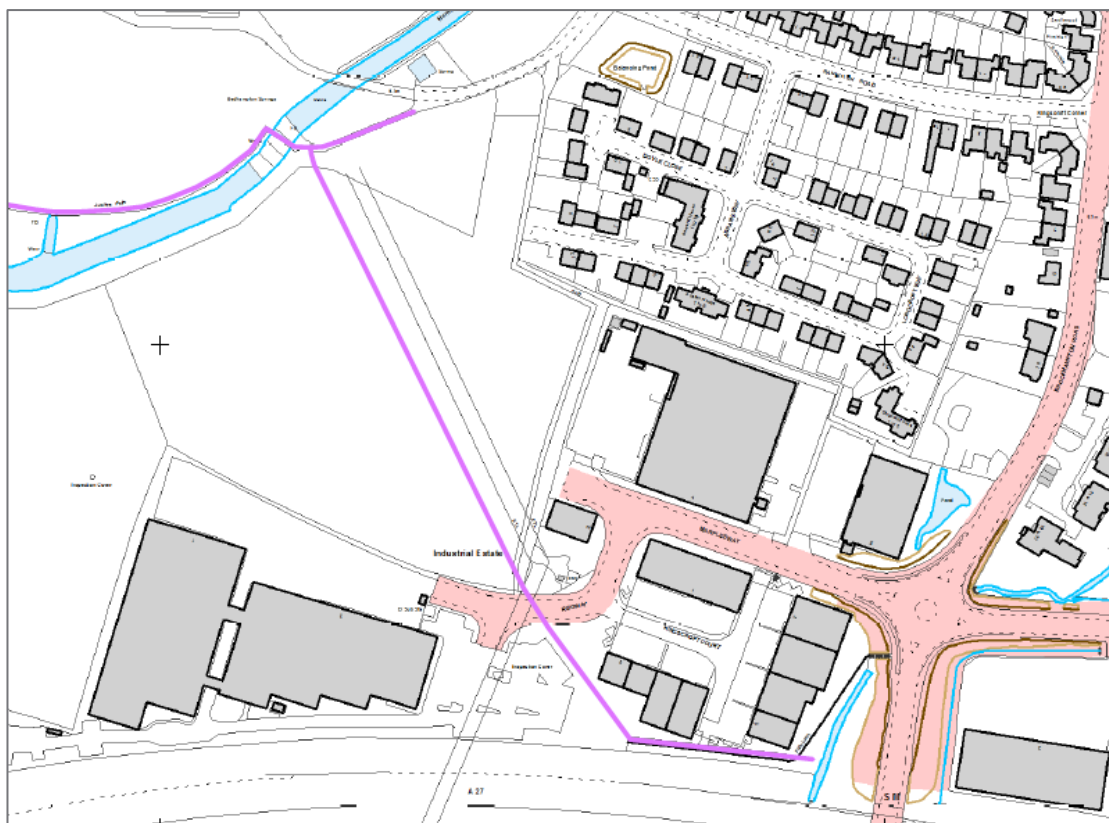
3.3.4 To the north of the site, the footways connect to those on either side of West Street at the West Street / Meyrick Road priority junction. The footways on either side of West Street benefit from street lighting and are approximately 2m in width.

3.3.5 To the west of the West Street / Meyrick Road priority junction, the footways on West Street provide a continuous pedestrian route towards Bedhampton railway station. The railway line crosses West Street adjacent to Bedhampton railway station, and an at-grade level crossing is

provided across West Street to facilitate safe pedestrian movements over the railway line. In addition, Bedhampton railway station accommodates a pedestrian bridge to afford pedestrian access to both sides of the platform.

- 3.3.6** Further to the west, the footways on West Street merge with those on either side of Bedhampton Road and New Road respectively, at the New Road / West Street / Bedhampton Road priority junction. To the west, the footways afford access to some local bus stops, as well as numerous local facilities and services accessible off Bedhampton Road. The facilities include Bedhampton Community Centre, as well as a Rowlands Pharmacy and convenience store.
- 3.3.7** To the east of the West Street / Meyrick Road priority junction, the footways on West Street provide a continuous route towards Havant town centre via the traffic signal-controlled pedestrian crossing on Park Road South, which is located adjacent to the West Street / Park Road South priority junction. Havant town centre contains a wide range of local facilities and services and is well suited to pedestrians, with wide street-lit footways provided.
- 3.3.8** To the east of the site, Brockhampton Road accommodates footways on either side of the carriageway that benefit from street lighting. Access to Brockhampton Road is achievable via Ranelagh Road or via the footways on either side of Knox Road respectively. To the south, the footways on Brockhampton Road provide a continuous route toward The Wendy House pre-school, as well as employment/leisure areas including Kingscroft Business Park and the Solent Retail Park via the footways on Marples Way and Solent Road respectively.
- 3.3.9** Further to the south, the footways on Brockhampton Road continue over the A27 bridge and provide access to a significant area of employment, including the Langstone Technology Park.
- 3.3.10** A Public Right of Way (PROW) (tile 17.06 route 35) runs through the site and connects to PROW route no. 34 to the northwest and Marples Way Industrial Estate to the southeast. The location and routing of the PROW is shown in **Image 3.1**.

Image 3.1: PROW no. 35 – Location and Routing



Source: Highway Boundary Data (HCC)

3.4 Cycling

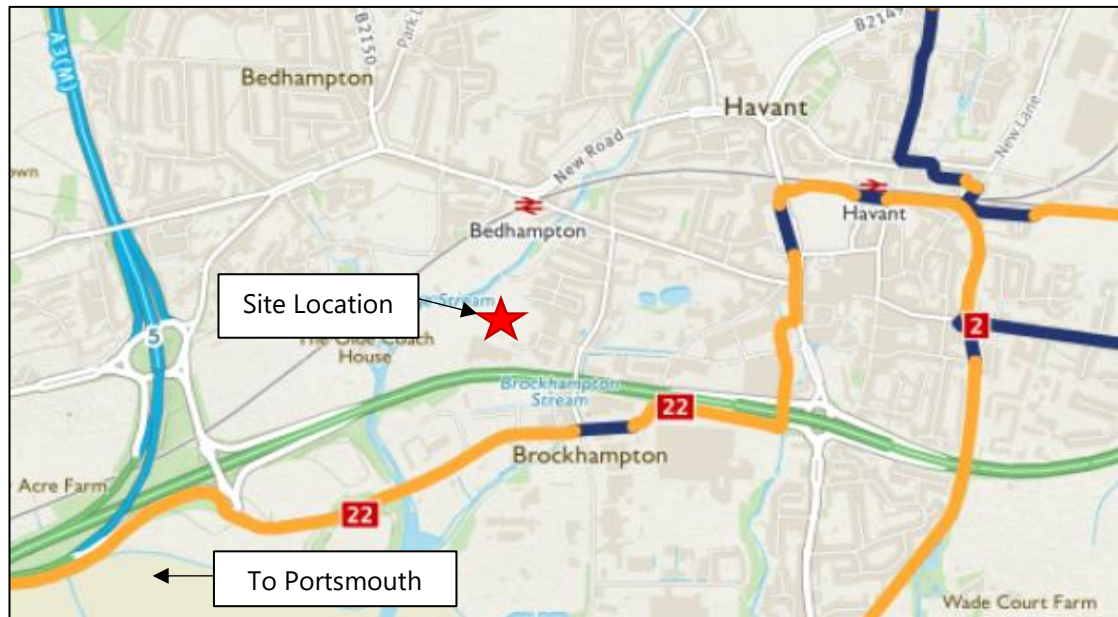
3.4.1 Cycle travel is appropriate on many of the surrounding roads, given the sign posted speed limits and road characteristics. Manual for Streets (MfS) guidance suggests:

“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 Meyrick Road, Ranelagh Road, Knox Road, West Street and Bedhampton Road are appropriate for on-street cycling. This is confirmed in the findings of the WCHAR at **Appendix G**.

3.4.3 Notwithstanding this, the site benefits from being located within close vicinity to the National Cycle Network (NCN), with NCN Route no. 22 accessible to the east of the site via travel along West Street or to the south via travel along Brockhampton Road. The route provides a cycle connection west towards Portsmouth, as well as east towards Havant railway station. The route is shown in **Image 3.2**.

Image 3.2: National Cycle Network Routes close to the Site



Source: Sustrans

- 3.4.4 In addition to the accessibility to NCN Route no. 22, a shared footway/cycleway is accommodated on the western side of Park Road South, whilst a network of shared footways/cycleways are accommodated within the vicinity of the Langstone Technology Park to the south of the site.

3.5 Public Transport

Bus

- 3.5.1 The nearest bus stops are located approximately 650m from the centre of the site on either side of Bedhampton Road, adjacent to Brunswick Gardens. The bus stops are served by bus route no. 23, as well as several school services. Both the eastbound and westbound bus stops feature a bus stop flag, bus shelter with associated seating, timetable information and raised kassel-kerbs. On-carriageway bus stop cages are also provided for each bus stop.
- 3.5.2 A summary of the local bus services operating within the local area is provided in **Table 3.1**.
- 3.5.3 The site is well served by local bus services, with the no. 23 and 30 services operating at a less than 15-minute and 30-minute frequencies throughout the course of a typical week respectively. This ensures that residents will be offered realistic opportunities to travel to a range of destinations, including Portsmouth, by bus.

Table 3.1: Local Bus Service from Brunswick Gardens Bus Stops

No.	Route	Mon-Fri	Sat	Sun
23	Leigh Park - Southsea	Every 10 minutes – first departure 05:19, last return 0:03	Every 12 minutes - first departure 06:31, last return 0:03	Every 15 minutes – first departure 07:28, last return 23:13
SD5	Gosport – Havant Campus	Once a Day (07:53 – 18:02)	No Service	No service
30	Haying Island - Havant	Every 30 minutes (05:35 – 21:00)	Every hour (08:05 – 19:35)	No service
654	Purbrook – West Street adjacent The Gardens	Once a Day (08:05 – 15:45)	No Service	No service
737	Petersfield - Havant	Once a Day (07:52 – 16:40)	No Service	No service

Source: Traveline

Rail

- 3.5.4 The nearest railway station to the site is Bedhampton Station, which is located circa 550m from the centre of the site. The station is served by trains operated by Southwestern Railway, which provide direct services to a number of destinations including London Waterloo, Petersfield, Chichester and Portsmouth & Southsea. **Table 3.2** provides a summary of railway services available from Bedhampton railway station.

Table 3.2: Summary of available rail services from Bedhampton station

Destination	Frequency		Journey time (minutes)
	Peak	Off-peak	
London Waterloo	2	1	96
Havant	3	2	3
Portsmouth & Southsea	4	2	13
Petersfield	2	1	18
Chichester	2	1	22

Source: National Rail

- 3.5.5 Havant railway station is located circa 1,500m from the centre of the site and provides services to many of the destinations accessible via Bedhampton station, as well as a direct service to Southampton.

- 3.5.6 These services operate at a higher frequency than from Bedhampton station and have a reduced overall journey time. **Table 3.3** provides a summary of railway services available from Havant railway station.

Table 3.3: 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	5	4	13
Southampton Central	3	2	41

Source: National Rail

Summary

- 3.5.7 The site benefits from being within the vicinity of good local bus services, which provide connections toward Portsmouth at a less than 15-minute frequencies. In addition, Bedhampton and Havant railway stations are located within a reasonable walking distance of the site and provide frequent connections to key destinations including London Waterloo and Southampton.

3.6 Local Highway Network

- 3.6.1 Meyrick Road is a single carriageway, two-way road that is subject to a 30mph speed limit. Within immediate vicinity of the site Meyrick Road is under private ownership by Portsmouth Water and therefore does not form part of the adopted public highway. To the west of the site, Meyrick Road forms access into an adjacent water treatment works, and provides no formal pedestrian infrastructure. Vehicular access to this facility is limited and occasional but does require the access of larger vehicles.
- 3.6.2 To the north of the site, Meyrick Road meets Ranelagh Road and Knox Road at two independent priority-controlled T-junctions. Adjacent to the priority junction with Knox Road, Meyrick Road forms part of the adopted public highway. At this point, footways are present on either side of the carriageway, which benefit from street lighting, and is laid out in a traditional estate road construction, with a tarmacadam surface, road widths of 5.5-6m.
- 3.6.3 Further to the north, Meyrick Road meets West Street at a priority-controlled T-junction. West Street is a single carriageway, two-way road that is subject to a 30mph speed limit. To the west

it meets Bedhampton Road and New Road at a priority junction, whilst to the east it meets Park Road South at a priority junction.

- 3.6.4 Prior to the Bedhampton Road / New Road priority junction, a level crossing is located across West Street, adjacent to Bedhampton railway station. A full barrier crossing is provided, with virtual footways accommodated for pedestrians.
- 3.6.5 Bedhampton Road is a single carriageway, two-way road that is subject to a 30mph speed limit. To the west, Bedhampton Road provides one of primary connections to the A3(M), which forms part of the strategic road network, via Bedhampton Hill and a grade separated roundabout junction.
- 3.6.6 New Road is a single carriageway, two-way road that is subject to a 30mph speed limit. To the northeast, New Road meets the B2149 and Park Road North at a four-arm roundabout junction. Together, the B2149 and Park Road North form one of the main arterial routes through Havant, providing a route out of Havant to the north and a connection to the A27 to the south (via Park Road South).
- 3.6.7 Park Road North is a single carriageway, two-way road that is subject to a 30mph speed limit, to the south of the B2149 / Emleigh Road / Park Road North / New Road four-arm roundabout junction, Park Road North becomes Park Road South and provides access to Havant Town Centre. Further to the south, Park Road South provides a connection to the Solent Road Retail Park via Solent Road, before meeting the A27 at a grade-separated roundabout junction.
- 3.6.8 Ranelagh Road and Knox Road are single carriageway, two-way roads that are subject to 30mph speed limits. At the eastern extents, they meet Brockhampton Road at two independent priority junctions. The roads are residential in nature, and experience regular on-street parking, which often occurs simultaneously on both sides of the carriageway. Ranelagh Road is a private unadopted road whereas Knox Road forms part of the public highway.
- 3.6.9 Brockhampton Road is a single carriageway, two-way road that is subject to a 30mph speed limit. To the south, it crosses the A27 (via a grade-separated flyover) and provides a route towards some significant local employment opportunities (including those within Kingscroft Business Park and the Langstone Technology Park) via Marples Way, South moor Lane and Brookside Road respectively. In addition, Brockhampton Road provides a further connection to the Solent Road Retail Park via Solent Road.

- 3.6.10 Harts Farm Way is accessible from Brockhampton Road via a four-arm compact roundabout junction with Brookside Road and Southmoor Lane. To the west, Harts Farm Way forms one of the primary connections to the A27 via the teardrop roundabout.

Strategic Highway Network

- 3.6.11 The A3(M) runs in a north-south alignment within close vicinity of Havant. To the north, it provides a connection to the nearby settlement of Waterloo, whilst further to the north it provides access to Petersfield and onwards towards Guildford. To the south, the A3(M) meets the A27 which, in turn, meets the M27 further to the west of Havant.
- 3.6.12 The A27 runs in an east-west alignment within close vicinity of Havant. To the east it provides a route towards the adjacent settlements of Emsworth and Southbourne and onwards towards Chichester. To the west of Havant it provides a connection to the nearby city of Portsmouth, before meeting the M275 and M27, which provide onward connections toward Fareham and Southampton.

3.7 Baseline Traffic Conditions

- 3.7.1 To establish the baseline traffic conditions on the local highway network, a series of traffic surveys were commissioned in September 2020, in agreement with HCC. The surveys included:
- Manual Classified Count (MCC) surveys at:
 - the Bedhampton Road / West Street priority junction;
 - the West Street / Meyrick Road priority junction;
 - the Staunton Road / Brockhampton Road / West Street staggered junction;
 - the Park Road South / West Street priority junction;
 - the Park Road South / Solent Road traffic signal-controlled junction;
 - the Brockhampton Road / Solent Road / Marples Way roundabout junction;
 - the Brockhampton Road / Brookside Road / Southmoor Lane / Harts Farm Way roundabout junction; and
 - the Ranelagh Road / Abrams Way priority junction.
 - A Level Crossing Survey at the West Street level crossing; and
 - A Parking Beat Survey.

- 3.7.2 Following the easing of lockdown restrictions across the country in the months following the initial pandemic response, where there was a resulting increase in traffic levels on many local roads (as more of the population returned to work and school), it was agreed with HCC that the traffic surveys could be commissioned in September 2020.
- 3.7.3 However, in recognition of the fact that at that time local traffic volumes may not have returned to pre-pandemic levels following the easing of lockdown restrictions, it was agreed with HCC to obtain permanent traffic count data from pre-Pandemic at the Park Road South / Solent Road traffic signal-controlled junction from HCC to benchmark the traffic survey data.
- 3.7.4 The permanent traffic count data was obtained for the week of the commissioned traffic surveys (21st September to 25th September 2020), as well as the equivalent week in 2019. The data obtained in 2020 has been compared to the data obtained from 2019, in order to enable a 'Covid-19' uplift factor be derived, i.e. by comparing the flows at the junction in September 2020 and September 2019. This approach was agreed with HCC at Pre-Application stage.
- 3.7.5 The results of the analysis determined that the traffic flows obtained in September 2020 were approximately 19% lower in the morning peak hour, and around 13% lower in the evening peak hour than during the equivalent period in September 2019. The traffic flows obtained during the traffic surveys commissioned in September 2020 have therefore been adjusted by 19% in the morning peak hour and around 13% in the evening peak hour respectively. The detailed analysis of the permanent traffic count data is contained in **Appendix C**.

Existing Network Conditions

- 3.7.6 A summary of the existing two-way traffic flows on local roads within the vicinity of the site, inclusive of the agreed covid-19 uplift, is provided in **Table 3.4**.

Table 3.4: Observed 2020 Traffic Flows – with Covid-19 Uplift

Local Road	Two-way Traffic Flows (2020)	
	Morning Peak Period (0800-0900)	Evening Peak Period (1700-1800)
Meyrick Road	19	23
Ranelagh Road	38	55
West Street	221	299
Staunton Road	53	70
Brockhampton Road	290	315

Local Road	Two-way Traffic Flows (2020)	
	Morning Peak Period (0800-0900)	Evening Peak Period (1700-1800)
New Road	1392	1373
Bedhampton Road	1537	1579
Solent Road	1088	1384
Harts Farm Way	809	818
Southmoor Lane	433	374
Park Road South	1700	1796

3.7.7 The observed operation of the existing level crossing on West Street, adjacent to Bedhampton railway station, is presented in **Table 3.5**.

Table 3.5: Observed Level Crossing Operation – West Street

Crossing	Approach	Morning Peak		Evening Peak	
		Average Queue	Maximum Queue	Average Queue	Maximum Queue
West Street	East	4	9	7	16
	West	1	3	1	3

3.7.8 The results of the level crossing survey indicate that the level crossing operates with spare capacity – i.e. all vehicles clear the level crossing the next time the barrier is opened.

3.7.9 A maximum queue of 16 vehicles was recorded on the eastern approach to the level crossing (from West Street), which equates to a queue length of circa 90-95m during the peak hour. The junction of Palk Road with West Street is located some 135m back from the level-crossing stop-line and therefore the maximum recorded queue from the eastern approach to the level crossing was not observed to block access/egress from the junction during the peak hour.

Parking Beat Survey

3.7.10 To understand the existing on-street parking issues on local residential streets, a parking beat survey was undertaken during night-time periods on 22-23 September 2020 in line with the Lambeth methodology.

3.7.11 The parking survey was undertaken on the following roads in the immediate vicinity of the site:

- West Street;
- Brocklands;
- Meyrick Road;
- Knox Road;
- Ranelagh Road;
- Brockhampton Road;
- Abrams Way;
- Doyle Close; and
- Longcroft Way.

3.7.12 The full parking beat survey results are contained at **Appendix D**.

3.7.13 The results of the parking beat survey indicated that the following roads currently experience low amounts of car parking stress:

- Abrams Way (22%-28%);
- Brockhampton Road (37%);
- Brocklands (65%-71%);
- Doyle Close (20%);
- Longcroft Way (12%-17%); and
- Meyrick Road (39%).

3.7.14 However, the following roads currently operate under some stress, with Ranelagh Road presently operating above 100% parking stress:

- Knox Road (86%-96%);
- West Street (89%-94%); and
- Ranelagh Road (105%-111%).

3.7.15 The parking beat survey therefore indicates that there are regular occurrences of on-street car parking occurring on some local residential streets within the vicinity of the site, namely Knox Road and Ranelagh Road.

3.7.16 Along these streets on-street parking often occurs on both sides of the carriageway, restricting the roads in some locations and at some times to one-way working where parking is present. The parking beat surveys identify incidences where cars have been parked on double-yellow lines (contrary to parking restrictions) and in locations that blocked resident driveways.

3.7.17 Whilst this demonstrates a parking pressure on local roads, which corroborates site observations, the parking beat surveys were undertaken in the early hours of the morning (as required by the Lambeth Methodology), where on-street parking is typically at its maximum.

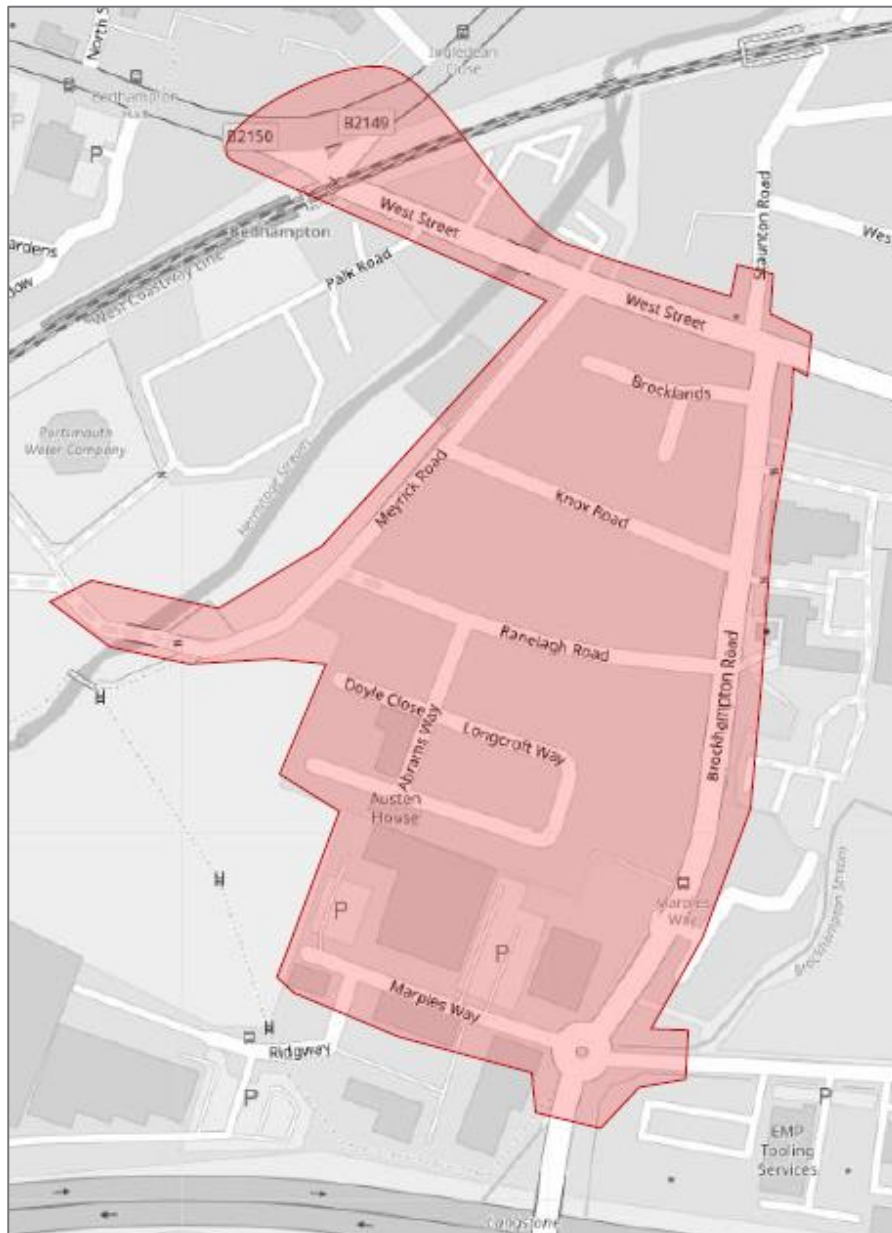
3.7.18 The level of on-street car parking is significantly lower during traditional daylight hours, including the network peak periods.

3.7.19 Notwithstanding this, it will be necessary to ensure that the proposed development provides an appropriate level of on-site car parking to ensure that the risk of overspill of car parking onto these local roads is kept to an absolute minimum.

3.8 Highway Safety

3.8.1 Personal Injury Accident (PIA) data has been obtained from Hampshire Constabulary for the area indicated in **Image 3.3**. Data has been obtained for the latest five year period (from 1st July 2016 to 30th June 2021). A copy of the report is included as **Appendix E**.

Image 3.3: Extent of Personal Injury Accident Analysis



Source: Google / i-Transport

3.8.2 A total of eight accidents were recorded within the study area in the latest five-year period, of which five were 'slight' in nature and three were 'serious'.

3.8.3 With regard to the serious accidents:

- One occurred as a result of a car driver passing too close to a cyclist, causing the cyclist to collide with a parked vehicle.

- Another occurred as a result of a cyclist losing control of their cycle whilst looking over their shoulder, causing them to collide into a motor vehicle travelling along the carriageway.
- The final serious accident occurred as a result of a car stopping suddenly in front of a motorcyclist, causing them to brake heavily and lose control of their motorcycle and fall off. The car driver then selected the wrong gear in their automatic car, reversing over the motorcycle.

3.8.4 A review of the accidents recorded does not identify any pattern or trend in accidents occurring in the area that would identify any road safety issues.

3.8.5 **Table 3.6** provides a summary of the locations where accidents occurred.

Table 3.6: Summary of Personal Injury Accidents

Location	Personal Injury Accidents		
	'Slight'	'Serious'	'Fatal'
West Street	2	1	-
Bedhampton Road	-	1	-
New Road	-	1	-
Brockhampton Road	3	-	-
Total	5	3	-

Source: Hampshire Constabulary

Summary

3.8.6 The number of accidents recorded is not atypical for an urban area. The accidents recorded over the latest five-year period are typically the result of human error, with only a single accident recorded as being the result of wet weather conditions. As such, the accident record does not suggest there are any underlying road safety issues with the local highway network that would be exacerbated as a result of the development proposal at the application site.

SECTION 4 DEVELOPMENT PROPOSALS

- 4.1.1 This section of the TA describes the development proposal and the access, parking and servicing arrangements, noting however that the application is made for Outline planning consent only and that matters of scale, quantum and layout will be determined later in Reserved Matters.

4.2 Development Schedule

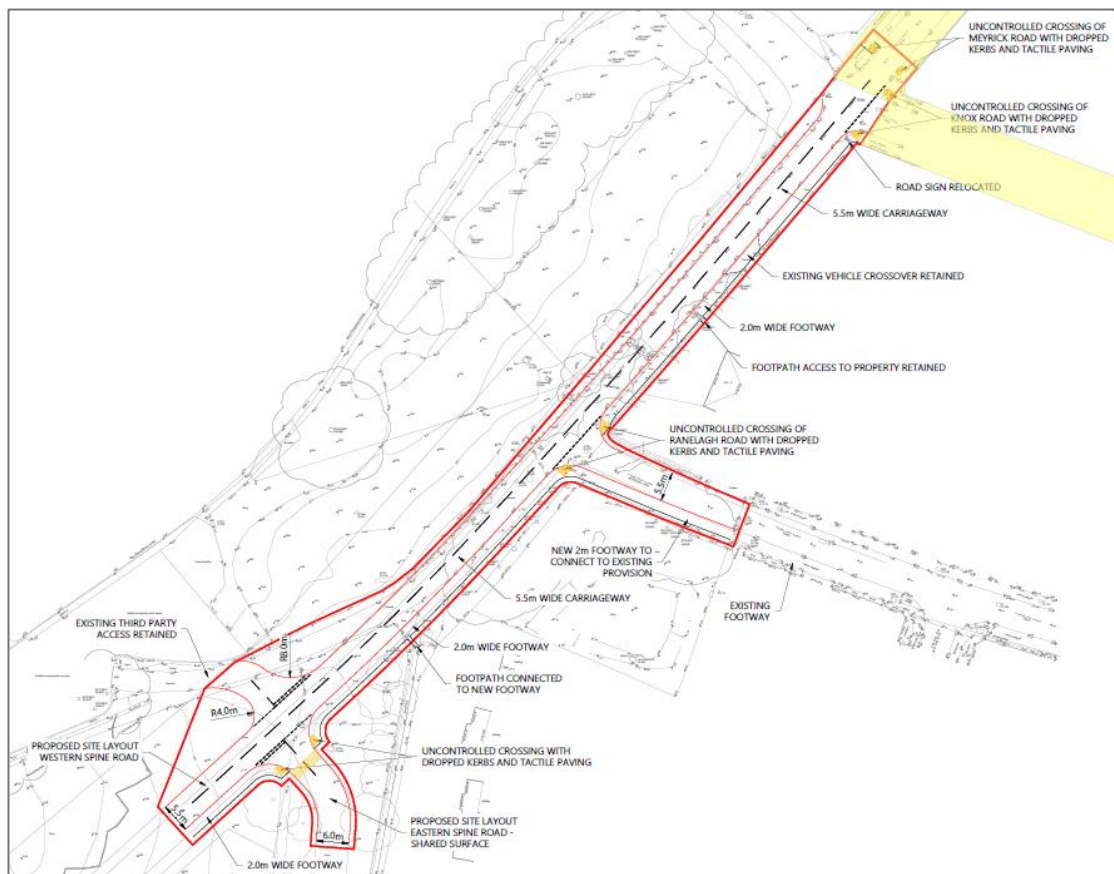
- 4.2.1 It is proposed to provide a residential development at the site, comprising up to 140 dwellings. A full schedule of development will be set out at the Reserved Matters stage.

4.3 Site Access Arrangements

- 4.3.1 Vehicular, along with pedestrian and cycle, access will be achieved from Meyrick Road. The existing carriageway will be extended south into the site, and the length of Meyrick Road that runs south of the priority junction with Knox Road will be upgraded to provide a 5.5m wide carriageway with a footway on the eastern side provided.
- 4.3.2 Vehicle access to the existing Portsmouth Water land to the west of the site will be maintained through the provision of a realigned priority junction onto the northern side of the extended Meyrick Road carriageway.
- 4.3.3 Whilst the Portsmouth Water access is used very infrequently throughout a typical day, it is utilised occasionally by articulated vehicles and therefore swept path analysis has been undertaken to demonstrate ease of access/egress for HGVs. This swept path analysis is presented as i-Transport drawing no. **ITB15443-GA-004**.
- 4.3.4 In addition to upgrading Meyrick Road, a circa 30m length of Ranelagh Road (east of the priority junction with Meyrick Road) will be upgraded to a width of 5.5m and will include a 2m wide footway extension to connect to the existing provision to the east.
- 4.3.5 On the eastern side of the site access road, a 2m wide footway will be provided that will extend along the eastern side of Meyrick Road and tie into the existing footway on the southern side of Knox Road. Dropped kerb pedestrian crossings will also be provided across Meyrick Road, the bellmouth of Knox Road and the bellmouth of Ranelagh Road to facilitate pedestrian movements to/from the site. Access to the existing driveway and pedestrian access to the properties along this section of Meyrick Road will be maintained (**Drawing ITB15443-GA-002**).

- 4.3.6 The proposed site access, as well as the Meyrick Road and Ranelagh Road improvements, have been designed with reference to Manual for Streets (MfS) guidance and are presented on i-Transport drawing no. **ITB15443-GA-001**, an extract of which is presented as **Image 4.1**.

Image 4.1: Proposed Site Access Junction



Source: Extract of i-Transport drawing number: ITB15443-GA-001B

4.4 Site Layout and Parking Provision

- 4.4.1 An illustrative site layout has been prepared by HGP Architects to accompany the planning application, a copy of which is contained at **Appendix F**. The layout of the site is not for determination at this stage.
- 4.4.2 The internal roads will be designed in accordance with the principles of MfS and built to adoptable standards. The future Reserved Matters application will detail and demonstrate the suitability of the proposed site layout, including providing evidence on street geometry, visibility, service vehicle access, refused arrangements and emergency vehicle access.

Car Parking

- 4.4.3 The details on car parking will be provided within a future Reserved Matters planning application, however car parking will be provided in accordance with Havant Borough Council's Parking SPD. The car parking standards are set out in Section 2 of this TA.

Cycle Parking

- 4.4.4 Cycle parking will also be provided in line with Havant Borough Council's Parking SPD, and the relevant cycle parking standards are set out in Section 2 of this TA.

Electric Vehicle Charging

- 4.4.5 Charging provision for electric vehicles will be detailed in a future Reserved Matters application, however, will be provided in accordance with prevailing national guidance, i.e. Approved Document S of Building Regs.

SECTION 5 PROMOTING SUSTAINABLE TRANSPORT

5.1.1 This section of the TA provides a review of the accessibility of the Site 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 people make journeys. The Department for Transport's (DfT) National Travel Survey (NTS) identifies the proportion of all trips by purpose as set out in **Table 5.1**.

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 – 2019 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. Travel demand is split between leisure, retail, commuting and education trip.

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

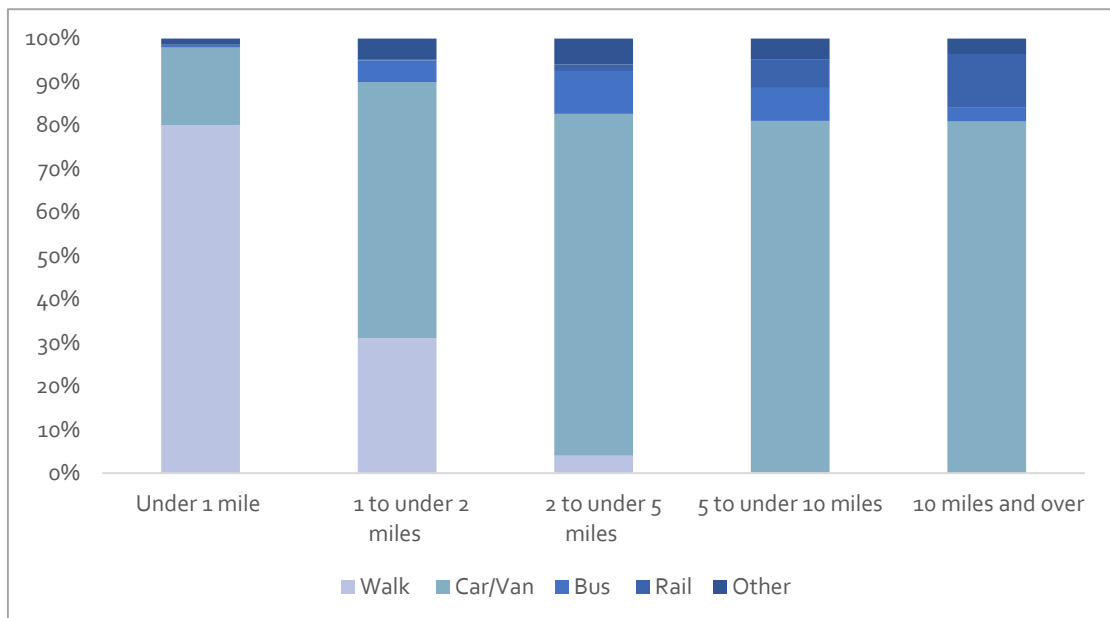
Walking Distances

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) 2019 (pre-Covid) identifies the mode share journeys of different lengths. This is repeated in **Image 5.1** and demonstrates that the vast majority (80%) of trips are undertaken on foot for journeys up to one mile (1.6km). This is corroborated by the CIHT guidance ‘*Planning for Walking*’. The NTS data also shows that 31% 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 Therefore, facilities and services within one mile (1.6km) will enable a large majority of trips to be undertaken on foot and those within 2km provide the greatest opportunity for trips to be made by walking. Trips of 2 miles (3,200m) are the upper limit of walking trips. On this basis, the accessibility of the application site will be considered against the following distances:

- Up to 800m – A comfortable walking distance
- Up to 1,600m – A distance where the majority of people (circa 80%) will walk
- Up to 2,000m – A reasonable walking distance i.e. the distance that ***“offers the greatest potential to replace short car trips”***
- 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

- 5.3.5 Paragraph 2.2.2 of the DfT Document LTN 1/20 *Cycle Infrastructure Design* provides the most up-to-date comprehensive guidance on delivering cycle infrastructure. The document states that more people cycle for everyday journeys where acceptable conditions are provided, and that two out of every three personal trips are less than five miles (8km) in length, a distance which is considered achievable for most people.
- 5.3.6 DfT guidance on Local Cycling and Walking Improvement Plans (LCWIP's) identifies that in determining the geographical scope of the LCWIP, it is recommended that the assessment looks at the likely distance that would be travelled by bike in a single journey, which is up to about 10km (six miles) or around 30 minutes' cycling time.
- 5.3.7 A cycling distance of up to around 8km (5 miles) is therefore a 'reasonable' cycling distance, i.e. is an achievable distance to cycle for most people and offers potential to replace car trips. Cycling also frequently forms part of a longer journey in combination with public transport.

5.4 Local Facilities and Services

- 5.4.1 There are a range of local facilities and services located within close vicinity of the site in Havant, which are shown visually on **Figure 2**. A summary of the travel distance to reach the identified local facilities and services and the time such journeys would take by walking and cycling is presented in **Table 5.2**.

Table 5.2: Local Facilities and Services

Destination Type	Destination	Approx. Distance (m)	Walking Time (Minutes)	Cycling Time (Minutes)
Leisure	Prince of Wales Pub	450	5	2
	Bedhampton Community Centre	650	8	2
	Bedhampton Cricket Club	1,250	15	5
	Havant Rugby Football Club	1,250	15	5
	Havant Hockey Club	1,450	17	5
	Broadmarsh Coastal Park	1,650	20	6
	Havant Leisure Centre	1,750	21	7
Retail	Hartley Stores	850	10	3
	Tesco Extra	900	11	3
	Aldi	1,150	14	4

Destination Type	Destination	Approx. Distance (m)	Walking Time (Minutes)	Cycling Time (Minutes)
Employment	Havant Town Centre	1,250	15	5
	Meridian Shopping Centre	1,250	15	5
	Marples Way Industrial Estate	250	3	1
	Solent Retail & Trade Park	500	6	2
	Portsmouth Water	600	7	2
	Tanneries Industrial Estate	800	10	3
	Beaver Industrial Estate	800	10	3
Education	Langstone Technology Park	900	11	3
	SSE	1,250	15	5
	The Wendy House Preschool	400	5	2
	Havant College	1,250	15	5
	Bidbury Infants School	1,350	16	5
	Bidbury Junior School	1,450	17	5
	St. Thomas Mores Catholic Primary School	1,450	17	5
Healthcare	Trosnant Infants School	1,550	18	6
	Bosmere Medical Practise	600	7	2
	Rowlands Pharmacy	850	10	3
	Park Lane Medical Centre	1,750	21	7
	Havant Health Centre	1,750	21	7
Transport	Bedhampton Railway Station	550	7	2
	Brunswick Gardens Bus Stops	650	8	2
	Havant Railway Station	1,550	18	6

Source: Consultant's Estimates

Key:

	Within a comfortable walking distance (800m)
	Within a distance where most people (circa 80%) will walk (1,600m)
	Within a reasonable walking distance, where most trips are on-foot (2,000m)

5.4.2 Table 5.2 demonstrates that the site is in an accessible location with a large range of everyday facilities located within a reasonable walking and cycling distance of the site. Such nearby destinations include Havant town centre (a 15 minute walk or 5 minute cycle), which contains a

significant number of additional facilities and services that residents of the proposed development are likely to utilise on a day-to-day basis.

5.5 Walking, Cycling and Horse Riding Assessment and Review

5.5.1 In accordance with HCC's TG19 guidance document, a Walking, Cycling and Horse Riding Assessment and Review (WCHAR) has been undertaken in support the development proposals at the application site.

5.5.2 The WCHAR study area covers the key routes to local amenities such as schools, retail centres, employment areas and the nearby railway stations of Bedhampton and Havant. Five routes have been assessed as part of the WCHAR, which are as follows:

- Route 1 – to Bedhampton Railway Station;
- Route 1a –to Bidbury Infant and Junior School and Havant Rugby Football Club;
- Route 2 - to Havant Leisure Centre;
- Route 3 - to Havant Town Centre (High Street);
- Route 3a - to Havant Railway Station;
- Route 4 – to the Solent Retail Park; and
- Route 5 – to the nearby business parks to the south of the A27 Havant Bypass.

5.5.3 The full WCHAR is contained at **Appendix G** and confirms that the Site is well connected to local facilities by walking and cycling facilities. A range of deliverable improvements are identified which could be delivered to enhance accessibility by active travel modes.

5.6 Public Transport

Bus

5.6.1 As set out in Section 3, the site is well located to the existing bus stop infrastructure on either side of Bedhampton Road, which are approximately 650m from the centre of the site (7-8 minute walk). These existing bus stops are served by bus route nos. 23 and 30, which operate at less than 15 minute and less than 30 minute frequencies throughout the course of a typical week respectively. The existing bus stops are also served by several school services.

- 5.6.2 Access to the bus stops is achievable from the site via Meyrick Road and the footways on either side of West Street and Bedhampton Road respectively. The Site Access proposals include the delivery of the missing link of footway on Meyrick Road to ensure safe journeys for all.

Rail

- 5.6.3 As set out in Section 3, the nearest railway station to the site is Bedhampton, which is located circa 550m from the centre of the site (a 7 minute walk). The station is served by trains operated by Southwestern Railway, which provide direct services to a number of destinations including London Waterloo, Petersfield, Chichester and Portsmouth & Southsea. This provides good levels of access to the national rail network.
- 5.6.4 Havant railway station is located circa 1,500m from the centre of the site and provides services to many of the destinations accessible via Bedhampton station, as well as a direct service to Southampton. These services operate at a higher frequency than from Bedhampton station and have a reduced overall journey time.

5.7 Travel Plan

- 5.7.1 To ensure the opportunities available to the site for sustainable travel are taken up, a Framework Travel Plan is provided to identify a package of measures and active travel strategies that will be implemented at the site. This provides a deliverable and realistic approach to promote sustainable travel opportunities. **Table 5.3** provides a summary of the actions of the Travel Plan, and a framework for its implementation.

Table 5.3: Travel Plan Framework for Implementation

Measure	Timescale	Reasonability	Cost Estimate
Travel Plan Co-ordinator	Appointed prior to 1 st occupation	Developer	£30,000 (£6,000 per annum)
Steering Group	1 st meeting one-month after appointment of Travel Plan Co-ordinator. Subsequent 6 monthly meetings for first two years after first occupation, annual meetings thereafter.	Travel Plan Co-ordinator	£0 (including in Travel Plan Co-ordinator costs)
Travel Information Pack / Leaflet	Prior to 1 st occupation	Travel Plan Co-ordinator	£1,000 (£8 per household)

Measure	Timescale	Reasonability	Cost Estimate
Travel Information Website	To be phased in line with development but available prior to first occupation	Travel Plan Co-ordinator	£0 (included in Travel Plan Co-ordinator costs)
Events e.g. Launch of TP Facebook page	Occurring prior to 1 st occupation	Travel Plan Co-ordinator	£0 (included in Travel Plan Co-ordinator costs)
Journey Planning Software and Advice	In place prior to 1 st occupation	Travel Plan Co-ordinator	£0 (included in Travel Plan Co-ordinator costs)
Walking Maps	Within resident's travel information packs and on webpage / community notices	Travel Plan Co-ordinator	£1,000 (£8 per household)
Event Banner Production	Commissioning of Travel Planning Banner / materials for Steering Group and other events	Travel Plan Co-ordinator	£1,500
Bicycle User Group (BUG)	By 75 th occupation	Travel Plan Co-ordinator	£0 (included in Travel Plan Co-ordinator costs)
Bus stop-specific timetables	Within resident's travel information packs	Travel Plan Co-ordinator	£0 (included in Travel Plan Co-ordinator costs)
Informal Residential Car Sharing Scheme	By 75 th occupation	Travel Plan Co-ordinator	£0 (included in Travel Plan Co-ordinator costs)
HCC Monitoring and Evaluation	Annually for five years	Travel Plan Co-ordinator	£15,000 (£3,000 per annum)
Total			£47,500

Source: Extract of Table 8.1 of the Travel Plan (i-Transport report no. ITB15443-005R)

5.8 Summary

5.8.1 The proposed development at the application site is readily accessible to a range of facilities and services that residents may use on a day to day basis by a range of travel modes, including on-foot and by cycle. In line with HCC guidance, a WCHAR has been undertaken in support of the development proposals at the application site and confirms connecting routes are suitable and attractive, as well as identifying a range of potential improvements to enhance access.

5.8.2 Local bus services are accessible a short walk from the site, providing access to local destinations and further afield towards Leigh Park, Portsmouth and Southsea. There are also a number of local school bus services accessible from the nearest bus stops.

- 5.8.3 The closest railway station to the application site is Bedhampton, which provides direct services to a number of destinations including London Waterloo, Petersfield, Chichester and Portsmouth & Southsea. At approximately 550m from the site, Bedhampton railway station is located well within a reasonable walking and cycling distance. Havant railway station is located some 1500m from the centre of the site and provides additional services towards Southampton.
- 5.8.4 A Travel Plan is proposed to ensure that the opportunities for sustainable travel available to the site are taken up.
- 5.8.5 On this basis, opportunities for sustainable transport have and can be taken up in accordance with Paragraph 110 of the NPPF such that active and sustainable travel modes will form a genuine choice of travel mode for future residents.

SECTION 6 TRAFFIC IMPACT

6.1.1 This section of the TA establishes 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 Site Allocation – Trip Generation

6.2.1 The site is allocated for development in the adopted HBC Local Plan as Site BD19 – Kingscroft Farm. The allocation is for 12,000sqm of employment floorspace, with reference made within Policy BD19 to the development of manufacturing and/or warehousing units.

6.2.2 To provide a robust appraisal of impacts, the traffic impact analysis (modelling) of the proposed development does not consider the application against the potential traffic impacts of the extant employment allocation and instead considers all travel demands to be new and additional.

6.2.3 It is nonetheless important to provide context as to what the likely traffic impacts of an employment development at the site could be, and the TRICS database has been used to obtain B2 (General Industrial) and B8 (Commercial Warehousing) trip rates and estimate travel demand.

6.2.4 A summary of the vehicular trips is provided in **Table 6.1**, and the full TRICS output reports in **Appendix H** Vehicular trip rates have been obtained using the following parameters:

- **Region** – all of England (excluding Greater London);
- **Size Relevance** – developments with a range of 2,000 – 25,000sqm;
- **Time Period** – surveys for the last 7-year period;
- **Location Relevance** – surveys in ‘suburban’ / ‘Edge of town’ locations only; and
- **Date Relevance** – surveys on neutral weekdays only, i.e. excluding Mondays and Fridays.

Table 6.1: Allocated Development Traffic Generation – Employment (B2 and/or B8)

		Morning Peak (0800-0900)			Evening Peak (1700-1800)			Daily (0700-1900)		
		Arrive	Depart	Total	Arrive	Depart	Total	Arrive	Depart	Total
B2 Industrial Estate	Trip Rate	0.423	0.208	0.631	0.135	0.380	0.515	2.971	2.956	5.927
	Trips	51	25	76	16	46	62	357	355	711
B8 Commercial Warehousing	Trip Rate	0.168	0.140	0.308	0.125	0.207	0.332	2.125	2.118	4.243
	Trips	20	17	37	15	25	40	255	254	509

6.2.5 **Table 6.1** demonstrates that the allocated employment development at the site could generate up to 76 two-way movements in the morning peak period and 62 two-way movements in the evening peak period. Across a typical weekday, some 711 two-way movements could be expected. This level of traffic generation broadly equates to one additional vehicle every minute in the morning and evening peak periods respectively.

6.2.6 Moreover, around 13 two-way HGV movements could be expected to be generated in the morning peak period and around 16 two-way HGV movements in the evening peak period. Across the course of a typical weekday, some 206 two-way HGV movements could be expected.

6.3 Proposed Development – Trip Generation

6.3.1 The planning application proposes residential development of up to 140 dwellings at the site. This will be a mix of private and affordable dwellings albeit for assessment purposes a robust approach has been taken considering only Private Housing (which exhibits higher trip rates).

6.3.2 To determine the likely vehicular traffic generation of the scheme, the TRICS database has been used. The vehicular trip rates have been obtained using the following parameters:

- **Type** – Private Housing Only
- **Region** – all of England (excluding Greater London);
- **Size Relevance** – developments with a range of 80 to 250 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 on neutral weekdays only

6.3.3 A summary of the vehicular trips is provided in **Table 6.2**, and the full TRICS output report is presented in **Appendix H**.

Table 6.2: Proposed Traffic Generation – Residential (C3)

	Morning Peak (0800-0900)			Evening Peak (1700-1800)			Daily (0700-1900)		
	Arrive	Depart	Total	Arrive	Depart	Total	Arrive	Depart	Total
Trip Rate	0.152	0.387	0.539	0.328	0.165	0.493	2.471	2.578	5.049
Trips	21	54	75	46	23	69	346	360	707

Source: TRICS

6.3.4 Table 6.2 demonstrates that the proposed residential development at the site is likely to generate some 75 two-way vehicle movements in the morning peak period and some 69 two-way movements during the evening peak period. Across the duration of a typical weekday, some 707 two-way vehicle movements could be expected. This broadly equates to one additional vehicle movement every one minute in the morning and evening peak periods, respectively.

6.4 Site Allocation and Proposed Development – Comparison

6.4.1 A comparison can be drawn between the likely traffic impacts associated with a 12,000sqm floorspace employment scheme, developed in line with the site allocation, and a 140 dwelling residential scheme at the site. **Table 6.3** provides this comparison and on this basis an estimate of the likely net traffic impact on the local highway network.

Table 6.3: Net Traffic Impact – Employment (B2/B8) to Residential (C3)

	Morning Peak (0800-0900)			Evening Peak (1700-1800)			Daily (0700-1900)		
	Arrive	Depart	Total	Arrive	Depart	Total	Arrive	Depart	Total
B2 Industrial Estate	51	25	76	16	46	62	357	355	711
B8 Commercial Warehousing	20	17	37	15	25	40	255	254	509
Residential	21	54	75	46	23	69	346	360	707
<i>Net Change from Industrial Estate</i>	-30	+29	+1	+30	-23	+7	-11	+5	-4
<i>Net Change from Commercial Warehousing</i>	+1	+37	+38	+31	-2	+29	+91	+106	+198

Source: TRICS and Consultant's Calculations

6.4.2 When compared to a B2 employment use, the proposed development will result in a negligible increase in vehicular traffic on the local highway network during the morning and evening peak periods respectively. Across a daily period, the proposed development would lead to a decrease of circa 4 two-way vehicle movements.

6.4.3 When compared to a B8 employment use, the proposed development will result in an increase of circa 38 two-way vehicle movements in the morning peak period and an increase of circa 29 two-way vehicle movements in the evening peak period. Across a daily period, an additional 198 two-way vehicle movements would be expected.

- 6.4.4 Whilst the impacts of the proposed development are assessed in full, i.e. assuming all development traffic at the site is 'new' to the local highway network, it is nonetheless evident that the delivery of a residential development of 140 dwellings at the site would generate levels of travel demand that are consistent with the level of travel demand that would arise from development of the site in line with the Local Plan allocation.
- 6.4.5 In addition, the number of HGV movements associated with the proposed residential use would be significantly lower than those associated with a B2 and/or a B8 employment use.

6.5 Traffic Distribution and Assignment

- 6.5.1 The likely journey purpose for the generated car driver peak hour trips has been determined using data derived from the NTS 2018 (DfT). The proportion of the peak hour trips by journey purpose by car is presented in **Table 6.4**.

Table 6.4: Proportion of Peak Hour Trips by Journey Purpose (Car Driver Only)

Trip Purpose	Morning Peak Hour	Evening Peak Hour
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 2014/2018, National Travel Survey, DfT, 2018

- 6.5.2 The NTS 2018 data 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 hours.

Commuting Journeys

- 6.5.3 Journey 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 Havant 014 mid-layer super output area (MSOA) has been used, which encompasses the site and the surrounding residential area and provides a realistic comparison area to the scheme. The analysis is summarised in **Table 6.5** and presented in full in **Appendix I**.

Table 6.5: Summary of Work Trips Distribution (Travel by Car)

Destination	Percentage of Trips to Work	Percentage of All Trips
Havant	20.5%	9.0%
Chichester	8.8%	3.9%
Waterlooville	5.9%	2.6%
Portsea / Central Portsmouth	4.8%	2.1%
Port Solent	4.7%	2.1%
Hilsea (Portsmouth)	4.3%	1.9%
Emsworth	4.2%	1.8%
Cosham (Portsmouth)	3.7%	1.6%
Petersfield	2.5%	1.1%
Fareham	2.5%	1.1%
Southampton	2.4%	1.1%
Bedhampton	2.1%	0.9%
Somerstown (Portsmouth)	1.7%	0.8%
Horndean	1.7%	0.7%
Hayling Island	1.7%	0.7%
Milton (Portsmouth)	1.6%	0.7%
Walderton	1.6%	0.7%
Gosport	1.6%	0.7%
Tipner (Portsmouth)	1.6%	0.7%
Whiteley	1.3%	0.6%
Old Portsmouth (Portsmouth)	1.2%	0.5%
Denmead	1.1%	0.5%
Swanwick	1.0%	0.5%
Other	17.5%	7.7%
Total	100.0%	43.9%

Non-employment Journeys

- 6.5.4 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.
- 6.5.5 The population of key urban areas (likely destinations 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.

6.5.6 A summary of the distribution of trips for non-employment journey purposes by destination is presented in **Table 6.6**. The gravity model is presented in full in **Appendix I**.

Table 6.6: Distribution of Other Journey Purposes (Car Drivers Only)

Destination	Percentage of Trips for Non-employment Purposes	Percentage of All Trips
Havant	28.5%	16.0%
Waterlooville	15.2%	8.5%
Bedhampton	5.6%	3.1%
Tipner (Portsmouth)	5.0%	2.8%
Fareham	4.4%	2.5%
Somerstown (Portsmouth)	4.2%	2.4%
Cosham (Portsmouth)	4.1%	2.3%
Milton (Portsmouth)	4.0%	2.3%
Port Solent (Portsmouth)	3.3%	1.8%
Hilsea (Portsmouth)	3.2%	1.8%
Portsea / Central Portsmouth	3.1%	1.7%
Hayling Island	2.9%	1.6%
Horndean	2.9%	1.6%
Emsworth	2.4%	1.3%
Petersfield	1.7%	0.9%
Denmead	1.3%	0.7%
Walderton	0.9%	0.5%
Old Portsmouth (Portsmouth)	0.7%	0.4%
Other	6.4%	3.6%
Total	100.0%	56.1%

Source: Census 2011

Combined Traffic Distribution

6.5.7 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 6.7** and presented in full in **Appendix I**.

Table 6.7: Combined Distribution (Travel by Car)

Destination	Percentage of all Trips – Work	Percentage of all Trips – Non-work	Percentage of all Trips
Havant	9.00%	16.00%	25.00%
Waterlooville	2.60%	8.50%	11.10%
Bedhampton	0.90%	3.10%	4.10%
Cosham (Portsmouth)	1.60%	2.30%	4.00%
Chichester	3.90%	-	3.90%
Port Solent (Portsmouth)	2.10%	1.80%	3.90%
Portsea / Central Portsmouth	2.10%	1.70%	3.80%
Hilsea (Portsmouth)	1.90%	1.80%	3.70%
Fareham	1.10%	2.50%	3.60%
Tipner (Portsmouth)	0.70%	2.80%	3.50%
Emsworth	1.80%	1.30%	3.20%
Somerstown (Portsmouth)	0.80%	2.40%	3.10%
Milton (Portsmouth)	0.70%	2.30%	3.00%
Horndean	0.70%	1.60%	2.40%
Hayling Island	0.70%	1.60%	2.40%
Petersfield	1.10%	0.90%	2.10%
Walderton	0.70%	0.50%	1.20%
Denmead	0.50%	0.70%	1.20%
Southampton	1.10%	-	1.10%
Old Portsmouth (Portsmouth)	0.50%	0.40%	0.90%
Gosport	0.70%	-	0.70%
Whiteley	0.60%	-	0.60%
Swanwick	0.50%	-	0.50%
<i>Other</i>	7.7%	3.6%	11.3%
Total	43.9%	56.1%	100.0%

Source: Census 2011

- 6.5.8** The main travel demands from the Site are Havant, Bedhampton and Portsmouth.
- 6.5.9** The traffic expected to be generated by the proposed residential development at the site (ref: **Table 6.2**) has been distributed across the local highway network to the destinations summarised in **Table 6.7** 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 were reflected.

Table 6.8: Summary of Traffic Assignment

Decision Points	Route Choice	Percentage of Routing
1 (Site Access)	Ranelagh Road (East)	45.3%
	West Street (West)	44.2%
	West Street (East)	10.5%
Total		
2	Brockhampton Road (South)	45.3%
	Bedhampton Road (West)	32.6%
	West Street (East)	10.5%
	Bedhampton Road (East)	11.6%
Total		
3	Brockhampton Road (South)	34.8%
	Solent Road (East)	10.5%
	Park Road (North)	10.5%
Total		
4	Harts Farm Way (West)	31.8%
	Park Road (South)	10.5%
	Southmoor Lane	3.0%
Total		

Source: Consultant's Calculations

- 6.5.11 The proposed development generated traffic distribution has been agreed with HCC, as part of pre-application discussions, and is presented visually in **TF11** and **TF12** for the morning and evening peak periods respectively.

6.6 Traffic Growth and Committed Development

- 6.6.1 Factors to allow for background traffic growth from 2020 (the year the traffic surveys were undertaken) to 2023 (year of anticipated first occupation) have been derived using the TEMPRO software for the Havant 014 mid-layer super output area. A 2028 (five years after opening) sensitivity scenario has also been assessed. The growth rates obtained are 'unadjusted', i.e. include all housing and employment growth identified by HBC without education.
- 6.6.2 The TEMPRO growth factors are summarised in **Table 6.9** and the TEMPRO calculations are provided in **Appendix J**.

Table 6.9: TEMPRO Derived Growth Factors

Growth Factor	Morning Peak	Evening Peak
2020-2023	1.029185	1.027984
2020-2028	1.069662	1.068101

Source: TEMPRO

- 6.6.3** In addition, as described in Section 3, to ensure that the Baseline traffic data is representative of normal conditions, and to take account of the COVID-19 restrictions in place at the time of survey, the baseline traffic data was increased (adjusted) based on a COVID-19 factor derived from pre-COVID traffic conditions in Havant.
- 6.6.4** In addition to TEMPRO growth factors, and at the request of HCC, the committed development at Langstone Technology Park (located approximately 1km to the southeast of the site off Brookside Road) has also been included. The committed development would see the change of use of existing floorspace at the Langstone Technology Park to a B1c / B8 land use.
- 6.6.5** The development traffic flows for the Langstone Technology Park site have been extracted from the Transport Assessment submitted in support of the planning application (*Ref:* APP/19/00703).
- 6.6.6** The Transport Assessment submitted in support of the Langstone Technology Park planning application did not include a study area wider than the Brockhampton Road / Brookside / Southmoor Lane / Harts Farm Way roundabout. Therefore, the committed development traffic flows have been distributed throughout the wider study area in accordance with the existing turning proportions recorded during 2020 traffic surveys.
- 6.6.7** This approach to the committed development traffic flows associated with the Langstone Technology Park has been agreed with HCC during pre-application scoping discussions.

6.7 Junction Capacity Testing

- 6.7.1** The proposed development will generate around one additional vehicle movements per minute onto the local highway network during the morning and evening peak hours. In real terms this is a modest level of impact.
- 6.7.2** The proposed residential development will not differ significantly from a B2 and/or a B8 development during the peak periods, in line with the development allocation at the site.

6.7.3 Notwithstanding the fallback position of the site (its potential for development in line with the existing site allocation), an assessment has been carried out considering all trips onto the local highway network as 'new' trips.

6.7.4 Detailed junction capacity analysis has been undertaken using the TRL software Junctions 9 at the following junctions, in line with the assessment scope agreed with HCC:

- The Meyrick Road / West Street priority junction;
- The New Road / West Street / Bedhampton Road priority junction;
- The Brockhampton Road / Solent Road / Marples Way four-arm roundabout junction;
- The Brockhampton Road / Brookside Road / Southmoor Lane / Harts Farm Way four-arm roundabout junction.

6.7.5 The detailed modelling has been undertaken considering the following scenarios:

- 2020 base year;
- 2023 opening year 'without development' i.e. allowing for background traffic growth and committed development;
- 2028 future year 'without development';
- 2023 opening year 'with development' i.e. allowing for background traffic growth, committed development and the development proposal; and
- 2028 future year 'with development'.

6.7.6 This approach to the detailed junction capacity analysis has been agreed with HCC during pre-application scoping discussions.

6.7.7 **Appendix K** presents the junction modelling outputs, and the results of the assessments are summarised in the following paragraphs.

Meyrick Road / West Street

6.7.8 The Meyrick Road / West Street priority junction is located some 350m to the northeast of the proposed site access and takes the form of a simple priority junction. The junction has been modelled using the PICADY module of Junctions 9 and the junction capacity assessment results are summarised in **Tables 6.10**.

Table 6.10: Meyrick Road / West Street

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Observed 2020						
Meyrick Road	0.02	0	7	0.03	0	6
West Street	0.01	0	5	0.01	0	5
2023 'without development'						
Meyrick Road	0.02	0	7	0.03	0	6
West Street	0.01	0	5	0.01	0	5
2028 'without development'						
Meyrick Road	0.02	0	7	0.03	0	6
West Street	0.01	0	5	0.01	0	5
2023 'with development'						
Meyrick Road	0.08	0	7	0.05	0	6
West Street	0.02	0	5	0.05	0	5
2028 'with development'						
Meyrick Road	0.08	0	7	0.06	0	6
West Street	0.02	0	5	0.05	0	5

Source: Junctions 9

- 6.7.9** The junction is forecast to operate well within capacity (i.e. with minimal queueing and delay), across all opening year and future year scenarios.
- 6.7.10** The proposed development has a limited impact on the operation of the junction, with a maximum increase in RFC of 6% recorded at the Meyrick Road arm of the junction during the morning peak hour in both the 2023 and 2028 future year scenarios. This increase does not correspond with any material impact on queue lengths or delay.

New Road / West Street / Bedhampton Road

- 6.7.11** The New Road / West Street / Bedhampton Road junction is located some 500m to the northwest of the proposed site access and takes the form of a priority junction with a filter lane for left-turning vehicles and a right-turning lane. The junction has been modelled using the PICADY module of Junctions 9 and the junction capacity results are summarised in **Table 6.11**.

Table 6.11: New Road / West Street / Bedhampton Road

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Observed 2020						
1 – West Street (Right-out)	0.07	0	13	0.07	0	13
1 – Bedhampton Road (Right-in)	0.19	0	7	0.19	0	7
2 – West Street (Left-out)	0.13	0	7	0.25	0	8
2 – New Road / Bedhampton Road	0.45	2	6	0.42	2	6
3 – New Road (Left-in)	0.02	0	5	0.03	0	5
2023 'without development'						
1 – West Street (Right-out)	0.08	0	14	0.07	0	14
1 – Bedhampton Road (Right-in)	0.20	0	8	0.20	0	8
2 – West Street (Left-out)	0.14	0	7	0.26	0	8
2 – New Road / Bedhampton Road	0.48	2	7	0.44	2	7
3 – New Road (Left-in)	0.02	0	5	0.03	0	5
2028 'without development'						
1 – West Street (Right-out)	0.08	0	15	0.08	0	14
1 – Bedhampton Road (Right-in)	0.21	0	8	0.21	0	8
2 – West Street (Left-out)	0.15	0	7	0.28	0	8
2 – New Road / Bedhampton Road	0.53	3	7	0.48	2	7
3 – New Road (Left-in)	0.02	0	5	0.03	0	5
2023 'with development'						
1 – West Street (Right-out)	0.10	0	14	0.08	0	14
1 – Bedhampton Road (Right-in)	0.21	0	8	0.22	0	8
2 – West Street (Left-out)	0.17	0	7	0.28	0	8
2 – New Road / Bedhampton Road	0.51	2	7	0.51	2	7
3 – New Road (Left-in)	0.02	0	5	0.04	0	5
2028 'with development'						
1 – West Street (Right-out)	0.11	0	15	0.09	0	14
1 – Bedhampton Road (Right-in)	0.22	0	8	0.24	0	8
2 – West Street (Left-out)	0.18	0	7	0.29	0	8
2 – New Road / Bedhampton Road	0.56	3	8	0.55	3	8
3 – New Road (Left-in)	0.02	0	5	0.04	0	5

Source: Junctions 9

6.7.12 The junction is forecast to operate well within capacity (i.e. with minimal queueing and delay), across all opening year and future year with development scenarios, with a maximum Ratio of Flow to capacity (RFC) of 0.56 against a design capacity of 0.85 and capacity of 1.0 RFC.

6.7.13 The proposed development has a limited impact on the operation of the junction, with a maximum increase in RFC of 7% recorded at the New Road arm of the junction during the evening peak period in the 2028 future year scenario.

Brockhampton Road / Solent Road / Marples Way

6.7.14 The Bedhampton Road / Solent Road / Marple Way junction is located some 500m to the southeast of the proposed site access and takes the form of a four-arm roundabout junction. The junction is modelled using the ARCADY module in Junctions 9 (**Table 6.12**).

Table 6.12: Brockhampton Road / Solent Road / Marples Way

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Observed 2020						
Brockhampton Road (N)	0.21	0	5	0.14	0	5
Solent Road	0.29	0	4	0.28	0	4
Brockhampton Road (S)	0.30	0	5	0.34	1	5
Marples Way	0.03	0	5	0.12	0	5
2023 'without development'						
Brockhampton Road (N)	0.22	0	5	0.15	0	5
Solent Road	0.30	0	4	0.28	0	4
Brockhampton Road (S)	0.31	1	5	0.36	1	6
Marples Way	0.03	0	5	0.12	0	5
2028 'without development'						
Brockhampton Road (N)	0.23	0	5	0.16	0	5
Solent Road	0.31	1	4	0.30	0	4
Brockhampton Road (S)	0.32	1	6	0.38	1	6
Marples Way	0.04	0	5	0.13	0	5
2023 'with development'						
Brockhampton Road (N)	0.25	0	5	0.16	0	5
Solent Road	0.31	0	4	0.29	0	4
Brockhampton Road (S)	0.32	1	5	0.38	1	6
Marples Way	0.03	0	5	0.13	0	5
2028 'with development'						
Brockhampton Road (N)	0.26	0	5	0.17	0	5
Solent Road	0.32	1	4	0.31	0	4
Brockhampton Road (S)	0.33	1	6	0.40	1	6
Marples Way	0.04	0	5	0.13	0	5

6.7.15 The results demonstrate that the junction operates well within capacity (i.e. with minimal queueing and delay), across all opening year and future year with development scenarios.

6.7.16 The proposed development has a limited impact on the operation of the junction, with a maximum increase in RFC of 3% recorded at the Brockhampton Road (North) arm of the junction during the morning peak hour in both future year scenarios. This increase in RFC does not correspond with any material increase in queueing or delay.

Brockhampton Road / Brookside Road / Southmoor Lane / Harts Farm Way

6.7.17 The Brockhampton Road / Brookside Road / Southmoor Lane / Harts Farm Way junction is located some 750m to the southeast of the proposed site access and takes the form of a four-arm roundabout junction. The junction has been modelled using the ARCADY module in Junctions 9 and the results are summarised in **Table 6.13**.

Table 6.13: Brockhampton Road / Brookside Road / Southmoor Lane / Harts Farm Way

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Observed 2020						
Brockhampton Road	0.30	0	4	0.28	0	4
Brookside Road	0.14	0	8	0.17	0	8
Southmoor Lane	0.13	0	3	0.26	0	4
Harts Farm Way	0.46	1	6	0.26	0	4
2023 'without development'						
Brockhampton Road	0.31	0	4	0.29	0	4
Brookside Road	0.15	0	8	0.21	0	8
Southmoor Lane	0.14	0	3	0.27	0	4
Harts Farm Way	0.48	1	6	0.27	0	4
2028 'without development'						
Brockhampton Road	0.32	1	5	0.30	0	4
Brookside Road	0.16	0	8	0.22	0	8
Southmoor Lane	0.14	0	3	0.28	0	4
Harts Farm Way	0.50	1	6	0.28	0	4
2023 with development'						
Brockhampton Road	0.32	1	5	0.30	0	4
Brookside Road	0.15	0	8	0.21	0	8
Southmoor Lane	0.14	0	3	0.27	0	4
Harts Farm Way	0.48	1	6	0.28	0	4

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2028 'with development'						
Brockhampton Road	0.34	1	5	0.31	0	4
Brookside Road	0.16	0	9	0.22	0	8
Southmoor Lane	0.14	0	3	0.28	0	4
Harts Farm Way	0.50	1	6	0.29	0	5

Source: Junctions 9

6.7.18 The results demonstrate that the junction operates well within capacity (i.e. with minimal queueing and delay), across all opening year and future year with development scenarios.

6.7.19 The proposed development has a minimal impact on the operation of the junction, with a maximum increase of 2% recorded at the Brockhampton Road arm of the junction during the morning peak hour in the 2028 future year scenario. The increase in RFC does not correspond with any material impact on queue lengths or delay.

6.8 Traffic Impacts on Local Roads

6.8.1 The site is located within immediate proximity of several local residential streets, namely Meyrick Road, Ranelagh Road and Knox Road, which are projected to be used for travel to the east of the site. These local roads are presently very lightly trafficked, however currently accommodate significant amounts of on-street car parking.

6.8.2 The results of the parking beat survey demonstrate that these local streets operate under moderate to high levels of parking stress, with on-street car parking often present on both sides of the carriageway, corroborating site observations.

6.8.3 Due to the geometry of these local streets, where parking occurs, the streets are mostly restricted to one-way working. In addition, the parking beat survey recorded occasional incidences of cars being parked contrary to parking restrictions and blocking driveways.

6.8.4 The proposed development would see all development traffic use Meyrick Road, and up to 56% of development traffic utilise Ranelagh Road to access Brockhampton Road.

6.8.5 As such, an analysis of the likely development traffic impact on the operation of these local streets has been undertaken and is presented in **Table 6.14**.

Table 6.14: Proposed Development Generated Traffic – Local Roads

	Morning Peak Period (0800-0900)			Evening Peak Period (1700-1800)		
	EB / NB	WB / SB	Two-way	EB / NB	WB / SB	Two-way
Meyrick Road (Site Access)	Observed Traffic (2020)					
	10	9	19	16	7	23
	Proposed Development Traffic					
	54	21	75	23	46	69
	Net Impact					
	+54 (+540%)	+21 (+233%)	+75 (+394%)	+23 (+144%)	+46 (+657%)	+69 (+300%)
Meyrick Road (North of Ranelagh Road)	Observed Traffic (2020)					
	10	9	19	16	7	23
	Proposed Development Traffic					
	30	9	39	13	20	33
	Net Impact					
	+30 (+300%)	+9 (+100%)	+39 (+205%)	+13 (+81%)	+20 (+286%)	+33 (+143%)
Ranelagh Road	Observed Traffic (2020)					
	23	15	38	24	31	55
	Proposed Development Traffic					
	24	12	36	10	26	36
	Net Impact					
	+24 (+104%)	+12 (+80%)	+36 (+95%)	+10 (+42%)	+26 (+84%)	+36 (+65%)

Source: Consultant's Calculations

- 6.8.6** Meyrick Road and Ranelagh Road are currently very lightly trafficked, with circa 23 two-way vehicle movements and 55 two-way vehicle movements using the roads during the network peak periods respectively. This broadly equates to one vehicle every two minutes along Meyrick Road and less than one vehicle per minute along Ranelagh Road.
- 6.8.7** With regards to Meyrick Road, the proposed development will lead to a significant uplift in traffic where it forms the site access over which all traffic for the development will pass, with up to 75 two-way vehicle movements during the network peak periods. However, to the north of Ranelagh Road, the proposed development will lead to a modest uplift in traffic, with up to 39 two-way vehicle movements likely to use the road during the peak periods. This broadly equates to one additional vehicle every one and a half to two minutes.
- 6.8.8** With regards to Ranelagh Road, the proposed development will lead to a modest uplift in traffic, with circa 36 two-way development traffic movements likely to use the street during the network

peak periods as part of journeys to/from the A27 Havant Bypass respectively. This broadly equates to one additional vehicle every one and a half to two minutes.

- 6.8.9 Whilst this level of development traffic generation is significant in the context of existing traffic flows, Meyrick Road and Ranelagh Road will remain very lightly trafficked with the proposed development in place. Traffic flows of less than 100 two-way vehicle movements are forecast on both streets during either the morning or evening peak periods respectively, even when accounting for background traffic growth and committed development.
- 6.8.10 In the context of the existing parking that occurs on local roads, primarily Ranelagh Road, the likely incidence of two cars meeting where two-way working is limited (due to the presence of on-street parking) will also remain low. Traffic frequency would increase from one vehicle every two minutes to one vehicle every minute. At this low frequency, vehicles will be able to comfortably pass along Ranelagh Road (and other local streets) and in the event that a vehicle in the opposing direction is encountered, this low frequency will ensure that vehicles can locate and utilise an area of the street where passing is possible.
- 6.8.11 In addition, as set out in Section 4 of this TA, the proposed development will accommodate an appropriate level of car parking (in line with standards), which will serve to ensure that development parking demand does not extend off site to these nearby residential streets.
- 6.8.12 It is also pertinent to note that the proposed development distribution model, which has been agreed with HCC during pre-application discussions, has been robust in its assumptions. All development traffic has been shown to utilise Ranelagh Road as part of journeys to/from the A27 Havant Bypass, with no development traffic shown to utilise Knox Road. In all likelihood, there will be a proportionate spread of development generated traffic using both Ranelagh Road and Knox Road as means of undertaking such journeys, and therefore the development traffic impacts set out above, as well as the analysis in **Table 6.14**, are robust.

6.9 **A27 / Havant Bypass (Teardrop Junction)**

- 6.9.1 The A27 / Havant Bypass, known locally as the 'teardrop junction', is located circa 1km to the southwest of the application site and forms one of the principal junctions with the A27 to the south of Havant.
- 6.9.2 It was agreed with HCC, during pre-application highways discussions, that detailed junction modelling of the teardrop junction would not be necessary as part of the TA.

- 6.9.3 Notwithstanding this, it was agreed that a percentage impact assessment of the development generated traffic impacts at the teardrop junction would be undertaken.

Percentage Impact Assessment

- 6.9.4 To determine the existing operation of the teardrop junction, the Transport Assessment (prepared by others) submitted in support of the Forty Acre Farm development (*Ref: 18/00450*) to the west of Havant has been reviewed.
- 6.9.5 The TA presented baseline traffic flow data for the teardrop junction, as well as detailed junction capacity analysis in a 2028 future year scenario. An extract of the full baseline traffic survey data is contained at **Appendix L**.
- 6.9.6 To determine the likely development traffic impact on the operation of the teardrop junction, the baseline traffic survey data for the Harts Farm Way arm of the junction has been compared to the volume of development generated traffic that is forecast to route along Harts Farm Way. This analysis is presented in **Table 6.15**.

Table 6.15: Percentage Impact Analysis – Teardrop Junction (Harts Farm Way)

Time Period	Direction		
	Northbound	Southbound	Total
Baseline Traffic Flows			
AM Peak	317	1,098	1,415
PM Peak	1,120	374	1,494
Proposed Development Traffic Flows			
AM Peak	20	7	27
PM Peak	8	17	25
Percentage Impact			
AM Peak	-	-	1.9%
PM Peak	-	-	1.7%

Source: Consultant's Calculations

- 6.9.7 The proposed development traffic impact on the Harts Farm Way arm of the junction is very low, with a 1.9% uplift in traffic forecast during the morning peak period and an uplift of 1.7% forecast in the evening peak period.
- 6.9.8 In addition, the tidal nature of the proposed development traffic flows means that the majority of development traffic will utilise the Harts Farm Way approach to the junction during the

morning peak period and the A27 arms of the junction during the evening peak period. When considered in the context of the future year junction capacity analysis at the Teardrop junction, as set out in the Forty Acre Farm TA:

- There is significant headroom on the Harts Farm Way arm for additional development generated traffic in the morning peak hour – with a maximum Degree of Saturation (DoS) of 40.9% forecast;
- There is significant headroom on the A27 arms of the junction during the evening peak hour – with a maximum DoS 71.8% forecast.

6.9.9 Moreover, the total development generated traffic that is forecast to utilise the teardrop junction has been compared to the total extracted baseline traffic flows through junction. This analysis is presented in **Table 6.16**.

Table 6.16: Percentage Impact Analysis – Teardrop Junction (Total Junction Flow)

Time Period	Total Flow
Baseline Traffic Flows	
AM Peak	3495
PM Peak	3557
Proposed Development Traffic Flows	
AM Peak	27
PM Peak	25
Percentage Impact	
AM Peak	0.8%
PM Peak	0.7%

Source: Consultant's Calculations

6.9.10 When considered in the context of total traffic flow through the teardrop junction, the proposed development generated traffic is forecast to result in an uplift of circa 0.8% and 0.7% in the morning and evening peak periods respectively. This level of uplift is de-minimis, and would certainly have no significant, let alone severe, impact on the operation of the junction.

SECTION 7 SUMMARY AND CONCLUSIONS

7.1 SUMMARY

Background

- 7.1.1 Foreman Homes Ltd have appointed i-Transport LLP to provide transport and highways advice in relation to a planning application for a residential development of up to 140 dwellings.
- 7.1.2 The site is bounded to the north by Meyrick Road, to the west by Hermitage Stream, to the south by light industrial units within Kingscroft Business Park and to the east by dwellings that form part of a recently permitted residential scheme by Foreman Homes, which are accessed from Ranelagh Road via Abrams Way, and industrial units at Marples Way
- 7.1.3 The site is allocated for development in the adopted Havant Borough Council (HBC) Local Plan as Site BD19 – Kingscroft Farm. The allocation is for 12,000sqm of employment floorspace, with reference made within Policy BD19 to the development of manufacturing and/or warehousing units. This allocation remains extant, but at this time, no planning applications have been progressed at the site. Notwithstanding this, the site remains allocated for development, and it is now proposed to submit a planning application for a residential development at the site.

Existing Conditions and Accessibility

- 7.1.4 The application site is readily accessible to a range of facilities and services that residents may use on a day to day basis by a range of travel modes, including on-foot and by cycle. In line with HCC guidance, a WCHAR has been undertaken in support of the development proposals at the application site and demonstrates that with the improvements proposed, the routes are suitable.
- 7.1.5 Local bus services are accessible a short walk from the site, providing frequent and attractive public transport access to local destinations and further afield towards Leigh Park, Portsmouth and Southsea. There are also a number of local school bus services accessible from the nearest bus stops. The closest railway station to the application site is Bedhampton, which provides direct services to a number of destinations including London Waterloo, Petersfield, Chichester and Portsmouth & Southsea. At approximately 550m from the site, Bedhampton railway station is located well within a reasonable walking and cycling distance.
- 7.1.6 In addition to Bedhampton railway station, Havant railway station is located some 1500m from the centre of the site and provides additional services towards Southampton. Much like

Bedhampton station, at approximately 1500m from the site, Havant railway station is located within a reasonable walking and cycling distance.

- 7.1.7 The existing highway conditions within the vicinity of the site have been considered through the collection of traffic survey data, which has been uplifted using a covid-19 uplift that has been agreed with HCC. A review of on-street parking on local residential streets has been carried out through the undertaking of parking beat surveys, and a detailed review of PIA data has been undertaken. The PIA data review did not identify any specific road safety problems within the vicinity of the site that are likely to be exacerbated with the proposed development in place.

Proposed Site Access Arrangements and Site Layout

- 7.1.8 Access to the site is proposed from Meyrick Road. The existing carriageway will be extended south into the site and upgraded to provide a 5.5m wide carriageway. Vehicular access to the Portsmouth Water land to the west of the site is to be maintained through the provision of a realigned priority junction onto the northern side of the extended Meyrick Road carriageway. The realigned junction provides improved sightlines for egressing vehicles and swept path analysis has been undertaken to demonstrate ease of access for HGVs.
- 7.1.9 In addition to the upgrading of Meyrick Road, a circa 30m length of Ranelagh Road will be upgraded to a width of 5.5m and will include a 2m wide footway extension to tie into the existing provision along the road.
- 7.1.10 Pedestrian access to the site will be achieved via a 2m wide footway on the eastern side of the site access road. The footway will extend along the eastern side of Meyrick Road and tie into the existing footway on the southern side of Knox Road. Dropped kerb pedestrian crossings will also be provided across Meyrick Road, Knox Road and Ranelagh Road to facilitate safe pedestrian movements to/from the site.
- 7.1.11 The internal site layout will be designed in accordance with the principles of the MfS and the primary roads built to adoptable standards. Swept path analysis of the site layout will be undertaken at the Reserved Matters stage, whilst car and cycle parking will be provided in accordance with the Havant Borough Council Parking SPD.

Traffic Impact

- 7.1.12 The proposed development is anticipated to generate some 75 two-way vehicle movements during the weekday peak hour periods, equating to broadly one additional vehicle movement

every minute onto the local highway network. When compared to the extant employment uses at the site the proposed development of 140 dwellings would generate relatively low levels of additional traffic onto the local highway network. Notwithstanding this, the impacts of the proposed development have been assessed in full, i.e. assuming all development traffic at the site is 'new' to the local highway network.

- 7.1.13** The development traffic has been assigned to the local highway network using a distribution based on a combination of 2011 Census Travel to Work Data (for the proportion of peak hour trips that are workplace journeys) and a gravity model (for all other journey purposes). The distribution and assignment of development generated traffic has been discussed and agreed with HCC as part of pre-application discussions.
- 7.1.14** Operational assessments at key junctions on the local highway network have been undertaken to assess the off-site highways impacts of the proposed development. The operational assessments have been undertaken for an opening year of 2023, as well as future year of 2028 and include the impact of committed development. The scope of detailed junction modelling undertaken has been agreed with HCC during pre-application discussions.
- 7.1.15** The off-site junctions assessed are forecast to operate with spare capacity in the future year scenarios, and the proposed development is forecast to have a limited impact on the operation of these junctions.
- 7.1.16** Therefore, the proposed development generated traffic can be accommodated on the local highway network and the residual cumulative impacts of the development fall far short of the 'severe' test set by the NPPF.
- 7.1.17** Traffic impacts on local roads to the site have been appraised in full. Whilst there is a prevalence of on street parking evident on the east-west road links (i.e. Knox Road and Ranelagh Road) the impacts of the development on these connections will be relatively limited and not result in conditions which raise any material safety or operational issues.
- 7.1.18** A Travel Plan is proposed to promote sustainable travel and ensure opportunities for sustainable movement from the site are taken up. This will serve to reduce travel demands from those forecast in the TA, which should be considered to be robust.

7.2 Conclusions

7.2.1 It is therefore demonstrated that:

- There are genuine opportunities for travel to and from the site using sustainable modes, and that the proposals will ensure these opportunities are taken up.
- Safe and suitable access can be provided to the development for all users.
- The local highway network can accommodate the traffic generated by the development without leading to any significant (let alone 'severe') impact on operation or safety.

7.2.2 The proposals are therefore in accordance with national and local policy and are acceptable in highways and transport terms.