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'optimising development potential'

**LAND SOUTH OF BARTONS ROAD,
HAVANT**

Transport Assessment

**Project No. 14-018
November 2015**



**LAND SOUTH OF BARTONS ROAD,
HAVANT**

Transport Assessment

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1.0 INTRODUCTION

1.1 This Transport Assessment has been prepared by C & A Consulting Engineers, as instructed by Chidden Farms, to support the proposed outline planning application for residential development on Land south of Bartons Road. The location of the site is presented on **Figure 1**.

1.2 The site benefits from being an allocated site for housing within the Havant Adopted Allocations Plan (July 2014). The site specific development requirements are set out in *Allocation Policy UE3b – Land south of Bartons Road*. This allocation allows for up to 203 dwellings to be promoted on this site.

1.3 Through the pre application process, review of the site constraints and consultation with key stakeholders it is proposed to submit an outline planning application for 175 dwellings on the site.

Key Stakeholder Consultation

1.4 As part of the pre-application stage, the development team have worked to engage with all key consultees and stakeholders. This includes Hampshire County Council as Highway Authority, Havant Borough Council as Planning Authority, as well as local Councillors and residents.

1.5 A Development Control Forum was also attended on 10 September 2015, in which the development proposals were presented and discussed with key consultees and the public. The responses from these consultees have been taken on board and are considered within this assessment, as discussed in the following sections.

Scope of Assessment

1.6 A scoping report was submitted to the highways authority Hampshire County Council (HCC) and agreed in principle with the highways officer Mark Philcox. The scoping report and correspondence with HCC is included as **Appendix A**.

1.7 In accordance with the DfT guidance and NPPG, this report and the proposed development, have given consideration to current government policy on transport, as set out in the National Planning Policy Framework. In addition, at a regional level the report references and accounts for the policy included in the Hampshire County Council (HCC) Local Transport Plan and within the Havant District Core Strategy and Adopted Allocations Plan.

Report Structure

1.8 **Section 2.0** of this report sets out the policy and guidance context against which the proposal will be judged. **Section 3.0** provides the local context in terms of the highway network, along with a detailed review of the local accessibility and access to non-car modes of travel.

1.9 **Section 4.0** details the proposed development and the site access arrangements. Following on from this, **Section 5.0** sets out the forecast trip generation and assignment and **Section 6.0** presents the assessment of the development trips on the surrounding network, along with any proposed mitigation and enhancements.

1.10 **Section 7.0** provides a Framework Travel Plan for the site and finally **Section 8.0** provides responses to other comments raised by stakeholders as part of the Development Control Forum which have not been covered in the main assessment and **Section 9.0** summarises this report and set out the conclusions.

2.0 POLICY CONTEXT

National Policy

National Planning Policy Framework

2.1 Adopted on 27th March 2012, the Department for Communities and Local Government's (DCLG's) National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied.

2.2 The NPPF replaces previous Planning Policy Guidance Notes and Statements, becoming the definitive national planning guidance from which local planning authorities can, in collaboration with their communities, produce Local Plans appropriate to the character and needs of their area.

2.3 The NPPF suggests that the key to its success is the following statement from Paragraph 14: *"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."*

2.4 Transport forms one of the 12 core land use planning principles set out by the NPPF. The transport principle directs that locations which are sustainable, or which can be made sustainable, should become the focus for significant development. Opportunities to utilise sustainable modes of travel to their fullest, such as public transport, walking and cycling should be actively taken and these modes are considered within this Transport Assessment. Paragraph 7 of the NPPF notes three 'dimensions':

- Economic;
- Social; and
- Environmental.

2.5 Transport is able to contribute significantly to the development's sustainable potential through the provision of infrastructure and services that

support the existing and future village community. The NPPF outlines overarching tests to ensure that *“opportunities for sustainable transport” have been taken, that a “safe and suitable access to the site can be achieved for all people”* and *“improvements can be undertaken within the transport network that cost effectively limit the significant impacts of development.”*

2.6 As encouraged in the NPPF, within paragraph 29, the proposed development will be designed so as to encourage people to use sustainable modes of travel as *“Plans and decisions should take account of whether:*

- *The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site to reduce the need for major transport infrastructure;*
- *safe and suitable access to the site can be achieved for all the people and;*
- *improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.”*

2.7 NPPF is now supported by Planning Practice Guidance, including on the topic of Travel Plans and Transport Assessments, released in March 2014.

Manual for Streets

2.8 Manual for Streets (MfS) was published in March 2007 and supersedes Design Bulletin 32: Places, Streets and Movement. MfS, produced for the Department for Transport (DfT) and the Department for Communities and Local Government (DCLG), provides guidance to a range of practitioners on effective residential street design.

2.9 MfS recognises that there is a need to transform the quality of residential streets, and this requires a new approach to the design of places which prioritise the needs of non-motorised users while recognising the wish for people to also

own cars. Its recommendation for providing a hierarchy of streets has been adopted in the formulation of the Masterplan.

Regional Policy

2.10 Hampshire County Council (HCC) is the Highway Authority for most of the roads in East Hampshire, with the Highways Agency (HA) being responsible for the A3/A3(M). Therefore the policies provided by HCC are applicable to the site. This includes the Hampshire Local Transport Plan 2011-2031 (LTP).

2.11 The LTP, contains a long-term strategy and a short-implementation plan, which taken together provide the transport policy context for the Core Strategy. The strategy sets out the priorities and policy objectives for transport in Hampshire as a whole to 2031. These include:

'Policy Objective 9: Introduce the 'shared space' philosophy, applying Manual for Streets design principles to support a better balance between traffic and community life in towns and residential areas;

Policy Objective 12: Invest in sustainable transport measures, including walking and cycling infrastructure, principally in urban areas, to provide a healthy alternative to the car for local short journeys to work, local services or schools; and work with health authorities to ensure that transport policy supports local ambitions for health and well-being.'

2.12 The LTP splits into three main strategies covering geographical areas of the region. Chapter 7 of the LTP sets out the South Hampshire Joint Strategy. This chapter forms a freestanding document to cover the South Hampshire area including the Horndean area. It has been developed jointly by the three Local Transport Authorities of Hampshire County Council, Portsmouth City Council and Southampton City Council, working together as Transport for South Hampshire (TfSH).

2.13 This chapter considers the strategy for this part of the region and sets out the aim to have a:

'Reduced dependence on the private car through an increased number of people choosing public transport and the 'active travel' modes of walking and cycling' and 'Improved awareness of the different travel options available to people for their journeys, enabling informed choices about whether people travel, and how.'

Companion Guide for Manual for Streets

2.14 HCC published the Companion Guide for MfS in 2010. The Companion Document sets out responses to specific parts of the Manual and is a technical publication meant for developers, designers and planners.

2.15 MfS forms the basis of the County Council's approach to street design and is therefore not repeated in the Companion Document. MfS does not cover the detailed technical standards for materials and construction that are needed for highways to be adopted. The Companion Guide provides a series of technical papers aimed at ensuring that, by applying the principles of the MfS, new streets meet the adoption standards HCC require without compromising quality of design.

2.16 Any development coming forward would need to meet the design standards set out in the Companion Guide

Local Policy

Havant Borough Core Strategy

2.17 The Core Strategy was adopted by Havant Borough Council in March 2011. The Havant Borough Core Strategy in one of the documents within the Havant Borough Local Development Framework is the principal document setting out the broad detail and direction of development in the borough. The Core Strategy describes the council's long term vision and objectives for what the borough will be like as a place in 2026.

2.18 Policy CS20 sets out the Borough's policy on Transport and Access, stating:

'Development will be permitted that:

- 1. Is consistent with and contributes to the implementation of the 'Reduce, Manage and Invest' strategy.*
- 2. Does not increase congestion and promotes better use of existing transport networks.*
- 3. Improves accessibility to goods, services and employment and promotes equality in the transport system.*
- 4. Provides transport management measures to ensure the safe and efficient operation of the strategic and local road network.*
- 5. Ensures that highway design responds positively to the characteristics of the area and delivers a high quality public realm for all users.*
- 6. Maintains or improves the range of transport modes accessible to the users of the development site with specific emphasis on public transport, especially high quality/frequency buses and includes walking and cycling where appropriate.'*

2.19 With regard to transport infrastructure the Core Strategy sets out the following Development Management Policies:

DM11 Planning for More Sustainable Travel

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.*

DM12 Mitigating the Impacts of Travel

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.*

DM13 Car and Cycle Parking on Residential Development

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.

2.20 The Havant Borough Local Plan (Allocations) document was adopted in July 2014. The Havant Borough Local Plan (Allocations) follows on from the adopted Havant Borough Local Plan (Core Strategy). The Allocations Plan replaces the remaining saved policies for the Havant Borough District-Wide Local Plan and plans for the delivery of the Borough's vision for growth and prosperity up to 2026, which is set out in the Havant Borough Local Plan (Core Strategy).

2.21 Policy AL1 sets out the Borough's policy on Sustainable Development, and presumption in favour of that which is sustainable, stating:

When considering development proposals, the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework (NPPF). It will always work proactively with applicants to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

Planning applications that accord with the policies in this local plan will be approved without delay, unless material considerations indicate otherwise. Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision, then the Council will grant permission unless material considerations indicate otherwise, taking into account whether:

- 1. Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the NPPF taken as a whole; or*
- 2. Specific policies in the NPPF indicate that development should be restricted.*

2.22 The Havant Borough Local Plan (Allocations) document sets out the housing allocations for the Borough and Policy HB1 sets out the allocations for Havant and Bedhampton. This includes allocation UE3b – Land south of Bartons Road, which is the development site set out within this Transport Assessment.

2.23 Policy UE3b provides a summary of the site specific requirements that Havant Borough Council have set out for the site through the allocation process, as follows:

- *Heritage Statement, of an appropriate level of detail, to support planning application*
- *Design and layout to respect the context and setting of listed building*
- *Strong landscape buffer on eastern boundary required*
- *Design and layout to aim to retain and protect TPO trees*
- *The site is subject to a S106 legal agreement which the landowners and the Council (as parties to the original agreement) will need to vary to allow development to take place*
- ***Vehicular access to be provided north onto Bartons Road (running to the east of land at Helmsley House)***
- ***Pedestrian/cycle access to be provided south into existing residential development in Denvilles (improvement to existing link)***
- ***Improvements to increase natural surveillance and usability of the pedestrian/cycle link onto Bartons Road (west of Eastleigh House). This requirement may not be necessary should more suitable pedestrian/cycle access be made available through Havant Garden Centre, also a residential allocation (UE43)***
- ***Long term provision should be made available should further residential development be sought on land to the immediate west of the vehicular access (land at Helmsley House). This should ensure no ransom strips are in place and allow for coordination of development so that residential properties could (if sought) be provided facing onto the access road.***

This would improve natural surveillance of the access proposed and provide for coordination of development

- *Consultation with HCC alongside any planning application in relation to minerals and whether prior extraction may be required*
- *Employment and Skills Plan to support planning application*
- *Southern Water request connection to the sewerage system at the nearest point of adequate capacity*
- *Appropriate easement from existing sewage/waste infrastructure.*

(Note: highways and access related requirements highlighted in bold)

2.24 The policies set out above will be taken into consideration within this Transport Assessment to ensure the development proposals meet with local policy.

3.0 EXISTING SITUATION & ACCESSIBILITY

3.1 The area for development is located on land south of Bartons Road, Havant. The site is bordered by residential property to the west and south and by agricultural land up to Eastleigh Road to the east, as shown in **Figure 1**.

Existing Mode Share

3.2 The existing mode share for the local area has been determined with reference to the 2001 Journey to Work Census data for the Havant district areas. The percentage mode share is set out in Table 1 below.

Table 1 Method of Travel to Work (2001 Census)

Mode	Havant	Hampshire*
Car / Van	70%	69%
Taxi	1%	0%
Walk	8%	9%
Cycle	4%	4%
Train	3%	3%
Bus	5%	3%
Motorcycle	1%	1%
Other / work from home	8%	11%

*excluding Portsmouth and Southampton

3.3 The Census data indicates that the mode share for Havant is consistent with that recorded for Hampshire as a whole, with a slightly higher percentage mode share for Bus.

Pedestrian Access

3.4 Planning guidance emphasises the integration of land use, transport and planning decisions. To ensure developments are sustainable, they should be

accessible to local facilities, employment opportunities and public transport services.

3.5 As shown on **Figure 2**, there is a public right of way (PROW) through the site. This PROW connects through the site from Barton Road to the north to Japonica Way to the west, connecting the site to the surrounding pedestrian network.

3.6 From Bartons Road there is a lit, 2m wide footway along the southern side of the carriageway that connects to the wider pedestrian network, so allowing safe, easy pedestrian access to nearby bus stops, as well as a range of local facilities and ultimately Havant town centre. There is no footway on the northern side of Bartons Road until some 60m west of the junction with Wakefords Way. At this point there are drop kerbs and tactile paving on both sides of Bartons Road, providing a safe pedestrian crossing point.

3.7 To the west of the site, the PROW joins to Japonica Way via a short section of shared surface carriageway. Japonica Way has lit, 1.8-2m wide footways along both sides of the carriageway. This connects to the pedestrian network through the Denvilles estate and to the existing pedestrian bridge over the railway line to the west of the site.

Cycle Access

3.8 Cycling has the potential to substitute short car trips, particularly those less than 5 km and to form part of a longer journey on public transport. At an average cycle speed of 16kph, this distance equates to a journey time of circa 20 minutes.

3.9 Whilst there are no specific cycle routes set out in the immediate area, the existing roads are wide and lit and provide safe routes for on road cycling. This provides connection to the national cycle network both from Petersfield Road and to the south on Southleigh Road, some 800m from the site. These provide good quality cycling routes through to Havant town centre as well as Emsworth and north to the South Downs national park.

Bus Services

3.10 The number 20 and 21 services run at a frequency of two services per hour during daytimes Monday to Saturday from bus stops located on Wakefords Way, 640m from the site. These services give access to Leigh Park, Portsea and Farlington.

3.11 Bus routes 27 and 28 serve bus stops on Southleigh Road to the south of the site, both less than 750m from the site. The number 27 runs every two hours, between Rowlands Castle, Havant and Emsworth Hospital, Monday to Saturday. Route 28 runs hourly, Monday to Saturday, to Southbourne, Emsworth and Havant.

Rail Services

3.12 Warblington railway station is located some 1400m from the centre of the site and Havant railway station is 2500m away. As shown on **Figure 2**, walking is a viable mode of travel to Warblington station and cycling is a viable mode of travel to access both stations.

3.13 Trains from Warblington run to Chichester and Littlehampton to the east and to Havant and onto Portsmouth & Southsea in the west. Services run in both directions at a frequency of two services per hour at peak times and at a frequency of one service per hour during off peak periods.

3.14 Services from Havant include those stopping at Warblington described above and the journey between the two stations takes approximately 2 to 3 minutes. In addition there are services to central London, Portsmouth and also direct trains to Brighton.

3.15 Services to central London run at a frequency of four per hour during peak periods and at two per hour during off peak periods.

Local and Wider Accessibility

3.16 There are a number of facilities and amenities within reasonable walking and cycling distance, or within reach by public transport. Local facilities are shown on **Figure 2**, along with walking and cycling isochrones.

3.17 The walk times provided above are based on an average walk speed of 4.8km/h or 80m per minute. This is an industry accepted walking speed and used within the London based Public Transport Accessibility Level (PTAL) analysis. This provides a typical average estimate of five minutes to walk 400m and 10 minutes to walk 800m.

Schools

3.18 The nearest schools are Sharps Copse Primary school which is some 14 minutes walk from the centre of the site, along the lit, safe footway on Bartons Road and St Albans Primary School some 1.4km walk from the centre of the site. Warblington School is some 20 minutes walk or 5 minute cycle ride along residential roads.

Retail

3.19 The site is well situated to take advantage of various local amenities, with walking as the primary mode of travel. To the southern end of the site a Co-operative convenience store is located on Snowberry Crescent 400m from the site using the existing PROW and footways. The Wyevale Garden Centre provides a range of retail facilities within a few minutes walk of the centre of the site, along Bartons Road. There is also a range of retail facilities within Havant town centre, which can be reached using the existing bus services.

Employment

3.20 There are a range of employment opportunities within walking distance of the site, including a range of industrial and office units around New Lane, accessible by existing footways. The Spire, Portsmouth hospital is located some

450m east of the centre of the site, accessible along the existing footway on Bartons Road.

3.21 There is also a range of employment opportunities further afield in Havant town centre, Portsmouth and London, all accessible by the existing bus or train services.

Local Highway Network

3.22 The local highway network is shown in **Figure 3**. Bartons Road is some 7.5-8m wide distributor road that runs west/east connecting to Petersfield Road to the west in the form of a signalised junction and Comely Hill / Emsworth Road to the east leading to the centre of Emsworth.

3.23 An automatic traffic count was completed along Bartons Road during June 2015, the results of which are included within **Appendix B**. As part of the ATC vehicle speed data was collected, this indicated that the average speed travelling east was 36.9mph with an 85th percentile speed of 40.9mph. Travelling westbound the average speed of vehicles was recorded as 38.4mph and the 85th percentile speed recorded was 42.7mph.

3.24 To the west Bartons Road forms a signalised junction with Petersfield Road, which is a link road running from the north into the centre of Havant and linking to the A27 further south. The A27 runs parallel, south of Bartons Road and is a major strategic route along the south coast linking the site to Portsmouth and the M27 leading to Southampton to the west and Chichester and Brighton to the south.

3.25 From Petersfield Road, drivers can access A3 to head north towards Petersfield, Guildford and London via Stockheath Road and Purbrook Way.

3.26 To the east Bartons Road forms a ghost island priority junction with Eastleigh Road, which runs south connecting to Southleigh Road providing access to Warblington Railway station south of the site.

3.27 Further east of the junction with Eastleigh Road, Bartons Road forms a staggered priority crossroads with Comely Hill running north, Emsworth Common Road to the east and Horndean Road heading south.

3.28 Comely Hill to the north is a B classified Road that runs through the west of the settlement of Rowlands Castle and leads up towards Horndean and connects to the A3. Similarly Emsworth Common Road is B classified road which leads into the South Downs national park, a sparsely populated area with few facilities, but does provide a route to the east to Chichester.

Accident Analysis

3.29 Road traffic collision data has been obtained for the previous five years to assess the safety of the local network. A summary of the data and is provided in **Appendix B**, along with a plan showing the locations of the accidents.

3.30 The information indicates there were some 17 accidents along the length of Bartons Road over the last 5 year period, all of which occurred at or around a junction. This equates to 3.4 accidents a year over a 1.6km length of road. There were no recorded accidents along site frontage onto Bartons Road for some 600m to the west and 220m to the east. Based on this information, Bartons Road does not appear to have a high accident record or any particular design led safety issues.

3.31 There were 8 accidents reported at the crossroads junction of Bartons Road / Horndean Road / Comley Hill / Emsworth Common Road. This equates to less than 2 accidents per year. Reviewing the data provided, these accidents relate to human error and failure to give way or observe other road users. Given the type of accident and the low numbers, there is not considered to be a design led accident problem at this junction.

3.32 There were 3 recorded accidents at the junction of Bartons Road and Eastleigh Road over the 5 year period. This equates to less than 1 a year and all related to driver error.

3.33 There were 3 recorded accidents at the junction of Bartons Road and Petersfield Road over the 5 year period. This again equates to less than 1 accident a year. All of the accidents were a result of driver error including losing control whilst u turning, misjudging turning the corner and driving too close to a cyclist. Based on this data, there is therefore no design led safety issue at this junction.

4.0 PROPOSED DEVELOPMENT

4.1 It is intended that the planning application for the proposed development be in outline with all matters, except access, to be reserved. The development scheme comprises up to 175 dwellings as shown on the Masterplan attached in **Appendix C**. The Masterplan sets out the site layout and internal road network, as well as the access points.

Access Strategy

4.2 As detailed in **Section 2.0** the principle of vehicle access on to Bartons Road was established during the Local Plan site allocation process and as set out on Policy UE3b, access is proposed to be provided north onto Bartons Road, running to the east of land at Helmsley House

4.3 The design of the junction has been based on a number of parameters, including:

- The nature of Bartons Road and thus the type of junction that is consistent with this;
- Required capacity to serve the scale of development;
- Achieving suitable design standards, including visibility.

4.4 The proposed site access is shown on **Drawing 14-018-002 Rev D**. The proposed access is to take the form of a priority junction, with ghost island right turn lane, which will ensure there is a safe area for traffic turning right into the site to wait and also prevents development traffic from blocking eastbound traffic along Bartons Road. The access will form a right left stagger with the newly constructed access to the crematorium opposite.

4.5 As shown on **Drawing 14-018-002 Rev D**, it is proposed that the access will take the form of a 6m carriageway with 2.0m footways on both sides.

4.6 When considering the visibility requirements for the site, C & A Consulting Engineers consider that DMRB standards are applicable. Within

DMRB, the visibility splay for a 40mph vehicle speeds, would be set back 2.4m from the carriageway and 120m in both directions along the kerb edge.

4.7 The speed survey completed on Bartons Road, adjacent to the proposed site access, indicated that in dry weather, travelling eastbound the 85th percentile speed was 40.9mph and travelling westbound the 85th percentile speed recorded was 42.7mph.

4.8 Based on DMRB guidance (TA22/81) new junction designs should be based on wet weather 85th percentile speeds, which are calculated by deducting 4kph from the dry weather speeds. This would therefore produce wet weather speeds of 36.9kmh westbound and 38.7kmh westbound.

4.9 DMRB requires 120m visibility splays for 40mph speeds and as shown on **Drawing 14-018-002 Rev D** visibility of 159m can be achieved to the west and 224m to the east, from 2.4m set back from the proposed give way. Therefore more than adequate visibility can be achieved from the proposed site access to meet DMRB standards.

Pedestrian / Cycle Access

4.10 A network of footways and shared surfaces will be provided throughout the development, providing safe routes for both pedestrian and cyclists. These are shown on the Masterplan contained in **Appendix C**.

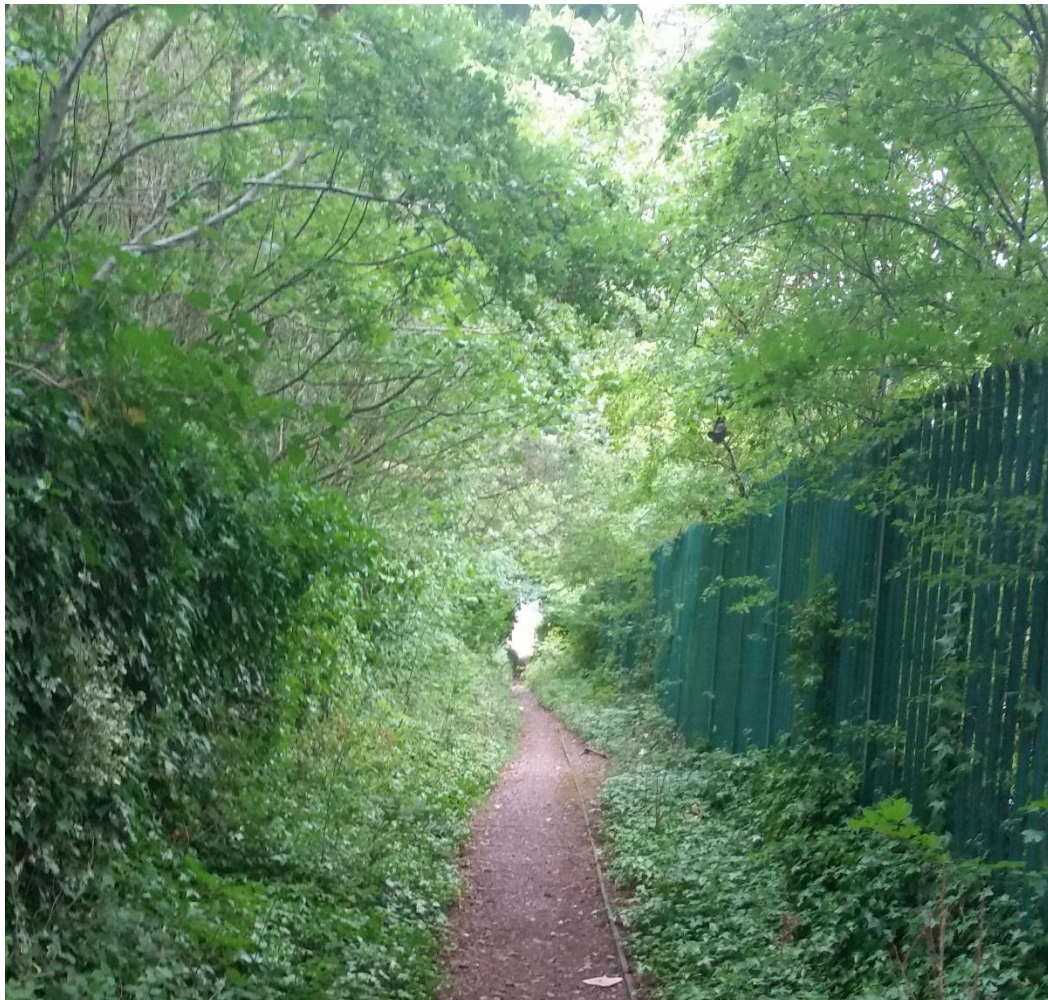
4.11 As set out in the Local Plan allocation Policy UE3b, there is a requirement to provide a pedestrian / cycle access into the existing Denvilles residential estate to the west of the site and to improve the existing pedestrian / cycle access in the north west corner of site leading onto Bartons Road. These links are provided by the existing PROW into the site, as described in **Section 3**.

4.12 As shown on the Masterplan, attached as **Appendix C**, the internal site layout will be designed to provide clear pedestrian / cycle paths connecting to the existing PROW access points to Bartons Road and Japonica Way.

4.13 The two PROW connections are within the ownership of the Local Authority, so it is not possible for the development scheme to improve the two links directly. It is however intended, as part of the development proposals, to provide funding to the Local Authority to improve these two links.

4.14 **Photograph 1** shows the existing PROW from Bartons Road to the site. Whilst the final improvement schemes to the PROW are in the remit of the Local Authority, it is recommended that the existing access in the north west corner of the site be improved to provide greater surveillance with the addition of lighting, along with improvements to usability through widening of the path and resurfacing as well as the clearing of vegetation along the route.

Photograph 1 – Existing PROW link from Bartons Road to the site



4.15 A possible design scheme for the route is shown in **Drawing 145-018-010**.

4.16 **Photograph 2** shows the existing PROW link from Japonica Way towards the site. The pedestrian / cycle access from Japonica Way is shorter in length than that of the Bartons Road link and as such has a more open feel. It may therefore not need additional lighting, but would benefit from widening of the path and resurfacing, as well as the clearing of vegetation.

4.17 As this is intended to be a pedestrian and cycle link, the existing barriers and posts would also need to be removed. A possible design scheme for the route is shown in **Drawing 145-018-010**.

Photograph 2 – Existing PROW link from Japonica Way



Internal Site Layout

4.18 Given that the development application will be in outline, with all matters, except access, reserved, the masterplan for the site is only indicative. However, in order to ensure that the scheme provides sufficient refuse and emergency access strategies, an initial review of the site layout has been undertaken.

4.19 Havant Borough Council's Refuse team have provided dimensions and turning circle details for the size of refuse currently used in the Borough. AutoTrack has then been used to ensure that a refuse vehicle of this size can safely manoeuvre through the site. Turning heads have been provided where cul de sacs are more than 25m in length and no bin stores have been provided. The vehicle track plot for the refuse vehicle is provided on **Drawing 14-018-011.** and demonstrates that the internal road layout is sufficient to accommodate such a vehicle.

4.20 In terms of emergency vehicle access, all proposed dwellings are within 45m of the carriageway and so comply with guidance that all dwellings should be within length of the hose from the fire appliance.

Car Parking

4.21 Car parking on the site will be provided to meet the standards set out in HBC's recently updated parking standards. The detail of the parking will be agreed at the detailed design stage of the planning process, but will accord with the design principles set out the HCC's Companion Guide for Manual for Streets.

4.22 Additionally, a swept path analysis programme has been used to assess the parking provision to ensure that it is possible to adequately manoeuvre a large car in and out of the spaces. The vehicle track plot for the parking is provided on **Drawing 14-018-011.**

4.23 Cycle parking standards set out in HCC's Parking Standards will also be met as part of the detailed scheme proposals.

5.0 TRIP GENERATION & DISTRIBUTION

5.1 In order to assess the impact of the proposed development on the transport network, it is first necessary to forecast the travel demand. This section of the report considers the method applied to forecast the development generation and the assignment on to the highway network.

Vehicular Trip Rates

5.2 To establish the appropriate trip rates, the industry accepted TRICS database has been utilised. This database includes a wide range of surveys of existing developments, with details of the land use, location and other parameters which impact on trip generation. By using the TRICS database, forecast trip rates are derived from empirical evidence, relevant to the site specific factors and is considered a robust method for predicting trip generation for a proposed development.

5.3 In adopting the TRICS methodology, it must be acknowledged that no single site can be reasonably assumed to be entirely representative of the development proposals. Accordingly a broad sample is necessary, with appropriate statistical evaluation. In this case, a total of 31 sites were selected from TRICS from the Privately Owned Housing range of survey data. The raw TRICS data is provided in **Appendix D** and the associated trip rates set out in **Table 2**.

Table 2 Summary of peak hour vehicular trip rates.

Period	Arrivals	Departures	Two Way total
AM Peak (0800-0900)	0.147	0.369	0.516
PM Peak (1700-1800)	0.410	0.208	0.618

5.4 The above trip rates were then used to calculate the likely trip generation for the proposed 175 dwellings. This trip generation is set out in **Table 3**.

Table 3 Trip Generation for 175 dwellings

Period	Arrivals	Departures	Two Way total
AM Peak (0800-0900)	26	65	90
PM Peak (1700-1800)	72	36	108

5.5 This indicates that the proposed development will generate some 90 two way trips in the AM Peak period and 108 in the PM Peak period.

Trip Distribution and Assignment

5.6 To inform the assessment of traffic impact, it is necessary to distribute the forecast traffic generation on to the highway network, making reasonable and appropriate assumptions of assignment of traffic to particular routes.

5.7 The method used to assign traffic across the highway network has been based upon analysis of Journey To Work data compiled from the 2011 Census for Havant. Whilst it is acknowledged that not all trips are travel to work, they represent a majority in the peak hours being considered. This therefore represents a robust method of forecasting distribution of the development trips.

5.8 This data can therefore be used to make appropriate forecasts of where existing residents from the local area work, applying this pattern to the proposed development traffic generation. This resulting distribution is shown in **Appendix E**.

6.0 ASSESSMENT

6.1 This section reviews the likely impact of the development on the local highway network and considers whether any mitigation measures are required.

Key Highway Network

6.2 Within the scoping exercise it was agreed that the following junctions would be included within the assessment:

- Site Access / Bartons Road
- Bartons Road / Eastleigh Road
- Bartons Road / B2148 Comley Hill / Horndean Road / Emsworth Common Road
- Bartons Road / B2149 Petersfield Road

Baseline Data Collection

6.3 Manual Classified Turning Counts (MCCs) were undertaken at the junctions above. These were carried out on the 11th June 2015 during the AM and PM periods (07:00-10:00 and 16:00-19:00). In addition, an Automatic Traffic Counter (ATC) was deployed during the same week-long period on Bartons Road in order to derive link flows, speeds and vehicle classification.

6.4 The data collected has been used to derive the 2015 baseline traffic flow scenario. The data from these surveys are included in **Appendix F** and 2015 baseline traffic flow diagrams for the AM and PM peak are shown in **Figures 4 and 5**, respectively.

Background Growth

6.5 As part of the scoping exercise it was agreed to provide a future year assessment of 5 years after the application date. This results in a future year of 2020.

6.6 TEMPRO is the software traditionally used to derive traffics growth rates based on the effect of demographic changes and land-use. In the latter case, development forecasts forming part of the 'planning data' within the software is generally provided by the local planning authority, based on known site allocations and expected growth projections. The TEMPRO software uses this information to localise growth forecast for particular road types, based on national forecasts from the National Transport Model (NTM).

6.7 In this instance, the growth rates taken reflect the growth attributable to 'Havant' geographical area within the dataset. A summary of the growth rates applied to the 2015 observed flows is provided in **Table 4**.

Table 4 Summary of TEMPRO Growth Rate

Classification	Period	AM Growth Rate	PM Growth Rate
Urban principal	2015-2020	1.0735	1.0767

Source: TEMPRO version 6.2, dataset 62

6.8 This TEMPRO growth rate includes sites allocated within the Local Plan and as such includes the development site. No attempt has been made to discount the development itself from the TEMPRO policy based growth rates, therefore the growth forecast is considered to be robust.

Committed Development

6.9 Consent has recently been granted for the erection of 55 residential dwellings on land to the north of Bartons Road (application number 14/00863). This site is also one of the sites allocated within the Local Plan and so should be included within the background growth rate produced by TEMPRO. However, the allocation was for some 30 dwellings whilst the application was for 55.

6.10 Given the increase in numbers and it's close proximity to the site, the expected trips to be produced by this development have been added to the 2020 future year scenarios in their entirety, based on numbers submitted within the

transport assessment submitted in support of this application, providing a robust assessment of the local network.

Future Year Flows

6.11 The trips from the committed development site have then been added to the 2020 growthed traffic flows to generate 2020 Baseline Flows for the AM and PM peaks. These are shown in **Figures 6 and 7** respectively.

6.12 The proposed development flows for the 175 dwellings have been assigned to the local highway network based on the 2011 Census distribution as described in **Section 5**. These flows are shown on **Figures 8 and 9**.

6.13 The 2020 Baseline plus Development Flows are shown in **Figures 10 and 11** for the AM and PM Peaks respectively.

Junction Assessments

6.14 To assess the impact of this a series of junction models of the local network have been developed. The scope of the network analysed is based on discussions with HCC officers as detailed earlier within this report.

6.15 In each case, a base model has been developed using the appropriate industry standard modelling software. In this particular case 3 junctions have been modelled using the TRL software, Junctions 8 (PICADY module). The final junction has been modelled using the JMP software LINSIG for signal controlled junctions.

6.16 Junction assessments for the 2015 survey year have been undertaken and are included in **Appendix G**. These assessments, which have been calibrated based on the observed existing conditions, indicate that the Bartons Road / Petersfield Road and Bartons Road / Eastleigh Road junctions operate within the theoretical capacity in the 2015 base year.

6.17 The Bartons Road / Comley Hill / Horndean Road / Emsworth Common Road junction, however, is more difficult to model as the junction has left turn lanes which are marked as, and as observed on site, operate as slip roads rather than give ways. This means that these vehicles are not held at a give-way and so do not queue on the arms. Therefore, to model the operation of the junction more accurately the PICADY model has been set up removing the left turn movement and geometry.

6.18 The model indicates that even in 2015 the 'straight over' movements from Bartons Road to Emsworth Common Road in the AM and vice versa in the PM is nearing its operational capacity. This is not unexpected given that these vehicles have to wait for appropriate gaps in traffic to cross both north and southbound carriageways.

6.19 On-site observations, supported by the 2015 traffic survey data, indicate that there is some queuing on both Bartons Road and Emsworth Common Road but it is expected that cars will wait for short periods for gaps in the traffic and queues are minimal with limited short intervals during the peak periods where vehicle numbers increase over 10 vehicles. On-site observations recorded queues clearing within 1-1.5 minutes at its worst.

6.20 Further junctions assessments have then been completed for each junction for the 2020 Base and 2020 Base plus Development scenarios. The results for these assessments are set out below and the assessment outputs provided in **Appendix G**.

Site Access / Bartons Road

6.21 The proposed site access has been tested with the 2020 Base with Development Flows only and the results summarised in **Table 6**. The operational assessment indicates that the site access will operate well within capacity in 2020 Base plus Development scenario.

Table 6 Summary of Operational Assessment for Site Access / Bartons Road

Scenario	Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
		RFC	End Queue	RFC	End Queue
2020 Base plus Development	Bartons Road East	0.074	0	0.037	0
	Site Access	0.142	0	0.073	0
	Bartons Road West	0.024	0	0.060	0

Bartons Road / Eastleigh Road

6.22 The existing configuration of the priority junction of Bartons Road / Eastleigh Road has been tested using the 2020 Baseline Flows followed by the 2020 Baseline plus Development Flows. The results of the operational assessments are summarised in **Table 7**.

Table 7 Summary of Operational Assessment for Bartons Road / Eastleigh Lane

Scenario	Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
		RFC	End Queue	RFC	End Queue
2020 Base	Eastleigh Road	0.681	2	0.422	1
	Bartons Road	0.234	0	0.273	0
2020 Base plus Development	Eastleigh Road	0.717	2	0.477	1
	Bartons Road	0.283	0	0.300	0

6.23 The operational assessment indicates that the junction will operate within capacity in both the 2020 Base and 2020 Base plus Development scenarios and the development trips have no impact on the operation of the junction.

Bartons Road / B2148 Comley Hill / Horndean Road / Emsworth Common Road

6.24 The existing configuration of the priority crossroads junction of Bartons Road / Comley Hill / Horndean Road / Emsworth Common Road has been tested using the 2020 Baseline Flows followed by the 2020 Baseline plus Development Flows, following the same methodology as set out in Paragraph 6.17.

6.25 Given that the 2015 operational assessment indicates that both Bartons Road and Emsworth Common Road are operating close to the theoretical capacity, any future year assessments are limited as, once past this point, PICADY is not able to realistically model the operation of the junction because it the RFC and queues have a tendency to increase exponentially after the theoretical capacity of the junction is reached. The purpose of this assessment is, therefore, to understand the comparative impact of the proposed development trips compared to the without development scenario.

6.26 The results of the operational assessments are summarised in **Table 8**.

Table 8 Summary of Operational Assessment for Bartons Road / Comley Hill / Horndean Road / Emsworth Common Road

Scenario	Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
		RFC	End Queue	RFC	End Queue
2020 Base	Bartons Road	1.088	29	0.959	10
	Horndean Road	0.159	0	0.070	0
	Emsworth Common Road	0.625	1	1.063	21
	Comley Hill	0.211	0	0.142	0
2020 Base plus Development	Bartons Road	1.105	32	0.971	11
	Horndean Road	0.159	0	0.070	0
	Emsworth Common Road	0.634	2	1.073	23
	Comley Hill	0.216	0	0.159	0

Note Queues are in PCU (Passenger Carrying Unit)

6.27 The operational assessment indicates that the development trips will marginally increase the RFC on Bartons Road and Emsworth Common Road in both the AM and PM peaks, adding 3 PCUs to the queue on Bartons Road and 1 PCU to Emsworth Common Road in the AM and 1 PCU to the queue on Bartons Road and 2 PCU to Emsworth Common Road in the PM peak. The development trips therefore have minimal impact on the operation of the junction in comparison to the 2020 Base.

6.28 When considering the impact on driver delay, based on the operational assessment, the development trips would add only 20 seconds of delay at the

Bartons Road arm in AM Peak in comparison to the 2020 Base and less than 10 seconds at the Emsworth Common Road arm in the PM Peak.

6.29 The proposed development trips equate to 20 additional two way trips at the junction in the AM Peak, and 22 two way trips in the PM Peak, so less than 1 trip every 2 minutes.

6.30 NPPF Planning Policy requires assessments to consider if the development has a severe impact and does not require development to resolve existing or predicted capacity issues.

6.31 Therefore, whilst acknowledging the limitations of the modelling tool in this situation and that the model indicates that Bartons Road and Emsworth Common Road will be operating over the theoretical capacity in the 2020 Base, before any development trips are added, the proposed development does not have a severe impact on the operation of the junction. Therefore no mitigation is proposed as part of the development scheme.

Bartons Road /Petersfield Road

6.32 The existing configuration of the signal crossroads junction of Bartons Road / Petersfield Road has been tested using the 2020 Baseline Flows followed by the 2020 Baseline plus Development Flows. The results of the operational assessments are summarised in **Table 9**.

Table 9 Summary of Operational Assessment for Bartons Road / Petersfield Road

Scenario	Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
		Deg Sat	Max Queue	Deg Sat	Max Queue
2020 Base	Petersfield Road (North)	76.5%	10	65.2%	7
	Bartons Road	64.5%	6	62.5%	7
	Petersfield Road (South)	75.8%	9	65.2%	7
2020 Base plus Development	Petersfield Road (North)	76.8%	10	68.4%	7
	Bartons Road	68.8%	6	61.6%	7
	Petersfield Road (South)	77.4%	9	68.8%	8

6.33 The 2020 Base and 2020 Base with Development scenario assessments have been optimised to achieve the best signal timings and show that in the 2020 Base with Development scenario the junction operates within capacity and the development trips do not impact on the operation of the junction.

6.34 In summary, a robust assessment of the highway network has been completed, taking into account both future growth as set out in TEMPRO and the committed development north of Bartons Road. When considering the development impact in comparison to the 2020 Base flows, the development does not have a significant impact on the surrounding highway network.

7.0 TRAVEL PLAN FRAMEWORK

7.1 This section provides a Travel Plan Framework (TPF), for the proposed development. This TPF outlines the content that will be provided within the full Travel Plan (TP) which will be produced, as a condition, should the development be granted outline planning permission.

7.2 The TP when produced in full will set out site specific initiatives aimed at improving the availability and choice of travel modes to and from the development. Together with the TA, the TP will aim to be the mechanism by which overall travel demand will be managed and monitored.

7.3 The full TP will be produced in accordance with Hampshire County Council's Travel Plan Guidance 'Detailed Measures to be included in a Residential Travel Plan'.

7.4 This TPF sets out below the likely content of the full TP, set out under the headings that will be used in the full TP.

Introduction

7.5 The introduction will set out the background of the application and the permitted development scheme. The TP will also include information on the development timescales and any key milestones that may link the TP and the development phasing.

Existing Situation

7.6 An appraisal of the existing conditions in the area of the site will be provided based on information presented in **Section 3** of this report. This will specifically focus on the current provision for sustainable travel with walking, cycling and public transport examined. The opportunities to increase the share of sustainable modes will be examined and used to inform a package of bespoke measures appropriate to the development and residents in this part of the community.

Policy, Aim and Objectives

7.7 This section will outline the local and national policy related to transport policy and Travel Plans. It will discuss the overall aims to be achieved through the implementation of a TP. Travel management objectives will focus on reducing visitor trips made by car as well as considering resident travel patterns. The overall travel management objectives will be:

- To minimise the number and length of single occupancy car trips to the site; and
- To facilitate and promote walking, cycling and public transport trips to the site.

Targets

7.8 The TP will aim to promote travel choice for future residents and hence to increase the use of sustainable transport modes. Overarching targets for the site should be set once baseline residential travel surveys have been carried out.

7.9 Travel Plan targets will be 'SMART' i.e. they must be:

- Site-specific;
- Measurable;
- Achievable;
- Realistic; and
- Time-related.

Travel Plan Co-ordinator

7.10 Prior to the occupation of the site, the developers will appoint a designated Travel Plan Co-ordinator (TPC) who will be responsible for the development and implementation of the TP. The co-ordinator will be provided with any appropriate training and time to fulfil their role.

7.11 A critical part of the information gathering for the TP will be to carry out a questionnaire survey of all occupiers to provide details of individual circumstances, travel patterns and preferences etc. The surveys will be carried out either online or can be paper based.

7.12 Prior to first occupation, the TPC will update and/or acquire all the supporting information needed, such as public transport timetables and cycle maps and review the overall contents of the TP document to ensure its currency and relevance.

7.13 The co-ordinator will also provide the Travel Plan Officer at the Council with their name and contact details. The duties of the TPC will include:

- Oversee the gathering of information, e.g. the travel questionnaire;
- Liaison with new residents to explain the objectives and benefits of the TP to ensure awareness of the plan and to encourage participation;
- Acting as a focal point for all transport, access and travel related issues in relation to their company;
- Actively encouraging and promoting walking, cycling or public transport use to travel to and from the development, where possible, during the life of the plan. Hence, residents will be encouraged to be fully aware of different travel options which are available from the site;
- Obtaining up to date details of the information required in the TP;
- Implementing, monitoring and reviewing the TP; and
- Liaison with the Council as needed with respect to initiatives, the development of the plan, evaluation of monitoring and the setting of targets for modal shift etc.

7.14 This TPF will provide the basis for development of the full TP which will be written using data from the baseline resident travel surveys. Measures and initiatives will be tailored on the basis of the results of these surveys. The full TP including the baseline information for occupiers will be provided to the Travel Plan Officer within 6 months of occupation.

Implementation

7.15 The TP will set out the role of the Travel Plan Co-ordinator, as set out above and will define their responsibilities in terms of ensuring that the series of measures and initiatives identified are delivered.

7.16 A series of 'hard' and 'soft' measures will be implemented. These will be put forward within the TP to ensure that there is opportunity and incentive to travel by sustainable methods of travel. An Action Plan will be developed to set out a clear plan of action for the implementation of the Travel Plan measures.

Action Plan

7.17 The primary objective of the transport strategy and development proposals is to influence travel behaviour such that:

- The number and length of single occupancy car trips are reduced as much as possible; and
- Access to the site by all other modes, particularly walking, cycling and public transport is promoted, encouraged and enhanced.

7.18 In order to encourage people to change their mode of travel, it may be necessary to introduce a varied mix of facilities and incentives, which could include:

- Good quality pedestrian facilities;
- Cycle vouchers; and
- A one month taster bus pass.

Marketing and Promotion

7.19 When raising awareness of the TP, consideration will be given to different groups that should be targeted. Publicity material could include the following:

- Leaflets on aspects of the TP;
- Information and briefing notes for community groups;

- Cycle route and bus timetable information in residents welcome packs;
- Poster campaigns;
- Exhibition stands and notice boards in community venues including bus service, car sharing and cycle route information;
- A Travel Plan email / newsletter – for example, a mass email detailing the launch of a new measure, the advantages of this and who to contact to find out more;
- Stories / regular updates in existing community newsletters / bulletins; and
- Information for those with mobility impairments.

7.20 When developing the marketing strategy, it is often useful to identify which of the above media would be most effective at different stages of implementation and identify the timescale and who will be responsible for developing each. This will be done by the TPC.

Monitoring and Review

7.21 A successful TP must have an appropriate monitoring programme that measures success (and failure) and reinvigorates the process where necessary. The development of an appropriate monitoring and review strategy will be the responsibility of the TPC.

7.22 Resident travel surveys will be carried out on an annual basis (year on year from the month of the baseline surveys being carried out) for a five year period. An annual monitoring / review report will be prepared and made publically available.

7.23 The survey should include the following elements:

- How residents plan to or currently travel to work and other destinations.
- How residents prefer to travel for various journey purposes.
- Measures that would encourage residents to use sustainable modes.

- Work, school and main shopping destination(s) (typically by postcode area).
- Other travel needs.

Budget

7.24 The TP will set out an estimated budget needed to deliver the TP and its measures. This budget will then inform the developer and the Planning Authority as to the potential costs associated with the delivery of the TP.

Summary

7.25 A summary of the TP aims, objectives and how it will be implemented will be provided. Alongside this information a summary of the proposed measures within an Action Plan, targets and monitoring programme.

8.0 PUBLIC CONSULTATION RESPONSE

8.1 A Development Consultation Forum was attended on 10 September 2015, in which the development proposals were presented and discussed with key consultees and the public. Although HBC are not the Highway Authority for this proposed development, the local Development Engineer did provide some comments on highways and transport for the Forum alongside comments from Councillors and members of the public.

8.2 Whilst the information within this TA has been based on the scope agreed with HCC, as the Highway Authority, consideration has been given to the comments made by HBC's Engineer. Many of the comments raised by HBC and within the Forum itself have been covered within the TA in **Sections 1-7**. Any comments not already covered in the TA are set out and responded to below:

'Comment 1 – The TA should investigate the impact of increased traffic.....on the following junction;

- ***Warblington level crossing***
- ***A27 junction A259***
- ***Horndean Road near St James's school'***

{note the list above only includes those listed by HBC not already included in the TA}

8.3 When determining the key highway network to assess within the TA, a review of the likely impact on the surrounding junctions was completed. For the Highway Authority to require the assessment of junctions to be completed, there has to be justification in terms of impact or safety reasons.

8.4 As set out in **Table 10**, the traffic impact of the development on the additional junctions listed by HBC is minimal, therefore, in terms of policy guidance do not justify further detailed assessment.

Table 10 Assessment of the number of development trips using wider highway network

Junction	Two way Development Vehicle Flows		Frequency – 1 vehicle every	
	AM Peak	PM Peak	AM Peak	PM Peak
Warblington Level Crossing	32	33	1 min 52 seconds	1 min 49 seconds
A27 / A259	20	17	3 mins	3 mins 32 seconds
Horndean Road nr St James School	3	3	20 mins	20 mins

8.5 During the Forum, the junction of Southleigh Road and Horndean Road was raised in terms of safety for vehicles exiting Southleigh Road onto Horndean Road and it was asked that consideration be given to the development impact on this junction.

8.6 Based on the Census distribution, it is not expected that any development trips will use Southleigh Road at this junction, however, some development trips will travel along Horndean Road – some 3 trips in the AM Peak and 3 in the PM Peak.

8.7 When reviewing the accident statistics for this junction, no accidents were recorded within the last 5 years, indicating that there is no existing accident problem at this junction. Therefore, the addition of 3 additional development trips in the Peak periods, or equivalent of 1 trip every 20 minutes, will not adversely impact on the safety at this junction.

Comment 2 - The Developers attention is drawn to the following notes within the allocation plan document

- ***Existing bus routes available within 600m both north and south of the site (but potential to extend bus route(s) to serve the site)***

8.8 When the site was being put forward for allocation within the Local Plan, the bus route 27 ran along Bartons Road, and so offered the potential to divert a bus route into the site, should this be desirable. However, since then, the bus routes within the area have been rationalised and no bus services now run along this length of Bartons Road.

8.9 As set out in **Section 3**, the nearest bus route is located on Wakefords Way and this serviced by the number 20/21 service run by Stagecoach. C & A Consulting Engineers have liaised with Stagecoach to discuss the viability of diverting this service to the site and Stagecoach confirmed that such a diversion would not be viable financially and would not be acceptable to Stagecoach in terms of the increased travel time to existing passengers. Stagecoach would not, therefore, wish to see a diversion of this bus service into the site.

8.10 Stagecoach also confirmed that the existing bus stops on Wakefords Way are considered to be within reasonable walking distance of the site and so would agree that future residents of the site could walk to the existing stops to use the bus service.

8.11 During these discussion C & A Consulting asked Stagecoach if there were upgrades to the bus stop infrastructure that could be provided through contributions from the site. Stagecoach confirmed that the bus stop infrastructure had recently been upgraded and as such no further works would be requested.

8.12 However, Stagecoach are aware that HCC are in the process of providing real time information at bus stops across Havant and so a contribution towards this may be appropriate. Discussion regarding any contributions will be undertaken after submission and must relate to the likely usage from the future residents of the development. A summary of discussions with Stagecoach is provided in **Appendix H**.

Comment 3 - Layout needs to provide adequate parking for both vehicles and cycles during the construction period

8.13 Whilst acknowledging the need for a management plan as part of the construction phase, this application relates to outline only and so this matter will be provided within the detailed design application.

Comment 4 - Any application should also demonstrate the phasing and the sequence of the construction.

8.14 Whilst acknowledging the need for a provision of construction phasing information, this application relates to outline only and so this matter will be provided within the detailed design application.

Comment 5 – Any application should consider the pedestrian route to Sharps Copse Primary School and whether this needs upgrading.

8.15 The desire line from the site to the school is along Bartons Road, westbound to Wakefords Way. As set out in **Section 3** of this report, the existing footways on the southern side of Bartons Road provides a safe, lit route up to the junction with Wakefords Way. To the east of this junction, there is an existing drop kerb and tactile paving on both sides of the carriageway allowing a safe crossing point for pedestrians. There is no existing footway on the northern side of Bartons Road until the junction with Wakefords Way, therefore there is no opportunity to cross pedestrians at another point other than the existing crossing point set out above.

8.16 When reviewing the accident records, 4 accidents were recorded at the junction of Wakefords Way and Bartons Road in the last 5 years. None of these accidents include pedestrians and all relate to human error where the driver failed to stop. Therefore given the low accident rate, less than 1 accident a year, and that none relate to pedestrians, it is considered that the existing provision for pedestrians will meet the needs of both existing and future residents wishing to cross the Bartons Road.

Comment 6 – Cumulative impact of all the developments coming forward in Havant at the moment.

8.17 During the Development Control Forum a member of the public raised concern about the cumulative impact of all the development coming forward in Havant and how this is taken into account. Within this report, background growth and committed development flows have been added to the 2015 survey data to provide a robust assessment of future year traffic flows on the highway network. The likely additional traffic associated with these new developments, that would use the key highway network around the site, has therefore been taken into account.

8.18 When considering the wider implications of all the developments on the highway network, it is the role of the Highway Authority to consider and assess this cumulative impact.

9.0 Summary and Conclusion

Summary

9.1 This Transport Assessment has been prepared by C & A Consulting Engineers, as instructed by Chidden Farms, to support the proposed outline planning application for residential development on Land south of Bartons Road.

9.2 The site benefits from being an allocated housing site within the Havant Adopted Allocations Plan (July 2014). The site specific development requirements are set out in Allocation Policy UE3b – Land south of Bartons Road. This allocation allows for up to 203 dwellings to be promoted on this site.

9.3 Through the pre application process, review of the site constraints and consultation with key stakeholders, it is proposed to submit an outline planning application for 175 dwellings on the site.

9.4 A review of National and Local policies has been undertaken and considered within this Transport Assessment to ensure the development proposals meet with both National and Local policy. Specific consideration has also been given to meeting the requirements set out in Policy UE3b.

9.5 A review of the existing situation indicates the site is well located in terms of pedestrian / cycle facilities and access to existing bus services. The existing infrastructure allows safe, easy access to a range of services and facilities including local shops, schools, employment and local rail stations.

9.6 The development proposes to take access onto Bartons Road as shown on **Drawing 14-018-002 Rev D**. This is consistent with Policy UE3b. The proposed access will take the form of a priority, with ghost island right turn lane, which will ensure there is a safe area for traffic turning right into the site to wait and also prevents development traffic from blocking eastbound traffic along Bartons Road. The access will form a right left stagger with the newly constructed access to the Crematorium opposite.

9.7 Policy UE3b also promotes the improvement of the two PROW accesses to the site, one onto Bartons Road and one connecting to Japonica Way to the west. These connections are not within the development land and so it is proposed to provide a contribution as part of the development proposals for the Local Authority to provide improvements to these links.

9.8 To establish the appropriate trip rates, the industry accepted TRICS database has been utilised. This indicates that the proposed development will generate some 90 two way trips in the AM Peak period and 108 in the PM Peak period. These development trips have been distributed and assigned to the local highway network using Census Journey to Work data for the Havant area.

9.9 An assessment of the local highway network has been completed for the future year 2020 Base including committed development and the 2020 Base plus Development. This assessment indicates that the proposed site access, Bartons Road / Petersfield Road and Bartons Road / Eastleigh Road all operate well within capacity in the 2020 Base plus Development scenario.

9.10 The operational assessment of the Bartons Road / Comley Hill / Horndean Road / Emsworth Common Road indicates that even with the 2015 traffic flows, the straight over movements from Bartons Road to Emsworth Common Road and vice versa are operating close to the theoretical capacity. Therefore any future year assessments are limited as, once past this point, PICADY is not able to realistically model the operation of the junction because it exponentially models the RFC and queues. The purpose of this assessment is, therefore, to understand the comparative impact of the proposed development trips compared to the without development scenario.

9.11 The operational assessment indicates that the development trips will marginally increase the RFC on Bartons Road and Emsworth Common Road in both the AM and PM peaks adding 3 PCUs to the queue on Bartons Road and 1 PCU to Emsworth Common Road in the AM and 1 PCU to the queue on Bartons Road and 2 PCU to Emsworth Common Road in the PM peak. The

development trips therefore have minimal impact on the operation of the junction in comparison to the 2020 Base.

9.12 When considering the impact on driver delay, based on the operational assessment, the development trips would add only 20 seconds of delay at the Bartons Road arm in AM Peak in comparison to the 2020 Base and less than 10 seconds at the Emsworth Common Road arm in the PM Peak.

9.13 The proposed development trips equate to 20 additional two way trips at the junction in the AM Peak, and 22 two way trips in the PM Peak, equivalent to less than 1 trip every 2 minutes.

9.14 Therefore, whilst acknowledging the limitations of the modelling tool in this situation and that the model indicates that Bartons Road and Emsworth Common Road will be operations over the theoretical capacity in the 2020 Base, before any development trips are added, the proposed development does not have a severe impact on the operation of the junction. Therefore no mitigation is proposed as part of the development scheme.

9.15 A Framework Travel Plan for the site has been provided in **Section 7**. This TPF outlines the content that will be provided within the full Travel Plan (TP) which will be produced, as a condition, should the development be granted outline planning permission.

9.16 A Development Control Forum was attended on 10 September 2015, in which the development proposals were presented and discussed with key consultees and the public. Although HBC are not the Highway Authority for this proposed development, the local Development Engineer did provide some comments on Highways and Transport for the Forum, alongside some comments made by members of the public. These comments have been reviewed and most have been concerned within the assessment set out in this report. Any additional comments have been discussed in **Section 8** and responses provided to set out why these elements are not required.

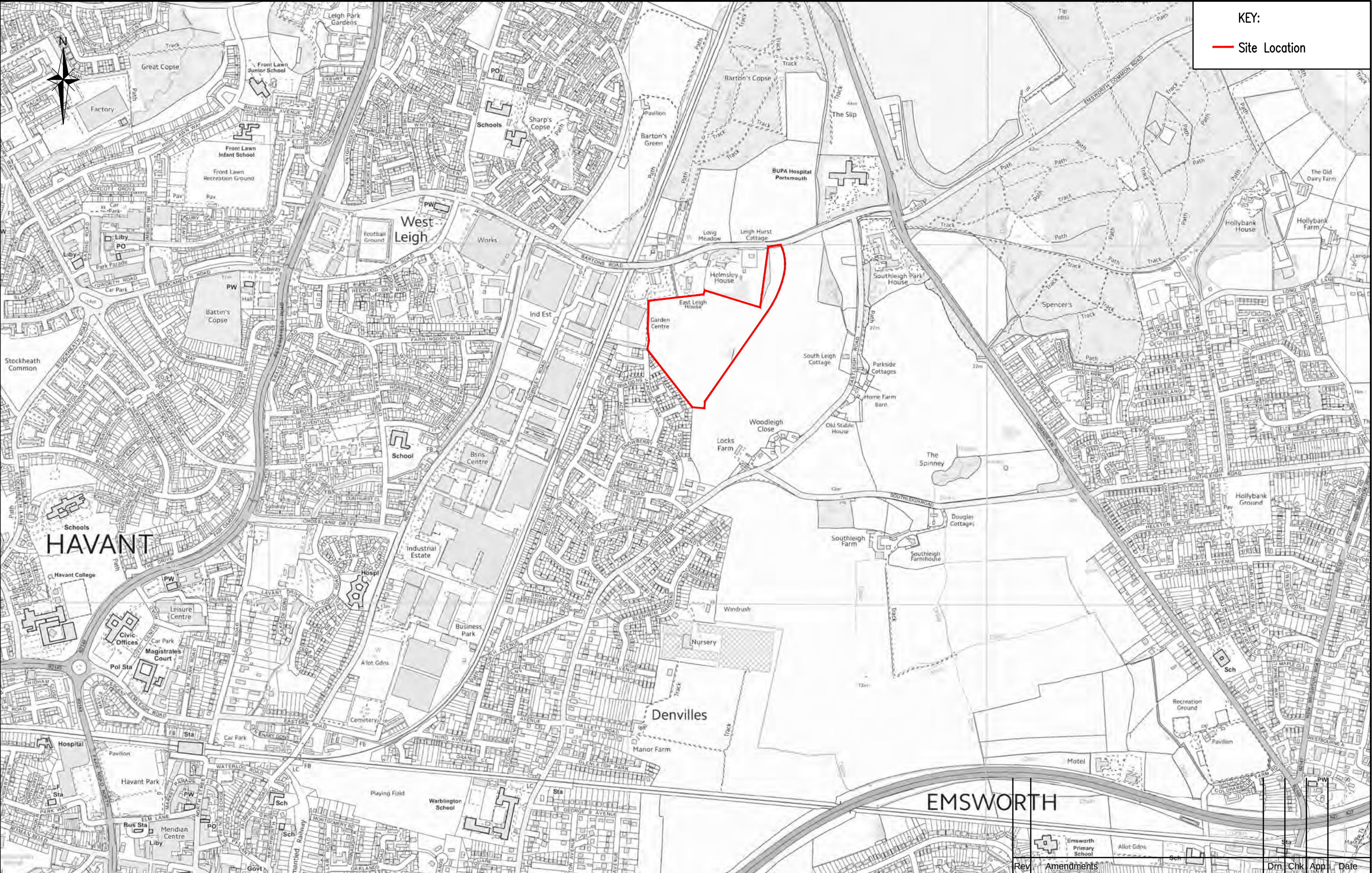
Conclusion

9.17 The development proposes 175 dwellings on Land South of Bartons Road. This site is allocated within the Local Plan and the development proposals have been designed to meet the requirements set out in Policy EU3b.

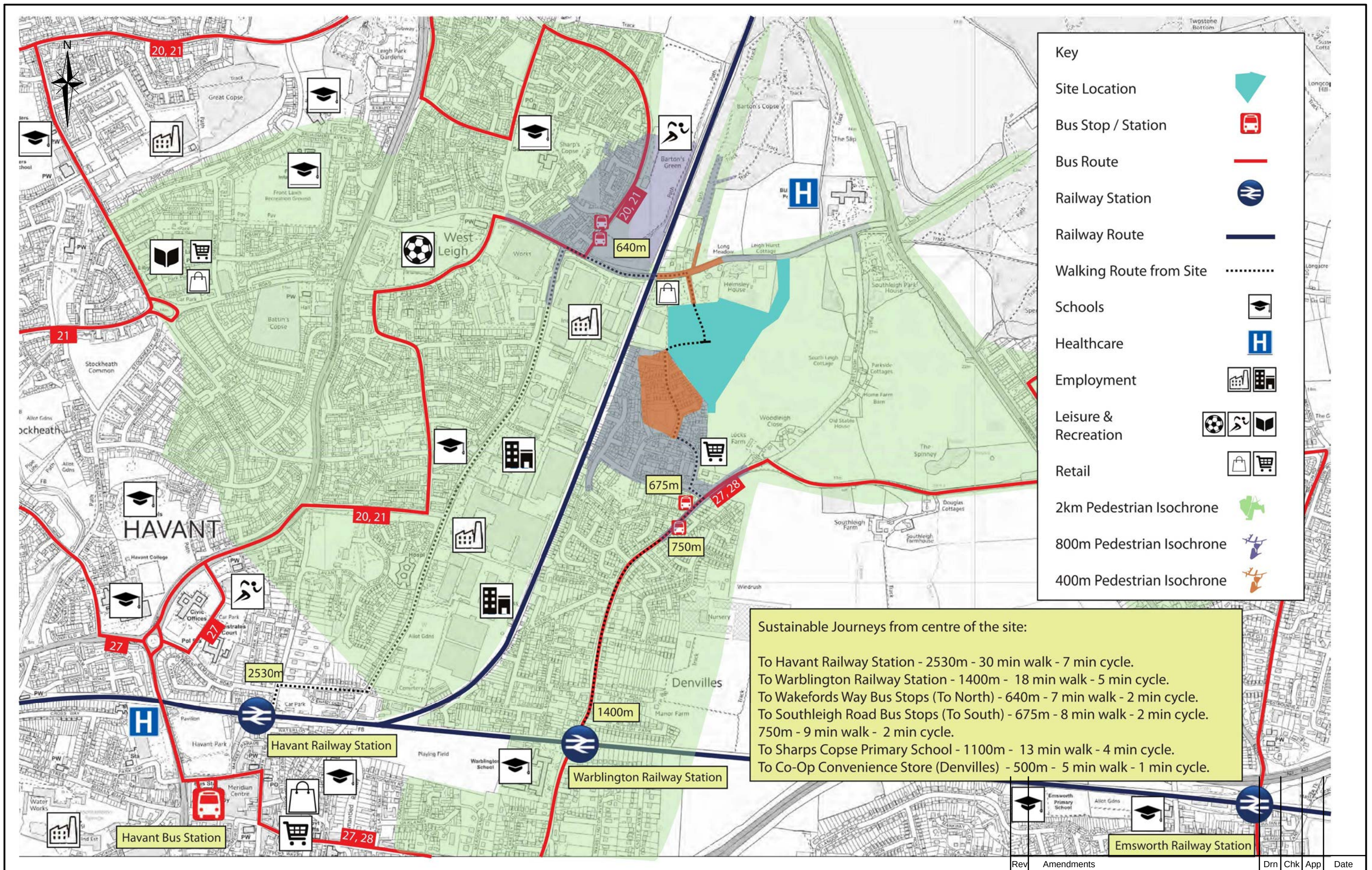
9.18 The development is well located in terms of accessibility to local facilities and services. The development proposes to contribute towards the improvement of the PROW connections from the site to Bartons Road and Japonica Way. These then connect the site to the wider, good quality pedestrian / cycle network.

9.19 An assessment of the highway impact of the development on the surrounding highway network indicates that the development will not have a significant impact on the network in terms of capacity or safety. Therefore, under the guidelines set out in the NPPF, it is considered that planning permission should not be refused on transport grounds.

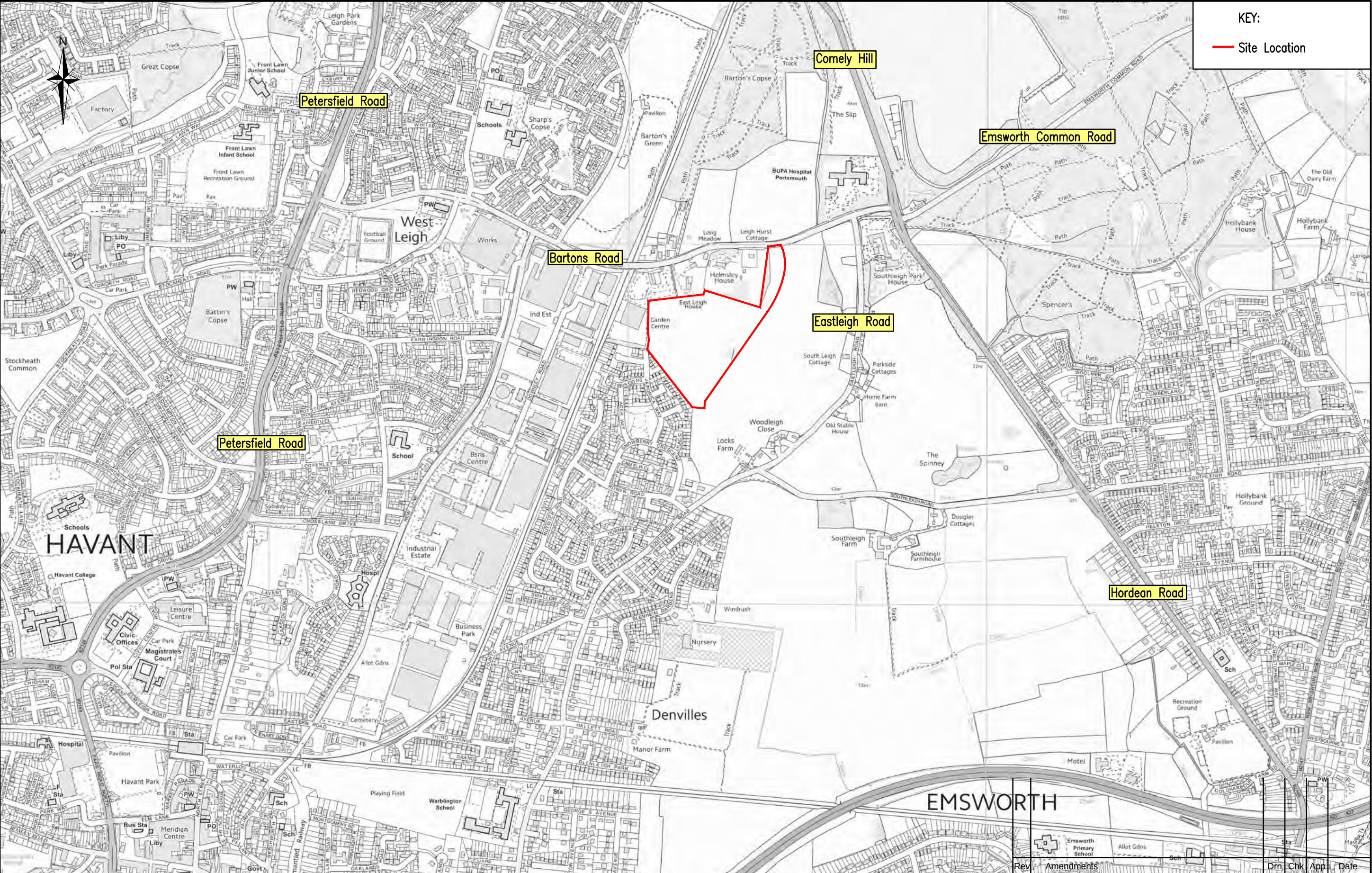
FIGURES



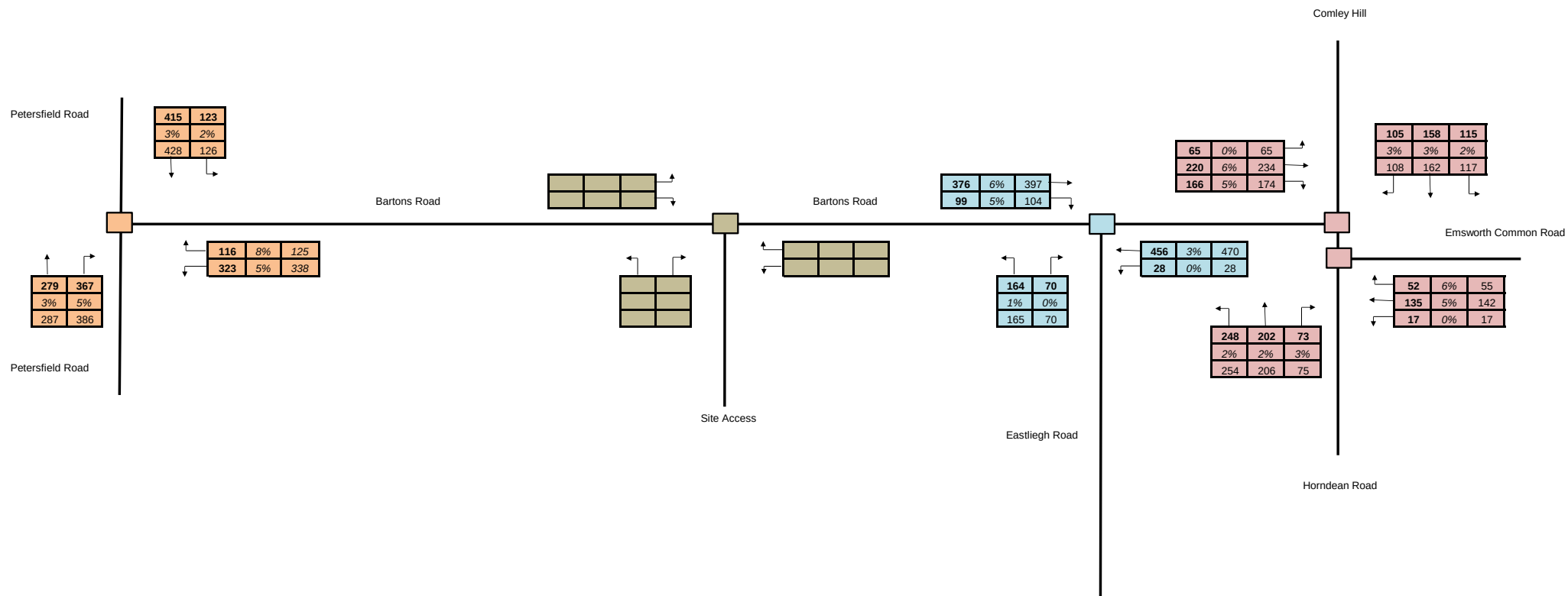
	Issued by ☐ Offices 8 & 9 Aldershot Enterprise Centre Mandora House Louise Margaret Road Aldershot, Hampshire GU11 2PW 01252 939000 ☐ Office 17, Wealden Place Bradbourne Vale Road Sevenoaks, Kent TN13 3QQ 01732 448120	Job Title	Land South of Bartons Road, Havant	Client	Chidden Farms	Scale	NTS	Date	Nov 15	Designed	DH	
		Drawing Title				Site Location Plan	Drawn	DH	Checked	SA	Approved	DH
		Job No				14-018	Drawing No	Figure 1	Rev			



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						NTS	Nov 15	DH
		Drawn				Checked	Approved	
			DH	SA	SA			
			Job No	Drawing No		Rev		
			14-018	Figure 2				



	Issued by ☐ Offices 8 & 9 Aldershot Enterprise Centre Mandora House Louise Margaret Road Aldershot, Hampshire GU11 2PW 01252 939000 ☐ Office 17, Wealden Place Bradbourne Vale Road Sevenoaks, Kent TN13 3QQ 01732 448120	Job Title	Land South of Bartons Road, Havant	Client	Chidden Farms	Scale	NTS	Date	Nov 15	Designed	DH	
		Drawing Title				Highway Network	Drawn	DH	Checked	SA	Approved	SA
		Job No				14-018	Drawing No	Figure 3	Rev			



Notes:

???
???
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Vehicles
HGV %
PCU

Not to Scale
Not all Roads and Routes are Shown

Job Title:

Bartons Road, Havant

Drawing Title:

Figure 4
2015 Baseline Traffic Flows - AM Peak

Job No:

14-018

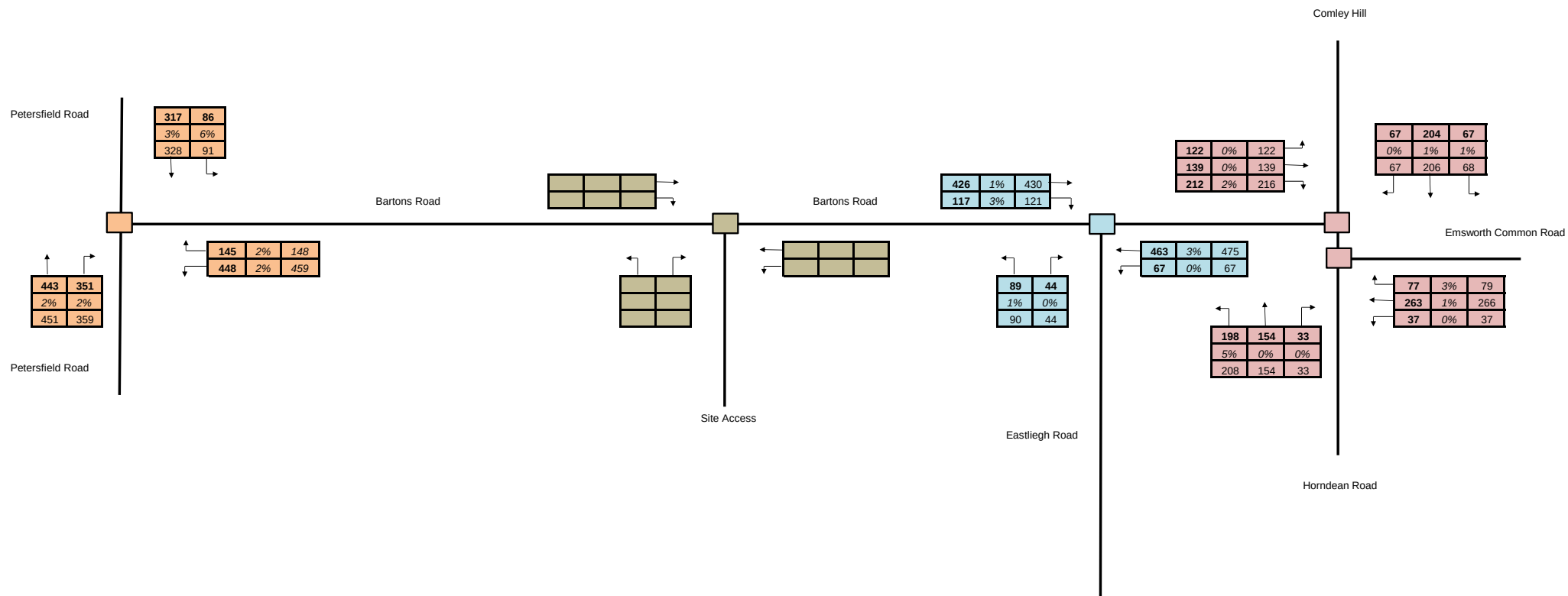
Date:

25/06/2015



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Notes:

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Vehicles
HGV %
PCU

Not to Scale
Not all Roads and Routes are Shown

Job Title:

Bartons Road, Havant

Drawing Title:

Figure 5
2015 Baseline Traffic Flows - PM Peak

Job No:

14-018

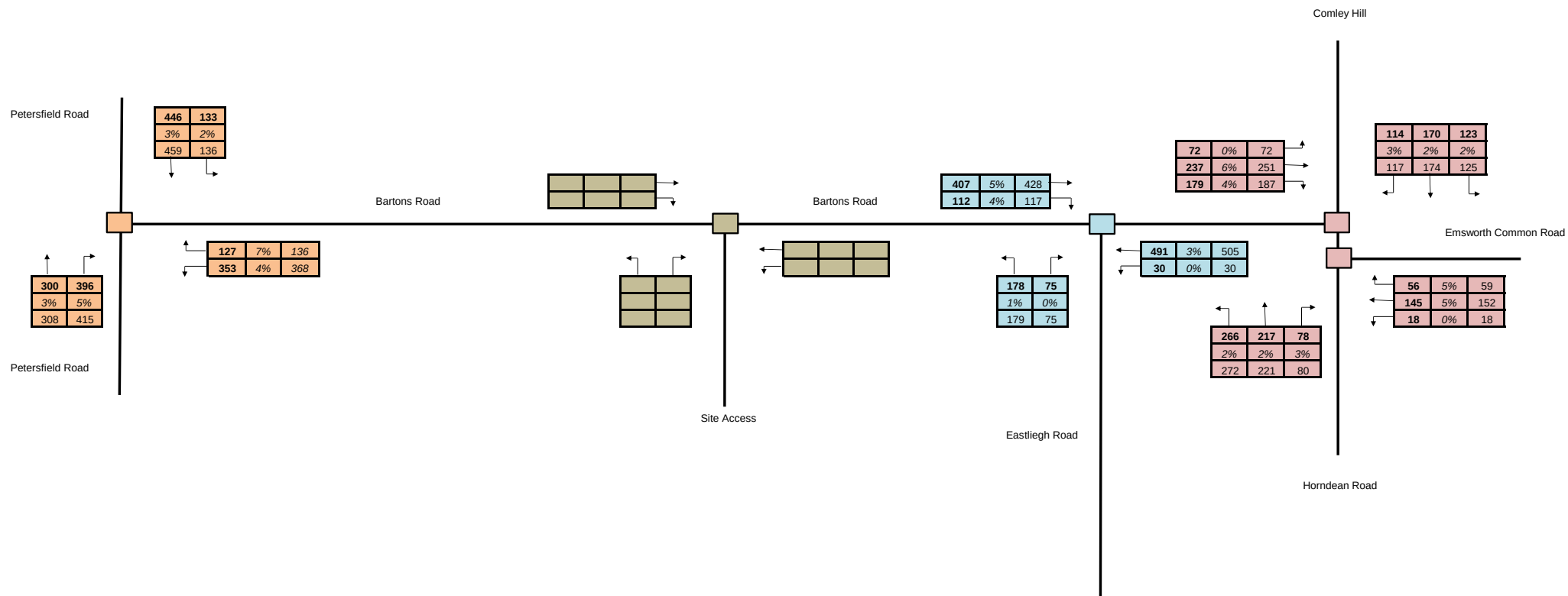
Date:

25/06/2015



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Notes:

???
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Vehicles
HGV %
PCU

Not to Scale
Not all Roads and Routes are Shown

Job Title:

Bartons Road, Havant

Drawing Title:

Figure 6
2020 Baseline + Committed Dev - AM Peak

Job No:

14-018

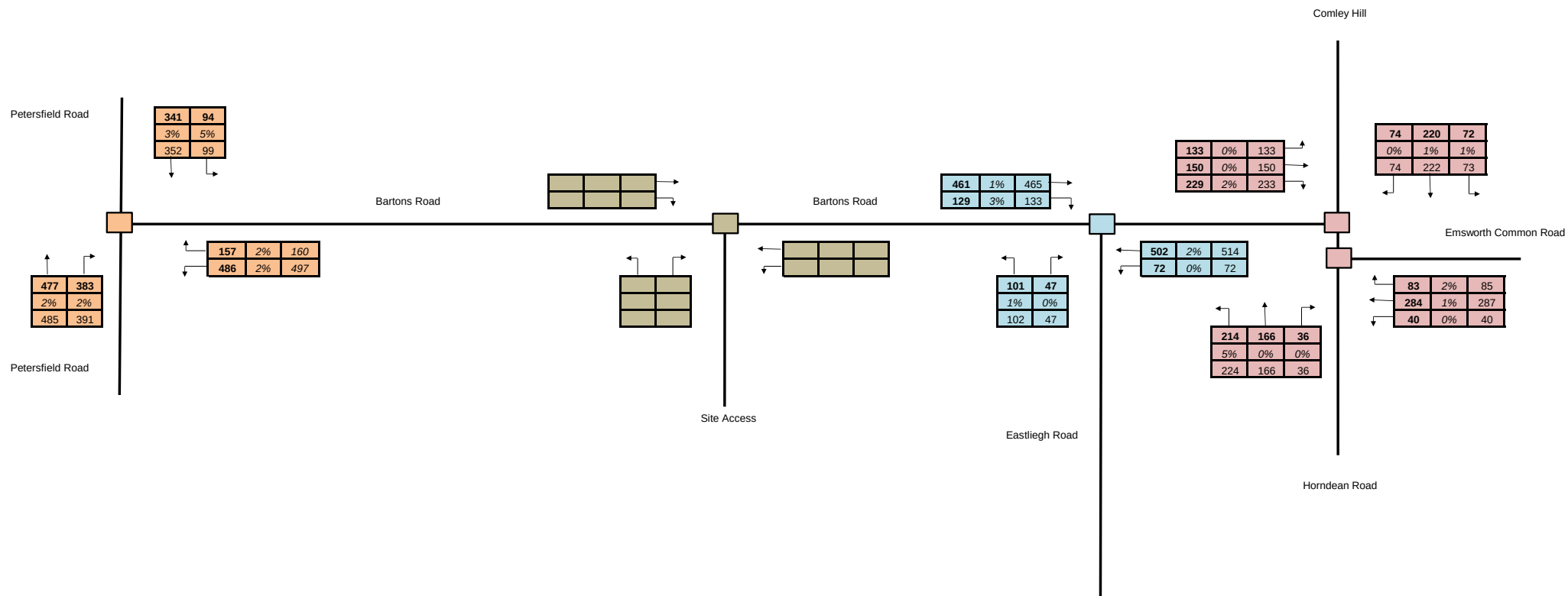
Date:

25/06/2015



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Notes:

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Vehicles
HGV %
PCU

Not to Scale
Not all Roads and Routes are Shown

Job Title:

Bartons Road, Havant

Drawing Title:

Figure 7
2020 Baseline + Committed Dev - PM Peak

Job No:

14-018

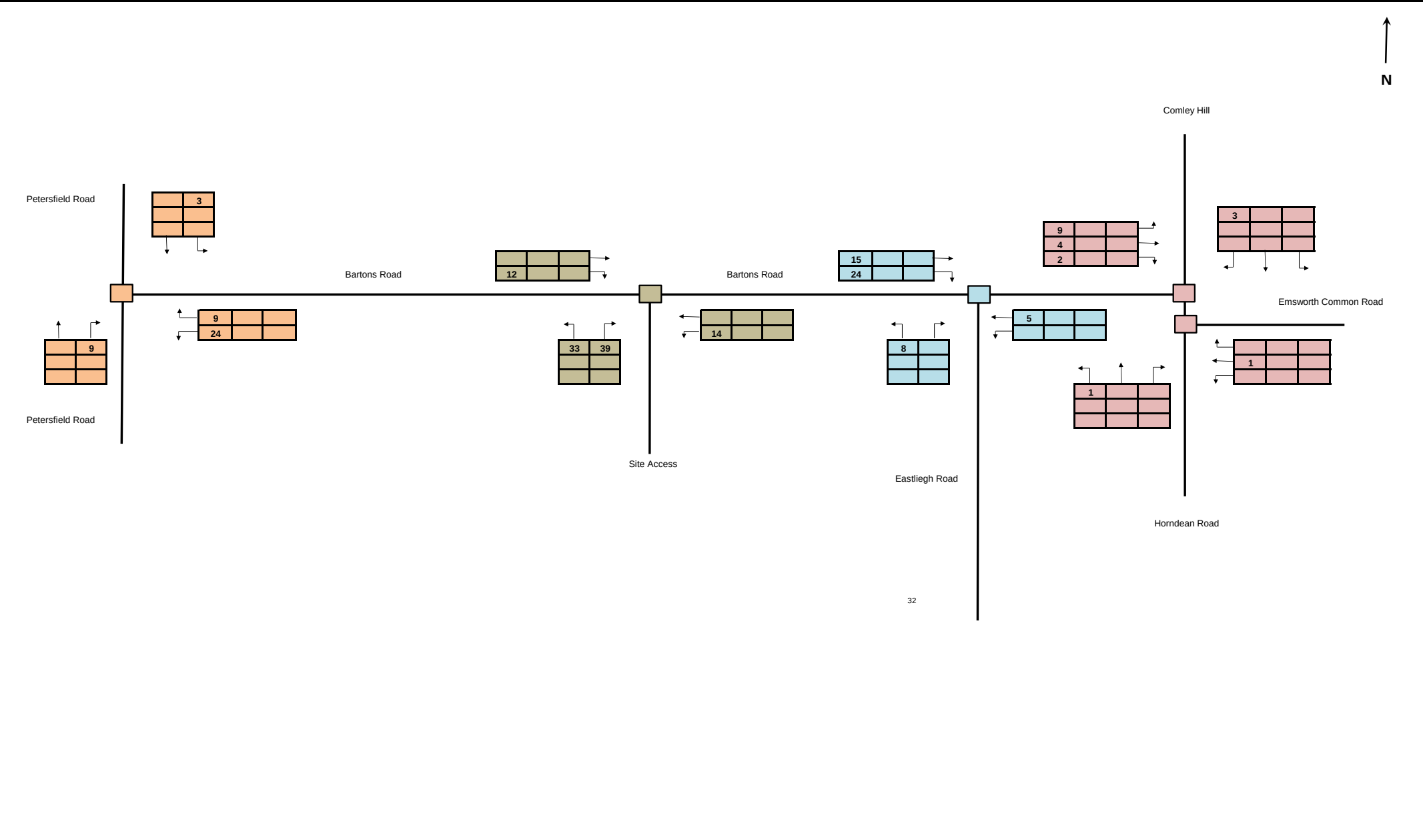
Date:

25/06/2015



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Notes:

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Vehicles
HGV %
PCU

Not to Scale
Not all Roads and Routes are Shown

Job Title:

Bartons Road, Havant

Drawing Title:

Figure 8
Development Flows - AM Peak

Job No:

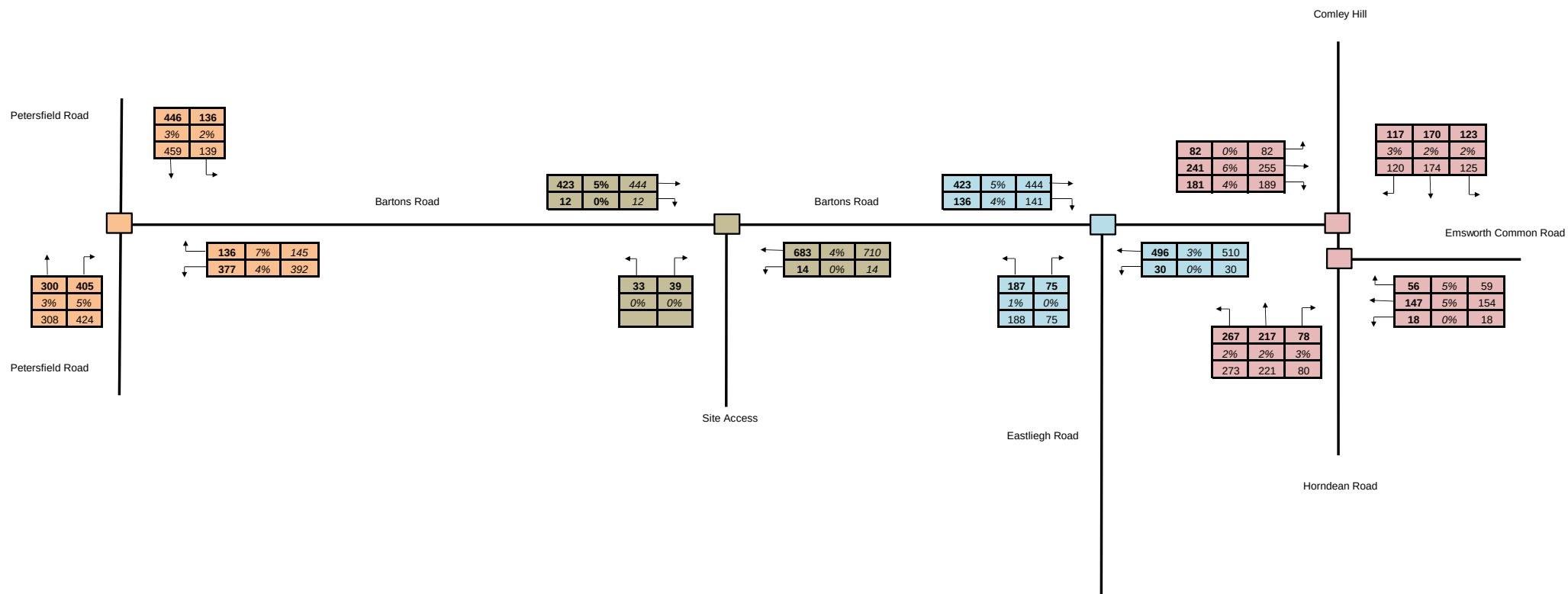
14-018

Date:

25/06/2015



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Notes:

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Vehicles
HGV %
PCU

Not to Scale
Not all Roads and Routes are Shown

Job Title:

Bartons Road, Havant

Drawing Title:

Figure 10
2020 Baseline + Development Flows - AM Peak

Job No:

14-018

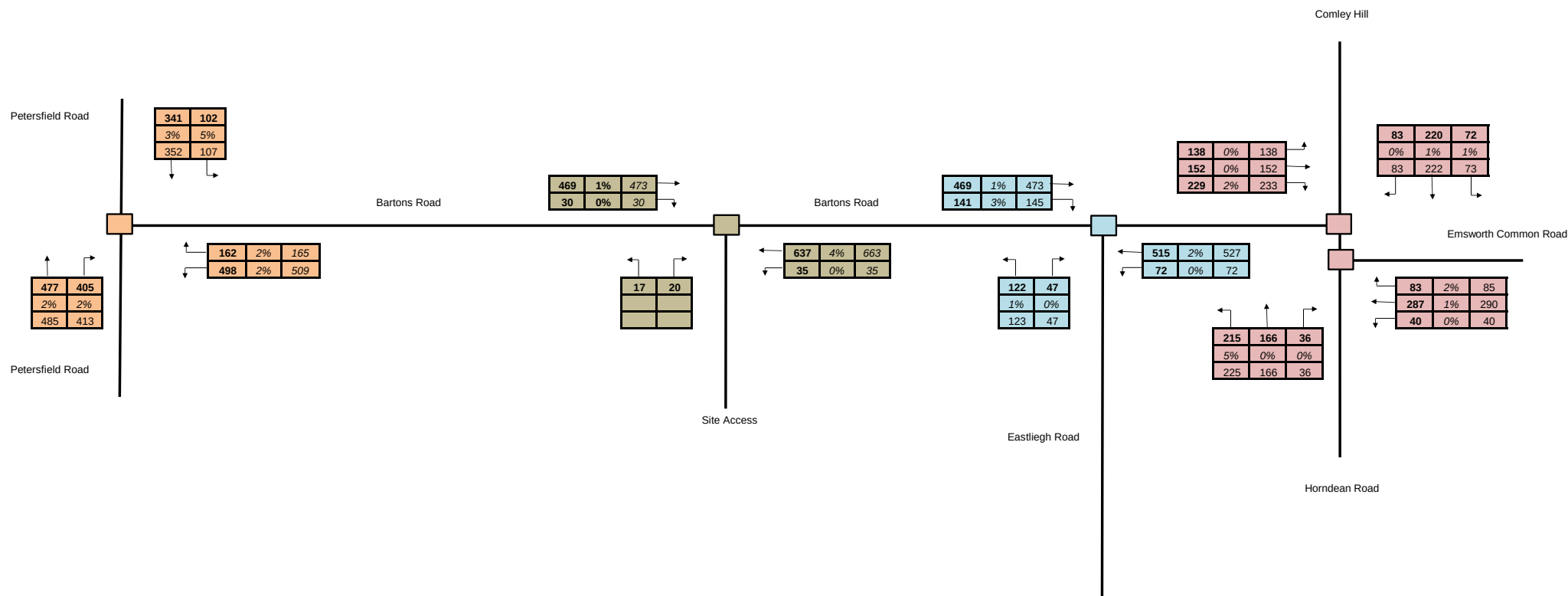
Date:

25/06/2015



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Office 17 - Wealden Place - Sevenoaks - TN13 3QQ



Notes:

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???
???

Vehicles
HGV %
PCU

Not to Scale
Not all Roads and Routes are Shown

Job Title:

Bartons Road, Havant

Drawing Title:

Figure 11
2020 Baseline + Development Flows - PM Peak

Job No:

14-018

Date:

25/06/2015



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DRAWINGS



NOTES

- Do not scale from this drawing.
- The access to the Crematorium is based on planning drawings from the public domain and the exact position should be checked and varied on site.
- The position of the new site access is subject to confirmation of the Highway Boundary and Land Ownership.

HIGHWAY BOUNDARY

D	Access tied into Topo	DH	SA	GC	Nov 15
C	Agricultural access added	DH	SA	GC	Oct 15
B	Access widened from 6.0m to 6.5m	DH	SA	GC	Oct 15
A	Topographical survey added	TS	SA	GC	09/2015
Rev	Amendments	Dm	Chk	App	Date



OFFICE 12
WEALDINS PLACE
BRADBORNE VALE ROAD
SEVENOAKS KENT
TN13 1BQ

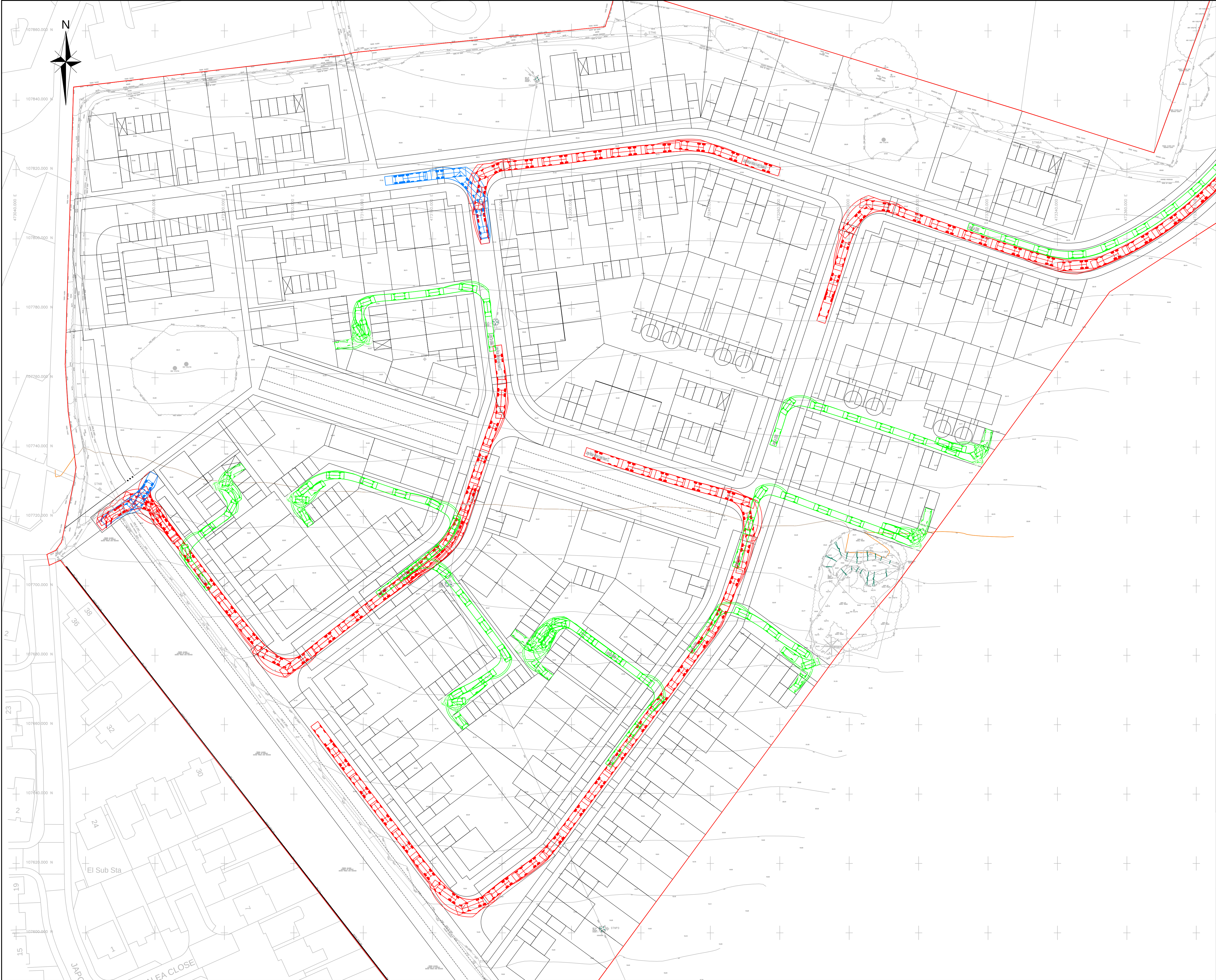
Telephone: 01732 448126
Fax: 01732 465626
Email: enquiries@ca-uk.com
Web: www.ca-uk.com

Job Title
Land South of Barton's Road, Havant

Drawing Title
Preliminary Site Access Plan

Client
Chidden Farms

Scale 1:500@A1	Date Apr'15	Designed SB
Drawn SB	Checked GAC	Approved GAC
Job No 14-018	Drawing No 14-018-002	Rev D



NOTES

112

Large Refuse Vehicle (4 axle) Havant CC

Overall Length11.200m

Overall Width2.500m

Overall Body Height4.751m

Min Body Ground Clearance0.304m

Track Width2.500m

Lock to Lock Time6.00s

Wall to Wall Turning Radius9.550m

5.079

Large Car (2006)

Overall Length5.079m

Overall Width1.872m

Overall Body Height1.525m

Min Body Ground Clearance0.310m

Max Track Width1.831m

Lock to Lock Time4.00 sec

Kerb to Kerb Turning Radius5.900m

Rev	Amendments	Dm	Chk	App	Date

Offices 8 & 9 Aldershot Enterprise Centre Mandora House Limes Margaret Road Aldershot Hampshire GU11 2PW 01252 939000 enquiries@ce-a.uk.com www.ce-a.uk.com

Office 17 Waddes Place Bradbourne Vale Road Sevenoaks Kent TN13 3QD 01752 448128

Job Title

Land South of Bartons Road, Havant

Drawing Title

Refuse & Parking Strategy Plan

Client

Chidden Farms

Scale	1:500@A1	Date	Nov 15	Designed	DH
Drawn	DH	Checked	SA	Approved	GAC
Job No	14-018	Drawing No	14-018-011	Rev	