

Transport Assessment

**LAND OFF ST MARY'S ROAD,
HAYLING ISLAND, HAMPSHIRE
CLIENT: GLADMAN DEVELOPMENTS**



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1 INTRODUCTION

1.1 Purpose of Report

- 1.1.1 This report considers the highways and transportation implications associated with Gladman Developments Ltd's (Gladman) proposal for a residential development comprising up to 210 dwellings and 0.6ha for apartments with care (C2) located on land off St Mary's Road, Hayling Island, Hampshire.
- 1.1.2 This document has been prepared in accordance with the Government's Planning Practice Guidance: Transport evidence bases in plan making (October 2014) and Travel Plans, transport assessments and statements in decision-taking (March 2014) and the Department for Transport's (DfT) Guidance on Transport Assessment (GTA) (March 2007). It considers the accessibility of the site and safety for all modes of travel but specifically alternatives to the private car such as walking, cycling and public transport.
- 1.1.3 The conclusions and recommendations contained herein have been drawn based on information available and obtained in advance of the planning submission to which this report relates.
- 1.1.4 Reasonable checks have been carried out on any third-party information used in the preparation of this report but, nonetheless, PRIME Transport Planning accepts no liability for the accuracy or otherwise of this data.
- 1.1.5 Third party rights are excluded for the use of information contained within this report.

1.2 Scope of Report

- 1.2.1 This report has been prepared in accordance with 'Transport evidence bases in plan making' which replaced the DfT's GTA on the 22nd October 2014. However, the new document is not a like-for-like replacement for GTA, providing no guidance on the production of Transport Assessments to accompany developments. The latest guidance instead helps local planning authorities assess strategic transport needs to reflect and, where appropriate, mitigate these in their Local Plan.
- 1.2.2 More relevant information is provided within the PPG under Travel Plans, Transport Assessments and Statements in Decision-Taking however this also does not provide the level of detailed guidance that was contained within DfT's GTA.
- 1.2.3 The lack of current detailed guidance places greater emphasis on agreeing the scope of a TA with the highway authority responsible for the location in which the development is proposed and in employing industry best-practice. Given that GTA was in place for 7-years, PRIME believes that assessment in-line with the document still represents industry best-practice, particularly for aspects where the current guidance lacks the necessary detail to form a robust assessment.

1.2.4 Hampshire County Council (HCC) is the planning and highway authority for Hayling Island. The scope of this TA has been largely agreed with HCC Highways, per the scoping correspondence included in **Appendix A**.

1.2.5 Following this introduction, the remainder of this report is structured as follows:

- **Section 2** describes the relevant local and national transport policy and guidance;
- **Section 3** describes the existing situation in terms of the site, local highway network and traffic conditions;
- **Section 4** details the development proposal including the access strategy;
- **Section 5** details access to the site by sustainable modes of travel which includes walking, cycling and public transport;
- **Section 6** discusses the forecasting methodology and trip generation of the site;
- **Section 7** describes the results of the traffic impact assessment and the ability of the proposed site access to accommodate the generated traffic;
- **Section 8** describes the existing safety of the local highway network; and
- **Section 9** summarises and concludes the findings of the Transport Assessment.

2 TRANSPORT POLICY AND GUIDANCE

2.1 Introduction

- 2.1.1 It is important that any new developments conform to and compliment national and local planning policy. This section details the policies that are relevant to this development.

2.2 National Planning Policy Framework

- 2.2.1 The *National Planning Policy Framework* (NPPF) was published in March 2012 and sets out the Government's current planning policies for England.

- 2.2.2 Paragraph 14 states that there is a '*presumption in favour of sustainable development*' and that '*local planning authorities should positively seek opportunity to meet the development needs of their area*' unless '*any adverse impacts of doing so would significantly and demonstrably outweigh the benefits...*'

- 2.2.3 Section 4 of the NPPF, *Promoting Sustainable Transport*, outlines the important role that transport policies have to play in facilitating sustainable development. It states that:

'The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel.'

- 2.2.4 The document emphasises the need for developments to offer a choice of sustainable modes of transport which '*support reductions in greenhouse gas emissions and reduce congestion*' and provide '*safe and suitable*' access for all.

- 2.2.5 Paragraph 35 of the NPPF states that plans for new development should:

'...protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to:

- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;*
- create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones; and*
- consider the needs of people with disabilities by all modes of transport.'*

- 2.2.6 Paragraph 36 continues stating that a '*key tool*' to facilitate the above will be a Travel Plan, one of which has been submitted in support of this planning application as a separate document, but is summarised in **Section 5** of this TA given its pertinence to reducing the highway potential impact of the site and enhancing accessibility by sustainable modes of travel.

2.2.7 The NPPF calls for a '*balance of land uses*' which will encourage people to minimise their journey lengths for employment, shopping, leisure, education and other activities.

2.2.8 With regards to making decisions related to new development, Paragraph 32 of the NPPF states that such decisions should consider 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 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.'*

2.3 Planning Practice Guidance

2.3.1 The theme of sustainable development runs throughout Planning Practice Guidance, with the detailed elements regarding transport being focussed in the following sections:

- Transport evidence bases in plan making and decision taking; and
- Travel plans, transport assessments and statements in decision-taking.

2.3.2 Both sections of the Guidance provide significant amounts of detail on the information types and sources that are appropriate for helping Local Planning Authorities to take forward their Local Plan with an appropriate evidence base. The Guidance is also a useful reference for assessing schemes such as the development which this report accompanies.

2.3.3 The core components of the requirements for assessment, as set out in the Guidance, can be summarised as:

'The key issues, which should be considered in developing a transport evidence base, include the need to:

- *assess the existing situation and likely generation of trips over time by all modes and the impact on the locality in economic, social and environmental terms*
- *assess the opportunities to support a pattern of development that, where reasonable to do so, facilitates the use of sustainable modes of transport*
- *highlight and promote opportunities to reduce the need for travel where appropriate*
- *identify opportunities to prioritise the use of alternative modes in both existing and new development locations if appropriate*
- *consider the cumulative impacts of existing and proposed development on transport networks*

- *assess the quality and capacity of transport infrastructure and its ability to meet forecast demands*
- *identify the short, medium and long-term transport proposals across all modes'*

2.3.4 The principles set out in Planning Practice Guidance are consistent with the approach undertaken in the production of this Transport Assessment (TA).

2.4 Hampshire Local Transport Plan

2.4.1 HCC's Local Transport Plan (LTP) was formally approved on 24 February 2011 and covers the period to 2031.

2.4.2 The LTP is written in two parts: an LTP Strategy and an LTP Implementation Plan. The LTP Strategy is a comprehensive document which covers a 20-year period, from 2011 to 2031, and as such is intended to set out a long-term vision for how the transport network of Hampshire will be developed. The LTP Implementation Plan is a shorter document which comprises a three-year prioritised programme of integrated transport schemes to be delivered between 2014/15 to 2016/17, and it is the intention that HCC will produce subsequent three-year implementation plans throughout the life of the LTP.

2.4.3 The LTP sets out three main transport priorities for Hampshire for the next 20 years, these being:

- *'Main Priority 1: To support economic growth by ensuring the safety, soundness and efficiency of the transport network in Hampshire;*
- *Main Priority 2: 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*
- *Main Priority 3: Manage traffic to maximise the efficiency of existing network capacity, improving journey time reliability and reducing emissions, thereby supporting the efficient and sustainable movement of people and goods.'*

2.4.4 The LTP sets fourteen further policy objectives organised under the following five 'themes':

- A. Supporting the economy through resilient highways;
- B. Management of traffic;
- C. The role of public transport;
- D. Quality of life and place; and
- E. Transport and growth areas.

2.4.5 Theme E in particular relates to the link between transport and land-use policy, and in discussing Theme E, the LTP notes that,

'Whilst acknowledging that most people will wish to own and use cars, it is important that new development is planned to avoid increasing traffic pressure by ensuring that attractive sustainable transport alternatives are available. These alternatives then need to be promoted to ensure that those working and living within new developments are aware of the travel choices open to them.'

- 2.4.6 Chapter 7 of the LTP specifically addresses the South Hampshire Joint Strategy area, which includes Hayling Island and Havant, and has been developed jointly by HCC, Portsmouth City Council and Southampton City Council, working collectively as Transport for South Hampshire (TfSH). The vision for TfSH is to create:

'A resilient, cost effective, fully-integrated sub-regional transport network, enabling economic growth whilst protecting and enhancing health, quality of life and environment'.

- 2.4.7 There are 10 transport policies relevant to Hayling Island which are as follows:

- Policy A: To develop transport improvements that support sustainable economic growth and development within South Hampshire;
- Policy C: To optimise the capacity of the highway network and improve journey time reliability for all modes;
- Policy D: To achieve and sustain a high-quality, resilient and well-maintained highway network for all;
- Policy E: To deliver improvements in air quality;
- Policy G: To improve road safety across the sub-region;
- Policy H: To promote active travel modes and develop supporting infrastructure;
- Policy I: To encourage private investment in bus, taxi and community transport solutions, and where practical, better infrastructure and services;
- Policy L: To work with Local Planning Authorities to integrate planning and transport;
- Policy M: To develop and deliver high-quality public realm improvements; and
- Policy N: To safeguard and enable the future delivery of transport improvements within the TfSH area.

2.5 Havant Borough Council Core Strategy

- 2.5.1 The Havant Borough Council Core Strategy (2011-2026) was adopted in March 2011, and is the principal document in the Council's Local Plan.
- 2.5.2 The document sets out a vision for the future development of the Borough between 2011-2026, which is to transform Havant Borough into a *'cleaner, safer and more prosperous place. It will be a place where people of all ages and circumstances will want to live, visit or work.'*

2.5.3 The Core Strategy comprises seven key themes, which are as follows:

- Health and Wellbeing;
- Promoting Havant Borough's Economy;
- Regeneration and Community Support;
- Community Safety;
- Housing;
- Caring for our Borough; and
- Infrastructure, Implementation and Monitoring

2.5.4 The Core Strategy also sets out Development Management Policies, which are as follows:

- Health and Wellbeing – Community Facilities, Recreation and Open Space;
- Promoting Havant Borough's Economy;
- Housing;
- Caring for Our Borough; and
- Infrastructure – **Transport**

2.5.5 The following Development Management (DM) Policies are set out under 'Infrastructure-Transport'.

DM Policy 11 – Planning for More Sustainable Travel

2.5.6 Within the document it states that *'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'*.

2.5.7 The document sets out a list of 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 in accordance with the Hampshire Local Transport Plan and 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*
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.'*

DM Policy 12 – Mitigating the Impacts of Travel

2.5.8 It is stated in the document that *'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'.*

2.5.9 By ensuring that the above is met, Havant Borough Council have set out the following criteria:

- *'Adequate provision is made for integrated and improved transport infrastructure or appropriate mitigation measures, through direct improvements and S106 contributions;*
- *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;*
- *The submission of a Transport Statement must accompany planning applications to explain changes to travel demand;*
- *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.; and*
- *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.'*

DM Policy 13 – Car and Cycle Parking on Residential Development

2.5.10 It is set out in the document that *'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.'*

2.6 Havant Borough Residential Parking and Cycle Provision

2.6.1 The Supplementary Planning Document (SPD) was adopted in March 2010 and provides comprehensive information and local standards with regards to parking provision and design in residential developments. **Image 2.1** below is Table 4 from the document and shows the allocated parking standards, **Image 2.2** is Table 5 from the document and show the shared/communal parking standards and **Image 2.3** is Table 7 from the document and shows the cycle parking standard.

Image 2.1 – Allocated Parking Standards

Table 4 Vehicle Parking			
Zone Size of dwelling	Standard	Havant town centre	Waterlooville town centre
1 Bed Unit	1 space	Max 1 space	1 space
2 Bed Unit	2 spaces	Max 1 space	1 space
3 Bed Unit	2 spaces	Max 1 space	1-2 spaces
4+ Bed Unit	3 spaces	Max 2 spaces	1-2 spaces

Image 2.2 – Shared/Communal Parking

Table 5 Shared/Communal Parking (unallocated)			
Zone Size of dwelling	Standard	Havant town centre	Waterlooville town centre
1 Bed Unit	0.9 spaces	Max 0.5 spaces	0.6 spaces
2 Bed Unit	1.3 spaces	Max 0.8 spaces	1 space
3 Bed Unit	1.9 spaces	Max 1 spaces	1.4 spaces
4+ Bed Unit	2.4 spaces	Max 1.2 spaces	1.8 spaces

Image 2.3 – Cycle Parking/Storage Provision

Size of dwelling	Long stay	Short Stay
1 Bed Unit	1 space per unit	1 loop/hoop per unit
2 Bed Unit	2 spaces per unit	1 loop/hoop per unit
3 Bed Unit	2 spaces per unit	1 loop/hoop per unit
4+ Bed Unit	2 spaces per unit	1 loop/hoop per unit

2.6.2 The standards for allocated and shared/communal cars parking vary based on the house type and the local area's level of accessibility as do the standards for cycle parking.

2.6.3 The standards for sheltered housing and nursing and rest homes which may be applicable to the apartments with care land use are shown in **Image 2.4** this being Table 6 from the document.

Image 2.4 – Sheltered Housing and Nursing and Rest Home Parking

Zone Type of Provision	Standard	Havant town centre	Waterlooville town centre
Sheltered Housing	1 space per unit	Max 0.5 Spaces per unit	0.5 – 1 spaces per unit
	Age restriction conditions or legal undertakings may be appropriate to define the age of occupants. Mobility vehicle storage provision may also be required in addition to cycle long and short stay provision (see Table 7).		
Nursing and Rest Homes	1 space per 4 residents and 1 space per staff and 1 long stay cycle space per 6 staff and 1 loop/hoop per 4 units	1 space per 8 residents and 0.5-1 space per staff and 1 long stay cycle space per 3 staff and 1 loop/hoop per 2 units	1 space per 6 residents and 1 space per staff and 1 long stay cycle space per 4 staff and 1 loop/hoop per 3 units
	The resulting level of parking would allow flexibility for visitors, visiting health care professionals, ambulances, etc. As staff are likely to operate over a 24 hour period the calculation based on the number of staff should be based on the number typically present on the site at any one time. Information to support this should be submitted with any planning application.		

- 2.6.4 These standards vary by type of provision and the local area's level of accessibility. It is however important to note that developers of such establishments often provide justification for bespoke parking standards given the varying nature of such facilities, as evident in the Transport Statement for the consented development opposite the site on the former Hayling Billy public house by McCarthy and Stone (APP/16/00568). Further details will be provided as part of any subsequent Reserved Matters application.

2.7 Manual for Streets and HCC Companion Document

- 2.7.1 *Manual for Streets* (MfS) was published on behalf of the DfT and Communities and Local Government in March 2007 and provides advice for the design of residential streets in England and Wales.

- 2.7.2 The focus of MfS is to demonstrate the:

'benefits that flow from good design and assigns a higher priority to pedestrians and cyclists, setting out an approach to residential streets that recognises their role in creating places that work for all members of the community. MfS refocuses on the place function of residential streets, giving clear guidance on how to achieve well-designed streets and spaces that serve the community in a range of ways' (MfS page 7).

- 2.7.3 The guidance addresses many common design principles and discusses detailed design issues, often presenting recommended design criteria. Some of the key principles of MfS include:

- The need to shift from focusing on designing for motor vehicles to designing streets around the needs of pedestrians, cyclists and public transport users which in turn enhances safety;
- Good design can help to create and strengthen a sense of place and community;
- Creating streets that are permeable and offer good quality connections to main destinations for all road users;
- Inclusive design that recognises the needs of people of all ages and abilities; and
- Cost-effective construction often by avoiding over-designing.

- 2.7.4 In September 2010 a companion document *Manual for Streets 2 – wider application of the principles* (MfS2) was published. This document expands on some of the design principles of MfS and provides examples of places where designs based on these principles have been implemented.

- 2.8 HCC has produced a *Companion Document to Manual for Streets*, which is HCC's response to MfS: not replacing it, but sitting alongside it. The Companion Document sets out responses to specific parts of MfS. What MfS does not cover are the detailed technical standards for materials and construction that are needed for highways to be adopted. The HCC Companion Document is intended to provide a series of technical papers aimed at ensuring that, by applying the principles

of the MfS, new streets meet the exacting standards HCC require without compromising quality of design.

2.9 Summary

- 2.9.1 This section has outlined national and local transport policies and guidance which are applicable to the development site. How the site conforms to and complements these policies and guidance will be discussed in the following sections of this report, where relevant.

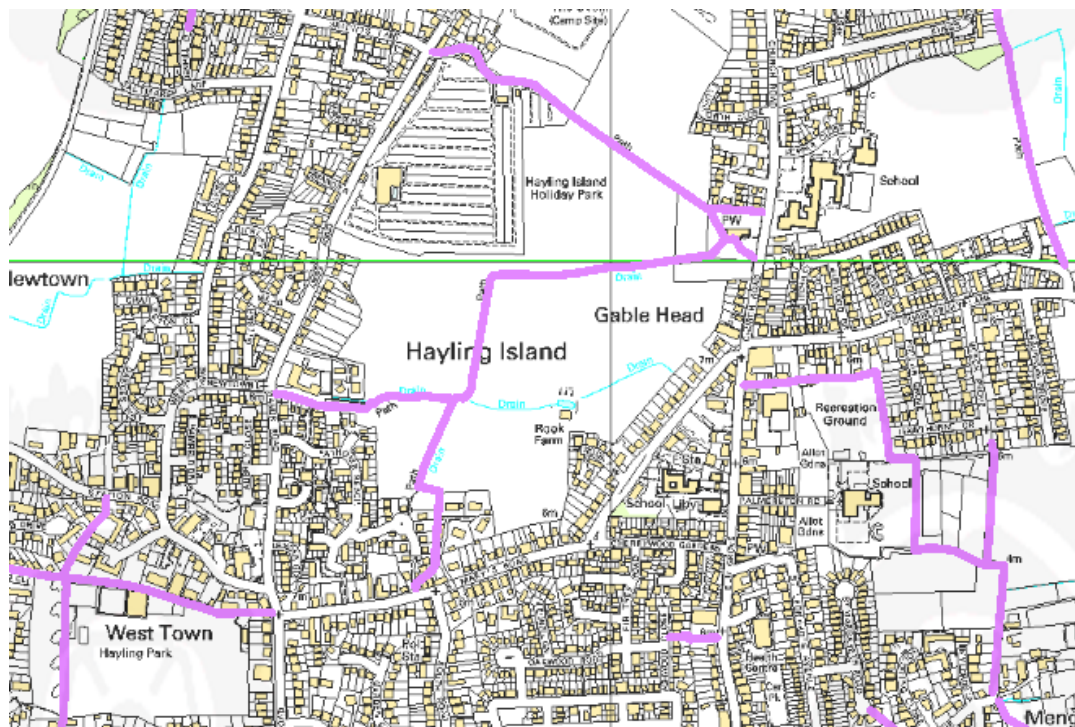
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3 EXISTING SITUATION

3.1 Site Description

- 3.1.1 The application site is currently largely undeveloped and in agricultural use. It is located in the Gable Head area of Hayling Island to the north of the South Hayling area. The site is bound to the south and east by existing residential properties off St Mary's Road and Church Road and bound to the north and west by open space. The site's only frontage with the adopted highway network is an approximately 30m wide section with St Mary's Road, in between numbers 115 and 123.
- 3.1.2 Hayling Island itself is a true island with a single bridge connection from the mainland. It sits within the borough of Havant, Hampshire. The Gable Head area is approximately 4.5 miles south of the centre of Havant and 10 miles east of Portsmouth. The location of the site in the context of Hayling Island and the local highway network is illustrated in **Figure 1** in **Appendix B**.
- 3.1.3 **Image 3.1** below shows the various public rights of way (PRoW) in the vicinity of the site, this being an extract of HCC's online mapping system. Footpaths are highlighted pink with Footpath 93 running along but outside of the northern boundary of the site from St Mary's Church to Footpath 92 which continues south along but outside of the western boundary then west to Manor Road. Footpath 94 runs from Footpath 92 to St Mary's Road at Southleigh Grove. The map below highlights the PRoW network local to the site.

Image 3.1: Extract from HCC's Online Mapping System Depicting the Public Rights of Way



Source: <http://localviewmaps.hants.gov.uk/LocalViewmaps/Sites/ROWOnline/#>

3.2 Local Highway Network

St Mary's Road

- 3.2.1 As mentioned above, St Mary's Road is the site's only frontage with the local highway network. It is a residential local access collector road effectively connecting Church Road to Manor Road as well as providing access to a number of side roads and many properties having driveway frontage with it. The road is best described in two sections, with the north-eastern section running diagonally from a priority controlled junction with ghost island right turn with Church Road in the north-east to Cherrywood Gardens where it forms a split priority junction. The western section then continues west from this junction to a priority controlled junction with minor arm flare with Manor Road.
- 3.2.2 St Mary's Road is two-way with a single lane in each direction. It is subject to a 30mph speed limit. The road also provides access to Mengham Infant School and a public car park. A central reserve is present in the vicinity of the school access which includes an uncontrolled crossing. A school bus stop is also present at this location. Double yellow lines restrict parking between the Church Road junction and the school while some on-street parking is permitted between the school and Cherrywood Gardens. Parking restrictions are largely not present along the western section. Continuous footway is present along the southern side of the western section while the footways along the eastern section are somewhat intermittent but safe contiguous walking routes are available by crossing over the road. Traffic calming features are not present on St Mary's Road.

Church Road/Elm Grove/Sea Grove Avenue

- 3.2.3 Church Road runs south from the A3023 roundabout becoming Elm Grove south of St Mary's Road then Sea Grove as it approaches Sea Front, the coast road. The road is one of the two distributor roads in the southern half of the island. It collects traffic from numerous side roads with many residential and commercial properties also taking access from it. Between Gable Head and South Hayling it acts as the local high street with shops and other businesses forming the majority of the frontage and wide footways being present. It is subject to a 30mph speed limit.

A3023

- 3.2.4 The A3023 is the primary distributor road that connects the island with the mainland. It runs south from a grade separated traffic signal controlled roundabout with the A27 and Park Road South to the south of Havant where it is named Langstone Road. It then bridges over Chichester and Langstone Harbours with the structure commonly known as Langstone Bridge. The bridge itself has a single lane in each direction and shared cycleways on each side of the carriageway. Continuing onto the island, the A3023 is named Havant Road and passes through the Stoke area where the speed limit reduces from 40mph to 30mph and provides access to side roads and driveway access to residential and commercial properties. This characteristic continues further south although driveway frontage becomes more prevalent as the surrounding areas become more urban. To the

west of the roundabout with Church Road, the A3023 continues west then south running parallel to Church Road/Elm Grove/Sea Grove Avenue to Sea Front passing through a district centre in the vicinity of St Mary's Road.

3.3 Existing Traffic Conditions

- 3.3.1 Two site visits were undertaken, one during the PM peak on Thursday 7th July 2016, the other during the AM peak on Friday 8th July 2016 which have aided in the compilation of this TA. During the site visits, it was observed that traffic flowed freely on Hayling Island itself and over the bridge with traffic travelling at typical free flow speeds. Some queues were observed on the A3023 approach to the junction with the A27 and at the merge point travelling southbound from the junction, but these queues tended to clear fairly quickly, particularly at the merge point with drivers showing courtesy to others to allow the merge to happen smoothly. Some slight delays were observed on the minor arms of junctions with the A3023 whilst traffic was gap-seeking but again, many drivers drove with courtesy and often allowed traffic out of the side roads. Traffic was also able to turn in between platoons. No notable queues were observed on the island itself.
- 3.3.2 It was noted that bus services appeared to be frequent and popular. Many pedestrians and cyclists were also observed.
- 3.3.3 In order to gain a better understanding of traffic conditions in the local area and for use in capacity assessment modelling to be detailed in **Section 6**, classified turning count and queue length surveys were undertaken by 360TSL, a specialist traffic survey and data collection company. Four user classes were surveyed, these being cars, light goods vehicles (LGVs), heavy good vehicles (HGVs) and buses. The junctions surveyed were:
1. A27/A3023 Langstone Road/Park Road South – grade separated signal controlled roundabout
 2. A3023 Langstone Road/Langstone Technology Park Access/Southbrook Road – staggered crossroads with ghost island right turns;
 3. A3023 Havant Road/Church Road – 3 arm roundabout;
 4. A3023 Manor Road/St Mary's Road/Station Road – 4 arm staggered crossroads with ghost island right turn to St Mary's Road;
 5. Elm Grove/Cherrywood Gardens – 3 arm priority;
 6. St Mary's Road/Cherrywood Gardens – 3 arm split priority; and
 7. Church Road/Tournerbury Lane/Elm Grove/St Mary's Road – staggered crossroads with ghost island right turns;
- 3.3.4 Junctions 1, 3 and 7 were originally suggested for assessment by PRIME, the choice of which was informed by a generation-distribution exercise using 2011 census data and detailed further in

Section 6. HCC then requested that surveys were undertaken for the other junctions listed during scoping discussions (**Appendix A**).

3.3.5 From hereon, junctions 1 and 2 are collectively referred to as the mainland junctions while the other five are referred to as the island junctions.

3.3.6 The turning count data was interrogated to derive the network weekday peak hours which were as follows:

Mainland Junctions

- AM peak: 0745-0845; and
- PM peak: 1645-1745.

Island Junctions:

- AM peak: 0800-0900;
- PM peak: 1630-1730; and
- School PM peak: 1530-1630.

3.3.7 It is not surprising that the peak hours of the mainland junctions differ to those of the island junctions given the distance between them. The school PM peak for the island junctions is actually higher than the PM peak so in agreement with HCC, an assessment of all three peaks for the island junctions will be undertaken and described in **Section 6**. There were only slight fluctuations between the network peaks and individual junctions with the greatest difference being 18 trips.

3.3.8 The queue surveys recorded the queue lengths at five minute intervals with queues recorded as stationary or slow moving (<5mph) vehicles.

3.3.9 **Traffic Flow Diagrams 1, 2 and 3** included at **Appendix C**, summarise the observed peak hour traffic flows from the turning count surveys and the average queues for the peak hours. In order to aid the capacity assessment modelling detailed in **Section 6**, the four user classes have been condensed into two, with cars and LGVs now referred to as 'lights'; HGVs and buses now referred to as 'heavies'. The raw traffic flow survey data is available on request.

3.3.10 The observed peak hour traffic flows along St Mary's Road at the site frontage, based on the abovementioned classified turning count at Junction 7, are shown in **Table 3.1** below.

Table 3.1: Link Flows along St Mary's Road in the vicinity of the site frontage

Peak	Direction	Link Flow			Heavy %
		Lights	Heavies	Total	
AM	NE bound	146	2	148	1.35%
	SW bound	88	1	89	1.12%
	2-Way	234	3	237	1.27%
PM	NE bound	69	3	72	4.17%
	SW bound	112	1	113	0.88%
	2-Way	181	4	185	2.16%
School PM	NE bound	86	0	86	0.00%
	SW bound	107	1	108	0.93%
	2-Way	193	1	194	0.52%

- 3.3.11 The flows in **Table 3.1** are low both in terms of volume and HGV content. The highways flows are in the AM peak with 237 trips being equivalent to less than four trips per minute. The flows are somewhat tidal in nature with the highways flow being north-eastbound in the AM peak but south-west bound in the two PM peaks. No more than three HGVs were recorded in one direction.
- 3.3.12 The utilisation of the results of these surveys in ascertaining the capacity of the site access and the abovementioned junctions is described in **Section 6**.
- 3.3.13 In addition to the turning count surveys, a speed survey was undertaken on St Mary's Road at the site frontage further to the request by HCC. The survey was undertaken using a radar speed 'gun' undertaken in accordance with TA 22/81 *Vehicle Speed Measurement on All Purpose Roads* of the *Design Manual for Roads and Bridges* (DMRB) whereby 200 measurements of vehicles travelling at free flow speed in each direction were recorded on two separate days, Tuesday 8th November and Monday 14th November 2016. The surveyors, again from 360TSL, remained in their vehicle parked at an inconspicuous location further away from the survey point so as to not influence the speeds.
- 3.3.14 The results of the speed survey are shown in **Table 3.2** and do not include a wet weather adjustment, despite the weather being dry during one of the days of the radar survey.

Table 3.2: Recorded Speeds along St Mary's Road at site frontage

Direction	Speed (mph)	
	Average	85th %ile
North-east	25.0	29
South-west	16.5	20

- 3.3.15 The results in **Table 3.2** are encouraging as they show that the signed speed limit is being adhered to but this is not surprising given the proximity to the junction with Elm Grove as traffic approaching the junction will be decelerating to give-way while traffic exiting the junction will be accelerating from a much slower speed when negotiating the turn. The raw data from this radar speed survey is provided in **Appendix D**.

Langstone Road Bridge

- 3.3.16 In order to gain a better understanding of traffic conditions over the bridge, an automatic traffic counter (ATC) was installed for a two-week period commencing Thursday 22nd September. **Table 3.3** provides a summary of the average weekday peak hour flows recorded over the bridge with the raw data provided in **Appendix D**.

Table 3.3: Langstone Bridge Two-week Average Flows

Direction	AM Peak (0900-1000)				
	Lights	Heavies	Total	Heavy %	Direction %
Northbound	1106	37	1143	3.2%	68.4%
Southbound	508	20	528	3.8%	31.6%
Two-way	1614	57	1671	3.4%	100.0%
Direction	PM Peak (1700-1800)				
	Lights	Heavies	Total	Heavy %	Direction %
Northbound	601	17	618	2.8%	36.6%
Southbound	1049	22	1071	2.1%	63.4%
Two-way	1650	39	1689	2.3%	100.0%

- 3.3.17 The recorded traffic flows show a clear tidal pattern with the northbound (towards mainland) direction being the busiest in the AM peak accounting for over 68% of the flow and the southbound (towards island) direction being the busiest in the PM peak with over 63% of the flow. The HGV proportions are fairly low with the highest being less than 4% in the AM peak.
- 3.3.18 DMRB TA 79/99 provides traffic capacity values for 'links' based on carriageway type and width. The most applicable carriageway type for the bridge based on Table 1 of the same document would be Urban All-purpose (UAP) 1. Table 2 in the document provides one-way hourly link capacity values in vehicles based on the number of lanes and carriageway width. The width of the carriageway was measured on site to be 6.8m which sits between the default widths of 6.75m and 7.3m. The precise value of link capacity for the measured width has been calculated based on linear growth, with this value being 1345 vehicles/hour. The highest observed value of 1143 vehicles/hour in the AM peak is well-below this figure indicating that there is currently spare capacity on the bridge.
- 3.3.19 It should however be remembered that this document was published over 17-years ago with the link capacity values presumably derived earlier than this and therefore do not take into account developments in car braking and collision systems, meaning that they may be somewhat historic and lower than what the values may be during present day conditions. It should also be remembered that the values are based on a HGV% of $\leq 15\%$ which is significantly higher than what has been recorded, meaning that realistically, the calculated link capacity values may be less than the actual capacity of Langstone Road Bridge.
- 3.3.20 The ATC also recorded traffic speeds over the bridge with the results summarised in **Table 3.4**.

Table 3.4: Recorded Speeds on Langstone Bridge

Direction	Speed (mph)			
	Week 1		Week 2	
	Average	85th %ile	Average	85th %ile
North	31.8	38.4	31.8	38.4
South	32.9	38.3	33.1	38.3

- 3.3.21 Both the average and 85th percentile speeds are less than the signed speed limit but are within a reasonable free flow cruise speed for of road of its nature. The results show very little variation in average and 85th percentile speeds over the bridge between the two weeks suggesting that speeds and therefore journey times over the bridge are fairly regular and reliable.
- 3.3.22 Prior to the ATC surveys, journey time surveys were undertaken by 360TSL on Thursday 19th May 2016 as part of the feasibility study undertaken for the site. This was the Thursday before a particularly warm and sunny bank holiday weekend, so the traffic flows may have been higher than usual. The surveys were undertaken in the AM and PM peak periods from 0700-1000 and 1530-1630 for the section of the A3023 between Mill Lane and Hayling Island Service Station with 40 journeys made in each direction. A summary of the journey times including the average, minimum, maximum and deviation between the minimum and maximums are shown in **Table 3.5**, with the raw data included in **Appendix D**.

Table 3.5: Summary of Langstone Bridge Journey Time Results (hh:mm:ss)

Period	Direction	Average	Minimum	Maximum	Deviation: Max-Min	Deviation: Max-Ave
AM	Southbound	00:01:15	00:01:08	00:01:23	00:00:15	00:00:08
	Northbound	00:01:15	00:01:10	00:01:20	00:00:10	00:00:05
PM	Southbound	00:01:17	00:01:08	00:01:33	00:00:25	00:00:16
	Northbound	00:01:16	00:01:10	00:01:28	00:00:18	00:00:12

- 3.3.23 **Table 3.5** shows that the average speeds in the peak hours are closely comparable with the average journey times in the AM peak being identical in both directions in the AM peak period and 1-2 seconds higher in the PM peak period. The level of deviation is fairly minimal fluctuating between 10-25 seconds between the maximum and minimum and 5-16 seconds between the maximum and average. The results show fairly constant journey times during the peak periods indicating good journey time reliability over the bridge. The traffic survey specialist noted that queues did not form over the bridge during the survey.
- 3.3.24 The traffic survey locations are shown graphically in **Figure 1** of **Appendix B**.

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4 DEVELOPMENT PROPOSAL

4.1 Development Description

- 4.1.1 As mentioned above, Gladman is seeking outline planning permission for up to 210 dwellings and 0.6ha for apartments with care (C2) on land off St Mary's Road, Hayling Island, Hampshire. The nature of the application will mean that all matters will be reserved except for access.
- 4.1.2 Further details on the mix of dwelling types and areas of public open space will be provided in other documents submitted as part of the planning application. These documents should be available via the online Havant Borough Council (HBC) planning portal.
- 4.1.3 A Development Framework Plan has been produced by FPCR and forms part of the supporting documentation for the planning application. It is not included within this document as it has the potential to be revised up to the point of submission and therefore, to avoid conflicting and superseded layouts being submitted within the various planning documents, it is omitted from this report.
- 4.1.4 The Development Framework Plan shows that the site is to be served via a new access from St Mary's Road with the primary access route running through the portions of the site to be developed. This developed area will be surrounded by green infrastructure and a play area. Pedestrian accesses will connect to the local PRow's that border the site.

4.2 Access Strategy

Vehicular Access

- 4.2.1 It is suggested that a single main access will be appropriate to serve this particular development. This will take the form of a priority controlled junction located at the St Mary's Road frontage. The junction has been located as far west along the frontage as possible in order to maximise the junction spacing with Elm Grove. The proposed access strategy is shown in **Drawing P16031-001D** in **Appendix E**.
- 4.2.2 In order to ensure that the proposed vehicular access is a safe design, the visibility splays have been calculated based on the stopping sight distance (SSD) for vehicles. MfS2 contains the following calculation for SSD:

$$SSD = vt + v^2/2(d+0.1a)$$

where:

v = speed (m/s)

t = driver perception-reaction time (seconds)

d = deceleration (m/s²)

a = longitudinal gradient (%)

- 4.2.3 Table 10.1 in MfS2 provides a recommendation of variable SSD criteria. For speeds of 60kph (37mph) and below, a reaction time of 1.5s and deceleration rate of 0.45g (equivalent to 4.41m/s²) should be used; for speeds above 60kph, a reaction time of 2s and deceleration rate of 0.375g (3.68m/s²) (absolute), or 0.25g (2.45m/s²) (desirable), should be used.
- 4.2.4 Paragraph 3.4 of DMRB TA 22/81 *'Vehicle Speed Measurement on All Purpose Roads'* states that stopping sight distance (SSD) in access design should be based on wet weather speeds and as such the correction factor of 4kph (2.5mph) should be used (deducted from the observed speeds) for All Purpose Single Carriageways where conditions are observed to be dry during the survey period(s). Conditions were dry on one of the days of the speed surveys but damp on the other, so not wet weather adjustment has been applied resulting in a more robust SSD.
- 4.2.5 **Table 3.2** shows that the recorded 85%ile speeds were 29mph in the north-eastbound direction and 20mph in the south-westbound direction, these being the speeds for use in the derivation of the SSD. Applying this figure in the SSD calculation provided above, alongside the 'below 60kph' reaction time (1.5s) and deceleration rate (4.41m/s²) gives the appropriate stopping sight distance, otherwise known as the 'y' distance, of **39m** to the right on exit and **23m** to the left on exit.
- 4.2.6 In-line with MfS guidance, an 'x' distance of 2.4m has been used, which *'represents a reasonable maximum distance between the front of the car and the driver's eye'* (MfS2 paragraph 10.5.6). Collectively the 'x' and 'y' distances are referred to as the visibility splay
- 4.2.7 Visibility splays of **2.4m x 39m** to the right on exit and **2.4m x 23m** to the left on exit have therefore been shown on the Proposed Access Arrangement **Drawing P16031-001D** contained with **Appendix E**. Greater visibility is available in both directions.
- 4.2.8 It is useful to note that the abovementioned visibility splays lie within the red line boundary of the site and the extent of the adopted highway.
- 4.2.9 The proposed access consists of a 5.5m wide carriageway, 2 x 2m wide footways and 8m junction radii. These dimensions accord with MfS guidelines. The two footways will tie in to the existing provision on St Mary's Road which itself will be extended further south-west as shown on the abovementioned drawing. The width of new footway provision along St Mary's Road will be limited by the available highway verge. A topographic survey used in the design shows that a footway of a varying width of between 1.8m and 2.0m can be achieved until outside property number 109. At this point, an uncontrolled crossing will be provided which will consist of dropped-kerbs and tactile paving, allowing pedestrians to cross to the existing footway on the south-eastern side of the road. Dropped-kerbs and tactile paving will then aid the crossing of the public car park access. Should pedestrians prefer not to cross at this point, the footway, whilst narrower, will continue to another proposed uncontrolled crossing. The width will reduce to 1.36m but this is greater than the 1.2m minimum suggested in the DfT document *Inclusive Mobility (2005)* and will be more than wide enough to accommodate wheelchair and buggy users. To maximise accessibility, Gladman will be

- willing to fund the provision of a white-lined safety zone through the public car park to the footpath that leads to Elm Grove.
- 4.2.10 **Drawing P16031-001D** in **Appendix E** demonstrates that adequate forward visibility to the proposed uncontrolled crossings can be achieved with the MfS2 formula used for the signed 30mph speed limit, with the equivalent SSD being 43m which is inclusive of a bonnet length adjustment. Greater SSDs in both directions are clearly achievable.
- 4.2.11 To further maximise accessibility, Gladman is willing to fund the provision of two uncontrolled crossings with pedestrian refuge islands in the ghost island tapers on Church Road/Elm Grove as shown on **Drawing P16031-002** in **Appendix E**. These features demarcate safe places to cross and allow Church Road/Elm Grove to be crossed in two movements. The provision of the northern crossing will require the removal of a short section of the bus layby by building out the footway, but this will not affect the operation of the layby as the parallel section will still be greater than the 17m minimum length required. The provision of the refuge islands should also encourage slower speeds through the junction by creating a narrowing effect.
- 4.2.12 The radii has been based on a swept path analysis using the industry standard software *AutoTrack* as shown in **Drawing P16031-003** for a large refuse collection vehicle (3 axle Dennis Eagle Elite). The refuse collection vehicle will be the largest vehicle expected to regularly access with smaller vehicles, such as cars, ambulances and fire appliances having less onerous swept paths. The drawing shows that the vehicle will have to cross both sides of the access road which should be acceptable given that such vehicles will only need to access the site once a week. Furthermore, egressing traffic flows on the minor arm will be minimal in the peak hours (see **Section 6**) so it is unlikely that there will be egressing traffic when the refuse collection vehicle is accessing the site and any delay incurred will be minimal. Providing greater dimensions would be contrary to MfS advice as it would be over-designing and would make it more difficult for pedestrians to cross.
- 4.2.13 HCC Highways also requested that adequate access for construction vehicles should be incorporated into the site access arrangements. This issue is normally dealt with at the Reserved Matters stage during which further details and a Construction Traffic Management Plan will be provided, however, a swept path analysis has been undertaken for a 16.48m long articulated lorry in **Drawing P16031-004** and for a large tipper truck in **Drawing P16031-005** to provide an early indication to the highway authority regarding construction vehicle access. It is expected that such vehicles will travel from/to the mainland so the right turn in and left turn out of the site are the only movements considered along with the equivalent turns at the Elm Grove junction. Whilst the paths of both vehicles are fairly onerous, they can both safely access and egress the site.
- 4.2.14 It should be remembered that *AutoTrack* provides for a worst-case assessment with qualified heavy vehicle drivers being able to undertake tighter turns than shown in the software. It should also be remembered that banksmen and on site staff will be present to guide larger vehicles in and out of the site when required. Temporary surfaces could also be used during the construction phase to

further facilitate construction traffic access/egress. In order to accommodate the articulated lorry and the pedestrian island across St Mary's Road, the north-western kerb line needs to be cut-back as shown in **Drawing P16031-001D**. The original kerb line could be reinstated following construction.

Additional Accesses for Pedestrians

- 4.2.15 Whilst the vehicular access will cater for all road users, the accessibility of the site by sustainable modes of transport will be enhanced by the provision of three pedestrian accesses onto Footpath 94 which provides connection to other footpaths and to Southleigh Grove and the south-western section of St Mary's Road.

Internal Layout

- 4.2.16 It is expected that the masterplan associated with any Reserved Matters application will include turning areas within the site for vehicles, either in the form of internal loops or turning heads.
- 4.2.17 The design speed of the access road will be 20mph. While the internal layout will be subject to a separate Reserved Matters application by the potential house builder, it is expected that it will be based on MfS design guidance meaning that the layout will focus on the needs of pedestrians, cyclists and public transport users, create a sense of place and community, create permeable streets offering good quality connections and will recognise the needs of people of all ages and abilities. All of these should be achieved without over-designing.
- 4.2.18 The proposed access strategy and pedestrian improvements will enhance the site's permeability and connectivity by sustainable modes of travel. It will also help the site to integrate with the existing and proposed surrounding residential areas and is therefore compliant with the various Themes and Objectives outlined within the LTP document.

4.3 Parking

- 4.3.1 The Havant Borough car and cycle parking standards are presented in **Section 2** and vary depending on the dwelling size and establishment type. The housing mix has not been finalised as part of this Outline application and will be addressed as part of the Reserved Matters application but it is expected that the subsequent Reserved Matters application will provide sufficient parking to comply with the relevant standards at the time of submission. Further details on the parking provision for the apartments with care will also be provided at that stage.

4.4 Summary

- 4.4.1 As described in this section, the development will conform to a number of national and local policy guidance. The design of the site accesses will conform to the standards in MfS and DMRB. As such the design will also conform to and complement several national and local policies. The relevant

local transport policies pertinent to the development proposals include LTP Main Priorities 1 and 2, TfSH LTP policies A, H and M and HBC Core Strategy policies DM11 and DM13.

- 4.4.2 The proposals reflect the principles of inclusive design outlined in MfS, shifting from focusing on designing for motor vehicles to designing streets around the needs of pedestrians, cyclists and public transport users, controlling speeds, not overdesigning and creating permeable streets. These principles in turn help the site to conform to NPPF guidance including paragraph 35 in terms of giving priority to pedestrian and cycle movements, creating 'safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians' and considers the 'needs of people with disabilities by all modes of transport'.

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