

Appendix 8.1

Transport Assessment

Land at Rook Farm, St Mary's Road
Hayling Island, Hampshire

Client: Gladman



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1 INTRODUCTION

1.1 Purpose of Report

- 1.1.1 This Transport Assessment (TA) considers the highways and transportation implications associated with Gladman's proposal for a residential development comprising up to 300 dwellings at Rook Farm off St Mary's Road, Hayling Island.
- 1.1.2 The site was to be allocated for residential development as Policy H27 Rook Farm in the previous iteration of the emerging Havant Borough Local Plan which has now been withdrawn.
- 1.1.3 The planning application for the proposed development was validated in January 2022 and assigned the reference APP/21/01434 by Havant Borough Council (HBC), the local planning authority (LPA). A TA (Revision A) and Travel Plan (TP) (Revision A) both dated December 2021 accompanied the application at the time of submission.
- 1.1.4 A previous application for this site was submitted in December 2016 and assigned the reference APP/17/00007, however planning permission was refused in April 2017. This report incorporates comments from Hampshire County Council (HCC), the local highway authority (LHA), with regard to the original application, and focuses on the transportation implications of the new application. The previous planning application was for up to 210 dwellings and 0.6ha for apartments with care.
- 1.1.5 This revised TA (Revision B) has been prepared to update time-sensitive elements of the assessment given the passage of time since the application was submitted. Most notably, it presents the results of the updated Hayling Island microsimulation model at the request of HCC and in accordance with its comments on the submitted planning application. It also reflects comments from the Inspectors who oversaw the Examination of the previous iteration of the emerging Havant Local Plan. As well as the neutral month model being updated to a 2022 baseline, there is also a summer month version of the model to directly address comments raised during the Examination and post-submission of this planning application.
- 1.1.6 In addition to the update of these time-sensitive elements, extensive discussions have taken place with HCC and National Highways (NH) which have informed this updated TA. It should be noted that following the provision of the results of the updated microsimulation model to NH via email in August 2025, NH has offered 'no objection' to the development proposals in its NHPR 25-01 response dated 3rd September 2025.
- 1.1.7 The TP has also been updated to Revision B and it should be read alongside this TA.
- 1.1.8 Technical Note 1 (TN1), dated April 2023, was prepared following receipt of consultation comments from HCC. This version of the TA supersedes TN1.

- 1.1.9 This document has been prepared in accordance with the Government's Planning Practice Guidance: *Transport evidence bases in plan making* (2014) and *Travel Plans, transport assessments and statements in decision-taking* (2014) and the Department for Transport's (DfT) *Guidance on Transport Assessment* (GTA) (2007).
- 1.1.10 The conclusions and recommendations contained herein have been drawn based on information available and obtained in advance of the preparation of the report.
- 1.1.11 Reasonable checks have been carried out on any third-party information used in the preparation of this report but, nonetheless, Prime Transport Planning (Prime) accepts no liability for the accuracy or otherwise of this data.
- 1.1.12 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 in 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. 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.
- 1.2.3 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.
- 1.2.4 The scope of the 2016 application was agreed with HCC and an updated scoping exercise took place in 2018. Copies of the email based correspondence is provided for reference in Appendix A. Several further discussions with HCC took place during 2019 and 2020 as the now withdrawn Local Plan was evolving. Extensive discussions have also taken place with HCC post submission of the current planning application to consider issues related to access, accessibility by sustainable modes and traffic impact. The extent of the modelling, the calibration and validation of the baseline model, and the forecast model methodology has been agreed with HCC and NH.
- 1.2.5 An Environmental Statement (ES) has also been produced, which includes a Transport chapter (Chapter 8) written by Prime. The scope of the ES was agreed with HBC and the chapter should be

read alongside this TA, as should the accompanying TP which aims to promote and encourage travel by sustainable modes. The TA and TP form Appendices 8.1 and 8.2 to the ES chapter.

1.2.6 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 microsimulation modelling including the forecasting methodology and trip generation;
- Section 7 presents a junction-by-junction traffic impact assessment;
- Section 8 presents preliminary designs for an active travel improvement scheme;
- Section 9 describes the existing safety of the local highway network; and
- Section 10 summarises and concludes the findings of the Transport Assessment.

2 TRANSPORT POLICY AND GUIDANCE

2.1 National Planning Policy Framework

2.1.1 The current *National Planning Policy Framework* (NPPF) was published in December 2024, with slight amendments on 7th February 2025, and sets out the Government's current planning policies. At the heart of NPPF is '*a presumption in favour of sustainable development*' as detailed in paragraphs 10 and 11.

2.1.2 Section 9 of the NPPF, *Promoting sustainable transport*, outlines the important role that the planning system has in facilitating sustainable development. It states in paragraph 110 that:

'Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.'

2.1.3 The document offers guidance for planning policies including:

- supporting appropriate mixes of land uses;
- minimising the number and length of journeys;
- actively involving local highway authorities, transport infrastructure providers and operators and neighbouring councils in order to align strategies and investments for supporting sustainable travel; and
- providing high quality walking and cycling networks and associated supporting facilities such as cycle parking.

2.1.4 Paragraph 115 of the NPPF provides direction for the assessment of sites for development, stating:

'...it should be ensured that:

a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;

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

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.'

2.1.5 In determining planning applications, paragraph 116 states that:

'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.'

2.1.6 Paragraph 117 continues:

'Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.'

2.1.7 Paragraph 118 highlights the need for planning applications for developments that will *'generate significant amounts of movement'* to be accompanied by a Transport Assessment or Transport Statement and a Travel Plan so that the *'likely impacts of the proposal can be assessed and monitored.'*

2.1.8 Paragraph 103 highlights the importance of access to open spaces as well as opportunities for sport and physical activity in the context of the health and well-being of communities. Paragraph 105 continues to include the importance of access to and the enhancement of public rights of way.

2.2 Planning Practice Guidance

2.2.1 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.

2.2.2 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.

2.2.3 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.'*

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

2.3 [DfT Circular 01/2022 Strategic Road Network and the Delivery of Sustainable Development \(2022\)](#)

2.3.1 Written by the DfT for its executive arm NH, this document provides an update of Circular 02/2013, and therefore sets out the way in which NH will engage in the planning system to deliver sustainable development, whilst safeguarding the primary purpose of the strategic road network.

2.3.2 The Circular aligns with the NPPF in implying the need for mitigation when development would have an *'unacceptable safety impact or the residual cumulative impacts would be severe'*.

2.3.3 The Circular does however move away from the 'predict and provide' approach and prioritises vision-led approaches including 'vision and validate', 'decide and provide' and 'monitor and manage'. It also places a clear ethos on the importance of maximising the potential for sustainable travel initiatives and places this ahead of capacity enhancements on the SRN. TPs are cited as being an effective means to help incentivise the use of sustainable modes.

- 2.3.4 Early engagement with NH is encouraged and overarching details of acceptable assessment methodologies are presented.

2.4 Planning for the Future (2023)

- 2.4.1 This document is a *'guide to working with National Highways on planning matters'*. It details the motorway and trunk road authority's role in the planning process and links with Circular 01/2022. The following six planning values are outlined:

- Maintain safety;
- Engage early;
- Work openly;
- Share evidence;
- Share knowledge and experience; and
- Work collaboratively.

- 2.4.2 The importance of early engagement with NH is highlighted and this has been undertaken for this project.

2.5 Manual for Streets and HCC Technical Guidance Notes

- 2.5.1 *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.

- 2.5.2 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).

- 2.5.3 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.

2.5.4 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.

2.5.5 HCC has produced a series of *Technical Guidance Notes* (TG) to replace its *Companion Document to Manual for Streets* which, for a time, sat alongside MfS. The TG include its standards for adoption and design details for pedestrian and cycle facilities.

2.6 Local Transport Note 1/20 Cycle Infrastructure Design (2020)

2.6.1 In 2020, the DfT published its *Cycle Infrastructure Design* guidance in Local Traffic Note (LTN) 1/20. A common theme of the guidance is encouraging cycling for people of all abilities, and it presents technical details such as geometric requirements and junction design. A preference of the guidance is to provide separate infrastructure for pedestrians and cyclists; however, it does acknowledge in Section 6.5 that shared use routes are still acceptable depending on the number of users.

2.6.2 Another preference of LTN 1/20 is for junctions on cycle routes to be designed in a more cycle-friendly manner, with pedestrians and cyclists given priority over motor vehicles.

2.6.3 HCC's TG10 provides design guidance for pedestrian and cycle infrastructure, aligning with LTN 1/20. It also includes a preference for segregated footways and cycleways, but also recognises that this may not be possible in all circumstances.

2.7 Hampshire Local Transport Plan

2.7.1 HCC's fourth Local Transport Plan (LTP4) will guide transport policy in Hampshire up to 2050. LTP4's vision is for:

'A carbon neutral, resilient and inclusive transport system designed around - and with - people, which: supports health, wellbeing and quality of life for all; supports a connected economy and creates successful and prosperous places; and respects and seeks to enhance Hampshire's unique natural and built environment'.

2.7.2 LTP4 is supported by two guiding principles which are as follows:

- **Guiding Principle 1:** Give people a choice of high quality travel options; and
- **Guiding Principle 2:** Provide a transport system that promotes high quality, prosperous places and puts people first.

2.7.3 To deliver these principles, the following policies are outlined in Part 6 of LTP4:

- **Policy C1:** Putting people and places at the heart of our decisions;
- **Policy C2:** Efficient and sustainable movement of goods;

- **Policy C3:** Transport strategies and schemes to be developed in accordance with consideration of all users (Road User Utility Framework);
- **Policy C4:** Place climate change at the heart of decision-making;
- **Policy C5:** Support local living and reduce demands on transport;
- **Policy C6:** Encourage sustainable travel behaviour;
- **Policy C7:** A Safe System approach for Hampshire;
- **Policy C8:** Managing the harmful health effects of poor air quality and noise disturbance due to transport; and
- **Policy C9:** Protecting the environment.

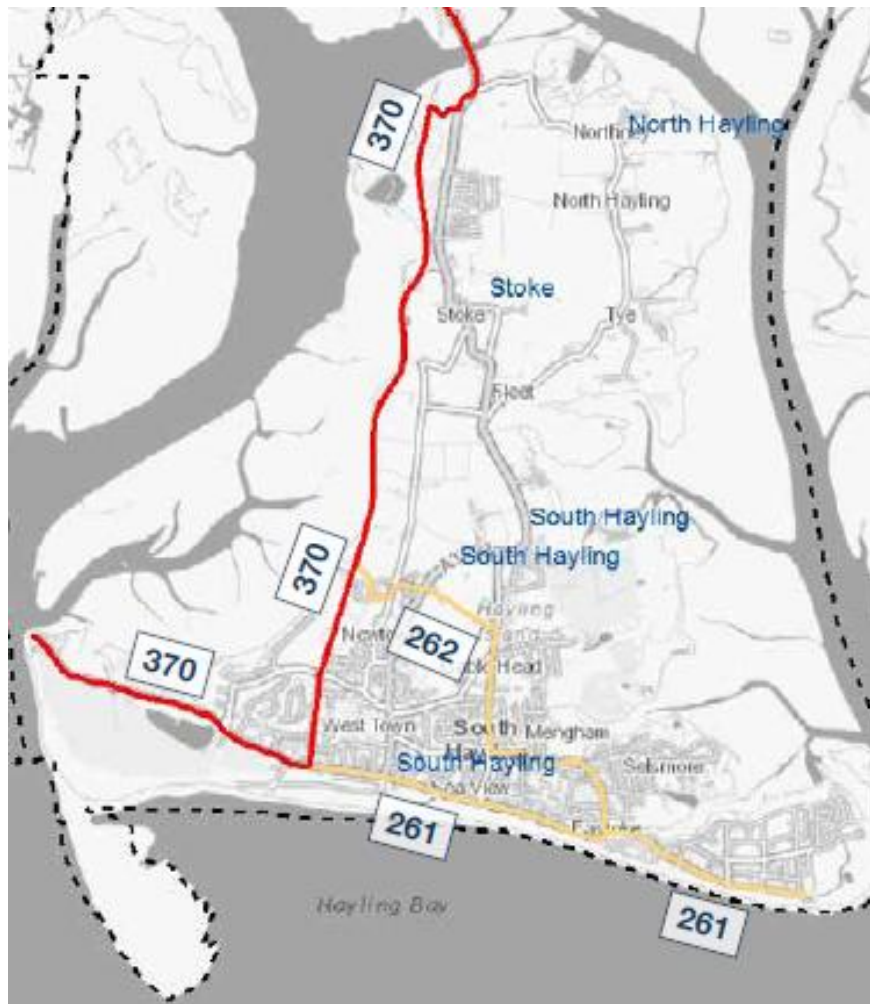
2.8 Havant Local Cycling and Walking Infrastructure Plan (2023) (LCWIP)

2.8.1 HCC has produced an LCWIP for Havant Borough with the following aims:

‘Walking: By 2025, walking will be the travel mode of choice for short trips and the most popular and accessible means of recreation.

Cycling: By 2025, cycling will be a convenient, safe, healthy, affordable and popular means of transportation and recreation within Hampshire.’

2.8.2 The LCWIP highlights potential/suggested improvements for three routes on Hayling Island as shown in Image 2.1. The red route, 370 is a ‘primary cycle route’ – the Hayling Billy Trail, while the amber routes are ‘secondary cycle routes’. The development site sits somewhat centrally between the three routes.

Image 2.1: Extract from Havant South LCWIP Location Plan

- 2.8.3 The LCWIP outlines a number of desired improvements along these three routes which are subject to further investigation and design work. This is discussed further in connection with the current application proposals in Section 8.

2.9 Havant Borough Council Core Strategy

- 2.9.1 The Havant Borough Council Core Strategy (2011-2026) was adopted in March 2011, and is the principal document in the Council's Local Plan.
- 2.9.2 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.'*
- 2.9.3 The Core Strategy comprises seven key themes, which are as follows:
1. Health and Wellbeing;
 2. Promoting Havant Borough's Economy;

3. Regeneration and Community Support;
4. Community Safety;
5. Housing;
6. Caring for Our Borough; and
7. Infrastructure, Implementation and Monitoring.

2.9.4 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*

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

DM Policy 11 – Planning for More Sustainable Travel

2.9.6 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'.

2.9.7 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

- 2.9.8 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'*.
- 2.9.9 By ensuring that the above is met, HBC has set out the following criteria:
1. *'Adequate provision is made for integrated and improved transport infrastructure or appropriate mitigation measures, through direct improvements and S106 contributions;*
 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; and*
 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.'*

DM Policy 13 – Car and Cycle Parking in Residential Development

- 2.9.10 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.'

2.10 Havant Borough Parking Supplementary Planning Document

- 2.10.1 The Supplementary Planning Document (SPD) was adopted in 2016. The document provides comprehensive information and local standards with regards to parking provision and design in residential developments. Tables 4A, 4B and 4D below are from the document show the allocated vehicle parking standards, the shared/communal parking standards and the cycle parking standards respectively.

TABLE 4A			
C3 Dwelling Houses – Vehicle Parking			
Zone Size of dwelling	Minimum Car Parking Requirement	Havant Town Centre	Waterlooville Town Centre
1 Bed Unit	1 space	Max 1 space	Max 1 space
2 Bed Unit	2 spaces	Max 1 space	Max 1 space
3 Bed Unit	2 spaces	Max 1 space	Max 2 spaces
4+ Bed Unit	3 spaces	Max 2 spaces	Max 2 spaces

TABLE 4B			
C3 Dwelling Houses – Shared/Communal Parking (unallocated)			
Zone Size of dwelling	Minimum Car Parking Requirement	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

TABLE 4D		
C3 Dwelling Houses – Cycle Parking/Storage Provision		
Size of Dwelling	Long stay	Short Stay
1 Bed Unit	1 space per unit	In larger developments (schemes of 10 or more dwellings), short-term visitor parking will be expected at 20% of the long-term cycle parking standard.
2 Bed Unit	2 spaces per unit	
3 Bed Unit	2 spaces per unit	
4+ Bed Unit	2 spaces per unit	

2.10.2 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. The proposals are submitted in outline and parking provision will be determined at the reserved matters stage.

2.11 Building a Better Future Plan – Emerging Havant Local Plan

2.11.1 HBC is currently working on a new Local Plan to guide the borough's growth strategy for at least a 15-year period. An initial draft version of the Local Plan was available for consultation between 6th May and 1st July 2025.

- 2.11.2 Noting that this emerging Local Plan is at an early stage of development, the Council's recent consultation proposals outlined how the authority is not proposing to direct any new greenfield residential allocations to Hayling Island, citing concerns over accessibility by non-car modes of transport as of its case for this stance.
- 2.11.3 It is notable that this represents a significant change in position by HBC, given that Rook Farm/the application site was proposed to be allocated for 395 dwellings in the now withdrawn emerging Local Plan. Several other sites were also proposed to be allocated for development on the Island in the same document.
- 2.11.4 At the time of writing, we are not aware of any robust justification for the strategy the Council are now advancing in this regard. In this context, we also note that development on Hayling Island was addressed in paragraph 4.486 of the authority's most recent Local Plan consultation document as follows:

'It should be noted that no site allocations have been made on Hayling Island, in line with the development strategy for this plan. Therefore, the Local Plan TA has not tested a notable amount of development on the island. Should any applications be received for major development on the island, testing the transport implications of the proposal will therefore be particularly important. Potential applicants are advised to agree the methodology for the Transport Assessment or Transport Statement with the Highway Authorities (Hampshire County Council and National Highways) at the preapplication stage, including the approach to modelling.'

- 2.11.5 As demonstrated through this TA, a comprehensive highway modelling exercise has been undertaken in connection with the current application proposals, with the scope of this modelling discussed and agreed with both HCC and NH. Furthermore, this modelling has demonstrated that the proposals would not result in a severe cumulative impact on the local highway network nor the strategic road network (A27). The applicant and Prime consider the Island to already be accessible by sustainable modes of transport, though there is also the potential for development proposals on the Island to deliver additional active travel enhancements which would benefit new and existing residents alike.
- 2.11.6 The LCWIP is acknowledged in the emerging Local Plan as follows:

'Hampshire County Council has produced a Local Cycling and Walking Infrastructure Plan (LCWIP) for Havant Borough, which identifies a network of primary and secondary cycle routes and core walking zones. Applicants will be required to show how their site can either link to the network or contribute to the delivery of the LCWIP to raise the profiles of cycling and walking as viable alternatives to driving, contributing to the objective of reducing the level of car usage in Havant. Where applicable, LCWIP routes are identified within site allocation policies to enable connectivity to be considered from the outset.'

2.11.7 As noted above, integration with improvements in line with the LCWIP are discussed in Section 8 of this document.

2.11.8 There are two main policies related to transport in the emerging Local Plan that are outlined as follows:

Policy 47: Accessibility, Transport and Parking

2.11.9 This policy aligns with LTP4 and the hierarchy of road users presented in MfS, stating that:

- a) *'Development proposals must be informed by the following hierarchy:*
 - i. *opportunities to reduce travel demand and the need to travel;*
 - ii. *vulnerable users, including people with disabilities or long-term mobility-related health conditions;*
 - iii. *people walking;*
 - iv. *people cycling;*
 - v. *people using public transport;*
 - vi. *delivery of goods; and*
 - vii. *other motor vehicles.*
- b) *The needs of all people and modes of transport have been considered, with sustainable and active modes of travel prioritised and positively encouraged through on and/or off-site measures;*
- c) *The site is located and planned so that*
 - i. *Safe and suitable access to the site is provided for all people and modes of transport, with priority given to walking, cycling and public transport;*
 - ii. *The layout prioritises comfortable non-motorised movement to all parts of the site, and provides a high level of permeability to link with the wider network beyond the site;*
 - iii. *The site layout encourages lower vehicle speeds, for the safety of all users;*
 - iv. *Any existing public rights of way on site are safeguarded or diverted and rights of way on and near the site are improved where necessary to address the impact of the development;*

- v. *The streets, including public and private parking areas, contribute positively to the design of the development and deliver a high quality public realm, including through the use of high quality materials and integration of landscaping;*
 - vi. *Sufficient visibility and lighting are provided for the safe use of the streets, cycle routes, walking routes and parking areas;*
 - vii. *Provision is made for the parking of motor vehicles and cycles in line with Council standards; and*
 - viii. *Adequate provision is made for varying sizes of vehicles, including refuse and emergency vehicles, to access all parts of the site, park, load, unload and turn safely and with ease;*
- d) *Any transport impacts are fully assessed and mitigated where necessary as follows:*
- i. *Where required, a satisfactory Transport Statement or Transport Assessment is submitted which evaluates transport impacts and demonstrates that the needs of the development for all modes have been considered and any adverse impacts on the wider area are mitigated;*
 - ii. *A sequential approach is taken to mitigation measures so that they first avoid or reduce the need to travel, then consider the needs and the experience of all highway users, in line with the hierarchy set out at criterion a. above;*
 - iii. *The traffic generated by the development, taking into account any proposed avoidance and mitigation measures, would not result in severe impacts, either individually or cumulatively, on the transport network and would not have an unacceptable impact on highway safety;*
 - iv. *A Travel Plan is provided where appropriate in relation to the scale and type of development; and v. The development contributes to the delivery of identified improvements to the pedestrian, cycle, public transport and/or road networks as appropriate;*
- e) *The development would not compromise the ability of Local Authorities or Highway Authorities to deliver identified interventions.'*

Policy 48: New Accesses onto Classified Roads

- 2.11.10 This policy addresses new access or the intensification of existing accesses onto classified roads. Specific reference is made to the A3023 Langstone Road between the A27 at Langstone and the Mill

Rythe Roundabout, with HBC stating that they will not permit new accesses or intensified access along this section of the A3023. Again, this is somewhat at odds with HBC not allocating development to Hayling Island, as the proposed development site, and other live applications, all have proposed accesses that do not connect directly to this section of the A3023 or intensify existing accesses onto it, implying that HBC will consider developments with such arrangements.

2.11.11 In addition to the above, 'Policy 8: Health and Climate Change' calls for:

- f) *'Enhancing existing and facilitating new opportunities for active travel, informal play and social interaction by:*
 - i. *Co-location of facilities or improving access to existing facilities by active travel and*
 - ii. *Creating and improving pedestrian and cycle route linkages within the Borough, and to and from surrounding areas;*
- g) *Facilitating easy and safe access to education and employment;*
- h) *Enabling active and healthy lifestyles through good urban design by*
 - i. *Improving the Borough's network of good quality, accessible and safe open spaces and*
 - ii. *Enhancing the public realm with high-quality surface treatments, landscaping, signage and street furniture that is accessible to all.'*

2.12 Hayling Island Transport Assessment (2019) and Addendum (2020)

2.12.1 The Hayling Island Transport Assessment (HITA) and its subsequent Addendum was prepared for the now withdrawn emerging Local Plan. The focus of the HITA was on what is termed a 'neutral period' i.e. typical conditions outside of school holidays including the summer, Easter and Christmas. The HITA included a thorough review of existing baseline traffic and transportation conditions, presented the results from the previous iteration of the Hayling Island microsimulation model and considered initial network improvements and interventions.

2.12.2 The HITA Addendum affirmed a package of mitigation measures required to enable the Local Plan development to be delivered without resulting in a 'severe' impact on the island's highway network and a section of the network on the mainline in the vicinity of Langstone and Havant town. The microsimulation model was used to assess the impact and sequentially test the mitigation package. H27 Rook Farm was included in the traffic model as an allocation for up to 395 dwellings.

2.12.3 It was concluded that the withdrawn emerging Local Plan development could be safely accommodated on the local highway network without a 'severe' cumulative impact subject to the

delivery of the mitigation package, which the developers behind the emerging allocations would be expected to financially contribute to on a scale commensurate to the size of the individual developments.

2.12.4 However, it was raised during the Examination of the now withdrawn emerging Local Plan that the Island is frequented by tourists during the summer, as such, it was argued by several local residents the model should have also included a summertime period. This has been addressed by the updated microsimulation model which includes a neutral month model and a summer month model which is detailed further in Section 6.

2.12.5 The latest version of the microsimulation model used in this assessment supersedes previous assessment work for both the emerging Local Plan and the proposed development.

2.13 Summary

2.13.1 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.

3 EXISTING SITUATION

3.1 Site Description

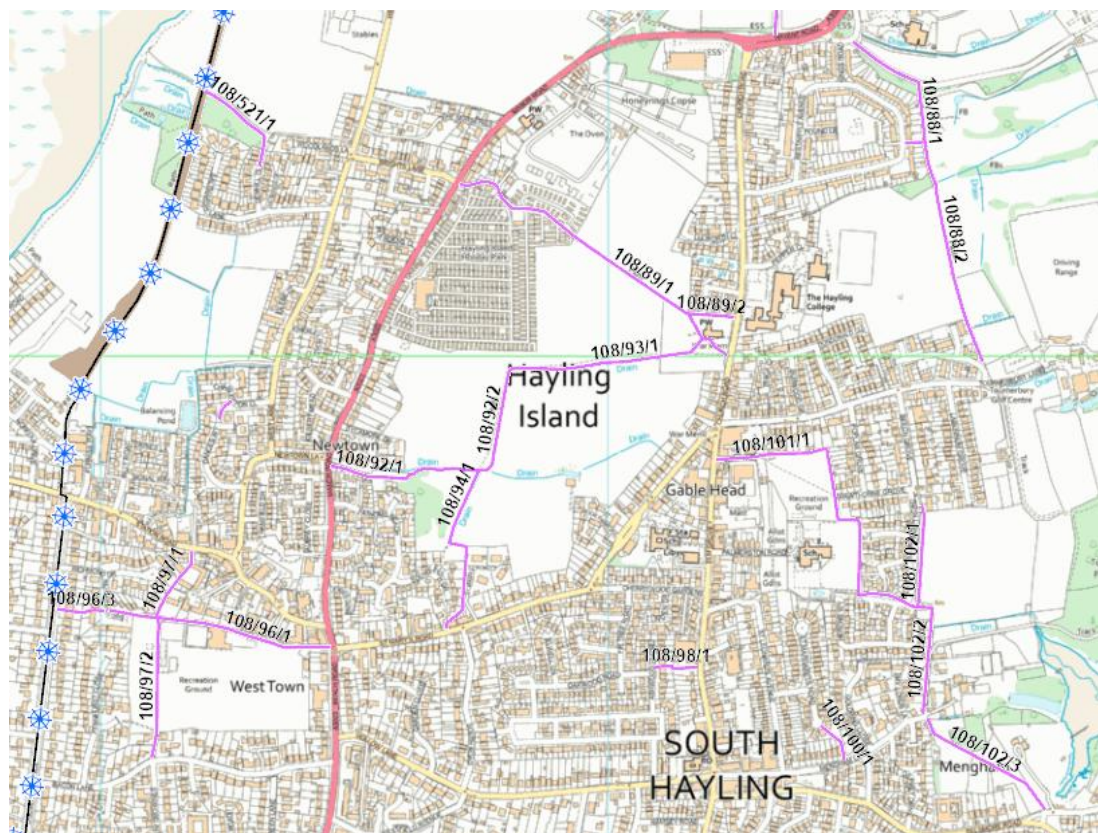
3.1.1 The application site is currently largely undeveloped and in agricultural use. It is located in the Gable Head area of Hayling Island to the north of the South Hayling area. The site is bound to the south and east by existing residential properties off St Mary's Road and Church Road and bound to the north and west by open space. The site adjoins the adopted highway network along St Mary's Road, from where vehicular access is proposed to be taken (discussed further in Section 4.2 below).

3.1.2 The Gable Head area is approximately 4.5 miles south of the centre of Havant and 10 miles east of Portsmouth. Gable Head is located on the southern part of the Island where there are numerous local services and amenities. The location of the site in the context of Hayling Island and the local highway network is illustrated in Figure 1 in Appendix B.

3.2 Public Rights of Way

3.2.1 Image 3.1, an extract of HCC's online mapping system, shows there are a number of public rights of way (PRoW) in the vicinity of the site.

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



Source: <https://maps.hants.gov.uk/rightsofwaydefinitivemap/largemap>

- 3.2.2 Footpaths are highlighted purple 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 the site's western boundary then west to Manor Road. Footpath 94 runs from Footpath 92 to St Mary's Road at Southleigh Grove. Footpath 96 runs west from the St Mary's Road/Beach Road junction to the long distance route Shipwrights Way, part of the Hayling Billy Trail, indicated by the black line with blue markers.

3.3 Cycle Routes

- 3.3.1 Image 3.2 is an extract from HBC's online cycle map.

Image 3.2: Extract from HBC's Online Cycling Map



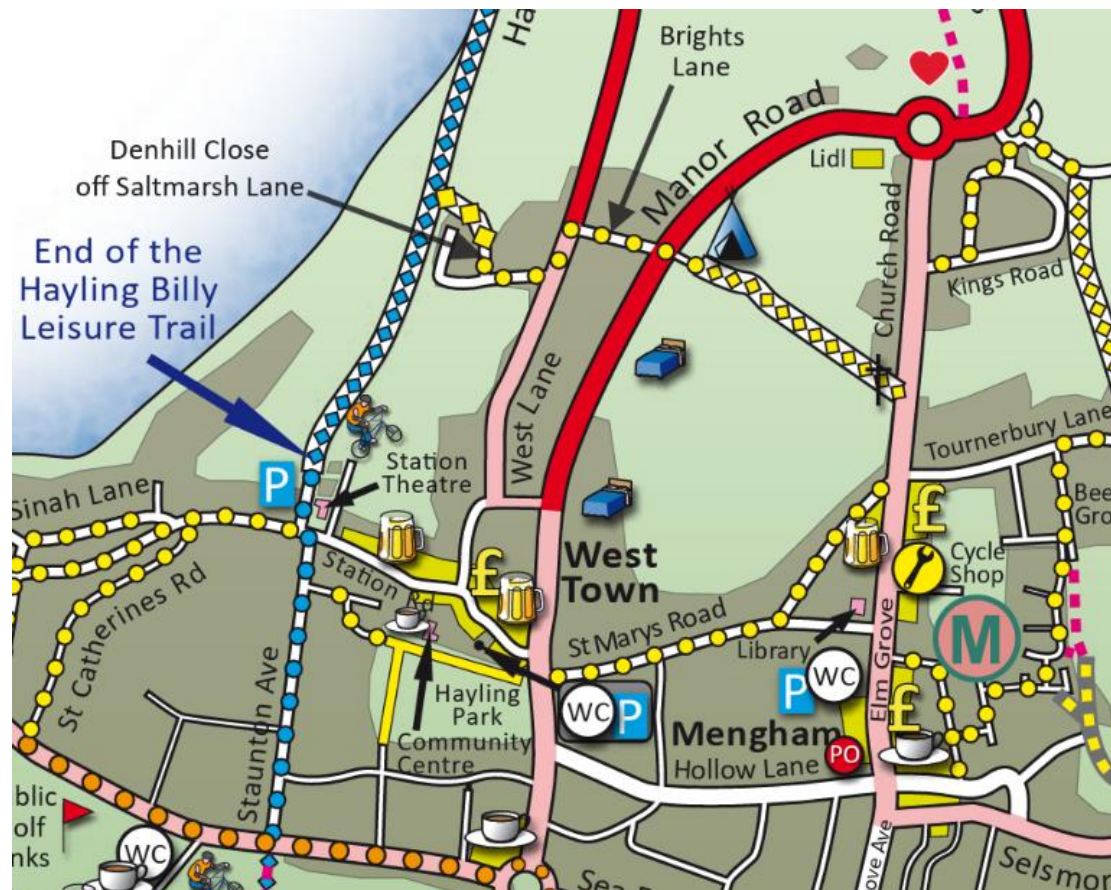
Source: <https://www.havant.gov.uk/media/9765/download?inline>

- 3.3.2 The yellow highlighted roads, such as St Mary's Road, Cherrywood Gardens and Tournerbury Lane, are suggested link routes. The solid navy blue lines are off-road cycle tracks (surfaced), the dashed navy blue lines are byways, bridleways or other tracks available for cyclist use but are typically loosely surfaced, and the sky blue highlighted roads are cycle network links (signposted). The caution symbols

indicate difficult junctions, barriers or steps, and include the junctions at both ends of St Mary's Road, however, potential improvements to these junctions are presented in Section 8.

- 3.3.3 The red squares numbered 2 show that the Hayling Billy Trail forms part of National Cycle Route 2 (NCR 2) which is a long distance route linking Kent and Cornwall via the south coast. North of Sinah Lane the Trail is traffic-free while to the south it is on-road but signed.
- 3.3.4 An extract of the Cycle Hayling Cycling and Walking Map (2022 Jubilee Edition), prepared by Cycle Hayling, is provided as Image 3.3. It expands on HBC's map, most notably suggesting a route north of the site from St Mary's Church, through Hayling Island Holiday Park, along Higworth Lane, Brights Lane, West Lane, Saltmarsh Lane and Denhill Close onto the Hayling Billy Trail, which is one of the routes identified for improvements in the LCWIP.

Image 3.3: Extract from Cycle Hayling Cycling and Walking Map



Source: https://cyclehayling.org/wp-content/uploads/2022/08/2022_A0_cycle_map_2_small.pdf

3.4 Local Highway Network

St Mary's Road

- 3.4.1 As mentioned above, the site's frontage with the adopted highway network is along St Mary's Road. It is a residential local access collector road connecting Church Road to Manor Road as well as

providing access to a number of side roads, along with properties which have 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/Beach Road.

- 3.4.2 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, a public car park and a retirement home. A central reserve is present in the vicinity of the school access which includes an uncontrolled crossing. A school bus stop with layby 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 absent in places but safe contiguous walking routes are available. Traffic calming features are not present on St Mary's Road.

Church Road/Elm Grove/Sea Grove Avenue

- 3.4.3 Church Road runs south from the A3023 roundabout becoming Elm Grove south of St Mary's Road then Sea Grove Avenue 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. Several bus stops can be found along Church Road within a reasonable walking distance of St Mary's Road. 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 Langstone Road/Havant Road

- 3.4.4 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.

3.5 Existing Traffic Conditions

Site Visit Observations

- 3.5.1 Numerous site visits have been undertaken during different times of the year and at different times of the day between 2016 and 2025. The most recent visit was undertaken on Thursday 24th July 2025. During the site visits, it was observed that traffic flowed freely on Hayling Island itself and over the Langstone Bridge with traffic travelling at typical free flow speeds albeit restricted by the speed of the vehicle at the front of the platoon.
- 3.5.2 Some queues have been observed on the A3023 approach to the junction with the A27, but these queues tended to clear fairly quickly. Some slight delays have been observed on the minor arms of junctions with the A3023 when traffic was gap-seeking but 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.
- 3.5.3 It was noted that bus services appeared to be frequent and popular. Many pedestrians and cyclists were also observed, particularly in the district centres and using the footpaths to the north and west of the site. Many parents/guardians appear to travel on foot to/from Mengham Infant School, and those that choose to drive appear to park with a reasonable degree of courtesy, with school peak times tending to last for around 20-30 minutes in the morning and late afternoon. St Mary's Car Park opposite the site is observed to be popular for school pick-up journeys.

Traffic Surveys

St Mary's Road Speed Surveys

- 3.5.4 Several speed surveys have been undertaken on St Mary's Road at the site frontage for use in access design. These surveys were undertaken by 360TSL, a specialist traffic survey and data collection company. It is industry standard practice to design accesses with a level of visibility that is appropriate for the 85th percentile speeds of the road that access is taken from.
- 3.5.5 The most recent speed survey was undertaken using an automatic traffic counter (ATC) installed on Tuesday 17th August 2021 following HCC granting the appropriate licence. It had been intended to record data over a 7-day period, unfortunately however, the ATC equipment was removed and vandalised, which is the second time this has happened in this location. Fortunately, the hardware recorded data for almost two and a half days, returning 1,672 speed measurements.
- 3.5.6 HCC did however raise concerns with this survey as it was undertaken during the summer, despite another officer at HCC previously remarking that such surveys would be appropriate in a location such as Hayling Island that is frequented by tourists over the summer period. The August survey results were presented in the original TA.

- 3.5.7 An earlier set of ATC based speed survey results undertaken from 15:00 on Thursday 3rd October 2019 up to 16:00 on Tuesday 8th October 2019 were presented in TN1. As with the August 2021 survey, it was intended that the survey equipment would be installed for 7-days, but unfortunately it was vandalised on the evening of the third day. Given that the duration of the survey was longer than two days it was undertaken in line with CA 185 of the *Design Manual for Roads and Bridges (DMRB)*. The results of both surveys are summarised in Table 3.1 with the raw data included in Appendix C.

Table 3.1: St Mary's Road Speed Survey Results at Site Access

Direction	October 2019		August 2021	
	Speed (mph)		Speed (mph)	
	Average	85th %ile	Average	85th %ile
North-eastbound	22.0	28.5	21.4	25.9
South-westbound	20.0	24.9	18.6	22.9

- 3.5.8 The results in Table 3.1 show that average speeds on St Mary's Road at the site frontage are close to 20mph. The 85th percentile speeds are below the signed 30mph speed limit. The recorded speeds are in line with what are commonly regarded to be conducive to a safe residential environment. Use of the speed survey results in the access design is discussed in Section 4. The October 2019 speeds have been used in the access design given that they are higher than the August 2021 results and as HCC's consultation response expressed a preference for neutral surveys.
- 3.5.9 Whilst the surveys were completed in 2019 and 2021 there have been no changes to the local road network that would likely results in higher speeds if further surveys were undertaken. Also, the traffic survey company is not willing to re-survey at this location given the previous two instances of vandalism to their equipment, which left it damaged beyond repair. We are reluctant to instruct another company for the same reason.

Junction Turning Counts

- 3.5.10 The traffic impact assessment will be based on the forecast traffic flows from the Hayling Island microsimulation model. These flows will be derived from baseline traffic surveys undertaken on HBC's behalf on 17th November 2022 and 5th August 2022. Further details are available in the Base Model Development Report (BMDR) by SYSTRA, the specialist consultancy who undertook the microsimulation modelling work. A copy of the BMDR is provided in Appendix D.
- 3.5.11 However, as the base model and the associated data is owned by HBC, Prime also instructed separate surveys at key junctions in the context of the proposed development to allow for sensitivity testing. These surveys included junction turning counts and queue length surveys and were undertaken by 360TSL on 29th September 2022, a neutral day by definition of TAG guidance. The following junctions were surveyed:

- Church Road/Elm Grove/St Mary's Road/Tournerbury Lane;
- A3023 Havant Road/Church Road 'Mill Rythe Roundabout'; and
- A27/A3023 Langstone Road/Park Road South 'Langstone Roundabout'.

3.5.12 Use of the peak hour survey data derived from the above three junctions is detailed Section 6.3.

St Mary's Road/Church Road/Works Access

3.5.13 During a meeting with HCC on 7th March 2024, HCC expressed some concerns regarding the ability for St Mary's Road in the vicinity of the proposed site access to accommodate two large vehicles passing each other. Whilst the updated access drawings and swept paths presented in Section 4 demonstrate that large cars and service vehicles can pass, an additional traffic survey was commissioned to better consider the instances of such occurrences.

3.5.14 The traffic survey data has also been used to consider the impact of the proposed kerb and footway realignment on the northern side of St Mary's Road, east of the proposed site access, on the Smith & Austin Engineering Products Ltd business at 11 Church Road, hereon referred to as 'the Works'. HCC had also queried how the proposed site access arrangements would interact with parking/drop-offs associated with the Works.

3.5.15 In order to provide a detailed classified link count on St Mary's Road as well as consider activity in the vicinity of the Works, Paul Castle Associates (formerly 360TSL), was instructed to undertake a 12-hour (7am-7pm) 7-day link count with the aid of a video camera attached to a lighting column on Church Road opposite the eastern end of St Mary's Road. The survey commenced on Tuesday 14th May 2024, with this being a neutral period by definition of DfT guidance.

3.5.16 The link count took place to the south-west of the Works. In order to consider activity outside of the Works, the verge, the footway and the carriageway were split into three zones, with entry and exit movements to the Works also counted. A plan showing an extract of the footage with the three zones, provided by Paul Castle Associates, is shown as Image 3.3.

3.5.17 The results are provided in Appendix C with the survey footage available on request with the exception of Friday 17th due to a file download error.

Image 3.4: Traffic Survey Plan

3.5.18 The link count classified vehicles into light vehicles (cars and vans <3.5 tonnes) other goods vehicles (OGV) (goods vehicles >3.5 tonnes i.e. HGVs). OGVs were split by OGV1 and OGV2 with the differences between the two shown in Image 3.5. No buses or coaches were recorded.

Image 3.5: Vehicle Classifications

CAR	 SALOON	 ESTATE		
	 PEOPLE CARRIER	 CAR TOWING CARAVAN / TRAILER		
LIGHT GOODS VEHICLE (LGV)	 VAN	 <3.5TONNES – single motor flywheels	 PICK-UP	
OTHER GOODS VEHICLE (CGV1)	 >3.5TONNES – three motor flywheels	 2-AXES RIGID	 3-AXES RIGID	
OTHER GOODS VEHICLE (CGV2)	 4 OR MORE AXES RIGID	 3-AXES ARTIC	 4 OR MORE AXES ARTIC	 OTHER GOODS VEHICLE WITH TRAILER

3.5.19 Table 3.2 presents a summary of the 12-hour (7am-7pm) totals by day.

Table 3.2: Classified Link Summary (12-hours)

Day (May)	South-westbound				North-eastbound			
	LIGHT	OGV1	OGV2	TOTAL	LIGHT	OGV1	OGV2	TOTAL
Tue 14th	714	1	0	715	776	0	0	776
Wed 15th	729	2	0	731	862	1	0	863
Thurs 16th	785	1	0	786	901	2	0	903
Fri 17th	752	2	0	754	849	2	0	851
Sat 18th	619	0	0	619	635	0	0	635
Sun 19th	449	0	0	449	467	0	0	467
Mon 20th	714	3	0	717	773	1	0	774
Weekday Ave	739	2	0	741	832	1	0	833
Weekend Ave	534	0	0	534	551	0	0	551

- 3.5.20 The maximum number of OGV1s recorded in either direction was 3 with a weekday average of 2 south-westbound and 1 north-eastbound. One of the OGV1 trips on Monday 20th was likely to be the weekly refuse collection vehicle and the one OGV1 trip on the Tuesday was the weekly garden waste collection vehicle as confirmed by review of the survey footage.
- 3.5.21 From review of the full survey results in Appendix C, there was only one instance of when OGV1 movements occurred in each direction in each 15-minute survey period, this being 07:15-07:30 on Thursday 16th, however from review of the footage, these trips were made by the same vehicle, a business waste collection vehicle which also backed into the Works' car park.
- 3.5.22 The OGV1 weekday trips, on average, equate to less than 0.2% of the total two-way traffic flow.
- 3.5.23 No OGV2 trips were recorded.
- 3.5.24 No conflicts between OGVs were recorded during the 7-day traffic survey. We acknowledge that there may be occasional conflicts, but the professionally qualified drivers of such vehicles will simply elect to give-way to the other as appropriate, as they would on many roads across the country.
- 3.5.25 The construction phase impact of the proposed development will be managed and mitigated by the Construction Traffic Management Plan (CTMP) which is likely to include the ability to coordinate deliveries so the OGV and other large construction vehicle arrivals and departures can be staggered to avoid each other. During the operational phase, as to be expected with any residential development, the number of daily OGV movements is expected to be low and limited to weekly refuse collection and weekly garden waste collection, with these vehicles already making trips on St Mary's Road but diverting into the site, as well as occasional bulky goods deliveries.
- 3.5.26 A summary of the total daily (7am-7pm) 'ins' and 'outs' at the Works' car park is provided in Table 3.3.

Table 3.3: The Works Total Ins and Outs (12-hour)

Day (May)	Ins	Outs
Tue 14th	15	15
Wed 15th	15	15
Thurs 16th	14	14
Fri 17th	12	12
Sat 18th	6	6
Sun 19th	0	0
Mon 20th	19	19
Weekday Ave	15	15
Weekend Ave	3	3

- 3.5.27 Weekday averages of 15 ins and 15 outs were recorded entering and exiting the Works' car park. On four of the weekdays, no more than 3 trips were recorded in or out in any single hour, except for 5 inbound trips on the Monday. The weekday averages equate to just 1.25 trips per hour during the 12-hour period.
- 3.5.28 HCC's concern regarding the impact on the operation of the Works was primarily related to visitors parking on St Mary's Road in the vicinity of its access.
- 3.5.29 The parking beat survey split parked vehicles into the three aforementioned zones. To provide an indication of how frequently vehicles park in these three zones, parking stress can be calculated for each day. As the survey recorded vehicles parked in 15-minute time segments, this totals 48 time segments across the 12-hour survey period. A parking stress value of 0% indicates that no vehicles were parked during the 12-hour period, while a stress value of 100% indicates that there was at least one vehicle parked there all day. The longer periods of parking, or higher stress values, typically relate to a vehicle being parked for several hours or more. Table 3.4 presents a summary of the daily parking stress.

Table 3.4: St Mary's Road Parking Beat Stress (12-hour)

Day	Zone 1	Zone 2	Zone 3
	Verge	Footway	Carriageway
Tue 14th	8.3%	6.3%	0.0%
Wed 15th	4.2%	6.3%	0.0%
Thurs 16th	6.3%	4.2%	0.0%
Fri 17th	100.0%	22.9%	0.0%
Sat 18th	39.6%	4.2%	0.0%
Sun 19th	66.7%	4.2%	0.0%
Mon 20th	10.4%	10.4%	2.1%
Weekday Ave	25.8%	10.0%	0.4%
Weekend Ave	53.1%	4.2%	0.0%

-
- 3.5.30 The parking stress results suggest that Zone 3, the carriageway, experienced very little parking, with a vehicle being parked on the Monday only. The value of 2.1% on the Monday equates to just 1 car which was dropping off school children presumably heading towards Hayling College. No vehicles parking in Zone 3 visited the Works.
- 3.5.31 Zone 2, the footway, also experienced very little parking, albeit slightly more than Zone 3. The survey company noted that the majority of vehicles parking in Zone 2 walked to the Works, though it would appear that all such trips lasted less than 15-minutes. Only 13 of the vehicles parked in Zone 2 across the whole survey period visited the Works, equating to 43% of Zone 2 trips. Other observations made by the survey company relating to the purpose of Zone 2 parking trips were visiting residential properties, dropping off children or simply pulling over.
- 3.5.32 Zone 1 was the most active parking zone, particularly Friday to Sunday, with the 100% stress figure on the Friday relating to what appears to be the same vehicle parked on the verge all day rather than different vehicles arriving and departing across the course of the day. The same vehicle appears to have been parked there, with some 'coming and going', over the whole weekend suggesting that they were visiting friends or family. The survey company observed that other vehicles parked in Zone 1 were primarily associated with the flats opposite, with some vehicles dropping off school children or visiting the Co-op (which has its own car park). Only 3 vehicles parking in Zone 1 were associated with the Works.
- 3.5.33 The interaction of the development traffic with the Works access is considered further in Section 4.2.

4 DEVELOPMENT PROPOSAL

4.1 Development Description

- 4.1.1 Gladman is seeking outline planning permission for up to 300 dwellings on land at Rook Farm off St Mary's Road, Hayling Island. 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 HBC planning portal.
- 4.1.3 A Development Framework Plan (DFP) has been produced by FPCR and forms part of the supporting documentation for the planning application. The DFP 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 a number of the local PRoWs that border the site where this would be feasible. In a recent update to the DFP, and following discussions with HCC, the applicant is willing to provide a path to their northern site boundary to allow HCC to complete a connection to the PRoW network.

4.2 Access Strategy

Vehicular Access

- 4.2.1 A single main access will be appropriate to serve this development. This will take the form of a priority-controlled junction located at the St Mary's Road frontage. The junction has been located in the optimum location at the site frontage following a detailed swept path analysis explained below. The proposed access strategy is shown in Drawing P21033-001I in Appendix E.
- 4.2.2 Modern best-practice design guidance, specifically MfS, the *National Design Guide* (2021) and the *National Design Model Code* (2021), does not prescribe a limit for the number of dwellings served by a single vehicular access. In a modern residential environment, such as the development's internal layout, which will be expected to be designed to encourage speeds of ≤ 20 mph with traffic calming features, the chances of collisions severe enough to block the internal route will be very limited indeed. To reduce the chances of an accident at the access on St Mary's Road, which as the speed surveys detailed in Table 3.1 show is subject to average speeds of circa 20mph, the proposed access is somewhat oversized in terms of its width, which will help to reduce the chance of blockage in the highly unlikely event of a collision. Furthermore, an additional emergency access can be provided as will be detailed below.

4.2.3 The proposed access arrangement from St Mary's Road was also subject to an independent Stage 1 Road Safety Audit, contained in Appendix F, as detailed later in this section.

4.2.4 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 (%)

4.2.5 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.

4.2.6 Table 3.1 shows that the recorded 85th percentile speeds from the most recent speed survey were 28.5mph in the north-eastbound direction and 24.9mph 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 40m to the right on exit and 34m to the left on exit.

4.2.7 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.

4.2.8 Visibility splays of 2.4m x 40m to the right on exit and 2.4m x 34m to the left on exit have therefore been shown on the Proposed Access Arrangement Drawing P21033-001I contained with Appendix E. A 1.0m offset from the kerb edge has been shown to the right on exit, with this being equivalent to the kinetic width of a cyclist as detailed in LTN 1/20, meaning that all road users capable of travelling at or close to the observed 85th percentile speeds would be visible.

4.2.9 It is useful to note that the abovementioned visibility splays lie within the red line boundary of the site and the adopted highway.

4.2.10 The proposed access consists of a 6.5m wide carriageway, a 2m wide footway on the western side, a 3m wide shared cycleway on the eastern side and 8m junction radii supplemented by corner tapers. These dimensions accord with MfS guidelines in that they are greater than the minimum width required to allow two vehicles to pass. The width proposed is greater than the 5.5m commonly used

to access major residential estates in order to better facilitate construction vehicle access, with HCC objecting to the previous application on the grounds that sufficient evidence regarding this matter had not been submitted. The swept path analysis used to determine this width is detailed below.

Footway and Cycleway Improvements

- 4.2.11 The western footway will tie into 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 is present, albeit with some overhanging vegetation that should be cut-back, until outside property number 109.
- 4.2.12 An uncontrolled crossing will be provided in advance of this point. The crossing will consist of dropped-kerbs and tactile paving, allowing pedestrians to cross to the existing footway on the south-eastern side of the road where a new section of footway will be provided.
- 4.2.13 Discussions have taken place between HCC and the applicant regarding the provision of a new section of footway on St Mary's Road to replace the existing grass verge on the southern side between the access and the access to Limewood retirement home. The verge contains a single tree which HCC has confirmed to be a highway asset. The ability to provide a 'root-friendly' footway using a 'no-dig' method of construction in order to minimise any impact on the tree will be considered further at the detailed design stage. Should however, it not be possible to retain the tree, the tree could be removed and a Capital Asset Value for Amenity Trees (CAVAT) payment made. The applicant is willing to accept a suitably worded condition to secure this arrangement which is shown on Drawing P21033-001I (Appendix E).
- 4.2.14 Additional dropped-kerbs and tactile paving will then aid the crossing of the public car park access. Provision of this section of footway and crossing improvements will offer some benefit to existing pedestrians on St Mary's Road.
- 4.2.15 Drawing P21033-001I in Appendix E demonstrates that adequate pedestrian-vehicle intervisibility 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.
- 4.2.16 A 3m wide shared cycleway on the eastern side of the proposed site access is proposed, along with widening of the existing footway to shared cycleway between the access and Church Road. This will facilitate connection to the active travel improvement scheme detailed in Section 8.
- 4.2.17 To further enhance accessibility, Gladman would be 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 P21033-002E 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, which was confirmed by Stagecoach in the correspondence provided in Appendix G. A swept path analysis has been provided for a bus using the layby as shown in Drawing P21033-007E in Appendix E, an earlier version of which was provided to Stagecoach in the aforementioned email chain. The provision of the refuge islands should also encourage slower speeds through the junction by creating a narrowing effect. It should however be noted that the active travel improvement scheme detailed in Section 8, will result in an alternative arrangement at the junction, specifically a narrowing of the carriageway which would make it easier for pedestrians to cross.

- 4.2.18 An uncontrolled pedestrian crossing is proposed on St Mary's Road west of the junction with Church Road. A pedestrian refuge island was originally considered however HCC raised concerns with vehicle strikes and potential conflict with the access to the Works. As such, the crossing has been located further west of the bellmouth.

Interaction with the Works Access

- 4.2.19 From the data and analysis presented in Section 3.3, the proposed realignment of St Mary's Road will not have an undue impact on the operation of the Works. It is also important to note that the Works has a car park of a size that seems capable of accommodating its staff and visitors, with some visitors appearing to park on St Mary's Road for very short periods of time, most likely due to the convenience of simply having to pull-in rather than enter and exit the car park.
- 4.2.20 It is also noted that this section of St Mary's Road is protected by a traffic regulation order with double yellow lines which makes parking or waiting illegal, except for blue badge holders, as per Highway Code Rule 238. Such restrictions normally extend to the back of public highway, which in this case would include both the footway and verge. It is not the applicant's responsibility to address illegal parking and there are other parking opportunities available for visitors to local residents, particularly in St Mary's Car Park to the south-west.
- 4.2.21 Furthermore, it is important to acknowledge that the primary function of public highway is for the passage of vehicles and pedestrians, not the parking of vehicles.

Swept Path Analysis

- 4.2.22 HCC expressed concern regarding the ability of larger vehicles to pass each other on the bend on St Mary's Road immediately east of the proposed site access. The applicant proposes to realign the northern kerbline at the bend which will provide a wider carriageway in order to better accommodate such movements as demonstrated in the swept path analysis provided in Drawing P21033-008 in Appendix E which shows that a large car and a delivery vehicle (large van) can freely pass each other at the bend.

- 4.2.23 Drawing P21033-009 in Appendix E shows that a refuse collection vehicle can turn left out of the proposed site access then right onto Elm Grove with minimal overhang onto the opposite side of the carriageway.
- 4.2.24 Drawing P21033-010 in Appendix E shows that a safe level of intervisibility can be achieved between vehicles exiting the proposed site access and vehicles turning left or right from Elm Grove/Church Road. The 38m intervisibility is suitable for speeds up to 27.5mph and the 37m intervisibility is suitable for speed up to 26.5mph based on Manual for Streets guidance, with these speeds in excess of the recorded speeds on St Mary's Road in the vicinity of the proposed site access presented in Table 3.1.
- 4.2.25 The access width and radii have been based on a swept path analysis using the industry standard software AutoTrack for the following vehicles as shown in the respective drawings listed below and included in Appendix E.
- Refuse collection vehicle: Drawing P21033-003F;
 - Articulated lorry (construction): Drawing P21033-004F;
 - Tipper truck (construction): Drawing P21033-005F; and
 - Pantechnicon (furniture removals): Drawing P21033-006F.
- 4.2.26 The refuse collection vehicle will be the largest vehicle expected to regularly access the site with smaller vehicles, such as cars, ambulances and fire appliances having less onerous swept paths. The drawing showing the refuse collection vehicle demonstrates that the vehicle will be able to access the site with minimal crossing onto the opposite side of the carriageway which should be acceptable given that such vehicles will only need to access the site once a week and with a commonly accepted degree of overhang. 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.
- 4.2.27 As part of its comments on the previous planning application, 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 CTMP will be provided, however, the abovementioned swept path analysis for the articulated lorry and tipper truck demonstrate that both large construction vehicles can safely access and egress the site. The access is wider than that proposed as part of the previous application in order to better accommodate these vehicles types.
- 4.2.28 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 marshals will be present to guide larger vehicles in and out of the site if and when required.
- 4.2.29 The frequency of the potential conflict between large vehicles is given greater consideration in Section 3.5. It was detailed, using traffic survey data, that the scope for conflict is minimal.

Emergency Access

- 4.2.30 Whilst not strictly a requirement for residential developments, and being highly unlikely to ever be used for such a purpose, a separate emergency access can be provided via Rook Farm Way. Whilst this road is unadopted, it is constructed to a good standard and is wide enough to be navigable by a fire appliance.
- 4.2.31 The applicant has confirmed that they, through the site's landowner, has access rights for vehicular and non-vehicular access from Rook Farm Way. Gladman have reviewed the legal rights and provided the following information to HBC via email on 5th July 2022:

'We've (Gladman) now had an opportunity to double check this point with our solicitor and they've confirmed that our application site benefits from a retained "right of way with or without vehicles for all purposes over and along the Access", with 'the Access' for this purpose being what is Rook Farm Way. The right was granted by the Transfer that accompanied the sale of the land previously occupied by Rook Farm (yard and buildings) to Hillreed Homes, dated 1st July 2004. The land that benefits from the right in the Transfer is consistent with Land Registry Title SH47285, which is our promotion land.

We believe this is sufficient to confirm a right to utilise Rook Farm Way in connection with our application proposals, but we would be happy to share the relevant Land Registry Titles and the Transfer document with you, so that you can review further as needed.'

- 4.2.32 HCC considers that a connection between the road and the site would be beneficial to pedestrians and cyclists. The applicant considers the benefit of such a connection to be limited, but they are willing to accept a condition that requires the housebuilder(s) to provide a shared foot/cycleway up to the north-western end of Rook Farm Way within and up to the site boundary which HCC can potentially facilitate a connection between the two for pedestrians, cyclists and emergency vehicles in the future using an appropriate legal mechanism.
- 4.2.33 As an alternative to Rook Farm Way, the main site access off St Mary's Road could be modified with the cycleway widened to 3.1m or wider in line with national fire and rescue guidance, *Fire Safety: Approved Document B*, to allow it to be driven over by a fire appliance.

Additional Accesses for Pedestrians

- 4.2.34 Whilst the vehicular access will cater for all road users, the accessibility of the site by sustainable modes of transport can be enhanced by the provision of two 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. These connections are shown on the DFP.

- 4.2.35 During post-submission discussions, HCC requested that the applicant consider providing a pedestrian and potential cycle connection close to the north-east corner of the site, towards the rear of St Mary's Church. A full connection to the existing PRow and other paths will require the intervention of HCC as land beyond the applicant's control sits between the site boundary and the paths. To help facilitate such a connection, the applicant would be willing to provide a path up to the site boundary. Whilst the connection would be beneficial, we do not consider it to be essential to the accessibility of the proposed development.

4.3 Stage 1 Road Safety Audit

- 4.3.1 The independent and specialist consultant six:TEN Highways & Traffic Ltd was instructed to carry out a Stage 1 Road Safety Audit (RSA) on an earlier version of the proposed access arrangement at St Mary's Road along with the associated pedestrian improvements.
- 4.3.2 The RSA was undertaken by two Society of Road Safety Auditors qualified professionals who undertook a site visit on 16th June 2021 and the audit was carried out in accordance with *Design Manual for Roads and Bridges (DMRB) GG119 – Road Safety Audit*.
- 4.3.3 The proposed access arrangement was amended following the recommendations of the original RSA presented in the original version of the TA. At HCC's request, the RSA was then updated in February 2023 based on the revised drawings. Only one issue was raised, this was related to a suggested white lined footway running through St Mary's Car Park. Given the negative feedback from HCC and the auditors, the white lined footway has been removed from the proposals.
- 4.3.4 The latest version of the RSA is included in Appendix F of this TA. It should be noted that the RSA raised no issues regarding the principle of the access arrangement such as the location or form of junction. The proximity to the Church Road/Elm Grove/St Mary's Road junction was considered and not raised as an issue.

4.4 Internal Layout

- 4.4.1 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.
- 4.4.2 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.

- 4.4.3 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 vision of LTP4.

4.5 Parking

- 4.5.1 HBC 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.

- 4.5.2 Electric vehicle charging facilities will be provided in accordance with *Approved Document S* of the Building Regulations.

4.6 Traffic Calming Scheme

- 4.6.1 In acknowledgement of the site's proximity to Mengham Infant School and CherryHarbour Nursery, the applicant would be willing to fund a traffic regulation order (TRO) to reduce the speed limit on St Mary's Road to 20mph which is detailed further as part of the active travel improvement scheme outlined in Section 8.

4.7 Summary

- 4.7.1 The proposed access arrangements have taken into account consultation comments received by HCC since submission of the planning application. Following submission of TN1 and several meetings, it is understood that the proposed access arrangement is provisionally agreeable with HCC
- 4.7.2 The design of the proposed site access has been subject to an independent Stage 1 RSA and will conform to the standards and guidance in MfS and HCC's TG Notes. 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: LTP4 Policies C1, C2, C3 and C6; and HBC Core Strategy policies DM11 and DM13.
- 4.7.3 The design reflects the MfS principles of inclusive design, 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, as seen within paragraph 117 in giving priority to pedestrian and cycle movements and minimising conflict for these users, as well as paragraph 115 in promoting sustainable transport modes and creating '*safe and suitable access to the site*' along with paragraphs 103 and 105 by providing opportunity for physical activity and enhancements to PRoW.

5 ACCESS BY SUSTAINABLE MODES OF TRANSPORT

5.1 Introduction to Sustainable Modes

- 5.1.1 National and local transport planning policy centres on the importance of sustainable development, meaning that new developments should be located in areas where there is access to sustainable modes of travel, or where sustainable modes of travel can be introduced. The *NPPF* (2024) defines sustainable transport modes as:

'Any efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, ultra low and zero emission vehicles, car sharing and public transport.'

- 5.1.2 Walking, cycling and public transport are commonly regarded to be the most sustainable modes of transportation. This section of the report will describe how the site can be accessed by these modes.

5.2 Access on Foot

- 5.2.1 The site is located adjacent to existing residential areas and close to the amenities of Hayling Island. As stated in Section 4, together with the vehicular access, the development proposals include pedestrians only accesses to the PRow network.
- 5.2.2 The development proposals include uncontrolled crossings on St Mary's Road, Elm Grove and Church Road. These will encourage walking to and from the site and will not only benefit future residents of the site but also existing local residents. They will be particularly beneficial for walking trips to/from the local schools, creating safer routes.
- 5.2.3 Research has indicated that acceptable walking distances depend on several factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution of Highways and Transportation (CIHT) document entitled *Providing for Journeys on Foot* (2000) suggests walking distances which are relevant to this application. These distances are shown in Table 5.1.

Table 5.1: Suggested Acceptable Walking Distances

Criteria	Town Centres (m)	Commuting/School/Sightseeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred Maximum	800	2000	1200

Source: CIHT Document *'Providing for Journeys on Foot'* (2000)

- 5.2.4 Additional guidance is provided in MfS which states that (emphasis added):

'The propensity to walk is influenced not only by distance, but also by the quality of the walking experience. A 20-minute walk alongside a busy highway can seem endless, yet in a rich and stimulating street, such as in a town centre, it can pass without noticing. Residential areas can offer a pleasant walking experience if good quality landscaping, gardens or interesting architecture are present. Sightlines and visibility towards destinations or intermediate points are important for pedestrian way-finding and personal security...'

- 5.2.5 To illustrate the site's accessibility on foot, an indicative walking isochrone has been produced using the Geographic Information System (GIS) software Visography TRACC. Figure 2 in Appendix B represents the site's walking catchment for local service and commuting/school trips. The walking catchment is based on the distances of 1200m and 2000m '*Preferred Maximum*' by the CIHT for local service and commuting/school trips respectively.
- 5.2.6 Shown within the figure is a selection of local schools, local amenities and places of employment. To provide an accurate representation of the future highway and footway network in the area, the site's proposed vehicular access, as well as the pedestrian and pedestrian/cycle only accesses to the west and south-west have been manually added to the network used for the isochrone, as have local PRoWs. The potential connection at the north-east corner of the site has not been included in this analysis. The local bus stops are also shown in Figure 2.
- 5.2.7 Table 5.2 below summarises the distance and the typical time it would take to walk from the centre of the site to the local amenities and centres of employment and education, identified in Figure 2 of Appendix B via the road and/or PRoW network. It provides a comparison against those distances recommended in the CIHT's Providing for Journeys on Foot. The time it takes is based on a walking speed of 4.8kph which corresponds with the TRACC default, which itself is based on advice in the DfT document *Transport Connectivity Travel Time Indicators: Guidance Notes*.

Table 5.2: Distance and Walking Time Taken from Site to Local Amenities

Amenity	Distance from Site (m)	CIHT Preferred Max Walk Distance (m)	Walk Time (mm:ss)
Co-Operative Foodstore	314	1200	03:57
The Infinity Bar Hayling Island	334	1200	04:11
Hot Food takeaways	356	1200	04:27
Recreation Ground and Play Area	476	1200	06:01
Veterinary Practice	479	1200/2000	06:00
Mengham Infant School	480	2000	06:03
CherryHarbour Nursery	495	1200	06:12
St Mary Church	525	1200	06:36
Hayling Island Library	605	1200	07:36
Community Allotments	658	1200	08:14
Hayling Christian Centre	681	1200	08:33
The Hayling College	708	2000	08:56
Mengham Junior School	711	2000	08:58
Hayling Pharmacy	791	1200	09:54
Hayling Island Health Centre	794	1200	09:58
Hayling Island Holiday Park	872	2000	10:55
South Hayling District Centre	928	1200/2000	11:37
West Town District Centre	965	1200/2000	12:04
Hayling Island Community Centre	1023	1200	12:50
Seacourt Tennis Club and Gym	1233	1200	15:31
Lidl	1241	1200	15:31
Amusement Park	1336	1200/2000	16:48
Mill Rythe Schools (Infant and Junior)	1350	2000	16:58
Furniss Way Businesses	1357	2000	16:58
Mill Rythe Coastal Village	1756	2000	21:58
Bus Stops			
Tournerbury Lane (S-bound), Elm Grove, Gable Head	328	-	04:07
Tournerbury Lane (N-bound), Church Road, Gable Head	347	-	04:21

5.2.8 The results in Table 5.2 show that some amenities are within a 'desirable' walking distance (400m) from the site, these include The Infinity Bar, Co-Operative foodstore and two hot food takeaways. Many amenities fall within an 'acceptable' walking distance (800m) from the site, including a recreation ground, library, health centre, pharmacy, community allotments and two churches. Outside of this distance but within the preferred maximum (1200m) are the South Hayling and West Town district centres which includes numerous amenities including shops, restaurants, banks and a post office. Outside of the 1200m distance but within a 17-minute walk, which is shorter than the 20-minute walk suggested by MfS, are the Lidl foodstore, Seacourt Tennis Club and Gym, amusement park and a collection of businesses accessible from Furniss Way, all of which are accessible along pleasant walking routes.

5.2.9 Of the five schools/colleges listed, Mengham Infant School and nursery falls within a desirable walking distance (less than a 7-minute walk), while Mengham Junior School and The Hayling College fall within

an acceptable walking distance with an approximate time of 9 minutes. The two Mill Rythe schools (Infant and Junior) fall within the '*preferred maximum*' of 2000m. Employment opportunities may be available over time at the various amenities listed above, particularly the foodstores and local businesses in the district centres.

5.2.10 Table 5.2 also shows that the closest pair of bus stops that facilitate access to local bus services, which are on Church Road/Elm Grove opposite and adjacent to Tournurbury Lane, are less than a 5-minute walk away.

5.2.11 Given the evidence presented in Figure 2 of Appendix B and Table 5.2, walking can be considered to be a realistic and viable method of travel to a range of day-to-day amenities indicating that the site's location is accessible via this sustainable mode. The applicant is willing to provide funding towards an active travel improvement scheme that aligns with the aspirations of the LCWIP as detailed in Section 2.8.

5.3 Access by Cycle

5.3.1 It is widely recognised that cycling can offer an attractive alternative to short car trips, particularly those under 5km, but also as part of longer journeys by public transport.

5.3.2 The CIHT document *Cycle Friendly Infrastructure* (2004) states in paragraph 2.3 that:

'Three quarters of journeys by all modes of travel are less than five miles (8km) and half under two miles (3.2km) (DoT 1993, table 2a). These are distances that can be cycled comfortably by a reasonably fit person.'

5.3.3 Local Transport Note (LTN) 1/20 *Cycle Infrastructure Design* states similar, in that:

'Two out of every three personal trips are less than five miles [8km] in length – an achievable distance to cycle for most people.'

5.3.4 The National Travel Survey states that in 2019, the average cycling trip took 23-minutes, equivalent to 6,133m (based on an average speed of 16kph), again this being an average with a proportion of respondents cycling a greater distance than this. LTN 1/20 also recognises that lightly trafficked, low speed streets can be conducive to cycling, stating, '*in quiet residential streets, most people will be comfortable cycling on the carriageway even though they will be passed by the occasional car moving at low speeds.*'

5.3.5 The generally flat topography of Hayling Island is naturally conducive to cycling. Shared footway/cycleways are also present on Langstone Bridge which allows cyclists to avoid the carriageway which is not only safer for cyclists, but it means that they do not impact upon the capacity of the carriageway. The Hayling Billy Trail (part of NCR 2) provides a largely traffic-free cycle route that runs the virtual length of Hayling Island from the Hayling Island Ferry Landing connecting to the

mainland via Langstone Bridge. Several local streets, including St Mary's Road, are identified as being safe on-road cycle routes.

- 5.3.6 A cycling isochrone showing the site's catchment has also been produced using TRACC and is shown as Figure 3 in Appendix B. The figure illustrates 2000m, 5000m and 8000m catchment ranges which equate to 10-minute, 25-minute and 40-minute journey times respectively which are based on the somewhat conservative or leisurely cycle speed of 12kph. Anecdotally, commuting cyclists are generally thought to travel at speeds between 15-20kph so a greater catchment may be more realistic.
- 5.3.7 The cycling distances and times to a selection of key local centres of education, employment and amenities, as well as neighbouring areas, are shown in Table 5.3, although the cycle times detailed in the table are based on a cycling speed of 16kph which corresponds with the TRACC default, which the software developer has based on DfT advice. It should be noted that some of the cycle distances differ from the walking distances as cycling along PRowS is typically not allowed unless designated as cycleways, bridleways or byways.

Table 5.3: Distance and Cycling Time Taken from Site to Local Centres of Employment, Education, Amenities and Neighbouring Settlements

Employment/ Education/ Amenity/ Settlement	Distance from Site (m)	Cycle Time (mm:ss)
Co-Operative Foodstore	375	01:40
The Infinity Bar Hayling Island	396	01:42
Hot Food takeaways	417	01:46
Recreation Ground and Play Area	538	02:41
Mengham Infant School	541	02:24
Veterinary Practice	541	02:13
CherryHarbour Nursery	556	02:17
St Mary Church	587	02:45
Hayling Island Library	666	02:49
Community Allotments	720	02:55
Hayling Christian Centre	742	03:05
The Hayling College	770	03:23
Mengham Junior School	772	03:25
Hayling Pharmacy	852	03:24
Hayling Island Health Centre	855	03:35
South Hayling District Centre	990	03:52
Lidl	1303	05:02
Mill Rythe Schools (Infant and Junior)	1411	05:49
West Town District Centre	1429	05:33
Hayling Island Community Centre	1496	05:56
Seacourt Tennis Club and Gym	1547	06:25
Amusement Park	1746	07:09
Furniss Way Businesses	1920	07:25
Mill Rythe Coastal Village	1929	07:25
Hayling Island Holiday Park	1964	07:31
Beachlands/Hayling Golf Club	2901	11:04
Stoke	3258	12:22
Sinah Warren Leisure Club	3480	13:14
Hayling Ferry Terminal	4406	16:50
North Hayling	4532	17:10
Langstone	6182	23:22
Solent Retail Park	7457	28:07
Langstone Technology Park	7468	28:10
Havant Town Centre	7494	29:03
Tesco Extra	7681	29:17
Solent Trade Park	7782	29:20
Havant railway station	7916	30:03

5.3.8 Figure 3 in Appendix B and Table 5.3 above illustrate that there is a considerable range of local amenities, places of employment, places of education and settlements within the cycle catchment. All of the amenities and centres of employment and education mentioned in the Access on Foot section are within the 2000m catchment. Most of Hayling Island is within the 5000m catchment including the residential areas of Stoke and North Hayling as well as the Hayling Ferry Terminal.

- 5.3.9 Between the 5000m and 8000m catchment ranges and a 30-minute cycle time, which may be feasible for some residents of the site particularly given the cycle-friendly topography of the island, are Solent Retail Park, Langstone Technology Park, Havant Town Centre, Tesco Extra and Solent Trade Park, all major places of employment.
- 5.3.10 Connection can be made to National Rail services at Havant station which is in the town centre and a circa 30-minute cycle ride from the site. The station has 92 CCTV protected, sheltered cycle storage spaces (source: <https://www.nationalrail.co.uk/stations/havant/>).
- 5.3.11 The catchment plan and Table 5.3 suggest that cycling will be a viable mode of travel for access to a range of local amenities and places of employment and education.
- 5.3.12 Clearly the site location and the surrounding infrastructure will mean that travel on foot and by cycle will be realistic and convenient modes of travel for some future residents of the site. The potential numbers of walking and cycling trips that the site will generate will be discussed in Section 6 of this report, but clearly the scale of the site is not such that it will disadvantage existing pedestrians and cyclists.
- 5.3.13 The proposed site access point and pedestrian connections will complement the existing pedestrian and cycle infrastructure and provide convenient routes that will follow natural desire lines for future residents of the site. Other potential active travel enhancements are also discussed in Section 8 below.

5.4 Access by Public Transport

Bus

- 5.4.1 The Chartered Institute of Highways and Transportation (CIHT) document, *Planning for Public Transport in Development* recommends that developments should ideally be located within 400m of a bus stop. This distance is also endorsed in the document *Bus Services & Residential Developments* (2025) as a recommended limit for affordable housing and higher density development.
- 5.4.2 As Table 5.2 shows, the stops on Church Road/Elm Grove opposite and adjacent to Tournurbury Lane are within this distance. Both stops have flag poles with timetables, while the northbound bus stop comprises seating and shelter to protect waiting passengers from inclement weather. Additional stops are located in close proximity to the site and provide access to the same services.
- 5.4.3 Table 5.4 below summarises the services that can be accessed via these stops. Timetable information for all the services mentioned below can be downloaded from Traveline (<https://www.traveline.info/>), with the timetables referenced at the time of writing available on request.

Table 5.4: Summary of Bus Services in the Vicinity of the Site

Bus Service	Route	Weekday	Weekend	
			Saturday	Sunday
30	Havant – Hayling Island Circular (anticlockwise)	Up to 2 services per hour	Up to 2 services per hour	1 service per hour
31	Havant – Hayling Island Circular (clockwise)	Up to 2 services per hour	Up to 2 services per hour	1 service per hour

- 5.4.4 Both circular services link the main residential areas of Hayling Island to Havant town centre. The two services combined provide up to four services per hour in the weekday peak periods. The first number 30 service departs the Church Road bus stops at 05:55 with the last return 31 service departing Havant at 23:30. The two services should be convenient modes of travel for future residents of the site who work at Langstone Technology Park, Solent Retail Park or in Havant town centre. Connection can also be made to National Rail services at Havant station which is a 5-minute walk from Havant bus station.
- 5.4.5 The services are operated by Stagecoach with the current fleet including smart ticketing, low floor access, wheelchair access and Wi-Fi.
- 5.4.6 To demonstrate the accessibility of bus services, an isochrone has been produced using TRACC and is shown as Figure 4 in Appendix B which highlights the destinations served by the regular daily bus services in Hayling Island. The calculation involved in producing the catchment plan includes only direct services to destinations within one hour's journey time. A greater range of destinations will be available if passengers make connections to other bus services. The isochrone was produced for the typical commuter hours of 0700-0900 using the National Public Transport Data Repository (NPTDR) dataset for the fourth quarter of 2025 for a typical Monday.
- 5.4.7 Figure 4 in Appendix B demonstrates that the bus services adjacent to the site provide convenient connections to a number of destinations. As illustrated, the majority of the main population centres on Hayling Island centre can be reached within a 30-minute journey time, with residents also able to reach Langstone Technology Park and Havant town centre, including the train station and retail parks, within a similar journey time. Beyond this, the residential areas of Emsworth, Waterlooville and the northern areas of Portsmouth can be reached in less than a 60-minute combined walking and bus journey time.
- 5.4.8 Bus travel may therefore be a viable mode of transport and provides a reasonable choice for a number of residents of the site.

Rail

- 5.4.9 As mentioned above, Havant railway station may be within a reasonable cycling distance for some residents of the site with secure cycle storage available. The station provides regular services to

London Waterloo and Victoria, Portsmouth, Southampton and Brighton. The station is also accessible via the 30 and 31 public transport services in conjunction with a short 5-minute walk between the stations.

Ferry

- 5.4.10 Hayling Island Ferry Terminal is within a 17-minute cycle journey from the site. The current (at the time of writing) summer timetable available on <http://www.haylingferry.net/> provides 15 Monday to Saturday services to Eastney at 25-60 minute intervals from 0740 until 1840. The last return service from Eastney departs at 1900. This service enables Hayling Island residents to commute to/from Portsmouth with the ferry licenced to carry up to 63 passengers. Many services link to the 25-bus service in Eastney which connects to Portsmouth city centre.
- 5.4.11 The current single ticket fare for an adult is £3.50 with discount available for 10 and 20 trip tickets and for concessions. Contactless payment is available. Bicycles can be carried free of charge with the ferry also forming part of the 14.5 mile long Langstone Harbour Circular Walk and Cycle Ride.

5.5 Travel Plan

- 5.5.1 A residential Travel Plan (TP) has been produced as part of the package of documents supporting the planning application. The document forms the start of an ongoing process to encourage and monitor the use of sustainable modes of travel. As many aspects of the TP will be applicable to this TA, a summary of the key points is as follows:
- Outlines the key local and national objectives of the TP process;
 - Sets targets for the reduction of car or van driver trips by 10%;
 - Indicates potential measures that can be implemented to achieve these targets; and
 - Provides details of how the TP will be managed, monitored and reviewed.
- 5.5.2 It should however be noted that in order to provide a robust assessment, the traffic impact assessment detailed in Section 6 of this TA, does not take into account any trip reduction as part of the TP.

5.6 Summary

- 5.6.1 This section of the report has demonstrated that the site is in a sustainable location where there are a range of local amenities within two local centres, a multitude of early years schools, and a combined high school and further-education college are within nationally recognised acceptable walking and cycling distances. The local bus services provide connections to some of the major employment areas located in Langstone and Havant making bus travel a viable option for some of the residents to locate work. Residents further have the opportunity to merge a cycling trip with either a train caught from Havant railway station or a ferry trip west towards Portsmouth.

-
- 5.6.2 This section has also explained that a TP produced in support of the development will help to encourage the use of these sustainable modes. It is hoped that a combination of the site's sustainable location and design, as well as the adoption of the TP, will help to maximise the use of sustainable modes of transport.
- 5.6.3 A key theme of national and local transport planning policy is that development should be located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. The NPPF states that *'significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes'*, as well as providing *'safe and suitable'* access for all.
- 5.6.4 The development proposal's integration with and improvement of the surrounding pedestrian and cycle infrastructure ensures compliance with LTP4 Policies C1, C2, C3, C5 and C6; and HBC Core Strategy policies DM11 and DM12.

6 MICROSIMULATION MODELLING AND TRAFFIC FORECASTING

6.1 Introduction

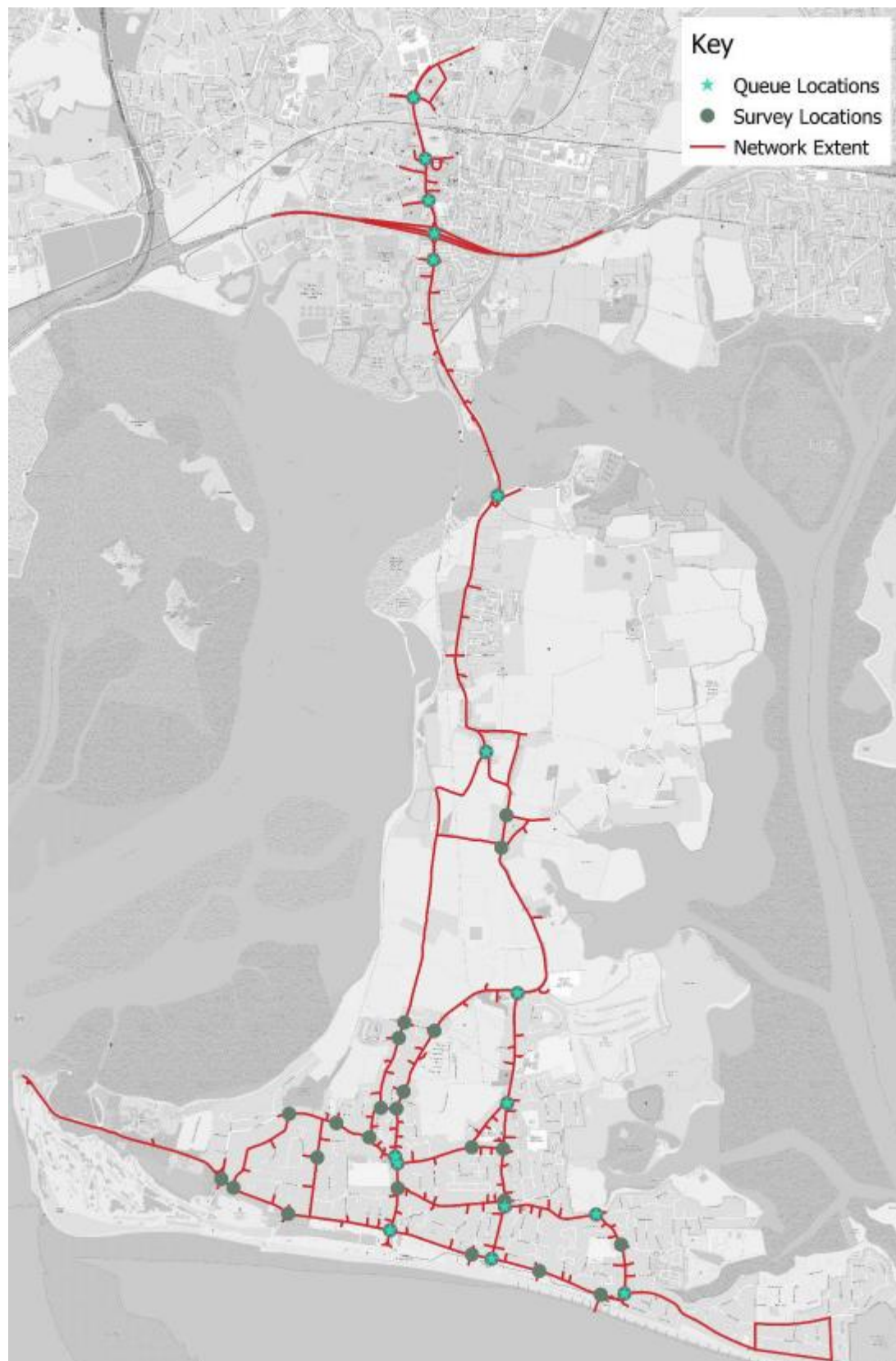
- 6.1.1 This section of the report details the methodology used to predict the demand associated with the development. It then provides a cumulative assessment of the impact of the development on the highway network.

6.2 Hayling Island Microsimulation Model

- 6.2.1 As mentioned earlier in this report, HBC commissioned SYSTRA to update the microsimulation model produced to support the now withdrawn version of the previous Local Plan. HCC requested that applicants should use the Paramics based microsimulation model to help assess their cumulative impacts the local highway network. The model would also be used to identify the need for mitigation and to test various mitigation proposals.
- 6.2.2 Microsimulation modelling is regarded in the development planning industry as being an advanced method of traffic modelling. Not only does it encompass elements of strategic modelling but it also includes detailed link and junction operation.
- 6.2.3 It was made clear to the Planning Inspectorate at the EiP stage of the withdrawn emerging Local Plan that HCC was supportive of the modelling methodology, highlighting that the software's ability to model 'friction', which was explained in the previous supporting HITA as being driver responses to physical road conditions which interfere with traffic flow, such as *'vehicle composition (cars / lorries / caravans etc), vehicle turning movements, weather and the complex behaviour of undisciplined road users, which leads to shockwaves or 'phantom traffic jams''*.
- 6.2.4 We are also supportive of the use of microsimulation to better understand traffic behaviour on the island and to derive suitable mitigation measures. Use of the microsimulation model was also agreed with NH to assess the cumulative impact of planning applications on the A27 at the Langstone Roundabout.
- 6.2.5 Whilst the microsimulation model is an appropriate tool to consider traffic impact, HCC requested that all major applications on the island also undertake junction capacity assessments, as the associated software can act as a more detailed tool to consider junction operation. Traffic flows from the microsimulation model would therefore act as inputs to standalone junction capacity assessment models.

Base Model

- 6.2.6 A model of the existing highway network was constructed, with the model study area shown in Image 6.1, this being Figure 1 from the BMDR produced by SYSTRA and included in Appendix D.

Image 6.1: Microsimulation Model Study Area

6.2.7 The model therefore includes the main roads on the island as well as the A3023 junction with the A27, a section of the A27 and its slip roads and the approach to Havant town centre.

- 6.2.8 Two versions of the model have been produced following comments made by the Planning Inspectorate during the EiP stage of the withdrawn version of the emerging Local Plan. Whilst it is common practice grounded in DfT guidance to assess traffic impact during neutral periods i.e. outside of school holidays, Christmas, Easter etc., concerns were raised by local residents regarding the impact during the summer when there can be tourist trips to the Island. As such, HBC instructed their consultants, SYSTRA, to also prepare a summertime model. The differences between the two base models are explained below.

Neutral Month Model

- 6.2.9 The neutral month model (NMM) was produced for the 12-hour period between 0700-1900 though the focus of this assessment will be on the following three peak hours which were identified following review of the survey data:

- AM Peak 0800-0900;
- Inter Peak 1500-1600; and
- PM Peak 1700-1800.

- 6.2.10 Baseline traffic data was obtained from a variety of sources during neutral periods. Full details are provided in the BMDR (Appendix D) but in summary, turning count data was recorded by a specialist traffic survey company at 37 junctions on Thursday 17th November 2022 between 0700 and 1900. Additional data sources were also used including queue length surveys, Bluetooth, TomTom, traffic signal timings and the Solent Transport's Sub-Regional Transport Model.

Summer Month Model

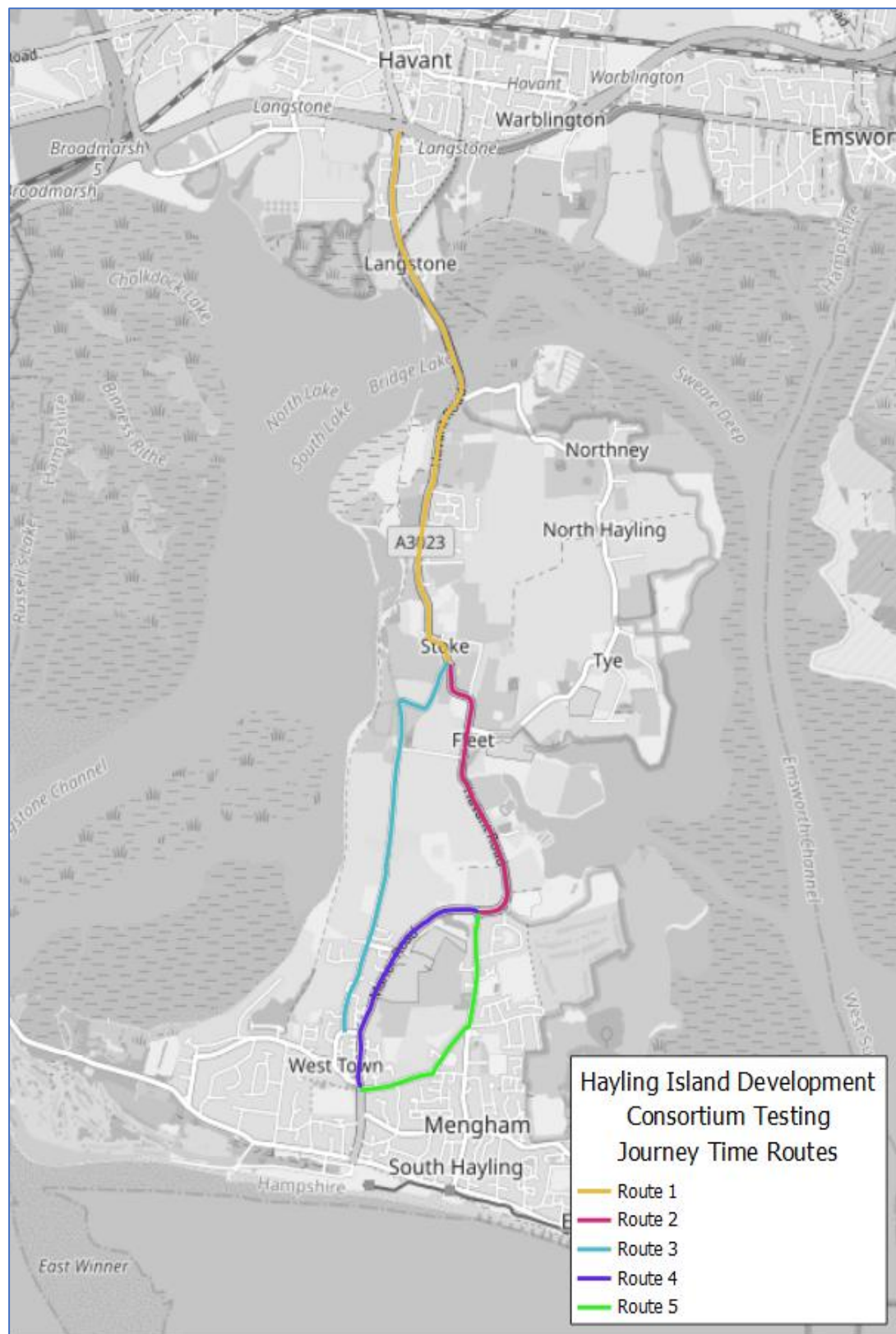
- 6.2.11 The summer month model (SMM) was produced for the 12-hour period between 0700-1900 though the focus of this assessment will be on the following three peak hours which were identified following review of the survey data:

- AM Peak 0900-1000;
- Inter Peak 1200-1300; and
- PM Peak 1500-1600.

- 6.2.12 Junction turning counts were undertaken on Friday 5th August 2022 at 41 junctions in the study area. The four junctions surveyed in addition to the NMM were the accesses to the car parks on the Sea Front. Additional data sources were also used including queue length surveys, Bluetooth, TomTom and traffic signal timings.

Journey Time Routes

- 6.2.13 Five journey time routes were identified as shown in Image 6.2.

Image 6.2: Journey Time Routes

6.2.14 Bluetooth and TomTom data has been used to calibrate the base models. Further details are provided in the BMDR (Appendix D).

Model Calibration and Validation

- 6.2.15 Both versions of the base model were calibrated and validated to reflect observed and recorded traffic conditions. This included turning count calibration and journey time validation. The modelled turning counts and queue lengths closely match the recorded equivalents and were in line with DfT TAG and DMRB criteria. Queue length comparisons were also made which showed that modelled queues were reflective of observed queues.
- 6.2.16 It was agreed with both HCC and NH that the level of calibration and validation was acceptable. Therefore, the base model is a suitable tool to consider traffic impact following the forecasting process outlined below.

Forecast Model

- 6.2.17 HBC gave Gladman, and the applicants behind three other live applications on Hayling Island, permission to utilise the base model and produce a forecast model to assess their respective and cumulative impacts. The other three live applications are as shown in Table 6.1.

Table 6.1: Live Planning Application Details

App. No.	Description	Quantum (no. dwellings)	Applicant	Transport Consultant
APP/21/01350	North of Oysters, Station Road	Up to 29	Hayling Island Builders	Paul Basham Associates (PBA)
APP/21/01351	South of Saltmarsh Lane	Up to 60	Hayling Island Builders	Paul Basham Associates (PBA)
APP/22/00001	Fathoms Reach	51 (demolition of 5)	Taylor Wimpey	Hydrock

- 6.2.18 Gladman and the other two applicants listed in Table 6.1 commissioned SYSTRA to undertake the forecast modelling.
- 6.2.19 Prime prepared a Modelling Brief that was circulated to HBC, HCC and NH for agreement prior to instructing SYSTRA. Various revisions of the Modelling Brief were circulated, with version 3.1 of the document included in Appendix H containing the full traffic forecasting methodology. A summary of the key points are as follows.

Background Traffic Growth

- 6.2.20 It was agreed with the authorities that two forecast years would be assessed, the first being 2025. This will act as the year of opening for the four development proposals. Whilst only a small proportion of the Rook Farm would be occupied in this year, full build-out will be assessed in line with NH recommendations. It is acknowledged that due to slippage with the modelling timescales, this TA has been prepared in mid-2025 and it is unlikely that the first dwellings proposed as part of the development will be constructed any sooner than 2027 even if planning permission is granted in 2025. However, given the limited levels of traffic growth on the Island, it is reasonable to treat 2025 as 2027.

A second forecast year of 2035 will also be assessed, this representing the year of opening (2025) plus 10 years in line with HCC's preference.

- 6.2.21 The development proposals will likely account for local traffic growth on the Island, therefore no traffic growth will be applied to local movements i.e. Island to Island, Island to mainland local roads and mainland local road to Island trips. Whilst NH in the meeting on 17th May 2023 expressed a preference for TEMPro to be applied to movements to/from the A27, trips associated with the live applications will be assigned to the A27 slip roads and will likely account for all island to A27 growth and vice versa. TEMPro growth will however be applied to A27 to mainland and mainland to A27 trips. Further details of the TEMPro growth is included in Table 2.1 and 2.2 of the Modelling Brief (Appendix H).
- 6.2.22 HBC has provided SYSTRA with completions to April 2022 which will be included as committed developments. HBC provided Prime with updated data for residential and commercial completions which was shared with SYSTRA for inclusion in the model.
- 6.2.23 It should be noted that Section 2.3 of the Modelling Brief suggested that the SMM would assess the peak hours of 1100-1200 and 1700-1800, however, following further review the actual SMM peak hours were those listed above.

Reference Case

- 6.2.24 The background traffic growth and traffic generated from the committed developments would form the 2025 and 2035 Reference Case (RC) scenarios, which are also referred to as the Future Baseline scenario in EIA terms.

Trip Generation

- 6.2.25 As detailed in Section 2.4 of the Modelling Brief (Appendix H), surveys of recent residential developments on the Island were instructed by SYSTRA and Prime. Table 2.3 in the Modelling Brief details the locations and dates of these surveys. Both neutral and summer periods were surveyed. Use of local trip rates as opposed to more traditional methods such as the TRICS database, allows for the local characteristics of the Island to be better considered.
- 6.2.26 The neutral month trip rates are summarised in Table 6.2.

Table 6.2: Local Trip Rate Summary – Neutral Month Model

TIME	ARRIVALS	DEPARTURES	TOTAL
0700 - 0800	0.058	0.269	0.327
0800 - 0900	0.211	0.446	0.657
0900 - 1000	0.112	0.172	0.283
1000 - 1100	0.150	0.181	0.331
1100 - 1200	0.137	0.157	0.294
1200 - 1300	0.176	0.157	0.334
1300 - 1400	0.163	0.175	0.338
1400 - 1500	0.211	0.179	0.391
1500 - 1600	0.307	0.216	0.524
1600 - 1700	0.322	0.202	0.524
1700 - 1800	0.396	0.265	0.661
1800 - 1900	0.224	0.154	0.378
12-HOUR	2.469	2.572	5.041

6.2.27 The network peak hour trip rates are higher than what average TRICS based rates would show, as the total rates would typically be circa 0.500. The above rates are more in line with TRICS 85th percentile rates and should be considered to be particularly robust.

6.2.28 The summer month trip rates are summarised in Table 6.3.

Table 6.3: Local Trip Rate Summary – Summer Model

TIME	ARRIVALS	DEPARTURES	TOTAL
0700 - 0800	0.049	0.123	0.172
0800 - 0900	0.054	0.194	0.248
0900 - 1000	0.096	0.203	0.299
1000 - 1100	0.149	0.196	0.346
1100 - 1200	0.129	0.157	0.285
1200 - 1300	0.235	0.185	0.420
1300 - 1400	0.158	0.158	0.317
1400 - 1500	0.211	0.197	0.408
1500 - 1600	0.176	0.150	0.326
1600 - 1700	0.243	0.140	0.383
1700 - 1800	0.283	0.167	0.451
1800 - 1900	0.237	0.217	0.455
1900 - 2000	0.147	0.107	0.254
13-HOUR	2.167	2.195	4.362

6.2.29 The above rates are much lower than the neutral month model rates and as such the development impact is likely to be lesser. However, given that the baseline traffic flows could be higher, there is potential for the cumulative impact to be greater in the SMM. This has been investigated as detailed later in this section.

6.2.30 The trip rates in the above two tables have been applied to each of the four live applications.

6.2.31 The trip rates were accepted by HCC and NH following review.

6.2.32 A summary of the peak hour trip generation of the proposed development at Rook Farm is shown in Table 6.4.

Table 6.4: Rook Farm Trip Generation Summary (300 dwellings)

Time	Neutral Month Trips			
	Arrivals	Departures	Total	Trips per min.
0800-0900	63	134	197	3.3
1500-1600	92	65	157	2.6
1700-1800	119	79	198	3.3
Time	Summer Month Trips			
	Arrivals	Departures	Total	Trips per min.
0900-1000	29	61	90	1.5
1200-1300	70	55	125	2.1
1500-1600	53	45	98	1.6

6.2.33 The proposed development is forecast to generate close to 200 two-way trips in the neutral month AM and PM peak hours, and close to 160 two-way trips in the inter peak hour. These figures are equivalent to between 2.6 and 3.3 trips per minute at the proposed site access before dissipating across the highway network. The summer month trip generation is notably lower, with less than 100 two-way trips forecast in the AM and PM peak hour and around 125 trips in the inter peak hour, with these figures equivalent to 1.5 to 2.1 trips per minute at the proposed site access.

Trip Distribution

6.2.34 It was agreed with HCC and NH that the development traffic distribution from the 2019 version of the model would remain applicable to this model, with the distribution based on the observed distribution at neighbouring residential zones.

Forecast Scenarios

6.2.35 The following forecast scenarios were derived:

- Reference Case (2022 Base plus traffic growth and committed developments);
- Scenario 1 – Rook Farm Site only;
- Scenario 2 – Fathoms Reach Site only;
- Scenario 3 – 2 x Hayling Island Builders Sites only; and
- Scenario 4 – All Development Sites i.e. the Cumulative Scenario.

6.2.36 The four development scenarios were based on the Reference Case (RC) with the respective development traffic added. All scenarios were run using both the NMM and the SMM. The forecast years of 2025 and 2035 were assessed. The focus of this TA is on the RC, Scenario 1: Rook Farm and Scenario 4: Cumulative. The other two applicants will assess their respective scenarios.

- 6.2.37 Further details of the traffic forecasting methodology are provided in the Model Forecast Report (MFR), by SYSTRA, provided as a separate document.

Forecast Traffic Impact on Existing Network

- 6.2.38 The main form of assessment in the microsimulation modelling is a journey time comparison across the five journey time routes shown in Image 6.2.
- 6.2.39 The journey time results for Scenario 1: Rook Farm and Scenario 4: Cumulative compared to the RC are shown in Table 6.5-6.8. The results for all scenarios are shown in the MFR provided separately.

Table 6.5: Journey Time Results Neutral Month 2025

08:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:41	05:51	06:00	00:10	00:19
JT Route 1	SB	05:02	05:11	05:43	00:09	00:41
JT Route 2	NB	02:41	02:41	02:42	00:00	00:01
JT Route 2	SB	02:47	02:46	02:48	-00:01	00:01
JT Route 3	NB	03:48	03:49	03:50	00:01	00:02
JT Route 3	SB	03:41	03:41	03:42	00:00	00:01
JT Route 4	NB	02:33	02:35	02:36	00:02	00:03
JT Route 4	SB	02:26	02:29	02:28	00:03	00:02
JT Route 5	NB	02:30	02:29	02:30	-00:01	00:00
JT Route 5	SB	02:33	02:33	02:31	00:00	-00:02
15:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:10	05:14	05:15	00:04	00:05
JT Route 1	SB	04:46	04:47	04:48	00:01	00:02
JT Route 2	NB	02:42	02:43	02:43	00:01	00:01
JT Route 2	SB	02:52	02:53	02:54	00:01	00:02
JT Route 3	NB	03:46	03:46	03:47	00:00	00:01
JT Route 3	SB	03:41	03:41	03:41	00:00	00:00
JT Route 4	NB	02:32	02:32	02:33	00:00	00:01
JT Route 4	SB	02:32	02:31	02:31	-00:01	-00:01
JT Route 5	NB	02:32	02:29	02:31	-00:03	-00:01
JT Route 5	SB	02:35	02:36	02:36	00:01	00:01
17:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:03	05:06	05:07	00:03	00:04
JT Route 1	SB	04:51	04:53	04:53	00:02	00:02
JT Route 2	NB	02:36	02:39	02:39	00:03	00:03
JT Route 2	SB	02:48	02:50	02:50	00:02	00:02
JT Route 3	NB	03:44	03:44	03:44	00:00	00:00
JT Route 3	SB	03:41	03:40	03:41	-00:01	00:00
JT Route 4	NB	02:29	02:30	02:30	00:01	00:01
JT Route 4	SB	02:25	02:25	02:27	00:00	00:02
JT Route 5	NB	02:26	02:26	02:29	00:00	00:03
JT Route 5	SB	02:33	02:39	02:37	00:06	00:04

Table 6.6: Journey Time Results Neutral Month 2035

08:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:38	05:56	05:56	00:18	00:18
JT Route 1	SB	05:00	05:13	05:26	00:13	00:26
JT Route 2	NB	02:41	02:42	02:41	00:01	00:00
JT Route 2	SB	02:47	02:47	02:47	00:00	00:00
JT Route 3	NB	03:48	03:49	03:49	00:01	00:01
JT Route 3	SB	03:41	03:41	03:42	00:00	00:01
JT Route 4	NB	02:32	02:36	02:35	00:04	00:03
JT Route 4	SB	02:27	02:28	02:28	00:01	00:01
JT Route 5	NB	02:30	02:29	02:29	-00:01	-00:01
JT Route 5	SB	02:31	02:32	02:33	00:01	00:02
15:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:11	05:15	05:13	00:04	00:02
JT Route 1	SB	04:45	04:46	04:46	00:01	00:01
JT Route 2	NB	02:42	02:42	02:42	00:00	00:00
JT Route 2	SB	02:52	02:54	02:53	00:02	00:01
JT Route 3	NB	03:46	03:46	03:46	00:00	00:00
JT Route 3	SB	03:41	03:41	03:41	00:00	00:00
JT Route 4	NB	02:32	02:32	02:32	00:00	00:00
JT Route 4	SB	02:31	02:31	02:31	00:00	00:00
JT Route 5	NB	02:29	02:30	02:28	00:01	-00:01
JT Route 5	SB	02:35	02:35	02:39	00:00	00:04
17:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:06	05:04	05:11	-00:02	00:05
JT Route 1	SB	04:51	04:52	04:55	00:01	00:04
JT Route 2	NB	02:37	02:37	02:38	00:00	00:01
JT Route 2	SB	02:48	02:50	02:50	00:02	00:02
JT Route 3	NB	03:44	03:44	03:44	00:00	00:00
JT Route 3	SB	03:41	03:41	03:41	00:00	00:00
JT Route 4	NB	02:28	02:28	02:30	00:00	00:02
JT Route 4	SB	02:25	02:25	02:27	00:00	00:02
JT Route 5	NB	02:29	02:30	02:25	00:01	-00:04
JT Route 5	SB	02:33	02:36	02:35	00:03	00:02

Table 6.7: Journey Time Results Summer Month 2025

09:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:08	05:10	05:12	00:02	00:04
JT Route 1	SB	04:40	04:42	04:43	00:02	00:03
JT Route 2	NB	02:39	02:39	02:40	00:00	00:01
JT Route 2	SB	02:47	02:47	02:48	00:00	00:01
JT Route 3	NB	03:49	03:50	03:50	00:01	00:01
JT Route 3	SB	03:41	03:42	03:41	00:01	00:00
JT Route 4	NB	02:35	02:37	02:37	00:02	00:02
JT Route 4	SB	02:24	02:25	02:24	00:01	00:00
JT Route 5	NB	02:31	02:31	02:31	00:00	00:00
JT Route 5	SB	02:36	02:35	02:35	-00:01	-00:01
12:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	06:13	06:30	06:30	00:17	00:17
JT Route 1	SB	08:31	08:38	08:35	00:07	00:04
JT Route 2	NB	02:43	02:44	02:46	00:01	00:03
JT Route 2	SB	02:48	02:48	02:48	00:00	00:00
JT Route 3	NB	03:47	03:47	03:49	00:00	00:02
JT Route 3	SB	03:42	03:42	03:42	00:00	00:00
JT Route 4	NB	02:32	02:34	02:33	00:02	00:01
JT Route 4	SB	02:31	02:29	02:30	-00:02	-00:01
JT Route 5	NB	02:33	02:33	02:33	00:00	00:00
JT Route 5	SB	02:38	02:38	02:39	00:00	00:01
15:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	08:32	09:51	09:33	01:19	01:01
JT Route 1	SB	08:28	08:13	08:36	-00:15	00:08
JT Route 2	NB	02:48	02:49	02:54	00:01	00:06
JT Route 2	SB	02:52	02:52	02:53	00:00	00:01
JT Route 3	NB	03:50	03:50	03:53	00:00	00:03
JT Route 3	SB	03:42	03:42	03:42	00:00	00:00
JT Route 4	NB	02:34	02:36	02:37	00:02	00:03
JT Route 4	SB	02:31	02:31	02:31	00:00	00:00
JT Route 5	NB	02:33	02:35	02:31	00:02	-00:02
JT Route 5	SB	02:35	02:37	02:37	00:02	00:02

Table 6.8: Journey Time Results Summer Month 2035

09:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	05:09	05:12	05:14	00:03	00:05
JT Route 1	SB	04:40	04:42	04:44	00:02	00:04
JT Route 2	NB	02:39	02:40	02:41	00:01	00:02
JT Route 2	SB	02:47	02:46	02:47	-00:01	00:00
JT Route 3	NB	03:49	03:50	03:51	00:01	00:02
JT Route 3	SB	03:42	03:41	03:41	-00:01	-00:01
JT Route 4	NB	02:37	02:38	02:39	00:01	00:02
JT Route 4	SB	02:24	02:25	02:24	00:01	00:00
JT Route 5	NB	02:32	02:33	02:32	00:01	00:00
JT Route 5	SB	02:35	02:35	02:36	00:00	00:01
12:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	06:14	06:26	06:32	00:12	00:18
JT Route 1	SB	08:29	08:37	08:37	00:08	00:08
JT Route 2	NB	02:45	02:45	02:46	00:00	00:01
JT Route 2	SB	02:47	02:48	02:49	00:01	00:02
JT Route 3	NB	03:48	03:48	03:48	00:00	00:00
JT Route 3	SB	03:42	03:42	03:42	00:00	00:00
JT Route 4	NB	02:31	02:32	02:31	00:01	00:00
JT Route 4	SB	02:30	02:29	02:33	-00:01	00:03
JT Route 5	NB	02:32	02:33	02:32	00:01	00:00
JT Route 5	SB	02:38	02:39	02:37	00:01	-00:01
15:00			Absolute (mm:ss)		Difference	
Route	Direction	RC	Scenario 1	Scenario 4	Scenario 1	Scenario 4
JT Route 1	NB	08:51	09:28	09:51	00:37	01:00
JT Route 1	SB	08:32	08:11	09:00	-00:21	00:28
JT Route 2	NB	02:49	02:50	02:50	00:01	00:01
JT Route 2	SB	02:50	02:51	02:52	00:01	00:02
JT Route 3	NB	03:50	03:50	03:49	00:00	-00:01
JT Route 3	SB	03:42	03:42	03:42	00:00	00:00
JT Route 4	NB	02:34	02:35	02:35	00:01	00:01
JT Route 4	SB	02:30	02:32	02:32	00:02	00:02
JT Route 5	NB	02:34	02:32	02:34	-00:02	00:00
JT Route 5	SB	02:35	02:37	02:36	00:02	00:01

6.2.40 The negative increases (decreases) are as a result of what is commonly termed model 'noise' which can be defined as minor variations between model runs as a result of the complex algorithms in the modelling software and potentially some rounding. Such variations are common in microsimulation and to what we consider to be within a reasonable range.

6.2.41 In the NMM the most notable journey time increase as a result of the proposed development at Rook Farm is an 18 second increase in the northbound journey time on route 1, which is the A3023 between the A27 and West Lane, in the AM peak hour at 2035. Such level of increase is minimal. When

- considered as a percentage increase on the 5 minute 38 second journey time of the RC, the additional 18 seconds is just a 5.3% increase. The increase in the journey time on the same route in the southbound direction is just 13 seconds. The increases in journey times on the other routes and on all routes in the other two peak hours is less no greater than 4 seconds.
- 6.2.42 For the cumulative scenario, the same route in the AM peak is subject to the greatest increase in journey time in the NMM, though the northbound time also increases by 18 seconds, the same as the Rook Farm scenario, while the southbound journey time increases by another 13 seconds to 26 seconds. This 26 second increase is equivalent to just an 8.7% increase. The cumulative scenario results in no greater than a 5 second increase in journey time for all other routes and peak.
- 6.2.43 It should be noted that journey time increases up to 1 minute and 29 seconds were forecast as part of the previous HITA work with physical mitigation in place, and such level of increase was not considered to result in a 'severe' impact. The HITA increase was over three times greater than that forecast by the current model. It should however be remembered that the HITA tested a greater level of development on the island, including 395 dwellings at Rook Farm rather than the 300 proposed.
- 6.2.44 When considering journey time increases in the SMM for the Rook Farm scenario, the greatest increases are forecast in 2025 on route 1 in the PM peak hour. However, there does appear to be some model noise with the Rook Farm scenario having a lower journey time than the RC in the southbound direction in both assessment years and the Rook Farm scenario having a greater impact than the cumulative scenario in the northbound direction at 2025. The same route is forecast to experience a 12 second increase northbound and 8 seconds southbound in the inter peak and 3 seconds northbound and 2 seconds southbound in the AM peak. Aside from route 1, the Rook Farm journey time increases are no greater than 2 seconds. Such model noise is common in microsimulation models and the variation is within reasonable tolerances. The microsimulation modelling is supplemented by standalone junction capacity assessment modelling for further assurance in Section 7.
- 6.2.45 The cumulative scenario is forecast to increase the journey time northbound on route 1 in the PM peak by 60 seconds and southbound by 28 seconds, which are equivalent to percentage increases of 11.3% and 5.5% respectively. The northbound and southbound increases in the inter peak are 18 and 8 seconds respectively, and 5 and 4 seconds respectively in the AM peak. The cumulative journey time increases on the other routes in all peaks is no greater than 3 seconds.
- 6.2.46 Whilst the HITA did not undertake a summer assessment, the cumulative journey time increases in the SMM are less than those plus mitigation for the neutral HITA model suggesting that a severe cumulative impact will not occur in the summer.
- 6.2.47 It is acknowledged that journey times on route 1 in the SMM are higher than the NMM, particularly in the inter peak and PM peak, however, the RC is higher so the difference between the two models is not the proposed developments but baseline traffic flows. In line with NPPF, It is not the

responsibility of the developers to reduce SMM journey times on this route, but to mitigate their impact should the impact be severe. Based on the journey time results, we do not consider the impact to be severe in either the NMM or the SMM.

- 6.2.48 SYSTRA has advised that no junction capacity issues are present in the microsimulation model, however, we have undertaken standalone junction capacity assessments as detailed in the following section.

7 JUNCTION CAPACITY ASSESSMENT

7.1 Introduction

- 7.1.1 It was agreed with HCC and NH that the microsimulation modelling should be supplemented with standalone junction capacity assessments using traditional capacity assessment software.
- 7.1.2 Junctions 11 by TRL Software has been used to model the priority controlled junctions and standard roundabouts. When interpreting the results, the capacity of each arm or movement is calculated as the Ratio of Flow to Capacity (RFC) with 0.85 representing the practical capacity threshold of the arm and 1.00 representing the theoretical capacity threshold. It is above the practical capacity threshold where capacity problems can begin to occur while exceeding the theoretical capacity means that arms are over capacity.
- 7.1.3 LinSig 3 has been used to model the Langstone Roundabout. When interpreting the results, the capacity of each lane is calculated as a degree of saturation (DoS) with 90% representing the practical capacity threshold of the lane and 100% representing the theoretical capacity threshold. The capacity of the junction as a whole is indicated by the practical reserve capacity (PRC) with negative values indicating that the practical capacity threshold has been exceeded and a PRC less than -10% indicating that a junction is operating above the theoretical capacity threshold. Queues are the mean maximum queue (MMQ) over the hour modelled.
- 7.1.4 Modelled queues are shown in passenger car units (PCUs), this being equivalent to a distance of 5.75m which is the length of road space (car length plus gap length) that a typical car will occupy when queueing. In order to convert the traffic flows into PCUs, which is the requisite input flow unit required in the modelling software, a factor of 2.0 has been applied to the heavy vehicle user class, while light vehicles effectively have a factor of 1.0.
- 7.1.5 The models used in the TA that supported the 2016 planning application at Rook Farm have been used as a starting point and updated where appropriate. Junction geometry has been coded into the models based on a mixture of OS mapping, topographical survey data, aerial photography and on-site observations. Geometry and visibility values have generally been rounded down to increase the level of robustness. Traffic signal controller specifications have been used to model the Langstone Roundabout.
- 7.1.6 Traffic flows in the Junctions 11 models have been input based on the 'ONE HOUR' (ODTAB) option which synthesises a 'peak within a peak' at the middle of the time period modelled and is generally seen as being the worst-case form of assessment in terms of impact. A 'FLAT' profile, whereby each 15-minute time segment is 25% of the total hourly flow, has been considered at one junction for model calibration and comparison purposes, while LinSig only allows flows to be input based on a FLAT profile.

Main Assessment

- 7.1.7 The junction turning counts extracted from the base and forecast models are shown in the Traffic Flow Diagrams 1-12 in Appendix I. Separate versions are provided for the NMM and SMM.

Sensitivity Test

- 7.1.8 A sensitivity test has been undertaken for three key junctions using the observed flows from late September 2022 detailed in Section 3.5. These flows were higher than the observed flows used in the microsimulation model from mid November 2022 which are also detailed in Section 3.5. Aside from daily fluctuations in traffic flow, we believe that the differences between the two datasets is as a result of more tourist traffic being present on the Island in September than November, with some of the local holiday parks being open in September but closed in November. The sensitivity test could therefore be considered to be a hybrid between a neutral period and a summer period, though technically the date surveyed was neutral in accordance with the DfT's TAG.
- 7.1.9 The sensitivity test has been undertaken for the 2035 cumulative scenario only, with the associated traffic flow scenarios referred to as the 2035 With Development Sensitivity Test. Traffic growth has been added to the September 2022 observed flows by subtracting the 2022 Base flows from the 2035 Scenario 4: Cumulative flows and adding the difference to the observed.
- 7.1.10 The NMM sensitivity test flows are shown in Traffic Flow Diagrams X1-X12 in Appendix I.

7.2 Study Area Junctions

- 7.2.1 The study area junctions agreed with HCC are as follows:
1. A27/ A3023 Langstone Rd/ Park Rd South (Langstone Roundabout) (+ sensitivity test);
 2. A3023 Langstone Rd/ Langstone Technology Park/ Woodbury Av;
 3. A3023 Havant Rd/ Northney Rd;
 4. A3023 Havant Rd/ Church Rd (Mill Rythe Roundabout) (+ sensitivity test);
 5. Church Rd/ Tournembury Ln/ Elm Grove/ St Mary's Rd (+ sensitivity test);
 6. A3023 Manor Rd/ Station Rd;
 7. A3023 Manor Rd/ St Mary's Rd;
 8. Elm Grove/ Cherrywood Gardens; and
 9. St Mary's Rd/Cherrywood Gardens.
- 7.2.2 The location of the study area junctions 1-3 (mainland to Northney Road) are shown in Image 7.1 with the location of the study area junctions 4-9 (southern part of the Island) shown in Image 7.2.

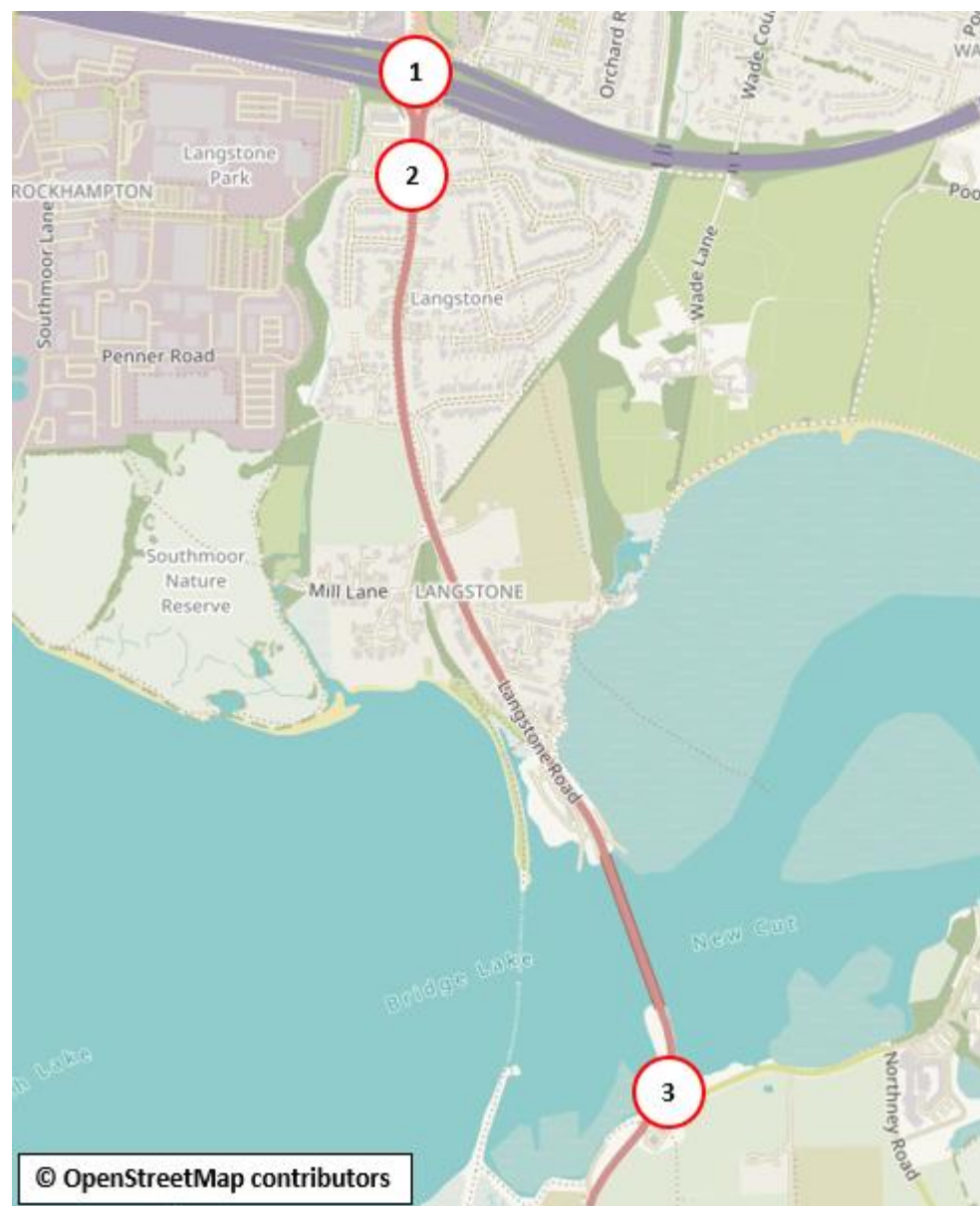
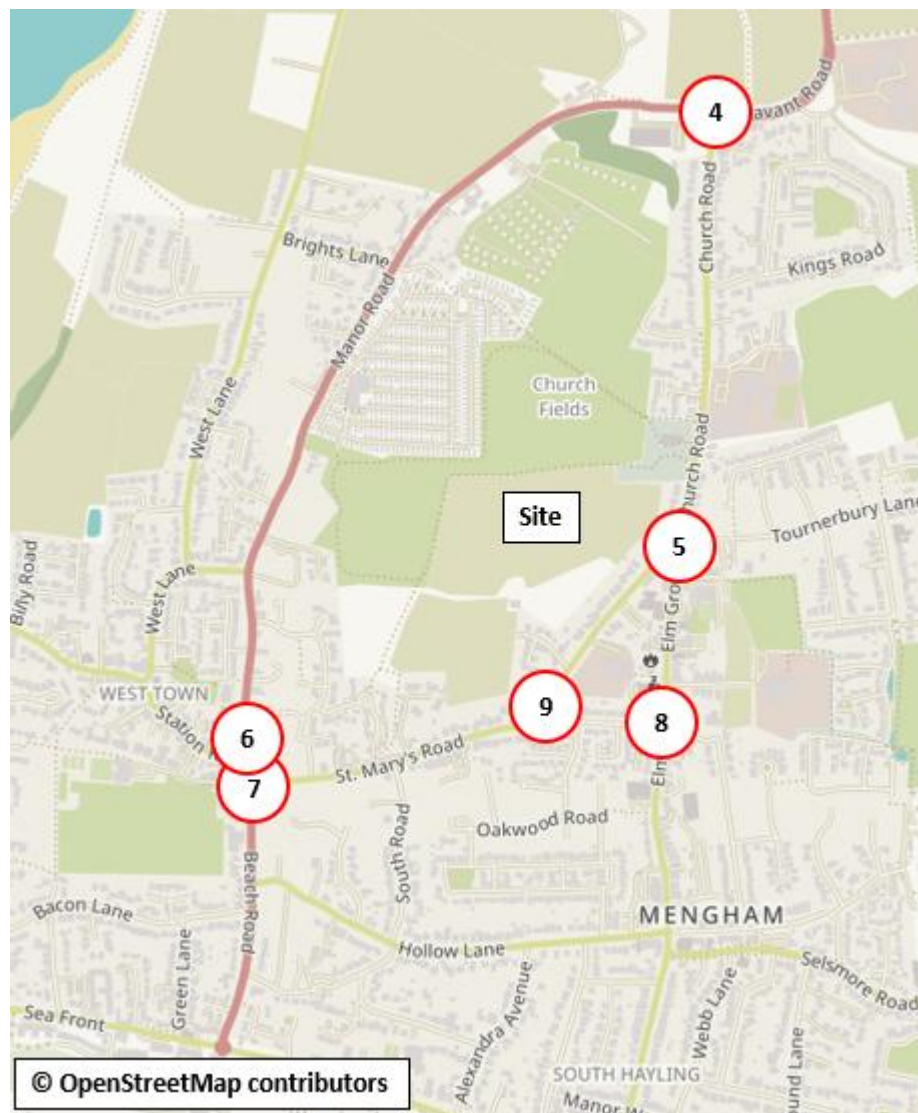
Image 7.1: Study Area Junctions 1-3

Image 7.2: Study Area Junctions 4-9

7.3 Capacity Assessment Results

- 7.3.1 The capacity assessment results have been presented for the 2035 scenarios only as this presents a worst case in traffic flow terms.
- 7.3.2 The results are summarised in the following tables with the full results provided in the software report outputs in Appendix J.

1. A27/A3023 Langstone Rd/ Park Rd South (Langstone Roundabout)

- 7.3.3 Footage undertaken at the time of the September 2022 traffic surveys was used to calculate the average peak hour cycle times at the junction. The minimum cycle time in both the AM and PM peak hours was 45 seconds with an AM peak maximum cycle time of 55 seconds and a PM peak maximum cycle time of 85 seconds. This variation in traffic flows is indicative of SCOOT (Split Cycle Offset Optimisation Technique) control, where the signal controller is informed of live traffic conditions

through inductive loops or other sensors and adjusts green times, cycletimes and offsets accordingly. The average cycletimes were calculated to be 51 seconds in the AM peak and 60 seconds in the PM peak. A copy of the cycletime calculations is provided in Appendix K. Whilst these cycletimes were specific to the sensitivity test, they were also applied to the main assessment as a proxy due to the equivalent information not being available. The variation in cycletimes suggests that the timings increase at times of higher demand.

- 7.3.4 In late 2023, the nearside flare on the northern arm was lengthened and the lane allocation changed, providing more capacity, so a pre-2024 and a post-2024 model have been created. The only difference between the models is this change, but with the former containing the 2022 flows and the latter containing the forecast flows.
- 7.3.5 The Langstone Roundabout was modelled for the AM and PM peak hours only given that it is unlikely to be heavily influenced by school traffic unlike some of the junctions on the southern part of the Island.
- 7.3.6 The Langstone Roundabout results are summarised in Table 7.1 for the NMM and Table 7.2 for the SMM. More detailed results are available in the output in Appendix J.

Table 7.1: Capacity Assessment Results – Langstone Roundabout NMM

Peak	AM Peak	PM Peak
2022 Observed (Calibration)		
PRC (%)	48.4	75.2
Delay (pcuHr)	25.75	22.61
2022 Base		
PRC (%)	98.1	63.9
Delay (pcuHr)	16.98	23.56
2035 Reference Case		
PRC (%)	85.1	50.9
Delay (pcuHr)	17.84	24.53
2035 Scenario 1		
PRC (%)	80.0	50.6
Delay (pcuHr)	18.06	25.04
2035 Scenario 4		
PRC (%)	78.3	49.5
Delay (pcuHr)	18.53	25.23
2035 Scenario 4 ST		
PRC (%)	38.4	41.2
Delay (pcuHr)	29.71	28.42

Table 7.2: Capacity Assessment Results – Langstone Roundabout SMM

Peak	AM Peak	PM Peak
2022 Base		
PRC (%)	95.5	80.3
Delay (pcuHr)	16.03	21.49
2035 Reference Case		
PRC (%)	55.9	45.4
Delay (pcuHr)	22.26	25.63
2035 Scenario 1		
PRC (%)	55.6	46.2
Delay (pcuHr)	22.61	26.04
2035 Scenario 4		
PRC (%)	54.5	45.6
Delay (pcuHr)	22.71	25.69

- 7.3.7 The results show that the Langstone Roundabout will operate with spare capacity in all tested scenarios. NH and its consultant have reviewed the LinSig models and has offered 'no objection' to the proposed development in terms of cumulative impact.

2. A3023 Langstone Rd/ Langstone Technology Park/ Woodbury Av

- 7.3.8 The results are summarised in Table 7.3 for the NMM and Table 7.4 for the SMM.

Table 7.3: Capacity Assessment Results – A3023 Langstone Rd/ Langstone Technology Park/ Woodbury Av NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Langstone Technology Park Access (Nearside)	0.12	0.1	0.12	0.1	0.28	0.4
Langstone Technology Park Access (Offside)	0.17	0.2	0.08	0.1	0.16	0.2
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.01	0.0
Woodbury Avenue	0.30	0.4	0.16	0.2	0.10	0.1
A3023 Langstone Road (Northern Arm)	0.15	0.2	0.07	0.1	0.09	0.1
Reference Case 2035						
Langstone Technology Park Access (Nearside)	0.12	0.1	0.12	0.1	0.28	0.4
Langstone Technology Park Access (Offside)	0.17	0.2	0.08	0.1	0.17	0.2
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.01	0.0
Woodbury Avenue	0.30	0.4	0.16	0.2	0.11	0.1
A3023 Langstone Road (Northern Arm)	0.15	0.2	0.06	0.1	0.09	0.1
S1 2035						
Langstone Technology Park Access (Nearside)	0.12	0.1	0.12	0.1	0.28	0.4
Langstone Technology Park Access (Offside)	0.18	0.2	0.08	0.1	0.17	0.2
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.01	0.0
Woodbury Avenue	0.30	0.4	0.15	0.2	0.11	0.1
A3023 Langstone Road (Northern Arm)	0.16	0.2	0.06	0.1	0.10	0.1
S4 2035						
Langstone Technology Park Access (Nearside)	0.12	0.1	0.12	0.1	0.29	0.4
Langstone Technology Park Access (Offside)	0.18	0.2	0.08	0.1	0.18	0.2
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.01	0.0
Woodbury Avenue	0.31	0.5	0.16	0.2	0.12	0.1
A3023 Langstone Road (Northern Arm)	0.16	0.2	0.07	0.1	0.10	0.1

Table 7.4: Capacity Assessment Results – A3023 Langstone Rd/ Langstone Technology Park/ Woodbury Av SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Langstone Technology Park Access (Nearside)	0.07	0.1	0.07	0.1	0.12	0.1
Langstone Technology Park Access (Offside)	0.11	0.1	0.05	0.1	0.08	0.1
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.00	0.0
Woodbury Avenue	0.21	0.3	0.09	0.1	0.16	0.2
A3023 Langstone Road (Northern Arm)	0.14	0.2	0.06	0.1	0.07	0.1
Reference Case 2035						
Langstone Technology Park Access (Nearside)	0.08	0.1	0.14	0.2	0.14	0.2
Langstone Technology Park Access (Offside)	0.05	0.1	0.15	0.2	0.20	0.3
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.00	0.0
Woodbury Avenue	0.17	0.2	0.14	0.2	0.15	0.2
A3023 Langstone Road (Northern Arm)	0.15	0.2	0.06	0.1	0.06	0.1
S1 2035						
Langstone Technology Park Access (Nearside)	0.08	0.1	0.14	0.2	0.14	0.2
Langstone Technology Park Access (Offside)	0.05	0.1	0.15	0.2	0.22	0.3
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.00	0.0
Woodbury Avenue	0.17	0.2	0.14	0.2	0.16	0.2
A3023 Langstone Road (Northern Arm)	0.15	0.2	0.06	0.1	0.06	0.1
S4 2035						
Langstone Technology Park Access (Nearside)	0.08	0.1	0.15	0.2	0.14	0.2
Langstone Technology Park Access (Offside)	0.05	0.1	0.16	0.2	0.22	0.3
A3023 Langstone Road (Southern Arm)	0.00	0.0	0.00	0.0	0.00	0.0
Woodbury Avenue	0.17	0.2	0.15	0.2	0.16	0.2
A3023 Langstone Road (Northern Arm)	0.14	0.2	0.06	0.1	0.06	0.1

7.3.9 The results suggest that the junction will continue to operate with a good level of spare capacity in all modelled scenarios.

3. A3023 Havant Rd/ Northney Rd

7.3.10 The results are summarised in Table 7.5 for the NMM and Table 7.6 for the SMM.

Table 7.5: Capacity Assessment Results – A3023 Havant Rd/ Northney Rd NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Northney Road (Nearside)	0.05	0.1	0.11	0.1	0.02	0.0
Northney Road (Offside)	0.44	0.8	0.57	1.3	0.30	0.4
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.06	0.1	0.02	0.0
Reference Case 2035						
Northney Road (Nearside)	0.05	0.1	0.11	0.1	0.02	0.0
Northney Road (Offside)	0.43	0.8	0.55	1.2	0.29	0.4
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.06	0.1	0.02	0.0
S1 2035						
Northney Road (Nearside)	0.05	0.1	0.12	0.1	0.03	0.0
Northney Road (Offside)	0.46	0.9	0.57	1.3	0.32	0.5
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.06	0.1	0.02	0.0
S4 2035						
Northney Road (Nearside)	0.06	0.1	0.12	0.1	0.03	0.0
Northney Road (Offside)	0.50	1.0	0.58	1.4	0.33	0.5
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.06	0.1	0.03	0.0

Table 7.6: Capacity Assessment Results – A3023 Havant Rd/ Northney Rd SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Northney Road (Nearside)	0.03	0.0	0.06	0.1	0.11	0.1
Northney Road (Offside)	0.22	0.3	0.34	0.5	0.57	1.3
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.05	0.1	0.06	0.1
Reference Case 2035						
Northney Road (Nearside)	0.05	0.1	1.26	4.7	1.37	4.7
Northney Road (Offside)	0.50	1.0	1.23	17.6	1.33	18.4
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.06	0.1	0.07	0.1
S1 2035						
Northney Road (Nearside)	0.06	0.1	1.35	5.2	1.44	5.1
Northney Road (Offside)	0.56	1.2	1.32	21.0	1.41	20.5
A3023 Langstone Road (Southern Arm)	0.05	0.1	0.07	0.1	0.07	0.1
S4 2035						
Northney Road (Nearside)	0.06	0.1	1.37	5.3	1.41	4.8
Northney Road (Offside)	0.56	1.3	1.34	21.9	1.38	19.6
A3023 Langstone Road (Southern Arm)	0.05	0.1	0.08	0.1	0.07	0.1

- 7.3.11 The results suggest that the junction will continue to operate with spare capacity in the NMM, however, the theoretical capacity threshold (RFC = 1.00) is exceeded in the SMM inter and PM peaks on the Northney Road arm in the RC, with the RFC increasing further with the additional traffic from Scenario 1 and Scenario 4. The impact of the proposed development is equivalent to an RFC increase of up to 0.09 in the inter peak and 0.08 in the PM peak in the SMM. In the cumulative scenario this increases to up to 0.11 in the inter peak.

- 7.3.12 It is however important to note that the modelling software is known to exaggerate RFC and queue lengths when an RFC of 1.00 is exceeded, meaning that the results can be unreliable. We have therefore also run the model using a FLAT profile as the 'peak within a peak' profile of the ONE HOUR input method can exaggerate the results. The SMM results using a FLAT profile are summarised in Table 7.7.

Table 7.7: Capacity Assessment Results – A3023 Havant Rd/ Northney Rd SMM FLAT Profile

Arm	AM		Inter Peak		PM	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Northney Road (Nearside)	0.02	0.0	0.05	0.1	0.08	0.1
Northney Road (Offside)	0.17	0.2	0.27	0.4	0.44	0.8
A3023 Langstone Road (Southern Arm)	0.03	0.0	0.04	0.0	0.05	0.1
Reference Case 2035						
Northney Road (Nearside)	0.04	0.0	0.33	0.5	0.29	0.4
Northney Road (Offside)	0.36	0.6	0.83	4.2	0.82	3.9
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.05	0.1	0.06	0.1
S1 2035						
Northney Road (Nearside)	0.04	0.0	0.84	2.2	0.53	0.9
Northney Road (Offside)	0.40	0.7	0.87	5.3	0.85	4.5
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.06	0.1	0.06	0.1
S4 2035						
Northney Road (Nearside)	0.04	0.0	0.88	2.4	0.37	0.6
Northney Road (Offside)	0.40	0.7	0.88	5.7	0.83	4.2
A3023 Langstone Road (Southern Arm)	0.04	0.0	0.06	0.1	0.06	0.1

- 7.3.13 Using a FLAT profile, the results suggest that the Northney Road arm of the junction will operate close to the practical capacity threshold (RFC = 0.85) in the inter and PM SMM peaks with the threshold slightly exceeded in the inter peak in Scenario 1 and Scenario 4. With the exception of a substantial increase in RFC in the nearside lane, which is most likely due to this short flare almost filling, the maximum RFC increase as a result of the development are 0.04 in the inter and 0.03 in the PM peak, and 0.05 in the cumulative scenario in the inter peak.
- 7.3.14 A number of improvement options for the junction were undertaken by HBC's consultants as part of the HITA. These improvements were variations of a traffic signal controlled option. Whilst traffic signal control will aid movements from Northney Road, they will increase delays on the A3023, which may have wider implications on this sensitive road.
- 7.3.15 We have undertaken our own review of the junction and note the presence of the ghost island right turn. However, from reviewing the traffic flows, fewer than 30 trips make the right turning movement in all modelled scenarios, so the need for the ghost island is questionable. The presence of the ghost island can make it more difficult for traffic to turn right out of a side road and make it less likely that drivers turning right in or straight ahead will show courtesy and allow drivers to turn right out. The gap-seeking associated with traffic wanting to turn right into Northney Road without the aid of a ghost

island is unlikely to cause notable delays to the ahead movement and the removal of the ghost island would make it more likely that opposing southbound drivers would give-way to them.

- 7.3.16 Any need or form of mitigation is a matter for HCC's consideration, but we do not consider that the proposed development will result in a severe impact either in isolation or cumulatively.

4. A3023 Havant Rd/ Church Rd (Mill Rythe Roundabout)

- 7.3.17 The Mill Rythe Roundabout has two lanes on approach. The lane simulation option within the software has been used to consider an imbalance in the frequency of the use of these lanes. The results are summarised in Table 7.8 for the NMM and Table 7.9 for the SMM.

Table 7.8: Capacity Assessment Results – Mill Rythe Roundabout NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
1 - A3023 Havant Road (Eastern Arm)	0.44	1.2	0.58	2.0	0.72	3.1
2 - Church Road	0.69	2.7	0.61	1.7	0.46	1.0
3 - A3023 Manor Road (Western Arm)	0.56	1.4	0.39	0.8	0.24	0.5
Reference Case 2035						
1 - A3023 Havant Road (Eastern Arm)	0.44	1.4	0.58	2.1	0.73	3.4
2 - Church Road	0.70	2.8	0.59	1.6	0.44	1.1
3 - A3023 Manor Road (Western Arm)	0.59	1.3	0.39	0.8	0.24	0.6
S1 2035						
1 - A3023 Havant Road (Eastern Arm)	0.46	1.3	0.58	2.2	0.78	4.1
2 - Church Road	0.78	4.0	0.63	2.5	0.50	1.2
3 - A3023 Manor Road (Western Arm)	0.57	1.6	0.42	0.8	0.25	0.5
S4 2035						
1 - A3023 Havant Road (Eastern Arm)	0.44	1.1	0.61	2.4	0.76	3.8
2 - Church Road	0.78	3.7	0.63	2.0	0.48	1.1
3 - A3023 Manor Road (Western Arm)	0.62	1.6	0.41	1.1	0.25	0.5
S4 2035 ST						
1 - A3023 Havant Road (Eastern Arm)	0.57	1.8	0.63	2.7	0.74	3.6
2 - Church Road	0.82	4.9	0.65	2.5	0.53	1.9
3 - A3023 Manor Road (Western Arm)	0.52	1.5	0.44	1.3	0.45	1.4

Table 7.9: Capacity Assessment Results – Mill Rythe Roundabout SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
1 - A3023 Havant Road (Eastern Arm)	0.43	1.2	0.57	2.0	0.58	1.7
2 - Church Road	0.70	2.3	0.58	1.5	0.61	2.1
3 - A3023 Manor Road (Western Arm)	0.43	0.8	0.34	0.7	0.38	0.8
Reference Case 2035						
1 - A3023 Havant Road (Eastern Arm)	0.50	1.3	0.66	2.9	0.67	2.7
2 - Church Road	0.81	4.4	0.67	2.7	0.72	3.0
3 - A3023 Manor Road (Western Arm)	0.53	1.3	0.44	1.0	0.55	1.7
S1 2035						
1 - A3023 Havant Road (Eastern Arm)	0.50	1.6	0.67	3.1	0.69	3.2
2 - Church Road	0.82	5.9	0.72	2.8	0.74	3.0
3 - A3023 Manor Road (Western Arm)	0.57	1.6	0.46	1.0	0.53	1.6
S4 2035						
1 - A3023 Havant Road (Eastern Arm)	0.51	1.8	0.67	3.0	0.69	3.3
2 - Church Road	0.86	6.6	0.72	2.9	0.73	3.3
3 - A3023 Manor Road (Western Arm)	0.58	1.6	0.47	1.4	0.53	1.5

- 7.3.18 The results suggest that the roundabout will continue to operate with a good level of spare capacity in all modelled scenarios.

5. Church Rd/ Tournerbury Ln/ Elm Grove/ St Mary's Rd

- 7.3.19 The results for the staggered crossroads east of the site are summarised in Table 7.10 for the NMM and Table 7.11 for the SMM.

Table 7.10: Capacity Assessment Results – Church Rd/ Tournerville Ln/ Elm Grove/ St Mary's Rd
NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
St Mary's Road	0.20	0.3	0.16	0.2	0.12	0.1
Elm Grove	0.08	0.1	0.10	0.1	0.08	0.1
Tournerville Lane (Nearside)	0.04	0.0	0.06	0.1	0.06	0.1
Tournerville Lane (Offside)	0.09	0.1	0.09	0.1	0.08	0.1
Church Road	0.16	0.2	0.17	0.2	0.16	0.2
Reference Case 2035						
St Mary's Road	0.19	0.2	0.16	0.2	0.12	0.1
Elm Grove	0.08	0.1	0.10	0.1	0.08	0.1
Tournerville Lane (Nearside)	0.04	0.0	0.06	0.1	0.06	0.1
Tournerville Lane (Offside)	0.09	0.1	0.08	0.1	0.08	0.1
Church Road	0.15	0.2	0.17	0.2	0.16	0.2
S1 2035						
St Mary's Road	0.42	0.7	0.29	0.4	0.26	0.4
Elm Grove	0.11	0.1	0.13	0.2	0.11	0.1
Tournerville Lane (Nearside)	0.04	0.0	0.06	0.1	0.07	0.1
Tournerville Lane (Offside)	0.10	0.1	0.09	0.1	0.09	0.1
Church Road	0.21	0.3	0.23	0.3	0.27	0.4
S4 2035						
St Mary's Road	0.41	0.7	0.28	0.4	0.27	0.4
Elm Grove	0.11	0.1	0.13	0.2	0.11	0.1
Tournerville Lane (Nearside)	0.05	0.1	0.07	0.1	0.07	0.1
Tournerville Lane (Offside)	0.10	0.1	0.09	0.1	0.08	0.1
Church Road	0.20	0.3	0.23	0.3	0.27	0.4
S4 2035 ST						
St Mary's Road	0.41	0.7	0.25	0.4	0.26	0.4
Elm Grove	0.13	0.2	0.19	0.2	0.19	0.2
Tournerville Lane (Nearside)	0.19	0.2	0.24	0.3	0.23	0.3
Tournerville Lane (Offside)	0.40	0.7	0.34	0.5	0.26	0.4
Church Road	0.21	0.3	0.18	0.2	0.20	0.3

Table 7.11: Capacity Assessment Results – Church Rd/ Tournerbury Ln/ Elm Grove/ St Mary's Rd
SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
St Mary's Road	0.15	0.2	0.13	0.2	0.16	0.2
Elm Grove	0.07	0.1	0.09	0.1	0.09	0.1
Tournerbury Lane (Nearside)	0.14	0.2	0.16	0.2	0.17	0.2
Tournerbury Lane (Offside)	0.00	0.0	0.00	0.0	0.00	0.0
Church Road	0.16	0.2	0.15	0.2	0.16	0.2
Reference Case 2035						
St Mary's Road	0.16	0.2	0.15	0.2	0.16	0.2
Elm Grove	0.07	0.1	0.09	0.1	0.09	0.1
Tournerbury Lane (Nearside)	0.16	0.2	0.18	0.2	0.20	0.3
Tournerbury Lane (Offside)	0.00	0.0	0.00	0.0	0.00	0.0
Church Road	0.35	0.6	0.26	0.4	0.26	0.4
S1 2035						
St Mary's Road	0.35	0.6	0.26	0.4	0.26	0.4
Elm Grove	0.09	0.1	0.12	0.1	0.10	0.1
Tournerbury Lane (Nearside)	0.20	0.3	0.23	0.3	0.23	0.3
Tournerbury Lane (Offside)	0.00	0.0	0.00	0.0	0.00	0.0
Church Road	0.20	0.3	0.23	0.3	0.23	0.3
S4 2035						
St Mary's Road	0.35	0.6	0.25	0.3	0.25	0.3
Elm Grove	0.09	0.1	0.12	0.1	0.10	0.1
Tournerbury Lane (Nearside)	0.19	0.3	0.23	0.3	0.23	0.3
Tournerbury Lane (Offside)	0.00	0.0	0.00	0.0	0.00	0.0
Church Road	0.19	0.3	0.23	0.3	0.23	0.3

- 7.3.20 The results suggest that the staggered crossroads will continue to operate with a good level of spare capacity in all modelled scenarios.

6. A3023 Manor Rd/ Station Rd

- 7.3.21 The Manor Road (Beach Road) junctions with Station Road and St Mary's Road could be considered to constitute a staggered crossroads, however, the software manual states that if the stagger distance is greater than 20m, the junction should be modelled as two separate junctions which is the case here.
- 7.3.22 The results for the Station Road/Manor Road junction are summarised in Table 7.12 for the NMM and Table 7.13 for the SMM.

Table 7.12: Capacity Assessment Results – A3023 Manor Rd/ Station Rd NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Station Road (Nearside)	0.11	0.1	0.12	0.1	0.07	0.1
Station Road (Offside)	0.16	0.2	0.26	0.4	0.16	0.2
A3023 Manor Road (Northern Arm)	0.11	0.2	0.15	0.3	0.11	0.2
Reference Case 2035						
Station Road (Nearside)	0.10	0.1	0.12	0.1	0.07	0.1
Station Road (Offside)	0.16	0.2	0.26	0.4	0.17	0.2
A3023 Manor Road (Northern Arm)	0.11	0.2	0.14	0.3	0.12	0.2
S1 2035						
Station Road (Nearside)	0.10	0.1	0.12	0.1	0.07	0.1
Station Road (Offside)	0.17	0.2	0.27	0.4	0.20	0.3
A3023 Manor Road (Northern Arm)	0.12	0.2	0.14	0.3	0.12	0.2
S4 2035						
Station Road (Nearside)	0.11	0.1	0.12	0.1	0.08	0.1
Station Road (Offside)	0.18	0.2	0.26	0.4	0.20	0.3
A3023 Manor Road (Northern Arm)	0.13	0.2	0.15	0.3	0.14	0.2

Table 7.13: Capacity Assessment Results – A3023 Manor Rd/ Station Rd SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Station Road (Nearside)	0.11	0.1	0.1	0.1	0.12	0.1
Station Road (Offside)	0.16	0.2	0.22	0.3	0.26	0.4
A3023 Manor Road (Northern Arm)	0.10	0.2	0.14	0.2	0.15	0.3
Reference Case 2035						
Station Road (Nearside)	0.13	0.2	0.13	0.2	0.14	0.2
Station Road (Offside)	0.20	0.3	0.28	0.4	0.31	0.5
A3023 Manor Road (Northern Arm)	0.15	0.3	0.17	0.3	0.19	0.4
S1 2035						
Station Road (Nearside)	0.13	0.2	0.13	0.2	0.15	0.2
Station Road (Offside)	0.21	0.3	0.32	0.5	0.35	0.6
A3023 Manor Road (Northern Arm)	0.16	0.3	0.18	0.4	0.19	0.4
S4 2035						
Station Road (Nearside)	0.14	0.2	0.14	0.2	0.15	0.2
Station Road (Offside)	0.21	0.3	0.3	0.4	0.36	0.6
A3023 Manor Road (Northern Arm)	0.16	0.3	0.19	0.4	0.19	0.4

- 7.3.23 The results suggest that the junction will continue to operate with a good level of spare capacity in all modelled scenarios.

7. A3023 Manor Rd/ St Mary's Rd

- 7.3.24 The results for the Manor Road/St Mary's Road junction are summarised in Table 7.14 for the NMM and Table 7.15 for the SMM.

Table 7.14: Capacity Assessment Results – Station Rd/ St Mary's Rd NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
St Mary's Road (Nearside)	0.07	0.1	0.09	0.1	0.07	0.1
St Mary's Road (Offside)	0.12	0.1	0.17	0.2	0.12	0.1
A3023 Beach Road (Southern Arm)	0.06	0.1	0.05	0.1	0.03	0.0
Reference Case 2035						
St Mary's Road (Nearside)	0.07	0.1	0.09	0.1	0.07	0.1
St Mary's Road (Offside)	0.12	0.1	0.17	0.2	0.11	0.1
A3023 Beach Road (Southern Arm)	0.06	0.1	0.05	0.1	0.03	0.0
S1 2035						
St Mary's Road (Nearside)	0.08	0.1	0.10	0.1	0.07	0.1
St Mary's Road (Offside)	0.17	0.2	0.19	0.3	0.15	0.2
A3023 Beach Road (Southern Arm)	0.08	0.1	0.06	0.1	0.04	0.0
S4 2035						
St Mary's Road (Nearside)	0.08	0.1	0.09	0.1	0.07	0.1
St Mary's Road (Offside)	0.18	0.2	0.19	0.2	0.17	0.2
A3023 Beach Road (Southern Arm)	0.08	0.1	0.06	0.1	0.04	0.0

Table 7.15: Capacity Assessment Results –Station Rd/ St Mary's Rd SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
St Mary's Road (Nearside)	0.06	0.1	0.08	0.1	0.09	0.1
St Mary's Road (Offside)	0.11	0.1	0.15	0.2	0.17	0.2
A3023 Beach Road (Southern Arm)	0.03	0.0	0.04	0.0	0.05	0.1
Reference Case 2035						
St Mary's Road (Nearside)	0.09	0.1	0.13	0.2	0.14	0.2
St Mary's Road (Offside)	0.14	0.2	0.18	0.2	0.19	0.2
A3023 Beach Road (Southern Arm)	0.05	0.0	0.04	0.0	0.05	0.1
S1 2035						
St Mary's Road (Nearside)	0.09	0.1	0.12	0.1	0.13	0.2
St Mary's Road (Offside)	0.17	0.2	0.20	0.3	0.21	0.3
A3023 Beach Road (Southern Arm)	0.05	0.1	0.05	0.1	0.06	0.1
S4 2035						
St Mary's Road (Nearside)	0.10	0.1	0.13	0.1	0.13	0.2
St Mary's Road (Offside)	0.17	0.2	0.21	0.3	0.22	0.3
A3023 Beach Road (Southern Arm)	0.05	0.1	0.05	0.1	0.06	0.1

- 7.3.25 The results suggest that the junction will continue to operate with a good level of spare capacity in all modelled scenarios.

8. Elm Grove/ Cherrywood Gardens

- 7.3.26 The results for the Elm Grove/ Cherrywood Gardens junction are summarised in Table 7.16 for the NMM and Table 7.17 for the SMM.

Table 7.16: Capacity Assessment Results – Elm Grove/ Cherrywood Gardens NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Cherrywood Gardens (Nearside)	0.13	0.2	0.17	0.2	0.12	0.1
Cherrywood Gardens (Offside)	0.04	0.1	0.07	0.1	0.07	0.1
Reference Case 2035						
Cherrywood Gardens (Nearside)	0.12	0.1	0.18	0.2	0.12	0.1
Cherrywood Gardens (Offside)	0.04	0.1	0.07	0.1	0.07	0.1
S1 2035						
Cherrywood Gardens (Nearside)	0.15	0.2	0.18	0.2	0.13	0.2
Cherrywood Gardens (Offside)	0.04	0.1	0.07	0.1	0.07	0.1
S4 2035						
Cherrywood Gardens (Nearside)	0.15	0.2	0.20	0.3	0.13	0.2
Cherrywood Gardens (Offside)	0.04	0.1	0.07	0.1	0.07	0.1

Table 7.17: Capacity Assessment Results – Elm Grove/ Cherrywood Gardens SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
Cherrywood Gardens (Nearside)	0.12	0.1	0.17	0.2	0.17	0.2
Cherrywood Gardens (Offside)	0.05	0.1	0.07	0.1	0.07	0.1
Reference Case 2035						
Cherrywood Gardens (Nearside)	0.15	0.2	0.18	0.2	0.20	0.3
Cherrywood Gardens (Offside)	0.05	0.1	0.08	0.2	0.09	0.2
S1 2035						
Cherrywood Gardens (Nearside)	0.16	0.2	0.19	0.2	0.21	0.3
Cherrywood Gardens (Offside)	0.06	0.1	0.08	0.2	0.09	0.2
S4 2035						
Cherrywood Gardens (Nearside)	0.17	0.2	0.20	0.3	0.22	0.3
Cherrywood Gardens (Offside)	0.06	0.1	0.09	0.2	0.09	0.2

- 7.3.27 The results suggest that the junction will continue to operate with a good level of spare capacity in all modelled scenarios.

9. St Mary's Rd/Cherrywood Gardens

- 7.3.28 The results for the St Mary's Rd/Cherrywood Gardens junction are summarised in Table 7.18 for the NMM and Table 7.19 for the SMM.

Table 7.18: Capacity Assessment Results – St Mary's Rd/ Cherrywood Gardens NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
St Mary's Road (Nearside)	0.03	0.0	0.03	0.0	0.03	0.0
St Mary's Road (Offside)	0.10	0.1	0.13	0.2	0.11	0.1
Cherrywood Gardens	0.03	0.0	0.03	0.0	0.02	0.0
Reference Case 2035						
St Mary's Road (Nearside)	0.02	0.0	0.03	0.0	0.03	0.0
St Mary's Road (Offside)	0.10	0.1	0.14	0.2	0.11	0.1
Cherrywood Gardens	0.03	0.0	0.03	0.0	0.02	0.0
S1 2035						
St Mary's Road (Nearside)	0.04	0.0	0.03	0.0	0.04	0.0
St Mary's Road (Offside)	0.16	0.2	0.15	0.2	0.14	0.2
Cherrywood Gardens	0.03	0.0	0.03	0.0	0.02	0.0
S4 2035						
St Mary's Road (Nearside)	0.04	0.0	0.04	0.0	0.03	0.0
St Mary's Road (Offside)	0.16	0.2	0.15	0.2	0.14	0.2
Cherrywood Gardens	0.03	0.0	0.03	0.0	0.02	0.0

Table 7.19: Capacity Assessment Results – St Mary's Rd/ Cherrywood Gardens SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
Base 2022						
St Mary's Road (Nearside)	0.02	0.0	0.02	0.0	0.03	0.0
St Mary's Road (Offside)	0.10	0.1	0.12	0.1	0.13	0.2
Cherrywood Gardens	0.02	0.0	0.02	0.0	0.03	0.0
Reference Case 2035						
St Mary's Road (Nearside)	0.02	0.0	0.03	0.0	0.03	0.0
St Mary's Road (Offside)	0.12	0.1	0.16	0.2	0.16	0.2
Cherrywood Gardens	0.02	0.0	0.02	0.0	0.02	0.0
S1 2035						
St Mary's Road (Nearside)	0.03	0.0	0.03	0.0	0.03	0.0
St Mary's Road (Offside)	0.15	0.2	0.16	0.2	0.16	0.2
Cherrywood Gardens	0.02	0.0	0.02	0.0	0.02	0.0
S4 2035						
St Mary's Road (Nearside)	0.02	0.0	0.03	0.0	0.03	0.0
St Mary's Road (Offside)	0.14	0.2	0.17	0.2	0.17	0.2
Cherrywood Gardens	0.02	0.0	0.02	0.0	0.03	0.0

- 7.3.29 The results suggest that the junction will continue to operate with a good level of spare capacity in all modelled scenarios.

Proposed Site Access

- 7.3.30 The proposed site access off St Mary's Road has been assessed with the results summarised in Table 7.20 for the NMM and Table 7.21 for the SMM.

Table 7.20: Capacity Assessment Results – Proposed Site Access/St Mary's Road NMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
S1 2035						
Proposed Site Access	0.26	0.4	0.12	0.1	0.16	0.2
St Mary's Road (North-Eastern Arm)	0.06	0.1	0.09	0.1	0.16	0.2
S4 2035						
Proposed Site Access	0.26	0.4	0.12	0.1	0.16	0.2
St Mary's Road (North-Eastern Arm)	0.06	0.1	0.09	0.1	0.16	0.2
S4 2035 ST						
Proposed Site Access	0.26	0.4	0.12	0.1	0.16	0.2
St Mary's Road (North-Eastern Arm)	0.06	0.1	0.09	0.1	0.15	0.2

Table 7.21: Capacity Assessment Results – Proposed Site Access/St Mary's Road SMM

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
S1 2035						
Proposed Site Access	0.20	0.3	0.11	0.1	0.09	0.1
St Mary's Road (North-Eastern Arm)	0.06	0.1	0.08	0.1	0.07	0.1
S4 2035						
Proposed Site Access	0.20	0.3	0.11	0.1	0.09	0.1
St Mary's Road (North-Eastern Arm)	0.06	0.1	0.08	0.1	0.07	0.1

- 7.3.31 The results show that the proposed site access will operate with a considerable level of spare capacity and will therefore be suitable to serve the proposed development.

7.4 Person Trip Generation

- 7.4.1 An estimate of the multimodal trip generation of the proposed development can be forecast by applying a factor between the locally calculated vehicular trip generation and the 2011 census Method of Travel to Work (MTW) car/van driver figure, noting that the 2021 census was undertaken during the Covid-19 pandemic when many people were working from home. More accurate estimates can be provided during the baseline travel surveys that will be undertaken at a suitable level of occupation as part of the TP.
- 7.4.2 The MSOA Havant 016 (E02004777) has been selected as it includes the site and the surrounding residential area. The trip ends for each method of travel have been downloaded from Nomis (<http://www.nomisweb.co.uk>).
- 7.4.3 Several of the transport mode categories have been manually removed from the data for reasons including the observed census trips being very low (e.g. taxi), it being unrealistic that they will be used by residents of the site (i.e. underground, metro, light rail) or they will not generate a trip (i.e. not in employment and working from home).

- 7.4.4 As the vehicular trips were calculated using locally derived tip rates, factors have been derived between them and the census car driver trips (1,461). The factors equate to 13.5% for the AM peak and 13.6% for the PM peak. They have then been applied to the other census modes to forecast the likely number of multimodal trips generated by the site. A summary of these multimodal trips is shown in Table 7.22.

Table 7.22: Forecast Multimodal Person Trips

Method of Travel to Work	Census Trips	Mode %	AM Trips	PM Trips
Work mainly at or from home	268	12%	36	36
Train	58	3%	8	8
Bus, minibus or coach	74	3%	10	10
Motorcycle, scooter or moped	28	1%	4	4
Driving a car or van	1,461	67%	197	198
Passenger in a car or van	77	4%	10	10
Bicycle	63	3%	8	9
On foot	158	7%	21	21
Trips Excluding WFH	1,919	-	258	260
All Modes	2,187	100%	294	296
<i>Factor</i>			<i>13.5%</i>	<i>13.6%</i>

- 7.4.5 Based on the figures in Table 7.22, the site is forecast to generate 258 and 260 total people physical trips in the AM and PM peaks respectively, with around 36 people working from home although this figure is likely to be higher given the increase in working from home and flexible working patterns following the Covid-19 pandemic.
- 7.4.6 Following driving a car being the most frequent method of travel likely to be used by residents of the site, equating to 67%, walking trips will account for 21 trips in the AM and PM peak hours equating to 7% of trips. Car or van passengers will account for 10 trips in each peak equating to 4% of trips. Train passengers and cyclists will account for around 8 trips each (3%) while the remainder will consist of users of motorised two-wheelers. As the nearest train station, Havant, is around 8km away, it is likely that the initial part of the outbound trip and final part of the return journey will be made as a car driver, car passenger, bus passenger or cyclist. It should be noted that a short car journey to a train station as part of a longer distance train based journey should be considered to be a sustainable trip overall. It is not expected that the number of non-car trips will be of a level that would cause capacity issues associated with the respective method of transportation.

7.5 Highway Authority Review of Model Results

- 7.5.1 The electronic microsimulation network model files and the LinSig files of the Langstone Roundabout were sent to NH, and its consultant Jacobs, via email in August 2025 for detailed review. Following this review, NH removed its holding objection in its NHPR 25-01 response dated 3rd September 2025 concluding as follows:

'We [NH] have reviewed both the Paramics and Linsig files and we are satisfied that the presented models demonstrate there will be no adverse impacts on the SRN or on the LRN that could impact on the safe and efficient operation of the SRN. Scenario 4 of the modelling contained all the live Hayling Island Apps cumulatively. Therefore, on this basis, National Highways offer 'No Objection to application APP/21/01434.'

7.5.2 The microsimulation network and standalone junction capacity assessment modelling (LinSig and Junctions 11) results were provided to HCC via email in April 2025 with further updates in July and August 2025 to respond to queries raised by the LHA. Following issue of the results and further clarification, HCC removed its objection to the two Hayling Builders applications (APP/21/01350 and APP/21/01351) in its consultation responses dated 22nd September 2025. This was subject to a number of conditions and obligations, which included active travel measures, that would help to mitigate the cumulative impact of these two applications and the other two included in the cumulative assessment (Rook Farm and Fathoms Reach).

7.5.3 It is assumed that HCC will take the same stance with the Rook Farm application, with a package of potential active travel improvements detailed in Section 8.

7.6 Summary

7.6.1 The microsimulation modelling undertaken by the independent modelling consultant has demonstrated that the impact of proposed development on its own and cumulatively on the local highway network will not be 'severe', in line with NPPF paragraph 116. No traditional highway capacity based mitigation is needed as a result of the modelling results, but consideration has been given to active travel enhancements in Section 8 below, which includes potential active travel improvement schemes, commensurate to the scale of the development, that could be implemented in connection with the application proposals, if this was deemed necessary to make the development acceptable in planning terms.

7.6.2 NH has offered no objection to the cumulative impact of the proposed development and we assume HCC, from its formal recommendations on the two Hayling Builders applications, will offer no objection to the cumulative impact subject to conditions and obligations, most likely towards active travel improvements with potential improvements suggested in Section 8.

7.6.3 It has also been demonstrated that the proposed access will operate with sufficient capacity to accommodate the development proposals.

7.6.4 Aside from being in line with NPPF, the proposals are in accordance with the policies of LTP4; and HBC Core Strategy policy DM12.

8 ACTIVE TRAVEL IMPROVEMENT SCHEME

8.1 Policy Position

8.1.1 LTP4 has highlighted HCC's commitment across the county to encourage a modal shift from private car use, putting active travel first. Active travel has the potential to reduce car borne trips, thereby reducing the need for new infrastructure for motor vehicles, and at the same time providing environmental benefits and encouraging healthier lifestyles.

8.1.2 This policy shift is in line with The Climate Change Committee's *Report to Parliament* (2022) which notes that for the UK to achieve net zero carbon status by 2050, a modal shift away from car travel is needed. This is supported by the NPPF at paragraphs 77 and 110 which states that significant development should offer a genuine choice of transport modes. Further to this, paragraph 109 which calls for a vision-led approach to the identification of transport solutions to '*deliver well-designed, sustainable and popular places*', which involves '*identifying and pursuing opportunities to promote walking, cycling and public transport use*'.

8.1.3 The *DfT's Gear Change: A bold vision for cycling and walking* (2020) presents the significant health benefits of active travel. In terms of physical health, it states:

'Physical activity, like cycling and walking, can help to prevent and manage over 20 chronic conditions and diseases, including some cancers, heart disease, type 2 diabetes and depression. Physical inactivity is responsible for one in six UK deaths (equal to smoking) and is estimated to cost the UK £7.4 billion annually (including £0.9 billion to the NHS alone).'

8.1.4 Active travel also has significant wellbeing benefits, with the above document stating:

'20 minutes of exercise per day cuts risk of developing depression by 31% and increases productivity of workers.'

8.1.5 LTP4 has led to HCC providing greater weight towards active travel improvements over more traditional highway capacity improvements, subject to local circumstances. The basic logic behind this approach is that providing additional highway capacity makes car journeys easier with less delay, making it less likely for people to elect for more sustainable alternatives, with active travel in particular offering considerable health benefits as outlined above.

8.1.6 The microsimulation modelling and standalone capacity assessment modelling, presented in Sections 6 and 7 respectively, demonstrates that the proposed development will not result in a severe impact either on its own or cumulatively.

8.1.7 As demonstrated earlier in the TA, the site already benefits from good accessibility to facilities/amenities by non-car modes of transport, specifically walking, cycling and public transport.

Notwithstanding, we have considered whether there are opportunities to enhance the already good range of active travel options further. A preliminary scheme of potential active travel improvements has been considered and explored, commensurate to the scale of the development, should this be deemed necessary to make the development acceptable; the delivery of these enhancements in connection with the proposed development, or any forms of mitigation, would be subject to meeting planning tests of necessity and detailed design.

- 8.1.8 The applicant and Prime are willing to engage further with HCC to determine the most appropriate methods to secure elements of the below, be they planning obligations (S106), which would allow HCC to deliver the works as part of a wider package as agreed on other developments in the county, or via S278 to require the developer to undertake the works that lie within public highway (note that this exclude works to the PRow network outside of the application boundary).

8.2 Preliminary Designs

- 8.2.1 It should be noted that the improvement schemes presented below consist of preliminary designs showing what could potentially be deliverable within the constraints of adopted highway, PRow and land controlled by the Applicant. They are based on a combination of topographical surveys and OS mapping, and have been informed by plans recently purchased from HCC detailing the extent of adopted highway land. The designs would evolve through further consultation and detailed design work, which would likely include additional safety audits and utilities searches.
- 8.2.2 The initial design were informed by the suggestions of the LCWIP, where we feel that they are reasonable, but with supplementary improvements on other sections of roads local to the site. An extract of the LCWIP is provided in Appendix L for ease of reference.
- 8.2.3 A map of the local LCWIP routes is provided in Image 2.1 in Section 2.8. Local to the site are the following routes:
- 370 – a primary route, constituting the Hayling Billy Trail;
 - 261 – a secondary route running from the Hayling Bill Trail at Denhill Close, along Saltmarsh Lane, West Lane, Brights Lane, Higworth Lane, through Hayling Island Holiday Park, along PRow footpath 89, Church Road, Elm Grove, Selsmore Road and Rails Lane to Southwood Road; and
 - 262 – a secondary route running from the Hayling Billy Trail at Beach Road, along Sea Front and Southwood Road to Sandy Point.
- 8.2.4 HCC's design preferences have been applied where possible, this includes a preference for segregated footways and cycleways, and a reduction in speed limit to 20mph, where reasonable, for on-road cycle routes.

- 8.2.5 Earlier versions of the designs were shared with HCC via email in July 2025. HCC met with Prime via MS Teams on 4th September 2025 when HCC provided its initial feedback, which included feedback from internal consultees, such as Intelligent Traffic Control (ITC) and the civil design team, within the LHA. This was followed up with a written summary of the feedback provided by HCC via email on 1st October 2025. It was clear during the meeting that HCC was relatively content with the principle of the designs, but further modifications and justification was required.
- 8.2.6 A key point raised by HCC during the meeting was that whilst segregated footways and cycleways remain their preference, shared cycleways are still acceptable and can work well in the right locations, with an example given of Bar End Road in the vicinity of Winchester Leisure Centre where shared cycleways have been installed to good effect.
- 8.2.7 The potential improvements are shown in four drawings provided in Appendix M.
- 8.2.8 Improvements have not been offered to the Hayling Billy Trail given that it already useable as a walking and cycling route with identified improvements, and, given its somewhat strategic nature and NCR status, we would suggest that funding could be made available through Sustrans as the charity responsible to the upkeep of the NCR network.
- 8.2.9 Improvements are offered to sections of Routes 261 and 262 along with St Mary's Road which is not identified in the LCWIP but is recommended as an on-road cycling route as per the images in Section 3.3. The full lengths of Routes 261 and 262 have not been considered given their distance from the site and as other developers are considering improvements to some sections. The sections considered provide connectivity with the Hayling Billy Trail, local schools and local amenities.
- 8.2.10 A description of the works suggested along each route is provided below.
- NORTH-WESTERN SECTION: MANOR ROAD CROSSING TO CHURCH ROAD VIA CARAVAN PARK AND PROW (DRAWING P21033-AT-001A)*
- 8.2.11 The section between the Hayling Billy Trail to Manor Road has not been included, as HCC has informed Prime that another developer is devising an improvement scheme for this section.
- 8.2.12 Our suggestions commence at the crossing point between Brights Lane and Higworth Lane on Manor Road where we have suggested providing a cyclist-friendly parallel crossing with zebra crossing. Shared cycleway/footway is proposed at the crossing as there is insufficient highway verge to deliver full segregated facilities on both sides. Furthermore, short sections of segregation at crossings can lead to user confusion.
- 8.2.13 Provision of a non-signal controlled crossing is in line with Active Travel England's (ATE) Crossing Selector Tool which suggests a threshold of 8,000 vehicles per day, above which signal controlled crossings should be considered. The annual average daily traffic (AADT) figure for this section of

- Manor Road presented in Chapter 10: Transport of the ES for Scenario 4 in 2035 is 7,259, suggesting that a signalised crossing is not required.
- 8.2.14 An initial comment provided by HCC's ITS team is that they would want the crossing to be signalised if 85th percentile speeds were greater than 35mph. A speed survey was undertaken on Manor Road around 350m south of this point in 2019 which recorded 85th percentile speeds of 34mph northbound and 33mph southbound. It would be logical to assume that 85th percentile speeds in the location of the crossing are higher than this, and higher than 35mph, however, as this is the only section of road on the southern part of the island subject to a speed limit greater than 30mph, and is within the extent of the residential area, we would suggest that it would be more appropriate to extend the 30mph speed limit further north on Manor Road, north of the crossing point. The applicant would be willing to fund a TRO as part of this scheme.
- 8.2.15 A 20mph speed limit is proposed for the lightly trafficked Higworth Lane. The final section of this route runs through land under the ownership of Hayling Island Holiday Park. In this regard, any improvements on land within their ownership will require their consent, and it will be for HCC to discuss these with the relevant landowner, if they are deemed necessary to make the development acceptable, noting again that good active travel opportunities already exist in the local vicinity. It is beyond the applicant's control to deliver works on third-party land, and it is unable to agree to planning conditions and/or obligations that would require it to carry out works on such land.
- 8.2.16 The path will connect to Church Road which has been identified for the potential improvements listed below.
- 8.2.17 These improvements are in line with the aspirations of the LCWIP.
- 8.2.18 The drawing and updated DFP shows that the applicant is willing to provide a path to the northern site boundary which has been discussed with HCC. The Applicant will require the intervention of HCC to connect the potential access to the local PRow.
- 8.2.19 Also illustrated on the drawing, for the benefit of HCC's Countryside Planning Officers (PRow), are the formal PRow routes along with the trodden paths picked up as part of the topographical survey. This shows how the potential connections on the northern and western boundaries of the site will help to connect the application site with the wider PRow network.
- 8.2.20 Any improvements to the PRow network mentioned above will need to be delivered by HCC, but the applicant is willing to provide funding S106 to help their delivery, should they be deemed necessary in planning terms.

NORTH-EASTERN SECTION: CHURCH ROAD FROM MANOR ROAD TO ST MARY'S ROAD (DRAWING P21033-AT-001A)

- 8.2.21 Earlier versions of this scheme were presented to HCC in 2024 and provisionally agreed. The logic behind it is to provide an LTN 1/20 and TG10 compliant walking and cycling route between St Mary's Road and The Hayling College. Church Road has a wider carriageway than what is required. Therefore, it is proposed to reassign road space to deliver wider footways and cycleways.
- 8.2.22 There are several pinch-points along the route but all dimensions are within LTN 1/20 recommended tolerances. The proposals also include the upgrade of the existing puffin crossing to a toucan crossing (cycle-friendly), along with the introduction of LTN 1/20 recommended side road crossings where pedestrians and cyclists are given priority over motor vehicles. Feedback from HCC has recommend that the LTN 1/20 crossings should not be set back from Church Road as now shown. Swept path analysis provided on the drawing shows that refuse collection vehicles can still safely navigate the tighter side roads.
- 8.2.23 A segregated cycleway is shown running on the eastern side south of the Mill Rythe Roundabout to Pepper Close. A previous iteration of the drawing presented to HCC included a continuation of the segregated cycleway further south past The Hayling College than crossing to the western side. However, the drawing has been updated with the topographical survey, rather than just the OS mapping, which shows that there is insufficient width to retain the LTN 1/20 preferred dimensions for segregated features and some of the parking laybys, though there is sufficient width for shared cycleway infrastructure.
- 8.2.24 Furthermore, there are two areas where people congregate on this section – outside of The Hayling College and outside of St Mary's Church. The shared facility should be more appropriate to these areas. Also, a standard coloured tarmacadam surface should be more in keeping with the setting of the listed church from a heritage perspective than a brightly coloured segregated facility. The segregation will switch to shared use close to the Mill Rythe Roundabout where it will join the existing shared provision on Manor Road towards the Lidl foodstore.
- 8.2.25 The improvements involve the loss of the ghost islands from several junctions, however, as they only serve relatively small numbers of dwellings, they are not required and could be considered to be somewhat historic over-designs. Removal of the ghost islands should also make it easier to turn right out of these side roads.
- 8.2.26 The improvement will also require the loss of the ghost islands leading to Tournurbury Road and St Mary's Road, but a capacity assessment has been undertaken to consider this, with the results provided in Section 8.3.
- 8.2.27 Also, should the active travel improvements be required, it will result in a slight modification to the crossing arrangement proposed as detailed in Section 4.2, with the proposed pedestrian refuge

islands on Church Road/Elm Grove to no longer be provided. However, the width of the carriageway will be significantly reduced, making it easier to cross.

- 8.2.28 These improvements are in line with the aspirations of the LCWIP.

SOUTH-WESTERN SECTION: ST MARY'S ROAD FROM CHURCH ROAD TO BEACH ROAD ZEBRA
UPGRADE (DRAWING P21033-AT-003A)

- 8.2.29 These improvements are not identified in the LCWIP but are designed based on the general recommendations of the LCWIP. Like the Elm Grove measures, improvements along St Mary's Road are constrained by the limited highway width. As such, it is proposed to introduce a 20mph speed limit with narrowings to 5m at 60-70m spacing. St Mary's Road already meets LTN 1/20 recommended lane widths so there is no need for additional narrowing.
- 8.2.30 The speed limit reduction is further justified based on the average speeds recorded as presented in Table 3.1, with the DfT's *Setting Local Speed Limits* (2024) stating that average speeds are appropriate for speed limit reductions. These improvements will also be beneficial for Mengham Infant School and CherryHarbour Nursery, with many roads in the country that serve primary schools having their speed limits reduced to 20mph in recent years following a number of safety campaigns.
- 8.2.31 The proposals also show a tightening of the A3023 Manor Road/St Mary's Road junction to provide shared cycleway infrastructure with a parallel crossing added to the existing zebra crossing. Segregated facilities were originally considered, but following discussions with HCC, it is felt that shared facilities are more appropriate at a crossing location such as this, however, we are proposing sufficient widths to allow the shared facilities to be replaced by segregated facilities should they ever be required.
- 8.2.32 We did consider moving the crossing closer to the junction, however, this is restricted by existing driveways, layby and the relocation of the Belisha beacons to a location close to the front windows of neighbouring properties which cause be a nuisance to local residents. A short cycle bypass is provided opposite St Mary's Road for any cyclists preferring to remain on the carriageway and cross without the benefit of the formal crossings further south.
- 8.2.33 Whilst not included in the LCWIP, we understand that HCC has aspirations to upgrade the existing crossing to facilitate cycle use as per the parallel crossing shown. This would improve connectivity to the shared cycleway that passes through Hayling Park and connects to the Hayling Billy Trail. A zebra and parallel crossing is appropriate with the AADT of this section of Beach Road/Manor Road forecast to be 6,373 which is below the aforementioned 8,000 threshold of ATE's Crossing Selector Tool.

SOUTH-EASTERN SECTION: ELM GROVE FROM ST MARY'S ROAD TO CHERRYWOOD GARDENS
(DRAWING P21033-AT-004A)

- 8.2.34 The works along Elm Grove follow the suggestions of the LCWIP.

- 8.2.35 The available highway width along this section of Elm Grove is too narrow to provide segregated footways and cycleway, therefore, the carriageway is proposed to be narrowed to an LTN 1/20 compliant 6.2m width with 5.0m narrowings at 60-70m intervals to help reduce speeds, potentially with a speed limit reduction to 20mph, making cycling within the carriageway safer.
- 8.2.36 The widening of the footway on the western side may allow it to also be used by cyclists. We also suggest that the access to the library could be converted to a more pedestrian-friendly crossover (dropped kerb access).

8.3 Ghost Island Removal Capacity Assessment

- 8.3.1 As the proposed active travel scheme would involve the removal of the ghost islands and changes to the geometry at two junctions in the study area, junction capacity assessments have been undertaken for the 2035 cumulative scenario (S4).
- 8.3.2 Table 8.1 presents the results for the Church Rd/ Tournembury Ln/ Elm Grove/ St Mary's Rd without the ghost island.

Table 8.1: Capacity Assessment Results – Church Rd/ Tournembury Ln/ Elm Grove/ St Mary's Rd No Ghost Island

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
NMM S4 2035						
St Mary's Road	0.46	0.9	0.31	0.5	0.30	0.4
Elm Grove	0.17	0.5	0.2	0.5	0.14	0.4
Tournembury Lane (Nearside)	0.05	0.1	0.07	0.1	0.07	0.1
Tournembury Lane (Offside)	0.10	0.1	0.09	0.1	0.08	0.1
Church Road	0.26	0.6	0.33	0.9	0.45	1.6
NMM S4 2035 ST						
St Mary's Road	0.46	0.9	0.28	0.4	0.29	0.4
Elm Grove	0.21	0.6	0.26	0.7	0.26	0.7
Tournembury Lane (Nearside)	0.19	0.2	0.24	0.3	0.23	0.3
Tournembury Lane (Offside)	0.40	0.7	0.34	0.5	0.26	0.4
Church Road	0.31	0.9	0.28	0.8	0.34	1.1
SMM S4 2035						
St Mary's Road	0.39	0.7	0.28	0.4	0.28	0.4
Elm Grove	0.16	0.5	0.18	0.5	0.17	0.5
Tournembury Lane (Nearside)	0.27	0.7	0.37	1.2	0.36	1.2
Tournembury Lane (Offside)	0.00	0.0	0.00	0.0	0.00	0.0
Church Road	0.27	0.7	0.37	1.2	0.36	1.2

- 8.3.3 Table 8.2 presents the results for the Manor Road/St Mary's Road junction without the ghost island and with the loss of the flare on the minor arm.

Table 8.2: Capacity Assessment Results – Manor Road/St Mary's Road No Ghost Island or Flare

Arm	AM Peak		Inter Peak		PM Peak	
	RFC	Q (PCU)	RFC	Q (PCU)	RFC	Q (PCU)
NMM S4 2035						
St Mary's Road	0.25	0.3	0.27	0.4	0.23	0.3
A3023 Beach Road (Southern Arm)	0.11	0.2	0.07	0.1	0.05	0.1
SMM S4 2035						
St Mary's Road	0.26	0.4	0.32	0.5	0.33	0.5
A3023 Beach Road (Southern Arm)	0.07	0.1	0.07	0.1	0.08	0.1

- 8.3.4 The results for both junctions show that the potential removal of the ghost islands will see them continue to operate with spare capacity in S4 using both the NMM and SMM flows.

Summary

- 8.3.5 Whilst the application site is in a location that is readily accessible by sustainable modes of transport, the potential improvements mentioned above could further encourage travel on-foot and by bicycle in the vicinity of the site, aiding the short trips to local schools, shops and bars/cafes/restaurants as well as to the Hayling Billy Trail. These improvements, subject to meeting planning tests of necessity and detailed design, could also help to further encourage a modal shift from use of the private car, further reducing traffic impact.
- 8.3.6 The proposals align with NPPF in terms of *'significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes'*, as well as providing *'safe and suitable'* access for all.

9 HIGHWAY SAFETY

9.1 Road Collision Analysis

- 9.1.1 Personal injury collision data has been purchased from Hampshire Constabulary to cover the five-year period of 1st August 2019 to 31st July 2024 i.e. 60 months. The collision study area is shown on the plan provided by Hampshire and Isle of Wight Constabulary in Appendix N, with the collision reports available on request. The study area includes the A3023 from its junction with the A27 and Park Road South in Havant to the north, to its junction with Sea Front (Beachlands roundabout) to the south. Also included is Church Road from its junction with the A3023 and Sea Front to the north and south respectively, as well as St Mary's Road and Cherrywood Gardens.
- 9.1.2 In total there were 86 collisions within the study area, comprising of 26 serious and 60 slight injury collisions. No fatal collisions occurred. The annual breakdown of numbers and type of classification is shown in Table 9.1 below.

Table 9.1: Summary of Reported Personal Injury Collisions

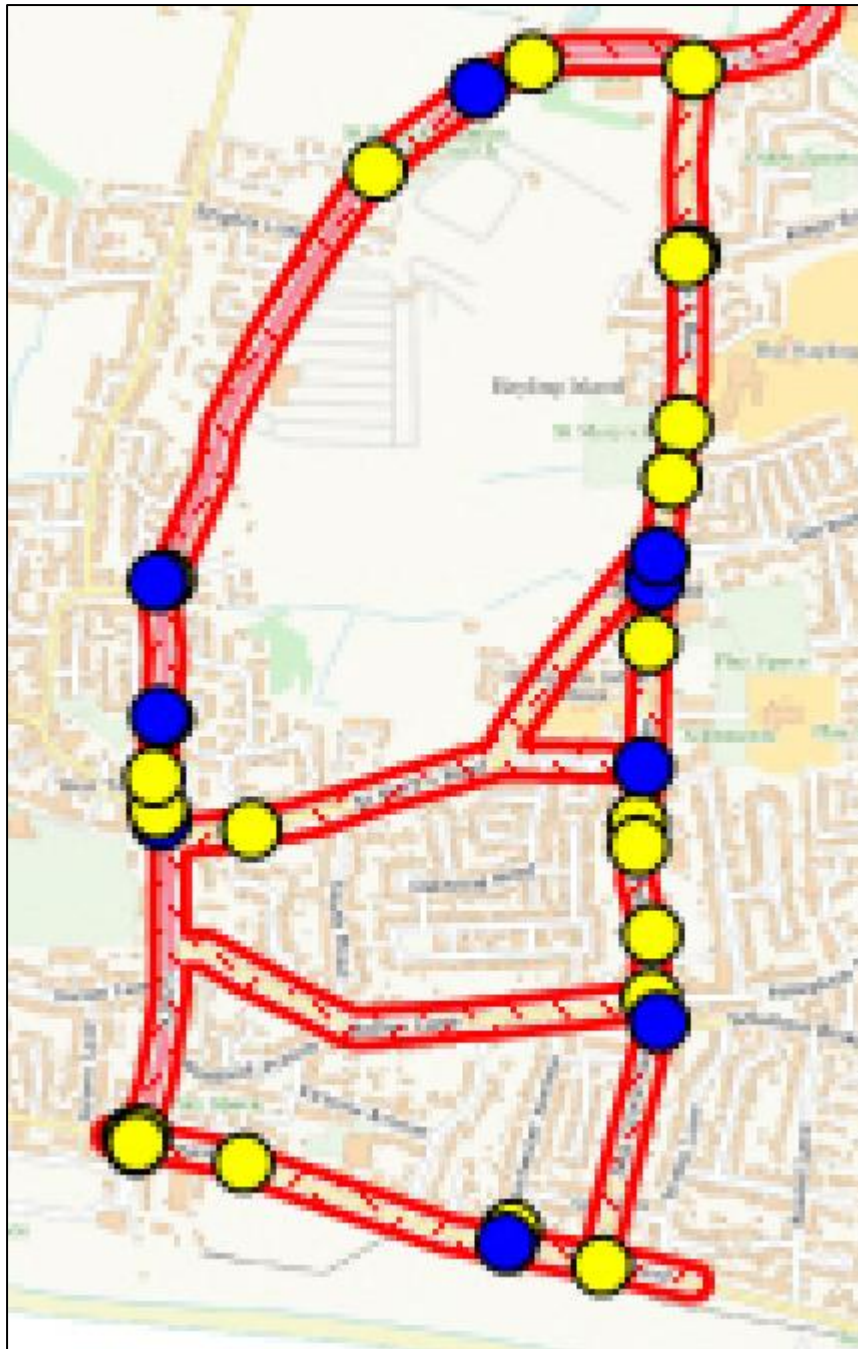
Severity	Year						Total	Severity %
	2019 (Aug-Dec)	2020	2021	2022	2023	2024 (Jan-July)		
Slight	7	17	11	9	13	3	60	70%
Serious	3	8	4	4	3	4	26	30%
Fatal	0	0	0	0	0	0	0	0%
Total	10	25	15	13	16	7	86	100%

- 9.1.3 The results show a similar frequency of collisions in each year with a slight peak of collisions in 2020 with 17 slight and 8 serious. The severity of collisions does however appear to have decreased and remained consistent in the years following. The number of collisions is not unusually high given that it covers a total road length of circa 12.5km.
- 9.1.4 A summary of the reported casualties is provided in Table 9.2.

Table 9.2: Summary of Reported Casualties

Casualties	Fatal	Serious	Slight	Total	% of all Casualties	% Serious
Vehicle Driver	0	6	46	52	42.6%	11.5%
Passenger	0	4	21	25	20.5%	16.0%
Motorcyclist	0	14	13	27	22.1%	51.9%
Pedal Cyclist	0	3	9	12	9.8%	25.0%
Pedestrian	0	3	3	6	4.9%	50.0%
Total	0	30	92	122	100.0%	100.0%

- 9.1.5 The 86 collisions resulted in 122 casualties, with 63.1% being vehicle drivers or passengers, 22.1% being motorcycle riders, 9.8% cyclists and 4.9% pedestrians. The highest proportion of serious injuries occurred to motorcyclists and pedestrians, with 51.9% and 50% of injuries to these road users respectively resulting in serious injury.
- 9.1.6 The information in the collision reports has been summarised in Table J1 in Appendix N.
- 9.1.7 A number of key statistics from the accident reports are as follows:
- Vehicle types: 88.4% of collisions involved cars and 5.8% involved LGVs;
 - Vulnerable road users: 58.1% of collisions involved a motorcyclist, 27.9% involved cyclists and 14.0% involved pedestrians;
 - 14.0% of collisions occurred on a wet carriageway surface;
 - 5.8% occurred when it was raining;
 - 48.8% involved elderly or inexperienced drivers;
 - 15.1% involved alcohol or drugs;
 - Main causation factors: Driver error was listed as the first factor in 74.6% of collisions, alcohol or drugs in 20.9%, illness or disability in 11.9%, road condition (slippery surface) in 4.5% and isolated incidents of sun dazzle and vehicle condition.
- 9.1.8 The collisions have occurred at various locations across the study area, however the following paragraphs group the collisions into geographic locations to aid in the identification of any common causation factors across the highway network. The causation factors mentioned are those presented in the police reports. The images are extracts from the main overview plan provided by Hampshire and Isle of Wight Constabulary, with the blue dots representing a serious accident and the yellow dots representing a slight accident.

South Island Area**Image 9.1 – South Island Collision Locations and Severity**

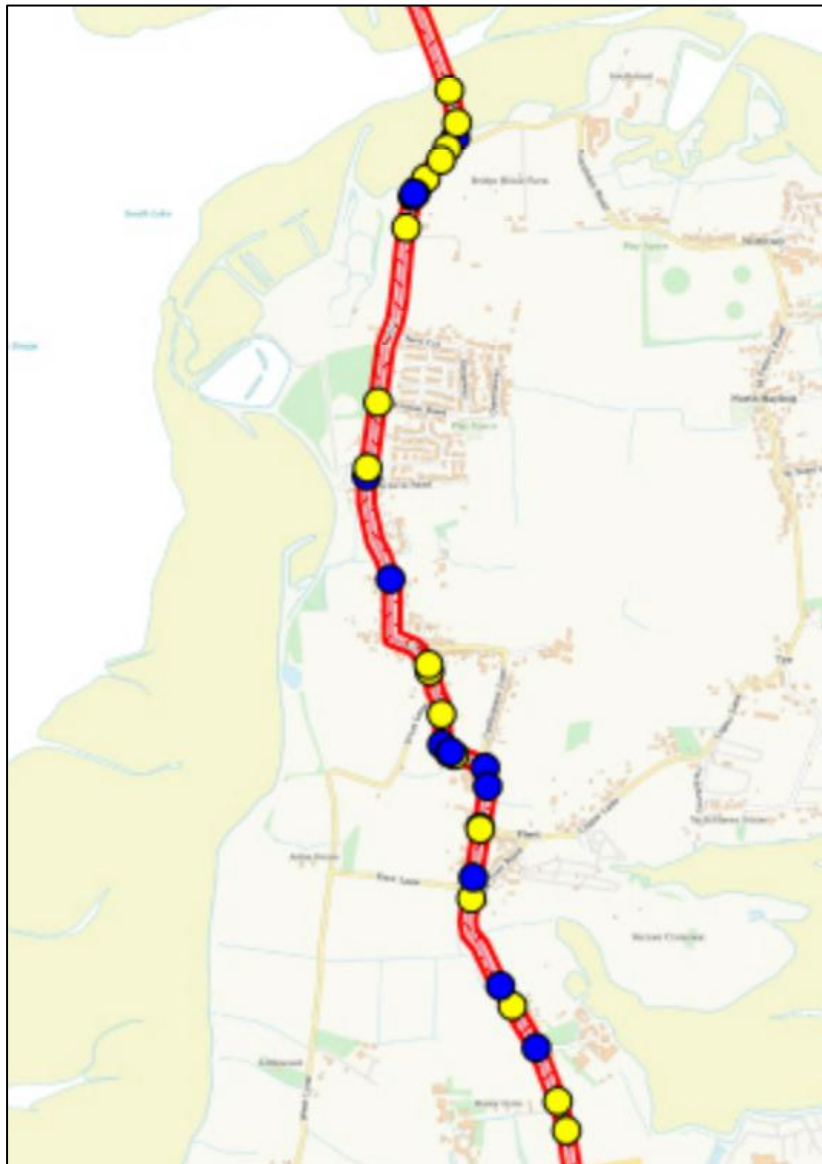
- 9.1.9 From review of Image 9.1, 1 slight collision occurred on St Mary's Road, with none recorded on Cherrywood Gardens or Hollow Lane. There are some small clusters of collisions at the main junctions along Church Road/Elm Grove and at the Sea Front/Beach Road mini-roundabout.
- 9.1.10 The slight collision was positioned approximately at a private driveway for property no.11 on the northern side of St Mary's Road; a car travelling east intends to turn right onto the private drive while a motorcyclist, also travelling east, attempts to overtake but collides with the car as it makes the

manoeuvre. The motorcyclist sustained slight injuries. Rider error, in relation to the motorcyclist, can be determined as the overall causation factor.

- 9.1.11 From the descriptions provided in the police reports, it appears that two serious collisions occurred in the vicinity of the St Mary's Road/Church Road/Tournerbury Road/Elm Grove junction. The first serious collision occurred in September 2020 when a motorcyclist collided with a car making the left-right staggered turn out of Tournerbury Lane causing serious injury to the motorcyclist with failure to look properly given as the main causation factor. For the second collision, a motorcyclist was travelling north on Elm Grove and collided with a pedestrian, very likely to have been impaired by alcohol, who was stood in the middle of the carriageway. Additional rider error factors were listed as contributory reasons for the collisions.

North Island Area

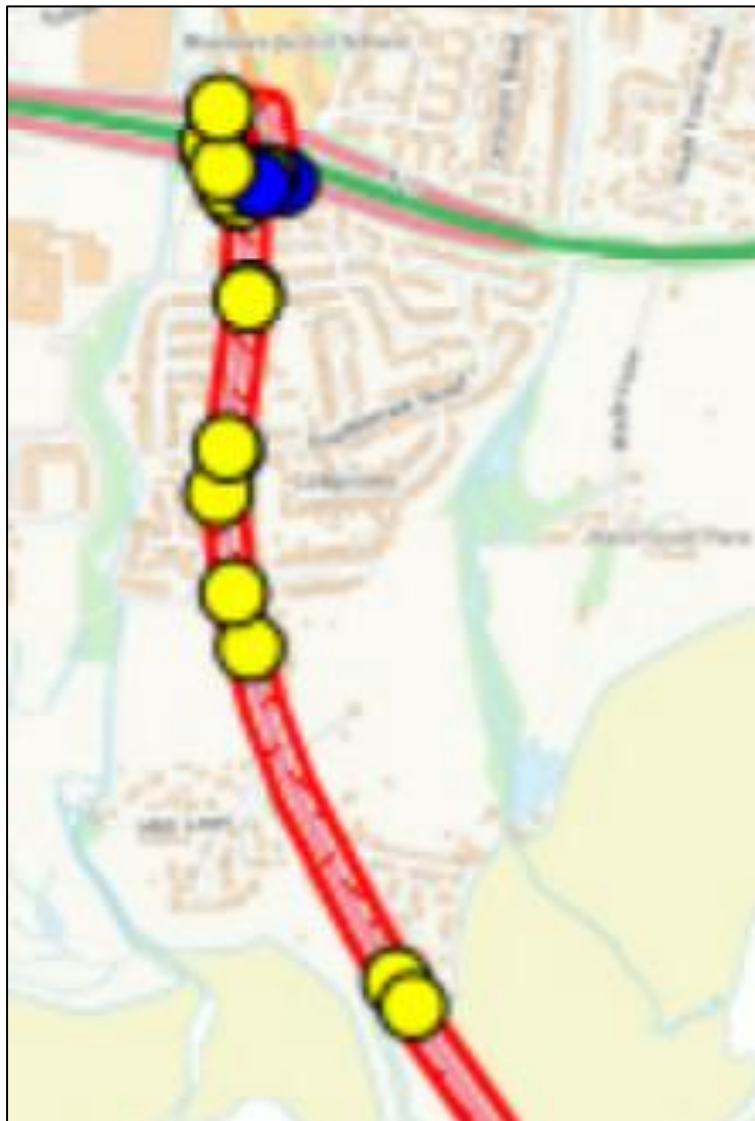
Image 9.2: North Island Collision Locations and Severity



- 9.1.12 From review of Image 9.2, the collisions on the A3023 on the northern half of the island were generally dispersed, albeit with a cluster of serious collisions where the road bends west in the vicinity of Castlemans Lane and West Lane, as well as a slight collisions cluster at the bend near Northney Road.
- 9.1.13 Of the four serious collisions that happened at the southerly sharp bend, only two featured motorcyclists as vulnerable road users, with all featuring cars. A loss of control of the vehicle, a poor manoeuvre or being impaired by alcohol were listed as recurring contributor factors for these serious collisions.
- 9.1.14 The cluster of slight collisions in addition to two serious collisions around the Northney Lane simple priority-controlled junction mostly involved cars, with one motorcycle slight collision and one pedal cyclist slight collision. Failure to look or judge the other persons speed were very likely probability factors for the slight collisions.

Mainland Study Area

Image 9.3: Mainland Collision Locations and Severity



- 9.1.15 Image 9.3 shows a notable cluster of collisions around the A3023/A27 junction which is not untypical of a well-trafficked grade-separated junction. No collisions occurred on the bridge though there were small clusters in the vicinity of the junctions with Woodbury Avenue, Langstone Avenue, The Mallards, Southbrook Road and the Technology Park access.

9.2 Safety Improvements Associated with Access Design and Active Travel Improvement Scheme

- 9.2.1 As detailed in Section 4, the proposed access arrangement has been designed in accordance with national design guidance in the form of MfS and has been subject to an independent Stage 1 RSA, with the issues applicable to this stage of the design process addressed.
- 9.2.2 The proposed access will provide new footways which will tie into the existing infrastructure on St Mary's Road, with a new section of footway to be provided on the southern side of the road along with a number of uncontrolled crossings or crossing improvements, including at the St Mary's Road/Church Road/Elm Grove/Tournerbury Lane junction with the pedestrian island also helping to control traffic speeds.
- 9.2.3 The potential active travel improvement scheme detailed in Section 8 could also offer safety benefits. Aside from proposed 20mph speed limits on St Mary's Road and Elm Grove, it includes a number of pedestrian and cycle crossings, and dedicated pedestrian and cycle infrastructure in line with LTN 1/20 and HCC's TG10, creating a more pedestrian and cycle friendly environment.

9.3 Summary

- 9.3.1 The above shows there have been 86 injury collisions in the circa 12.5km long study area in the last five-years resulting in 122 casualties. The majority of these collisions involved an injury to a driver or passenger of a vehicle, followed by a motorcyclist casualty. No fatal collisions occurred.
- 9.3.2 It should be noted that the overwhelming majority of collisions were a result of driver/rider error, with the layout of the local highway network not considered to be a causation factor. One slight collision was recorded along St Mary's Road where the proposed site access will be located as a result of motorcyclist error.
- 9.3.3 The proposed pedestrian and cycle improvements as part of the proposed active travel improvement scheme would help to further enhance/create a more pedestrian and cycle friendly environment where such users have priority at junctions, have greater crossing opportunities, and will benefit from dedicated infrastructure and reduced speed limits where on-road cycling is required.
- 9.3.4 Furthermore, the proposed safety improvements will conform with NPPF paragraph 115 in promoting sustainable transport modes and creating '*safe and suitable access to the site*'.

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- 9.3.5 As described in Section 4, the design of the proposed site access has been subject to an independent Stage 1 RSA and will conform to the standards and guidance in MfS and HCC's TG Notes. 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: LTP4 Policies C1, C2, C3 and C6; and HBC Core Strategy policies DM11 and DM13.
- 9.3.6 There is no evidence to suggest that the proposed development will increase the frequency or severity of collisions on the local highway network.

10 SUMMARY AND CONCLUSION

10.1 Summary

- 10.1.1 This TA accompanies the proposal to develop land at Rook Farm off St Mary's Road, Hayling Island for up to 300 dwellings. This version of the TA, Revision B, has been prepared to supersede the previously submitted version of the TA and TN1 predominantly to factor in the results of updated traffic modelling and follows numerous discussions with HCC.
- 10.1.2 A single vehicular access is to be provided at the St Mary's Road frontage. This access has been designed based on national design guidance and best practice both in terms of geometry and visibility with the latter based on local speed surveys.
- 10.1.3 Detailed swept path analysis has been undertaken for operational and construction vehicles to aid the design and demonstrate its suitability, addressing reasons for refusal associated with the previous planning application in 2016. It has been demonstrated that access from St Mary's Road is safe and provides sufficient capacity to serve the development.
- 10.1.4 Two pedestrian accesses will be provided onto the local PRow network and emergency only access can be provided via Rook Farm Way if deemed necessary by HBC, HCC or the local fire authority.
- 10.1.5 The proposed access arrangement includes the provision of a new section of footway to the south-west of the site access along with an uncontrolled crossing over St Mary's Road and one over the public car park access on St Mary's Road.
- 10.1.6 The proposed access arrangement and associated improvements are shown in Drawing P21033-001I in Appendix E.
- 10.1.7 The Applicant would also be willing to fund the provision of uncontrolled crossings over the Elm Grove, Church Road and St Mary's Road arms of the associated junction which will include pedestrian refuge islands which will allow pedestrians to cross in two movements and should encourage slower vehicle speeds through the junction. These improvements are shown in Drawing P21033-002E in Appendix E, however, should the suggested active travel improvement scheme be agreeable with HCC, the main road will be narrowed making it easier for pedestrians to cross.
- 10.1.8 In addition to the above, the Applicant is also willing to fund the implementation of a 20mph zone on St Mary's Road with associated traffic calming features, subject to further discussions with HBC and HCC.
- 10.1.9 A number of modifications have been made to the previously submitted version of the proposed access arrangement which followed discussions with HCC. Concerns regarding HGVs passing each other and any conflict with the Works on the corner of St Mary's Road and Church Road have been addressed. It is now understood that the proposed access arrangements are agreeable to HCC.

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- 10.1.10 A Residential Travel Plan has been prepared alongside this TA and forms one of the documents which support this planning application.
- 10.1.11 The location of the site has been shown to be sustainable when considering access to and from the site by modes of travel other than the private car, particularly walking, cycling and public transport. It has been demonstrated that the local schools, places of employment and local amenities are within nationally acceptable walking and cycling distances. The bus stops in the vicinity of the site provide connections to the rest of the island, Langstone Technology Park, Solent retail and trade parks and Havant, including Havant train station, making bus travel a viable option for some of the residents of the site. The access strategy maximises access via sustainable modes and the proposal includes measures to encourage travel by non-car modes, which is described in further detail in the Residential Travel Plan.
- 10.1.12 The impact of the proposed development has been assessed on its own and cumulatively with live applications on the Island. One of the tools used to assess this has been HBC's microsimulation model prepared by their consultant SYSTRA. The base model met DfT guidance in terms of calibration and validation, making it a suitable tool for traffic forecasting and impact assessment purposes, as agreed with HCC and NH.
- 10.1.13 The traffic forecasting methodology was agreed with both HCC and NH. The forecasting results from the microsimulation model suggest that the proposed development, both on its own and cumulatively with three other live applications on the Island, will not result in a severe cumulative impact with regards to journey times in both a neutral period and the summertime period. No highway capacity based mitigation is required.
- 10.1.14 Standalone junction capacity testing has been undertaken at key junctions using the forecast flows from the microsimulation model, and higher sensitivity test flows. The results show that all junctions will operate with spare capacity in the cumulative scenario in all peak hours assessed for both the neutral period and the summer period at 2035.
- 10.1.15 NH and its consultant has reviewed the microsimulation model of the highway network and the LinSig model of the Langstone Roundabout. NH has offered 'no objection' to the development proposals in its NHPR 25-01 response dated 3rd September 2025.
- 10.1.16 A number of routes on the Island have been identified for cycling and walking improvements in the LCWIP. An important funding source for these improvements will be developments such as that proposed at Rook Farm. Whilst the proposed development already benefits from good accessibility via sustainable modes of travel, a series of potential active travel enhancements have been developed, should these be deemed to be necessary to make the proposals acceptable in planning terms. It is envisaged that these enhancements would be secured via S106 obligations and/or conditions, at a level commensurate to the scale of the proposed development, with HCC to deliver
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these improvements wholistically in conjunction with funds from other planning applications and potentially other sources.

10.1.17 These active travel improvements are in line with national and local policy and, should they meet the planning tests of necessity and detailed design, would help to further encourage a modal shift from the private car to these more sustainable modes. Aside from further reducing traffic impact, they should contribute to healthy lifestyles and the strive to net zero.

10.1.18 A review of personal injury accidents that have occurred on the local highway network has been undertaken for the most recent 5-year period that the data was available for. 86 accidents have occurred during this period, 26 of which resulted in serious injury and the others in slight injury. No fatal accidents occurred. The accidents are not particularly concentrated with this and the causation factors listed suggesting that the vast majority of these accidents did not occur as a result of highway layout or design, but as a result of driver error. The active travel package will also offer highway safety improvements by creating a more pedestrian and cyclist friendly highway network.

10.2 Conclusion

10.2.1 It is concluded that the proposed development would not result in an '*unacceptable impact on highway safety*' nor have a '*severe*' cumulative impact on the operation of the highway network in terms of capacity, in line with NPPF paragraph 116.

10.2.2 As the proposal complies with local and national planning policy and guidance with respect to sustainable accessibility, safety and impact on the highway network, there are no highways or transportation related reasons why planning permission should not be granted. Should the local highway authority have any concerns, we are happy to consult further with them.