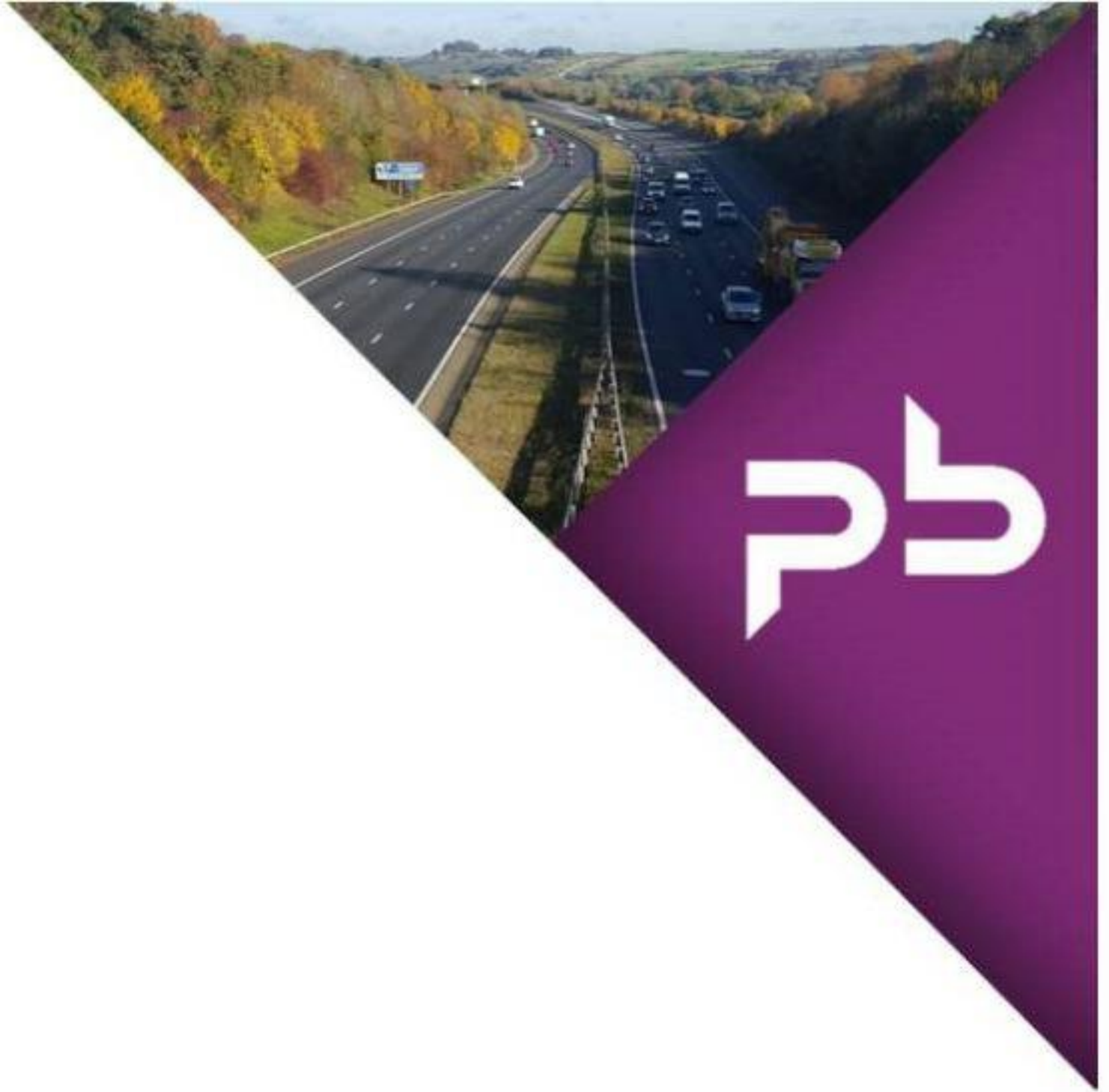




LAND NORTH OF THE OYSTERS, HAYLING ISLAND

TRANSPORT STATEMENT

October 2021

Hayling Island Builders

**RESIDENTIAL DEVELOPMENT
LAND NORTH OF THE OYSTERS
HAYLING ISLAND**

TRANSPORT STATEMENT

CONTROLLED DOCUMENT

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Revision Record

Rev.	Date	By	Summary of Changes	Chkd	Aprvd
2	20.10.21	TP	Revised Site Layout	MS	MS

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**RESIDENTIAL DEVELOPMENT
LAND NORTH OF THE OYSTERS
HAYLING ISLAND**

TRANSPORT STATEMENT

Contents

1.	INTRODUCTION.....	2
2.	EXISTING SITE CONDITIONS AND ACCESSIBILITY.....	3
3.	PROPOSED DEVELOPMENT.....	12
4.	TRIP GENERATION.....	14
5.	HIGHWAY IMPACT ASSESSMENT.....	15
6.	JUNCTION ASSESSMENT.....	16
7.	SUMMARY AND CONCLUSIONS.....	18

Figures

- Figure 1:** Approximate Site Location
Figure 2: Site Access in relation to Trail Entry
Figure 3: Map of PRow for Hayling Island
Figure 4: Map of NCR
Figure 5: Bus Route for Hayling Island
Figure 6: Local scale bus routes
Figure 7: PIA Data (2016-2020)

Tables

- Table 1:** Summary of Local Bus Services
Table 2: Walking and Cycle Times in relation to amenities
Table 3: Summary of Local Parking Guidance (Havant Borough Council)
Table 4: Proposed Site Trip Generation (HCC's Beech Grove Trip Rates)
Table 5: Route Assignment by Percentage
Table 6: Modelling Scenarios
Table 7: TEMPRO Growth Factors
Table 8: Billy Road/Station Road Modelling Results Summary

Appendices

- Appendix A:** Site Layout
Appendix B: Accessibility Map
Appendix C: Access Drawing (020.0659.001)
Appendix D: HCC's Beech Grove Trip Rates
Appendix E: Spreadsheet Model Modelling Flows
Appendix F: Billy Road/Station Road Modelling Outputs

1. INTRODUCTION

- 1.1 This Transport Statement (TS) has been prepared by Paul Basham Associates on behalf of Hayling Island Builders to support an outline planning application for a residential development comprising of up to 29 dwellings at Land of the Oysters, Hayling Island. A copy of the indicative site layout is reproduced at **Appendix A**.
- 1.2 The application site covers approximately 1.26 hectares in total and is located approximately 500m from 'West Town' local centre. The proposed residential development is a continuation of a previous residential development south of the site known as 'The Oysters'. The proposed site location is identified within **Figure 1**.

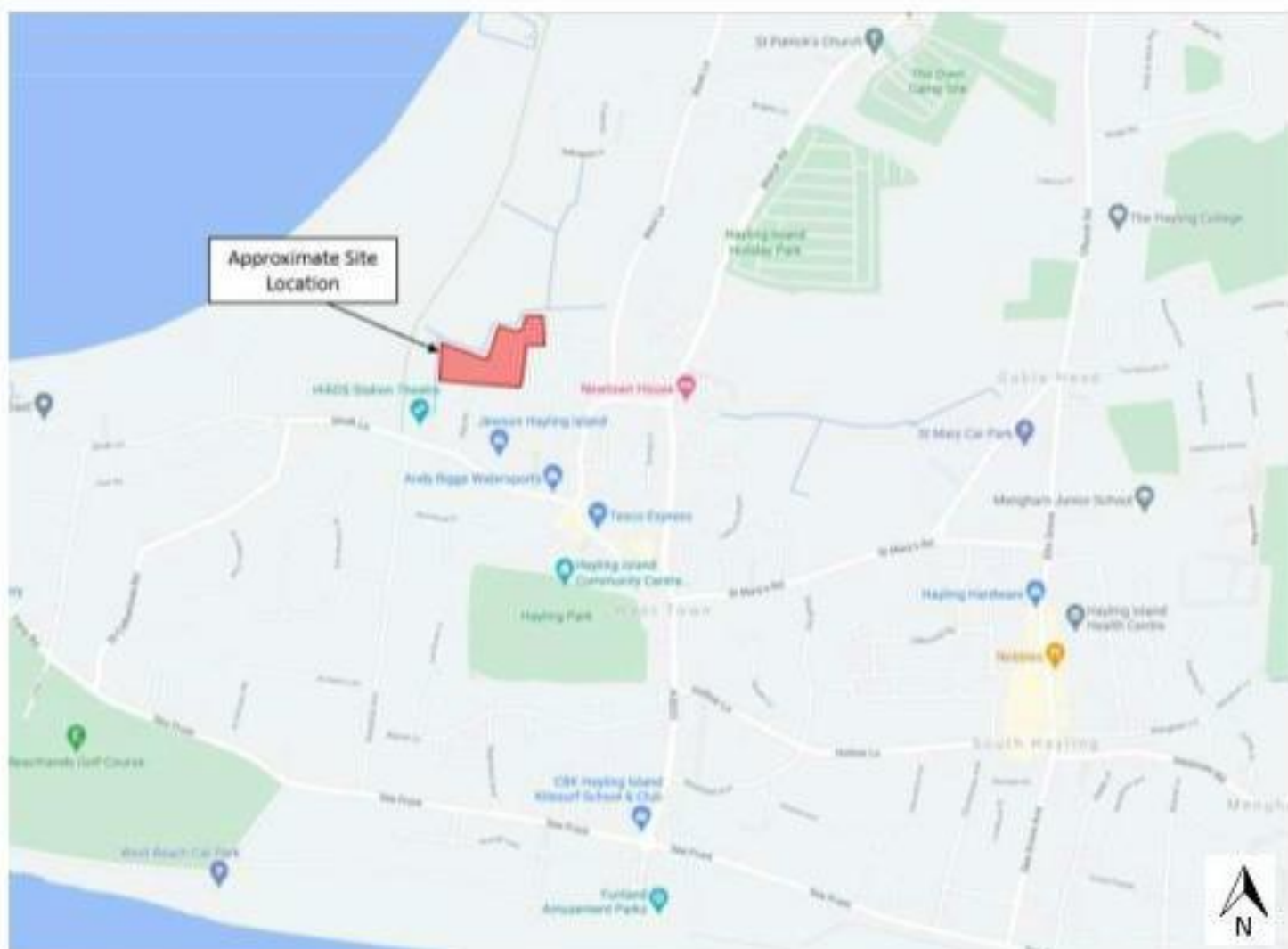


Figure 1: Approximate Site Location

- 1.3 This TS will review the existing conditions of the site comprising local road network and facilities, site accessibility, proposed development including parking and cycle requirements, off-site traffic impact, access arrangements and servicing arrangements for refuse and emergency services. The TS will then draw conclusions from the assessments.

2. EXISTING SITE CONDITIONS AND ACCESSIBILITY

Overview of Existing Site

- 2.1 The proposed development site is currently undeveloped and located approximately 500m from central West Town and approximately 1.3km from South Hayling. The existing conditions are shown in **Photograph 1** and **2**. The site is bounded by housing developments to the south and east, a coastal trail (Hayling Billy Trail) to the west, and more agricultural land to the north. The proposed scheme is an extension of the residential development to the south (The Oysters, Billy Road).
- 2.2 This site is accessed via Billy Road onto Station Road south of the development. The residential site and the existing conditions of the proposed site are shown in **Photograph 3**. This TS will consider the existing residential development in relation to this current proposal.



Photograph 1: The current site conditions



Photograph 2: The current site conditions from Hayling Billy Coastal Path



Photograph 3: The current site conditions from overhead.

- 2.3 This site is located 500m from the town centre and 30 metres from a National Cycle Route (NCR) and Coastal Path. It also has good transportation links to Portsmouth, 4.5km north is a road bridge to Langstone and 3km west is a pedestrian ferry to Portsmouth.

Local Road Network

- 2.4 The proposed site access is via Billy Road to the south of the site which was constructed as part of the original 'The Oysters' development to the south of the proposed development. Billy Road is subject to a speed limit of 30mph, although was designed to a design speed of 20mph, and is street lit with a typical width of 5.5m. To the south Billy Road meets Station Road via a priority junction with Billy Road forming the minor arm. The conditions along Billy Road are shown in **Photograph 4**, whilst it's junction with Station Road is shown in **Photograph 5**.
- 2.5 Station Road routes along an east-west alignment and connects to the A303 Manor Road (an A-road routing through Hayling Island) to the east of the site. Station Road is also street lit and subject to a 30mph speed limit within the vicinity of the site.



Photograph 4: Billy Road



Photograph 5: Billy Road / Station Road Junction

- 2.6 Station Road has speed calming measures in place, including 'SLOW' demarcations at regular intervals and solid white line where the road narrows. Billy Road is also subject to traffic calming measures including raised tables, and the proposed development would continue similar design frameworks to Billy Road to ensure continuity.

Pedestrian and Cycle Network

- 2.7 Footways are provided on the both sides of Billy Road by the access point and on the western side of Billy Road south of Signal Way (**Photograph 7**). The existing development has 2m width footways with dropped kerbs and raised tables (**Photograph 8**), plus tactile paving outside the development (**Photograph 6**).



Photograph 6: Tactile paving and dropped kerbs off-site on Station Road.



Photograph 7: Conditions on Billy Road south of Signal Way



Photograph 8: Raised table arrangement on-Billy Road.

- 2.8 The site is a 2-minute walk, approximately 110m, from the Hayling Billy Trail/coastal path, a long-distance trail that routes on a north-south alignment between Station Road and Langstone Road Bridge approximately 8km to the north (refer to **Figure 2** to see the development access in relation to the trail entry). This trail is used as both a National Cycle Route and a hiking trail, refer to **Figure 3** for the PRow within Hayling Island and the Trail route.



Figure 2: Site entry location in relation to the entrance to Hayling Billy Trail.



Figure 3: PRow within Hayling Island (PRow highlighted in light pink and the Hayling Billy Trail in green).

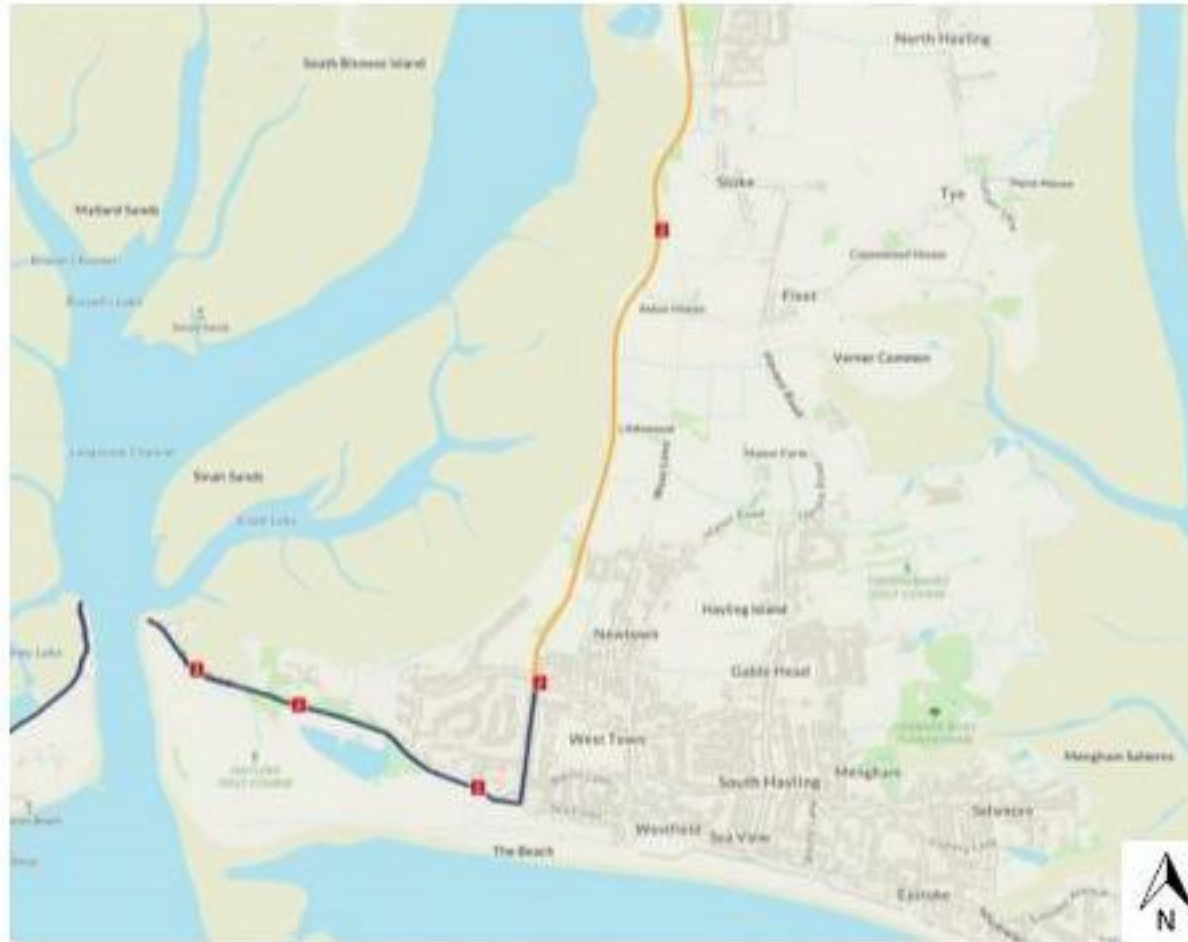


Figure 4: NCR for Hayling Island along the Hayling Billy Trail.

- 2.9 **Figure 4** shows the NCR stop on the west coast of Hayling Island approximately 2km from the site. At this location there is a pedestrian and cycle ferry service that connects to Eastney, Portsmouth, and therefore provides a direct link between Hayling Island and Portsmouth without the need for car travel.

Public Bus Services

- 2.10 The closest bus stop is located 200m south from the site, a 2-minute walk, which is named Station Theatre. On Hayling island there are 2 bus services that serve the area on the same route in different directions. The 31 service (operating clockwise towards Havant) and the 30 service (operating anti-clockwise) both operated by Stagecoach bus company.
- 2.11 Station Theatre Bus Stops comprise sheltered seating area and a timetable pole on the clockwise 31 service bus stop and a singular timetable pole on Station Theatre bus stop for service 30 (an anti-clockwise route).
- 2.12 Both buses serve the south and west of Hayling Island, passing through West Town, East Stoke, Selmore, South Hayling, Gable Head, Fleet, Stoke and then north to Langstone Road, Havant and Havant Station (see **Figure 5** for the Hayling Island Bus Route). **Figure 6** identifies a local view of bus stops and routes in relation to the site.



Figure 5: Hayling Island bus routes (30 and 31) and stops for Hayling Island and Havant on a regional scale.



Figure 6: Bus routes (30 and 31) and stops for Hayling Island on a local scale.

- 2.13 The services defined in **Table 1**, operate approximately every 30 minutes in each direction, and take approximately an hour to circle the island. Due to the high frequency of the services, these bus services would present an opportunity for future residents to use as a means of sustainable transport,

Service	Operator	Bus Stop Location	Route	Frequency		
				Mon-Fri	Sat	Sun
30	Stagecoach	Station Theatre Bus Stop	Havant Bus Stop B – Hayling Island – West Town – Beachlands – Eastoke – Mengham – Hayling Island – Havant (B)	Every 30 minutes between 11am-3pm (Varied occurrence all other times (AOT))	First Bus: 5:55am Frequency: Every 30 minutes Last Bus: 21:55pm between 9am-6pm (Varied occurrence AOT)	Every Hour between 9:30am-5:30pm (Varied occurrence AOT)
31	Stagecoach	Station Theatre Bus Stop	Havant (B) – Hayling Island – Mengham – Eastoke – Beachlands – West Town – Hayling Island – Havant (B)	Every 30 minutes between 11am-3pm (Varied occurrence AOT)	Every 30 minutes between 8:30am-5:30pm (Varied occurrence AOT)	

Table 1: Summary of Local Bus Services

Rail Services

- 2.14 There is no railway station on Hayling Island, however the bus services identified in **Table 1** stop at Havant Railway station, the closest rail service to the site. There is also a tourist railway service named “Hayling Seaside Railway” that stops at Eastoke Corner and Beachlands but only runs along the seafront, thus, is mainly used for pedestrian leisure and tourist purposes. Havant Railway Station is equipped with car and cycle parking and is staffed Monday-Friday during daytime operational hours. Havant Railway Station provides direct access to destinations such as Portsmouth Harbour, Southampton Central, Brighton, London Victoria and London Waterloo. These services operate at a frequency of two services per hour to Southampton Central, Brighton and London Victoria, three per hour to London Waterloo and five per hour to Portsmouth Harbour. Havant Railway Station therefore provides opportunities for journeys to these key destinations to be made by public transport and reduce the necessity for car travel.

Facilities

- 2.15 This site is a sustainable location and is in close proximity to an abundance of facilities and amenities. The site is within a 5-minute walk to West Town centre and is a 2-minute walk from the nearest bus-stop. West Town provides retail, public houses, restaurants, a pharmacy and community facilities which are a 5-minute walk, a further 15-minute walk allows access to schools, banks, a library, places of worship and retail. The location of the site in relation to these facilities is shown on the Accessibility Map included at **Appendix B**.
- 2.16 Manual for Streets states that walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance. The Institution of Highways and Transportation's (IHT) document 'Providing for Journeys on Foot' sets out preferred walking distances to key facilities. It identifies maximum preferred walking distances of 2km for commuting and 1.2km for other purposes.
- 2.17 **Table 2** below identifies distances and subsequent walking and cycling times to/from the site. Walking time based on the average walking speed of 1.4m/s taken from IHT 'Guidelines for providing for journeys on foot', and an average cycling time of 5m/s taken from DMRB, Volume 11, Section 3.

Facility	Approximate Journey Distance (m)	Approximate Journey Time (Minutes)	
		Walking	Cycling
Restaurant - West Town Inn	140	2	1
Supermarket - Tesco	310	4	1
Bank - Tesco ATM	310	4	1
Pharmacy - Lloyds Pharmacy	310	4	1
Public House - The Barley Mow	450	6	2
West Town	550	7	2
Community Centre	550	7	2
Leisure - Hayling Island Cricket Club and Park	550	7	2
Place of Worship - Hayling Island Baptist Church	550	7	2
Post Office	620	8	3
School - Mengham Infant School	1.2km	16	5
Library - Hayling Island Library	1.3km	17	5
Medical Centre - Hayling Island Medical Centre	1.5km	18	6

Table 2: Walking and Cycling times in relation to the site

Personal Injury Accident (PIA) Data

- 2.18 The Crashmap online database has been interrogated to determine whether there is a history Personal Injury Accident (PIA) data within the vicinity of the site, along Station Road and the southern stretch of West Lane for the most recent 5 year period. The PIA data at Station Road and West Lane is shown in **Figure 7**.



Figure 7: PIA data (2016-2020) (Source: Crashmap)

- 2.19 The PIA indicates that 2 slight accidents and 1 serious accident occurred within close proximity to the development site. The serious incident occurred along West Lane, whilst the two slight incidents occurred along Station Road approximately 175m and 325m to the east of the site. Whilst any accident is regrettable, the review of the collision data has not identified any areas of highway concern and therefore the proposed development should not pose a safety risk to future site users or worsen as a result in overall betterment to highway safety.

Summary of Site Accessibility

- 2.20 The site is located approximately 500m from 'West Town' centre. The site is well connected to the local public transport network which gives access to wider areas like Havant, Portsmouth and essential amenities. The site is also well connected to pedestrian and cycle routes such as the Hayling Billy Trail. These well-connected means of transport provide an opportunity to therefore promote and establish a sustainable development.

3. PROPOSED DEVELOPMENT

- 3.1 The development proposals comprise up to 29 dwellings, with the access point location from Station Road via Billy Road which will be continued from 'The Oysters' development. The indicative site layout is attached as **Appendix A**. The application is being submitted in outline with all matters reserved except for access.

Access Arrangements

- 3.2 The site access arrangements are proposed to take the form of a continuation of Billy Road from the adjacent development to the south. Billy Road currently abuts the site and terminates in the form of a turning head. As part of the proposals the access will continue north, with the accompanying footways also continuing north into the development accordingly. The access width measures 5.5m, whilst the footways measure 2m. The access arrangements are shown in **Appendix C**. Due to the straight nature of the transition between the existing carriageway and proposed continuation into the site forward visibility of 25m in line with the proposed design speed of 20mph is achievable and will be confirmed once the internal layout is confirmed through a reserved matters application.

Parking Provision

- 3.3 The application is being submitted in outline, therefore details of parking provision are not currently provided and will instead be provided as part of any future reserved matters application. The parking will accord with the relevant parking standards at the time of application.
- 3.4 At this time, it is understood these standards are set out within Havant Borough Council's 'Parking Supplementary Planning Documents' (Adopted July 2016) as summarised within **Table 3**.

Type of Development	Number of expected parking spaces				Disabled Parking	Visitor Parking	Cycle Spaces
C3 – Dwelling houses – Vehicle Parking.	1 Bed Unit	2 Bed Unit	3 Bed Unit	4 Bed Unit	Spaces to be considered in parking bays/ 5% of unallocated parking	20% of unallocated parking for visitors	1 space per unit (1 bed), 2 spaces per unit (2-4 beds)
	1 space	2 spaces	2 spaces	3 spaces			

Table 3: Summary of Local Parking Guidance (source: Havant Borough Council)

Refuse and Servicing

- 3.5 Refuse collection will take place throughout the development. Whilst specific details on refuse collection will be confirmed within a future reserved matters application the current site layout has been designed with these concepts in mind and turning heads have been shown indicatively to indicate where refuse vehicles may be able to turn, ensuring they will be able to adhere to the appropriate requirements set out within Manual for Streets.

4. TRIP GENERATION

- 4.1 The accommodation schedule for this proposed site will become fixed at the reserved matter stage, however the scheme currently comprises up to 29 residential dwellings. To assess any impact on the highways, a trip rate assessment has been undertaken.

Proposed Trip Generation

- 4.2 At the request of Hampshire County Council, trip rates have been derived from surveys undertaken at the nearby Beech Grove development, which was surveyed as part of the development of the Hayling Island Transport Assessment. Through the pre-application process, HCC requested that the Beech Grove trip rates are used for all developments on Hayling Island moving forward so as to ensure consistency.
- 4.3 The resulting trip rates are summarised in **Table 4** with full outputs included in **Appendix D**.

Beech Grove (HCC Trip Rates)	AM Peak (0800-0900)			PM Peak (1700-1800)			12 Hour Total Daily Trips
	Arrivals	Departures	Total	Arrivals	Departures	Total	
Trip Rate (Per 1 Dwelling)	0.149	0.305	0.454	0.32	0.23	0.55	4.770
Trip Generation (29 dwellings)	4	9	14	10	7	17	143

Table 4: Trip Generation derived from Beech Grove surveys

- 4.4 As per **Table 4**, the proposed development is likely to generate in the order of 14 trips in the AM peak and 17 trips in the PM peak, with 143 trips generated across a 12-hour period. With the site being undeveloped, these trips would be additional to the local road network.

5. HIGHWAY IMPACT ASSESSMENT

- 5.1 With respect to traffic distribution, as agreed with HCC it is practical to utilise the distributions for the nearby and recent Sinah Lane application (APP/18/00724) but reconfigured to consider the revised localised routing to reflect the different origin point for trips. As such, we anticipate traffic distributing from the site access to comprise the percentages set out by route in **Table 5**.

Route Assignment	Percentage
Stay on Hayling Island	6.4%
Park Road N/S	17.2%
A27 East	7.8%
A27 West	43.2%
A3M	25.4%
Total	100%

Table 5: Route Assignment by Percentage

- 5.2 This distribution assignment suggests that all 100% of trips will route east out of the development (i.e. left turn departures and right turn arrivals) and subsequently 6.4% of all trips will remain on Hayling Island. Of the remaining trips 93.6% of trips, they will all route north through Hayling Island via the A3023 north to the A27 roundabout. From here, 17.2% will route north along Park Road, and 25.4% will route along the A27 east. The remaining 68.6% will then route west along the A27 with 25.4% routing north on the A3M and 43.2% continuing the A27 west.

6. JUNCTION ASSESSMENT

- 6.1 As requested by HCC a highways capacity assessment has been undertaken for the Billy Road/Station Road junction to the south of the site to confirm it can adequately accommodate the proposed increase in vehicular trips resulting from the development.
- 6.2 In line with best practice, three modelling scenarios have been assessed, a base year, a forecast year and a forecast year with development for both the weekday AM (08:00-09:00) and PM (17:00-18:00) peak periods. The scenarios assessed are summarised in **Table 6**.

Scenarios	
1	2021 Base Year
2	2026 Forecast Year
3	2026 Forecast Year + Proposed Development at Land North of The Oysters (Up-to 32 dwellings)

Table 6: Modelling Scenarios

- 6.3 Due to the ongoing pandemic new traffic data has not been obtained as it would be considered unrepresentative due to the current changes in behaviour. Instead, existing traffic obtained for Station Road as part of the Sinah Lane application was utilised as the mainline flow for Station Road, with an appropriate growth factor applied to increase from the surveyed year of 2016 to a baseline of 2021. Then in order to determine the minor arm traffic flow the trip generation set out within the original The Oysters application was applied to the network to determine a 2021 Baseline. The spreadsheet model, within which the scenario flows are summarised, is included within **Appendix E**.
- 6.4 Following the determination of a baseline TEMPRO was interrogated to obtain growth factors for the MSOA Havant 015 using the All – 'Principal Roads' as this factor was higher than the 'Minor Roads' and therefore considered robust. These were then utilised to factor the 2021 base up to a forecast year of 2026, 5 years after the intended submission of the application. The resulting growth factors are summarised within **Table 7**.

Growth Factors (All Road Types)	
2016-2021	
AM	1.0486
PM	1.0442
2021-2026	
AM	1.0332
PM	1.0329

Table 7: TEMPRO Growth Factors

6.5 Modelling of the existing arrangement of the junction has been undertaken using the industry standard package Junction 9. These modelling results (based on a proposed development quantum of 32 dwellings to ensure robustness) are summarised in **Table 8**. Modelling outputs for this junction are attached as **Appendix F**.

		AM			PM		
		Max Q	Delay (s)	RFC	Max Q	Delay (s)	RFC
1 - Baseline (2021)	Billy Road – Station Road East (Stream B-C)	0.1	6.70	0.06	0.1	6.66	0.05
	Billy Road – Station Road West (B-A)	0.0	0.00	0.00	0.0	0.00	0.00
	Billy Road – Station Road East/West (C-AB)	0.0	5.49	0.03	0.1	5.57	0.05
2 - Forecast (2026)	Billy Road – Station Road East (Stream B-C)	0.1	6.73	0.06	0.1	6.69	0.05
	Billy Road – Station Road West (B-A)	0.0	0.00	0.00	0.0	0.00	0.00
	Billy Road – Station Road East/West (C-AB)	0.1	5.49	0.03	0.1	5.58	0.06
3 - Forecast (2026) Plus Development (32 dwellings)	Billy Road – Station Road East (Stream B-C)	0.1	6.85	0.08	0.1	6.78	0.06
	Billy Road – Station Road West (B-A)	0.0	0.00	0.00	0.0	0.00	0.00
	Billy Road – Station Road East/West (C-AB)	0.1	5.54	0.06	0.1	5.68	0.07

Table 8: Junctions 9 Modelling Results for Billy Road/Station Road

6.6 The results of the modelling indicate that the development will operate under capacity in scenarios, with maximum RFCs recorded in Scenario 3 of 0.08 and 0.07 in the AM and PM periods respectively.

6.7 There are therefore no highway capacity issues at the Billy Road/Station Road junction as a result of the proposed development

6.8 Beyond the site access, it is acknowledged that there are wider proposals within the Hayling Island Transport Assessment to improve traffic conditions. This includes a combination of junction/corridor improvements, as well as measures to improve conditions and therefore attractiveness for non-car modes of travel. It is anticipated that the proposed development would mitigate its impact on the wider Hayling Island network through a proportionate and fair contribution to those identified works.

7. SUMMARY AND CONCLUSIONS

- 7.1 This Transport Statement (TS) has been prepared by Paul Basham Associates on behalf of Hayling Island Builders to support a planning application for a residential development comprising up to 29 residential dwellings at Land North of the Oysters, Hayling Island.
- 7.2 The site is located approximately 500m from 'West Town' Town centre. The site is well connected to the local public transport network which gives access to wider areas like Havant and Portsmouth. The site is also connected to excellent pedestrian and cycle routes such as the Hayling Billy Trail. These provide an opportunity to promote and establish a sustainable development. A PIA data assessment does not indicate any highway safety concerns that would worsen because of the proposed development.
- 7.3 Vehicular and pedestrian access to the site will be from Billy Road via a continuation of the existing carriageway routing north into the proposed development site.
- 7.4 Based on the trip rates provided by HCC, the proposed development is likely to generate 14 trips in the AM peak and 17 trips in the PM peak, with 143 trips generated across a 12-hour period. This proposed increase in trip generation is not expected to give rise to any highway capacity concerns.
- 7.5 Following dialog with HCC the Station Road/Billy Road junction has been subject to capacity modelling to confirm it will be able to accommodate the proposed increase in vehicular trips. This modelling confirmed the junction will continue to operate well within capacity in its future scenario with maximum RFCs of 0.08 and 0.07 in the AM and PM peak periods respectively.
- 7.6 The Transport Statement has demonstrated that the proposed development can deliver a safe and sustainable form of development from a highway perspective. We would therefore encourage the local highway and planning authorities to look favourably upon this development in relation to highways.





0 50
metres
(1:1,250)

Site boundary 1.24ha (3.06acres)

Project
Land North of the Oysters

Drawing Title
Illustrative Masterplan

Date 13/10/2021	Scale 1:1,250 at A3	Drawn by CT	Check by SR
Project No 1239	Drawing No 003	Revision	J

Mosaic

Appendix B





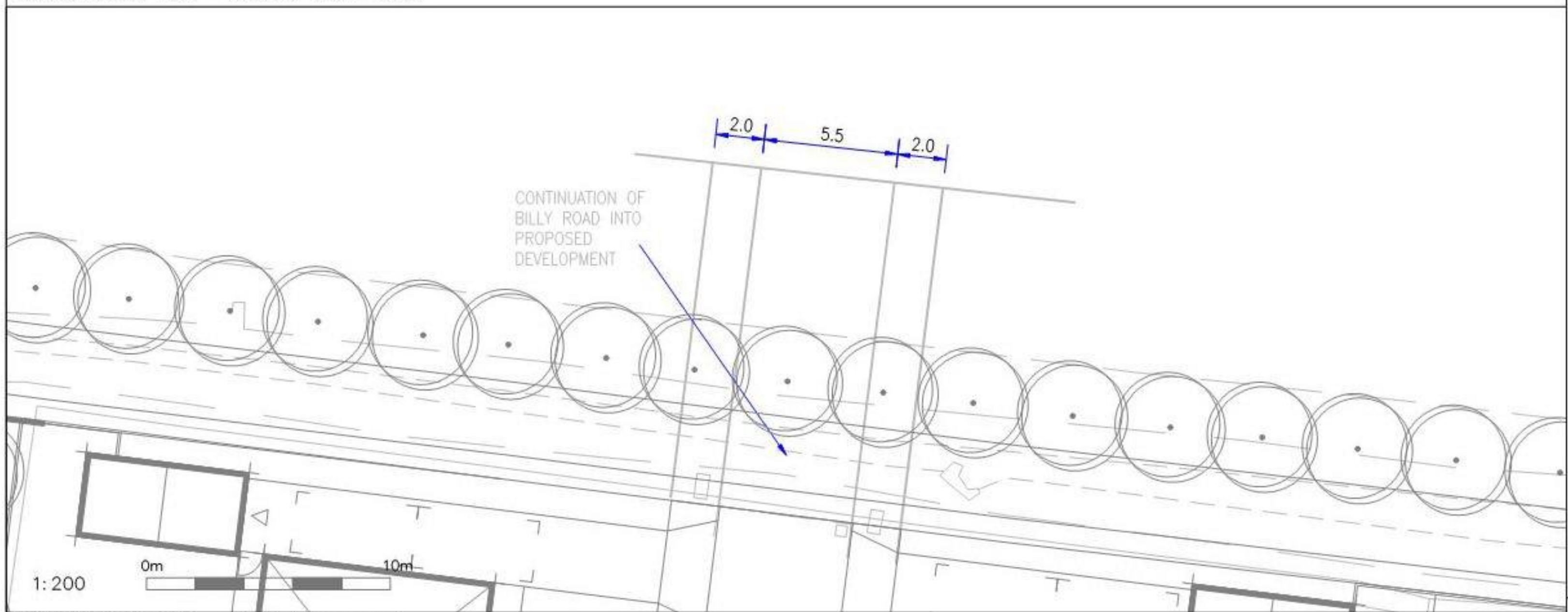
Project Number: 020.0659	Title: Accessibility Map		Checked By:	Checked Date:	Scale:
Project Name: Land North of the Oysters, Hayling Island			Drawn By: JH	Drawn Date: 30.06.2021	Drawing No: 1

Appendix C





ACCESS DESIGN PLAN – CONTEXT (SCALE 1:500)



ACCESS DESIGN PLAN – DETAIL (SCALE 1:200)

GENERAL NOTES

1. THIS DRAWING IS INTENDED TO BE VIEWED IN COMBINATION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
2. ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
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Rev	Description	Date	By	Chkd
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Project Name LAND NORTH OF THE OYSTERS HAYLING ISLAND	Title ACCESS ARRANGEMENTS	 Paul Basham Associates Ltd Suite 4, Hiding Court, Sandhams Way, Abingdon Business Park, Abingdon, OX14 1RD 01235 425400 info@paulbashamassociates.com www.paulbashamassociates.com	Client HAYLING ISLAND BUILDERS	Checked By TP	Checked Date 24.08.21	Scale AS SHOWN (AT A3 SIZE)
Project Phase PRELIMINARY				Drawn By JH	Drawn Date 30.07.21	Client Drawing No. - PBA Drawing No. 020.059.001 Revision -

Appendix D



Surveyed Trip Rates

Time period starting	arr	dep	
00:00	0.015238	0.00381	
01:00	0.009524	0.00381	
02:00	0.00381	0	
03:00	0.001905	0.005714	
04:00	0.00381	0.005714	
05:00	0.00381	0.032381	
06:00	0.017143	0.118095	
07:00	0.047619	0.295238	
08:00	0.148571	0.304762	
09:00	0.152381	0.209524	
10:00	0.158095	0.180952	
11:00	0.139048	0.182857	
12:00	0.186667	0.140952	
13:00	0.171429	0.165714	
14:00	0.175238	0.188571	
15:00	0.222857	0.161905	
16:00	0.304762	0.211429	
17:00	0.32	0.230476	
18:00	0.268571	0.201905	
19:00	0.228571	0.175238	
20:00	0.167619	0.102857	
21:00	0.112381	0.066667	
22:00	0.072381	0.030476	
23:00	0.030476	0.019048	
12 Hour	2.295	2.474	4.770

Appendix E





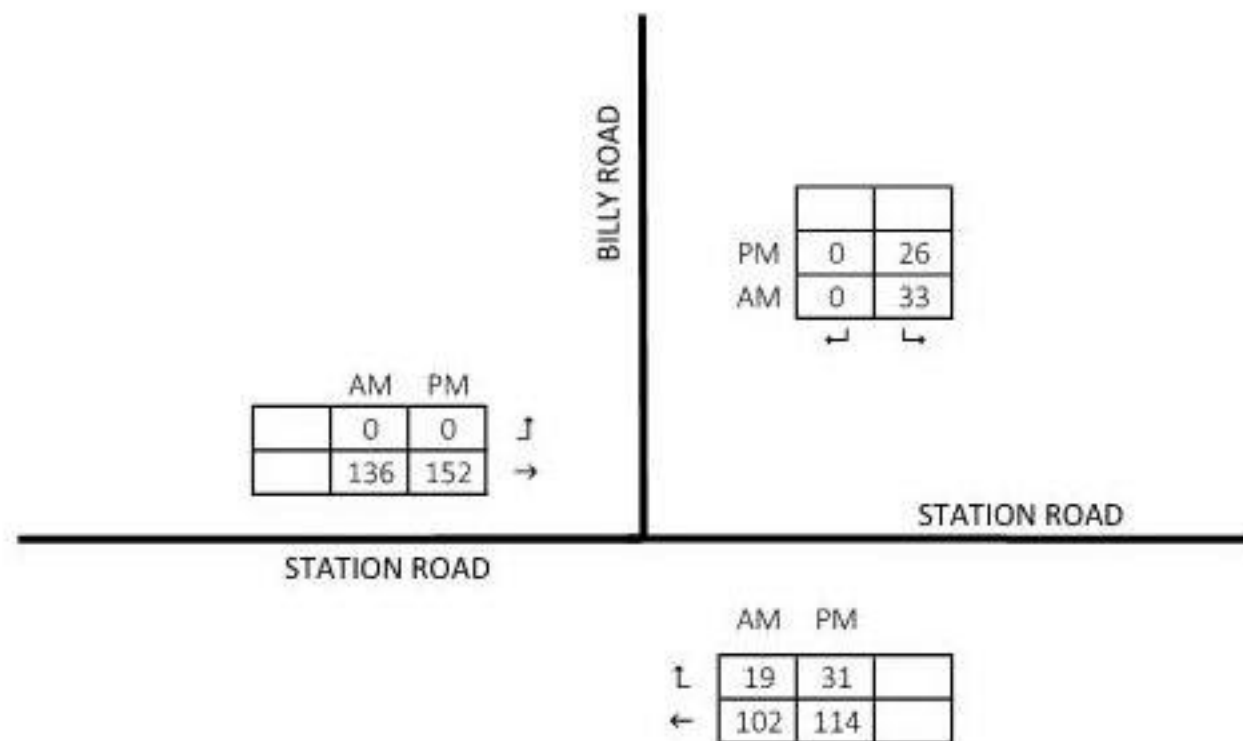
Project Name: Land North of the Oysters, Hayling Island

Project Number: 020.0659

Drawn By: JH

Approved By: TP

Scenario: 2021 Baseline





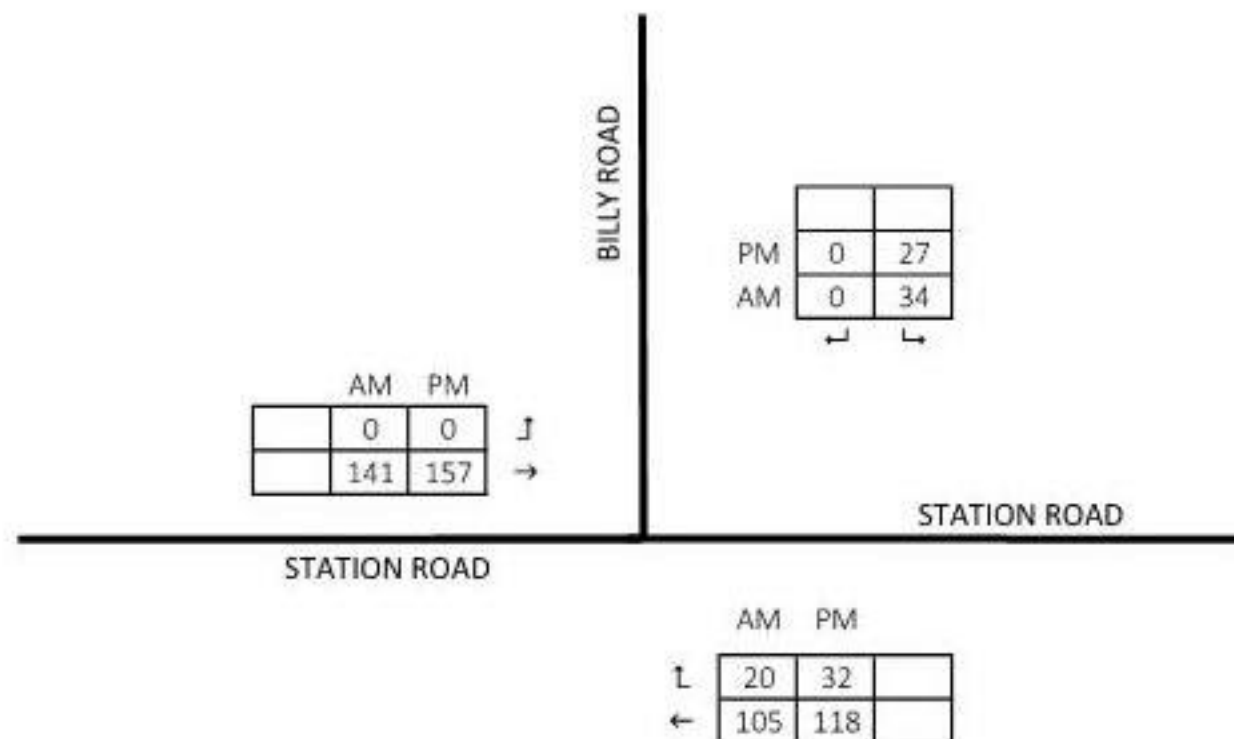
Project Name: Land North of the Oysters, Hayling Island

Project Number: 020.0659

Drawn By: JH

Approved By: TP

Scenario: 2026 Forecast





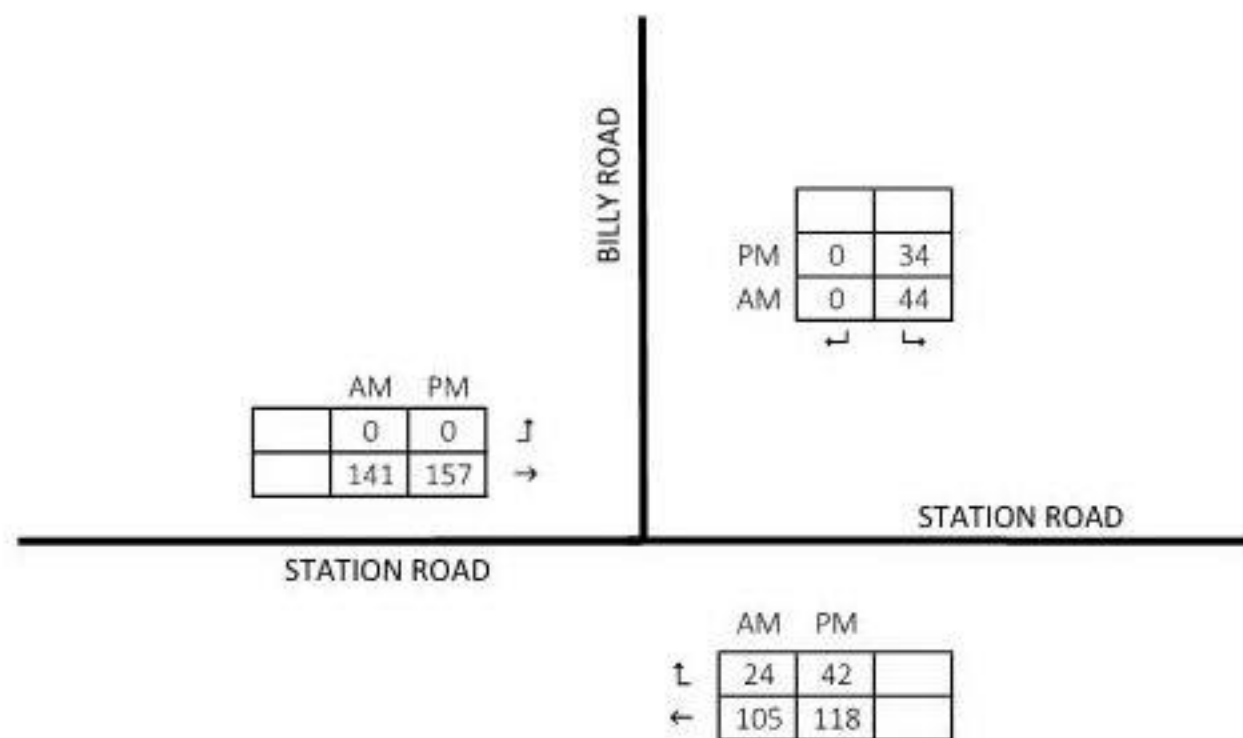
Project Name: Land North of the Oysters, Hayling Island

Project Number: 020.0659

Drawn By: JH

Approved By: TP

Scenario: 2026 Forecast Plus Development



Appendix F



Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.0.2.5947 © Copyright TRL Limited, 2017			
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk			
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Filename: Billy Road_Station Road.j9

Path: W:\Projects\020-029\020 Miscellaneous\020.0659 Land North of the Oysters\Modelling

Report generation date: 25-Aug-21 3:57:57 PM

- »2021 Base, AM
- »2021 Base, PM
- »2026 Forecast, AM
- »2026 Forecast, PM
- »2026 Forecast With Development, AM
- »2026 Forecast With Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 Base								
Stream B-C	0.1	6.70	0.06	A	0.1	6.66	0.05	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	5.49	0.03	A	0.1	5.57	0.05	A
2026 Forecast								
Stream B-C	0.1	6.73	0.06	A	0.1	6.69	0.05	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.1	5.49	0.03	A	0.1	5.58	0.06	A
2026 Forecast With Development								
Stream B-C	0.1	6.85	0.08	A	0.1	6.78	0.06	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.1	5.52	0.04	A	0.1	5.68	0.07	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19-Aug-21
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PC-PBASH-KAREN\Paul B
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2026 Forecast	AM	ONE HOUR	07:45	09:15	15	✓
D4	2026 Forecast	PM	ONE HOUR	16:45	18:15	15	✓
D5	2026 Forecast With Development	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026 Forecast With Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2021 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.18	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Station Road W		Major
B	Billy Road		Minor
C	Station Road E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.50			250.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	6.50	3.00	3.00	3.00	3.00	✓	1.00	25	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	423	0.075	0.191	0.120	0.272
1	B-C	665	0.100	0.252	-	-
1	C-B	719	0.272	0.272	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Base	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	136	100.000
B		ONE HOUR	✓	33	100.000
C		ONE HOUR	✓	121	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		A	B	C	
	A	0	0	136	
	B	0	0	33	
	C	102	19	0	

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	6.70	0.1	A	30	45
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.03	5.49	0.0	A	20	30
C-A					91	136
AB					0	0
AC					125	187

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	25	6	639	0.039	25	0.0	0.0	6.439	A
B-A	0	0	391	0.000	0	0.0	0.0	0.000	A
C-AB	16	4	738	0.022	16	0.0	0.0	5.482	A
C-A	75	19			75				
AB	0	0			0				
AC	102	26			102				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	30	7	634	0.047	30	0.0	0.1	6.546	A
B-A	0	0	384	0.000	0	0.0	0.0	0.000	A
C-AB	20	5	742	0.026	19	0.0	0.0	5.478	A
C-A	89	22			89				
AB	0	0			0				
AC	122	31			122				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	36	9	628	0.058	36	0.1	0.1	6.697	A
B-A	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	748	0.033	25	0.0	0.0	5.474	A
C-A	109	27			109				
AB	0	0			0				
AC	150	37			150				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	36	9	628	0.058	36	0.1	0.1	6.697	A
B-A	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	748	0.033	25	0.0	0.0	5.474	A
C-A	109	27			109				
AB	0	0			0				
AC	150	37			150				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	30	7	634	0.047	30	0.1	0.1	6.548	A
B-A	0	0	384	0.000	0	0.0	0.0	0.000	A
C-AB	20	5	742	0.026	20	0.0	0.0	5.479	A
C-A	89	22			89				
AB	0	0			0				
AC	122	31			122				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	25	6	639	0.039	25	0.1	0.0	6.442	A
B-A	0	0	391	0.000	0	0.0	0.0	0.000	A
C-AB	16	4	738	0.022	16	0.0	0.0	5.485	A
C-A	75	19			75				
AB	0	0			0				
AC	102	26			102				

2021 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 Base	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	152	100.000
B		ONE HOUR	✓	26	100.000
C		ONE HOUR	✓	145	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	0	152
	B	0	0	26
	C	114	31	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	6.66	0.1	A	24	36
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.05	5.57	0.1	A	33	50
C-A					100	150
AB					0	0
AC					139	209

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	20	5	636	0.031	19	0.0	0.0	6.416	A
B-A	0	0	385	0.000	0	0.0	0.0	0.000	A
C-AB	26	7	741	0.036	26	0.0	0.0	5.541	A
C-A	83	21			83				
AB	0	0			0				
AC	114	29			114				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	23	6	631	0.037	23	0.0	0.0	6.518	A
B-A	0	0	377	0.000	0	0.0	0.0	0.000	A
C-AB	32	8	745	0.043	32	0.0	0.1	5.554	A
C-A	98	25			98				
AB	0	0			0				
AC	137	34			137				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	29	7	623	0.046	29	0.0	0.1	6.660	A
B-A	0	0	367	0.000	0	0.0	0.0	0.000	A
C-AB	41	10	752	0.055	41	0.1	0.1	5.571	A
C-A	119	30			119				
AB	0	0			0				
AC	167	42			167				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	29	7	623	0.046	29	0.1	0.1	6.660	A
B-A	0	0	367	0.000	0	0.0	0.0	0.000	A
C-AB	41	10	752	0.055	41	0.1	0.1	5.574	A
C-A	119	30			119				
AB	0	0			0				
AC	167	42			167				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	23	6	631	0.037	23	0.1	0.0	6.521	A
B-A	0	0	377	0.000	0	0.0	0.0	0.000	A
C-AB	32	8	745	0.043	32	0.1	0.1	5.558	A
C-A	98	24			98				
AB	0	0			0				
AC	137	34			137				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	20	5	636	0.031	20	0.0	0.0	6.421	A
B-A	0	0	385	0.000	0	0.0	0.0	0.000	A
C-AB	26	7	741	0.036	26	0.1	0.1	5.547	A
C-A	83	21			83				
AB	0	0			0				
AC	114	29			114				

2026 Forecast, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.18	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 Forecast	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	141	100.000
B		ONE HOUR	✓	34	100.000
C		ONE HOUR	✓	125	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	0	141
	B	0	0	34
	C	105	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	6.73	0.1	A	31	47
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.03	5.49	0.1	A	21	32
C-A					94	140
AB					0	0
AC					129	194

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	26	6	639	0.040	25	0.0	0.0	6.457	A
B-A	0	0	389	0.000	0	0.0	0.0	0.000	A
C-AB	17	4	739	0.023	17	0.0	0.0	5.486	A
C-A	77	19			77				
AB	0	0			0				
AC	106	27			106				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	31	8	633	0.048	31	0.0	0.1	6.568	A
B-A	0	0	383	0.000	0	0.0	0.0	0.000	A
C-AB	21	5	743	0.028	21	0.0	0.0	5.483	A
C-A	92	23			92				
AB	0	0			0				
AC	127	32			127				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	37	9	626	0.060	37	0.1	0.1	6.725	A
B-A	0	0	374	0.000	0	0.0	0.0	0.000	A
C-AB	26	7	749	0.035	26	0.0	0.1	5.479	A
C-A	112	28			112				
AB	0	0			0				
AC	155	39			155				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	37	9	626	0.060	37	0.1	0.1	6.725	A
B-A	0	0	374	0.000	0	0.0	0.0	0.000	A
C-AB	26	7	749	0.035	26	0.1	0.1	5.480	A
C-A	112	28			112				
AB	0	0			0				
AC	155	39			155				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	31	8	633	0.048	31	0.1	0.1	6.570	A
B-A	0	0	383	0.000	0	0.0	0.0	0.000	A
C-AB	21	5	743	0.028	21	0.1	0.0	5.484	A
C-A	92	23			92				
AB	0	0			0				
AC	127	32			127				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	26	6	639	0.040	26	0.1	0.0	6.463	A
B-A	0	0	389	0.000	0	0.0	0.0	0.000	A
C-AB	17	4	739	0.023	17	0.0	0.0	5.489	A
C-A	77	19			77				
AB	0	0			0				
AC	106	27			106				

2026 Forecast, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2026 Forecast	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	157	100.000
B		ONE HOUR	✓	27	100.000
C		ONE HOUR	✓	150	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	0	157
	B	0	0	27
	C	118	32	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	6.69	0.1	A	25	37
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.06	5.58	0.1	A	35	52
C-A					103	155
AB					0	0
AC					144	216

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	20	5	635	0.032	20	0.0	0.0	6.434	A
B-A	0	0	383	0.000	0	0.0	0.0	0.000	A
C-AB	27	7	741	0.037	27	0.0	0.1	5.542	A
C-A	86	21			86				
AB	0	0			0				
AC	118	30			118				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	24	6	630	0.039	24	0.0	0.0	6.540	A
B-A	0	0	376	0.000	0	0.0	0.0	0.000	A
C-AB	34	8	746	0.045	34	0.1	0.1	5.555	A
C-A	101	25			101				
AB	0	0			0				
AC	141	35			141				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	30	7	622	0.048	30	0.0	0.1	6.688	A
B-A	0	0	365	0.000	0	0.0	0.0	0.000	A
C-AB	43	11	753	0.057	43	0.1	0.1	5.573	A
C-A	123	31			123				
AB	0	0			0				
AC	173	43			173				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	30	7	622	0.048	30	0.1	0.1	6.688	A
B-A	0	0	365	0.000	0	0.0	0.0	0.000	A
C-AB	43	11	753	0.057	43	0.1	0.1	5.576	A
C-A	123	31			123				
AB	0	0			0				
AC	173	43			173				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	24	6	630	0.039	24	0.1	0.0	6.540	A
B-A	0	0	376	0.000	0	0.0	0.0	0.000	A
C-AB	34	8	746	0.045	34	0.1	0.1	5.557	A
C-A	101	25			101				
AB	0	0			0				
AC	141	35			141				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	20	5	635	0.032	20	0.0	0.0	6.439	A
B-A	0	0	383	0.000	0	0.0	0.0	0.000	A
C-AB	27	7	742	0.037	27	0.1	0.1	5.548	A
C-A	86	21			86				
AB	0	0			0				
AC	118	30			118				

2026 Forecast With Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Forecast With Development	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	141	100.000
B		ONE HOUR	✓	44	100.000
C		ONE HOUR	✓	129	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	0	141
	B	0	0	44
	C	105	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.08	6.85	0.1	A	40	61
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.04	5.52	0.1	A	25	38
C-A					93	139
AB					0	0
AC					129	194

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	33	8	639	0.052	33	0.0	0.1	6.533	A
B-A	0	0	389	0.000	0	0.0	0.0	0.000	A
C-AB	20	5	739	0.027	20	0.0	0.0	5.512	A
C-A	77	19			77				
AB	0	0			0				
AC	106	27			106				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	40	10	633	0.062	40	0.1	0.1	6.668	A
B-A	0	0	382	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	743	0.033	25	0.0	0.0	5.514	A
C-A	91	23			91				
AB	0	0			0				
AC	127	32			127				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	48	12	626	0.077	48	0.1	0.1	6.853	A
B-A	0	0	373	0.000	0	0.0	0.0	0.000	A
C-AB	31	8	749	0.042	31	0.0	0.1	5.519	A
C-A	111	28			111				
AB	0	0			0				
AC	155	39			155				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	48	12	626	0.077	48	0.1	0.1	6.853	A
B-A	0	0	372	0.000	0	0.0	0.0	0.000	A
C-AB	31	8	749	0.042	31	0.1	0.1	5.520	A
C-A	111	28			111				
AB	0	0			0				
AC	155	39			155				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	40	10	633	0.062	40	0.1	0.1	6.672	A
B-A	0	0	382	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	743	0.033	25	0.1	0.0	5.518	A
C-A	91	23			91				
AB	0	0			0				
AC	127	32			127				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	33	8	639	0.052	33	0.1	0.1	6.541	A
B-A	0	0	389	0.000	0	0.0	0.0	0.000	A
C-AB	20	5	739	0.027	20	0.0	0.0	5.513	A
C-A	77	19			77				
AB	0	0			0				
AC	106	27			106				

2026 Forecast With Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 Forecast With Development	PM	ONE HOUR	18:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	157	100.000
B		ONE HOUR	✓	34	100.000
C		ONE HOUR	✓	160	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	0	157
	B	0	0	34
	C	118	42	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.06	6.78	0.1	A	31	47
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.07	5.68	0.1	A	45	68
C-A					101	152
AB					0	0
AC					144	216

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	26	6	635	0.040	25	0.0	0.0	6.489	A
B-A	0	0	381	0.000	0	0.0	0.0	0.000	A
C-AB	36	9	741	0.048	36	0.0	0.1	5.609	A
C-A	85	21			85				
AB	0	0			0				
AC	118	30			118				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	31	8	630	0.049	31	0.0	0.1	6.608	A
B-A	0	0	373	0.000	0	0.0	0.0	0.000	A
C-AB	44	11	746	0.059	44	0.1	0.1	5.638	A
C-A	100	25			100				
AB	0	0			0				
AC	141	35			141				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	37	9	622	0.060	37	0.1	0.1	6.776	A
B-A	0	0	362	0.000	0	0.0	0.0	0.000	A
C-AB	56	14	753	0.074	56	0.1	0.1	5.679	A
C-A	120	30			120				
AB	0	0			0				
AC	173	43			173				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	37	9	622	0.060	37	0.1	0.1	6.776	A
B-A	0	0	362	0.000	0	0.0	0.0	0.000	A
C-AB	56	14	753	0.074	56	0.1	0.1	5.680	A
C-A	120	30			120				
AB	0	0			0				
AC	173	43			173				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	31	8	630	0.049	31	0.1	0.1	6.612	A
B-A	0	0	373	0.000	0	0.0	0.0	0.000	A
C-AB	44	11	746	0.059	44	0.1	0.1	5.643	A
C-A	100	25			100				
AB	0	0			0				
AC	141	35			141				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	26	6	635	0.040	26	0.1	0.0	6.493	A
B-A	0	0	381	0.000	0	0.0	0.0	0.000	A
C-AB	36	9	742	0.049	36	0.1	0.1	5.616	A
C-A	84	21			84				
AB	0	0			0				
AC	118	30			118				