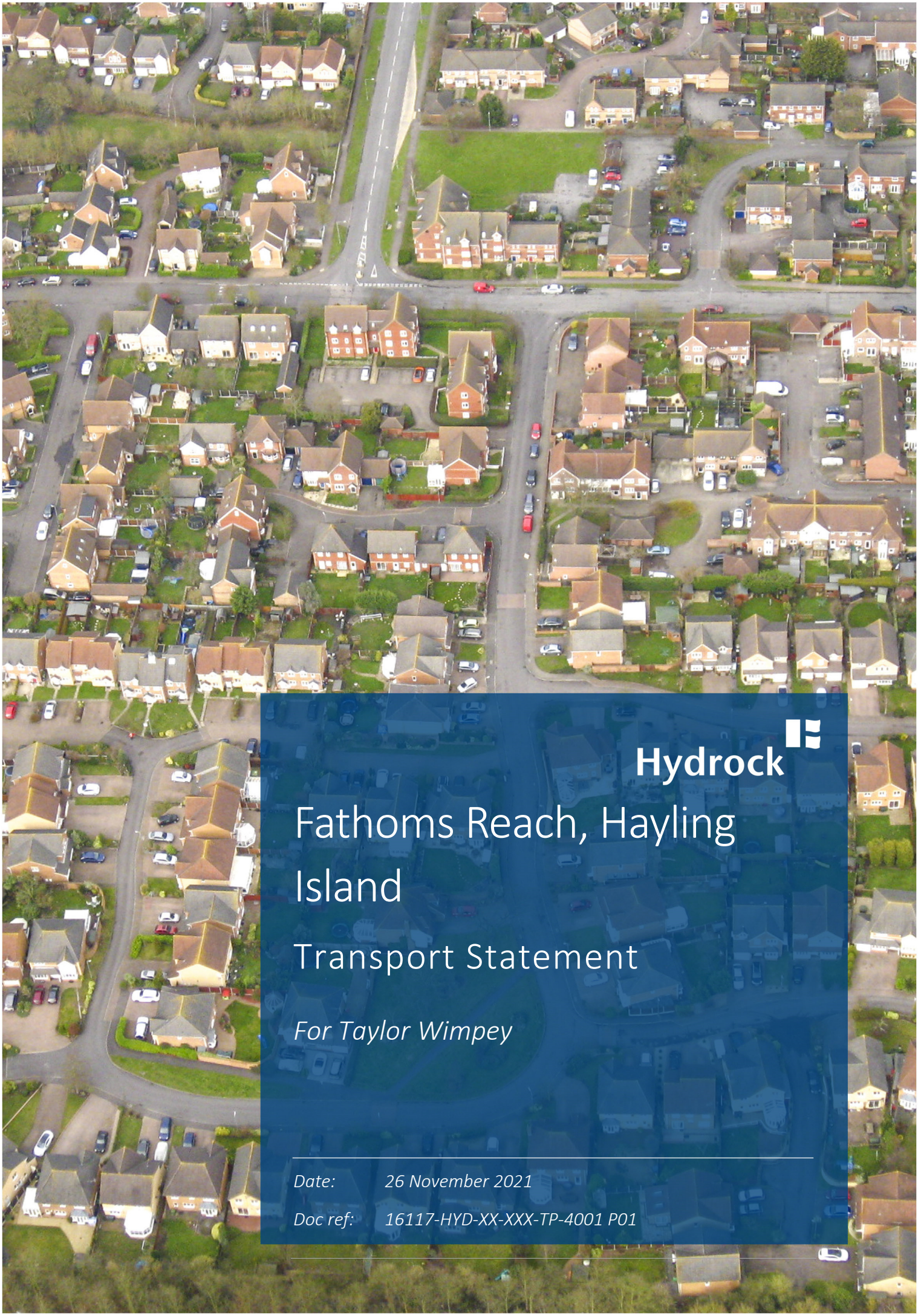

Hydrock

Fathoms Reach, Hayling Island

Transport Statement

For Taylor Wimpey

Date: *26 November 2021*

Doc ref: *16117-HYD-XX-XXX-TP-4001 P01*

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1. INTRODUCTION

1.1 Overview

1.1.1 This Transport Statement (TS) has been prepared by Hydrock on behalf of Taylor Wimpey in support of a Full planning application for the development of 51 residential dwellings at land off Fathoms Reach, Hayling Island. The proposal includes demolition of five existing dwellings, giving a net gain of 46 dwellings.

1.1.2 The TS has been prepared in accordance with industry standards and best practice. It sets out the transport issues relating to the development site (existing conditions) and provides details of the development proposal; including issues associated with accessibility and connectivity, an assessment of the traffic predicted to be generated by the proposed development and the corresponding traffic impact on the surrounding local highway network.

1.1.3 This TS demonstrates that there would be no material highways or transportation matters that would preclude the local planning authority from approving this application.

1.2 Draft Allocation

1.2.1 The site is identified as a draft allocation in the Havant Borough Submission version Draft Local Plan (2036) for up to 55 dwellings and is known as site H28.

1.2.2 The draft policy requires any development proposal to be accompanied by a Transport Assessment and Travel Plan. It notes that access is achievable from Fathoms Reach via demolition of a number of existing properties adjoining the site. From a transport perspective, the design of the layout should consider:

- Protecting and enhancing the existing rights of way; and
- Providing for a high degree of permeability for cyclists and pedestrians to and from the site, the Rook Farm allocation (H27) and public footpaths adjacent to the site.

1.3 Scoping

1.3.1 A Transport Assessment Scoping Note (Doc ref 16117-HYD-XX-XX-TP-3001) was submitted to Hampshire County Council (HCC) as the Local Highway Authority in May 2021. Pre-application scoping discussions were subsequently held with officers, with written feedback received in June 2021, which is provided as Appendix A.

1.3.2 Pre-application meetings were then held with HCC to agree the development and site access principles and the scope of assessment required. This Transport Statement has been prepared in line with these pre-application discussions.

1.4 Structure of Transport Statement

1.4.1 This TS has been compiled to reflect guidance set out in the National Planning Policy Framework (NPPF) and accompanying National Planning Policy Guidance (NPPG). The NPPF sets out at paragraph 110 the transport tests which development proposals should meet, which are as follows:

- To take up appropriate opportunities to promote sustainable transport modes given the type of development and its location;
- To achieve safe and suitable access to the site for all users;

- To design streets, parking areas and other transport elements in line with current national guidance; and
- To ensure that any significant impacts on the local transport network (safety, capacity and congestion) can be cost effectively mitigated to an acceptable degree.

1.4.2 Paragraph 111 sets out 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 would be severe"*.

1.4.3 The TS also considers advice set out in various local and national guidance documents including; Transport Evidence in Plan Making (DfT), Manual for Streets (DfT), Providing for Journeys on Foot (CIHT), Local Transport Note 01/20: Cycle Infrastructure Design (DfT) and the Havant Borough Local Plan.

1.4.4 The remainder of this TS is structured as follows:

- Chapter 2: Site Description and Existing Conditions including a description of the site location, a review of road safety records and a description of the existing site;
- Chapter 3: Site Accessibility by Non-Car Modes including the connectivity of the site by foot, cycle and public transport to local facilities and services;
- Chapter 4: Description of the development proposal including access for all modes, site layout, pedestrian and cycle accessibility and servicing arrangements;
- Chapter 5: Trip Generation and impact of traffic on the local road network; and
- Chapter 6: Summary and Conclusions.

2. SITE DESCRIPTION AND EXISTING CONDITIONS

2.1 Site Location

2.1.1 The proposed development site is located on Hayling Island, Hampshire, which falls within the borough of Havant. The site is located directly east of Fathoms Reach, a residential street which serves Southleigh Grove directly south of the site. The site lies approximately 270m north east of West Town local centre.

2.1.2 The site is bound to the west by Fathoms Reach. To the north and east of the site there is open farmland whilst to the south is Southleigh Grove and St Mary's Grove residential areas. Land to the north and east is also allocated in draft for housing under HBC Local Plan Policy H27 Rook Farm, for about 390 dwellings. The location of the proposed development site is shown below:

Figure 2.1: Site Location

2.2 Accessibility

Pedestrian Accessibility

2.2.1 The site is well connected to existing pedestrian routes. Fathoms Reach and Southleigh Grove provide good quality, lit footways of circa 2m in width on both sides of the road. Where Fathoms Reach meets Manor Road, a dropped kerb crossing point is provided on the Fathoms Reach arm. Good quality, street lit footways are provided on Manor Road. At the southern end of Southleigh Grove, a pedestrian link connects through to St Mary's Road, where pedestrians would cross to the footway on the southern side. In general, the roads in the local area are served with well-maintained lit footways on both sides, with dropped kerbs present at crossing points.

2.2.2 Hampshire Public Right of Way (PRoW) 92 routes to the north of the site from Manor Road to Church Road and PRoW 94 routes to the east linking PRoW 92 with Southleigh Grove. PRoW 92 and 94 converge and meet PRoW 93, which connects to Church Road and provides a direct off-road route to St Mary's Church and The Hayling College. Section 4 sets out how the proposed development will integrate pedestrian connections to these PROWs.

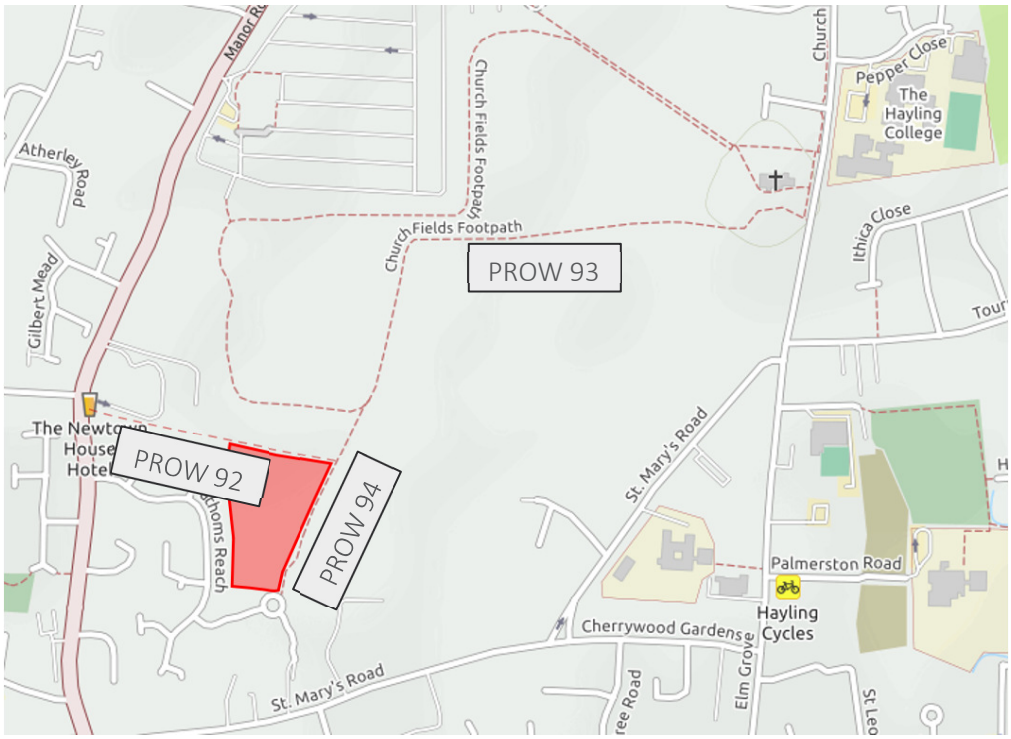

Figure 2.2: Local Public Rights of Way

Cycle Accessibility

2.2.3 While there is no dedicated cycle infrastructure in the immediate vicinity of the site, local roads are subject to 30mph speed limits and of sufficient width that cycling can be considered safe. However, National Cycle Network (NCN) route 2 is located 1km (a five-minute cycle) to the west of the site and provides north/south access to Portsmouth (via a ferry) and Havant.

Public Transport Accessibility

2.2.4 The closest set of bus stops are on A3023 Manor Road, located either side of the junction with Sycamore Drive. These stops are a 290m (4 min) walk from the site access and are served by the services 30 and 31, provided by First Group. The 30 serves the southbound stop, while the 31 offers services northbound. An overview of services is provided in Table 2.1.

Table 2.1: Buses from Sycamore Drive

Number	Route	First/last bus	Weekday Frequency	Saturday Frequency	Sunday Frequency
30	Havant - Hayling Island	05:38/21:14	30 mins	30 mins	60 mins
31	Hayling Island - Havant	06:22/22:39	30 mins	30 mins	60 mins

2.2.5 Havant bus station, the start/end point of the bus routes, is approximately 350m (5 mins) walk from Havant railway station. Havant is served by GWR, Southern and South Western Railway trains and offers direct services to destinations including London Terminals (Waterloo and Victoria), Portsmouth and Southsea, Southampton Central and Brighton.

2.3 Local Highway Network

2.3.1 The development site is located ease of West Town, Hayling Island, which is accessed via the A3023 Manor Road. Access to the site is served by the local road network with local connection to the Strategic Road Network (SRN) (A27) some 6km to the north. Details and descriptions of the local access road are set out below.

Fathoms Reach

2.3.2 Fathoms Reach is a residential cul-de-sac that runs to the west of the site and provides the primary vehicular access. It is lit and subject to a 30mph speed limit. The road measures 5.5m in width and is provided with 2.0m footways on both sides of the carriageway. To the north, the road meets A3023 Manor Road at a priority junction. To the south, it becomes Southleigh Grove, providing access to further residential dwellings.

Southleigh Grove

2.3.3 Southleigh Grove is a residential cul-de-sac accessed from Fathoms Reach. It is of a similar width to Fathoms Reach and is street lit. It has footways on both sides and features a large island halfway along and a turning head at its southern end. Access to St Mary's Road is for pedestrians and cyclists only.

A3023 Manor Road

2.3.4 A3023 Manor Road runs in a north south orientation from the A27 to the north to the sea front in the south. It can be accessed from Fathoms Reach approximately 150m west of the site. A3023 Manor Road has footways on both sides, with dropped kerbs at side roads.

2.3.5 A3023 Manor Road acts as a local distributor road for traffic on the western side of Hayling Island. It is approximately 6.0m wide and features street lighting. To the north, the A3023 continues which provides the route in and out of Hayling Island.

St Mary's Road

2.3.6 St Marys Road runs in an east-west orientation from Elm Grove in the East to A3023 Manor Road in the west. It is accessed from Southleigh Grove to the south of the site, by pedestrians and cycles. In the vicinity of the site the road is of variable width (in the region of 7m) and includes a circa 1.5m wide footway on the southern side of the carriageway.

2.4 Highway Safety

2.4.1 Personal injury accident data has been obtained from Hampshire Constabulary data for the road network in the vicinity of the site covering the most recently available five-year period from 1st September 2015 to 31st August 2020. The study area includes Fathoms Reach, Southleigh Grove, Manor Road and St Mary's Road.

2.4.2 Figure 2.3 overleaf details the locations of local PIAs.

Figure 2.3: PIA data 2015-2020 (Source: Hampshire Constabulary)

2.4.3 Five incidents were reported to Hampshire Constabulary in the time period and study area queried.

2.4.4 No personal injury accidents were recorded on Fathoms Reach, Southleigh Grove, St Mary's Road or at the Fathoms Reach/ A3023 Manor Road and A3023 Manor Road/St Mary's Road junctions.

2.4.5 Four of the accidents occurred on A3023 Manor Road, to the south of Fathoms Reach, as follows:

- A slight injury accident occurred in May 2017 at the A3023 Manor Road/Station Road junction. It involved a car turning right out of Station Road across the path of a cyclist, with a slight injury incurred by the cyclist. The driver failing to look and the dazzling sun were listed as contributory factors.
- A slight injury accident occurred in August 2017 on the A3023 Manor Road just south of the junction with Lexington Gardens and involved a rear end shunt between three cars. One slight injury was reported to the driver of car three. Inexperience and failure to judge speed were listed as contributory factors.
- A serious injury accident occurred in September 2019 at the junction of the A3023 Manor Road and Spinnaker Close. It involved a car pulling out of Spinnaker Close into the path of a car travelling south along Manor Road. Failure to look properly and failure to judge a vehicle's path or speed were listed as contributory factors.

- A further serious injury accident occurred in July 2020 at the same junction. It involved a single car leaving the carriageway near to the junction and colliding with a tree. Loss of control and alcohol impairment were listed as contributory factors.

2.4.6 The accident to the north of Fathoms Reach was a slight injury accident in July 2020 on the A3023 Manor Road close to the junction with Newtown Lane. It involved a child pedestrian being struck by a car travelling south on Manor Road. Failure to look properly by the pedestrian was listed as a contributory factor.

2.4.7 It is acknowledged that this data has been collected for a five-year period up to August 2020 and as such, this data has been supplemented by a review of the latest data available on Crash Map. This search has found one additional incident, a serious incident occurring in October 2020.

2.4.8 This incident occurred on A3023 Manor Road between the junctions of Sycamore Drive and Newton Lane, and involved a motorcyclist colliding with a lamp post. No other vehicles or casualties were involved.

2.4.9 The data shows that Fathoms Reach and the junction of Fathoms Reach/A3023 Manor Road and A3023 Manor Road/St Mary's Road are operating safely, with no accidents recorded in the most recent five-year period. While a small number of accidents were reported on A3023 Manor Road, there is no pattern or clustering of reported incidents within the study area. It can be concluded that there are no issues with the layout or geometry of the local highway network which are likely to be exacerbated by the development.

2.5 Summary

2.5.1 A review of the accessibility of the site has been undertaken, with the key conclusions as follows:

- The site sits within a suburban area of Hayling Island, adjacent to a development site allocated for about 390 dwellings;
- High quality, overlooked and street lit pedestrian infrastructure is available around the site on Fathoms Reach, Southleigh Grove, St Marys Road and A3023 Manor Road;
- The site area benefits for PROWs within its immediate vicinity that allow a high level of pedestrian permeability;
- The environment surrounding the site is conducive to cycling and NCN route 2 is located a 5-minute cycle to the west of the site;
- A pair of bus stops are located 290m to the west of the site on A3023 Manor Road; and
- An analysis of accident data over the most recent five-year period from 2015 to 2020 did not identify an accident trend that could be exacerbated by the development proposals.

3. SITE ACCESSIBILITY BY NON-CAR MODES

3.1 Introduction

3.1.1 This section sets out the connectivity of the site to the surrounding area by sustainable modes of travel and demonstrates the accessible location of the site.

3.1.2 The site has a draft allocation (Site H28) in the submission version of the Havant Borough Local Plan, confirming that HBC consider is a suitable site for residential development in sustainability terms.

3.2 Walking and Cycling Distances

3.2.1 There are a number of publications which suggest guidance for appropriate walking and cycling distances to facilities. For reference, these have been summarised as follows.

3.2.2 Manual for Streets (MfS) states at paragraph 4.4.1 that "walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit…".

3.2.3 Although now superseded by CD143, LTN 91/05 provides useful guidance on likely walking and cycling distances. Paragraph 2.3 states that 'Walking is used to access a wide variety of destinations including educational facilities, shops, and places of work, normally within a range of up to 2 miles' (3.2km). Paragraph 2.2 states that 2 miles is 'a distance that could easily be walked by the majority of people' and (at paragraph 2.3) that 'Walking and rambling can also be undertaken as a leisure activity, often over longer distances'. In relation to shorter trips in particular, the CIHT publication Planning for Walking (section 2.1) states that across Britain about '80% of journeys shorter than 1 mile are made wholly on foot'.

3.2.4 With regard to cycling, the DfT's LTN 01/20 'Cycle Infrastructure Design' notes at paragraph 2.2.2 that two out of every three personal trips are less than five miles (8km) in length, which is an achievable distance to cycle for most people.

3.2.5 For the purpose of this note therefore, key distances are considered to be as follows:

- 800m (0.5 mile) - a walkable neighbourhood;
- 1.6km (1 mile) - reasonable walking distance, over which most journeys will be undertaken on foot;
- 3.2km (2 miles) - maximum walking distance; and
- 8km (5 miles) - reasonable cycling distance.

3.3 Local Services and Amenities

3.3.1 The site is well located in the centre of Hayling Island for access to local facilities and services, with a Tesco Express supermarket, a pub and a Lloyds Pharmacy within West Town. Further amenities are within walking distance in South Hayling. A junior and infant school are located circa 800m to the east on Elm Grove and Secondary education, circa 1.3km from the site on Church Road. Employment is available within the Hayling Island area within walking and cycling distance. Distances to key local services are contained within Table 3.1 (overleaf).

Table 3.1: Distance to local services

Amenity	Distance (m)	Walk Time (Mins)	Cycle Time (Mins)
Royal Mail Delivery Office	280	4	1
The Barley Mow Pub	350	4	1
Tesco Express	550	7	2
Community Centre	650	8	2
St Mary's Church	650	8	2
Mengham Infants School	750	10	2
The Hayling College	785	10	2
The Co-op	790	10	2
Hayling Island Library	950	12	3
Mengham Junior School	1100	13	3
Allotments	1100	13	3
Waterside Medical Practice	1100	13	3
TSB Bank	1100	14	3
Hayling Fruiterers	1100	14	3
Post Office	1200	15	4
Sainsbury's	1200	15	4
Konsept Gym	1200	15	4
Hobbs Pharmacy	1200	15	4
Mill Rythe School	1800	23	6

Note: Based on walking speeds of 80 metres per minute and cycling speeds of 320 metres per minute

Key
Represents a facility within a 'walkable neighbourhood' of 800m
Represents a facility within a 'reasonable' walking distance of 1.6km
Represents a facility within a 'maximum' walking distance of 3.2km or a 'reasonable' cycling distance of 8km

3.4 Summary

3.4.1 A review of the accessibility of the site has been undertaken, with the key conclusions as follows:

- The site is well located for access to a range of local facilities within a 'walkable neighbourhood' including local shopping, the infant school and community facilities;
- Within a 'reasonable' walking distance or a short cycle distance there are a further range of facilities and services including the Junior school, GP surgery and further local and supermarket shopping facilities;
- The secondary school is also well within maximum walking and cycling distances;
- Employment is available both within Hayling Island and in Havant, accessible by bus. Refer to rail connectivity accessible by cycle or short car journeys (which could be made sustainably by electric vehicle).
- A residential travel plan statement is put forward alongside this planning application (see Hydrock report 16117-HYD-XX-XX-TP-6001) to promote and enhance opportunities for residents to make day to day journeys by sustainable modes of transport.

3.4.2 Overall, the site is considered to be a suitable, sustainable location for residential development. Development in this location provides appropriate opportunities for the use of sustainable transport modes for everyday journeys in line with the transport requirements of paragraph 110 of the NPPF.

4. DEVELOPMENT PROPOSAL

4.1 Overview

4.1.1 The proposal is a full application comprised of the following:

- Demolition of five existing residential properties on Fathom Reach - plots 61, 63, 65, 67 and 69 and the erection of three replacement of plots between 61 and 67;
- Creation of a site access using land from plot 67 and 69;
- Erection of 51 dwellings; 3 replacement dwellings on Fathoms Reach and 48 dwellings on land to the east of Fathom Reach;
- Integration with public footpaths around the development.

4.1.2 The proposals will result in a net gain of 46 dwellings.

4.1.3 The proposed development layout is shown in Appendix B. Table 4.1 sets out the quantum of development:

Table 4.1: Quantum of Development

Dwelling Size and type	Quantum
1 Bed Flat	3
2 Bed Flat	6
2 Bed House	19
3 Bed House	18
4 Bed House	5
Total	51 (net gain of 46)

4.2 Vehicle Access

4.2.1 Access is proposed via a new simple priority junction with Fathoms Reach, in the approximate location of Plot 67 and 69 (to be demolished) on Fathoms Reach. The proposed site access is shown on drawing 16117-HYD-XX-XX-DR-TP-0202 in Appendix C and the principles of the design were established through discussions with officers at HCC at the pre-application stage.

4.2.2 The initial section of the access road is 6.4m wide and includes kerb radii of 10m to the north and 4m to the south. This enables a large refuse vehicle and a car to pass one another on the site access road, and was identified by officers at HCC as a key design requirement at the pre-application stage. Further into the site, the access road reduces to 5.5m in width, sufficient for a refuse vehicle and car to pass, given the curved nature of the road.

4.2.3 To allow this access to be constructed, the give way line for the proposed access is pushed 0.5m into the carriageway with footways on Fathom's Reach widened to accommodate this. The junction does not impact upon the adjacent properties' private driveways or their dropped kerb access to the highway, and results in a 5.1m wide carriageway on Fathoms Reach, suitable for a car to pass a large vehicle such as a refuse vehicle, in accordance with guidance contained in Manual for Streets (Figure 7.1).

4.2.4 Visibility of 2.4m x 43m are achievable from the access to Fathoms Reach in both directions reflective of design guidance given in MfS for a 30mph design speed.

4.2.5 A 2m wide footway is provided on the northern side of the carriageway, with the access junction providing dropped kerbs and tactile paving for pedestrians walking north/south on Fathoms Reach. On the southern side of the carriageway a 1m wide service margin is proposed. The proposal maintains the existing driveway crossover access to the properties located to the south of the site (71, 73 and 75 Fathoms Reach).

4.2.6 Policy H28 of the emerging Havant Borough Local Plan states that the access "could be achieved following the demolition of a number of existing residential properties". Given the terrace nature of the properties on Fathoms Reach (except 69), it is not possible to demolish two dwellings only. On investigation, Taylor Wimpey has determined that either only plot 69 could be demolished, or all of the dwellings be demolished.

4.2.7 As such the proposals include the demolition of all five dwellings on plots 61 to 69, and the reprovision of three dwellings (61 to 65), designed to maximise space for the provision of a suitable access road.

4.2.8 Through this approach, the proposed access road meets design guidance for carriageway widths, visibility and geometry contained in Manual for Streets and addresses the design requirements specified by HCC during the pre-application process.

4.2.9 The proposed site access General Arrangement, vehicle tracking and visibility splays are shown in Appendix C.

4.3 Pedestrian and Cycle Access

4.3.1 The site provides pedestrian and cycle access as follows:

- The main site access to Fathoms Reach features a 2m wide footway as described above;
- A 1.5m wide pedestrian and cycle connection is proposed southwards to Southleigh Grove. This connection will enhance pedestrian access to St Mary's Road, which provides access to Mengham Infant and Junior schools.
- A direct, 1.5m wide mettled connection to PROW 92 is proposed to the north of the site. This PROW provides more direct routes to the north and west (such as to access bus stop on Manor Road). This is shown in Figure 4.1 overleaf:

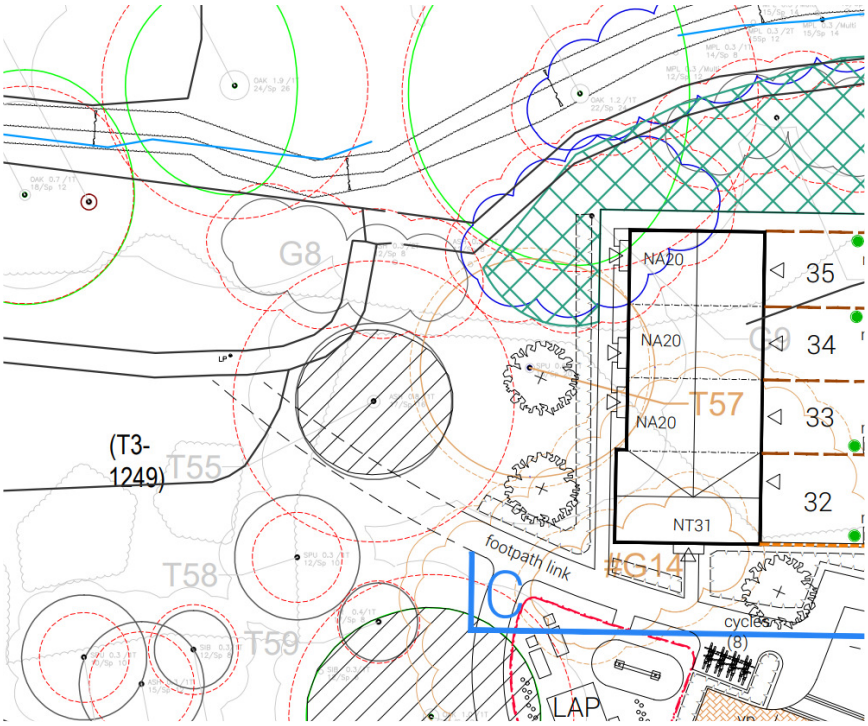

Figure 4.1: Site connection to PROW 92

4.3.2 It should be noted that the routing of PROW 92, 93 and 94 themselves are not impacted upon by the development. Based on HCCs public rights of way map and on-site observations, PROW routes fall outside of the development area. Informal paths that currently cross the site are retained in the layout to enable access to the Public Rights of Way. This is shown in Figure 4.2:

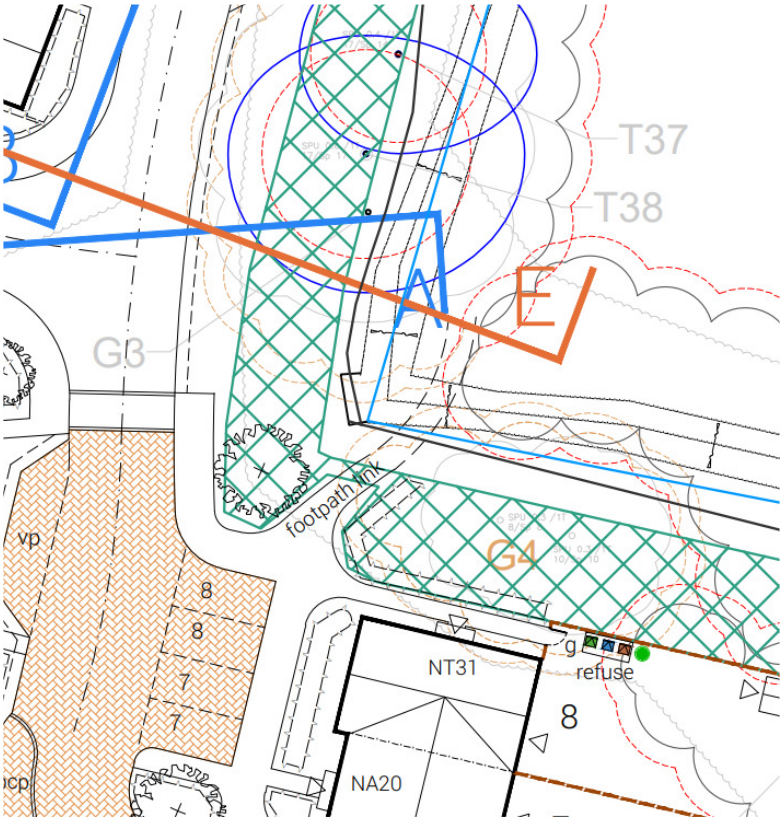

Figure 4.2: Site Connection to PROW 94

4.3.3 Through these connections to the PROW network the site achieves connectivity towards the Rook Farm draft development allocation site (and beyond), that can be tied into should that site come forward.

4.3.4 The site therefore provides a high level of permeability for pedestrians and cyclists to the north, south and west of the site, which maintaining the routing and connecting to the PROW adjacent to the site. This is in line with the draft allocation, which requires that the site:

> *"Protects and enhances the existing rights of way;*
>
> *Provides for a high degree of permeability for cyclists and pedestrians to and from the site, the Rook Farm allocation (H27) and public footpaths adjacent to the site"*

4.4 Internal Geometry

4.4.1 The proposed development features 4.8m wide carriageways around the site with localised widenings and narrowings as required. The site is made up of a north/south road of 4.8m in width and a 4.4m wide feature spine road between the site access (which itself is 6.4m wide, narrowing to 5.5m) and the 4.8m north/south road. The highway geometry is shown in Appendix B.

4.4.2 The highway layout is in accordance with Manual for Streets guidance (MfS Figure 7.1) for residential streets, with 4.8m being suitable for a large vehicle and car to pass. The 4.8m wide streets ensure that green space is maximised within the development and the urban environment does not present as a car dominated environment. This width is considered conducive to lower vehicle speeds creating a more attractive walking and cycling environment.

4.4.3 The 4.8m wide north/south road features a relatively sharp bend in the north east corner of the site, required due to the shape of the development land. This corner has been widened to 5.25m to allow two large cars to pass one another. There is sufficient forward visibility to allow a large vehicle and a car to see each other on approach for a 15mph cornering speed.

4.4.4 A narrowed section between the site access and the 4.8m north/south is provided due to the presence of a root protection area towards the west of the site. A pinch point of 4.4m is provided over a length of 27m, sufficient for two private cars to pass but insufficient for a large vehicle and car to pass. Sufficient forwards visibility is provided to allow an approaching vehicle to wait for an oncoming vehicle to pass on the rare occasions where a large vehicle meets a private car on this section of the site. This section of carriageway will be clearly separated from the 4.8m and wider carriageways through the use of surface treatment.

4.4.5 Within the development, footways 2m in width are provided on one or two sides of the carriageway, with all properties fronting onto a footway or shared surface. 2m wide footways tie into the existing Public Rights of Way for both existing users and residents of the new development. The low speed environment presented by the site's highway geometry ensure that walking is an attractive travel option.

4.4.6 Private cul-de-sacs operating on a shared surface basis of varying widths are provided around the site, with parking aisle widths of 6m ensuring that parked cars can access parking bays in accordance with standard car park geometry guidance Manual for Streets Section 8.3 and Havant's Parking Supplementary Planning Document 2019 Section 4. Parking bays are provided at 2.4m x 4.8m in accordance with the same guidance.

4.5 Parking Provision

Car Parking Standards

4.5.1 To determine the appropriate level of parking on-site, consideration has been given to the Havant Borough Council Parking Supplementary Document (SPD) (2019). This parking standard indicates that two and three bed dwellings require 2 allocated spaces, whilst four bed dwelling require 3 allocated spaces. An additional 20% of parking provision should come forward as visitor parking. Table 4.2 sets out the quantum of development parking provided on site.

Table 4.2: Proposed Parking Provision

	Standard	Quantum	Required	Provided
1 Bed Flat	1 space	3		98 allocated resident bays
2 Bed Flat	2 spaces	6		
2 Bed House	2 spaces	19		
3 Bed House	2 spaces	18		
4 Bed House	3 spaces	5		
Total Allocated		51	98	
Unallocated		20% of resident parking		12 unallocated visitor bays

4.5.2 Table 4.2 indicates that the proposed development will provide parking in line with the Havant parking standards, with Table 4.2 not counting the last bay where there are instances of triple tandem parking.

4.5.3 Similarly, unallocated parking has been provided with consideration given the to the parking standards, in laybys and marked bays around the site with a shortfall of 8 unallocated parking spaces compared with HBC's standard. However, it should be noted that for properties featuring triple tandem parking where the last bay is not counted for residents, the last parking bay is considered accessible for visitors visiting that plot.

4.5.4 With the site located in close proximity to a range of amenities (as set out in Table 2.1), having strong pedestrian accessibility to the north, south and west via existing public rights of way, the short fall in parking is not considered to present a highways safety concern. It is likely that, regardless of the quantity of marked visitor bays, that on-street parking will occur and the site layout incorporates sufficient widths to allow a large vehicle to pass a private car parked on-street.

Cycle Parking

4.5.5 The Havant Parking SPD also provides requirements for cycle parking. The provision requires two storage spaces for C3 Dwelling houses with more than one bedroom, plus an additional 20% for short term visitor parking in developments of more than 10 units.

4.5.6 Each dwelling will feature a shed or garage for the storage of two cycles, whilst the block of flats incorporates a cycle store for 15 cycles, plus 6 visitor cycle parking spots. With much of the site coming forward as houses on self-contained plots, it is likely that visitors will leave their cycles at the plot they are visiting rather than a central, public cycle parking location.

Electric Vehicle (EV) Parking

4.5.7 The adopted Local Plan does not provide standards for EV parking. The emerging HBC Local Plan (Policy IN3) suggests that Electric Vehicle charging infrastructure should be provided for:

- Each new residential unit with private off-street parking;
- An appropriate number of spaces in shared parking at residential and commercial development where long-term parking for staff or residents is provided.

4.5.8 It is proposed to provide passive infrastructure for EV parking for each residential dwelling.

4.6 Servicing

4.6.1 Tracking has been provided in Appendix D for a large (11.3m) refuse vehicle and demonstrates that this vehicle can access the site via the proposed access from Fathoms Reach, turn within the adopted highway and exit in a forward gear. The tracking also demonstrates that the design conforms with guidance in Manual for Streets (Para 6.8.9) in relation to carry distances for residents and refuse workers.

4.6.2 Tracking has been provided to demonstrate that a fire tender can access all dwellings, meeting the distances required by Building Regulations document Part B.

4.6.3 This vehicle tracking is contained within Appendix D.

5. TRIP GENERATION AND IMPACT

5.1 Introduction

5.1.1 The following section assesses the trip generation from the new development and considers any potential impact on local junctions from the scheme.

5.2 Trip Generation

5.2.1 The TRICS trip generation database has been interrogated and a multi-modal trip rate has been obtained for the Houses Privately Owned land use category. The following TRICS criteria were used:

- Sites within England and Wales, excluding Greater London;
- Sites in suburban areas and residential zones;
- Surveys undertaken between 2013 and 2021 on weekdays; and
- Developments of between 20 and 80 units.

5.2.2 The proposed vehicular, pedestrian and cycle trip rates for the scheme are shown in Table 5.1, along with the total people (all modes) trip rate. The TRICS Outputs are provided in Appendix E.

Table 5.1: Trip Rates

	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Tot	Arr	Dep	Tot
Vehicular	0.130	0.419	0.549	0.354	0.161	0.515
Pedestrian	0.080	0.256	0.336	0.111	0.057	0.168
Cycle	0.002	0.043	0.045	0.016	0.009	0.025
Total People	0.222	0.976	1.198	0.645	0.286	0.931

5.2.3 Trips generated by the proposed net gain of 46 dwellings are given in Table 5.2:

Table 5.2: Trip Generation

	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Tot	Arr	Dep	Tot
Vehicular	6	20	25	16	7	24
Pedestrian	4	12	15	5	3	8
Cycle	0	2	2	1	0	1
Total - Multi Modal	10	45	55	30	13	43

5.2.4 The proposal is therefore predicted to generate 55 trips across all modes in the highway network morning peak hour and 43 in the highway network evening peak hour. Of these, 25 and 24 would be vehicle trips in the morning and evening peak hours respectively.

5.2.5 The TRICS assessment of similar suburban sites has identified a relatively high number of pedestrian trips made during the peak hours. This is supported by the site's permeability and connections to existing Public Rights of Way network, with the predicted pedestrian trips likely being proportionally distributed across four access routes - The site access; PRoW 92 towards Manor Road and destinations to the north and west; and PRoW 94 to St Mary's Road and local schools.

5.3 Impact

Development Impact

5.3.1 The proposed trip generation of the site represents a minor increase in trips on the highway network, with less than one additional vehicle every two minutes generated by the site. This level of trip generation is negligible and unlikely to be noticeable on the local highway network. This was agreed with officers at pre-application stage.

5.3.2 A Transport Assessment was undertaken to support the emerging Havant Local Plan, which includes the assessment of allocated housing sites across Hayling Island. Through this assessment, highway improvement schemes have been identified for development in Havant, to mitigate against any highway impacts caused by the cumulative impact of development in Havant Island.

5.3.3 Nevertheless, a comparison has been undertaken to hourly flow data on the A3023 Manor Road, in the vicinity of Gilbert Mead using DfT ATC data (Counter ID 27621) to identify the proposed development's likely specific impact. The last year with a daily profile available is 2016, with the snapshot occurring at the end of September, and as such, the usage of this data represents a robust off-season traffic count. This 2016 data was then factored up to 2026 levels using the TEMPRO database to represent a 'planning year plus five years' future year scenario. The TEMPRO assessment for 2016 to 2026, locally adjusted to Havant borough, indicates a morning peak hour growth rate 1.1118 and an evening peak hour growth rate of 1.1035 over this 10 year period.

5.3.4 The comparison between forecast 2026 peak hour traffic two-way flows and the development's two-way traffic flows are presented in Table 5.3:

Table 5.3: Development Traffic Impact on Manor Road

Time Period	2016 Baseline Traffic	2026 Forecast Traffic	Development Traffic	Percentage Increase
0800 to 0900	450	500	25	5.0%
1700 to 1800	465	513	24	4.7%

5.3.5 Table 5.3 demonstrates that the proposed development will not have a significant impact on traffic flows on A2034 Manor Road. The traffic flow increase is anticipated to be within daily flow variations and, considered as a stand-alone site, there is no residual impact to mitigate. The impact of the proposal will be negligible and certainly cannot be considered severe in the context of the NPPF paragraph 110 and 111 criteria.

Local Plan Context

5.3.6 A Transport Assessment was undertaken to support the emerging Havant Local Plan, which includes the assessment of allocated housing sites across Hayling Island. The Transport Assessment modelled the cumulative impact of Local Plan development on the Hayling Island transport network. The development assessed comprised 1,087 dwellings, of which 55 were allowed for on Fathoms Reach. Through this assessment, a number of schemes have been identified to mitigate against the highway impacts caused by the cumulative impact of this quantum of development in Havant Island. In summary, the proposed mitigation comprises:

- 'Friction reduction measures' such as provision of bus lay-bys, pull-ins and right turn lanes;
- Junction improvement schemes at Mill Rythe, West Lane, Northney Road and Langstone Road; and

- Improvements to the Billy Trail cycle route and other improvements to promote non-car mode use.

5.3.7 It should be noted that the Fathom's Reach site comprised just 5% of the dwelling mix assessed and as set out in Paragraph 5.3.3, the impacts of this site alone are negligible.

5.3.8 Subsequently, the Inspector's Interim Findings on the Local Plan Submission have been published. The Transport Assessment was found to be not sound based on current evidence due to seasonality factors not being considered.

Seasonality

5.3.9 Against this background, consideration has been given to the impact of the development on seasonal traffic flows. It is important to note that standard practice is to undertake transport assessment of highway networks during 'typical' network conditions and outside of school holiday periods.

5.3.10 It is anticipated that increased background traffic flows observed in the summer are likely to be at their greatest at the weekend. Whilst the TRICS database does not contain TRICS data for housing for weekends, the proposed development is likely to generate fewer trips at the weekends due to the reduced employment and educational trips that will occur at this time, and as such limiting the developments impact on seasonal traffic flows. The development itself is within 1.2km (suitable walking and cycling distance - see Section 3) of Hayling Island beach and as such, it is unlikely that the proposal would add to seasonal leisure traffic in the summer months.

5.3.11 Similarly, development trips will likely be travelling in the opposite direction to the tidal seasonal flows, with visitors to Hayling Island travelling south into the Island in the morning when the development's residents are likely leaving the Island for work or other purposes.

5.3.12 It is also worth noting that the proposals will have a reduced proportional impact on background traffic flows during periods of increased network traffic due to seasonality.

5.3.13 In summary, while background traffic flows increase seasonally, there is no evidence to suggest that development flows would increase due to seasonal factors. In fact at times when the highway network is busy, local residents are more likely to undertake local journeys by non-car modes. The site travel plan will seek to facilitate and promote non-car mode use for local trips. The impact of the development on trips during peak holiday seasons will continue to be negligible and certainly not severe.

5.4 Summary

5.4.1 The proposed development will generate an increase of 25 two-way vehicle trips in the morning peak hour and 24 two-way vehicle trips in the evening peak period.

5.4.2 I addition, the proposed development will generate a moderate number of pedestrian and cycle trips, and with the site's high level of permeability onto the surrounding network, direct access onto key desire lines to local schools and bus stops can be achieved. The proposed travel plan will seek to promote and encourage local travel by non-car modes.

5.4.3 The proposed trip generation of the site represents a minor increase in trips on the highway network, with less than one additional vehicle every two minutes generated by the site. This level of trip generation is negligible and in itself is unlikely to be noticeable on the local highway network. This was agreed with officers at pre-application stage.

5.4.4 The cumulative impact of development on Hayling Island was assessed by HBC's Transport Assessment prepared in support of the Local Plan and mitigation schemes identified It should be noted that development at Fathoms Reach comprised just 5% of the dwelling mix assessed.

5.4.5 It is acknowledged that Hayling Island observes seasonal traffic flows. The proposed development is not considered to exacerbate seasonal traffic impacts due to reduced development trip generation at weekends and development trips travelling against the tidal flows of visitors to the island. During busy periods, residents are more likely to walk or cycle for local trips. The impact of the development on trips during peak holiday seasons will continue to be negligible and certainly not severe.

6. SUMMARY

6.1 Summary

6.1.1 Hydrock Consultants has been appointed by Taylor Wimpey to prepare this Transport Statement for a proposed residential development of 51 dwellings on land at Fathoms Reach, Hayling Island, Hampshire. The proposals would result in the net gain of 46 dwellings.

6.1.2 The site has been identified as a draft allocation in Havant Borough Councils Pre-Submission Draft Local Plan (2036) as site H28.

6.1.3 This TS considers the development proposal against the key transport requirements given in paragraphs 110 and 111 of the National Planning Policy Framework (NPPF), which require:

- To take up appropriate opportunities to promote sustainable transport modes given the type of development and its location;
- To achieve safe and suitable access to the site for all users;
- To design streets, parking areas and other transport elements in line with current national guidance; and
- To ensure that any significant impacts on the local transport network (safety, capacity and congestion) can be cost effectively mitigated to an acceptable degree.

6.1.4 A Framework Travel Plan (FTP) (Ref: 16117-HYD-XX-XX-RP-TP-6001), which identifies measures and initiatives to encourage travel to and from the site by sustainable modes of travel, has been prepared and is submitted as a separate document. The TS and the TP should be read alongside one another.

6.2 Conclusions

6.2.1 The site is situated in a sustainable location close to local facilities and services and bus stops providing access to a frequent bus service. The location will allow residents of the development to walk, cycle and use public transport for day-to-day journeys to and from the site. The site has been designed as a permeable layout, provide good connectivity to the local footway and public right of way network in line with good practice guidance in Manual for Streets and the draft allocation. The proposal is supported by a Framework Travel Plan, providing the sustainable transport strategy for the site. It is therefore demonstrated that appropriate opportunities to support travel by sustainable modes will be taken up, having regard to the suburban location of the development.

6.2.2 The proposal provides safe and suitable access by all modes with the site designed to be permeable to pedestrians and cyclists and the access designed in line with guidance in Manual for Streets as well as in accordance with pre-application feedback.

6.2.3 The transport elements of the internal site layout have been designed to guidance in Manual for Streets and relevant local and national design guidance. Suitable road widths and [pedestrian provision is proposed. Parking is to be provided in 98 allocated spaces, in accordance with HBC parking standards, with a further 12 spaces dedicated to visitor parking. Whilst the proposed level of visitor provision falls slightly short of HBC's standards, this is considered acceptable in the context of the accessible location, some plots have an 'extra' space due to triple tandem parking and there is capacity for visitor parking to occur on-street. Swept path analysis demonstrates that suitable provision is made for refuse and emergency vehicles. The proposal therefore meets the NPPF requirement to design streets, parking and other transport elements in line with national policy guidance.

6.2.4 The development is expected to generate 25 additional vehicular trips in the morning peak hour and 24 additional vehicle trips in the evening peak. This forecasted increase in vehicular trip generation will not have any material detrimental impact upon the safety, operation and functioning of the surrounding local highway network. It is acknowledged that Hayling Island features seasonal variations in traffic flows. The proposed development is unlikely to exacerbate seasonal increases in traffic flows due to its residential nature.

6.2.5 Consequently, in light of the assessment undertaken and presented within this report, it is considered that the development proposal meets the requirements of paragraphs 110 and 11 of the NPPF and as well as local transport policy. There are no significant highways or transportation matters that should preclude the Local Planning Authority from approving this planning application.

Appendix A Pre-Application Feedback

Hampshire County Council

Economy, Transport and Environment Department
Elizabeth II Court West, The Castle
Winchester, Hampshire SO23 8UD

Tel: 0300 555 1375 (General Enquiries)
0300 555 1388 (Roads and Transport)
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Fax 01962 847055

www.hants.gov.uk

Emily Pearson,
Hydrock,
White Building,
1-4 Cumberland Place,
Southampton,
SO15 2NP

Enquiries to Chris Hirst

Direct Line 0370 779 0563

Date 10th June 2021

My reference TBC

Your reference

Email Chris.Hirst@hants.gov.uk

Dear Emily,

Pre-Application Enquiry – Fathoms Reach, Hayling Island

Thank you for your pre-application enquiry with regards to the proposed development at Fathoms Reach, Hayling Island. A Scoping Note (SN) has been submitted and has subsequently been reviewed. Following a review of the note, the Highway Authority wish to make the following comments.

Existing Conditions
The proposed development is located to the northeast of Fathoms Reach on Hayling Island. Fathoms Reach is situated approximately 300m to the east of West Town and 1km from Elm Grove and the facilities available along the high street.

The site has been identified in Havant Borough Council's emerging local plan for the development of 55 dwellings with vehicular access provided via the demolition of existing residential properties adjoining the site. The site-specific policy requires the submission of a Transport Assessment, with reference to the Hayling Island microsimulation model, and Travel Plan to address highway matters associated with the development.

Accessibility
Within the supporting transport document, an audit should be undertaken of the nearby walking and cycling infrastructure (in the form of a WCHAR) to identify whether any upgrades are required to facilitate sustainable transport connections to local facilities.

The site layout plan indicates pedestrian and cycle connections off-site in the northwestern and northeastern corners of the site, alongside the footway through the site access to provide access onto Southleigh Grove. To ensure

permeability between this development and the adjacent site also allocated within the emerging local plan known as Rook Farm, further details of the pedestrian/cycle connection in the northeastern corner of the site should be provided. This should include the width of the path and off-site landing point to understand how the connection will integrate with the Rook Farm development.

Further details regarding the northwestern connection point into Footpath 92 are also sought to understand at which point the off-site connection and Footpath will connect. Conversations are currently being held with HCC Countryside Services team to understand the condition of the footpath and any planned improvement schemes which could be contributed towards by the proposed development given that the usage of the footpath will be directly exacerbated by this site.

Footpath 94 also runs north/south towards the eastern side of the site and could represent another walking route to the proposed development. Further details should be provided as part of the planning application to understand how the development could tie into these facilities.

Personal Injury Accident Data
No reference has been made within the SN to provision of Personal Injury Accident (PIA) data through the transport assessment. The Highway Authority requires the provision of the most recent 5-year accident data gathered from Hampshire Constabulary and an analysis of the data to confirm that there are no accident clusters or patterns which could be exacerbated by the proposed development.

Development Proposals
To provide vehicular access to the site, the scoping note proposes to demolish property numbers 65 and 67 along Fathoms Reach and also relocate the driveways of numbers 61 and 67 to the rear of the properties. The new access will be used to serve 40 dwellings with no alternative form of emergency access.

The site access has been designed to a width of 5m and is flanked to the north and south by 2m footways. Visibility splays have been demonstrated based on a 30mph speed limit at 2.4m x 43m, with the northbound splay shown to the tangent. This has been demonstrated in drawing number 16116-HYD-XX-XX-DR-TP-0202.

Following a review of the site access proposals, the Highway Authority have the following comments to make:

- The uncontrolled crossing should be located on the desire line for pedestrians and within land to be dedicated as highway.
- The proposed access is too narrow and should be widened to ensure that two vehicles are able to navigate the junction at the same time. The tracking currently shows that a refuse vehicle crosses the central road markings whilst manoeuvring. There are no passing places identified

which means that the refuse vehicle would need to reverse back out onto the highway in the event that a car is trying to leave the site. Consideration should be given towards a 5.5m or 6.0m wide access with updated tracking drawings to demonstrate that this movement can be safely undertaken.

- Tracking for a car entering the site whilst another vehicle waits to egress the junction.

The Highway Authority would welcome further engagement regarding the site access.

Parking
In their capacity as local parking authority, Havant Borough Council will determine whether the proposed quantum of parking meets adopted parking standards.

Adopted parking standards must be adhered to prevent any overspill parking from the development onto Fathoms Reach. Cars may otherwise park within the site access visibility splays which is unacceptable and must be avoided to prevent a potential safety concern.

Internal Layout
The scoping note does not make reference as to whether the internal road layout will be offered for adoption to HCC under a Section 38 agreement. The Highway Authority would support the applicant putting the internal road layout forward for adoption and would welcome early discussions on this matter to facilitate the S38.

Developers should also be made aware of the Advanced Payment Code (APC) that will be required by the Highway Authority. Details of this can be found via the following link - http://documents.hants.gov.uk/transport/APCProcess-Guidancedocumentforwebsitev22018-04-02.pdf.

The site layout presented in Appendix A does not indicate that any vehicular connections to the northeast corner of the site will be provided, allowing for permeability through to Rook Farm. Given that no emergency access is currently shown to the development, the applicant should confirm whether the internal road could be constructed to the site boundary to allow for future connectivity and emergency access between the two developments.

Trip Generation
The SN sets out the methodology for calculating trip generation from the site by utilising the industry standard TRICS database and assigning a 20% adjustment factor to the rate to account for COVID related traffic flow reductions. The justification behind the adjustment factor is to take account of peak spreading and the expectation that the trend of home working will continue post COVID.

Whilst there may be changes to travel patterns as a result of the pandemic, the Highway Authority does not agree that it is currently appropriate to apply an adjustment factor until the long-term impacts are known. Traffic levels have varied throughout the pandemic and there is an indication that traffic levels in Havant are now returning back to 'pre-covid' levels, indicated by flow data from HCC's ITS team on the B2149 Park Road South, collected in April 2021, which shows northbound and southbound traffic flows are 100% and ~95% when compared to the February 2020 traffic flow data.

For the reasons stated above, the non-adjusted trip rate shown within table 5.1 should be utilised, providing two-way trip rates of 0.504 and 0.505 in the respective AM and PM peak hours, equating to 19 trips in both of the peaks.

Traffic Distribution
Given the identified trip generation, the SN does not propose to undertake any further assessment work to understand the operation of the local highway network.

In support of the local plan process, Havant Borough Council have produced a Transport Assessment to review the cumulative impact of development on Hayling Island. As an allocated site in the emerging local plan, traffic associated with the Fathoms Reach site has been factored into this assessment. Whilst the Highway Authority therefore agrees that the standalone trip generation for this site does not qualify for further assessment work as part of any planning application, the cumulative impact of allocated developments on Hayling Island is addressed below.

Traffic Impact
To assess the impact of allocated sites identified with Havant Borough Council's emerging local plan, a microsimulation model was created and run through a variety of scenarios which included mitigation measures throughout Hayling Island identified by HBC's engineering team. This work has been detailed within the Transport Assessment created by HBC. The aim of the Transport Assessment is to identify how allocated sites could be mitigated in highway terms to ensure that their implementation will not result in a severe impact on the local highway network.

As noted previously, Fathoms Reach has been identified within the emerging local plan and therefore the traffic generation from the site has been factored into the microsimulation model. To ensure that the cumulative impact of this development and others on Hayling Island are sufficiently mitigated, the Highway Authority require a contribution from this site towards the measures identified within the Transport Assessment along the A3023 proportionate to the scale of development. Further discussions around the contribution value should take place as part of the pre-application and application discussions.

Travel Plan
Whilst the site is not typically of a scale which usually qualifies for a travel plan, in this instance the Highway Authority would expect a travel plan to be produced

in support of any planning application. This is due to the traffic sensitivities on the island and the benefit of promoting modes of sustainable transport to reduce the impact on the local road network.

Summary
The Highway Authority would welcome further discussions, or a follow up meeting to discuss the points raised within this response should this be of benefit.

Yours Sincerely,

Chris Hirst – Senior Transport Planner

Appendix B Site Layout

Site Area = 1.779 Hectares

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- Car parking bay and allocation
- Visitor parking bay
- Plot boundary fence
- Decorative boundary wall
- Existing trees and undergrowth to be removed for development
- Indicative new landscaping / trees
- Affordable Unit Location (30%)
- Ecology Zone
- Concrete block surface finish
- Site Sections
- Street Scenes

Fathom's Reach
Hayling Island

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SDA DESIGN GROUP

DRAWING TITLE
Site Plan Planning Layout

In Progress

SCALE	SHEET SIZE	DRAWN	CHKD	DATE
1:500	A1	ML		05/10/2021

DETAIL PLANNING

19-1105-005-1ST

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Appendix C Site Access

Appendix D Vehicle Tracking

Appendix E TRICS Output

Calculation Reference: AUDIT-540501-211020-1035

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
	KC	KENT	1 days
03	SOUTH WEST		
	DV	DEVON	2 days
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	SF	SUFFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	2 days
	SY	SOUTH YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
09	NORTH		
	DH	DURHAM	1 days
10	WALES		
	PS	POWYS	1 days

Primary Filtering selection:

Parameter: No of Dwellings
Actual Range: 21 to 73 (units:)
Range Selected by User: 20 to 80 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 27/05/21

Selected survey days:

Monday	5 days
Tuesday	2 days
Wednesday	2 days
Thursday	4 days

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	13

Selected Location Sub Categories:

Residential Zone	13

Secondary Filtering selection:

Use Class:

C3	13 days

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	5 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	3 days
125,001 to 250,000	5 days
250,001 to 500,000	1 days

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	11 days

Travel Plan:

Yes	3 days
No	10 days

PTAL Rating:

No PTAL Present	13 days

LIST OF SITES relevant to selection parameters

1 CA-03-A-05 DETACHED HOUSES CAMBRIDGESHIRE
EASTFIELD ROAD
PETERBOROUGH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 28
Survey date: MONDAY 17/10/16 Survey Type: MANUAL

2 CH-03-A-11 TOWN HOUSES CHESHIRE
LONDON ROAD
NORTHWICH
LEFTWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 24
Survey date: THURSDAY 06/06/19 Survey Type: MANUAL

3 DH-03-A-01 SEMI DETACHED DURHAM
GREENFIELDS ROAD
BISHOP AUCKLAND

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 50
Survey date: TUESDAY 28/03/17 Survey Type: MANUAL

4 DV-03-A-01 TERRACED HOUSES DEVON
BRONSHILL ROAD
TORQUAY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 37
Survey date: WEDNESDAY 30/09/15 Survey Type: MANUAL

5 DV-03-A-03 TERRACED & SEMI DETACHED DEVON
LOWER BRAND LANE
HONITON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 70
Survey date: MONDAY 28/09/15 Survey Type: MANUAL

6 HC-03-A-23 HOUSES & FLATS HAMPSHIRE
CANADA WAY
LIPHOOK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 62
Survey date: TUESDAY 19/11/19 Survey Type: MANUAL

7 KC-03-A-03 MIXED HOUSES & FLATS KENT
HYTHE ROAD
ASHFORD
WILLESBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 51
Survey date: THURSDAY 14/07/16 Survey Type: MANUAL

8 NY-03-A-08 TERRACED HOUSES NORTH YORKSHIRE
NICHOLAS STREET
YORK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 21
Survey date: MONDAY 16/09/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9 NY-03-A-09 MIXED HOUSING NORTH YORKSHIRE
GRAMMAR SCHOOL LANE
NORTHALLERTON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 52
Survey date: MONDAY 16/09/13 Survey Type: MANUAL

10 PS-03-A-02 DETACHED/SEMI-DETACHED POWYS
GUNROG ROAD
WELSHPOOL

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 28
Survey date: MONDAY 11/05/15 Survey Type: MANUAL

11 SF-03-A-07 MIXED HOUSES SUFFOLK
FOXHALL ROAD
IPSWICH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 73
Survey date: THURSDAY 09/05/19 Survey Type: MANUAL

12 SY-03-A-01 SEMI DETACHED HOUSES SOUTH YORKSHIRE
A19 BENTLEY ROAD
DONCASTER
BENTLEY RISE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 54
Survey date: WEDNESDAY 18/09/13 Survey Type: MANUAL

13 WL-03-A-02 SEMI DETACHED WILTSHIRE
HEADLANDS GROVE
SWINDON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 27
Survey date: THURSDAY 22/09/16 Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	44	0.055	13	44	0.274	13	44	0.329
08:00 - 09:00	13	44	0.130	13	44	0.419	13	44	0.549
09:00 - 10:00	13	44	0.159	13	44	0.179	13	44	0.338
10:00 - 11:00	13	44	0.121	13	44	0.156	13	44	0.277
11:00 - 12:00	13	44	0.133	13	44	0.140	13	44	0.273
12:00 - 13:00	13	44	0.170	13	44	0.144	13	44	0.314
13:00 - 14:00	13	44	0.154	13	44	0.165	13	44	0.319
14:00 - 15:00	13	44	0.146	13	44	0.205	13	44	0.351
15:00 - 16:00	13	44	0.265	13	44	0.194	13	44	0.459
16:00 - 17:00	13	44	0.296	13	44	0.156	13	44	0.452
17:00 - 18:00	13	44	0.354	13	44	0.161	13	44	0.515
18:00 - 19:00	13	44	0.234	13	44	0.135	13	44	0.369
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.217			2.328			4.545

Parameter summary

Trip rate parameter range selected:	21 - 73 (units:)
Survey date date range:	01/01/13 - 27/05/21
Number of weekdays (Monday-Friday):	13
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	4
Surveys manually removed from selection:	0

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	44	0.000	13	44	0.000	13	44	0.000
08:00 - 09:00	13	44	0.005	13	44	0.005	13	44	0.010
09:00 - 10:00	13	44	0.007	13	44	0.005	13	44	0.012
10:00 - 11:00	13	44	0.002	13	44	0.003	13	44	0.005
11:00 - 12:00	13	44	0.003	13	44	0.000	13	44	0.003
12:00 - 13:00	13	44	0.000	13	44	0.002	13	44	0.002
13:00 - 14:00	13	44	0.002	13	44	0.002	13	44	0.004
14:00 - 15:00	13	44	0.002	13	44	0.002	13	44	0.004
15:00 - 16:00	13	44	0.002	13	44	0.002	13	44	0.004
16:00 - 17:00	13	44	0.000	13	44	0.002	13	44	0.002
17:00 - 18:00	13	44	0.000	13	44	0.000	13	44	0.000
18:00 - 19:00	13	44	0.000	13	44	0.000	13	44	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.023			0.046

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	44	0.009	13	44	0.038	13	44	0.047
08:00 - 09:00	13	44	0.002	13	44	0.043	13	44	0.045
09:00 - 10:00	13	44	0.003	13	44	0.016	13	44	0.019
10:00 - 11:00	13	44	0.010	13	44	0.007	13	44	0.017
11:00 - 12:00	13	44	0.005	13	44	0.005	13	44	0.010
12:00 - 13:00	13	44	0.010	13	44	0.009	13	44	0.019
13:00 - 14:00	13	44	0.009	13	44	0.000	13	44	0.009
14:00 - 15:00	13	44	0.005	13	44	0.005	13	44	0.010
15:00 - 16:00	13	44	0.040	13	44	0.003	13	44	0.043
16:00 - 17:00	13	44	0.029	13	44	0.010	13	44	0.039
17:00 - 18:00	13	44	0.016	13	44	0.009	13	44	0.025
18:00 - 19:00	13	44	0.017	13	44	0.007	13	44	0.024
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.155			0.152			0.307

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	44	0.014	13	44	0.111	13	44	0.125
08:00 - 09:00	13	44	0.080	13	44	0.256	13	44	0.336
09:00 - 10:00	13	44	0.081	13	44	0.085	13	44	0.166
10:00 - 11:00	13	44	0.047	13	44	0.087	13	44	0.134
11:00 - 12:00	13	44	0.068	13	44	0.038	13	44	0.106
12:00 - 13:00	13	44	0.066	13	44	0.052	13	44	0.118
13:00 - 14:00	13	44	0.057	13	44	0.071	13	44	0.128
14:00 - 15:00	13	44	0.061	13	44	0.054	13	44	0.115
15:00 - 16:00	13	44	0.196	13	44	0.102	13	44	0.298
16:00 - 17:00	13	44	0.130	13	44	0.049	13	44	0.179
17:00 - 18:00	13	44	0.111	13	44	0.057	13	44	0.168
18:00 - 19:00	13	44	0.059	13	44	0.036	13	44	0.095
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.970			0.998			1.968

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	44	0.002	13	44	0.057	13	44	0.059
08:00 - 09:00	13	44	0.005	13	44	0.083	13	44	0.088
09:00 - 10:00	13	44	0.007	13	44	0.031	13	44	0.038
10:00 - 11:00	13	44	0.017	13	44	0.019	13	44	0.036
11:00 - 12:00	13	44	0.012	13	44	0.009	13	44	0.021
12:00 - 13:00	13	44	0.019	13	44	0.028	13	44	0.047
13:00 - 14:00	13	44	0.007	13	44	0.003	13	44	0.010
14:00 - 15:00	13	44	0.019	13	44	0.016	13	44	0.035
15:00 - 16:00	13	44	0.028	13	44	0.017	13	44	0.045
16:00 - 17:00	13	44	0.029	13	44	0.002	13	44	0.031
17:00 - 18:00	13	44	0.043	13	44	0.007	13	44	0.050
18:00 - 19:00	13	44	0.054	13	44	0.000	13	44	0.054
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.242			0.272			0.514

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	44	0.090	13	44	0.546	13	44	0.636
08:00 - 09:00	13	44	0.222	13	44	0.976	13	44	1.198
09:00 - 10:00	13	44	0.267	13	44	0.357	13	44	0.624
10:00 - 11:00	13	44	0.227	13	44	0.328	13	44	0.555
11:00 - 12:00	13	44	0.237	13	44	0.222	13	44	0.459
12:00 - 13:00	13	44	0.293	13	44	0.267	13	44	0.560
13:00 - 14:00	13	44	0.267	13	44	0.277	13	44	0.544
14:00 - 15:00	13	44	0.260	13	44	0.317	13	44	0.577
15:00 - 16:00	13	44	0.676	13	44	0.371	13	44	1.047
16:00 - 17:00	13	44	0.607	13	44	0.263	13	44	0.870
17:00 - 18:00	13	44	0.645	13	44	0.286	13	44	0.931
18:00 - 19:00	13	44	0.444	13	44	0.227	13	44	0.671
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.235			4.437			8.672