

REPORT

Land at Cowplain Community School, Hart Plain Avenue, Waterloooville

Transport Statement

Client: Frontier Estates Ltd.

Reference: PC2284-RHD-ZZ-XX-RP-R-0001

Status: 0.3/S3

Date: 14/07/2022

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1 Introduction

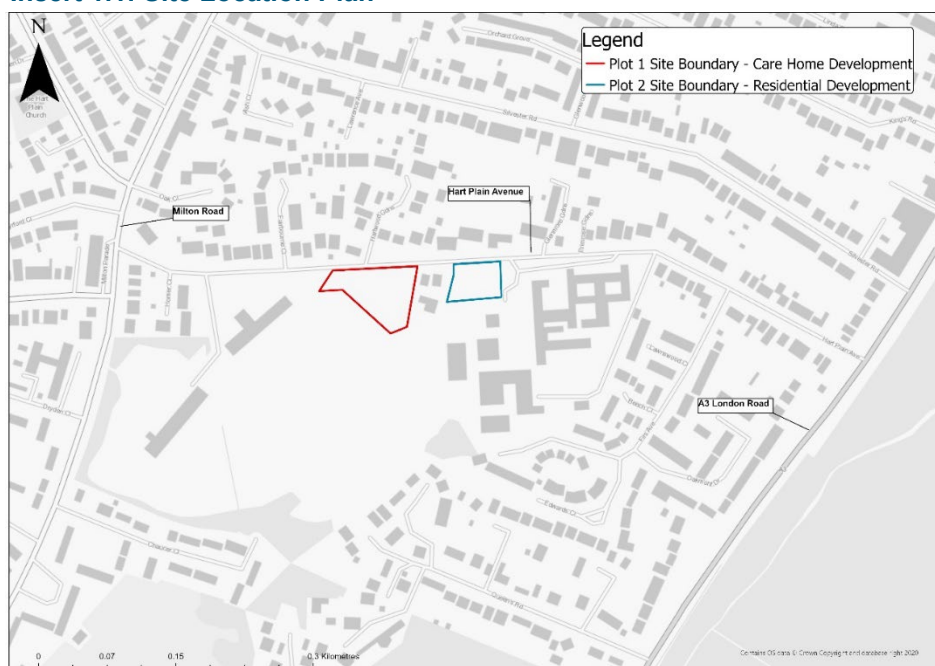
1.1 Overview

- 1.1.1 This Transport Statement (TS) has been prepared by Royal HaskoningDHV (RHDHV), on behalf of Frontier Estates Ltd, to consider the highways and transportation implications of a proposed 64-bed care home (C2) development together with six dwellings (C3) on land at Cowplain Community School, Hart Plain Avenue, Waterlooville PO8 8RY (the 'site').
- 1.1.2 The area surrounding the site comprises predominately residential land use. The site is located approximately 500 metres (m) to the west of the Queen's Inclosure wood, with Jubilee Park and Waterlooville retail park located to the south. The local planning authority is Havant Borough Council (HBC) and the local highway authority is Hampshire County Council (HCC).
- 1.1.3 This TS will consider the proposed development in the context of national, regional and local transport and land use planning policy and guidance.

1.2 Existing Site

- 1.2.1 The development site occupies land that abuts Hart Plain Avenue to the north. To the west the adjoining site is occupied by Hart Plain Infant School, with Cowplain Community School to the south and east. The site can be accessed from Hart Plain Avenue, via either the A3 London Road to the east or Milton Road to the west.
- 1.2.2 The site is located approximately 800m west of Cowplain district centre. Bedhampton railway station is located approximately 6.2 kilometres (km) to the south east of site.
- 1.2.3 The application site is located within the grounds of the Cowplain Community School and is comprised of two distinct plots, both bordered to the north by Hart Plain Avenue and separated by a small cluster of residential dwellings. A site location plan is included in **Insert 1.1**.

Insert 1.1: Site Location Plan



1.3 Scoping Discussions

- 1.3.1 RHDHV prepared a TS Scoping Report that was issued to HCC Highways on 11th March 2021 for the purpose of agreeing the scope of assessment. The TS Scoping Note was based on a development of an 80-bed care home and 4no, four-bed dwellings.
- 1.3.2 A pre-application response was received from HCC Highways on 21st April 2021 which included the following comments to be addressed within the scope of assessment work to be undertaken:
- With regards to Personal Injury Collision (PIC) Data:
“Accident data should be gathered from Hampshire Constabulary to ensure that the most recent and accurate data is reviewed within the TS.”
 - With regards to car parking provision:
“Havant Borough Council normally assess the quantum of parking provided against adopted parking standards. However, given the suggested under provision, the Highway Authority raise a concern at this stage of overspill parking on street in the vicinity of the school and the associated crossing points. The Highway Authority will need to undertake a site visit during school collection times to understand the current arrangement at the site and the risks of any overspill parking from the proposed care home given the site location. It should be noted that any overspill parking will also be contrary to policy CS20 of Havant’s Adopted Transport Strategy as set out on page 6 of the scoping note.”
 - With regards to site access and visibility splays, the following comments were provided:
“the visibility splays should be shown to 55m which shouldn’t be an issue given the alignment of the road. The minimum separation between the proposed access and the existing vehicle crossover should be 10m from the projected channel to the dropped crossing. Having reviewed the drawings in light of this requirement, the separation only appears to be 7.5m, meaning the access will need to move west by at least 2.5m to meet the minimum standards. The junction separation from Hartford Gardens appears suitable so the relocation should not be an issue.”
- 1.3.3 The full HCC Highways pre-application response is attached at **Appendix 1**.

1.4 Report Structure

- 1.4.1 This TS will provide consideration of the site’s accessibility by sustainable modes together with a review of the proposed site access and servicing strategy. The TS additionally reviews the potential trip generation of the site, and provides an assessment of the potential car parking demand of the proposed development.
- 1.4.2 The TS comprises the following sections:
- **Section 2** provides an overview of the national, regional and local ‘transport and land use’ planning policy relevant to the proposed development.
 - **Section 3** provides a description of the existing highway layout in the vicinity of the development site.
 - **Section 4** provides a summary of accessibility at the site by non-car modes of travel,
 - **Section 5** summarises the proposed development scheme.

- **Section 6** quantifies the trip generation at the proposed development by means reference to surveys of comparable sites, extracted from the TRICS database.
- **Section 7** summarises a proposed outline Delivery and Servicing Strategy, associated with site operation.
- Finally, **Section 8** provides a summary and conclusion to this document.

2 Policy Review

2.1 National Policy

National Planning Policy Framework (July 2021)

- 2.1.1 The National Planning Policy Framework (NPPF) is defined as being the document that “*sets the Government’s planning policies for England and how these are expected to be applied*”. The NPPF is not a transport-specific document, rather it sets out the Government’s general requirements for the planning system.
- 2.1.2 The NPPF incorporates guidance for local planning authorities when defining their local plans and in determining planning applications.
- 2.1.3 The purpose of the planning system, as identified in the NPPF, is to contribute to the achievement of sustainable development, with the following three ‘dimensions’ identified as supporting this:
- a) “**an economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure
 - b) **a social objective** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and
 - c) **an environmental objective** – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”
- 2.1.4 With regard to the transport considerations for new development, the NPPF states that “*all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed*”.
- 2.1.5 Regarding decision making, paragraph 111 of the NPPF states that:
- “Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”*
- 2.1.6 The NPPF goes on to say that “*within this context, applications for development should:*
- a) “*give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*

- b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.”*

2.2 Regional Policy

Hampshire Local Transport Plan (2011-2031)

2.2.1 The Hampshire Local Transport Plan 2011 - 2031 (LTP) is a statutory document which considers the transport needs of the Hampshire area and sets out a way forward to address such needs through short, medium and long-term policy. The Plan comprises the following:

- The 20-year Local Transport Strategy, with detailed supporting appendices;
- An Implementation Plan setting out how the Strategy will be delivered over three year periods (to be updated for the full 15 years).

2.2.2 At the heart of the Local Transport Strategy are five themes, which provide the foundation for the more detailed objectives which are then followed by detailed policies within the Strategy and are at the core of the whole document. The themes illustrate the enabling role of transport and the wide-ranging impact it can have on the quality of life and wellbeing of Hampshire. The five transport strategy themes and their associated objectives are:

- *“Supporting the economy through resilient highways:*
 - *To support economic growth by ensuring the safety, soundness and efficiency of the transport network in Hampshire;*
 - *Provide a safe, well-maintained, and more resilient road network in Hampshire as the basic transport infrastructure of the county on which all forms of transport directly and indirectly depend, and the key to continued casualty reduction.*
- *Management of traffic:*
 - *Manage traffic to maximise the efficiency of existing network capacity, improving journey time reliability and reducing emissions, thereby supporting the efficient and sustainable movement of people and goods;*
 - *Continue to work to improve road safety through targeted measures that deliver reductions in casualties, including applying a speed management approach that aims to reduce the impact of traffic on community life and promote considerate driver behaviour;*

- *Work with district authorities to agree coherent policy approaches to parking, including supporting targeted investment in 'park and ride' to provide an efficient and environmentally sustainable alternative means of access to town centres, with small-scale or informal park and ride arrangements being considered as well as major schemes;*
- *Promote, where they are stable and serve our other transport priorities, the installation of new transport technologies, including navigational aids, e-ticketing and smartcards, delivery of public transport information over the internet and on the move, and electric vehicle charging points.*
- *The role of public transport:*
 - *Work with bus and coach operators to grow bus travel, seek to remove barriers that prevent some people using buses where affordable and practical, and reduce dependence on the private car for journeys on inter- and intra-urban corridors;*
 - *Maintain a 'safety net' of basic accessibility to services and support for independent living in rural areas, with Community Transport services as the primary alternative to the private car, including car-based provision such as 'Neighbourcare Scheme', car clubs and shared taxis;*
 - *Work with rail industry partners and Community Rail Partnerships to deliver priorities for long-term rail investment; including improved parking and access facilities at railway stations, movement of more freight by rail, upgrades of existing routes and stations and (where viable) new or re-opened stations or rail links;*
 - *Ensure that travel from home to school affordably serves changing curriculum needs, underpins sustainable schools and maximises individual opportunities for education and training;*
 - *Improve co-ordination and integration between transport modes through better local interchanges, for example at rail stations.*
- *Quality of life and place:*
 - *Introduce the 'shared space' philosophy, applying Manual for Streets design principles to support a better balance between traffic and community life in towns and residential areas;*
 - *Contribute to achieving local targets for improving air quality and national carbon targets through transport measures, where possible and affordable;*
 - *Reduce the need to travel through encouragement of a high-speed broadband network, supporting the local delivery of services and in urban areas the application of 'Smarter Choices' initiatives;*
- *Transport and growth areas:*
 - *Over the longer term, develop bus rapid transit and high quality public transport provision in South Hampshire as a strategic transport direction, to reduce car dependence and improve journey time reliability;*
 - *Outline and implement a long-term transport strategy to enable sustainable development in major growth areas."*

2.3 Local Policy

Adopted Havant Borough Local Plan (2011)

- 2.3.1 The Adopted Havant Borough Council (HBC) Local Plan (Core Strategy) is the currently adopted local plan which sets out the planning policies for the borough up to 2026. This guidance document contains key transport strategy themes and their associated objectives as follows:

CS20 Transport and Access Strategy

- 2.3.2 *The Council will permit development which:*

- *'Does not increase congestion and promotes better use of existing transport networks';*
- *'Provides transport management measures to ensure the safe and efficient operation of the strategic and local road network.'*
- *'Ensures that highway design responds positively to the characteristics of the area and delivers a high quality public realm for all users.'*
- *'Maintains or improves the range of transport modes accessible to the users of the development site with specific emphasis on public transport, especially high quality/frequency buses and includes walking and cycling where appropriate.'*
- *'Improves highway, cycling and pedestrian links between the western built up area of the borough (Waterlooville) and the eastern area of the borough (centred on Havant) to create a strong east/west communication axis that passes through Dunsbury Hill Farm/Leigh Park.'*

CS16 High Quality Design

- *'Planning permission will be granted for development that is designed to a high standard, which helps to create places where people want to live, work and relax. All development should demonstrate that its design':*
- *'New streets are not dominated by vehicular traffic';*
- *'Inclusive by considering the needs of those with disabilities, ensuring safe and convenient access for all;'*
- *'Is well connected to and integrates with the immediate local area and the wider area by linking to existing pedestrian and cycle routes and encouraging people to use public transport where possible.'*

DM11 – Planning for More Sustainable Travel

- 2.3.3 *"The council will seek to ensure that every opportunity is taken to increase integration of sustainable travel modes and availability of non-motorised modes by appropriate measures including:*

- *Securing on-site and/or off-site interventions that promote integrated travel and access by non-motorised modes.*
- *Requiring safe and secure vehicular and cycle parking and turning facilities to adopted standards.*
- *Securing appropriate improvements to public and community transport (including infrastructure requirements) in accordance with the Hampshire Local Transport Plan and (where applicable) the relevant sub-regional transport strategy.*
- *Proposals for reducing opportunities for informal parking in the area surrounding the development where this would impact on the capacity, operation and safety of the local*

highway network and/or the amenity of the locality.

- *Ensuring that new developments are located and designed at the outset to encourage lower vehicle speeds and safe, permeable, inclusive layouts that integrate with existing pedestrian, cycle and public transport routes. This will facilitate and encourage short distance trips by cycle and walking, including to public transport interchanges.”*

DM12 Mitigating the Impacts of Travel

2.3.4 *“New developments will be required to mitigate their travel impact, including the environmental impacts of travel:*

- *Adequate provision is made for integrated and improved transport infrastructure or appropriate mitigation measures, through direct improvements and S106 contributions in accordance with the Hampshire County Council Transport Contributions Policy.*
- *The submission of a transport statement must accompany planning applications to explain changes to travel demand.*
- *A bond is provided which will be used to mitigate negative travel impacts of the development, should the travel plan fail to achieve its targets. This bond will be held by the relevant local transport authority.”*

DM13 – Car and Cycle Parking on Residential Development

2.3.5 *“Residential development will only be permitted where it provides car parking and cycle storage in accordance with the standards set out in the Residential Car Parking and Cycle Provision Supplementary Planning Document.”*

3 Site and Surroundings

3.1 Preface

- 3.1.1 This section considers the existing site and the local highway network and includes a review of collision data for roads surrounding the site.

3.2 Site Location and Existing Access

- 3.2.1 The development site occupies land that abuts Hart Plain Avenue to the north. To the west the adjoining site is occupied by Hart Plain Infant School, with Cowplain Community School to the south and east. The site can be accessed from Hart Plain Avenue, via either the A3 London Road to the east or Milton Road to the west.
- 3.2.2 The site is located on Hart Plain Avenue, which is an unclassified road that connects with Milton Road to west and the A3 London Road to the east. The application site is located within the grounds of the Cowplain Community School and is comprised of two distinct plots, both bordered to the north by Hart Plain Avenue and separated by a small cluster of residential dwellings.
- **Plot 1**, on which the care home development is proposed; is a triangular-shaped area of greenfield land (0.73ha). The plot currently forms part of the school's playing field, and adjoins Hart Plain Infant School to the west, while the playing field lies to the south; and
 - **Plot 2**, on which the residential units are proposed, is a rectangular hardstanding (0.21ha) immediately adjacent to the Cowplain School to the east and associated car park to the south.
- 3.2.3 The boundaries for each plot are indicated on **Insert 1.1**.
- 3.2.4 There are currently no existing accesses to the proposed development site from the public highway, as the sites are within the grounds of the Cowplain Community School.
- 3.2.5 The development site is located approximately 800m west of Cowplain district centre, within the Borough of Havant.

3.3 Local Highway Network

Hart Plain Avenue

- 3.3.1 Hart Plain Avenue is a two-way, single carriageway road which operates under a speed limit of 20 miles per hour (mph). Hart Plain Avenue has an east-west alignment and connects with the wider highway network via the A3 London Road to the east and Milton Road to the west. Hart Plain Road continues to the north-west of Milton Road and becomes Eagle Avenue.
- 3.3.2 Pedestrian footways are present on both sides of Hart Plain Road. Streetlighting is present along the length of the carriageway and dropped kerbs are provided at side roads.
- 3.3.3 The nearest pedestrian crossings to the application site are located on Hart Plain Road directly adjacent to Plot 2, approximately 40m west of the vehicular access to Cowplain School, as well as adjacent to the access to the Infant School to the west. The existing crossing points consist of dropped kerbs and tactile paving, as well as high visibility bollards.

Automatic Traffic Count (ATC) Survey

- 3.3.4 A seven-day ATC traffic survey was undertaken to record traffic flow volumes and speeds along Hart Plain Avenue approximately 40m west of the vehicular access to Cowplain School. The ATC survey was undertaken from Thursday 6th May 2021 to Wednesday 12th May 2021 during school term time.
- 3.3.5 A summary of the survey results with regard to vehicle speeds and volumes is presented in **Table 3.1**.

Table 3.1: Summary of ATC Traffic Survey on Hart Plain Avenue

Time Range	Eastbound			Westbound		
	Traffic Volume	85 th Percentile Speed (mph)	Mean Speed (mph)	Traffic Volume	85 th Percentile Speed (mph)	Mean Speed (mph)
AM Peak (08:00-09:00) (5 Day Average)	215	25.3	20.6	126	24.2	19
PM Peak (17:00-18:00) (5 Day Average)	98	32	25.8	73	31.1	25.9
24hr (7 Day Average)	1176	31.8	25.3	796	31.2	24.3

- 3.3.6 The ATC survey indicates that the average weekday AM peak (08:00-09:00) two-way traffic movement along Hart Plain Avenue was 341 vehicles. The PM peak (17:00-18:00) two-way traffic movements along Hart Plain Avenue was 171 vehicles.
- 3.3.7 The 85th percentile vehicle speed for eastbound vehicles in the AM and PM peak hours was 20.6 mph and 25.8 mph respectively at the survey location. The 85th percentile for westbound vehicles in the AM and PM peak hours was 19 mph and 25.9 mph respectively at the survey location.

A3 London Road

- 3.3.8 London Road is a two-way, single carriageway local distributor road providing a connection to a number residential streets, as well as Waterlooville district centre to the south and Cowplain district centre to the north.
- 3.3.9 Footways and streetlighting are provided on both sides of the carriageway along London Road in the vicinity of the site. A toucan crossing is located approximately 10m to the south of the junction with Hart Plain Avenue.
- 3.3.10 A shared footway/ cycleway is present along the western side of the A3 beginning approximately 110m south of the junction with Hart Plain Avenue which continues south until the Hulbert Road roundabout. The A3 additionally accommodates on carriageway cycle lanes on both sides of the carriageway to the north of Hart Plain Avenue which continues north until the junction with King Road. This route provides direct connections to Cowplain district centre to the north and Waterlooville retail park to the south.

Milton Road

- 3.3.11 Milton Road is a north-south aligned, two-way single carriageway road which acts as a local distributor road. Milton Road connects to Hambledon Road to the south and Wecock Farm to the north. The junction of Milton Road/ Hart Plain Avenue is restricted to a left-in and left-out arrangement.

- 3.3.12 Footways are provided on both sides of Milton Road and streetlighting is present on both sides of the carriageway. A toucan crossing is located approximately 10m to the south of the junction with Hart Plain Avenue.
- 3.3.13 An existing shared cycleway/ footway route is present along Milton Road to the west of the site, which provides an off-carriageway route southbound from Hart Plain Avenue. This route provides a connection to Jubilee Park and Waterlooville retail park to the south.

3.4 Review of Collision Data

- 3.4.1 In order to establish whether there are any inherent safety issues on the local highway network, a review of collision data has been undertaken. Data was obtained from the Hampshire Constabulary for the most recently available five-year period (2016 – 2020).
- 3.4.2 Personal Injury Collision (PIC) data has been obtained for the study area defined within the plan in **Appendix 2**. The study area comprises the full extent of Hart Plain Avenue, including the junctions with London Road to the east and Milton Road to the west.
- 3.4.3 A total of six PICs were recorded within the study area of which five incidents were recorded as 'slight' and one 'serious'. No fatalities were recorded within the study area during the period of assessment. The detailed report summary for the PIC data is also provided in **Appendix 2**.
- 3.4.4 A summary of the recorded PICs is provided within **Table 3.1**.

Table 3.2: Summary of recorded PICs

PIC Location	Accident Severity			Total
	Slight	Serious	Fatal	
Hart Plain Avenue J/W Milton Road	4	0	0	4
At access to Cowplain Community School	1	0	0	1
Hart Plain Avenue J/W Glenmore Gardens	0	1	0	1
Hart Plain Avenue J/W London Road	0	0	0	0
Total	5	1	0	6

- 3.4.5 The recorded PICs can be summarised as follows:
- Five PICs occurred during the hours of daylight;
 - Two incidents occurred when the road conditions were wet/ damp;
 - One 'slight' collisions involved a cyclists;
 - One 'serious' PIC involved motorcyclists;
 - Three collision involved pedestrians.
- 3.4.6 The 'serious' PIC occurred during 2017 at the main vehicular access to Cowplain Community School. The incident occurred during hours of daylight. Weather conditions are described as 'raining' and the road surface was wet. The incident was described as a 'van pulling onto the wrong side of the road, in order to reverse into No.48, causing eastbound motorcycle to brake in wet conditions and fall'.

- 3.4.7 The three 'slight' PICs involving pedestrians, were all described as 'children failing to look properly' when crossing at Hart Plain Avenue J/W Milton Road.
- 3.4.8 Based on a review of the above incidents, it is concluded that there is no common cause for the collisions involving vulnerable users. There are no observable collision trends that point to defects in the design of the highway that can be directly linked to poor highway safety conditions.
- 3.4.9 Given the broad study area, it is not considered that the recorded accident rate (approximately one incident every year) is indicative of any inherent road safety deficiency within the assessed road network. In view of the scale and nature of the proposed development, it is considered that traffic associated with the development will not have an adverse impact on road safety conditions.

3.5 Summary

- 3.5.1 The development site occupies land that abuts Hart Plain Avenue to the north. To the west the adjoining site is occupied by Hart Plain Infant School, with Cowplain Community School to the south and east. The site can be accessed from Hart Plain Avenue, via either the A3 London Road to the east or Milton Road to the west.
- 3.5.2 A review of collision data for the local highway network demonstrates that there is no identifiable pattern of collisions associated with pedestrians and cyclists. It is considered that traffic associated with the development would not have an adverse impact on route safety conditions.

4 Site Accessibility by Non-Car Modes of Travel

4.1 Preface

- 4.1.1 This section considers the current opportunities to access the site by means of travel other than the private car. Travel opportunities on foot, by cycle, bus and train are considered in the context of the site.

4.2 Walking

- 4.2.1 The Department for Transport '*Walking and Cycling Statistics, England 2019*' publication indicates that the average walk distance within England for all journey purposes is 1.31 km.
- 4.2.2 A summary of the local facilities within a reasonable walking distance of the site is provided in **Table 4.1**.

Table 4.1: Summary of Local Services and Amenities

Amenity	Name	Distance
Town Centre	Waterlooville Town Centre	1.9km
GP Surgery	Cowplain Family Practice	850m
GP Surgery	Vine Medical Group	700m
Place of Worship	Cowplain Evangelical Church	950m
Pharmacy	Pharmacy	800m
Supermarket	Lidl Supermarket	600m
Supermarket	Co-Operative Food (Milton Road)	400m
Post Office	Horndea Post Office	500m

- 4.2.3 A walk catchment plan is presented within **Appendix 3** which indicates areas that can be accessed within a 1km and 2km walking distance of the site.
- 4.2.4 A number of the amenities summarised within **Table 4.1** are located on London Road to the east of the site, towards Cowplain district centre. Waterlooville town centre is additionally located within walking distance of the site, approximately 1.9km to the south of Hart Plain Avenue.
- 4.2.5 The nearest pedestrian crossings are directly adjacent to Plot 2, approximately 40m west of the vehicular access to Cowplain School, as well as adjacent to the access to the Infant School to the west. The existing crossing points incorporate dropped kerbs and tactile paving, as well as high visibility bollards.
- 4.2.6 Toucan crossings are located directly adjacent to the junctions of Hart Plain Avenue with London Road to the east and Milton Road to the west.

4.3 Cycling

- 4.3.1 The National Travel Survey (NTS) 2019 identifies that the average length for cycle journeys in England is 3.375 miles (5.4km). It should be noted that 5.4km represents the average distance for cycle journeys and as such some people will be prepared to cycle further distances. All of the facilities identified in **Table 4.1** are thus within an acceptable cycle distance of the site.

- 4.3.2 A cycle catchment plan is included within **Appendix 3** which indicates the areas than can be accessed within a 3km and 5km cycle distance of the site.
- 4.3.3 An existing shared cycleway/ footway is present along Milton Road to the east of the site, which provides an off-carriageway route southbound from Hart Plain Avenue. This route provides a connection to Jubilee Park and Waterlooville retail park to the south. The route is part of Havant Borough Cycle Network.
- 4.3.4 Along the A3 London Road, National Cycle Network (NCN) Route 222 is present. This route is provided in the form of both a shared footway/ cycleway, as well as sections of cycle infrastructure on-carriageway. This route provides direct connections to Cowplain and Horndean district centres to the north and Waterlooville retail park to the south.

4.4 Bus

- 4.4.1 The Chartered Institute of Highways and Transportation (CIHT) document “Planning for Walking” (March 2015) indicates with regard to access to bus stops in residential areas, a distance of 400m has traditionally been regarded as the desirable maximum walking distance.
- 4.4.2 The closest bus stops to the site are situated immediately adjacent to Cowplain Community School, along Hart Plain Avenue, approximately 50m from the proposed residential development site, and 150m from the proposed care home site. It is acknowledged that these bus stops are served by the 654 bus service which is a school bus operated by First.
- 4.4.3 Bus stops are additionally located on Milton Road and A3 London Road, approximately 400m and 550m respectively from the site. The 39, D2 and 7 The Star services can be accessed from Milton Road, while the 8 The Star service can be accessed from London Road. **Table 4.2** provides a summary of the frequency of locally accessible bus services.

Table 4.2: Summary of Local Bus Services

Bus No.	Route	First Bus	Last Bus	Weekday Peak Frequency	Saturday Frequency	Sunday Frequency
654	Purbrook Oaklands School – Cowplain Community School – Hambledon Lotts Stores - Hambledon	15:59	15:59	n/a	n/a	n/a
D2	Mead End – Cowplain The Rainbow – Waterlooville Precinct	07:03	17:03	1ph	1 every 2 hours	n/a
39	Wecock Blackbird Close – Cowplain The Rainbow – Bedhampton Asda – Havant Bus Station	05:37	09:18	3ph	3ph	1ph
7 The Star	Wecock Blackbird Close – Waterlooville The Rainbow – QA Hospital North – City Centre Shops South	05:10	22:43	3ph	3ph	3ph
8 The Star	Portsmouth The Hard Interchange – QA Hospital North – Cowplain Hart Plain Avenue – Clanfield	05:22	22:42	3ph	3ph	3ph

Source: [bustimes.org](https://www.bustimes.org), accessed 10/03/21

4.5 Rail

4.5.1 The nearest railway station is at Bedhampton which is approximately 6.2 km to the south east of site. The railway station is accessible by means of an approximate 20-minute cycle journey. This station is served by Southern and South Western Railway and provides direct connections to Littlehampton, London Waterloo, Portsmouth and Southsea and Portsmouth Harbour.

4.5.2 **Table 4.3** provides a summary of the rail services available from Bedhampton railway station.

Table 4.3: Summary of Rail Services

Operator	Destination	First Train	Last Train	Frequency			
				AM Peak	PM Peak	Sat	Sun
South Western Railway	London Waterloo	04:43	22:38	1ph	1ph	1ph	1ph
	Portsmouth and Southsea	04:43	23:33	3ph	3ph	2ph	2ph
	Portsmouth Harbour	04:43	23:34	1ph	1ph	1ph	1ph
Southern	Littlehampton	06:29	23:33	1ph	1ph	1ph	n/a

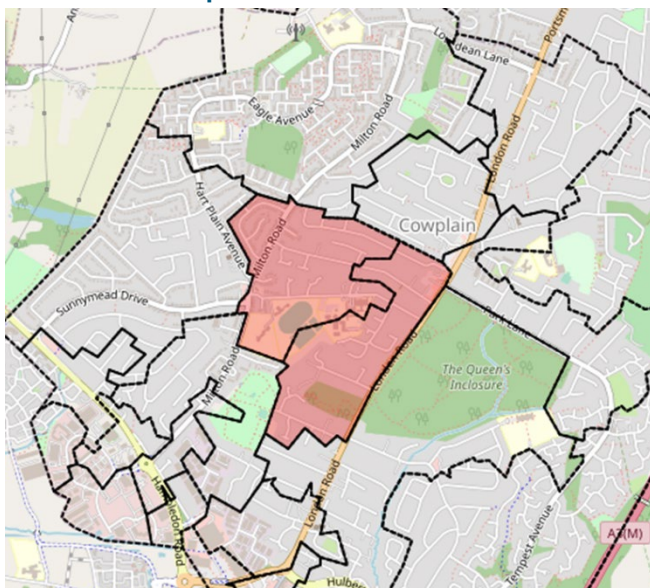
*Direct Services Only

Source: live-departures.info, accessed 16/04/21

4.6 2011 Census Data – Local Travel Patterns

4.6.1 Estimated travel patterns associated with staff working at the proposed care home (discussed in later sections of this report) has been derived through a review of the 2011 census data – Method of travel to work (2001 specification) (Workplace population) for the workplace zones E33042292 and E33042293. These two workplace zones have been included given that the Cowplain School, within which the site sits, is located within both aforementioned zones.

Insert 4.1: Workplace Zones E33042292 and E33042293



- 4.6.2 The 2011 Census Data modal split for workplace zones E33042292 and E33042293, is presented in **Table 4.4**.

Table 4.4: 2011 Census Data Modal Split (Workplace Population)

Method of Travel to Work	Modal Split
Train	0%
Bus, minibus or coach	3%
Taxi	0%
Motorcycle, scooter or moped	1%
Driving a car or van	75%
Passenger in a car or van	6%
Bicycle	1%
On foot	12%
Other method of travel to work	1%
Total	100.0%

- 4.6.3 The 2011 Census data indicates that the main mode of travel to the development for staff is likely to be car, with car drivers representing 75% of all travel with car passengers representing 6%. Active travel (walking and cycling) and public transport modes represent a total of 16% of all journeys to work in the locality.

4.7 Summary

- 4.7.1 The local pedestrian network provides connections to multiple local amenities and residential streets, providing good opportunities for residents, staff and visitors to travel to and from the site on foot.
- 4.7.2 There is good quality pedestrian infrastructure present along Hart Plain Avenue, including wide pedestrian footways, crossing points and dropped kerbs.
- 4.7.3 There is an existing shared cycleway/ footway route along Milton Road to the east of the site, provided as part of Havant Borough Cycle Network. Along the A3 London Road, National Cycle Network (NCN) Route 222 is present. This route provides direct connections to Cowplain and Horndean district centres to the north and Waterlooville retail park to the south.
- 4.7.4 The closest bus stops to the site are situated immediately adjacent to Cowplain Community School, along Hart Plain Avenue, approximately 50m from the proposed residential development site, although it is noted that these stops are served by a school bus service. Bus stops are additionally located on Milton Road and A3 London Road, approximately 400m and 550m respectively from this site.
- 4.7.5 The nearest railway station is at Bedhampton which is approximately 6.2 km to the south east of site. The railway station could be accessed within an approximate 20-minute cycle journey.
- 4.7.6 In summary, the site is accessible by a range of non-car modes of travel, with a number of public transport services, multi-modal opportunities and local amenities accessible on foot or by cycle.

5 Development Proposals

5.1 Preface

- 5.1.1 This section describes the development proposals outlined within the planning application including vehicular and pedestrian access arrangements, proposed parking provision and delivery and servicing arrangements.

5.2 Proposed Development Overview

- 5.2.1 The proposal seeks to provide a 64-bed care home (Use Class C2) on Plot 1 and six dwellings (Use Class C3) on Plot 2, with associated parking and landscaping.
- 5.2.2 The care home proposes a total of 29 car parking spaces, inclusive of two disabled parking spaces plus one dedicated ambulance drop-off/ pick-up point. The proposals equate to a parking ratio of 0.45 spaces/ bedroom. A total of 10 secure cycle parking spaces would be provided in the form of five Sheffield stands within the curtilage of the site.
- 5.2.3 In addition to the care home, the proposal seeks to provide six dwellings on Plot 2 consisting of four semi-detached and two detached houses. Each dwelling will have its own private driveway and off-street parking space, accessed from Hart Plain Avenue. In addition to private driveways, garages are indicated within the curtilage of each dwelling plot.
- 5.2.4 The proposed development layout is indicated within the architect's layout plan provided in **Appendix 4**.

5.3 Site Constraints and Design Layout Evolution

- 5.3.1 There are no major planning constraints on the site:
- The Council's Interactive Map shows that it is not located within a Conservation Area and that there are no listed buildings within or adjacent to the site.
 - No protected trees are indicated on the site.
 - The site is not covered by any landscape or nature conservation statutory designations.
 - The government's Flood Map for Planning indicates that the site lies within Flood Zone 1.

5.4 Proposed Access Strategy

- 5.4.1 It is proposed that new vehicular accesses from Hart Plain Avenue would be created to the care home and residential development sites.

Care Home Access

- 5.4.2 The proposed main site access to the care home would provide access for vehicular traffic associated with staff, visitors and deliveries to the care home. The proposed site access for the care home site would be located on the north-eastern corner of the development site, approximately 43m east of the junction with Harwood Gardens. This accords with Manual for Streets (MfS) guidance, which requires a junction spacing distance of 30m.
- 5.4.3 Visibility at the proposed care home access has been assessed with respect to the requirements outlined in the Hampshire County Council TG3 - Stopping Sight Distances and Visibility Splays

Technical Guidance Note and MfS.

- 5.4.4 In informing the access design, an ATC survey (detailed in **Section 3.4**) was commissioned along Hart Plain Avenue. The observed 85th percentile vehicle speed measurements were recorded as 31.8 mph in the eastbound direction and 31.2 mph in the westbound direction. For robustness, the higher recorded eastbound speeds have been applied to determine the required visibility splays in both directions.
- 5.4.5 Using the HCC stopping sight distance calculator, the 31.8 mph 85th percentile speed was converted to kph (51.2 kph) to determine a stopping sight distance (SSD) of 47 metres (adjusted for bonnet length).
- 5.4.6 During pre-application discussions with HCC, the highways officers have requested that visibility splays should be shown to 55m, rather than 47m. Drawing **PC2284-RHD-GE-SW-DR-R-0001**, included within **Appendix 5**, demonstrates that visibility splays of 2.4m x 55m can be achieved at the care home access.
- 5.4.7 It has been noted during pre-application discussions with HCC that the junction separation between the proposed care home and no.43 to the east should be a minimum of 10m. No.43 is provided with two vehicular accesses, with the western provision located approximately 10m east of the proposed care home access.
- 5.4.8 A turning head and delivery and servicing loading bay is proposed within the site to ensure that all servicing is conducted within the curtilage of the site.
- 5.4.9 Swept path analysis of the proposed delivery and servicing access arrangements are provided in **Appendix 6**. The swept path analysis demonstrates that a 11.2m refuse vehicle, a 7.5t box van, and a fire tender are able to access and egress the site in a forward gear.
- 5.4.10 Further information relating to how delivery and servicing vehicles would access and serve the site and how deliveries would be managed is detailed within **Section 7** of this report.

Residential Accesses

- 5.4.11 The proposed residential units would each be served by a private driveway accessed from Hart Plain Avenue. The proposed access to the residential unit on the eastern flank of Plot 2 is located approximately 20m to the west of the existing vehicular access to Cowplain Community School. The proposed access to the residential unit on the western flank of Plot 2, is a further 35m to the west.
- 5.4.12 Refuse/ delivery and servicing for the residential units would be undertaken along Hart Plain Avenue. An existing pedestrian crossing point is located approximately 35m west of the access to the school. The position of the crossing does not conflict with the proposed accesses to the residential units and would therefore be retained as existing.
- 5.4.13 Visibility at the four proposed residential unit access has been assessed with respect to the requirements outlined in the Hampshire County Council TG3 - Stopping Sight Distances and Visibility Splays Technical Guidance Note and MfS.

- 5.4.14 As noted previously in this section, using recorded ATC survey speeds, the HCC stopping sight distance calculator, determined a stopping sight distance (SSD) of 47m (adjusted for bonnet length). As with the care home access, HCC highways officers during pre-application discussions requested a visibility splay of 55m be delivered.
- 5.4.15 Drawing **PC2284-RHD-GE-SW-DR-R-0002**, included within **Appendix 5**, demonstrates that visibility splays of 2.4m x 55m can be achieved at each of the respective residential unit accesses, in line with HCC highways officers recommendations.
- 5.4.16 Swept path analysis of proposed site accesses are provided within **Appendix 6**.

5.5 Pedestrian/ Cycle Access

- 5.5.1 A pedestrian footpath would be located to the east of the vehicular access carriageway which would connect Hart Plain Avenue to the main entrance of the development site. (Refer **Drawing 4528-WRD-XX-ZZ-DR-A-0500** within **Appendix 4**). Sheffield stands for cycle parking would be located adjacent to the main entrance.

5.6 Car Parking Provision

Care Home

- 5.6.1 In developing the proposals at the site, RHDHV has undertaken a review of car parking standards for 'Residential nursing and rest homes (C2 Dwelling Houses – Older Peoples' Housing)' within Havant Borough Council's Parking Standards Supplementary Planning Document (SPD) (2016).
- 5.6.2 **Table 5.1** below presents a summary of relevant parking standards outlined within HBC's Supplementary Planning Documents (SPD):

Table 5.1: Summary of HBC Car and Cycle Parking Standards – Care Home

Land Use	Parking Type	Minimum Parking Standards
Care Home (C2)*	Vehicle	1 space per 4 residents and 1 space per staff
	Cycle	1 long-stay cycle space per 6 Staff. 1 loop/hoop per 4 units
<i>*Schemes where residents receive a high degree of support and care will require less parking for residents than general residential homes, but will need more parking for staff and visitors. As staff are likely to operate over a 24 hour period the calculation based on the number of staff should be based on the number typically present on the site at any one time. Information to support this should be submitted with any planning application and should form the basis of pre-application discussions.</i>		

- 5.6.3 The number of staff anticipated to be present during a daytime shift at the proposed care home is based upon a typical ratio of one staff member per three beds. This is anticipated to represent 22 day-time staff present on-site at any one time. It is anticipated that there would not be any resident staff at the site.
- 5.6.4 In relation to the proposed 64-bed care home and in the context of the maximum anticipated staff at the site (up to 22 staff on-site at any one), using the vehicle and cycle parking requirements outlined in **Table 5.1** equates to 37 vehicle parking spaces (ratio of 0.58 spaces/bed).
- 5.6.5 It is proposed that the provision of 37 total car parking spaces for the care home is significantly in excess of the anticipated parking demand requirements and is not reflective of how the care home

would operate.

- 5.6.6 The care home proposes a total of 29 car parking spaces, inclusive of two disabled parking spaces with one dedicated ambulance drop-off/ pick-up point equating to a parking ratio of 0.45 spaces/ bedroom. The level of parking proposed is considered adequate in meeting the anticipated parking demand associated with the operation of the care home development.
- 5.6.7 A parking accumulation assessment is carried out in **Section 6.4** of this report, to further demonstrate the suitability of the proposed quantum of car parking in relation to the parking demand expected to be generated by the proposed development once fully operational.
- 5.6.8 Swept path analysis of a large car has been undertaken to demonstrate that all parking bays are accessible. The swept path analysis is presented within **Appendix 6**.

Residential Units

- 5.6.9 In developing the proposals at the site, RHDHV has undertaken a review of parking standards for four-bed residential units (Class C3) within Havant Borough Council's Parking Standards Supplementary Planning Document (SPD) (2016).
- 5.6.10 **Table 5.2** presents a summary of relevant parking standards as outlined within HBC's SPD:

Table 5.2: Summary of HBC Car and Cycle Parking Standards – Residential Units

Land Use	Size of Dwelling	Minimum Car Parking Standard	Cycle Parking Standards
Residential Units (C3)	3 bed unit	2 spaces	2 spaces per unit
	4+ bed unit	3 spaces	2 spaces per unit

- 5.6.11 The four semi-detached houses would each be allocated with two on-plot car parking spaces. The two detached houses would each be allocated with three on-plot car parking spaces. Each residential unit would be provided with a private driveway and off-street parking space/ garage.
- 5.6.12 Within HBC's Parking SPD, it is noted that garages are acceptable as a form of car parking/cycle parking provision, so long as they adhere to a minimum of 3m x 6m dimensions per vehicle. Furthermore, it is considered that *'Tandem parking (i.e. one car behind another) will be acceptable for individual properties. However, only one space behind the other will be acceptable - including garage parking provision.'*
- 5.6.13 It was noted during pre-application discussions with HCC that *'parking must be provided on plot in an attractive form to prevent overspill parking on the highway'*. It is proposed for each dwelling, that up to two cars would be able to park within the driveway, while an additional car parking space would be provided within the garage.

5.7 Cycle Parking Provision

- 5.7.1 As noted above, RHDHV has undertaken a review of cycle parking standards for care home (Use Class C2) and residential land uses (Use Class C3). The outlined standards have been presented in **Table 5.1** and **5.2**. Using these standards, the cycle parking provision equates to 20 cycle parking spaces for the care home.

- 5.7.2 It is considered that the provision of 20 total cycle parking spaces for the care home is significantly in excess of the anticipated parking demand requirements and is not reflective of how the care home would operate.
- 5.7.3 A total of 10 secure cycle parking spaces would be provided in the form of five Sheffield stands within the curtilage of the site. This equates to approximately one space per three staff expected at the site at any one time and is considered to adequately meet cycle parking demand requirements.

Residential Units

- 5.7.4 The residential units would each be allocated with 2 cycle parking spaces per unit. The cycle parking spaces would be provided within a garage which is proposed for each unit - within HBC's Parking SPD, it is noted that garages are acceptable as a form of cycle parking provision.

5.8 Bus Stop Improvement

- 5.8.1 HCC during pre-application discussions, requested that the bus stop facilities on Milton Road, which would be accessible from the proposed development, should be improved as part of the proposals. HCC's request in this respect is presented below:

"The southbound bus stop on Milton Road also consists of a sheltered waiting facility alongside the flag pole and timetable. The northbound facility on Milton Road consists of a flagpole and timetable only which should be upgraded to include sheltered waiting facilities to improve the attractiveness of the facility"

- 5.8.2 It is proposed that improvements to this bus facility could be made via an S106 agreement.

5.9 Summary

- 5.9.1 The proposal seeks to provide a 64-bed care home (Use Class C2) on Plot 1 and six dwellings (Use Class C3) on Plot 2, with associated parking and landscaping.
- 5.9.2 The care home proposes a total of 29 car parking spaces, inclusive of two disabled parking spaces with one dedicated ambulance drop-off/ pick-up point. This equates to a parking ratio of 0.45 spaces/ bedroom. A total of 10 secure cycle parking spaces would be provided in the form of five Sheffield stands within the curtilage of the site.
- 5.9.3 In addition to the care home, the proposal seeks to provide six dwellings on Plot 2 consisting of four semi-detached and two detached houses. Each dwelling will have its own private driveway and off-street parking space, accessed from Hart Plain Avenue. In addition to private driveways, garages are provided for each dwelling.
- 5.9.4 The proposed main site access to the care home would provide access for vehicular traffic associated with staff, visitors and deliveries to the care home. The proposed site access for the care home site would be located on the north-eastern corner of the development site, approximately 43m west of the junction with Harwood Gardens.
- 5.9.5 The proposed residential units would each be served by a private driveway along Hart Plain Avenue. The proposed access to the residential unit on the eastern flank of Plot 2 is located

approximately 20m to the west of the existing vehicular access to Cowplain Community School. The proposed access to the residential unit on the western flank of Plot 2, is a further 35m to the west.

- 5.9.6 Drawings attached within **Appendix 5** demonstrate that visibility splays of 2.4m x 55m can be achieved in both directions of the access for both the care home and residential accesses respectively. This accords with recommendations from HCC highways officers during pre-application discussions.
- 5.9.7 A total of 10 secure cycle parking spaces would be provided in the form of five Sheffield stands within the curtilage of the site. This equates to approximately one space per three staff which is considered to adequately meet cycle parking demand requirements based on the anticipated modal split at the site.
- 5.9.8 The residential units would each be allocated with 2 cycle parking spaces per unit.
- 5.9.9 It is anticipated that the proposed care home would typically operate across two or three different shift patterns over each 24-hour period, with a maximum total of 22 employees being present on-site at any one time.

6 Trip Generation

6.1 Preface

- 6.1.1 This section of the report details the trip generation exercise undertaken to support the application. **Appendix 7** provides the supporting calculations and TRICS output.

6.2 Proposed Trip Generation

- 6.2.1 In order to establish trip rates associated with the proposed residential care home, the TRICS v7.9.1 database has been interrogated. The following selection criteria have been applied:

Care home:

- Land Use Class 05F Health Care (Elderly Residential)
- Exclusion of sites in Ireland, Scotland, Wales and Greater London.
- Sites with between 17 and 180 bedrooms
- Sites in Edge of Town and Suburban Locations

Residential units:

- Land Use Class 03A Houses Privately Owned
- Exclusion of sites in Ireland, Scotland, Wales and Greater London.
- Sites with between 6 and 20 dwellings
- Sites in Edge of Town and Suburban Locations.

6.3 Care Home (Use Class C2)

- 6.3.1 The residential care home multi-modal trip generation, derived by TRICS for the traditional weekday AM peak (08:00 – 09:00) is presented in **Table 6.4**.

Table 6.1: (C2 Care Home) Multi-Modal Trip Generation – Weekday AM Peak (08:00-09:00)

Mode of Travel	Trip Rate (trips per resident)			Total Trips		
	Arrivals	Depart's	Total	Arrivals	Depart's	Total
Vehicles	0.059	0.066	0.125	4	4	8
Vehicle Occupants	0.086	0.072	0.158	6	5	10
Public Transport Users	0.039	0.007	0.046	2	0	3
Pedestrians	0.02	0.02	0.04	1	1	3
Cyclists	0	0	0	0	0	0
Total Person Trips	0.145	0.099	0.244	9	6	16

- 6.3.2 The resulting residential care home multi-modal trip generation for the traditional weekday PM peak (17:00 – 18:00) is presented in **Table 6.5**.

Table 6.2: (C2 Care Home) Multi-Modal Trip Generation – Weekday PM Peak (17:00-18:00)

Mode of Travel	Trip Rate (trips per resident)			Total Trips		
	Arrivals	Depart's	Total	Arrivals	Depart's	Total
Vehicles	0.072	0.079	0.151	5	5	10
Vehicle Occupants	0.079	0.099	0.178	5	6	11
Public Transport Users	0.007	0.013	0.02	0	1	1
Pedestrians	0.007	0.013	0.02	0	1	1
Cyclists	0.007	0.007	0.011	0	0	1
Total Person Trips	0.099	0.132	0.231	6	8	15

- 6.3.3 The resulting residential care home multi-modal trip generation daily profile breakdown for a typical weekday (07:00 – 19:00) is presented in **Table 6.6**.

Table 6.3: (C2 Care Home) Multi-Modal Trip Generation –Daily Trips (07:00-19:00)

Mode of Travel	Trip Rate (trips per resident)			Total Trips		
	Arrivals	Depart's	Total	Arrivals	Depart's	Total
Vehicles	0.875	0.914	1.789	56	58	114
Vehicle Occupants	1.067	1.146	2.213	68	73	142
Public Transport Users	0.161	0.112	0.273	10	7	17
Pedestrians	0.269	0.28	0.566	17	18	36
Cyclists	0.028	0.028	0.056	2	2	4
Total Person Trips	1.546	1.553	3.099	99	99	198

- 6.3.4 The proposed care home development is anticipated to generate eight two-way vehicle trips in the traditional weekday AM peak hour of travel demand and 10 two-way vehicle trips in the traditional weekday PM peak hour. This equates to one vehicle movement, on average, every eight minutes during the weekday AM peak hour, and every six minutes along Hart Plain Avenue during the weekday PM peak hour periods.
- 6.3.5 Over the course of a 12-hour day, a two-way total of 114 vehicle movements to/from the care home site are predicted: 56 arrivals and 58 departures.

6.4 Residential Units (Use Class C3)

- 6.4.1 The residential units multi-modal trip generation for the traditional weekday AM peak (08:00 – 09:00) is presented in **Table 6.4**.

Table 6.4: (C3 Residential) Multi-Modal Trip Generation – Weekday AM Peak (08:00-09:00)

Mode of Travel	Trip Rate (trips per resident)			Total Trips		
	Arrivals	Depart's	Total	Arrivals	Depart's	Total
Vehicles	0.225	0.408	0.633	1	2	4
Vehicle Occupants	0.358	0.567	0.925	2	3	6
Public Transport Users	0	0	0	0	0	0
Pedestrians	0.142	0.25	0.392	1	2	2
Cyclists	0	0	0	0	0	0
Total Person Trips	0.5	0.817	1.317	3	5	8

- 6.4.2 The resulting residential units multi-modal trip generation for the traditional weekday PM peak (17:00 – 18:00) is presented in **Table 6.5**.

Table 6.5: (C3 Residential) Multi-Modal Trip Generation - Weekday PM Peak (17:00-18:00)

Mode of Travel	Trip Rate (trips per resident)			Total Trips		
	Arrivals	Depart's	Total	Arrivals	Depart's	Total
Vehicles	0.267	0.117	0.384	2	1	3
Vehicle Occupants	0.358	0.167	0.525	2	1	3
Public Transport Users	0	0.017	0.017	0	0	0
Pedestrians	0.058	0.033	0.091	0	0	1
Cyclists	0	0	0	0	0	0
Total Person Trips	0.417	0.217	0.634	3	1	4

- 6.4.3 The resulting residential units multi-modal trip generation daily profile breakdown for a typical weekday (07:00 – 19:00) is presented in **Table 6.6**.

Table 6.6: (C3 Residential) Multi-Modal Trip Generation – Daily Trips (07:00-19:00)

Mode of Travel	Trip Rate (trips per resident)			Total Trips		
	Arrivals	Depart's	Total	Arrivals	Depart's	Total
Vehicles	2.458	2.666	5.124	15	16	31
Vehicle Occupants	3.283	3.708	6.991	20	22	42

Mode of Travel	Trip Rate (trips per resident)			Total Trips		
	Arrivals	Depart's	Total	Arrivals	Depart's	Total
Public Transport Users	0.05	0.025	0.075	0	0	0
Pedestrians	1.176	1.125	2.301	7	7	14
Cyclists	0.066	0.075	0.141	0	0	1
Total Person Trips	4.574	4.934	9.508	27	30	57

- 6.4.4 The proposed residential units are anticipated to generate 4 two-way vehicle trips in the traditional weekday AM peak hour of travel demand and 3 two-way vehicle trips in the traditional weekday PM peak hour.
- 6.4.5 Over the course of a 12-hour day, a two-way total of 31 vehicle movements to/from the site are predicted in the forms of 15 arrivals and 16 departures.

6.5 Car Parking Assessment

- 6.5.1 During pre-application discussions, concerns were raised by HCC regarding potential overspill parking on street in vicinity of the school.
- 6.5.2 The TS Scoping Note, issued to HCC Highways on 11th March 2021, formed the basis of the pre-application discussions regarding car parking provision. The initial scheme proposed in the TS Scoping Note included a total of 29 car parking spaces to be provided in relation to the care home at a ratio of 0.36 spaces per bedroom (including two disabled bays). Since these discussions, the scale of the care home development has been reduced with the number of car parking spaces remaining the same. The car parking ratio has thus increased from 0.36 spaces per bedroom to 0.45 spaces per bedroom.
- 6.5.3 In order to establish whether the level of car parking provision is sufficient to cater for the demands of the proposed care home site, a car parking accumulation assessment has been undertaken. **Table 6.7** details the parking accumulation, as calculated from arrival / departure data contained within the TRICS database.

Table 6.7: Car Parking Accumulation Assessment – 29 spaces

Time Period	Arrivals	Departures	Occupied Spaces	% Occupied
Initial	-	-	10	34%
07:00-08:00	2	3	9	32%
08:00-09:00	4	4	9	30%
09:00-10:00	6	2	13	45%
10:00-11:00	3	6	10	33%
11:00-12:00	6	7	8	29%
12:00-13:00	4	4	9	30%
13:00-14:00	8	2	14	49%

14:00-15:00	5	9	10	36%
15:00-16:00	6	7	10	33%
16:00-17:00	4	5	9	30%
17:00-18:00	5	5	8	29%
18:00-19:00	4	5	8	26%
19:00-20:00	2	3	7	24%
20:00-21:00	2	2	7	23%
20:00-21:00	4	3	3	17%

- 6.5.4 **Table 6.7** demonstrates that the proposed car parking provision of 29 spaces is sufficient to cater for the anticipated parking demands of the site. Due to the nature of the development, the car park spaces would most likely be used by staff and visitors to the care home, and not residents.
- 6.5.5 It has been assumed that a total of ten of the care home spaces are occupied overnight. This is anticipated due to the 24-hour on-site nursing and dementia care and subsequent staff shift patterns.
- 6.5.6 The maximum parking accumulation for the development is expected to occur between 13:00 and 14:00 when 14 spaces would be occupied. This equates to an anticipated maximum level of parking occupancy of 49%.
- 6.5.7 The total provision is sufficient to accommodate additional demand over and above the recognised peak (13:00-14:00), such as that occurring during shift changeover times. This is due to the fact that staff arriving to start their shift will arrive before other staff who are finishing their shift have departed.
- 6.5.8 It is forecast the care home development would operate with spare parking capacity throughout an average weekday. As a result, is not anticipated that the proposals would result in any overspill parking in vicinity of the site.
- 6.5.9 The above analysis is considered to be a reasonable and accurate forecast of future conditions at the site, given that the sites assessed in TRICS have staff shifts similar to that of the proposed scheme. The parking provision associated with the care home is deemed sufficient and appropriate to meet the anticipated parking demand.
- 6.5.10 In addition to the above exercise, a review of car parking ratios provided for class C2 nursing/ care home sites throughout England has been undertaken following a review of the TRICS survey database. Sites were selected in Edge of Town and Suburban Areas only. The comparison of car parking ratios is presented within **Table 6.8**.

Table 6.8: Review of Car Parking Ratios (Spaces to Beds) at C2 sites

Reference	Town/City	Area	Location	RESIDE	PARKING	Parking Ratio
CA-05-F-01	Peterborough	Cambridgeshire	Suburban Area (PPS6 Out of Centre)	48	20	0.42
DS-05-F-01	Derby	Derbyshire	Suburban Area (PPS6 Out of Centre)	70	23	0.33

GM-05F-03	Rochdale	Greater Manchester	Edge of Town	30	15	0.50
HC-05-F-01	Southampton	Hampshire	Edge of Town	42	29	0.69
LC-05-F-02	Blackpool	Lancashire	Edge of Town	31	10	0.32
LN-05-F-01	Lincoln	Lincolnshire	Suburban Area (PPS6 Out of Centre)	38	12	0.32
NY-05-F-05	Richmond	North Yorkshire	Edge of Town	37	15	0.41
SF-05-F-01	Ipswich	Suffolk	Edge of Town	17	6	0.35
TW-05-F-02	Gateshead	Tyne & Wear	Suburban Area (PPS6 Out of Centre)	60	16	0.27
TW-05-F-03	Gateshead	Tyne & Wear	Suburban Area (PPS6 Out of Centre)	52	10	0.19
WG-05-F-01	Wokingham	Wokingham	Suburban Area (PPS6 Out of Centre)	58	20	0.34
WK-05-F-01	Leamington Spa	Warwickshire	Suburban Area (PPS6 Out of Centre)	32	7	0.22
WM-05-F-01	Birmingham	West Midlands	Edge of Town	65	17	0.26
				Average Parking Ratio (spaces/beds)		0.36

- 6.5.11 The parking ratio comparison obtained from surveyed care home sites within the TRICS database demonstrates an average parking ratio of 0.36 spaces per bed. Applying this ratio to the proposed care home development would equate to the provision of 23 car parking spaces on the site.
- 6.5.12 A total of 29 parking spaces are proposed within the proposed care home development, of which two spaces would be designed as disabled parking spaces. This represents a parking ratio of 0.45 spaces per resident bed space and exceeds the mean average parking ratio comparison results.
- 6.5.13 The car parking assessment using trip generation data as well as the comparison of car parking ratio to similar care home developments indicates that the proposed 29 car parking spaces would be appropriate for the development and should alleviate any concerns regarding overspill parking in the vicinity of the site.

6.6 Servicing Vehicle Trip Generation

- 6.6.1 It is anticipated that there would be no greater than two service/ delivery vehicle arrival and two departure trips occurring during any hour of the day associated with the proposed care home. The development proposals for on-site servicing will therefore not result in a material impact on the operation of the highway network.

6.7 Summary

- 6.7.1 The proposed care home development is anticipated to generate eight two-way vehicle trips in the traditional weekday AM peak hour of travel demand and 10 two-way vehicle trips in the traditional weekday PM peak hour. This equates to one vehicle movement, on average, every eight minutes

during the weekday AM peak hour, and every six minutes along Hart Plain Avenue during the weekday PM peak hour periods.

- 6.7.2 Over the course of a 12-hour day, a two-way total of 114 vehicle movements to/from the care home site are predicted: 56 arrivals and 58 departures.
- 6.7.3 The proposed residential units are anticipated to generate 4 two-way vehicle trips in the traditional weekday AM peak hour of travel demand and 3 two-way vehicle trips in the traditional weekday PM peak hour.
- 6.7.4 Over the course of a 12-hour day, a two-way total of 31 vehicle movements to/from the site are predicted: 15 arrivals and 16 departures.
- 6.7.5 The maximum parking accumulation for the care home development is expected to occur between 13:00 and 14:00 when 14 spaces would be occupied. This equates to an anticipated maximum level of parking occupancy of 49%.
- 6.7.6 The total level of parking proposed is sufficient to accommodate any additional parking demand over and above the recognised typical peak.
- 6.7.7 Consequently, it is forecast that the development proposals would not have a material impact upon the operation of the local highway network.

7 Outline Delivery and Servicing Strategy

7.1 Overview

- 7.1.1 Delivery and servicing for the residential units (C3) would be undertaken on-street, along Hart Plain Avenue, adjacent to the two proposed units to the west. Double yellow lines, which prohibit waiting at any time, are present to the east.
- 7.1.2 Delivery and servicing for the proposed care home would take place within the curtilage of the site, with access to the service area via Hart Plain Avenue.
- 7.1.3 All delivery and servicing vehicles for the care home use would enter the site via the main vehicular access and turn within the turning head and unload/ load within the loading bay provided within the site's car parking layout.
- 7.1.4 All delivery and servicing vehicles would access and egress the care home development in a forward gear. This is demonstrated within the swept path analysis provided within **Appendix 6**.
- 7.1.5 Bin stores are to be located to the north-west of the proposed building in proximity to the proposed kitchen area. The bin stores are conveniently located for access from the proposed servicing loading area.
- 7.1.6 The bin store arrangement is in accordance with Manual for Streets guidance which states:
- residents should not be required to carry waste more than 30 m (excluding any vertical distance) to the storage point;
 - waste collection vehicles should be able to get to within 25 m of the storage point (note, BS 5906: 200518 recommends shorter distances) and the gradient between the two should not exceed 1:12. There should be a maximum of three steps for waste containers up to 250 litres, and none when larger containers are used (the Health and Safety Executive recommends that, ideally, there should be no steps to negotiate); and
 - the collection point should be reasonably accessible for vehicles typically used by the waste collection authority.
 - BS 5906: 2005 provides guidance and recommendations on good practice. The standard advises on dealing with typical weekly waste and recommends that the distance over which containers are transported by collectors should not normally exceed 15 m for two-wheeled containers, and 10 m for four-wheeled containers.
- 7.1.7 Vehicle swept path analysis for the proposed care home has been undertaken to demonstrate that the layout is suitable to accommodate the expected vehicle movements. The swept paths are presented in **Appendix 6**. Swept path analysis has been carried out for the following vehicles:
- 11.2m Refuse Vehicle;
 - 7.5t Box Van.

7.2 Types of Deliveries

- 7.2.1 Grocery deliveries at the care home will take place daily and will be accommodated within the loading area. It is anticipated that deliveries would typically be undertaken by transit vans or a 7.5t box van.

7.2.2 Laundry services will be undertaken in-house and will subsequently not generate any service vehicle trips.

7.2.3 Refuse collection will be undertaken on a weekly basis by a circa. 11.2m council refuse vehicle.

7.3 Management of Deliveries

7.3.1 Deliveries would be scheduled and managed by an on-site representative such as the care home facilities manager. In the unlikely event of two delivery vehicles arriving at the site within the same time period, there is sufficient turning and manoeuvring space within the car park and delivery bay area to ensure that deliveries and servicing vehicle trips can be managed and processed efficiently in a timely manner.

7.4 Summary

7.4.1 Delivery and servicing vehicle trips to the proposed care home can be accommodated within the curtilage of the development site. It is anticipated that delivery trips would typically be comprised of transit van and 7.5t box van vehicle trips. Deliveries will be scheduled and managed by an on-site representative within the care home.

8 Summary

- 8.1.1 This Transport Statement (TS) has been prepared by Royal HaskoningDHV (RHDHV), on behalf of Frontier Estates Ltd, to consider the highways and transportation implications of a proposed 64-bed care home (C2) development in addition to six dwellings (C3), at the land at Cowplain Community School, Hart Plain Avenue, Waterlooville PO8 8RY (the 'site').
- 8.1.2 The site is located approximately 800 metres (m) west of Cowplain district centre, within the Borough of Havant.
- 8.1.3 The site is located on Hart Plain Avenue, which is an unclassified road that connects with Milton Road to west and the A3 London Road to the east. The application site is located within the grounds of the Cowplain Community School and is comprised of two distinct plots, both bordered to the north by Hart Plain Avenue and separated by a small cluster of residential dwellings.
- **Plot 1**, on which the care home development is proposed; is a triangular-shaped area of greenfield land (0.73ha). The plot currently forms part of the school's playing field, and adjoins Hart Plain Infant School to the west, while the playing field lies to the south; and
 - **Plot 2**, on which the residential units are proposed, is a rectangular hardstanding (0.21ha) immediately adjacent to the Cowplain School to the east and associated car park to the south.
- 8.1.4 The boundaries for each plot are indicated on **Insert 1.1**.
- 8.1.5 A review of collision data for the local highway network demonstrates that there is no identifiable pattern of collisions associated with pedestrians and cyclists. It is considered that traffic associated with the development will not have a foreseeable adverse impact on road safety conditions.
- 8.1.6 There is good quality pedestrian infrastructure present along Hart Plain Avenue including wide pedestrian footpaths, crossing points and dropped kerbs.
- 8.1.7 There is an existing shared cycleway/footway route along Milton Road to the east of the site, which is part of Havant Borough Cycle Network. Along the A3 London Road, National Cycle Network (NCN) Route 222 is present. This route provides direct connections to Cowplain and Horndean district centres to the north and Waterlooville retail park to the south.
- 8.1.8 Bedhampton railway station is located approximately 6.2 km to the south east of site. This station is served by Southern and South Western Railway and provides direct connections to Littlehampton, London Waterloo, Portsmouth and Southsea and Portsmouth Harbour.
- 8.1.9 The closest bus stops to the site are situated approximately 50m from the proposed residential development site, which are served by the 654 school service. Bus stops are additionally located on Milton Road and A3 London Road, approximately 400m and 550m respectively from the site. The 39, D2 and 7 The Star services can be accessed from Milton Road, while the 8 The Star can be accessed from London Road.
- 8.1.10 The proposal seeks to provide a 64-bed care home (Use Class C2) on Plot 1 and six dwellings (Use Class C3) on Plot 2, with associated parking and landscaping.
- 8.1.11 The care home proposes a total of 29 car parking spaces, inclusive of two disabled parking spaces

with one dedicated ambulance drop-off/ pick-up point, and this equates to a parking ratio of 0.45 spaces/ bedroom. A total of 10 secure cycle parking spaces would be provided in the form of five Sheffield stands within the curtilage of the site.

- 8.1.12 In addition to the care home, the proposal seeks to provide six dwellings on Plot 2 consisting of four semi-detached and two detached houses. Each dwelling will have its own private driveway and off-street parking space, accessed from Hart Plain Avenue. In addition to private driveways, garages are indicated within the curtilage of each dwelling plot.
- 8.1.13 It is proposed that new vehicular accesses from Hart Plain Avenue would be created to the care home and residential development sites.
- 8.1.14 The proposed care home development is anticipated to generate eight two-way vehicle trips in the traditional weekday AM peak hour of travel demand and 10 two-way vehicle trips in the traditional weekday PM peak hour. This equates to one vehicle movement, on average, every eight minutes during the weekday AM peak hour, and every six minutes along Hart Plain Avenue during the weekday PM peak hour periods.
- 8.1.15 Over the course of a 12-hour day, a two-way total of 114 vehicle movements to/from the care home site are predicted: 56 arrivals and 58 departures.
- 8.1.16 The proposed residential units are anticipated to generate 4 two-way vehicle trips in the traditional weekday AM peak hour of travel demand and 3 two-way vehicle trips in the traditional weekday PM peak hour.
- 8.1.17 Over the course of a 12-hour day, a two-way total of 31 vehicle movements to/from the site are predicted: 15 arrivals and 16 departures.
- 8.1.18 The maximum parking accumulation for the care home development is expected to occur between 13:00 and 14:00 when 14 spaces would be occupied. This equates to an anticipated maximum level of parking occupancy of 49%.
- 8.1.19 Delivery and servicing vehicle trips can be accommodated within the curtilage of the care home development. It is anticipated that delivery trips would typically comprise transit van and 7.5t box van vehicle trips. Deliveries will be scheduled and managed by an on-site representative within the care home.
- 8.1.20 Refuse/ delivery and servicing for the residential units would be undertaken on-street along Hart Plain Avenue.
- 8.1.21 This document has identified that the development would not result in an adverse transport impact and the development is therefore supported by transport planning policies at a national, regional and local level.
- 8.1.22 In light of the above and the preceding assessment, it is reasonable to conclude that the development proposals are in accordance with the principles of sustainable development set out within the National Planning Policy Framework, and are therefore fully acceptable in transport planning terms.

Appendix 1 – HCC Highways Response

From: [Hirst, Chris](#)
To: [Chris Slack](#); [Drury, Holly](#)
Cc: [Will Rees](#); karine@gillingsplanning.co.uk; [Tom Hicks](#)
Subject: RE: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterloooville, PO8 8RY
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)

Hi Chris,

Following discussions with the TM and School Travel Planning teams, we have agreed a route forward to help achieve the proposed access to the site. The existing TRO's along Hart Plain Avenue should be rationalised to provide a clear delineation between areas that are subject to parking restrictions and areas of road where parking is allowed, rather than having long, continuous sections of parking restrictions or on-street parking. The site access will require restrictions to prevent errant parking and this will be the subject of a TRO. The funds for the parking rationalisation and further TRO's will be expected to come from the proposed development. The cost for this will be borne out of further discussions with the Traffic Management team who should be engaged with to agree an appropriate design.

Furthermore, our School Travel Planning team will be engaging with the local schools to increase the uptake of walking and cycling via travel plans, rather than trips via the private car which will help to reduce the levels of on-street parking. This will feature a review/provision of travel plans, a review of the current cycle parking arrangements, further engagement on producing maps of local walking catchments and routes and follow up work to investigate enforcement of parking in the area. My colleague in the travel planning team is going to pull together some costs for this work which should also be contributed towards/funded by the proposed development.

With regards to the access, the visibility splays should be shown to 55m which shouldn't be an issue given the alignment of the road. The minimum separation between the proposed access and the existing vehicle crossover should be 10m from the projected channel to the dropped crossing. Having reviewed the drawings in light of this requirement, the separation only appears to be 7.5m, meaning the access will need to move west by at least 2.5m to meet the minimum standards. The junction separation from Hartford Gardens appears suitable so the relocation should not be an issue.

Happy to discuss any of the above in more detail if required.

Kind Regards,

Chris Hirst
Senior Transport Planner
0370 779 0563
Chris.Hirst@hants.gov.uk

Highways Development Planning
Hampshire County Council
2nd Floor Elizabeth II Court West
The Castle Winchester SO23 8UD



Hampshire County Council operates a pre-application highway advice service for developers.

Hampshire County Council welcomes and encourages discussions before a developer submits a planning application. Please follow this link for further information

[Pre-Application guidance for developers](#)

From: Chris Slack <Christopher.Slack@rhdhv.com>

Sent: 24 August 2021 11:55

To: Hirst, Chris <Chris.Hirst@hants.gov.uk>; Drury, Holly <holly.drury@hants.gov.uk>

Cc: Will Rees <willrees@Frontier-estates.com>; karine@gillingsplanning.co.uk; Tom Hicks <tom.hicks@rhdhv.com>

Subject: RE: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterloooville, PO8 8RY

Hi Chris/Holly,

I understand that our Planning Consultant is meeting the Planning Case Officer at Havant BC on Thursday.

Is there any further update following my email response of 28th July and in relation to any discussions held with the School Travel Planning Officers and traffic management teams at HCC as referenced in your email below?

Please let me know if we can be of any further assistance.

Kind Regards

Chris Slack BA MSc (Eng) CMILT MIHT

Associate Transport Planner – Transport UK

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From: Hirst, Chris <Chris.Hirst@hants.gov.uk>

Sent: 27 July 2021 09:59

To: Drury, Holly <holly.drury@hants.gov.uk>; Chris Slack <Christopher.Slack@rhdhv.com>

Cc: Will Rees <willrees@Frontier-estates.com>; karine@gillingsplanning.co.uk; Tom Hicks <tom.hicks@rhdhv.com>

Subject: RE: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterlooville, PO8 8RY

Hi Chris,

Apologies for the delay in getting back to you.

Further to the points Holly has made below regarding the potential departure, please can you provide confirmation as to where the speed surveys have been undertaken to confirm they meet HCC TG3 guidance. The visibility splays will subsequently need to be updated and the junction separation between the access to no. 43 still needs to be confirmed to establish exactly how far the new access will be from Hartford Gardens. Our engineer has taken a look at the potential separation and it appears that a departure would not be necessary but the information noted above and in Holly's email will help to clarify this point.

I visited site a few weeks ago to observe traffic conditions during the school drop off period. During this time, Hart Plain Avenue was heavily parked, especially in the vicinity of the proposed site access. There was also evidence of parking along the double yellows and 'keep clear' markings. I am therefore meeting with the school travel planning and traffic management teams at HCC to understand what measures could be implemented to ensure that the required visibility will be achievable from the site access. I have been liaising with Alison Mills who has provided me with a history of the schemes previously implemented along HPA, although these were ultimately implemented by the County and therefore is not HBC's responsibility.

I will provide you with a further update following my discussions with the aforementioned teams.

In the meantime, I'd be happy to discuss any of the above further if it would be of benefit.

Kind Regards,

Chris Hirst
Senior Transport Planner
0370 779 0563
Chris.Hirst@hants.gov.uk

Highways Development Planning
Hampshire County Council
2nd Floor Elizabeth II Court West
The Castle Winchester SO23 8UD





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[Pre-Application guidance for developers](#)

From: Drury, Holly <holly.drury@hants.gov.uk>

Sent: 16 July 2021 09:42

To: Chris Slack <Christopher.Slack@rhdhv.com>; Hirst, Chris <Chris.Hirst@hants.gov.uk>

Cc: Will Rees <willrees@Frontier-estates.com>; karine@gillingsplanning.co.uk; Tom Hicks <tom.hicks@rhdhv.com>

Subject: RE: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterlooville, PO8 8RY

Morning Chris

I can answer a couple of this whilst Chris is away.

HBC contact is Stuart Wood stuart.wood@havant.gov.uk and Alison Mills Alison.Mills@easthants.gov.uk

Our Technical Guidance notes available on our website set out that if recorded speeds are less than 37mph then MfS applies. Junction separation is always a difficult one as this isn't set in MfS and the only standards are within DMRB. You will need to demonstrate that the largest required vehicle can track between the junctions (as I understand it) if you are not able to comply with the standards set out within DMRB and this may require a departure from standard.

Chris went to site just before he went on leave so I shall leave him to provide the additional comments as a result of observations made at the site visit.

Kind Regards

Holly

Holly Drury BSc (Hons) MSc MCIHT

Principal Transport Planner – Highways Development Planning

Strategic Transport

0370 779 3193



From: Chris Slack <Christopher.Slack@rhdhv.com>

Sent: 14 July 2021 18:18

To: Hirst, Chris <Chris.Hirst@hants.gov.uk>

Cc: Drury, Holly <holly.drury@hants.gov.uk>; Will Rees <willrees@Frontier-estates.com>;

karine@gillingsplanning.co.uk; Tom Hicks <tom.hicks@rhdhv.com>

Subject: RE: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterloooville, PO8 8RY

Hi Chris,

I don't believe I received a response to my email below?

Are you able to provide any update in relation to the queries below?

Kind Regards

Chris Slack BA MSc (Eng) CMILT MIHT

Associate Transport Planner – Transport UK

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From: Chris Slack

Sent: 27 May 2021 11:27

To: 'Hirst, Chris' <Chris.Hirst@hants.gov.uk>

Cc: Drury, Holly <holly.drury@hants.gov.uk>; Will Rees <willrees@Frontier-estates.com>; karine@gillingsplanning.co.uk; Tom Hicks <tom.hicks@rhdhv.com>

Subject: RE: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterloooville, PO8 8RY

Hi Chris,

Further to your response, we are continuing to review the layout and seek to incorporate and address the points raised within the comprehensive review provided.

I note that there were a couple of points that were to be reviewed which I have extracted below:

- *The Highway Authority understands that Hart Plain Avenue has been subject to a number of traffic management proposals to address accident concerns. **The TM team at HBC should be involved in discussions on this site** to ensure that any remaining concerns are not exacerbated by the proposed development.*

Are you able to provide the appropriate contact at Havant Borough Council for the project team to understand any Traffic Management proposals that may affect the development proposals?

- *Junction separation from Hartford Gardens is less than DMRB requirement of 50m. Whilst this is normally a departure from standard, this is a matter we will clarify internally and respond on in due course.*

Hart Plain Avenue has a registered speed limit of 20mph. RHDHV has subsequently undertaken an ATC survey which demonstrates an 85th percentile speed of 31mph. The application of DMRB design standards would not appear appropriate for this residential road. Are you able to confirm the application of highway design standards considered appropriate in relation to junction separation requirements?

- *The Highway Authority will need to undertake a site visit during school collection times to understand the current arrangement at the site and the risks of any overspill parking from the proposed care home given the site location.*

Are you able to indicate when you anticipate this site visit will be undertaken?

Please let me know if you have any queries.

Kind Regards

Chris Slack BA MSc (Eng) CMILT MIHT

Associate Transport Planner – Transport UK

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From: Hirst, Chris <Chris.Hirst@hants.gov.uk>

Sent: 21 April 2021 08:32

To: Chris Slack <Christopher.Slack@rhdhv.com>

Cc: Drury, Holly <holly.drury@hants.gov.uk>; Will Rees <willrees@Frontier-estates.com>; karine@gillingsplanning.co.uk; Tom Hicks <tom.hicks@rhdhv.com>

Subject: RE: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterlooville, PO8 8RY

Dear Chris,

Thank you for your pre-application enquiry into the proposed 80 bed care home and 4 no. 4 bed dwellings accessed from Hart Plain Avenue, Waterlooville. The Highway Authority have now had the chance to review the attached pre-application scoping note and wish to make the following comments.

Existing Conditions

The proposed developments are located along Hart Plain Avenue, in-between Hart Plain Infant School and Cowplain Community School. Hart Plain Avenue is subject to a 20mph speed limit for the majority of its length and features continuous footways on both the northern and southern side of the carriageway.

To the west, Hart Plain Avenue connects with Milton Road via a priority junction where there are a number of amenities located within a walkable distance of the development. To the east, Hart Plain Avenue joins the A3/London Road corridor which provides access to the A3(M) via junction 2 or 3.

The junction of Hart Plain Avenue/Milton Road is not an all moves junction but restricted to a left in and left out arrangement. Access from Hart Plain Avenue onto the A3 London Road is a right turn lane type junction.

Personal Injury Accident Data

Personal Injury Accident (PIA) data will be assessed within the Transport Statement (TS) for the most recent 5-year period. The scoping note proposes to obtain the accident data from Crashmap which is not an accepted source within Hampshire. Accident data should be gathered from Hampshire Constabulary to ensure that the most recent and accurate data is reviewed within the TS.

The scope of the PIA data (the length of Hart Plain Avenue including the junctions with Milton Road and A3/London Road) is considered acceptable.

The Highway Authority understands that Hart Plain Avenue has been subject to a number of traffic management proposals to address accident concerns. The TM team at HBC should be involved in discussions on this site to ensure that any remaining concerns are not exacerbated by the proposed development.

Site Accessibility

Pedestrian/Cycle

A list of nearby facilities has been listed within the scoping note. Whilst it is unclear which parcel of the site has been used as the basis for the distance measurements, it is noted that nearby shops such as the co-op have been omitted when they would likely attract pedestrian/cycle trips from the site. Taking the 800m identified in the CIHT's 'Providing for Journeys on Foot' as the maximum preferred walking distance, the majority of the identified facilities sit within an acceptable walking distance for the residential element of the site. It is acknowledged that facilities which are located further away from the care home are unlikely to attract any pedestrian trips.

As noted above, Hart Plain Avenue is served by a continuous footway on both sides of the footway. Crossing points are provided intermittently and consist of dropped kerbs and tactile paving. It is noted that a full review of the pedestrian and cycle infrastructure will be provided in the TS and further information shall be provided at that stage.

Bus

Reference is made to the bus stops on Hart Plain Avenue; however, it is noted that these stops serve school buses only and therefore do not represent bus facilities available for use by the new site.

The stops located on Milton Road and London Road are 400m and 550m away respectively. The A3 corridor contains a dedicated bus lane with upgraded waiting facilities. The southbound bus stop on Milton Road also consists of a sheltered waiting facility alongside the flag pole and timetable. The northbound facility on Milton Road consists of a flagpole and timetable only which should be upgraded to include sheltered waiting facilities to improve the attractiveness of the facility. Given the under provision in on-site parking spaces (addressed below), encouraging the uptake of alternative modes of travel for staff should be investigated given the proximity of the existing waiting facilities and frequency of services which presents the buses as a realistic alternative form of transport.

Rail

The closest railway station to the site is located in Bedhampton, 6.2km away. Given that the station sits outside a walkable and cyclable distance, it is unlikely that rail travel will represent an alternative

mode of transport for staff at the care home.

Parking Provision

It is noted that the care home development will not adhere to Havant Borough Council's adopted parking standards for the care home element of the site. A total of 29 parking spaces are proposed, alongside a separate delivery and loading bay. Based on HBC's parking SPD, a total of 47 spaces would be required. It is unclear at this stage what type of care home is proposed which could impact on the parking requirements too if residents own a car – further information is required on this point.

To justify the under provision in on-site parking spaces, a TRICS assessment for similarly located care homes has been undertaken to understand the parking ratio for these sites. The average parking ratio between those sites used in the assessment was 0.33. The provision of 29 spaces for this development equates to a parking ratio of 0.36.

In their capacity as local parking authority, Havant Borough Council normally assess the quantum of parking provided against adopted parking standards. However, given the suggested under provision, the Highway Authority raise a concern at this stage of overspill parking on street in the vicinity of the school and the associated crossing points. The Highway Authority will need to undertake a site visit during school collection times to understand the current arrangement at the site and the risks of any overspill parking from the proposed care home given the site location. It should be noted that any overspill parking will also be contrary to policy CS20 of Havant's Adopted Transport Strategy as set out on page 6 of the scoping note.

It is noted that each residential unit will be provided with 3 parking spaces via a mixture of a private driveway and garage which will utilise tandem parking. Whilst the drawings in the scoping note do not fully demonstrate the internal layout for these properties, parking must be provided on plot in an attractive form to prevent overspill parking on the highway. This matter is essential given the proximity to the school and the potential conflict with car parking on-street during school drop off and pick up times.

Site Access(es)

The following access strategy is proposed for the two elements of the site:

- Care Home – Provision of a new bellmouth junction with Hart Plain Avenue located in the northern eastern corner of the site.
- Residential Dwellings – Provision of 4 new accesses onto Hart Plain Avenue.

An initial review of the proposed accesses has been undertaken but further information is required before the Highway Authority can consider the accesses acceptable. Detailed comments are set out below.

- The junction separation between the care home and the access to no. 43 needs to be confirmed. Should the access not be located at least 10m away from the existing dropped kerb, it will need to be moved further west. Discussions may need to be held with the owners of no. 43 if there are constraints as to why the access needs to be located as shown in the plans; with No 43 enjoying two vehicle accesses there is possibility that the western provision could be removed by agreement with the land owner.
- Junction separation from Hartford Gardens is less than DMRB requirement of 50m. Whilst this is normally a departure from standard, this is a matter we will clarify internally and respond on in due course.

- To justify the 25m visibility splays, a speed survey should be undertaken on Hart Plain Avenue in accordance with HCC TG3 guidance.
- Updated vehicle tracking for a 11.2m refuse vehicle.
- Vehicle tracking to demonstrate two vehicles can pass in the new site access for the care home.
- The combined length of each pair of new dropped kerbs serving the 4 residential dwellings are likely to be longer than 10m, therefore falling outside of the criteria for a S184. The access proposals should be included within any s278 for the care home access or would be subject to separate agreement. Further detailed drawings of the accesses would be beneficial in appraising the access proposals.
- A stage 1 safety audit is required for the access proposals.

Trip Generation

To derive the trip generation from the proposed development, the industry standard TRICS database has been utilised for care homes and residential properties in similar locations. The TRICS assessment provided the following trip rates:

Care Home

AM Peak Hour: 0.131 (10 two-way trips)

PM Peak Hour: 0.162 (13 two-way trips)

Residential Dwellings

AM Peak Hour: 0.613 (3 two-way trips)

PM Peak Hour: 0.416 (2 two-way trips)

The Highway Authority have reviewed the proposed trip rates and consider them acceptable for the scale and location of development.

Given the relatively low level of traffic generation, junction modelling will not be required.

Conclusion

The Highway Authority would welcome further discussions on any of the points raised within this response prior to submission of the planning application should this be of benefit.

Kind Regards,

Chris Hirst

Senior Transport Planner

0370 779 0563

Chris.Hirst@hants.gov.uk

Highways Development Planning

Hampshire County Council

2nd Floor Elizabeth II Court West

The Castle Winchester SO23 8UD





Hampshire County Council operates a pre-application highway advice service for developers.

Hampshire County Council welcomes and encourages discussions before a developer submits a planning application. Please follow this link for further information

[Pre-Application guidance for developers](#)

From: Chris Slack <Christopher.Slack@rhdhv.com>

Sent: 11 March 2021 16:22

To: Highways Development Planning <highways.development.planning@hants.gov.uk>; Hirst, Chris <Chris.Hirst@hants.gov.uk>; Drury, Holly <holly.drury@hants.gov.uk>

Cc: Will Rees <willrees@Frontier-estates.com>; Karine Johnson <karine@gillingsplanning.co.uk>; Tom Hicks <tom.hicks@rhdhv.com>

Subject: Pre-Application Highways Request - Land at Cowplain School, Hart Plain Avenue, Waterlooville, PO8 8RY

Hi Chris/Holly,

We would like to seek Hampshire County Council pre-application advice in relation to development proposals within land at Cowplain School, Hart Plain Avenue, Waterlooville, PO8 8RY.

The proposals include the development of an 80 bed care home in addition to 4 No. four bed residential units.

I attach the following:

- Completed and signed pre-application guidance request form; and
- Transport Statement Scoping Note detailing the proposals and associated scope of assessment to be undertaken.

Based upon the pre-application charging schedule, this development would constitute medium scale development. An 80 bed care home would equate to circa 28 residential dwellings in terms of highways and transport development impact.

The client, Will Rees of Frontier Estates, copied in to this email, has agreed to make payment of £750 & VAT via BACS.

I would be grateful if you could provide the appropriate contact details of your accounts department to allow this payment to be processed.

Please let me know if you require any further information or have any queries.

Kind Regards

Chris Slack BA MSc (Eng) CMILT MIHT

Associate Transport Planner – Transport UK

D +44 (0)20 7151 0019 | **M** +44 (0)7776 484 314

E christopher.slack@rhdhv.com | **W** www.royalhaskoningdhv.com



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Appendix 2 – PIC Data



Hart Plain Avenue, Waterlooville

SCALE	1 : 3340
DATE	17/05/2021
DRAWING No.	
DRAWN BY	

Accidents between dates 01/01/2016 and 31/12/2020 (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
Waterlooville BACS/SR/0521/057")

Notes:

Selected Polygon:AW Waterlooville BACS/SR/0521/057

44170086509 07/03/2017 Time 2000 Vehicles 2 Casualties 1 Slight
E:468157 N: 110837 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VH1 (CAR) TRAVELLING NW ON HART PLAIN AVENUE IS WAITING TO TURN RIGHT ON MILTON ROAD.
VH1 STARTS TO PULL OUT BELIEVING THAT VH2 (CAR) TRAVELLING S ON MILTON ROAD IS TURNING
LEFT INTO HART PLAIN AVENUE. VH2 IS GOING STRAIGHT AHEAD SO COLLIDES WITH VH1

Occurred on MILTON ROAD AT JUNCTION WITH HART PLAIN AVENUE, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from SE to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 19 Female
Not hit and run Breath test Not requested
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 19 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Car Going ahead other
Vehicle movement from NE to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 55 Male
Not hit and run Breath test Not requested
Left hand drive: No

Accidents between dates 01/01/2016 and 31/12/2020 (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
Waterlooville BACS/SR/0521/057")

Notes:

44170157106 27/04/2017 Time 1515 Vehicles 1 Casualties 1 Slight
E:468144 N: 110814 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation			
Factor:	Participant:	Confidence:	
1st: Failed to look properly	Casualty 1	Possible	
2nd: Careless/Reckless/In a hurry	Vehicle 1	Possible	
3rd:			
4th:			
5th:			
6th:			

V1 TRAVELLING SOUTH DOWN MILTON PARADE WHEN C1 HAS WALK OUT INTO ROAD AND INTO V1.
Occurred on MILTON PARADE, MILTON ROAD, WATERLOOVILLE, HAMPSHIRE.

Vehicle Reference 1 Car Going ahead other
Vehicle movement from N to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 46 Female
Not hit and run Breath test Not requested Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 4 Male Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist
Location U/K E bound
In carr not crossing masked

Accidents between dates 01/01/2016 and 31/12/2020 (60) months

Selection: Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
Waterlooville BACS/SR/0521/057")

44170315507 09/08/2017 Time 1325 Vehicles 2 Casualties 1 Serious
E:468601 N: 110829 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Pri Drive Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation			
Factor:	Participant:	Confidence:	
1st: Failed to look properly	Vehicle 2	Very Likely	
2nd: Failed to judge other persons path or speed	Vehicle 2	Very Likely	
3rd: Sudden braking	Vehicle 1		
4th:			
5th:			
6th:			

VEH 2 (VAN) TRAVELLING W ALONG HART PLAIN AVENUE PULLS ONTO THE WRONG SIDE OF THE ROAD
IN ORDER TO REVERSE INTO NUMBER 48 CAUSING VEH 1 (M/CYCLE) TRAVELLING E ALONG HART PLAIN
AVENUE TO BRAKE ON WET ROAD AND RIDER TO FALL OFF.

Occurred on HART PLAIN AVENUE AT JUNCTION WITH NUMBER 48, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway Skidded
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 24 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 24 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Van or Goods 3.5 tonnes mgw and under Changing lane to right
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 50 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Accidents between dates 01/01/2016 and 31/12/2020 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
Waterlooville BACS/SR/0521/057")

44170484828 14/12/2017 Time 1524 Vehicles 1 Casualties 1 Slight
E:468156 N: 110829 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Casualty 1	Very Likely
2nd:	Wrong use of pedestrian crossing facility	Casualty 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEH1 (CAR) TRAVELLING S ON MILTON ROAD COLLIDES WITH CAS1 (PEDESTRIAN) WHO RAN OUT INTO ROAD THINK TRAFFIC HAD STOPPED FOR PED CROSSING. CAS1 SUFFERED MINOR INJURIES.

Occurred on MILTON ROAD AT JUNCTION WITH HART PLAIN AVENUE, COWPLAIN, HAMPSHIRE.

Vehicle Reference 1 Car Going ahead other
Vehicle movement from N to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/park First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 26 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 6 Female Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist
On Ped Crossing E bound
Driver's offside masked

Accidents between dates 01/01/2016 and 31/12/2020 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
Waterlooville BACS/SR/0521/057")

44180417395 06/11/2018 Time 1440 Vehicles 1 Casualties 2 Slight
E:468654 N: 110831 First Road: U Road Type Single carriageway
Speed limit: 20 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Casualty 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

CAS 1 (PEDESTRIAN) TRAVELLING N ACROSS HART PLAIN AVENUE STEPS FROM THE PAVEMENT INTO THE PATH OF VEH 1 (P/CYCLE) TRAVELLING W ALONG HART PLAIN AVENUE AND COLLIDES.

Occurred on HART PLAIN AVENUE OUTSIDE OF COWPLAIN COMMUNITY SCHOOL, WATERLOOVILLE, HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 15 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 14 Male Pedestrian Severity: Slight

Not a pupil

Seatbelt Not Applicable Cycle helmet: Not a cyclist

In carr elsewhere N bound

Driver's nearside

Casualty Reference: 2 Vehicle: 1 Age: 15 Male Driver/rider Severity: Slight

Not a pupil

Seatbelt Not Applicable Cycle helmet: No

Accidents between dates 01/01/2016 and 31/12/2020 (60) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
Waterlooville BACS/SR/0521/057")

44190236010 07/07/2019 Time 1930 Vehicles 2 Casualties 1 Slight
E:468154 N: 110839 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st:		
2nd:		
3rd:		
4th:		
5th:		
6th:		

VEH2 TRAVELLING W ALONG HART PLAIN AVENUE TURNED RIGHT ONTO MILTON ROAD WITHOUT
GIVING WAY TO VEH1 (CAR) TRAVELLING N ALONG MILTON ROAD.

Occurred on MILTON ROAD AT JUNCTION WITH HART PLAIN AVENUE, WATERLOOVILLE, HAMPSHIRE.

Vehicle Reference 1 Car Going ahead other
Vehicle movement from S to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 72 Female
Not hit and run Breath test Driver not contacted
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 72 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Car Turning right
Vehicle movement from E to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Accidents between dates **01/01/2016 and 31/12/2020** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents
 within selected Polygons -HC - RPU Statistics Request ("AW
 Waterloooville BACS/SR/0521/057")

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	4	4
2-wheeled motor vehicles	0	1	0	1
Pedal cycles	0	0	1	1
Horses & other	0	0	0	0
Total	0	1	5	6

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	2	2
Passenger	0	0	0	0
Motorcycle rider	0	1	0	1
Cyclist	0	0	1	1
Pedestrian	0	0	3	3
Other	0	0	0	0
Total	0	1	6	7

Appendix 3 – Walk and Cycle Catchment Plans



Legend

- Bus Stops
- ★ Site Location (Care Home Access)

Walk Catchment

Distance

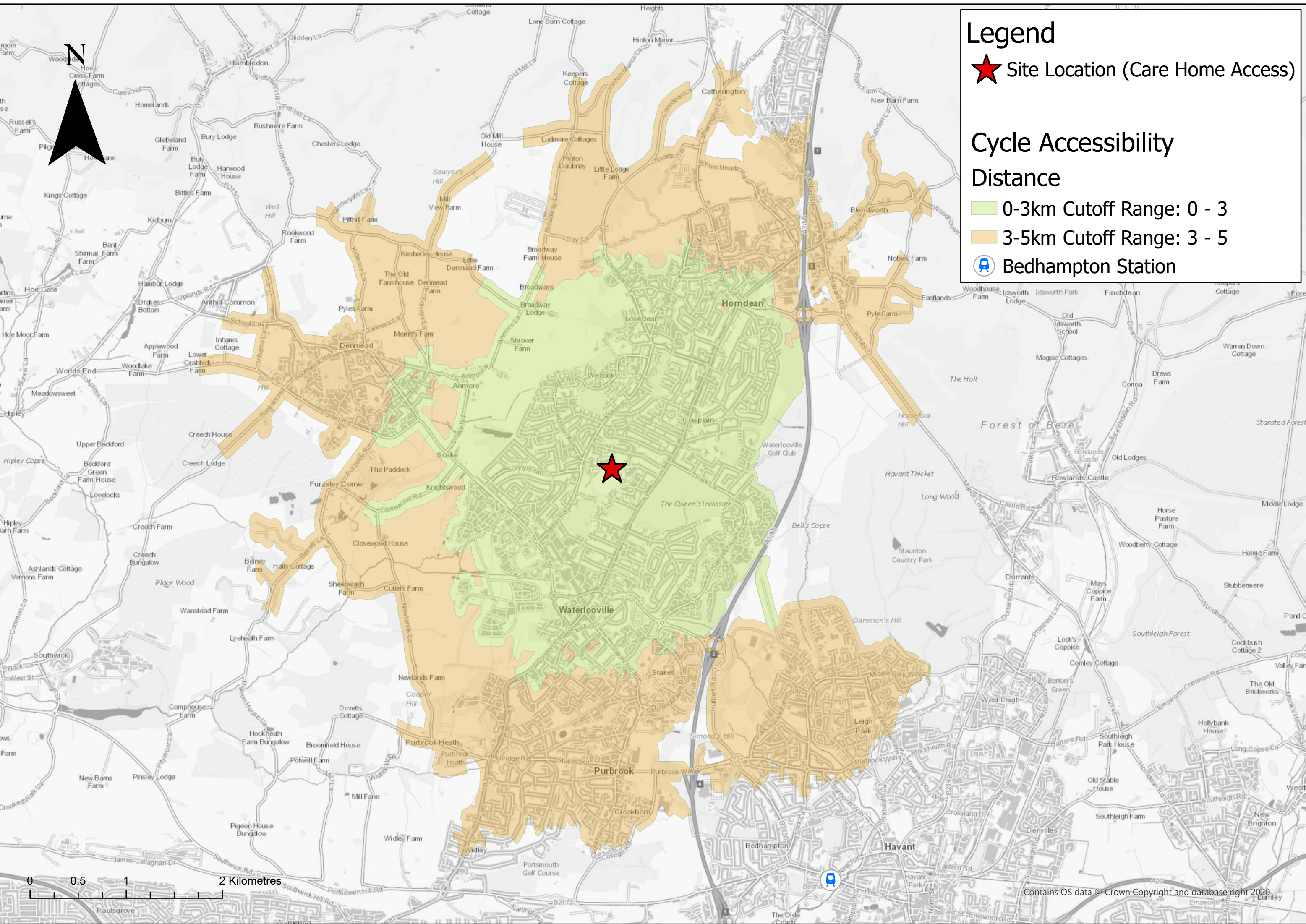
- 0-1km Cutoff Range: 0 - 1
- 1-2km Cutoff Range: 1 - 2

**Cowplain
District Centre**



0 0.2 0.4 0.8 Kilometres

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Legend

Site Location (Care Home Access)

Cycle Accessibility Distance

0-3km Cutoff Range: 0 - 3

3-5km Cutoff Range: 3 - 5

Bedhampton Station

Appendix 4 – Architect's Layout Plans

Plot 1 Area:
5208.9 m²
1.30 acres
0.53 hectares

Plot 2 Area:
2176.4 m²
0.52 acres
0.21 hectares

Site boundary

Proposed railing
Refer to Landscape Designer's specification

Proposed fence
Refer to Landscape Designer's specification

Foul Drainage

Surface Water Drainage

G4-B1 Tree reference / classification
Refer to Arboricultural Drawing

RPA

Existing tree

Proposed tree planting
Refer to Landscape Designer's specification

Proposed low maintenance planting

Proposed grassed area

Proposed tarmac area

Proposed block paving

Proposed paving

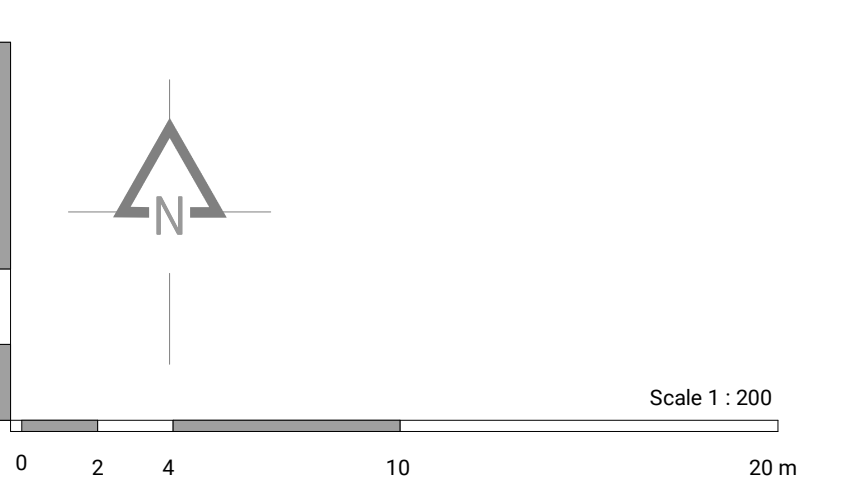
Easement

Proposed footpath paving

Main Entrance

Service Entrance

Service Entrance



P01	First Issue	JD	20.05.21
P02	Updated housing layout	JD	20.05.21
P03	Updated care-home layout	JD	20.05.21
P04	Updated Layout	JD	27.05.21
P05	Updated layout for Pre-application	EH	28.05.21
P06	Updated housing layout	EH	14.06.21
P07	Revised site layout to reflect updated site boundary	EH	25.08.21
P08	Revised to incorporate planning officers comments	EH	14.09.21
P09	Revised 6a bed layout	EH	10.12.21
P010	Revised layout to accommodate revised red line boundary	EH	20.12.21
P011	Updated for coordination with TLP	EH	18.01.22
P012	Updated following review of landscape design	EH	20.01.21
P013	Updated to reflect operators comments	EH	18.02.22
P014	Planning Issue	EH	20.02.22
REV	AMENDMENTS	DWN	DATE

PLANNING

DO NOT SCALE FROM THIS DRAWING. CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SITE DRAWINGS.

wrdunn.

27 FRONT STREET ACOMB YORK YO24 3BW
01904 784421 info@wrdunn.co.uk

CLIENT

FRONTIER

PROJECT
Land at Cowplain Community School
Hart Plain Avenue
Waterlooville
PO8 8RY

DRAWING TITLE
Proposed Site Plan

SCALE @ A0
As indicated

DATE
17.05.21

DRAWN
EH

CHECKED
JD

DRAWING NUMBER

REVISION

SUITABILITY

4528-WRD-XX-ZZ-DR-A-0500

P014

S3

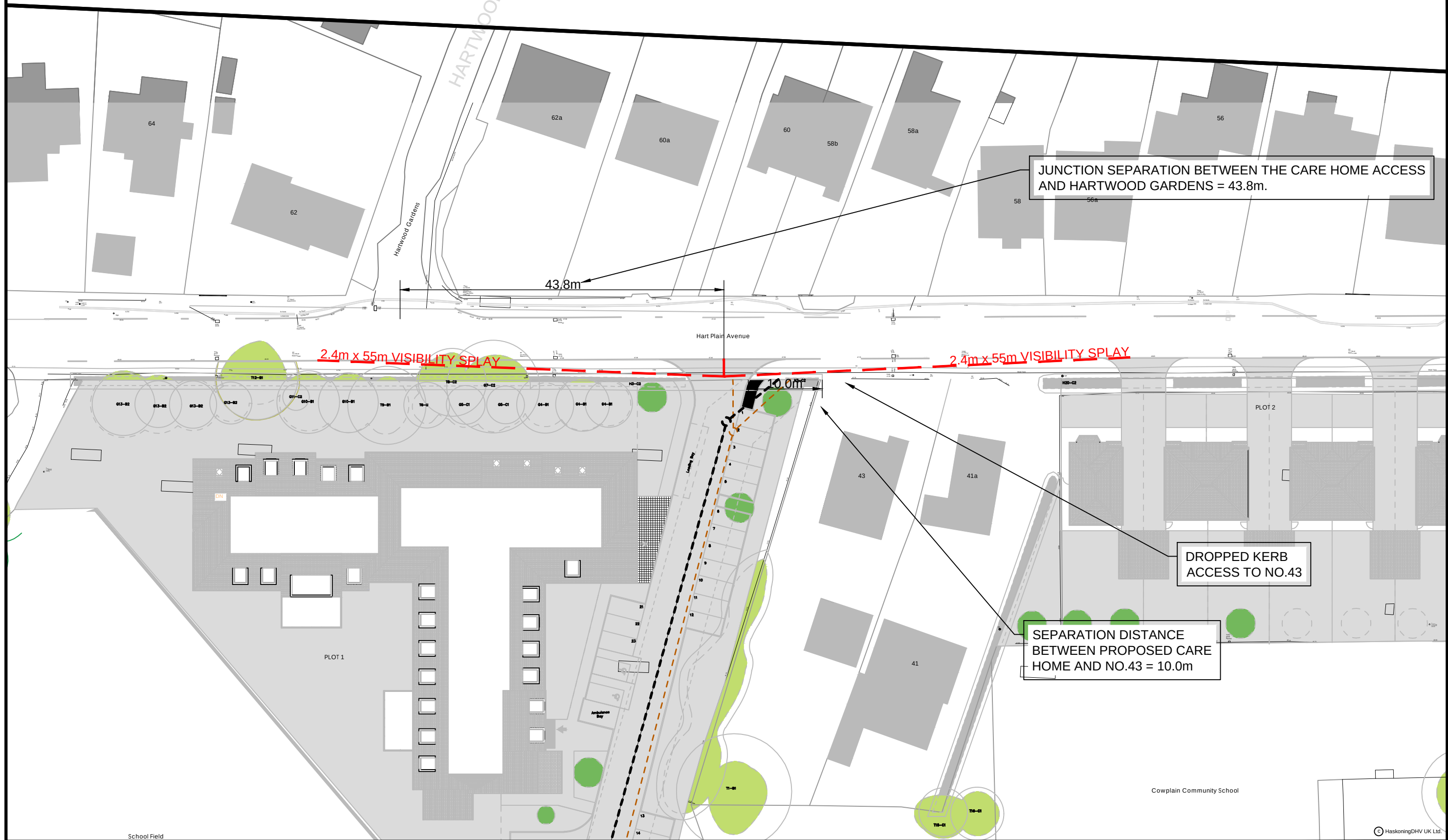
Proposed Site Plan
1 : 200

Appendix 5 – Visibility Splays

DO NOT SCALE



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TITLE
VISIBILITY SPLAY - CARE HOME ACCESS

PROJECT
LAND AT COWPLAIN SCHOOL,
WATERLOOVILLE



2 Abbey Gardens,
Great College Street, Westminster,
London, SW1P 3NL
Tel +44(0)207 222 2115
www.royalhaskoningdhv.com

JOB No.
PC2284
DATE
15/07/22
SCALE
1:500 at A3

DRAWN
KM
REV
P06
SUIT
S3

CHECKED
AW
PASSED
AW
AUTOCAD REF.
PC2284-0001
DRG No.
PC2284-RHD-GE-SW-DR-R-0001

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62a



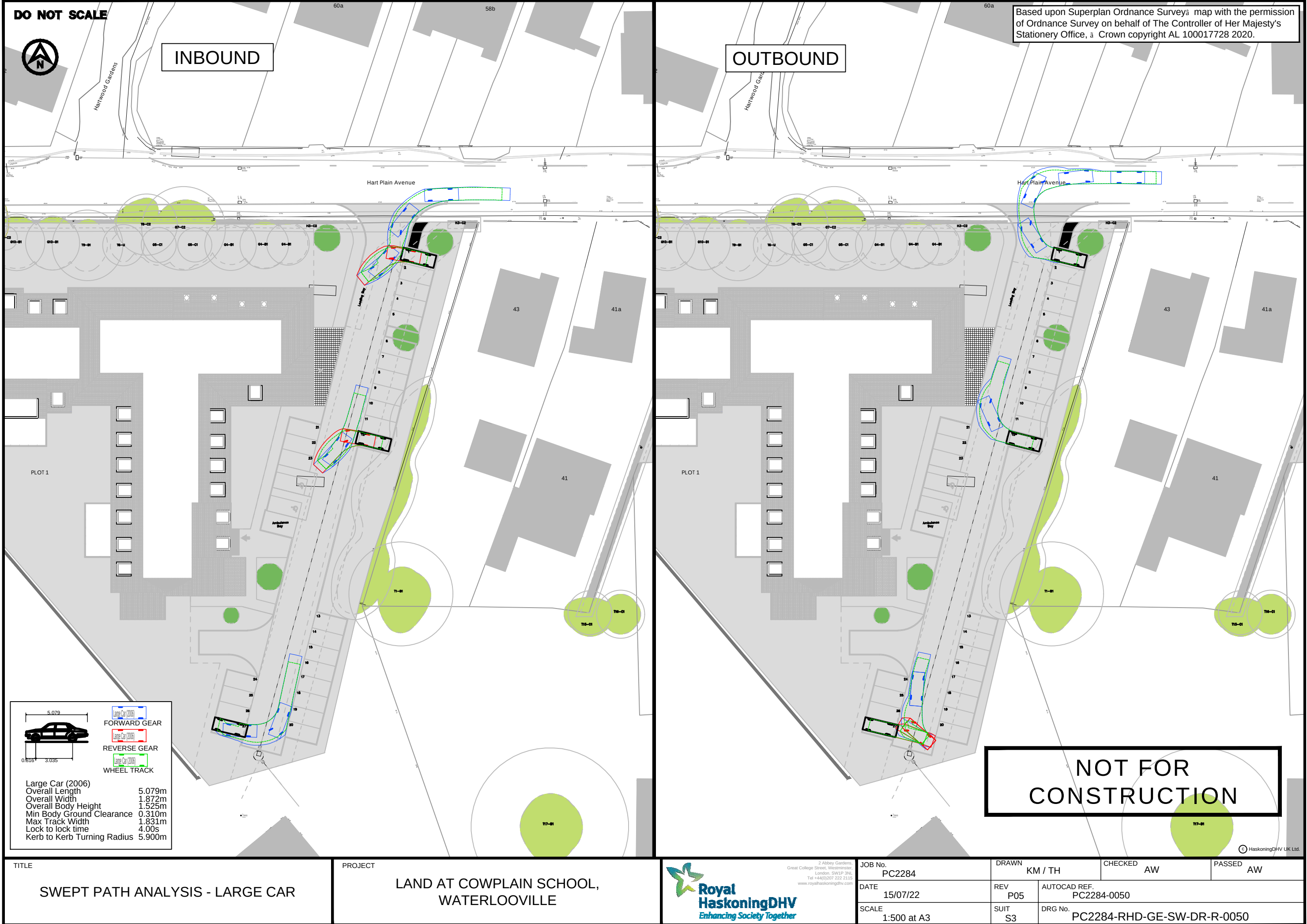
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TITLE VISIBILITY SPLAY - RESIDENTIAL UNIT ACCESSSES	PROJECT LAND AT COWPLAIN SCHOOL, WATERLOOVILLE	 Royal HaskoningDHV Enhancing Society Together	<table border="1"> <tr> <td data-bbox="2039 1879 2318 1883"> JOB No. PC2284 </td> <td data-bbox="2318 1879 2597 1883"> DRAWN KM / TH </td> <td data-bbox="2597 1879 2733 1883"> CHECKED AW </td> <td data-bbox="2733 1879 2846 1883"> PASSED AW </td> </tr> <tr> <td data-bbox="2039 1883 2318 1887"> DATE 15/07/22 </td> <td data-bbox="2318 1883 2457 1887"> REV P06 </td> <td colspan="2" data-bbox="2457 1883 2846 1887"> AUTOCAD REF. PC2284-0002 </td> </tr> <tr> <td data-bbox="2039 1887 2318 1892"> SCALE 1:500 at A3 </td> <td data-bbox="2318 1887 2457 1892"> SUIT S3 </td> <td colspan="2" data-bbox="2457 1887 2846 1892"> DRG No. PC2284-RHD-GE-SW-DR-R-0002 </td> </tr> </table>	JOB No. PC2284	DRAWN KM / TH	CHECKED AW	PASSED AW	DATE 15/07/22	REV P06	AUTOCAD REF. PC2284-0002		SCALE 1:500 at A3	SUIT S3	DRG No. PC2284-RHD-GE-SW-DR-R-0002	
JOB No. PC2284	DRAWN KM / TH	CHECKED AW	PASSED AW												
DATE 15/07/22	REV P06	AUTOCAD REF. PC2284-0002													
SCALE 1:500 at A3	SUIT S3	DRG No. PC2284-RHD-GE-SW-DR-R-0002													

Appendix 6 – Vehicle Swept Paths



DO NOT SCALE



INBOUND

OUTBOUND

Based upon Superplan Ordnance Survey map with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, a Crown copyright AL 100017728 2020.

Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

FORWARD GEAR

REVERSE GEAR

WHEEL TRACK

TITLE

SWEPT PATH ANALYSIS - LARGE CAR

PROJECT

LAND AT COWPLAIN SCHOOL,
WATERLOOVILLE

Royal HaskoningDHV
Enhancing Society Together

2 Abbey Gardens,
Great College Street, Westminster
London, SW1P 3NL
Tel +44(0)20 222 2115
www.royalhaskoningdhv.com

JOB No.
PC2284

DATE
15/07/22

SCALE
1:500 at A3

DRAWN KM / TH	CHECKED AW	PASSED AW
REV P05	AUTOCAD REF. PC2284-0050	
SUIT S3	DRG No. PC2284-RHD-GE-SW-DR-R-0050	

NOT FOR
CONSTRUCTION

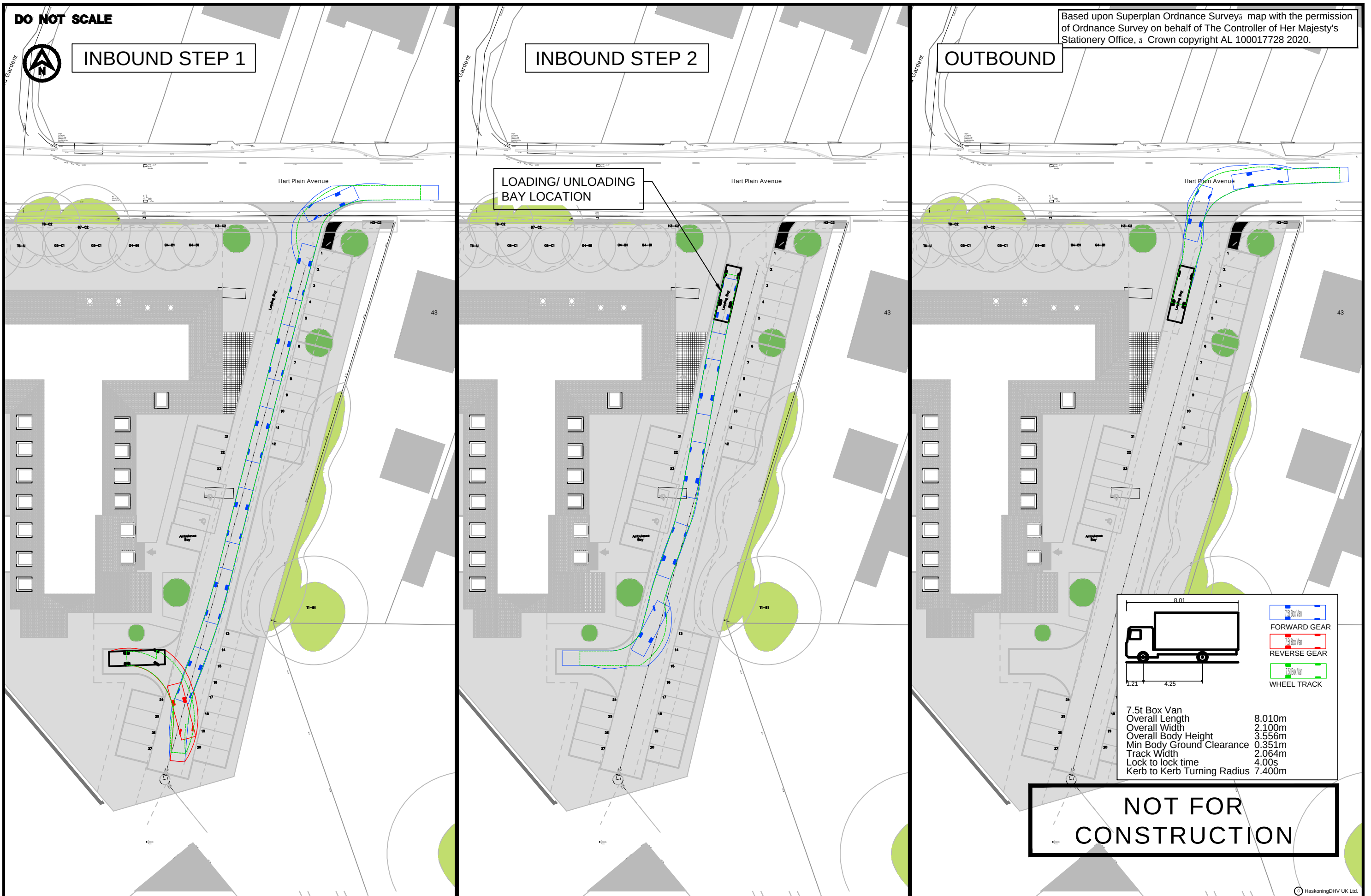
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INBOUND STEP 1

INBOUND STEP 2

OUTBOUND

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NOT FOR
CONSTRUCTION

SWEPT PATH ANALYSIS - 7.5T BOX VAN

LAND AT COWPLAIN SCHOOL,
WATERLOOVILLE



SCALE
1:500 at A3

	SUIT
	S3

2284-RHD-GE-SW-DR-R-0051

R-0051

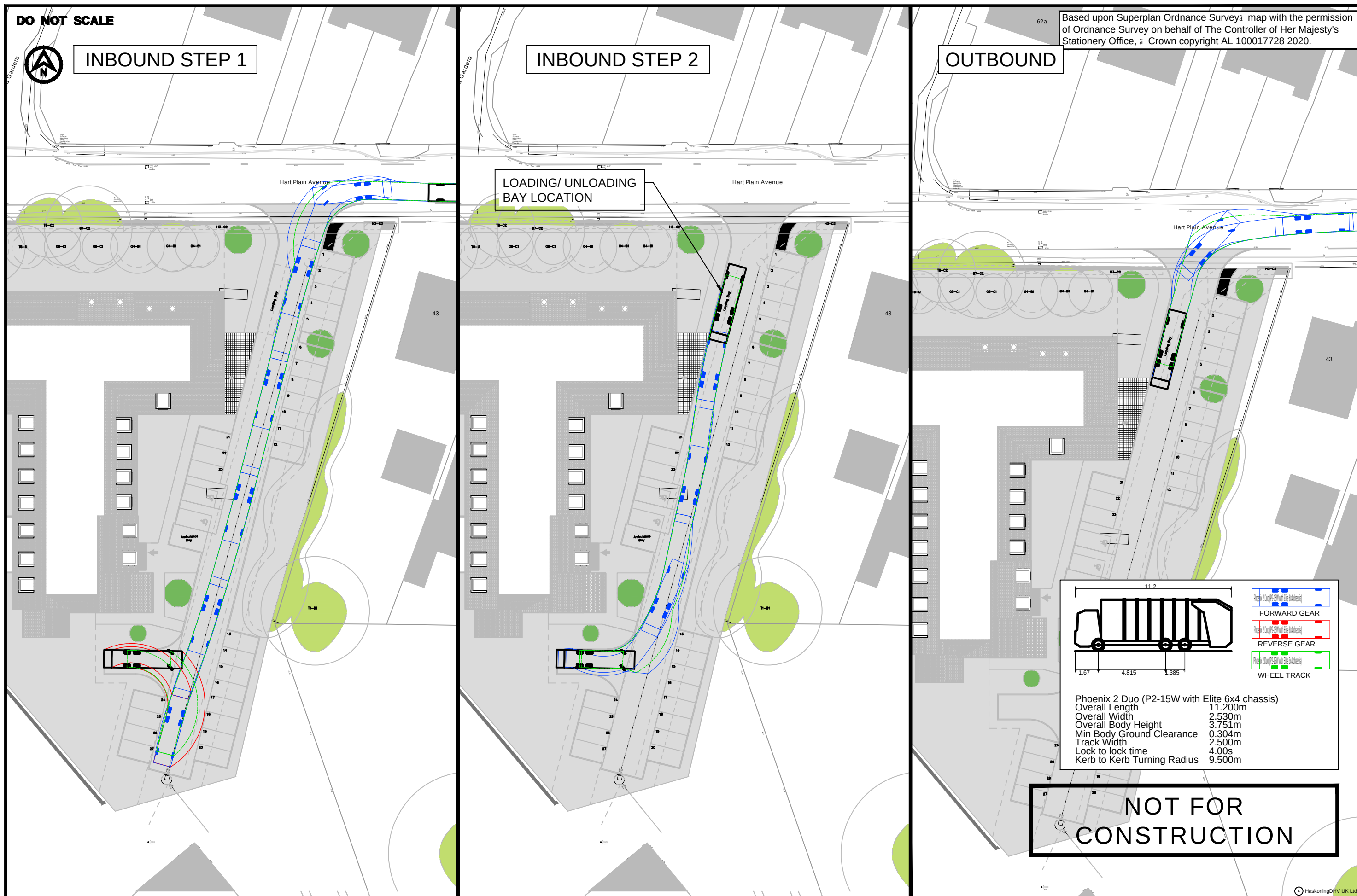
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INBOUND STEP 1

INBOUND STEP 2

OUTBOUND

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TITLE

SWEPT PATH ANALYSIS - 11.2m REFUSE VEHICLE

PROJECT

LAND AT COWPLAIN SCHOOL,
WATERLOOVILLE



JOB No.
PC2284

DATE 15/07/22

SCALE
1:500 at A3

DRAWN	KM / TH
-------	---------

REV
P06

	SUIT
	S3

CHECKED	AW
---------	----

284-0052

2284-RHD-GE-SW-DR-R-0052

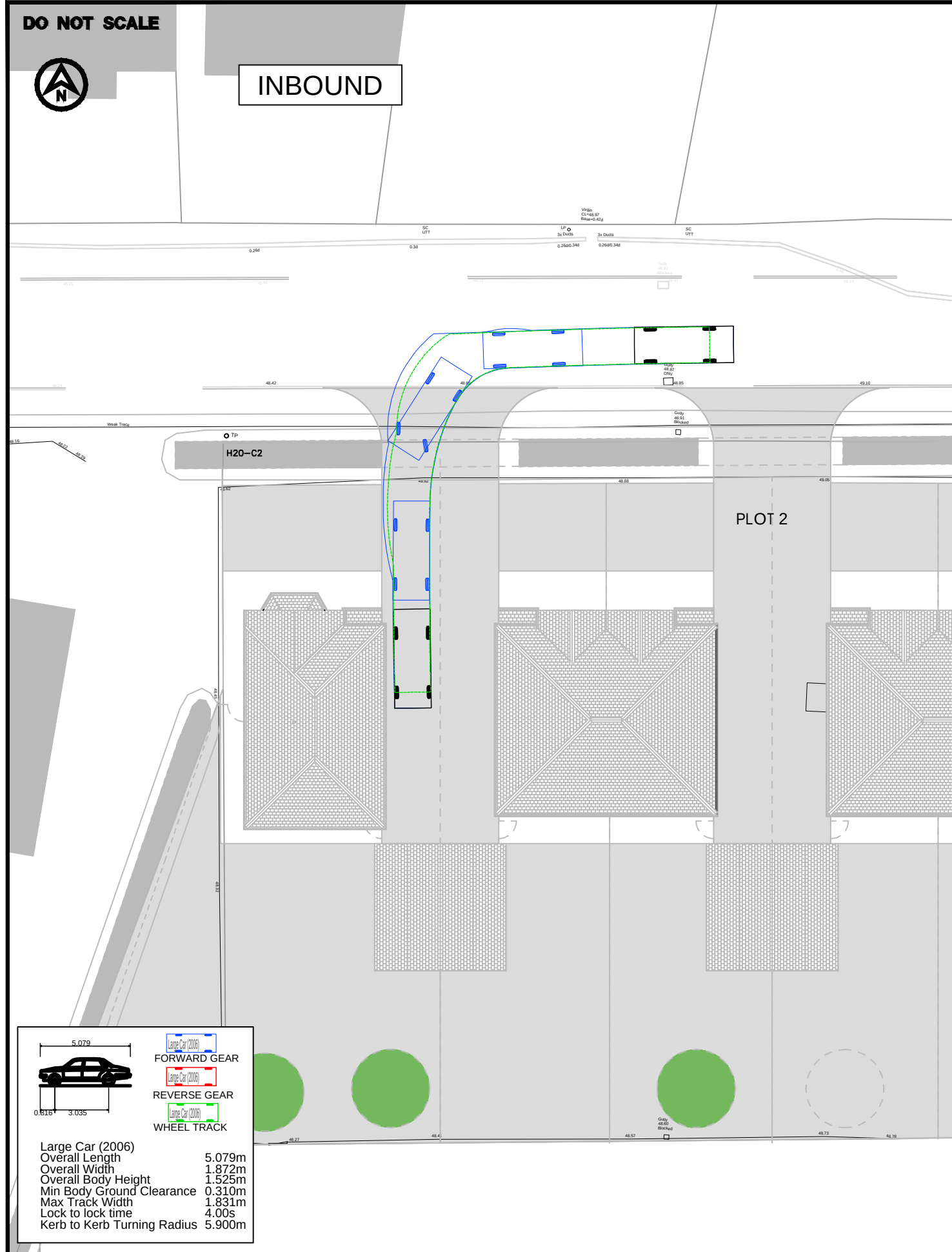
PASSED	AW
--------	----

R-R-0052

DO NOT SCALE



INBOUND



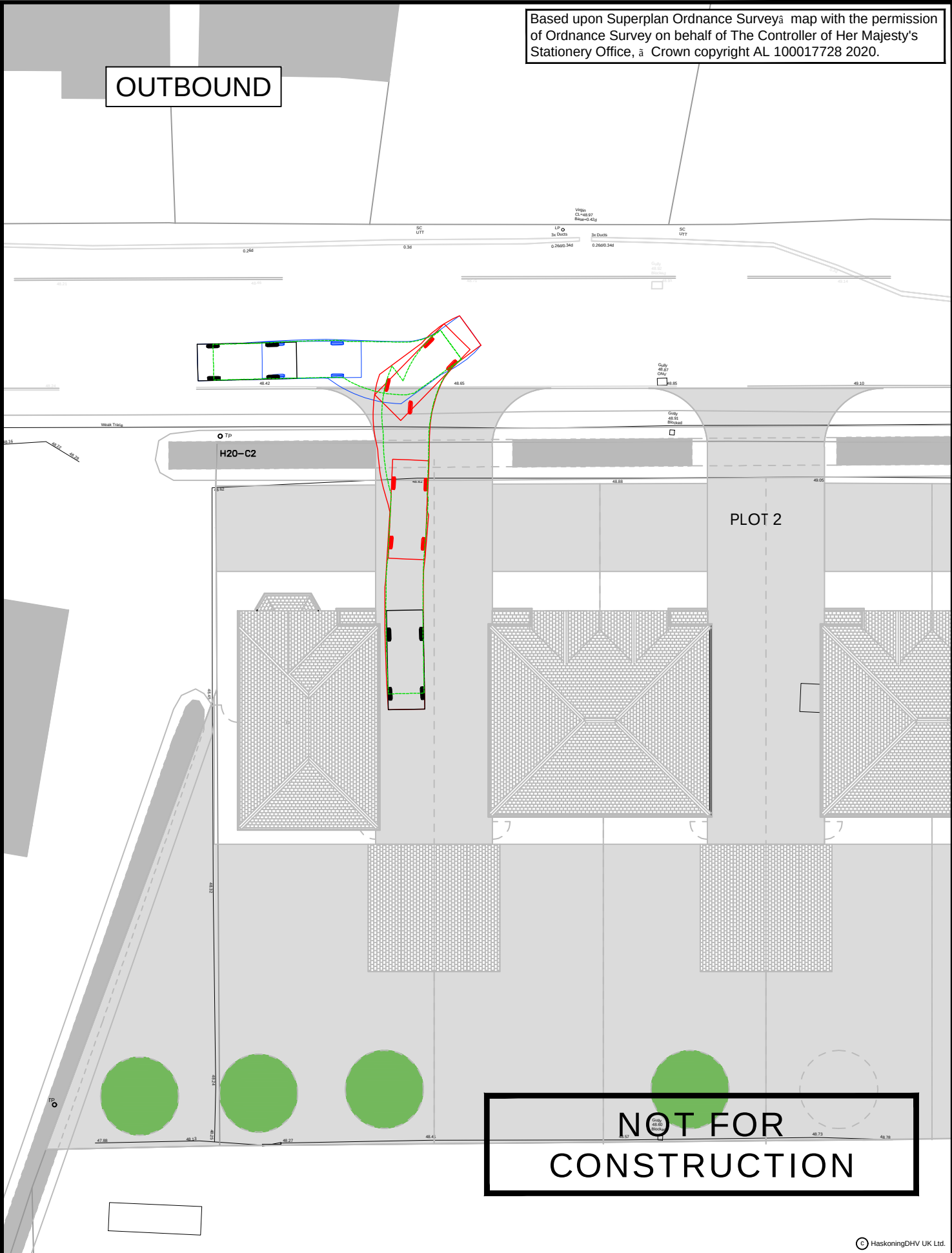
Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

FORWARD GEAR

REVERSE GEAR

WHEEL TRACK

OUTBOUND



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CONSTRUCTION

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TITLE
SWEPT PATH ANALYSIS -
RESIDENTIAL UNITS

PROJECT
LAND AT COWPLAIN SCHOOL,
WATERLOOVILLE

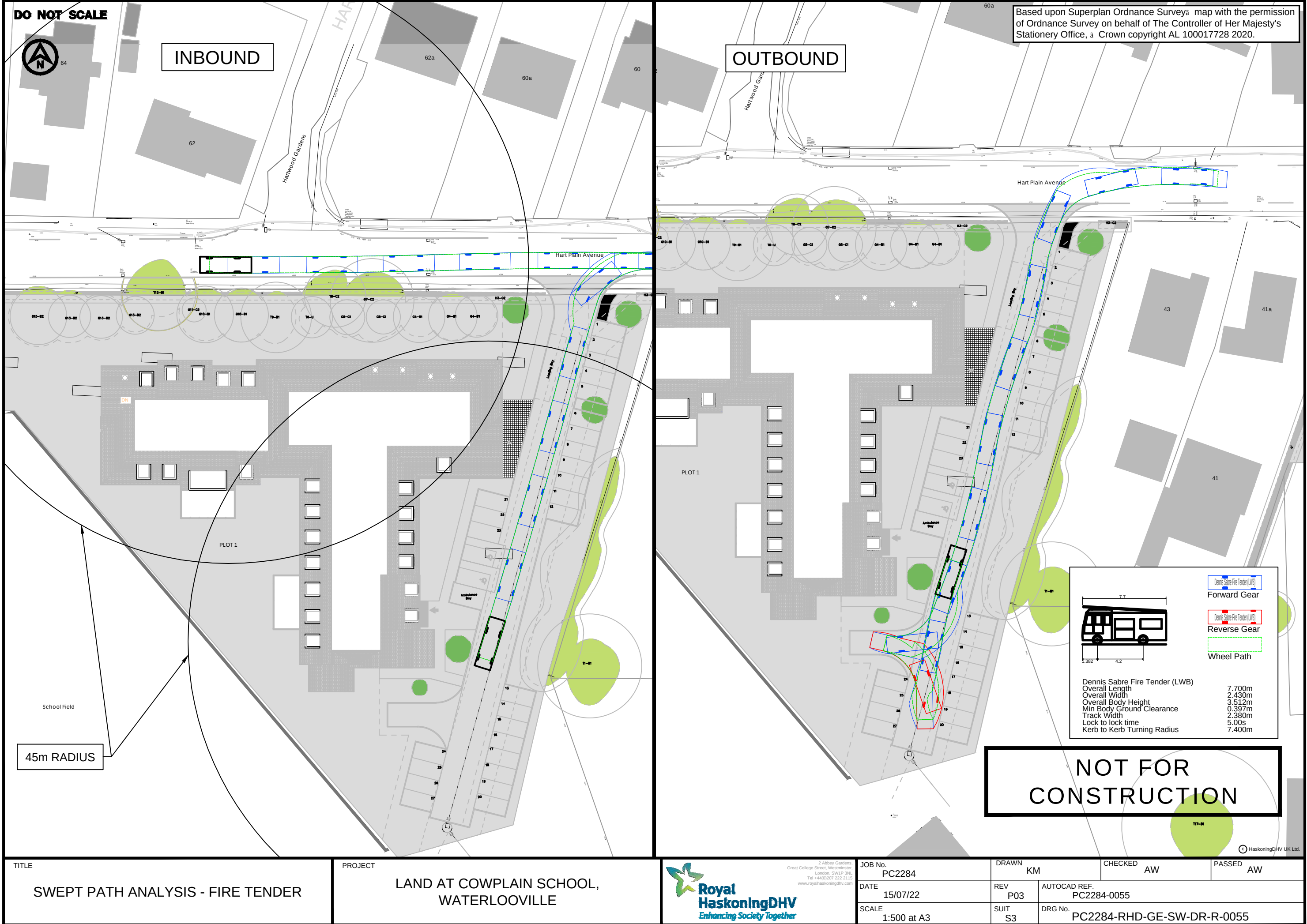
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Enhancing Society Together

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Tel +44(0)207 222 2115
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JOB No.
PC2284
DATE
18/07/22
SCALE
1:250 at A3

DRAWN
KM / TH
REV
P06
SUIT
S3

CHECKED
AW
PASSED
AW
AUTOCAD REF.
PC2284-0053
DRG No.
PC2284-RHD-GE-SW-DR-R-0053



DO NOT SCALE



INBOUND

OUTBOUND

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45m RADIUS

NOT FOR CONSTRUCTION

TITLE SWEPT PATH ANALYSIS - FIRE TENDER	PROJECT LAND AT COWPLAIN SCHOOL, WATERLOOVILLE	 2 Abbey Gardens, Great College Street, Westminster London, SW1P 3NL Tel +44(0)207 222 2115 www.royalhaskoningdhv.com	JOB No. PC2284	DRAWN KM	CHECKED AW	PASSED AW
			DATE 15/07/22	REV P03	AUTOCAD REF. PC2284-0055	
			SCALE 1:500 at A3	SUIT S3	DRG No. PC2284-RHD-GE-SW-DR-R-0055	

Appendix 7 – TRICS Outputs

Calculation Reference: AUDIT-703101-220518-0537

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
 Category : F - CARE HOME (ELDERLY RESIDENTIAL)
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of residents
 Actual Range: 31 to 52 (units:)
 Range Selected by User: 17 to 180 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 02/05/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Thursday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	4
------------------	---

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C2 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

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

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

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

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 4 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	LC-05-F-02 LYTHAM ROAD BLACKPOOL SQUIRES GATE Edge of Town Residential Zone Total Number of residents: Survey date: TUESDAY	NURSING HOME 31 27/09/16	LANCASHIRE Survey Type: MANUAL
2	NY-05-F-05 SEAGRIM CRESCENT RICHMOND Edge of Town Residential Zone Total Number of residents: Survey date: MONDAY	NURSING HOME 37 04/03/19	NORTH YORKSHIRE Survey Type: MANUAL
3	TW-05-F-03 MOORE STREET GATESHEAD FELLING SHORE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of residents: Survey date: THURSDAY	NURSING HOME 52 02/05/19	TYNE & WEAR Survey Type: MANUAL
4	WK-05-F-01 CLARENDON SQUARE LEAMINGTON SPA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of residents: Survey date: THURSDAY	NURSING HOME 32 25/10/12	WARWICKSHIRE Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)
MULTI-MODAL TOTAL VEHICLES
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 1.74

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	4	38	0.033	4	38	0.046	4	38	0.079
08:00 - 09:00	4	38	0.059	4	38	0.066	4	38	0.125
09:00 - 10:00	4	38	0.099	4	38	0.033	4	38	0.132
10:00 - 11:00	4	38	0.046	4	38	0.099	4	38	0.145
11:00 - 12:00	4	38	0.086	4	38	0.105	4	38	0.191
12:00 - 13:00	4	38	0.066	4	38	0.059	4	38	0.125
13:00 - 14:00	4	38	0.118	4	38	0.033	4	38	0.151
14:00 - 15:00	4	38	0.079	4	38	0.138	4	38	0.217
15:00 - 16:00	4	38	0.092	4	38	0.105	4	38	0.197
16:00 - 17:00	4	38	0.066	4	38	0.079	4	38	0.145
17:00 - 18:00	4	38	0.072	4	38	0.079	4	38	0.151
18:00 - 19:00	4	38	0.059	4	38	0.072	4	38	0.131
19:00 - 20:00	4	38	0.039	4	38	0.046	4	38	0.085
20:00 - 21:00	4	38	0.033	4	38	0.039	4	38	0.072
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.947			0.999			1.946

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	31 - 52 (units:)
Survey date range:	01/01/12 - 02/05/19
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

MULTI-MODAL CYCLISTS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	4	38	0.000	4	38	0.000	4	38	0.000
08:00 - 09:00	4	38	0.000	4	38	0.000	4	38	0.000
09:00 - 10:00	4	38	0.000	4	38	0.000	4	38	0.000
10:00 - 11:00	4	38	0.007	4	38	0.000	4	38	0.007
11:00 - 12:00	4	38	0.000	4	38	0.000	4	38	0.000
12:00 - 13:00	4	38	0.000	4	38	0.007	4	38	0.007
13:00 - 14:00	4	38	0.007	4	38	0.000	4	38	0.007
14:00 - 15:00	4	38	0.000	4	38	0.007	4	38	0.007
15:00 - 16:00	4	38	0.007	4	38	0.000	4	38	0.007
16:00 - 17:00	4	38	0.000	4	38	0.000	4	38	0.000
17:00 - 18:00	4	38	0.007	4	38	0.007	4	38	0.014
18:00 - 19:00	4	38	0.000	4	38	0.007	4	38	0.007
19:00 - 20:00	4	38	0.000	4	38	0.000	4	38	0.000
20:00 - 21:00	4	38	0.000	4	38	0.000	4	38	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.028			0.028			0.056

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	4	38	0.046	4	38	0.066	4	38	0.112
08:00 - 09:00	4	38	0.086	4	38	0.072	4	38	0.158
09:00 - 10:00	4	38	0.112	4	38	0.046	4	38	0.158
10:00 - 11:00	4	38	0.053	4	38	0.138	4	38	0.191
11:00 - 12:00	4	38	0.105	4	38	0.112	4	38	0.217
12:00 - 13:00	4	38	0.079	4	38	0.066	4	38	0.145
13:00 - 14:00	4	38	0.151	4	38	0.033	4	38	0.184
14:00 - 15:00	4	38	0.086	4	38	0.184	4	38	0.270
15:00 - 16:00	4	38	0.105	4	38	0.132	4	38	0.237
16:00 - 17:00	4	38	0.079	4	38	0.099	4	38	0.178
17:00 - 18:00	4	38	0.079	4	38	0.099	4	38	0.178
18:00 - 19:00	4	38	0.086	4	38	0.099	4	38	0.185
19:00 - 20:00	4	38	0.046	4	38	0.053	4	38	0.099
20:00 - 21:00	4	38	0.033	4	38	0.039	4	38	0.072
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.146			1.238			2.384

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	4	38	0.020	4	38	0.007	4	38	0.027
08:00 - 09:00	4	38	0.020	4	38	0.020	4	38	0.040
09:00 - 10:00	4	38	0.039	4	38	0.013	4	38	0.052
10:00 - 11:00	4	38	0.046	4	38	0.026	4	38	0.072
11:00 - 12:00	4	38	0.013	4	38	0.013	4	38	0.026
12:00 - 13:00	4	38	0.033	4	38	0.039	4	38	0.072
13:00 - 14:00	4	38	0.033	4	38	0.020	4	38	0.053
14:00 - 15:00	4	38	0.020	4	38	0.039	4	38	0.059
15:00 - 16:00	4	38	0.020	4	38	0.033	4	38	0.053
16:00 - 17:00	4	38	0.007	4	38	0.020	4	38	0.027
17:00 - 18:00	4	38	0.007	4	38	0.013	4	38	0.020
18:00 - 19:00	4	38	0.039	4	38	0.026	4	38	0.065
19:00 - 20:00	4	38	0.007	4	38	0.059	4	38	0.066
20:00 - 21:00	4	38	0.007	4	38	0.007	4	38	0.014
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.311			0.335			0.646

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	4	38	0.007	4	38	0.000	4	38	0.007
08:00 - 09:00	4	38	0.039	4	38	0.007	4	38	0.046
09:00 - 10:00	4	38	0.026	4	38	0.013	4	38	0.039
10:00 - 11:00	4	38	0.007	4	38	0.000	4	38	0.007
11:00 - 12:00	4	38	0.007	4	38	0.000	4	38	0.007
12:00 - 13:00	4	38	0.007	4	38	0.013	4	38	0.020
13:00 - 14:00	4	38	0.007	4	38	0.000	4	38	0.007
14:00 - 15:00	4	38	0.007	4	38	0.007	4	38	0.014
15:00 - 16:00	4	38	0.007	4	38	0.013	4	38	0.020
16:00 - 17:00	4	38	0.020	4	38	0.020	4	38	0.040
17:00 - 18:00	4	38	0.007	4	38	0.013	4	38	0.020
18:00 - 19:00	4	38	0.020	4	38	0.026	4	38	0.046
19:00 - 20:00	4	38	0.007	4	38	0.026	4	38	0.033
20:00 - 21:00	4	38	0.000	4	38	0.013	4	38	0.013
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.168			0.151			0.319

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)
MULTI-MODAL TOTAL PEOPLE
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 1.74

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	4	38	0.072	4	38	0.072	4	38	0.144
08:00 - 09:00	4	38	0.145	4	38	0.099	4	38	0.244
09:00 - 10:00	4	38	0.178	4	38	0.072	4	38	0.250
10:00 - 11:00	4	38	0.112	4	38	0.164	4	38	0.276
11:00 - 12:00	4	38	0.125	4	38	0.125	4	38	0.250
12:00 - 13:00	4	38	0.118	4	38	0.125	4	38	0.243
13:00 - 14:00	4	38	0.197	4	38	0.053	4	38	0.250
14:00 - 15:00	4	38	0.112	4	38	0.237	4	38	0.349
15:00 - 16:00	4	38	0.138	4	38	0.178	4	38	0.316
16:00 - 17:00	4	38	0.105	4	38	0.138	4	38	0.243
17:00 - 18:00	4	38	0.099	4	38	0.132	4	38	0.231
18:00 - 19:00	4	38	0.145	4	38	0.158	4	38	0.303
19:00 - 20:00	4	38	0.059	4	38	0.138	4	38	0.197
20:00 - 21:00	4	38	0.039	4	38	0.059	4	38	0.098
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.644			1.750			3.394

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Calculation Reference: AUDIT-703101-220519-0517

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
 Actual Range: 7 to 18 (units:)
 Range Selected by User: 6 to 20 (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: 01/01/12 to 16/06/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	2 days
Wednesday	3 days
Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	4

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	9
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3 9 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

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

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

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

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	7 days
1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 9 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 9 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CH-03-A-08 WHITCHURCH ROAD CHESTER BOUGHTON HEATH Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 11 Survey date: TUESDAY 22/05/12	DETACHED	CESHIRE	Survey Type: MANUAL
2	MS-03-A-03 BEMPTON ROAD LIVERPOOL OTTERSPOOL Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 15 Survey date: FRIDAY 21/06/13	DETACHED	MERSEYSIDE	Survey Type: MANUAL
3	NF-03-A-03 HALING WAY THETFORD Edge of Town Residential Zone Total No of Dwellings: 10 Survey date: WEDNESDAY 16/09/15	DETACHED HOUSES	NORFOLK	Survey Type: MANUAL
4	NY-03-A-13 CATTERICK ROAD CATTERICK GARRISON OLD HOSPITAL COMPOUND Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 10 Survey date: WEDNESDAY 10/05/17	TERRACED HOUSES	NORTH YORKSHIRE	Survey Type: MANUAL
5	SF-03-A-04 NORMANSTON DRIVE LOWESTOFT Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 7 Survey date: TUESDAY 23/10/12	DETACHED & BUNGALOWS	SUFFOLK	Survey Type: MANUAL
6	SF-03-A-05 VALE LANE BURY ST EDMUNDS Edge of Town Residential Zone Total No of Dwellings: 18 Survey date: WEDNESDAY 09/09/15	DETACHED HOUSES	SUFFOLK	Survey Type: MANUAL
7	SH-03-A-06 ELLESMERE ROAD SHREWSBURY Edge of Town Residential Zone Total No of Dwellings: 16 Survey date: THURSDAY 22/05/14	BUNGALOWS	SHROPSHIRE	Survey Type: MANUAL
8	TW-03-A-02 WEST PARK ROAD GATESHEAD Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 16 Survey date: MONDAY 07/10/13	SEMI-DETACHED	TYNE & WEAR	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9 WK-03-A-02 BUNGALOWS WARWICKSHIRE
NARBERTH WAY
COVENTRY
POTTERS GREEN
Edge of Town
Residential Zone
Total No of Dwellings: 17
Survey date: THURSDAY 17/10/13 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
HF-03-A-04	Covid-19
KC-03-A-09	Covid-19

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

Total People to Total Vehicles ratio (all time periods and directions): 1.86

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	9	13	0.075	9	13	0.292	9	13	0.367
08:00 - 09:00	9	13	0.225	9	13	0.408	9	13	0.633
09:00 - 10:00	9	13	0.108	9	13	0.208	9	13	0.316
10:00 - 11:00	9	13	0.233	9	13	0.158	9	13	0.391
11:00 - 12:00	9	13	0.150	9	13	0.225	9	13	0.375
12:00 - 13:00	9	13	0.267	9	13	0.250	9	13	0.517
13:00 - 14:00	9	13	0.208	9	13	0.183	9	13	0.391
14:00 - 15:00	9	13	0.150	9	13	0.183	9	13	0.333
15:00 - 16:00	9	13	0.283	9	13	0.283	9	13	0.566
16:00 - 17:00	9	13	0.242	9	13	0.167	9	13	0.409
17:00 - 18:00	9	13	0.267	9	13	0.117	9	13	0.384
18:00 - 19:00	9	13	0.250	9	13	0.192	9	13	0.442
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.458			2.666			5.124

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	7 - 18 (units:)
Survey date range:	01/01/12 - 16/06/21
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	9	13	0.000	9	13	0.017	9	13	0.017
08:00 - 09:00	9	13	0.000	9	13	0.000	9	13	0.000
09:00 - 10:00	9	13	0.000	9	13	0.008	9	13	0.008
10:00 - 11:00	9	13	0.000	9	13	0.033	9	13	0.033
11:00 - 12:00	9	13	0.008	9	13	0.017	9	13	0.025
12:00 - 13:00	9	13	0.017	9	13	0.000	9	13	0.017
13:00 - 14:00	9	13	0.008	9	13	0.000	9	13	0.008
14:00 - 15:00	9	13	0.008	9	13	0.000	9	13	0.008
15:00 - 16:00	9	13	0.017	9	13	0.000	9	13	0.017
16:00 - 17:00	9	13	0.008	9	13	0.000	9	13	0.008
17:00 - 18:00	9	13	0.000	9	13	0.000	9	13	0.000
18:00 - 19:00	9	13	0.000	9	13	0.000	9	13	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.066			0.075			0.141

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	9	13	0.117	9	13	0.375	9	13	0.492
08:00 - 09:00	9	13	0.358	9	13	0.567	9	13	0.925
09:00 - 10:00	9	13	0.150	9	13	0.283	9	13	0.433
10:00 - 11:00	9	13	0.300	9	13	0.208	9	13	0.508
11:00 - 12:00	9	13	0.217	9	13	0.258	9	13	0.475
12:00 - 13:00	9	13	0.350	9	13	0.367	9	13	0.717
13:00 - 14:00	9	13	0.233	9	13	0.233	9	13	0.466
14:00 - 15:00	9	13	0.183	9	13	0.217	9	13	0.400
15:00 - 16:00	9	13	0.433	9	13	0.508	9	13	0.941
16:00 - 17:00	9	13	0.292	9	13	0.258	9	13	0.550
17:00 - 18:00	9	13	0.358	9	13	0.167	9	13	0.525
18:00 - 19:00	9	13	0.292	9	13	0.267	9	13	0.559
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.283			3.708			6.991

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	9	13	0.050	9	13	0.100	9	13	0.150
08:00 - 09:00	9	13	0.142	9	13	0.250	9	13	0.392
09:00 - 10:00	9	13	0.033	9	13	0.058	9	13	0.091
10:00 - 11:00	9	13	0.042	9	13	0.117	9	13	0.159
11:00 - 12:00	9	13	0.083	9	13	0.050	9	13	0.133
12:00 - 13:00	9	13	0.075	9	13	0.067	9	13	0.142
13:00 - 14:00	9	13	0.067	9	13	0.092	9	13	0.159
14:00 - 15:00	9	13	0.092	9	13	0.100	9	13	0.192
15:00 - 16:00	9	13	0.392	9	13	0.158	9	13	0.550
16:00 - 17:00	9	13	0.100	9	13	0.067	9	13	0.167
17:00 - 18:00	9	13	0.058	9	13	0.033	9	13	0.091
18:00 - 19:00	9	13	0.042	9	13	0.033	9	13	0.075
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.176			1.125			2.301

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	9	13	0.025	9	13	0.000	9	13	0.025
08:00 - 09:00	9	13	0.000	9	13	0.000	9	13	0.000
09:00 - 10:00	9	13	0.000	9	13	0.000	9	13	0.000
10:00 - 11:00	9	13	0.000	9	13	0.000	9	13	0.000
11:00 - 12:00	9	13	0.000	9	13	0.000	9	13	0.000
12:00 - 13:00	9	13	0.017	9	13	0.000	9	13	0.017
13:00 - 14:00	9	13	0.000	9	13	0.000	9	13	0.000
14:00 - 15:00	9	13	0.000	9	13	0.000	9	13	0.000
15:00 - 16:00	9	13	0.000	9	13	0.008	9	13	0.008
16:00 - 17:00	9	13	0.008	9	13	0.000	9	13	0.008
17:00 - 18:00	9	13	0.000	9	13	0.017	9	13	0.017
18:00 - 19:00	9	13	0.000	9	13	0.000	9	13	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.050			0.025			0.075

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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

Total People to Total Vehicles ratio (all time periods and directions): 1.86

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	9	13	0.192	9	13	0.492	9	13	0.684
08:00 - 09:00	9	13	0.500	9	13	0.817	9	13	1.317
09:00 - 10:00	9	13	0.183	9	13	0.350	9	13	0.533
10:00 - 11:00	9	13	0.342	9	13	0.358	9	13	0.700
11:00 - 12:00	9	13	0.308	9	13	0.325	9	13	0.633
12:00 - 13:00	9	13	0.458	9	13	0.433	9	13	0.891
13:00 - 14:00	9	13	0.308	9	13	0.325	9	13	0.633
14:00 - 15:00	9	13	0.283	9	13	0.317	9	13	0.600
15:00 - 16:00	9	13	0.842	9	13	0.675	9	13	1.517
16:00 - 17:00	9	13	0.408	9	13	0.325	9	13	0.733
17:00 - 18:00	9	13	0.417	9	13	0.217	9	13	0.634
18:00 - 19:00	9	13	0.333	9	13	0.300	9	13	0.633
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.574			4.934			9.508

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.