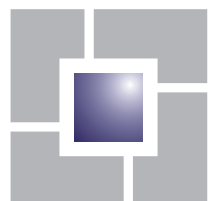


Dellwood Hospital, Liebenrood Road, Reading

Transport Assessment



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Dellwood Hospital, Liebenrood Road,
Reading

Transport Assessment

2nd September 2020
SJT/RT 22075-01d Transport Assessment

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1.0 INTRODUCTION

- 1.1 David Tucker Associates (DTA) has been commissioned by Montpelier Estates to review the transport implications of a 55-bedroom care home on the land adjacent to Dellwood Hospital, Reading. The proposed site layout is held in **Appendix A**.
- 1.2 This Transport Assessment (TA) has been prepared in accordance with the National Planning Policy Framework (NPPF) and National Planning Practice Guidance issued in March 2014, which replaces the previous Guidance on Transport Assessment (2007).
- 1.3 This report considers the transport and highways implications associated with the proposals and is structured as follows:
- Chapter 2: Policy Context;
 - Chapter 3: Existing Conditions;
 - Chapter 4: Development Proposals;
 - Chapter 5: Traffic Generation and Distribution;
 - Chapter 6: Traffic Impact Assessment; and
 - Chapter 7: Conclusions.
- 1.4 Pre-application advice was received from Reading Borough Council. This was received for a plan which involved redevelopment for 14 residential dwellings, however the headlines of the advice remains relevant to the consideration of a care home. The relevant points have been addressed within this report.
- 1.5 This TA considers the potential transport and highways impacts of the proposals including the impact of development generated traffic on the capacity and safety of the surrounding road network. It is concluded that proposed development would have no material residual adverse impact on the safe operation of the local highway network.

2.0 NATIONAL POLICY

2.1 National Guidance - National Planning Policy Framework

2.1.1 In February 2019, the Government published a revised National Planning Policy Framework (NPPF). This report should therefore be read in the context of the new NPPF.

2.1.2 Paragraph 109 of the NPPF is clear 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"*.

2.1.3 Within this context, the NPPF identifies in Paragraph 110 that applications for development should:

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

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

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

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

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

2.1.4 Paragraph 111 of the NPPF goes on to state 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 In reinforcing the principle of supporting sustainable development, paragraph 10 stipulates that at the heart of the Framework is *"...a presumption in favour of sustainable development"*.

2.2 **Transport Assessments and Statement – PPG**

2.2.1 Following directly on from the NPPF, in particular para 32, the PPG states:

Local planning authorities must make a judgement as to whether a development proposal would generate significant amounts of movement on a case by case basis (i.e. significance may be a lower threshold where road capacity is already stretched or a higher threshold for a development in an area of high public transport accessibility).

In determining whether a Transport Assessment or Statement will be needed for a proposed development, local planning authorities should take into account the following considerations:

- *the Transport Assessment and Statement policies (if any) of the Local Plan;*
- *the scale of the proposed development and its potential for additional trip generation (smaller*
- *applications with limited impacts may not need a Transport Assessment or Statement);*
- *existing intensity of transport use and the availability of public transport;*
- *proximity to nearby environmental designations or sensitive areas;*
- *impact on other priorities/ strategies (such as promoting walking and cycling);*
- *the cumulative impacts of multiple developments within a particular area; and*
- *whether there are particular types of impacts around which to focus the Transport Assessment or Statement (e.g. assessing traffic generated at peak times).*

2.2.2 The document advocates early consultation with key decision makers at an early stage through pre-application discussions to determine the scope of the technical work required

to underpin the associated transport assessments and travel plans. The key issues it suggests that should be considered are:

- *the planning context of the development proposal;*
- *appropriate study parameters (i.e. area, scope and duration of study);*
- *assessment of public transport capacity, walking/ cycling capacity and road network capacity;*
- *road trip generation and trip distribution methodologies and/ or assumptions about the development proposal;*
- *measures to promote sustainable travel;*
- *safety implications of development; and*
- *mitigation measures (where applicable) – including scope and implementation strategy.*

2.2.3 It acknowledges that the scope and level of detail in reports will vary from site to site, but suggests the following should be considered when settling the scope of the proposed assessment:

- *information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport);*
- *information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
- *data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;*
- *a qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*
- *an assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);*

- *data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;*
- *an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;*
- *an assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
- *measures to improve the accessibility of the location (such as provision/enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*
- *a description of parking facilities in the area and the parking strategy of the development;*
- *ways of encouraging environmental sustainability by reducing the need to travel; and*
- *measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads.*

In general, assessments should be based on normal traffic flow and usage conditions (e.g. non-school holiday periods, typical weather conditions) but it may be necessary to consider the implications for any regular peak traffic and usage periods (such as rush hours). Projections should use local traffic forecasts such as TEMPRO drawing where necessary on National Road Traffic Forecasts for traffic data.

The timeframe that the assessment covers should be agreed with the local planning authority in consultation with the relevant transport network operators and service providers. However, in circumstances where there will be an impact on a national transport network, this period will be set out in the relevant Government policy.

2.3 Reading Borough Local Plan

2.3.1 The Reading Borough Local Plan was adopted November 2019 and is the document which guides development in Reading up to 2036.

2.3.2 The first policy which is relevant to this scheme is 'TR1: Achieving the Transport Strategy'. This policy states that *"planning permission will not be granted for major development proposals unless there is a commitment to implement measures to promote and improve sustainable transport facilities"*.

2.3.3 Policy 'TR3: Access, Traffic and Highway-related Matters' states that *"In determining proposals involving a new or altered access onto the transport network, improvement works to the transport network, the creation of new transport infrastructure or the generation of additional trips on the transport network, consideration will be given to the effect on safety, congestion and the environment."* If a proposal includes one of these scenarios, *"Development will only be permitted where: -*

- a) Accesses and works to the highway comply with the adopted standards of the Transport Authority;*
- b) The development would not have a material detrimental impact on the functioning of the transport network;*
- c) The proposals would not be detrimental to the safety of users of the transport network, including pedestrians and cyclists;*
- d) The proposal would not generate regular movement of heavy goods vehicles (HGVs) on unsuitable roads, or on roads without easy access to the Classified Highway Network; and*
- e) For non-residential uses, or new dwellings on classified roads, off-street servicing would be provided."*

2.3.4 Policy 'TR5: Car and Cycle Parking and Electric Vehicle Charging' states that *"Development*

should provide car parking and cycle parking that is appropriate to the accessibility of locations within the Borough to sustainable transport facilities, particularly public transport.”

2.4 Reading Borough Local Transport Plan 3: Strategy 2011-2016

2.4.1 The Reading Borough Local Transport Plan 3 (LTP3) was adopted in April 2011. It sets out the long-term policy approach to 2026 which has been developed in line with relevant local documents.

2.4.2 The LTP strategy considers the policy approach to all transport modes as well as setting out some policies which describe how the borough will deliver the strategy for including, intervention, infrastructure and innovation.

2.4.3 The plan sets out nine overarching objectives which underpin the Northamptonshire Transportation Plan. The overarching objectives are:

- *To facilitate more physically active travel for journeys in a healthy environment;*
- *To improve personal safety on the transport network;*
- *To provide affordable, accessible and inclusive travel options for everyone;*
- *To ensure that the transport network operates safely and efficiently to meet the needs of all users;*
- *To align transport and land use planning to enable sustainable travel choices, improve mobility, reduce the need to travel and preserve the natural environment;*
- *To deliver balanced packages of value for money transport solutions and make best use of existing transport investment;*
- *To offer sustainable transport choices for the Travel to Work Area and beyond, integrating within and between different types of transport;*
- *To improve journey times, journey reliability and the availability of information; and*
- *To reduce carbon emissions from transport, improve air quality and create a transport network which supports a mobile, affordable low-carbon future.*

3.0 EXISTING CONDITIONS

3.1 Site Location

3.1.1 The site is located approximately 2.3km to the west of Reading. The site is bounded by Liebenrood Road to the west, Dellwood Hospital to the east and residential dwellings to the north and south. The site is currently vacant.

3.2 Highway Network

3.2.1 Liebenrood Road is a single carriageway road with an approximate width of 7m. It is subject to a 30mph speed limit. There are lit footways on both sides of the road with a width of approximately 2.5m and a grass verge with a width of approximately 1.5m. Liebenrood Road runs between the Tilehurst Road/ Waverley Road/ Liebenrood Road Roundabout and the A4 Bath Road.

3.2.2 The A4 Bath Road is a single carriageway road which flares to two lanes in either direction at various points along its length. It is approximately 10m in width with lit footways. The A4 is subject to a 30mph speed limit. The A4 Bath Road runs east to west between London and Avonmouth. More locally, it connects the site to the M4 which is located 4.6km west of the Liebenrood Road/ A5 Bath Road junction.

3.3 Personal Injury Collisions

3.3.1 Personal Injury Collision (PIC) data has been obtained from Reading Network Management for the most recent five-year period from the 1st October 2014 to 30th September 2019. A summary of the results can be seen in **Table 3**. The PIC output plans are attached in **Appendix B**.

Table 1 - Summary of PICs by Severity

PIC Severity	Slight	Serious	Fatal	Total
Number of PICs	18	5	0	23
% of Total	78%	22%	0%	100%

3.3.2 As shown above, a total of 23 PICs have been recorded over the most recent five-year

period of which 18 were classed as 'slight' in severity, 5 'serious' in severity and none resulting in fatality. The study area included Liebenrood Road and the junctions at either end with Bath Road and Tilehurst Road

- 3.3.3 Of the PICs which occurred in the study area only three did not occur at one of the junctions at either end of Liebenrood Road. Of these, two were classed as 'slight' in severity and the other was classed as 'serious'.
- 3.3.4 Eleven of the PICs which occurred around the site involved vulnerable road users. Nine of these were classed as 'slight' in severity and two were classed as 'serious' in severity.
- 3.3.5 The first PIC which involved a vulnerable road user occurred at the roundabout junction of Tilehurst Road and Liebenrood Road and was classified as 'slight' in severity. It occurred when a car travelling east collided with a pedestrian crossing the road on the pedestrian crossing. The driver then panicked and reversed which resulted in the car colliding with an LGV travelling behind. This PIC was due to the pedestrian and driver of the car failing to look properly and the driver of the car disobeying the pedestrian crossing facility.
- 3.3.6 The second PIC which involved a vulnerable road user occurred on Liebenrood Road and was classed as 'slight' in severity. It occurred when a car entering the main carriageway at a junction collided with a pedal cyclist. The PIC was possible due to the driver of the car failing to look properly and possibly being careless/ reckless/ in a hurry.
- 3.3.7 The third PIC involving a vulnerable road user occurred on Ameythest Road at the junction with Liebenrood Road and was classed as 'slight' in severity. It occurred with a car waiting to turn left into Liebenrood Road which was hit by a pedal cyclist turning left into Ameythest Road.
- 3.3.8 The fourth PIC involving a vulnerable road user occurred on the A4 Bath Road at the junction with Liebenrood Road and was classed as 'slight' in severity. It occurred when a pedal cyclist travelling west has overtaken another pedal cycle and fell off their bike. There was no contact between the cyclists. This PIC was due to the cyclist being impaired



by alcohol, carrying out a poor turn or manoeuvre and being careless/ reckless/ in a hurry.

- 3.3.9 The fifth PIC involving a vulnerable road user occurred on A4 Bath Road approximately 190m e of Liebenrood Road and was classed as 'slight' in severity. Both a car trying to turn left south to west and pedal cyclist traveling west of footway gave way to each other. Another vehicle flashed the car to let them out, the car drove across the footway and collided with the pedal cyclist who had also moved forwards. This PIC was due to both vehicles failing to signal or giving a misleading signal.
- 3.3.10 The sixth PIC which involved a vulnerable road user occurred on Tilehurst Road roundabout with Liebenrood Road and was classed as 'serious' in severity. A car travelling west failed to give way and collided with a pedal cyclist travelling south. This PIC possibly occurred as the driver of the car failed to look properly.
- 3.3.11 The seventh PIC which involved a vulnerable road user occurred on the A4 Bath Road at the junction with Liebenrood Road and was classed as 'slight' in severity. It occurred when a child pedestrian crossed the road on the pedestrian crossing racing a friend and did not check the traffic signals. They collided with a car travelling west. This PIC was due to the pedestrian failing to look properly and being careless/ reckless/ in a hurry. It was also possibly due to the pedestrian making the wrong use of the pedestrian crossing and the driver of the car failing to look properly.
- 3.3.12 The eighth PIC involving a vulnerable road user occurred on the A4 Bath Road at the junction with Liebenrood Road and was classed as 'serious' in severity. A pedestrian crossing the carriageway on the pedestrian crossing was hit by a car travelling east to west. This PIC was due to the pedestrian disobeying signals and failing to look properly.
- 3.3.13 The ninth PIC involving a vulnerable road user occurred on the A4 Bath Road approximately 117m north-east of the junction with Liebenrood Road and was classed as 'slight' in severity. A car exiting a car park collided with a pedal cyclist travelling across the entrance.
- 3.3.14 The tenth PIC involving a vulnerable road user occurred on Tilehurst Road exiting the

roundabout and was classed as 'slight' in severity. A pedal cyclist collided with the rear of a car entering the roundabout. The car fled the scene. This PIC was due to the pedal cyclist failing to judge the car's path or speed and possibly due to them following too close.

3.3.15 The eleventh PIC involving a vulnerable road user occurred on Tilehurst Road at the junction with Liebenrood Road and was classed as 'slight' in severity. A car travelling west failed to give way and collided with a pedestrian crossing the road on a zebra crossing. This PIC was due to the car failing to judge the other person's path or speed and the pedestrian failing to look properly.

3.3.16 The remaining twelve PICs, which did not involve vulnerable road users, were due to driver error.

3.3.17 As can be seen from the above analysis, the majority of PICs were as a result of driver error and lack of awareness of other road users rather than highway design issues.

3.3.18 It is therefore considered that there is currently no significant accident issue within the study area that would require intervention and that the proposed development will not be detrimental to the safe operation of the local highway network.

3.4 Walking and Cycling Provision

3.4.1 The site is well equipped for pedestrians with lit footways on all roads as well as footpaths linking green spaces to the roads. There are dropped kerbs at crossing locations between the site and key locations.

3.4.2 National Cycle Route (NCR) 4 is approximately 1.4km from the site. NCR 4 is a long-distance route between London and Fishguard via Reading, Bath, Bristol, Newport and Swansea. NCR 5 is approximately 3.4km from the site. NCR 5 is a long-distance route between Reading and Holyhead via Oxford, Stratford-upon-Avon, Bromsgrove, Birmingham, Stoke-on-Trent and Bangor.

3.5 Public Transport Provision

- 3.5.1 The Accessibility Index for the site has been calculated to be 4.33. A copy of the Tra 01 calculator used to calculate the Accessibility Index is attached at **Appendix C**.

Bus Services

- 3.5.2 The closest bus stop to the proposed development is located directly outside Dellwood Hospital. The bus stop is serviced by the numbers F22, F24, and F25. There are also bus stops on the A5 Bath Road and Waverly Road which are both 400m from the site. The bus stop on the A5 Bath Road is serviced by the numbers 1, 2/2a, F20, F22, F24 and F25. The bus stop on Waverly Road is serviced by the numbers 33, F22, F23, F24 and F25. All services with an F identify the services that run on Reading FC home match days only. A summary of the regular services can be seen below in **Table 4**.

Table 2 - Summary of Bus Services

Service Number	Route	Frequency		
		Monday-Friday	Saturday	Sunday
1	Reading – Theale – Thatcham – Newbury	30mins (05:14-22:49)	30mins (06:28-22:47)	Hourly (07:29-18:54)
2/2a	Peppard Common – Central Reading – Mortimer	30mins (05:03-23:33)	30mins (06:53-23:33)	Hourly (09:09-19:11)
33	Central Reading – Tilehurst – Turnham's Farm	15mins (05:33-23:35)	15mins (06:03-23:35)	30mins (08:22-22:35)

Rail Services

- 3.5.3 The nearest rail station to the development is Reading West Railway Station which is approximately 1.8km from the site. The station is served by local services operated by Great Western Railway between Reading and Basingstoke or Newbury.
- 3.5.4 During weekday daytime, the station is served by two trains an hour on the Basingstoke route, plus one on the Newbury route. Trains are less frequent on Sundays and in the evenings.
- 3.5.5 Reading Railway Station is located approximately 3km from the site and is managed by Network Rail. The station is served by four train operating companies: Great Western

Railway, CrossCountry, TfL Rail and South Western Railway.

- 3.5.6 The station plays a key role in serving the Great Western Main Line, the line which runs west from London Paddington to Reading. To the west of Reading station, the line splits into two branches, allowing it to serve a variety of communities in the West and South West of England and onward into South Wales. The other branch to the west of Reading station is the Reading to Taunton line which serves communities in Berkshire and Wilshire.
- 3.5.7 Other main lines connect Reading with Birmingham New Street, Birmingham International, northern England and Scotland, and with Basingstoke, Winchester, Southampton Central and Bournemouth to the south. The main routes offered by CrossCountry are to Newcastle and Manchester Piccadilly to the north and Southampton Central and Bournemouth in the south. There are extensions to Edinburgh Waverley and Guildford once daily in each direction.
- 3.5.8 There are 344 bicycle parking stands located at the station. There are also 1275 pay and display car parking spaces.

3.6 **Local Facilities**

- 3.6.1 The majority of trips that will be made by foot or cycle to the proposed development will be for the purpose of short visits to the residents. Some of the more able residents may make trips on foot for shopping trips, and trips to bus stops as part of linked trips to other destinations.
- 3.6.2 It is generally considered that for distances under 2km, walking offers the greatest potential to replace short car trips. For distances under 5km, cycling also has the potential to substitute for short car trips.
- 3.6.3 Accessibility by foot to local amenities was determined by measuring the distances from the access of the proposed development to the local amenities.
- 3.6.4 Located approximately 1.2km west of the site is an Asda Superstore. This equates to a circa 15-minute walk or circa 3-minute drive.



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- 3.6.5 The nearest GP to the proposed development is Southcote Clinic which is located approximately 1.4km south-west of the site. There is a pharmacy located across the square from the GP Surgery.
- 3.6.6 Royal Berkshire Hospital is the nearest hospital offering A&E services. It is located approximately 4km east of the site.
- 3.6.7 There are a number of eateries and public houses in the area surrounding the site. The nearest of these is The Parkside Café which is 350m from the site. There are also a number of places of worship such as The English Martyrs Catholic Church which is approximately 400m north of the site.
- 3.6.8 Overall, the site is considered to be well located in terms of accessibility to local facilities.

4.0 DEVELOPMENT PROPOSALS

- 4.1 The proposed development is to provide a 55-bedroom care home on land adjacent to Dellwood Hospital, Reading. The area which is being proposed is currently used as car parking space.
- 4.2 The development would result in a loss of 34 car parking spaces from the existing car park and 18 car parking spaces supplied for the care home. This results in a net loss of 16 car parking spaces overall on the site.
- 4.3 The site is currently accessed through two access points in an 'in' and 'out' system. As part of the development, the southernmost access point to be closed off. A site access review was previously carried out when the land was being sold to see if the remaining access point could be modified to accommodate for all vehicle movements. This is subject to a separate planning application which has been approved (Reference 191257). This report is attached at **Appendix D**.
- 4.4 That application proposes a 5.6m wide access which allowed a refuse vehicle and large car to pass in the access. This was designed with a 10m radius to the north and 4m radius to the south to allow for left and right turns. This geometry means that 2 car parking spaces would be lost.
- 4.5 As part of the access design, there is sufficient width for a refuse vehicle and large car to enter/ exit simultaneously. Refuse collection will take place on street approximately 20m from the bin store. This is within the Manual for Streets requirement of waste collection vehicles being able to get within 25m of the storage point.
- 4.6 Service vehicles will still need to access the site in order to deliver and collect items from the site. **Drawing 22075-05** shows that a service vehicle such as a 4.6t Light Van can enter and leave the site in a forward gear.
- 4.7 Reading Borough Local Development Framework Revised Parking Standards and Design SPD lays out the required car parking spaces for each land use. The site is located within

'Zone 3 - Secondary Core Area'. Both the hospital and the care home come under land use C2 but are separated into Nursing Home, Hospital (Out Patients) and Hospital (In Patients) in the SPD.

- 4.8 The policy standard for a nursing home is 1 space per FTE staff and 1 per 4 residents. A hospital (out patients) is required to have 1 space per 4 FTE staff and 1 per consulting room. A hospital (in patients) is required to have 1 space per 4 FTE and 1 space per 3 beds.
- 4.9 The care home is expected to have 70 FTE staff and 55 residents at its full capacity, but only 28 staff would be on site at any one time. This leads to an SPD maximum of 42 spaces. This is likely to result in a significant over-provision of spaces and the proposed plans provide 18 car parking spaces of which two will be for disabled parking. **Drawing 22075-05** shows that a large car can enter the site, access the car parking spaces and leave the site. It also shows that two large cars can enter and leave the site simultaneously. Based on the operational needs of similar care home sites elsewhere providing a similar number of car parking space, it is considered that the number of spaces proposed for the site is adequate for this development.
- 4.10 However, a car parking accumulation exercise has been undertaken using the arrival and departure rates derived from the TRICS database to demonstrate that the level of provision is adequate to meet operational needs. The resulting accumulation is summarised in **Table 5** below.

Table 3 - Care Home Car Parking Accumulation

Time Period	In	Out	Total	Car Parking Accumulation
07:00-08:00	4	3	7	1
08:00-09:00	2	1	3	2
09:00-10:00	3	2	5	4
10:00-11:00	6	3	9	6
11:00-12:00	6	5	11	6
12:00-13:00	2	4	6	4
13:00-14:00	5	1	7	8
14:00-15:00	3	6	8	5
15:00-16:00	4	6	9	3
16:00-17:00	3	5	8	1

17:00-18:00	1	2	3	1
18:00-19:00	1	1	3	0
19:00-20:00	2	1	3	1
20:00-21:00	1	3	4	0

- 4.11 The above table demonstrates a maximum demand of 8 spaces. On the assumption that the development will generate around 70 FTE staff of which around 40% would be on staff at any one time, staff demand would be around 28 people at any one time. With a typical journey to work mode share for the local area of 58.8% this equates to a demand of around 17 spaces.
- 4.12 In practise, car ownership for residents of the care home will be zero and therefore the remaining spaces will cover visitors, etc.
- 4.13 As part of the plans, 20 car parking spaces will be retained for existing uses on the site which comprise the physiotherapy centre and the Hospice. The 30 spaces at the front of the building which are being lost are currently being used by visitors and staff of the Hospice and physiotherapy centre, however, the land should be considered 'lost' already as it belonged to the former hospital, not in use since 2005.
- 4.14 Two of the car parking spaces will have an electric vehicle charging point. These spaces will be located near the main entrance. The development will also provide 10 cycle parking spaces with 4 located near the main entrance and the remaining 6 located at the services entrance.

5.0 TRAFFIC GENERATION

5.1 Proposed Traffic Generation

5.1.1 To assess the potential traffic movements from the development, the TRICS database was interrogated (TRICS v7.6.4 online). This database contains surveys of the vehicle and multimodal trip generation of a wide variety of sites which are classified by land use and various other attributes. The database was interrogated for multimodal vehicular surveys for Land Use 05 – Health/F – Care Home (Elderly Residential), with sites in London, Scotland, Ireland and Wales manually excluded. The TRICS printouts are attached at **Appendix E**. The vehicle and person trip rates are summarised in **Table 7** with the associated generation shown in **Table 8** below.

Table 4 - Vehicle and Person TRICS Trip Rates

	Vehicle Trip Rates			Person Trips Rates		
	Arrivals	Departures	Total	Arrivals	Departures	Total
08:00-09:00	0.032	0.016	0.048	0.075	0.054	0.129
17:00-18:00	0.027	0.032	0.059	0.038	0.065	0.103
Daily	0.763	0.773	1.536	1.279	1.313	2.592

Table 5 - Vehicle and Person Generation

	Vehicle Trips			Person Trips		
	Arrivals	Departures	Total	Arrivals	Departures	Total
08:00-09:00	2	1	3	4	3	7
17:00-18:00	1	2	3	2	4	6
Daily	42	43	84	70	72	143

5.1.2 As shown in the table above, the proposed development is predicted to generate in the order of 3 two-way vehicle movements in the AM and PM peak. This equates to, on average, an additional vehicle every 20-minutes, which is considered modest.

5.1.3 To more accurately represent the likely traffic generation of the site in Reading the mode share for car driver recorded in the 2011 census can be applied to the person trip rates shown in **Table 7**. The 2011 census mode share can be seen in **Table 8** below. The results of this are summarised in **Table 9** below and compared with the TRICS results.

Table 6 - Method of travel to work in Reading 015

Method of Travel to Work	Percentage
Driving a car or van	58.8%
On foot	13.1%
Bus, minibus or coach	7.1%
Passenger in a car or van	4.8%
Train	2.4%
Bicycle	2.2%
Motorcycle, scooter or moped	0.5%
Taxi	0.3%
Other method of travel to work	0.3%
Underground, metro, light rail or tram	0.1%

Table 7 - Census derived traffic generation

	TRICS			Census		
	Arrivals	Departures	Total	Arrivals	Departures	Total
08:00-09:00	2	1	3	2	2	4
17:00-18:00	1	2	3	1	2	3
Daily	42	43	84	41	42	84

5.1.4 **Table 9** shows that by applying the journey to work mode share data to the person trips, the potential traffic generation will marginally increase during the peak hours but stay the same over the whole day.

6.0 BREEAM REQUIREMENTS

6.1 In order for a site to be BREEAM compliant a number of requirements must be met. The requirements listed below in **Table 10** are the requirements that a site-specific transport assessment must cover.

Table 8 - BREEAM Requirements

The site-specific travel assessment (or statement) shall cover as a minimum	Where to find it in the Transport Assessment										
Travel patterns and attitudes of existing building or site users towards cycling, walking and public transport, to identify relevant constraints and opportunities.	As it is a new development there are no current travel patterns. However, Section 3.3 shows the existing parking use for the hospice and physiotherapy unit which are located next to the new development.										
Predicted travel patterns and transport impact of future building or site users.	Section 5.1 summarises the proposed traffic generation for the site.										
Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors.	Section 3.5 summarises the walking and cycling accessibility of the site. Age-related requirements of occupants and visitors have been considered for the development and the following have been incorporated: - The main entrance is easily accessible from the highway with dropped kerbs at key crossing points. - There is enough width for wheelchair access on footways around the site and for access into the site.										
Reporting of the number and type of existing accessible amenities within 500m of the site.	Section 3.8 summarises the relevant facilities which can be accessed easily from the site. The table below summarises what is within 500m of the site . <table border="1"> <tr> <td>Appropriate food outlet</td><td>N</td></tr> <tr> <td>Access to cash</td><td>N</td></tr> <tr> <td>Access to an outdoor open space (public or private, suitably sized and accessible to building users)</td><td>Y</td></tr> <tr> <td>Access to a recreation or leisure facility for fitness or sports</td><td>Y</td></tr> <tr> <td>Publicly available postal facility</td><td>N</td></tr> </table>	Appropriate food outlet	N	Access to cash	N	Access to an outdoor open space (public or private, suitably sized and accessible to building users)	Y	Access to a recreation or leisure facility for fitness or sports	Y	Publicly available postal facility	N
Appropriate food outlet	N										
Access to cash	N										
Access to an outdoor open space (public or private, suitably sized and accessible to building users)	Y										
Access to a recreation or leisure facility for fitness or sports	Y										
Publicly available postal facility	N										

	Community Facility	N
	Over the counter services associated with a pharmacy	N
	Public sector GP surgery or general medical centre	N
	Childcare facility or school	Y
Disabled access accounting for varying levels and types of disability, including visual impairment.	As the development is to be a care home, the residents are unlikely to leave the site without a nurse or family member. Disabled access for staff and visitors has, however, been considered. There are two disabled car parking spaces included in the layout. These will be located next to the main entrance. Pedestrian access will be via the vehicular access point. Due to this there will be enough space for wheelchair users to access the site.	
Calculation of the existing public transport Accessibility Index (AI).	Section 3.6 summarises the public transport provision for the site and states the Accessibility Index.	
Current facilities for cyclists.	As it is a new development there are no current facilities for cyclists.	

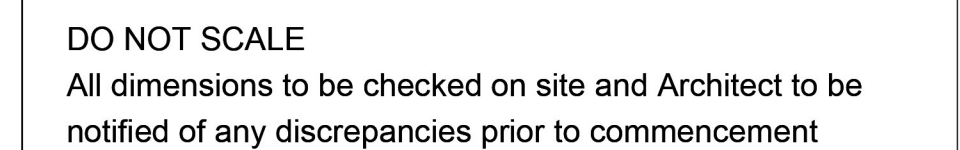


7.0 CONCLUSION

- 7.1 This Transport Assessment has reviewed the highways and transport implications of providing a 55-bedroom care home on the land adjacent to Dellwood Hospital, Reading.
- 7.2 The proposed site is located close to amenities and facilities within Reading with good access to public transport links.
- 7.3 The traffic generation has been estimated and it shows there will be a modest increase in traffic on the local roads.
- 7.4 In accordance with NPPF, the additional traffic would not have a material impact on the safety or operation on the local road network and it can clearly be concluded that the impact of the development will not be “severe” and overall there are no justifiable reasons for refusal on highway grounds.

Appendix A

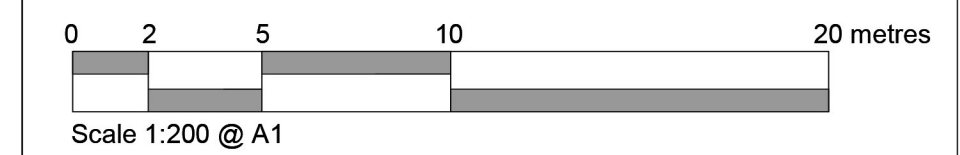
Site Layout



Construction (Design and Management) Regulations 2015

RESIDUAL RISKS:

REF:	DESCRIPTION	DATE:
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Appendix B

PIC Results

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection: Notes:
Selected using Pre-defined Query : Liebenrood Road

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Date									
2nd Road No.	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

W1411114 Saturday LIEBENROOD ROAD J/W TILEHURST 15/11/2014 ROAD READING
R1: U 7201 1132hrs Veh 1 Car Going ahead NWto SE
R2: U 7201 Daylight:street lights present Veh 2 Car Wait go ahead held NWto SE Dri F 27 Slight
E 469,278 Wet/Damp Veh 2 Car Wait go ahead held NWto SE RSP M 8 Slight
N 173,003 Fine without high winds
30 mph

Causation Factor: Participant: Confidence:
1st: Slippery road (due to weather) Vehicle 1 Very Likely
2nd: Deposit on road (eg oil, mud, chippings) Vehicle 1 Very Likely
3rd: Following too close Vehicle 1 Possible
4th: Sudden braking Vehicle 2 Possible
5th: Failed to look properly Vehicle 1 Very Likely
C1 TRAV NW TO SE ON XIT FROM RBT COLL/W RR C2 STAT WAITNG AT PED XING

W2841114 Tuesday TILEHURST RD J/W LIEBENROOD RD 25/11/2014 READING
R1: U 7201 1827hrs Veh 1 Car Going ahead W to E Ped F 53 Slight
R2: U 7201 Darkness: street lights present a Veh 2 Goods < 3.5t Wait go ahead held W to E
E 469,184 Wet/Damp
N 173,046 Raining without high winds
30 mph

Causation Factor: Participant: Confidence:
1st: Failed to look properly Casualty 1 Very Likely
2nd: Disobeyed pedestrian crossing facility Vehicle 1 Very Likely
3rd: Uncorrected, defective eyesight Vehicle 1 Very Likely
4th: Failed to look properly Vehicle 1 Very Likely
C1 TRAV E COLL/W PED XING RD TO S ON PED XING, DRIV PANICKD & REVRSD & COLL/W LGV2 TRAV BHND

W1391214 Wednesday TILEHURST RD APP 40M E 10/12/2014 LIEBENROOD RD READING
R1: U 7201 0930hrs Veh 1 Goods > 7.5t Stopping E to W
Veh 2 Car Wait go ahead held E to W FSP M 25 Slight
Daylight:street lights present Veh 2 Car Wait go ahead held E to W Dri M 20 Slight
E 469,310 Dry
N 173,075 Fine without high winds
30 mph

Causation Factor: Participant: Confidence:
1st: Failed to look properly Vehicle 1 Very Likely
2nd: Failed to judge other persons path or speed Vehicle 1 Very Likely
3rd: Sudden braking Vehicle 2
C2 TRAV W STOPPD AT PED XING & HIT IN REAR BY HGV1

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection: Notes:
Selected using Pre-defined Query : Liebenrood Road

Police Ref.	Day	Location Description	Vehicles					Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Date									
2nd Road No.	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

W2260615 Thursday TILEHURST ROAD J/W LIEBENROOD ROAD READING
25/06/2015
R1: U 7201 0300hrs
R2: U 7201 Daylight:street lights present
E 469,270 Dry
N 173,056 Fine without high winds
30 mph

Causation Factor: Participant: Confidence:
1st: Careless/Reckless/In a hurry Vehicle 1 Very Likely
2nd: Junction overshoot Vehicle 1 Very Likely
3rd: Exceeding speed limit Vehicle 1
C1 TRAV E TO SW ON APP TO RBT WAS HIT IN RR BY C2 TRAV E TO SW. POLICE OFFICER STATES INCONSISTENCIES IN REPORT OF DRIVER C1.

W0670815 Wednesday LIEBENROOD ROAD EX JUNCT N/K
12/08/2015
R1: U 7201 1500hrs
R2: U 7201 Daylight:street lights present
E 469,297 Dry
N 172,934 Fine without high winds
30 mph

Causation Factor: Participant: Confidence:
1st: Failed to look properly Vehicle 1 Possible
2nd: Careless/Reckless/In a hurry Vehicle 1 Possible
C1 ENT MAIN C/WAY AT JUNCT TRAV IN N/K DIR COLL/W PC2 TRAV IN N/K DIR.

W0700815 Wednesday AMEYTHEST LANE J/W LIEBENROOD ROAD READING
12/08/2015
R1: U 7201 1450hrs
R2: U 7201 Daylight:street lights present
E 469,407 Dry
N 172,590 Fine without high winds
30 mph

C2 WAITG TO TRN LT INTO MAJ RD E TO S HIT BY PC2 TRNG LT N TO E

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection: Notes:
Selected using Pre-defined Query : Liebenrood Road

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
Road No.	Date										
2nd Road No.	Time										
Grid Ref.	D/L										
	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											
W1870815	Wednesday	A4 BATH RD EX LOC NK POSS NR	Veh 1	Car	Going ahead	W	to	E			
R1: A 4	26/08/2015	J/W PARKSIDE RD READING	Veh 2	Pedal cycle	Wait go ahead held	W	to	E	Dri	M	43 Serious
	1845hrs	Daylight:street lights present									
E 469,645	Dry										
N 172,510	Fine without high winds										
	30 mph										
Causation Factor:			Participant:			Confidence:					
1st:	Failed to look properly		Vehicle 1			Possible					
2nd:	Passing too close to cyclist, horse rider or pedestrian		Vehicle 1			Possible					
C1 TRAV IN NK DIR FOR NK REASON COLL/W REAR PC2.C1 FTS											
R2031115	Wednesday	A4 BATH ROAD APP 75M W J/W	Veh 1	Car	Change lane to right	W	to	E	Dri	M	36 Slight
R1: A 4	25/11/2015	LIEBENWOOD ROAD READING	Veh 2	Car	Going ahead	W	to	E			
	1822hrs	Daylight:street lights present									
E 469,366	Wet/Damp										
N 172,422	Fine without high winds										
	30 mph										
Causation Factor:			Participant:			Confidence:					
1st:	Failed to look properly		Vehicle 1			Very Likely					
2nd:	Following too close		Vehicle 1			Very Likely					
C1 TRAV E MOVD OUT OVRTK A SLW MOVG VEH IN LANE 1 & COLL/W C2 TRAV IN OUTSIDE LANE											
W2080515	Saturday	LIEBENROOD ROAD J/W ACCESS	Veh 1	M/C > 500 cc	Going ahead	N	to	S	Dri	M	19 Serious
R1: U 7201	23/05/2015	ROAD LEADING TO PROSPECT PARK	Veh 2	Car	Turning right	NW	to	S			
R2: U	1102hrs	READING									
E 469,331	Daylight:street lights present										
N 172,814	Dry										
	Fine without high winds										
	30 mph										
Causation Factor:			Participant:			Confidence:					
1st:	Exceeding speed limit		Vehicle 1			Very Likely					
2nd:	Travelling too fast for conditions		Vehicle 1			Very Likely					
3rd:	Failed to look properly		Vehicle 2			Very Likely					
4th:	Careless/Reckless/In a hurry		Vehicle 1			Very Likely					
5th:	Stationary or parked vehicle		Vehicle 1			Very Likely					
6th:	Stationary or parked vehicle		Vehicle 2			Very Likely					
C2 FAILED TO GWAY TRNG RT NW TO S & COLL/W MC1 TRAV S											

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection: Notes:
Selected using Pre-defined Query : Liebenrood Road

Police Ref.	Day	Location Description	Vehicles					Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Date									
2nd Road No.	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

W0850316 Friday A4 BATH RD J/W LIEBENROOD RD Veh 1 Pedal cycle O/take m/veh o/side E to W Dri M 41 Slight
11/03/2016 READING
R1: A 4 2321hrs
R2: U 7201 Darkness: street lights present a
E 469,443 Dry
N 172,443 Fine without high winds
30 mph

Causation Factor: **Participant:** **Confidence:**
1st: Impaired by alcohol Vehicle 1 Very Likely
2nd: Poor turn or manoeuvre Vehicle 1 Very Likely
3rd: Careless/Reckless/In a hurry Vehicle 1
PC TRAV W (RIDER INTOX) OVTK ANOTHER NK CYCLE & FELL OFF BIKE, NO CONTACT

W0960716 Thursday LIEBENROOD RD J/W TILEHURST RD Veh 1 Car Going ahead N to S
14/07/2016 READING Veh 2 Car Wait go ahead held N to S RSP M 10 Slight
R1: U 7201 1610hrs Veh 2 Car Wait go ahead held N to S FSP M 8 Slight
R2: U 7201 Daylight:street lights present Veh 2 Car Wait go ahead held N to S Dri F 44 Slight
E 469,278 Dry
N 173,004 Fine without high winds
30 mph

Causation Factor: **Participant:** **Confidence:**
1st: Failed to look properly Vehicle 1 Very Likely
2nd: Failed to judge other persons path or speed Vehicle 1 Possible
C1 EXITG RBT TO S FAILED TO SEE C2 STAT AHEAD HELD UP AT PED XING* COLL/W REAR C2

W1540816 Friday A4 BATH RD AT ENT TO THE WREN Veh 1 Car Starting S to W
26/08/2016 SCHOOL APP 190M E LIEBENROOD Veh 2 Pedal cycle Starting W to E Dri M 19 Slight
R1: A 4 1701hrs RD READING
R2: U Daylight:street lights present
E 469,624 Dry
N 172,495 Fine without high winds
30 mph

Causation Factor: **Participant:** **Confidence:**
1st: Failed to signal/Misleading signal Vehicle 1 Very Likely
2nd: Failed to signal/Misleading signal Vehicle 2 Very Likely
BOTH C1 TRNG LFT S TO W & PC2 TRAV W ON F/WAY GAVE WAY TO EACH OTHER,NK VEH ON RD FLSD C1 TO LET OUT, C1 DRV ACROSS F/WAY & COLL/W PC2 WHO HAD ALSO MVD FORWARD

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection: Notes:
Selected using Pre-defined Query : Liebenrood Road

			Vehicles					Casualties				
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev				
Road No.	Date											
2nd Road No.	Time											
Grid Ref.	D/L											
	R.S.C											
	Weather											
	Speed											
	Account of Accident											
Causation Factor:												
160308320	Friday	LIEBENROOD RD J/W TILEHURST RD	Veh 1	Car		Going ahead	S	to	N			
	28/10/2016	READING	Veh 2	Car		Stopping	S	to	N	FSP	M	52 Slight
R1: U 7201	1455hrs		Veh 2	Car		Stopping	S	to	N	Dri	F	45 Slight
R2: U 7201	Daylight:street lights present											
E 469,278	Dry											
N 173,001	Fine without high winds											
	30 mph											
Causation Factor:						Participant:			Confidence:			
1st:	Failed to look properly					Vehicle 1			Possible			
C1 EXITG RBT TO S FAILED TO SEE C2 STAT AHEAD HELD UP AT PED XING & COLL/W REAR C2												
160316020	Friday	TILEHURST ROAD RBT/W	Veh 1	Car		Going ahead	N	to	S			
	28/10/2016	LIEBENROOD ROAD READING	Veh 2	Pedal cycle		Going ahead	E	to	W	Dri	M	44 Serious
R1: U 7201	1845hrs											
R2: U 7201	Darkness: street lights present a											
E 469,268	Dry											
N 173,046	Fine without high winds											
	30 mph											
Causation Factor:						Participant:			Confidence:			
1st:	Failed to look properly					Vehicle 1			Possible			
C1 TRAV W FAILED TO GWAY & COLL/W PC2 TRAV S												
170070436	Monday	LIEBENROOD ROAD APP 60M N J/W	Veh 1	Car		Wait go ahead held	S	to	N			
	06/03/2017	PENROATH AVENUE READING	Veh 2	Car		Wait go ahead held	S	to	N	Dri	M	21 Slight
R1: U 7201	1715hrs											
	Daylight:street lights present											
E 469,276	Dry											
N 172,993	Fine without high winds											
	30 mph											
Causation Factor:						Participant:			Confidence:			
1st:	Failed to look properly					Vehicle 1			Very Likely			
C2 WAITG IN TRAFF TRAV N WAS HIT IN REAR BY C1 MOVG FORWARD. C1 FTS												

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection: Notes:
Selected using Pre-defined Query : Liebenrood Road

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
Road No.	Date										
2nd Road No.	Time										
Grid Ref.	D/L										
	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											
170088542	Tuesday	A4 BATH RD J/W LIEBENROOD RD	Veh 1	Car		Turning right	E	to N	Dri	F	49 Slight
	07/03/2017	READING	Veh 2	Car		Going ahead	W	to E			
R1: A 4	0552hrs										
R2: U 7201	Daylight:street lights present										
E 469,436	Wet/Damp										
N 172,449	Fine without high winds										
	30 mph										
Causation Factor:			Participant:			Confidence:					
1st:	Disobeyed automatic traffic signal					Vehicle 1		Possible			
2nd:	Disobeyed automatic traffic signal					Vehicle 2		Possible			
C1 TRND RT E TO N OFF MAIN RD & COLL/W C2 TRAV E. BOTH DRIVERS STATE ATS GRN FOR THEM. NO WITNESSES											
170129059	Tuesday	A4 BATH RD J/W LIEBENROOD RD	Veh 1	Car		Going ahead	E	to W	Ped	M	12 Slight
	25/04/2017	READING									
R1: A 4	0805hrs										
R2: U	Daylight:street lights present										
E 469,452	Dry										
N 172,447	Fine without high winds										
	30 mph										
Causation Factor:			Participant:			Confidence:					
1st:	Failed to look properly					Casualty 1		Very Likely			
2nd:	Careless/Reckless/In a hurry					Casualty 1		Very Likely			
3rd:	Wrong use of pedestrian crossing facility					Casualty 1		Possible			
4th:	Failed to look properly					Vehicle 1		Possible			
PED (CHILD) XED RD TO S ON PED XING RACG FRIEND & DID NOT CHECK ATS & COLL/W C1 TRAV W											
170362405	Friday	A4 BATH ROAD J/W LIEBENROOD	Veh 1	Car		Going ahead	E	to W	Ped	M	68 Serious
	01/12/2017	ROAD, READING									
R1: A 4	1948hrs										
R2: U 7201	Darkness: street lights present a										
E 469,453	Dry										
N 172,446	Fine without high winds										
	30 mph										
Causation Factor:			Participant:			Confidence:					
1st:	Failed to look properly					Casualty 1		Very Likely			
PED XING C/WAY N TO S ON PED XING WAS HIT BY C1 TRAV E TO W. PED DISOBEYED SIGS											

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection:

Selected using Pre-defined Query :

Notes:

Liebenrood Road

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Date									
2nd Road No.	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

43180369840 Monday A4 BATH ROAD READING, 300 Veh 1 Car Going ahead W to E Dri F 72 Slight
03/12/2018 METRES SW OF JUNCTION Veh 2 Car Going ahead E to W Dri M 48 Slight
R1: A 4 1635hrs SOUTHCOTE LANE.
Darkness: street lights present a
E 469,595 Wet/Damp
N 172,492 Fine without high winds
30 mph

Causation Factor:

Participant:

Confidence:

1st: Illness or disability, mental or physical Vehicle 1 Very Likely
V1 TRAVELLING FROM W TO E TOWARDS READING TC HAS GONE FM L1 TO L2 AND CONTINUED INTO OPP LANE HITTING V2 HEAD ON.

190210446 Tuesday A4 BATH ROAD APPX 117M NE J/W Veh 1 Car Going ahead N to S
09/07/2019 LIEBENROOD ROAD READING Veh 2 Pedal cycle Going ahead NE to SW Dri M 13 Slight
R1: A 4 0805hrs
R2: U Daylight:street lights present
E 469,556 Dry
N 172,488 Fine without high winds
30 mph

C1 EXITING CAR PARK N TO S COLL/W PC2 TRAV PC2 TRAV TO SW ACROSS ENT.

190206424 Saturday TILEHURST ROAD J/W LIEBENROOD Veh 1 Goods Unknown Change lane to left W to E
22/06/2019 ROAD READING Veh 2 Taxi Going ahead W to E Dri M 44 Slight
R1: U 7201 0001hrs
R2: U 7201 Darkness: street lights present a
E 469,204 Dry
N 173,051 Fine without high winds
30 mph

LGV1 TRAV W TO E IN LN2 ON RBT CHNGD LN TO LFT & COLL/W RR TX2 TRAV W TO E IN LN1. LGV1 FTS.

Details of Personal Injury Accidents for Period - 01/10/2014 to 30/09/2019 (60) months

Selection: Notes:
Selected using Pre-defined Query : Liebenrood Road

			Vehicles					Casualties				
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev				
Road No.	Date											
2nd Road No.	Time											
Grid Ref.	D/L											
	R.S.C											
	Weather											
	Speed											
	Account of Accident											
Causation Factor:												
190275479	Wednesday	TILEHURST ROAD READING EX RBT	Veh 1	Pedal cycle	Going ahead	W	to	E	Dri	M	23	Slight
	28/08/2019	N/K	Veh 2	Car	Stopping	W	to	E				
R1: U 7201	1021hrs											
R2: U 7201	Daylight:street lights present											
E 469,189	Dry											
N 173,045	Fine without high winds											
	30 mph											
Causation Factor:					Participant:			Confidence:				
1st:	Failed to judge other persons path or speed				Vehicle 1			Very Likely				
2nd:	Following too close				Vehicle 1			Possible				
PC1 TRAV IN N/K DIR COLL/W RR C2 ENT RBT IN N/K DIR. C2 FTS.												
190073828	Saturday	TILEHURST ROAD J/W LIEBENROOD	Veh 1	Car	Going ahead	E	to	W	Ped	F	24	Slight
	09/03/2019	ROAD RNDBT READING										
R1: U 7201	1300hrs											
R2: U 7201	Daylight:street lights present											
E 469,254	Dry											
N 173,062	Fine without high winds											
	30 mph											
Causation Factor:					Participant:			Confidence:				
1st:	Failed to judge other persons path or speed				Vehicle 1			Very Likely				
2nd:	Failed to look properly				Casualty 1			Very Likely				
C1 TRAV W FAILD TO G/WAY & COLL/W PED1 XING RD N ON ZEBRA XING												

Appendix C
Tra 01 Calculator

BREEAM 2018 Tra01/02 Accessibility Index calculator



Using the drop down boxes make the relevant selections and press the 'Select' button

Building type Healthcare Hospitals(Acute, Specialist, Teaching, Mental health) ▼

No. nodes required 3 ▼

Select

NODE 1

Public transport type	Bus										
Distance to node (m)	400										
	Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8	Service 9	Service 10	
Average frequency per hour	2	2									

NODE 2

Public transport type	Bus										
Distance to node (m)	400										
	Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8	Service 9	Service 10	
Average frequency per hour	4										

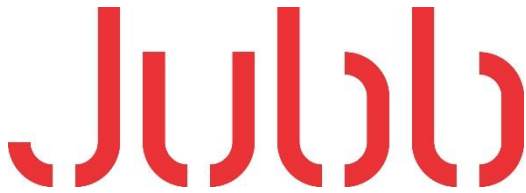
NODE 3

Public transport type	Rail										
Distance to node (m)	1800										
	Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8	Service 9	Service 10	
Average frequency per hour	3										

Accessibility Index 4.33

Appendix D
Site Access Review

19219



Title: Site Access Review

Date: May 2019

Prepared by: C. Sheard

1.0 Introduction

- 1.1 Jubb have been commissioned by NHS Property Services Ltd to provide transport and highways advice in relation to vehicular access at Dellwood Hospital.
- 1.2 It is understood that NHS Property Services own the freehold of the land currently occupied by Dellwood Hospital and are looking to dispose of a section of land in the south western corner of the site. This disposal is subject to retaining site access for the remainder of the hospital site that is occupied by a Hospice.
- 1.3 **Figure 1** below provides an extract of the site boundary and land to be sold.

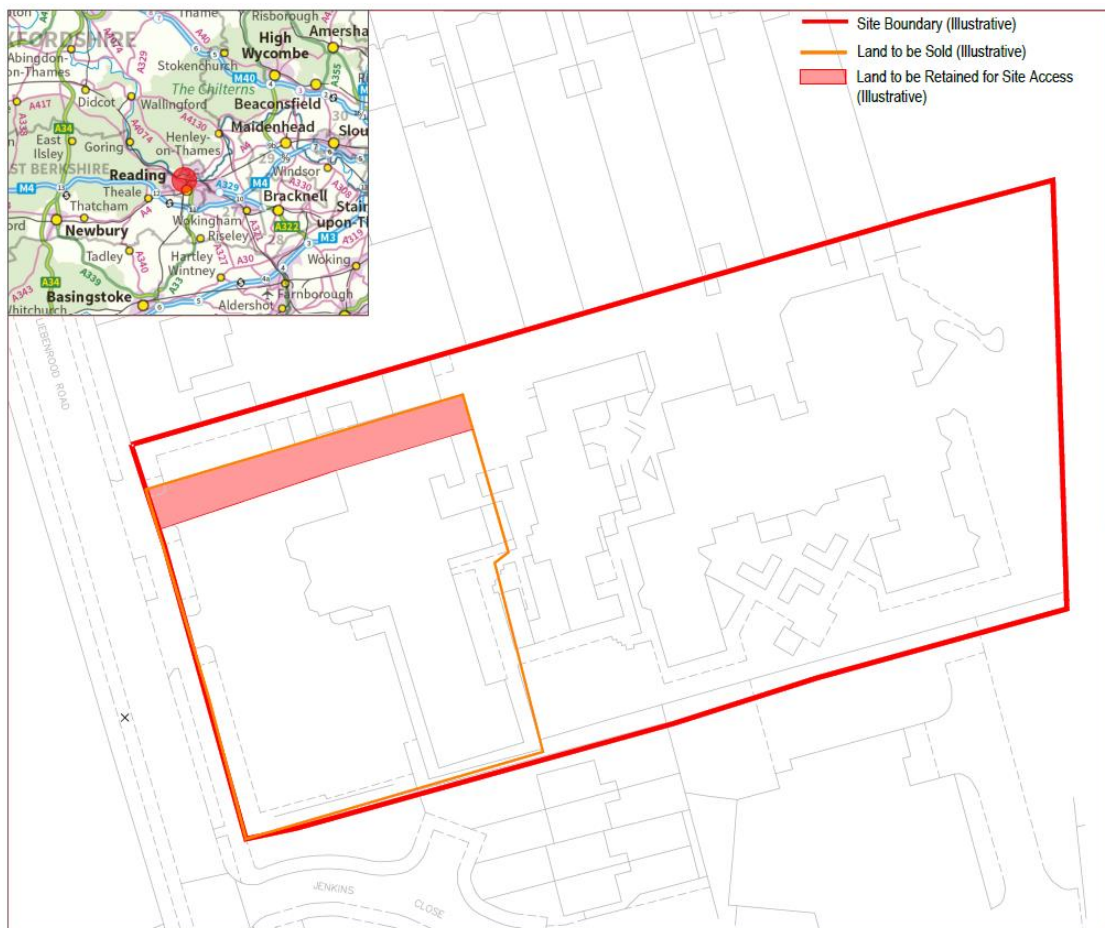


Figure 1 - Extract of Site Location and Land to be Disposed

- 1.4 As shown above, the existing entry only access located to the north western corner would be retained and amended to maintain vehicular access for all movements without comprising land to the south west.

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- 1.5 This Technical Note provides an assessment of the existing vehicular entry which serves Dellwood Hospital and its ability to be converted to an all movements access. Thereafter, this review will conclude that the entry can be modified to accommodate all appropriate vehicle movements within the identified land constraints.
- 1.6 It is noted that this assessment has provided a review of vehicle access primarily and assumes that the proposed access road operates as a shared use route i.e. that pedestrians and vehicles share the access. This is considered reasonable due to the low number of vehicles movements that will occur at the access. Should a separate footway or walkway be required then this could require land within the land immediately north of the proposed access route and would therefore require the removal of parking spaces along this northern edge.
- 1.7 Should planning consent be required to modify the point of access then it is recommended that the access proposals are agreed with the Local Highway Authority prior to sale of the southern land parcel.

2.0 Existing Access Arrangements

- 2.1 Access to the site is obtained from Leibenrood Road. Liebenrood Road is a single carriageway road with 30mph speed classification. Along the frontage of the site the carriageway width is approximately 6.7m and bounding the western side of the site frontage is a 2.6m wide footway alongside a 1.8m grassed verge.
- 2.2 The hospital site currently has a split vehicle access comprising of an existing singular point of entry and a separate exit point, taken from Liebenrood Road.
- 2.3 The existing entry access is located at the north western edge of the site and provides immediate access into the car park.
- 2.4 The vehicular entrance takes form of a 'gap' within the site boundary wall. This 'gap' is 5m wide and once within the site the carriageway width varies between 5.6 - 6m.
- 2.5 The vehicular exit is taken from the western edge of the site, at a point approximately 13.5m south of the vehicle entry. This exit also takes form of a 'gap' within the site boundary wall with a width of 4.6m.
- 2.6 It is proposed that the existing site access would be retained and amended to facilitate vehicular movements both accessing and exiting the site, without impeding on the land to be sold.
- 2.7 Considering the suitability of the existing entry point, based on its current use, this access could remain in its current location. However, it is not quite wide enough to provide both an entry and exit point for the vehicles that will need continued access to the retained land. Hence, amendments are required to its current form.

3.0 Potential Access Solution

- 3.1 **Figure 2** on the following page provides an extract of the proposed site access.

19219

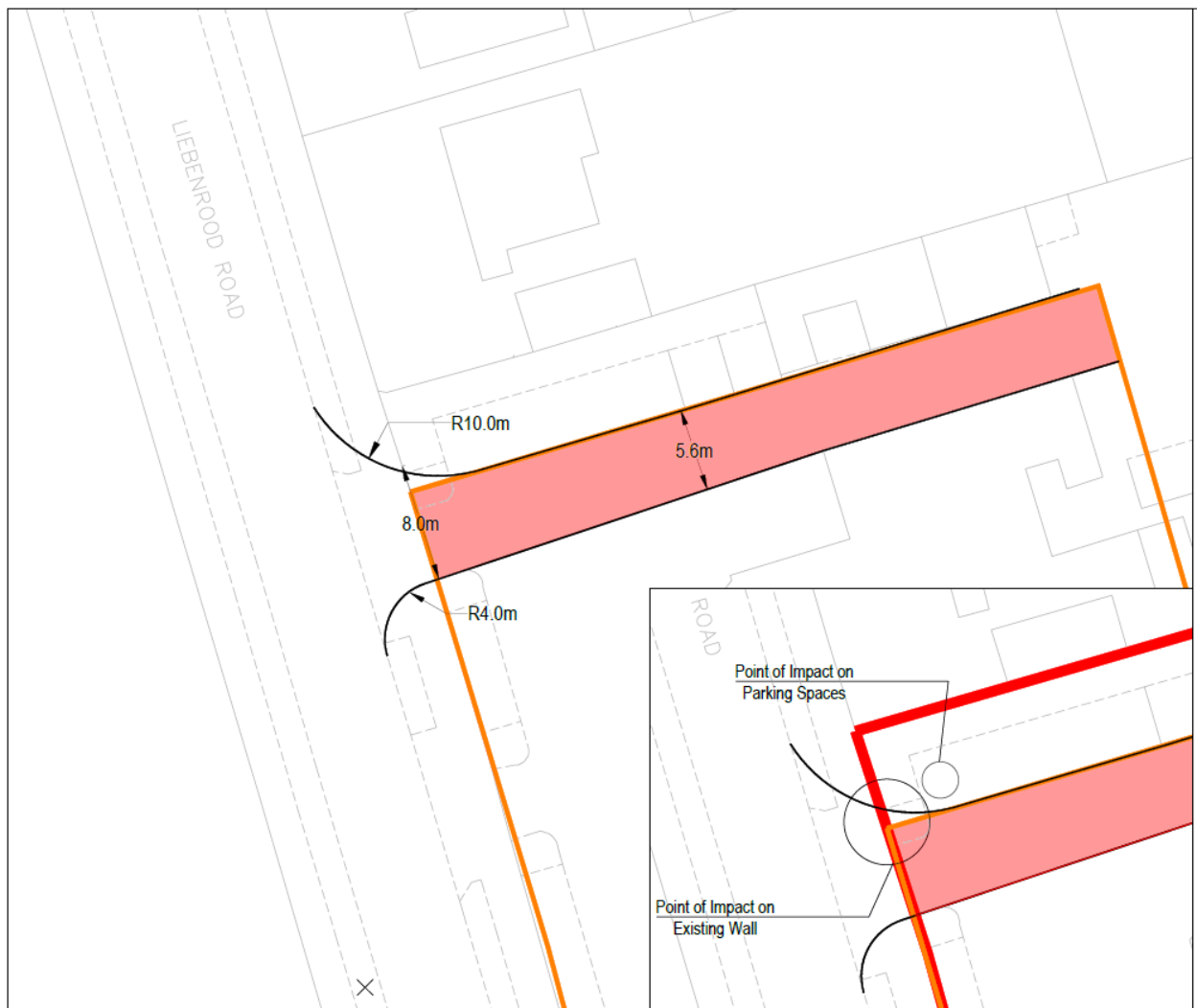


Figure 2 - Proposed Site Access

- 3.2 To facilitate full access into the site, it is proposed that the site access would be widened to provide an entrance of 8m in width with appropriate radii to cater for swept path movements of the vehicles that may need to use it.
- 3.2.1 In widening the access, there would be an impact upon the existing wall which forms the northern boundary of the access point. A section of wall approximately 2-3m in length would need to be removed.
- 3.3 A 10m radius would be provided on the northern side of the site access which would provide enough space for vehicles turning left into the site whilst at the same time avoiding encroachment on the neighbouring property's driveway to the north. A 4m radius on the southern side is considered reasonable for left turning movements out of the site and would not encroach on the land to be sold to the south.
- 3.4 It is noted that the existing parking spaces located in the north western corner of the site would also be impacted, as shown in **Figure 2**. As such, it is likely that approximately 2 parking spaces would need to be removed.
- 3.5 To assess the suitability of the access for appropriate vehicle movements, swept path analysis of the proposed site access was undertaken for a refuse vehicle, rigid truck and a large car. These drawings are attached at **Appendix A** with extracts provided below.

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- 3.6 **Figure 3** and **Figure 4** below and on the following page illustrate the movements of a refuse and rigid vehicle separately entering and exiting the site via the proposed access.

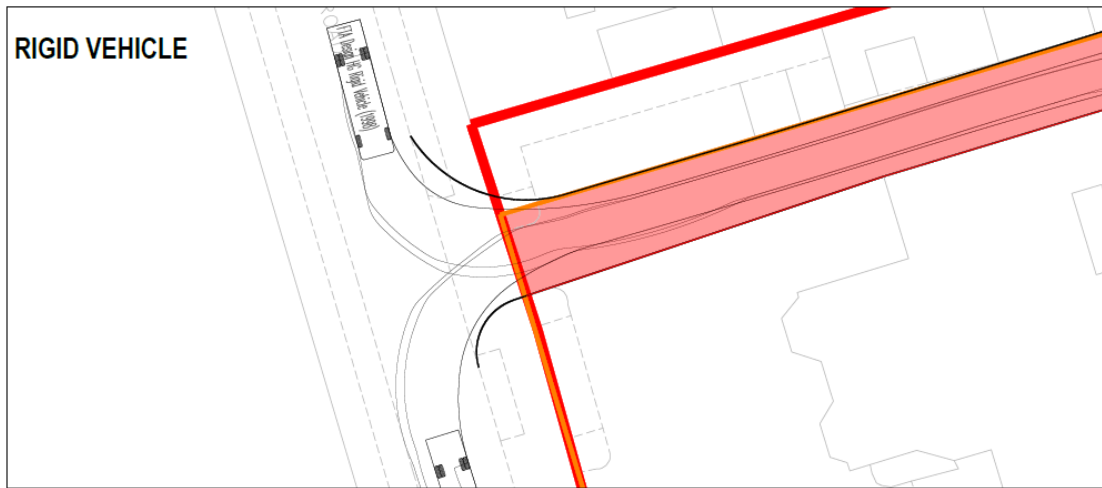


Figure 3 - Rigid Vehicle Tracking

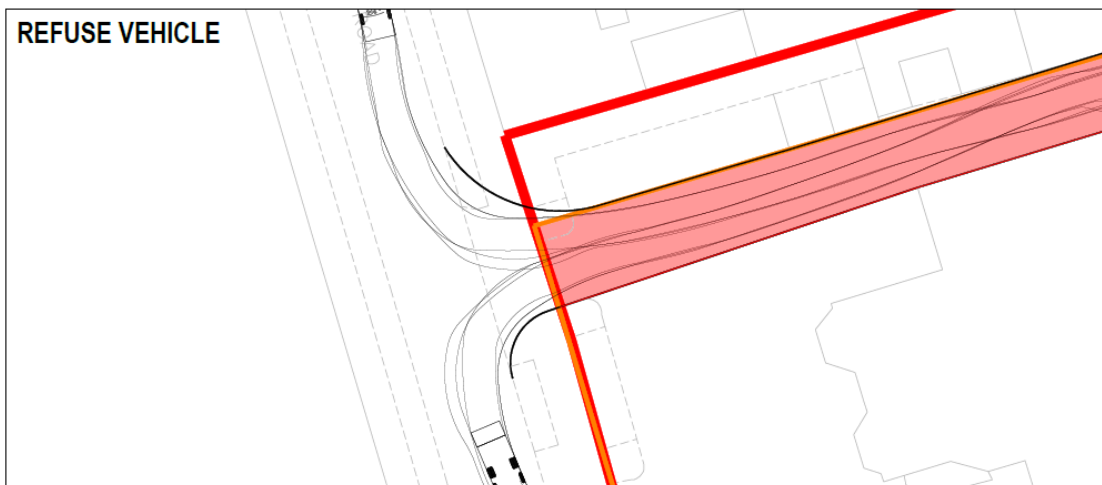


Figure 4 - Refuse Vehicle Tracking

- 3.7 As shown in **Figure 3** and **Figure 4**, both an 8.9m long refuse and 10m long rigid vehicle are easily accommodated within the proposed site access without obstruction.
- 3.8 The tracking assessment also demonstrated the ability of the site access to accommodate for both the movements of a large car and refuse/rigid vehicle at the same time. **Figures 5** and **6** below show a refuse and rigid vehicle entering the site and passing each other.

19219

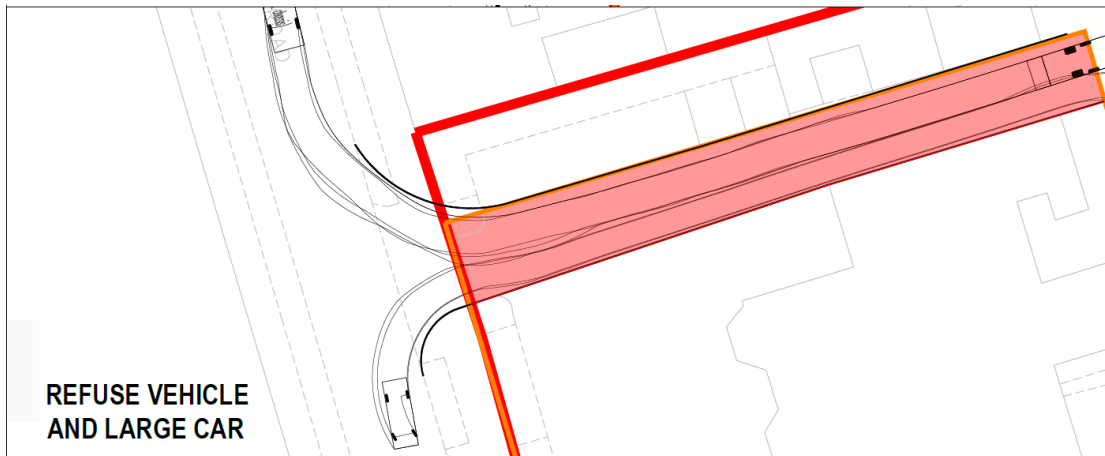


Figure 5 - Refuse Vehicle and Large Car Tracking

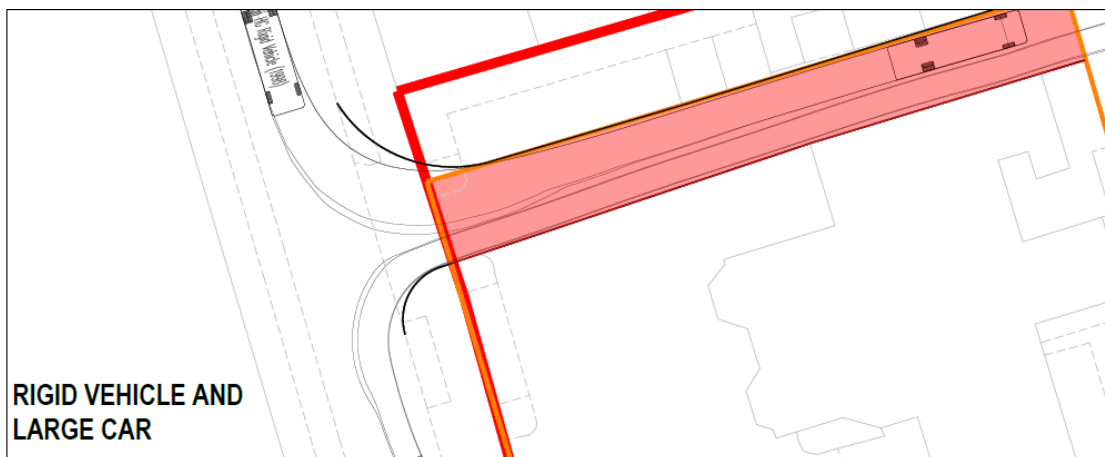


Figure 6 – Rigid vehicle and Large Car Tracking

- 3.9 As shown, both the refuse and rigid vehicle are able to enter the site whilst passing a 4.9m long large car without obstruction. These vehicles are also shown passing each other along the internal carriageway.
- 3.10 Thus, in conclusion, the proposed assess solution is demonstrated as suitable to accommodate a refuse and rigid vehicle passing a large car and hence is suitable to serve the retained land at Dellwood Hospital.

4.0 Summary and Conclusions

Summary

- 4.1 It is understood that an area of land to the south western corner of the site is to be sold. The existing site entrance is to be retained.
- In order to achieve an all movements vehicle access by way of the existing entry only point, the entrance would be widened to 8m and designed as a T-junction with a 10m radius to the northern side of the access and a 4m radius to the south.
- 4.2 The existing parking spaces in the north western corner of the site would be removed to achieve a 10m radius.

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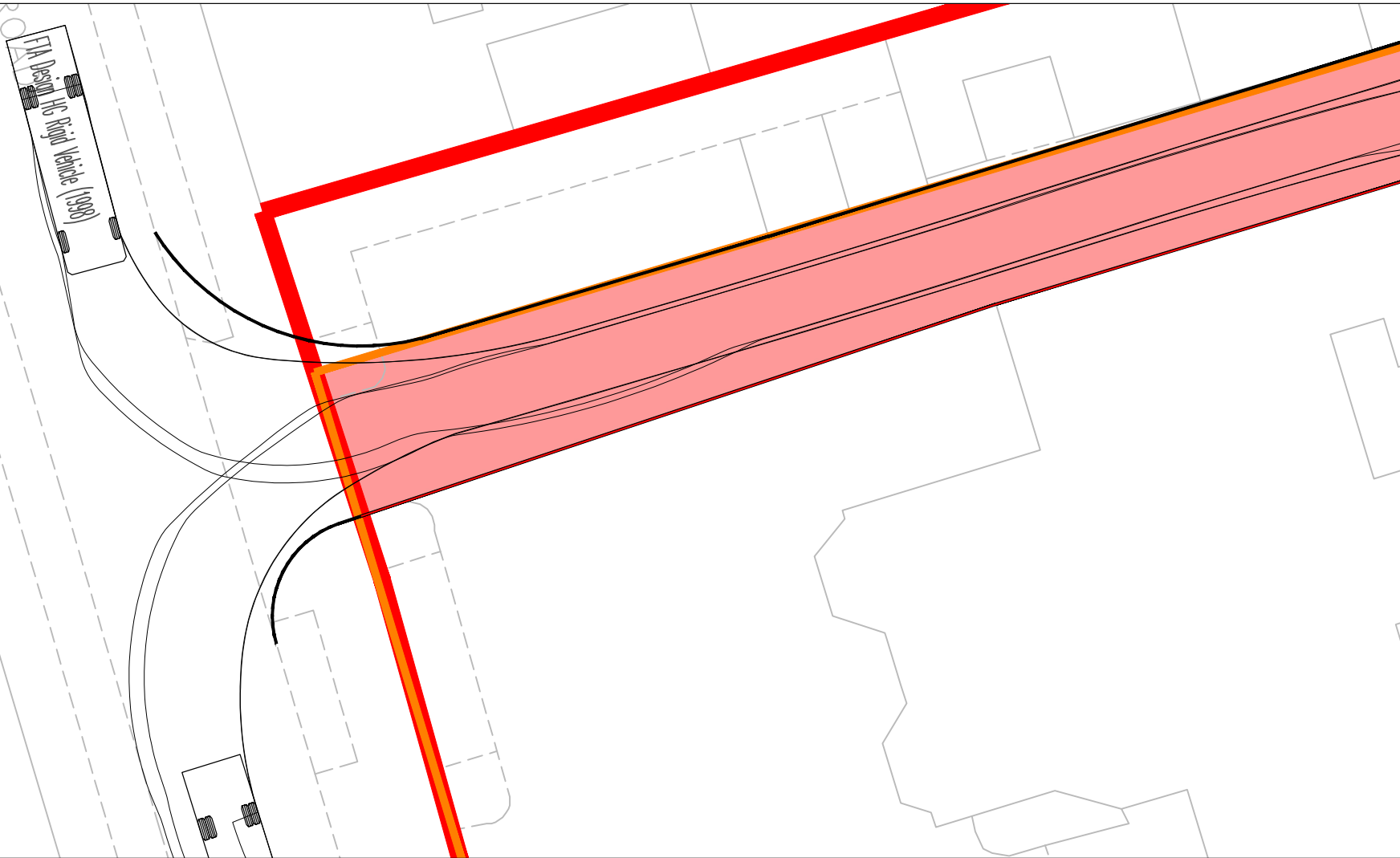
- 4.3 This Technical Note has assessed the existing entry point and demonstrated that vehicular movements (incl. a refuse vehicle, rigid vehicle and large car) in and out of the site is achievable.

Conclusion

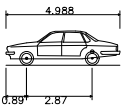
- 4.4 The amendments that could be made to the site access are adequate to serve the needs of the retained Dellwood Hospital land. The area of land proposed to be sold can be sold without compromising access to the retained land.

Appendix A: Swept Path Analysis

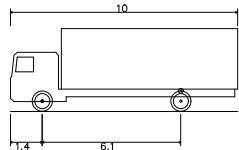
RIGID VEHICLE



- Carriageway Amendments
- Site Boundary (Illustrative)
- Land to be Sold (Illustrative)
- Land to be Retained (Illustrative)



Large Car
Overall Length 4.988m
Overall Width 1.793m
Overall Body Height 1.502m
Min Body Ground Clearance 0.287m
Track Width 1.700m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 6.200m



FTA Design HG Rigid Vehicle (1998)
Overall Length 10.000m
Overall Width 2.500m
Overall Body Height 3.645m
Min Body Ground Clearance 0.440m
Track Width 2.470m
Lock to lock time 3.00s
Kerb to Kerb Turning Radius 11.000m

P1	01.05.19	Preliminary Issue	CS	MG
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Rev Date Description By Apvd

PROJECT:
DELLWOOD HOSPITAL

TITLE:
SITE ACCESS FTA RIGID VEHICLE
TRACKS

CLIENT:
NHS PROPERTY SERVICES

SCALE@A3:
1:250

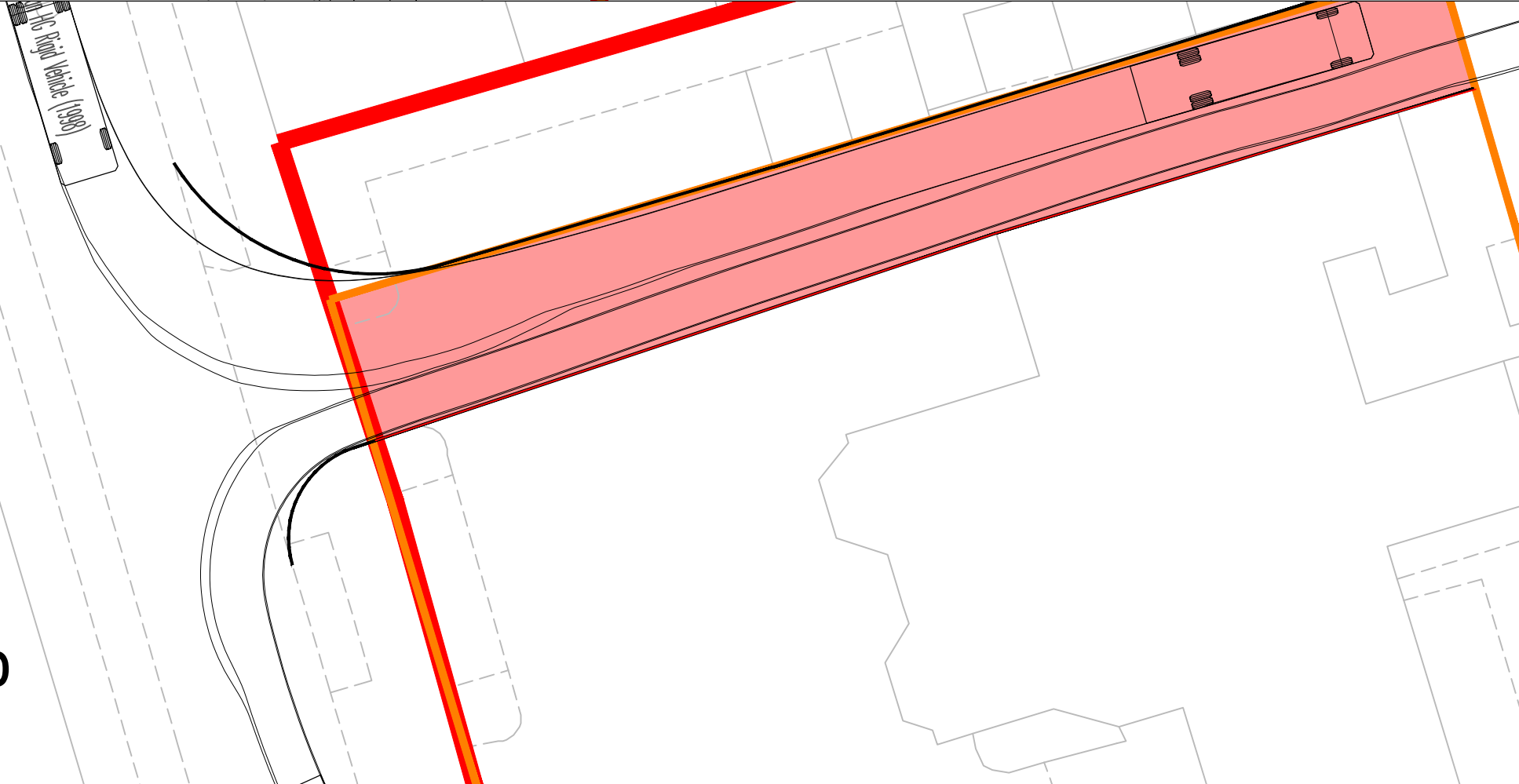
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19219

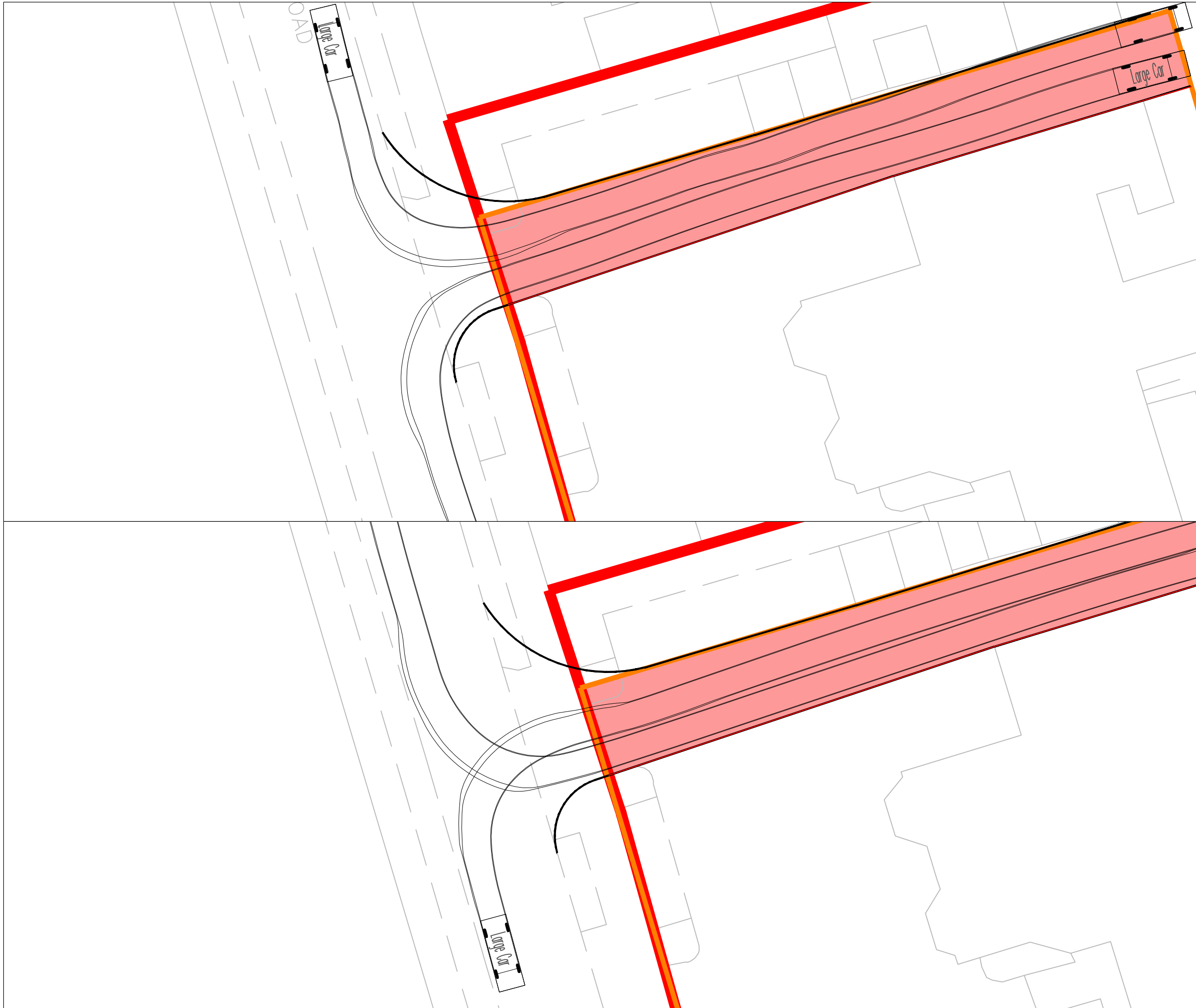
DRAWING No: SK_003 REV: P1

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction

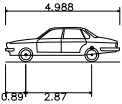


RIGID VEHICLE AND
LARGE CAR





- Carriageway Amendments
- Site Boundary (Illustrative)
- Land to be Sold (Illustrative)
- Land to be Retained (Illustrative)

	
Large Car	4.988m
Overall Length	1.793m
Overall Width	1.502m
Overall Body Height	0.287m
Min. Body Ground Clearance	1.700m
Track Width	4.00s
Lock to lock time	6.200m
Kerb to Kerb Turning Radius	

Rev	Date	Description	By	Apvd
P1	01.05.19	Preliminary Issue	CS	MG

PROJECT:
DELLWOOD HOSPITAL

TITLE:
SITE ACCESS LARGE CAR TRACKS

CLIENT:
NHS PROPERTY SERVICES

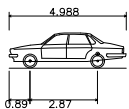
SCALE@A3:
1:250

PROJECT REF: 19219	REV: P1
DRAWING No: SK_002	

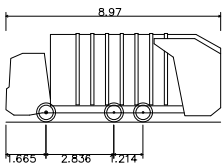
Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction

REFUSE VEHICLE

- Carriageway Amendments
- Site Boundary (Illustrative)
- Land to be Sold (Illustrative)
- Land to be Retained (Illustrative)



Large Car
Overall Length 4.988m
Overall Width 1.793m
Overall Body Height 1.502m
Min Body Ground Clearance 0.287m
Track Width 1.700m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 6.200m



Phoenix 2-12N (with Elite 2 6x2 ML chassis)
Overall Length 8.970m
Overall Width 2.250m
Overall Body Height 3.707m
Min Body Ground Clearance 0.260m
Track Width 2.250m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.850m

P1	01.05.19	Preliminary Issue	CS	MG
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Rev Date Description By Apvd

PROJECT:
DELLWOOD HOSPITAL

TITLE:
SITE ACCESS REFUSE AND LARGE CAR TRACKS

CLIENT:
NHS PROPERTY SERVICES

SCALE@A3:
1:250

PROJECT REF:
19219
DRAWING No: SK_001
REV: P1

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction



REFUSE VEHICLE
AND LARGE CAR

Appendix E

TRICS output

Calculation Reference: AUDIT-623801-200309-0359

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	HF HERTFORDSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
08	NORTH WEST	
	LC LANCASHIRE	1 days

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

Secondary 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: 17 to 76 (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: 01/01/11 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	2 days
Thursday	1 days
Sunday	1 days

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

Selected survey types:

Manual count	5 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:

Edge of Town Centre	2
Edge of Town	3

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
No Sub Category	1

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 5 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®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

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

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
125,001 to 250,000	2 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	2 days
1.1 to 1.5	3 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	5 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	5 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	EX-05-F-01	NURSING HOME	ESSEX
	WINSTON AVENUE		
	SOUTHEND-ON-SEA		
	WESTCLIFF		
	Edge of Town Centre		
	Residential Zone		
	Total Number of residents:	17	
	Survey date: THURSDAY	24/10/13	Survey Type: MANUAL
2	HF-05-F-02	NURSING HOME	HERTFORDSHIRE
	BEACONSFIELD ROAD		
	ST ALBANS		
	Edge of Town Centre		
	No Sub Category		
	Total Number of residents:	25	
	Survey date: TUESDAY	01/10/13	Survey Type: MANUAL
3	LC-05-F-02	NURSING HOME	LANCASHIRE
	LYTHAM ROAD		
	BLACKPOOL		
	SQUIRES GATE		
	Edge of Town		
	Residential Zone		
	Total Number of residents:	31	
	Survey date: TUESDAY	27/09/16	Survey Type: MANUAL
4	NY-05-F-04	NURSING HOME	NORTH YORKSHIRE
	ROECLIFFE LANE		
	BOROUGHBRIDGE		
	Edge of Town		
	Residential Zone		
	Total Number of residents:	76	
	Survey date: SUNDAY	16/10/11	Survey Type: MANUAL
5	NY-05-F-05	NURSING HOME	NORTH YORKSHIRE
	SEAGRIM CRESCENT		
	RICHMOND		
	Edge of Town		
	Residential Zone		
	Total Number of residents:	37	
	Survey date: MONDAY	04/03/19	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 VEHICLES

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	5	37	0.075	5	37	0.048	5	37	0.123
08:00 - 09:00	5	37	0.032	5	37	0.016	5	37	0.048
09:00 - 10:00	5	37	0.054	5	37	0.032	5	37	0.086
10:00 - 11:00	5	37	0.102	5	37	0.059	5	37	0.161
11:00 - 12:00	5	37	0.102	5	37	0.097	5	37	0.199
12:00 - 13:00	5	37	0.032	5	37	0.070	5	37	0.102
13:00 - 14:00	5	37	0.097	5	37	0.022	5	37	0.119
14:00 - 15:00	5	37	0.048	5	37	0.102	5	37	0.150
15:00 - 16:00	5	37	0.065	5	37	0.102	5	37	0.167
16:00 - 17:00	5	37	0.048	5	37	0.091	5	37	0.139
17:00 - 18:00	5	37	0.027	5	37	0.032	5	37	0.059
18:00 - 19:00	5	37	0.022	5	37	0.027	5	37	0.049
19:00 - 20:00	5	37	0.032	5	37	0.027	5	37	0.059
20:00 - 21:00	5	37	0.027	5	37	0.048	5	37	0.075
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.763			0.773			1.536

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:	17 - 76 (units:)
Survey date range:	01/01/11 - 02/05/19
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	1
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 TOTAL PEOPLE

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	5	37	0.118	5	37	0.091	5	37	0.209
08:00 - 09:00	5	37	0.075	5	37	0.054	5	37	0.129
09:00 - 10:00	5	37	0.102	5	37	0.059	5	37	0.161
10:00 - 11:00	5	37	0.124	5	37	0.070	5	37	0.194
11:00 - 12:00	5	37	0.145	5	37	0.145	5	37	0.290
12:00 - 13:00	5	37	0.065	5	37	0.097	5	37	0.162
13:00 - 14:00	5	37	0.161	5	37	0.070	5	37	0.231
14:00 - 15:00	5	37	0.102	5	37	0.177	5	37	0.279
15:00 - 16:00	5	37	0.102	5	37	0.151	5	37	0.253
16:00 - 17:00	5	37	0.091	5	37	0.140	5	37	0.231
17:00 - 18:00	5	37	0.038	5	37	0.065	5	37	0.103
18:00 - 19:00	5	37	0.054	5	37	0.059	5	37	0.113
19:00 - 20:00	5	37	0.070	5	37	0.065	5	37	0.135
20:00 - 21:00	5	37	0.032	5	37	0.070	5	37	0.102
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.279			1.313			2.592

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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