



Otterfield Road, Yiewsley

Transport Statement

Client: London Borough of Hillingdon

i-Transport Ref: SJ/RW/ITB14706-002D

Date: 04 February 2022

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SECTION 1 INTRODUCTION

1.1 Background

- 1.1.1 The London Borough of Hillingdon (LBH) has appointed i-Transport LLP to provide transport and highways advice with regard to the planning application for a mixed-use scheme at Otterfield Road, Yiewsley. The development proposal is for 50 apartments and a 277m² public library.
- 1.1.2 The site formerly accommodated the Yiewsley Swimming Pool and is adjacent to the Fairfield Road public car park which is to the south and the Yiewsley Recreation ground to the west. It is located in the London Borough of Hillingdon. A site location plan is shown on Hunters **drawing No.M9534-HUN-APL301** as extracted at **Image 1.1**.

Image 1.1: Site location



Source: Extract of Hunters drawing No.M9534-HUN-APL202

1.2 Proposed Development

1.2.1 The proposed development will provide 50 new apartments and a library. A total of 25 parking spaces will be provided, all of which will be provided on site. Vehicular and pedestrian access to the site will be taken from the existing access road to the car park.

1.3 Scope

1.3.1 Pre-Application discussions with LBH highways officers have taken place in the form of a Transport Statement Scoping Note (i-Transport Report Ref: ITB14706-001) which was prepared in June 2019. This document set out the proposed scope of the Transport Statement and has been submitted to the LBH highways team for agreement.

1.3.2 This TS has been prepared by i-Transport on the basis outlined in the Transport Statement Scoping Note and assesses the transport impacts of the development proposals with respect to national, regional and local policy and guidance. A separate Travel Plan Statement (TPS) has been prepared for the planning application.

1.4 Structure of Report

1.4.1 The remainder of the TS is set out as follows:

- Section 2 summarises the relevant national, regional and local policies and guidance;
- Section 3 summarises the existing conditions, including site location, local highway network, walking and cycling, public transport and the accessibility of the site;
- Section 4 sets out the development proposals including access arrangements, servicing and parking provision;
- Section 5 provides an analysis of the traffic impact of the site; and
- Section 6 provides a summary and conclusions.

SECTION 2 POLICY CONTEXT

2.1 To provide context for the Transport Statement, this section of the report provides an overview of the relevant national and local transport planning policy.

2.2 National Policy

National Planning Policy Framework (NPPF) (July 2021)

2.2.1 The National Planning Policy Framework (NPPF) July 2021 sets out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development.

2.2.2 The NPPF states that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment and a Travel Plan (ref: NPPF, paragraph 113).

2.2.3 It is stated that in assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- ***“appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;***
- ***safe and suitable access to the site can be achieved for all users;***
- ***the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and***
- ***any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree”. (ref: NPPF, paragraph 110)***

2.2.4 In addition, it is stated 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” (ref: NPPF, paragraph 111)***

National Planning Practice Guidance (NPPG) 2014

2.2.5 The NPPG provides guidance on promoting sustainable transport (Section 4), and paragraph 32 states that a Transport Assessment or Statement is required to support proposals that generate significant amounts of movement.

2.3 Regional Policy

The London Plan 2021 (March 2021)

- 2.3.1 The London Plan sets out the strategic targets for the spatial development of London for the next 20-25 years. From a transport perspective, the Mayor intends that London will be a city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling. Furthermore, the Mayor wishes to strike an appropriate balance between promoting new development and preventing excessive parking provision that can undermine the use of sustainable travel modes.
- 2.3.2 **Policy T1 – Strategic Approach to Transport** states that all development should facilitate the delivery of the Mayor’s strategic target of 80% of all trips in London to be made by foot, cycle or public transport by 2041. Developments should make the most effective use of land, reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that any impacts on London’s transport networks and supporting infrastructure are mitigated.
- 2.3.3 **Policy T4 – Assessing and Mitigating Transport Impacts** states that transport assessments should be submitted with development proposals to ensure that impacts on the capacity of the transport network (including impacts on pedestrians and the cycle network), at the local, network-wide and strategic level, are fully assessed. Transport assessments should focus on embedding the Healthy Streets Approach within, and in the vicinity of, new development. Travel Plans, Parking Design and Management Plans, Construction Logistics Plans and Delivery and Servicing Plans will be required having regard to Transport for London guidance.
- 2.3.4 **Policy T5 – Cycling** requires that development proposals should help remove barriers to cycling and create a healthy environment in which people choose to cycle. This is achieved through supporting the delivery of a London-wide network of cycle routes, and appropriate cycle parking, that is designed and laid out in accordance with the guidance contained in the London Cycling Design Standards (LCDS), and that meets the minimum standards set out in Table 10.2.
- 2.3.5 **Policy T6 – Car Parking** states that car-free development should be the starting point for all development proposals in places that are (or are planned to be) well-connected by public transport, with developments elsewhere designed to provide the minimum necessary parking ('car-lite'). Car-free development has no general parking but should still provide disabled

persons parking. Where car parking is provided in new developments, provision should be made for infrastructure for electric or other Ultra-Low Emission vehicles. Adequate provision should be made for efficient deliveries and servicing and emergency access. A Parking Design and Management Plan should be submitted alongside all applications which include car parking provision, indicating how the car parking will be designed and managed.

2.3.6 Policy T7 – Deliveries, Servicing and Construction states that development proposals should facilitate safe, clean, and efficient deliveries and servicing. Provision of adequate space for servicing, storage and deliveries should be made off-street, with on-street loading bays only used where this is not possible. Construction Logistics Plans and Delivery and Servicing Plans will be required and should be developed in accordance with Transport for London guidance and in a way which reflects the scale and complexities of developments.

Car and Cycle Parking Standards

2.3.7 The current car and cycle parking standards set out in the London Plan 2021 relevant to the site are summarised in **Tables 2.1** and **2.2** respectively.

Table 2.1: London Plan Car Parking Standards

Land Use	Vehicle Parking Standards (Maximum)
Residential (Land Use C3)	<p>1-2 Beds = 0.75 spaces per dwelling (Outer London PTAL 2-3)</p> <p>3+ Beds = Up to 1 space per dwelling (Outer London PTAL 2-3)</p> <p>Notes: Developments must ensure that for three per cent of dwellings, at least one designated disabled persons parking bay per dwelling is available from the outset. At least 20 per cent of spaces should have active electric vehicle charging facilities, with passive provision for all remaining spaces.</p>
Hotel and Leisure Uses	In locations with PTAL of 0-3, schemes should be assessed on a case-by-case basis and provision should be consistent with the Healthy Streets Approach, mode share and active travel targets, and the aim to improve public transport reliability and reduce congestion and traffic levels. (Policy T6.4B Hotel and Leisure uses parking).

Source: London Plan 2021

Table 2.2: London Plan Cycle Parking Standards

Land Use	Minimum Cycle Parking	
	Long Stay	Short Stay
Residential (Land Use C3)	1 space per studio or 1 person 1-bedroom dwelling; 1.5 spaces per 2 person 1-bedroom dwelling; 2 spaces per all other dwellings.	5 to 40 dwellings: 2 spaces; Thereafter; 1 space per 40 dwellings
Other (Land Use D1 e.g. Library)	1 place per 8 Staff	1 space per 100 sqm (GEA)

Source: The London Plan 2021

2.4 Local Transport Policies

[London Borough of Hillingdon Local Plan: Part 1 – Strategic Policies \(November 2012\) and London Borough of Hillingdon Unitary Development Plan \(1998\) Saved – September 2007](#)

2.4.1 The Hillingdon Local Plan - Part 1 - Strategic Policies is the key strategic planning document for Hillingdon and will support delivery of the spatial elements of the Sustainable Community Strategy. It sets out a long-term vision and objectives for the Borough. The primary matter relating to Transport notes Hillingdon has an overall aim of improving quality of life and reducing private car dependency.

2.4.2 The LBH Unitary Development Plan (UDP) contains 'saved' policies from 1998 and sits alongside the Local Plan Part 1. Once adopted, the Local Plan Part 2 will replace these policies, although until then the following transport policies are still relevant to this proposal.

Policy

- The Local Planning Authority will consider whether the traffic generated by proposed developments is acceptable in terms of the capacity and functions of existing and *AM1* - Development will only be permitted where the existing/proposed public transport network has sufficient capacity to meet demand and/or the development makes the development more accessible through finding improvements;
- *Policy AM2* – All proposals for development will be assessed against their contribution to traffic generation and their impact on congestion;

- *Policy AM6* committed principal roads only – development will be refused if development will result in unacceptable increases in demand on roads/through junctions already at capacity, prejudice the free flow of traffic or conditions of general highway or pedestrian safety or diminish materially the environmental benefits brought about by new or improved roads;
- *Policy AM13* - The Local Planning Authority will seek to ensure that proposals for development increase ease and spontaneity of movement for elderly people, the frail and people with disabilities by (amongst other things) seeking adequate and convenient parking spaces for people with disabilities;
- *Policy AM14* - New development will only be permitted where it is in accordance with the council's adopted car parking standards as set out in annex 1;
- *Policy AM15* - All car parks provided for new development shall contain conveniently located reserved spaces for disabled persons in accordance with the council's adopted car parking standards.

2.4.3 The current relevant adopted car and cycle parking standards are summarised in **Tables 2.3** and **2.4**.

Table 2.3: LBH Local Plan 1 Car Parking Standards

Land Use	Vehicle Parking Standards (Maximum)
Residential (Land Use C3)	Up to 1.5 spaces per dwelling

Source: London Borough of Hillingdon Unitary Development Plan Saved Policies 2007

Table 2.4: LBH Local Plan 1 Cycle Parking Standards

Land Use	Maximum Cycle Standards
Residential (Land Use C3)	Studio/1 bed/2 beds: 1 space 3 beds +: 2 spaces

Source: London Borough of Hillingdon Unitary Development Saved Policies 2007

Note: Visitor parking forms part of the standard unless otherwise stated

London Borough of Hillingdon Local Plan: Part 2 – Development Management Policies (January 2020)

2.4.4 The Local Plan Part 2 provides revised development management policies replaces the UDP in its entirety. The relevant policies within the adopted version are as follows:

- *Policy DMT 1 – Managing Transport Impacts* – Development will be required to be accessible by sustainable modes of travel, adequately address delivery, servicing and drop-off requirements and have no significant adverse transport or associated air quality and noise impacts on the local and wider environment. Developments of more than 80 units will be required to prepare a Transport Assessment and Travel Plan.
- *Policy DMT 2 – Highways Impacts* – Development must provide safe and suitable access for all users, and impacts on local amenity and congestion are minimised by routing traffic appropriately, with suitable mitigation measures if necessary.
- *Policy DMT 4 – Public Transport* - The Council may require developers to mitigate transport impacts from development proposals by improving local public transport facilities and services;
- *Policy DMT 5 – Pedestrians and Cyclists* - Development proposals will be required to ensure that safe, direct and inclusive access for pedestrians and cyclists is provided on the site connecting it to the wider network.
- *Policy DMT 6 – Vehicle Parking* – Development must comply with the standards outlined at Appendix C in order to facilitate sustainable development. All car parks provided for new development will be required to contain conveniently located reserved spaces for wheelchair users and those with restricted mobility in accordance with the Council’s Accessible Hillingdon SPD.

2.4.5 The proposed parking standards from the document are set out in **Tables 2.5** and **2.6** below.

Table 2.5: LBH Local Plan 2 Car Parking Standards

Land Use	Vehicle Parking Standards (Maximum)
Residential (Land Use C3)	3-4 or more bedrooms: 2 spaces per unit 1-2 bedrooms: 1-1.5 spaces per unit Studio: 1 space per 2 units Notes: Proposals must also accommodate visitor’s car parking on-site additional to the above Car parks must be allocated to dwellings

Source: London Borough of Hillingdon Local Plan Part 2 2021 Appendix C

Table 2.6: LBH Local Plan 2 Cycle Parking Standards

Land Use	Maximum Cycle Standards
Residential (Land Use C3)	Studio/1 bed/2 beds: 1 space 3+ beds: 2 spaces

Source: London Borough of Hillingdon Local Plan Part 2 2021 Appendix C

Note: Visitor parking forms part of the standard unless otherwise stated

2.5 Summary

- 2.5.1 The London Plan 2021 recommends a car parking level of a maximum 0.75 spaces per dwelling for 1 and 2 bed dwelling and up to 1 space per 3 bed dwellings in Outer London PTAL 2-3 areas, whilst the residential parking standards in the LBH Local Plan seek maximum standards of up to 1.5 spaces per unit for 1-2 beds and 2 spaces per 3-bed units. Regional and local parking standards both require adequate disabled and cycle parking on-site. No specific parking standards are provided for libraries and these should be assessed on a case by case basis.
- 2.5.2 It is important to note that the London Plan requires all developments in areas of good public transport accessibility in all parts of London to aim for significantly less than 1 space per unit.
- 2.5.3 There is an element of contradiction between the parking policies of LBH and those set by the Mayor of London and a balance should be sought.

SECTION 3 EXISTING CONDITIONS AND ACCESSIBILITY

3.1 Overview

3.1.1 The section of the TS sets out the existing conditions and accessibility of the site, including the site location, local walking and cycling infrastructure, the local highway network and accessibility of the site.

3.2 Site Location

3.2.1 The site is located on the former site of the Yiewsley Swimming Pool. The site is bounded by the access road to the car park to the south, the Yiewsley recreation ground to the west and residential properties to the east.

3.2.2 A site location plan is shown on Hunters **drawing No.M9534-HUN-APL202**.

3.3 Walking and Cycling

Pedestrian Environment

3.3.1 Footways are provided on both sides of the site access road that joins Otterfield Road with a priority junction arrangement – the footway on the site access road will be improved (described in Section 4). Footways are also provided on both sides of Otterfield Road along with street lighting on both sides of the carriageway. Footways are provided on both sides of the carriageway on Fairfield Road. At the Fairfield Road/ High Street junction there is a pedestrian crossing point with a central refuge, dropped kerbs and tactile paving is provided approximately 50m west of the southern site access onto Fairfield Road. Fairfield Road is street lit.

3.3.2 A footway running adjacent to the western site boundary provides for walking in northbound direction to Falling Lane and southbound to Fairfield Road and Parkview which both provide access to the High Street. The footway to the west of the site is accessible via a gated access on the western side of the Fairfield Road Car Park and provides a shorter walking route to key High Street destinations than walking via Otterfield Road. Parts of the footway are street lit.

3.3.3 A signal-controlled pedestrian crossing is provided on the High Street, providing pedestrian access to the shops and facilities provided on the western side of the High Street. Yiewsley High

Street benefits from wide, good quality footways with street lighting on both sides of the carriageway.

Cycle Network

- 3.3.4 The local area benefits from an extensive network of cycle routes which provide convenient routes to local facilities and train and London Underground stations as well as Heathrow Airport to the south west. These are detailed in the TfL Local Cycling Guide 6. In the vicinity of the site there are a number of routes signed or marked for the use of cyclists. Yiewsley High Street is identified as a route for use by cyclists on a mixture of quieter or busier routes. This route provides a direct connection to the north with Uxbridge and links to West Drayton Station to the south of the site.
- 3.3.5 Surrounding the site there are a number of roads identified on TfL Local Cycling Guide 6 that have been recommended by cyclists. Some of these routes connect to other off-road routes or routes signed and marked for the use of cyclists.
- 3.3.6 Another off-road cycle route has been designated alongside the Grand Union Canal and can be joined west of the site and provides a connection to Uxbridge to the north and Hayes to the south-east.

3.4 Public Transport

Bus

- 3.4.1 The closest bus stops to the site are located on Yiewsley High Street 270m south of the site for northbound services and 300m south for southbound services. These bus stops provide access to bus services 222, U1, U3 and U5. Both stops are provided with shelters.
- 3.4.2 A summary of the buses that serve the site is provided in **Table 3.1**.

Table 3.1: Local Bus Services

Bus No.	Route	Typical Frequency (per hour, per direction)		
		Mon - Fri	Sat	Sun
222	Uxbridge – West Drayton - Hounslow	Service every 9-13 minutes	Service 9-13 minutes	Service every 10-13 minutes
U1	Ruislip – Uxbridge – West Drayton	4 services an hour	4 services an hour	2 services an hour

Bus No.	Route	Typical Frequency (per hour, per direction)		
		Mon - Fri	Sat	Sun
U3	Uxbridge – West Drayton – Heathrow Airport	Service every 9-12 minutes	Service every 12 minutes	Every 20 minutes
U5	Uxbridge – Cowley – Hillingdon Hospital – West Drayton – Stockley Park – Hayes & Harlington Station	Service every 11-12 minutes	Service every 12 minutes	Every 20 minutes

Source: TfL – Assessed August 2021

3.4.3 In summary, the bus stops located on Yiewsley High Street provide regular and frequent bus services to destinations such as Uxbridge, West Drayton, Ruislip and Hounslow within a four-minute walk of the site (300m). This provision will clearly provide future residents, employees and visitors of the site with excellent travel opportunities by bus.

Rail

3.4.4 National Rail services can be accessed from West Drayton Station, operated by TfL Rail and Great Western Railway. West Drayton Station is located 680m south of the site which equates to an 8-minute walk or 3-minute cycle journey. Approximately 5 services to Reading and 4 services to London Paddington operate per hour.

3.4.5 West Drayton Station will benefit from introduction of the Elizabeth Line. The Elizabeth Line is a significant piece of new railway infrastructure adding approximately 10% of new railway capacity and new/easier journey opportunities.

3.4.6 Stations along the route are also being upgraded with West Drayton station to benefit from the following upgraded features:

- A new entrance canopy across the existing building and extension;
- Platform extensions to accommodate new Elizabeth Line trains;
- A new lift to provide step-free access;
- New lighting in the station and on the platforms; and
- Improved customer information screens, station signage, help points and CCTV.

- 3.4.7 When the full route opens, up to six Elizabeth line services an hour will allow passengers from West Drayton to travel Reading or Heathrow in the west or through the central London tunnels to Essex and southeast London via Liverpool Street and Canary Wharf.

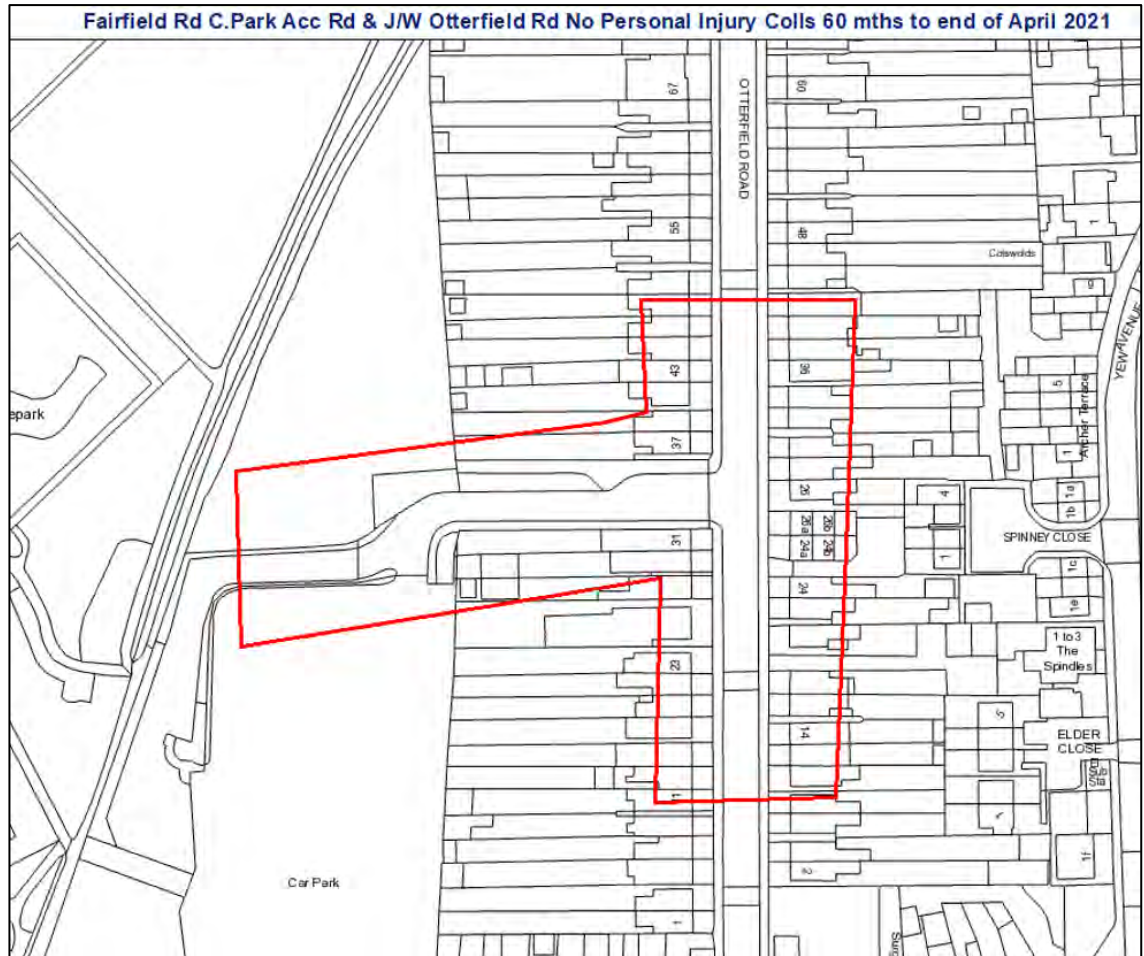
3.5 Local Highway Network

- 3.5.1 The site access road forms the minor arm of a priority junction with Otterfield Road to the east. Otterfield Road is a single carriageway road with a speed limit of 20mph. On Otterfield Road traffic calming features in the form of speed bumps are present intermittently. The majority of Otterfield Road is not subject to any parking restrictions; however, the southern end of Otterfield Road is subject to a 'business permit holder only' parking restriction between 08:00 – 18:30, Monday to Saturday. Circa 120m south of the Otterfield Road access, Otterfield Road connects to Fairfield Road via a priority junction.
- 3.5.2 Fairfield Road is a single carriageway road leading to the local services and facilities provided on Yiewsley High Street and towards West Drayton Station to the south. At the southern site access, Fairfield Road has double yellow lines which are also subject to No Loading restrictions. Controlled Parking Zone (CPZ) Y1 encompasses Fairfield Road. This restricts parking to resident permit holders only between 09:00 – 18:00, Monday to Saturday. To the west, Fairfield Road connects to the High Street via a priority junction.
- 3.5.3 Yellow lines on the High Street are present on both sides of the carriageway, with no stopping restrictions between 08:00 and 18:30, Monday to Saturday as well as no loading restrictions between 08:00-09:30 and 16:30- 18:30, Monday to Friday.

Road Safety

- 3.5.4 Personal Injury Accident (PIA) data has been obtained from TfL for the most recently available five-year period up to the end of April 2021. The area of search included the Fairfield Road car park access road, its junction Otterfield Road and an area to both the north and south of that.
- 3.5.5 No PIAs occurred in the study area during the most recent 60-month period available. The full data is provided as **Appendix A** and an extract is shown at **Image 3.1**.

Image 3.1: Personal Injury Accident Plot



Source: TfL

3.6 Accessibility

Local Facilities

- 3.6.1 A key aim of national and local policy is the delivery of sustainable development. This in part, is achieved by the accessibility of a site to a good range of everyday services and facilities.
- 3.6.2 It is clear from **Table 3.2** that a good range of everyday services and facilities will be accessible to future residents of the site, on foot or by bicycle. The services and facilities are shown on **Figure 1**.

Table 3.2: Distances and Travel Times to Key Destinations

	Destination	Approx. Walking Distance from Site (m)	Walking Journey Time (mins)	Cycling Journey Time (mins)
Education	St Matthews CofE Primary School	280m	3	1
	Rabbsfarm Primary School	510m	6	2
	Magic Steps Nursery	550m	7	2
	Little Leaf Nursery School	850m	10	3
	Park Academy West London	1100m	13	4
	West Drayton Academy	1500m	13	4
	Meadow Special School	1500m	18	6
	Colham Manor Primary School	1900m	23	7
	Brunel University	2100m	25	8
Retail	Wilko	100m	1	<1
	Yiewsley High Street	200m	2	1
	Iceland	270m	3	1
	Morrisons	350m	4	1
	Aldi	400m	5	2
	Tesco	470m	6	2
Leisure	Yiewsley Recreation Ground	50m	1	<1
	George and Dragon Public House	310m	4	1
	Packet Boat Marina	1300m	13	4
	Panthers Gym	1400m	14	4
	Uxbridge Football Club	1700m	20	6
Health	Otterfield Medical Centre	80m	1	<1
	Yiewsley Chemist	400m	5	2
	Yiewsley Family Practice	450m	5	2
	Hillingdon Hospital	1600m	19	6

Source: i-Transport

PTAL

- 3.6.3 The accessibility of the site has been assessed using the TfL Public Transport Accessibility Level (PTAL) methodology. PTALs are a detailed measure of the accessibility of a site to the public transport network, taking into account the combination of walking time and service frequency.
- 3.6.4 The site has a PTAL rating of 3, indicating a good level of public transport accessibility. This good PTAL score is a result of the proximity to West Drayton railway station and local bus stops (the closest within 300m of the site). The PTAL output is provided at **Appendix B**. Full details of the public transport services accessible from the site are provided in the previous section.

TIM Assessment

- 3.6.5 TfL's WebCAT resource also provides travel time mapping (TIM) which reflects the travel time from the site to other areas in London by public transport during a morning peak hour. Considering this, the site is accessible to a large area of central and west London within a 30-45-minute journey. The output is provided at **Appendix C**.

Car Clubs

- 3.6.6 Car clubs provide the opportunity for residents to have access to a car without owning a private vehicle. As this transport option has become established in London, surveys have consistently demonstrated the positive benefits of car clubs – including the fact that car club members drive significantly fewer miles than other London drivers and have lower car ownership than Londoners in general.
- 3.6.7 Car Club services operated by HiyaCar are located throughout Yiewsley and more widely across Hillingdon. The nearest car club is located in West Drayton to the south of the site.

Travel Plan Statement

- 3.6.8 A separate Travel Plan Statement (TPS) has been prepared to support the application (i-Transport Report Ref: ITB14706-003A Travel Plan Statement).

3.7 **Summary**

- 3.7.1 The site has good overall accessibility with excellent proximity to a wide range of bus routes and the wider London transport network. Pedestrian access is good and will be improved as a result of the development and the site has good highway access with no road safety problems identified in the local vicinity.

SECTION 4 DEVELOPMENT PROPOSALS

4.1 Overview

4.1.1 This section of the TS describes the development proposal, including the access, parking and servicing arrangements for the development.

4.2 Development Proposals

4.2.1 The development proposal is for 50 apartments, a public library and associated access, servicing, landscaping and parking.

4.2.2 The proposed residential accommodation schedule is as follows:

- 24 x 1-bed units;
- 13 x 2-bed units; and
- 13 x 3-bed units.

4.2.3 The proposal site layout is provided on Hunters **drawing No.M9534-HUN-APL202**.

4.3 Access

4.3.1 Access to the site will be provided from the car park access road. A simple vehicular crossover will be delivered to serve the site, and this has been designed in accordance with Manual for Streets and TfL guidance. Visibility splays of 2.4m x 25m are to be provided in accordance with the 20mph speed limit.

4.3.2 The proposed access is shown on **Drawing ITB14706-GA-003C** and will deliver access for vehicles, pedestrians and cyclists.

4.3.3 Footways will be provided on either side of the site access road and will connect to the existing footways on the Fairfield Road car park access road.

4.3.4 The northern footway on the Fairfield Road car park access road will be realigned in a southerly direction to provide a better walking route from the site to Otterfield Road. The indicative proposal is provided on Hunters **drawing No.M9534-HUN-APL202** and full details will be

agreed with LBH highways officers and can be secured as part of a suitably worded planning condition.

4.4 Parking Strategy

Car Parking

- 4.4.1 A total of 25 car parking spaces (including 5 disabled spaces) will be provided for the residential use, with parking bays provided around the south-eastern boundary of the building. This level of parking is below the parking standards set out within the London Plan 2021 but is considered sufficient due to the sites excellent proximity to public transport links and local amenities.
- 4.4.2 In respect of the proposed library, there are no specific parking standards provided. The London Plan suggests that in locations with PTAL of 0-3 (such as this site), schemes should be assessed on a case-by-case basis and provision should be consistent with the Healthy Streets Approach, mode share and active travel targets, and the aim to improve public transport reliability and reduce congestion and traffic levels. On this basis, two disabled parking bays for staff and visitors to the proposed library will be provided on site, with additional parking available in the Fairfield Road car park immediately adjacent to the site if required. Visitors to the library are in any event very likely to be combining a visit to the library with other activities in the town centre.
- 4.4.3 To support the use of the Fairfield Road car park, two full 12-hour parking accumulation surveys of the existing Fairfield Road Car Park were undertaken on Thursday 4 July 2019 and Saturday 6 July 2019 (both comfortably outside the school holiday period) to assess the weekday and weekend occupancy level of the car park. This was considered necessary in order to be clear that there is sufficient capacity within the car park to allow for some library parking should there be any specific requirement for a primary trip to the library.
- 4.4.4 The parking accumulation survey showed that the car park which provides 159 spaces in total, did not reach more than 60% full at any time during the weekday and not more than 54% full at any time during the weekend survey, meaning there are ample (i.e. always over 60) spaces available in the car park.
- 4.4.5 The full car park survey results are included in **Appendix D**.

Cycle Parking

4.4.6 Cycle parking for the development will be provided in the form of Sheffield Stands. These will be located in three dedicated bicycle stores capable of accommodating 88 bicycles for the residential units, and these will be accessed from separate external doors, next to the main entrances to the buildings. A further 10 short stay outdoor cycle spaces will be provided for the public library.

4.4.7 This is in accordance with the London Plan and LBH standards.

4.5 Refuse Collection

4.5.1 Refuse collection will take place from within the site. Swept path analysis has been undertaken (**Drawing ITB14706-GA-001D**) and demonstrates that the London Borough of Hillingdon refuse vehicle can get within 10m of the bin store for collection. The refuse vehicle can safely be accommodated within the proposed layout and is able to enter and exit the site in forward gear.

4.6 Summary

4.6.1 Access to the site is proposed via a simple vehicular crossover designed in accordance with Manual for Streets and TfL guidance. The access provides a direct pedestrian connection to existing footways in Otterfield Road.

4.6.2 The proposal includes sufficient car and cycle parking including provision for both the residential units and the library. Additional parking can be found in the Fairfield Road car park if required.

4.6.3 Service and delivery access is provided in a safe and sufficient manner with the largest typical service vehicle being able to safely enter and exit the site in a forward gear.

4.6.4 Against this background, the proposed arrangements are in accordance with local and national policy requirements.

SECTION 5 TRAFFIC IMPACT

5.1 Introduction

5.1.1 This section of the TS assesses the likely traffic impact of the proposal.

5.2 Base Traffic Flows

5.2.1 In order to determine existing traffic flows and volumes on the local highway network, a series of traffic counts were undertaken between 2 July and 8 July 2019 (comfortably outside the school holiday period) as follows:

- A Manual Classified Count at Access Road/ Otterfield Road (Thursday 4 July 2019); and
- A 7-day Automatic Traffic Count on Otterfield Road.

5.2.2 The raw traffic data can be provided on request but the recorded 2019 peak hour flows at the junction of the Fairfield Road car park access and Otterfield Road are shown on **Figure TF1** and **TF2**.

5.3 Traffic Generation Assessment

5.3.1 The TRICS database has been used to extract residential trip rates for privately owned flats to represent the worst-case traffic generation. The sites have been filtered on the following parameters:

- Residential – Flats Privately Owned;
- Sites in Greater London only;
- Sites with a range of 20-100 units;
- Weekday surveys only (Monday to Friday);
- Town Centre and Edge of Town Locations;

5.3.2 The full residential TRICS outputs are provided at **Appendix E**. A summary of the trip rates and generation is presented in **Table 5.1**.

5.3.3 The proposed library is expected to require a maximum of four staff on site to provide a robust assessment of its impact it is assumed that they will be accessed in the morning peak hour and exited in the evening peak hour as presented in **Table 5.1**.

5.3.4 No library visitor traffic generation is included as it is assumed that visitors will be visiting the library as part of a linked trip to other destinations in Yiewsley rather than making a primary trip to the library.

Table 5.1: C3 Residential: Flats Privately Owned (50 units) plus Library Trip rates

	AM Peak Hour (0800 – 0900)			PM Peak Hour (1700 – 1800)		
	In	Out	Two Way	In	Out	Two Way
Vehicle Trip Rate per dwelling	0.036	0.088	0.124	0.104	0.062	0.176
Traffic Generation (50 units)	2	4	6	5	3	9
Library (staff)	4	0	4	0	4	4
Total	6	4	10	5	7	13

Source: TRICS and Consultant Calculations

5.4 Distribution and Assignment

5.4.1 An assessment of the 2011 Journey to Work census data for the Super Output Area Hillingdon 025 has been reviewed to identify the likely destinations that the proposed development traffic. The distribution model is included at **Appendix F**.

5.4.2 A summary of distribution (travel by car) is provided in **Table 5.2**.

Table 5.2: Summary of Trip Distribution (Travel by Car)

Destination	Trips %
Uxbridge	14.1%
Hounslow	9.5%
Yiewsley	9.2%
Heathrow	8.3%
Ealing	7.2%
Hayes	6.9%
Slough	5.8%

Destination	Trips %
Ruislip	4.7%
Hillingdon	2.8%
Iver / Denham	2.6%
Brent	2.2%
Reading	2.0%
Harrow	1.6%
Hammersmith and Fulham	1.4%
West Drayton	1.4%
Windsor / Maidenhead	1.3%
Other London	5.0%
Other South	5.1%
Other North	4.6%
Other West	2.0%
Other East	1.5%
Total	100%

- 5.4.3 It can be seen from **Table 5.2** that the main destinations for peak hour travel are Uxbridge, Hounslow, Yiewsley, Heathrow and Ealing accounting for some 48% of trips.
- 5.4.4 To consider the routing of trips to these destinations, trips have been assigned to the network based on the quickest route from the site to the destination using Google Maps 'Directions' Facility using a morning peak period travel time (08:00).
- 5.4.5 From this assessment, it has been calculated that 89% of the development traffic will head north from the site on Otterfield Road, and 11% will route south on Otterfield Road.
- 5.4.6 For a robust assessment it has been assumed that all traffic will head east from the site towards the Otterfield Road junction. No traffic has been assigned through the car park onto Fairfield Road which is an alternative route and if traffic were assigned to it then it would reduce the impact on Otterfield Road.

5.5 Traffic Growth

- 5.5.1 In accordance with the Department for Transport Circular 02/2013 'The Strategic Road Network and Delivery of Sustainable Transport', it is proposed to assess the impact of the development at time of opening of development. The opening year of the development is defined as:

“The date at which the development first becomes available for occupation”

5.5.2 It is anticipated that the development would be available for occupation in 2022 and therefore the following scenarios are proposed to be assessed:

- 2019 Baseline;
- 2022 future year without development; and
- 2022 future year with development.

5.5.3 Baseline assessments will be undertaken based on observed 2019 traffic flows for the morning and evening peak hours. Further to this, future year assessments will be undertaken for the anticipated year of opening of the development, which is expected to be 2022.

5.5.4 Factors to allow for traffic growth to 2022 have been derived from the National Transport Model (NTM) Hillingdon 025 middle layer super output area (MSOA), which comprises the development site and surrounding area.

5.5.5 Using this methodology, **Table 5.3** below summaries the growth factors which will be applied to the 2019 observed traffic flows to derive 2022 peak hour traffic flows.

Table 5.3: Traffic Growth Factors

Growth Period	Time Period	TEMPRO Growth Rate
2019-2022	Morning Peak Hour	1.0266
	Evening Peak Hour	1.0251

Source: TEMPRO v7.2b

5.6 Traffic Impact

5.6.1 The traffic flows for the junction of the Fairfield Road car park access road and Otterfield Road in 2022 (future year without development) and 2022 (future year with development) in the morning and evening peak hours are shown on Figures **TF3 – TF6**.

5.6.2 **Table 5.4** presents an assessment of the impact of the proposed development on the local highway network. The development traffic is considered to be ‘new’ trips being generated from the proposed development, i.e. no account has been taken of the former use of the site.

Table 5.4: Net Traffic Impacts

Route	Observed Two Way Traffic Flows		Development Traffic		% Impact	
	AM Peak	PM peak	AM Peak	PM peak	AM Peak	PM peak
Otterfield Road N	200	220	9	12	5%	5%
Otterfield Road S	159	156	1	1	1%	1%

5.6.3 **Table 5.4** shows that the impact of the proposed development on Otterfield Road will be small, with a maximum of 12 additional vehicles travelling north and 1 travelling south in the busiest hours of the day. This equates to one a maximum of 1 vehicle every 5 minutes which will have very little impact on the local highway network.

5.7 Operation of the Local Highway Network

5.7.1 To assess the operation of the priority junction of the Fairfield Road car park access road and Otterfield Road, an assessment has been carried out for the morning and evening peak hours which have been assessed for a future year of 2022, which is the proposed year of opening.

5.7.2 The operation of the junction has been tested using the TRL software Junctions 9.

Car Park Access Road/ Otterfield Road

5.7.3 The junction is a simple three arm priority junction, with the minor arm providing access to the Fairfield Road Car Park and deliveries to the Wilkinson store. **Table 5.5** summarises the findings of the assessment with full outputs provided in **Appendix G**.

Table 5.5: PICADY Assessment – Access Road/ Otterfield Road

	AM Peak Hour			PM Peak Hour		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2019 Base Year						
Access Road	0.07	0.1	5.81	0.07	0.1	5.74
Otterfield Road	0.05	0.1	5.72	0.05	0.1	5.58
2022 Future Year						
Access Road	0.07	0.1	5.83	0.07	0.1	5.76
Otterfield Road	0.05	0.1	5.72	0.05	0.1	5.58
2022 Future Year with Development						
Access Road	0.08	0.1	5.88	0.08	0.1	5.83

	AM Peak Hour			PM Peak Hour		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Otterfield Road	0.06	0.1	5.78	0.06	0.1	5.61

Source: Junctions 10

5.7.4 The assessment in **Table 5.5** demonstrates that in the future scenarios (with background traffic growth) and development the Access Road/ Otterfield Road junction will operate comfortably within capacity with little queuing or delays on any arms.

5.8 Summary

5.8.1 The proposed development will generate a maximum of 10 two-way vehicle movements in the morning peak hour and 13 two-way vehicle movements in the evening peak hour. This level of additional traffic equates to less than one extra vehicle every six minutes in the morning peak hour and one extra vehicle every five minutes in the evening peak hour.

5.8.2 The additional traffic has been assigned to the local highway network using an evidence based traffic distribution model and the impact of that traffic assessed using industry standard junction capacity modelling software, the results of which show that the traffic impact of the development is insignificant and certainly not 'severe' which is the level of traffic impact that the NPPF states is necessary to prevent development from coming forward.

SECTION 6 SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 In summary, this TS has been prepared by i-Transport on behalf of the London Borough of Hillingdon to accompany a planning application for a residential scheme on the former site of the Yiewsley Swimming Pool.

6.1.2 The proposed development comprises of a residential led scheme comprising of 50 new apartments, with a public library and associated parking, landscaping, servicing and refuse provision. The development will also deliver a total of 25 car parking spaces with 23 provided for the residential use (including 5 disabled bays) and two disabled bays for the library use. There will be 88 cycle spaces all provided on-site, with a further 10 short stay spaces provided.

Accessibility

6.1.3 Footways are provided on both sides of the site access road and these join the onward footway network in Otterfield Road providing access to a good range of everyday services and facilities which will be accessible to future residents of the site, on foot or by bicycle. The development proposal will improve the northern footway in the Fairfield Road Car Park access road.

6.1.4 Furthermore, an existing footway routes adjacent to the site boundary to the Fairfield Road junction with the High Street that provides a shorter walking route than via Otterfield Road.

6.1.5 Wider accessibility is good, with the site having good proximity to a wide range of bus routes and the wider London transport network.

Site Access, Servicing and Parking

6.1.6 Access to the site is proposed via a simple vehicular crossover designed in accordance with Manual for Streets and TfL guidance. The access provides a direct pedestrian connection to existing footways in Otterfield Road.

6.1.7 The proposal includes sufficient on site car and cycle parking and the Fairfield Road car park will also provide sufficient car parking for any 'new / primary' car based visitor trips to the library.

6.1.8 Service and delivery access is provided in a safe and sufficient manner with the largest typical service vehicle being able to safely enter and exit the site in a forward gear.

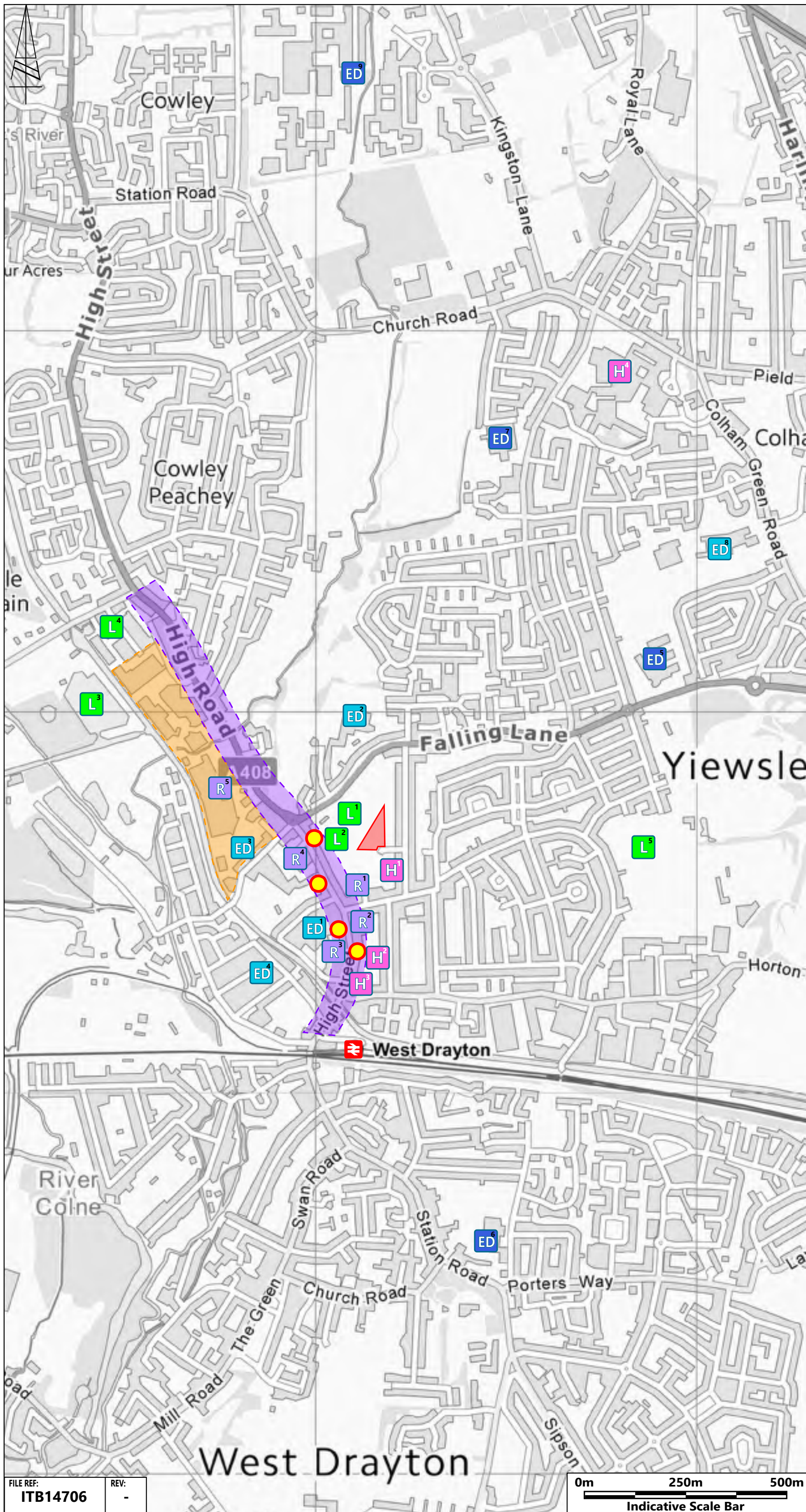
Traffic Impact

- 6.1.9 The development will generate a maximum of 10 two-way vehicle movements in the morning peak hour and 13 two-way vehicle movements in the evening peak hour. The development traffic has been assigned to the local highway network using a evidence based traffic distribution model and the impact of that traffic assessed using industry standard junction capacity modelling software, the results of which show that the traffic impact of the development is insignificant and certainly not 'severe' which is the level of traffic impact that the NPPF states is necessary to prevent development from coming forward.
- 6.1.10 In addition, a Travel Plan Statement has been prepared to accompany the planning application (i-Transport report ref: ITB14706-003A Travel Plan Statement).

6.2 Conclusion

- 6.2.1 In conclusion, the proposed development compiles with the relevant national, regional and local policies and is fully acceptable in transport terms.

FIGURES



- KEY**
- INDICATIVE SITE BOUNDARY
 - W WEST DRAYTON STATION
 - B BUS STOP
 - RETAIL AREA
 - YIEWSLEY HIGH STREET INCLUDING:
 - POST OFFICE
 - BANKS
 - COSTA COFFEE
 - SUBWAY
- LEISURE**
- L YIEWSLEY RECREATION GROUND
 - L GEORGE AND DRAGON PUBLIC HOUSE
 - L PACKET BOAT MARINA
 - L PANTHERS GYM
 - L UXBRIDGE FOOTBALL CLUB
- RETAIL**
- R WILKO
 - R ICELAND
 - R MORRISONS
 - R ALDI
 - R TESCO
 - R B&M HOME STORES
- EDUCATION**
- ED ST MATTHEWS COFE PRIMARY SCHOOL
 - ED RABBSFARM PRIMARY SCHOOL
 - ED MAGIC STEPS NURSERY
 - ED LITTLE LEAF NURSERY SCHOOL
 - ED PARK ACADEMY WEST LONDON
 - ED WEST DRAYTON ACADEMY
 - ED THE MEADOW SCHOOL
 - ED COLHAM MANOR PRIMARY SCHOOL
 - ED BRUNEL UNIVERSITY
- HEALTHCARE**
- H OTTERFIELD MEDICAL CENTRE
 - H YIEWSLEY PHARMACY
 - H YIEWSLEY HEALTH CENTRE
 - H HILLINGDON HOSPITAL

i-Transport

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Fax: 01256 338 644
www.i-transport.co.uk

TITLE:
**OTTERFIELD ROAD, YIEWSLEY
LOCAL FACILITIES PLAN**

FILE REF: ITB14706
REV: -

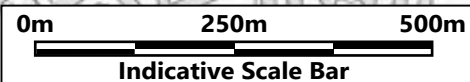
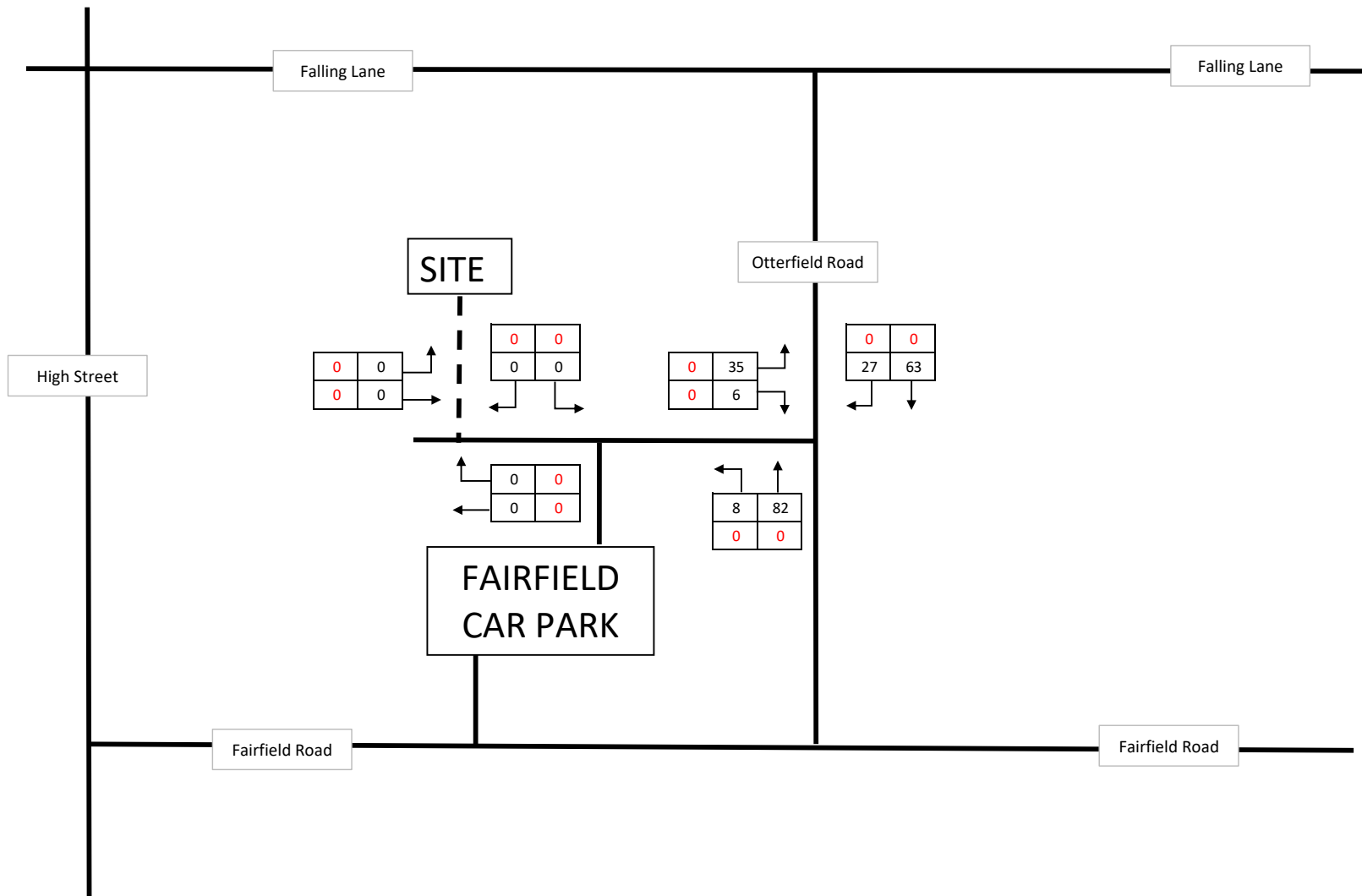
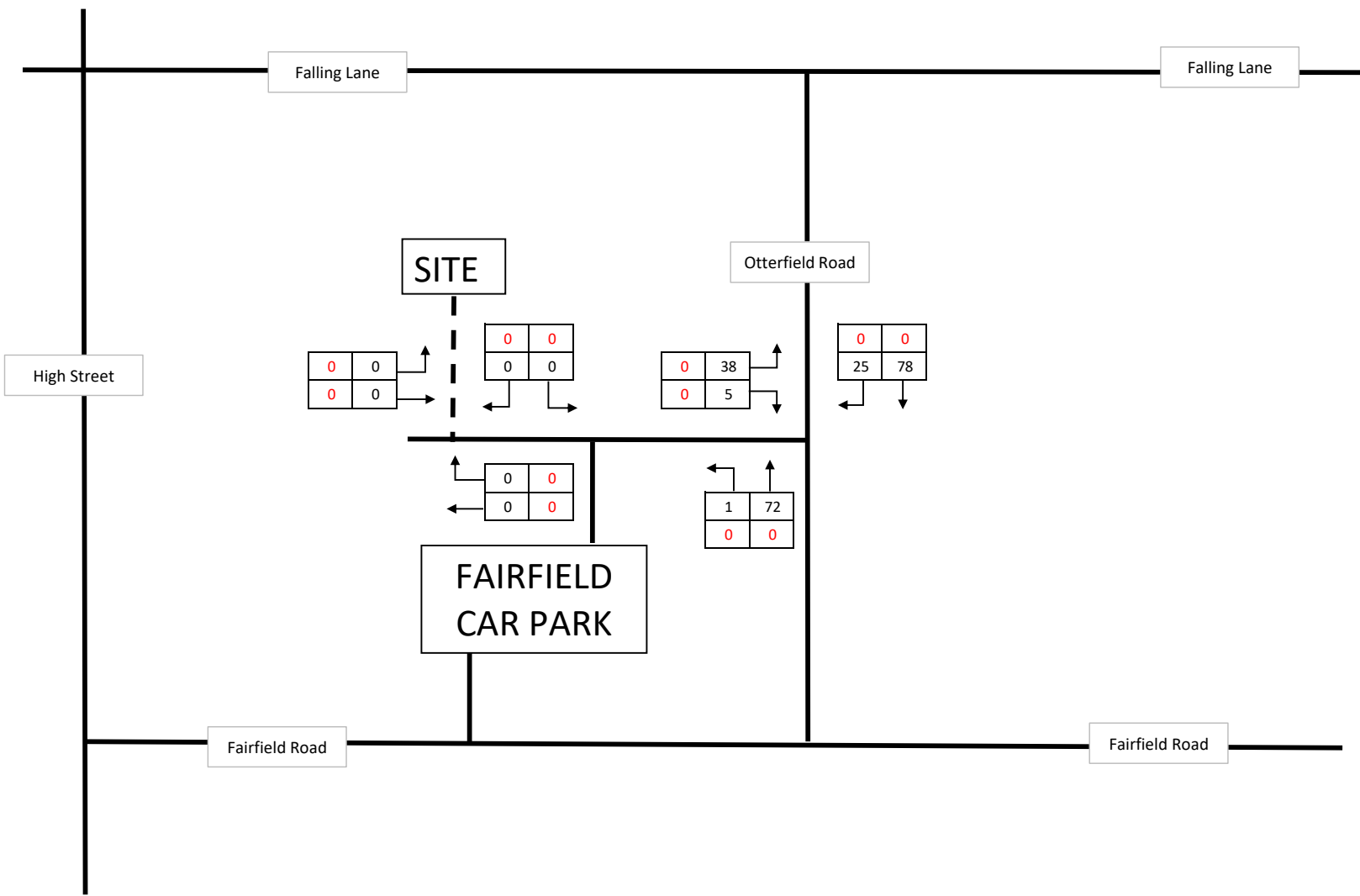


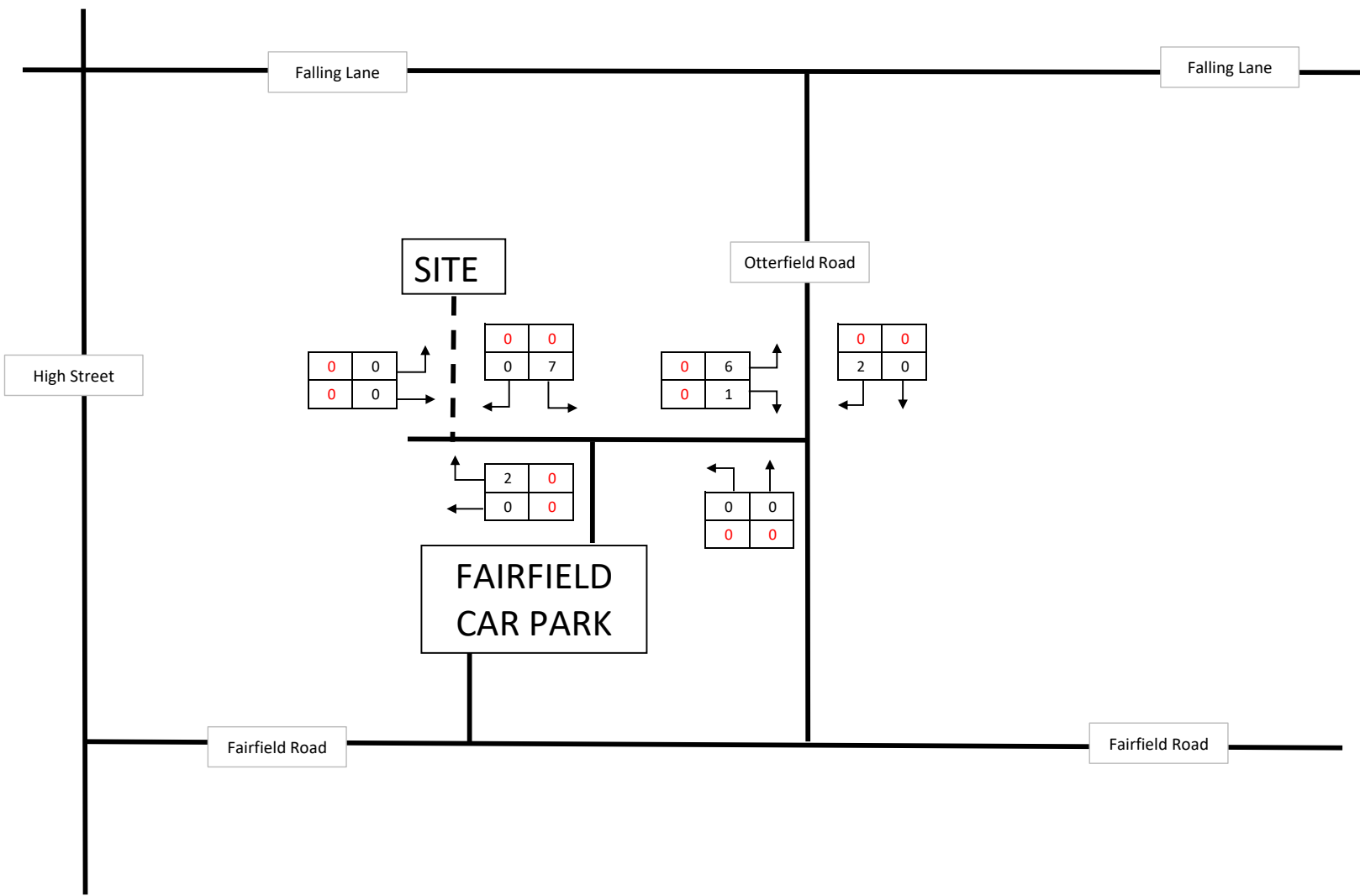
FIGURE No: **FIGURE 1**




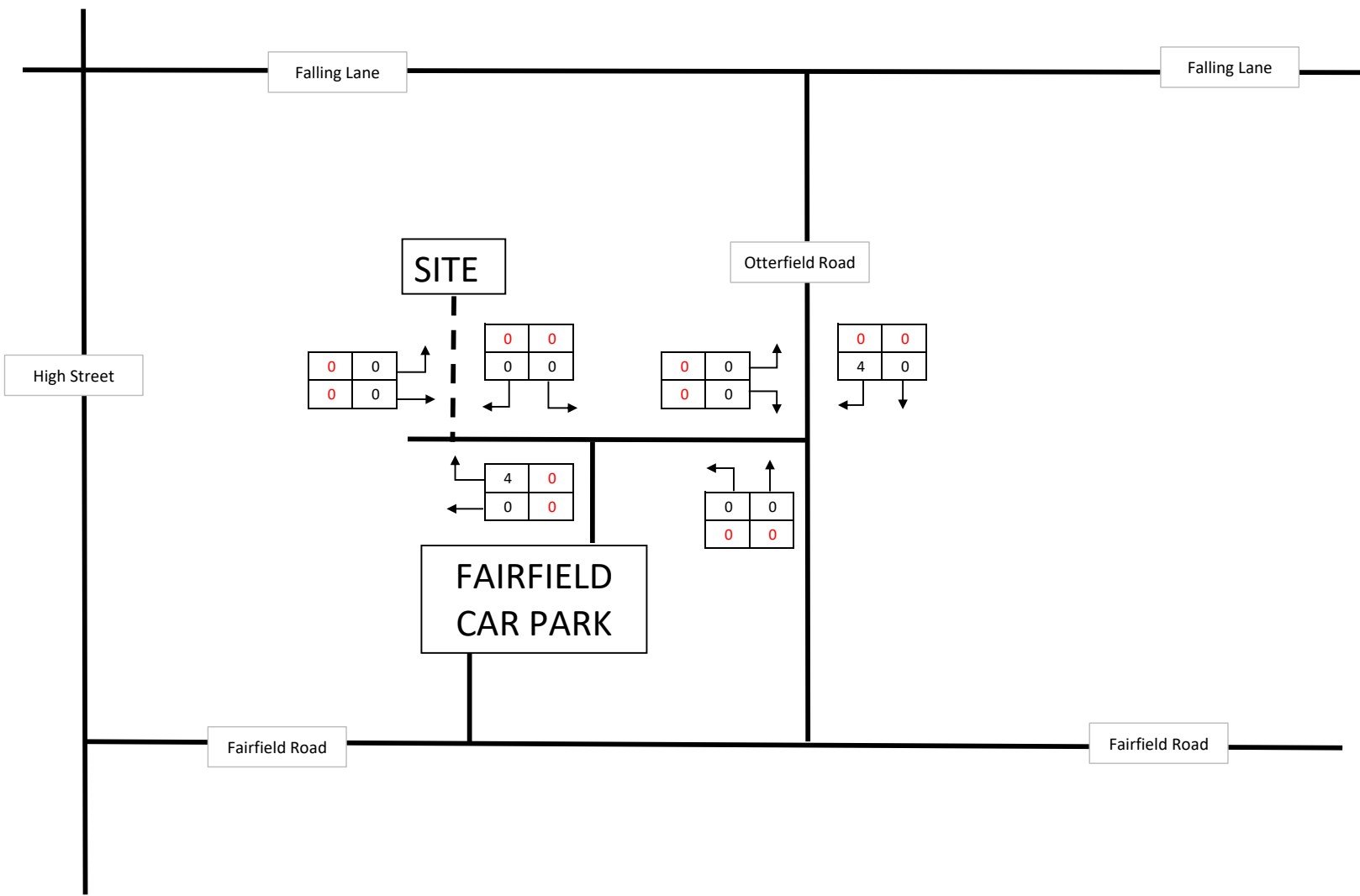
<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG Tel: 01256 338640
	Otterfield Road, Yiewsley	
	TF1	
	2019 Observed Traffic Flows - AM Peak Hour (0800-0900)	



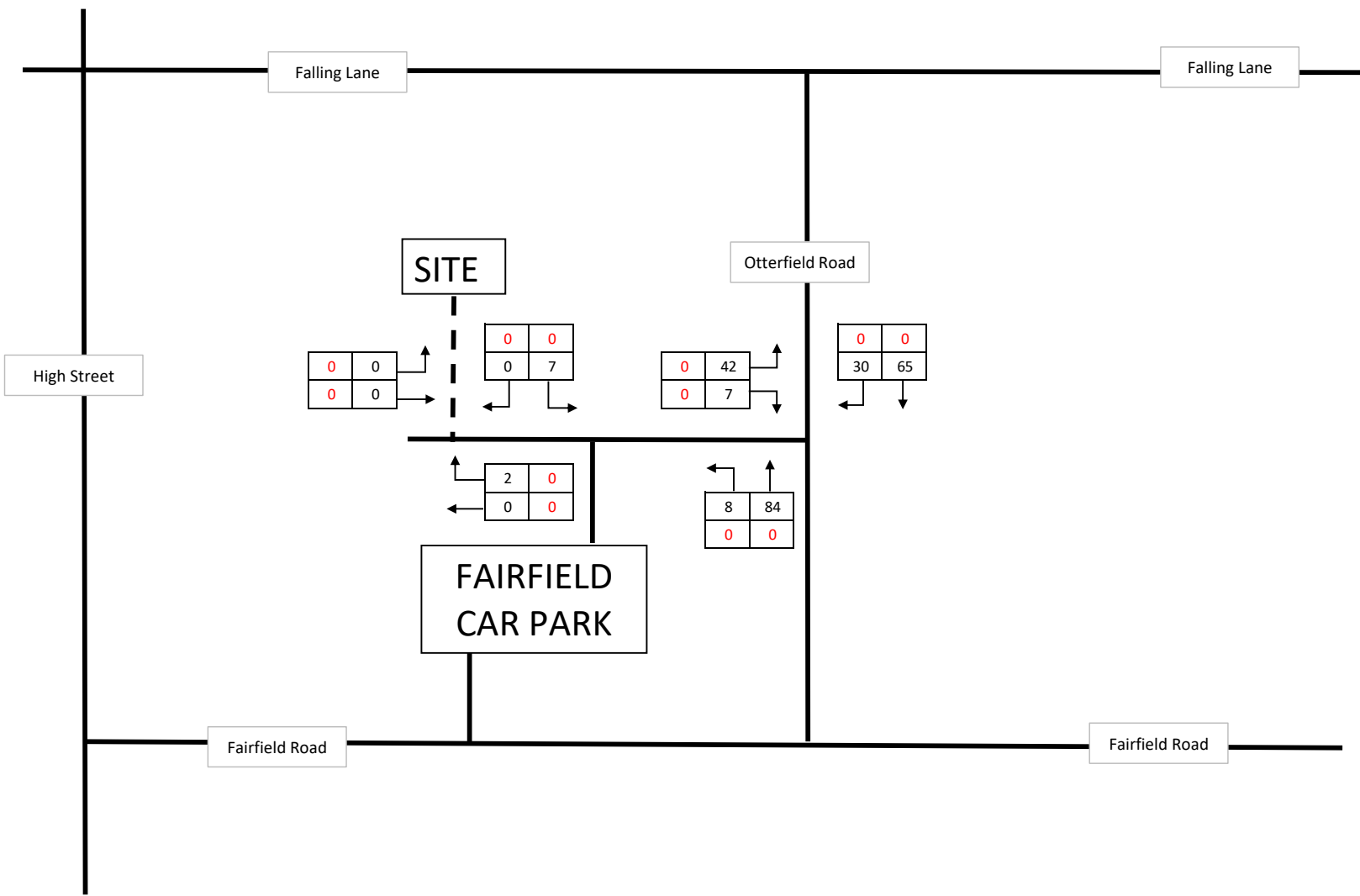
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	<p>Otterfield Road, Yiewsley</p>	
	<p>TF2</p>	
	<p>2019 Observed Traffic Flows - PM Peak Hour (1700-1800)</p>	




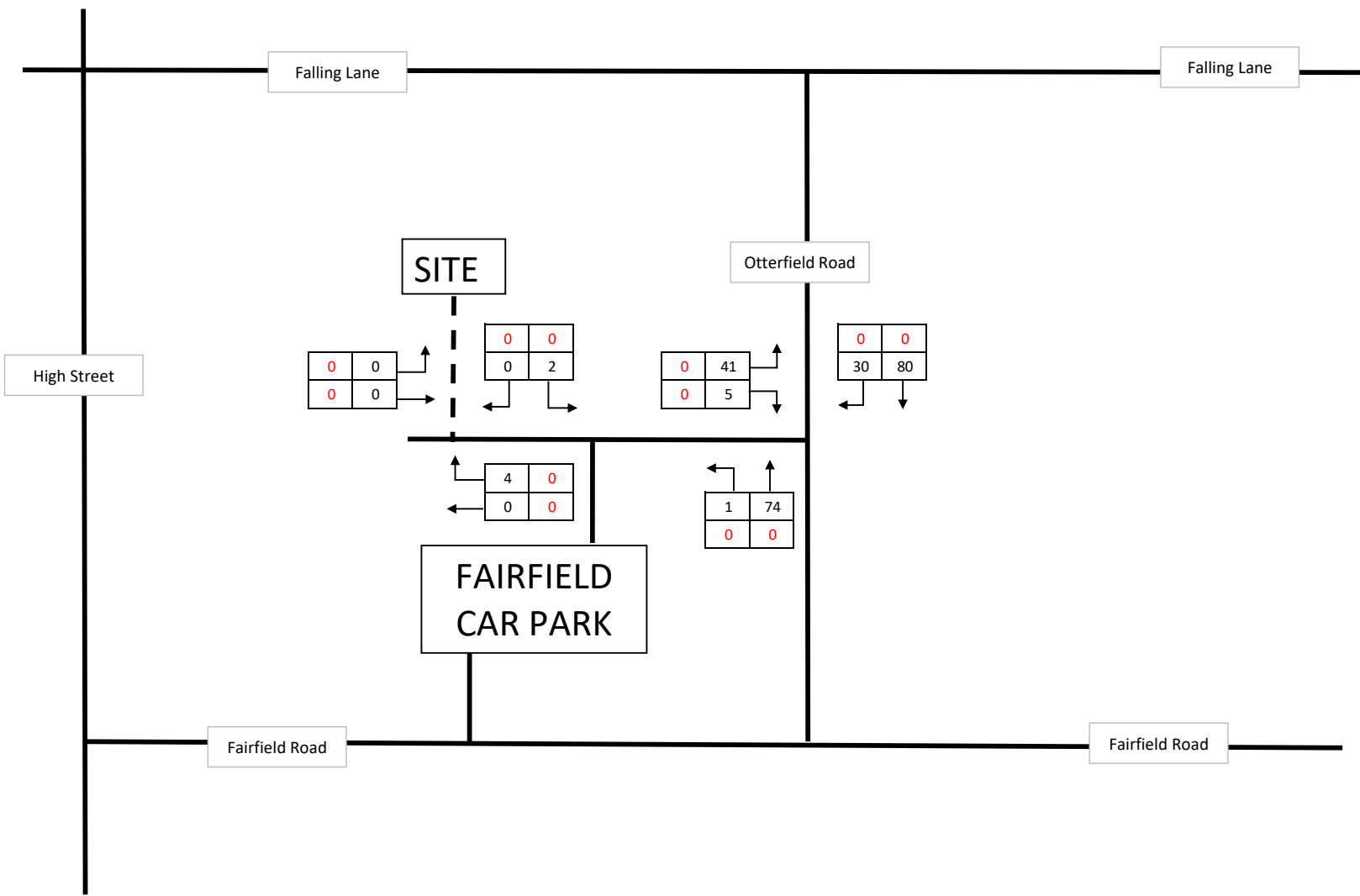
<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG Tel: 01256 338640
	Otterfield Road, Yiewsley	
	TF3	
	Development Assignment TOTAL (AM Peak Hour)	




<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG Tel: 01256 338640
	Otterfield Road, Yiewsley	
	TF4	
	Development Assignment Arrivals (PM Peak Hour)	



<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG Tel: 01256 338640
	Otterfield Road, Yiewsley	
	TF5	
	2022 'with development' Traffic Flows AM Peak Hour (0800-0900)	



<p>KEY</p> <p>500 = TOTAL VEHICLES</p> <p>25 = HGVs</p>		<p>Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG Tel: 01256 338640</p>
	<p>Otterfield Road, Yiewsley</p>	
	<p>TF6</p>	
	<p>2022 'with development' Traffic Flows PM Peak Hour (1700-1800)</p>	

DRAWINGS



Net Sales Area			Net Sales Area				
Level	Number	Unit Type	Area	Level	Number	Unit Type	Area
00 Ground Floor	06	1Bed	65.2 m²	04 Fourth Floor Plan	45	2Bed	64 m²
00 Ground Floor	05	Wheelchair	69.4 m²	04 Fourth Floor Plan	47	2Bed	63.2 m²
00 Ground Floor	04	1Bed	69.6 m²	04 Fourth Floor Plan	43	3Bed	190.3 m²
00 Ground Floor	03	Wheelchair	65.8 m²	05 Fifth Floor Plan	48	3Bed	90.8 m²
00 Ground Floor	02	2Bed	65.8 m²	05 Fifth Floor Plan	49	3Bed	93 m²
00 Ground Floor	01	2Bed	65.2 m²	05 Fifth Floor Plan	50	3Bed	249.5 m²
00 Ground Floor	06	Wheelchair	401 m²	Grand total: 50			3421.1 m²

- Line of building above
- 300mm dwarf brick wall with 1800mm hooped metal railings, primed and painted black
- 1800mm hooped metal railings, primed and painted black
- 2400mm closed boarded timber fence
- Existing trees to be removed
- Existing CAT A, B & C trees to be retained with root protection zone
- Proposed new shrubs
- Proposed new trees
- Mown Grass
- Wild Flower - seeded meadow grass
- New mixed low level shrub planting (no thorn or poisonous species)
- 800mm Mixed Evergreen Species Hedge (no thorn or poisonous species)
- Residential Patio Terrace and Footpaths - Marshalls Concrete paving 450x450. Colour buff
- Library Footpath - Marshalls Paving smooth surface with concrete edgings. Colour: Tornegar Davis Blend
- Car park - Tarmac Surface. Colour beige
- Footpaths: Macadam Path with concrete edgings. Colour: Buff
- Parking Bays - Herringbone block permeable paving. Colour bracken

01 Proposed Site Plan 1:200

Disabled bay for library users	Car parking on site	Disabled car parking on site for residents	Total	Cycle Parking
2	18	5	25	88

Total Units	Projected Weekly Waste per household	Waste Produced from all households
1 Bed 24	100 Litres	24 x 100 = 2400 Litres
2 Bed 13	170 Litres	13 x 170 = 2210 Litres
3 Bed 13	240 Litres	13 x 240 = 3120 Litres
TOTAL WEEKLY WASTE ARISING:		7730 Litres

No. of bins required = 7730 Litres / 1100 Litres = 7 x 1100 Litre Bins
As per Hillingdon 'Guidance for Waste and Recycling Storage and Collection'

Level	Name	Area
00 Ground Floor		157.3 m²
03 Third Floor Plan		212.5 m²
04 Fourth Floor Plan		91 m²
Grand total		460.8 m²

Unit Type	Count
1Bed	20
1Bed Wheelchair	4
2Bed	13
3Bed	12
3Bed Wheelchair	1
Grand total: 50	

Level	Name	Area
00 Ground Floor		105.8 m²
00 Ground Floor	Wheelchair	63.2 m²
01 First Floor Plan		169 m²
01 First Floor Plan	1Bed	53 m²
01 First Floor Plan	2Bed	29.9 m²
01 First Floor Plan	3Bed	5.8 m²
01 First Floor Plan	3Bed Wheelchair	6.5 m²
Grand total		97.2 m²

Level	Name	Area
02 Second Floor Plan		96.2 m²
02 Second Floor Plan	1Bed	36.7 m²
02 Second Floor Plan	2Bed	18.8 m²
02 Second Floor Plan	3Bed	34.7 m²
02 Second Floor Plan	3Bed Wheelchair	90.2 m²
03 Third Floor Plan		42.4 m²
03 Third Floor Plan	1Bed	42.4 m²
Grand total		613.1 m²

Level	Name	Area
03 Third Floor Plan	3Bed	47.1 m²
03 Third Floor Plan	3Bed	89.5 m²
04 Fourth Floor Plan		35 m²
04 Fourth Floor Plan	1Bed	35 m²
04 Fourth Floor Plan	2Bed	30.7 m²
04 Fourth Floor Plan	3Bed	6.4 m²
04 Fourth Floor Plan	3Bed	72.1 m²
05 Fifth Floor Plan		97.2 m²
05 Fifth Floor Plan	3Bed	97.2 m²
Grand total		613.1 m²

Revision	Date	By	Reason
C	2022 January	GH	Building height reduced. Landscaping revised.
B	2021 October	GH	Issued for planning. Site location plan updated.
A	2021 September	GH	Issued for planning.
Issue			

drawing title:
M9534- APL202

YIEWSLEY FORMER POOL SITE PROPOSED SITE PLAN

Issued for **PLANNING**

revision date: 2022 January

Building height reduced

Scale: 1:200

Yiewsley Housing and Library Sites

Space One, Hammersmith, London, W6 0EA

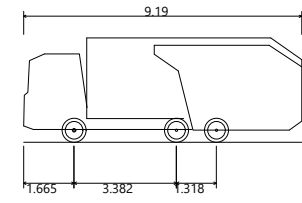
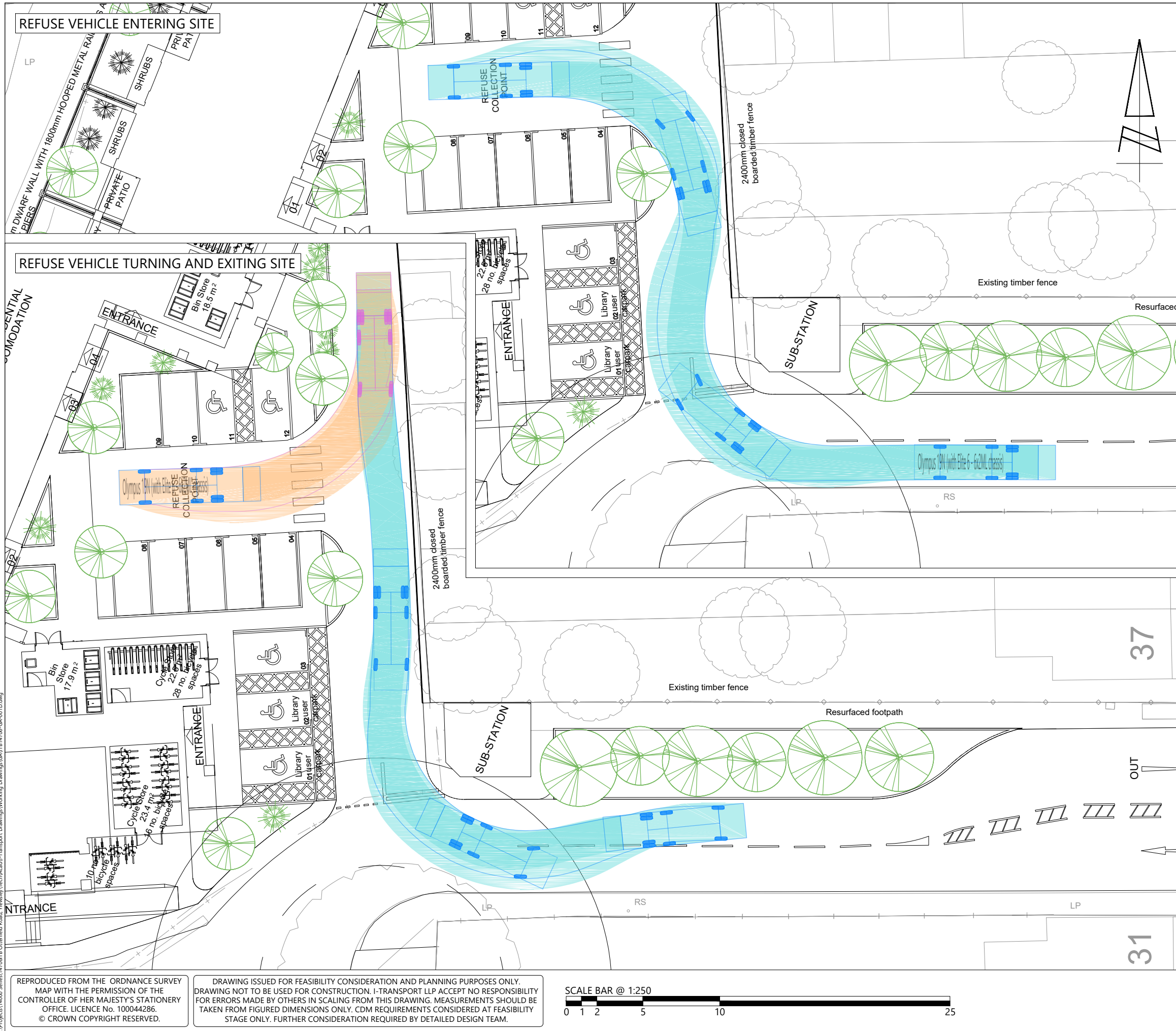
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Olympus 19N (with Elite 6 - 6x2ML chassis)
 Overall Length 9.190m
 Overall Width 2.250m
 Overall Body Height 3.450m
 Min Body Ground Clearance 0.410m
 Track Width 2.250m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 11.000m

REV	DATE	BY	DESCRIPTION	CHK	APD
D	03.02.22	JD	SITE LAYOUT UPDATED	RS	SJ
C	03.09.21	AS	SITE LAYOUT UPDATED	SJ	SJ
B	29.08.19	JD	SITE LAYOUT UPDATED	SJ	SJ
A	19.07.19	JD	SITE LAYOUT UPDATED	SJ	SJ

STATUS: FOR INFORMATION



The Square, Basing View, Basingstoke, Hampshire, RG21 4EB
 Tel: 01256 637940
 www.i-transport.co.uk

TITLE: SWEEP PATH ANALYSIS - REFUSE VEHICLE

PROJECT: OTTERFIELD ROAD, YIEWSLEY

CLIENT: LONDON BOROUGH OF HILLINGDON

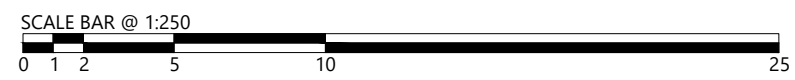
DRAWN: JD	CHECKED: EF	APPROVED: SJ
PROJECT No: ITB14706	SCALE @ A3: 1:250	DATE: 20.06.19

DRAWING No: ITB14706-GA-001
 REV: D

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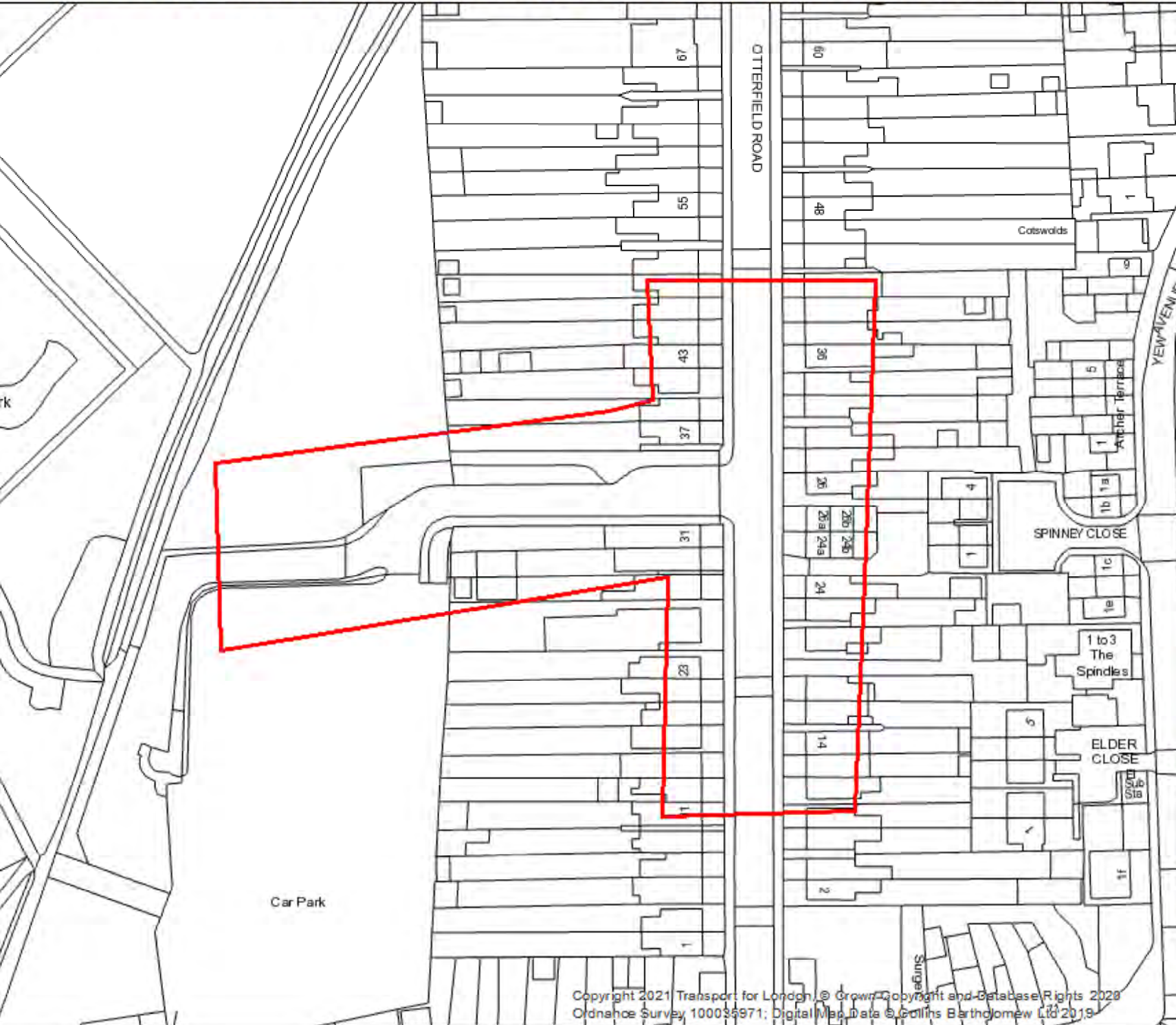
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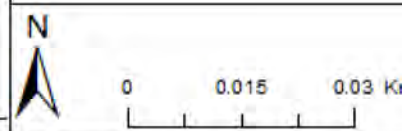
APPENDIX A. Personal Injury Accident Data

Fairfield Rd C.Park Acc Rd & J/W Otterfield Rd No Personal Injury Colls 60 mths to end of April 2021



Severity of collision

Slight	Serious	Fatal
1 (0)	1 (0)	1 (0)
2 (0)	2 (0)	2 (0)
3 (0)	3 (0)	3 (0)
4 (0)	4 (0)	4 (0)
5 (0)	5 (0)	5 (0)

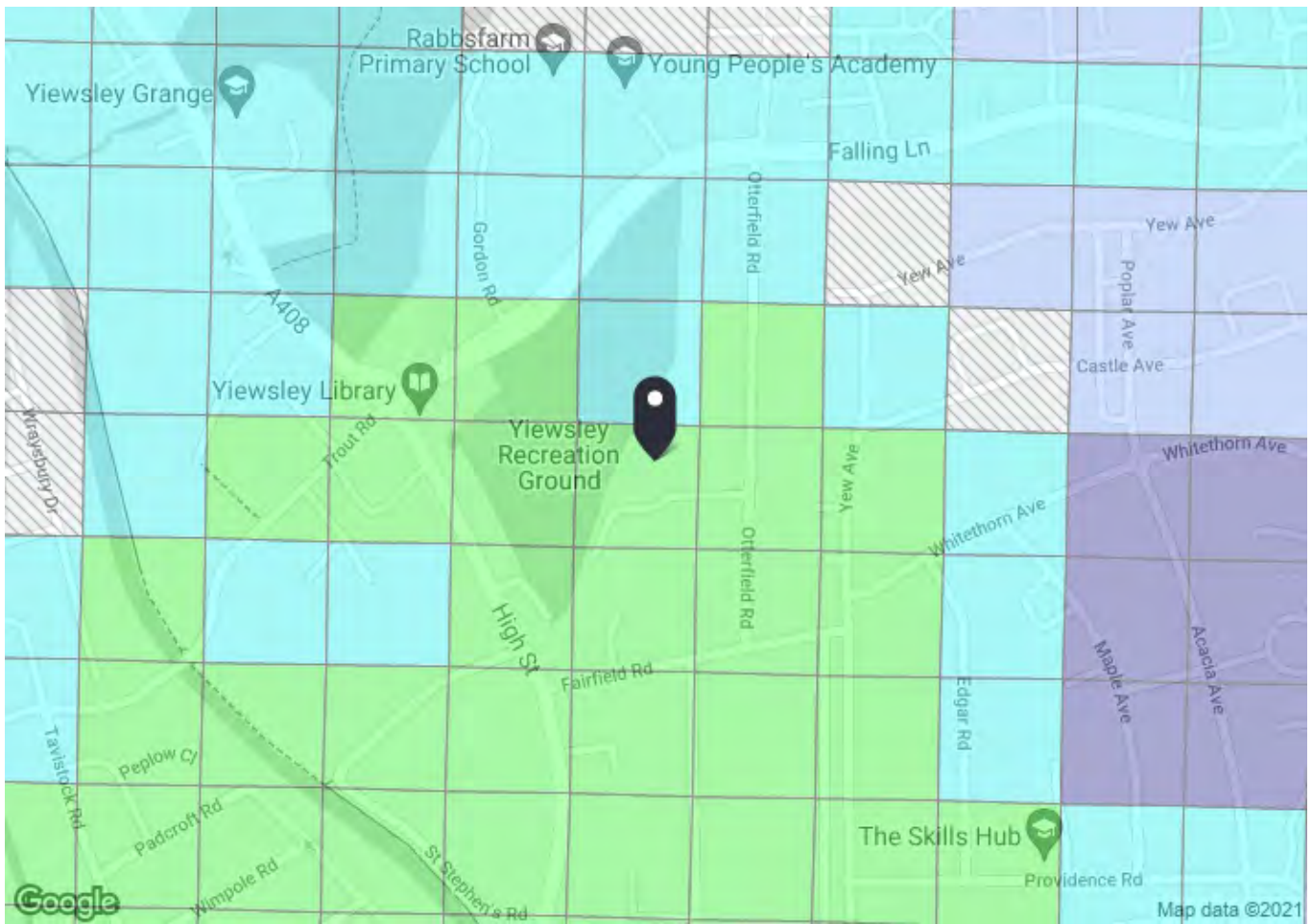


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DATE:
06/09/2021



APPENDIX B. PTAL Assessment



PTAL output for Base Year
3

31 Otterfield Rd, West Drayton UB7 8PE, UK
Easting: 506162, Northing: 180662

Grid Cell: 81073

Report generated: 09/09/2021

Calculation Parameters

Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

Map layers

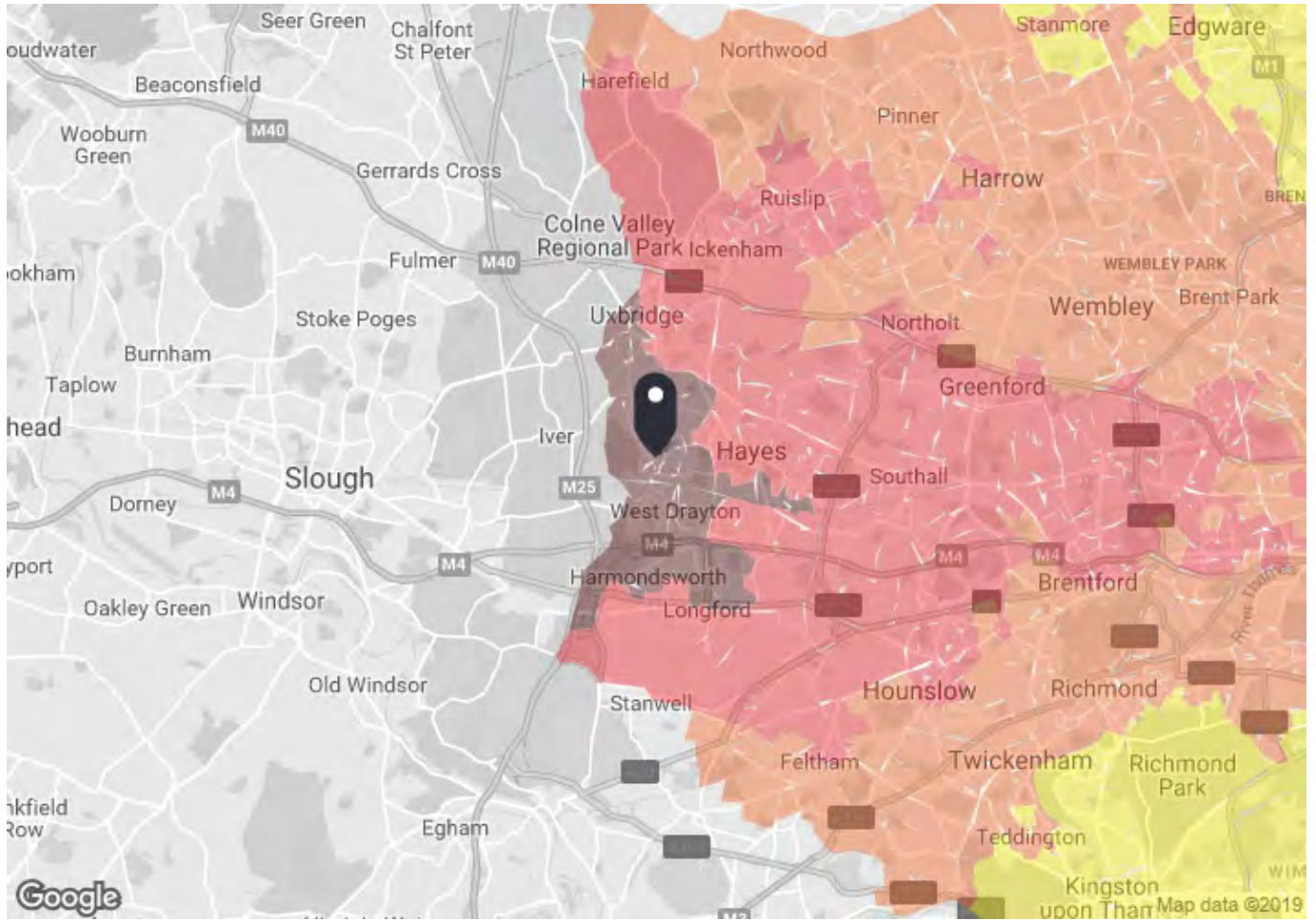
- PTAL (cell size: 100m)

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	HIGH STREET YIEWSLEY	222	488.26	7.5	6.1	6	12.1	2.48	1	2.48
Bus	FALLING LANE MILBURN DR	U5	421.21	5	5.27	8	13.27	2.26	0.5	1.13
Bus	FALLING LANE MILBURN DR	U3	421.21	5	5.27	8	13.27	2.26	0.5	1.13
Bus	FALLING LANE MILBURN DR	U1	421.21	4	5.27	9.5	14.77	2.03	0.5	1.02
Bus	HORTON ROAD ALBERT ROAD	350	531.18	5	6.64	8	14.64	2.05	0.5	1.02
Rail	West Drayton	'PADTON-OXFD 2N14'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'PADTON-OXFD 2N16'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'PADTON-OXFD 2N18'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'PADTON-OXFD 2N22'	901.42	0.67	11.27	45.53	56.79	0.53	0.5	0.26
Rail	West Drayton	'PADTON-OXFD 2N24'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'RDNGSTN-PADTON 2P09'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'OXFD-PADTON 2P11'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'RDNGSTN-PADTON 2P12'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'RDNGSTN-PADTON 2P14'	901.42	1.33	11.27	23.31	34.57	0.87	0.5	0.43
Rail	West Drayton	'RDNGSTN-PADTON 2P17'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'OXFD-PADTON 2P18'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'BNBR-PADTON 2P20'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'SLOUGH-PADTON 2P25'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'SLOUGH-PADTON 2P32'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15
Rail	West Drayton	'PADTON-RDNGSTN 2R13'	901.42	1.67	11.27	18.71	29.98	1	1	1
Rail	West Drayton	'PADTON-TWYFORD 2R21'	901.42	0.33	11.27	91.66	102.93	0.29	0.5	0.15

Total Grid Cell AI: 10.42

APPENDIX C. TIM Assessment










TIM output for Base Year
 Scenario: Base Year Mode: All public transport modes, Time of day: AM peak, Direction: From location
 UB7 8EY
 Fairfield Rd, West Drayton UB7 8EY, UK
 Easting: 506124, Northing: 180684

Report generated: 11/06/2019


*Population and employment: GLA forecasts 2016
 Town Centres: GLA 2016
 Education: EduBase 2016
 Health: NHS Direct, CQC 2016*

Code: NT086A05A

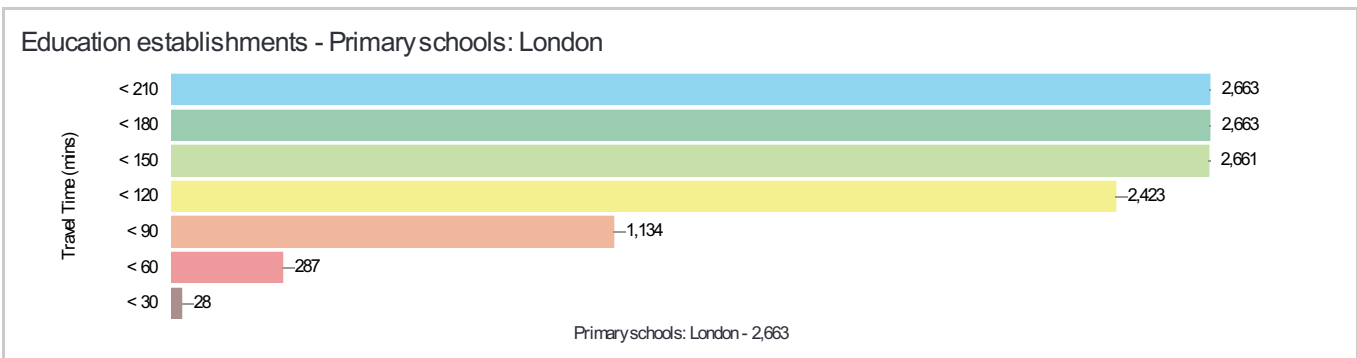
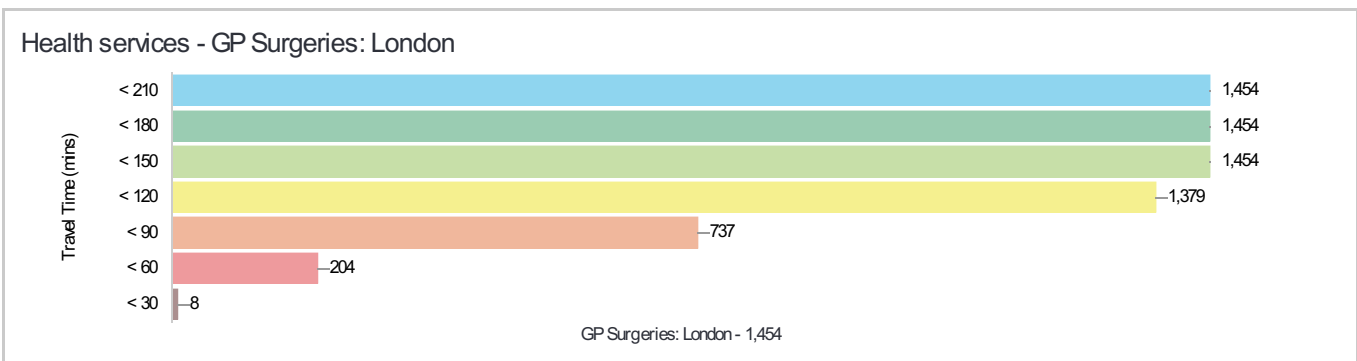
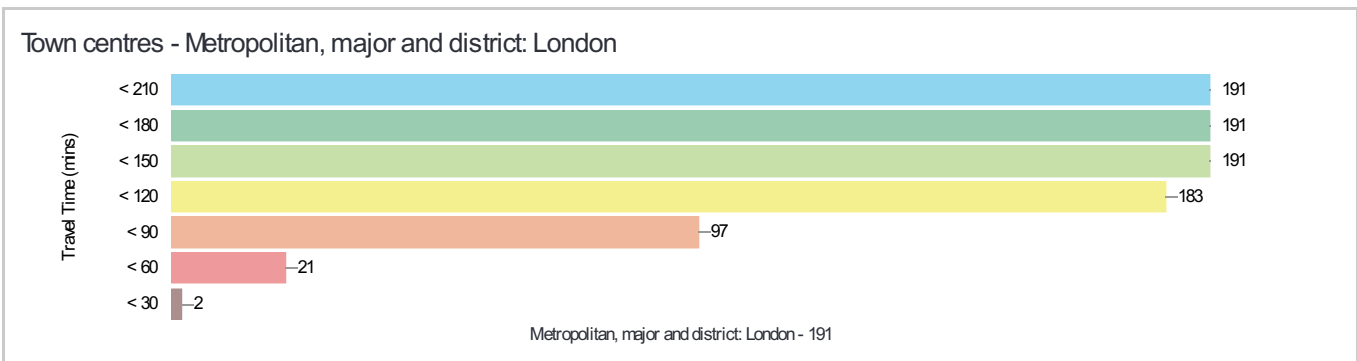
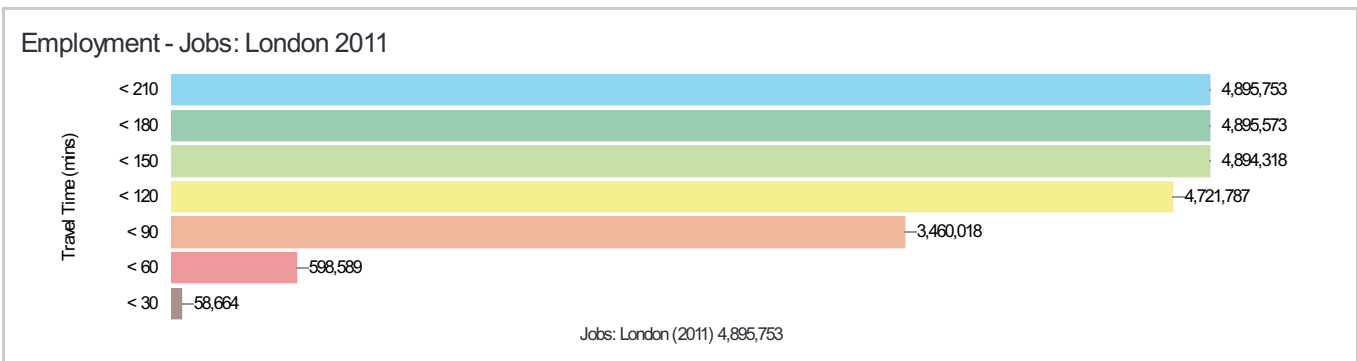
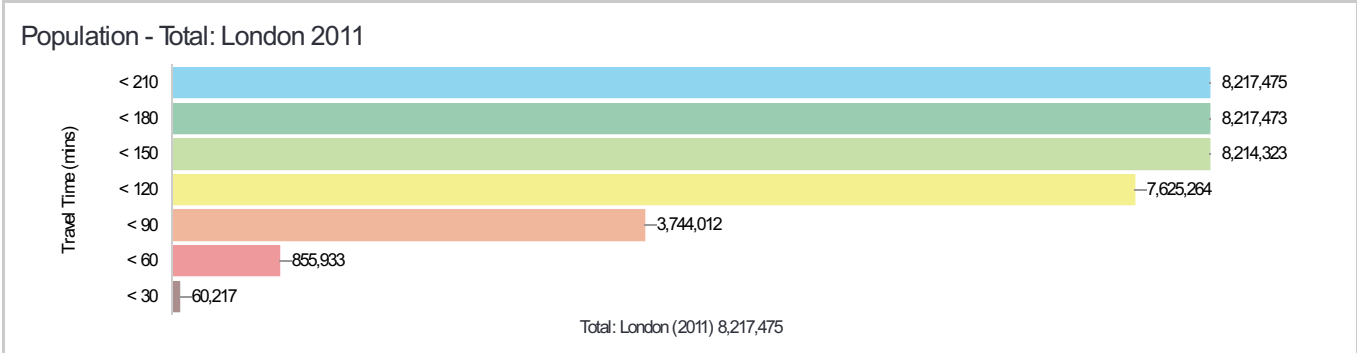
Map key - Travel Time

 < 30 mins	 30 - 60 mins
 60 - 90 mins	 90 - 120 mins
 120 - 150 mins	 150 - 180 mins
 180 - 210 mins	

Map layers

-  Travel Times

Catchment data for your current selection



APPENDIX D.Fairfield Road Car Parking Survey Data

Hillingdon, Greater London
Car Park Accumulation Study

Site 2 of 3
Fairfield Road Car Park

Capacity

Ordinary	140
Electric	2
Disabled	11
Reserved	6
Total	159

Date
Thursday 04 July 2019

Weather
Sunny

Temp: 18°C

0700 - 1900 (Thursday 12H Session)

TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PSU TOTAL	Capacity %
Pre-Survey	0	0	14	0	0	0	0	0	14	14.00	8.81
0700 - 0715	0	0	16	0	0	0	0	0	16	16.00	10.06
0715 - 0730	0	0	15	0	0	0	0	0	15	15.00	9.43
0730 - 0745	0	0	16	0	0	0	0	0	16	16.00	10.06
0745 - 0800	0	0	21	0	0	0	0	0	21	21.00	13.24
0800 - 0815	0	0	26	0	0	0	0	0	26	26.00	16.35
0815 - 0830	0	0	38	0	1	0	0	0	39	39.00	24.53
0830 - 0845	0	0	59	0	4	0	0	0	63	63.00	39.61
0845 - 0900	0	0	44	0	1	0	0	0	45	45.00	28.30
0900 - 0915	0	0	44	0	1	0	0	0	45	45.00	28.30
0915 - 0930	0	0	53	0	3	0	0	0	56	56.00	35.22
0930 - 0945	0	0	57	0	2	0	0	0	59	59.00	37.11
0945 - 1000	1	0	60	0	1	0	0	0	62	62.00	39.00
1000 - 1015	1	0	89	0	0	0	0	0	79	79.00	49.68
1015 - 1030	1	0	79	0	1	0	0	0	80	79.00	50.31
1030 - 1045	1	0	73	0	0	0	0	0	74	73.00	46.54
1045 - 1100	1	0	70	0	0	0	0	0	71	70.00	44.05
1100 - 1115	1	0	65	0	0	0	0	0	66	65.00	41.51
1115 - 1130	1	0	64	2	1	0	0	0	67	67.00	42.77
1130 - 1145	1	0	58	0	0	0	0	0	59	58.00	37.11
1145 - 1200	0	0	58	0	0	0	0	0	58	58.00	36.46
1200 - 1215	0	0	59	0	0	0	0	0	59	59.00	37.11
1215 - 1230	0	1	63	0	0	0	0	0	64	63.00	40.25
1230 - 1245	1	0	62	0	3	0	0	0	66	65.00	41.51
1245 - 1300	1	0	60	0	2	0	0	0	63	61.00	38.36
1300 - 1315	1	0	65	0	1	0	0	0	67	66.00	42.14
1315 - 1330	1	0	70	0	1	0	0	0	72	71.00	45.26
1330 - 1345	1	0	83	1	2	0	0	0	87	86.00	53.46
1345 - 1400	1	1	84	3	0	0	0	0	89	87.00	54.66
1400 - 1415	1	1	84	3	0	0	0	0	89	87.00	54.66
1415 - 1430	3	1	84	0	2	0	0	0	90	87.00	54.66
1430 - 1445	3	1	84	1	1	0	0	0	90	87.00	54.66
1445 - 1500	3	1	86	1	1	0	0	0	92	89.00	55.92
1500 - 1515	2	1	84	1	2	0	0	0	89	86.00	53.46
1515 - 1530	2	1	73	1	1	0	0	0	78	75.00	46.86
1530 - 1545	1	1	67	0	2	0	0	0	70	68.00	43.40
1545 - 1600	1	1	68	0	1	0	0	0	71	69.00	44.05
1600 - 1615	1	1	68	0	1	0	0	0	71	69.00	44.05
1615 - 1630	1	1	68	0	1	0	0	0	71	69.00	44.05
1630 - 1645	1	1	63	0	1	0	0	0	66	64.00	41.51
1645 - 1700	1	1	79	0	2	0	0	0	82	80.00	50.94
1700 - 1715	1	1	85	0	2	0	0	0	88	87.00	54.66
1715 - 1730	0	1	83	0	4	0	0	0	88	87.00	54.66
1730 - 1745	0	1	83	0	4	0	0	0	88	87.00	54.66
1745 - 1800	0	1	82	0	2	0	0	0	85	84.00	52.88
1800 - 1815	0	1	82	0	0	0	0	0	83	82.00	51.54
1815 - 1830	0	1	80	1	0	0	0	0	82	80.00	50.94
1830 - 1845	0	1	74	0	0	0	0	0	75	74.00	46.86
1845 - 1900	3	1	32	0	0	0	0	0	36	33.00	22.64

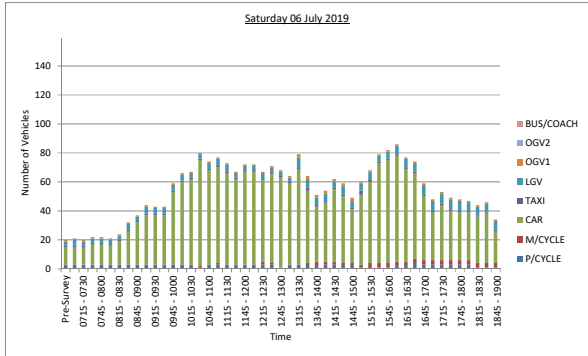
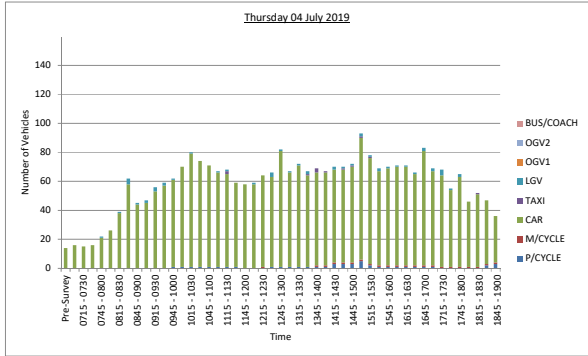
Date
Saturday 06 July 2019

Weather
Sunny

Temp: 19°C

0700 - 1900 (Saturday 12H Session)

TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PSU TOTAL	Capacity %
Pre-Survey	2	1	12	1	3	1	0	0	20	19.00	13.21
0700 - 0715	2	1	12	1	3	1	0	0	20	19.00	13.21
0715 - 0730	2	1	14	1	3	1	0	0	22	20.00	13.84
0730 - 0745	2	1	14	1	3	1	0	0	22	20.00	13.84
0745 - 0800	2	1	14	1	3	1	0	0	22	20.00	13.84
0800 - 0815	2	1	13	1	3	1	0	0	21	19.00	13.21
0815 - 0830	2	1	16	1	3	1	0	0	24	22.00	15.09
0830 - 0845	2	1	23	1	4	1	0	0	31	29.00	20.11
0845 - 0900	2	1	29	1	3	1	0	0	37	35.00	23.27
0900 - 0915	2	1	35	1	5	1	0	0	44	42.00	27.64
0915 - 0930	2	1	34	1	4	1	0	0	43	41.00	27.04
0930 - 0945	2	1	38	1	5	2	0	0	48	45.00	29.56
0945 - 1000	2	1	30	1	4	1	0	0	39	37.00	24.53
1000 - 1015	2	1	37	1	4	1	0	0	44	42.00	27.64
1015 - 1030	2	1	39	1	3	1	0	0	46	44.00	29.19
1030 - 1045	2	1	65	1	4	1	0	0	73	71.00	45.91
1045 - 1100	2	1	60	1	3	1	0	0	65	63.00	40.25
1100 - 1115	2	1	63	1	5	1	0	0	71	70.00	45.26
1115 - 1130	2	1	64	1	3	1	0	0	72	70.00	45.26
1130 - 1145	2	1	64	1	3	1	0	0	72	70.00	45.26
1145 - 1200	2	1	64	1	3	1	0	0	72	70.00	45.26
1200 - 1215	2	1	64	1	3	1	0	0	72	70.00	45.26
1215 - 1230	2	1	66	1	4	1	0	0	74	72.00	46.54
1230 - 1245	2	1	66	1	4	1	0	0	74	72.00	46.54
1245 - 1300	2	1	66	1	4	1	0	0	74	72.00	46.54
1300 - 1315	2	1	66	1	4	1	0	0	74	72.00	46.54
1315 - 1330	2	1	66	1	4	1	0	0	74	72.00	46.54
1330 - 1345	2	1	66	1	4	1	0	0	74	72.00	46.54
1345 - 1400	2	1	66	1	4	1	0	0	74	72.00	46.54
1400 - 1415	2	1	66	1	4	1	0	0	74	72.00	46.54
1415 - 1430	2	1	66	1	4	1	0	0	74	72.00	46.54
1430 - 1445	2	1	66	1	4	1	0	0	74	72.00	46.54
1445 - 1500	2	1	66	1	4	1	0	0	74	72.00	46.54
1500 - 1515	2	1	66	1	4	1	0	0	74	72.00	46.54
1515 - 1530	2	1	66	1	4	1	0	0	74	72.00	46.54
1530 - 1545	2	1	66	1	4	1	0	0	74	72.00	46.54
1545 - 1600	2	1	66	1	4	1	0	0	74	72.00	46.54
1600 - 1615	2	1	66	1	4	1	0	0	74	72.00	46.54
1615 - 1630	2	1	66	1	4	1	0	0	74	72.00	46.54
1630 - 1645	2	1	66	1	4	1	0	0	74	72.00	46.54
1645 - 1700	2	1	66	1	4	1	0	0	74	72.00	46.54
1700 - 1715	2	1	66	1	4	1	0	0	74	72.00	46.54
1715 - 1730	2	1	66	1	4	1	0	0	74	72.00	46.54
1730 - 1745	2	1	66	1	4	1	0	0	74	72.00	46.54
1745 - 1800	2	1	66	1	4	1	0	0	74	72.00	46.54
1800 - 1815	2	1	66	1	4	1	0	0	74	72.00	46.54
1815 - 1830	2	1	66	1	4	1	0	0	74	72.00	46.54
1830 - 1845	2	1	66	1	4	1	0	0	74	72.00	46.54
1845 - 1900	3	1	22	1	6	1	0	0	34	31.00	21.38



APPENDIX E. TRICS Output

Calculation Reference: AUDIT-236603-210903-0944

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	BE BEXLEY	1 days
	BK BARKING	1 days
	HM HAMMERSMITH AND FULHAM	1 days
	HO HOUNSLOW	1 days
	KI KINGSTON	1 days
	WF WALTHAM FOREST	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: 20 to 86 (units:)
 Range Selected by User: 20 to 100 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 10/09/20

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
Wednesday	3 days
Thursday	1 days

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

Selected survey types:

Manual count	6 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:

Town Centre	3
Edge of Town Centre	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	3
Built-Up Zone	1
High Street	1
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:

C3 6 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:

25,001 to 50,000 3 days
50,001 to 100,000 2 days
100,001 or More 1 days

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

Population within 5 miles:

500,001 or More 6 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 5 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:

Yes 1 days
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:

2 Poor 1 days
3 Moderate 2 days
5 Very Good 2 days
6a Excellent 1 days

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

Covid-19 Restrictions Yes At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1	BE-03-C-01 CROOK LOG BEXLEYHEATH	BLOCKS OF FLATS		BEXLEY
	Edge of Town Centre Residential Zone Total No of Dwellings:		79	
	<i>Survey date: WEDNESDAY</i>		<i>19/09/18</i>	<i>Survey Type: MANUAL</i>
2	BK-03-C-01 NORTH STREET BARKING	BLOCKS OF FLATS		BARKING
	Town Centre No Sub Category Total No of Dwellings:		40	
	<i>Survey date: THURSDAY</i>		<i>10/09/20</i>	<i>Survey Type: MANUAL</i>
3	HM-03-C-01 VANSTON PLACE FULHAM	BLOCK OF FLATS		HAMMERSMITH AND FULHAM
	Town Centre High Street Total No of Dwellings:		42	
	<i>Survey date: WEDNESDAY</i>		<i>16/07/14</i>	<i>Survey Type: MANUAL</i>
4	HO-03-C-02 HIGH STREET BRENTFORD	BLOCK OF FLATS		HOUNSLOW
	Town Centre Built-Up Zone Total No of Dwellings:		86	
	<i>Survey date: WEDNESDAY</i>		<i>03/09/14</i>	<i>Survey Type: MANUAL</i>
5	KI-03-C-03 PORTSMOUTH ROAD SURBITON	BLOCK OF FLATS		KINGSTON
	Edge of Town Centre Residential Zone Total No of Dwellings:		20	
	<i>Survey date: MONDAY</i>		<i>11/07/16</i>	<i>Survey Type: MANUAL</i>
6	WF-03-C-01 ERSKINE ROAD WALTHAMSTOW	BLOCKS OF FLATS		WALTHAM FOREST
	Edge of Town Centre Residential Zone Total No of Dwellings:		73	
	<i>Survey date: TUESDAY</i>		<i>05/11/19</i>	<i>Survey Type: MANUAL</i>

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

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	6	57	0.032	6	57	0.094	6	57	0.126
08:00 - 09:00	6	57	0.044	6	57	0.103	6	57	0.147
09:00 - 10:00	6	57	0.041	6	57	0.056	6	57	0.097
10:00 - 11:00	6	57	0.071	6	57	0.062	6	57	0.133
11:00 - 12:00	6	57	0.074	6	57	0.065	6	57	0.139
12:00 - 13:00	6	57	0.047	6	57	0.053	6	57	0.100
13:00 - 14:00	6	57	0.056	6	57	0.074	6	57	0.130
14:00 - 15:00	6	57	0.044	6	57	0.082	6	57	0.126
15:00 - 16:00	6	57	0.085	6	57	0.053	6	57	0.138
16:00 - 17:00	6	57	0.088	6	57	0.062	6	57	0.150
17:00 - 18:00	6	57	0.118	6	57	0.082	6	57	0.200
18:00 - 19:00	6	57	0.071	6	57	0.053	6	57	0.124
19:00 - 20:00	4	53	0.118	4	53	0.071	4	53	0.189
20:00 - 21:00	4	53	0.057	4	53	0.057	4	53	0.114
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.946			0.967			1.913

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:	20 - 86 (units:)
Survey date range:	01/01/13 - 10/09/20
Number of weekdays (Monday-Friday):	6
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.

APPENDIX F. Traffic Distribution Model

Routing Assessment

8:00 am Departure Time Thurs 6 Jun

Destination	Proportion by car	Route 1	Route 2	Route 3
Uxbridge	14.1%	Otterfield Road N	Falling Lane E	
Hounslow	9.5%	Otterfield Road N	Falling Lane E	
Yiewsley	9.2%	Otterfield Road S	Fairfield Road W	
Heathrow	8.3%	Otterfield Road N	Falling Lane E	
Ealing	7.2%	Otterfield Road N	Falling Lane E	
Hayes	6.9%	Otterfield Road N	Falling Lane E	
Slough	5.8%	Otterfield Road N	Falling Lane W	High Road N
Other South	5.1%	Otterfield Road N	Falling Lane E	
Ruislip	4.7%	Otterfield Road N	Falling Lane E	
Other North	4.6%	Otterfield Road N	Falling Lane E	
Hillingdon	2.8%	Otterfield Road N	Falling Lane E	
Iver / Denham	2.6%	Otterfield Road N	Falling Lane W	High Road N
Brent	2.2%	Otterfield Road N	Falling Lane E	
Other West	2.0%	Otterfield Road N	Falling Lane E	
Yeading	2.0%	Otterfield Road N	Falling Lane E	
Harrow	1.6%	Otterfield Road N	Falling Lane E	
Hammersmith and Fulham	1.4%	Otterfield Road N	Falling Lane E	
West Drayton	1.4%	Otterfield Road S	Fairfield Road W	High St S
Windsor / Maidenhead	1.3%	Otterfield Road N	Falling Lane E	
High Wycombe	0.9%	Otterfield Road N	Falling Lane W	High Road N
Richmond	0.9%	Otterfield Road N	Falling Lane E	
Westminster	0.9%	Otterfield Road N	Falling Lane E	
Other East	0.8%	Otterfield Road N	Falling Lane W	High Road N
Gerrards Cross	0.5%	Otterfield Road N	Falling Lane W	High Road N
Kensington and Chelsea	0.4%	Otterfield Road N	Falling Lane E	
Barnet	0.3%	Otterfield Road N	Falling Lane E	
Newham	0.3%	Otterfield Road N	Falling Lane E	
Wandsworth	0.3%	Otterfield Road N	Falling Lane E	
Camden	0.2%	Otterfield Road N	Falling Lane E	
Croydon	0.2%	Otterfield Road N	Falling Lane E	
Merton	0.2%	Otterfield Road N	Falling Lane E	
Enfield	0.2%	Otterfield Road N	Falling Lane E	
Greenwich	0.2%	Otterfield Road N	Falling Lane E	
Haringey	0.2%	Otterfield Road N	Falling Lane E	
Islington	0.1%	Otterfield Road N	Falling Lane E	
Lambeth	0.1%	Otterfield Road N	Falling Lane E	
Redbridge	0.1%	Otterfield Road N	Falling Lane E	
Southwark	0.1%	Otterfield Road N	Falling Lane E	
Sutton	0.1%	Otterfield Road N	Falling Lane E	
Tower Hamlets	0.1%	Otterfield Road N	Falling Lane E	
City of London	0.1%	Otterfield Road N	Falling Lane E	
Kingston	0.1%	Otterfield Road N	Falling Lane E	
Hackney	0.0%	Otterfield Road N	Falling Lane E	
Havering	0.0%	Otterfield Road N	Falling Lane E	
	100%			

Route 1	Proportion
Otterfield Road N	89%
Otterfield Road S	11%
Total	100%

Route 2	Proportion
Falling Lane E	79%
Falling Lane W	11%
Fairfield Road W	11%
Total	100%

APPENDIX G.Junction Capacity Modelling

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Site Access Junction with Otterfield Road.j9
Path: T:\Projects\14000 Series\14706ITB Otterfield Road, Yiewsley\Tech\Junction Assessments\Picady
Report generation date: 19/07/2019 15:36:30

- »2019 Observed, AM
- »2019 Observed, PM
- »2022 Future Year, AM
- »2022 Future Year, PM
- »2022 Future Year with Development, AM
- »2022 Future Year with Development, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2019 Observed								
Stream B-AC	0.1	5.81	0.07	A	0.1	5.74	0.07	A
Stream C-AB	0.1	5.72	0.05	A	0.1	5.58	0.05	A
2022 Future Year								
Stream B-AC	0.1	5.83	0.07	A	0.1	5.76	0.07	A
Stream C-AB	0.1	5.72	0.05	A	0.1	5.58	0.05	A
2022 Future Year with Development								
Stream B-AC	0.1	5.89	0.08	A	0.1	5.78	0.08	A
Stream C-AB	0.1	5.74	0.06	A	0.1	5.61	0.06	A

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

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

File summary

File Description

Title	
Location	
Site number	
Date	27/06/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\Hotdesk
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019 Observed	AM	ONE HOUR	07:45	09:15	15
D2	2019 Observed	PM	ONE HOUR	16:45	18:15	15
D3	2022 Future Year	AM	ONE HOUR	07:45	09:15	15
D4	2022 Future Year	PM	ONE HOUR	16:45	18:15	15
D5	2022 Future Year with Development	AM	ONE HOUR	07:45	09:15	15
D6	2022 Future Year with Development	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2019 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access/ Otterfield Road	T-Junction	Two-way		1.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Otterfield Road West		Major
B	Site Access		Minor
C	Otterfield Road East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Otterfield Road East	7.25			115.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	4.26	25	29

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	563	0.097	0.245	0.154	0.350
1	B-C	723	0.105	0.265	-	-
1	C-B	641	0.235	0.235	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019 Observed	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Otterfield Road West		✓	90	100.000
B - Site Access		✓	41	100.000
C - Otterfield Road East		✓	90	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	8	82
	B - Site Access	6	0	35
	C - Otterfield Road East	63	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	0	0
	B - Site Access	0	0	0
	C - Otterfield Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.07	5.81	0.1	A
C-AB	0.05	5.72	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	674	0.046	31	0.0	5.594	A
C-AB	22	656	0.033	22	0.0	5.677	A
C-A	46			46			
A-B	6			6			
A-C	62			62			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	670	0.055	37	0.1	5.684	A
C-AB	27	659	0.040	27	0.0	5.694	A
C-A	54			54			
A-B	7			7			
A-C	74			74			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	665	0.068	45	0.1	5.810	A
C-AB	33	663	0.050	33	0.1	5.716	A
C-A	66			66			
A-B	9			9			
A-C	90			90			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	665	0.068	45	0.1	5.810	A
C-AB	33	663	0.050	33	0.1	5.719	A
C-A	66			66			
A-B	9			9			
A-C	90			90			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	670	0.055	37	0.1	5.685	A
C-AB	27	659	0.040	27	0.0	5.696	A
C-A	54			54			
A-B	7			7			
A-C	74			74			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	674	0.046	31	0.0	5.597	A
C-AB	22	656	0.033	22	0.0	5.683	A
C-A	46			46			
A-B	6			6			
A-C	62			62			

2019 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access/ Otterfield Road	T-Junction	Two-way		1.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019 Observed	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Otterfield Road West		✓	73	100.000
B - Site Access		✓	43	100.000
C - Otterfield Road East		✓	103	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	1	72
	B - Site Access	5	0	38
	C - Otterfield Road East	78	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	0	0
	B - Site Access	0	0	0
	C - Otterfield Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.07	5.74	0.1	A
C-AB	0.05	5.58	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	683	0.047	32	0.0	5.532	A
C-AB	21	666	0.031	20	0.0	5.576	A
C-A	57			57			
A-B	0.75			0.75			
A-C	54			54			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	679	0.057	39	0.1	5.618	A
C-AB	25	671	0.037	25	0.0	5.573	A
C-A	67			67			
A-B	0.90			0.90			
A-C	65			65			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	47	675	0.070	47	0.1	5.738	A
C-AB	32	678	0.047	31	0.1	5.568	A
C-A	82			82			
A-B	1			1			
A-C	79			79			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	47	675	0.070	47	0.1	5.738	A
C-AB	32	678	0.047	32	0.1	5.571	A
C-A	82			82			
A-B	1			1			
A-C	79			79			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	679	0.057	39	0.1	5.621	A
C-AB	25	671	0.037	25	0.0	5.575	A
C-A	67			67			
A-B	0.90			0.90			
A-C	65			65			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	683	0.047	32	0.1	5.535	A
C-AB	21	666	0.031	21	0.0	5.579	A
C-A	57			57			
A-B	0.75			0.75			
A-C	54			54			

2022 Future Year, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access/ Otterfield Road	T-Junction	Two-way		1.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2022 Future Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Otterfield Road West		✓	93	100.000
B - Site Access		✓	42	100.000
C - Otterfield Road East		✓	93	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	8	84
	B - Site Access	6	0	36
	C - Otterfield Road East	65	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	0	0
	B - Site Access	0	0	0
	C - Otterfield Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.07	5.83	0.1	A
C-AB	0.05	5.72	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	673	0.047	32	0.0	5.607	A
C-AB	23	656	0.034	22	0.0	5.680	A
C-A	47			47			
A-B	6			6			
A-C	64			64			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	669	0.057	38	0.1	5.700	A
C-AB	27	659	0.042	27	0.0	5.697	A
C-A	56			56			
A-B	7			7			
A-C	76			76			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	664	0.070	46	0.1	5.831	A
C-AB	34	664	0.052	34	0.1	5.720	A
C-A	68			68			
A-B	9			9			
A-C	93			93			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	664	0.070	46	0.1	5.831	A
C-AB	34	664	0.052	34	0.1	5.723	A
C-A	68			68			
A-B	9			9			
A-C	93			93			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	669	0.057	38	0.1	5.701	A
C-AB	27	659	0.042	27	0.1	5.701	A
C-A	56			56			
A-B	7			7			
A-C	76			76			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	673	0.047	32	0.0	5.610	A
C-AB	23	656	0.034	23	0.0	5.685	A
C-A	47			47			
A-B	6			6			
A-C	64			64			

2022 Future Year, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access/ Otterfield Road	T-Junction	Two-way		1.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2022 Future Year	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Otterfield Road West		✓	75	100.000
B - Site Access		✓	44	100.000
C - Otterfield Road East		✓	106	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	1	74
	B - Site Access	5	0	39
	C - Otterfield Road East	80	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	0	0
	B - Site Access	0	0	0
	C - Otterfield Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.07	5.76	0.1	A
C-AB	0.05	5.58	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	682	0.049	33	0.1	5.544	A
C-AB	21	667	0.032	21	0.0	5.575	A
C-A	58			58			
A-B	0.77			0.77			
A-C	56			56			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	679	0.059	40	0.1	5.633	A
C-AB	26	672	0.039	26	0.0	5.572	A
C-A	69			69			
A-B	0.92			0.92			
A-C	67			67			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	49	674	0.072	49	0.1	5.756	A
C-AB	33	679	0.048	32	0.1	5.568	A
C-A	84			84			
A-B	1			1			
A-C	81			81			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	49	674	0.072	49	0.1	5.756	A
C-AB	33	679	0.048	33	0.1	5.571	A
C-A	84			84			
A-B	1			1			
A-C	81			81			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	679	0.059	40	0.1	5.636	A
C-AB	26	672	0.039	26	0.0	5.576	A
C-A	69			69			
A-B	0.92			0.92			
A-C	67			67			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	682	0.049	33	0.1	5.547	A
C-AB	21	667	0.032	21	0.0	5.581	A
C-A	58			58			
A-B	0.77			0.77			
A-C	56			56			

2022 Future Year with Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access/ Otterfield Road	T-Junction	Two-way		2.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Future Year with Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Otterfield Road West		✓	93	100.000
B - Site Access		✓	49	100.000
C - Otterfield Road East		✓	95	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	8	84
	B - Site Access	7	0	42
	C - Otterfield Road East	65	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	0	0
	B - Site Access	0	0	0
	C - Otterfield Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.08	5.89	0.1	A
C-AB	0.06	5.74	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	674	0.055	37	0.1	5.644	A
C-AB	24	656	0.037	24	0.0	5.694	A
C-A	47			47			
A-B	6			6			
A-C	64			64			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	44	670	0.066	44	0.1	5.748	A
C-AB	29	659	0.045	29	0.1	5.715	A
C-A	56			56			
A-B	8			8			
A-C	76			76			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	665	0.081	54	0.1	5.894	A
C-AB	37	664	0.055	37	0.1	5.743	A
C-A	67			67			
A-B	9			9			
A-C	93			93			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	665	0.081	54	0.1	5.894	A
C-AB	37	664	0.055	37	0.1	5.743	A
C-A	67			67			
A-B	9			9			
A-C	93			93			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	44	670	0.066	44	0.1	5.749	A
C-AB	29	659	0.045	29	0.1	5.717	A
C-A	56			56			
A-B	8			8			
A-C	76			76			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	674	0.055	37	0.1	5.647	A
C-AB	24	656	0.037	24	0.0	5.698	A
C-A	47			47			
A-B	6			6			
A-C	64			64			

2022 Future Year with Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access/ Otterfield Road	T-Junction	Two-way		1.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2022 Future Year with Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Otterfield Road West		✓	76	100.000
B - Site Access		✓	46	100.000
C - Otterfield Road East		✓	110	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	1	74
	B - Site Access	5	0	41
	C - Otterfield Road East	80	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Otterfield Road West	B - Site Access	C - Otterfield Road East
From	A - Otterfield Road West	0	0	0
	B - Site Access	0	0	0
	C - Otterfield Road East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.08	5.78	0.1	A
C-AB	0.06	5.61	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	682	0.051	34	0.1	5.558	A
C-AB	24	667	0.037	24	0.0	5.603	A
C-A	58			58			
A-B	1			1			
A-C	56			56			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	41	679	0.061	41	0.1	5.649	A
C-AB	30	672	0.044	30	0.1	5.607	A
C-A	69			69			
A-B	1			1			
A-C	67			67			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	51	674	0.075	51	0.1	5.778	A
C-AB	37	679	0.055	37	0.1	5.611	A
C-A	83			83			
A-B	2			2			
A-C	81			81			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	51	674	0.075	51	0.1	5.778	A
C-AB	37	679	0.055	37	0.1	5.614	A
C-A	83			83			
A-B	2			2			
A-C	81			81			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	41	679	0.061	41	0.1	5.653	A
C-AB	30	672	0.044	30	0.1	5.608	A
C-A	69			69			
A-B	1			1			
A-C	67			67			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	682	0.051	35	0.1	5.563	A
C-AB	24	667	0.037	24	0.0	5.609	A
C-A	58			58			
A-B	1			1			
A-C	56			56			

