New Leisure Centre, Harmondsworth Road, West Drayton

Transport Statement

Client: London Borough of Hillingdon

i-Transport Ref: SJ/RW/ITB14708-005 R

Date: 11 January 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 new Leisure Centre at Rowlheys Place, West Drayton. The development proposal is for a new sports centre with an eight-lane swimming pool, sports hall and football pitch with associated access and car parking.

1.1.2 The site is currently occupied by West Drayton Young People Centre and Family Centre. Access to the existing centre is provided from Rowlheys Place. Rowlheys Place bisects the site and is accessed from Harmondsworth Road which runs parallel to the site on the eastern boundary.

1.2 Planning History

1.2.1 A previous application for the development was approved in 2020 (application ref: 75127/APP/2019/3221) for a similar scheme, with car park deck providing 191 car parking spaces over two levels, and a further 8 spaces at the front entrance to the centre.

1.2.2 The application was approved and there were no highways or transport objections to the application from the statutory consultees LBH Highways, TfL or Highways England (now National Highways).

1.3 Revised Proposal

1.3.1 The revised development proposal is for a new sports centre including an eight-lane swimming pool, sports hall and football pitch, the total Gross Internal Floor Area (GFA) is 5,529m^2. For this application, parking provision has been reduced, with a new car park on the part of the site to the south of Rowlheys Place. A total of 144 car parking spaces are proposed on site, with 135 of these within the car park including 17 'blue badge' spaces and 8 'brown badge' spaces[1]. 20% of the spaces will be provided with active EV charging points (i.e. 28 spaces). A further 8 blue badge spaces will be provided on the site frontage, north of Rowlheys Place. Vehicular and pedestrian access to the site will be taken from Rowlheys Place as agreed as part of the earlier application.

[1] Motorists over 65 with a brown badge are eligible to use dedicated spaces in some car parks in the Borough

1.4 Scope

1.4.1 As part of the earlier application pre-application discussions with LBH highways officers took place. A Transport Statement (TS) Scoping Note (i-Transport Report Ref: ITB14706-001) was prepared in June 2019. This document set out the proposed scope of the Transport Statement and was submitted to the LBH highways team for agreement. A meeting with LBH highways officers took place to agree the scope of some further work which was included as part of the TS for the earlier application and is re-provided in this report.

1.4.2 This TS has been prepared by i-Transport on the basis outlined in the Transport Statement Scoping Note and discussions with LBH highways officers. The TS 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.

1.5 Residents Consultation

1.5.1 A local residents consultation event was held on 4 September 2019 where the earlier scheme was presented. Local residents raised a range of matters at the exhibition many of which were supportive. In relation to transport, the particular issues raised included:

- The ability of Rowlheys Place to accommodate additional traffic generated by the proposed leisure centre;
- The impact of the development on the existing Rowlheys Place and Stainby Close residents in terms of on-street parking and access to their properties;
- Queuing and capacity issues at the junction of Rowlheys Place and Harmondsworth Road;
- Proposed car parking capacity and the potential for leisure centre users to park in Rowlheys Place; and
- Visibility splays in relation to two coach drop-off lay-bys that are proposed for Harmondsworth Road.

1.5.2 The traffic impact along with other issues raised at the public consultation event are considered throughout this TS. The table in **Appendix A** provides a summary of the comments and issues raised at the resident's consultation event and includes a 'point by point' response addressing these issues. Some matters are now superseded by the content of this report.

1.6 Structure of Report

1.6.1 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, and additional commentary on similar schemes in Hillingdon;
- 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 T6.4B Hotel and Leisure** uses parking sets out:

> ***"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."***

2.3.3 **Policy T6.4C** states:

> ***"All operational parking must provide infrastructure for electric or other ultra-low emission vehicles, including active charging points for all taxi spaces."***

2.3.4 Regarding disabled persons parking, the London Plan states that hotel and leisure uses should have regard to the standards set out in Policy T6.5 Non-residential disabled persons parking. **Table 2.1** outlines these standards.

Table 2.1: London Plan Non-residential disabled persons parking standards

Land Use	Designated bays (per cent of total parking provision)	Enlarged bays (per cent of total parking provision)
Retail, recreation, hotels and leisure	6 per cent	4 per cent

Source: London Plan 2021

2.3.5 On the basis of the above, car parking provision should be provided on a case-by-case basis, with sufficient provision for electric vehicle and disabled parking.

2.3.6 The cycle parking standards relevant to the site are summarised below and in **Table 2.2**.

Table 2.2: London Plan Cycle Parking Standards

Land Use	Minimum Cycle Parking	
	Long Stay	Short Stay
Use Class D2 Sports (e.g. sports hall, swimming, etc.)	1 space per 8 full-time staff	1 space per 100sqm

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.

2.4.3 The transport policies relevant to this proposal are as follows:

- *Policy AM1* - 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 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.

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 replacing 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.
- *Policy DMCI 6* - Indoor Sports and Leisure Facilities – Development proposals will be acceptable in principle if:

"They are of scale and type intended to cater for local demands and needs of people living within a 1.6km radius of the site; or

They are intended to serve a wider public and are located in town centres or other areas where they are accessible by public transport for all potential users; and

They are not detrimental to the amenity of the surrounding area." *(paragraph 7.32)*

2.4.5 The proposed parking standards from the document are set out in **Tables 2.3** and **2.4** below.

Table 2.3: LBH Local Plan 2 Car Parking Standards

Land Use	Vehicle Parking Standards (Maximum)
Health Clubs, Licensed Clubs and Sports Facilities without Licensed Club House, Swimming Pools	On an individual basis using a transport assessment and travel plan, and in addition to provision for taxi and bus/coach access and parking

Source: London Borough of Hillingdon Local Plan Part 2 2021

Table 2.4: LBH Local Plan 2 Cycle Parking Standards

Land Use	Maximum Cycle Standards Requirement
Health Clubs, Licensed Clubs and Sports Facilities without Licensed Club House, Swimming Pools	1 per 10 staff and 1 per 20 peak period visitors

Source: London Borough of Hillingdon Local Plan Part 2 2021

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

2.5 Summary

2.5.1 Policy T6.4B of the London Plan 2021 states that in locations of PTAL 0-3, schemes should be assessed on a case-by-case basis and parking provision consistent in line with the Healthy Street

Approach. Electric vehicle and disabled parking bays should also be provided in line with guidance set out in the London Plan. It also recommends a cycle parking level of a maximum of 1 space per 8 staff for long stay and 1 space per 100sqm for short stay for D2 use classes.

2.5.2 The LBH Local Plan 2 notes that car parking at proposals such as this should be provided on an individual basis using a transport assessment and travel plan, and in addition to provision for taxi and bus/coach access and parking and that cycle parking should be provided to a maximum level of 1 space per 10 staff and 1 space per 20 peak period visitors.

2.5.3 The local and regional parking policies have some discrepancies between them and a balance should be sought and this balance is achieved through the analysis set out in the TS.

SECTION 3 EXISTING CONDTIONS 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 at the existing West Drayton Young People and Family Centre, located to the west of Harmondsworth Road with existing access provided from Rowlheys Place.

3.2.2 A site location plan is shown at **Figure 1**.

3.3 Walking and Cycling

Pedestrian Environment

3.3.1 Footways are provided on both sides of Rowlheys Place with street lighting on both sides of the carriageway. There is a crossing point with dropped kerbs and tactile paving circa 40m east of the site at the junction with Harmondsworth Road.

3.3.2 Harmondsworth Road benefits from a segregated footway / cycleway on both sides of the carriageway providing a link from West Drayton Station to the north of the site and the residential area of West Drayton to the south. At the signal-controlled junction with Harmondsworth Road/ Sipson Road/ Thornton Avenue there are formal push button pedestrian crossing points provided with dropped kerbs, tactile paving and street lighting.

Cycle Network

3.3.3 The local area benefits from an extensive network of cycle routes which provide convenient routes to and from West Drayton Station and linking with the local residential area. These are detailed in the TfL Local Cycling Guide 6.

3.3.4 In the vicinity of the site there are a number of routes signed or marked for the use of cyclists. 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.

3.3.5 Another off-road cycle route has been designated alongside the Grand Union Canal to the north of the site which provides a connection from Uxbridge to the north and Hayes to the north east.

3.4 Public Transport

Bus

3.4.1 The closest bus stops to the site are located on Station Road 300m to the north of the site. These bus stops provide access to bus services 222, 350, and 698. Additional bus stops on Porters Way provide access to the U5 bus service only and are located circa 430m to the northeast of the site. Further bus stops on Laurel Lane provide access to the U3 bus service only and are located circa 450m to the south of the site.

3.4.2 Bus stops on Station Road and for eastbound services on Porters Way are provided with shelters, timetabling information and lighting. The westbound bus stop on Porters Way and Laurel Lanes bus stops are provided with a flagpole, timetabling and lighting.

3.4.3 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 10 minutes	Service 10 minutes	Service every 12 minutes
350	Hayes – Yiewsley – West Drayton – Heathrow Terminal 5	Service every 20 minutes	Service every 20 minutes	Service every 20 minutes
698	West Drayton – Hayes – Ickenham	School service	No service	No service
U3	U3 - Uxbridge - West Drayton - Heathrow Airport	Service every 12 minutes	Service every 12 minutes	Service every 20 minutes
U5	Uxbridge – Cowley – Hillingdon Hospital – West Drayton – Stockley Park – Hayes & Harlington Station	Service every 12 minutes	Service every 12 minutes	Service every 20 minutes

Source: TfL – Assessed January 2022

3.4.4 In summary, the bus stops located on Station Road, Porters Way and Laurel Lane provide regular and frequent bus services from destinations such as Uxbridge, West Drayton, Ruislip, Hounslow and Heathrow Airport. This provision will clearly provide future staff and visitors of the site with excellent travel opportunities by bus.

Rail

3.4.5 National Rail services are available at West Drayton Station, operated by TfL and Great Western Railway. West Drayton Station is located 1,300m north of the site which equates to a 15-minute walk or 5-minute cycle journey. Approximately 4 services to Reading and London Paddington and 2 services to Didcot Parkway operate per hour.

3.4.6 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.

3.4.7 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.

3.4.8 When the full route opens in 2022, up to six Elizabeth Line services an hour will allow passengers to travel to West Drayton from Reading or Heathrow without changing. The Elizabeth Line will also provide a route through central London from Essex and southeast London via Liverpool Street and Canary Wharf.

3.5 Local Highway Network

3.5.1 Rowlheys Place bisects the site and leads to Stainby Close serving a number of residential dwellings. Rowlheys Place forms the minor arm of a priority junction with Harmondsworth Road circa 30m east of the existing site access.

3.5.2 Harmondsworth Road is a single carriageway road subject to a 30mph speed limit. Harmondsworth Road provides a connection from Harmondsworth and Longford in the south. North of the site, Harmondsworth Road joins a signal-controlled junction with Station Road/ Thornton Avenue/ Sipson Road. This junction is a main interchange for a number of routes connecting to the site.

3.5.3 The site benefits from two motorway connections within 4km. Located to the south east of the site is junction 4 of the M4 and to the south west of the site is junction 15 of the M25, connecting to the M4.

3.5.4 A Manual Classified Traffic Count (MCC) was undertaken at the junction of Rowlheys Place and Harmondsworth Road on Thursday 4 July 2019 (comfortably before for the school holidays) to record morning and evening peak hour traffic volumes. The traffic flows are shown on **Figures TF1** & **TF2.**

3.5.5 **Figures TF1** and **TF2** show that peak hour traffic flows on Rowlheys Place and very low with 51 movements in the morning peak hour and 50 movements in the evening peak hour. Traffic volumes on Harmonsworth Road are moderate with a 2-way peak hour flow of around 800 vehicles per hour.

3.6 Accessibility

PTAL

3.6.1 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.

3.6.2 The site has a PTAL rating of 2, indicating a reasonable level of public transport accessibility. This PTAL score is a result of the proximity to West Drayton railway station and local bus stops (the closest within 430m 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

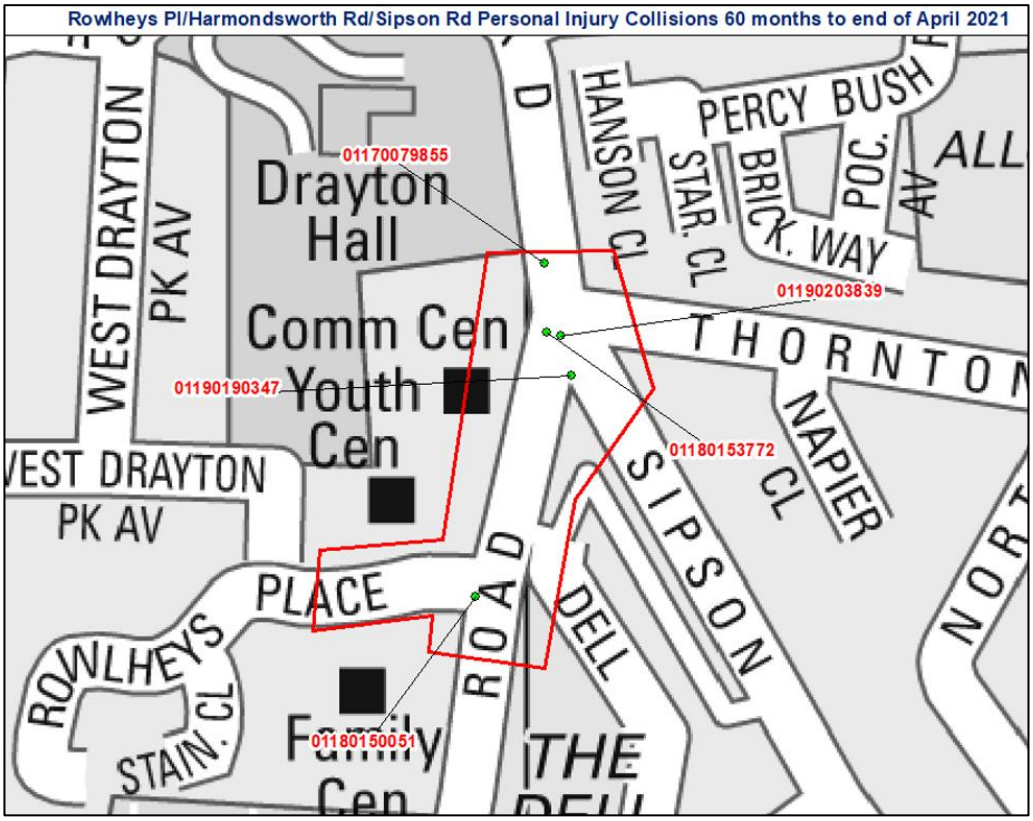
3.6.3 TfL's WebCAT resource also provides travel time mapping (TIM) which reflects the travel time from the site to other areas in London by public transport during a morning peak hour.

Considering this, the site is accessible to a large area of the Borough and west London within a 30-45-minute journey. The output is provided at **Appendix C**.

3.7 Road Safety

3.7.1 Personal Injury Accident (PIA) data has been obtained from TfL for the most recently available five-year period up to April 2021. The study area included Rowlheys Place, Harmondsworth Road and the junction of Station Road/ Thornton Avenue/ Sipson Road. The full data is provided as **Appendix B** and an extract of the PIA plot is provided at **Image 3.1**.

Image 3.1: Extract of TfL Personal Injury Accident Plot



Source: TfL

3.7.2 A total of 5 PIAs have been recorded during the 60 months to end of April 2021 within the study area, all accidents were classified as 'slight' in severity, i.e. there were no serious or fatal accidents.

3.7.3 **Table** 3. summarises the location and severity of each PIA and the full data is included in **Appendix D**. Further detail of the recorded serious PIAs is summarised in the following paragraphs.

Table 3.2: Summary of PIA Data

Year	Motorised Vehicles		Pedestrians and Cyclists		Total
	Slight	Serious	Slight	Serious	
2016	0	0	0	0	**0**
2017	0	0	1	0	**1**
2018	1	0	1	0	**2**
2019	2	0	0	0	**2**
2020	0	0	0	0	**0**
2021	0	0	0	0	**0**
TOTAL	**3**	**0**	**2**	**0**	**5**

Source: TfL

3.7.4 One of the five accidents involved pedestrians, one occurred in wet conditions and four of the accidents occurred in hours of darkness.

3.7.5 No accidents occurred in Rowlheys Place in the 60 months to end of April 2021 and just one accident occurred close to the junction with Harmondsworth Road in that period.

3.7.6 Contributory factors to the slight PIAs can be largely attributed to driver/ pedestrian error, including:

- Slippery road (due to weather);
- Loss of control;
- Poor turn or manoeuvre;
- Careless/ reckless in a hurry;
- Failed to look properly;
- Aggressive driving;
- Cyclist wearing dark clothing at night;
- Disobeyed automatic traffic signal; and
- Vision affected – rain, sleet, snow or fog.

Summary

3.7.7 A review of the PIA data in the vicinity of the site in the 60 months to the end of April 2021 has been undertaken. Whilst any accident is regrettable, the cause and locations of the accidents do not suggest a specific highway safety problem on the local highway network. This TS

nevertheless carefully assesses the impacts of the development to consider whether there will be unacceptable safety impacts in line with paragraph 110 of the NPPF.

3.8 Summary

3.8.1 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 there is excellent cycle access. The site has good highway access with no road safety problems identified on the site access road and no particular clusters or trends 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 a new 5,529sqm sports centre with eight lane swimming pool, sports hall and football pitch with associated access, servicing, landscaping and parking.

4.2.2 The proposed site layout is provided on Hunters **drawing M9534 APL004 Rev E.**

4.3 Access Arrangements

4.3.1 The access arrangements reflect the same approach used (and agreed) as part of the earlier application.

4.3.2 A new access and drop off arrangement will be provided to the north of Rowlheys Place to provide access to the new leisure centre. In addition, the new car park for the site will be accessed from a priority junction in the location of the existing West Drayton Family Centre to the south of Rowlheys Place. Visibility splays of 2.4m x 43m are provided at both locations in accordance with the 30mph speed limit as shown on **drawing ITB14708-GA-005 Rev E.**

4.3.3 The car park will be clearly sign posted from Rowlheys Place so that all visitors to the leisure centre turn left into the car park and do not continue into the residential part of Rowlheys Place. To further ensure that no leisure centre traffic enters Rowlheys Place, it is proposed to locally narrow Rowlheys Place through the introduction of a small 'pinch point' just beyond the car park access, this is detailed on **drawing ITB14708-GA-006 Rev D.**

4.3.4 A new pedestrian crossing will be provided on Rowlheys Place to ensure safe pedestrian movement between the leisure centre and the car park, indicative details are provided on Hunters **drawing M9534 APL004 Rev E** and full details of the provision will be agreed with LBH highways officers and the final scheme of works in the public highway can be secured by a suitably worded planning condition. Further details of the type of crossing proposed are provided below.

4.4 Parking

Car Parking

4.4.1 As outlined in Section 2, The London Plan 2021 sets the parking standards for development proposals. For leisure centres in PTAL 0-3, decisions on parking provision should be made on a case-by case basis, but with provision for both electric vehicle and disabled parking.

4.4.2 The proposal is for a car park to be located to the south of Rowlheys Place comprising of 144 spaces. This includes 8 'blue badge' spaces, provided at the main entrance (north side of Rowlheys Place) and 17 'blue badge' spaces in the proposed car park (south of Rowlheys Place). This is in line with (and in excess of) London Plan guidance for non-residential disabled parking provision, which requires a minimum of 9 designated and 5 enlarged disabled bays with regard total parking provision of 144 spaces. The proposed level of car parking also includes 8 'brown badge' spaces in the car park.

4.4.3 20% of the parking spaces (28 spaces) will be provided with active EV charging points, these will be managed so that they are available for non-EV use whilst / should the number of EVs visiting the site remain limited. A Dial-a-cab bay is also proposed outside the main entrance of the site.

4.4.4 The car park will be subject to a suitable management process to remove the potential for users of the leisure centre to be tempted to park in Rowlheys Place or Stainby Close. In addition, the applicant is prepared to consider introducing a local parking management system in Rowlheys Place and Stainby Close should there be local support for such a measure.

Car Parking Assessment

4.4.5 Given that the level of car parking is now 144 spaces as opposed to 199 spaces (ref: application 75127/APP/2019/3221) an assessment of the adequacy of the 144 spaces has been completed. The assessment considers three approaches:

- **Parking accumulation -** based on forecast level of use and hourly in/out movements using the TRICS database and the forecast traffic generation agreed as part of application 75127/APP/2019/3221.
- **Comparison with Hillingdon Sports and Leisure Centre –** based on a parking accumulation survey at that site.

- **Comparison with Highgrove Pool and Fitness Centre -** based on a parking accumulation survey at that site.

Parking accumulation

4.4.6 As part of the earlier planning application the level of forecast traffic movements were agreed with LBH Highways. The agreed traffic movements were used to assess the off-site traffic impact of the proposal i.e. the traffic impact in Rowlheys Place and at the junction of Harmondsworth Road. The same data has now been used to assess the hourly movements of cars into and out of the car park for every hour of the day. This assessment is known as a parking accumulation assessment and assesses the likely occupancy of the proposed car park for every hour of the day.

4.4.7 The parking accumulation assessment uses the agreed trip rates as set out in Section 5 and the results of the assessment are shown in **Table 4.1**.

Table 4.1: Car Parking Accumulation Assessment

Time	Arrivals	Departures	Accumulation	Occupation
06:00-07:00	30	5	30	21%
07:00-08:00	28	25	33	23%
08:00-09:00	32	24	42	29%
09:00-10:00	40	27	55	38%
10:00-11:00	30	31	54	38%
11:00-12:00	31	34	51	36%
12:00-13:00	27	31	48	33%
13:00-14:00	20	29	40	27%
14:00-15:00	21	23	37	26%
15:00-16:00	45	25	57	39%
16:00-17:00	59	45	71	49%
17:00-18:00	61	59	73	51%
18:00-19:00	75	65	83	58%
19:00-20:00	64	68	80	55%
20:00-21:00	30	73	37	26%
21:00-22:00	8	33	12	8%
22:00-23:00	1	8	5	3%

Source: Agreed TRICS trip rates / Consultant

4.4.8 **Table 4.1** shows that the occupancy of the car park is expected to peak between the hours of 18.00-19.00 with 83 vehicles expected to be parked on the site between those hours. The occupancy peaks at 83 vehicles representing 58% of the parking spaces being used, i.e. 42% are forecast to remain available.

4.4.9 The above assessment confirms that the proposed 144 car parking spaces are more than sufficient with the supply of parking spaces significantly greater than the demand.

Hillingdon Sports and Leisure Centre Car Park

4.4.10 To further demonstrate that the proposed level of car parking is sufficient to accommodate the likely demands of the leisure centre and at the request of LBH highways officers, a parking survey of the Hillingdon Sports and Leisure Complex in Gatting Way, Uxbridge was undertaken on the Thursday 4 July 2019 and Saturday 6 July 2019 (both dates are comfortably before the school holidays began and before the Covid-19 pandemic) between 07:00 and 19:00. The results are summarised below, and the full survey data is included at **Appendix E**.

4.4.11 The Hillingdon Sports and Leisure Centre is located at Gatting Way, Uxbridge. The site is located in an area with a PTAL level 1b (i.e. it is less accessible by public transport than the proposed site at Rowlheys Place). The facilities themselves are extensive, comprising an 8-lane 50m indoor competition pool and leisure pool, outdoor pools and a lido, gym, group exercise studios, indoor cycling studio and health suite. There is also a 400m running track, football pitches, indoor sports hall. The Hillingdon Sports and Leisure Centre is therefore of a greater scale than the facility proposed at Rowlheys Place.

4.4.12 The survey found the following:

- The Hillingdon Sports and Leisure Centre provides 207 car parking spaces.
- During the weekday survey (Thursday 4 July 2019) there was only one 15-minute period when the car park reached a maximum occupancy of 207 cars in the car park. For all other 15-minute periods of the day there was available spaces with a range of free spaces varying between 13 free spaces at 10:30 to 137 free spaces at 08:30.
- During the weekend survey (Saturday 6 July 2019) there was always available spaces in the car park, with the range of free spaces varying between 16 spaces at 10:30 to 185 spaces at 07:30.

4.4.13 The proposal at Rowlheys Place is for a total of 144 parking spaces and whilst this is less than that provided at Hillingdon Sports and Leisure Centre, the Rowlheys Place scheme is of a smaller scale. In addition, the site at Rowlheys Place is in an area with a higher level of non-motorised accessibility meaning that staff and visitors have more opportunities to take up sustainable modes of transport to access the site which will lead to a reduced demand for car parking than is found at Hillingdon Sports and Leisure Centre.

Highgrove Pool and Fitness Centre

4.4.14 To further demonstrate that the proposed level of parking provided at the proposed development is sufficient, a review has been undertaken of the Highgrove Pool and Fitness Centre, located in Ruislip, Hillingdon. The car park of the centre initially provided 99 parking spaces and currently has a PTAL of 1a i.e. the lowest score for public transport accessibility.

4.4.15 An application for a further 43 parking spaces within the site car park (to provide a total of 142 spaces) was proposed alongside refurbishments to the leisure centre. At the time, no LBH parking standards existed for leisure centres, and each case was determined on an individual basis. For this reason, surveys were undertaken in 2011 to ascertain the demand of the existing car park and therefore assist in determining appropriate level of additional parking to be provided. The survey considered 14 days in March 2011, 14 days in May 2011 and 14 days in July 2011. The average occupancy at various times of the day is set out in **Table 4.2**.

Table 4.2: Car parking demand at Highgrove Pool and Fitness Centre

Day	8am	10am	12pm	2pm	4pm	6pm	8pm
Monday	93	120	113	92	112	120	114
Tuesday	91	120	111	93	115	118	110
Wednesday	91	117	100	93	110	120	105
Thursday	89	114	99	92	109	120	104
Friday	90	121	119	87	116	114	87
Saturday	54	113	113	89	53	-	-
Sunday	46	78	88	85	50	-	-

Source: Waterman Group Transport Statement January 2012

4.4.16 **Table 4.1** shows that the maximum parking demand at the Highgrove Pool and Fitness Centre was 120 cars and peak demand often occurred at 10am and 6pm.

4.4.17 The proposal at Rowlheys Place is for a total of 144 parking spaces, i.e. greater than that provided at Highgrove Pool and Fitness Centre and the Rowlheys Place site is in an area with a higher level of non-motorised accessibility meaning that staff and visitors have more opportunities to take up sustainable modes of transport to access the site which will lead to a reduced demand for car parking than is found at Highgrove Pool and Fitness Centre.

Cycle Parking

4.4.18 A total of 72 cycle spaces are proposed. 48 cycle parking spaces will be provided for members/staff and 24 cycle spaces for visitors.

4.4.19 The overall provision is in accordance with both LBH standards and the London Plan (2021) standards which require:

London Plan

- 1 space per 8 full-time staff (150 full-time equivalent staff are expected which would require 19 spaces).
- 1 space per 100sqm (5,529sqm) would require 55 spaces.
- Total 74 spaces

LBH standards

- 1 space per 10 staff (150 full-time equivalent staff are expected which would require 15 spaces).
- 1 space per 20 peak period visitors (whilst the total peak period visitors is not known the provision of 57 further spaces equates to 1,150 peak period visitors).
- Total 72 spaces

4.4.20 In summary a total of 72 cycle parking spaces are provided which reconciles well with both the London Plan and LBH standards.

4.5 Refuse Collection and Servicing

Refuse Collection

4.5.1 Refuse collection will be managed by onsite maintenance staff who will bring the bins to a temporary bin collection point close to Rowlheys Place on collection day. The temporary collection point is shown on Hunters **drawing M9534 APL004 Rev E.**

4.5.2 The swept path of the refuse collection vehicle is shown on **drawing ITB14708-GA-005 Rev E,** as agreed with LBH highways officers the proposed on-site layout has been amended to ensure that the refuse vehicle can enter and exit the site without reversing.

Leisure Centre Pool Chemical Deliveries and Servicing

4.5.3 Further swept path analysis has been undertaken to demonstrate that the site can accommodate a 7.5ton Luton Box Van to service the centre and swimming pool which is maximum size vehicle expected. The service access is provided on the western side of the centre and will allow such a service vehicle to access the building for deliveries and enter and exit in a forward gear. This is illustrated on **drawing ITB14708-GA-005 Rev E.**

Coach Drop Off Arrangements

4.5.4 A coach drop-off area on Harmondsworth Road has been designed to accommodate the safe drop-off of visitors to the leisure centre. The coach bay will accommodate two coaches and will require works to the public highway including alternations to street lighting and the existing footway / cycle. Indicative details are provided on Hunters **drawing M9534 APL004 Rev E** and the swept path analysis with a more refined highway design is shown on **drawing ITB14708-GA-005 Rev E.** The details shown reflect the requirements agreed with LBH highways officers such that the layby is located so that it has no impact on the availability of visibility from the Rowlheys Place junction – even during times when it is occupied by two coaches. The scheme of works in the public highway will be secured by a suitably worded planning condition.

4.6 Proposed Pedestrian Improvement

Zebra Crossing

4.6.1 It is proposed to provide a 'Zebra' crossing on Rowlheys Place between the car park entrance / exit and the leisure centre. This is shown on Hunters **drawing M9534 APL004 Rev E.**

4.6.2 Given the type of development proposed, the need for almost all visitors to have to cross Rowlheys Place and the likely nature of some visitors being large school groups, the applicant would like to deliver the Zebra crossing. However, it is accepted that the TfL *Deign Standards for Signal Schemes in London* suggests that new signal crossings (which technically includes Zebra crossings) should have a PMV[2] value[2] of at least 0.8 to justify a new installation of this type.

4.6.3 A PMV[2] assessment has been carried out using the forecast number of vehicles set out in Section 5 and the forecast number of pedestrians (assuming that each car entering the site carries two people and they cross the road once to enter the leisure centre and again to exit the leisure centre). The assessment has generated a PMV[2] value of 0.1, which is below the level indicated in the TfL *Deign Standards for Signal Schemes in London*. The PMV[2] assessment is included in **Appendix F**.

4.6.4 However, this is an LBH led scheme on a non-TfL road and it is possible for LBH Highways to consider this an 'exceptional circumstance' and allow the crossing proposal to proceed. The TfL guidance covers 'exceptional circumstances' stating, ***"whilst this*** [PMV[2]] ***criteria should be adhered to whenever possible, there may be times when exceptional circumstances mean that the proposal is assessed on a site by site basis….."***

4.6.5 On the basis of the likely type and frequency of pedestrian movements including young persons' being involved in school groups etc (which are not included in the PMV[2] Assessment), the applicant is prepared to bring forward the crossing subject to this being acceptable to the local Highway Authority.

4.7 Summary

4.7.1 Access to the site and proposed car park is proposed via simple new priority access junctions designed in accordance with Manual for Streets and TfL guidance. The access provides a direct pedestrian connection to existing footways in Harmondsworth Road.

4.7.2 The proposal includes sufficient car and cycle parking – comparable to that available at the larger Hillingdon Sport and Leisure Centre in Uxbridge. Further, the level of car parking demand at the Highgrove Pool site in Ruislip has been assessed and shown to be less than the level proposed at this site despite the Ruislip site operating with a lower PTAL than the proposed development.

[2] PMV[2] is a calculation of the number of vehicles and pedestrians in a given location which considers the likely level of difficulty in crossing a road and generates a value.

In addition, the forecast level of traffic and occupancy of the car park has been assessed (using the agreed trip rates) for each hour of the day and found to be more than adequate with more car parking to be provided than the forecast demand.

4.7.3 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.

4.7.4 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 Traffic Generation Assessment

5.2.1 To understand the traffic impact of the proposed development it is necessary to calculate how much additional traffic will be generated by the development. An assessment has therefore been undertaken to establish the existing traffic generation of the Young Person's Centre and Family Centre currently on the site and the traffic generation of the proposed new leisure centre.

Existing Vehicular Traffic Generation

5.2.2 The Young Person's Centre and Family Centre is currently not being heavily used. However, the centre involves several large buildings, meeting rooms, workshops and offices which could be re-used without any changes to their planning permission.

5.2.3 To gain an understanding of the potential existing number of vehicular movements that could be generated by the Young Person's and Family Centre, the TRICS database has been interrogated for similar uses. Unfortunately, there are no similar sites in the database and the use of 'best fit' is under the Leisure – Community Centre category.

5.2.4 Applying a Community Centre peak hour trip rate to the overall one-hectare site area where the Young Person's and Family Centre is located results in the potential level of vehicle movements shown in **Table 5.1**. The TRICS outputs are in **Appendix G**.

Table 5.1: Existing Traffic Generation

Time	Arrivals	Departures	Total
Morning Peak (0800-0900)	43	4	46
Evening Peak (1700-1800)	39	28	67

Source: TRICS

Proposed Traffic Generation for New Sports Centre

5.2.5 Trip rates for the proposed leisure centre have been obtained from TRICS using the following parameters:

- Tenure: Leisure Centre;
- Region: Greater London;
- Size relevance: Sites between 4,000-8,460sqm;
- Location relevance: surveys in 'edge of 'town centre' and 'suburban areas' locations only.

5.2.6 The trip rates are summarised in **Table 5.2** below.

Table 5.2: Development Trip Rates and Traffic Generation – 5,529sqm floor area

Time	Trip Rates (per SQM)			Traffic Generation		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Morning Peak (0800-0900)	0.766	0.555	1.321	42	31	73
Evening Peak (1700-1800)	1.411	1.305	2.716	78	72	150

Source: TRICS

5.2.7 The results demonstrate that the proposed development is likely to generate a total of 73 two-way vehicle movements in the weekday morning peak hour and 150 two-vehicle movements in the evening peak hour.

5.3 Net Impact

5.3.1 The difference between the vehicular trip generation of the current use of the site and the development proposal is presented in **Table 5.3.**

Table 5.3: Vehicular Trips – Net Increase

Time	Morning Peak (0800-0900)			Evening Peak (1700-1800)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Existing Use	43	4	46	39	28	67
Proposed Use	42	31	73	78	72	150
Net increase	-1	+27	+27	+39	+44	+83

Source: TRICS / Consultant's Estimates. Note: Numbers may not sum due to rounding

5.3.2 The results presented demonstrate that the proposed development will result in an increase (over and above the existing use) of 27 trips in the morning peak and 83 trips in the evening peak hour.

5.4 Development Traffic Distribution and Assignment

5.4.1 In order to determine the likely distribution of traffic travelling to and from the proposed leisure centre, a gravity model has been developed. Settlements that are within the 20-25 minutes' drive time have been included in the gravity model. The population of these settlements (as likely origins for customers) has been taken from the 2011 census data. Journey times have been calculated based on the Google Maps Direction facility. The full gravity model is included in **Appendix H** and a summary provided in **Table 5.4**.

Table 5.4: Distribution of Trips (Car Driver Only)

Settlement	% Distribution of Trips
West Drayton	44.4%
Harmondsworth / Sipson	23.5%
Yiewsley	17.5%
Hayes	6.8%
Reading	3.4%
Hillingdon	2.5%
Uxbridge	1.8%
Total	**100.0%**

Source: 2011 Census / Consultants Estimates

5.4.2 The assignment of development traffic can therefore be summarised as follows:

- 76% of arrivals and departures will be from the north;
- 24% of arrivals and departures will be from the south.

5.4.3 The assigned development traffic flows illustrated on **Figure TF3** for the morning peak and **Figure TF4** for the evening peak. These figures show the total development traffic rather than just the net increase.

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 2024 and therefore the following scenarios are proposed to be assessed:

- 2019 Baseline;
- 2024 future year without development; and
- 2024 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 2024. Factors to allow for traffic growth to 2024 have been derived from the National Transport Model (NTM) Hillingdon 029 middle layer super output area (MSOA), which comprises the development site and surrounding area. Using this methodology, **Table 5.5** below summaries the growth factors which will be applied to the 2019 observed traffic flows to derive 2024 peak hour traffic flows.

Table 5.5: Traffic Growth Factors

Growth Period	Time Period	TEMPRO Growth Rate
2019-2024	Morning Peak Hour	1.0528
	Evening Peak Hour	1.0547

Source: TEMPRO

5.6 Traffic Impact

5.6.1 **Table 5.6** presents an assessment of the net impact of the proposed development on the local highway network.

Table 5.6: Net Traffic Impacts

Route	Observed Two Way Traffic Flows		Development Traffic		% Impact	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Harmondsworth Road North	848	869	21	63	2.5%	7.2%
Harmondsworth Road South	837	855	6	20	0.7%	2.3%

Route	Observed Two Way Traffic Flows		Development Traffic		% Impact	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Total net development traffic[3]	-	-	**27**	**83**	-	-

Source: Traffic Surveys – July 2019 and Consultant Calculations

5.6.2 **Table 5.6** shows that the net impact of the proposed development on Harmondsworth Road will be small, with a maximum of 63 additional vehicles travelling to / from the north and 20 travelling to / from the south in the very busiest hours of the day. This equates to approximately one vehicle every minute during the very busiest hour of the day which will have very little impact on that part of the local highway network.

No 'net impact' assessment

5.6.3 In recognition of the fact that the existing Young Person and Family Centre is not fully operational, a further assessment has been carried out to assess the impact of the development on the basis that the development traffic is entirely new i.e. it does not "net off" the traffic associated with the previous use. The results are shown in **Table 5.7** and reflect the development related traffic flows in **Figures TF3** and **TF4**.

Table 5.7: Worst case Traffic Impacts

Route	Observed Two Way Traffic Flows		Development Traffic		% Impact	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Harmondsworth Road North	848	869	56	114	6.6%	13.1%
Harmondsworth Road South	837	855	18	36	2.2%	4.2%
Total worst-case development traffic[4]	-	-	**73**	**150**	-	-

Source: Traffic Surveys – July 2019 and Consultant Calculations

5.6.4 **Table 5.7** shows that when (unrealistically) taking no account of the previous use of the site, the worst-case impact of the proposed development on Harmondsworth Road will remain small,

[3] Table 5.3 third row
[4] Table 5.3 second row

with a maximum of 114 additional vehicles travelling to / from the north and 36 travelling to / from the south in the very busiest hour of the day. This equates to no more than one or two additional vehicles every minute during the busiest hour of the day 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 network, site observations have been supplemented by a traffic capacity assessment which has been carried out on the Rowlheys Place / Harmondsworth Road junction. The morning and evening peak hours have been assessed for a future year of 2024, which is the proposed year of opening.

5.7.2 The operation of the junctions has been tested using the TRL software Junctions 10 and the development traffic flows from the 'worst case' assessment have been used. The 2024 with development traffic flows are shown on **Figures TF5** and **TF6.**

Rowlheys Place / Harmondsworth Road

5.7.3 The junction is a simple three arm priority junction, with the minor arm providing access to Rowlheys Place. **Table 5.8** summarises the findings of the assessment with full outputs provided in **Appendix I**.

Table 5.8: PICADY Assessment – Rowlheys Place/ Harmondsworth Road

	AM Peak Hour			PM Peak Hour		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2019 Base Year						
Rowlheys Place	0.06	<1	8	0.07	<1	9
Harmondsworth Road	0.04	<1	5	0.05	<1	5
2024 Future Year						
Rowlheys Place	0.07	<1	8	0.08	<1	9
Harmondsworth Road	0.05	<1	5	0.05	<1	5
2024 Future Year with Development						
Rowlheys Place	0.14	<1	9	0.25	<1	11
Harmondsworth Road	0.15	<1	5	0.24	1	6

Source: Junctions 10

5.7.4 The assessment shown in **Table 5.8** demonstrates that in the future scenario (with background traffic growth) and the worst-case development related traffic assumption that the Rowlheys Place/ Harmondsworth Road junction will continue to operate comfortably within capacity with little queuing or delay on any arm.

5.8 Construction phase

5.8.1 The applicant is prepared to submit and agree a Construction Traffic Management Plan (CTMP) prior to the commencement of development to ensure that the construction phase is carefully managed to ensure that any impacts on the residential part of Rowlheys Place is limited.

5.8.2 The CTMP will include provision for deliveries, vehicle turning, contractor parking and hours of operation etc. The CTMP would be secured by a suitably worded planning condition.

SECTION 6 SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 This TS has been prepared by i-Transport on behalf of the London Borough of Hillingdon to accompany a planning application for a new leisure centre on the existing site of the West Drayton Young People Centre.

6.1.2 The proposed development comprises of a new leisure centre comprising of an eight-lane swimming pool, sports hall and football pitch.

6.1.3 The development will also deliver 144 car parking spaces including a car park to the south of Rowlheys Place and 24 cycle spaces for visitors and 48 for members and staff.

Accessibility

6.1.4 The site has good overall accessibility with excellent proximity to a wide range of bus routes and the wider London transport network. Pedestrian and cycle access is very good and the site has good highway access with a new pedestrian crossing on Rowlheys Place being proposed as part of the development. There are no road safety problems identified on the site access road and no particular clusters or trends in the local vicinity.

Servicing / Parking

6.1.5 The proposal includes sufficient car and cycle parking with a parking accumulation exercise having been completed using the traffic data agreed with LBH Highways as part of the earlier application. In addition, the parking provision is of a similar scale to that available at the Highgrove Pool and Fitness Centre, which has been shown to have ample capacity. Clear signage is proposed into the car park so that no visitors to the leisure centre will mistakenly drive into Rowlheys Place. In addition, a localised road narrowing is proposed to further discourage unintended access to the residential part of Rowlheys Place.

6.1.6 Coach drop off facilities will be provided in a new layby on Harmondsworth Road which does not impede visibility at the junction of Rowlheys Place.

6.1.7 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

6.1.8 The assessment demonstrates even in the worst-case development related traffic scenario the Rowlheys Place / Harmondsworth Road junction will operate comfortably within capacity with little queuing or delay on any arm. The existing highway network has a good road safety record and the development related traffic can be readily accommodated on it.

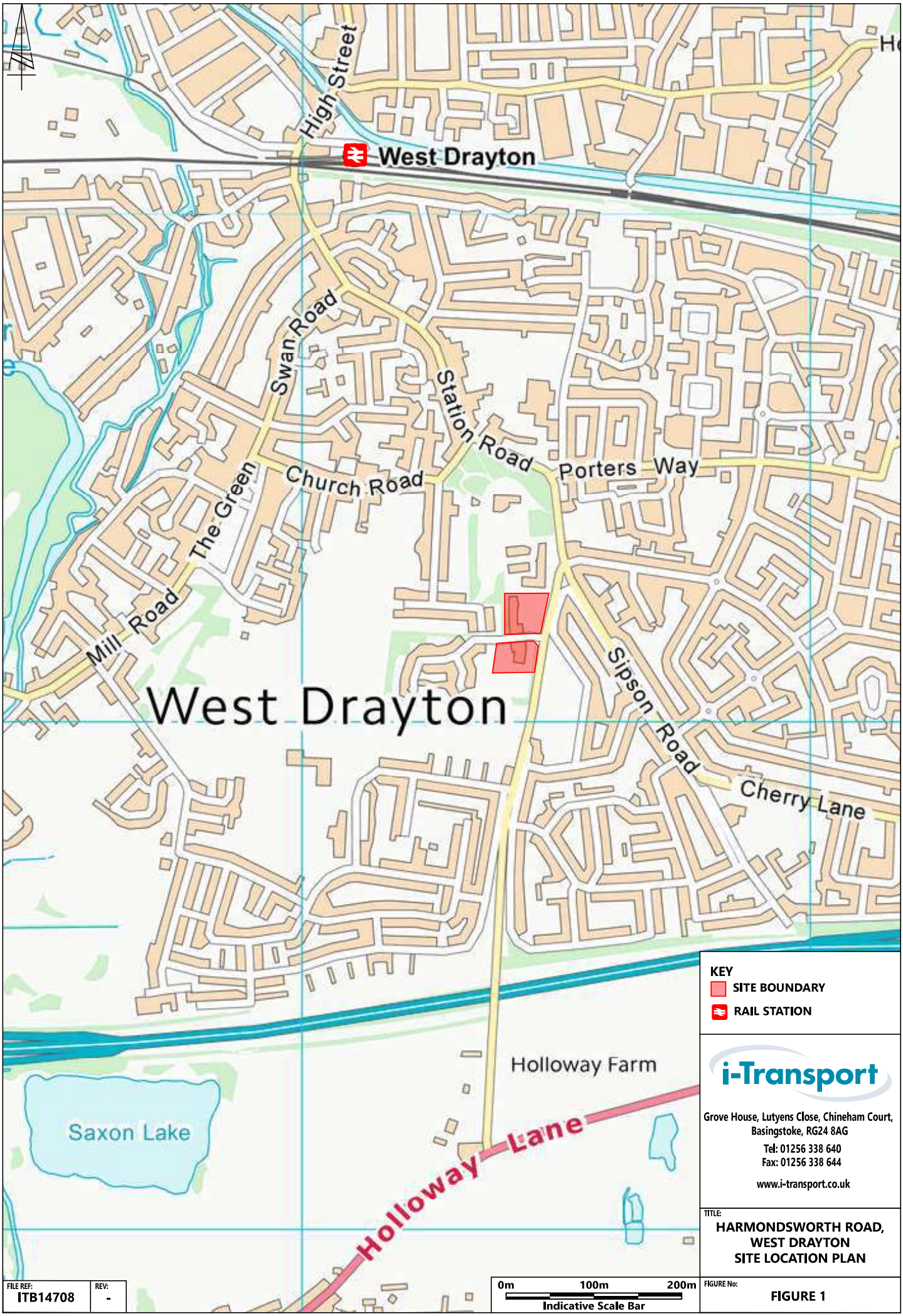
6.1.9 A Construction Traffic Management Plan would be secured by a suitably worded planning condition.

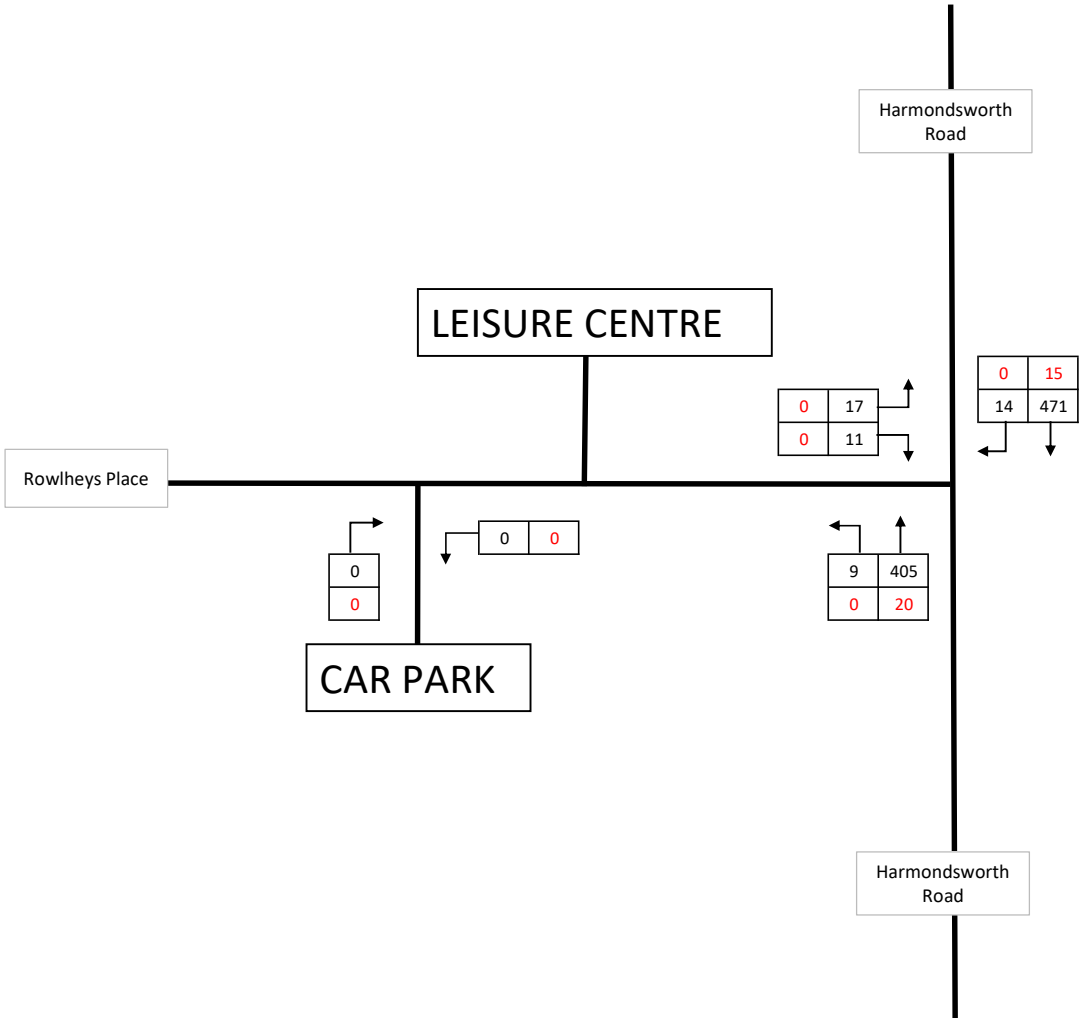
6.1.10 A separate Travel Plan Statement has been prepared to accompany the planning application and no account of the benefits that this will bring has been included in the traffic impact analysis.

6.2 Conclusion

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

FIGURES


High Street
West Drayton
Swan Road
Station Road
Porters Way
The Green
Church Road
Mill Road
West Drayton
Sipson Road
Cherry Lane
Holloway Farm
Saxon Lake
Holloway Lane
KEY
SITE BOUNDARY
RAIL STATION
i-Transport
Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG
Tel: 01256 338 640
Fax: 01256 338 644
www.i-transport.co.uk
TITLE:
HARMONDSWORTH ROAD, WEST DRAYTON
SITE LOCATION PLAN
FILE REF: ITB14708
REV: -
0m 100m 200m
Indicative Scale Bar
FIGURE No:
FIGURE 1



KEY

500 = TOTAL VEHICLES

25 = HGVs

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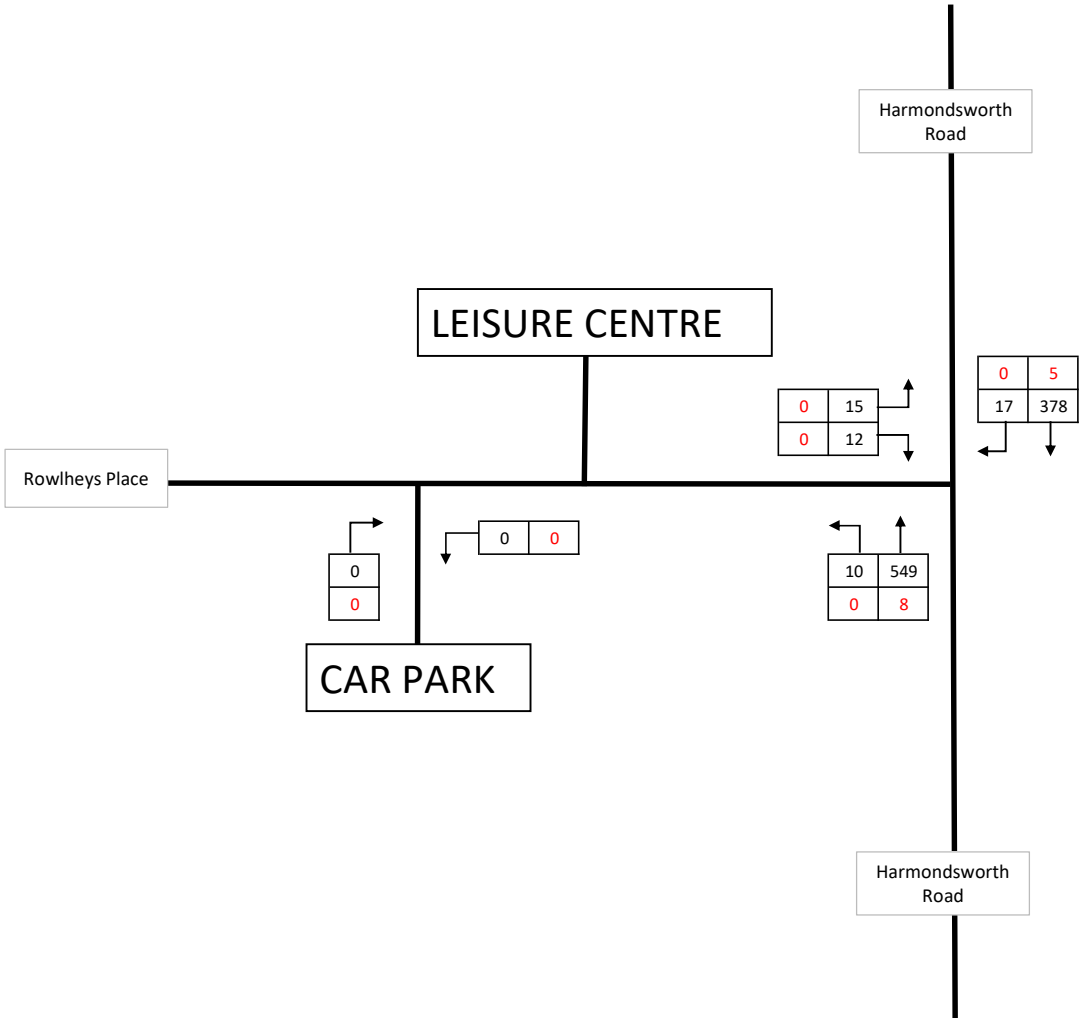
Rowhleys Place Leisure Centre

TF1

2019 Observed Traffic Flows - AM Peak Hour (0800-0900)



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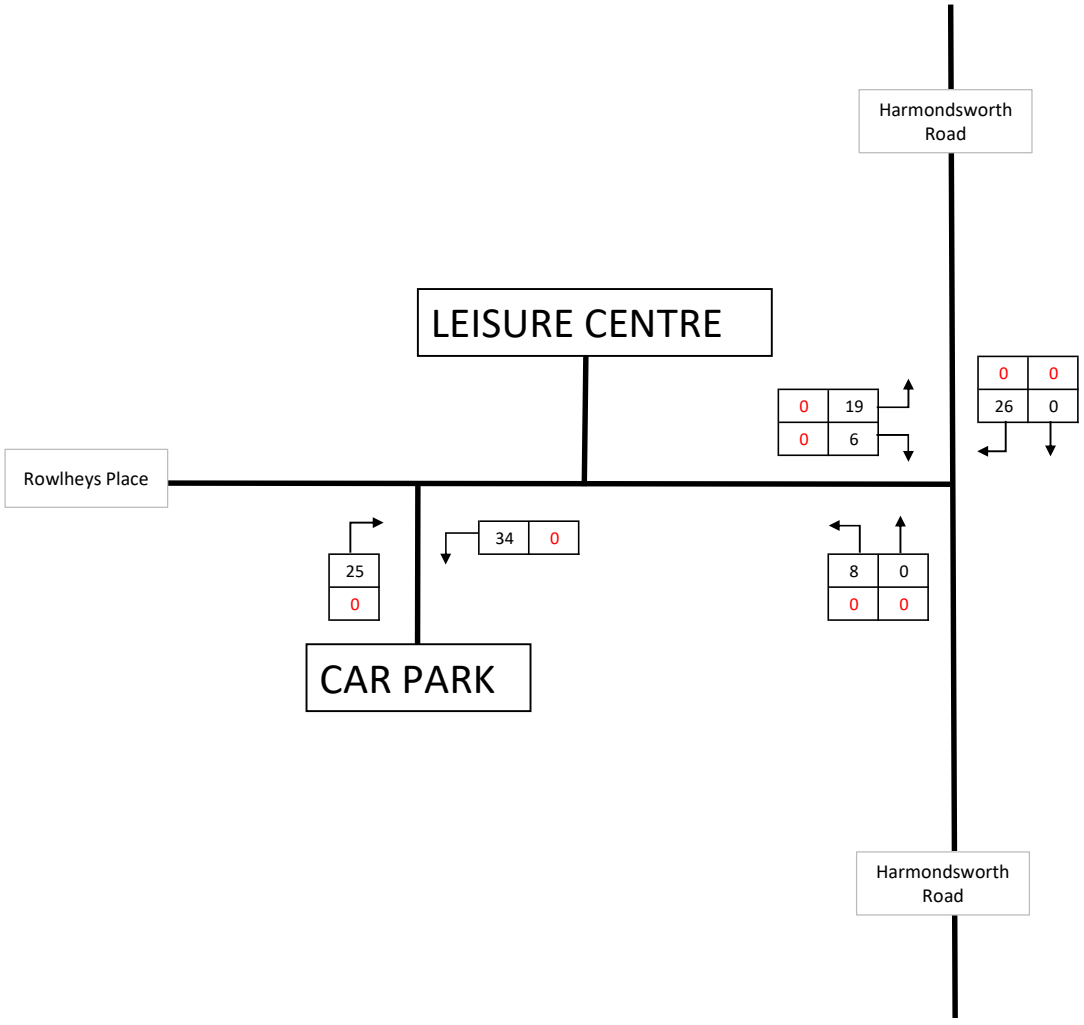
TF2

2019 Observed Traffic Flows - PM Peak Hour (1700-1800)



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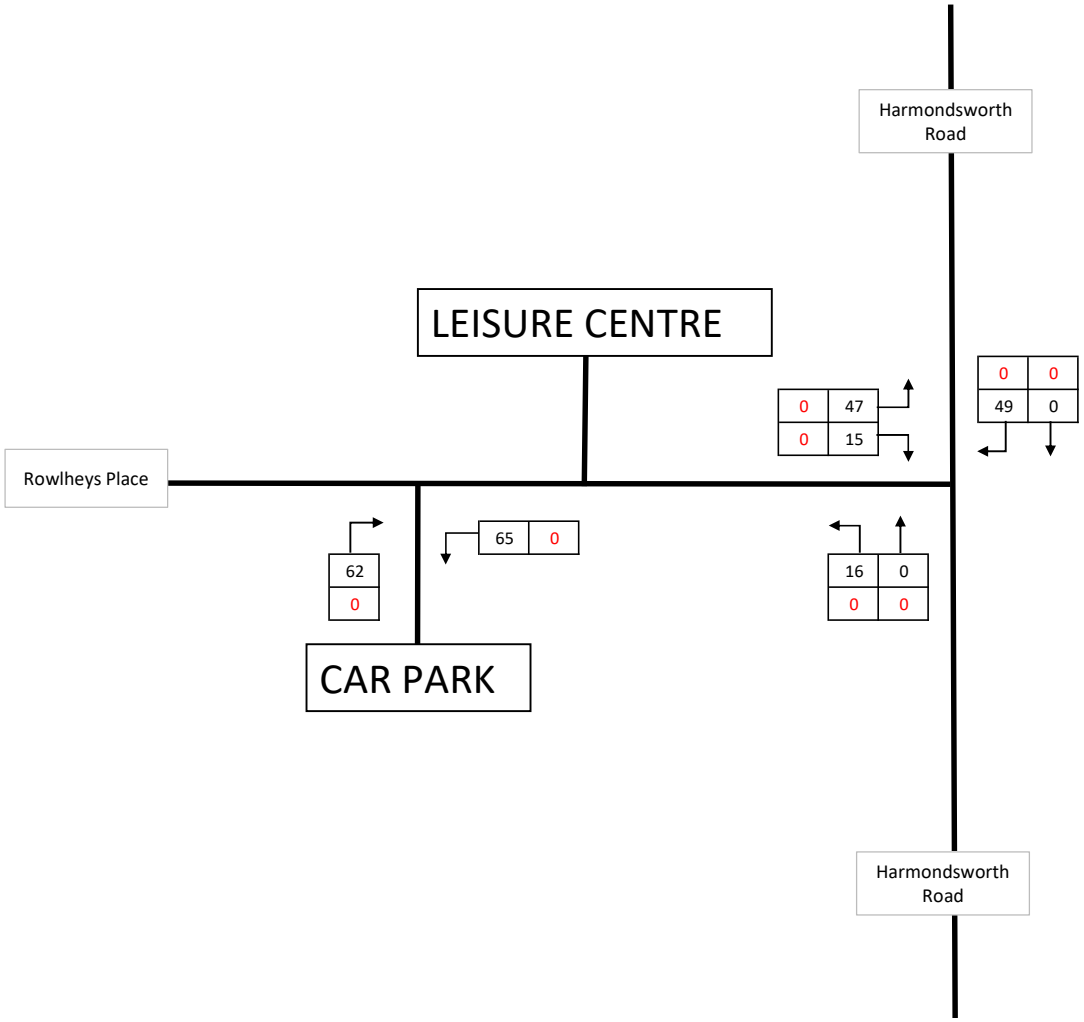
TF3

Development Assignment TOTAL (AM Peak Hour)



KEY

500 = TOTAL VEHICLES

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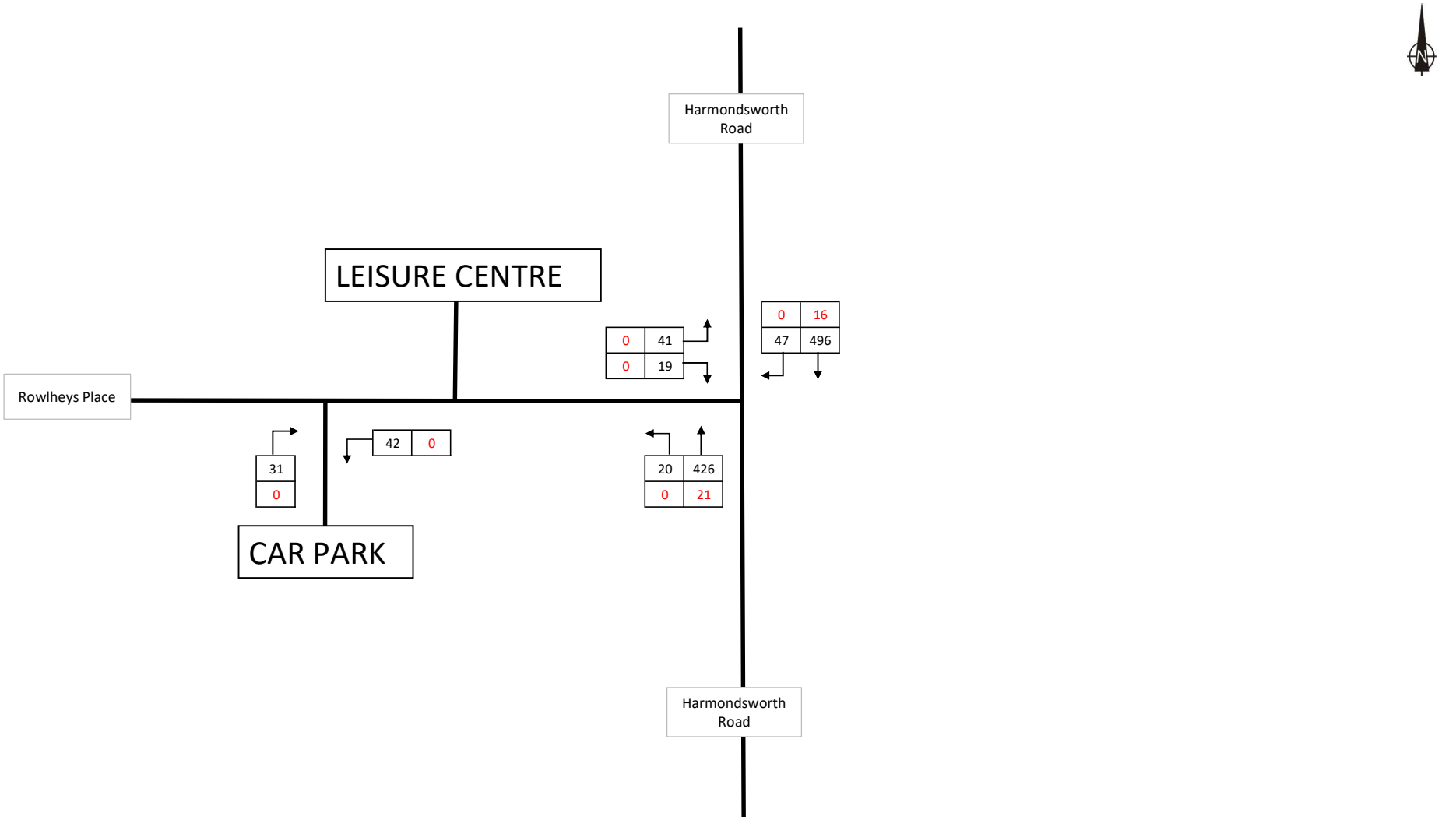
TF4

Development Assignment TOTAL (PM Peak Hour)



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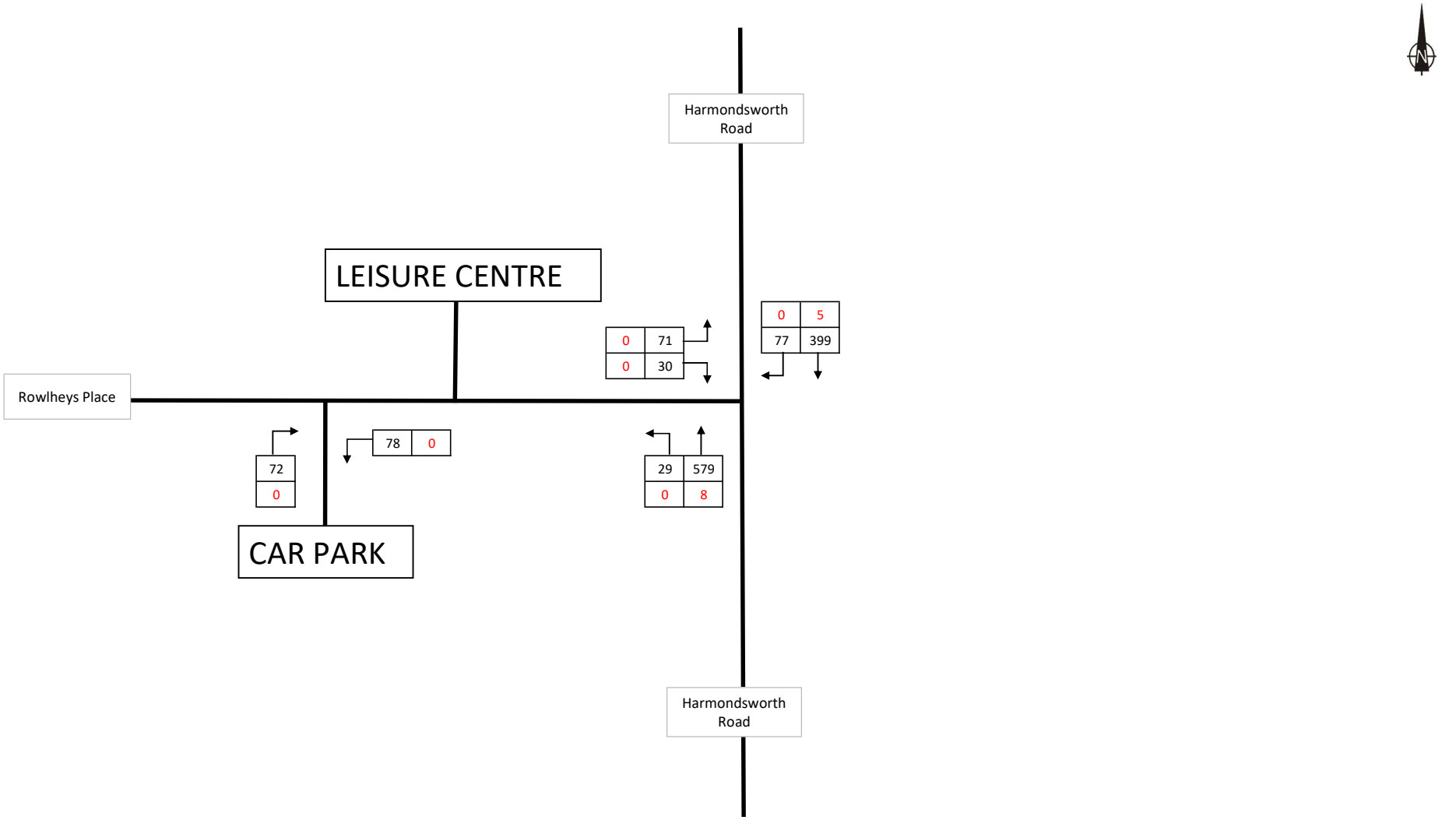
TF5

2024 'with development' Traffic Flows AM Peak Hour (0800-0900)



KEY

500 = TOTAL VEHICLES

25 = HGVs

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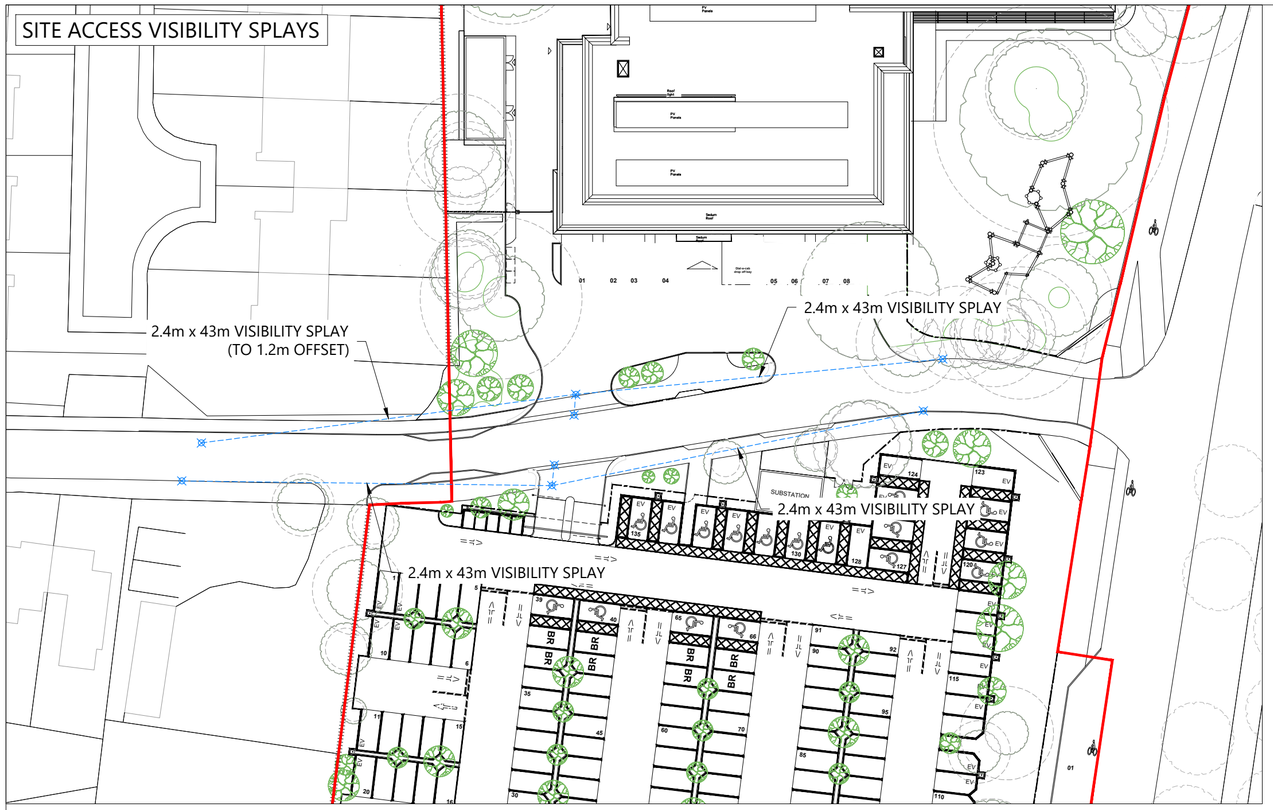
Rowhleys Place Leisure Centre

TF6

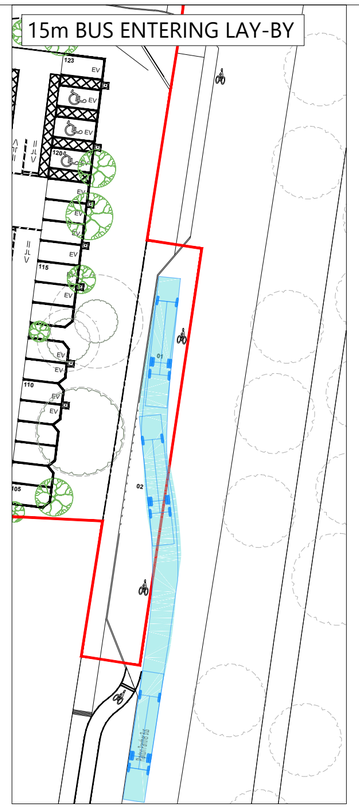
2024 'with development' Traffic Flows PM Peak Hour (1700-1800)

DRAWINGS

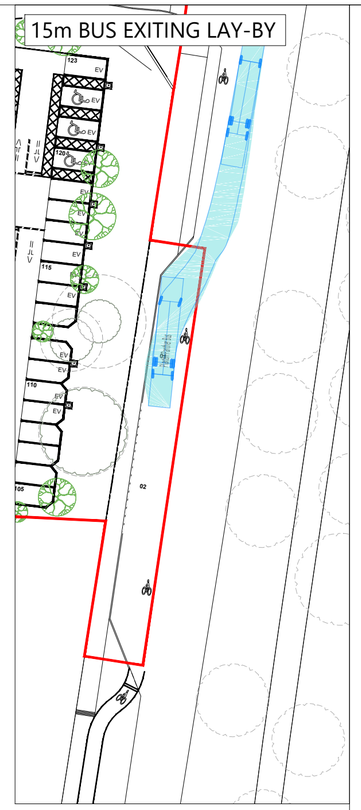
SITE ACCESS VISIBILITY SPLAYS



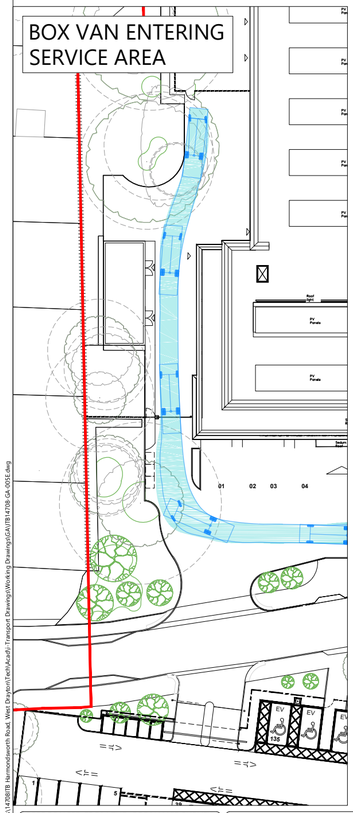
15m BUS ENTERING LAY-BY



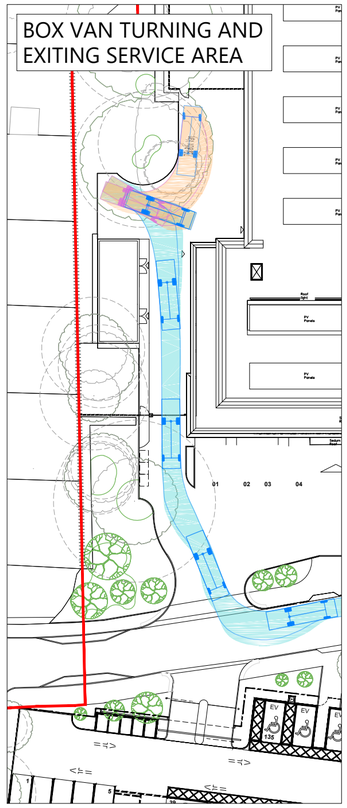
15m BUS EXITING LAY-BY



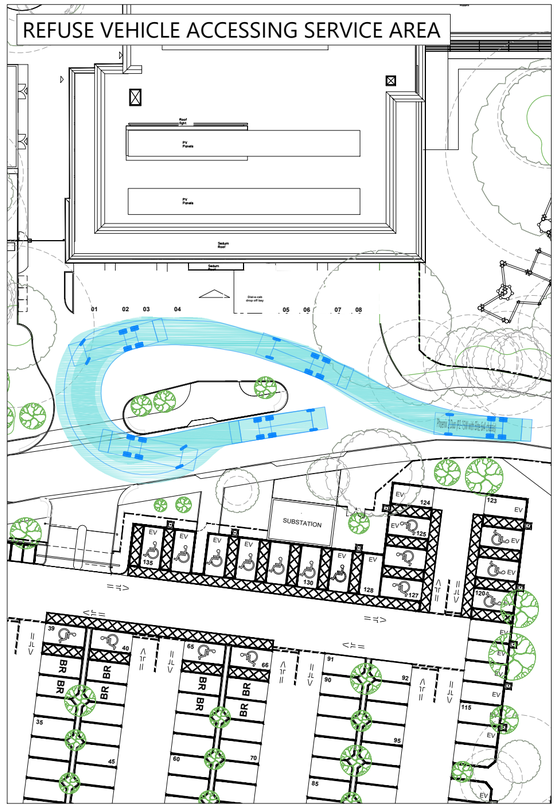
BOX VAN ENTERING SERVICE AREA



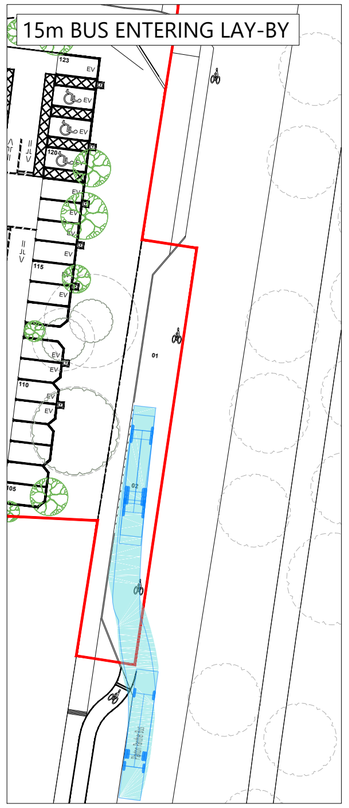
BOX VAN TURNING AND EXITING SERVICE AREA



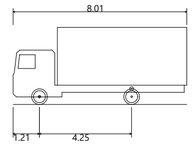
REFUSE VEHICLE ACCESSING SERVICE AREA



15m BUS ENTERING LAY-BY

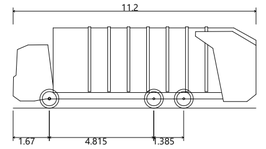


15m BUS EXITING LAY-BY



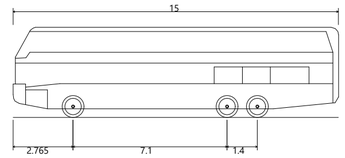
7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m



Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall Length	11.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m



Plaxton Panther Bus

Overall Length	15.000m
Overall Width	2.500m
Overall Body Height	4.157m
Min Body Ground Clearance	0.397m
Track Width	2.500m
Lock to lock time	5.00s
Wall to Wall Turning Radius	12.500m

REV	DATE	BY	DESCRIPTION	CHK	APD
E	06.01.22	JD	SITE LAYOUT REVISED	SJ	SJ
D	24.02.20	JD	SITE LAYOUT REVISED	SJ	SJ
C	27.09.19	SH	SITE LAYOUT REVISED	SJ	SJ
B	20.09.19	JD	TRACKS AMENDED	SJ	SJ
A	20.08.19	JD	LAY-BY AMENDED	SJ	SJ

STATUS:

FOR INFORMATION

i-Transport

The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

TITLE:

SITE ACCESS VISIBILITY SPLAYS AND SWEPT PATH ANALYSIS -
7.5T BOX VAN, REFUSE VEHICLE AND 15m BUS

PROJECT:

HARMONDSWORTH ROAD, WEST DRAYTON

CLIENT:

LONDON BOROUGH OF HILLINGDON

DRAWN:	CHECKED:	APPROVED:
JD	SJ	SJ
PROJECT No:	**SCALE @ A2:**	**DATE:**
ITB14708	1:500	19.07.19
DRAWING No:		**REV:**
ITB14708-GA-005		E

REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE. LICENCE No. 100044286.
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SCALE BAR @ 1:500

0 5 10 25 50

T:\Projects\14000 Series\14708\Harmondsworth Road, West Drayton\Tech\Autodk Transport Drawings\Working Drawings\GA\ITB14708-GA-005E.dwg

PV Panels

PV Panels

Sedum Roof

Sedum Roof

Dial-a-cab drop off bay

01 02 03 04 05 06 07

LEISURE CENTRE PARKING SIGN (SEE SIGN DETAIL)

3.7m

SUBSTATION

EV EV EV EV EV EV

135 130

1 5 10

39 40 65 66 91 90

BR BR

SCALE BAR @ 1:250

0 1 2 5 10 25

SIGN DETAIL:

REV	DATE	BY	DESCRIPTION	CHK	APD
D	06.01.22	JD	SITE LAYOUT REVISED	SJ	SJ
C	24.02.20	JD	SITE LAYOUT REVISED	SJ	SJ
B	27.09.19	SH	SITE LAYOUT REVISED	SJ	SJ
A	20.09.19	JD	ACCESS AMENDED	SJ	SJ

STATUS: FOR INFORMATION

i-Transport

The Square, Basing View, Basingstoke, Hampshire, RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

TITLE: ROWLHEYS PLACE IMPROVEMENT SCHEME

PROJECT: HARMONDSWORTH ROAD, WEST DRAYTON

CLIENT: LONDON BOROUGH OF HILLINGDON

DRAWN:	CHECKED:	APPROVED:
JD	SJ	SJ

PROJECT No:	SCALE @ A3:	DATE:
ITB14708	1:250	10.09.19

DRAWING No:	REV:
ITB14708-GA-006	D

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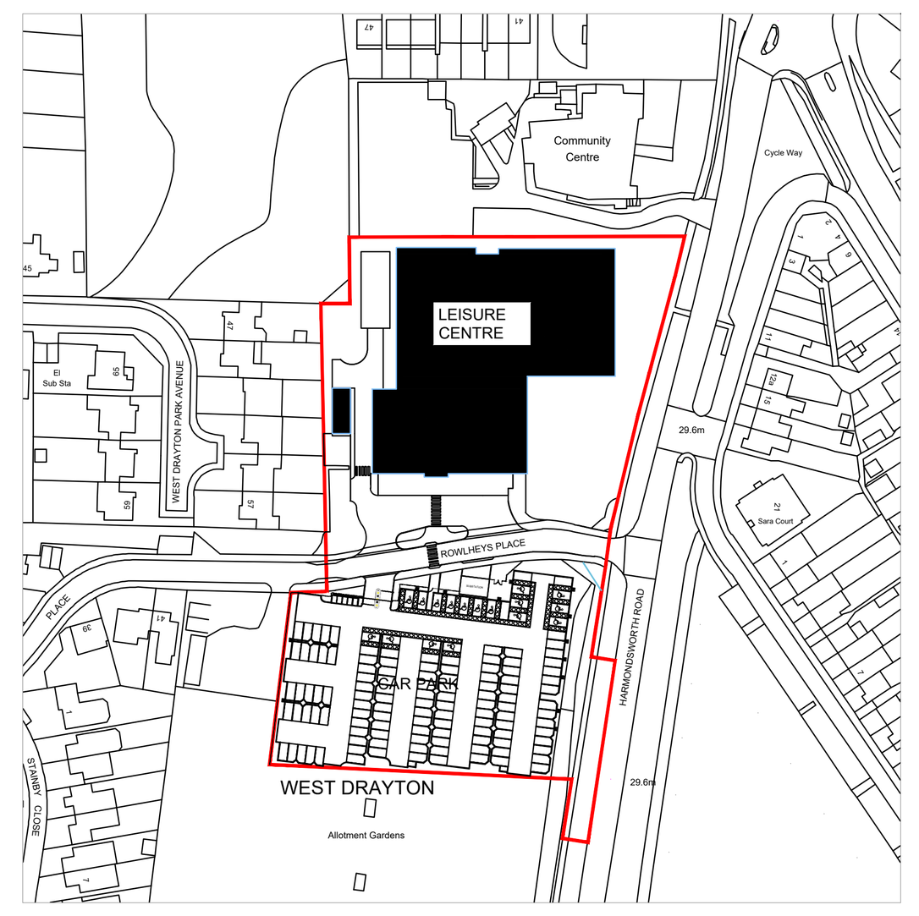
PROPOSED SITE PLAN

Revision
Revision A - Submitted for Planning
Revision B - Car Park Capacity Revised
Revision C - Coach drop-off area and cycle path updated.
Revision D - Acoustic fence extended to car park area.
Revision E - Building footprint and car park amended. Landscape amended to suit



SITE LOCATION PLAN 1:2000@A0

LEGEND

- Existing CAT A, B & C trees (as indicated) to be retained with root protection zone
- Existing CAT A, B, C & U trees (as indicated) to be removed
- Existing CAT A, B, C & U trees (indicated as illustrative) outside of application boundary
- Proposed New Tree (refer to landscape plan for species)
- 1800mm railings, primed & painted black
- 2100mm railings, primed & painted black
- 2100mm Acoustic timber fencing
- Dwarf brick wall 600mm with 1100mm high railings, primed & painted black
- Potential low height retaining wall
- Existing hedge to be retained
- 1800mm Mixed Evergreen Species Hedge (no thorn or poisonous species)
- Mown Grass
- EL1F Native Wildflower meadow mix
- EW1 Native Woodland mix
- New mixed low level security shrub planting (no thorn or poisonous species)
- Groundcover planting to base of mature trees
- Artificial turf
- Hogging path - timber edging
- Sedum Green Roof System
- 800mm high raised timber planter, with mixed wildflower species (no thorn or poisonous species)
- Permeable concrete paving block, size: 200x100x80mm. colour: Charcoal
- Permeable concrete paving block, size: 200x100x60mm. colour: Natural
- Permeable concrete paving block, size: 200x100x80mm. colour: Heather
- Permeable concrete paving block, size: 200x100x60mm. colour: Bracken
- Concrete paving block, size: 90x90x60mm. colour: Sandstone
- Permeable concrete flag paving, size: 400x400x65mm. colour: Mid Grey
- Buff Tarmac
- Raised table pedestrian crossing
- Block paving to parking and drop-off area
- Loose gravel to building perimeter
- Tarmac to permeable concrete paving block, size:90x90x60mm. colour: Charcoal
- Tactile Blister Paving. Colour: Standard Charcoal
- Painted road markings. Colour: White
- Gate access
- Vehicular automatic access gate and Security access gate with fob / code entry, and release button exit
- Stainless Steel Cycle Sheffield Stand
- Line of existing building for demolition
- Application Site boundary (to be checked and verified by the client before any site works commence)
- Public green areas

PARKING SCHEDULE			
	Blue Badge spaces	Brown Badge spaces	Spaces
Entrance	08	00	00
Car Park	17	8	110
TOTAL	25	8	110
			143

2 coach spaces provided along Harmondsworth Road
1 Dial-a-cab drop off bay provided at the entrance
Cycle Parking: 48 member & 24 Visitor spaces
EV 20% active EV charging point (28 no. spaces) with 100% passive allowance.

0 1m 5m 10m 20m

PROPOSED SITE PLAN 1:200@A0

N

project name: YIEWSLEY & WEST DRAYTON LEISURE CENTRE HARMONDSWORTH ROAD / ROWLHEYS PLACE

drawing reference: PROPOSED SITE PLAN

date: AUGUST 2019
sheet:
drawn: GH
scale: 1:200@A0
checked:

job number: M9534
drawing number: APL004
revision: E

status: PLANNING

cad ref: M9534_APL004_E_Proposed Site Plan_1-200_A0_bind.dwg

Use figured dimensions only. All levels and dimensions to be checked on site. This drawing is to be read in conjunction with all other relevant drawings and specifications.
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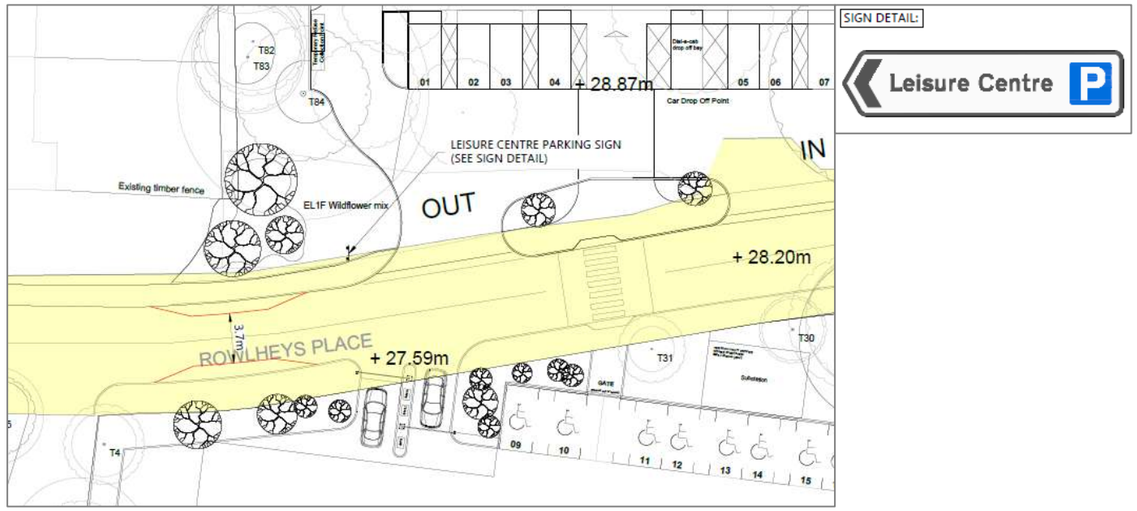
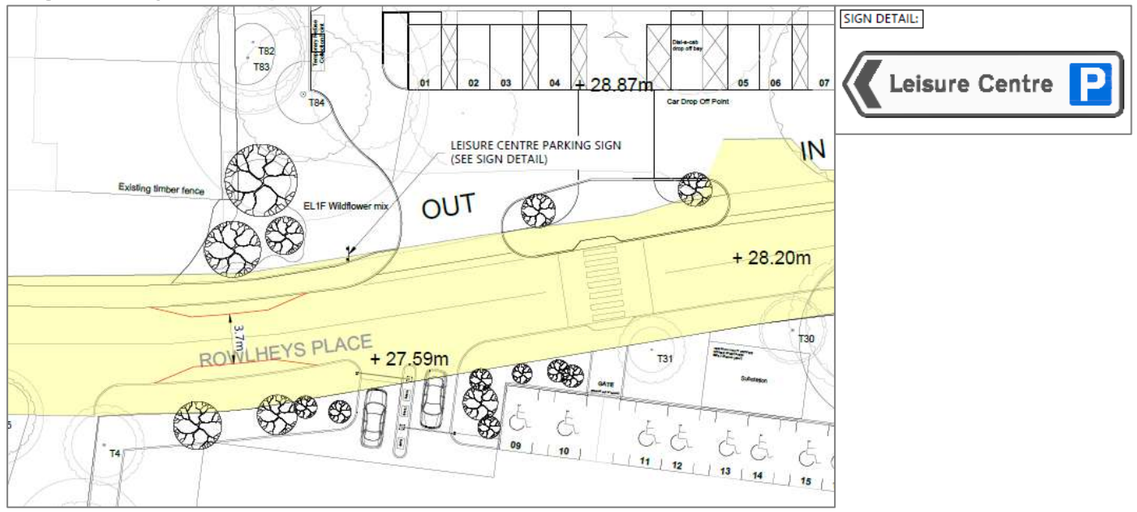
APPENDIX A. Local Resident Comments and Response

Comment Number	Comment/Response	Main Concern	i-Transport Response
1	***Proposed leisure centre looks good. But where will the youth services that are currently the be relocated to? There has been no information given as to where the young people in Yiewsley/West Drayton will access support***	N/A	Not a transport issue
2	***I look forward for this sport centre to be build. It is something that the residents need for a long time. I used to live 5 minutes walking from a sport centre. Its great to benefit from all the things (swimming pool, classes, gym etc.). As long as it has free and controlled car parking it is not an issue for the residents around it***	Parking	Client to clarify likelihood of no car parking charges for users of the Leisure Centre.
3	***In all honesty I am very happy to have this wonderful facility near to where I live. My main concern is this, at the moment the cul-de-sac that we live in is very peaceful and that once the facility is up and running that it will no longer be the case. All the traffic that will miss the car park entrance will go directly into the cul-de-sac. i would like assurance that this will be controlled somehow or the other. maybe by having a gate or NO ENTRANCE signs***	Having gated community	To prevent vehicles entering the residential area of Rowlheys Place and Stainby close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided to create a clear demarcation that a resident area lies beyond. The narrowing could be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below. **Image: Rowlheys Place Improvement Scheme** 

Comment Number	Comment/Response	Main Concern	i-Transport Response
4	***1. The entrance to the leisure centre is very open and quite obsinct to the area surrounding and quite an eyesore*** ***2. Can the entrance to the leisure centre and the facility be from the main Harmondsworth Road, and not Rowlheys Place*** ***3. Can we have restricted access too (residents only) so to avoid thoroughfairing by outsiders***	Security	1. Not a transport issue 2. The existing junction with Harmondsworth Road is suitable to accommodate the development traffic. 3. To prevent vehicles entering the residential area of Rowlheys Place and Stainby close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided to create a clear demarcation that a resident area lies beyond. The narrowing could be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below. **Image: Rowlheys Place Improvement Scheme** 
5	***This is a positive development. The centre is needed in the south of the Borough. The facilities outlined would be very useful for the local community***	N/A	Not a transport issue
6	***I would like to suggest the entrance to the car park be off Harmondsworth Road not Rowlheys Place as it takes us long enough to get out of our road at times already without the extra traffic this proposed centre would generate***	Traffic/Parking	A Manual Classified traffic Count (MCC) was undertake at the junction of Rowlheys Place and Harmondsworth Road on Thursday 4 July 2019 (comfortably before for the school holidays) to record morning and evening peak hour traffic volumes. The video footage for this survey has been reviewed and can be summarised as follows: • Minimal delay in waiting to turn left or right from Rowlheys Place; • Vehicles during the morning and evening peak hours quite often do not have to stop at the giveway line before turning onto Harmondsworth Road and when they do, the delay to them is minimal; and • The queue from the signal-controlled junction to the north (Harmondsworth Road / Sipson Road / Thornton Avenue / Station Hill) extends to the Rowlheys Place / Harmondsworth Road Junction only once in the morning peak and clears within 6 seconds.  08:22:30 – vehicles leaves Rowlheys Place, stopping at give way lines. 08:16:33 – vehicle leaves Rowlheys Place turning right without 08:12:33 – vehicles leaves Rowlheys Place, stopping at give way lines. 08:12:53 – vehicle leaves Rowlheys Place. Vehicle waited 20 seconds to turn right.

<table>
<tr><th>Comment Number</th><th>Comment/Response</th><th>Main Concern</th><th>i-Transport Response</th></tr>
<tr><td>7</td><td>Construction disruption management
On-road parking control
Mini roundabout Rowlheys/Harmondsworth Road?</td><td>Traffic/Parking</td><td>Matters concerning construction traffic will be addressed in a Construction Traffic Management Plan (CTMP).

To assess the operation of the network, a traffic capacity assessment has been carried out on the Rowlheys Place / Harmondsworth Road junction. The morning and evening peak hours have been assessed for a future year of 2022, which is the proposed year of opening.

PICADY Assessment – Rowlheys Place/ Harmondsworth Road
<table>
<tr><th rowspan="2"></th><th colspan="3">AM Peak Hour</th><th colspan="3">PM Peak Hour</th></tr>
<tr><th>RFC</th><th>Queue (veh)</th><th>Delay (s/veh)</th><th>RFC</th><th>Queue (veh)</th><th>Delay (s/veh)</th></tr>
<tr><td>2019 Base Year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Rowlheys Place</td><td>0.06</td><td>0.1</td><td>8</td><td>0.05</td><td>0.1</td><td>8</td></tr>
<tr><td>Harmondsworth Road</td><td>0.04</td><td>0.1</td><td>5</td><td>0.05</td><td>0.1</td><td>5</td></tr>
<tr><td>2022 Future Year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Rowlheys Place</td><td>0.07</td><td>0.1</td><td>8</td><td>0.05</td><td>0.1</td><td>8</td></tr>
<tr><td>Harmondsworth Road</td><td>0.04</td><td>0.1</td><td>5</td><td>0.05</td><td>0.1</td><td>5</td></tr>
<tr><td>2022 Future Year with Development</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Rowlheys Place</td><td>0.13</td><td>0.1</td><td>8</td><td>0.21</td><td>0.3</td><td>10</td></tr>
<tr><td>Harmondsworth Road</td><td>0.13</td><td>0.3</td><td>5</td><td>0.20</td><td>0.4</td><td>6</td></tr>
</table>

The assessment demonstrates that in the future scenario (with background traffic growth) and the worst-case development related traffic assumption that the Rowlheys Place/ Harmondsworth Road junction will operate comfortably within capacity with little queuing or delay on any arm.</td></tr>
</table>

<table>
<tr><th>Comment Number</th><th>Comment/Response</th><th>Main Concern</th><th>i-Transport Response</th></tr>
<tr><td>8</td><td>The road layout will present massive inconvenience to residents. Foot traffic to and from the centre from the car park and bus drop off bays will be a hazard. The increased vechicle traffic from the car park and drop off area outside the centre will cause huge delays for residents attempting to drive out onto Harmondsworth Road which is already difficult at peak times. why has no option to re-route thee road been considered? Lazy planning or has no traffic simulation been instructed? Option B would greatly reduce inconvenience to residents and also reduce/remove risk to pedestrian access to the new centre</td><td>Traffic/Parking</td><td>
A Manual Classified traffic Count (MCC) was undertake at the junction of Rowlheys Place and Harmondsworth Road on Thursday 4 July 2019 (comfortably before for the school holidays) to record morning and evening peak hour traffic volumes.

The video footage for this survey has been reviewed and can be summarised as follows:

• Minimal delay in waiting to turn left or right from Rowlheys Place;
• Vehicles during the morning and evening peak hours quite often do not have to stop at the giveway line before turning onto Harmondsworth Road and when they do, the delay to them is minimal; and
• The queue from the signal- controlled junction to the north (Harmondsworth Road / Sipson Road / Thornton Avenue / Station Hill) extends to the Rowlheys Place / Harmondsworth Road Junction only once in the morning peak and clears within 6 seconds.

To assess the operation of the network, a traffic capacity assessment has been carried out on the Rowlheys Place / Harmondsworth Road junction. The morning and evening peak hours have been assessed for a future year of 2022, which is the proposed year of opening.

PICADY Assessment – Rowlheys Place/ Harmondsworth Road
<table>
<tr><th></th><th colspan="3">AM Peak Hour</th><th colspan="3">PM Peak Hour</th></tr>
<tr><th></th><th>RFC</th><th>Queue (veh)</th><th>Delay (s/veh)</th><th>RFC</th><th>Queue (veh)</th><th>Delay (s/veh)</th></tr>
<tr><td>2019 Base Year</td><td colspan="6"></td></tr>
<tr><td>Rowlheys Place</td><td>0.06</td><td>0.1</td><td>8</td><td>0.05</td><td>0.1</td><td>8</td></tr>
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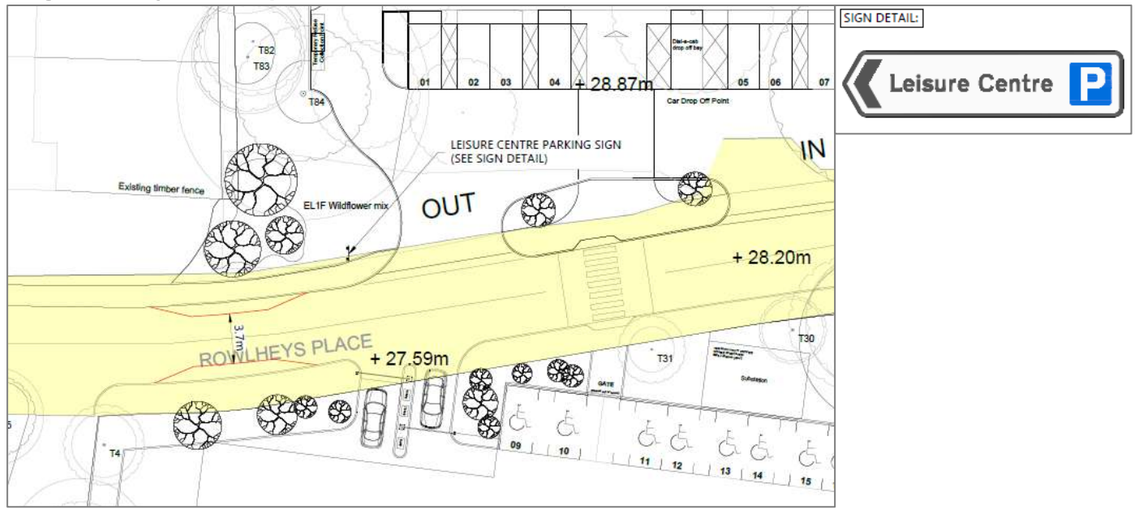
<tr><td>2022 Future Year with Development</td><td colspan="6"></td></tr>
<tr><td>Rowlheys Place</td><td>0.13</td><td>0.1</td><td>8</td><td>0.21</td><td>0.3</td><td>10</td></tr>
<tr><td>Harmondsworth Road</td><td>0.13</td><td>0.3</td><td>5</td><td>0.20</td><td>0.4</td><td>6</td></tr>
</table>
The assessment demonstrates that in the future scenario (with background traffic growth) and the worst-case development related traffic assumption that the Rowlheys Place/ Harmondsworth Road junction will operate comfortably within capacity with little queuing or delay on any arm.

08:22:30 – vehicles leaves Rowlheys Place, stopping at give way lines.
08:16:33 – vehicle leaves Rowlheys Place turning right without waiting.
08:12:33 – vehicles leaves Rowlheys Place, stopping at give way lines.
08:12:53 – vehicle leaves Rowlheys Place. Vehicle waited 20 seconds to turn right.
</td></tr>
</table>

Comment Number	Comment/Response	Main Concern	i-Transport Response
9	***To protect the residents of both Rowlheys Pl & Stainby Cl, could the idea of a gated development (as orginially proposed when it was built) be implemented - the wall is already in, only the gates would need to be fitted. Also, make the cut through to closes park a proper maintained path with fencing to protect the houses backing on to the land. (A burglary occurred on Sun 01/09/19 with this land used for access)***	Security Having gated community	A gate is unlikely to be acceptable to the highway authority but to prevent vehicles entering the residential area of Rowlheys Place and Stainby close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided. This would be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below. **Image: Rowlheys Place Improvement Scheme** 
10	***As a resident adjacent to the proposed project, I have concerns on the accommodation and efficiency of the parking facilities for the visitors to the centre. Any proposed measures to contain visitors to the centre so as to not impose on the living conditions of the adjacent residents?***	Traffic/Parking	<u>Parking</u> The Hillingdon Sports and Leisure Centre is of a comparable, if not greater scale than the facility proposed at Rowlheys Place. A car parking accumulation exercise was completed of the Hillingdon Sports and Leisure Complex which provides 207 car parking spaces. During the weekday survey (Thursday 4 July 2019) there was only one 15-minute period when the car park reached a maximum occupancy of 207 cars in the car park. For all other 15-minute periods of the day there was available spaces with a range of free spaces varying between 13 free spaces at 10:30 to 137 free spaces at 08:30. During the weekend survey (Saturday 6 July 2019) there was available spaces in the car park at all times, with the range of free spaces varying between 16 spaces at 10:30 to 185 spaces at 07:30. The proposal at Rowlheys Place is for a total of 199 parking spaces, i.e. comparable than that provided at Hillingdon Sports and Leisure Centre and the Rowlheys Place facility is smaller and better located for access by non-car modes.

<table>
<tr><th>Comment Number</th><th>Comment/Response</th><th>Main Concern</th><th>i-Transport Response</th></tr>
<tr><td>11</td><td>Is there a change to park?
Impact of extra traffic?
Of pollution?
Times of opening?</td><td>Traffic/Parking</td><td>Client to clarify no additional car parking charges for users of the Leisure Centre.

To assess the operation of the network, a traffic capacity assessment has been carried out on the Rowlheys Place / Harmondsworth Road junction. The morning and evening peak hours have been assessed for a future year of 2022, which is the proposed year of opening.

PICADY Assessment – Rowlheys Place/ Harmondsworth Road
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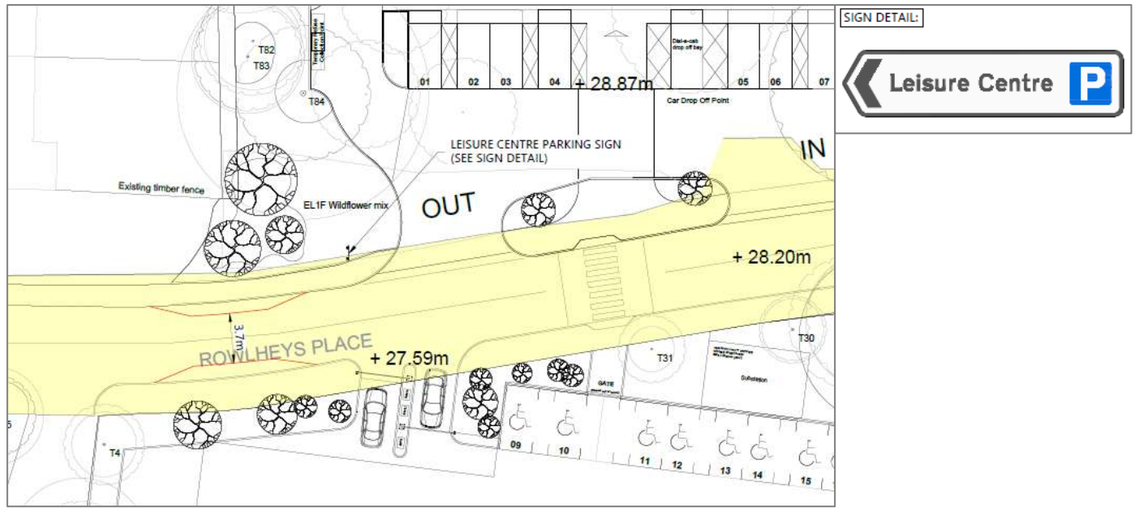
The assessment demonstrates that in the future scenario (with background traffic growth) and the worst-case development related traffic assumption that the Rowlheys Place/ Harmondsworth Road junction will operate comfortably within capacity with little queuing or delay on any arm.

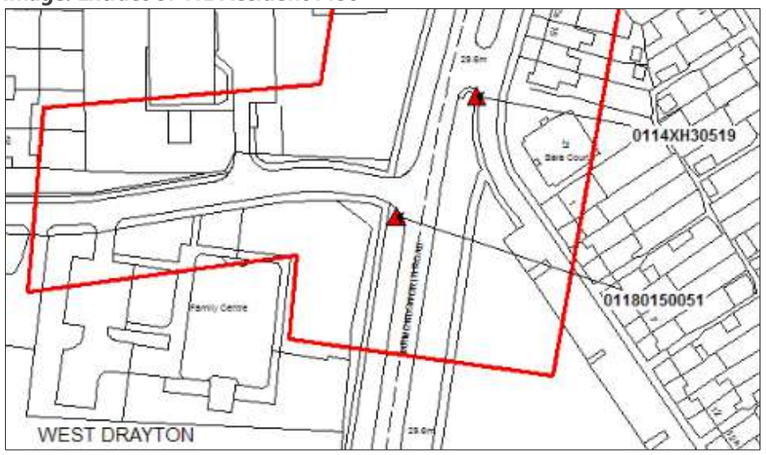
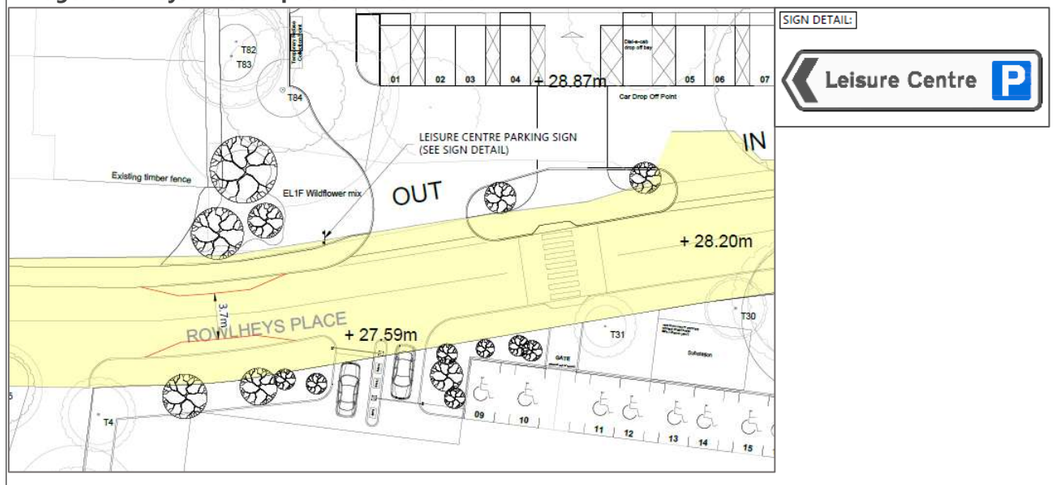
An Air and Noise Quality Assessment is being undertaken.</td></tr>
<tr><td>12</td><td>1. Where will youth/education/childrens provision be relocated?
2. Residents should be consulted on this to ensure remains local</td><td>N/A</td><td>Not a transport issue</td></tr>
<tr><td>13</td><td>Looks wonderful and will be a very welcome facility. Desperately needed in this area. Please make it happen ASAP!</td><td>N/A</td><td>Not a transport issue</td></tr>
<tr><td>14</td><td>Lovely building & facility.
Concerns:
- View & noise from Harmondsworth Rd
- Already conjested parking area
- Remove double yellow from main road
Requests:
- Introduce parking for residents only
- Put in parking bays for residents</td><td>Traffic/Parking</td><td><u>Parking</u>
The Hillingdon Sports and Leisure Centre is of a comparable, if not greater scale than the facility proposed at Rowlheys Place. A car parking accumulation exercise was completed of the Hillingdon Sports and Leisure Complex which provides 207 car parking spaces.

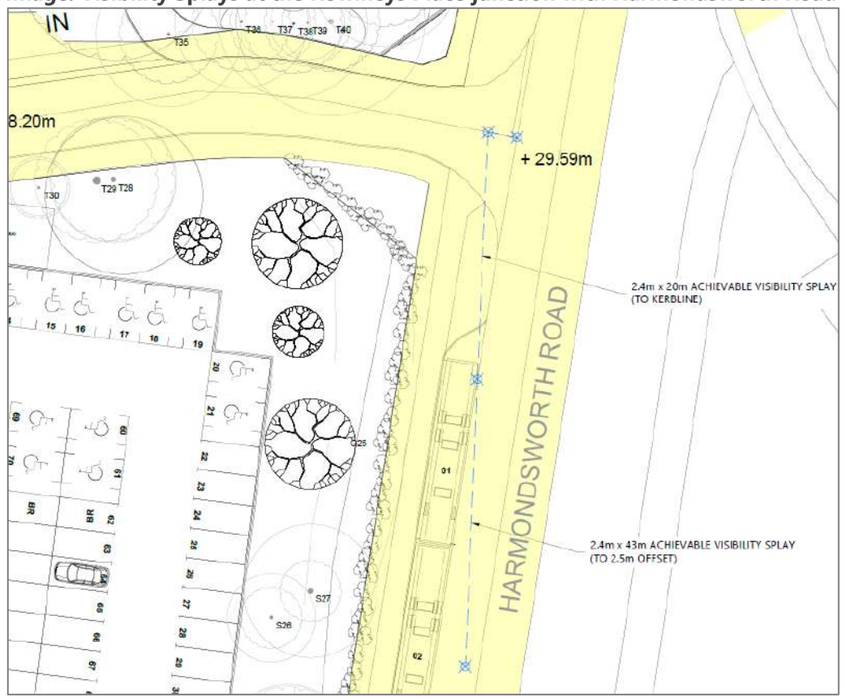
During the weekday survey (Thursday 4 July 2019) there was only one 15-minute period when the car park reached a maximum occupancy of 207 cars in the car park. For all other 15-minute periods of the day there was available spaces with a range of free spaces varying between 13 free spaces at 10:30 to 137 free spaces at 08:30.

During the weekend survey (Saturday 6 July 2019) there was available spaces in the car park at all times, with the range of free spaces varying between 16 spaces at 10:30 to 185 spaces at 07:30.

The proposal at Rowlheys Place is for a total of 199 parking spaces, i.e. comparable to that provided at Hillingdon Sports and Leisure Centre and the Rowlheys Place site is better located for non-car modes.</td></tr>
</table>

Comment Number	Comment/Response	Main Concern	i-Transport Response
15	***The design is not in keeping with the conservation area. The colours of the design are dramatic and would constitive an eyesore for the local residents. Please address the parking concerns for all the residents of Rowlheys & Stainby. If the car park is pay & display users could park along our houses where currently there is already tight parking and it is difficult to access our driveway.*** ***Why can the entrance not be via Harmondsworth Road and the single lane traffic made into dual lanes and the entrance be beside the cemetary. The green/trees on Rowlheys Place are already not maintained, how will the additional trees be maintained?*** ***Can we have a gated entrance for Rowlheys and Stainby residents?*** ***How is an increase in potential antisocial behaviour going to be managed given the recent increase in crime around the area - particularly theft!*** ***What perks will be provided for the residents of Rowlheys and Stainby? Such as free services, particularly for the creche?***	Traffic/Parking Security Having gated community Antisocial behaviour	Client to clarify car parking charges and that there will be no extra charge for users of the Leisure Centre. To prevent vehicles entering the residential area of Rowlheys Place and Stainby close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided. This would be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below. **Image: Rowlheys Place Improvement Scheme** 
16	***How are you planning to control the traffic while the construction will be taking place.*** ***Are you going to put double yellow lines to protect residents parking & Harmondsworth Road*** ***Will residents get any benefits & concessions from the health centre?*** ***What security will you be having at the centre that will also protect the residents?*** ***Will you offer job opportunities to residents?***	Traffic/Parking Security	Matters concerning construction traffic will be addressed in a Construction Traffic Management Plan (CTMP). <u>Parking</u> The Hillingdon Sports and Leisure Centre is of a comparable, if not greater scale than the facility proposed at Rowlheys Place. A car parking accumulation exercise was completed of the Hillingdon Sports and Leisure Complex which provides 207 car parking spaces. During the weekday survey (Thursday 4 July 2019) there was only one 15-minute period when the car park reached a maximum occupancy of 207 cars in the car park. For all other 15-minute periods of the day there was available spaces with a range of free spaces varying between 13 free spaces at 10:30 to 137 free spaces at 08:30. During the weekend survey (Saturday 6 July 2019) there was available spaces in the car park at all times, with the range of free spaces varying between 16 spaces at 10:30 to 185 spaces at 07:30. The proposal at Rowlheys Place is for a total of 199 parking spaces, i.e. comparable to that provided at Hillingdon Sports and Leisure Centre and the Rowlheys Place site is smaller and better located for sustainable mode access. Double Yellow lines / residents parking could be considered if the highway authority are supportive.
17	***Please leave trees but they do need lopping!***	N/A	Not a transport issue

Comment Number	Comment/Response	Main Concern	i-Transport Response
18	***The Rowlheys Place/Harmondsworth road junction is already a bad junction I don't think it will be safe for all the extra traffic without modification. i.e. traffic lights!*** ***There needs to be some proposal to prevent overflow car parking, parking in Rowlheys Place/Dell Road i.e. residents parking!*** ***Will coaches in the coach drop off obstruct the line of sight for leaving Rowlheys Place?*** ***Contrctor & Sub Contractors vehicles could be a problem by parking in local roads during construction*** ***In favour of the sports centre, but with reservations***	Traffic/Parking	Accident records have been obtained from TfL for the most recently available five-year period up to December 2018. No accidents occurred in Rowlheys Place in the 60 months to December 2018 and just one accident occurred close to the junction with Harmondsworth Road in that period. The accident occurred at 06.49 5/12/18 and involved a car turning left at the junction of Rowlheys Close and colliding with a cyclist on the cycleway – the contributory factors include cyclist wearing dark clothes and the driver failing to look properly. **Image: Extract of TfL Accident Plot**  To prevent vehicles entering the residential area of Rowlheys Place and Stainby close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided. This will be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below. **Image: Rowlheys Place Improvement Scheme**  Matters concerning construction traffic will be addressed in a Construction Traffic Management Plan (CTMP).

Comment Number	Comment/Response	Main Concern	i-Transport Response
			Junction Visibility Drawings to assess the visibility at the junction of Rowlheys Place with Harmondsworth Road show that visibility to the kerb line and to the centre of the nearside lane can be achieved. **Image: Visibility Splays at the Rowlheys Place junction with Harmondsworth Road** 
19	***The design and look of the lesuire centre looks great. West Drayton really needs things like this for families and to promote health. Living so close to the lesuire centre would mean adding great opportunity for more lesuire time***	N/A	Not a transport issue
20	***My concern relates to the extra traffic that will be created by this facility. The slip road which is used on the opposite side of the road is already extremely busy. Now with this facility in place extra traffic will no doubt be created. Highways need to be aware of this and introduce restricted parking on the slip road access e.g. double yellow markings***	Traffic/Parking	The 'slip road' on the opposite side of Harmondsworth Road will be unaffected by the development traffic save for a modest amount of traffic forecast to us the northern section of Harmondsworth Road. Double yellow lines could be introduced if supported by the highway authority.

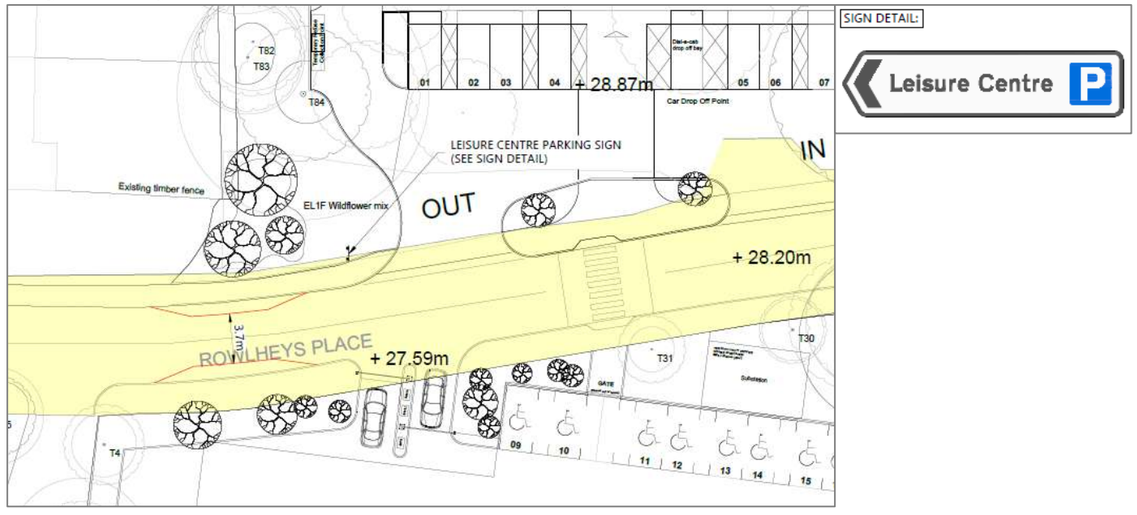
Comment Number	Comment/Response	Main Concern	i-Transport Response
21	***Lovely facilities however my biggest concern is the car park*** ***- no. of spaces (very small street and area to accommodate such traffic)*** ***- entrance on Rowlheys Place (worried with the amount of traffic on a very small street and area and the amount of unwelcomed cars or thieves looking for opportunities. I feel my family might be unsafe walking by the car park)***	Traffic/Parking Security	<u>Parking</u> The Hillingdon Sports and Leisure Centre is of a comparable, if not greater scale than the facility proposed at Rowlheys Place. A car parking accumulation exercise was completed of the Hillingdon Sports and Leisure Complex which provides 207 car parking spaces. During the weekday survey (Thursday 4 July 2019) there was only one 15-minute period when the car park reached a maximum occupancy of 207 cars in the car park. For all other 15-minute periods of the day there was available spaces with a range of free spaces varying between 13 free spaces at 10:30 to 137 free spaces at 08:30. During the weekend survey (Saturday 6 July 2019) there was available spaces in the car park at all times, with the range of free spaces varying between 16 spaces at 10:30 to 185 spaces at 07:30. The proposal at Rowlheys Place is for a total of 199 parking spaces, i.e. comparable to that provided at Hillingdon Sports and Leisure Centre and the Rowlheys Place is better located.
22	***Like the facilities but I have concerns with the entrance to the car park being in Rowlheys Place which is a small residential road, and will cause problems to residents entering/exiting at busy times. I believe that the entrance should be on Harmondsworth Road***	Traffic/Parking	A new junction onto Harmondsworth Road is not necessary as the existing junction is sufficient to accommodate the development traffic. To prevent vehicles entering the residential area of Rowlheys Place and Stainby Close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided. This could be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below. **Image: Rowlheys Place Improvement Scheme** 
23	***1. Family of the lesiure centre - could be on to Harmondsworth Road instead of Rowlheys Place*** ***2. The entrance for the pool/club can be provided from Harmondsworth Road*** ***3. Privacy concern for us who are living in the cul-de-sac on Rowlheys Place, drive access and also that this is a conservation area***	Privacy	1. A new junction onto Harmondsworth Road is not necessary as the existing junction is sufficient to accommodate the development traffic. 2. A new junction onto Harmondsworth Road is not necessary as the existing junction is sufficient to accommodate the development traffic. 3. To prevent vehicles entering the residential area of Rowlheys Place and Stainby close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided. This will be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below.

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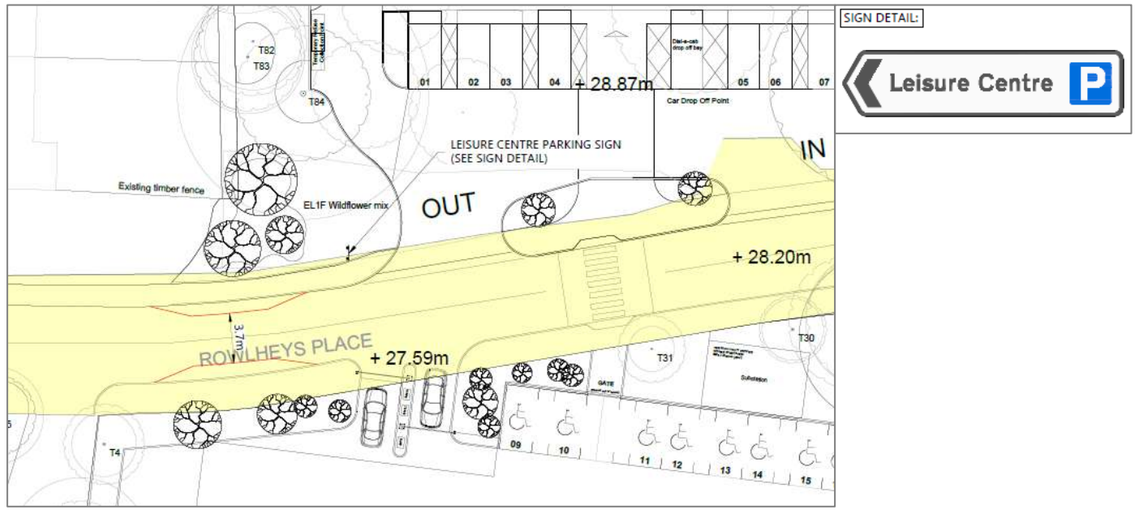
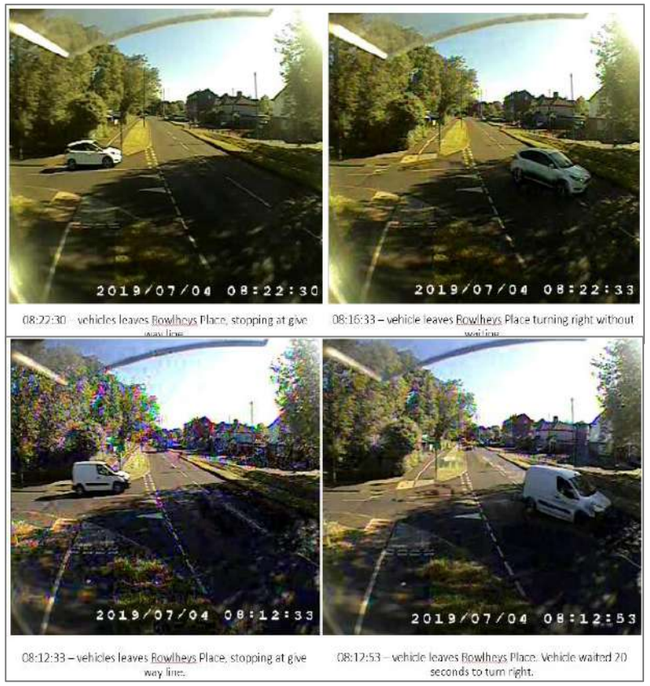
			Image: Rowlheys Place Improvement Scheme 
24	***The entrance to the proposed car park and gym will lead to major disruption to the residents of Stainby Close/Rowlheys Place. It will reduce our quality of life and increase the risk of traffic. We already suffer trying to gain access to Rowlheys Place at peak times and weekends. We have suggested access should be from the main road/Harmondsworth Road nearer the cemetery.*** ***We would aslo appreciate metal gates be installed to assist us with security due to the increase of new visitors to our area.*** ***As residents who will be majorly disrupted an offer of free membership to ofset the hassle would be a factor.*** ***Is there a possiblity that the road could be widened at the top of Rowlheys Place onto Harmondsworth Road, having a left/right lane each to alliviate to backup of traffic***	Traffic/Parking Security Having gated community	A new junction onto Harmondsworth Road is not necessary as the existing junction is sufficient to accommodate the development traffic. A Manual Classified traffic Count (MCC) was undertake at the junction of Rowlheys Place and Harmondsworth Road on Thursday 4 July 2019 (comfortably before for the school holidays) to record morning and evening peak hour traffic volumes. The video footage for this survey has been reviewed and can be summarised as follows: • Minimal delay in waiting to turn left or right from Rowlheys Place; • Vehicles during the morning and evening peak hours quite often do not have to stop at the giveway line before turning onto Harmondsworth Road and when they do the level of delay is minimal; and • The queue from the signal-controlled junction to the north (Harmondsworth Road / Sipson Road / Thornton Avenue / Station Hill) extends to the Rowlheys Place / Harmondsworth Road Junction only once in the morning peak and clears within 6 seconds. To assess the operation of the network, a traffic capacity assessment has been carried out on the Rowlheys Place / Harmondsworth Road junction. The morning and evening peak hours have been assessed for a future year of 2022, which is the proposed year of opening. 

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PICADY Assessment – Rowlheys Place/ Harmondsworth Road

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The assessment demonstrates that in the future scenario (with background traffic growth) and the worst-case development related traffic assumption that the Rowlheys Place/ Harmondsworth Road junction will operate comfortably within capacity with little queuing or delay on any arm.

</td></tr>
<tr><td>25</td><td>Plan looks fantastic, very modern with a great varity of sport catered for. Looking forward to it!</td><td>N/A</td><td></td></tr>
<tr><td>26</td><td>Please move the entrance of the car park to the front/Harmondsworth Rd.
- Please widen the road
- Offer free membership to the facilities to Stainby Close/Rowlheys Place residents
- Put up electric gates at the "Lancers Mews" entrance
- Don't destroy our quality of life</td><td>Having gated community</td><td>A new junction onto Harmondsworth Road is not necessary as the existing junction is sufficient to accommodate the development traffic.

To prevent vehicles entering the residential area of Rowlheys Place and Stainby close a narrowing of the carriageway after the entrance to the leisure centre car park could be provided. This could be to a width of 3.7m to deter vehicles from travelling passed the car park entrance. The carriageway narrowing and signage detail to guide vehicles into the car park is shown in the image below.

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			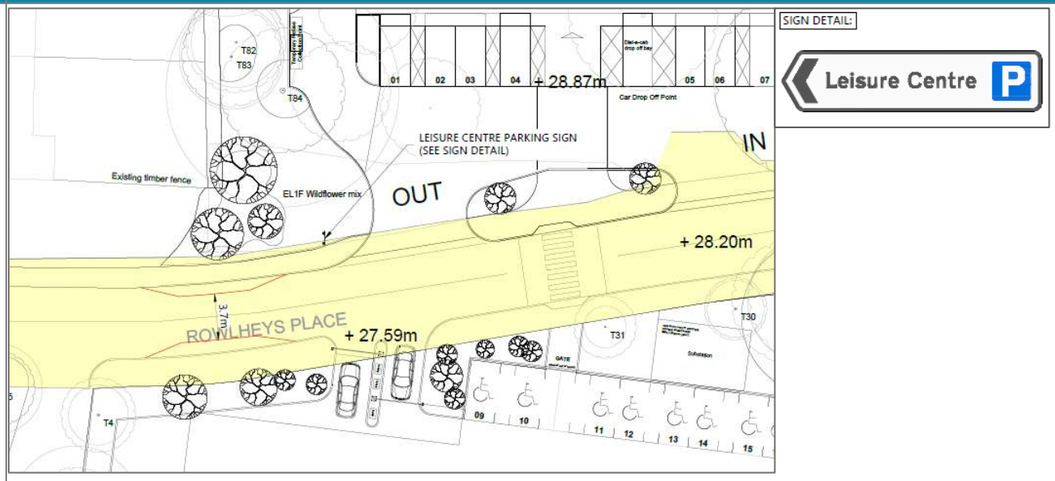
27	***The leisure centre looks good but as a resident of Rowlheys Place I am a bit concerned with the increase in the flow of traffic and the parking situation. Will this cause my road to be used as a "free" car park for those who do not want to pay for parking? What concessions are the residents going to be getting?***	Traffic/Parking	A peak car parking accumulation is forecast at 90 cars needing to park between 6pm and 7pm. In addition, the Hillingdon Sports and Leisure Centre is of a comparable, if not greater scale than the facility proposed at Rowlheys Place. A car parking accumulation exercise was completed of the Hillingdon Sports and Leisure Complex which provides 207 car parking spaces. During the weekday survey (Thursday 4 July 2019) there was only one 15-minute period when the car park reached a maximum occupancy of 207 cars in the car park. For all other 15-minute periods of the day there was available spaces with a range of free spaces varying between 13 free spaces at 10:30 to 137 free spaces at 08:30. During the weekend survey (Saturday 6 July 2019) there was available spaces in the car park at all times, with the range of free spaces varying between 16 spaces at 10:30 to 185 spaces at 07:30. The proposal at Rowlheys Place is for a total of 199 parking spaces, i.e. comparable to that provided at Hillingdon Sports and Leisure Centre.
28	***I think not enough thought has been given to the residents of Rowlheys Place and Stainby Close, with regards to the extra traffic it will generate and conjestion. The throughfare is a cul-de-sac. The parking could be a problem, if the car park is free or people miss the entrance. Also Rowlheys Place is a conservation area and is a quet area. It is not a very good outlook either. Who is going to be running the complex - as to whether it will be affordable. Its a shame the council did not seek any feedback from residents before deciding that this is going to happen. Is there going to be any good security in place to stop any unfavourable behaviour?***	Traffic/Parking Security Antisocial behaviour	A peak car parking accumulation is forecast at around 90 cars needing to park between 6pm and 7pm. In addition, the Hillingdon Sports and Leisure Centre is of a comparable, if not greater scale than the facility proposed at Rowlheys Place. A car parking accumulation exercise was completed of the Hillingdon Sports and Leisure Complex which provides 207 car parking spaces. During the weekday survey (Thursday 4 July 2019) there was only one 15-minute period when the car park reached a maximum occupancy of 207 cars in the car park. For all other 15-minute periods of the day there was available spaces with a range of free spaces varying between 13 free spaces at 10:30 to 137 free spaces at 08:30. During the weekend survey (Saturday 6 July 2019) there was available spaces in the car park at all times, with the range of free spaces varying between 16 spaces at 10:30 to 185 spaces at 07:30. The proposal at Rowlheys Place is for a total of 199 parking spaces, i.e. comparable to that provided at Hillingdon Sports and Leisure Centre.

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<tr><td>29</td><td>I think access to the proposed car park should be off of Harmondsworth road and not Rowlheys Place. Rowlheys Place is a small road which currently is congested when two cars drive in and out. This part of Harmondsworth Road is congested at the moment so access to the car park should be further up Harmondsworth Road</td><td>Traffic/Parking</td><td>To assess the operation of the network, a traffic capacity assessment has been carried out on the Rowlheys Place / Harmondsworth Road junction. The morning and evening peak hours have been assessed for a future year of 2022, which is the proposed year of opening.

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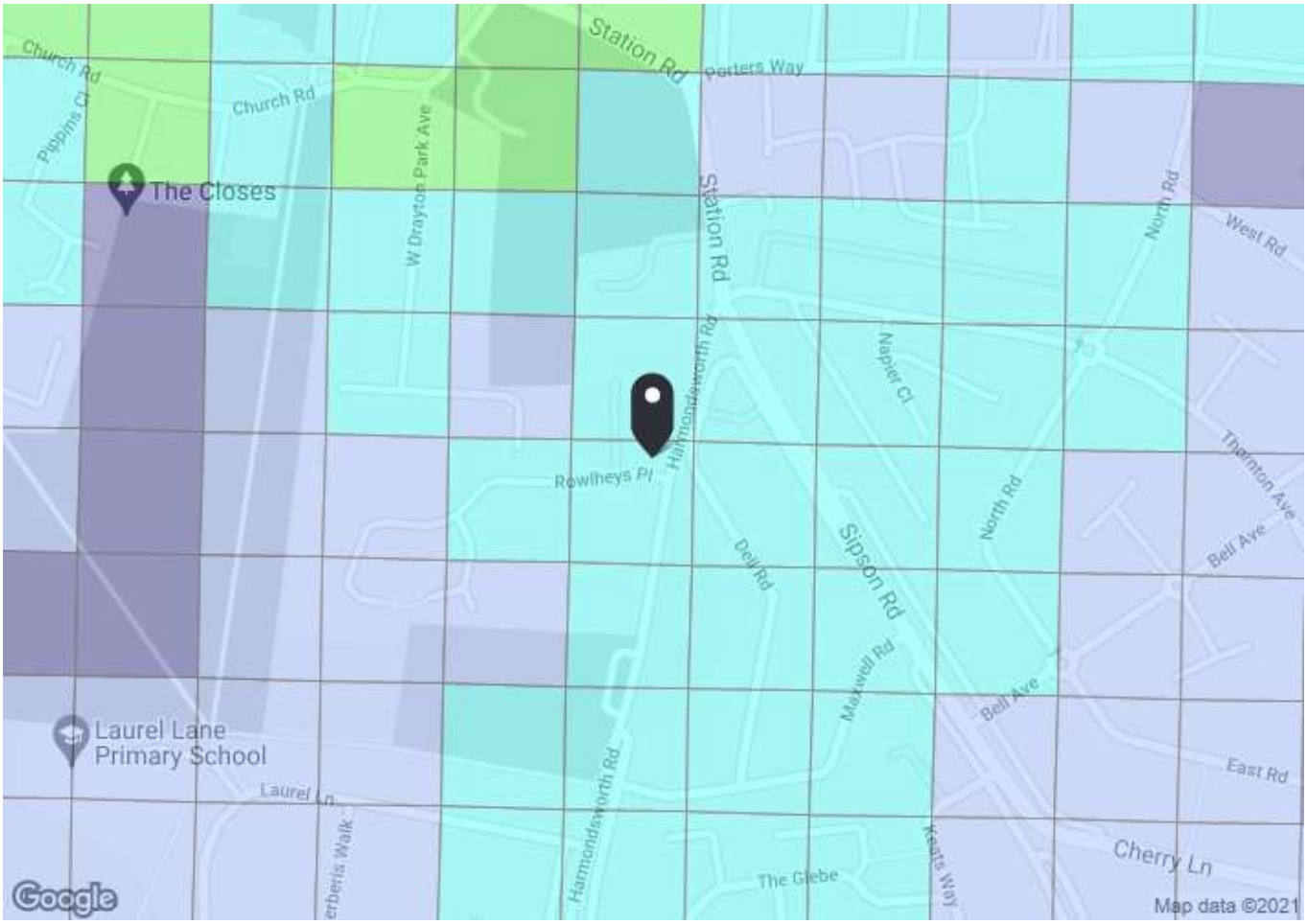
APPENDIX B. PTAL Assessment

TRANSPORT FOR LONDON



PTAL output for Base Year
2

3 Dell Rd, West Drayton UB7 9HN, UK
Easting: 506463, Northing: 179178

Grid Cell: 73718

Report generated: 25/08/2021

Map key - PTAL

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

Map layers

PTAL (cell size: 100m)

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

Copyright TfL 2021

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	WEST DRAYTON PORTERS WAY	U5	484.6	5	6.06	8	14.06	2.13	0.5	1.07
Bus	W DRAYTON POLICE STATION	222	256.13	7.5	3.2	6	9.2	3.26	1	3.26
Bus	THE DELL	350	194.53	5	2.43	8	10.43	2.88	0.5	1.44
Bus	LAUREL LANE THE BRAMBLES	U3	433.95	5	5.42	8	13.42	2.23	0.5	1.12
									Total Grid Cell AI:	**6.88**

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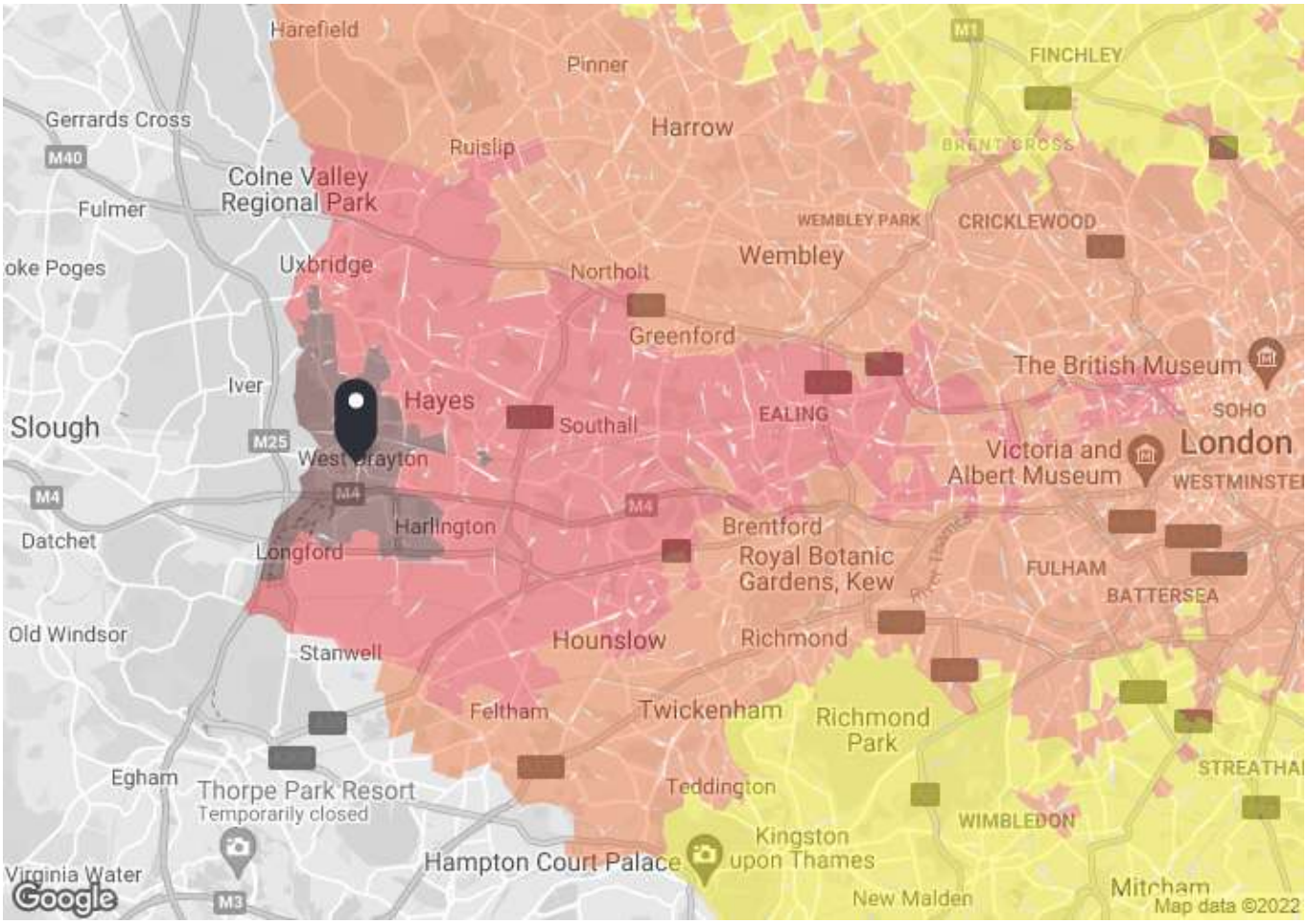
APPENDIX C. TIM Assessment

TRANSPORT FOR LONDON



TIM output for Base Year
Scenario: Base Year Mode: All public transport modes, Time of day: AM peak, Direction: From location

41 Rowlheys Pl, West Drayton UB7 9NQ, UK
Easting: 506442, Northing: 179168

Report generated: 11/01/2022

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

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Catchment data for your current selection

Population - Total: London 2011

Total: London (2011) 8,217,475

Travel Time (mins)	Total: London (2011) 8,217,475
< 30	47929
< 60	694283
< 90	3440036
< 120	7444931
< 150	8214310
< 180	8217473
< 210	8217475

Travel Time (mins)	Total: London & SE (2011) 21,126,595
< 30	47929
< 60	1030231
< 90	4240086
< 120	10517320
< 150	16535458
< 180	19119950
< 210	20861351

Travel Time (mins)	Households: London (2011) 3,278,323
< 30	17265
< 60	260334
< 90	1411592
< 120	2970793
< 150	3276974
< 180	3278322
< 210	3278323

Travel Time (mins)	Households: London & SE (2011) 8,578,772
< 30	17265
< 60	389521
< 90	1726723
< 120	4197606
< 150	6631561
< 180	7708060
< 210	8461675

Travel Time (mins)	Working Age: London (2011) 5,487,531
< 30	32317
< 60	465490
< 90	2388787
< 120	5020876
< 150	5485823
< 180	5487530
< 210	5487531

Travel Time (mins)	Economicallyactive: London (2011) 3,706,868
< 30	19513
< 60	306301
< 90	1615033
< 120	3370604
< 150	3705511
< 180	3706867
< 210	3706868

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Travel Time (mins)	Pensioners: London (2011) 1,087,045
< 30	5763
< 60	88981
< 90	421526
< 120	941488
< 150	1086115
< 180	1087045
< 210	1087045

Employment - Jobs: London 2011

Travel Time (mins)	Jobs: London (2011) 4,895,753
< 30	30595
< 60	475135
< 90	3349437
< 120	4669099
< 150	4893906
< 180	4895573
< 210	4895753

Travel Time (mins)	Jobs: London & SE (2011) 10,763,962
< 30	30595
< 60	638302
< 90	3755927
< 120	6211782
< 150	8822101
< 180	9965209
< 210	10661271

Town centres - Metropolitan, major and district: London

Travel Time (mins)	Metropolitan, major and district: London - 191
< 30	1
< 60	16
< 90	91
< 120	179
< 150	191
< 180	191
< 210	191

Travel Time (mins)	Metropolitan and major: London - 47
< 30	0
< 60	7
< 90	29
< 120	46
< 150	47
< 180	47

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< 210	47

Travel Time (mins)	Metropolitan only: London - 12
< 30	0
< 60	4
< 90	6
< 120	12
< 150	12
< 180	12
< 210	12

Health services - GP Surgeries: London

Travel Time (mins)	Pharmacies: London - 2,607
< 30	13
< 60	281
< 90	1285
< 120	2439
< 150	2607
< 180	2607
< 210	2607

Travel Time (mins)	GP Surgeries: London - 1,454
< 30	4
< 60	159
< 90	666
< 120	1347
< 150	1454
< 180	1454
< 210	1454

Travel Time (mins)	A&E departments: London - 31
< 30	1
< 60	4
< 90	15
< 120	30
< 150	31
< 180	31
< 210	31

Education establishments - Primary schools: London

Travel Time (mins)	Primary schools: London - 2,663
< 30	22
< 60	248
< 90	1041
< 120	2357

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< 150	2661
< 180	2663
< 210	2663

Travel Time (mins)	Secondary schools: London - 756
< 30	3
< 60	58
< 90	279
< 120	641
< 150	754
< 180	756
< 210	756

Travel Time (mins)	Further education colleges: London - 50
< 30	0
< 60	3
< 90	25
< 120	44
< 150	50
< 180	50
< 210	50

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APPENDIX D. PIA Data

Rowlheys Place_Harmondsworth Road_Sipson Road Personal Injury Collisions 60 months to end of April 2021

SUMMARY OF COLLISIONS SELECTED

SITE REFERENCE AND DESCRIPTION	DATE PERIOD	COLLISION COUNT
B26 SITE 1 GIS AREA B26 SITE 1(P)	60MTS TO APR/2021	5

THE DESCRIPTION OF HOW THE COLLISION OCCURRED AND THE CONTRIBUTORY FACTORS ARE THE REPORTING OFFICER'S OPINION AT THE TIME OF REPORTING AND MAY NOT BE THE RESULT OF EXTENSIVE INVESTIGATION. NOTE THAT SELF-REPORTED COLLISIONS (INTRODUCED IN SEPTEMBER 2016) MAY HAVE LIMITED INFORMATION. DESCRIPTIONS HAVE BEEN AUTOMATICALLY REDACTED TO REMOVE ALL PERSONALLY IDENTIFIABLE INFORMATION, BUT SHOULD YOU RECEIVE ANY IN ERROR PLEASE INFORM THE COLLISIONS DATA TEAM AS SOON AS PRACTICAL. SELF-REPORTED COLLISIONS INTRODUCED IN SEPTEMBER 2016 MAY HAVE LIMITED INFORMATION AND TEND TO BE LOWER IN QUALITY THAN POLICE REPORTS. THE INTRODUCTION OF ONLINE SELF-REPORTING HAS MADE IT EASIER FOR MEMBERS OF THE PUBLIC TO REPORT COLLISIONS TO THE POLICE. THERE HAVE BEEN YEAR ON YEAR INCREASES IN SELF-REPORTS SINCE THIS WAS INTRODUCED. THIS HAS CONTRIBUTED TO AN OVERALL INCREASE IN THE NUMBER OF CASUALTIES REPORTED ON LONDON'S ROADS.

1

01170079855	SAT 23/12/2017 03:00	DARK	STATION RD 30M N OF J/W HARMONDSWORTH RD				26 LINK 49-53	506509/179349
POLICE - AT SCENE	ROAD-DRY	WEATHER-FINE	SINGLE CWY	NO JUN IN 20M	N/A		PELICAN OR SIML	NONE IN 50M
CASUALTY	001 (001)	(34 YRS - F - REDA)	SLIGHT	PEDESTRIAN		STILL	UNKNOWN/OTHER	
VEHICLE	001 (000)	CAR BT - DRV NOT CONTACTED	(? YRS - M - REDACT)		G/AHEAD - OTHER		(N TO S) FRONT HIT FIRST	J/P - UNKN
V001	A	405 (FAILED TO LOOK PROPERLY)			V001	A	410 (LOSS OF CONTROL)	

2

01180150051	WED 05/12/2018 06:49	DARK	ROWLHEYS CLOSE J/W HARMONDSWORTH RD				26 LINK 27-53	506470/179160
POLICE - AT SCENE NOT KNOWN HOW COLLISION OCCURRED	ROAD-WET	RAINING	SINGLE CWY	T/STAG JUN	GIVEWAY /UNCONT		NO XING FACIL IN 50M	NONE IN 50M
CASUALTY	001 (002)	(29 YRS - M - REDA)	SLIGHT	DRIVER/RIDER				
VEHICLE	001 (000)	CAR BT - NOT REQ	(26 YRS - M - REDACT)		TURNING - LEFT		(P TO N) FRONT HIT FIRST	COMMUTING JCT APP
VEHICLE	002 (000)	PED CYCLE BT - N/A	(29 YRS - M - REDACT)		G/AHEAD - OTHER		(S TO N) FRONT HIT FIRST	J/P - UNKN JCT APP
V002 V001	A A	507 (RIDER WEARING DARK CLOTHING AT NIGHT) 405 (FAILED TO LOOK PROPERLY)			V001	A	707 (RAIN, SLEET, SNOW OR FOG)	

3

01180153772	SAT 22/12/2018 01:00		DARK	THORNTON AVENUE J/W STATION RD				26 NODE 53	506510/179310
POLICE - AT SCENE		ROAD-WET	WEATHER-FINE	SINGLE CWY	CROSSROADS	AUTO SIG		PELICAN OR SIML	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED									
CASUALTY	001 (001)	(19 YRS - F - REDA)		SLIGHT	VEH/PILLION PAX	REAR SEAT PASSENGER			
CASUALTY	002 (001)	(19 YRS - F - REDA)		SLIGHT	VEH/PILLION PAX	REAR SEAT PASSENGER			
VEHICLE	001 (000)	CAR BT - DRV NOT CONTACTED		(19 YRS - M - REDACT)		G/AHEAD - OTHER		(S TO E) FRONT HIT FIRST	J/P - UNKN L/MAIN RD
V001	A	103 (SLIPPERY ROAD (DUE TO WEATHER))				V001	A	601 (AGGRESSIVE DRIVING)	
V001	B	301 (DISOBEYED AUTOMATIC TRAFFIC SIGNAL)							

4

01190190347	SAT 29/06/2019 10:35		LIGHT	SIPSON RD JUNCT WTH HARMONDSWORTH RD.				26 NODE 53	506524/179285
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	SINGLE CWY	OTHER JUN	AUTO SIG		PELICAN OR SIML	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED									
CASUALTY	001 (002)	(14 YRS - M - REDA)		SLIGHT	DRIVER/RIDER				
VEHICLE	001 (000)	CAR BT - NOT REQ		(30 YRS - F - REDACT)		G/AHEAD - OTHER		(S TO N) FRONT HIT FIRST	J/P - UNKN JCT APP
VEHICLE	002 (000)	PED CYCLE BT - N/A		(14 YRS - M - REDACT)		G/AHEAD - OTHER		(W TO E) N/S HIT FIRST	J/P - UNKN JCT APP
V002	A	405 (FAILED TO LOOK PROPERLY)							

5

01190203839	SAT 07/09/2019 03:48		DARK	SIPSON RD, NR JUNCT WTH THORNTON AVENUE.				26 NODE 53	506518/179308
POLICE - AT SCENE		ROAD-DRY	WEATHER-FINE	SINGLE CWY	CROSSROADS	AUTO SIG		PEDN PHASE ATS	NONE IN 50M
NOT KNOWN HOW COLLISION OCCURRED									
CASUALTY	001 (001)	(30 YRS - M - REDA)		SLIGHT	VEH/PILLION PAX	REAR SEAT PASSENGER			
VEHICLE	001 (000)	CAR BT - NOT REQ		(29 YRS - M - REDACT)		TURNING RIGHT		(S TO E) FRONT HIT FIRST	JCT MID
V001	A	403 (POOR TURN OR MANOEUVRE)				V001	A	602 (CARELESS, RECKLESS OR IN A HURRY)	

APPENDIX E. Hillingdon Sports and Leisure Centre car parking survey

Hillingdon, Greater London
Car Park Accumulation Study

Site 3 of 3
Hillingdon Sports & Leisure Complex Car Park

Capacity

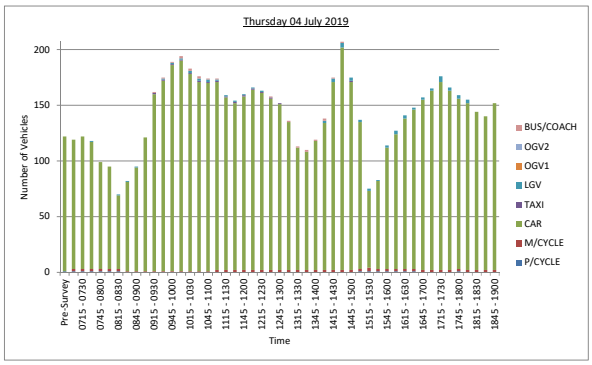
Ordinary	176
Reserved	10
Disabled	14
Parent & Child	7
Total	**207**

Date
Thursday 04 July 2019

Weather
Sunny
Temp: 18°C

0700 - 1900 (Thursday 12H Session)

TIME	PICYCLE	MICYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL	Capacity %
Pre-Survey	1	0	121	0	0	0	0	0	122	121.20	58.94
0700 - 0715	1	2	116	0	0	0	0	0	119	117.00	57.46
0715 - 0730	1	2	119	0	0	0	0	0	122	120.00	58.94
0730 - 0745	1	2	114	0	1	0	0	0	118	116.00	57.00
0745 - 0800	1	2	96	0	0	0	0	0	99	97.00	47.83
0800 - 0815	1	2	92	0	0	0	0	0	95	93.00	45.89
0815 - 0830	1	2	66	0	1	0	0	0	70	68.00	33.82
0830 - 0845	0	1	80	0	1	0	0	0	82	81.40	39.61
0845 - 0900	0	1	93	0	1	0	0	0	95	94.40	45.89
0900 - 0915	0	1	120	0	0	0	0	0	121	120.40	58.45
0915 - 0930	0	1	159	1	0	0	0	1	162	162.40	78.26
0930 - 0945	0	1	171	1	1	0	0	1	175	175.40	84.54
0945 - 1000	0	1	185	1	1	0	0	1	189	189.40	91.36
1000 - 1015	0	1	189	1	1	0	0	2	194	195.40	93.72
1015 - 1030	0	1	177	1	2	0	0	2	183	184.40	88.41
1030 - 1045	0	1	170	1	2	0	0	2	176	177.40	85.02
1045 - 1100	0	1	169	1	2	0	0	1	174	174.40	84.06
1100 - 1115	0	2	169	1	1	0	0	1	174	173.80	84.06
1115 - 1130	0	2	155	1	1	0	0	0	159	157.80	76.81
1130 - 1145	0	2	150	1	1	0	0	0	154	152.80	74.40
1145 - 1200	0	2	156	1	1	0	0	0	160	158.80	77.29
1200 - 1215	0	2	162	1	1	0	0	0	166	164.80	80.19
1215 - 1230	0	2	159	1	1	0	0	0	163	161.80	78.74
1230 - 1245	0	2	154	1	0	0	0	1	158	157.80	76.33
1245 - 1300	0	2	149	1	0	0	0	0	152	150.80	73.43
1300 - 1315	0	2	133	0	0	0	0	1	136	135.80	65.70
1315 - 1330	0	2	110	0	0	0	0	1	113	112.80	54.59
1330 - 1345	0	2	108	0	0	0	0	2	110	110.80	53.14
1345 - 1400	0	2	116	0	0	0	0	1	119	118.80	57.49
1400 - 1415	0	2	132	0	2	0	0	2	138	138.80	66.67
1415 - 1430	0	2	169	0	3	0	0	1	175	174.80	84.54
1430 - 1445	0	2	200	0	4	0	0	1	207	206.80	100.00
1445 - 1500	0	2	169	1	3	0	0	0	175	173.80	84.54
1500 - 1515	1	2	132	0	2	0	0	0	137	135.00	66.18
1515 - 1530	1	3	69	0	2	0	0	0	75	72.40	36.23
1530 - 1545	1	2	79	0	1	0	0	0	83	81.00	40.10
1545 - 1600	1	2	109	0	2	0	0	0	114	112.00	55.07
1600 - 1615	1	2	121	0	3	0	0	0	127	125.00	61.35
1615 - 1630	1	2	135	0	3	0	0	0	141	139.00	68.12
1630 - 1645	1	2	143	0	2	0	0	0	148	146.00	71.50
1645 - 1700	0	2	153	0	2	0	0	0	157	155.80	75.85
1700 - 1715	0	2	161	0	2	0	0	0	165	163.80	79.71
1715 - 1730	0	2	169	0	5	0	0	0	176	174.80	85.02
1730 - 1745	0	2	161	0	3	0	0	0	166	164.80	80.19
1745 - 1800	1	2	153	0	3	0	0	0	159	157.00	76.81
1800 - 1815	0	2	150	0	3	0	0	0	155	153.80	74.88
1815 - 1830	0	2	142	0	0	0	0	0	144	142.80	69.57
1830 - 1845	0	2	138	0	0	0	0	0	140	138.80	67.63
1845 - 1900	0	2	150	0	0	0	0	0	152	150.80	73.43

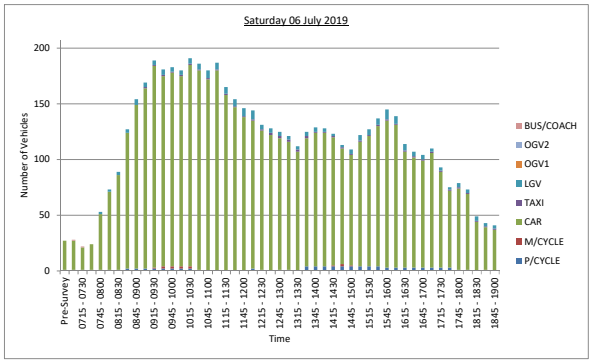


Date
Saturday 06 July 2019

Weather
Sunny
Temp: 19°C

0700 - 1900 (Saturday 12H Session)

TIME	PICYCLE	MICYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL	Capacity %
Pre-Survey	1	0	26	0	0	0	0	0	27	26.20	13.04
0700 - 0715	1	0	26	0	0	0	0	1	28	28.20	13.53
0715 - 0730	1	0	20	0	0	0	0	1	22	22.20	10.63
0730 - 0745	1	0	23	0	0	0	0	0	24	23.20	11.59
0745 - 0800	1	0	50	0	2	0	0	0	53	52.20	25.60
0800 - 0815	1	0	70	0	2	0	0	0	73	72.20	35.27
0815 - 0830	1	0	85	0	3	0	0	0	89	88.20	43.06
0830 - 0845	2	0	122	0	3	0	0	0	127	125.40	61.35
0845 - 0900	2	0	147	0	5	0	0	0	154	152.40	74.40
0900 - 0915	2	0	162	1	4	0	0	0	169	167.40	81.64
0915 - 0930	2	1	181	1	4	0	0	0	189	186.80	91.30
0930 - 0945	2	2	171	1	5	0	0	0	181	176.20	87.44
0945 - 1000	2	2	174	1	4	0	0	0	183	180.20	88.41
1000 - 1015	2	2	171	1	4	0	0	0	180	177.20	86.96
1015 - 1030	2	2	181	1	5	0	0	0	191	188.20	92.27
1030 - 1045	0	1	179	1	5	0	0	0	186	185.40	89.86
1045 - 1100	0	0	172	1	7	0	0	0	180	180.00	86.96
1100 - 1115	0	0	180	1	6	0	0	0	187	187.00	90.34
1115 - 1130	0	0	158	1	6	0	0	0	165	165.00	79.71
1130 - 1145	0	0	147	1	6	0	0	0	154	154.00	74.40
1145 - 1200	0	0	138	1	7	0	0	0	146	146.00	70.53
1200 - 1215	2	0	133	1	8	0	0	0	144	142.40	69.57
1215 - 1230	1	0	125	1	4	0	0	0	131	130.20	63.29
1230 - 1245	0	0	122	2	4	0	0	0	128	128.00	61.84
1245 - 1300	1	0	118	2	4	0	0	0	125	124.20	60.39
1300 - 1315	1	0	115	2	3	0	0	0	121	120.20	58.45
1315 - 1330	0	0	107	2	3	0	0	0	112	112.00	54.11
1330 - 1345	4	0	115	2	4	0	0	0	125	121.80	60.39
1345 - 1400	4	0	120	1	4	0	0	0	129	125.80	62.32
1400 - 1415	4	0	120	1	3	0	0	0	128	124.80	61.84
1415 - 1430	4	1	115	1	2	0	0	0	123	119.20	59.42
1430 - 1445	4	2	104	1	2	0	0	0	113	108.60	54.59
1445 - 1500	4	1	99	1	4	0	0	0	109	105.20	52.66
1500 - 1515	4	0	112	1	5	0	0	0	122	118.80	58.94
1515 - 1530	4	0	117	1	5	0	0	0	127	123.80	61.35
1530 - 1545	4	0	126	1	6	0	0	0	137	133.80	66.18
1545 - 1600	3	0	132	1	9	0	0	0	145	142.60	70.05
1600 - 1615	3	0	128	1	7	0	0	0	139	136.60	67.15
1615 - 1630	3	0	104	1	6	0	0	0	114	111.60	55.07
1630 - 1645	3	0	99	1	4	0	0	0	107	104.60	51.69
1645 - 1700	3	0	96	1	4	0	0	0	104	101.60	50.24
1700 - 1715	3	0	103	1	3	0	0	0	110	107.60	53.14
1715 - 1730	3	0	86	1	3	0	0	0	93	90.60	44.93
1730 - 1745	3	0	69	1	2	0	0	0	75	72.60	36.23
1745 - 1800	1	0	73	1	4	0	0	0	79	78.20	38.16
1800 - 1815	1	0	68	1	3	0	0	0	73	72.20	35.27
1815 - 1830	0	0	44	1	4	0	0	0	49	48.00	23.67
1830 - 1845	0	1	38	1	3	0	0	0	43	42.40	20.77
1845 - 1900	0	0	37	1	3	0	0	0	41	41.00	19.81



APPENDIX F. Highgrove Pool and Fitness Centre parking survey

C. Car Park Survey Data and Analysis

Highgrove Leisure Centre Car Park Occupancy Survey Data

		8am	10am	12pm	2pm	4pm	6pm *	8pm *
Monday	7th March 2011	92	123	112	90	118	121	114
Tuesday	8th March 2011	88	120	105	88	112	120	110
Wednesday	9th March 2011	94	115	94	92	106	121	105
Thursday	10th March 2011	93	118	105	94	110	121	105
Friday	11th March 2011	89	122	120	92	114	112	92
Saturday	12th March 2011	49	119	118	88	45		
Sunday	13th March 2011	45	78	95	86	50		
Monday	14th March 2011	94	119	108	88	96	120	118
Tuesday	15th March 2011	99	120	117	91	105	118	120
Wednesday	16th March 2011	91	118	101	89	99	117	106
Thursday	17th March 2011	89	112	92	95	105	121	108
Friday	18th March 2011	95	120	119	79	109	120	86
Saturday	19th March 2011	54	121	118	86	54		
Sunday	20th March 2011	44	75	86	87	47		
Monday	9th May 2011	99	120	112	94	117	121	110
Tuesday	10th May 2011	84	121	109	96	119	120	104
Wednesday	11th May 2011	96	117	101	104	121	121	102
Thursday	12th May 2011	93	118	105	94	110	121	105
Friday	13th May 2011	88	121	120	87	121	118	92
Saturday	14th May 2011	55	110	121	96	55		
Sunday	15th May 2011	48	81	88	78	52		
Monday	16th May 2011	95	119	117	98	110	120	116
Tuesday	17th May 2011	95	121	111	97	121	112	110
Wednesday	18th May 2011	93	118	104	89	101	121	109
Thursday	19th May 2011	86	110	100	90	102	121	101
Friday	20th May 2011	94	121	120	89	117	119	86
Saturday	21st May 2011	52	120	117	84	68		
Sunday	22nd May 2011	48	81	87	92	51		
Monday	4th July 2011	91	120	111	88	120	121	110
Tuesday	5th July 2011	90	119	108	95	117	119	106
Wednesday	6th July 2011	85	117	96	97	120	120	99
Thursday	7th July 2011	92	112	101	92	113	121	105
Friday	8th July 2011	89	121	121	96	119	102	82
Saturday	9th July 2011	59	105	102	90	44		
Sunday	10th July 2011	42	77	81	88	48		
Monday	11th July 2011	87	118	120	94	110	119	115
Tuesday	12th July 2011	88	117	117	91	117	121	109
Wednesday	13th July 2011	84	115	103	87	114	119	107
Thursday	14th July 2011	81	111	91	88	115	117	101
Friday	15th July 2011	87	118	116	76	117	115	82
Saturday	16th July 2011	54	101	104	88	49		
Sunday	17th July 2011	49	78	92	78	54		

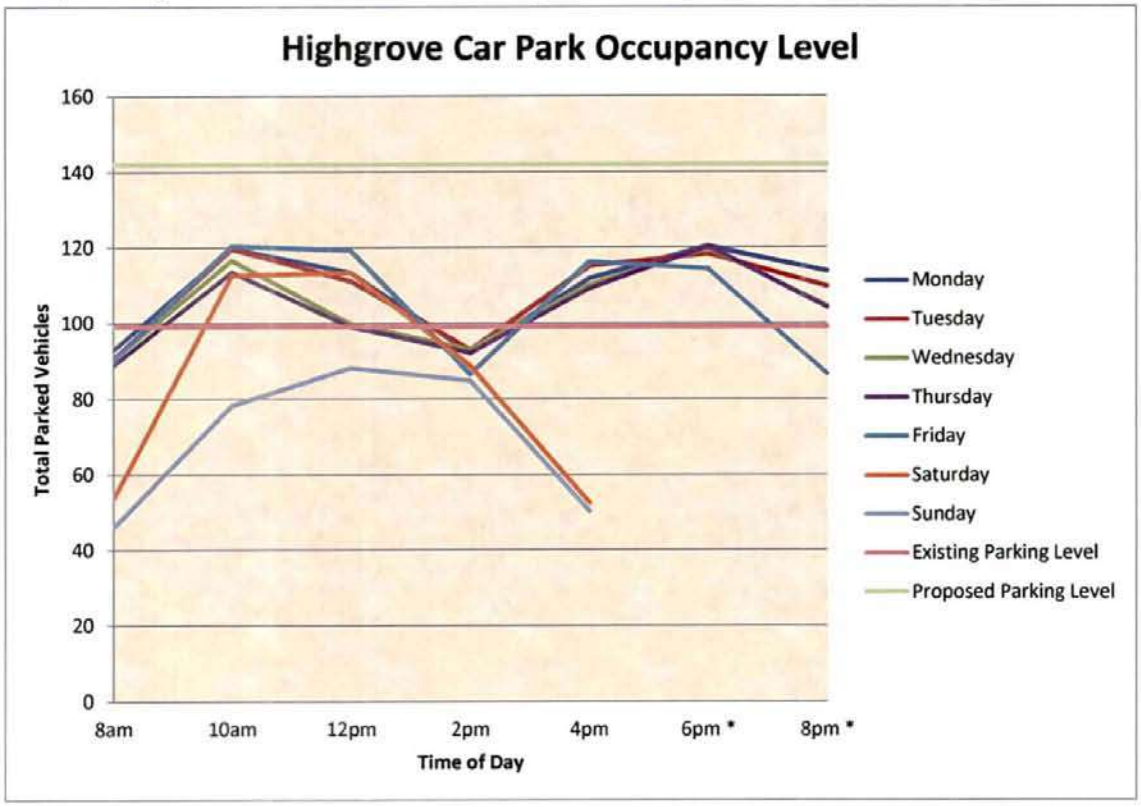
Average Occupancy by Day

	8am	10am	12pm	2pm	4pm	6pm *	8pm *
Monday	93	120	113	92	112	120	114
Tuesday	91	120	111	93	115	118	110
Wednesday	91	117	100	93	110	120	105
Thursday	89	114	99	92	109	120	104
Friday	90	121	119	87	116	114	87
Saturday	54	113	113	89	53		
Sunday	46	78	88	85	50		
Existing Parking Level	99	99	99	99	99	99	99
Proposed Parking Level	142	142	142	142	142	142	142

Note: Existing car park provision level is based upon Drawing 1258RE040 Rev C
Proposed car park provision level is based upon Drawing 1258RE040 Rev C
At present customers often park alongside kerbs etc in addition to marked spaces

Highgrove Leisure Centre Car Park Occupancy

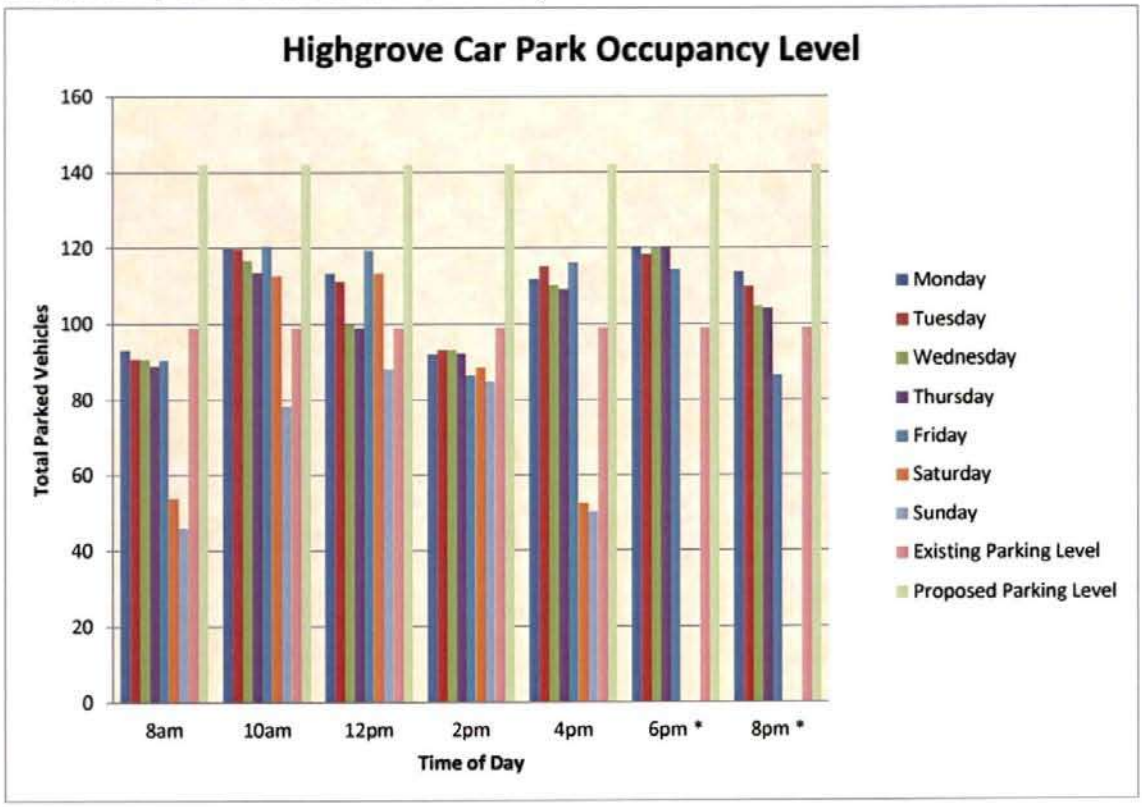
Analysis of Car Park Occupancy Level by Day and Time
Based upon survey data collected between March and July 2011



Notes:
Existing car park provision level is based upon Drawing 1258RE040 Rev C
Proposed car park provision level is based upon Drawing 1258RE040 Rev C
** From 6pm customers park in school car park when centre car park is full*
Reason for parking level in excess of current provision is that parking outside of marked spaces currently takes place

Highgrove Leisure Centre Car Park Occupancy

Analysis of Car Park Occupancy Level by Day and Time
Based upon survey data collected between March and July 2011



Notes:

Existing car park provision level is based upon Drawing 1258RE040 Rev C
Proposed car park provision level is based upon Drawing 1258RE040 Rev C
** From 6pm customers park in school car park when centre car park is full*
Reason for parking level in excess of current provision is that parking outside of marked spaces currently takes place

APPENDIX G. PMV^2 Assessment

ITB14708 - PMV2

Weighting Factors

Actual Measured Value	Policy Range	Value
6.0m	Less than or equal to 7.3m	0.8
30 mph	A 20mph Speed Limit	1.0
		1.8
Average value of difficulty to cross (Q)		0.9

Pedestrians

Hour	Pedestrian Count	Factor	Pm
0700-0800	112	0.9	102
0800-0900	119	0.9	108
0900-1000	141	0.9	128
1000-1100	129	0.9	117
1100-1200	138	0.9	126
1200-1300	123	0.9	112
1300-1400	103	0.9	94
1400-1500	94	0.9	86
1500-1600	149	0.9	136
1600-1700	221	0.9	201
1700-1800	255	0.9	232
1800-1900	298	0.9	271

Two-Way Traffic Flows

Hour	Observed Flows	2023 Flows	2023 + Dev
0700-0800	38	40	96
0800-0900	51	53	113
0900-1000	28	29	100
1000-1100			
1100-1200			
1200-1300			
1300-1400			
1400-1500			
1500-1600			
1600-1700	32	33	144
1700-1800	50	52	180
1800-1900	37	39	188

2019 - 2022 TEMPRO Growth Rate

AM	PM
1.0429	1.0437

PmV2

Hour	Pm	V2	PmV2	10^8
0700-0800	102	9142	932494	0.01
0800-0900	108	12684	1373534	0.01
0900-1000	128	9904	1268803	0.01
1000-1100	117			0.00
1100-1200	126			0.00
1200-1300	112			0.00
1300-1400	94			0.00
1400-1500	86			0.00
1500-1600	136			0.00
1600-1700	201	20641	4146996	0.04
1700-1800	232	32234	7479337	0.07
1800-1900	271	35178	9545832	0.10

>1.0 crossing is justified
0.5-1.0 crossing would be added to a secondary list
0.2-0.5 controlled crossing not normally recommended
<0.2 crossing facilitiy not justified

Average PMV2 0.04

Notes:

Vehicle flow data derived from the MCC at the Rowlheys Place/ Harmondsworth Road Junction.
Pedestrian count based on 2.0 people per vehicle.

APPENDIX H.TRICS Outputs

Calculation Reference: AUDIT-236601-190719-0749

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : Q - COMMUNITY CENTRE
VEHICLES

Selected regions and areas:

04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	ST	STAFFORDSHIRE	1 days

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

Secondary Filtering selection:

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

Parameter: Site area
Actual Range: 0.13 to 0.37 (units: hect)
Range Selected by User: 0.04 to 2.50 (units: hect)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 07/06/18

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:

Thursday	3 days
Friday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	3
Edge of Town	1

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	2
Built-Up Zone	1
High Street	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:

D2	4 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	2 days
25,001 to 50,000	1 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
250,001 to 500,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	1 days

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

Travel Plan:

No	4 days

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

PTAL Rating:

No PTAL Present	4 days

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

LIST OF SITES relevant to selection parameters

1 CA-07-Q-02 COMMUNITY CENTRE CAMBRIDGESHIRE
HIGH STREET
CAMBOURNE

Edge of Town Centre
High Street
Total Site area: 0.37 hect
Survey date: THURSDAY *07/06/18* *Survey Type: MANUAL*

2 NT-07-Q-01 COMMUNITY CENTRE NOTTINGHAMSHIRE
61B MANSFIELD ROAD
NOTTINGHAM

Edge of Town Centre
Residential Zone
Total Site area: 0.13 hect
Survey date: THURSDAY *13/06/13* *Survey Type: MANUAL*

3 SH-07-Q-01 COMMUNITY CENTRE SHROPSHIRE
SOUTHGATE
TELFORD
SUTTON HILL
Edge of Town
Residential Zone
Total Site area: 0.15 hect
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

4 ST-07-Q-01 COMMUNITY CENTRE STAFFORDSHIRE
DUDLEY ROAD
WOLVERHAMPTON

Edge of Town Centre
Built-Up Zone
Total Site area: 0.20 hect
Survey date: FRIDAY *09/05/14* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 07 - LEISURE/Q - COMMUNITY CENTRE
VEHICLES
Calculation factor: 1 hect
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	1	0.37	5.405	1	0.37	0.000	1	0.37	5.405
08:00 - 09:00	4	0.21	41.176	4	0.21	3.529	4	0.21	44.705
09:00 - 10:00	4	0.21	36.471	4	0.21	23.529	4	0.21	60.000
10:00 - 11:00	4	0.21	29.412	4	0.21	35.294	4	0.21	64.706
11:00 - 12:00	4	0.21	24.706	4	0.21	38.824	4	0.21	63.530
12:00 - 13:00	4	0.21	27.059	4	0.21	34.118	4	0.21	61.177
13:00 - 14:00	4	0.21	22.353	4	0.21	28.235	4	0.21	50.588
14:00 - 15:00	4	0.21	27.059	4	0.21	31.765	4	0.21	58.824
15:00 - 16:00	4	0.21	22.353	4	0.21	18.824	4	0.21	41.177
16:00 - 17:00	4	0.21	17.647	4	0.21	20.000	4	0.21	37.647
17:00 - 18:00	4	0.21	37.647	4	0.21	27.059	4	0.21	64.706
18:00 - 19:00	4	0.21	29.412	4	0.21	8.235	4	0.21	37.647
19:00 - 20:00	4	0.21	16.471	4	0.21	37.647	4	0.21	54.118
20:00 - 21:00	4	0.21	0.000	4	0.21	12.941	4	0.21	12.941
21:00 - 22:00	3	0.16	0.000	3	0.16	16.667	3	0.16	16.667
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			337.171			336.667			673.838

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:	0.13 to 0.37 (units: hect)
Survey date date range:	01/01/11 - 07/06/18
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 07 - LEISURE/Q - COMMUNITY CENTRE
CARS
Calculation factor: 1 hect
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	1	0.37	5.405	1	0.37	0.000	1	0.37	5.405
08:00 - 09:00	4	0.21	20.000	4	0.21	0.000	4	0.21	20.000
09:00 - 10:00	4	0.21	15.294	4	0.21	10.588	4	0.21	25.882
10:00 - 11:00	4	0.21	9.412	4	0.21	5.882	4	0.21	15.294
11:00 - 12:00	4	0.21	3.529	4	0.21	18.824	4	0.21	22.353
12:00 - 13:00	4	0.21	5.882	4	0.21	3.529	4	0.21	9.411
13:00 - 14:00	4	0.21	3.529	4	0.21	2.353	4	0.21	5.882
14:00 - 15:00	4	0.21	8.235	4	0.21	5.882	4	0.21	14.117
15:00 - 16:00	4	0.21	8.235	4	0.21	9.412	4	0.21	17.647
16:00 - 17:00	4	0.21	3.529	4	0.21	10.588	4	0.21	14.117
17:00 - 18:00	4	0.21	27.059	4	0.21	10.588	4	0.21	37.647
18:00 - 19:00	4	0.21	16.471	4	0.21	2.353	4	0.21	18.824
19:00 - 20:00	4	0.21	14.118	4	0.21	35.294	4	0.21	49.412
20:00 - 21:00	4	0.21	0.000	4	0.21	12.941	4	0.21	12.941
21:00 - 22:00	3	0.16	0.000	3	0.16	16.667	3	0.16	16.667
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			140.698			144.901			285.599

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

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

Calculation Reference: AUDIT-236601-190621-0647

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : C - LEISURE CENTRE
VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	EG	EALING	1 days
	HD	HILLINGDON	2 days
	HK	HACKNEY	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 4000 to 5800 (units: sqm)
Range Selected by User: 1300 to 19750 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 30/06/15

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	1 days
Friday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of 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	4

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

Secondary Filtering selection:

Use Class:

D2	4 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	2 days
50,001 to 100,000	1 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	4 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	1 days
1.1 to 1.5	3 days

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

Travel Plan:

Yes	1 days
No	3 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:

1a (Low) Very poor	1 days
3 Moderate	1 days
4 Good	1 days
5 Very Good	1 days

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

LIST OF SITES relevant to selection parameters

1 EG-07-C-04 LEISURE CENTRE EALING
EASTCOTE LANE NORTH
NORTHOLT

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 4500 sqm
Survey date: TUESDAY *30/06/15* *Survey Type: MANUAL*

2 HD-07-C-01 LEISURE CENTRE HILLINGDON
HUME WAY
RUISLIP

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 4000 sqm
Survey date: FRIDAY *26/06/15* *Survey Type: MANUAL*

3 HD-07-C-03 LEISURE CENTRE HILLINGDON
EAST AVENUE
HAYES

Edge of Town Centre
Residential Zone
Total Gross floor area: 5800 sqm
Survey date: MONDAY *29/06/15* *Survey Type: MANUAL*

4 HK-07-C-02 LEISURE CENTRE HACKNEY
HYDE ROAD
SHOREDITCH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 4627 sqm
Survey date: WEDNESDAY *17/09/14* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	4732	0.734	4	4732	0.095	4	4732	0.829
07:00 - 08:00	4	4732	0.539	4	4732	0.655	4	4732	1.194
08:00 - 09:00	4	4732	0.766	4	4732	0.555	4	4732	1.321
09:00 - 10:00	4	4732	0.983	4	4732	0.597	4	4732	1.580
10:00 - 11:00	4	4732	0.671	4	4732	0.740	4	4732	1.411
11:00 - 12:00	4	4732	0.650	4	4732	0.808	4	4732	1.458
12:00 - 13:00	4	4732	0.660	4	4732	0.623	4	4732	1.283
13:00 - 14:00	4	4732	0.465	4	4732	0.623	4	4732	1.088
14:00 - 15:00	4	4732	0.486	4	4732	0.512	4	4732	0.998
15:00 - 16:00	4	4732	0.972	4	4732	0.576	4	4732	1.548
16:00 - 17:00	4	4732	1.273	4	4732	1.073	4	4732	2.346
17:00 - 18:00	4	4732	1.411	4	4732	1.305	4	4732	2.716
18:00 - 19:00	4	4732	1.622	4	4732	1.527	4	4732	3.149
19:00 - 20:00	4	4732	1.025	4	4732	1.390	4	4732	2.415
20:00 - 21:00	4	4732	0.793	4	4732	1.215	4	4732	2.008
21:00 - 22:00	4	4732	0.180	4	4732	0.803	4	4732	0.983
22:00 - 23:00	1	4627	0.000	1	4627	0.238	1	4627	0.238
23:00 - 24:00									
Total Rates:			13.230			13.335			26.565

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:	4000 - 5800 (units: sqm)
Survey date date range:	01/01/11 - 30/06/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	4732	0.000	4	4732	0.000	4	4732	0.000
07:00 - 08:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
08:00 - 09:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
09:00 - 10:00	4	4732	0.011	4	4732	0.011	4	4732	0.022
10:00 - 11:00	4	4732	0.005	4	4732	0.005	4	4732	0.010
11:00 - 12:00	4	4732	0.005	4	4732	0.005	4	4732	0.010
12:00 - 13:00	4	4732	0.011	4	4732	0.011	4	4732	0.022
13:00 - 14:00	4	4732	0.005	4	4732	0.005	4	4732	0.010
14:00 - 15:00	4	4732	0.011	4	4732	0.011	4	4732	0.022
15:00 - 16:00	4	4732	0.026	4	4732	0.026	4	4732	0.052
16:00 - 17:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
17:00 - 18:00	4	4732	0.005	4	4732	0.005	4	4732	0.010
18:00 - 19:00	4	4732	0.021	4	4732	0.021	4	4732	0.042
19:00 - 20:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
20:00 - 21:00	4	4732	0.005	4	4732	0.005	4	4732	0.010
21:00 - 22:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
22:00 - 23:00	1	4627	0.000	1	4627	0.000	1	4627	0.000
23:00 - 24:00									
Total Rates:			0.105			0.105			0.210

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

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

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	4732	0.000	4	4732	0.000	4	4732	0.000
07:00 - 08:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
08:00 - 09:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
09:00 - 10:00	4	4732	0.021	4	4732	0.005	4	4732	0.026
10:00 - 11:00	4	4732	0.026	4	4732	0.026	4	4732	0.052
11:00 - 12:00	4	4732	0.011	4	4732	0.021	4	4732	0.032
12:00 - 13:00	4	4732	0.016	4	4732	0.011	4	4732	0.027
13:00 - 14:00	4	4732	0.021	4	4732	0.016	4	4732	0.037
14:00 - 15:00	4	4732	0.037	4	4732	0.042	4	4732	0.079
15:00 - 16:00	4	4732	0.016	4	4732	0.021	4	4732	0.037
16:00 - 17:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
17:00 - 18:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
18:00 - 19:00	4	4732	0.000	4	4732	0.005	4	4732	0.005
19:00 - 20:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
20:00 - 21:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
21:00 - 22:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
22:00 - 23:00	1	4627	0.000	1	4627	0.000	1	4627	0.000
23:00 - 24:00									
Total Rates:			0.148			0.147			0.295

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

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

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	4732	0.021	4	4732	0.000	4	4732	0.021
07:00 - 08:00	4	4732	0.048	4	4732	0.032	4	4732	0.080
08:00 - 09:00	4	4732	0.053	4	4732	0.032	4	4732	0.085
09:00 - 10:00	4	4732	0.053	4	4732	0.021	4	4732	0.074
10:00 - 11:00	4	4732	0.042	4	4732	0.058	4	4732	0.100
11:00 - 12:00	4	4732	0.032	4	4732	0.026	4	4732	0.058
12:00 - 13:00	4	4732	0.026	4	4732	0.053	4	4732	0.079
13:00 - 14:00	4	4732	0.042	4	4732	0.042	4	4732	0.084
14:00 - 15:00	4	4732	0.026	4	4732	0.032	4	4732	0.058
15:00 - 16:00	4	4732	0.085	4	4732	0.032	4	4732	0.117
16:00 - 17:00	4	4732	0.069	4	4732	0.074	4	4732	0.143
17:00 - 18:00	4	4732	0.069	4	4732	0.095	4	4732	0.164
18:00 - 19:00	4	4732	0.090	4	4732	0.048	4	4732	0.138
19:00 - 20:00	4	4732	0.079	4	4732	0.111	4	4732	0.190
20:00 - 21:00	4	4732	0.063	4	4732	0.053	4	4732	0.116
21:00 - 22:00	4	4732	0.000	4	4732	0.095	4	4732	0.095
22:00 - 23:00	1	4627	0.000	1	4627	0.065	1	4627	0.065
23:00 - 24:00									
Total Rates:			0.798			0.869			1.667

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

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

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	4732	0.713	4	4732	0.085	4	4732	0.798
07:00 - 08:00	4	4732	0.523	4	4732	0.639	4	4732	1.162
08:00 - 09:00	4	4732	0.734	4	4732	0.534	4	4732	1.268
09:00 - 10:00	4	4732	0.919	4	4732	0.560	4	4732	1.479
10:00 - 11:00	4	4732	0.608	4	4732	0.682	4	4732	1.290
11:00 - 12:00	4	4732	0.597	4	4732	0.729	4	4732	1.326
12:00 - 13:00	4	4732	0.623	4	4732	0.592	4	4732	1.215
13:00 - 14:00	4	4732	0.407	4	4732	0.571	4	4732	0.978
14:00 - 15:00	4	4732	0.417	4	4732	0.439	4	4732	0.856
15:00 - 16:00	4	4732	0.909	4	4732	0.497	4	4732	1.406
16:00 - 17:00	4	4732	1.257	4	4732	1.051	4	4732	2.308
17:00 - 18:00	4	4732	1.379	4	4732	1.279	4	4732	2.658
18:00 - 19:00	4	4732	1.564	4	4732	1.479	4	4732	3.043
19:00 - 20:00	4	4732	1.009	4	4732	1.358	4	4732	2.367
20:00 - 21:00	4	4732	0.777	4	4732	1.178	4	4732	1.955
21:00 - 22:00	4	4732	0.180	4	4732	0.793	4	4732	0.973
22:00 - 23:00	1	4627	0.000	1	4627	0.238	1	4627	0.238
23:00 - 24:00									
Total Rates:			12.616			12.704			25.320

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

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

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	4732	0.021	4	4732	0.011	4	4732	0.032
07:00 - 08:00	4	4732	0.011	4	4732	0.016	4	4732	0.027
08:00 - 09:00	4	4732	0.011	4	4732	0.016	4	4732	0.027
09:00 - 10:00	4	4732	0.021	4	4732	0.021	4	4732	0.042
10:00 - 11:00	4	4732	0.026	4	4732	0.021	4	4732	0.047
11:00 - 12:00	4	4732	0.032	4	4732	0.042	4	4732	0.074
12:00 - 13:00	4	4732	0.005	4	4732	0.000	4	4732	0.005
13:00 - 14:00	4	4732	0.016	4	4732	0.021	4	4732	0.037
14:00 - 15:00	4	4732	0.016	4	4732	0.011	4	4732	0.027
15:00 - 16:00	4	4732	0.005	4	4732	0.016	4	4732	0.021
16:00 - 17:00	4	4732	0.005	4	4732	0.016	4	4732	0.021
17:00 - 18:00	4	4732	0.011	4	4732	0.000	4	4732	0.011
18:00 - 19:00	4	4732	0.016	4	4732	0.005	4	4732	0.021
19:00 - 20:00	4	4732	0.000	4	4732	0.016	4	4732	0.016
20:00 - 21:00	4	4732	0.005	4	4732	0.011	4	4732	0.016
21:00 - 22:00	4	4732	0.000	4	4732	0.000	4	4732	0.000
22:00 - 23:00	1	4627	0.000	1	4627	0.000	1	4627	0.000
23:00 - 24:00									
Total Rates:			0.201			0.223			0.424

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

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

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	4732	0.000	4	4732	0.000	4	4732	0.000
07:00 - 08:00	4	4732	0.005	4	4732	0.000	4	4732	0.005
08:00 - 09:00	4	4732	0.021	4	4732	0.005	4	4732	0.026
09:00 - 10:00	4	4732	0.011	4	4732	0.000	4	4732	0.011
10:00 - 11:00	4	4732	0.005	4	4732	0.005	4	4732	0.010
11:00 - 12:00	4	4732	0.005	4	4732	0.011	4	4732	0.016
12:00 - 13:00	4	4732	0.005	4	4732	0.011	4	4732	0.016
13:00 - 14:00	4	4732	0.016	4	4732	0.011	4	4732	0.027
14:00 - 15:00	4	4732	0.005	4	4732	0.011	4	4732	0.016
15:00 - 16:00	4	4732	0.016	4	4732	0.016	4	4732	0.032
16:00 - 17:00	4	4732	0.011	4	4732	0.005	4	4732	0.016
17:00 - 18:00	4	4732	0.016	4	4732	0.021	4	4732	0.037
18:00 - 19:00	4	4732	0.021	4	4732	0.016	4	4732	0.037
19:00 - 20:00	4	4732	0.016	4	4732	0.016	4	4732	0.032
20:00 - 21:00	4	4732	0.005	4	4732	0.021	4	4732	0.026
21:00 - 22:00	4	4732	0.000	4	4732	0.011	4	4732	0.011
22:00 - 23:00	1	4627	0.000	1	4627	0.000	1	4627	0.000
23:00 - 24:00									
Total Rates:			0.158			0.160			0.318

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.*

APPENDIX I. Gravity Model

i-Transport Gravity Model

ITB14708 Rowhleys Place Leisure Centre

Destination	Route 1	Route 2	Route 3	Time (mins)	Population	P/T	P/T^2	P/T^2%	Car Driver Mode Split	P/T^2 using Cars (% of all users)	Routing %	% to destination by car
West Drayton	Harmondsworth Road North	Station Road	Porters Way	5	18,565	3713	743	42.9%	35%	15.0%	50.0%	22.2%
	Harmondsworth Road North	Sipson Road	Sipson Road								50.0%	22.2%
Yiewsley	Harmondsworth Road North	Station Road	Station Road	8	19,045	2381	298	17.2%	34%	5.9%	100.0%	17.5%
Hayes	Harmondsworth Road North	Sipson Road	Cherry Lane	15	29,545	1970	131	7.6%	30%	2.3%	100.0%	6.8%
Harmondsworth / Sipson	Harmondsworth Road South	Harmondsworth Road South	Holloway Lane	4	6,663	1666	416	24.0%	33%	7.9%	100.0%	23.5%
Hillingdon	Harmondsworth Road North	Sipson Road	Cherry Lane	20	16,635	832	42	2.4%	36%	0.9%	100.0%	2.5%
Uxbridge	Harmondsworth Road North	Station Road	Station Road	20	19,007	950	48	2.7%	23%	0.6%	100.0%	1.8%
Yeading	Harmondsworth Road North	Sipson Road	Cherry Lane	22	27,069	1230	56	3.2%	35%	1.1%	100.0%	3.4%
						12742	**1,733**	**100.0%**		**33.7%**		**100.0%**

Route 1	% of Car Drivers
Harmondsworth Road South	24%
Harmondsworth Road North	76%
Total	**100%**

Route 2	% of Car Drivers
Station Road	42%
Sipson Road	35%
Harmondsworth Road South	24%
Total	**100%**

Route 3	% of Car Drivers
Porters Way	22%
Station Road	19%
Cherry Lane	13%
Holloway Lane	24%
Sipson Road	22%
Total	**100%**

APPENDIX J. Junction Capacity Models

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.1.1519
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Filename: Harmondsworth Road_Rowlheys Combined.j10
Path: T:\Projects\14000 Series\14708ITB Harmondsworth Road, West Drayton\Tech\Junction Assessments\Picady\2021
Report generation date: 11/01/2022 15:38:54

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	8.11	0.06	A	0.1	8.89	0.07	A
Stream C-AB	0.1	4.61	0.04	A	0.1	5.04	0.05	A
	2024 Future Year							
Stream B-AC	0.1	8.22	0.07	A	0.1	9.18	0.08	A
Stream C-AB	0.1	4.57	0.05	A	0.1	5.02	0.05	A
	2024 Future Year + Development							
Stream B-AC	0.2	8.79	0.14	A	0.3	10.90	0.25	B
Stream C-AB	0.4	4.85	0.15	A	0.6	5.92	0.24	A

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	Harmondsworth Road/ Rowlheys Place Priority
Location	
Site number	
Date	26/06/2019
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	2024 Future Year	AM	ONE HOUR	07:45	09:15	15
D4	2024 Future Year	PM	ONE HOUR	16:45	18:15	15
D5	2024 Future Year + Development	AM	ONE HOUR	07:45	09:15	15
D6	2024 Future Year + 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

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harmondsworth Road/ Rowlheys Place	T-Junction	Two-way	Two-way	Two-way		0.38	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.38	A

Arms

Arms

Arm	Name	Description	Arm type
A	Harmondsworth Road South		Major
B	Rowlheys Place		Minor
C	Harmondsworth Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Harmondsworth Road South	6.70			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 - Rowlheys Place	One lane	4.16	30	48

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	570	0.101	0.255	0.160	0.364
B-C	730	0.109	0.274	-	-
C-B	641	0.241	0.241	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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 - Harmondsworth Road South		✓	414	100.000
B - Rowlheys Place		✓	28	100.000
C - Harmondsworth Road South		✓	485	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	9	405
	B - Rowlheys Place	11	0	17
	C - Harmondsworth Road South	471	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	0	5
	B - Rowlheys Place	0	0	0
	C - Harmondsworth Road South	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.06	8.11	0.1	A
C-AB	0.04	4.61	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	21	535	0.039	21	0.0	7.003	A
C-AB	19	801	0.024	19	0.0	4.600	A
C-A	346			346			
A-B	7			7			
A-C	305			305			

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	25	510	0.049	25	0.1	7.426	A
C-AB	26	836	0.031	26	0.0	4.434	A
C-A	410			410			
A-B	8			8			
A-C	364			364			

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	31	475	0.065	31	0.1	8.111	A
C-AB	37	887	0.042	37	0.1	4.232	A
C-A	497			497			
A-B	10			10			
A-C	446			446			

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	31	475	0.065	31	0.1	8.113	A
C-AB	37	887	0.042	37	0.1	4.238	A
C-A	497			497			
A-B	10			10			
A-C	446			446			

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	25	510	0.049	25	0.1	7.431	A
C-AB	26	836	0.031	26	0.0	4.451	A
C-A	410			410			
A-B	8			8			
A-C	364			364			

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	21	535	0.039	21	0.0	7.007	A
C-AB	19	801	0.024	19	0.0	4.610	A
C-A	346			346			
A-B	7			7			
A-C	305			305			

2019 Observed, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harmondsworth Road/ Rowlheys Place	T-Junction	Two-way	Two-way	Two-way		0.41	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.41	A

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 - Harmondsworth Road South		✓	559	100.000
B - Rowlheys Place		✓	27	100.000
C - Harmondsworth Road South		✓	395	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	10	549
	B - Rowlheys Place	12	0	15
	C - Harmondsworth Road South	378	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	0	1
	B - Rowlheys Place	0	0	0
	C - Harmondsworth Road South	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.07	8.89	0.1	A
C-AB	0.05	5.04	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	20	505	0.040	20	0.0	7.429	A
C-AB	21	736	0.028	21	0.0	5.033	A
C-A	277			277			
A-B	8			8			
A-C	413			413			

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	24	476	0.051	24	0.1	7.974	A
C-AB	28	758	0.037	28	0.1	4.923	A
C-A	327			327			
A-B	9			9			
A-C	494			494			

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	30	435	0.068	30	0.1	8.887	A
C-AB	40	791	0.050	39	0.1	4.784	A
C-A	395			395			
A-B	11			11			
A-C	604			604			

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	30	435	0.068	30	0.1	8.888	A
C-AB	40	791	0.050	40	0.1	4.788	A
C-A	395			395			
A-B	11			11			
A-C	604			604			

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	24	476	0.051	24	0.1	7.979	A
C-AB	28	759	0.037	28	0.1	4.934	A
C-A	327			327			
A-B	9			9			
A-C	494			494			

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	20	505	0.040	20	0.0	7.434	A
C-AB	21	736	0.028	21	0.0	5.038	A
C-A	276			276			
A-B	8			8			
A-C	413			413			

2024 Future Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harmondsworth Road/ Rowlheys Place	T-Junction	Two-way	Two-way	Two-way		0.39	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.39	A

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	2024 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 - Harmondsworth Road South		✓	431	100.000
B - Rowlheys Place		✓	29	100.000
C - Harmondsworth Road South		✓	506	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	9	422
	B - Rowlheys Place	11	0	18
	C - Harmondsworth Road South	491	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	0	5
	B - Rowlheys Place	0	0	0
	C - Harmondsworth Road South	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.07	8.22	0.1	A
C-AB	0.05	4.57	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	22	533	0.041	22	0.0	7.045	A
C-AB	21	809	0.026	21	0.0	4.566	A
C-A	360			360			
A-B	7			7			
A-C	318			318			

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	26	507	0.051	26	0.1	7.491	A
C-AB	28	846	0.033	28	0.0	4.398	A
C-A	427			427			
A-B	8			8			
A-C	379			379			

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	32	470	0.068	32	0.1	8.221	A
C-AB	42	899	0.046	41	0.1	4.194	A
C-A	516			516			
A-B	10			10			
A-C	465			465			

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	32	470	0.068	32	0.1	8.223	A
C-AB	42	899	0.046	42	0.1	4.200	A
C-A	516			516			
A-B	10			10			
A-C	465			465			

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	26	507	0.051	26	0.1	7.494	A
C-AB	28	846	0.033	28	0.0	4.413	A
C-A	427			427			
A-B	8			8			
A-C	379			379			

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	22	533	0.041	22	0.0	7.052	A
C-AB	21	809	0.026	21	0.0	4.575	A
C-A	360			360			
A-B	7			7			
A-C	318			318			

2024 Future Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harmondsworth Road/ Rowlheys Place	T-Junction	Two-way	Two-way	Two-way		0.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.43	A

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	2024 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 - Harmondsworth Road South		✓	583	100.000
B - Rowlheys Place		✓	29	100.000
C - Harmondsworth Road South		✓	413	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	10	573
	B - Rowlheys Place	13	0	16
	C - Harmondsworth Road South	395	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	0	1
	B - Rowlheys Place	0	0	0
	C - Harmondsworth Road South	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.08	9.18	0.1	A
C-AB	0.05	5.02	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	22	497	0.044	22	0.0	7.567	A
C-AB	23	741	0.031	22	0.0	5.008	A
C-A	288			288			
A-B	8			8			
A-C	431			431			

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	26	467	0.056	26	0.1	8.165	A
C-AB	30	765	0.040	30	0.1	4.896	A
C-A	341			341			
A-B	9			9			
A-C	515			515			

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	32	424	0.075	32	0.1	9.179	A
C-AB	44	800	0.054	43	0.1	4.754	A
C-A	411			411			
A-B	11			11			
A-C	631			631			

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	32	424	0.075	32	0.1	9.183	A
C-AB	44	800	0.055	44	0.1	4.761	A
C-A	411			411			
A-B	11			11			
A-C	631			631			

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	26	467	0.056	26	0.1	8.170	A
C-AB	30	765	0.040	30	0.1	4.905	A
C-A	341			341			
A-B	9			9			
A-C	515			515			

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	22	497	0.044	22	0.0	7.575	A
C-AB	23	741	0.031	23	0.0	5.015	A
C-A	288			288			
A-B	8			8			
A-C	431			431			

2024 Future Year + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harmondsworth Road/ Rowlheys Place	T-Junction	Two-way	Two-way	Two-way		0.96	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.96	A

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	2024 Future Year + 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 - Harmondsworth Road South		✓	446	100.000
B - Rowlheys Place		✓	60	100.000
C - Harmondsworth Road South		✓	543	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	20	426
	B - Rowlheys Place	19	0	41
	C - Harmondsworth Road South	496	47	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	0	5
	B - Rowlheys Place	0	0	0
	C - Harmondsworth Road South	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.14	8.79	0.2	A
C-AB	0.15	4.85	0.4	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	45	541	0.084	45	0.1	7.252	A
C-AB	66	811	0.081	65	0.2	4.828	A
C-A	343			343			
A-B	15			15			
A-C	321			321			

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	54	514	0.105	54	0.1	7.820	A
C-AB	90	848	0.106	89	0.2	4.743	A
C-A	399			399			
A-B	18			18			
A-C	383			383			

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	66	476	0.139	66	0.2	8.779	A
C-AB	132	902	0.146	131	0.4	4.676	A
C-A	466			466			
A-B	22			22			
A-C	469			469			

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	66	476	0.139	66	0.2	8.787	A
C-AB	132	902	0.147	132	0.4	4.686	A
C-A	466			466			
A-B	22			22			
A-C	469			469			

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	54	514	0.105	54	0.1	7.833	A
C-AB	90	848	0.106	90	0.2	4.766	A
C-A	398			398			
A-B	18			18			
A-C	383			383			

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	45	541	0.084	45	0.1	7.266	A
C-AB	66	811	0.081	66	0.2	4.848	A
C-A	343			343			
A-B	15			15			
A-C	321			321			

2024 Future Year + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Harmondsworth Road/ Rowlheys Place	T-Junction	Two-way	Two-way	Two-way		1.68	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.68	A

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	2024 Future Year + 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 - Harmondsworth Road South		✓	608	100.000
B - Rowlheys Place		✓	101	100.000
C - Harmondsworth Road South		✓	476	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	29	579
	B - Rowlheys Place	30	0	71
	C - Harmondsworth Road South	399	77	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Harmondsworth Road South	B - Rowlheys Place	C - Harmondsworth Road South
From	A - Harmondsworth Road South	0	0	1
	B - Rowlheys Place	0	0	0
	C - Harmondsworth Road South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.25	10.90	0.3	B
C-AB	0.24	5.92	0.6	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	76	519	0.146	75	0.2	8.101	A
C-AB	98	741	0.132	97	0.3	5.589	A
C-A	261			261			
A-B	22			22			
A-C	436			436			

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	91	487	0.186	91	0.2	9.074	A
C-AB	131	765	0.171	131	0.4	5.684	A
C-A	297			297			
A-B	26			26			
A-C	521			521			

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	111	442	0.252	111	0.3	10.867	B
C-AB	189	800	0.236	188	0.6	5.897	A
C-A	335			335			
A-B	32			32			
A-C	637			637			

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	111	441	0.252	111	0.3	10.899	B
C-AB	190	800	0.237	190	0.6	5.915	A
C-A	335			335			
A-B	32			32			
A-C	637			637			

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	91	487	0.186	91	0.2	9.107	A
C-AB	131	765	0.172	132	0.4	5.709	A
C-A	296			296			
A-B	26			26			
A-C	521			521			

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	76	519	0.147	76	0.2	8.137	A
C-AB	98	741	0.132	99	0.3	5.618	A
C-A	260			260			
A-B	22			22			
A-C	436			436			

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