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REDWOOD PARTNERSHIP

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**PROPOSED MIXED-USE
RETAIL & RESIDENTIAL DEVELOPMENT
43-67 HIGH STREET
YIEWSLEY
WEST DRAYTON
UB7 7QQ**

**TRANSPORT ASSESSMENT
VOLUME 1 OF 4**

on behalf of
**HARBOURSIDE INVESTMENTS LTD
&
WM MORRISON SUPERMARKETS PLC**

PMcL/3290d4/Jul 2018



VOLUME 1 OF 4

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1.0 INTRODUCTION

- 1.1 The Redwood Partnership has been appointed by Harbourside Investments Limited and WM Morrison Supermarkets PLC to provide transport and highway advice and prepare a Transport Assessment and Travel Plans to accompany a planning application at the existing Morrisons foodstore at 43-67 High St, Yiewsley, West Drayton, London, UB7 7QQ. The proposals include the demolition of the existing buildings and the redevelopment of the Site to provide a retail and residential mixed-use scheme. The Site will be developed to provide a replacement Morrisons foodstore with 144no residential units provided above. A Site location plan is shown on **Figure A1 (Appendix A)**.
- 1.2 The detailed planning application consists of replacement Use Class A1 food retail and new Use Class C3 Residential. Development proposals showing the ground floor level and 2no basement floor levels below are shown on the planning drawings submitted with the planning application. The planning application comprises a proposed mixed-use retail and residential development including:
- A replacement 1,643 sqm GIA Morrisons foodstore at ground level (Use Class A1)
 - 144no new dwellings including 47no 1-bedroom apartments; 76no 2-bedroom apartments; 16no 3-bedroom apartments and 5no 4-bedroom apartments in 6no storeys above the new Morrisons foodstore (Use Class C3)
 - Closure of 2no existing site accesses off St Stephen's Road replaced with a single site access
 - Footway widening and street lighting enhancements on St Stephen's Road
 - 69no Morrisons customer car parking spaces and 13no residential car parking spaces in an upper-level basement car park located beneath the new foodstore
 - 88no residential car parking spaces in a lower-level basement car park beneath the Morrisons car parking
 - 165no residential cycle parking spaces with space to expand up to 244no cycle parking spaces should more demand be identified in the Travel Plan
 - 32no Morrisons cycle parking spaces for customers and staff
 - Potential contributions within a S106 Planning Agreement towards possible future Traffic Regulation Orders on St Stephen's Road
- 1.3 The Transport Assessment will measure and assess the highway and transportation effects of the development proposals on the surrounding highway network and review the sustainability of the



development proposals against local and national transport guidelines. The Transport Assessment will be undertaken generally in accordance with Transport for London's "Best Practice Guide", April 2010.

1.4 The Transport Assessment considers the following issues:

- **Section 2.0** describes the existing highway conditions and patterns of movement within the study area together with public transport provision and accessibility of all modes of travel in the vicinity of the site
- **Section 3.0** describes the development proposals
- **Section 4.0** assesses the volume, distribution and characteristics of trips likely to be attracted to the development, car parking and the likely impact of the development on the adjoining highway network
- **Section 5.0** describes the local and national Planning policy background
- **Section 6.0** provides a full summary and report conclusions

1.5 The Authority responsible for planning, highways and transportation issues within the development area is the London Borough of Hillingdon. Transport for London (TfL) is responsible for the GLA road network also known as the Transport for London Road Network ("TLRN").

1.6 The Transport Assessment should be read together with other submitted documents in particular:

- the Morrisons Staff Travel Plan and the Residential Travel Plan prepared by the Redwood Partnership
- the Stage 1 Road Safety Audit prepared by Mayer Brown Consultants (**Appendix M**)
- the Design and Access Statement prepared by Hester Architects
- the Planning Statement prepared by Lichfields Planning Consultants
- the Construction Management Plan prepared by Deacon & Jones Consultants, and
- the full submission of commercial and residential site layouts and details prepared by Hester Architects



2.0 EXISTING SITUATION

- 2.1 The existing 0.52-hectare Site consists of a 3,340 sqm GIA Use Class A1 food retail building comprising a Morrisons foodstore located at the north-west corner of the junction of High Street and St Stephen's Road, Yiewsley, West Drayton, London, UB7 7QQ. The Site is located within the outer London Borough of Hillingdon. **Plan A1 (Appendix A)** shows the location of the site relative to the local highway network.

Highways – High street

- 2.2 The High Street is an 8.3m wide single carriageway urban road with waiting and loading restrictions, street lighting and wide footways both sides of the road. The High Street's western footway forms the eastern boundary of the site. Speeds limits are 30mph south of the St Stephen's Road junction changing to a 20mph zone along the site frontage adjacent to the Morrisons (**Photo 2.1**). High Street is a local distributor road serving local residential catchments and forms an important transport corridor through Yiewsley, linking the A408 Falling Lane in the north with West Drayton station in the south and beyond through to junction 4 of the M4 motorway (**Figure A1**).
- 2.3 **Photo 2.1** shows High Street looking north with the existing green façade of the Morrisons foodstore and the wide footway frontage; **Photo 2.2** shows High Street looking south with Colham bridge passing over the Grand Union Canal in the background:

Photo 2.1
High Street looking north



Photo 2.2
High Street looking south



- 2.4 A 7-day Automatic Traffic Counter (ATC) was installed on High Street. The speed and volume data will confirm safety of the High Street/St Stephen's Road junction and St Stephen's Road.



The results of the speed survey (**Appendix H**) measured 85thile traffic speeds on High Street as:

High Street (southbound) – 25.3 mph (40.7 kph)

High Street (northbound) – 25.5 mph (41.0 kph)

Highways – St Stephen's Road

- 2.5 St Stephen's Road is generally a 6.1m wide single carriageway urban road with single yellow line waiting restrictions, street lighting and a single narrow but poorly maintained footway on its north side adjacent to the Site's southern boundary. St Stephen's Road has the Grand Union Canal passing along its southern boundary with a narrow-landscaped strip dividing the canal towpath with the road. The footway on the north side of St Stephen's Road links High Street with St Matthew's Primary School beyond, however this school route is temporarily closed due to the poor quality of the footway link adjacent to the Site. St Stephen's Road maintains a national 30mph speed limit along the site frontage adjacent to the Morrisons.
- 2.6 **Photo 2.3** and **Photo 2.4** show the current condition of the existing footway on the St Stephen's Road footway with surface water ponding; obstructions from abandoned vehicles and narrow footways restricted by street furniture forcing pedestrians in places to walk in the carriageway when passing through:

Photo 2.3
St Stephen's Road
Existing ponding and obstructions



Photo 2.4
St Stephen's Road
Existing street furniture obstructions



- 2.7 St Stephen's Road is a local access road serving St Matthew's Primary School, small businesses and residential properties to the west and north of the Site, however the road is not a through route looping northwards to the west of the Morrisons and St Matthew's School



before connecting to High Street again as a simple priority junction approximately 150 metres north of the Site. The Morrisons foodstore attracts the majority of its traffic and all of its HGV deliveries from the High Street via the southern end of St Stephen's Road adjacent to the Grand Union Canal. Vehicles turn left or right from High Street travelling 100m along St Stephen's Road before accessing the Morrisons existing 114no space customer car park at the south-west corner of the Site (**Photo 2.5**). Service vehicles have a second dedicated access for deliveries in advance of the car park access as shown in **Photo 2.6**. **Figure 2.1** shows the relative location of the 2no existing site accesses on St Stephen's Road:

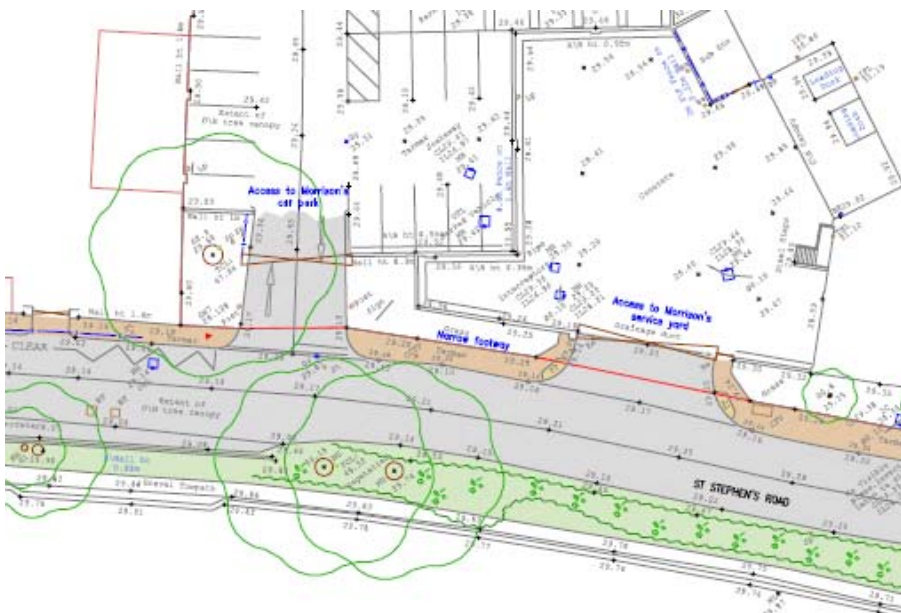
Photo 2.5
St Stephen's Road
Existing Morrisons car park entrance



Photo 2.6
St Stephen's Road
Existing Morrisons service entrance



Figure 2.1
Existing Morrisons vehicle accesses from St Stephen's Road





- 2.8 A 7-day Automatic Traffic Counter was installed on St Stephen's Road. The speed and volume data will confirm the safety of the proposed site access. The results of the speed survey (**Appendix H**) measured 85thile traffic speeds on St Stephen's Road as:

St Stephen's Road (westbound) –15.7 mph (25.3 kph)

St Stephen's Road (eastbound) – 18.1 mph (29.1 kph)

Pedestrian & Cycle Accessibility

- 2.9 The Institution of Highways and Transportation (IHT) publication "Guidelines for providing for journeys on foot" (2000) suggests acceptable walking distances for pedestrians without impaired mobility. The document suggests up to 2km (slightly over one mile) as being the maximum distance which the general public would consider if walking is a consideration. **Figure A5** shows a significant local population living within a 15-minute (1200 metre) walk isochrone. The site's location will benefit those who wish to walk to and from the site, namely new residents; staff working at Morrisons and customers shopping at Morrisons.
- 2.10 **Figure A6** shows the significant level of potential access routes for cyclists, albeit generally all along existing carriageway. A 5-mile (30 minutes) cycling isochrone encompasses a significant residential population providing new residents with a good opportunity to cycle to work from the Site and for staff and customers working or shopping at Morrisons. The 5-mile cycling isochrone extends as far as Heathrow in the south which would provide many employment opportunities for residents.

Public Transport - Bus Accessibility

- 2.11 Bus services 222, U1, U3 and U5 (**Figure A2**) all pass along the High Street adjacent to the Site. The bus stop for northbound services (stop A) is located on the west side of High Street 75 metres (1-minute) walk distance from the north-east corner of the Site. All southbound services stop at bus stop B located on the east side of High Street 40 metres (2-minute) walk distance from the north-east corner of the Site via a traffic signal-controlled pedestrian crossing of High Street. **Photo 2.7** and **Photo 2.8** show bus stop A and bus stop B located on High Street. Both bus stops are provided with shelters and seats:



Photo 2.7
Bus Stop A adjacent to Morrisons



Photo 2.8
Bus stop B opposite Morrisons



2.12 **Figure A2** shows the local bus routes. Bus service route 350 runs along Horton Road then south via West Drayton station to Heathrow. The bus stop for eastbound services (stop C) is located on the north side of Horton Road 160 metres (2-3 minutes) walk distance from the site via a pedestrian refuge island on High Street. For southbound services, route 350 stops at bus stop D located on the south side of Horton Road 200 metres (3 minutes) walk distance from the site via pedestrian refuge islands on Horton Road and High Street. **Photo 2.9** shows bus stop C; **Photo 2.10** shows bus stop D with a shelter and also showing that all bus services are accessible:

Photo 2.9
Bus Stop C Horton Road



Photo 2.10
Bus Stop D Horton Road



2.13 Most bus services are high frequency and operate throughout the day from approximately 03:40 hrs to 00:40 hrs with bus service 222 providing a 24-hour service. The frequency and timing of bus services provide a realistic opportunity for residents, staff and customers to consider bus travel. **Table 2.1** shows the local bus services and available routes stopping near to the site:



Table 2.1 - Local bus services and frequencies (Figure A2)

Service Number	General Frequency (mins)			Route
	Mon-Fri	Saturday	Sunday	
350	20 mins	20 mins	20 mins	Hayes-Botwell Common-Stockley Park-West Drayton-Harmondsworth-Colnbrook by-pass-Heathrow Terminal 5
222	10 mins	10 mins	12 mins	Uxbridge-Cowley-West Drayton-Heathrow Airport North-Cranford-Hounslow
U1	15 mins	15 mins	30 mins	West Drayton-Apple Tree Avenue-Colham Green-Kingston Lane-Uxbridge-Ickenham-West Ruislip-Ruislip
U3	12 mins	12 mins	20 mins	Heathrow Airport Central-Harmondsworth-Wise Lane-West Drayton-Apple Tree Avenue-Colham Green-Pield Heath-Brunel University-Uxbridge
U5	12 mins	12 mins	20 mins	Hayes-Stockley Park-Stockley Estate-West Drayton-Falling Lane-Colham Green-Pield Heath-Cowley-Uxbridge
697/698	5 services	-	-	School Service Wood End/West Drayton – Yeading/Hayes – Hayes End – Hillingdon – Ickenham

- 2.14 The walk distances to the Site from the nearest bus stops on High Street and Horton Road are well within the recommended maximum walk distances suggested in the Institution of Highways & Transportation's "Guidelines for Planning for Public Transport in Developments" (Para 5.18) which states: "The Department of the Environment has recommended that the public should not have to walk more than 400 metres to the nearest bus stop". The Site location is therefore easily accessible to local bus services.
- 2.15 In order to determine the usage of the existing bus services on High Street and Horton Road a bus occupancy survey was carried out during peak hours. The results of the bus occupancy survey are included in **Appendix K**. The impact of the residential development on local bus services will be addressed in **Section 4.0** of this document.
- 2.16 Changes to local bus services have been undertaken by Transport for London (TfL). TfL's Technical Note, July 2017 'Changes to suburban bus services to support the Elizabeth line' outlined bus service improvements along the Elizabeth line route. **Figure 2.2** provides an extract from TfL's Technical Note which describes the alterations to nearby bus services adjacent to West Drayton station as a result of the Elizabeth line improvements:



Fig 2.2 – Extract from TfL technical note
Alterations to local bus services to support Elizabeth Line Improvements

West Drayton

- 6.52 West Drayton station is located west of the Heathrow branch meaning train frequencies will be slightly lower. It is served by routes 222, 350, 698, U1, U3 and U5.
- 6.53 New development is anticipated in the West Drayton area but this is not expected to be significant before 2021. In the interim Hillingdon Hospital and Brunel University will continue to be important passenger destinations.
- 6.54 Corridors leading into West Drayton from both the north and south are forecast to experience some growth in usage but in general current service provision is expected to be sufficient to cope. The exception is Porters Way and Falling Lane (served by the U5) where in the very height of the morning peak additional capacity is required.
- 6.55 As a consequence it is planned to run additional peak hour journeys on **route U5** towards Uxbridge on weekday mornings. This is planned to be introduced from September 2017 and will provide the necessary capacity during a short period of high demand at Hayes, Stockley Park, West Drayton, Hillingdon Hospital and Brunel University.
- 6.56 This complements other changes at West Drayton that were introduced on 29 April 2017. These were:
- Routes 350 and U5 swapped their alignments between Hayes and Stockley Park. Route 350 now runs via Botwell Common and route U5 now runs via North Hyde Road.
 - Routes 350 and U5 also swapped their vehicle type. Route 350 now uses single-deck vehicles while route U5 now uses double-deck buses. Route 350 was also reduced in frequency from every 12 minutes during Monday to Friday daytimes to every 20 minutes and from every 20 minutes to every 30 minutes during evenings. Weekend daytimes were left unchanged.
- 6.57 No further changes are proposed at this time.

Public Transport - Rail Accessibility

- 2.17 The Institution of Highways & Transportation's "*Guidelines for Planning for Public Transport in Developments*" (Para 5.21) states: "*New developments should be located so that public transport trips involve a walking distance of less than 800 metres from the nearest railway station*". West Drayton station is located 250 metres (4-minutes) walk distance from the site boundary; well within the preferred maximum walking distance. With regular, comprehensive and soon to be improved services, the station provides an attractive travel choice for staff, customers and residents accessing all the uses on the site.
- 2.18 West Drayton station is currently undergoing significant improvements as part of the London Crossrail project and remains open during the improvement works. New overhead lines have been erected enabling electric trains to run through the station. The works are being carried out by Network Rail and are expected to be complete by December 2019 when Elizabeth line



services commence from Reading, Maidenhead and Heathrow. Once works are complete and the Elizabeth route opens fully, up to six Elizabeth line services an hour will serve West Drayton station, allowing passengers to travel through central London without having to change trains. The Elizabeth line route plan is shown in **Figure 2.3**:

Fig 2.3 – Elizabeth line Route Plan



Public Transport Accessibility Levels

2.19 A Public Transport Accessibility Level (PTAL) assessment has been undertaken using the standard online methodology issued by TfL. The PTAL methodology provides an 'accessibility index' of rail and bus services within given times of a particular location. Each area is graded between 0 and 6b, where a score of 0 is very poor access to public transport, and 6b is excellent access to public transport. Threshold walk times are set to eight minutes (an equivalent walk of 640 metres) for bus services and up to 12 minutes (an equivalent walk of 960 metres) for rail services. Parameters reflected by the accessibility measures are:

- Walking time between the point of interest and the public transport access points
- Reliability of the service modes available
- Number of services within the catchment area, and
- Level of service at the public transport access point (average waiting time)

2.20 The exact location of the PTAL point of interest can, depending upon the scale of the site, have a considerable bearing on the PTAL score since the distance to local transport services and the nature of the local walk network will vary from point to point. A single point of interest



has been taken to determine the PTAL rating for this site located at the south-east corner of the existing Morrisons foodstore. The PTAL assessment indicates that this Site is located in an area with a 'moderate' PTAL score of 3 reflecting local rail and bus accessibility. **Appendix B** includes the results of the PTAL assessment for the Site.

- 2.21 Journey time improvements from West Drayton station as a result of the Crossrail improvements are shown in **Table 2.2**. The proposed Crossrail improvements are expected to improve PTAL accessibility in the area to a 'good' PTAL score of 4 reflecting the increased rail services which will be provided by the Crossrail improvements at the nearby West Drayton station:

Table 2.2 – Key Journey Times from West Drayton

To	Current journey time (mins)	Elizabeth Line journey time (mins)
Bond Street	44	24
Liverpool Street	56	31
Canary Wharf	59	38
Reading	37	30

Personal Injury Accident Records

- 2.22 The latest available personal injury accident data has been obtained from Transport for London for a five-year period between 1st September 2012 and 30th August 2017 and are included in **Appendix L**.
- 2.23 An appraisal of the most recent accident data over the 5-year period identifies a number of accidents around the High Street/St Stephen's Road junction near to the site, however our review illustrates no history or pattern of traffic collisions to show that there are concerns with regard the local highway network. The data does not indicate any abnormal grouping of accidents or a statistically high occurrence of incidents near to the development site. The recorded incidents in many cases flagged up a lack of driver or pedestrian attention and driver or pedestrian error rather than junction inadequacies.

Existing traffic survey

- 2.24 Existing traffic surveys were carried out at the St Stephen's Road/High Street priority junction and the St Stephen's Road/Morrisons access priority junction on Saturday 10th February 2018 and



Friday 23rd February 2018. Basic classified count data are included in **Appendix J**. Peak hour turning count data are shown on **Figures F1 to Figure F3** with additional HGV traffic shown in brackets.

2.25 Total traffic movements at the High Street/St Stephen's Road junction identified the peak hours. Local highway network peak hours for this location were established as:

- Friday AM peak hour – 08:15-09:15 hrs
- Friday PM peak hour – 17:30-18:30 hrs
- Saturday midday peak hour – 11:30-12:30 hrs

2.26 Existing vehicle turning movements were counted including heavy goods vehicle proportions. The heavy goods vehicles have been converted to equivalent Passenger Car Units (PCUs) using a conversion factor of one HGV vehicle to 2.5 PCUs. Vehicle turning proportions in PCUs are shown in **Figure F4 to Figure F6**.

Pedestrian Environment Assessment

2.27 A pedestrian environment street assessment has been undertaken of the routes between the site and local bus stops and West Drayton Station to establish the quality of the walking environment for pedestrians. The assessment has been extended to include the important pedestrian routes between the following routes:

- i) The Site and bus stops A and B on High Street
- ii) The Site and bus stops C and D on Horton Road
- iii) The Site and West Drayton Station via Long Drive

2.28 The Pedestrian Environment Street Assessment has been completed and is included in **Appendix E**. The assessment has highlighted the poor condition of St Stephen's Road however this section of road will be improved as part of the development proposals.

2.29 The same routes from the Site to the nearest bus stops and West Drayton station have been reviewed independently by the Safety Audit team and are referred to in the Stage 1 Road safety Audit (**Appendix M**). The Stage 1 Road Safety Audit is satisfied that there are no areas causing safety concerns along these pedestrian routes.



3.0 DEVELOPMENT PROPOSALS

3.1 The planning application comprises a proposed mixed-use retail and residential development including:

- A replacement 1,643 sqm GIA Morrisons foodstore at ground level (Use Class A1)
- 144no new dwellings including 47no 1-bedroom apartments; 76no 2-bedroom apartments; 16no 3-bedroom apartments and 5no 4-bedroom apartments in 6no storeys above the new Morrisons foodstore (Use Class C3)
- Closure of 2no existing site accesses off St Stephen's Road replaced with a single site access
- Footway widening and street lighting enhancements on St Stephen's Road
- 69no Morrisons customer car parking spaces and 13no residential car parking spaces in an upper-level basement car park located beneath the new foodstore
- 88no residential car parking spaces in a lower-level basement car park beneath the Morrisons car parking
- 165no residential cycle parking spaces with space to expand up to 244no cycle parking spaces should more demand be identified in the Travel Plan
- 32no Morrisons cycle parking spaces for customers and staff
- Potential contributions within a S106 Planning Agreement towards possible future Traffic Regulation Orders on St Stephen's Road

3.2 The proposals will include a number of improvements on the Public Highway. **Drawing No. REDW-3290-460** shows the improvements at the proposed site access off St Stephen's Road. The Works include:

- i) The closure of the existing Morrisons customer car park access
- ii) The closure of the existing Morrisons service yard access
- iii) The construction of a new site access for resident's car park; the Morrisons customer car park and the service yard
- iv) The widening of the existing footway at the proposed site access with tactile paved crossings and overlay of the existing footway along the Stephen's Road frontage
- v) Replacement street lighting on St Stephen's Road from its junction with High Street west to the former pedestrian entrance to St Matthew's School
- vi) The widening of the footway on the High Street where the footway abuts the new Morrisons foodstore



Site Layout

- 3.3 **Photo 3.1** shows the visibility to the left at the proposed site access. **Photo 3.2** shows the visibility to the right at the proposed junction. The sightlines are clear and unobstructed:

Photo 3.1
Visibility to left looking east from the site access along St Stephen's Road



Photo 3.2
Visibility to right looking west from the site access along St Stephen's Road



- 3.4 Visibility splays at accesses have 2 main dimensions. The minimum requirement for the minor or site road distance (dimension 'x') is dependent upon the type of minor access varying from 4.5m for main road to 2.4m for minor accesses allowing the motorist to see down the major road without encroaching upon it.
- 3.5 The larger 'x' distance of 4.5 metres is used to reduce traffic delay on public roads and allows vehicles to move slowly up to the give way lane and leave the junction without stopping. For minor accesses a shorter 'x' distance is appropriate as a reduced distance introduces an element of traffic calming, lowering vehicle speeds leaving the side road. We consider an 'x' distance of 2.4 metres to be appropriate in this location.
- 3.6 The results of the speed survey (**Appendix H**) measured low 85%ile traffic speeds on St Stephen's Road as:
- St Stephen's Road (westbound) –15.7 mph (25.3 kph)
St Stephen's Road (eastbound) – 18.1 mph (29.1 kph)

The ATC survey confirmed that 85%ile vehicle speeds are lower than 40mph therefore in this location visibility and stopping distance criteria outlined in the Manual for Streets 2 – Wider Application of the Principles (MfS2) published at the end of September 2010 are appropriate.



MfS2 suggests a 'y' distance of 25 metres in both directions for the highest measured road speed. The layout provides for visibility splays of 2.4x43m as shown on **Drg.No. REDW-3290-460** which are adequate for the measured main road vehicle speeds.

- 3.7 A single new site access off St Stephen's Road will provide access to all vehicles entering the Site. After entering the Site, Morrisons service vehicles will turn immediately right into a dedicated service yard of sufficient size to ensure that all turning manoeuvres occur without encroaching upon the site access road. Morrisons customers and residents continue straight ahead turning right down a ramp to the upper level basement parking area (Level 1). **Figure 3.1** shows the arrangement of the upper level basement car park (Level 1) which contains all of Morrisons customer car parking and some residential car parking:

Figure 3.1 Upper Level Basement Parking Provision (Level 1)



- 3.8 Residents pass through the upper level basement car park to a secure-entry system for access to 13no resident's parking spaces on this level before turning clockwise down a further ramp to the lower level basement car park (Level 2). Stair and lift access to Cores A, B and C are located in the appropriate corners of the car park. **Figure 3.2** shows the arrangement of the lower level



basement car park (Level 2) which contains all residential parking including standard bays, electric charging bays, disabled bays and motorcycle parking. Residents reverse their route in order to leave the car park:

Figure 3.2 Lower Level Basement Parking Provision (Level 2)

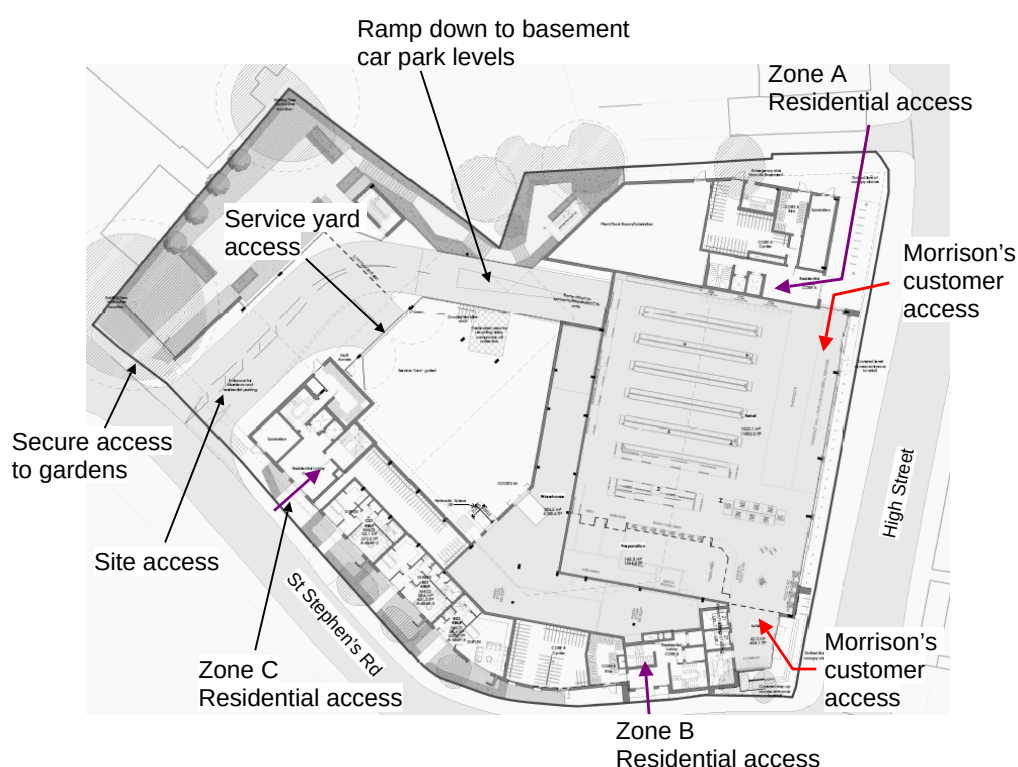


Pedestrians and Walking

- 3.9 Walking can either be part of a trip linked with other modes such as car, bus or train or be a single purpose trip in itself. Everybody is likely to be a pedestrian at some stage of their journey. Mixed-use development can provide significant benefits, in terms of promoting vitality and diversity and in promoting walking as a primary mode of travel. Pedestrians can access all basement parking levels via lifts and stairs. Local services are shown on **Figure A4**.
- 3.10 Pedestrian access to Morrisons is gained from the north-east and south-east corners of the new foodstore building (**Figure 3.3**). The north-east access has level access whilst the south-east entrance has stepped and ramped access:



Figure 3.3 Development Access Points



Morrisons Car Parking

3.11 **Table 3.1** summarises the Morrisons parking; all located on the upper basement level:

Table 3.1 Proposed Morrisons Parking Provision

Space Description	Spaces (No.)
Standard parking	47
Standard parking with active electric charging (10%)	7
Standard parking with passive electric charging (10%)	7
Disabled parking (Blue Badge)	6
Parent & Child parking	2
Total	69

3.12 LB Hillingdon's current car parking standards are contained in Hillingdon Local Plan: Part 2 2016, Appendix C. **Figure 3.4** shows an extract of Hillingdon's emerging parking standard:



Figure 3.4 Hillingdon A1 Food Car Parking Standards (Ref: <https://hillingdon.gov.uk/12566>)

CAR AND OTHER VEHICLE PARKING				BICYCLE PARKING
MAXIMUM REQUIREMENT				MAXIMUM REQUIREMENT
				(1 space per sqm of gross floorspace unless otherwise stated)
A1 FOOD				
Parking space per sqm of gross floorspace:				(a) A1 (shops)
	PTAL 6-5	PTAL 4-2	PTAL1	Out of centre – 1 per 350 sqm
Up to 550sqm	75	50 - 35	30	In Centre - 1 per 125 sqm
Up to 2500sqm	45 - 30	30 - 20	18	(b) A3 Café & restaurant
Over 2500sqm	38 - 25	25 – 18	15	1 per 20 staff + 1 per 20 customers.
With at least 1 space ~~to be~~ required for those food uses with a delivery service.				(c) A4 Pub/wine bars
				1 per 100 sqm

- 3.13 The London Plan 2016 provides specific parking guidance which mirrors the emerging Hillingdon car parking guidance. The London Plan sets out the preferred range of car parking provision of 1no space per 30-20m² GIA for food retail sites between 500-2500sqm GIA with PTAL ratings varying between 4-2. The proposed Morrisons internal floor area of 1,643sqm therefore suggests a range of maximum parking provision between 55-82no spaces. The proposed Morrisons car park will provide a total of 69no customer car parking spaces which is between the range suggested by both the emerging Hillingdon car parking guidance and the London Plan 2016 and is therefore compliant with both standards.
- 3.14 The provision of Morrisons disabled spaces accords with the London Plan 2016 which suggests 6% of parking capacity, i.e. 4no spaces. A further 4% of parking capacity will be made available for future disabled space provision equating to an additional 2no spaces. The layout provides a total of 6no disabled spaces and also provides 2no parent and child spaces, all of which ensures that the retail development is accessible to all, particularly for groups for whom public transport is not always a viable option.
- 3.15 Customer car parking spaces within the Morrisons car park have a dimension of 2.5x4.8m. Disabled bays and parent and child spaces have an additional 1.2m zone to one side and disabled spaces will have a further 1.2m zone at the front of the car parking space. Aisle widths



in front of parking bays have been set at a minimum 6.0m wide to provide adequate manoeuvring space into the parking bays.

- 3.16 The Morrisons car park will include 7no. active electric vehicle charging points (EVCPs) which equates to a 10% active provision for retail development as suggested by the London Plan 2016 (section 6A.3). An additional 7no parking spaces will be provided with passive provision to produce a further 10% provision. Passive spaces would include all the necessary ducting to allow for easy conversion in the future should there be a demand.

Morrisons Car Park management

- 3.17 To prevent on-site parking by commuters or employees of adjacent development the car park will be for Morrisons customers only. A maximum duration of stay of 3 hours will be implemented which accords with the current car park management regime. This will allow sufficient time for Morrisons customers to shop in the store and for linked shopping trips to the High Street shops.

Residential Car Parking

- 3.18 **Table 3.2** summarises the type of parking spaces provided within the residential development:

Table 3.2 Proposed Residential Parking Provision

Space Description	Spaces (No.)
Standard (Residents)	47
Standard parking with active electric charging (20%)	20
Standard parking with passive electric charging (20%)	20
Disabled	14
Total	101

- 3.19 LB Hillingdon's current car parking standards are contained in Hillingdon Local Plan: Part 2 2016, Appendix C. **Figure 3.5** shows an extract of Hillingdon's emerging parking standard:



Figure 3.5 Hillingdon A1 Residential Car Parking Standards (Ref: <https://hillington.gov.uk/12566>)

CAR AND OTHER VEHICLE PARKING	BICYCLE PARKING
MAXIMUM REQUIREMENT	MAXIMUM REQUIREMENT (1 space per sqm of gross floorspace unless otherwise stated)
FLATS	
3 - 4 or more bedrooms - 2 spaces per unit	(a) 1 per studio, 1 or 2 bed unit.
1 - 2 bedrooms - 1.5 - 1 spaces per unit	(b) 2 per 3 or more bed unit.
Studio - 1 space per 2 units	
(a) Proposals must also accommodate visitor's car parking on-site additional to the above	
(b) Car parks must be allocated to dwellings.	
	1 per 100 sqm

- 3.20 Hillingdon Council's maximum parking standard is 1.5-1 spaces per 1-2 bedroom unit and 2 spaces per 3-4 bedroom unit. As the Site has good accessibility and using the lower range for 1-2 bedrooms, the Hillingdon standard equates to a maximum provision of 165no spaces (123x1+21x2).
- 3.21 The London Plan 2016, Chapter 6 provides maximum car parking standards for residential development based upon the site's PTAL rating. Based upon a PTAL rating of 3, the London Plan (Table 6.2) suggests a maximum parking of up to 1no space per unit for this density of development, i.e. 144no spaces.
- 3.22 The residential development includes 144no units on a 0.52ha site. A total of 101no residential parking spaces are proposed; a ratio of 0.72 spaces per unit, which is appropriately below both Hillingdon Council's and the London Plan's maximum car parking standard and is therefore compliant with both these standards.
- 3.23 Car ownership Census data (2011) extracted for the Ward of Yiewsley is shown below in **Table 3.6**. The data indicates an average ratio of 0.71 for car-owning households for all household types in Yiewsley Ward. When the data is interrogated for house owners only, the car owning ratio is 0.78, however this development consists of apartments only which have lower car ownership ratios than houses. The development also contains a significant



proportion of affordable units generally owning fewer vehicles as well. The data shows that for apartment owners in Yiewsley the car ownership ratio is lower at 0.59. Therefore, based upon Yiewsley's car ownership census data for households living in apartments we consider a proposed parking ratio of 0.72 will satisfy car ownership demand in this location:

Table 3.6 – Office for National Statistics, Census 2011
Ref: <https://nomisweb.co.uk>

LC4415EW - Accommodation type by car or van availability |
by number of usual residents aged 17 or over in household

ONS Crown Copyright Reserved [from Nomis on 18 July 2018] ⓘ

Population	All households
Units	Persons
Date	2011
Area Type	2011 wards
Area Name	E05000345 : Yiewsley
No of Usual Residents in Households	All categories: Number of usual residents aged 17 or over in household

Cars or Vans ⓘ	All categories: Accommodation type	Whole house or bungalow
All categories: Car or van availability	4,967	3,208
No cars or vans in household	1,416	692
1 car or van in household	2,331	1,495
2 or more cars or vans in household	1,220	1,021

Cars or Vans ⓘ	Flat, maisonette, apartment, caravan or other mobile or temporary structure
All categories: Car or van availability	1,759
No cars or vans in household	724
1 car or van in household	836
2 or more cars or vans in household	199

- 3.24 The proposals include 47no 1-bedroom apartments providing an opportunity to review the allocation of parking spaces to this unit type and potentially preclude allocation of a parking space to purchasers of 1-bedroom apartments subject to accessibility needs. Should 1-bedroom apartments be totally precluded from purchasing a car parking space, the residential parking ratio of the development increases to 1.04 spaces per dwelling.
- 3.25 All residential car parking spaces have a minimum dimension of 4.8x2.4m wide; all aisle widths will be a minimum of 6m. Residential parking provision will include a minimum of 10% disabled parking equating to 10no disabled spaces. For the residential development electric vehicle charging points will accord with London Plan 2016 standards of 20% active installed immediately and 20% passive provision for future connection.



Residential Parking Allocation Strategy

3.26 In relation to the 101no residential parking spaces to be provided in the upper and lower basement levels, the following residential parking allocation strategy will be adopted that will:

- Make available a minimum of 1no parking space for each of the 2-bedroom, 3-bedroom and 4-bedroom units
- Restrict availability of parking spaces to the 1-bedroom units so as to ensure availability of a surplus that can be offered as a priority as a second parking space to the 3-bedroom and 4-bedroom units, if there is a demand
- Provide active, i.e. usable electric car-charging facilities for 20% of parking spaces with 20% passive electric charging facilities, i.e. easily convertible at some future date
- Provide approximately 10% wheelchair accessible parking spaces
- Restrict all residential parking to occupiers of and authorised visitors to the residential development
- Ensure that access to the residential car park is security controlled to prevent unauthorised parking

Motorcycle Parking

3.27 Hillingdon Council's parking standard for motorcycles is a blanket standard of 1no motorcycle space per 20no car parking spaces (i.e. 5% provision) without consideration of the use of the car park. The motorcycle parking standard equates to 4no motorcycle parking spaces (69/20) for the Morrisons car park located as shown on **Figure 3.1** and to 5no motorcycle parking spaces (101/20) for the residential car park located as shown on **Figure 3.2**.

Cycle Parking

3.28 There are no dedicated cycle lanes adjacent to the Site and cyclists are required to cycle on the main carriageway. Once cyclists arrive at the Site, there are a number of locations for cycle parking:

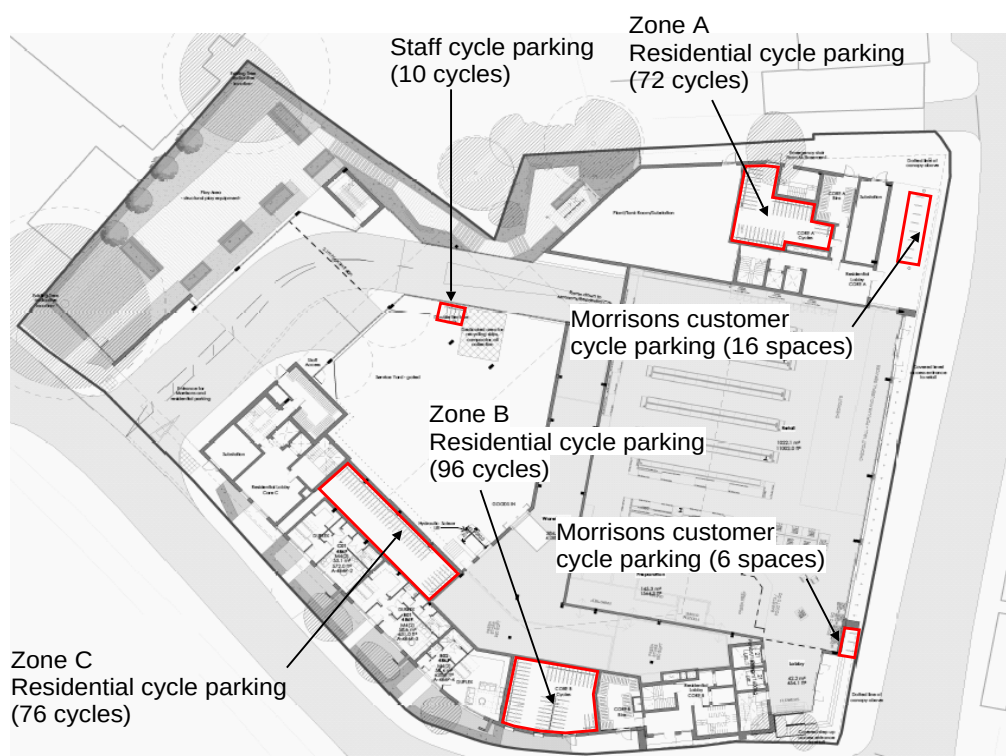
- i) Off High Street at the north-east corner of Site to Zone A residential cycle parking and Morrisons customer cycle parking
- ii) Off St Stephen's Road to Zones B and C residential cycle parking



- iii) Off High Street at the south-east corner of the Site to Morrisons customer cycle parking
- iv) Off St Stephen's Road for Morrisons staff via the main vehicular access. A pedestrian access is provided in the service yard fencing to allow secure staff access into the service yard

3.29 Short term cycle parking generally consists of uncovered cycle hoops such as Sheffield type stands which can accommodate 2no cycles per stand, whereas long term cycle parking would be covered. For this development all short and long-term cycle parking areas for staff, customers and residents will be secure and covered as shown on **Figure 3.7**:

Figure 3.7 Cycle Parking Location Plan



3.30 Residential cycle parking is located in 3no dedicated rooms within the development (**Figure 3.7**). The ceiling height within each room is 4.2m which allows for 'double-deck' cycle parking similar to that shown in **Photo 3.3**:



Photo 3.3 – Double-deck Cycle Parking



- 3.31 Dedicated secure and covered cycle storage areas are provided for each of the 3no residential cores. The proposals are for a total of 144no apartments including 123no 1 and 2-bedroom apartments and 21no 2+ bedroom apartments. LB Hillingdon suggests a minimum cycle parking provision equating to 1 space for 1-2 bedrooms and 2 spaces for 2+ bedrooms equating to 165no cycles (123x1+21x2).
- 3.32 The London Plan 2016 specifies a minimum long stay cycle parking provision of 1no cycle parking space for 1-bedroom units and 2no cycle parking spaces for 2+ units and short stay (visitor) of 1no cycle parking space per 40no units equating to 244no spaces.
- 3.33 The proposals include infrastructure for a minimum cycle parking provision of 165no cycles in accordance with LB Hillingdon's cycle parking standards. Internal cycle storage rooms are provided in each of the 3no residential cores which have a total capacity for 244no cycles. The proposals therefore allow for the future expansion of cycle storage from the initial 165no spaces up to a maximum 244no spaces with future demand monitored within the Residential Travel Plan.
- 3.34 LB Hillingdon's cycle parking standard for Use Class A1 food retail is a blanket requirement of 1no cycle space per 100sqm equating to 17no spaces. The London Plan 2016 specifies additional requirements for long and short stay basing its cycle parking standards on gross external floor space. Therefore, for this calculation to convert GIA to GEA we have factored the GIA by 5% to derive a notional 1,725sqm GEA (1,643x1.05). **Table 3.3** schedules the London Plan's cycle parking requirements:



Table 3.3 Use Class A1 Food Retail Cycle Parking Standards – London Plan 2016

Use Class	London Plan standard	Cycle Spaces (Min.)
A1 Food (1,725 sqm)	Long stay (staff) 1/175sqm	10
A1 Food up to 750sqm (750sqm)	Short Stay 1/40sqm (GEA) up to 750sqm	19
A1 Food above 750sqm (975sqm)	Short Stay 1/300sqm (GEA) over to 750sqm	3
	TOTAL	32

3.35 Morrisons cycle parking provision will be in accordance with the London Plan's cycle parking standards providing a total of 32no cycle parking spaces located in three areas. The short-stay cycle parking at both Morrisons entrances will have step-free access and are located within 15 metres of the main store entrances as follows (**Figure 3.7**):

- i) 16no short stay customer cycle spaces at the north-east Morrisons entrance
- ii) 6no short stay customer cycle spaces at the south-east Morrisons entrance
- iii) 10no long stay staff cycle spaces within the service yard (double-deck)

Service Vehicles – Morrisons Foodstore

3.36 Morrisons service vehicles access a dedicated service yard from St Stephen's Road (Ref: **Org.No. REDW-3290-460**). Bread/Chill and Produce are delivered early morning; LLC/Grocery/Frozen delivered in the evening. Direct supplies such as milk and bread are delivered at various times of the day using the suppliers' medium or light goods vehicles. The current schedule of service vehicle movements is shown on **Table 3.4**:

Table 3.4 Existing Morrisons Servicing Schedule

449 Yiewsley	Vehicle Spec	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Bread, Chill, Produce	16.5m artic	1	1	1	1	1	1	1
Long Life Chill (LLC)	16.5m artic	1	1	1	1	1	1	-
Grocery / Frozen	16.5m artic	1	-	1	1	1	1	-
Direcits: Milk, Bread, Cash, Clipper (Clothing)	MGV/LGV	4	4	4	4	4	4	4
Refuse	12m rigid	1	-	1	-	1	-	-
Total Deliveries	-	8	6	8	7	8	7	5



- 3.37 Morrisons have advised that the quantum of service vehicle deliveries for the new Morrisons foodstore will be no greater than the existing level of servicing and may be potentially lower.
- 3.38 **Drawing No. REDW-3290-470 (Drawings)** shows the track swept path of a 16.5m articulated lorry accessing and turning into the Site from St Stephen's Road turning clockwise within the service yard. The 16.5m articulated lorry utilises the bellmouth access of the service yard before reversing but the vehicle does not encroach onto the site access road prior to the reverse manoeuvre. There is no footway crossing the service road entrance so the manoeuvre beyond the service yard gates is considered acceptable in safety terms as confirmed by the safety audit. The track swept path shows a 0.3m clearance envelope on the Public Highway for wing mirrors and a more generous 1.0m clearance envelope within the service yard. The track swept path shows that the manoeuvre can be undertaken safely with sufficient clear width provided to allow a large car to exit the site should a vehicle be leaving at the same time as an articulated lorry enters the Site.
- 3.39 **Drawing No. REDW-3290-471** shows the track swept path of a 16.5m articulated lorry leaving the Site. The articulated lorry track includes an additional 0.3m overhang for wing mirrors. The track swept path shows that the manoeuvre can be undertaken safely.
- 3.40 **Drawing No. REDW-3290-472** shows a 12.0m rigid lorry accessing the service yard. This vehicle can enter the service yard whilst another service vehicle occupies the loading dock, however it would need to wait until the loading dock is vacant before being able to turn within the service yard and manoeuvring itself to the loading dock. **Drawing No. REDW-3290-473** shows a 12.0m rigid lorry adequately leaving the service yard onto St Stephen's Road.
- 3.41 Morrisons refuse collection will use private vehicles no larger than a 12m rigid lorry. All Morrisons refuse manoeuvring occurs within the service yard with vehicles leaving in forward gear. Vehicle turning requirements for emergency fire tenders and ambulances are smaller than for a refuse vehicle and will therefore require less area to turn on site if required.

Refuse Collection & Servicing (Residential)

- 3.42 TRICS data (**Appendix D**) estimates residential OGV total deliveries (arrivals and departures) as 0.066 total trips per day which equates to 10no vehicle total trips per day, i.e. 5 vehicle arrivals per day. We anticipate that the majority of deliveries to the flats (i.e. Amazon type deliveries) will be from smaller transit type vans up to 7.5 tonne light goods vehicles.



3.43 Refuse collection and servicing for the residential development will take place from the street frontages as occurs at the present time collecting from nearby businesses and flats. **Drawing No. REDW-3290-461** shows the expected collection and potential delivery points:

- Core A refuse will be collected on-street from the High Street at the north-east corner of the development. A 5.7m clear width on High Street is available at the side of a standing refuse vehicle which is sufficient for 2-way traffic to pass a refuse vehicle when it is temporarily standing collecting refuse. If the adjacent bus stop is occupied sufficient space is available for vehicles to pass individually between two standing vehicles. Council refuse vehicles already stop in the same manner collecting waste from other businesses and flats further north on High street
- Core A small vehicle deliveries can stop in the loading bay on High Street north-east of the development
- Core B refuse will be collected on-street from St Stephen's Road. The collection location shows that a standing vehicle will not obstruct a 16.5m articulated lorry turning into St Stephen's Road in the unlikely event that these two vehicles pass at the same time
- Cores A and B general deliveries can stop on 24m of single yellow line on the High Street frontage. The width of High Street in this location varies from 4.9-5.6 metres which is sufficient for 2-way traffic to pass a standing delivery vehicle
- Core C refuse will be collected and deliveries made on-street on St Stephen's Road as shown

3.44 Fire tenders and ambulances can temporarily stop on-street in times of emergency. Adequate clearance has been established for larger service vehicles, therefore clearance for smaller emergency vehicles is deemed to be acceptable.

Taxi Facilities

3.45 A drop-off/pick-up point is available on the single yellow line kerbside area in front of the existing store on High Street just north of the south-east store access. If required, it is possible for taxis to descend to the Morrisons basement car park to pick up or drop off customers. Details of local taxi operators will be displayed in the store and a telephone will be provided in the store to allow customers and staff to order from local taxi firms.



Employment accessibility

- 3.46 The Morrisons currently provides employment for approximately 75no full and part-time staff. Morrisons has confirmed that this figure is not expected to materially change once the new foodstore has opened for trading. Clearly, local recruitment will influence employee travel behaviour and this will undoubtedly make a significant contribution towards limiting unnecessary car usage. It is likely that many of the jobs created by the development will be taken up by those living close to the site generally living within a 1.5-mile radius of the Site. The position of the Site within a substantial residential catchment area with good bus and rail links will encourage walking, cycling and the use of public transport for staff.

Construction Management Plan

- 3.47 A Construction Management Plan (CMP) manages all types of freight vehicle movements to and from the Site during the demolition and construction period. The CMP will improve the safety and reliability of deliveries to the site, reduce congestion and minimise the environmental impact. A CMP has been prepared by Deacon & Jones Consultants and is included within the application documents.

Travel Plan

- 3.48 Two separate Travel Plans are included in the application documents, namely a Morrisons Staff Travel and a Residential Travel Plan. The Travel Plans will form part of a S106 Planning Agreement.

Pedestrian Link to the Grand Union Canal

- 3.49 As part of the pre-application consultation process LB Hillingdon raised the possibility of including within the proposals a formal pedestrian access from St Stephen's Road to the Grand Union Canal towpath. Upon further investigation of the Adopted Highway Plan (**Appendix C**) the limit of Adopted Public Highway terminates along the southern carriageway edge of St Stephen's Road, therefore works adjacent to the canal would involve third party land. The Applicants have confirmed that work on third-party land are not included within the planning application.
- 3.50 Notwithstanding the third-party land issue, a draft scheme showing suggested works required to connect pedestrians safely from St Stephen's Road onto the canal towpath to be carried out by others are shown on **Drg.No REDW-3290-462**.



Safety Audit

- 3.51 The proposals have been subject to a Stage 1 Road Safety Audit included in **Appendix M**. The Safety Audit identifies a number of safety matters which can be addressed during detailed design. No material safety issues have been identified with the proposals.

Traffic Regulation Orders

- 3.52 The existing Morrisons foodstore currently enjoys uninterrupted access for customer cars and service vehicles via St Stephen's Road. It is anticipated that the new development will operate similar to the existing situation without difficulty. The Applicants have confirmed that they would be willing to make a contribution towards the publishing and Making of necessary Traffic Regulation Orders (TROs) secured through a S106 Planning Agreement should LB Hillingdon decide that further waiting or loading restrictions would assist in managing on-street parking on St Stephen's Road.



4.0 TRAVEL ASSESSMENT

- 4.1 Existing traffic surveys were carried out at the St Stephen's Road/High Street priority junction and the St Stephen's Road/Morrisons access priority junction on Saturday 10th February 2018 and Friday 23rd February 2018. Basic classified turning count data are included in **Appendix J**. Peak hour turning count data are shown on **Figures F1-Figure F3** with additional HGV traffic shown in brackets.
- 4.2 Total traffic movements at the High Street/St Stephen's Road junction identified the peak hours. Local highway network peak hours for this location were established as:
- Friday AM peak hour – 08:15-09:15 hrs
 - Friday PM peak hour – 17:30-18:30 hrs
 - Saturday midday peak hour – 11:30-12:30 hrs
- 4.3 Existing vehicle turning movements were counted including heavy goods vehicle proportions. The heavy goods vehicles have been converted to equivalent Passenger Car Units (PCUs) using a conversion factor of one HGV vehicle to 2.5 PCUs. Vehicle turning proportions in PCUs are shown in **Figure F4-Figure F6**.

Development Nett Traffic Assessment

- 4.4 Research by the Competition Commission (Supermarkets – October 2000) examined the different factors that might affect customer's choice of store for main grocery shopping. Just over two-fifths of respondents (43 per cent) indicated that the main factor was *"the ability to get most of the weekly shopping done under one roof"*. The Competition Commission also considered to what extent 'supermarkets' were used for 'convenience shopping'. The Commission concluded that one-stop (main weekly food shop) destination shopping was carried out in stores with a size greater than 1,400 sq metres where there was a wider range of goods.
- 4.5 The Morrisons proposals are for a 1,643 sqm store, marginally above the 1,400 sqm criterion described above. The new Morrisons will retain broadly the same offer whilst making more efficient use of space. A foodstore of this size is not likely to generate a majority of primary one-stop shopping trips but will continue to meet the shopping needs of local residents or for



nearby office workers, all walking to the foodstore. Customers would also be able to combine their shopping trip with other destinations on the High Street.

4.6 Using the TRICS database we can estimate the new vehicle trip attraction to the residential proposals. A number of comparable sites were selected to suit as far as possible the following criteria:

- Developments within London
- Developments comparable in size (i.e. number of dwellings)
- Developments with approximately one car parking space per dwelling
- Developments in London with PTAL 3 public transport accessibility or less
- Surveys less than 5 years old

4.7 The TRICS sites shown in **Table 4.1** have been selected. One London site has a PTAL of 3 but a higher parking ratio than the proposals; two other sites are less accessible and are located in PTAL 2 areas. It is expected that all these sample sites will produce higher vehicle trip rates than the development site thereby providing a robust assessment. The appropriate TRICS data is included in **Appendix D**:

Table 4.1
Proposed Residential Use – Sites Selected for Weekday Assessment

TRICS Ref	Location	Survey Date	Units (no.)	parking spaces (no.)	Parking ratio (space/unit)	PTAL
BT-03-C-01	Brent	28/09/2016	170	212	1.25	3
HO-03-C-03	Hounslow	18/11/2016	150	106	0.71	2
HV-03-C-01	Havering	25/06/2014	293	246	0.84	2

4.8 The TRICS database does not include London-based residential Saturday surveys. In this situation, we have reviewed the TRICS database for Edge of Centre sites outside London. The appropriate TRICS data is included in **Appendix D**. **Table 4.2** shows the Friday AM/PM and Saturday midday peak hour vehicle trip rates to be used in the assessment:

Table 4.2
Gross residential vehicular trip rates per dwelling
Residential access off St Stephen's Road

Land Use	Development vehicle trip rate (vehs/dwelling)					
	Friday 0815-0915hrs		Friday 17:30-18:30hrs		Saturday 11:30-12:30hrs	
	Arr	Dep	Arr	Dep	Arr	Dep
Residential	0.034	0.082	0.121	0.108	0.080	0.140



- 4.9 **Table 4.3** shows the resultant vehicle movements at the site access for 144no dwellings calculated from the TRICS trip rates shown in **Table 4.2**:

Table 4.3
Gross residential vehicular trip rates per dwelling
Residential access off St Stephen's Road

Land Use	Development vehicle trips (vehicles)					
	Friday 0815-0915hrs		Friday 17:30-18:30hrs		Saturday 11:30-12:30hrs	
	Arr	Dep	Arr	Dep	Arr	Dep
144 dwellings	5	12	17	16	12	20

- 4.10 The development proposals will result in a reduction in the size of the existing Morrisons foodstore gross internal area by 50% from 3,340sqm GIA to 1,643sqm GIA; the sales area will reduce from 1,557sqm to 1,064sqm a reduction of 32%. Foodstore car parking provision will also reduce by 40% from 114no spaces to 69no spaces. The TRICS vehicle trip generation database has established that vehicle trips to a foodstore are in proportion to the floor area of the store or the car park provision attached to the store. The proposed reduction in Morrisons gross floor area will therefore result in a proportional reduction in traffic movements to the smaller foodstore.
- 4.11 The development proposals include 144no flats above the new foodstore resulting in new residential vehicle trips in the area, therefore the nett vehicle traffic impact of the development can be estimated by the addition of new residential vehicle trips with the reduced foodstore vehicle trips.
- 4.12 The existing Morrisons GIA is 3,340 sqm GIA. Existing traffic flows (**Figures F1-F3**) counted in February 2018 enable us to calculate the existing peak hour vehicle trip rates for the existing foodstore. **Table 4.4** shows the existing Morrisons peak hour vehicle trips as surveyed with resulting vehicle trip rates per 100sqm based upon the existing store size:

Table 4.4
Vehicle traffic attraction to the existing Morrisons (3,340sqm GFA)

Time Period	Total surveyed vehicle trips (vehs)		Vehicle Trip Rate (vehs per 100sqm GFA)	
	Arrivals	Departures	Arrivals	Departures
Weekday (08:15-09:15)	90	64	2.695	1.916
Weekday (17:30-18:30)	87	108	2.605	3.234
Saturday peak (11:30-12:30)	134	126	4.012	3.772



- 4.13 Recent residential development permissions nearby, together with the proposed residential development are conveniently located close to the Morrisons foodstore which will increase the catchment size and attract a significant proportion of new walk-in customers. **Table 4.1** shows the potential new walk-in customer catchment which has been or will be added to the local area:

Table 4.5 Nearby Residential Developments

Residential Site	Dwellings (no.)
Comag	104
Padcroft	308
Horton Wharf	86
Drayton Wharf	51
Trout Road	99
Art Wood Apartments	28
Morrisons (subject to this Application)	144
TOTAL	820

- 4.14 The Morrisons foodstore will reduce in size by approximately 50% from 3,340 sqm (GIA) to 1,643 (GIA), a reduction of 1,697sqm. Sales area will reduce by 32% from 1,557sqm to 1.064sqm. Peak hour vehicle trips are expected to reduce in proportion and for a robust estimate we have used the smaller reduction of 32% in proportion to smaller reduced sales area. Morrisons anticipate that walk-in customer trade will increase as a result of the larger product range in the new store and from the significant increase in residential development that has or is developing in the immediate area (**Table 4.5**). This increase in walk-in customer trade will offset the reduced level of trade from carborne customers.

- 4.15 Using the existing peak hour vehicle trip rates for the existing foodstore we can estimate the corresponding reduction in peak hour vehicle traffic at the site entrance as shown in **Table 4.6**:

Table 4.6
Vehicle traffic reduction to the existing Morrisons (1,697sqm GFA)

Time Period	Ex. Vehicle Trip Rate (vehs per 100sqm GFA)		Reduction in vehicle trips after removal of 1,697sqm GFA (vehs)	
	Arrivals	Departures	Arrivals	Departures
Weekday (08:15-09:15)	2.695	1.916	-46	-33
Weekday (17:30-18:30)	2.605	3.234	-44	-55
Saturday peak (11:30-12:30)	4.012	3.772	-68	-64



- 4.16 **Table 4.7** shows the nett traffic benefit at the St Stephen's Road site entrance as a result of the addition of traffic flows from **Table 4.3** and **Table 4.6**. The nett flows have been distributed on the highway in **Figure F9 (Appendix F)**:

Table 4.7
Nett Traffic Benefit at site access off St Stephen's Road

Land Use	Peak Hour vehicle trips (vehicles)					
	Friday 0815-0915hrs		Friday 17:30-18:30hrs		Saturday 11:30-12:30hrs	
	Arr	Dep	Arr	Dep	Arr	Dep
144 dwellings (Table 4.3)	5	12	17	16	12	20
Reduced Morrisons (Table 4.6)	-46	-33	-44	-55	-68	-64
Nett Traffic Impact (vehs/hr)	-41	-21	-27	-39	-56	-44

- 4.17 The expected nett reduction in development vehicle traffic will benefit the nearby High Street/St Stephen's Road junction and beyond. However, not all foodstore traffic flows will be entirely removed from the network at the High Street junction. Foodstore vehicle turning movements in and out of St Stephen's Road will be reduced and on High Street we have assumed these vehicle movements will divert to the Aldi and Tesco supermarkets north of the site with northbound vehicles diverting northwards instead of turning left into St Stephen's Road and southbound vehicles removed from the junction completely. The distribution of vehicle turning movements at the High Street/St Stephen's Road junction have been assumed to be in proportion to the existing turning movements surveyed in February 2018.
- 4.18 To provide a robust test of the capacity of the highway network adjacent to the Site, an unlikely Robust Assessment will be included assuming 100% new residential traffic flows added to the existing growthed base traffic flows but with no reduction in Morrisons traffic flows. The assessment of the High Street/St Stephen's Road junction will therefore be tested with the following scenarios with future year traffic flows growthed using TEMPRO traffic growth factors:
- i) Baseline Year Assessment (2018) – Do nothing
 - ii) Year of Opening Assessment (2021) – Do nothing
 - iii) Horizon Year Assessment (2023) – Do nothing
 - iv) Year of Opening Assessment (2021) - Residential + reduced Morrisons traffic
 - v) Horizon Year Assessment (2023) - Residential + reduced Morrisons traffic
 - vi) Year of Opening Robust Assessment (2021) – Residential with no reduction in Morrisons traffic flows



- vii) Horizon Year Robust Assessment (2023) – Residential with no reduction in Morrisons traffic flows

Study Area

- 4.19 Using the above scenarios the Transport Assessment will review the effect of development traffic at the High Street/St Stephen's Road priority junction using PICADY9 software. LB Hillingdon has accepted that no additional junctions require assessment.

Traffic growth

- 4.20 TEMPRO traffic growth factors will be applied to the 2018 base traffic survey information to derive base traffic for both the Year of Opening Assessment Year 2021 and the Horizon Year Assessment 2023. Growth factors have been derived using NTM growth factors weighted to local traffic conditions using TEMPRO datasets specific to the local Hillingdon area. A summary of the growth factors applied to the base traffic flows are shown in **Table 4.8**:

Table 4.8
Tempro adjusted traffic growth figures

Time Period	NTM Growth Factors with Tempro Adjustment	
	Growth Factor 2018-2021	Growth Factor 2018-2023
Friday AM	1.03	1.05
Friday PM	1.03	1.05
Saturday	1.03	1.05

- 4.21 Base traffic turning movements at the High Street/St Stephen's Road priority junction have been growthed to Year of Opening Assessment Year 2021 and Horizon Year Assessment 2023 and are shown on **Figure F7-Figure F8 (Appendix F)** respectively.

Carborne Trip Attraction – Residential Development

- 4.22 Using the TRICS database we can estimate the new vehicle trip attraction to the residential proposals. A number of comparable sites were selected to suit as far as possible the following criteria:



- Developments within London
- Developments comparable in size (i.e. number of dwellings)
- Developments with approximately one car parking space per dwelling
- Developments in London with PTAL 3 public transport accessibility or less
- Surveys less than 5 years old

4.23 The TRICS sites shown in **Table 4.9** have been selected. One London site has a PTAL of 3 but a higher parking ratio than the proposals; two other sites are less accessible and are located in PTAL 2 areas. It is expected that all these sample sites will produce higher vehicle trip rates than the development site thereby providing a robust assessment. The appropriate TRICS data is included in **Appendix D**:

Table 4.9
Proposed Residential Use – Sites Selected for Weekday Assessment

TRICS Ref	Location	Survey Date	Units (no.)	parking spaces (no.)	Parking ratio (space/unit)	PTAL
BT-03-C-01	Brent	28/09/2016	170	212	1.25	3
HO-03-C-03	Hounslow	18/11/2016	150	106	0.71	2
HV-03-C-01	Havering	25/06/2014	293	246	0.84	2

4.24 The TRICS database does not include London-based residential surveys for Saturday. In this situation, we have reviewed the TRICS database for Edge of Centre sites outside London. The appropriate TRICS data is included in **Appendix D**. **Table 4.10** shows the Friday AM/PM and Saturday midday peak hour vehicle trip rates to be used in the assessment:

Table 4.10
Gross residential vehicular trip rates per dwelling
Residential access off St Stephen's Road

Land Use	Development vehicle trip rate (vehs/dwelling)					
	Friday 0815-0915hrs		Friday 17:30-18:30hrs		Saturday 11:30-12:30hrs	
	Arr	Dep	Arr	Dep	Arr	Dep
Residential	0.034	0.082	0.121	0.108	0.080	0.140

4.25 **Table 4.11** shows the resultant vehicle trips for 144no dwellings calculated from the trip rates shown in **Table 4.10**. Residential vehicle trips have been distributed on the highway network as shown on **Figure F10**:



Table 4.11
Gross residential vehicular trip rates per dwelling
Residential access off St Stephen's Road

Land Use	Development vehicle trips (vehicles)					
	Friday 0815-0915hrs		Friday 17:30-18:30hrs		Saturday 11:30-12:30hrs	
	Arr	Dep	Arr	Dep	Arr	Dep
144 dwellings	5	12	17	16	12	20

Traffic Impact

- 4.26 The existing junction at High Street/St Stephen's Road has been assessed for capacity using PICADY9 software for Opening Year 2021 and Horizon Year 2023 using two traffic scenarios:
- i) Nett traffic flows including growthed base traffic with new residential traffic and a reduction in traffic from Morrisons (**Appendix F, Figure F11 and Figure F12**)
 - ii) A robust test of growthed base traffic with new residential traffic and no change in Morrisons traffic (**Appendix F, Figure F13 and Figure F14**)
- 4.27 Detailed PICADY9 outputs are included in **Appendix G**. A summary of the PICADY9 results is shown in **Table 4.12**. **Table 4.12** shows the junction operating within capacity under all traffic scenarios even with the robust but unlikely scenario of growthed base traffic with new residential traffic and no reduction in Morrisons traffic. In Year 2023 the junction operates with a maximum RFC of 0.64 (queue 1.7 vehicles) for St Stephen's Road and maximum RFC of 0.30 (queue 1.1 vehicles) for the right turn from High Street to St Stephen's Road. Junctions operating with an RFC lower than 0.85 are generally deemed to be within capacity.
- 4.28 The overall impact of the development on this junction is not considered to be severe even considering the most robust traffic assumption of no reduction in Morrisons traffic.

**Table 4.12****High Street / St Stephen's Road Junction - Summary of Picady9 Results**

Link	Friday AM Peak		Friday PM Peak		Saturday Peak	
	Queue (Vehs)	Demand Capacity (RFC)	Queue (Vehs)	Demand Capacity (RFC)	Queue (Vehs)	Demand Capacity (RFC)
	Baseline Year Assessment (2018) – Do nothing					
St Stephen's Road High Street right turn	0.5	0.33	0.9	0.48	1.0	0.51
	0.5	0.16	0.6	0.17	0.8	0.25
	Year of Opening Assessment (2021) – Do nothing					
St Stephen's Road High Street right turn	0.5	0.36	1.0	0.51	1.1	0.54
	0.5	0.17	0.6	0.18	0.9	0.26
	Horizon Year Assessment (2023) – Do nothing					
St Stephen's Road High Street right turn	0.6	0.37	1.1	0.53	1.2	0.55
	0.6	0.18	0.7	0.19	1.0	0.27
	Year of Opening Assessment (2021) Residential + reduced Morrisons					
St Stephen's Road High Street right turn	0.3	0.26	0.5	0.36	0.6	0.36
	0.2	0.09	0.3	0.13	0.4	0.15
	Horizon Year Assessment (2023) Residential + reduced Morrisons					
St Stephen's Road High Street right turn	0.4	0.27	0.6	0.37	0.6	0.37
	0.2	0.10	0.4	0.14	0.5	0.16
	Year of Opening Robust Assessment (2021) Residential + no reduction in Morrisons traffic flows					
St Stephen's Road High Street right turn	0.7	0.41	1.3	0.58	1.6	0.62
	0.6	0.18	0.7	0.22	1.0	0.29
	Year of Opening Robust Assessment (2023) Residential + no reduction in Morrisons traffic flows					
St Stephen's Road High Street right turn	0.7	0.43	1.4	0.60	1.7	0.64
	0.6	0.19	0.8	0.23	1.1	0.30



Modal Split

- 4.29 A detailed assessment has been undertaken of the Modal Split of person trips for the proposed residential use. For the residential development, travel to work statistics for Yiewsley are included in the Neighbourhood Statistics, 2011 dataset QS701EW as shown in **Fig 4.1:**

Fig 4.1 – Office for National Statistics, Census 2011 – Travel to work
Ref: <https://nomisweb.co.uk>

QS701EW - Method of travel to work ⁱ		Method of Travel to Work ⁱ	2011
ONS Crown Copyright Reserved [from Nomis on 18 July 2018]		All categories: Method of travel to work	9,525
Population	All usual residents aged 16 to 74	Work mainly at or from home	160
Units	Persons	Underground, metro, light rail, tram	370
Area Type	2011 wards	Train	403
Area Name	E05000345 : Yiewsley	Bus, minibus or coach	886
Rural Urban ⁱ	Total	Taxi	16
		Motorcycle, scooter or moped	59
		Driving a car or van	3,273
		Passenger in a car or van	226
		Bicycle	136
		On foot	587
		Other method of travel to work	45

- 4.30 **Table 4.13** shows the Modal Split for the Yiewsley Ward and Hillingdon with 'Work mainly at or from home' and 'Other method of travel to work' removed. The proportions in the dataset are of usual residents aged 16-74:

Table 4.13 Residential modal Split

Residential Mode of Travel	Modal Split (%)	
	LB Hillingdon	Yiewsley Ward
Underground	13.9	0
Train	4.5	12.9
Bus	12.6	14.9
Taxi	0.4	0.3
PTW	0.8	1.0
Car driver	55.1	54.9
Car passenger	3.3	3.8
Cycle	1.6	2.3
Walk	7.8	9.9
Total	100.0	100.0



- 4.31 The modal split will change throughout the day when peak hour work trips are removed and car driver trips reduce, however the residential travel to work Modal Split provides a robust indicator of the peak hour demand for bus and rail services which reduce outside peak hours.
- 4.32 Using the TRICS assessment for residential development (**Appendix D**) we can estimate the total daily person trips generated by the 144no apartments. TRICS estimates a total daily person trip rate of 5.987 persons per apartment equating to approximately 862no daily person trips (144x5.987). Using the travel to work Modal Split we can make a robust estimate the peak hour impact of passengers using bus and rail services. **Table 4.14** shows the Modal Split for the Yiewsley Ward according to 2011 Census 'Travel to work' data which can be used to estimate the daily volume of person trips for each mode of travel for this development based upon 862no daily person trips:

Table 4.14 Daily Residential Modal Split (144no units)

Residential Mode of Travel	Yiewsley Ward Census data (%)	Daily person trips for 144no units (total trips)	Predicted Daily Trips	
			Arrivals (persons)	Departures (persons)
Underground	0	0	0	0
Train	12.9	111	56	56
Bus	14.9	128	64	64
Taxi	0.3	3	2	2
PTW	1.0	9	5	5
Car driver	54.9	472	236	236
Car passenger	3.8	33	16	16
Cycle	2.3	20	10	10
Walk	9.9	86	43	43
Total	100.0	862⁽¹⁾	432⁽²⁾	432⁽²⁾

Notes:

1. From TRICS (144x5.987)
2. Rounding up difference

- 4.33 To assess the worst-case peak hour impact of new-person passenger trips on local bus and rail services we need to ascertain the proportion of peak hour public transport person trips. Using the TRICS database we can estimate the proportion of bus and train users in the peak hours by comparing the AM/PM peak hour trip rates with the total daily trip rates.
- 4.34 AM peak hour bus travel is estimated at approximately 18% of the daily figure (TRICS-0.099/0.566) divided into arrivals and departures as 15%/85% respectively. PM bus travel is estimated as 11% of daily trips (TRICS-0.06/0.566) with the proportion of arrivals/departures divided as 85%/15%.



4.35 Using the TRICS database the calculation can be repeated for rail travel. AM peak hour rail travel is estimated at 15% of the daily figure (TRICS-0.102/0.704) with the proportion of AM peak hour arrivals/departures as 10%/90% respectively. PM rail travel is estimated at approximately 8% of the daily trips (TRICS-0.058/0.704) with the proportion of arrivals/departures as 90%/10% respectively.

4.36 **Table 4.15** shows the estimate of new public transport demand from the residential development:

Table 4.15 Residential Modal Split for public transport (peak hour person trips)

Residential Mode of Travel	Daily person trips (no)	AM Peak Hour		PM Peak Hour	
		Arrivals (no.)	Departures (no)	Arrivals (no.)	Departures (no)
Underground	0	0	0	0	0
Bus	128	4 ⁽¹⁾	20	12	2
Train	111	2	15	8	2
Total	239	6	35	20	4

Notes:

1. $128 \times 0.18 \times 0.15 = 4$ (Other figures calculated in accordance with Paras 4.34-4.35)

Bus Capacity Assessment

4.37 A survey of existing bus capacity was carried out in July 2018. The results of the survey are enclosed in **Appendix K**. The maximum bus passenger trip generation from the development is estimated as 20no persons departing the Site with 4no arrivals in the AM peak hour and 12no arriving at the Site with 2no departures in the PM peak hour. A review of the spare capacity within each bus service passing near to the Site in the AM/PM peak hours shows that most individual bus services can contain the total peak hour demand from the Site. Local bus service capacity is more than sufficient to cater for the increased bus travel demand from the Site.

Rail Capacity Assessment

4.38 The Site produces very few rail trips, 2no arrivals and 15no departures in the AM peak hour and 8no arrivals and 2no departures in the PM peak hour. This quantum of new trips can easily be absorbed by the new Crossrail facility due to be operational by 2019, which will increase the number of rail services from 4no to 6no trains per hour in the peak periods. Local rail service capacity is more than sufficient to cater for the increased rail travel demand from the Site.



5.0 PLANNING POLICY GUIDANCE

5.1 National and local transport Planning policy and guidance relevant to the proposed development are included in the following documents:

- i) National Planning Policy Framework, July 2018
- ii) Hillingdon's Local Plan: Part 1 -Strategic Policies
- iii) London Plan March 2016

5.2 The common themes running through these documents are:

- To reduce the growth in the length and number of motorised journeys
- To encourage alternative means of travel which have less environmental impact; and hence
- To reduce reliance on the private car and offer a realistic choice of access by a choice of transport modes and where one journey can fulfil a number of purposes

5.3 Promoting brownfield development in urban areas near to major transport corridors and residential areas will provide an effective sustainable alternative to out of town development reducing the need for, and length of, car trips and will promote healthy alternatives to the car.

National Planning Policy Framework (NPPF, July 2018)

5.4 National Planning Policy Framework (NPPF) document paragraph 102 states:

‘102. Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;*



d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places. ‘

With regards the residential development, the location of the site is within walking distance of local shops and services and bus and rail transport routes which will reduce vehicle journeys, reducing their reliance on the private car, providing residents with a realistic choice of alternative means of travel other than the private motor car. Safe access is provided for all people and the traffic impact of the development has been shown to be acceptable. The proposals will retain a significant number of local employment opportunities, helping to retain commuter and shopping trips within the local area with the benefit of realistic journeys to work by walking, cycling or public transport.

5.5 Para 103 (NPPF) states:

‘103. The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emission and improve air quality and public health....’

The development maximises opportunities for sustainable modes of transport by locating the development close to major transport corridors through Yiewsley and to good bus and rail services and local shopping facilities and by the provision of adequate cycle parking on Site for all uses. The retention of the Morrisons foodstore will mean that local residents driving further away to other retail facilities will also be encouraged to stay in the local area resulting in shorter and less carborne journeys.

5.6 Para 109 (NPPF) states:

‘109. 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. ‘



Any residual cumulative impact in transport terms has been shown to be beneficial and not 'severe'. An 'unlikely' robust test of the highway network adding residential traffic to base traffic flows without a reduction in foodstore traffic shows the nearest main junction of High Street/St Stephen's Road operating within capacity in Year 2023

5.7 Para 111 (NPPF) states:

'111. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.'

The proposals are accompanied by this Transport Assessment together with a Morrisons Travel Plan and a Residential Travel Plan to cater for the retail and residential uses on the Site.

The London Plan (2016)

- 5.8 The London Plan (2016) was adopted in March 2016 and sets out to ensure that London's transport is easy, safe and convenient for everyone and encourages cycling, walking and the use of electric vehicles.
- 5.9 The London Plan states that London should 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 and makes better use of the River Thames.
- 5.10 The Mayor recognises that transport plays a fundamental role in addressing the whole range of his spatial planning, environmental, economic and social policy priorities. It is critical to the efficient functioning and quality of life of London and its inhabitants. It also has major effects, positive and negative, on places, especially around interchanges and in town centres and on the environment, both within the city itself and more widely.



5.11 Policy 6.1 stresses the importance of closer integration of transport and development and hopes to encourage this by (inter alia):

- Encouraging patterns of development that reduce the need to travel, especially by car;
- Seeking to improve the capacity and accessibility of public transport, walking and cycling, particularly in areas of greatest demand;
- Supporting development that generates high levels of trips only at locations with high levels of public transport accessibility, either currently or via committed, funded improvements;
- Facilitating the efficient distribution of freight whilst minimising its impacts on the transport network;
- Supporting measures that encourage shifts to more sustainable modes and appropriate demand management;
- Promoting greater use of low carbon technology so that CO² and other contributors to global warming are reduced;
- Promoting walking by ensuring an improved urban realm; and
- Seeking to ensure that all parts of the public transport network can be used safely, easily and with dignity by all Londoners, including by securing step-free access where this is appropriate and practicable.

5.12 Policy 6.3, regarding the effects of development on transport capacity, states that new developments which will give rise to significant numbers of new trips should be located either where there is already good public transport provision with capacity adequate to support the additional demand, or where such high-quality provision is being introduced. Phasing development, the use of Travel Plans and addressing freight issues may all help reduce the impact of the development. The assessment has determined that the development will have a positive effect on peak hour traffic flows in the local area. A robust test of highway network capacity ignoring the reduction in Morrisons traffic resulted in the High Street/St Stephen's Road junction operating within capacity for all scenarios to Year 2013.

5.13 Policy 6.9, relating to cycling, seeks to bring about a major increase in cycling such that it accounts 5% of modal share by 2026. The development will provide on-site cycle parking which will contribute positively towards an integrated cycling network.



Hillingdon Local Plan: Part 2 (2016)

- 5.14 Hillingdon Local Plan: Part 2 (2016) Part 2 of the Local Plan delivers detail of the strategic policies that were set out in Part 1. It has not yet been adopted. When it is, together with Part 1 it will form a comprehensive development strategy up to 2026. Part 2 comprises of a number of documents. The document 'Site Allocations and Designations' identifies suitable sites for new housing. The Hayes/West Drayton corridor is identified as a key corridor for growth, with Crossrail as a catalyst.
- 5.15 The document 'Development Management Policies' has detailed transport policies in Chapter 8. The key policies are summarised as follows:
- Policy DMT 1: Managing Transport Impacts. This policy requires that development proposals are accessible by public transport, promote walking and cycling, provide equal access for all people, address delivery and service requirements, and have no significant adverse transport impacts on the local environment (in particular the strategic road network).
 - Policy DMT 2: Highways Impacts. This policy requires safe and efficient vehicular access to the highway network, minimising impact on the local environment and facilities for pedestrians and cyclists.
 - Policy DMT 5: Pedestrians and Cyclists. This policy requires development proposals 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. Developments are to comply with parking standards in order to facilitate sustainable development and address congestion.
- 5.16 The aim of the transport policies is to provide a sustainable transport system that addresses the length of journeys, reduces car dependency, supports the economy, encourages active travel and improves quality of life. The policies also aim to reduce congestion and smooth traffic flow.

Summary

- 5.17 With regards to transport, the proposed development will accord with the relevant policies at a national, regional and local level. The proposals have been assessed in the light of current local and national transport policy and are fully compliant with policy objectives.



6.0 SUMMARY & CONCLUSIONS

6.1 The Redwood Partnership has been appointed by Harbourside Investments Limited and WM Morrison Supermarkets PLC to provide transport and highway advice and prepare a Transport Assessment and Travel Plans to accompany a planning application at the existing Morrisons foodstore at 43-67 High St, Yiewsley, West Drayton, London, UB7 7QQ.

6.2 The detailed planning application consists of replacement Use Class A1 food retail and new Use Class C3 Residential. The planning application comprises a proposed mixed-use retail and residential development including:

- A replacement 1,643 sqm GIA Morrisons foodstore at ground level (Use Class A1)
- 144no new dwellings including 47no 1-bedroom apartments; 76no 2-bedroom apartments; 16no 3-bedroom apartments and 5no 4-bedroom apartments in 6no storeys above the new Morrisons foodstore (Use Class C3)
- Closure of 2no existing site accesses off St Stephen's Road replaced with a single site access
- Footway widening and street lighting enhancements on St Stephen's Road
- 69no Morrisons customer car parking spaces in an upper-level basement car park located beneath the new foodstore
- 101no residential car parking spaces in a lower-level basement car park beneath the Morrisons car parking
- 165no residential cycle parking spaces with space to expand up to 244no cycle parking spaces should more demand be identified in the Travel Plan
- 32no Morrisons cycle parking spaces for customers and staff
- Contributions within a S106 Planning Agreement towards possible future Traffic Regulation Orders on St Stephen's Road

6.3 A significant local population live within a 15-minute (1200 metre) walk isochrone. The site's location will benefit those who wish to walk to and from the site, namely new residents; staff working at Morrisons and customers shopping at Morrisons. A 5-mile (30 minutes) cycling isochrone also encompasses a significant residential population providing new residents with a good opportunity to cycle to work on the Site and for staff and customers working or shopping at Morrisons.



- 6.4 The proposals include infrastructure for a total cycle parking provision of a minimum of 165no cycles in accordance with LB Hillingdon cycle parking standards. Internal cycle storage rooms are provided in each of the 3no residential cores which will have a total capacity for 244 cycles. The proposals therefore allow for the future expansion of cycle storage from the initial 165no spaces up to a maximum 244no spaces with future demand monitored within the Residential Travel Plan.
- 6.5 The site location is easily accessible to local bus services being well within the 400-metre recommended walk distance of bus stops. Most bus services are high frequency and operate throughout the day from approximately 03:40 hrs to 00:40 hrs with bus service 222 providing a 24-hour service. The frequency and timing of bus services provide a realistic opportunity for residents, staff and customers to consider bus travel.
- 6.6 West Drayton station is located 250 metres (4-minutes) walk distance from the site boundary; well within the preferred maximum walking distance. With regular and comprehensive services, the station provides an attractive travel choice for staff, patrons, customers and residents accessing all the uses on the site. West Drayton station is currently undergoing significant improvements as part of the London Crossrail project and remains open during the improvement works. Once works are complete and the Elizabeth route opens fully, up to six Elizabeth line services an hour will serve West Drayton station, allowing passengers to travel through central London without having to change trains.
- 6.7 A survey of existing bus capacity was carried out in July 2018. A review of the spare capacity within each bus service passing near to the Site in the AM/PM peak hours shows that most individual bus services can contain the total peak hour demand from the Site. Local bus service capacity is more than sufficient to cater for the increased bus travel demand from the Site.
- 6.8 The Site produces very few rail trips, 2no arrivals and 15no departures in the AM peak hour and 8no arrivals and 2no departures in the PM peak hour. This quantum of new trips can easily be absorbed by the new Crossrail facility due to be operational by 2019, which will increase the number of rail services from 4no to 6no trains per hour in the peak periods. Local rail service capacity is more than sufficient to cater for the increased rail travel demand from the Site.

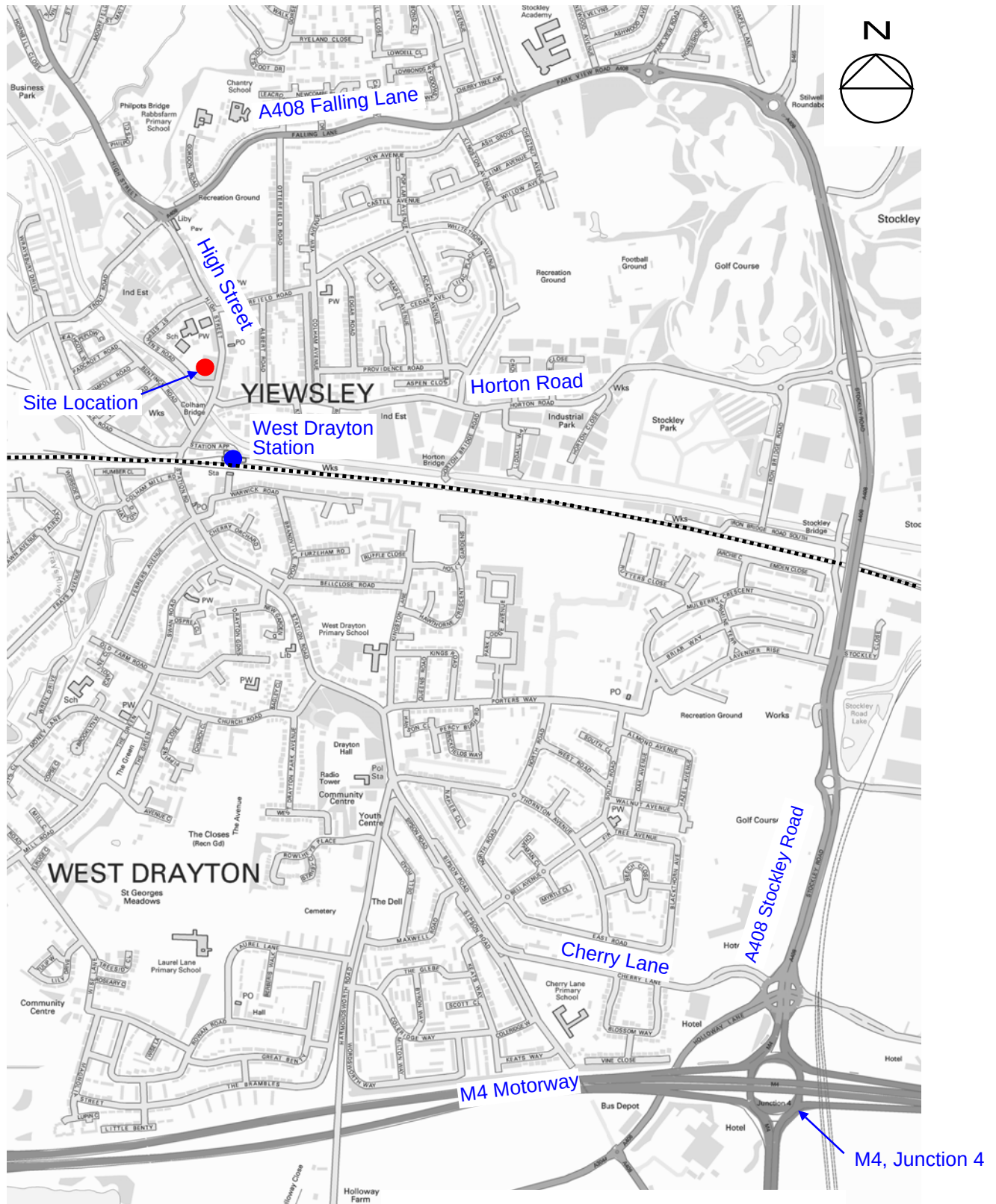


- 6.9 The PTAL assessment indicates that this Site is located in an area with a 'moderate' PTAL score of 3 reflecting local rail and bus accessibility. The proposed Crossrail improvements are expected to improve PTAL accessibility in the area to a 'good' PTAL score of 4 reflecting the increased rail services which will be provided by the Crossrail improvements at the nearby West Drayton station.
- 6.10 The latest personal injury accident data have been obtained from Transport for London for a five-year period between 1st September 2012 and 30th August 2017. The accident data does not indicate an abnormal grouping of accidents or a statistically high occurrence of incidents near to the development site.
- 6.11 The proposed Morrisons car park will provide a total of 69no customer car parking spaces which is between the range suggested by both the emerging Hillingdon car parking guidance and the London Plan 2016 and is therefore compliant with both standards. The residential development includes 144no units on a 0.52ha site. A total of 101no residential parking spaces are proposed; a ratio of 0.72 spaces per unit, which is appropriately below both Hillingdon Council's and the London Plan's maximum car parking standard and is therefore compliant with both these standards. Census data shows that for apartment owners in Yiewsley the car ownership ratio is lower at 0.59. Therefore, based upon Yiewsley's car ownership census data for households living in apartments we consider a proposed parking ratio of 0.72 will satisfy car ownership demand in this location.
- 6.12 The proposed service yard has been tracked for a 16.5m articulated lorry and 12m rigid lorry. The articulated lorry track includes a 0.3m clearance envelope on the Public Highway for wing mirrors and a more generous 1.0m clearance envelope within the service yard. The track swept path shows that the manoeuvre can be undertaken safely with sufficient clear width to allow a large car to exit the site should the vehicle be leaving at the same time as an articulated lorry enters the Site.
- 6.13 A foodstore of this size is not likely to generate a majority of primary one-stop shopping trips but will instead provide convenience shopping catering for local residents and office workers living or working nearby and walking to the foodstore. Customers would also be able to combine their shopping trip with other destinations on the High Street.
- 6.14 The development proposals will result in a reduction in the size of the existing Morrisons foodstore gross internal area by 50% from 3,340sqm GIA to 1,643sqm GIA; the sales area will reduce from 1,557sqm to 1,064sqm a reduction of 32%. Foodstore car parking provision will also reduce by



40% from 114no spaces to 69no spaces. The TRICS vehicle trip generation database has established that vehicle trips to a foodstore are in proportion to the floor area of the store or the car park provision attached to the store. The proposed reduction in Morrisons gross floor area will therefore result in a proportional reduction in traffic movements to the smaller foodstore.

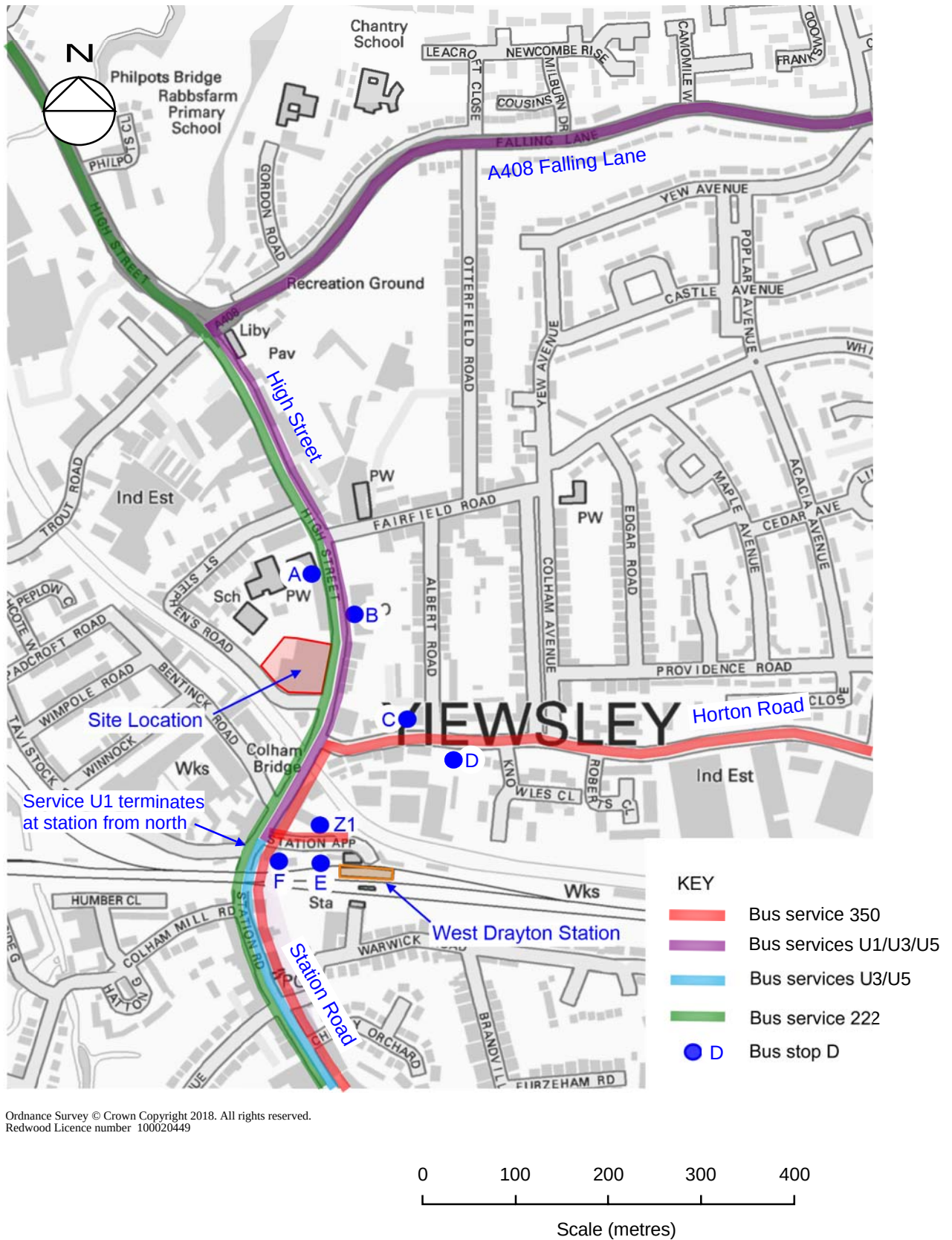
- 6.15 Morrisons anticipate that walk-in customer trade will increase as a result of the larger product range in the new store and from the significant increase in residential development that has or is developing in the immediate area. This increase in walk-in customer trade will offset the reduced level of trade from carborne customers.
- 6.16 To provide a robust test of the capacity of the highway network adjacent to the Site, an unlikely Robust Assessment has been made assuming 100% new residential traffic flows added to the existing growthed base traffic flows but with no reduction in Morrisons traffic flows. The nearby junction of High Street/St Stephen's Road still operates within capacity under all traffic scenarios even with the robust but unlikely scenario of growthed base traffic with new residential traffic and no reduction in Morrisons traffic in Year 2023.
- 6.17 The overall impact of the development in the local area is considered to be beneficial and not severe even considering the most robust traffic assumption of no reduction in Morrisons traffic. The development:
- i) Maximises opportunities for sustainable modes of transport by locating the development close to bus and rail services and local shopping facilities and by the provision of adequate cycle parking on Site for all uses
 - ii) Provides safe and suitable access and a car parking provision which is adequate for the proposed uses and is below the maximum Hillingdon and London Plan car parking standards
 - iii) Any residual cumulative impact in transport terms is shown to be beneficial and not 'severe'. An 'unlikely' robust test of the highway network adding residential traffic to base traffic flows growthed to Year 2021 and Year 2023 but without a reduction in foodstore traffic shows the nearest main junction of High Street/St Stephen's Road operating within capacity in all peak hours in the worst-case Year 2023
- 6.18 With regards to transport, the proposed development accords with the relevant policies at a national, regional and local level. The proposals have been assessed in the light of current local and national transport policy and are fully compliant with policy objectives.

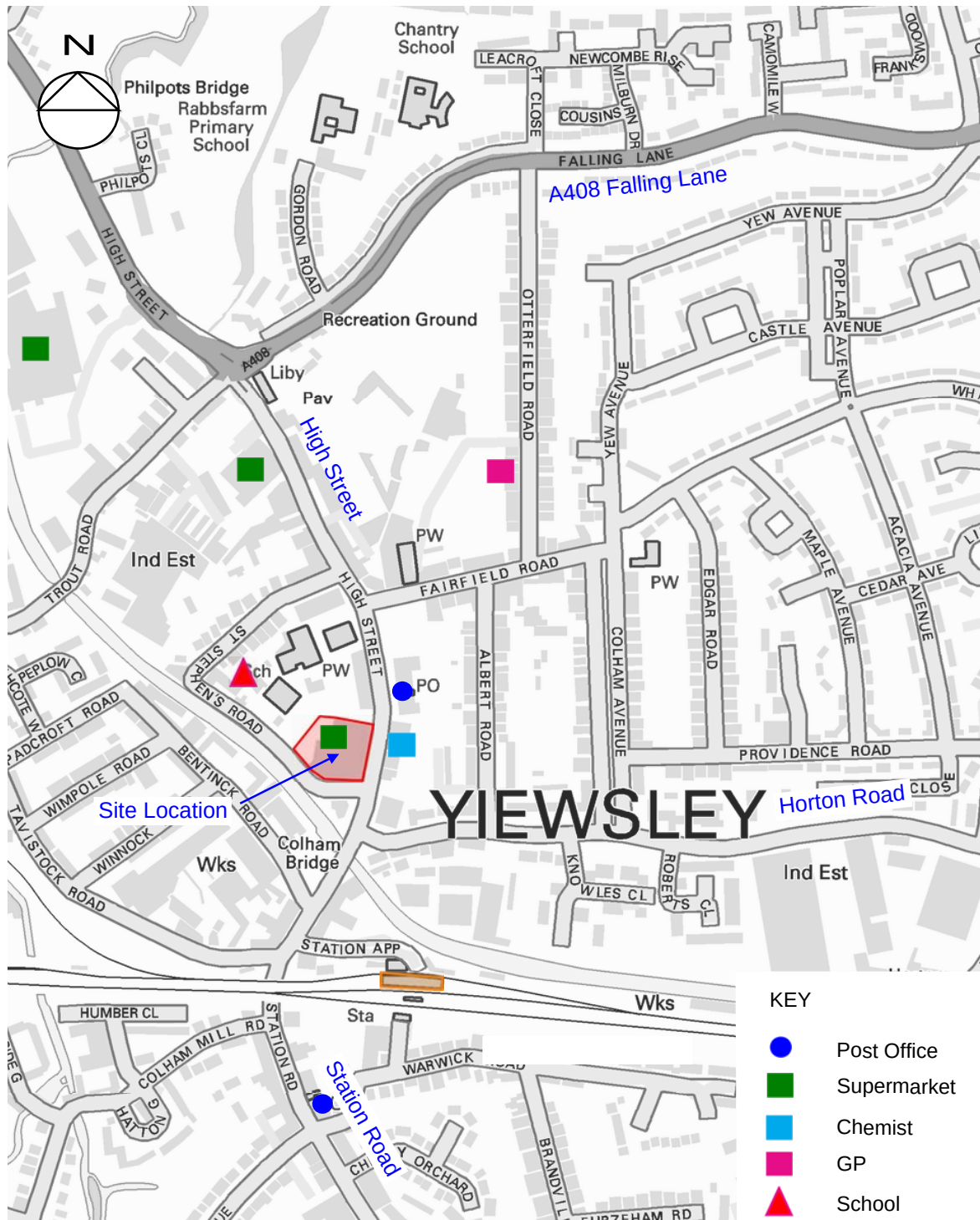


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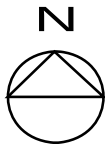
MORRISONS, HIGH STREET, YIEWSLEY, UB7 7QQ
SITE LOCATION PLAN

FIGURE A1





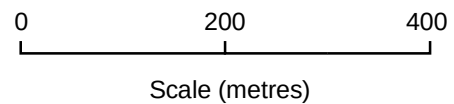
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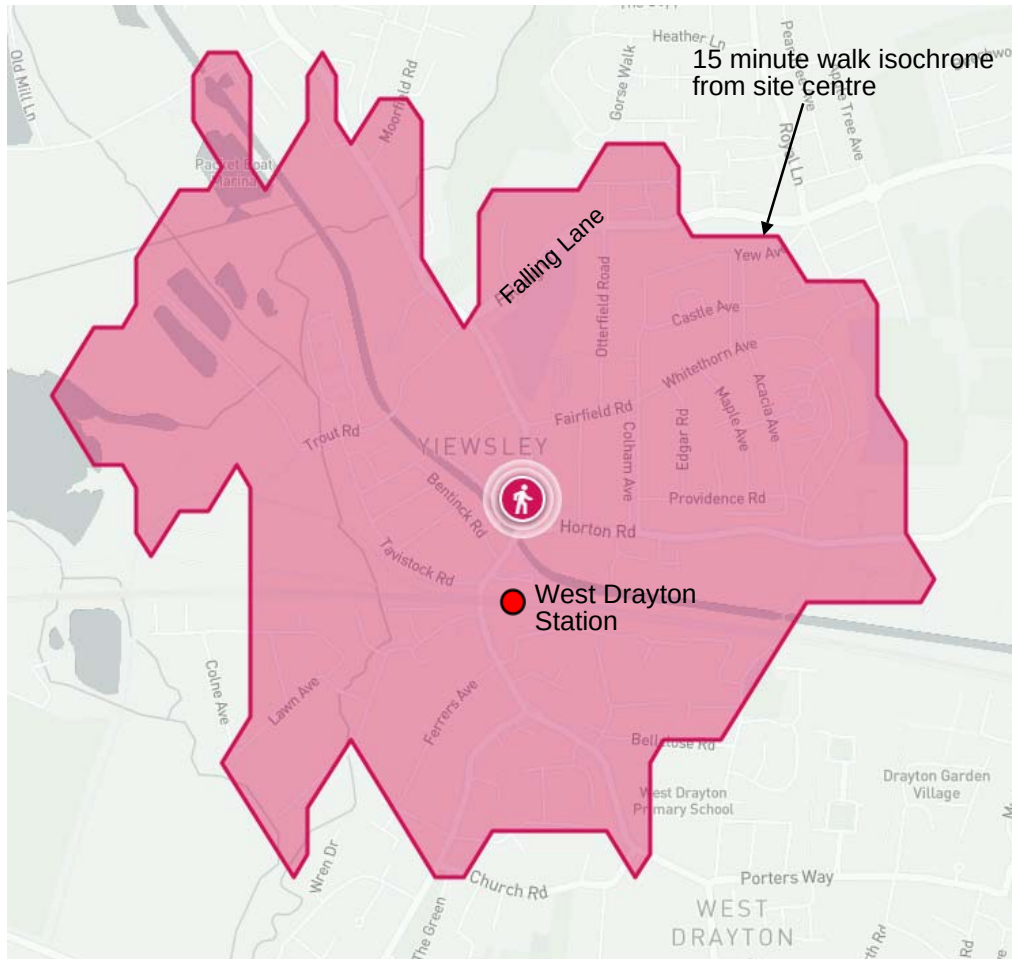
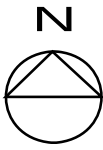


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KEY

- Local on-street cycle routes 89/93
- Grand Union Canal Cycle Route (Watford to London)





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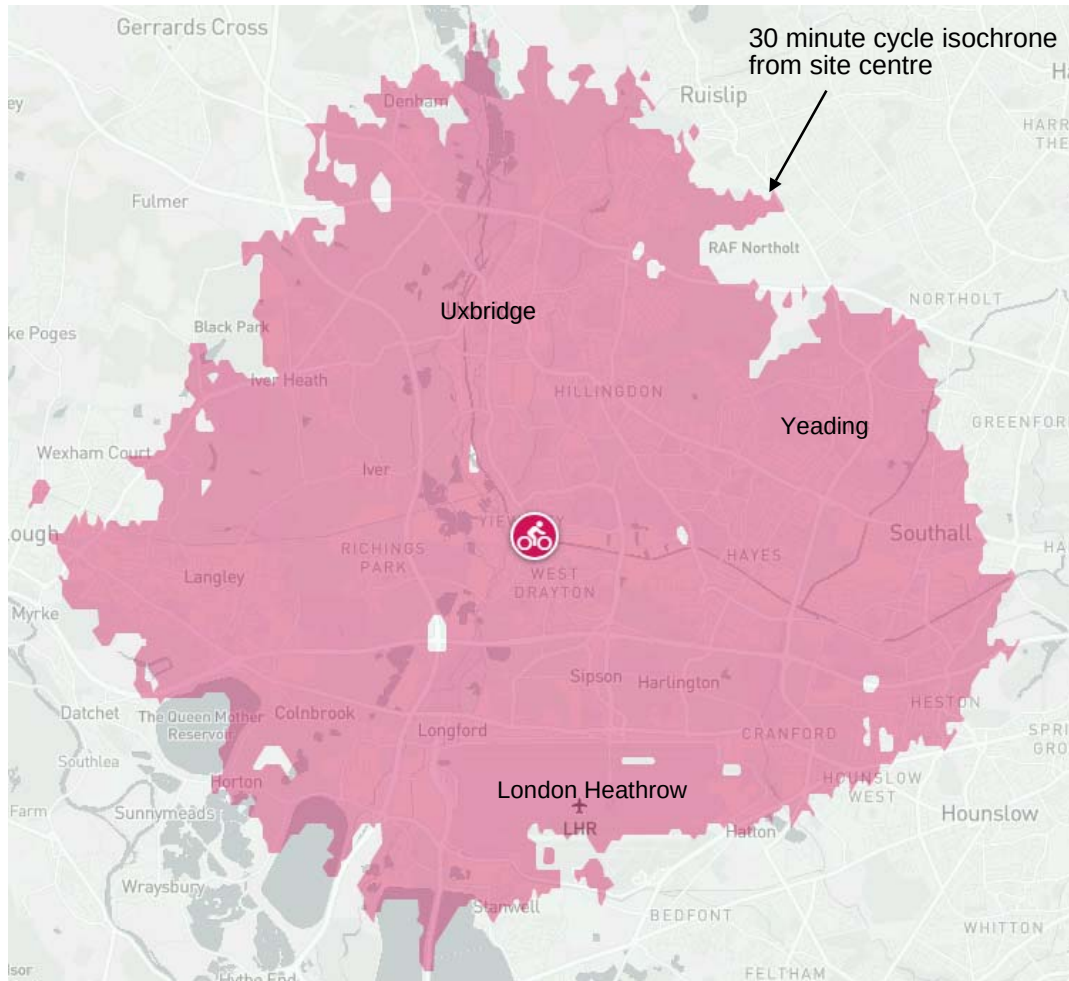
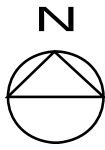
KEY



15 minute walk isochrone
80m/min = 1200m

0 400 800

Scale (metres)

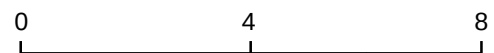


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KEY

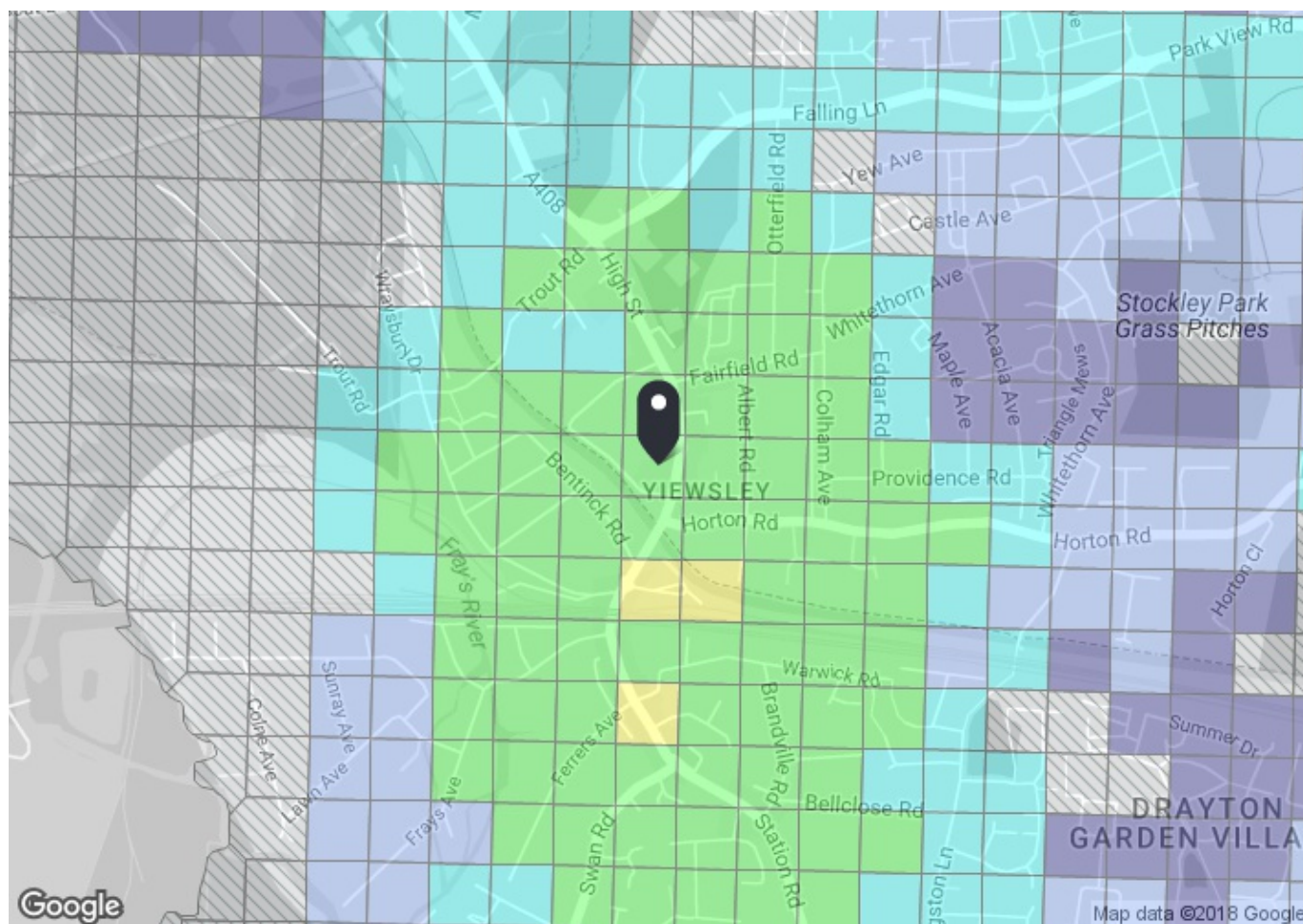


30 minute cycle isochrone
5 miles @ 10mph



Scale (kilometres)





PTAL output for Base Year 3

41-67 High St, West Drayton UB7 7QQ, UK
Easting: 506058, Northing: 180340

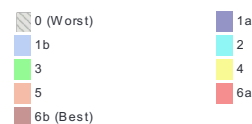
Grid Cell: 79575

Report generated: 08/01/2018

Calculation Parameters

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

Map key - PTAL



Map layers

 PTAL (cell size: 100m)

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	HIGH STREET YIEWSLEY	U5	113.25	5	1.42	8	9.42	3.19	0.5	1.59
Bus	HIGH STREET YIEWSLEY	222	113.25	7.5	1.42	6	7.42	4.05	1	4.05
Bus	HIGH STREET YIEWSLEY	U3	113.25	5	1.42	8	9.42	3.19	0.5	1.59
Bus	HIGH STREET YIEWSLEY	U1	113.25	4	1.42	9.5	10.92	2.75	0.5	1.37
Bus	HORTON ROAD ALBERT ROAD	350	281.33	5	3.52	8	11.52	2.6	0.5	1.3
Rail	West Drayton	'PADTON-OXFD 2N14 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'PADTON-OXFD 2N16 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'PADTON-OXFD 2N18 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'PADTON-OXFD 2N22 '	419.91	0.67	5.25	45.53	50.77	0.59	0.5	0.3
Rail	West Drayton	'PADTON-OXFD 2N24 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'RDNGSTN-PADTON 2P09 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'OXFD-PADTON 2P11 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'RDNGSTN-PADTON 2P12 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'RDNGSTN-PADTON 2P14 '	419.91	1.33	5.25	23.31	28.56	1.05	0.5	0.53
Rail	West Drayton	'RDNGSTN-PADTON 2P17 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'OXFD-PADTON 2P18 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'BNBR-PADTON 2P20 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'SLOUGH-PADTON 2P25 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'SLOUGH-PADTON 2P32 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Rail	West Drayton	'PADTON-RDNGSTN 2R13 '	419.91	1.67	5.25	18.71	23.96	1.25	1	1.25
Rail	West Drayton	'PADTON-TWYFORD 2R21 '	419.91	0.33	5.25	91.66	96.91	0.31	0.5	0.15
Total Grid Cell AI: 13.94										

- ## Map Notes

