

182-184 High Holborn Camden

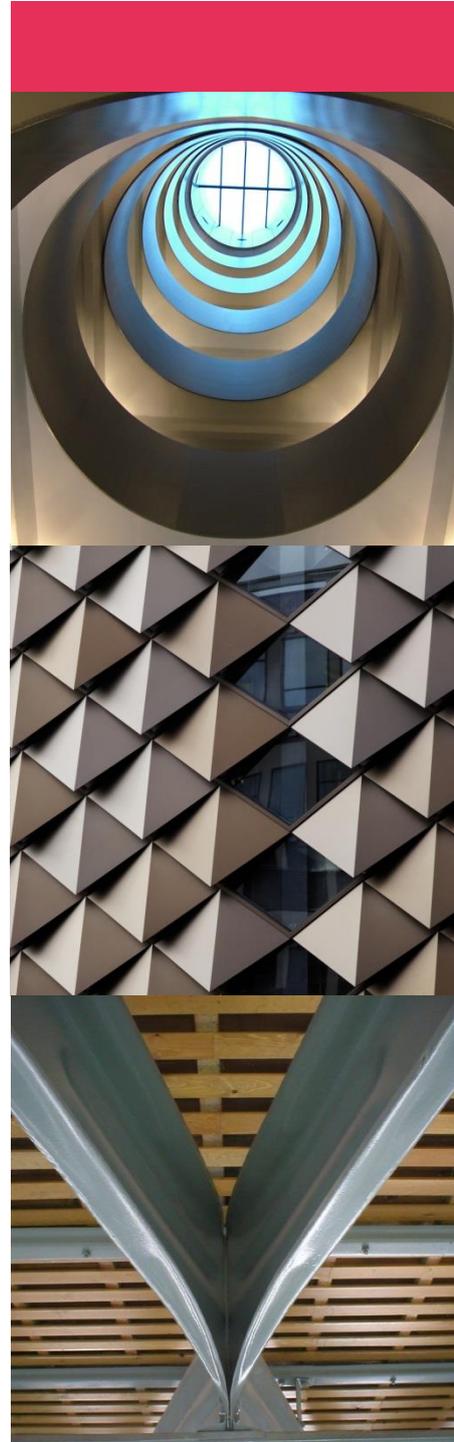
Interim Travel Plan

Curtins Ref: B059158

Revision: Final Rev B

Issue Date: 21 November 2016

Client Name: Covent Garden Investments S.A.R.L



Control Sheet

This report has been prepared for the sole benefit, use, and informing of the client. The liability of Curtins with respect to the information contained in the report will not extend to any third party.

Author	Signature	Date
Simon Moody BSc MSc MCIHT Senior Transport Planner		21 November 2016

Reviewed	Signature	Date
Ben Dawson BSc (Hons) MCIHT Associate – Transport Planning		21 November 2016

Authorised	Signature	Date
Ben Dawson BSc (Hons) MCIHT Associate – Transport Planning		21 November 2016

Table of contents

1.0	Introduction.....	4
1.1	Introduction.....	4
1.2	Site Description and Proposed Development	5
1.3	Purpose of Report	6
1.4	BREEM.....	6
1.5	Interim Travel Plan	9
1.6	Report Structure.....	9
2.0	Aims and Objectives.....	10
2.1	Background to Travel Plans	10
2.2	Travel Planning in London	10
2.3	The Aims of the Travel Plan.....	11
2.4	Benefits of a Travel Plan	11
3.0	Site Appraisal	13
3.1	Site Location.....	13
3.2	iTRACE	13
3.3	Walking Accessibility	14
3.4	Cycling Accessibility	17
3.5	Public Transport Accessibility	19
3.6	Accessibility by Bus.....	20
3.7	Accessibility by Underground.....	22
3.8	Accessibility by Rail.....	23
3.9	Accessibility Summary	24
4.0	Travel Plan Initiatives	25
4.1	Introduction.....	25
4.2	Production of Staff Induction Packs	25
4.3	Measures to Promote Walking	25
4.4	Measures to Promote Cycling	26
4.5	Measures to Promote Public Transport.....	26

Interim Travel Plan

4.6	Measures to Promote Operational Related Transport Efficiencies	26
5.0	Management and Coordination	28
5.1	Introduction.....	28
5.2	Appointment of a Travel Plan Coordinator.....	28
5.3	Targets	29

Figures

Figure 1.1 - Site Location.....	4
Figure 3.1 - Pedestrian Facilities Plan.....	15
Figure 3.2 - 2 Kilometre Walking Catchment.....	16
Figure 3.3 - 5 Kilometre Cycling Catchment.....	18
Figure 3.4 - Santander Cycle Hire Locations.....	19
Figure 3.5 - PTAL Location Plan - Application Site	20
Figure 3.6 - High Holborn - Bus Stop Location Plan	22

Tables

Table 1.1 - Proposed Development - Area Schedule.....	5
Table 3.1 - CIHT Recommended Walking Distances.....	15
Table 3.2 - Local Bus Service Weekday Frequency (Minutes)	21
Table 3.3 - Holborn Underground Station - Service Frequency (Minutes)	23
Table 3.4 - Farringdon Railway Station - Service Frequency (Minutes).....	24

Appendices

Appendix A	Proposed Site Layout
Appendix B	BREEM Assessment Criteria
Appendix C	PTAL Summary

1.0 Introduction

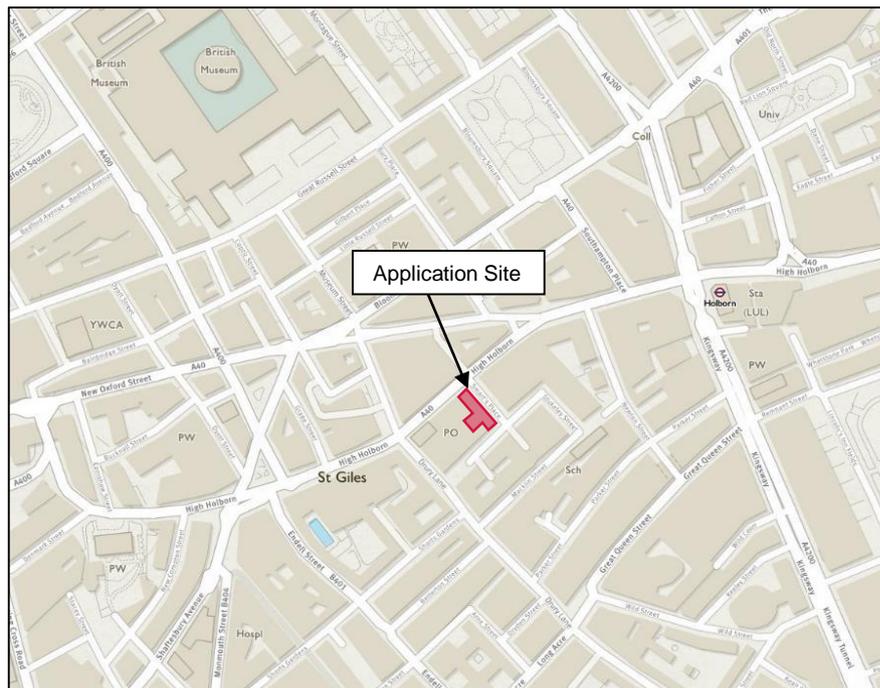
1.1 Introduction

1.1.1 Curtins has been appointed on behalf of *Covent Garden Investments S.A.R.L* to provide transport planning advice in relation to a proposed refurbishment and extension of an existing office building at 182-184 High Holborn within the London Borough of Camden. This Interim Travel Plan (ITP) has been prepared to support a planning application for the comprehensive redevelopment of the site together with a Transport Statement that will also accompany the application.

1.1.2 The application site comprises approximately 0.10 hectares and is located on the corner of the A40-High Holborn and Smart's Place, approximately 300 metres to the west of Holborn Station. The A40-High Holborn routes along the site's northern boundary, with Smart's Place located to the east of the building. The southern boundary of the site is bound by Stukeley Street, a shared space with access for loading vehicles only, while the western boundary of the application site directly adjoins neighbouring office buildings.

1.1.3 The application site is located in close proximity to strategic transport infrastructure, including Holborn Underground Station approximately 300 metres to the east. The proximity of key travel nodes and major travel destinations that are likely to be used by staff working at the proposed facility, suggests that the principle of development in this location accords with the thrust of sustainable transport and planning policies. The strategic context of the site is shown in **Figure 1.1** below.

Figure 1.1 - Site Location



1.2 Site Description and Proposed Development

- 1.2.1 The proposed development will involve the refurbishment of 182-184 High Holborn, which currently comprises 3,927m² GIA of B1 Office space. The proposed development will include for two additional floors to be added to the existing structure following refurbishment. This will result in a total GIA of 4,960m², an increase of 1,033m².
- 1.2.2 Once refurbished the development will contain a small retail unit fronting onto High Holborn and a flexible A1/A3/B1 space at ground floor. The rest of the development will be solely B1 office space. An area schedule for the proposed development is provided in [Table 1.1](#) below.

Table 1.1 - Proposed Development - Area Schedule

Land Use	GIA
Flexible A1 Retail/B1 Unit	106m ²
Flexible A1/A3/B1 Space	327m ²
B1 Office	4,008m ²
Basement	559m ²
Total	5,000m ²

- 1.2.3 Further details of the proposed development are provided within the Planning Statement submitted as part of this application. A proposed section of the development is included in [Figure 3.1](#) below and provided in full at [Appendix A](#).
- 1.2.4 The development has been designed to be car free and as a result no car parking has been provided within the proposals. However, the proposed development will accommodate 58 cycle parking spaces in the form of 29 double stacked cycle stands. This is in excess of the minimum cycle parking standards set out within The London Plan for long stay spaces.
- 1.2.5 The proposed cycle storage will be split across the ground level and basement. 20 cycle parking spaces will be on the ground level located next to the internal refuse storage area. The ground floor parking spaces will be accessed directly at street level by the existing servicing entrance on Stukeley Street.
- 1.2.6 The remaining 38 cycle parking spaces are located within the basement level of building, providing a covered and secure area which has been designed to meet LBC's Design Standards as out in Camden Planning Guidance Section 7. The basement level bike store is located directly adjacent to the male and female shower and changing facilities for ease of use. Each facility provides three shower cubicles to ensure adequate provision. In addition, a separate disabled shower/changing facility is also provided

Interim Travel Plan

- 1.2.7 The basement cycle store will be accessible via a stairway entrance from Smart's Place, which will incorporate a purpose built bike channel to facilitate easy access to the basement level. It is not possible to provide a lift to the basement level due to the thick raft foundations of the building.
- 1.2.8 The primary point of pedestrian access will be located on Smart's Place and will provide access into the main office reception area. An adjacent pedestrian access is also provided into the proposed A1/A3/B1 space and managers office. In addition, a third pedestrian access is provided from the southern end Smart's Place, which provides access to stairs leading to the basement area of the building. A fourth pedestrian access is provided from Stukeley Street to the cycle parking area. Finally, a pedestrian access will also be provided off High Holborn, providing a direct access to the proposed A1 retail unit.
- 1.2.9 As part of the proposals there is an opportunity to upgrade the existing infrastructure on Smart's Place in line with the London Borough of Camden's Streetscape Design Manual, creating a shared level surface layout, in much the same fashion at the western extent of Stukeley Street on the application site's southern boundary
- 1.2.10 At present, access for delivery and service vehicles is provided either on-street from Smart's Place or via a dedicated on-street loading area on Stukeley Street, which is located directly adjacent to the buildings internal storage area. It is proposed that refuse collection will take place from Stukeley Street as per the existing arrangement. Refuse vehicles will therefore be able to access the loading area on Stukeley Street by using the existing purpose built turning head at the corner of Smart's Place and Stukeley Street.

1.3 Purpose of Report

- 1.3.1 This report is intended to demonstrate the commitment to sustainable travel by the site operator and help the development achieve a BREEAM rating of excellent. It has been developed based on Travel Plan guidance produced by Transport for London (TfL) and the London Borough of Camden.
- 1.3.2 This Interim Travel Plan has been produced for the proposed development, with the view to developing it into a Full Travel Plan once the final end users have been identified.

1.4 BREEM

- 1.4.1 This report is intended to demonstrate the commitment to sustainable travel by the site operator and help the development achieve a BREEAM rating of excellent. It has been developed based on Travel Plan guidance produced by Transport for London (TfL) and the London Borough of Camden.
- 1.4.2 The BREEAM (Building Research Establishment's Environmental Assessment Method) is a leading and widely recognised environmental assessment method for buildings. The assessment method awards credits in ten categories and then uses these to produce a single overall score for the development.
- 1.4.3 One of the ten categories of assessment is transport. This considers the following:

Interim Travel Plan

- The location of the development;
- Parking and cyclist facilities;
- Access to public transport and local amenities; and
- Implementation of Travel Plans.

1.4.4 For each of the ten categories a number of aims are identified within the BREEAM assessment criteria. This identifies what measures are to be assessed and what evidence is needed to demonstrate the level of compliance with that specific assessment criteria. For transport six criteria are listed for assessment, these are:

- Provision of public transport;
- Proximity to amenities;
- Cyclist facilities;
- Pedestrian and cycle safety;
- Travel Plan; and
- Maximum car parking standards.

1.4.5 This Travel Plan is being produced to demonstrate compliance with the aim set out in the BREEAM assessment criteria which states that:

“To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.”

1.4.6 The BREEAM assessment criteria for Travel Plans and how to demonstrate compliance has been included as [Appendix B](#) at the rear of this report. This includes demonstrating compliance by:

- Producing a Travel Plan which considers all types of travel relevant to the building type and users;
- The plan is structured to meet the needs of the particular site including a site accessibility assessment;
- Including a package of measures to meet the Travel Plan objectives and minimise car-based travel patterns; and

- Including measures tailored to minimise the impacts of operational-related transport.

1.5 Interim Travel Plan

- 1.5.1 An Interim Travel Plan (ITP) is the first stage of a Travel Plan. It includes a list of potential measures that could be implemented to affect modal choice and a management strategy for producing a full TP. It does not include targets or travel surveys as the development it relates to has not been constructed.
- 1.5.2 In regards to an ITP, the Department for Transport (DfT) state that in circumstances where it is not possible to submit a Full Travel Plan the developer can prepare and submit an Interim Travel Plan. This should cover all substantive elements, to be completed at an agreed time.
- 1.5.3 182-184 High Holborn will comprise of B1 office and A1/A3 retail use post redevelopment. This ITP is primarily aimed at the staff of the offices and retail units; however, measures have also been proposed for visitors and for deliveries to the development.
- 1.5.4 A number of documents and resources have been consulted in the production of this ITP. The primary document is TfL's *Travel Planning for new development in London*. Other documents and guidance used in the production of this ITP include:
- The Department for Transport, "The Essential Guide to Travel Planning", (2008); and
 - The Department for Transport, "Good Practice Guidelines: Delivering Travel Plans through the Planning Process", (2009)
- 1.5.5 As part of this ITP the Public Transport Accessibility Levels (PTALs) have been identified for 182-184 High Holborn. Details of the public transport accessibility of the site are provided later in this report.

1.6 Report Structure

- 1.6.1 Following this introduction, Section 2 of the report outlines the aims and objectives of the ITP, some of the benefits associated with ITP's and the focus of the ITP. Section 3 provides an accessibility review of the site while Section 4 identifies measures and initiatives that can be implemented in order to promote and encourage sustainable forms of travel. Management and Co-ordination of the ITP is considered in Section 5.

2.0 Aims and Objectives

2.1 Background to Travel Plans

2.1.1 A Travel Plan (TP) is a package of practical measures aimed at reducing car use. The TP is intended to encourage site users to choose alternative modes of travel over single occupancy car use and where possible reduce the need to travel at all. A plan should be tailored to an individual site and include a range of measures that are likely to have a positive impact at that site.

2.1.2 The requirement to provide a TP was initially formalised by the revised Planning Policy Guidance Note 13 (PPG13) which, in Section 87, stated:

“Their (TPs) relevance to planning lies in the delivery of sustainable transport objectives, including:

- Reductions in car usage (particularly single occupancy journeys) and increased use of public transport, walking and cycling; and*
- Reduced traffic speeds and improved road safety and personal security particularly for pedestrians and cyclists.”*

2.2 Travel Planning in London

2.2.1 Both the London Plan and the Mayor’s Transport Strategy developed the approaches originally set out within PPG13 and aim to achieve a ‘sustainable city’. Policy 3C.1 of the London Plan States that,

- “The Mayor will work with TfL, the government, boroughs and other partners to ensure the integration of transport and development by:*
- Encouraging patterns and forms of development that reduce the need to travel, especially by car;*
- Seek to improve public transport, walking and cycling capacity and accessibility where it is needed, for areas of greatest demand and areas designated for development and regeneration;*
- Supporting high trip generating developments only at locations with both high levels of public transport accessibility and capacity, sufficient to meet the transport requirements of the development; and*
- Encourage integration of the major transport infrastructure plans with improvements to the public realm, particularly in key areas around major rail and Underground stations and interchanges, using land assembly powers where necessary.”*

2.2.2 Policy 3C.2 of the London Plan goes on to state that,

“Developments with significant transport implications should include a Transport Assessment and Travel Plan as part of planning applications.”

“All developments that exceed thresholds defined in TfL guidance on Workplace Travel Plans should have a Travel Plan.”

2.2.3 For B1 (including office), A1 (food/non-food retail) and A3 (food and drink) the thresholds for the production of a TP are triggered if the development either has 20 employees or is over 2,500sqm.

2.3 The Aims of the Travel Plan

2.3.1 In line with Central Government Policies and Guidance, the aims of the TP are to:

- Reduce the need to travel;
- Discourage the use of unsustainable modes of transport and enable users of the development to make travel choices that benefit themselves and their community;
- Maximise social inclusion by making the development accessible to all members of the community; and
- Raise awareness of alternative modes of transport and thus encourage a modal shift towards more sustainable travel modes.

2.4 Benefits of a Travel Plan

2.4.1 The most easily identifiable benefits are those that are directly related to reductions in vehicle use; namely significantly less congestion, noise, air pollution and accidents. However, there is also a broader range of more intangible benefits that can occur from the implementation of Travel Plan initiatives. These benefits include:

- Improved health (i.e. increased fitness and reduced stress and obesity);
- A reduction in travel costs;
- A cleaner local environment;
- Meeting an organisation’s environmental standards;
- Increase business efficiency and equality;
- Improved accessibility to local services;
- Increased road safety;

Interim Travel Plan

- Reduced travel times;
- Improved travel choice;
- Reduced congestion and demand for parking spaces; and
- A reduction in the need to travel.

3.0 Site Appraisal

3.1 Site Location

- 3.1.1 A key element of planning policy is to ensure new developments are located in areas where alternative modes of travel are available. It is also important to ensure that developments are not isolated but are located close to complementary land uses. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.
- 3.1.2 The application site benefits from a PTAL of 6b and is the highest achievable level relating to 'excellent' accessibility. The site is therefore ideally placed to support the principle of an increase in activity. The A40-High Holborn routes along the site's northern boundary, with Smart's Place located to the east of the building. The southern boundary of the site is bound by Stukeley Street,
- 3.1.3 A site-specific transport survey has been carried out assessing the accessibility of the site by sustainable modes of travel including:
- Pedestrian Accessibility;
 - Cycle Accessibility; and
 - Public Transport Accessibility.

3.2 iTRACE

- 3.2.1 iTRACE is an internet based Travel Plan management system. It has been built and designed based on requirements set out by TfL and WESTRANS, (The West London Transport Strategy Group). It comprises of two main elements:
- A range of tools including online site audits, online/paper based staff travel surveys and Travel Plan templates which organisations may use to develop their Travel Plan; and
 - A Travel Plan Project Management Application for use by London Borough Travel Plan Officers. This enables a range of data on individual sites to be inputted into the system and accessed by borough officers.
- 3.2.2 The document "Guidance for workplace Travel Planning for development" produced by TfL states that all development related Travel Plans in London should use a standardised approach.
- 3.2.3 As part of this approach all development related Travel Plans should be iTRACE compliant by either using iTRACE compliant surveys (as a minimum), or TRAVL compliant surveys (for larger developments).

- 3.2.4 Upon occupation it is proposed that an iTRACE compatible survey will be undertaken as a basis for providing initial data upon which the Travel Plan and future initiatives may be developed.

3.3 Walking Accessibility

- 3.3.1 In the context of the availability and quality of walking infrastructure, it is noted that the site lies within a highly urbanised and central location and, as such, benefits from a well-formed network of pedestrian footways that facilitate connectivity between the site and the surrounding area. Subsequently, pedestrian infrastructure in the vicinity of the site is considered to be of a good standard.
- 3.3.2 In the vicinity of the site, footways are contiguous on either side of High Holborn, with dropped-kerbs, tactile paving and signalised pedestrian crossings provided at key junctions including Drury Lane and New Oxford Street. Footways measure at least 3 metres in width on either side of the carriageway, with street lighting provided throughout.
- 3.3.3 Smart's Place also accommodates contiguous footways on either side of the carriageway, the footway on the eastern side of the carriageway measures approximately 1 metre in width, while the footway routing adjacent to the frontage of the building provides a high quality paved surface, measuring approximately 2.5 metres in width. The footway is lined with bollards and street lighting is provided throughout.
- 3.3.4 To the south of the application site, the western section of Stukeley Street provides for a high quality level surface space, creating a walkable and pedestrian friendly environment. [Figure 3.1](#) below indicates the pedestrian facilities afforded within the local vicinity.

Figure 3.1 - Pedestrian Facilities Plan



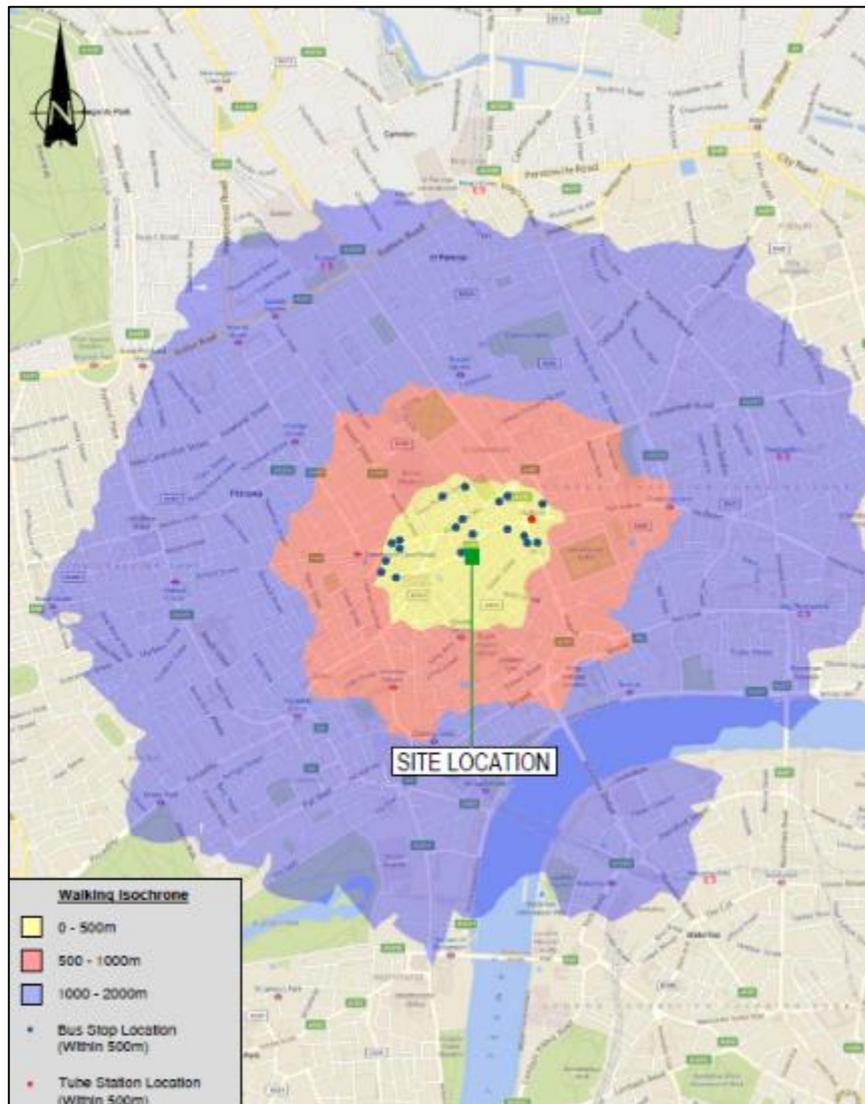
3.3.5 The Chartered Institution for Highways and Transportation (CIHT) document entitled *‘Providing for Journeys on Foot’* states walking distances relevant to this planning application. These are cited in [Table 3.1](#) below.

Table 3.1 - CIHT Recommended Walking Distances

CIHT Classification	Town Centres (m)	Commuting/School/Sightseeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

3.3.6 The credentials of the site have been considered by way of GIS-based modelling to identify the geographical catchment area for walking accessibility. The resulting catchment plan has been produced in accordance with the distances of 500m, 1000m and 2000m which are termed as *‘Desirable’*, *‘Acceptable’* and the *‘Preferred Maximum’* by the CIHT for commuting. All distances have been measured from the centre of the development site. The resulting analysis is shown in [Figure 3.2](#).

Figure 3.2 - 2 Kilometre Walking Catchment



3.3.7 As illustrated in Figure 3.2, destinations including Shaftesbury Avenue, Oxford Street, Blackfriars, Farringdon, Piccadilly and South Bank are all within a 500m walk of the development. Three national rail interchanges are also accessible within the walking catchment, including Farringdon, City Thameslink and London Euston. These rail interchanges provide services to regional and national destinations including Birmingham, Brighton, Sevenoaks, Bromley South and Orpington.

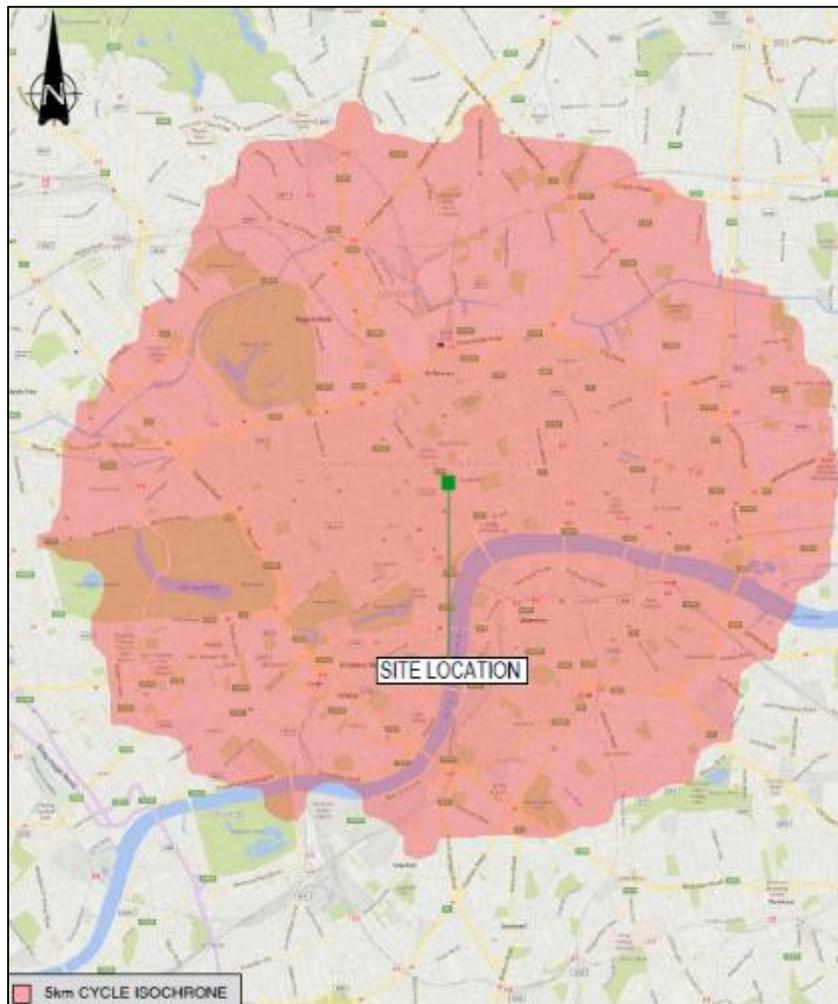
3.3.8 Within the 500m walk distance area of the development, recreational sites including St James's Park, Russell Square, Lincoln's Inn Fields and Corom Fields can be travelled to. Multiple underground stations provide rail access to regional areas beyond the 500m walk catchment boundary.

3.3.9 In summary, the application site's pedestrian accessibility is considered to be of a good standard. The surrounding pedestrian network comprises of is well maintained and provides direct access to surrounding amenities and facilities. As such, walking is considered to be a realistic and viable mode for journeys attracted by the site.

3.4 Cycling Accessibility

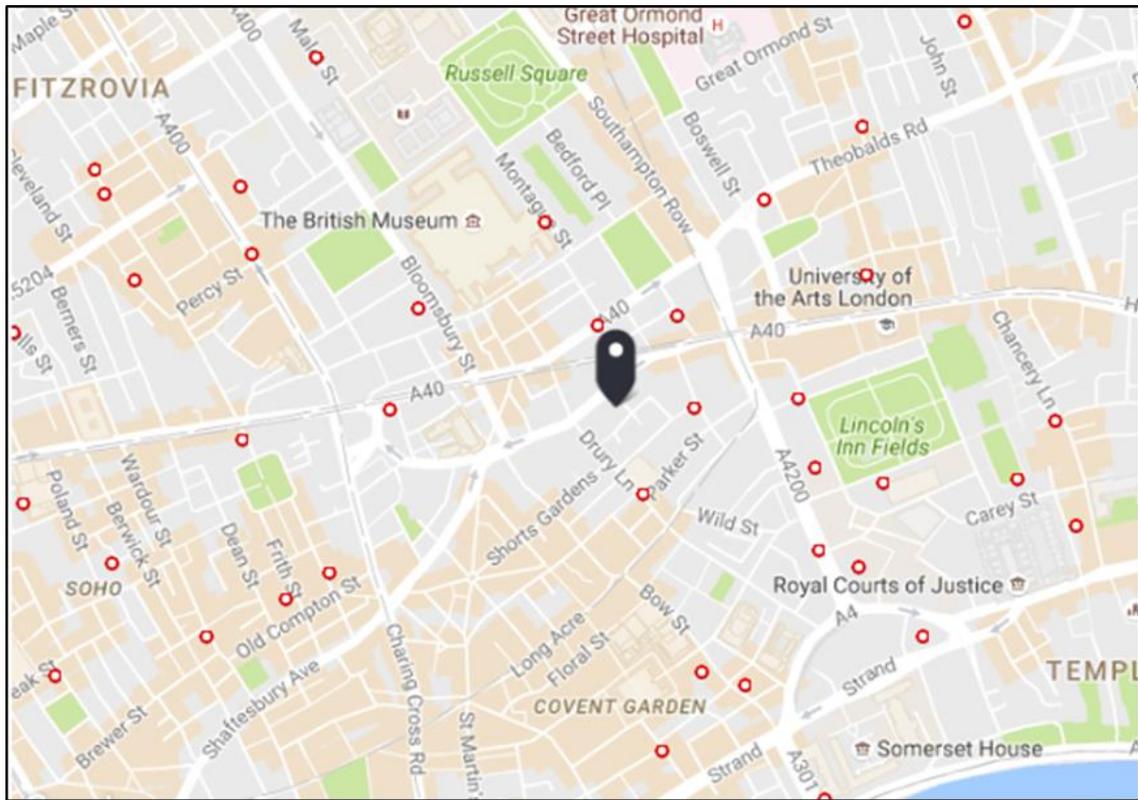
- 3.4.1 With regards to cycling facilities, there are a number of recognised cycle routes within the vicinity of the application site. London Cycle Network Route 39 provides an east-west route along High Holborn and New Oxford Street, approximately 80 metres to the north of the site. In addition London Cycle Network Route 6 provides a north-south route along Bury Place and Newton Street approximately 100 metres to the east of the application site.
- 3.4.2 It is considered that the surrounding roads are also of a suitable geometry and infrastructure provided on the above recognised routes is sufficient to encourage the uptake of cycling as a realistic and viable mode of transport.
- 3.4.3 The credentials of the site have been considered by way of GIS-based modelling to identify the geographical catchment area for cycling accessibility. In terms of cycling accessibility, a typical cycling threshold of 5 kilometres has been assumed. The resulting analysis is shown in [Figure 3.3](#).

Figure 3.3 - 5 Kilometre Cycling Catchment



- 3.4.4 As shown in [Figure 3.3](#) above, the London Boroughs of Camden, Lambeth, Islington, Kensington and Chelsea and the City of Westminster are all accessible within a 5km cycle distance of the development. This distance equates to a journey time of around 25 minutes when cycling at a speed of 12kph.
- 3.4.5 Additionally, there are a number of Santander Cycle Hire locations provided throughout the local area, the closet of which is provided at Barter Street approximately 125 metres to the north application site. With the provision of 10,000 bikes at over 700 docking stations situated every 300 to 500 metres in London, Santander Cycle Hire offers terminal-to-terminal rental, providing users with access to a quick and convenient mode of transport. [Figure 3.4](#) illustrates Santander Cycle Hire locations in proximity to the site.

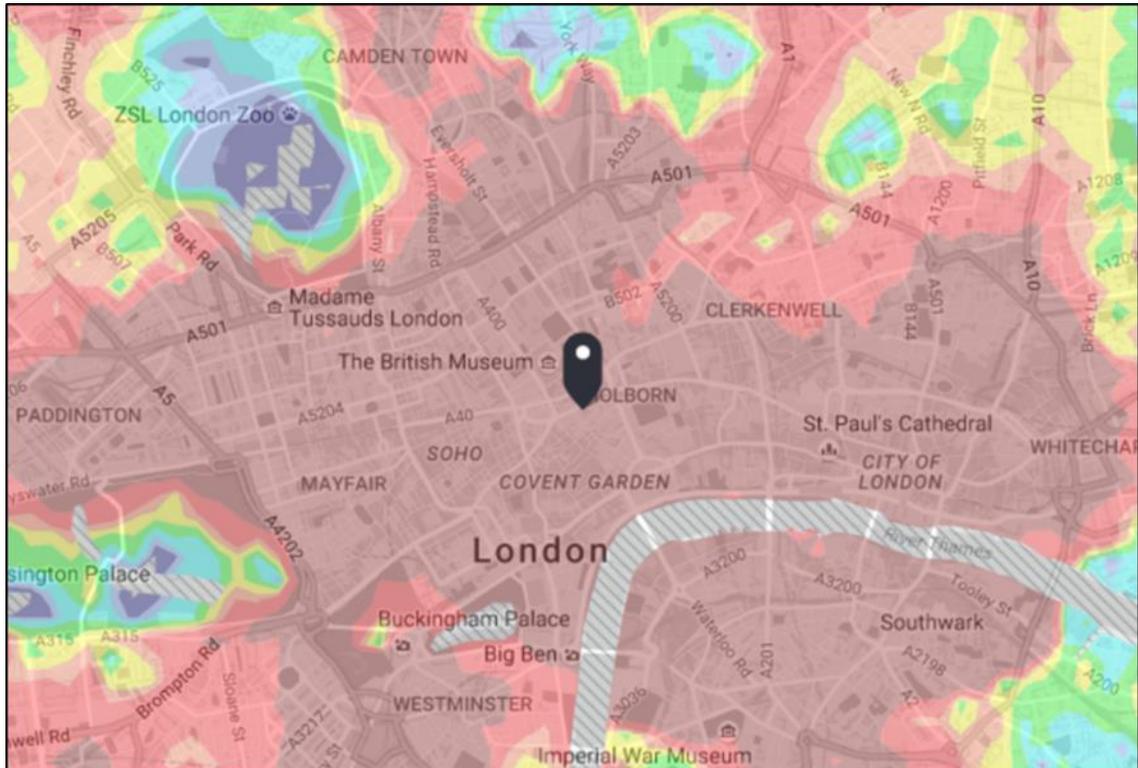
Figure 3.4 - Santander Cycle Hire Locations



3.5 Public Transport Accessibility

- 3.5.1 To establish the accessibility of the application site in terms of public transport infrastructure a Public Transport Accessibility Level (PTAL) analysis has been undertaken. PTAL is a method for calculating the level of public transport accessibility of a site or area. The methodology considers available public transport services, their frequency and the walking distance from the application site. PTAL takes account of all bus stops within 640 metres of the site and all rail/underground services within 960 metres of the site.
- 3.5.2 The rating of accessibility is a grade from 1–6 (including sub-divisions 1a, 1b, 6a and 6b), where a PTAL of 1a indicates extremely poor access to the location by public transport, and a PTAL of 6b indicates excellent access by public transport.
- 3.5.3 The PTAL of the site has been established by using Transport for London's WebCAT service. A summary of the results is provided in [Figure 4.5](#) below, while full PTAL outputs are provided at [Appendix C](#) of this report.

Figure 3.5 - PTAL Location Plan - Application Site



3.5.4 As shown in Figure 3.5 above, the application site has a PTAL rating of 6b. This is the highest available rating and indicates that the development is ideally located in a highly accessible location with access to a wide choice of frequent public transport services.

3.6 Accessibility by Bus

3.6.1 London buses are operated throughout Central and Greater London by TfL. The bus network consists of over 700 routes with 19,000 bus stops. It is estimated that over 6.4 million passengers use the bus network each day (source: GLA website).

3.6.2 As demonstrated above, the application site is well served by up to 38 bus services from eight bus stops located within 640 metres of the site. The closet of which is located 50 metres from the application site on the A40-High Holborn between Smart's Place and Drury Lane. The next closest stops are located on New Oxford Street up to 250 metres to the north of the site.

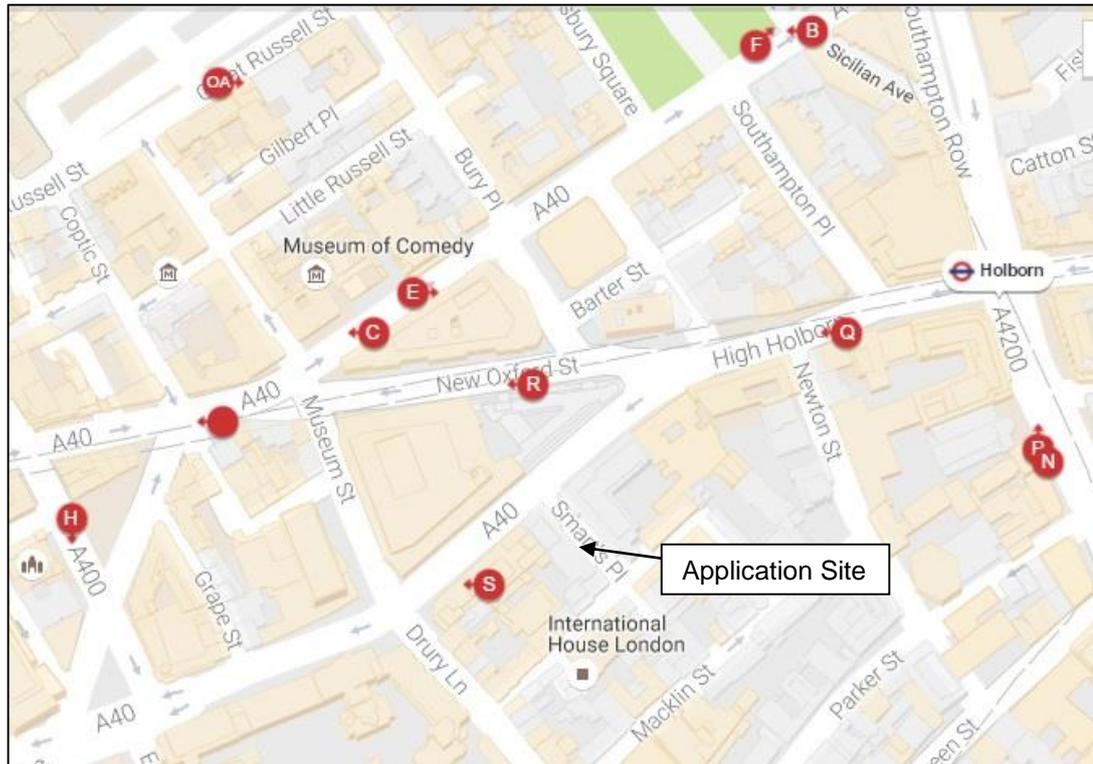
3.6.3 A summary of bus services available from the closest stops highlighted above is provided in Table 3.2 below.

Table 3.2 - Local Bus Service Weekday Frequency (Minutes)

Service	Route	Start/Finish	Daytime Frequency (Minutes)
1	New Oxford Street to Canada Water Bus Station	06:00-21:00	Every 6-10 minutes
242	Homerton Hospital/Wardle Street to St Giles High Street	07:00-18:00	Every 5-9 minutes
N1	New Oxford Street to Titmuss Avenue	Overnight	N/A
N68	Old Coulsdon/Tudor Rose to St Giles High Street	Overnight	N/A
8	Bow Church to Tottenham Court Road	08:00-21:00	Every 4-8 minutes
25	Holles Street to Hainault Street	09:00-16:00	Every 6-9 minutes
98	Pound Lane/Willesden Bus Garage to Red Lion Square	07:00-20:00	Every 6-9 minutes
N8	The Lowe to Holles Street	Overnight	N/A
N98	Stanmore Station to Red Lion Square	Overnight	N/A
N207	Uxbridge Station to Bloomsbury Square	Overnight	N/A

3.6.5 Timetable and frequency information for all bus stops within 640 metres of the site is provided in the PTAL output provided at [Appendix C](#) of this report. A map showing available bus stops within the vicinity of the site is provided in [Figure 3.6](#) below.

Figure 3.6 - High Holborn - Bus Stop Location Plan



3.7 Accessibility by Underground

- 3.7.1 London Underground is a rapid transit system operated by TfL, serving large parts of central and Greater London. In total there are over 270 stations spread over 12 lines, and it is estimated that approximately 3 million passengers use the London Underground network each day (source: GLA website).
- 3.7.2 The nearest underground station to the application site is Holborn Station, located on the Central and Piccadilly lines approximately 320m to the north east of the. The Central Line serves destinations such as Ealing Broadway, Bond Street, Tottenham Court Road, Bank, Debden, Snaresbrook, Notting Hill Gate, Chancery Lane and Shepherd's Bush. The Piccadilly Line offers direct connections to Heathrow Airport Terminals, Cockfosters, Rayners Lane, Hammersmith, Arnos Grove and Uxbridge. Peak AM and PM hour London Underground rail frequencies for Holborn Station are shown in [Table 3.3](#) below.

Table 3.3 - Holborn Underground Station - Service Frequency (Minutes)

Destination	AM Peak	PM Peak
Central Line		
Epping	10	10
Hainault	11	11
Debden	10	14
Loughton	12	14
West Ruislip	5	10
Ealing Broadway	8	7
White City	17	18
Northolt	12	8
North Acton	15	18
Piccadilly Line		
Arnos Grove	16	18
Cockfosters	14	15
Uxbridge	9	9
Heathrow T123	4	4
Heathrow T5	4	4
Rayners Lane	9	8

3.7.4 Other Underground stations located within 960 metres of the site include Covent Garden (600m) and Tottenham Court Road (600m). These stations provide access the Piccadilly, Central and Northern lines. Frequency information for all services available from these stations is provided in the PTAL output included at [Appendix C](#) of this report.

3.8 Accessibility by Rail

3.8.1 Farringdon is the closest railway station to the application site, located approximately 1.6km to the north-east of the site. National rail services from Farringdon station provide a direct connection to destinations such as Luton, Sutton, St Albans and Beckingham Junction. Peak AM and PM hour direct train service frequencies from Farringdon station are demonstrated in [Table 3.4](#).

Table 3.4 - Farringdon Railway Station - Service Frequency (Minutes)

Service	Destination	AM	PM
Thameslink	Luton	4	10
Thameslink	Brighton (East Sussex)	3	2
Thameslink	Bedford	2	7
Thameslink	St Albans City	8	13
Thameslink	Sutton (Surrey)	4	4
Thameslink	Beckenham Junction	1	1
Thameslink	Bromley South	4	3
Thameslink	Orpington	1	0
Thameslink	Sevenoaks	2	2
Thameslink	Three Bridges	3	3

3.8.2 Further to the above it should be noted that Farringdon station will also offer Crossrail services once construction of the Elizabeth Line is completed in 2018.

3.9 Accessibility Summary

3.9.1 This section has demonstrated that the site is highly accessible by a range of sustainable modes of travel. The accessibility of the site by sustainable modes has been assessed in detail, with the most significant findings set out below:

3.9.2 There is significant pedestrian infrastructure accommodating pedestrian movements to key areas, and facilities throughout the area surrounding the site;

- The site is positioned close to cycle hire stations and identified cycle routes;
- The site is close to Old Street Stations;
- There are a large number of bus services accessible directly outside of the site and from surrounding streets; and
- The proposed provision of cycle parking well in excess of policy together with restrictive car parking provision will provide a sound basis for encouraging non-care modes of transport.

4.0 Travel Plan Initiatives

4.1 Introduction

4.1.1 This Section of the ITP sets out potential initiatives that could be introduced to reduce dependency on the private car and encourage sustainable modes of travel for both the staff and customers/visitors of the development.

4.1.2 As there will be no car parking provision associated with the site it is forecast that the majority of staff will use sustainable modes of travel, such as walking, cycling and public transport. To make staff aware of the travel choices available to them and inform them what facilities are provided both in the site and the surrounding area the following measures and initiatives are proposed

4.2 Production of Staff Induction Packs

4.2.1 All staff will receive a copy of the final Travel Plan with an induction pack when they are first employed at the development. Induction packs can be critical in influencing travel patterns. The contents of the packs could include:

- Introduction to the TP concept detailing objectives and aspirations;
- Literature on the health benefits of walking, cycling and environmental benefits of sustainable modes of transport;
- Maps showing local walking / cycling routes and places of interest;
- Details of public transport services, including timetables and routes; and
- Details of the Travel Plan Co-ordinator (TPC).

4.3 Measures to Promote Walking

4.3.1 Walking is the most sustainable and accessible mode of travel. Any individual in relatively fair health can incorporate walking into part of their journey. Furthermore, 30 minutes of moderate activity 5 or more times per week is likely to enhance the health and fitness of the individual. In order to encourage walking a number of measures will be considered:

- Promotion of a 'walking buddy' scheme for staff;
- Provision of personal safety alarms for staff to enhance safety;
- Information on the local pedestrian routes, including public footpaths;
- Make information on local pedestrian routes and facilities available;

- Clear signing of pedestrian routes within and adjacent
- Raise awareness of the health benefits of walking.

4.4 Measures to Promote Cycling

4.4.1 To encourage staff to cycle, the following measures will be implemented or considered:

- Information on the local cycle network routes made available through Induction Packs;
- Local cycle clubs/forums to be invited to take part in Travel Plan promotional events to raise awareness of this mode of travel;
- Setting up of a Bicycle User Group (BUG);
- The provision of shower and changing facilities; and
- The provision of staff lockers.
- Promotion of events such as “National Bike Week”;
- Provide a lift home in the event of an emergency; and
- Access to sheltered secure cycle parking.

4.5 Measures to Promote Public Transport

4.5.1 Increased accessibility to, and use of, public transport is considered to be a key element of any TP. As demonstrated in the previous section, the proximity of local bus stops and Underground stations ensures that public transport is an attractive option for people accessing the site.

- Provide up to date public transport information including timetables and contact information in Induction Packs and on staff notice boards; and
- Provide a lift home in the event of an emergency.

4.5.2 Furthermore, season ticket loans could be made available for staff wishing to travel to work via public transport where a monthly deduction is made from their pay packet.

4.6 Measures to Promote Operational Related Transport Efficiencies

4.6.1 The primary operational transport related to office developments is the delivery of goods and the removal of waste.

Interim Travel Plan

- 4.6.2 Once occupied a full audit could be undertaken of workplace deliveries with a view to reducing the number of trips by either having larger deliveries or reducing the number of waste collections.

5.0 Management and Coordination

5.1 Introduction

- 5.1.1 Overall responsibility for the ITP will initially lie with the developer, and many of the initiatives outlined above need to be considered in detail and implemented in advance of site refurbishment and occupation.
- 5.1.2 Following full occupation, the ITP will need to be updated to a full TP and a Travel Plan Coordinator (TPC) identified.
- 5.1.3 Once the site is occupied an iTRACE site audit will be undertaken and staff travel surveys will be completed. This is proposed to take place three months after development occupation.

5.2 Appointment of a Travel Plan Coordinator

- 5.2.1 When the full TP is produced the day to day responsibility for the TP, its publicity and operation will lie with an appointed Travel Plan Coordinator (TPC) although the overall responsibility of the TP will lie with the operators of the development.
- 5.2.2 It is likely that the end operators of the development already have measures in place and experience in operating TPs for similar types of development.
- 5.2.3 The TPC will take responsibility for ensuring that the various elements of the plan are monitored and operate effectively to offer a genuine choice of travel modes. Typical duties include:
- Leading on the delivery of the TP;
 - Representing the human face of the TP and explaining its purpose and opportunities on offer;
 - Promoting individual measures in the TP;
 - Liaising with public transport operators;
 - Monitoring the TP; and
 - Taking a key role in reviewing the TP
- 5.2.4 The TPCs will be nominated when the full TP is produced and details will be provided to the Local Authority upon appointment.

5.3 Targets

- 5.3.1 Once initial travel surveys have been undertaken and a TPC appointed it will be necessary to agree suitable targets for the development discussed in consultation with the London Borough of Camden.

Appendix A – Proposed Site Layout

GENERAL NOTES

CONTRACTOR TO IMMEDIATELY ADVISE THE CONTRACT ADMINISTRATOR & ARCHITECT OF ANY DISCREPANCIES BETWEEN THE EXISTING SURVEY DRAWINGS AND THE SITE SITUATION IF FOUND TO DIFFER. SHOULD A DISCREPANCY BE IDENTIFIED, THE CONTRACTOR IS TO REQUEST VERIFICATION FROM THE CONTRACT ADMINISTRATOR BY WAY OF INSTRUCTION PRIOR TO PROCEEDING WITH THE ASSOCIATED WORK OR ORDERING OF MATERIALS.

WHERE THERE IS A PERCEIVED DISCREPANCY BETWEEN THE ARCHITECT'S / M & E / STRUCTURAL ENG. DRAWINGS, SPECIFICATIONS AND SCHEDULES, THOSE OF THE ARCHITECT ARE TO TAKE PRECEDENCE. THE CONTRACTOR IS TO SEEK CLARIFICATION FROM THE CONTRACT ADMINISTRATOR PRIOR TO UNDERTAKING THE WORKS OR ASSOCIATED WORKS.

THE CONTRACTOR IS RESPONSIBLE FOR CHECKING DIMENSIONS. ANY DISCREPANCY TO BE VERIFIED WITH THE ARCHITECTS BEFORE PROCEEDING WITH ANY WORKS.

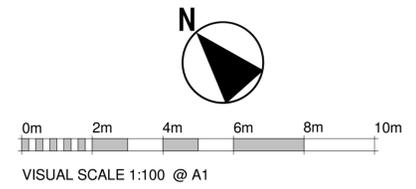
DO NOT SCALE DRAWINGS.

FIGURED DIMENSIONS TO BE WORKED IN ALL CASES. ALL DIMS ARE IN mm UNLESS OTHERWISE STATED.

ALL SUPPLIED TIMBER AND TIMBER BASED PRODUCTS SHALL CARRY THE FOREST STEWARDSHIP COUNCIL'S (FSC) TRADEMARK OR OTHER LABEL FROM AN EQUIVALENT INTERNATIONALLY RECOGNISED GLOBALLY APPLICABLE INDEPENDENT CERTIFICATION SYSTEM FOR GOOD FOREST MANAGEMENT. ACCEPTABLE TO THE ARCHITECT. CHAIN OF CUSTODY DOCUMENTATION IS TO BE PROVIDED PRIOR TO ANY WORKS PROCEEDING AND IS TO BE AVAILABLE FOR INSPECTION ON REQUEST BY THE ARCHITECT (WHERE INDEPENDENTLY CERTIFIED TIMBER STOCKS ARE NOT AVAILABLE. TIMBER AND WOOD PRODUCTS MAY BE SOURCED FROM SUPPLIERS THAT HAVE ADOPTED A FORMAL ENVIRONMENTAL PURCHASING POLICY, AND CAN PROVIDE CREDIBLE EVIDENCE OF A COMMITMENT TO THAT POLICY).

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, STRUCTURAL ENGINEERS, M&E ENGINEERS AND OTHER CONTRACT DOCUMENTS.

NOTE:
BOUNDARY WALL TO 181 HIGH HOLBORN (ESAVIAN HOUSE) SUBJECT TO AGREEMENT WITH ADJOINING OWNERS.



REVISIONS				REVISIONS				REVISIONS			
Date	Rev	By	Description	Date	Rev	By	Description	Date	Rev	By	Description
16.09.2016	P 1	GK	PLANNING ISSUE								
	P 2	GK	PLANNING ISSUE								



SPPARC
ARCHITECTURE

N°10 BAYLEY STREET
BEDFORD SQUARE
LONDON WC1B 3HB
T +44 (0) 20 7734 4100
F +44 (0) 20 7534 9930
W www.spparcstudio.com

Job Title 1602 - 182_184 High Holborn			Client Covent Garden Investment S.A.R.L
Drawing Title PROPOSED GROUND FLOOR LAYOUT		Drawing Number & Revision HH-P-20-0G-01-01_P2	
Scale (at A0) 1 : 100@A1	Date Amended DATE	Amended By GK	Checked TDM
Date Created	Drawn By Author		

GENERAL NOTES

CONTRACTOR TO IMMEDIATELY ADVISE THE CONTRACT ADMINISTRATOR & ARCHITECT OF ANY DISCREPANCIES BETWEEN THE EXISTING SURVEY DRAWINGS AND THE SITE SITUATION IF FOUND TO DIFFER. SHOULD A DISCREPANCY BE IDENTIFIED, THE CONTRACTOR IS TO REQUEST VERIFICATION FROM THE CONTRACT ADMINISTRATOR BY WAY OF INSTRUCTION PRIOR TO PROCEEDING WITH THE ASSOCIATED WORK OR ORDERING OF MATERIALS.

WHERE THERE IS A PERCEIVED DISCREPANCY BETWEEN THE ARCHITECT'S M & E, STRUCTURAL ENG. DRAWINGS, SPECIFICATIONS AND SCHEDULES, THOSE OF THE ARCHITECT ARE TO TAKE PRECEDENCE. THE CONTRACTOR IS TO SEEK CLARIFICATION FROM THE CONTRACT ADMINISTRATOR PRIOR TO UNDERTAKING THE WORKS OR ASSOCIATED WORKS.

THE CONTRACTOR IS RESPONSIBLE FOR CHECKING DIMENSIONS. ANY DISCREPANCY TO BE VERIFIED WITH THE ARCHITECTS BEFORE PROCEEDING WITH ANY WORKS.

DO NOT SCALE DRAWINGS.

FIGURED DIMENSIONS TO BE WORKED IN ALL CASES. ALL DIMS ARE IN mm UNLESS OTHERWISE STATED.

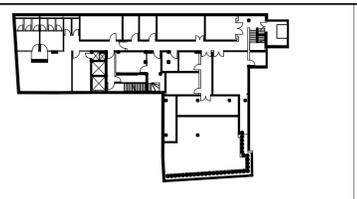
ALL SUPPLIED TIMBER AND TIMBER BASED PRODUCTS SHALL CARRY THE FOREST STEWARDSHIP COUNCIL'S (FSC) TRADEMARK OR OTHER LABEL FROM AN EQUIVALENT INTERNATIONALLY RECOGNISED, GLOBALLY APPLICABLE, INDEPENDENT CERTIFICATION SYSTEM FOR GOOD FOREST MANAGEMENT. ACCEPTABLE TO THE ARCHITECT. CHAIN OF CUSTODY DOCUMENTATION IS TO BE PROVIDED PRIOR TO ANY WORKS PROCEEDING AND IS TO BE AVAILABLE FOR INSPECTION ON REQUEST BY THE ARCHITECT (WHERE INDEPENDENTLY CERTIFIED TIMBER STOCKS ARE NOT AVAILABLE, TIMBER AND WOOD PRODUCTS MAY BE SOURCED FROM SUPPLIERS THAT HAVE ADOPTED A FORMAL ENVIRONMENTAL PURCHASING POLICY, AND CAN PROVIDE CREDIBLE EVIDENCE OF A COMMITMENT TO THAT POLICY).

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, STRUCTURAL ENGINEERS, M&E ENGINEERS AND OTHER CONTRACT DOCUMENTS.

NOTE:
BOUNDARY WALL TO 181 HIGH HOLBORN (ESAVIAN HOUSE) SUBJECT TO AGREEMENT WITH ADJOINING OWNERS.



REVISIONS				REVISIONS				REVISIONS			
Date	Rev	By	Description	Date	Rev	By	Description	Date	Rev	By	Description
16.09.2016	P 1	GK	PLANNING ISSUE								
DATE	P 2	GK	PLANNING ISSUE								



SPPARC
ARCHITECTURE

N°10 BAYLEY STREET
BEDFORD SQUARE
LONDON WC1B 3HB
T +44 (0) 20 7734 4100
F +44 (0) 20 7534 9930
W www.spparcstudio.com

Job Title 1602 - 182_184 High Holborn		Client Covent Garden Investment S.A.R.L
Drawing Title PROPOSED BASEMENT FLOOR LAYOUT		Drawing Number & Revision HH-P-20-B1-01-01_P2
Scale (at A0) 1 : 100@A1	Date Amended DATE	Amended By GK
Checked Checker	Date Created	Drawn By Author

Appendix B – BREEM Assessment Criteria

Tra 05 Travel plan

Number of credits available	Minimum standards
1	No

Aim

To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.

Assessment Criteria

The following is required to demonstrate compliance for:

One credit

1. A travel plan has been developed as part of the feasibility and design stages which considers all types of travel relevant to the building type and users.
2. The travel plan is structured to meet the needs of the particular site and takes into consideration the findings of a site-specific transport survey and assessment that covers the following (as a minimum):
 - a. Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified
 - b. Travel patterns and transport impact of future building users
 - c. Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children)
 - d. Disabled access (accounting for varying levels of disability and visual impairment)
 - e. Public transport links serving the site
 - f. Current facilities for cyclists
3. The travel plan includes a package of measures that have been used to steer the design of the development in order to meet the travel plan objectives and minimise car-based travel patterns. This is demonstrated via specific examples such as:
 - a. Providing parking priority spaces for car sharers
 - b. Providing dedicated and convenient cycle storage and changing facilities
 - c. Lighting, landscaping and shelter to make pedestrian and public transport waiting areas pleasant
 - d. Negotiating improved bus services, i.e. altering bus routes or offering discounts
 - e. Restricting and/or charging for car parking
 - f. Criteria for lobby areas where information about public transport or car sharing can be made available
 - g. Pedestrian and cycle friendly (for all types of user regardless of the level of mobility or visual impairment) via the provision of cycle lanes, safe crossing points, direct routes, appropriate tactile surfaces, well lit and signposted to other amenities, public transport nodes and adjoining offsite pedestrian and cycle routes.
 - h. Providing suitable taxi drop-off/waiting areas.
 - i. Ensuring that rural buildings are located with appropriate transport access to ensure that they adequately serve the local community (where procured to do so e.g. community centre).

4. Where appropriate to the building type, size and intended operation, the travel plan includes measures tailored to minimise the impacts of operational-related transport e.g. deliveries of supplies, equipment and support services to and from the site.
5. Where the building's final occupier is known, they confirm that the travel plan will be implemented post construction and supported by the building's management during building operation.

Compliance Notes

Ref	Terms	Description
CN1	Shell only See criterion 1	Where the end user/occupier is not known a travel plan is still required, albeit that it may only be an interim travel plan or one that broadly addresses all the above issues. The developer must confirm that they will handover a copy of the travel plan to the building's tenant(s), so that it may inform their own travel plan/strategy.
CN2	Building users See criterion 1	Where the term building users is referenced, this refers to the following, as appropriate to building type: <ol style="list-style-type: none"> 1. Staff (commuter journeys and business travel) 2. Pupils/students 3. Visitors 4. Patients 5. Customers 6. Community users 7. Personnel who make deliveries/collections to and from the development 8. Contractors/service providers, who regularly work at and access the building/development 9. Residents of multi-residential buildings
CN3	Existing Travel Plan See criterion 2a	The credit can be awarded if the assessed building is part of a site that has an existing up-to-date organisational travel plan that is compliant with BREEAM, is applicable to all building users (in existing and assessed new buildings) and accounts for the additional travel resulting from users of the new building.

Schedule of Evidence

Ref	Design stage	Post-construction stage
1-4	A copy of the Travel Plan. A copy of the site-specific transport survey/assessment.	As design stage.
3	Design drawings demonstrating examples of design measures	BREEAM Assessor's site inspection report and photographic evidence

Ref	Design stage	Post-construction stage
	implemented in support the travel plan's findings. OR Where a detailed site plan is not available, a formal letter from the client confirming that measures will be implemented into the final design in support the travel plan's findings.	confirming the installation of measures that support the travel plan.
5	A letter of confirmation from either the building's occupier, or in the case of a speculative development, the developer.	As design stage.

Additional Information

Relevant definitions

Travel Plan

A travel plan is a strategy for managing all travel and transport within an organisation, principally to increase choice and reduce reliance on the car by seeking to improve access to a site or development by sustainable modes of transport. A travel plan contains both physical and behavioural measures to increase travel choices and reduce reliance on single-occupancy car travel.

Checklists and Tables

None

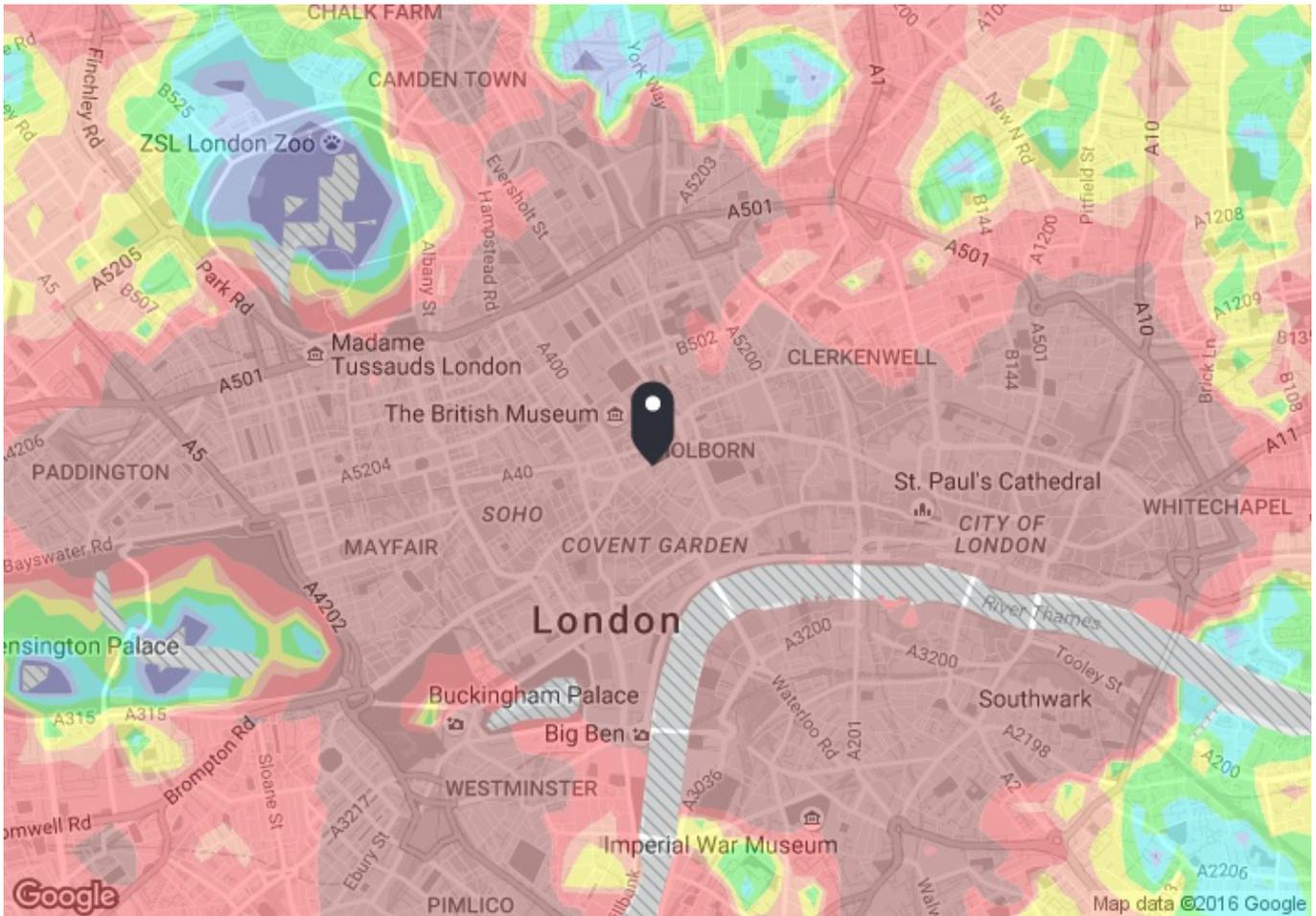
Calculation procedures

None

Other information

None

Appendix C – PTAL Summary



PTAL output for 2011 (Base year)
6b

Arab Press House
 Arab Press House, 182-184 High Holborn, London WC1V 7AP, UK

Easting: 530313, Northing: 181368

Grid Cell: 84832

Report generated: 16/08/2016

Calculation Parameters

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

Map key - PTAL

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

Map layers

 PTAL (cell size: 100m)

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	ALDWYCH WEST ARIM	11	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARIM	23	588.83	8	7.36	5.75	13.11	2.29	0.5	1.14
Bus	ALDWYCH WEST ARIM	9	588.83	12	7.36	4.5	11.86	2.53	0.5	1.26
Bus	ALDWYCH WEST ARIM	26	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARIM	13	588.83	8	7.36	5.75	13.11	2.29	0.5	1.14
Bus	ALDWYCH WEST ARIM	4	588.83	6	7.36	7	14.36	2.09	0.5	1.04
Bus	ALDWYCH WEST ARIM	15	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARIM	341	588.83	6	7.36	7	14.36	2.09	0.5	1.04
Bus	ALDWYCH WEST ARIM	76	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARIM	87	588.83	10	7.36	5	12.36	2.43	0.5	1.21
Bus	ALDWYCH WEST ARIM	172	588.83	6	7.36	7	14.36	2.09	0.5	1.04
Bus	ALDWYCH WEST ARIM	6	588.83	10	7.36	5	12.36	2.43	0.5	1.21
Bus	COVENT GARDEN RUSSELL STREET	RV1	523.25	6	6.54	7	13.54	2.22	0.5	1.11
Bus	HOLBORN STATION KINGSWAY	59	472.83	10	5.91	5	10.91	2.75	0.5	1.37
Bus	HOLBORN STATION KINGSWAY	243	472.83	11	5.91	4.73	10.64	2.82	0.5	1.41
Bus	HOLBORN STATION KINGSWAY	521	472.83	27	5.91	3.11	9.02	3.33	0.5	1.66
Bus	HOLBORN STATION KINGSWAY	91	472.83	9	5.91	5.33	11.24	2.67	0.5	1.33
Bus	HOLBORN STATION KINGSWAY	68	472.83	9	5.91	5.33	11.24	2.67	0.5	1.33
Bus	HOLBORN STATION KINGSWAY	X68	472.83	4	5.91	9.5	15.41	1.95	0.5	0.97
Bus	HOLBORN STATION KINGSWAY	188	472.83	8	5.91	5.75	11.66	2.57	0.5	1.29
Bus	HOLBORN STATION KINGSWAY	168	472.83	9	5.91	5.33	11.24	2.67	0.5	1.33
Bus	BLOOMSBURY NEWOXFORD ST	8	340.58	10	4.26	5	9.26	3.24	0.5	1.62
Bus	BLOOMSBURY NEWOXFORD ST	38	340.58	10	4.26	5	9.26	3.24	0.5	1.62
Bus	BLOOMSBURY NEWOXFORD ST	25	340.58	8	4.26	5.75	10.01	3	0.5	1.5
Bus	BLOOMSBURY NEWOXFORD ST	19	340.58	8	4.26	5.75	10.01	3	0.5	1.5
Bus	BLOOMSBURY NEWOXFORD ST	171	340.58	7.5	4.26	6	10.26	2.92	0.5	1.46
Bus	BLOOMSBURY NEWOXFORD ST	55	340.58	10	4.26	5	9.26	3.24	0.5	1.62
Bus	HIGH HOLBORN POST OFFICE	242	248.11	6.5	3.1	6.62	9.72	3.09	0.5	1.54
Bus	HIGH HOLBORN POST OFFICE	1	248.11	8	3.1	5.75	8.85	3.39	0.5	1.69
Bus	BLOOMSBURY ST SHAFTESBURY AVE	24	385.54	10	4.82	5	9.82	3.06	0.5	1.53
Bus	BLOOMSBURY ST SHAFTESBURY AVE	134	385.54	12	4.82	4.5	9.32	3.22	0.5	1.61
Bus	BLOOMSBURY ST SHAFTESBURY AVE	29	385.54	15	4.82	4	8.82	3.4	1	3.4
Bus	BLOOMSBURY ST SHAFTESBURY AVE	176	385.54	8.5	4.82	5.53	10.35	2.9	0.5	1.45
Bus	BLOOMSBURY ST SHAFTESBURY AVE	14	385.54	13	4.82	4.31	9.13	3.29	0.5	1.64
Bus	BLOOMSBURY STREET	10	617.57	4.5	7.72	8.67	16.39	1.83	0.5	0.92
Bus	BLOOMSBURY STREET	390	617.57	8	7.72	5.75	13.47	2.23	0.5	1.11
Bus	BLOOMSBURY STREET	73	617.57	18	7.72	3.67	11.39	2.63	0.5	1.32
Bus	GT RUSSELL ST MUSEUM ST	98	486.56	9	6.08	5.33	11.42	2.63	0.5	1.31
LUL	Covent Garden	'Cockfosters-LHRT4LT'	459.71	4.67	5.75	7.17	12.92	2.32	0.5	1.16
LUL	Covent Garden	'RayLane-Cockfosters'	459.71	3.67	5.75	8.92	14.67	2.04	0.5	1.02
LUL	Covent Garden	'LHRT4LT-ArnosGrove'	459.71	4.67	5.75	7.17	12.92	2.32	0.5	1.16
LUL	Covent Garden	'ArnosGrove-RayLane'	459.71	0.33	5.75	91.66	97.41	0.31	0.5	0.15
LUL	Covent Garden	'ArnosGrove-Nthfields'	459.71	3	5.75	10.75	16.5	1.82	0.5	0.91
LUL	Covent Garden	'Nthfields-Cockfoster'	459.71	1	5.75	30.75	36.5	0.82	0.5	0.41
LUL	Covent Garden	'LHRT5-Cockfosters'	459.71	6	5.75	5.75	11.5	2.61	0.5	1.3
LUL	Covent Garden	'Uxbridge-Cockfosters'	459.71	3.67	5.75	8.92	14.67	2.04	0.5	1.02
LUL	Covent Garden	'Ruislip-Cockfosters'	459.71	2.33	5.75	13.63	19.37	1.55	0.5	0.77
LUL	Covent Garden	'ArnosGrove-Uxbridge'	459.71	1	5.75	30.75	36.5	0.82	0.5	0.41
LUL	Covent Garden	'Oakwood-Uxbridge'	459.71	0.33	5.75	91.66	97.41	0.31	0.5	0.15
LUL	Covent Garden	'Oakwood-Ruislip'	459.71	0.33	5.75	91.66	97.41	0.31	0.5	0.15
LUL	Tottenham Court Road	'Hainault-Nacton'	668.38	1.33	8.35	23.31	31.66	0.95	0.5	0.47
LUL	Tottenham Court Road	'Morden-Edgware'	668.38	4.67	8.35	7.17	15.53	1.93	0.5	0.97
LUL	Tottenham Court Road	'HighBarnet-Morden'	668.38	0.33	8.35	91.66	100.01	0.3	0.5	0.15
LUL	Tottenham Court Road	'Kennington-Edgware'	668.38	14.67	8.35	2.79	11.15	2.69	1	2.69
LUL	Tottenham Court Road	'HighBarnet-Kenningt'	668.38	5.33	8.35	6.38	14.73	2.04	0.5	1.02
LUL	Tottenham Court Road	'MillHill-Morden'	668.38	1.67	8.35	18.71	27.07	1.11	0.5	0.55
LUL	Tottenham Court Road	'MillHillE-Kenningt'	668.38	1.67	8.35	18.71	27.07	1.11	0.5	0.55
LUL	Holborn	'Epping-Ealing'	516.3	3	6.45	10.75	17.2	1.74	0.5	0.87

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
LUL	Holborn	'WRuislip-Epping '	516.3	3	6.45	10.75	17.2	1.74	0.5	0.87
LUL	Holborn	'RuislipGar-Epping '	516.3	1	6.45	30.75	37.2	0.81	0.5	0.4
LUL	Holborn	'WhiteCity-Epping '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
LUL	Holborn	'Epping-NActon '	516.3	1	6.45	30.75	37.2	0.81	0.5	0.4
LUL	Holborn	'Northolt-Epping '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'Debden-WRuislip '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
LUL	Holborn	'WhiteCity-Debden '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
LUL	Holborn	'Debden-Northolt '	516.3	1	6.45	30.75	37.2	0.81	0.5	0.4
LUL	Holborn	'RuislipGdns-Debden '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
LUL	Holborn	'Loughton-WRuislip '	516.3	1	6.45	30.75	37.2	0.81	0.5	0.4
LUL	Holborn	'NActon-Loughton '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'RuislipGdns-Loughton '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'Loughton-WhiteCity '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'Loughton-Northolt '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
LUL	Holborn	'Ealing-Loughton '	516.3	1	6.45	30.75	37.2	0.81	0.5	0.4
LUL	Holborn	'Ealing-NewburyPark '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'WRuislip-NewburyPark '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
LUL	Holborn	'NActon-NewburyPark '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
LUL	Holborn	'Hainault-Ealing '	516.3	5.33	6.45	6.38	12.83	2.34	0.5	1.17
LUL	Holborn	'WRuislip-Hainault '	516.3	3	6.45	10.75	17.2	1.74	0.5	0.87
LUL	Holborn	'RuislipGdns-NP-Hain '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'Hainault-WhiteCity '	516.3	1.67	6.45	18.71	25.17	1.19	0.5	0.6
LUL	Holborn	'Hainault-NP-Northolt '	516.3	1	6.45	30.75	37.2	0.81	0.5	0.4
LUL	Holborn	'GrangeHill-WD-Eal '	516.3	1	6.45	30.75	37.2	0.81	0.5	0.4
LUL	Holborn	'GrangeHill-Wdld-Whit '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'GrangeHill-Wdld-WRsp '	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'Oakwood-RayLane '	516.3	0.33	6.45	91.66	98.11	0.31	0.5	0.15
Total Grid Cell AI:									77.98	

Our Locations

Birmingham

2 The Wharf
Bridge Street
Birmingham B1 2JS
T. 0121 643 4694
birmingham@curtins.com

Bristol

3/8 Redcliffe Parade West
Bristol
BS1 6SP
T. 0117 925 2825
bristol@curtins.com

Cardiff

3 Cwrt-y-Parc
Earlswood Road
Cardiff
CF14 5GH
T. 029 2068 0900
cardiff@curtins.com

Douglas

Varley House
29-31 Duke Street
Douglas Isle of Man
IM1 2AZ
T. 01624 624 585
douglas@curtins.com

Edinburgh

35 Manor Place
Edinburgh
EH3 7DD
T. 0131 225 2175
edinburgh@curtins.com

Kendal

28 Lower Street
Kendal
Cumbria LA9 4DH
T. 01539 724 823
kendal@curtins.com

Leeds

Woodside Mews
Clayton Wood Close
Leeds LS16 6QE
T. 0113 274 8509
leeds@curtins.com

Liverpool

Curtin House
Columbus Quay
Riverside Drive
Liverpool L3 4DB
T. 0151 726 2000
liverpool@curtins.com

London

Units 5/6
40 Compton Street
London
EC1V 0BD
T. 020 73242240
london@curtins.com

Manchester

10 Oxford Court
Bishopsgate
Manchester M2 3WQ
T. 0161 236 2394
manchester@curtins.com

Nottingham

7 College Street
Nottingham
NG1 5AQ
T. 0115 941 5551
nottingham@curtins.com