182-184 High Holborn, London Borough of Camden

Transport Statement

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Client Name:	Covent Garden Investments S.A.R.L
Site Address:	182-184 High Holborn, Camden, London, WC1V 7AP

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1.0 Introduction

1.1 Background

1.1.1 This report has been prepared by Curtins on behalf of Covent Garden Investments S.A.R.L (herein referred to as "the Applicant") in order to assess the traffic, transport and highway implications associated with a proposed refurbishment and extension of an existing office building at 182-184 High Holborn within the London Borough of Camden (LBC).

1.1.2 The application site currently comprises an office building under a B1 land-use classification, with a GIA of 3,927m². Following refurbishment two additional floors will be added to the building and the GIA will be 5,000m². Furthermore, the development will contain a small 106m² retail unit fronting onto High Holborn and a flexible A1/A3/B1 space at ground floor which will be 327m². The remaining area of the development will be solely B1 office space.

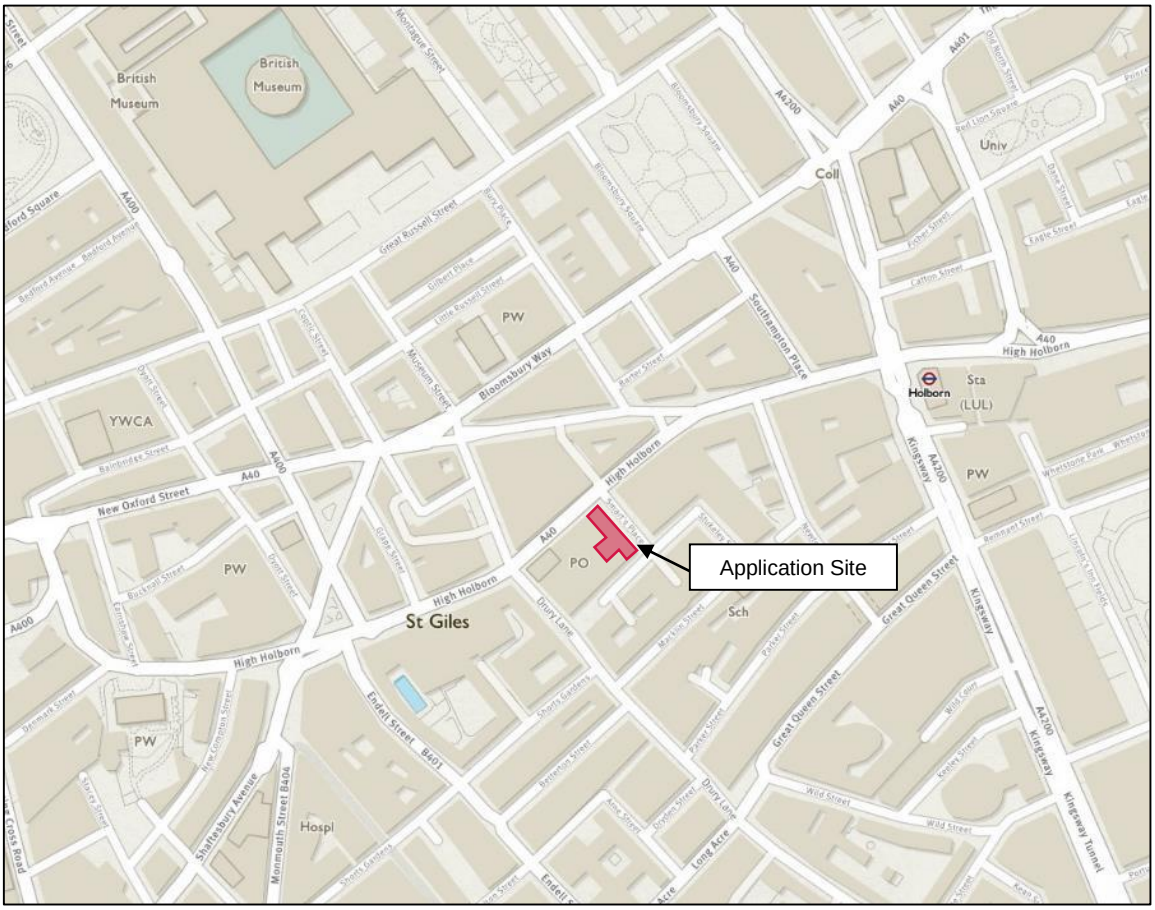
1.1.3 The site is located within a central area with immediate access to a range of non-car transport modes, including walking, cycling and public transport services. This report has been prepared with the purpose of providing the Local Planning and Highway Authorities with an evidence base that identifies the transport-related development effects. The assessment process has been undertaken with due regard to current best practice and with particular consideration to The London Plan (2015-16) and National Planning Policy Framework (NPPF).

1.2 Site Location

1.2.1 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.

1.2.2 The strategic context of the site is shown in Figure 1.1 below.

Figure 1.1 - Site Location Plan



1.3 Report Overview

1.3.1 In the interests of working cooperatively with the Local Highway Authority, the requirement and scope of a Transport Statement was discussed with highway officers at LBC. The resultant assessment parameters are incorporated within this report under the following structure:

Section 2.0 Planning Policy

This sets out the context of the proposed development in relation to national, regional and local planning policy.

Section 3.0 Development Proposals

This section of the report outlines those elements of the Proposed Development that are pertinent to transport, movement and accessibility, including parking provision, servicing arrangements and refuse collection.

Section 4.0 Non-Car Travel Credentials

The accessibility credentials of the application site are considered within this section of the report. An accessibility model has been created to inform the analyses and to show the site's relationship to key trip attractors. This is supplemented by a review of the interconnecting infrastructure.

Section 5.0 Planned Improvements

This section of the report details the planned improvements to the nearby network which may impact and benefit on the Proposed Development.

Section 6.0 Existing Highway Network

This section of the report considers existing highway network in close proximity to the site.

Section 7.0 Trip Generation

The trip generation potential of the Proposed Development, across all modes of travel, is set out in the context of the trip generation of the extant use of the site in order to identify the magnitude of any change in movement around the site. The significance of any change is considered in light of the existing and future infrastructure as set out within Sections 3.0 and 4.0 of this report.

Section 8.0 Summary and Conclusions

A summary of the salient findings of the report are provided within this section and these are used as an evidence base of an overarching conclusion regarding the suitability of the Proposed Development.

2.0 Planning Policy

2.1 Introduction

2.1.1 This section of the report assesses the appropriateness of the application proposals in terms of prevailing transport policy. The following is an assessment of relevant transport policy at a national, regional and local level. This section of the report concludes with a summary of policy guidance.

2.2 National Policy

2.2.1 Section 4, Promoting Sustainable Transport, of the National Planning Policy Framework (NPPF), outlines the important role that transport policies have to play in facilitating sustainable development. It states that:

- The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel.
- The document emphasises the need for developments to offer a choice of sustainable modes of transport which "support reductions in greenhouse gas emissions and reduce congestion and provide safe and suitable access for all.

2.2.2 In paragraph 32, the NPPF states that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that the costs effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

2.2.3 Paragraph 35 of the NPPF states that plans for new development should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to:

- Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;
- Incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- Consider the needs of people with disabilities by all modes of transport.

2.2.4 Paragraph 36 of NPPF states that in order to implement the above plans a key tool will be a Travel Plan;

> "all developments which generate significant amounts of movement should be required to provide to Travel Plan".

2.2.5 The NPPF calls for a "balance of land uses", which will encourage people to minimise their journey lengths for employment, shopping, leisure, education and other activities. Paragraph 41 of NPPF also states that;

> "local planning authorities should identify and protect, where there is robust evidence, sites and route which could be critical in developing infrastructure to widen transport choice".

2.2.6 It can be considered that the development proposals support and conform to the sustainable transport policies of the NPPF.

2.3 Regional Policy

The London Plan – Spatial Development Strategy for London consolidated with alterations since 2011 (with further alterations adopted in March 2016)

2.3.1 The Mayor published a revised version of the London Plan in 2011. The Plan sets out a spatial strategy reflecting the policies and priorities of the current Mayoral administration. Chapter 6 of the plan sets out the transport specific polices within the plan, the policies most relevant to the Proposed Development include:

2.3.2 Policy 6.1 'Strategic Approach' sets out the desire for closer integration of development and transport through encouraging patterns of development that reduce the need to travel, especially by car, seeking to locate high trip generating developments at locations with high

public transport accessibility, improving the capacity of public transport services, improving interchanges between services and improving accessibility by all modes including walking and cycling.

2.3.3 Policy 6.3 'Assessing Effects of Development on Transport Capacity' relates to transport capacity and stresses that new developments that give rise to a significant number of new trips should be located either where there is already good public transport accessibility with adequate capacity to support additional demand or where there is a realistic prospect of additional accessibility or capacity being provided in time to meet the new demand. It notes that the phasing of the development, the use of Travel Plans and addressing freight issues may all help reduce the impact of the development on the transport network and reduce emissions of greenhouse gases that contribute to climate change.

2.3.4 Policy 6.7 'Better Streets and Surface Transport' demonstrates the plans for improvements to the quality of bus, bus transit and tram services, supported by TfL and London Boroughs. This includes increased priority for public transportation, ensuring a good quality of environment surrounding stops amongst other measures.

2.3.5 Policy 6.9 'Cycling' sets out to bring a significant increase in cycling to at least 5% of modal share by 2026, supported by the implementation of Cycle Superhighways and the central London cycle hire scheme and provision of facilities for cyclists including secure cycle parking and on-site changing and shower facilities for cyclists.

2.3.6 Policy 6.10 'Walking' seeks to enhance the quality of the pedestrian and street environment through de-cluttering and access for all, to make walking an increasingly viable alternative to the private car.

2.3.7 Public Transport Accessibility Levels (PTALs), as detailed in the London Plan produce a consistent London-wide public transport access mapping facility to assist boroughs with area specific planning and assessment of appropriate parking provision by measuring broad public transport accessibility levels.

The Mayor's Transport Strategy (May 2010)

2.3.8 The Mayor's Transport Strategy (MTS) was published in May 2010 and was developed in conjunction with the London Plan and the Economic Development Strategy (EDS). It provides a 20-year strategic policy framework and outlines the Mayor's vision and how Transport for London (TfL) and its partners plan to deliver that vision.

2.3.9 The Mayor's transport vision states that "London's transport system should excel among those of world cities, providing access to opportunities for all its people and enterprises, achieving the highest environmental standards and leading the works in its approach to tacking urban transport challenges of the 21st century."

2.3.10 The Strategy seeks to improve connectivity and capacity of the transport system through a range of measures including schemes such as Crossrail, upgrades to the London Underground system and integrated fares and ticketing as well as more efficient movement of freight.

2.3.11 It notes that growth in population within the inner city is predicted to be low but that significant growth in employment is anticipated.

2.3.12 Policy 9 seeks to ensure that all high trip-generating developments are located in areas of high public transport accessibility, connectivity, capacity and that developments maximise access on foot, by cycle and public transport.

Supplementary Planning Guidance

2.3.13 The Supplementary Planning Guidance (SPG) on the "use of planning obligations in the funding of Crossrail, and the Mayoral Community Infrastructure Levy" (2016) has been prepared to support the policies in the London Plan dealing with the funding of Crossrail and other strategically important transport infrastructure, planning obligations and the Community Infrastructure Levy.

2.3.14 Crossrail is strongly endorsed by the London Plan and is seen as crucial to the future of London's economy. The SPG sets out a framework for seeking contributions through the planning system towards the funding of Crossrail and sets out the methodology used to assess when it is appropriate to seek a contribution towards the construction cost of Crossrail, and the amount to be sought.

2.3.15 The Proposed Development site falls within the Central London Contribution Area, where a standard charge is applied per square metre on the increase in retail floor-space (net increase in GIA). CIL will be charged at £50/m^2 and will be deducted from the Crossrail S106 as per the CIL regulations.

2.3.16 In April 2004 the GLA published the first Supplementary Planning Guidance (SPG) to the London Plan: 'Accessible London, Achieving an Inclusive Environment'. With regard to transport and access, the SPG includes additional guidance relating to increasing the capacity, quality, integration and accessibility of public transport and to providing safe,

convenient, accessible and direct walking and cycling routes. The SPG also covers the provision of adequate parking and good standards of car parking design.

2.4 Local Policy

London Borough of Camden Core Strategy - Local Development Framework (November 2010)

2.4.1 LBC's Core Strategy document provides the main elements for the Local Development Framework within Camden, which comprises several document to support the undertaking of polices including development policies, site allocations supplementary planning document (SPD) amongst others.

2.4.2 Specifically, within transport the main policies include;

- Promoting sustainable and efficient travel
- Improving LBC's health and wellbeing.

London Borough of Camden Planning Guidance (CPG)

2.4.3 Within LBC's Planning Guidance (CPG) document, Chapter 7 is dedicated to transport issues, published in 2011, this planning guidance will support the policies in the Local Development Framework for LBC and additionally the Core Strategies and Development Policies.

2.4.4 This provides assistance in applying the specific policies set out in the Local Development Framework including preparing documents for planning applications and designing and implementing car-free developments, amongst others.

London Borough of Camden Local Plan - Proposed Submission (2016)

2.4.5 LBC's Local Plan, submitted for approval in June 2016, sets out the planning polices and will replace the current Core Strategy and Development Policies planning documents, which were originally adopted 2010. The Local Plan is a key document in LBC's Development Plan and should provide guidance for council's decisions on planning applications. Currently the Local Plan is not adopted and can therefore only be given limited weight but is included in this policy review in anticipation of its adoption.

2.4.6 Specifically, for transport, the Local Plan aims to provide 'healthy and sustainable transport choices'. The transport policies set out within the Local Plan supports the aims and objectives of both the *Camden Transport Strategy 2011* and the *Camden Plan*. This includes improvement plans to health and wellbeing, air quality, sustainable communities and the impacts of transport.

2.4.7 Transport, within Camden's Local Plan, considers four main policies to prioritise sustainable transport over less sustainable modes. The main policies include:

- Policy T1 - Prioritising walking, cycling and public transport
- Policy T2 - Parking and car-free development
- Policy T3 - Transport Infrastructure
- Policy T4 - Sustainable movement of goods and materials.

2.5 Transport Policy Overview

2.5.1 The review of transport policy at all levels set out above identifies a number of key transport objectives associated with the development proposals, with an overarching objective being to secure development that is more sustainable in terms of its movement profile. Prevailing transport policy guidance requires that:

- Development should be located and designed in a manner that will reduce the demand for travel;
- New development must be accessible by a range of transport modes so that dependence on travel by private car is removed; and
- New development should support improvements to walking, cycling and public transport networks as part of a wider goal of reducing private car use.
- The assessment of the development proposals that follows will demonstrate that the application scheme:
- Constitutes redevelopment of existing developed land;
- Servicing is to be off-street;
- Provides a mix of complementary land uses; and
- Is located in a highly accessible location.

2.5.2 This Transport Statement will therefore demonstrate that the application proposals accord with prevailing transport policy guidance where possible or demonstrate that complying with all elements of policy is impracticable given the context/constraints of the site.

3.0 Development Proposals

3.1 Application Details

3.1.1 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 5,000m², an increase of 1,073m².

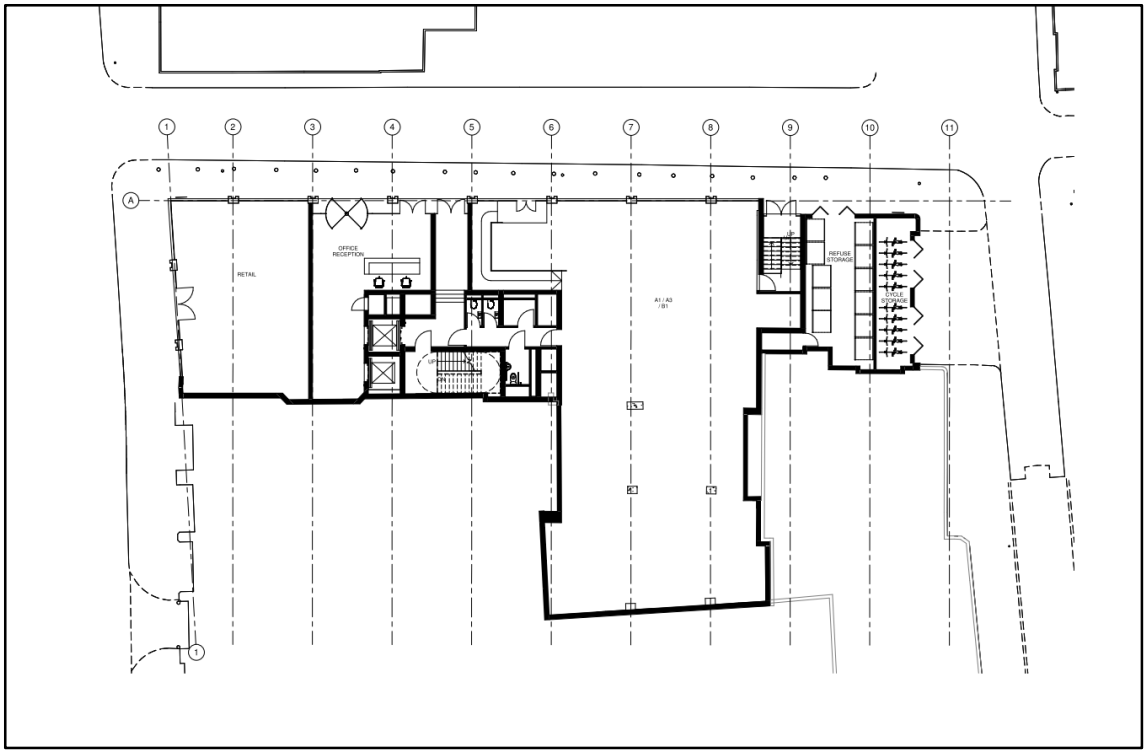
3.1.2 Once refurbished the development will contain a flexible small retail or B1 unit fronting onto High Holborn and a flexible A1/A3/B1 space at ground floor. The rest of the development will be solely B1 office space. An area schedule for the Proposed Development is provided in Table 3.1 below.

Table 3.1 - Proposed Area Schedule

Land Use	GIA
A1 Retail/B1 Unit	106m²
Flexible A1/A3/B1 Space	327m²
B1 Office	4,008m²
Basement	559m²
Total	5,000m²

3.1.3 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 within Appendix A.

Figure 3.1 - Indicative Masterplan



3.2 Car Parking

3.2.1 The development has been designed to be car free and as a result no car parking has been provided within the proposals

3.3 Cycle Parking

3.3.1 Further to discussions with highway officers from LBC, it was confirmed that cycle parking provision must meet or exceed the standards contained within *The London Plan* (March 2016). As a summary, these standards for Inner London are provided in Table 3.2 below.

Table 3.2 - Minimum Cycle Parking Standards - Inner London

Land Use	Long-stay	Short-stay
B1 Business Offices	1 space per 90m²	First 5,000m² - 1 space per 500m² thereafter: 1 space per 5,000m²
A1 Food Retail	From a threshold of 100m²: 1 space per 175m²	From a threshold of 100m²: first 750m² 1 space per 40m thereafter: 1 space per 300m²
A1 Non Food Retail	From a threshold of 100m²: first 1000m²: 1 space per 250m² thereafter: 1 space per 1000m²	from a threshold of 100m²: first 1000m²: 1 space per 125m² thereafter: 1 space per 1000m²

3.3.2 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 for long stay parking and is considered to be of a sufficient level to encourage future users of the development to travel to the application site by bicycle.

3.3.3 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.

3.3.4 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

3.3.5 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.

3.4 Pedestrian Access

3.4.1 The Proposed Development will have several points of pedestrian access ensuring immediate connectivity with the surrounding footway network and providing direct access to local amenities within the vicinity of the site.

3.4.2 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.

3.4.3 As part of the proposals there is an opportunity to upgrade the existing infrastructure on Smart's Place in line with LBC's Streetscape Design Manual, creating a shared level surface layout, in much the same fashion as the western extent of Stukeley Street on the application site's southern boundary.

3.4.4 Pedestrian infrastructure in the vicinity of the site is considered to be of a good standard, ensuring that the application site is located is a highly accessible location which encourages the uptake of walking. Further information on the pedestrian accessibility of the application site is provided at Section 4.0 of this report.

3.4.5 All points of pedestrian access into the Proposed Development are shown on the proposed layout plan provided at Appendix A of this report.

3.5 Service Arrangements

3.5.1 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.

3.5.1 In line with *Camden Council's Streetscape Design Manual* the Proposed Development seeks to demonstrate that the freight, servicing and deliveries required will be managed in such a way that minimises adverse impacts. As such, it is proposed that goods and refuse will be stored within the confines of the site and as per the existing arrangement, it is proposed that delivery activity will take place on surrounding streets within dedicated loading areas.

3.5.2 It is proposed that refuse collection will take place from Stukeley Street as per the existing arrangement. Prior to collection, waste will be transferred from the waste stores on to

Stukeley Street. The movement of waste throughout the development will be the responsibility of the facilities management team. In no circumstances will waste be stored on the public highway.

3.5.3 Refuse vehicles will 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. Swept-path analysis has been undertaken in order to demonstrate that a refuse vehicle may adequate access and service the Proposed Development.

3.5.4 The swept-path analysis is provided at Appendix B but, by way of summary, the results confirm that the existing arrangements form a suitable basis to accommodate the future servicing requirements of the Proposed Development.

3.6 Servicing Vehicle Generation and Effect

3.6.1 The only vehicular movements generated by the Proposed Development will relate to delivery and service vehicles movements.

3.6.2 The estimated number of delivery vehicles generated as a result of the Proposed Development and the net increase in service vehicle movements has been calculated using service vehicle trips rates detailed below:

- 0.20 vehicles per 100 sqm GIA per day for B1 land uses; and
- 0.53 vehicles per 100 sqm GIA per day for A1 retail land;
- 1.36 vehicles per 100 sqm GIA per day for A3 retail.

3.6.3 Based on the existing and Proposed Development, the daily existing, proposed and net service vehicle generation has been calculated as shown in Table 3.3, Table 3.4 and Table 3.5 respectively.

Table 3.3 – Existing Service Vehicle Generation

Land use	Area m² (GIA)	Daily Vehicle Trip Rate /100m²	Daily Trips (max)	Peak Hour
B1 Employment	3,245	0.20	7	1
Total			**7**	**1**

Table 3.4 – Proposed Service Vehicle Generation

Land use	Area sqm GIA	Daily Vehicle Trip Rate /100 sqm	Daily Trips (Max)	Peak Hour
B1 Employment	4,008	0.20	8	2
A1/A3/B1	327	1.36	5	
A1 Retail/B1	106	0.53	1	
Total			**14**	**2**

Table 3.5 – Net Service Vehicle Generation

Land use	Daily Trips (Max)	Peak Hour
B1 Employment	+1	+1
A1/A3/B1	+5	
A1 Retail/B1	+1	
Total	+7	+1

3.6.4 The service vehicle forecast shown above indicates that the Proposed Development will result in an additional seven service vehicles per day, resulting in a negligible increase of one in peak hour movements. As the Proposed Development seeks a flexible A1/A3/B1 space and a flexible A1/B1 space they have been assumed to be A1 Retail as this represents an absolute worst case.

3.6.5 On the basis of calculations presented above, it is considered that the Proposed Development will not materially impact on the capacity of loading areas in the vicinity of the site.

4.0 Non Car Travel Credentials

4.1 Introduction

4.1.1 The accessibility credentials of the application site have been considered by way of GIS-based modelling, using centralised travel networks and public transport data to identify the geographical catchment area of each travel mode. This is supplemented with consideration of the availability and quality of the infrastructure for each respective travel mode, such that any barriers are identified.

4.1.2 The results for each mode are discussed independently within the subsequent sections of this report, and are based on the following criteria:

- Accessibility by foot - assumes a typical walk threshold of 2 kilometres, as advocated within IHT Guidance entitled 'Planning for Journeys on Foot'.
- Accessibility by bike - assumes the industry accepted threshold of 5 kilometres.
- Accessibility by bus - is calculated on the basis of those public transport services that are available from the site within an assumed maximum 60-minute journey time and a limit of one interchange.

4.2 Walking Accessibility

4.2.1 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.

4.2.2 In the vicinity of the site, footways are continuous 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.

4.2.3 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.

4.2.4 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 4.1 below indicates the pedestrian facilities afforded within the local vicinity.

Figure 4.1 - Local Accessibility Context Plan

4.2.5 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 4.1 below.

Table 4.1 - CIHT Recommended Walking Distances

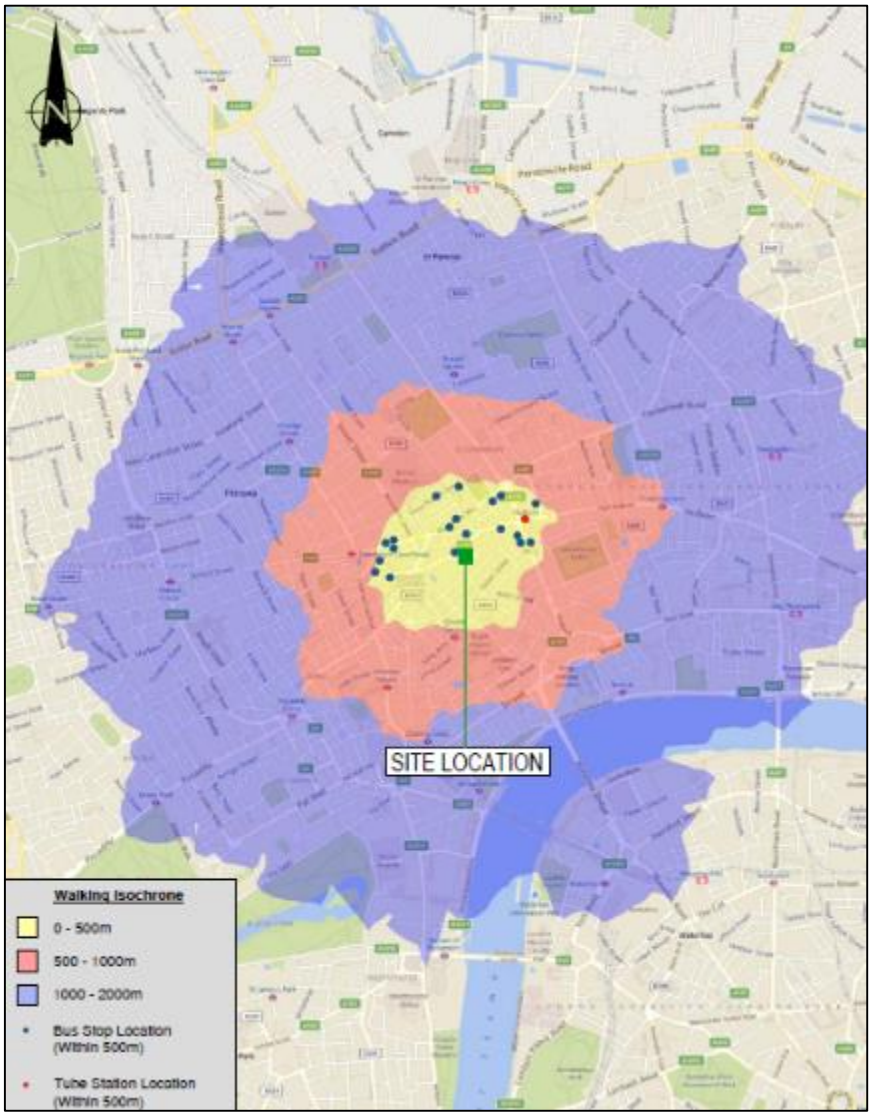
CIHT Classification	Town Centres (m)	Commuting/School/ Sightseeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

4.2.6 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.

4.2.7 The resulting analysis is shown in Figure 4.2.

Figure 4.2 - 2 Kilometre Walking Catchment



4.2.8 As illustrated in Figure 4.2, 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.

4.2.9 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.

4.2.10 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.

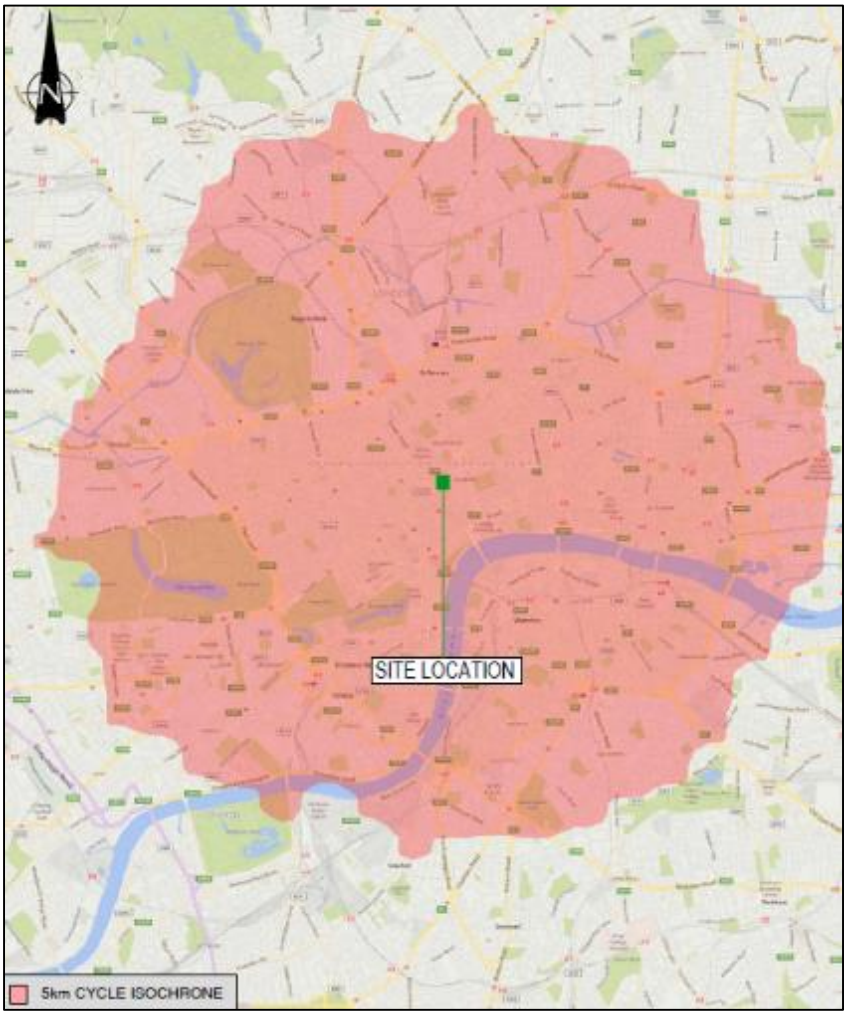
4.3 Cycling Accessibility

4.3.1 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 additional 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.

4.3.2 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.

4.3.3 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 4.3.

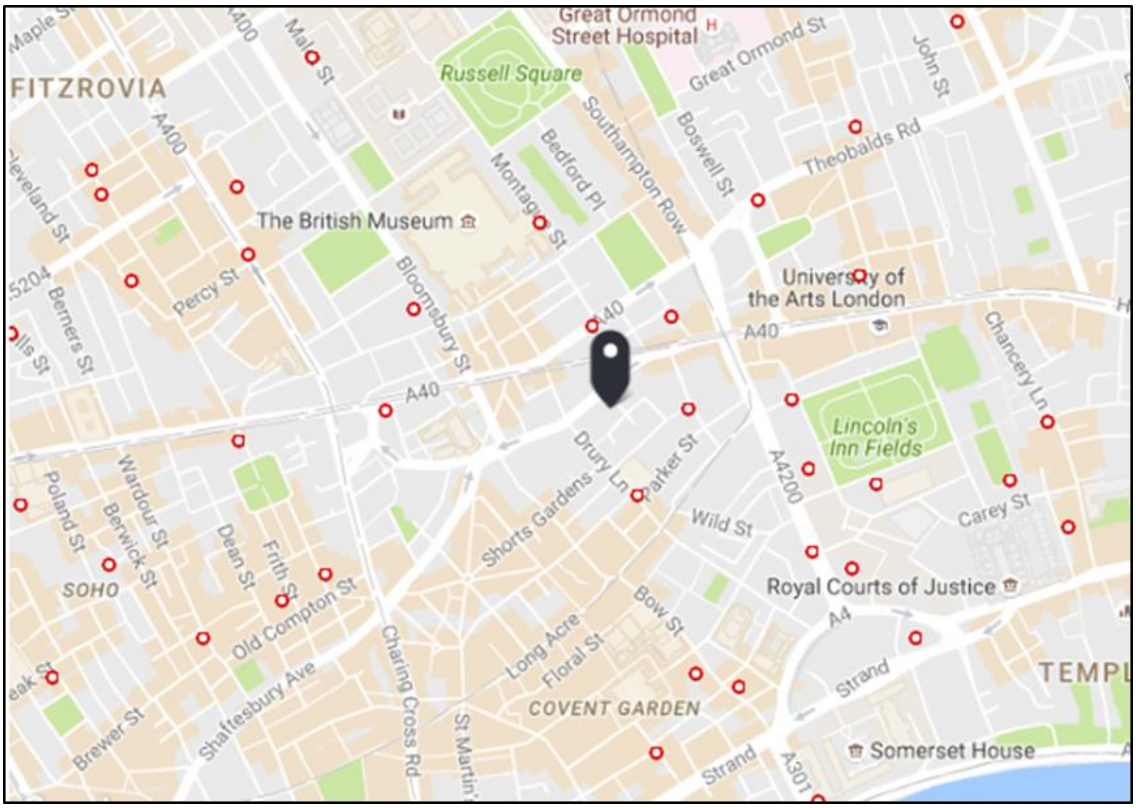
Figure 4.3 - 5 Kilometre Cycling Catchment



4.3.4 As shown in Figure 4.3 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.

4.3.1 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 4.4 illustrates Santander Cycle Hire locations in proximity to the site.

Figure 4.4 - Santander Cycle Hire Locations



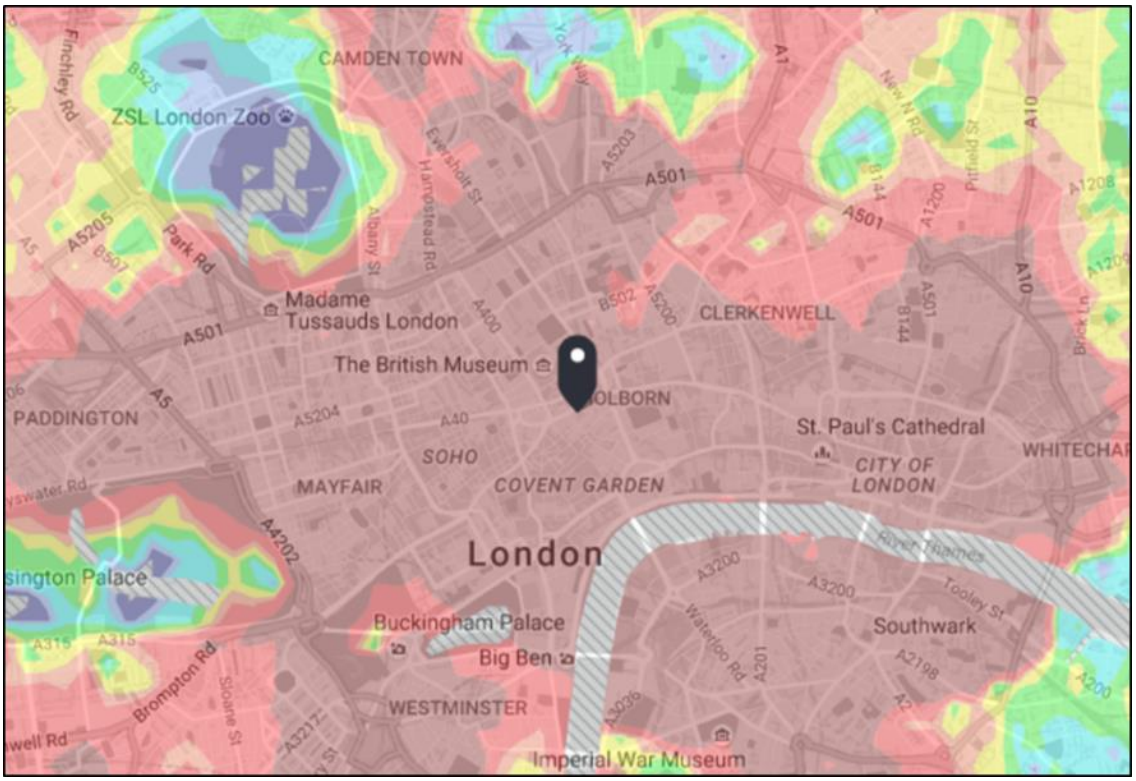
4.4 Public Transport Accessibility

4.4.1 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.

4.4.2 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.

4.4.3 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 4.5 - PTAL Location Plan - Application Site



4.4.4 As shown in Figure 4.5 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.

4.5 Accessibility by Bus

4.5.1 The London 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).

4.5.2 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.

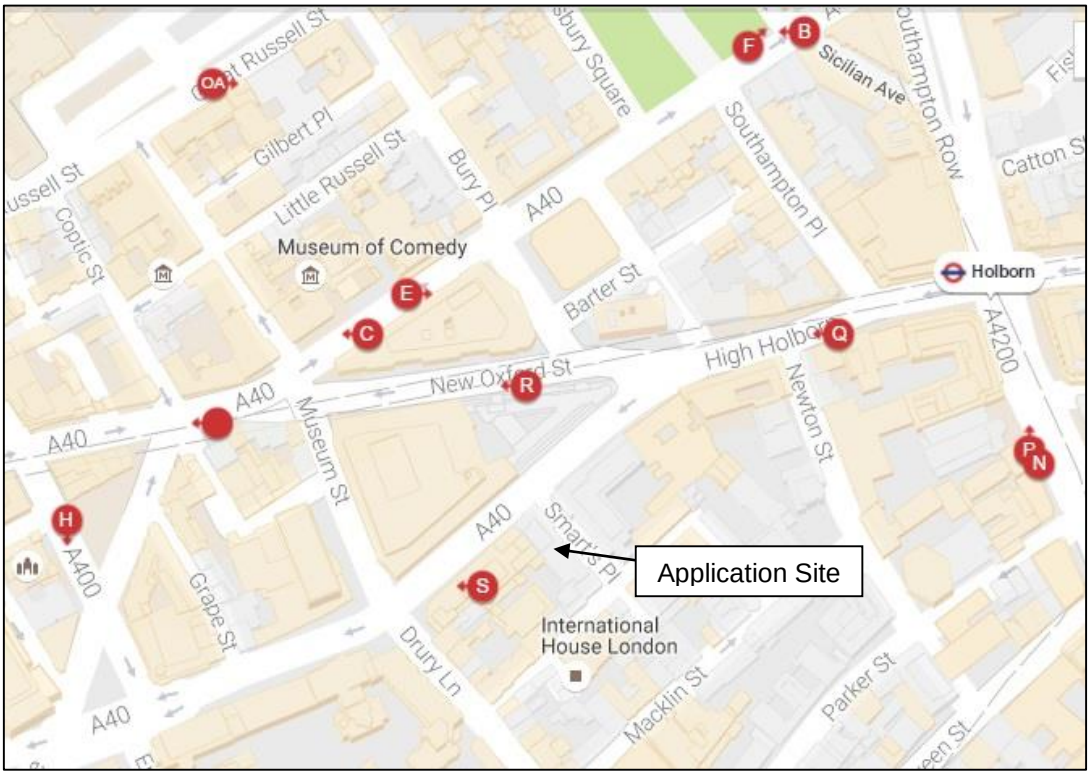
4.5.3 A summary of bus services available from the closest stops highlighted above is provided in Table 4.2 below.

Table 4.2 - 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

4.5.4 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 4.6 below.

Figure 4.6 – High Holborn – Bus Stop Location Plan



4.6 Accessibility by Underground

4.6.1 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).

4.6.2 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 4.3 below.

Table 4.3 - 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

4.6.3 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.

4.7 Accessibility by Rail

4.7.1 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 4.4.

Table 4.4 - 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

4.7.2 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.

4.8 Summary

4.8.1 The Proposed Development is located in a central urban area where it benefits from extensive infrastructure, facilitating many journeys to the site via Sustainable modes of transport. The site is approximately 320 metres south-west of Holborn Underground Station and has access to a number of underground, bus and rail services. As such, the development is considered compliant with current sustainable transport policy and provides future staff with an excellent level of non-car accessibility from a wide range of destinations, on both a local and regional scale.

5.0 Planned Improvements

5.1 Introduction

5.1.1 To fully assess the potential effects of the development on the transport network consideration has also be given to planned or approved infrastructure works that can be expected to benefit the site.

5.2 TFL's Central London Cycle Grid

5.2.1 The central London cycling grid is being funded by the Mayor's Vision for Cycling, a 10-year plan to deliver cycling improvements across London with spending set to total £913m by 2022. More than £54m of this funding will be allocated to the grid network.

5.2.2 The central London Cycle Grid is a set of safer, connected routes for cyclists across central London that will comprise of a mixture of Quietways and Superhighways. Superhighways will be located on main roads and include substantial sections of segregated cycle lanes that will be delivered by TfL. Quietways link destinations following backstreet routes, through parks, along waterways or tree-lined streets and will be delivered by the boroughs. They are intended to appeal to new and existing cyclists with varying levels of confidence who want a safer cycling experience and to travel at a slower pace.

5.2.3 In the vicinity of the site there is a Quietway proposed running north-south between Bloomsbury and Walthamstow, which commences approximately 1,200m to the north of the Proposed Development.

5.3 London Underground

5.3.1 A major upgrade plan by TfL is underway to improve capacity across the underground network by 30%. This includes the introduction of new rolling stock and signalling equipment on many lines as well as major station improvements to integrate with Crossrail works and improve accessibility.

5.3.2 According to TfL's 2011 Upgrade Plan, the following upgrades will have been implemented or partially implemented on LUL lines serving the Proposed Development.

5.3.3 From the early 2020's a new signalling system and walk-through, air cooled carriage will operate on the Piccadilly Line. This will increase capacity by 60% at peak periods; the equivalent of new capacity for 20,000 passengers per hour.

5.3.4 In addition, the Secretary of State for Transport decided on 12 November 2014 to make the statutory Transport Works Act Order (TWAO) that will give permission for the Northern line extension (NLE) from Kennington to Battersea via Nine Elms. The Order has been made with modifications and the Secretary of State has also decided to give permission for the project, subject to conditions.

5.4 London Buses

5.4.1 The Mayor's Transport Strategy sets out that the bus network has been developed to improve local connectivity, with an increase in service volume of approximately 40% in the last ten years. The Mayor aims to improve the bus services by providing services that are comprehensive, frequent, simple, reliable, accessible, value for money and reducing environmental impact (through improvements to the fleet).

5.4.2 Proposed improvements include improved reliability, journey time, accessibility, information and overall quality, with the intention of improving the bus network across the whole of London. The intention is that all routes should be reviewed and, where necessary, appropriate bus-priority measures should be considered with upgraded services and infrastructure. The overall strategy for buses includes the following components:

- Increased number of bus lanes and hours of operation to encourage efficient modes on limited road space;
- Increased number of step-free buses to improve accessibility for all bus users;
- Enhanced, intensified and enforced bus-priority measures on major corridors; and

5.4.3 Development of a Core Bus Priority Network (CBPN), comprising roads on which there are high bus flows to ensure that journey time savings are experienced by the maximum number of passengers.

5.4.4 As the majority of measures are intended primarily at improving the efficiency, accessibility and effectiveness of services, it has conservatively been assumed that no additional capacity will be introduced by 2016 to local routes. Bus services are, by their nature, more flexible than train and underground services and can be re-planned according to changes in demand or travel patterns and it cannot be guaranteed that the current route pattern will remain in place in 2016, however, it has been assumed that the same service pattern and routes will generally remain in place as per current arrangements, or equivalent.

5.5 Crossrail

5.5.1 Crossrail will provide a new high frequency railway service for London and the south-east, providing additional capacity for travel to and through London and improving interchange opportunities by linking stations in central London. Crossrail is expected to begin operation in 2018.

5.5.2 A Crossrail station will be provided at Tottenham Court Road Station which is accessible from the underground services including the Northern line and Central Line services accessible form Leicester Square, Holborn and Covent Garden Stations.

6.0 Existing Highway Network

6.1 Introduction

6.1.1 This section of the report considers the highway network immediately surrounding the site. The study area is taken to comprise the following junctions and interconnecting links:

- A40-High Holborn
- A40-High Holborn/ Smart's Place
- Smart's Place/ Stukeley Street

6.2 Geometric Appraisal

A40-High Holborn

6.2.1 A40-High Holborn is a one-way, two-lane carriageway routing broadly on an east>west alignment past the northern frontage of the application site. The A40-High Holborn provides connectivity from the application site to the high street area of Holborn to the east and towards Oxford Street to the west. The carriageway is also subject to a 20 mph speed limit.

6.2.2 The carriageway measures approximately 7 metres in width, providing a width of at least 3.5 metres per lane. Opposite the A1 retail frontage, A40-High Holborn also accommodates a loading bay, which is in operation between 08:30-20:30, Monday-Saturday, for permitted loading for 40 minutes per vehicle. The loading bay measures approximately 58.5 metres in length. At this point the carriageway widens to three lanes to accommodate the loading bay area, measuring approximately 9.4 metres in width. Buses serving the westbound bus stop on High Holborn are also required to stop on the carriageway, adjacent to the site.

6.2.3 In the immediate vicinity of the application, Pedestrians are accommodated on the A40-High Holborn by way of contiguous footways on either side of the carriageway, measuring at least 3 metres in width. This is considered sufficient for the level of pedestrian flow. The street is illuminated to modern standards and is well maintained for both pedestrians and vehicular use.

6.2.4 Three signalised pedestrian crossings are provided in the vicinity of the application site on the A40-High Holborn providing a good level of pedestrian accessibility in the area. All of the signalised pedestrian crossing incorporate dropped kerbs, tactile paving, colour contrast, and a tactile cone to provide increased legibility for sensory impaired users. The crossings have therefore been designed in accordance with current standards.

6.2.5 Single yellow lines and parking restrictions are implemented along the length of A40-High Holborn, preventing vehicles from parking at any time. Loading restrictions also apply, with signs stating there should be no stopping between 08:30 and 18:30. The general layout of A40-High Holborn is shown in Figure 6.1 provided below.

Figure 6.1 - A40-High Holborn

6.2.6 In view of the above, and in consideration of the trip generation effects of the Proposed Development (refer to Section 7.0), it is considered that the geometry and layout of A40-High Holborn would be sufficient to accommodate the Proposed Development.

A40-High Holborn/ Smart's Place

6.2.7 Adjacent to the east boundary of the application site, A40-High Holborn connects with Smart's Place via a left-in/ left-out priority junction. Smart's Place provides pedestrian access Proposed Development. Smart's Place accommodates a 7.5 tonne weight restriction and measures approximately 5.2 metres in width, which is sufficient to allow a car and HGV to pass each other in line with guidance provided in *Manual for Streets*.

6.2.8 The left-in/left-out priority junction accommodates a kerb radius of 2.5 metres on either side of the carriageway and provides visibility of 80 metres south of the junction, from 2.4 metre set-back position, onto the one-way carriageway of A40-High Holborn. This is in accordance with guidance set out in *Manual for Streets*.

6.2.9 Pedestrians are accommodated by way of a footway lining each side of the carriageway on Smart's Places, with the main footways on the west side of the carriageway measuring approximately 3 metres in width and incorporated bollards providing increased pedestrian safety. An informal pedestrian crossing with incorporated dropped kerbs and tactile paving is positioned in-line with the priority junction.

6.2.10 The general layout arrangements of the junction are shown in Figure 6.2.

Figure 6.2 - A40-High Holborn/ Smart's Place

6.2.11 On the basis of the above A40-High Holborn/ Smart's Place is sufficient to accommodate movements associated with the Proposed Development.

Smart's Place/ Stukeley Street

6.2.12 Smart's Place connects with Stukeley Street to the south via a crossroad formation providing access to shared spaces which accommodate loading areas to the south and west. These loading areas will accommodate the servicing vehicular traffic for the application, in particular to the refuse storage to the south of the application site. The main carriageway of Smart's Place continues to Stukeley Street, guided to the east of the junction.

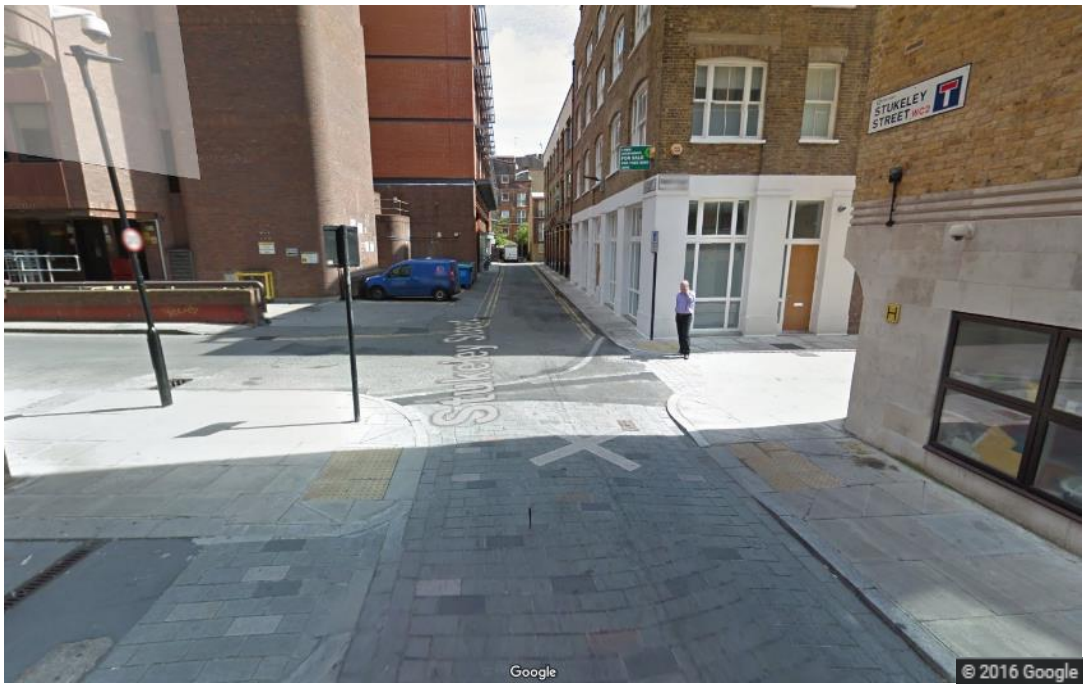
6.2.13 The above mentioned loading area also provide a turning area for the HGVs accessing the application site. Further detail is provided at Section 3.5 of this report.

6.2.14 Stukeley Street comprises a two-way single carriageway road to the east and routes along the southern boundary of the application site. The carriageway routes on an east>west alignment, measuring approximately 4 metres in width and accommodating footways on either side. To the east of the junction with Smart's Place, Stukeley Street provides a dead end, prohibiting through movements continuing on the carriageway.

6.2.15 Double yellow lines are accommodated on either side of the carriageway preventing parking at any time. Informal pedestrian crossing are also provided at all appropriate crossing points and have been designed in accordance with current standards and incorporate dropped kerbs, tactile paving and colour contrast.

6.2.16 The general layout of Stukeley Street and the Smart's Place/ Stukeley Street junction is shown in Figure 6.3 provided below.

Figure 6.3 - Smart's Place/ Stukeley Street



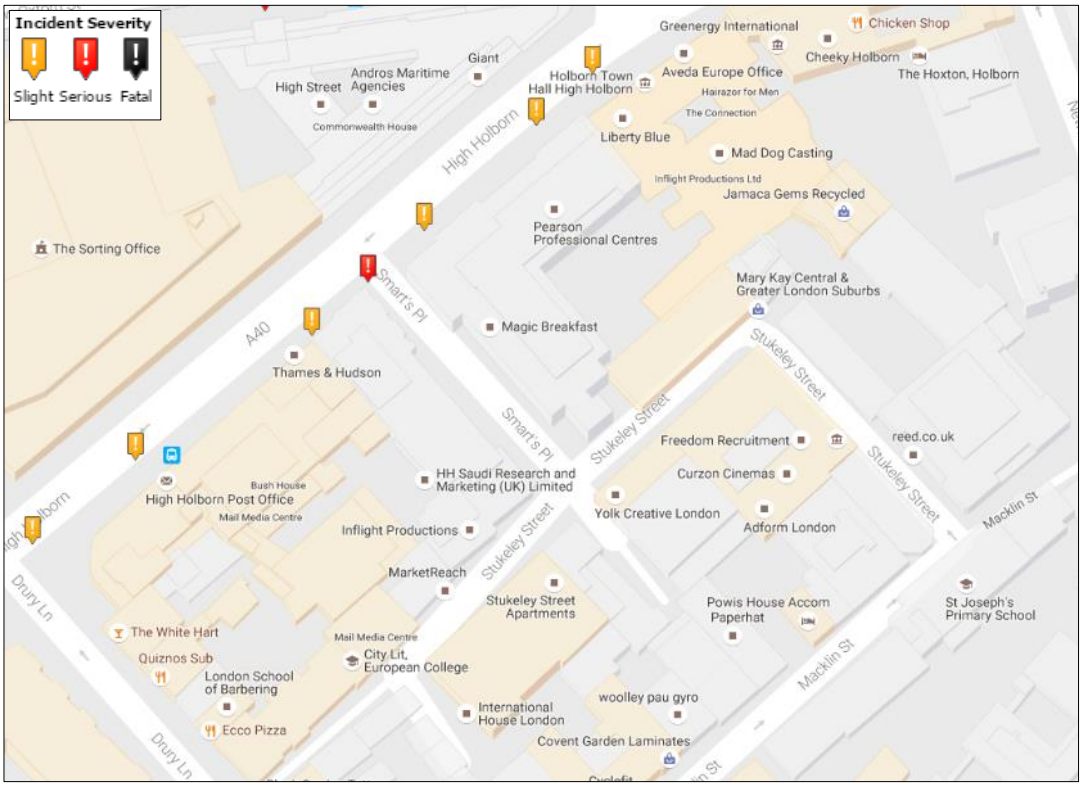
6.2.17 In view of the above, and in consideration of the trip generation effects of the Proposed Development, it is considered that the geometry and layout of Stukeley Street would be sufficient to accommodate the Proposed Development.

6.3 Personal Injury Accidents

6.3.1 Road safety data has been obtained from crashmap.co.uk to cover the highway network in the vicinity of the site for the latest available five-year period (2011-2015). The accident plot is provided in Figure 6.4.

6.3.2 Data indicates there have been seven recorded injury accidents in the last five years, all of which have occurred on A40-High Holborn. Six of the accidents have been classified at slight, the other accident has been recorded as a serious incident.

Figure 6.4 - Personal Injury Accident Map



6.3.3 Based on the IHT Risk Assessment Matrix presented in Figure 5.5, this would indicate that the A40-High Holborn has a medium/ high risk of slight or serious injury. The accident plot also shows no sign of accident clusters in the immediate vicinity of the site, indicating there are no inherent problems with surrounding highway infrastructure and safety.

6.3.4 It is therefore implicit that there is no existing deficiency in the layout or geometry of the study area highway network that is leading to an unacceptable safety risk. Taking this into account alongside the anticipated trip generation of the Proposed Development (see Section 7.0), it is considered that the Proposed Development would not result in a material or discernible worsening of the existing safety performance of the adjoining highway network.

Figure 6.5 – IHT Risk Assessment Matrix

		Frequency of Collision			
Severity		More than one per year	One every 1-4 years	One every 5-10 years	Less than one per 10 years
	Fatal	Very High	High	High	Medium
	Serious	High	High	Medium	Medium
	Slight	High	Medium	Medium	Low
	Damage	Medium	Medium	Low	Low

6.4 Section Conclusion

6.4.1 The existing surrounding public highway network, servicing and parking arrangements are considered to be suitable to accommodate the Proposed Development.

6.4.2 The analysis of the Personal Injury Accident Data, provided above, has shown that there are no inherent highway safety concerns and the surrounding highway network is of a sufficient standard and geometry to accommodate traffic associated with the development proposals.

7.0 Trip Generation

7.1 Introduction

7.1.1 A multi modal trip generation assessment has been undertaken to identify the net trip generation of the Proposed Development. This assessment has then been used to undertake an evaluation of the effect of the change in trips resulting from data contained in the Trip Rate Information and Computer System (hereinafter 'TRICS') database version 7.2.1.

7.1.2 The information sources and assumptions that have been used for this assessment are set out in detail below. This section concludes with the quantification of such trips in the AM and PM weekday peak periods. Full detail of the sites on which the trip generation was based is available in Appendix D.

7.1.3 **Retail Trip Generation**

7.1.4 The scale and type of retail space in the Proposed Development is considered complimentary to surrounding residential and commercial uses thus are expected to generate ‘linked trips’ only. As such both the existing and future retail units are not forecast to be trip generators in their own right but will be used by persons that are passing the site and visiting the wider area.

7.1.5 **Existing Development**

7.1.6 Trip Generation Methodology

7.1.7 Trip generation rates for the B1 employment element of the existing development have been sourced using the TRICS database. The selected surveys were chosen based on key characteristics including land use, PTAL rating of five or six, location, size of development and provision of parking.

7.1.8 Based on the above, the sites listed below have been considered appropriate comparators.

- CI-02-A-02 Gracechurch Street (City of London, 2013);
- CN-02-A-01 Ely Place (Camden, 2008); and
- CN-02-A-02 Gray’s Inn Road (Camden, 2008).

7.1.9 The total person trip rates of the three TRICS sites have been calculated and are presented in Table 6.1 below.

Table 7.1 - B1 Employment Person Trip Rate (per 100m² GFA)

AM Peak Hour			PM Peak Hour		
In	Out	Total	In	Out	Total
2.32	0.12	2.43	0.20	2.32	2.52

B1 Employment Mode share

7.1.10 The expected modal share of office staff has been established with reference to the 2011 Census location of usual residence and place of work by method of travel to work (WP7103EW) for the relevant workplace zone (E33029473).

7.1.11 The mode split has been adjusted to reflect no on-site parking provision. The reduction in car driver share has been added proportionally to the other modes. The adjusted mode share derived from the Census 2011 data is shown in Table 6.2 below.

Table 7.2 - B1 Employment Modal Split

Mode	Census Mode Split	Adjusted Mode Split
Underground	41%	42%
Train	31%	32%
Bus	12%	12%
Taxi	0%	0%
Car Driver	2%	0%
Car Passenger	0%	0%
Motorcycle	1%	1%
Bicycle	6%	6%
On foot	6%	6%
Other	0%	0%

Existing Multimodal Trip Generation

7.1.12 Applying the mode split summarised above to the number of trips forecast based on the trip rates detailed within Table 6.1 allows the number of peak hour arrivals and departures by mode to be determined. The resulting trip generation is presented in Table 6.3.

Table 7.3 – Existing B1 Employment Multimodal Trip Generation (3,245m² GIA)

Mode	Am Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Underground	32	2	33	3	32	34
Train	24	1	25	2	24	26
Bus	9	0	10	1	9	10
Taxi	0	0	0	0	0	0
Car Driver	0	0	0	0	0	0
Car Passenger	0	0	0	0	0	0
Motorcycle	1	0	1	0	1	1
Bicycle	5	0	5	0	5	5
On foot	5	0	5	0	5	5
Other	0	0	0	0	0	0
Total Trips	**75**	**4**	**78**	**6**	**75**	**81**

(Arithmetic errors due to rounding)

7.2 Proposed Development

7.2.1 The principal land use of the Proposed Development will remain as B1 Office. As such the trip generation methodology for the Proposed Development will be based on the same sites identified for the existing development. As such any change in trips generated by the Proposed Development are a result of the different floor areas of the B1 employment land use on site.

7.2.2 Proposed B1 Employment Mode share

7.2.3 With the consideration that the Proposed Development will be car-free and will not provide any associated car parking, the mode share for the Proposed Development will follow the same approach as detailed above, maintaining the adjusted modal split presented at Table 6.2.

7.2.4 Based on the AM and PM peak trip rates identified in Table 6.1 a multi modal trip generation forecast for the Proposed Development has been calculated as shown in Table 6.4 below.

Table 7.4 - Proposed Multimodal Peak Hour Trip Generation (4,008m² GIA)

	AM Peak (08:00 - 09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Underground	39	2	41	3	39	42
Train	30	2	31	3	30	32
Bus	11	1	12	1	11	12
Taxi	0	0	0	0	0	0
Car Driver	0	0	0	0	0	0
Car Passenger	0	0	0	0	0	0
Motorcycle	1	0	1	0	1	1
Bicycle	6	0	6	0	6	6
On foot	6	0	6	0	6	6
Other	0	0	0	0	0	0
Total Trips	**92**	**5**	**97**	**8**	**92**	**100**

(Arithmetic errors due to rounding)

7.3 Net Multimodal Trip Generation

7.3.1 In order to establish the total effect of the development, the net multimodal trip forecast for the Proposed Development provides a comparison of the existing and Proposed Development based on the data presented in Table 7.3 and Table 7.4. This is summarised in Table 7.5 below.

Table 7.5 – Net Trip Generation

Mode	AM Peak (08:00 - 09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Underground	7	0	8	1	7	8
Train	6	0	6	0	6	6
Bus	2	0	2	0	2	2
Taxi	0	0	0	0	0	0
Car Driver	0	0	0	0	0	0
Car Passenger	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Bicycle	1	0	1	0	1	1
On foot	1	0	1	0	1	1
Other	0	0	0	0	0	0
Total	**18**	**1**	**18**	**2**	**18**	**19**

7.4 Multimodal Trip Generation Effect

7.4.1 The results of the trip generation forecast show a predicted increase of 18 and 19 two-way trips during the AM and PM peak hours respectively. Two modes accommodate the majority of this minor increase in trips, namely the London Underground network and mainline rail services.

7.4.2 As set out in Section 4.0 of this report the site is located in an excellent location to take advantage of existing public transport provision. Given the vast array of underground and rail services available from stations at Holborn, Covent Garden, Tottenham Court Road and Farringdon, it is considered that the minor increase in trips generated by the development will have a negligible effect on services.

7.4.3 In accordance with the NPPF, the proposed redevelopment is situated in a highly accessible location, maximising the opportunities for sustainable transport modes to the used. It is therefore considered that the impact of the Proposed Development is acceptable in transport terms.

8.0 Summary and Conclusions

8.1 Summary

8.1.1 This report has been prepared by Curtins on behalf of *Covent Garden Investments S.A.R.L* in order to assess the traffic, transport and highway implications associated with a proposed refurbishment and extension of an existing office building at 182-184 High Holborn within the London Borough of Camden.

8.1.2 The application site currently comprises an office building under a B1 land-use classification, with a GIA of 3,927m². Following refurbishment two additional floors will be added to the building and the GIA will be increased to 5,000m². Furthermore, the development will contain a small 106m² retail/B1 unit fronting onto High Holborn and a flexible A1/A3/B1 space at ground floor which will be 327m². The remaining area of the development will be solely B1 office space.

8.1.3 This report has assessed the accessibility of the site via non car modes and has shown that the site is highly accessible via foot and cycle, with excellent public transport provided (PTAL 6b). As part of the proposals the developer is willing to upgrade existing infrastructure on Smart's Place in line with LBC'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.

8.1.4 The Proposed Development will incorporate a provision for 58 cycle parking spaces which is over and above the minimum standards set out within the London Plan.

8.1.5 As per the existing arrangement, it is proposed that delivery activity will take place on surrounding streets within dedicated loading areas and that adequate capacity is provided to accommodate the Proposed Development. It is proposed that refuse collection will take place from Stukeley Street. The movement of waste throughout the development will be the responsibility of the facilities management team and in no circumstances will waste be stored on the public highway.

8.1.6 A trip generation exercise has been carried out using the TRICS database, and the resultant impact calculated. This exercise concluded that there will be a minor increase in total trips during the AM and PM peak hours, with the vast majority of new trips generated by the site accommodated on the mainline rail and London Underground networks, making a negligible impact.

8.2 Conclusion

8.2.1 In conclusion, this Transport Assessment demonstrates that the Proposed Development of 182-184 High Holborn can be accommodated within the existing traffic and transport infrastructure surrounding the development site. The site is well served by public transport and there will be a negligible increase in person trips following the redevelopment of the site.

Appendix A – Proposed Masterplan

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 ARCHITECTS / 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 ENGINEER'S, M&E ENGINEER'S AND OTHER CONTRACT DOCUMENTS.

NOTE:

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

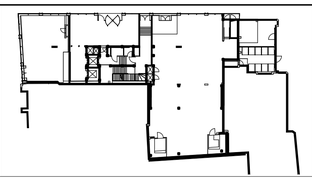
N

0m 2m 4m 6m 8m 10m

VISUAL SCALE 1:100 @ A1

REVISIONS

Date	Rev	By	Description
16.09.2016	P_ 1	GK	PLANNING ISSUE
DATE	P_ 2	GK	PLANNING ISSUE



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W www.spparcstudio.com

Job Title: 1602 - 182_184 High Holborn

Drawing Title: PROPOSED GROUND FLOOR LAYOUT

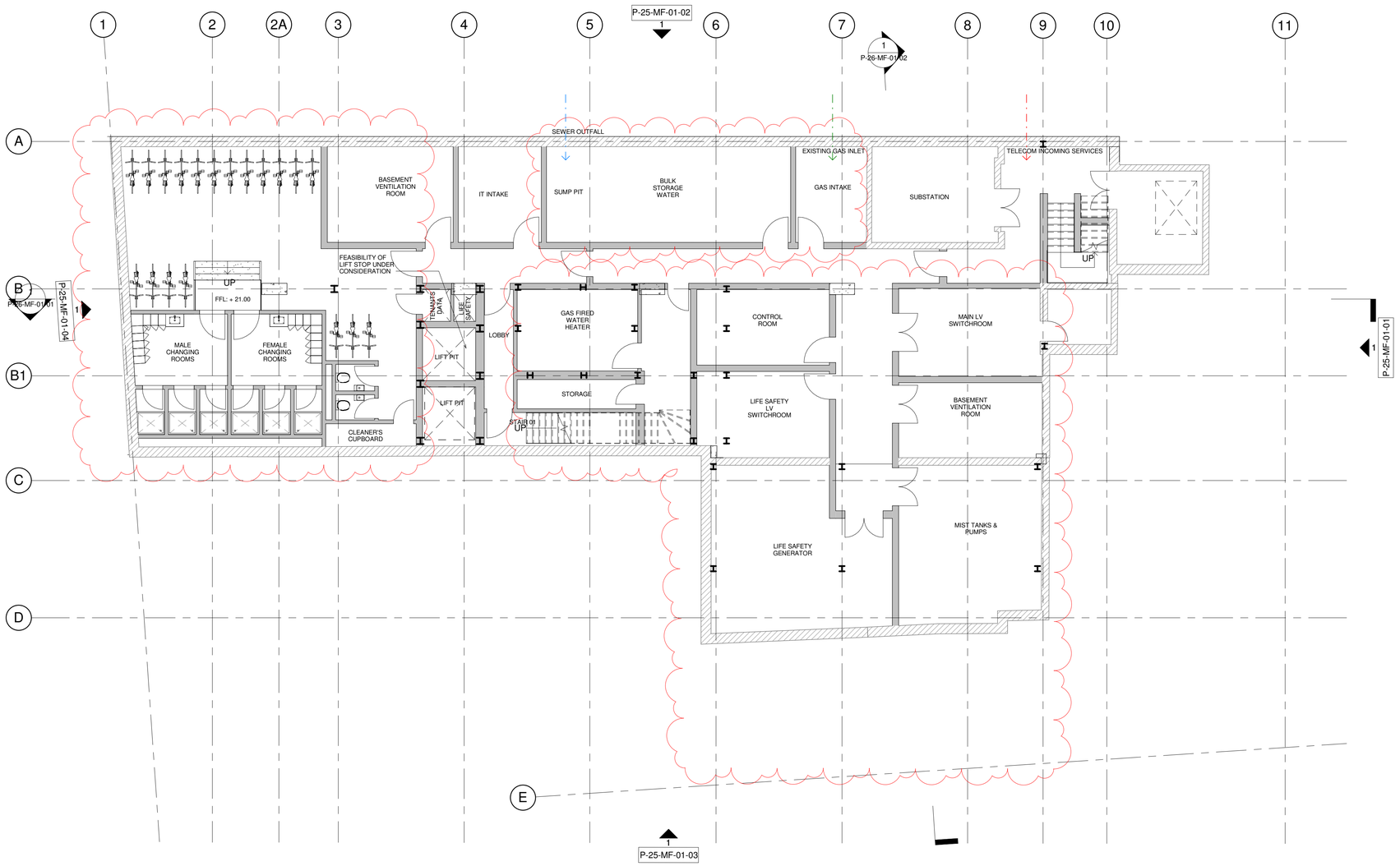
Client: Covent Garden Investment S.A.R.L

Scale (at A0)	Date Amended	Amended By
1 : 100@A1	DATE	GK
Checked	Date Created	Drawn By
TDM		Author

Drawing Number & Revision: HH-P-20-0G-01-01_P2

OPTION | STATUS: PLANNING

Printed on 10-Nov-16 3:27:15 PM



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 ARCHITECTS / 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).

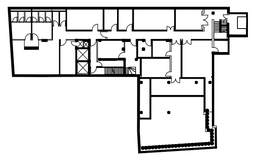
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, STRUCTURAL ENGINEER'S, M&E ENGINEER'S AND OTHER CONTRACT DOCUMENTS.

NOTE:

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

REVISIONS

Date	Rev	By	Description
16.09.2016	P_ 1	GK	PLANNING ISSUE
DATE	P_ 2	GK	PLANNING ISSUE



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Job Title
1602 - 182_184 High Holborn

Drawing Title
PROPOSED BASEMENT FLOOR LAYOUT

Client
Covent Garden Investment S.A.R.L

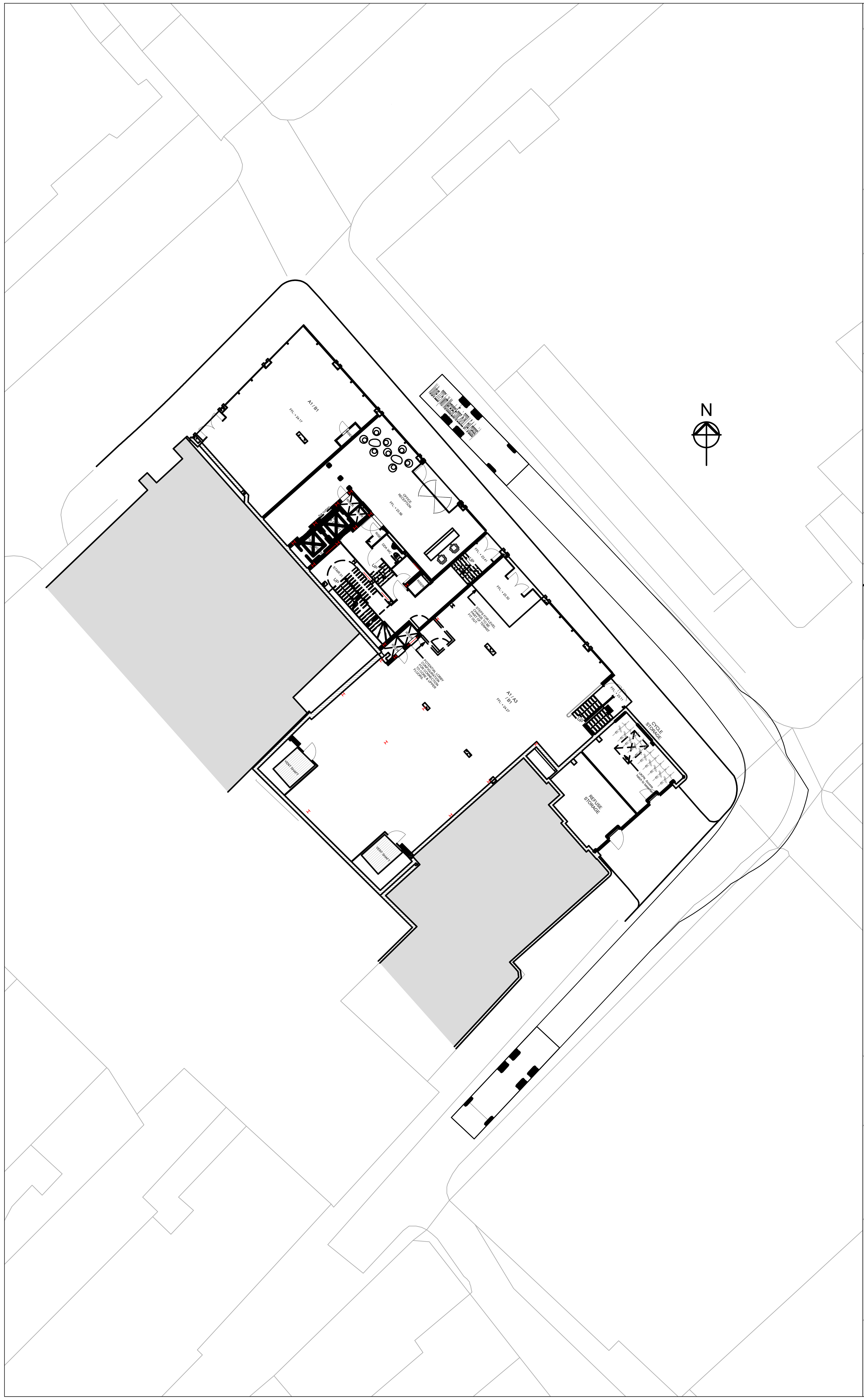
Scale (at A0)	Date Amended	Amended By
1 : 100@A1	DATE	GK
Checked	**Date Created**	**Drawn By**
Checker		Author

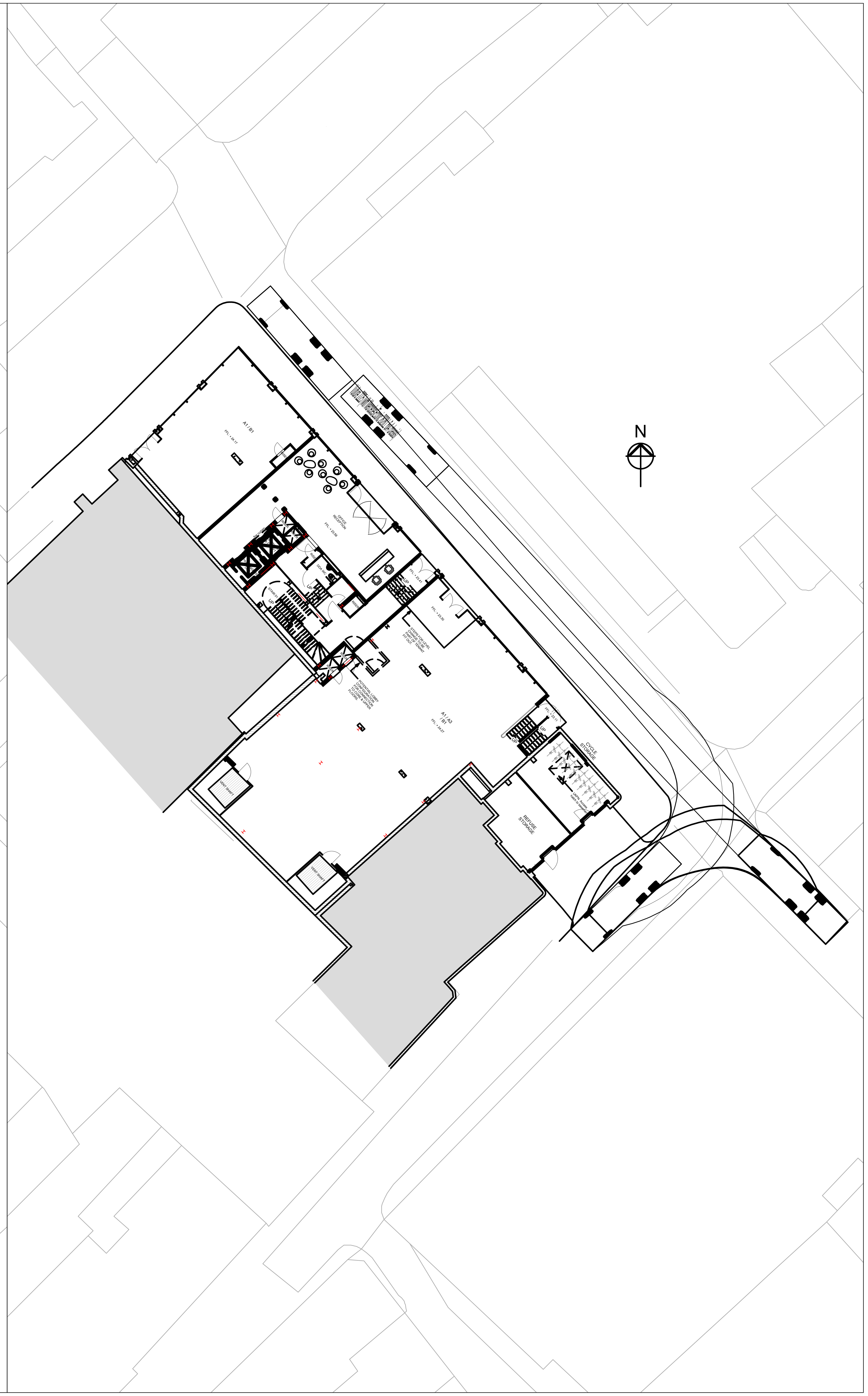
Drawing Number & Revision
HH-P-20-B1-01-01_P2

OPTION | STATUS PLANNING

Printed on 08-Nov-16 6:26:49 PM

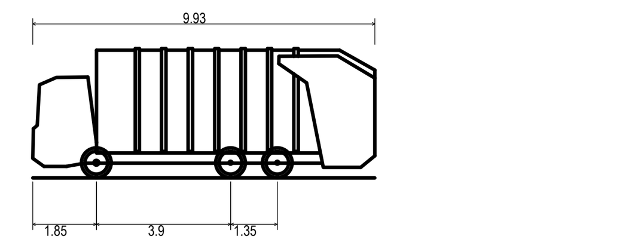
Appendix B – Swept Path Analysis





GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.



Vulture 2225 (with Mercedes Econic 2628LL 6x4 chassis)

Overall Length	9.930m
Overall Width	2.490m
Overall Body Height	3.749m
Min Body Ground Clearance	0.302m
Track Width	2.490m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	9.100m

Rev:	Description:	Date:	By:	Chkd:
P01	Vehicle Tracking Analysis	21/11/16	JW	IOR

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Status: FOR INFORMATION

Project: 182 - 184 High Holborn, Lonon Borough of Camden

Drg Title: Vehicle Tracking Analysis

Size:	Date:	Drawn By:	Designed By:	Checked By:
A1	21/11/16	JW	JW	IOR
Scale: 1:200				

Project No:	Originator:	Zone:	Level:	Type:	Discipline:	Category / Number:	Rev:
B059158-	CUR -	00 -	XX -	DR -	D -	(05)001	-P01

Appendix C – PTAL Analysis

TRANSPORT
FOR LONDON

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

Map key - PTAL

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

Map layers

PTAL (cell size: 100m)

Calculation Parameters

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

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	ALDWYCH WEST ARM	11	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	23	588.83	8	7.36	5.75	13.11	2.29	0.5	1.14
Bus	ALDWYCH WEST ARM	9	588.83	12	7.36	4.5	11.86	2.53	0.5	1.26
Bus	ALDWYCH WEST ARM	26	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	13	588.83	8	7.36	5.75	13.11	2.29	0.5	1.14
Bus	ALDWYCH WEST ARM	4	588.83	6	7.36	7	14.36	2.09	0.5	1.04
Bus	ALDWYCH WEST ARM	15	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	341	588.83	6	7.36	7	14.36	2.09	0.5	1.04
Bus	ALDWYCH WEST ARM	76	588.83	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	87	588.83	10	7.36	5	12.36	2.43	0.5	1.21
Bus	ALDWYCH WEST ARM	172	588.83	6	7.36	7	14.36	2.09	0.5	1.04
Bus	ALDWYCH WEST ARM	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 NEW OXFORD ST	8	340.58	10	4.26	5	9.26	3.24	0.5	1.62
Bus	BLOOMSBURY NEW OXFORD ST	38	340.58	10	4.26	5	9.26	3.24	0.5	1.62
Bus	BLOOMSBURY NEW OXFORD ST	25	340.58	8	4.26	5.75	10.01	3	0.5	1.5
Bus	BLOOMSBURY NEW OXFORD ST	19	340.58	8	4.26	5.75	10.01	3	0.5	1.5
Bus	BLOOMSBURY NEW OXFORD ST	171	340.58	7.5	4.26	6	10.26	2.92	0.5	1.46
Bus	BLOOMSBURY NEW OXFORD 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-Wdfd-Whit'	516.3	0.67	6.45	45.53	51.98	0.58	0.5	0.29
LUL	Holborn	'GrangeHill-Wdfd-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**

Appendix D – TRICS Output

Calculation Reference: AUDIT-148304-160819-0831

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	CI	CITY OF LONDON	1 days
	CN	CAMDEN	2 days

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

Filtering Stage 2 selection:

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

Parameter:	Gross floor area
Actual Range:	4062 to 9803 (units: sqm)
Range Selected by User:	4000 to 10000 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 29/11/13

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Wednesday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	2
Edge of Town Centre	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Commercial Zone	1
Built-Up Zone	2

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

Filtering Stage 3 selection:

Use Class:

B1	3 days

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

Population within 1 mile:

50,001 to 100,000	3 days

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

Population within 5 miles:

500,001 or More	3 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	2 days

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

Travel Plan:

No	3 days

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

LIST OF SITES relevant to selection parameters

1	CI-02-A-02	OFFICES		CITY OF LONDON
	GRACECHURCH STREET			
	MONUMENT			
	CITY OF LONDON			
	Town Centre			
	Commercial Zone			
	Total Gross floor area:		9803 sqm	
	Survey date: FRIDAY		29/11/13	Survey Type: MANUAL
2	CN-02-A-01	OFFICES		CAMDEN
	ELY PLACE			
	HOLBORN CIRCUS			
	HOLBORN			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:		4062 sqm	
	Survey date: THURSDAY		23/10/08	Survey Type: MANUAL
3	CN-02-A-02	OFFICES		CAMDEN
	GRAYS INN ROAD			
	CLERKENWELL			
	Town Centre			
	Built-Up Zone			
	Total Gross floor area:		6056 sqm	
	Survey date: WEDNESDAY		22/10/08	Survey Type: MANUAL

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	6640	0.512	3	6640	0.095	3	6640	0.607
08:00 - 09:00	3	6640	2.319	3	6640	0.115	3	6640	2.434
09:00 - 10:00	3	6640	1.933	3	6640	0.241	3	6640	2.174
10:00 - 11:00	3	6640	0.688	3	6640	0.472	3	6640	1.160
11:00 - 12:00	3	6640	0.547	3	6640	0.858	3	6640	1.405
12:00 - 13:00	3	6640	1.175	3	6640	1.797	3	6640	2.972
13:00 - 14:00	3	6640	1.727	3	6640	1.606	3	6640	3.333
14:00 - 15:00	3	6640	1.170	3	6640	0.658	3	6640	1.828
15:00 - 16:00	3	6640	0.743	3	6640	0.653	3	6640	1.396
16:00 - 17:00	3	6640	0.432	3	6640	0.914	3	6640	1.346
17:00 - 18:00	3	6640	0.201	3	6640	2.319	3	6640	2.520
18:00 - 19:00	3	6640	0.090	3	6640	1.109	3	6640	1.199
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			11.537			10.837			22.374

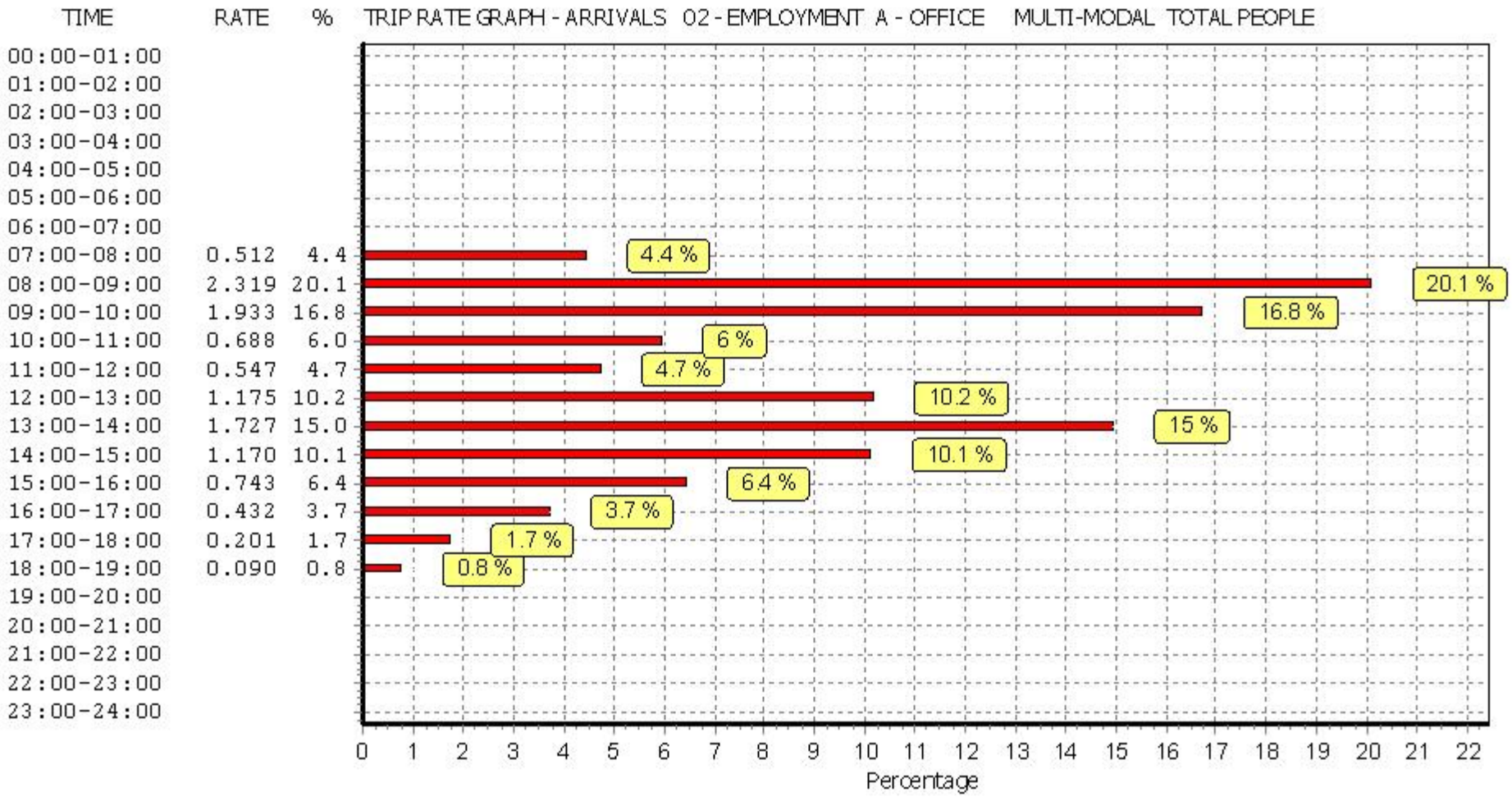
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

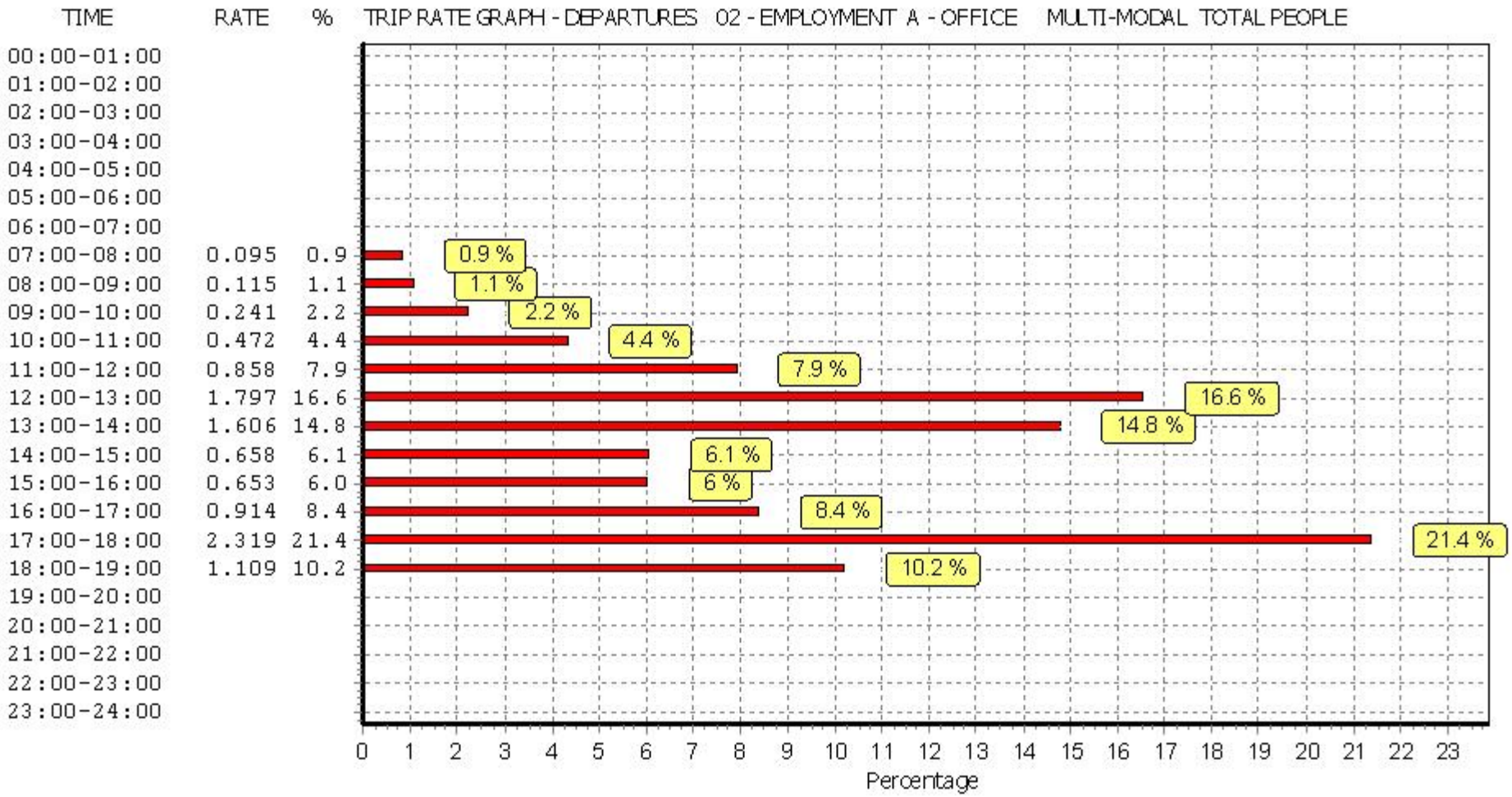
Parameter summary

Trip rate parameter range selected:	4062 - 9803 (units: sqm)
Survey date date range:	01/01/08 - 29/11/13
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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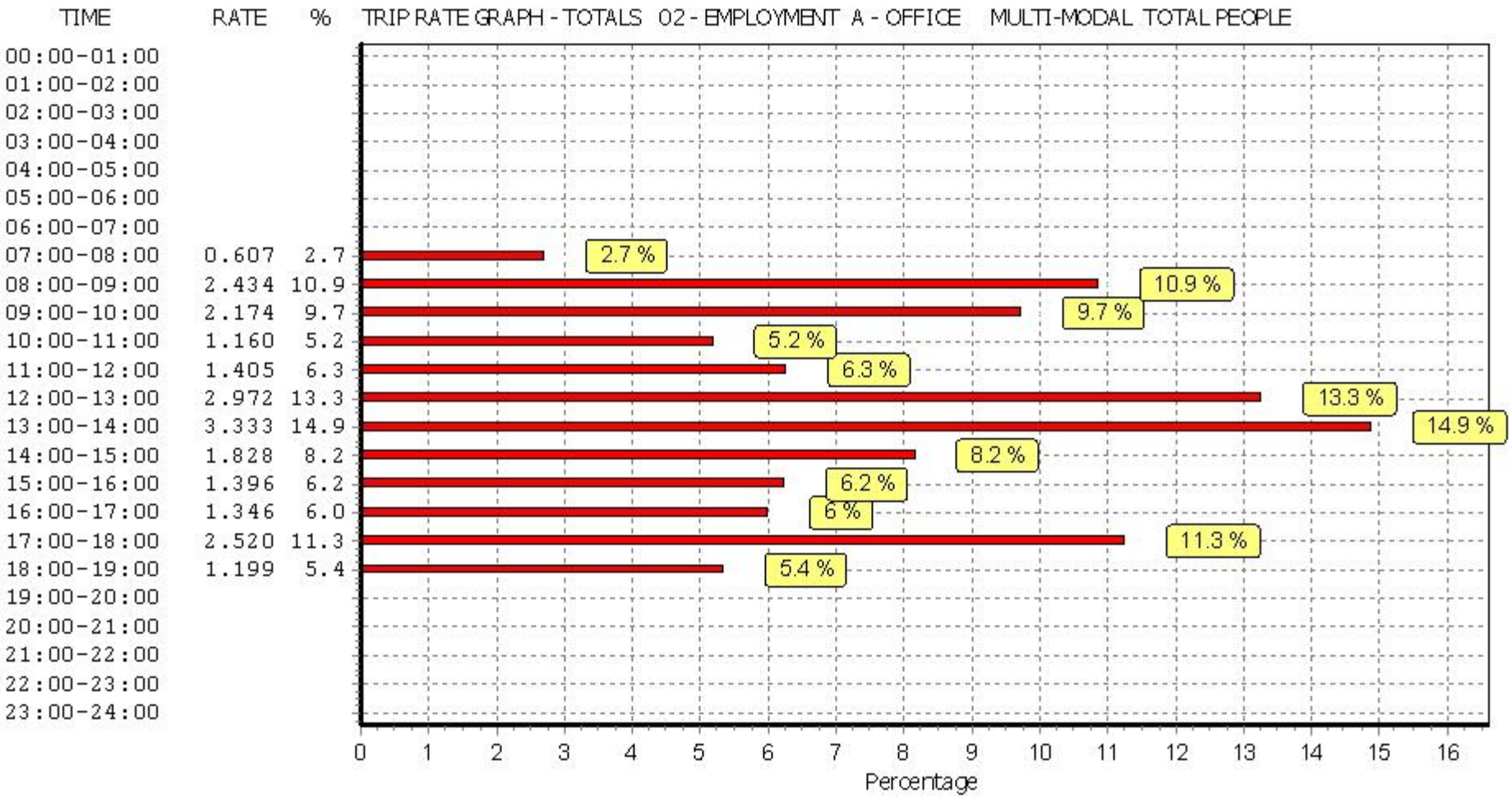

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