# 125 Shaftesbury Avenue

Transport Assessment

SEPTEMBER 2016

**Client Name:** Almacantar Shaftsbury s.a.r.l.
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## Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2008, BS EN ISO 14001: 2004 and BS OHSAS 18001:2007)

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**Comments**

3nd FINAL

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# 1. Introduction

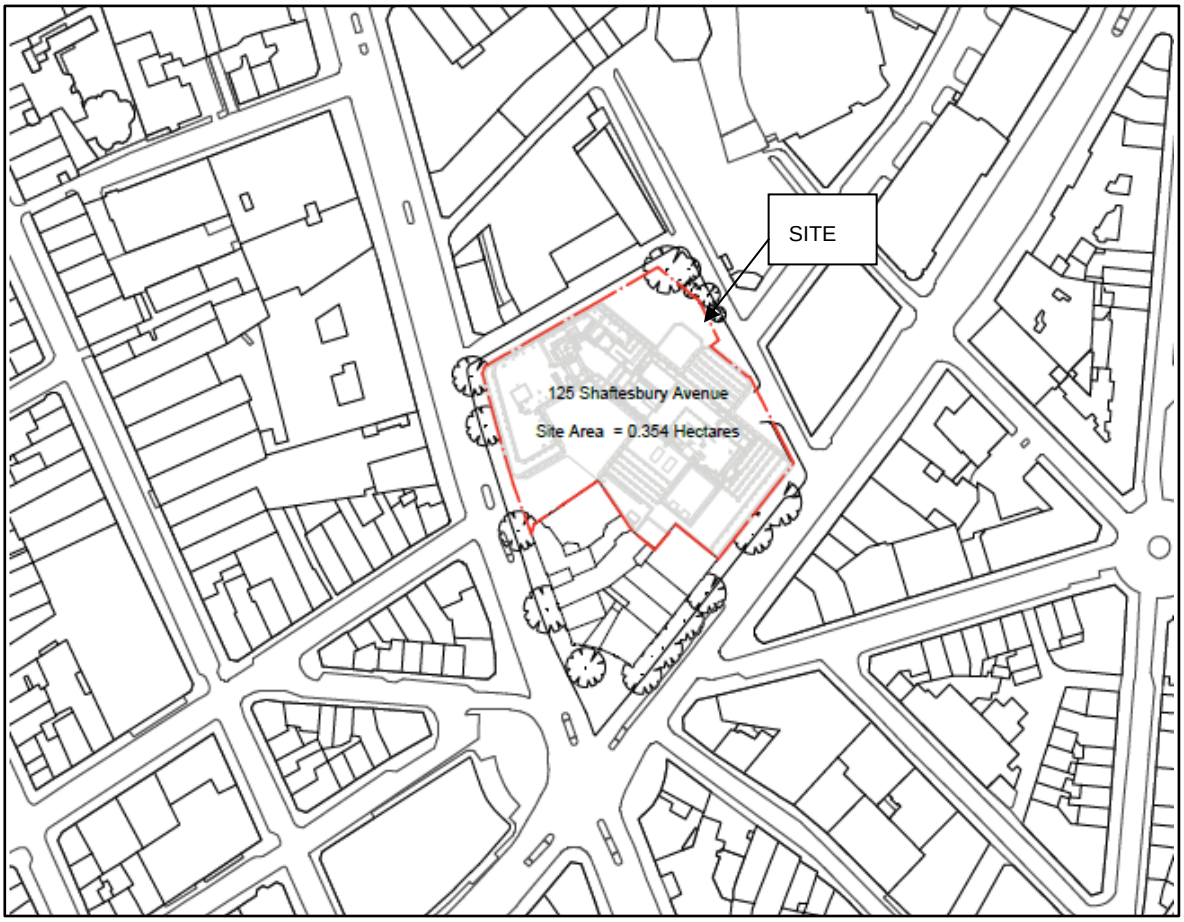
## Appointment

1.1. This Transport Assessment was prepared by Waterman Infrastructure & Environment on behalf of Almacantar Shaftsbury s.a.r.l. in support of a planning application for the refurbishment and extension (the 'Development') of 125 Shaftesbury Avenue (the 'Site'), located within the London Borough of Camden (LBC).

## Site Location

1.2. The Site is bounded by Shaftesbury Avenue to the south, Stacey Street to the east, Phoenix Street to the north and Charing Cross Road to the west. The Site location is shown in **Figure 1.**

Figure 1 Site Location



1.3. 125 Shaftesbury Avenue comprises existing office and retail land uses. The Site contains a basement car park accommodating 21 marked car parking bays (of which 15 are regularly in use), and is accessed via a two way ramp from Stacey Street. The Site's existing servicing yard is also accessed from Stacey Street.

## Development Proposals

1.4. The development proposals consist of the remodelling, refurbishment and extension of existing office and retail building (Class B1/A1/A3/Sui Generis), including terraces, a new public route, a relocated office entrance (Charing Cross Road), rooftop plant and flexible retail uses (Classes A1/A3), along with associated highway, landscaping and public realm improvements. Excluding the plant, servicing and back of house (BoH) areas in the basement and on floor 7 the proposed building would comprise:

- 26,013m$^2$ GEA B1 office land use; and
- 2,138m$^2$ GEA A1 non-food retail) – five retail land uses (these figures exclude plant, servicing and back of house areas).

1.5. The proposed works would result in a slight increase in the building footprint and an uplift of 9,259m$^2$ GEA of office space and a reduction in 1,371 m$^2$ of retail space again excluding plant servicing and BoH areas in the basement and on floor 7. These areas have been excluded as they do not contribute to the trip generating areas of the building. The GEA figures have been used in this document as they are required for the trip generation and cycle parking calculations.

1.6. An important feature of the proposed Development is the re-introduction of a pedestrian link between Stacey Street and Charing Cross Road, on the line of the historic street pattern that was interrupted by the construction of the current building.

1.7. The current basement car parking, which is accessed from Stacey Street via a two way ramp and on two levels, would be removed with the exception of two parking spaces (a lease requirement) and a delivery space. This allows cycle parking to be provided to exceed Camden's policy requirements and plant space.

1.8. The design requires moving the servicing bay northwards but servicing access would be maintained from Stacey Street.

## Report Purpose

1.9. This Transport Assessment relates to a planning application at 125 Shaftesbury Avenue and sets out the following:

- A review of the planning policy;
- A review of the baseline conditions;
- Proposals together with details on cycle parking, servicing and refuse strategy;
- Multi-modal and servicing trip generation; and
- Multi-modal Impact Assessment.

# 2. Planning Policy

2.1. The Development proposals have been considered in the light of national, regional and local planning and transportation policies in so far as they are relevant to the proposals for this building.

## National Policy

### National Planning Policy Framework (March 2012)

2.2. The National Planning Policy Framework (NPPF) is a material consideration in the determination of planning applications.

2.3. Paragraph 29 of the NPPF guides that the transport system needs to be balanced in favour of sustainable development.

2.4. Paragraph 32 of the guidance requires that all developments which generate significant amounts of movement should be supported by a transport statement. Planning 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 cost effectively limits the significant impacts of the development.*"

2.5. Development should be located where the need to travel will be minimised and the use of sustainable transport modes can be maximised (paragraph 34).

2.6. As shown later in this report the Development would be very well situated in terms of public transport provision and accommodating the delivery of goods on-Site, and has been designed to promote trips on foot, cycle or by public transport. It can therefore be concluded that the Development would accord with the general aims of the NPPF.

## Regional Policy

### The London Plan 2016

2.7. The Mayor's spatial development strategy, known as the London Plan. It is an integrated social, economic and environmental framework for the future development of London. It provides the London-wide context within which individual London Boroughs must set their local planning policies.

2.8. The London Plan was published in March 2011 but also includes later adopted alterations which include Revised Early Alterations to the London Plan (REMA), 2013, Further Alterations to the London Plan (FALP), 2015, and Minor Alterations to London Plan (MALP), 2016.

2.9. The Mayor recognises that transport plays a fundamental role in addressing the whole range of his spatial planning, environmental, economic and social policy priorities. It is critical to the efficient functioning and quality of life of London and its inhabitants. It also has major impacts – positive and negative – on places, especially around interchanges and in town centres and on the environment, both within the city itself and more widely.

2.10. Chapter 6 of The London Plan specifically deals with transport/travel in London. Relevant policies include:

*Policy 6.1 Strategic Approach*

*"The Mayor will work with all relevant partners to encourage the closer integration of transport and development … by encouraging patterns and nodes of development that reduce the need to travel, especially by car … "*

*Policy 6.1 'Assessing effects of development on transport capacity'*

*"Development proposals should ensure that impacts on transport capacity and the transport network, at both a corridor and local level are fully assessed …"*

*Policy 6.3 Planning Decisions*

*"Transport assessments will be required in accordance with TfL's Transport Assessment Best Practice Guidance for major planning applications. Workplace and/or residential travel plans should be provided for planning applications exceeding the thresholds in, and produced in accordance with, the relevant TfL guidance*."

*Policy 6.13 Parking Strategy*

*"The Mayor wishes to see an appropriate balance being struck between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use …"*

## Local Policy

### London Borough of Camden - Core Strategy

2.11. The Camden Core Strategy Document, adopted in 2010 sets out LBC's Strategic Planning Strategy and policies. It is a central part of LBC's Local Development Framework and all other Local Development Framework documents must be consistent with it.

2.12. The key policy relating to transport is policy CS11: 'Promoting sustainable and efficient travel'. This policy aims to promote sustainable travel measures and the delivery of additional infrastructure to support growth and relieve existing pressures on the transport system.

2.13. Parts of this policy that are particularly relevant to new developments include:

- "*Improve public spaces and pedestrian links across the borough;*
- *Continue to improve facilities for cyclists, including increasing the availability of cycle parking;*
- *Minimise the provision of private parking in new developments, such as through car free and car capped developments;*
- *Ensure new developments have regard to Camden's road hierarchy and does not adversely impact the road network; and*
- *Promote sustainable freight movements by reducing freight movements by road and minimising the impact of freight movement on local amenity, traffic and the environment.*"

2.14. The Development includes the provision of a new pedestrian link between Stacey Street and Charing Cross Road, and reduced office parking in the area by 13 spaces from the 15 currently utilised for parking.

## London Borough of Camden – Camden Development Policies Document

2.15. The Camden Development Policies Document sets out the detailed planning policies that the council will use when determining application for planning permission to achieve the vision and objectives of the core strategy. It forms part of LBC's Local Development Framework.

2.16. The document mentions that it is essential new developments are supported by adequate transport infrastructure. It comments that transports implications of new developments need to be managed so they do not generate excessive demands on transport infrastructure.

2.17. The policies in the document relating to the transport considerations of new developments are set in policies DP16 to DP21. These policies are described in further detail below.

2.18. Policy DP16: 'The transport implications of new developments' requires new developments to be supported by adequate transport infrastructure. It states that LBC will seek to ensure developments:

- "*make appropriate connections to highways and street spaces, in accordance with Camden's road hierarchy and to public transport networks to address the to travel to, from and within the Site;*
- *provide additional transport capacity off-Site where existing or committed capacity cannot meet the additional need generated by the development and;*
- *provide safe pick up, drop-off and waiting areas for taxis, private cars and coaches if this activity is likely to be associated with development.*"

2.19. The new pedestrian link would contribute substantially to the improving pedestrian connections in the area.

2.20. Policy DP16 requires Transport Assessments for developments where the transport implications of the proposals are significant. This includes all developments with more than 2,500m$^2$ of B1 business land use or more than 1,000m$^2$ of A1 to A5 retail land use. Transport Assessments should address the following:

- "*The types of movement associated the proposal during construction and in operation;*
- *An analysis of existing and proposed trips generated by the existing Site and proposed development for all transport modes and an assessment that these trips will have on the transport network;*
- *Specific routes over which existing and proposed trips are taking place;*
- *Movement of goods and materials associated with demolition, construction and operation of the development;*
- *the cumulative impact of the proposals with any other that will affect the same infrastructure and whether existing or committed capacity will be able to accommodate all of them;*
- *what steps the developer will need to take to ensure the proposal will be connected to existing transport infrastructure and will not have a negative impact on the capacity of existing infrastructure.*"

2.21. Policy DP16 requires travel plans to be submitted for developments that require a Transport Assessment as a way to mitigate the transport impact of a development.

2.22. Policy DP17: 'Walking, cycling and public transport' seeks to promote walking, cycling and public transport use. Developments should make suitable provision for pedestrians, cyclists and public transport users and where appropriate provide facilities for interchanging between different modes of transport. Measures may include adequate signage, footways and cycle ways, seating for pedestrians, workplace showers and lockers for cyclists and safe road crossings.

2.23. Policy DP18: 'Parking Standards and limiting the availability of car parking' seeks to minimise the level of car parking provision in new developments as well as promoting cycle parking, spaces for car clubs and electric charging points. This is to encourage people to switch to more sustainable ways of travel. In the Central London area, LBC expect any developments to be car free. For car free developments LBC require:

- "*On-Site parking to be limited to disabled users, operational or servicing needs;*
- *No issuing of on street parking permits and*
- *the use a legal agreement to ensure future occupants are aware they are not entitled to on-street parking permits.*"

2.24. In the Development the on-site parking provision would be substantially reduced.

2.25. In addition, Policy DP18 requires new developments to meet the Council's minimum standards for cycle parking.

2.26. Policy DP19: 'Managing the impact of parking' sets out LBC's approach to parking standards. It states developments should:

- "*Not harm highway safety or hinder pedestrian movement;*
- *provide adequate sightlines for vehicles leaving the Site;*
- *not add to on street parking demand unless supported by a transport assessment and is shown to meet a need that cannot be met by public transport;*
- *not require detrimental amendments to existing or proposed Controlled Parking Zones;*
- *meet the council's parking standards for bicycles, people with disabilities service vehicles, coaches and taxis;*
- *not create a shortfall in public car parking, operational business parking or residents' parking; and*
- *ensure any new car parking areas do not have a harmful visual impact.*"

2.27. Policy DP19 also states that if off-street parking is required for the development, the parking should preserve the building's and surrounding area character, preserve any features that make a significant visual appearance of the area and provide measures to offset visual impacts and increases in surface run-off

2.28. Policy DP20: 'Movement of goods and materials' sets out LBC's requirements for new developments in relation to the movements of goods and materials both during construction and when in operation. Developments that generate significant movement of goods or material by road both during construction and in operation should:

- "*consider minimising the movement of goods and materials by road and consider more sustainable alternatives for developments, such as rail and canal links;*
- *promote the development and use of freight consolidation centres;*
- *encourage the use of cycle courier services for local deliveries;*
- *be located close to major roads;*
- *avoid any additional needs for movement of vehicles over 7.5 tonnes in predominantly residential area;*
- *accommodate goods vehicles on site; and*
- *Seek opportunities to minimise disruption through a Delivery and Servicing Management Plan*."

2.29. Policy DP21: 'Development connecting to the highway network' sets out developments that are connected to the highway network to ensure they use the most appropriate road by each form of transport and purpose of journey, avoid direct vehicular access to major roads and avoid the use of local roads by through traffic. LBC expects works affecting highway to:

- "*Avoid disruption to the highway network and its function;*
- *avoid harm to on-street parking;*
- *Ensure adequate sightlines for vehicles leaving the Site;*
- *Address the needs of wheelchair users, mobility impaired users, people with sight impairments, children, the elderly and other vulnerable users;*
- *Avoid harm to highway safety, hinder pedestrian movement and avoid unnecessary street clutter*
- *Contribute to the creation of high quality street and public spaces; and*
- *Repair any construction damage to transport infrastructure and reinstate all affected transport network links and road and footway surfaces following development*."

# 3. Baseline Conditions

## Introduction

3.1. In accordance with the underlying principles of the NPPF, this section considers the accessibility of the Site to local public transport facilities, together with an assessment of accessibility to public transport as measured by the PTAL calculation. This section also sets out the baseline public transport, and cycle environment in the vicinity of the Site.

## Public Transport Accessibility Level

3.2. A Site-specific Public Transport Accessibility Level (PTAL) calculation was undertaken by TfL based on public transport service frequencies during the AM peak period between 08:15 and 09:15. The PTAL was calculated for a central point of interest (POI) within the Site. The PTAL was determined to be **Level 6b**, which equates to an 'Excellent' level of public transport accessibility; the highest achievable PTAL rating.

3.3. The PTAL calculation is contained in **Appendix A**.

## Bus Services

3.4. The Site has good access to several bus routes. Bus routes 14, 19 and 38 can be accessed from bus stops B and D as shown on **Figure 3**; these bus stops are located within 1 minutes' walk from the Site along Shaftesbury Avenue. Several other bus stops are within a short walk of the Site. **Figure 3** shows the location of the nearby bus stops to the Site, although there is current disruption owing to the Crossrail scheme on the A400 Charing Cross Road.

Figure 2 Location of nearby bus stops to the Site

3.5. TfL guidance recommends the maximum catchment area to access bus services is 640m which corresponds to an 8 minute walk. A summary of all bus services that can be accessed within a 640m walk are shown in **Table 1** below.

Table 1 Bus Service Summary Table

| Bus Route | Route summary | Operating Time | | Buses per hour | | |
|---|---|---|---|---|---|---|
| | | First | Last | AM peak | Off-peak | PM peak |
| **1** | Canada Water – Elephant & Castle - Waterloo – Tottenham Court Road | 24 hour | | 8 | 7.5 | 7.5 |
| **8** | Bow Church – Bank – Oxford Circus | 24 hour* | | 10 | 9 | 10 |
| **10** | Hammersmith – Oxford Circus – Kings Cross | 24 hour | | 7 | 7 | 7 |
| **14** | Putney – South Kensington – Tottenham Court Road | 24 hour | | 13 | 9 | 9 |
| **19** | Clapham Junction – Tottenham Court Road – Finsbury Park | 24 hour* | | 8 | 8 | 8 |
| **24** | Hampstead Heath – Warren Street Station - Pimlico | 24 hour | | 9 | 9 | 9 |
| **25** | Ilford – Bank – Oxford Circus | 24 hour | | 8 | 8 | 8 |
| **29** | Wood Green – Camden Town – Trafalgar Square | 24 hour* | | 15 | 12 | 12 |
| **38** | Victoria to Clapton Pond | 24 hour* | | 10 | 10 | 10 |
| | Victoria to Hackney | | | 18 | 18 | 18 |
| **55** | Leyton – Old Street – Oxford Circus | 24 hour* | | 10 | 10 | 10 |
| **73** | Stoke Newington – Islington – Kings Cross – Victoria | 24 hour* | | 18 | 12 | 18 |
| **98** | Willesden – Edgware Road – Tottenham Court Road | 24 hour* | | 9 | 9 | 9 |
| **134** | North Finchley – Archway – Camden Town – Shaftesbury Avenue | 24 hour | | 12 | 9 | 12 |
| **171** | Hither Green – Peckham – Camberwell – Tottenham Court Road | 24 hour* | | 7.5 | 7.5 | 7.5 |
| **176** | Penge – Camberwell – Waterloo – Tottenham Court Road | 24 hour | | 8.5 | 7.5 | 8.5 |
| **242** | Homerton – Shoreditch – Bank - Holborn | 24 hour | | 6.5 | 8 | 8 |
| **390** | Archway – Euston – Tottenham Court Road – Notting Hill | 24 hour | | 8 | 7.5 | 7.5 |
| **Total Bus service** | | | | **178** | **161** | **172** |

**Overnight service is provided by separate night bus route that covers the same route*

3.6. A bus spider map showing full route details of the routes is contained in **Appendix B.**

## Underground and National Rail Services

3.7. The Site has good access to nearby London Underground and National Rail services. Tottenham Court Road Underground station is the closest station, being a little over 300m from the Site linking to the central and northern lines. This station in the future will have a link to the Elizabeth line also known as Crossrail. Also relatively close by are Covent Garden, Leicester Square, and Piccadilly Circus Underground Stations.

3.8. TfL guidance recommends the maximum catchment area to access London Underground and National Rail services is 960m, which corresponds to a 12 minute walk. A summary of the London Underground services that can be readily accessed within a 960m walk are shown in **Table 2.**

Table 2 London Underground Summary Table

| Station | Distance from Site | Services | Route | AM trains per hour |
|---|---|---|---|---|
| Tottenham Court Road | 307m | LUL Central Line | Ealing Broadway or West Ruislip to Epping or Hainault | 32 |
| | | LUL Northern Line | Morden to Edgware, High Barnet or Mill Hill East | 23 |
| | | Elisabeth Line (Crossrail) | Reading to Shenfield or Abbey Wood | Up to 24 in central section |
| Covent Garden | 345m | LUL Piccadilly Line | Heathrow Airport or Uxbridge to Cockfosters | 23 |
| Leicester Square | 383m | LUL Northern Line | Morden to Edgware, High Barnet or Mill Hill East | 23 |
| | | LUL Piccadilly Line | Heathrow Airport or Uxbridge to Cockfosters | 23 |
| Piccadilly Circus | 710m | LUL Bakerloo Line | Elephant and Castle to Harrow & Wealdstone | 22 |
| | | LUL Piccadilly Line | Heathrow Airport or Uxbridge to Cockfosters | 23 |

3.9. In the above table, the number of trains per hour are for between 08:00 and 09:00 in busiest direction. All frequency data were taken from TfL's website.

3.10. There is one national rail station located within 960m of the Site; Charing Cross Station which links with the London Underground Northern Line. Charing Cross Station is located 763m to the south of the Site, which is an approximately 10 minute walk and provides services to south-eastern parts of London as well as Ashford, Tunbridge Wells, Dartford, Gravesend, Gillingham, Hayes, Sevenoaks, Hastings, Dover and Ramsgate. During the peak hours, Charing Cross Station is served by 24 trains per hour. Other London terminals are also accessible via the London Underground network.

## Pedestrian Environment

3.11. Walking is the primary mode of transport for a significant proportion of the existing visitors to the Site. In addition, the vast majority of local public transport service person trips need to be completed on foot and as such it is important that the Site is accessible. The Site also needs to be accessible for pedestrian modes from their start points to the building access.

3.12. The Site has good quality footways along its highway frontages. The footways form part of the safe pedestrian routes between the Site and bus stops and rail stations to access local services.

3.13. Shaftesbury Avenue and Charing Cross Road have relatively wide pedestrian footway on either side of their carriageway. Stacey Street and Phoenix Street have narrower footways, but still moderately wide pedestrian footways on either side of their carriageway. The footway on Phoenix Street is at the same level as the carriageway, which aids pedestrians crossing Phoenix Street and assist in the pedestrian demand generated by the theatre but are protected by bollards.

3.14. A signalised pedestrian crossing is located adjacent to the Site on Charing Cross Road, facilitating convenient pedestrian crossing across Charing Cross Road.

3.15. A Site visit during the PM peak showed that there is a high utilisation of the footpaths on Charing Cross Road and Shaftesbury Avenue, and low utilisation of the footpaths along Phoenix Street and Stacey Street. However, given the wide width of the footpaths there is capacity to accommodate more pedestrians.

3.16. There is good pedestrian signage to the Site. There are legible London signs located on the footpath of the south-eastern and north-eastern corners of Cambridge Circus that provide directions to the Site.

## Cycle Accessibility

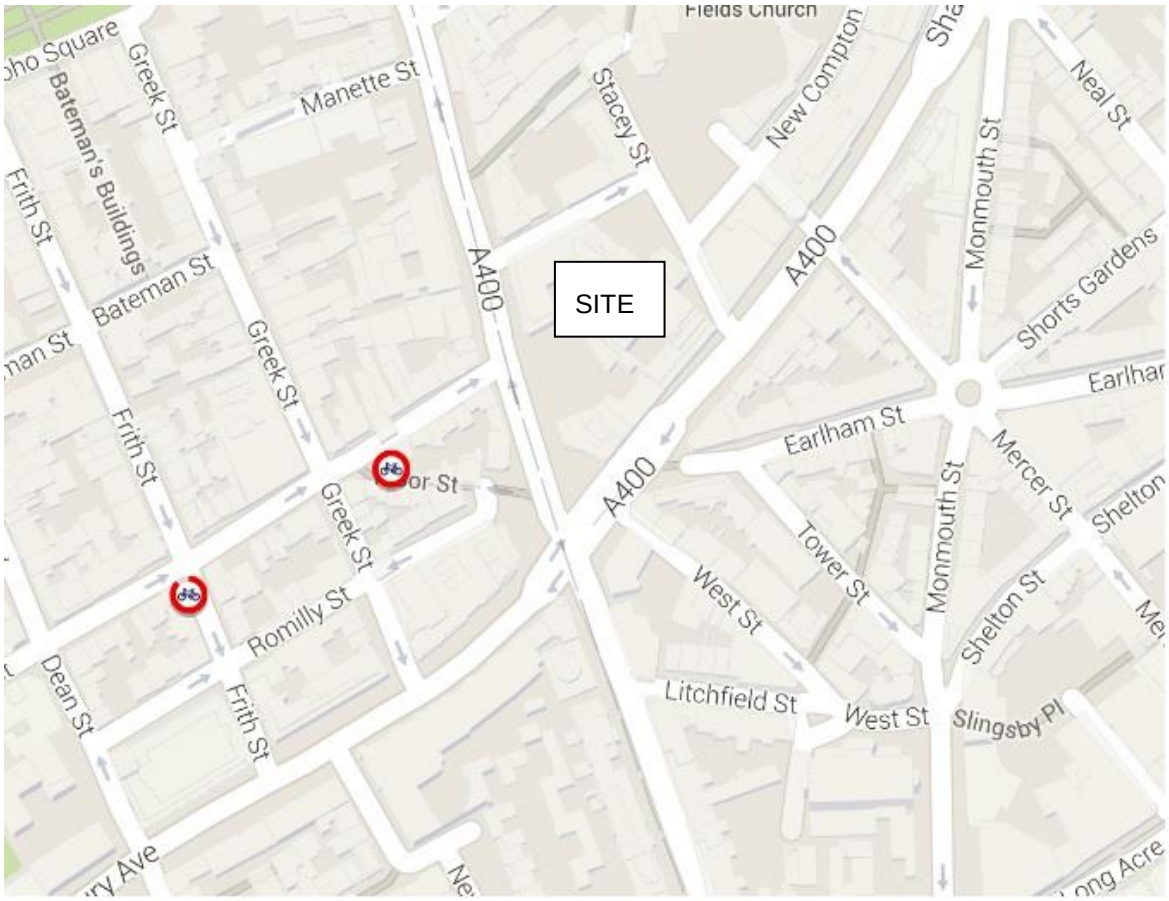
3.17. The Site has good access to a network of cycle routes. Signed cycle routes include Charing Cross Road, Moor St, West Street and Tower Street, all of which are adjacent or in close proximity of the Site. These signed cycle routes link the Site to other parts of Central London including the City of London, Waterloo, London Bridge, Kings Cross and Kensington.

3.18. A detailed map showing cycle routes to the Site are provided in **Appendix C**.

3.19. There are four Sheffield cycle stands located on the footpath on Stacey Street, providing parking for eight bicycles.

3.20. TfL Santander Cycle Hire docking stations are located close to the Site on Moor Street and Frith Street. Moor Street docking station has docking space for 15 bicycles while the Frith Street docking station has docking space for 14 bicycles. **Figure 4** shows the location of these TfL Santander Cycle Hire docking stations.

Figure 3 Location of nearby TfL Santander Cycle facilities (shown by the red bike signs)



## Highway Network

3.21. The Site is bounded by Shaftesbury Avenue, Charing Cross Road, Stacey Street and Phoenix Street. The Site is near Cambridge Circus, a busy signal controlled junction with high pedestrian movements where Charing Cross Road and Shaftesbury Avenue intersect.

3.22. Shaftesbury Avenue consists of wide single lanes in each direction. Charing Cross Road consists of two northbound traffic lanes, and a single bus contraflow lane in the southbound direction, but it is currently subject to works in conjunction with the Tottenham Court Road Crossrail scheme.

3.23. Stacey Street consists of single narrow lanes in each direction. Phoenix Street is an eastbound one way street with the pavements protected by bollards. All of the above roads have double yellow lines on either side of their carriageways.

3.24. Stacey Street is two way from Shaftsbury Avenue connecting with New Compton Street. New Compton Street is a one-way southbound road, and serves as one of the main routes for delivery vehicles to the Site.

3.25. There are a number of parking spaces on Stacey Street to the north-east of the Site and on New Compton Street to the east of the Site. However, these spaces are limited to residents' parking.

3.26. Loading and unloading is possible on Phoenix Street and for a limited time on Stacey Street. However, it is not generally permitted on Charing Cross Road and Shaftesbury Avenue.

3.27. 10 motorcycle parking spaces are provided close to the Site on New Compton Street.

3.28. There are several highway improvements proposed for the area including proposals to improve Cambridge Circus with new pedestrian crossing facilities based on a similar design to the Oxford Circus proposals. As part of Camden's West End Project, Princes Circus will also be improved for cyclists and pedestrians.

3.29. The Site has an existing basement car park accessed via a ramp from Stacey Street, as shown on the image in **Plate 1**. The basement car park contains approximately 21 numbered parking spaces, or which 15 are operational, situated over two levels and connected by ramps. Adjacent to the car park is also an existing on-site service yard which is also accessed from Stacey Street, as shown on the Plate **2 image**.

Plate 1 Existing Vehicular Access to Basement Car Park

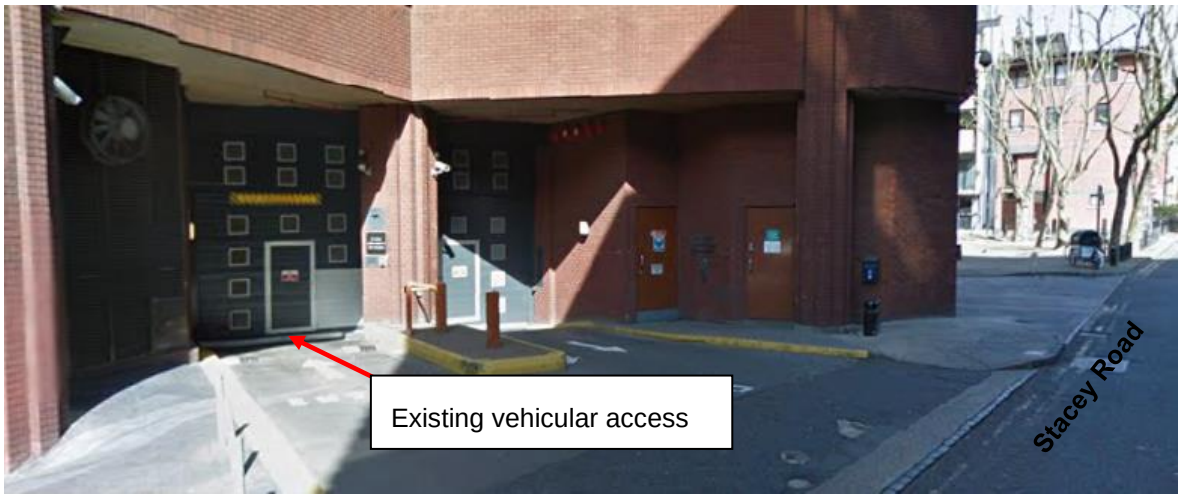


Plate 2 125 Shaftesbury Avenue servicing area on Stacey Street


3.30. The above shown the reversing manoeuvre used to access the existing serving bay.

# 4. Development Proposals

## Proposed Quantum

4.1. The development proposals consist of the remodelling, refurbishment and extension of existing office and retail building (Class B1/A1/A3/Sui Generis), including terraces, a new public route, a relocated office entrance (Charing Cross Road), rooftop plant and flexible retail uses (Classes A1/A3), along with associated highway, landscaping and public realm improvements. On the ground floor some of the existing retail floor space would be removed to provide an expanded lobby area for the office floor space that would front onto Charing Cross Road. The other ground floor retail units would be refurbished into flexible A1 (non-food)/A3 retail units. Full details are given in the planning drawings. The existing and proposed land uses associated with the Development are shown in **Table 3** on a GEA basis and excluding the plant, servicing and BoH areas in the basement and on floor 7 as required for cycle parking and transport trip generation calculations.

Table 3 Existing and Proposed Area Quantum (GEA)

| | Existing | Proposed | Net Change |
|---|---|---|---|
| B1 Office | 16,754m$^2$ | 26,013m$^2$ | +9,259m$^2$ |
| A1(non-food) - A3 Retail | 3,509m$^2$ | 2,138m$^2$ | -1,371m$^2$ |

* excludes servicing plant BOH at basement and floor 7 levels

4.2. For further details regarding the proposed modifications of 125 Shaftesbury Avenue please refer to the Architects drawings submitted with the application. Of particular note is the new pedestrian link from Stacey Street to Charing Cross Road, the extensive basement cycle parking, changes to the servicing bay and ramp changes.

4.3. The Development would include the retention of two of the existing car parking bays within the existing basement car park. The Development would also include a van servicing bay in the basement.

## Pedestrian Access

4.4. The main pedestrian access to the office element of the Development would be relocated from Shaftesbury Avenue to Charing Cross Road, with access into the reception area from the new pedestrian route. The ground floor retail units would front onto Shaftesbury Avenue, Charing Cross Road Phoenix Street, and Stacey Street and into the new pedestrian route. The primary pedestrian access into the building would be manned at all times. Access to the office would be restricted via card-operated turnstiles.

4.5. All pedestrian surfaces and entrances have been designed to accommodate wheelchair users.

4.6. Access to the office building would also be available from the new footway linking Charing Cross Road and Stacey Street.

## Cycle Parking

4.7. The number of cycle parking spaces required for the Development accords with the LBC's policy requirements and are set out below. The total cycle spaces proposed for the office and retail element of the Development are shown in **Table 4 overleaf**.

Table 4 Camden Cycle Parking Standards

| | Quantum | Short Stay | Long Stay | Total |
|---|---|---|---|---|
| B1 Office | 26,013 | 4 | 102 | 106 |
| A3 Retail | 2,138 | 7 | 7 | 14 |
| Total | | 11 | 109 | 120 |

However to meet the developers aspirations in terms of cycle parking it is intended to provide the cycle standard tabulated below.

Table 5 Cycle Parking Provision

| | Quantum | Short Stay | Long Stay | Total |
|---|---|---|---|---|
| B1 Office | 26,013m$^2$ GEA | 4 | 280 | 284 |
| A3 Retail | 2,138m$^2$ GEA | 7 | 12 | 19 |
| Total | | 11 | 292 | 303 |

4.8. Table 5 shows that the Development would include the provision of 303 cycle spaces (of which 292 would be for staff, and 11 for visitors, with the visitors' spaces being generally external to the Site). In total the cycle parking provision exceeds the LBC requirement by 183 spaces, to meet the client's expectations, good practice and British Council for Offices guidance. Full details are given on the planning drawings.

4.9. It should be noted that all the spaces would comply with Camden Cycle parking layout design guidance as provided in LBC's Planning Guidance Transport CPG7.

4.10. The long stay cycle parking would be provided in a storage room, located in the basement and accessed from Stacey Street via the initial part of the existing vehicle ramp. The existing ramp gradient is between 1 in 10 and 1 in 10.5 with a ramp length of 26 metres.

4.11. Motor vehicle ramps are frequently used for cycle access in central London, indeed site visits to 125 Shaftesbury Avenue show that cyclists currently use the ramp to access cycle parking on the ramp in the existing basement. There is also a useful run off area at the bottom of the ramp around 15m long assisting the use of the ramp by cyclists.

4.12. Given that 292 long stay cycle spaces are proposed, this number of spaces (well in excess of LBC's standards) is not conducive to access by lift use in capacity terms, and the existing vehicle ramp will be used for cycle access as is common in central London. However, to mitigate any perceived problems due to the ramp gradient the following features would be incorporated onto the ramp design.

a) Signage encouraging cyclist to dismount on the ramp.

b) A demarcated pedestrian / cycle lanes on the southern part of the ramp using an appropriate cycle-friendly surfacing.

c) Signing giving cyclist's priority over vehicles.

d) Audible or illuminated warning for vehicles not to use the ramp when cyclist or pedestrians are doing so.

e) Preventing vehicle deliveries via the basement ramp between 08:00 and 09:00 and 17:00 to 18:00 hours to prioritise cyclist movement and avoid cycle vehicle conflict in these periods via a service and delivery plan.

4.13. Male and female showers, changing rooms and locker facilities are to be provided in the basement that can be used by cyclists. A dedicated staircase would link the cycle store room to the ground floor reception at which the office entrance security control procedures would be implemented.

4.14. It is currently envisaged that the short stay / visitor cycle parking would be located at street level in the landscaping area external to the Development around Stacey Street containing six stands.

4.15. Cyclists will access the office floor space from the main stairs / lift, and then be screened in the main lobby before continuing to the office accommodation.

## Car Parking

4.16. The Development would include the retention of two existing car parking spaces, a lease requirement, and an internal delivery bay in the basement, accessed directly from Stacey Street. To allow for the construction of the new pedestrian link, the existing two way car park ramp would be narrowed at its entrance. The vehicle access would be controlled by a new traffic light system, which would enable the two-way movement of vehicles for the small number of veheicle movements generated (4 to 6 per hour). The car park would accommodate two parking bays, servicing and operational needs. The maximum size good vehicles which could access the basement car park would be a 4.6m Light Goods Van (LGV). Tracking associated with the basement car park is shown in **Appendix D**.

## Servicing and Refuse

4.17. The majority of office servicing and all refuse collection would take place from a new service yard entrance accessed directly from Stacey Street, adjacent to the existing car park entrance. Moving the service yard is necessary due to the new pedesrain route from Stacey Street to Charing Cross Road. Tracking associated with the service yard is shown in **Appendix D**. For the service yard a 7.5m Panel van was used, which can be held within the yard. The access would, as shown on the tracking drawings, require the service vehicle to approach from the north; generally via New Compton Street into Stacey Street, and then reverse in. This manouvre could be undertaken by a 10m vehicle but such a vehicle would require that the service yard doors remain open.

4.18. The revised service yard, as at present, would incorporate sufficient space for a waste compactor. The compactor would be collected by a skip lorry and again as shown on the drawings, this would require a reversing manoeuvre.

4.19. Additional servicing would be provided in the basement car park area which could accommodate LGVs. This would be particularly useful for servicing the retail units on Charing Cross Road, which can be accessed from the basement via a servicing lift.

4.20. All servicing would be managed through the implementation of a Service Delivery Plan.

4.21. Waste would be stored within the proposed servicing bay at ground floor level, accessed from Stacey Street.

4.22. Non-recyclable waste would be compacted; however, recyclable waste would need to be stored in 1,100 litres Eurobins or wheelie bins.

4.23. As the Development is essentially a refurbishment scheme, it is intended that the retail units would use the existing waste collection arrangements incorporated into the Service Delivery Plan.

4.24. On the day of waste collection, the service manager would transport waste to the refuse store on foot. The types of refuse i.e. non-recyclables, recyclable materials and food recyclables would be selected and placed in their own separate Eurobin(s), wheelie bins or waste compactor.

4.25. The Service Manager would supervise the refuse vehicle loading at all times to ensure that it does not conflict with other vehicular movements along Stacey Street.

# 5. Trip Generation – Net Change

## Net Change Floor Areas

5.1. This section considers the net change in trips generated by the Development. As summarised in **Table 4.1**, the Development proposes to provide:

- 9,259m$^2$ GEA net increase in B1 floor space; and
- 1,371m$^2$ GEA net decrease in retail floor space (figures exclude servicing, plant and BOH

## Future Office

5.2. The net change in future office trips was derived from first principles.

5.3. The Site proposes to increase the B1 office floor space by 9,259m$^2$ (refer to **Table 3**).

5.4. The existing floor areas provide space for approximately 1,166 office employees. Following the Development there would be capacity for 1,632 office employees. The increase in the number of office workers would be 466. There would be a small reduction in retail staff, which was not accounted for to ensure robust analyses.

5.5. It is reasonable to assume that 85% of the current workforce would be at work on any given weekday, of which 55% would arrive in the AM peak hour and 10% would depart in the AM peak hour. It is assumed that in the evening peak the arrival and departure profiles would be reversed. These values have been accepted by TfL and central London Planning Authorities on other planning applications.

5.6. Applying the above factors results in the Development generating a net increase of 257 two-way total person trips in both the AM and PM peak hour periods. Further details are provided in **Table 6.**

Table 6 Net Change in total person trips

| Mode | AM Peak Hr | | | PM Peak Hr | | |
|---|---|---|---|---|---|---|
| | In | Out | 2-way | In | Out | 2-way |
| Total Person | 218 | 39 | 257 | 39 | 218 | 257 |

5.7. The total person trips were assigned to modes of transport based on 'Census Journey Method of Travel to Work - Daytime Population' for the Holborn and Covent Garden Ward, within which the Site is located. The car mode split data were adjusted to reflect the two parking spaces proposed and to account for an increase in the cycling mode. The final mode share is shown in **Table 7**.

Table 7 Census Journey to Work Mode Share

| Mode | Census Mode Share | Re-adjusted Car Driver and Cyclist |
|---|---|---|
| Car Driver | 9.5% | 0.4% |
| Car Passenger | 0.9% | 0.0% |
| Motor Cycle | 2.0% | 2.2% |
| Pedal Cycle | 2.6% | 6.0% |
| Taxi | 0.5% | 0.5% |
| Underground | 35.2% | 36.0% |
| Rail | 36.1% | 40.1% |
| Bus | 9.2% | 10.2% |
| Walk | 4.1% | 4.6% |
| Total Person | 100.0% | 100.0% |

5.8. The above mode shares were applied to the total person trips set out **Table 6** to derive the net change in multi-modal trips, as detailed in **Table 8**. Full calculations are contained in **Appendix E.**

Table 8 Net Change, B1 Multi- Modal Trips

| Mode | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|
| | In | Out | 2-way | In | Out | 2-way |
| Car Driver | 1 | 0 | 1 | 0 | 1 | 1 |
| Car Passenger | 0 | 0 | 0 | 0 | 0 | 0 |
| Motor Cycle | 5 | 1 | 6 | 1 | 5 | 6 |
| Pedal Cycle | 13 | 2 | 15 | 2 | 13 | 15 |
| Taxi | 1 | 0 | 1 | 0 | 1 | 1 |
| Underground | 78 | 14 | 92 | 14 | 78 | 92 |
| Rail | 87 | 16 | 103 | 16 | 87 | 103 |
| Bus | 22 | 4 | 26 | 4 | 22 | 26 |
| Walk | 10 | 2 | 12 | 2 | 10 | 12 |
| **Total Person** | **218** | **39** | **257** | **39** | **218** | **257** |

## Future Retail

5.9. The Development would include a reduction in the existing retail space by 1371m$^2$. The number of retail trips would therefore be reduced. Subsequently, to ensure that a worst case scenario was assessed, no trip generation exercise was undertaken for this retail element. Furthermore, the future retail trips would be predominantly pedestrian pass-by or linked trips and would be unlikely to be significant within the peak periods.

# 6. Servicing Trips

6.1. The future servicing trips associated with the Development were derived from the TRAVL database. The methodology applied is set out below.

## Office Servicing Trips

6.2. The TRAVL database was consulted to establish the trips associated with the existing and future B1 office floor space. Sites within the database have been selected fulfilling the following criteria:

- GFA: between 300 to 6,350m$^2$;
- Survey Year: 2004+; and
- Location: London.

6.3. The sites selected using the above criteria, together with their vehicular servicing trip rate, are shown in **Appendix E**. The average trips rates associated with the selected sites are summarised in Table 9 and were applied to the existing and future floor area to derive the net change in service trips.

Table 9 Net Change in Daily B1 Office Deliveries

| Daily Service Trips | LGVs | Existing | Future | Net Change |
|---|---|---|---|---|
| Office Trip Rate (per 100m$^2$) | 0.26 | 44 | 68 | 24 |

6.4. Table 9 shows that the Office Development would result in a net increase of 24 daily deliveries, equating to two to three additional office deliveries per hour.

## Retail Servicing Trips

6.5. The Development proposes to provide 2,138m$^2$ A1 (non-food) / A3 flexible retail land uses. To ensure that a worst case scenario was assessed, it was assumed that all of this land use would be A3 café / restaurant as this would be the most significant retail trip generator.

6.6. The TRAVL database was examined for similar A3 retail Sites comprising:

- GFA: 200-500m$^2$;
- Survey Date: 2003+; and
- Location: London.

6.7. The sites selected using the above criteria, together with their vehicular servicing trip rate, are shown in **Appendix E**. The average trips rates associated with the selected sites are summarised in the Table 10 and were applied to the existing and future floor areas.

Table 10 Net Change in Daily Retail Deliveries

| Daily Service Trips | LGVS | Existing | Future | Net Change |
|---|---|---|---|---|
| Retail Trip Rate (per 100m$^2$) | 0.5 | 18 | 11 | -7 |

6.8. Table 10 shows that Development would result in a net decrease in seven daily retail trips.

## Total Net Change

6.9. Through the addition of the trips given in Table 9 and 10 in the net change column it is evident that the Development would only result in a net increase of seventeen delivery trips (24-7) throughout the day: this would result in less than two additional delivery trips per hour. All office deliveries would be undertaken within the service yard, with additional servicing being accommodated within the basement. Deliveries would be controlled and managed through the implementation of a Service Delivery Plan.

6.10. Given the above and that the only other powered vehicular use of the ramp is due to the two parking spaces. No more than 4 to 6 vehicles per hour should use the ramp.

# 7. Impact Assessment

7.1. The Development would result in a net increase of 12 two-way pedestrian trips in AM and PM peak hours, with a further 221 two-way trips forecast between the Development and the nearby bus stops, rail and underground stations during these periods. A total of 233 additional pedestrian trips would therefore be generated during the AM and PM peak hours.

7.2. Pedestrian facilities within the vicinity of the Site currently provide safe access on foot to the main pedestrian desire lines, which include local bus stops and key London Underground and National Rail Stations such as Leicester Square, Tottenham Court Road, Holborn, Piccadilly Circus and Charing Cross.

7.3. The pedestrian environment within the Development would be of high quality, with the provision of an attractive open spaces, and a well maintained and legible footway linking Charing Cross Road and Stacey Street that would be illuminated and allow for surveillance.

7.4. The Development would be fully compliant with the 5 C's criteria set out within 'The Walking Plan for London' (The 5 'Cs' are connected, convivial, conspicuous, comfortable, and convenient). The Site is easily accessible on foot and reducing car dependency by facilitating pedestrian trips to jobs, education and health facilities, shopping, leisure and local services.

7.5. The Development would provide a new pedestrian route connecting Stacey Street and Charing Cross Road, as promoted by LBC, to benefit pedestrian movement in the area.

## Cycle

7.6. The Development would generate an additional 15 two-way cycle trips in the AM and PM peak hours in the initial forecast, in addition to 46 trips from the existing workforce numbers; 61 in total, although this should further increase over time.

7.7. The Development includes the provision of 303 cycle parking spaces, which is well in excess of LBC standards as prescribed by LBC's cycle parking layout specifications, which in turn should encourage future employees to travel by this mode. Of these, 292 would be long stay spaces accessed via a ramp from Stacey Street that would be suitably demarcated and controlled to prioritise cycle movement.

7.8. Given the extensive cycle network in the area, the additional impact resulting from the increase in cyclists to and from the Development would not be significant. Therefore, no further mitigation measures are required.

## Bus

7.9. The Development would generate 26 two-way trips in the AM and PM peak hours.

7.10. Given that there are 178 buses serving the Site in the peak hours, the additional bus trips generated by the Development would result in less than one additional passenger per bus.

7.11. The existing bus services within the vicinity of the Development could easily accommodate the additional bus trips. The Development would therefore have a negligible impact on the existing bus network. No mitigation measures would be required.

## Underground

7.12. A total of 92 two-way underground trips in the AM and PM peak hours are forecast to be generated as a result of the Development.

7.13. The Development would be within convenient walking distance to several London Underground Stations, providing access to the Northern, Central, Piccadilly and Bakerloo lines and would benefit from the new link to Crossrail ( recently renamed the Elizabeth line) at Tottenham Court Road station. Therefore, no mitigation measures would be required.

## National Rail

7.14. A total of 103 two-way rail trips in the AM and PM peak hours are forecast to be generated as a result of the Development. Given that there are 24 trains per hour servicing the nearest station to the site at Charing Cross, the Development would have a negligible impact on existing rail services.

7.15. Rail services in the area would be significantly enhanced with the completion of the Elizabeth Line (Crossrail). The nearest Elizabeth station to the Development would be Tottenham Court Road, which is approximately 300m to the north. From here the Elizabeth line would link to, amongst other destinations, Reading, Heathrow Airport, Maidenhead, Slough, Ealing, Paddington Station, Liverpool Street Station, Stratford, Canary Wharf, Shenfield and Abbey Wood.

## Highway Network

7.16. The Development would result in a significant reduction in car parking by 13 spaces, with an associated reduction in traffic movements. Only two car parking spaces would be provided to accommodate a lease requirement. The only additional vehicular trips would be servicing vehicles, which are predicted to increase by 17 daily deliveries per day, equating to less than two additional deliveries per hour.

7.17. The Development would provide an off-street service yard at surface level, and a basement delivery bay.

7.18. The servicing of the Development would be managed through the implementation of a Service Delivery Plan.

7.19. The Development would therefore have a negligible impact on the existing highway network. Therefore, no mitigation measures would be required.

# 8. Conclusions

8.1. This Transport Assessment sets out the transport implications of the proposed remodelling, refurbishment and extension of 125 Shaftesbury Avenue.

8.2. The development proposals consist of the remodelling, refurbishment and extension of existing office and retail building (Class B1/A1/A3/Sui Generis), including terraces, a new public route, a relocated office entrance (Charing Cross Road), rooftop plant and flexible retail uses (Classes A1/A3), along with associated highway, landscaping and public realm improvements. In total, the Development would result in the net increase in 9,259m$^2$ GEA of B1 office floor space, and a net reduction in 1,371m$^2$ GEA of retail floor space, excluding basement, plant and BoH areas in the basement and on floor 7 that will not act as transport trip generators.

8.3. An important transport features of the Development is a new pedestrian link from Stacey Street to Charing Cross Road.

8.4. The above requires amendments to the existing surface loading bay and to the existing internal vehicle ramp which would require traffic light control and shuttle working, this is primarily due to the space constraints caused by the new pedestrian route through the Development.

8.5. The Development would have excellent Public Transport access, with a PTAL of 6B and would be served by numerous bus routes and four London Underground stations, including the closest at Tottenham Court Road, and the National Rail station at Charing Cross. The trip generation would therefore not have a significant adverse impact on the surrounding transport systems.

8.6. The existing Site has some 21 numbered car parking spaces with 15 being used for car parking and the rest filled in for other uses. In the Development the basement car park would essentially be closed, apart from two spaces for a lease requirement. Access to the basement car park would be controlled via traffic lights to ensure incoming and exiting vehicles do not conflict, as the new pedestrian link requires the narrowing of the top section of the ramp to accommodate shuttle working.

8.7. Currently, the Site has an internal vehicle servicing yard that is accessed from Stacey Street, while a vehicle ramp leading to the basement area is also used for some office and retail deliveries. The ground level servicing bay would be relocated to the north of the current loading bay with access taken from Stacey Street. The Development would result in the net increase in seventeen daily deliveries, which would equate to less than two per hour. All servicing would be managed through the implementation of a Service Delivery Plan using the tracked manoeuvres shown in **Appendix D**. These manoeuvres are similar to those already carried out at the site.

8.8. Cycle parking would be located in a basement cycle room. The 303 cycle parking spaces, well in excess of the 120 cycle parking spaces required by LBC, would be accessed via a signal controlled ramp from Stacey Street using the existing vehicle ramp structure for access. Of these, 292 spaces would be long term spaces and 11 short term external spaces.

8.9. The existing vehicle ramp has a gradient of between 1in 10 and 1 in 10.5. While the use by cyclists of such gradients on existing ramps designed for motor vehicles is common in central London to alleviate any concerns cyclists may have regarding the is gradient signs advising cyclists to dismount would be located on the ramp. In addition on the southern side of the ramp would be a demarcated pedestrian/cycle route and the Developments Service Delivery Plan would prevent deliveries at times of peak cycle use.

8.10. In section of 7 of this report, it is shown that the excellent surrounding transport networks would not require any mitigation measures to accommodate the Development's trip generation, in terms of Bus, London Underground and National Rail trips. Furthermore, the highway network would benefit from

the loss of 13 car parking spaces, with the removal of these spaces being compliant with LBC policy. The relatively small number of additional delivery movements (17 per day) would not have a significant impact on the highway network. The Development would generate additional cycle and pedestrian traffic but again, this would be accommodated on the existing networks.

8.11. In conclusion, the overall transport-related impacts of the proposed Development would be negligible in comparison to existing background demand. The proposed scheme meets the transport aspirations of current guidance in respect of sustainable development and LBC's expectations for a development of this nature.

# APPENDICES

**Appendices**

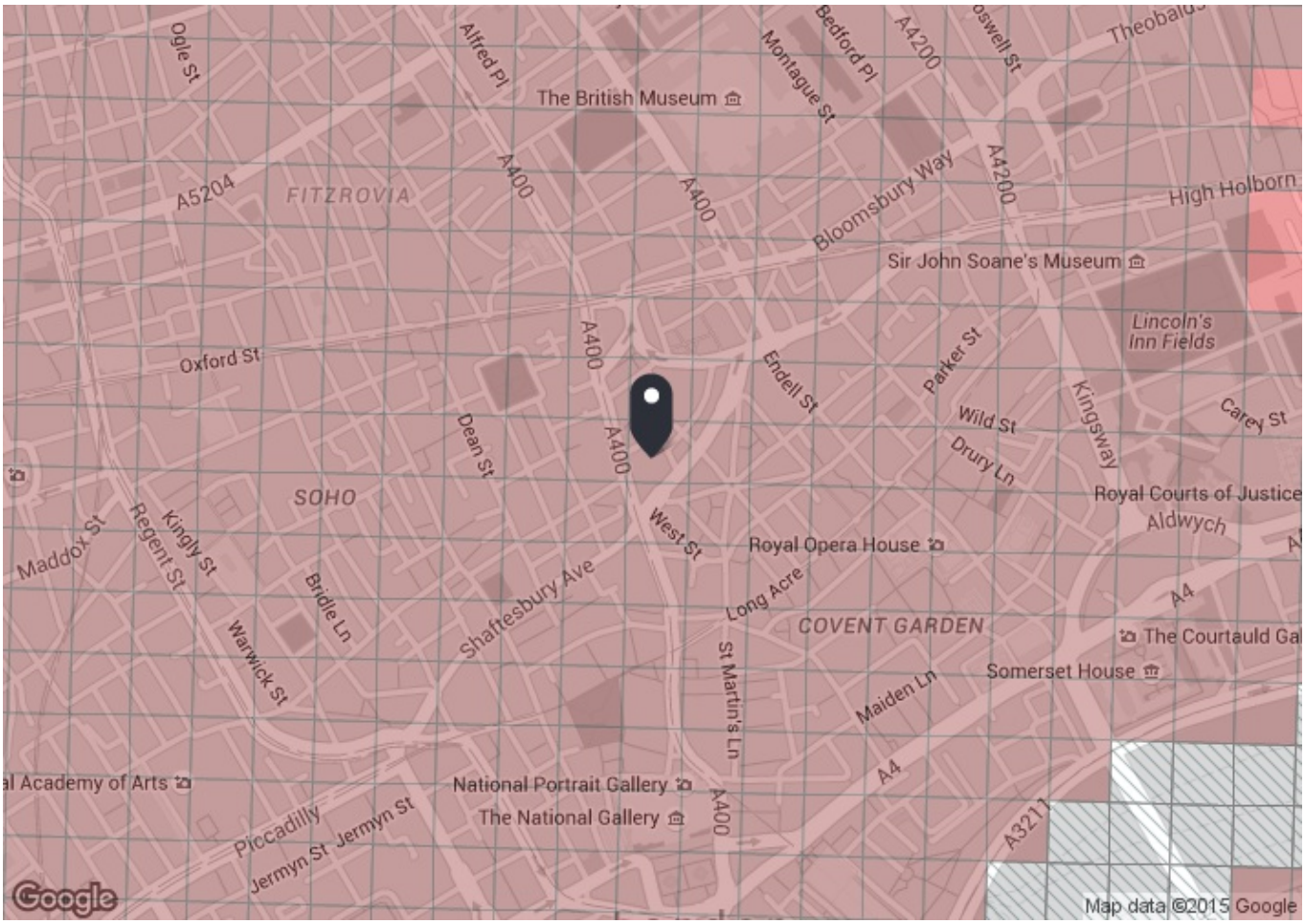
125 Shaftesbury Avenue, WC2H 8AD

Project Number: WIE10216

Document Reference: WIE10216-102-003TR

# A. PTAL

TRANSPORT FOR LONDON




PTAL output for 2011 (Base year)

**6b**

123 Shaftesbury Ave, London WC2H 8AD, UK

Easting: 529937, Northing: 181126

Grid Cell: 83811

Report generated: 29/09/2015

**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

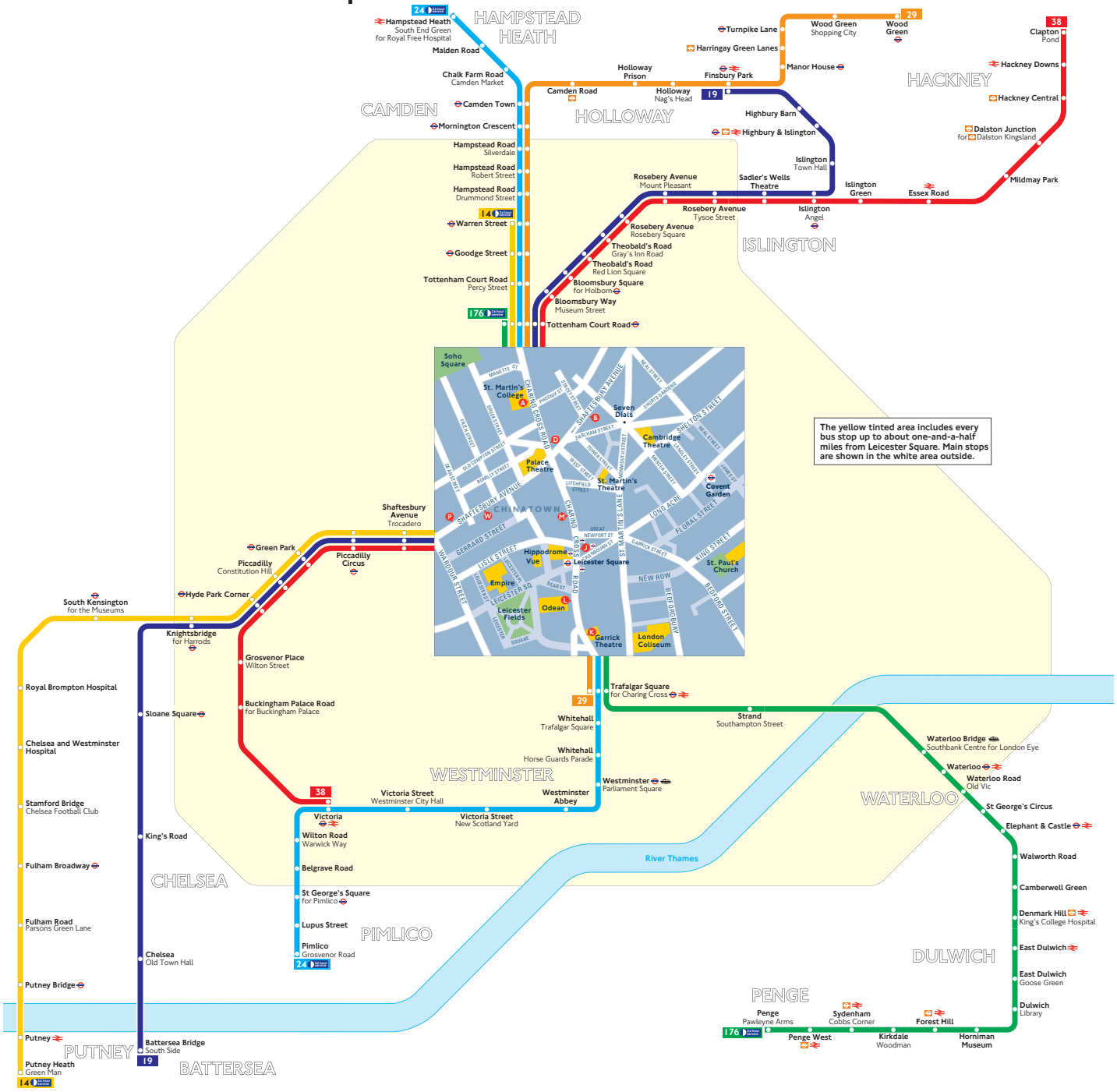
| Mode | Stop | Route | Distance (metres) | Frequency(vph) | Walk Time (mins) | SWT (mins) | TAT (mins) | EDF | Weight | AI |
|---|---|---|---|---|---|---|---|---|---|---|
| Bus | SHAFTESBURY AVE FRESHWAT | 38 | 61.76 | 10 | 0.77 | 5 | 5.77 | 5.2 | 0.5 | 2.6 |
| Bus | SHAFTESBURY AVE FRESHWAT | 14 | 61.76 | 13 | 0.77 | 4.31 | 5.08 | 5.91 | 1 | 5.91 |
| Bus | SHAFTESBURY AVE FRESHWAT | 19 | 61.76 | 8 | 0.77 | 5.75 | 6.52 | 4.6 | 0.5 | 2.3 |
| Bus | BLOOMSBURY NEW OXFORD ST | 171 | 436.77 | 7.5 | 5.46 | 6 | 11.46 | 2.62 | 0.5 | 1.31 |
| Bus | FOYLES/CAMBRIDGE CIRCUS | 24 | 109.03 | 10 | 1.36 | 5 | 6.36 | 4.71 | 0.5 | 2.36 |
| Bus | FOYLES/CAMBRIDGE CIRCUS | 29 | 109.03 | 15 | 1.36 | 4 | 5.36 | 5.59 | 0.5 | 2.8 |
| Bus | FOYLES/CAMBRIDGE CIRCUS | 176 | 109.03 | 8.5 | 1.36 | 5.53 | 6.89 | 4.35 | 0.5 | 2.18 |
| Bus | TOTTENHAM COURT RD STAND | 1 | 329.14 | 8 | 4.11 | 5.75 | 9.86 | 3.04 | 0.5 | 1.52 |
| Bus | NEW OXFORD ST CENTRE PNT | 10 | 390.79 | 4.5 | 4.88 | 8.67 | 13.55 | 2.21 | 0.5 | 1.11 |
| Bus | NEW OXFORD ST CENTRE PNT | 8 | 390.79 | 10 | 4.88 | 5 | 9.88 | 3.03 | 0.5 | 1.52 |
| Bus | NEW OXFORD ST CENTRE PNT | 98 | 390.79 | 9 | 4.88 | 5.33 | 10.22 | 2.94 | 0.5 | 1.47 |
| Bus | NEW OXFORD ST CENTRE PNT | 390 | 390.79 | 8 | 4.88 | 5.75 | 10.63 | 2.82 | 0.5 | 1.41 |
| Bus | NEW OXFORD ST CENTRE PNT | 73 | 390.79 | 18 | 4.88 | 3.67 | 8.55 | 3.51 | 0.5 | 1.75 |
| Bus | NEW OXFORD ST CENTRE PNT | 25 | 390.79 | 8 | 4.88 | 5.75 | 10.63 | 2.82 | 0.5 | 1.41 |
| Bus | NEW OXFORD ST CENTRE PNT | 55 | 390.79 | 10 | 4.88 | 5 | 9.88 | 3.03 | 0.5 | 1.52 |
| Bus | ST GILES HIGH STREET | 134 | 291.43 | 12 | 3.64 | 4.5 | 8.14 | 3.68 | 0.5 | 1.84 |
| Bus | ST GILES HIGH STREET | 242 | 291.43 | 6.5 | 3.64 | 6.62 | 10.26 | 2.92 | 0.5 | 1.46 |
| LUL | Piccadilly Circus | 'QueensPk-El&Castle' | 709.54 | 11.01 | 8.87 | 3.47 | 12.34 | 2.43 | 0.5 | 1.22 |
| LUL | Piccadilly Circus | 'El&Castle-Harrow&W' | 709.54 | 5.67 | 8.87 | 6.04 | 14.91 | 2.01 | 0.5 | 1.01 |
| LUL | Piccadilly Circus | 'StbridgePk-El&Castle' | 709.54 | 5 | 8.87 | 6.75 | 15.62 | 1.92 | 0.5 | 0.96 |
| LUL | Piccadilly Circus | 'Waterloo-QueensPk' | 709.54 | 1 | 8.87 | 30.75 | 39.62 | 0.76 | 0.5 | 0.38 |
| LUL | Piccadilly Circus | 'Waterloo-Harrow&W' | 709.54 | 0.33 | 8.87 | 91.66 | 100.53 | 0.3 | 0.5 | 0.15 |
| LUL | Leicester Square | 'Cockfosters-LHRT4LT' | 382.63 | 4.67 | 4.78 | 7.17 | 11.96 | 2.51 | 0.5 | 1.25 |
| LUL | Leicester Square | 'RayLane-Cockfosters' | 382.63 | 3.67 | 4.78 | 8.92 | 13.71 | 2.19 | 0.5 | 1.09 |
| LUL | Leicester Square | 'LHRT4LT-ArnosGrove' | 382.63 | 4.67 | 4.78 | 7.17 | 11.96 | 2.51 | 0.5 | 1.25 |
| LUL | Leicester Square | 'ArnosGrove-RayLane' | 382.63 | 0.33 | 4.78 | 91.66 | 96.44 | 0.31 | 0.5 | 0.16 |
| LUL | Leicester Square | 'ArnosGrove-Nthfields' | 382.63 | 3 | 4.78 | 10.75 | 15.53 | 1.93 | 0.5 | 0.97 |
| LUL | Leicester Square | 'Nthfields-Cockfoster' | 382.63 | 1 | 4.78 | 30.75 | 35.53 | 0.84 | 0.5 | 0.42 |
| LUL | Leicester Square | 'LHRT5-Cockfosters' | 382.63 | 6 | 4.78 | 5.75 | 10.53 | 2.85 | 0.5 | 1.42 |
| LUL | Leicester Square | 'Uxbridge-Cockfosters' | 382.63 | 3.67 | 4.78 | 8.92 | 13.71 | 2.19 | 0.5 | 1.09 |
| LUL | Leicester Square | 'Ruislip-Cockfosters' | 382.63 | 2.33 | 4.78 | 13.63 | 18.41 | 1.63 | 0.5 | 0.81 |
| LUL | Leicester Square | 'ArnosGrove-Uxbridge' | 382.63 | 1 | 4.78 | 30.75 | 35.53 | 0.84 | 0.5 | 0.42 |
| LUL | Leicester Square | 'Oakwood-Uxbridge' | 382.63 | 0.33 | 4.78 | 91.66 | 96.44 | 0.31 | 0.5 | 0.16 |
| LUL | Leicester Square | 'Oakwood-Ruislip' | 382.63 | 0.33 | 4.78 | 91.66 | 96.44 | 0.31 | 0.5 | 0.16 |
| Rail | Charing Cross | 'BRNHRST-CHRX 1C90' | 762.81 | 0.67 | 9.54 | 45.53 | 55.06 | 0.54 | 0.5 | 0.27 |
| Rail | Charing Cross | 'GRVSEND-CHRX 1D50' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'GLNGHMK-CHRX 1D52' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'GLNGHMK-CHRX 1D54' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-HASTING 1H10' | 762.81 | 0.67 | 9.54 | 45.53 | 55.06 | 0.54 | 0.5 | 0.27 |
| Rail | Charing Cross | 'CHRX-HASTING 1H24' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'HASTING-CHRX 1H52' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'OREE-CHRX 1H68' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'HASTING-CHRX 1H90' | 762.81 | 0.67 | 9.54 | 45.53 | 55.06 | 0.54 | 0.5 | 0.27 |
| Rail | Charing Cross | 'OREE-CHRX 1H92' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'HAYS-CHRX 1K90' | 762.81 | 1.33 | 9.54 | 23.31 | 32.84 | 0.91 | 0.5 | 0.46 |
| Rail | Charing Cross | 'ASHFKY-CHRX 1W90' | 762.81 | 0.67 | 9.54 | 45.53 | 55.06 | 0.54 | 0.5 | 0.27 |
| Rail | Charing Cross | 'DOVERP-CHRX 1W92' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'RAMSGTE-CHRX 1W94' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'GLNGHMK-CHRX 2A08' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'GRVSEND-CHRX 2A22' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'SLADEGN-CHRX 2B14' | 762.81 | 2 | 9.54 | 15.75 | 25.29 | 1.19 | 0.5 | 0.59 |
| Rail | Charing Cross | 'GRVSEND-CHRX 2C06' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'DARTFD-CHRX 2C08' | 762.81 | 2.33 | 9.54 | 13.63 | 23.16 | 1.3 | 1 | 1.3 |
| Rail | Charing Cross | 'DARTFD-CHRX 2D10' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'GRVSEND-CHRX 2D12' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'GLNGHMK-CHRX 2D14' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'SIDCUP-CHRX 2D16' | 762.81 | 1 | 9.54 | 30.75 | 40.29 | 0.74 | 0.5 | 0.37 |
| Rail | Charing Cross | 'GLNGHMK-CHRX 2D22' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |

| Mode | Stop | Route | Distance (metres) | Frequency(vph) | Walk Time (mins) | SWT (mins) | TAT (mins) | EDF | Weight | AI |
|---|---|---|---|---|---|---|---|---|---|---|
| Rail | Charing Cross | 'SVNOAKS-CHRX 2F06' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'ORPNGTN-CHRX 2F10' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'SVNOAKS-CHRX 2F20' | 762.81 | 0.67 | 9.54 | 45.53 | 55.06 | 0.54 | 0.5 | 0.27 |
| Rail | Charing Cross | 'ORPNGTN-CHRX 2F88' | 762.81 | 1.33 | 9.54 | 23.31 | 32.84 | 0.91 | 0.5 | 0.46 |
| Rail | Charing Cross | 'ORPNGTN-CHRX 2F94' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'ORPNGTN-CHRX 2F98' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-TUNWELL 2H08' | 762.81 | 1.67 | 9.54 | 18.71 | 28.25 | 1.06 | 0.5 | 0.53 |
| Rail | Charing Cross | 'CHRX-TUNWELL 2H10' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'TUNWELL-CHRX 2H56' | 762.81 | 1 | 9.54 | 30.75 | 40.29 | 0.74 | 0.5 | 0.37 |
| Rail | Charing Cross | 'TUNWELL-CHRX 2H60' | 762.81 | 1.67 | 9.54 | 18.71 | 28.25 | 1.06 | 0.5 | 0.53 |
| Rail | Charing Cross | 'HAYS-CHRX 2K08' | 762.81 | 1 | 9.54 | 30.75 | 40.29 | 0.74 | 0.5 | 0.37 |
| Rail | Charing Cross | 'CHRX-GLNGHMK 2L10' | 762.81 | 1.67 | 9.54 | 18.71 | 28.25 | 1.06 | 0.5 | 0.53 |
| Rail | Charing Cross | 'CHRX-GLNGHMK 2L12' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-CRFD 2M10' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-DARTFD 2M14' | 762.81 | 1.33 | 9.54 | 23.31 | 32.84 | 0.91 | 0.5 | 0.46 |
| Rail | Charing Cross | 'CHRX-SLADEGN 2M16' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-GRVSEND 2N12' | 762.81 | 1.67 | 9.54 | 18.71 | 28.25 | 1.06 | 0.5 | 0.53 |
| Rail | Charing Cross | 'CHRX-GRVSEND 2N14' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-DOVERP 2R10' | 762.81 | 1 | 9.54 | 30.75 | 40.29 | 0.74 | 0.5 | 0.37 |
| Rail | Charing Cross | 'CHRX-RAMSGTE 2R12' | 762.81 | 0.67 | 9.54 | 45.53 | 55.06 | 0.54 | 0.5 | 0.27 |
| Rail | Charing Cross | 'CHRX-RAMSGTE 2R18' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-ASHFKY 2R20' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-TONBDG 2R90' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-SVNOAKS 2S10' | 762.81 | 1.67 | 9.54 | 18.71 | 28.25 | 1.06 | 0.5 | 0.53 |
| Rail | Charing Cross | 'CHRX-SVNOAKS 2S12' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CHRX-ORPNGTN 2S92' | 762.81 | 0.67 | 9.54 | 45.53 | 55.06 | 0.54 | 0.5 | 0.27 |
| Rail | Charing Cross | 'CHRX-HAYS 2V10' | 762.81 | 2 | 9.54 | 15.75 | 25.29 | 1.19 | 0.5 | 0.59 |
| Rail | Charing Cross | 'RAMSGTE-CHRX 2W10' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'RAMSGTE-CHRX 2W12' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'RAMSGTE-CHRX 2W20' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'CNTBW-CHRX 2W22' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| Rail | Charing Cross | 'STROOD-CHRX 2D56' | 762.81 | 0.33 | 9.54 | 91.66 | 101.19 | 0.3 | 0.5 | 0.15 |
| LUL | Tottenham Court Road | 'Ealing-Epping' | 306.84 | 3 | 3.84 | 10.75 | 14.59 | 2.06 | 0.5 | 1.03 |
| LUL | Tottenham Court Road | 'Epping-Wruislip' | 306.84 | 3 | 3.84 | 10.75 | 14.59 | 2.06 | 0.5 | 1.03 |
| LUL | Tottenham Court Road | 'RuislipGar-Epping' | 306.84 | 1 | 3.84 | 30.75 | 34.59 | 0.87 | 0.5 | 0.43 |
| LUL | Tottenham Court Road | 'WhiteCity-Epping' | 306.84 | 0.33 | 3.84 | 91.66 | 95.49 | 0.31 | 0.5 | 0.16 |
| LUL | Tottenham Court Road | 'Epping-NActon' | 306.84 | 1 | 3.84 | 30.75 | 34.59 | 0.87 | 0.5 | 0.43 |
| LUL | Tottenham Court Road | 'Northolt-Epping' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |
| LUL | Tottenham Court Road | 'WhiteCity-Debden' | 306.84 | 0.33 | 3.84 | 91.66 | 95.49 | 0.31 | 0.5 | 0.16 |
| LUL | Tottenham Court Road | 'Debden-Northolt' | 306.84 | 1 | 3.84 | 30.75 | 34.59 | 0.87 | 0.5 | 0.43 |
| LUL | Tottenham Court Road | 'RuislipGdns-Debden' | 306.84 | 0.33 | 3.84 | 91.66 | 95.49 | 0.31 | 0.5 | 0.16 |
| LUL | Tottenham Court Road | 'Loughton-WRuislip' | 306.84 | 1 | 3.84 | 30.75 | 34.59 | 0.87 | 0.5 | 0.43 |
| LUL | Tottenham Court Road | 'NActon-Loughton' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |
| LUL | Tottenham Court Road | 'RuislipGdns-Loughton' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |
| LUL | Tottenham Court Road | 'Loughton-WhiteCity' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |
| LUL | Tottenham Court Road | 'Loughton-Northolt' | 306.84 | 0.33 | 3.84 | 91.66 | 95.49 | 0.31 | 0.5 | 0.16 |
| LUL | Tottenham Court Road | 'Ealing-Loughton' | 306.84 | 1 | 3.84 | 30.75 | 34.59 | 0.87 | 0.5 | 0.43 |
| LUL | Tottenham Court Road | 'Ealing-NewburyPark' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |
| LUL | Tottenham Court Road | 'WRuislip-NewburyPark' | 306.84 | 0.33 | 3.84 | 91.66 | 95.49 | 0.31 | 0.5 | 0.16 |
| LUL | Tottenham Court Road | 'NActon-NewburyPark' | 306.84 | 0.33 | 3.84 | 91.66 | 95.49 | 0.31 | 0.5 | 0.16 |
| LUL | Tottenham Court Road | 'Hainault-Ealing' | 306.84 | 5.33 | 3.84 | 6.38 | 10.21 | 2.94 | 0.5 | 1.47 |
| LUL | Tottenham Court Road | 'Hainault-Nacton' | 306.84 | 1.33 | 3.84 | 23.31 | 27.14 | 1.11 | 0.5 | 0.55 |
| LUL | Tottenham Court Road | 'Hainault-WRuislip' | 306.84 | 3.33 | 3.84 | 9.76 | 13.59 | 2.21 | 0.5 | 1.1 |
| LUL | Tottenham Court Road | 'RuislipGdns-NP-Hain' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |
| LUL | Tottenham Court Road | 'Hainault-WhiteCity' | 306.84 | 1.67 | 3.84 | 18.71 | 22.55 | 1.33 | 0.5 | 0.67 |
| LUL | Tottenham Court Road | 'Hainault-NP-Northolt' | 306.84 | 1 | 3.84 | 30.75 | 34.59 | 0.87 | 0.5 | 0.43 |
| LUL | Tottenham Court Road | 'GrangeHill-WD-Eal' | 306.84 | 1 | 3.84 | 30.75 | 34.59 | 0.87 | 0.5 | 0.43 |
| LUL | Tottenham Court Road | 'GrangeHill-Wdfd-Whit' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |

| Mode | Stop | Route | Distance (metres) | Frequency(vph) | Walk Time (mins) | SWT (mins) | TAT (mins) | EDF | Weight | AI |
|---|---|---|---|---|---|---|---|---|---|---|
| LUL | Tottenham Court Road | 'GrangeHill-Wdfd-WRsp' | 306.84 | 0.67 | 3.84 | 45.53 | 49.36 | 0.61 | 0.5 | 0.3 |
| LUL | Tottenham Court Road | 'Morden-Edgware' | 306.84 | 4.67 | 3.84 | 7.17 | 11.01 | 2.72 | 0.5 | 1.36 |
| LUL | Tottenham Court Road | 'HighBarnet-Morden' | 306.84 | 0.33 | 3.84 | 91.66 | 95.49 | 0.31 | 0.5 | 0.16 |
| LUL | Tottenham Court Road | 'Kennington-Edgware' | 306.84 | 14.67 | 3.84 | 2.79 | 6.63 | 4.52 | 1 | 4.52 |
| LUL | Tottenham Court Road | 'HighBarnet-Kenningt' | 306.84 | 5.33 | 3.84 | 6.38 | 10.21 | 2.94 | 0.5 | 1.47 |
| LUL | Tottenham Court Road | 'MillHill-Morden' | 306.84 | 1.67 | 3.84 | 18.71 | 22.55 | 1.33 | 0.5 | 0.67 |
| LUL | Tottenham Court Road | 'MillHillE-Kenningt' | 306.84 | 1.67 | 3.84 | 18.71 | 22.55 | 1.33 | 0.5 | 0.67 |
| LUL | Holborn | 'Debden-WRuislip' | 787.46 | 0.33 | 9.84 | 91.66 | 101.5 | 0.3 | 0.5 | 0.15 |
| LUL | Holborn | 'Oakwood-RayLane' | 787.46 | 0.33 | 9.84 | 91.66 | 101.5 | 0.3 | 0.5 | 0.15 |
| | | | | | | | | | **Total Grid Cell AI:** | **83.72** |

## B. Bus Map

# Buses from Leicester Square




## Route finder

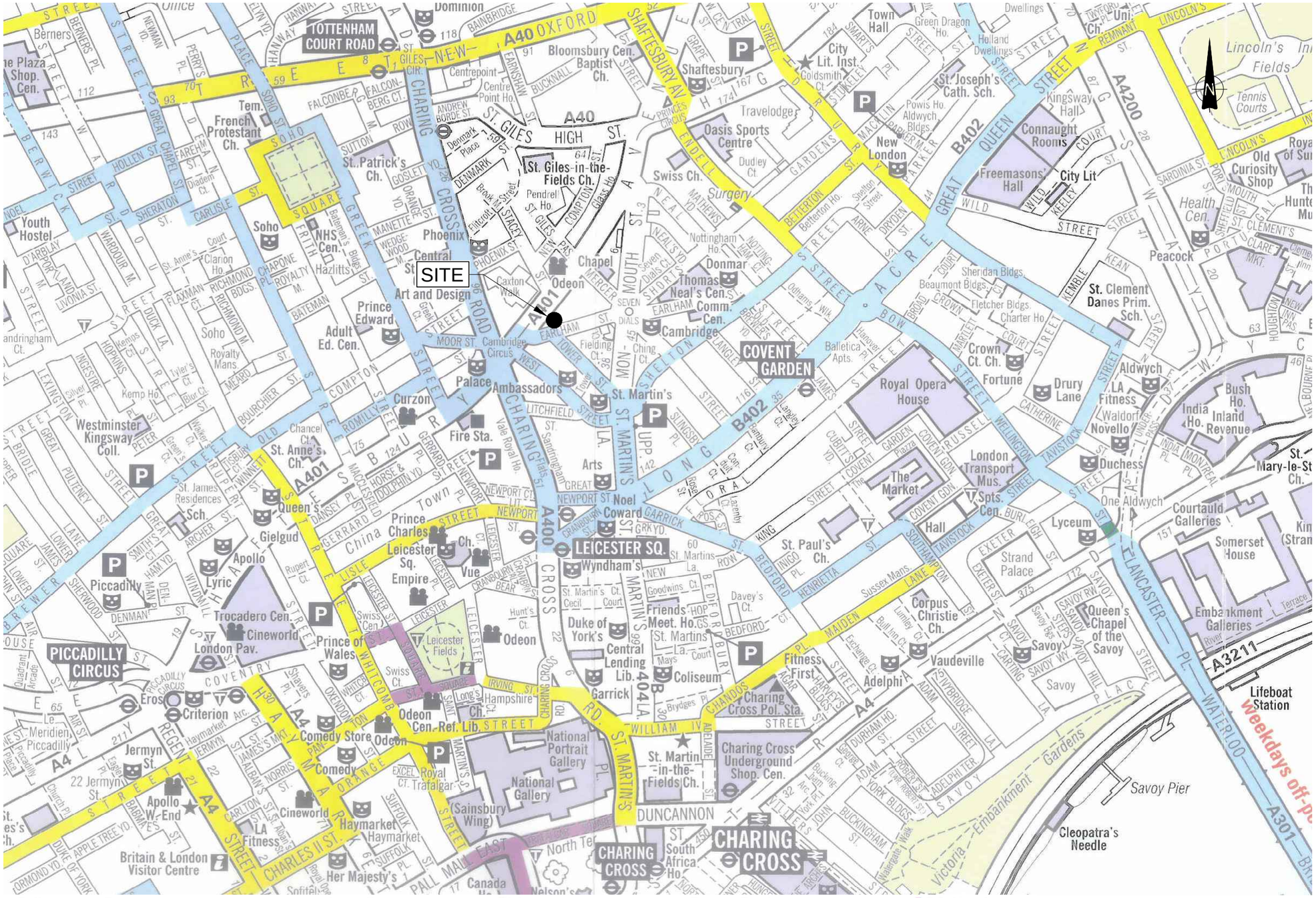
### Day buses including 24-hour services

| Bus route | Towards | Bus stops |
|---|---|---|
| 14 (24 hour service) | Putney Heath | B W |
| | Warren Street | A P |
| 19 | Battersea Bridge | B W |
| | Finsbury Park | A P |
| 24 (24 hour service) | Hampstead Heath | A L M |
| | Pimlico | D J K |
| 29 | Trafalgar Square | D J K |
| | Wood Green | A L M |
| 38 | Clapton | A P |
| | Victoria | B W |
| 176 (24 hour service) | Penge | D J K |
| | Tottenham Court Road | A L M |

### Night buses

For night bus information, please see separate poster

# C. Cycle Network




| Rev | Date | Description | By |
|---|---|---|---|
| A01 | 09.10.15 | FIRST ISSUE | LS |

Amendments

Project
# 125 SHAFTESBURY AVENUE

Title
## LOCAL CYCLE ROUTES

Client
ALMACANTAR LTD


Waterman
Pickfords Wharf Clink Street London SE1 9DG
t 020 7928 7888
mail@watermangroup.com www.watermangroup.com


Drawing Status
## PRELIMINARY

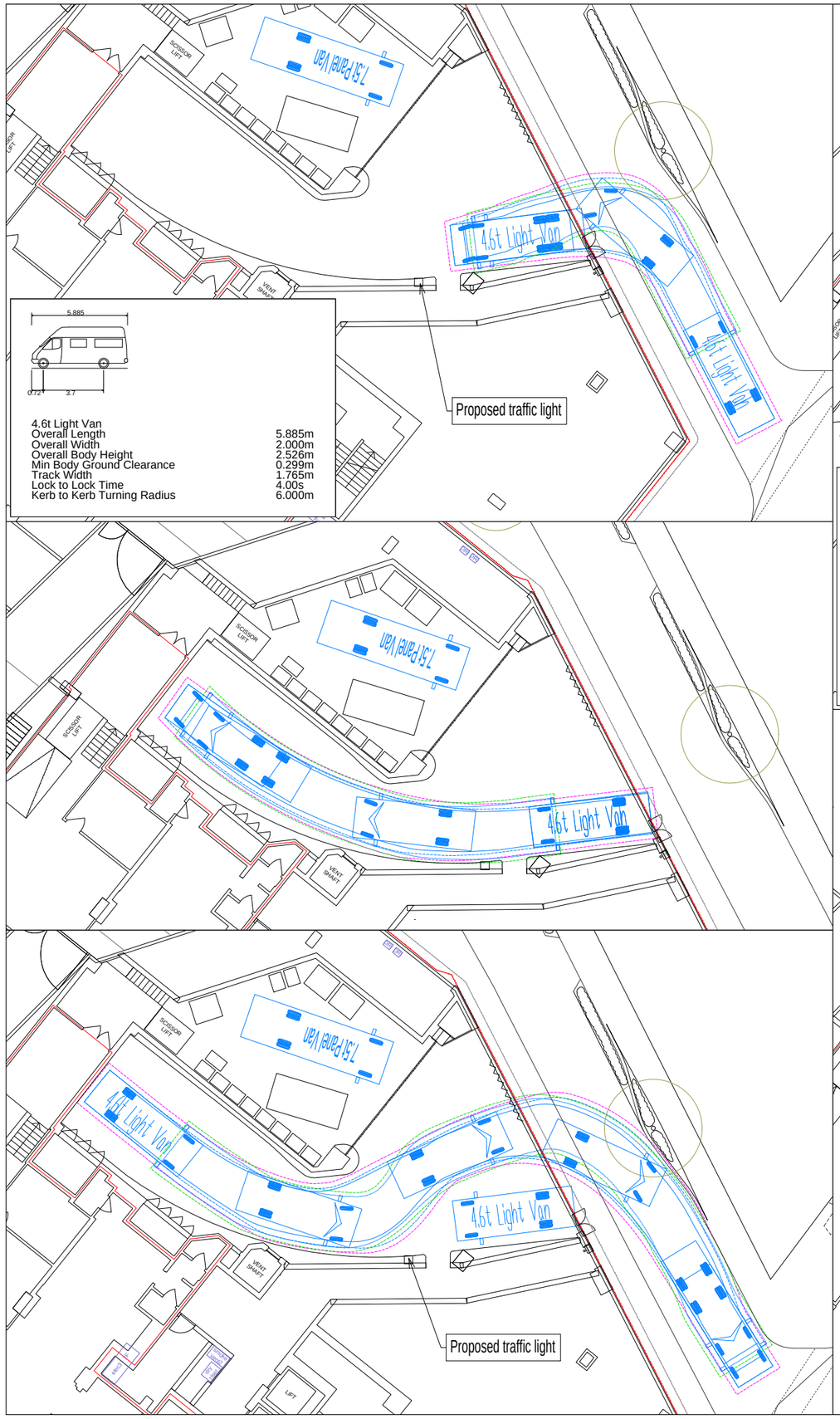
| | | | |
|---|---|---|---|
| Designed by | | Checked by PL-G | Project No WIE10216-102 |
| Drawn by LS | | Date OCTOBER 2015 | |
| Scales @ A3 work to figured dimensions only | NOT TO SCALE | | Computer File No WIE10216-102CSA060002.dwg |

| Publisher | Zone | Category | Number | Revision |
|---|---|---|---|---|
| WIE | SA | 06 | 0002 | A01 |

File Path N:\Projects\WIE10216\102\CAD\06\

A3-Wat-S

## D. Tracking

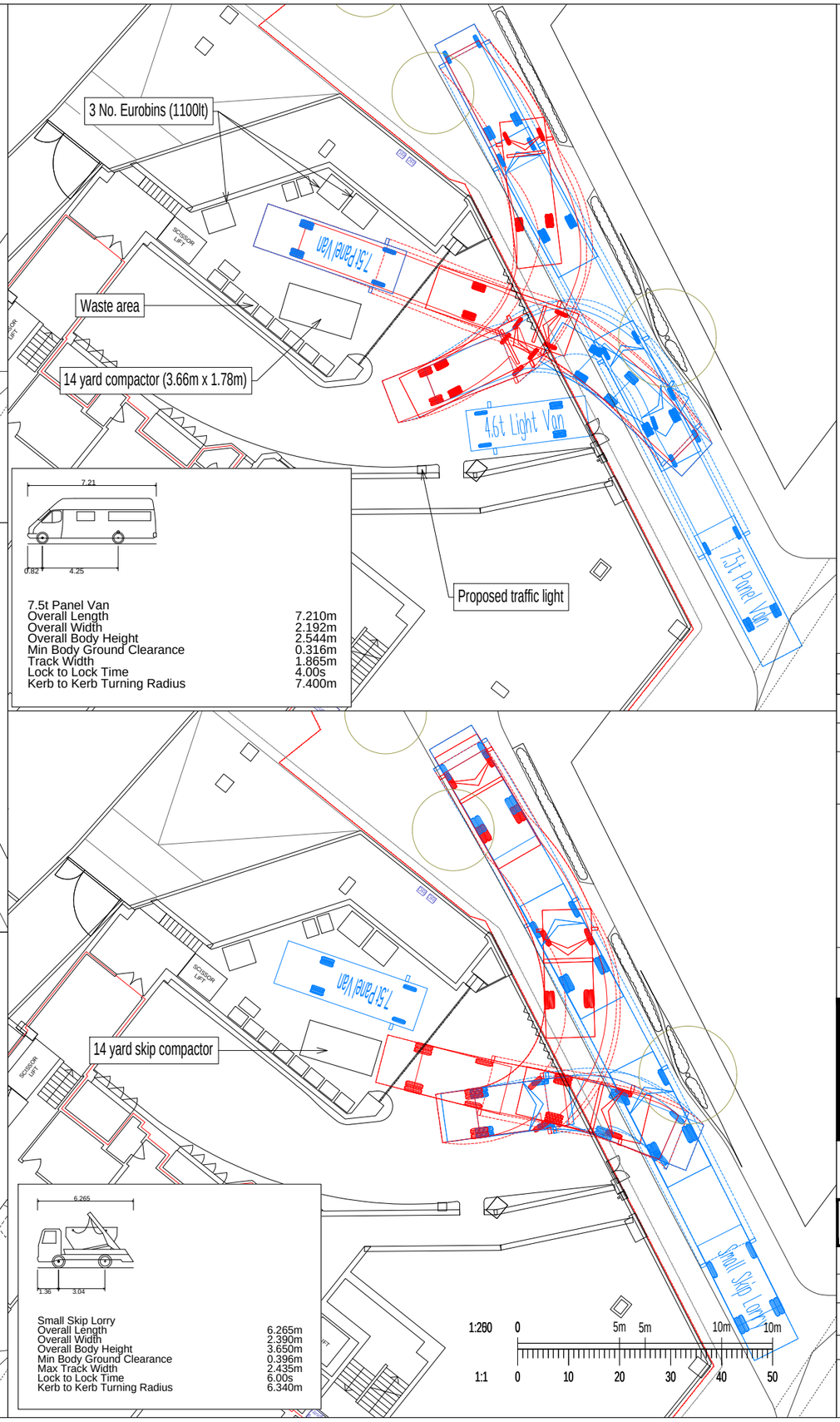






4.6t Light Van

| | |
|---|---|
| Overall Length | 5.885m |
| Overall Width | 2.000m |
| Overall Body Height | 2.526m |
| Min Body Ground Clearance | 0.299m |
| Track Width | 1.765m |
| Lock to Lock Time | 4.00s |
| Kerb to Kerb Turning Radius | 6.000m |







7.5t Panel Van

| | |
|---|---|
| Overall Length | 7.210m |
| Overall Width | 2.192m |
| Overall Body Height | 2.544m |
| Min Body Ground Clearance | 0.316m |
| Track Width | 1.865m |
| Lock to Lock Time | 4.00s |
| Kerb to Kerb Turning Radius | 7.400m |





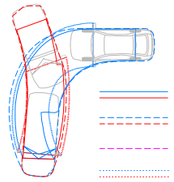





Small Skip Lorry

| | |
|---|---|
| Overall Length | 6.265m |
| Overall Width | 2.390m |
| Overall Body Height | 3.650m |
| Min Body Ground Clearance | 0.396m |
| Max Track Width | 2.435m |
| Lock to Lock Time | 6.00s |
| Kerb to Kerb Turning Radius | 6.340m |



AutoTrack Vehicle Key:
Blue = Forward movement
Red = Reverse movement
Wheel path envelope
Body envelope
250mm Offset body envelope
Wing mirror envelope

| Rev | Date | Description | By |
|---|---|---|---|
| A02 | 04.08.16 | BIN LAYOUT REVISED | LS |
| A01 | 21.06.16 | ISSUED | AJ |

Amendments

Project
125 Shaftesbury Avenue

Title
WASTE AND SERVICING VEHICLE SWEPT PATHS

Client
Alamcantar Shafetsbury Sarl


Pickfords Wharf Clink Street London SE1 9DG
t 020 7928 7888
mail@watermangroup.com www.watermangroup.com


Drawing Status
PRELIMINARY

| | | | |
|---|---|---|---|
| Designed by | | Checked by PH | Project No WIE10216 |
| Drawn by AJ | | Date June 2016 | Work Order No 102 |
| Scales @ A3 work to figured dimensions only | 1:250 | | |

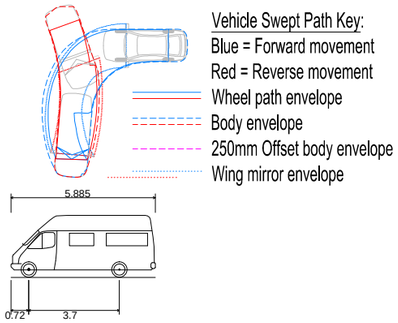
| Publisher | Zone | Category | Number | Revision |
|---|---|---|---|---|
| WIE | SA | 05 | 0002 | A02 |

File Path N:\Projects\WIE10216\102\CAD\05\
File Name WIE-10216-102-SA-05-0002.dwg

A3-Wat-T


1:250 0 5m 5m 10m 10m

1:1 0 10 20 30 40 50




Vehicle Swept Path Key:
Blue = Forward movement
Red = Reverse movement
Wheel path envelope
Body envelope
250mm Offset body envelope
Wing mirror envelope

4.6t Light Van

| | |
|---|---|
| Overall Length | 5.885m |
| Overall Width | 2.000m |
| Overall Body Height | 2.526m |
| Min Body Ground Clearance | 0.299m |
| Track Width | 1.765m |
| Lock to Lock Time | 4.00s |
| Kerb to Kerb Turning Radius | 6.000m |

| Rev | Date | Description | By |
|---|---|---|---|
| A03 | 22.07.16 | DRAFT ISSUE | LS |
| A02 | 22.06.16 | TRACKING REALIGNED | AJ |
| A01 | 21.06.16 | ISSUED | AJ |

Amendments

Project
125 Shaftesbury Avenue

Title
BASEMENT LEVEL
SERVICING VEHICLE
SWEPT PATHS

Client
Alamcantar Shafetsbury Sarl

Waterman
Pickfords Wharf Clink Street London SE1 9DG
t 020 7928 7888
mail@watermangroup.com www.watermangroup.com

Drawing Status
PRELIMINARY

| | | | |
|---|---|---|---|
| Designed by | | Checked by | PH |
| Drawn by | AJ | Date | June 2016 |
| Scales @ A3 work to figured dimensions only | 1:250 | Project No | WIE10216 |
| | | Work Order No | 102 |

| Publisher | Zone | Category | Number | Revision |
|---|---|---|---|---|
| WIE | SA | 05 | 0003 | A03 |

File Path N:\Projects\WIE10216\102\CAD\05\
File Name WIE-10216-102-SA-05-0003.dwg

A3-Wat-T

# E. Trip Generation

## OFFICE TRIP GENERATION -Net Change

| | |
|---|---|
| Net Chnage GEA B1a Floorspace | 5,216 |
| Total employees | 466 |
| Total employees - assumes 85% at work | 396 |

### Total Trip Generation

Assuming I employee per 20 sqm and 85% attendance

| Mode | Mode Split | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Two-way | In | Out | Two-way |
| Car Driver | 0.4% | 1 | 0 | 1 | 0 | 1 | 1 |
| Car Passenger | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Motor Cycle | 2.2% | 5 | 1 | 6 | 1 | 5 | 6 |
| Pedal Cycle | 6.0% | 13 | 2 | 15 | 2 | 13 | 15 |
| Taxi | 0.5% | 1 | 0 | 1 | 0 | 1 | 1 |
| Underground | 36.0% | 78 | 14 | 92 | 14 | 78 | 92 |
| Rail | 40.1% | 87 | 16 | 103 | 16 | 87 | 103 |
| Bus | 10.2% | 22 | 4 | 26 | 4 | 22 | 26 |
| Walk | 4.6% | 10 | 2 | 12 | 2 | 10 | 12 |
| **Total Person** | **100%** | **218** | **39** | **257** | **39** | **218** | **257** |

### Census 2001 Mode Share

| | |
|---|---|
| Proposed Office Car parking Spaces | 2 |
| *New Car Modal Split | 0.4% |

| Mode | Mode Split* | Distributed** | re adjusted final |
|---|---|---|---|
| Car Driver | 9.5% | 0.4% | 0.4% |
| Car Passenger | 0.9% | 0.0% | 0.0% |
| Motor Cycle | 2.0% | 2.2% | 2.2% |
| Pedal Cycle | 2.6% | 2.9% | 6.0% |
| Taxi | 0.5% | 0.5% | 0.5% |
| Underground | 35.2% | 39.1% | 36.0% |
| Rail | 36.1% | 40.1% | 40.1% |
| Bus | 9.2% | 10.2% | 10.2% |
| Walk | 4.1% | 4.6% | 4.6% |
| Total Person | 100.0% | 100.0% | 100.0% |

*based on Census 2001 Daytime Population

**Adjusted Modal Split to account for 2 space Car Park, cycle trips been readjeusted (taken off underground)

### Profile of Staff Trips

| | Arrivals | | Departures | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Employees | 55% | 10% | 10% | 55% |
| Total Person | **218** | **39** | **39** | **218** |

*Assumes 55% arrivals 10% departures in the AM Peak

| DATASET_TITLE | FROM | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AREA_TYPE | TO | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 | Apr-2001 |
| GEO_HIERARCHY | HEADING | All People (In Employment) | Works mainly at or from home | Underground, metro, light rail or tram | Train | Bus, minibus or coach | Taxi or minicab | Driving a car or van | Passenger in a car or van | Motorcycle, scooter or moped | Bicycle | On foot | Other |
| MEASUREMENT_UNIT | | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count |
| STATISTICAL_UNIT | | Persons | Persons | Persons | Persons | Persons | Persons | Persons | Persons | Persons | Persons | Persons | Persons |
| GOR_COD | WARD_NA | AREA_MET | ADATA | DATA_VALU | ATA_VALU | ATA_VALU | ATA_VALU | ATA_VALU | ATA_VALU | ATA_VALU | ATA_VALU | ATA_VALU | ATA_VALUE |
| H | Holborn and Covent Garden | | 75639 | 496 | 26355 | 27037 | 6869 | 361 | 7144 | 689 | 1483 | 1933 | 3067 | 205 |
| | | | 75639 | 496 | 26355 | 27037 | 6869 | 361 | 7144 | 689 | 1483 | 1933 | 3067 | 205 |
| | | | | 0.7% | 34.8% | 35.7% | 9.1% | 0.5% | 9.4% | 0.9% | 2.0% | 2.6% | 4.1% | 0.3% |

| | Mode | Modal Share | Redistributed |
|---|---|---|---|
| | Underground | 34.8% | 35.17% |
| | Train | 35.7% | 36.08% |
| | Bus | 9.1% | 9.17% |
| | Motorcycle | 2.0% | 1.98% |
| | Car Driver | 9.4% | 9.53% |
| | Car Passenger | 0.9% | 0.92% |
| | Taxi/Minicab | 0.5% | 0.48% |
| | Bicycle | 2.6% | 2.58% |
| 99.1% | Walk | 4.1% | 4.09% |
| | Other | 0.3% | Redistribute |
| | Home | 0.7% | |
| | Total | 100.0% | 100% |

## EXISTING OFFICE TRIP GENERATION

| | |
|---|---|
| Net Chnage GEA B1a Floorspace | 5,216 |
| Total employees | 1165 |
| Total employees - assumes 85% at work | 990 |

### Total Trip Generation

| Mode | Mode Split | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Two-way | In | Out | Two-way |
| Car Driver | 2.2% | 12 | 2 | 14 | 2 | 12 | 14 |
| Car Passenger | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Motor Cycle | 2.2% | 12 | 2 | 14 | 2 | 12 | 14 |
| Pedal Cycle | 2.8% | 15 | 3 | 18 | 3 | 15 | 18 |
| Taxi | 0.5% | 3 | 1 | 3 | 1 | 3 | 3 |
| Underground | 38.4% | 209 | 38 | 247 | 38 | 209 | 247 |
| Rail | 39.4% | 215 | 39 | 254 | 39 | 215 | 254 |
| Bus | 10.0% | 55 | 10 | 64 | 10 | 55 | 64 |
| Walk | 4.5% | 24 | 4 | 29 | 4 | 24 | 29 |
| **Total Person** | **100%** | **545** | **99** | **644** | **99** | **545** | **644** |

### Census 2001 Mode Share

Proposed Office Car parking Spaces **26**

*New Car Modal Split 2.2%

| Mode | Mode Split* | Distributed** |
|---|---|---|
| Car Driver | 9.5% | 2.2% |
| Car Passenger | 0.9% | 0.0% |
| Motor Cycle | 2.0% | 2.2% |
| Pedal Cycle | 2.6% | 2.8% |
| Taxi | 0.5% | 0.5% |
| Underground | 35.2% | 38.4% |
| Rail | 36.1% | 39.4% |
| Bus | 9.2% | 10.0% |
| Walk | 4.1% | 4.5% |
| Total Person | 100.0% | 100.0% |

*based on Census 2001 Daytime Population

**Adjusted Modal Split to account for 26 space Car Park

### Profile of Staff Trips

| | Arrivals | | Departures | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Employees | 55% | 10% | 10% | 55% |
| Total Person | **545** | **99** | **99** | **545** |

*Assumes 55% arrivals 10% departures in the AM Peak

## FUTURE OFFICE TRIP GENERATION

| | |
|---|---|
| Net Chnage GEA B1a Floorspace | 5,216 |
| Total employees | 1631 |
| Total employees - assumes 85% at work | 1386 |

### Total Trip Generation

| Mode | Mode Split | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Two-way | In | Out | Two-way |
| Car Driver | 0.1% | 1 | 0 | 1 | 0 | 1 | 1 |
| Car Passenger | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 |
| Motor Cycle | 2.2% | 17 | 3 | 20 | 3 | 17 | 20 |
| Pedal Cycle | 6.0% | 46 | 8 | 54 | 8 | 46 | 54 |
| Taxi | 0.5% | 4 | 1 | 5 | 1 | 4 | 5 |
| Underground | 36.1% | 275 | 50 | 325 | 50 | 275 | 325 |
| Rail | 40.2% | 307 | 56 | 362 | 56 | 307 | 362 |
| Bus | 10.2% | 78 | 14 | 92 | 14 | 78 | 92 |
| Walk | 4.6% | 35 | 6 | 41 | 6 | 35 | 41 |
| **Total Person** | **100%** | **762** | **138** | **900** | **138** | **762** | **900** |

### Census 2001 Mode Share

Proposed Office Car parking Spaces: 2

*New Car Modal Split: 0.1%

| Mode | Mode Split* | Distributed** | re adjusted final |
|---|---|---|---|
| Car Driver | 9.5% | 0.1% | 0.1% |
| Car Passenger | 0.9% | 0.0% | 0.0% |
| Motor Cycle | 2.0% | 2.2% | 2.2% |
| Pedal Cycle | 2.6% | 2.9% | 6.0% |
| Taxi | 0.5% | 0.5% | 0.5% |
| Underground | 35.2% | 39.2% | 36.1% |
| Rail | 36.1% | 40.2% | 40.2% |
| Bus | 9.2% | 10.2% | 10.2% |
| Walk | 4.1% | 4.6% | 4.6% |
| Total Person | 100.0% | 100.0% | 100.0% |

*based on Census 2001 Daytime Population

**Adjusted Modal Split to account for 2 space Car Park, cycle trips been readjeusted (taken off underground)

### Profile of Staff Trips

| | Arrivals | | Departures | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Employees | 55% | 10% | 10% | 55% |
| Total Person | **762** | **138** | **138** | **762** |

*Assumes 55% arrivals 10% departures in the AM Peak

## B1 Office SERV - Existing

| GEA (sqm) | 20797 |
|---|---|

| B1 Office | | | | | | Daily Deliveries | Daily Trip Rate per 100sqm |
|---|---|---|---|---|---|---|---|
| Survey Code | Name | Location | Survey Date | PTAL | GFA Sqm | Total | Total |
| 404 | Assoc of London Governmen | Inner | 02/12/2004 | 6 | 3066 | 4 | 0.13 |
| 835 | Buckingham Palace Road | | 26/03/2007 | 6 | 5337 | 14 | 0.26 |
| 512 | Eccleston Place | | 26/03/2007 | 6 | 6323 | 14 | 0.23 |
| 511 | Faith Lawson | | 26/03/2007 | 6 | 4568 | 8 | 0.18 |
| 473 | MVA Transport Consultancy | Central | 14/06/2006 | 6 | 509 | 2 | 0.39 |
| 836 | Windsor House | | 26/03/2007 | 6 | 5468 | 23 | 0.42 |
| | | | | | **25271** | 65 | **0.26** |
| | | | | | | | **54** |

**Address:** Assoc of London Government
59.5 Southwark Street
Southwark
SE1 0AL
**SurveyCode** 404
**Survey Date** 02/12/2004
Rigid 3 Axles

| **Time** | **In** | **Out** |
|---|---|---|
| 10:30-11:00 | 1 | 1 |
| 11:30-12:00 | 1 | 1 |
| 12:00-12:30 | 2 | 2 |
| **Total** | 4 | 4 |

**Address:** Buckingham Palace Road
172 Buckingham Palace Road London
Victoria
SW1W 9TN
**SurveyCode** 835
**Survey Date** 26/03/2007
Car

| **Time** | **In** | **Out** |
|---|---|---|
| 07:30-08:00 | 1 | 1 |
| **Total** | 1 | 1 |

Motor Cycle

| **Time** | **In** | **Out** |
|---|---|---|
| 12:00-12:30 | 1 | 0 |
| 13:00-13:30 | 0 | 1 |
| **Total** | 1 | 1 |

Pedestrian

| **Time** | **In** | **Out** |
|---|---|---|
| 15:00-15:30 | 1 | 1 |
| **Total** | 1 | 1 |

Small Van

| **Time** | **In** | **Out** |
|---|---|---|
| 08:30-09:00 | 1 | 1 |
| 09:30-10:00 | 1 | 1 |
| 10:00-10:30 | 1 | 0 |
| 10:30-11:00 | 0 | 1 |
| **Total** | 3 | 3 |

**Survey Date** 26/03/2007
Transit (2 axle < 7.5 Tonnes)

| **Time** | **In** | **Out** |
|---|---|---|
| 08:00-08:30 | 1 | 0 |
| 10:00-10:30 | 0 | 1 |
| 10:30-11:00 | 1 | 0 |
| 11:00-11:30 | 0 | 1 |
| 17:00-17:30 | 1 | 1 |
| **Total** | 3 | 3 |

Transit (Single rear tyre)

| **Time** | **In** | **Out** |
|---|---|---|
| 09:00-09:30 | 1 | 1 |
| 10:00-10:30 | 1 | 1 |
| 11:00-11:30 | 2 | 2 |
| 11:30-12:00 | 1 | 1 |
| 12:00-12:30 | 0 | 1 |
| 12:30-13:00 | 1 | 1 |
| 13:30-14:00 | 1 | 0 |
| **Total** | 7 | 7 |

| | |
|---|---|
| **Address:** | Eccleston Place<br>25 Eccleston Place, London<br>Victoria<br>SW1W 9NF |
| **SurveyCode** | 512 |
| **Survey Date** | 26/03/2007 |

Rigid 2 axles

| **Time** | **In** | **Out** |
|---|---|---|
| 11:00-11:30 | 1 | 0 |
| 11:30-12:00 | 0 | 1 |
| **Total** | 1 | 1 |

Transit (2 axle < 7.5 Tonnes)

| **Time** | **In** | **Out** |
|---|---|---|
| 08:00-08:30 | 1 | 1 |
| **Total** | 1 | 1 |

Transit (Single rear tyre)

| **Time** | **In** | **Out** |
|---|---|---|
| 08:00-08:30 | 1 | 1 |
| 09:00-09:30 | 2 | 2 |
| 09:30-10:00 | 1 | 1 |
| 10:00-10:30 | 1 | 1 |
| 12:00-12:30 | 2 | 2 |
| 14:00-14:30 | 4 | 4 |
| 14:30-15:00 | 1 | 1 |
| **Total** | 12 | 12 |

| | |
|---|---|
| **Address:** | Faith Lawson<br>Transport for London, Faith Lawson House, 15 Dacre Street, London<br>Westminster<br>SW1H 0NR |
| **SurveyCode** | 511 |
| **Survey Date** | 26/03/2007 |

Car

| **Time** | **In** | **Out** |
|---|---|---|
| 10:00-10:30 | 1 | 0 |
| 10:30-11:00 | 0 | 1 |
| **Total** | 1 | 1 |

Motor Cycle

| **Time** | **In** | **Out** |
|---|---|---|
| 14:30-15:00 | 1 | 1 |
| **Total** | 1 | 1 |

Pedestrian

| **Time** | **In** | **Out** |
|---|---|---|
| 09:00-09:30 | 1 | 1 |
| 15:30-16:00 | 1 | 1 |
| **Total** | 2 | 2 |

Small Van

| **Time** | **In** | **Out** |
|---|---|---|
| 10:30-11:00 | 1 | 0 |
| 11:00-11:30 | 0 | 1 |
| **Total** | 1 | 1 |

Transit (2 axle < 7.5 Tonnes)

| **Time** | **In** | **Out** |
|---|---|---|
| 10:30-11:00 | 1 | 1 |
| **Total** | 1 | 1 |

**Survey Date**

Transit (Single rear tyre)

| **Time** | **In** | **Out** |
|---|---|---|
| 06:30-07:00 | 1 | 1 |
| 10:00-10:30 | 1 | 1 |
| 10:30-11:00 | 1 | 0 |
| 11:00-11:30 | 1 | 2 |
| 11:30-12:00 | 1 | 1 |
| **Total** | 5 | 5 |

| | |
|---|---|
| **Address:** | MVA Transport Consultancy<br>1 Berners Street<br>Westminster<br>W1T 3LA |
| **SurveyCode** | 473 |
| **Survey Date** | 14/06/2006 |

Transit (Single rear tyre)

| **Time** | **In** | **Out** |
|---|---|---|
| 10:30-11:00 | 1 | 0 |
| 11:30-12:00 | 0 | 1 |
| 15:30-16:00 | 1 | 1 |
| **Total** | 2 | 2 |

| | |
|---|---|
| **Address:** | Windsor House<br>Windsor House, 42 - 50 Victoria Street, Victoria, Westminster, SW1H 0TL<br>Victoria<br>SW1H 0TL |
| **SurveyCode** | 836 |
| **Survey Date** | 26/03/2007 |

Motor Cycle

| **Time** | **In** | **Out** |
|---|---|---|
| 12:00-12:30 | 1 | 1 |
| 13:00-13:30 | 1 | 1 |
| 15:00-15:30 | 2 | 2 |
| 15:30-16:00 | 1 | 1 |
| 17:00-17:30 | 3 | 3 |
| **Total** | 8 | 8 |

Pedal Cycle

| **Time** | **In** | **Out** |
|---|---|---|
| 10:30-11:00 | 1 | 0 |
| 11:00-11:30 | 1 | 1 |
| 12:00-12:30 | 0 | 1 |
| 13:00-13:30 | 1 | 1 |
| 14:00-14:30 | 1 | 1 |
| 16:00-16:30 | 1 | 1 |
| 16:30-17:00 | 2 | 2 |
| **Total** | 7 | 7 |

Pedestrian

| **Time** | **In** | **Out** |
|---|---|---|
| 15:00-15:30 | 1 | 0 |
| 15:30-16:00 | 1 | 2 |
| **Total** | 2 | 2 |

## TRAVL - Deliveries By Time

**Address:** Windsor House
Windsor House, 42 - 50 Victoria Street, Victoria, Westminster, SW1H 0TL
Victoria
SW1H 0TL

**SurveyCode** 836
**Survey Date** 26/03/2007

Rigid 2 axles

| **Time** | **In** | **Out** |
|---|---|---|
| 09:00-09:30 | 1 | 1 |
| 11:30-12:00 | 1 | 0 |
| 12:00-12:30 | 0 | 1 |
| 12:30-13:00 | 1 | 0 |
| 13:00-13:30 | 0 | 1 |
| **Total** | 3 | 3 |

Small Van

| **Time** | **In** | **Out** |
|---|---|---|
| 08:00-08:30 | 1 | 1 |
| 10:00-10:30 | 1 | 1 |
| 10:30-11:00 | 1 | 0 |
| 11:00-11:30 | 1 | 1 |
| 11:30-12:00 | 0 | 1 |
| **Total** | 4 | 4 |

Transit (2 axle < 7.5 Tonnes)

| **Time** | **In** | **Out** |
|---|---|---|
| 08:30-09:00 | 1 | 1 |
| 09:00-09:30 | 1 | 0 |
| 11:00-11:30 | 1 | 0 |
| 11:30-12:00 | 0 | 1 |
| 17:30-18:00 | 1 | 1 |
| 18:00-18:30 | 0 | 1 |
| **Total** | 4 | 4 |

**SurveyCode** 836
**Survey Date** 26/03/2007

Transit (Single rear tyre)

| **Time** | **In** | **Out** |
|---|---|---|
| 05:30-06:00 | 1 | 0 |
| 06:00-06:30 | 0 | 1 |
| 09:00-09:30 | 1 | 1 |
| 12:00-12:30 | 1 | 1 |
| 12:30-13:00 | 1 | 1 |
| 13:00-13:30 | 1 | 1 |
| 13:30-14:00 | 2 | 1 |
| 14:00-14:30 | 2 | 2 |
| 14:30-15:00 | 0 | 1 |
| 15:30-16:00 | 1 | 1 |
| 16:00-16:30 | 1 | 1 |
| 16:30-17:00 | 1 | 1 |
| **Total** | 12 | 12 |

## B1 Office SERV - Future

| GEA (sqm) | 26013 |
|---|---|

| B1 Office | | | | | | Daily Deliveries | Daily Trip Rate per 100sqm |
|---|---|---|---|---|---|---|---|
| Survey Code | Name | Location | Survey Date | PTAL | GFA Sqm | Total | Total |
| 404 | Assoc of London Governmen | Inner | 02/12/2004 | 6 | 3066 | 4 | 0.13 |
| 835 | Buckingham Palace Road | | 26/03/2007 | 6 | 5337 | 14 | 0.26 |
| 512 | Eccleston Place | | 26/03/2007 | 6 | 6323 | 14 | 0.23 |
| 511 | Faith Lawson | | 26/03/2007 | 6 | 4568 | 8 | 0.18 |
| 473 | MVA Transport Consultancy | Central | 14/06/2006 | 6 | 509 | 2 | 0.39 |
| 836 | Windsor House | | 26/03/2007 | 6 | 5468 | 23 | 0.42 |
| | | | | | **25271** | 65 | **0.26** |
| | | | | | | | **68** |

**Address:** Assoc of London Government
59.5 Southwark Street
Southwark
SE1 0AL

**SurveyCode** 404
**Survey Date** 02/12/2004
Rigid 3 Axles

| **Time** | **In** | **Out** |
|---|---|---|
| 10:30-11:00 | 1 | 1 |
| 11:30-12:00 | 1 | 1 |
| 12:00-12:30 | 2 | 2 |
| **Total** | 4 | 4 |

**Address:** Buckingham Palace Road
172 Buckingham Palace Road London
Victoria
SW1W 9TN

**SurveyCode** 835
**Survey Date** 26/03/2007
Car

| **Time** | **In** | **Out** |
|---|---|---|
| 07:30-08:00 | 1 | 1 |
| **Total** | 1 | 1 |

Motor Cycle

| **Time** | **In** | **Out** |
|---|---|---|
| 12:00-12:30 | 1 | 0 |
| 13:00-13:30 | 0 | 1 |
| **Total** | 1 | 1 |

Pedestrian

| **Time** | **In** | **Out** |
|---|---|---|
| 15:00-15:30 | 1 | 1 |
| **Total** | 1 | 1 |

Small Van

| **Time** | **In** | **Out** |
|---|---|---|
| 08:30-09:00 | 1 | 1 |
| 09:30-10:00 | 1 | 1 |
| 10:00-10:30 | 1 | 0 |
| 10:30-11:00 | 0 | 1 |
| **Total** | 3 | 3 |

**Survey Date** 26/03/2007
Transit (2 axle < 7.5 Tonnes)

| **Time** | **In** | **Out** |
|---|---|---|
| 08:00-08:30 | 1 | 0 |
| 10:00-10:30 | 0 | 1 |
| 10:30-11:00 | 1 | 0 |
| 11:00-11:30 | 0 | 1 |
| 17:00-17:30 | 1 | 1 |
| **Total** | 3 | 3 |

Transit (Single rear tyre)

| **Time** | **In** | **Out** |
|---|---|---|
| 09:00-09:30 | 1 | 1 |
| 10:00-10:30 | 1 | 1 |
| 11:00-11:30 | 2 | 2 |
| 11:30-12:00 | 1 | 1 |
| 12:00-12:30 | 0 | 1 |
| 12:30-13:00 | 1 | 1 |
| 13:30-14:00 | 1 | 0 |
| **Total** | 7 | 7 |

## Retail Servicing - Existing

| GEA (sqm) | 3240 |
|---|---|

| A1 Supermarkets | | | | | | Daily Deliveries | Daily Trip Rate per 100sqm |
|---|---|---|---|---|---|---|---|
| Survey Code | Name | Location | Survey Date | PTAL | GFA | Total | Total |
| 343 | Carluccio's | Kingston | 31/01/2002 | 5 | 297 | 2 | |
| 378 | Carluccio's | Oxford Circ | 25/02/2003 | 6 | 420 | 1 | |
| 486 | Pizza Express | Richmond | 22/09/2006 | 6 | 279 | 2 | 0.82 |
| | | | | | **996** | 5 | **0.50** |
| | | | | | | | 16 |

### TRAVL - Deliveries By Time

**Address:** Carluccio's
Charter Quay
Kingston
KT1 1HT

**SurveyCode** 343
**Survey Date** 31/01/2002
Car

| Time | In | Out |
|---|---|---|
| 10:00-10:30 | 1 | 1 |
| 11:30-12:00 | 1 | 1 |
| **Total** | 2 | 2 |

Managed by MVA Consultancy on behalf of Transport for London
Printed On 17/10/2013 Predictor Type : Gross Floor Area (100 sq m) TRAVL Version : 8.18

### TRAVL - Deliveries By Time

**Address:** Carluccio's
8 Market Place
Oxford Circus
W1W

**SurveyCode** 378
**Survey Date** 25/02/2003
Rigid 2 axles

| Time | In | Out |
|---|---|---|
| 10:00-10:30 | 1 | 1 |
| **Total** | 1 | 1 |

Managed by MVA Consultancy on behalf of Transport for London
Printed On 17/10/2013 Predictor Type : Gross Floor Area (100 sq m) TRAVL Version : 8.18

### TRAVL - Deliveries By Time

**Address:** Pizza Express
Red Lion Street
Richmond
TW9 1RE

**SurveyCode** 486
**Survey Date** 22/09/2006
Transit (Single rear tyre)

| Time | In | Out |
|---|---|---|
| 11:00-11:30 | 1 | 1 |
| 12:00-12:30 | 1 | 1 |
| **Total** | 2 | 2 |

Managed by MVA Consultancy on behalf of Transport for London
Printed On 17/10/2013 Predictor Type : Gross Floor Area (100 sq m) TRAVL Version : 8.18

## Retail Servicing -Future

GEA (sqm) 2138

| A1 Supermarkets | | | | | | Daily Deliveries | Daily Trip Rate per 100sqm |
|---|---|---|---|---|---|---|---|
| Survey Code | Name | Location | Survey Date | PTAL | GFA | Total | Total |
| 343 | Carluccio's | Kingston | 31/01/2002 | 5 | 297 | 2 | |
| 378 | Carluccio's | Oxford Circ | 25/02/2003 | 6 | 420 | 1 | |
| 486 | Pizza Express | Richmond | 22/09/2006 | 6 | 279 | 2 | 0.82 |
| | | | | | **996** | 5 | **0.50** |
| | | | | | | | 11 |

### TRAVL - Deliveries By Time

**Address:** Carluccio's
Charter Quay
Kingston
KT1 1HT

**SurveyCode** 343
**Survey Date** 31/01/2002
Car

| Time | In | Out |
|---|---|---|
| 10:00-10:30 | 1 | 1 |
| 11:30-12:00 | 1 | 1 |
| **Total** | 2 | 2 |

Managed by MVA Consultancy on behalf of Transport for London
Printed On 17/10/2013 Predictor Type : Gross Floor Area (100 sq m) TRAVL Version : 8.18

### TRAVL - Deliveries By Time

**Address:** Carluccio's
8 Market Place
Oxford Circus
W1W

**SurveyCode** 378
**Survey Date** 25/02/2003
Rigid 2 axles

| Time | In | Out |
|---|---|---|
| 10:00-10:30 | 1 | 1 |
| **Total** | 1 | 1 |

Managed by MVA Consultancy on behalf of Transport for London
Printed On 17/10/2013 Predictor Type : Gross Floor Area (100 sq m) TRAVL Version : 8.18

### TRAVL - Deliveries By Time

**Address:** Pizza Express
Red Lion Street
Richmond
TW9 1RE

**SurveyCode** 486
**Survey Date** 22/09/2006
Transit (Single rear tyre)

| Time | In | Out |
|---|---|---|
| 11:00-11:30 | 1 | 1 |
| 12:00-12:30 | 1 | 1 |
| **Total** | 2 | 2 |

Managed by MVA Consultancy on behalf of Transport for London
Printed On 17/10/2013 Predictor Type : Gross Floor Area (100 sq m) TRAVL Version : 8.18

# UK and Ireland Office Locations