1 Triton Square & St Anne's

Transport Assessment

October 2016

1 TRITON SQUARE & ST ANNE'S PLANNING DOCUMENTS

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01 INTRODUCTION

This Transport Assessment (TA) has been prepared by Arup as part of a planning application by British Land Property Management Limited (BL or the 'Applicant'). This planning application seeks full planning permission for the extension and refurbishment of the 1 Triton Square office building and the redevelopment of St Anne's for residential use along with works to the public realm. Both of these buildings lie within the London Borough of Camden (LBC).

This document has been written in relation to both buildings. The objective of this TA is to provide an assessment of the transport-related effects of all aspects of the proposed development and to identify measures essential to provide safe and effective access by all modes of transport. Arup has met with LBC transport and planning officers to develop in principle the transport requirements for the proposed scheme.

The following items are including in the report:

- A description of the existing site and the development proposals;
- An overview of planning policy and context;
- A summary of the existing transport networks;
- Access and parking proposals for the proposed development;
- Development-related delivery and servicing requirements;
- A consideration of the transport effects of the development including details of any appropriate mitigation measures; and
- Details of a Framework Travel Plan.

02 DESCRIPTION OF DEVELOPMENT

2.1 EXISTING SITES

The 1 Triton Square building is part of Regent's Place, a mixed-used business, retail and residential quarter located on the northern side of the A501 Euston Road, in LBC. The building comprises a variety of land uses, including offices, retail units, a gym and a now closed day nursery. The existing area schedule is presented in Table 1, with areas expressed as Gross Internal Areas (GIAs) and Gross External Areas (GEAs).

The building is bounded to the west, south and east by Triton Square, which is pedestrianised in its western and southern sections and acts as a taxi access road in its eastern section. To the north, the site is bounded by Longford Street. 1 Triton Square has a basement servicing area that is accessed via a ramp located off Longford Street to the north. There is also an existing loading bay on Longford Street.

St Anne's Church is located to the north of 1 Triton Square on the corner of Longford Street and Laxton Place and covers approximately 511m² GEA of D1 floor area. St Anne's Church is bounded to the north and west by residential properties and open space to the east. It has two car parking spaces on site.

	COMMUNITY (D1)		LEISURE (D2)		RETAIL (A1,A3,A4)		OFFICE (B1)		TOTAL	
	GIA (M²)	GEA (M²)	GIA (M²)	GEA (M²)	GIA (M²)	GEA (M²)	GIA (M²)	GEA (M²)	GIA (M²)	GEA (M²)
B1	-	-	-	-	-	-	5,344	5,429	5,344	5,429
00	428	442	1,923	1,969	150	165	1,910	1,951	4,411	4,527
01	-	-	-	-	-	-	5,010	5,109	5,010	5,109
02	-	-	-	-	-	-	4,101	4,200	4,101	4,200
03	-	-	-	-	-	-	4,104	4,203	4,104	4,203
04	-	-	-	-	-	-	4,104	4,203	4,104	4,203
05	-	-	-	-	-	-	3,395	3,499	3,391	3,499
Roof	-	-	-	-	-	-	406	512	406	512
Total	428	442	1,923	1,969	150	165	28,370	29,106	30,871	31,682

Figure No.2. 1: Table 1: 1 Triton Square Existing Area Schedule

2.2 PROPOSED DEVELOPMENT

2.2.1 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development is described as follows:

"Extension of the existing 1 Triton Square office building by three storeys for office use (B1), retail (A1, A3, A4), affordable workspace (B1) and re-provision of a gym (D2); demolition of St Anne's Church and its replacement with a residential (C3) building of part 6, part 9 storeys; hard and soft landscaping; reconfigured vehicle and pedestrian access and works to the public highway; and all necessary ancillary and enabling works, plant and equipment."

2.2.2 1 TRITON SQUARE

1 Triton Square will continue to provide mixed-use accommodation but the office led development proposals will partially infill the existing atrium and add additional floor levels. The proposed area schedule shown in Table 2.

Land Use	GEA (m²)	GIA (m²)	NIA (m²)
Office (B1)	44,877	43,825	28,963
Retail (A1, A3, A4)	348	339	334
Community Affordable Workspace (B1)	1,028	1,015	1,003
Leisure (D2)	1,183	1,853	1,788
Total	**48,136**	**47,032**	**32,088**

Figure No.2. 2: Table 2: Proposed Area Schedule

Note: Plus 6,670m² GEA of basement, plant and ancillary infrastructure.

2.2.3 ST ANNE'S

The residential accommodation at St Anne's will comprise a part six, part nine storey's building providing 22 flats, of which two (10%) will meet wheelchair-accessible housing standards. The mix of dwellings is proposed as follows:

- 1No. one-bedroom unit;
- 11No. two-bedroom units; and
- 10No. three-bedroom units.

03 PLANNING POLICY CONTEXT

This section outlines the national, regional and local transport policy context within which the development must be assessed.

3.1 NATIONAL POLICY

The Department for Communities and Local Government (DCLG) published the National Planning Policy Framework (NPPF) in March 2012. The NPPF replaces the previous planning policy guidance (PPG) and planning policy statement (PPS) documents.

With specific reference to transport, the NPPF states that "the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel". The NPPF also indicates that developments should be located and designed, where practical, to:

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

In paragraph 32, the NPPF notes that:

- "All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:
- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."

DEVELOPMENT COMPLIANCE WITH NATIONAL POLICY

1 Triton Square and St Anne's are both located in an area of very good public transport provision and are connected to existing walking and cycling networks. Additionally, the development proposals include the provision of cycle parking spaces and supporting facilities for cyclists will be provided in 1 Triton Square. No car or motorcycle parking is to be provided for the mixed-use development and only the wheelchair accessible units in the residential development (two units) will be provided with a parking space each on an as required basis. The proposals therefore meet the sustainable development criteria promoted in the NPPF.

3.2 REGIONAL POLICY

3.2.1 THE LONDON PLAN (GLA, 2016)

The Mayor of London's London Plan was published by the Greater London Authority (GLA) in February 2004. It provides an integrated economic, environmental, transport and social framework for the future development of London to 2031. The latest version, the Minor Alterations to the London Plan, was published in March 2016.

Chapter 6 of the London Plan (2016) outlines a number of policies on the integration of transport and development, including the consideration of development proposals in terms of existing transport capacity and supporting sustainable transport in London. The following policies are of relevance:

- Policy 6.1 Strategic approach: this policy seeks to encourage development where the need to travel, especially by car, is reduced and supports developments that promote walking by improving the urban realm;
- Policy 6.3 Assessing effects of development on transport: the policy outlines the requirements for Transport Assessments and Travel Plans, stressing that the impact of development should be fully assessed;
- Policy 6.9 Cycling: the necessary standards of cycle parking are specified under this policy. In addition, it is noted that developments should aim to contribute positively to the existing cycling network;
- Policy 6.10 Walking: this policy refers to the London Pedestrian Design Guidance, noting the need for developments to improve the quality of the surrounding street space;
- Policy 6.13 Parking: with reference to the maximum parking standards, the policy notes that a balance must be achieved between promoting new development and providing parking that does not support the aim of promoting sustainable transport use. It states that parking should be provided for disabled people and that applicants should use their assessments to demonstrate how the needs of disabled people have been addressed.

The parking addendum to Chapter 6: London's Transport sets out the parking standards for developments in London. The standards of relevance to the proposed development are detailed below.

Table 3, Table 4 and Table 5 set out the maximum car parking standards for B1 office, retail and residential land uses in central London.

Location	Non-operational maximum standards for employment B1: spaces per m² (Gross Internal Area)
Central London (Central Activities Zone)	1,000 – 1,500

Figure No.3.1: Table 3: Maximum Car Parking Standards for B1 Office

For B1 office land uses, 20% of all spaces must be for electric vehicles with an additional 10% passive provision for electric vehicles in the future.

PTAL	Maximum standards for retail users: space per m² (Gross Internal Area)
PTAL 6 (central)	Unless for disabled people, no non-operational parking should be provided for locations in PTAL 6 (central).

Figure No.3.2: Table 4: Maximum Car Parking Standards for Retail
Source: London Plan (March 2016)

PTAL	Residential standards
PTAL 5-6 (central)	Up to one space per unit

Figure No.3.3: Table 5: Maximum Car Parking Standards for Residential
Source: London Plan (March 2016)

It is noted that residential developments in areas of good public transport accessibility should aim for significantly less than one space per unit. Adequate parking for disabled people must be provided, preferably on site.

Parking standards for Blue Badge holders in accordance with BS 8300:2009 are given in Table 6.

Building Type	Provision from the Outset		Future Provision
	Number of spaces per employee who is a disabled motorist	Number of spaces for visiting disabled motorists	Number of enlarged standard spaces
Workplaces	One space	5% of the total capacity	A further 5% of the total capacity
Shopping, recreation and leisure facilities	One space	6% of the total capacity	A further 4% of the total capacity

Figure No.3.4: Table 6: Designated Blue Badge Parking Provision
Source: London Plan (March 2016)

As for the minimum cycle parking standards of relevance to the proposed development, they are presented in Table 7.

3.2.2 THE MAYOR'S TRANSPORT STRATEGY (GLA,2010)

Published by the GLA in May 2010, the Mayor's Transport Strategy (MTS) sets out the transport policies for London, supports the London Plan (2016) and promotes investment in London's infrastructure and public services to accommodate the growth in London's population and employment in a sustainable manner. The policies that are relevant to the proposed development are as follows:

- Policy 9: To locate high trip generating developments in areas of high public transport accessibility, connectivity and capacity (either currently or where new transport schemes are committed), and to design development site layouts in such a way that access on foot, cycle, by public transport and by sustainable freight is maximised;
- Policy 11: To reduce the need to travel, encourage the use of more sustainable, less congesting modes of transport (public transport, cycling and walking), set appropriate parking standards and aim to increase public transport, walking and cycling mode shares; and
- Policy 17: To promote healthy travel options such as walking and cycling.

DEVELOPMENT COMPLIANCE WITH REGIONAL POLICY

Triton Square and the proposed residential development are located in an area of high public transport accessibility and the surrounding area is conducive to walking and cycling. Development proposals include the provision of cycle parking in accordance with the London Plan (2016) standards and will include supporting facilities for cyclists. The development will be car-free with the exception of two disabled parking bays provided for the residential aspect the development, on an as-required basis. The development therefore complies with the aims of the London Plan (2016) and the specific policies (9, 11 and 17) of the MTS.

Land Use	Long-Stay (Staff)	Short-Stay (Customer/Visitor)
A1 Food Retail	From a threshold of 100m²: 1 space per 175m²	From a threshold of 100m²: first 750m²: 1 space per 40m². Thereafter: 1 space per 300m²
A1 Non- Food Retail	From a threshold of 100m²: first 1,000m²: 1 space per 250m² Thereafter: 1 space per 1,000m²	From a threshold of 100m²: first 1,000m²: 1 space per 125m². T thereafter: 1 space per 1,000m²
B1 Office (Inner/central London)	1 space per 90m²	First 5,000m²: 1 space per 500m². Thereafter: 1 space per 5,000m²
A2 Financial / Professional Services	From a threshold of 100m²: 1 space per 175m²	From a threshold of 100m²: 1 space per 40m²
A3 Café & Restaurants		
A4 Drinking Establishments		
D1 Other (e.g. library, church, etc.)	1 space per 8 staff	1 space per 100m²
D2 Sports (e.g. sports hall, swimming, gymnasium, etc.)	1 space per 8 staff	1 space per 100m²
C3 Residential	1 space per 1 bed unit/studio 2 spaces for all other dwellings	1 space per 40 units

Figure No.3. 5: Table 7: Minimum Cycle Parking Standards
Source: London Plan (March 2016)

3.3 LOCAL POLICY

On 24 June 2016, Camden Council submitted the Camden Local Plan and supporting documents to the Secretary of State for Communities and Local Government for independent examination. This followed consultation of the Local Plan Submission Draft that ran for eight weeks from 8 February to 4 April 2016.

Although not adopted yet, the Local Plan in its draft form can be given (limited) consideration when determining planning applications. The Camden Local Plan will set out the Council's planning policies and, when finalised, will replace the current Core Strategy and Development Policies planning documents (adopted in 2010) as the basis for planning decisions and future development in the borough. In the meantime, the current Core Strategy and Development Policies still apply and the sections of relevance to the proposed development are set out in this section.

3.3.1 CORE STRATEGY 2010-2025 (2010)

The Core Strategy sets out the key elements of the Council's planning strategy and defines the overall vision for the borough:"Camden will be a borough of opportunity".

The Core Strategy defines high-level strategic policies for the future development of Camden to meet the vision and objectives set out above. Of relevance to transport is Policy CS11 – Promoting sustainable and efficient travel. This policy seeks to promote walking, cycling and public transport through a number of measures including extending the 'Legible London' scheme, increasing the availability of cycle parking and minimise parking provision.

3.3.2 CAMDEN DEVELOPMENT POLICIES 2010-2025 (2010)

The Camden Development Policies translate the strategic policies as set out in the Core Strategy into policies to be applied in the detailed assessment of planning applications.

The policies relevant to the development are as follows.

- Policy DP16 – The transport implications of development addresses the need for an assessment of the impact of any development upon the transport network;
- Policy DP17 – Walking, cycling and public transport details the Council's approach to favour walking, cycling and public transport use through development control;
- Policy DP18 – Parking standards and limiting the availability of car parking outlines the aspiration for car-free development and refers to the Council's cycle parking standards;
- Policy DP20 – Movement of goods and materials specifies the measures that should be applied to minimise the impact of servicing; and
- Policy DP21 – Development connecting to the highway network provides advice on integrating any new development with the existing highway network.

The disabled parking standards specified under Policy DP18 for the land uses within the proposed development are shown in Table 8.

Land Use	Users	Standards
A1 – Shops	People with Disabilities	Staff/operational – 1 space per disabled employee or, from a threshold of 1,000m², 1 space per 20,000m² or part thereof – whichever is the greater Customer – from a threshold of 1,000m², 1 space per 500m² or part thereof
B1 – Business		Staff/operational – 1 space per disabled employee or, from threshold of 2,500m², 1 space per 20,000m² or part thereof – whichever is the greater Visitor – from threshold of 2,500m², minimum of 1 if any visitors are expected, plus any additional spaces needed to bring the total number up to 5% of the visitors likely to be present at any time
D2 – Recreation and Leisure		Staff/operational – 1 space per disabled employee or, from a threshold of 1,000m², 1 space per 20,000m² or part thereof – whichever is the greater Visitor – from a threshold of 1,000m², 1 space per 500m² or part thereof
C3 Residential		Wheelchair housing: 1 space per dwelling, with dimensions suitable for use by people with disabilities General housing: where justified by the likely occupancy of the dwelling and reserved for use by people with disabilities, above a threshold of 10 units, 1 spacer per 20 units or part thereof, with dimensions suitable for use by people with disabilities

Figure No.3. 6: Table 8: Camden Development Policies – Disabled Car Parking Standards

Source: Camden Development Policies 2010-2025 (November 2010) 3.3.3 Camden Planning Guidance 7 (CPG7 Transport)

3.3.3 CAMDEN PLANNING GUIDANCE 7 (CPG7 TRANSPORT)

The Camden Planning Guidance 7 (CPG7 Transport) document supports the policies within the Core Strategy and the Camden Development Policies, and forms a Supplementary Planning Document (SDP) which is an additional "material consideration" to inform planning decisions in relation to development and impacts upon transport.

Of particular relevance to this development are the guidelines on the type of cycle parking that should be provided and also guidelines for Delivery and Servicing Management Plans.

DEVELOPMENT COMPLIANCE WITH LOCAL POLICY

The development proposals are aligned with the Core Strategy objectives which relate to promoting high-density mixed-use development. The proposed development also promotes sustainable mobility by being car-free (with the exception of disabled parking for the wheelchair-accessible units), providing cycling parking spaces and supporting facilities in accordance with the London Plan (2016) standards.

The planning application is supported by this TA which includes a Framework Travel Plan. Based on the scale of the proposed redevelopment and the high accessibility of the local area, it is expected that the development complies with the requirements set out in the Camden Development Policies document.

Furthermore, CPG7 Transport has been used to inform the type and location of the cycle parking provided for the proposed development and to assist in the development of the Servicing and Waste Management Strategy.

3.4 TECHNICAL GUIDANCE

The assessment of transport effects has been based on the approach set out in Transport for London's (TfL's) Transport Assessment Best Practice Guidance (published online at https://www.tfl.gov.uk/info-for/urban-planning-andconstruction/transport-assessment-guidance) which was updated in 2014 to reflect changes to national policy, including the adoption of the NPPF and overall government objective to streamline the planning process.

It is noted that the Department for Transport (DfT) withdrew its Guidance on Transport Assessment in October 2014. Broad guidance on the information to be included in a Transport Assessment is now available online at: http://planningguidance.planningportal.gov.uk/blog/guidance/travel-planstransport-assessments-and-statements-in-decision-taking/.

Other technical guidance documents which are relevant to the Transport Assessment include:

- Design Manual for Roads and Bridges (DMRB) (DfT, various dates);
- Manual for Streets (DCLG and DfT, 2007) and Manual for Streets 2 (Chartered Institution of Highways and Transportation, 2011);
- The London Cycling Design Standards (TfL, 2014);
- TfL guidance on walking, including the Pedestrian Comfort Guidance for London (TfL, 2010) and the Pedestrian Environment Review System (PERS);
- The requirements of the Equality Act 2010 in relation to transport and access for disabled people;
- TfL's updated Streetscape Guidance, Third Edition, 2016 Revision 1;
- TfL's Traffic Modelling Guidelines Version 3.0 (TfL, 2010); and
- Various guidance from TfL on the preparation of Travel Plans, Construction Logistics Plans and Delivery and Servicing Plans.

04 EXISTING TRANSPORT NETWORKS

This section describes the existing transport infrastructure and networks serving the site.

4.1 PEDESTRIAN NETWORK

1 Triton Square is part of Regent's Place, which offers a pedestrian-friendly environment to its users, with largely pedestrianised streets, alleyways and plazas. Around Regent's Place, wide footways, signalised pedestrian crossings and dropped kerbs and tactile paving are provided. Signposting is placed at strategic locations within and around the site to help pedestrians find their way, while there is reduced street furniture within Regent's Place and on its immediate outskirts, facilitating pedestrian movements to key local destinations.

St Anne's, immediately to the north-west of Triton Square, also benefits from wide footways, dropped kerbs and tactile paving.

4.2 CYCLE NETWORK

The routes bounding 1 Triton Square and St Anne's include Longford Street and Drummond Street are two of the many local "quieter roads that have been recommended by other cyclists". Further south, these routes connect with a network of "routes signed or marked for use by cyclists on a mixture of quiet or busier roads" across Marylebone, Fitzrovia and further onward destinations into central London.

Quietway 3 (Q3), between the Regent's Park and Gladstone Park, originates at the north-west corner of the Regent's Park, some 2.9km north-west of the site and travels through St. John's Wood, South and West Hampstead, Kilburn, Willesden Green and Dollis Hill. It is planned that Q3 will connect with Cycle Superhighway CS11 in the future if the latter goes ahead (see Section 4.6.2 for more details).

There are a number of Santander Cycles docking stations within walking distance of the 1 Triton Square site, including:

- Hampstead Road, Euston (53 bicycles, approximately 190m from the site);
- Longford Street, The Regent's Park (20 bicycles, 290m);
- Bolsover Street, Fitzrovia (19 bicycles, 300m);
- Warren Street station, Euston (25 bicycles, 350m); and
- Drummond Street, Euston (28 bicycles, 500m).

Public cycle parking is also available at the following locations:

- Outside Great Portland Street London Underground station (14 spaces, 300m);
- Drummond Street (eight and six spaces, 300 and 350m);
- Tottenham Court Road (four and 12 spaces, 350m and 450m);
- North Gower Street (six spaces, 350m); and
- Cleveland Street (six and six spaces, 400 and 500m).

4.3 PUBLIC TRANSPORT NETWORK

4.3.1 PUBLIC TRANSPORT ACCESSIBILITY LEVEL

The Public Transport Accessibility Level (PTAL) of the 1 Triton Square and St Anne's proposed development has been calculated using Transport for London's (TfL) WebCAT. This assumes a walking speed of 4.8km per hour and considers rail stations within a 12 minute walk (960m) of the site and bus stops within an eight-minute walk (640m) as accessible.

The proposed site has a PTAL rating of 6b. This is rated as 'Excellent' (with 1a being the lowest accessibility and 6b being the highest accessibility).

4.3.2 LONDON UNDERGROUND

There are six London Underground stations within 960m walking distance of the 1 Triton Square and St Anne's proposed development. These are (distances are given in brackets from 1 Triton Square):

- Warren Street (270m);
- Great Portland Street (400m);
- Euston Square (450m);
- Regent's Park (600m);
- Euston (600m); and
- Goodge Street (800m).

These stations provide access to the Bakerloo, Circle, Hammersmith & City, Metropolitan, Northern and Victoria lines. A summary of these services and their frequencies are provided in Table 9.

Figure No.4.1: Table 9: London Underground Services

Line	Origin/Destination	AM Peak Hour Arrivals at Nearest Station (All Directions)
Bakerloo	Harrow & Wealdstone – Wembley Central – Willesden Junction – Queen's Park – Paddington – Baker Street – Oxford Circus – Charing Cross – Waterloo – Elephant & Castle	22+22 = 44
Circle	Hammersmith – Wood Lane – Paddington – Edgware Road – Baker Street – King's Cross St. Pancras International – Liverpool Street – Aldgate – Monument – Westminster – Victoria – Paddington – Edgware Road	7+6 = 13
Hammersmith & City	Hammersmith – Wood Lane – Paddington – Edgware Road – Baker Street – King's Cross St. Pancras International – Liverpool Street – Aldgate East – Mile End – Barking	6+6 = 12
Metropolitan	Aldgate – Liverpool Street – King's Cross St. Pancras International – Baker Street – Finchley Road – Wembley Park – Harrow-on-the-Hill – Watford/Uxbridge/Chesham/ Amersham	13+13 = 26
Northern (Charing Cross branch)	Edgware – Hampstead OR High Barnet – Finchley Central – Archway OR Mill Hill East – Archway then Camden Town – Euston – Tottenham Court Road – Charing Cross – Waterloo – Kennington – Stockwell – Balham – Morden	23+21 = 44
Northern (Bank branch)	Edgware – Hampstead OR High Barnet – Finchley Central – Archway OR Mill Hill East – Archway then Camden Town – King's Cross St. Pancras International – Moorgate – Bank – London Bridge – Kennington – Stockwell – Balham – Morden	23+24 = 47
Victoria	Walthamstow Central – Seven Sisters – Highbury & Islington – King's Cross St. Pancras International – Oxford Circus – Victoria – Vauxhall – Brixton	34+34 = 68

4.3.3 NATIONAL RAIL

There is one National Rail station within 960m walking distance of the 1 Triton Square and St Anne's proposed development, Euston Station (600m).

Euston Station provides links to destinations in Scotland, north-west England, Wales and the West Midlands on services operated by Virgin Trains, London Midland and Caledonian Sleeper.

As summarised in Table 10, there are approximately 49 National Rail services arriving at Euston in the AM peak hour.

Figure No.4. 2: Table 10: National Rail Services

Station	Operators	Origins	AM Peak Hour Arrivals
Euston	Virgin Trains	Scotland (Glasgow, Edinburgh), Northwest England (Blackpool, Liverpool, Manchester), Wales (Holyhead, Wrexham), West Midlands (Shrewsbury, Birmingham)	11
	London Midland	Northwest England (Liverpool), West Midlands (Shrewsbury, Hereford, Redditch, Stratford-upon-Avon	38
	Caledonian Sleeper	Glasgow, Edinburgh, Inverness, Aberdeen, Fort William	0

4.3.4 LONDON OVERGROUND

There is one London Overground station within 960m walking distance of the 1 Triton Square and St Anne's proposed development, Euston Station (600m). One London Overground route originates and terminates at Euston and serves Watford Junction via Queen's Park, Willesden Junction, Wembley Central and Harrow & Wealdstone.

A summary of the London Overground service available at Euston is provided in Table 11.

Figure No.4. 3: Table 11: London Overground Service

Line	Key Stops	AM Peak Hour Arrivals
Watford Junction – Euston	Watford Junction – Harrow & Wealdstone – Wembley Central – Willesden Junction – Queen's Park – Euston	3

4.3.5 4.3.5 LONDON BUSES

There is a number of bus stops within 640m walking distance of the 1 Triton Square and St Anne's proposed development, providing access to 14 bus routes. Further information on the bus routes serving the site and their frequencies is provided in Table 12.

Figure No.4. 4: Table 12: London Bus Services

Route Number	Route	Frequency (per hour)
10	Wharfdale Road/London Canal Museum – Hammersmith Bus Station	4½
14	Putney Heath/Green Man – Warren Street Station	13
18	Sudbury & Harrow Road Station – Euston Station	17
24	Grosvenor Road – Royal Free Hospital	10
27	Chiswick Business Park – Chalk Farm/ Morrisons	8
29	Lordship Lane – Trafalgar Square/ Charing Cross Station	15
30	Portman Street/Selfridges – Hackney Wick/Trowbridge Road	7½
73	Victoria Bus Station – Stoke Newington Common	18
88	Camden Gardens – Omnibus Clapham	9
134	North Finchley Bus Station – New Oxford Street	12
205	Cleveland Terrace – Bow Church Station	8
390	Archway Station – Palace Gardens Terrace/Notting Hill Gate	8
453	Deptford Bridge – Great Central Street	12
C2	Parliament Hill Fields – Victoria Station	8

4.4 EXISTING LOCAL HIGHWAY NETWORK

The 1 Triton Square site is bounded to the west, south and east by Triton Square, which is pedestrianised in its western and southern sections, and acts as a taxi access road in its eastern section. To the north, the building is bounded by Longford Street. St Anne's Church sits on the corner of Longford Street and Laxton Place.

Longford Street continues as Drummond Street to the east and intersects with the A400 Hampstead Road some 200m north-east of the site. The A400 Hampstead Road is a section of the A400, an A road that runs from Charing Cross to Archway in North London. It forms a junction with the A501 Euston Road approximately 100m south of its intersection with Drummond Street and is known as the A400 Tottenham Court Road south of that point.

Longford Street connects with the A4201 Albany Street some 230m to the west of the site. The A4201 Albany Street runs parallel to the Regent's Park and continues into Great Portland Street south of the junction with the A501 Marylebone Road.

The A501 is part of the London Inner Ring Road, a 19km route formed from a number of major roads that encircle central London. In the vicinity of the site, it also forms the northern boundary of the London Congestion Charge (LCC) zone, but the road itself is not part of it. Drivers have to pay an £11.50 daily charge between 07:00 and 18:00 on weekdays only to get access to the LCC zone. The A501 also gives local access to the Marylebone (Baker Street) and Paddington areas to the west and the Euston, King's Cross, St. Pancras and Angel areas to the north-east.

4.5 CAR AND MOTORCYCLE PARKING

4.5.1 CONTROLLED PARKING ZONE

Both sites are located within a Controlled Parking Zone (CPZ) where parking is controlled Monday-Friday between 08:30 and 18:30.

4.5.2 ON-STREET PARKING

Within the CPZ, on-street car and motorcycle parking is permitted in the streets shown in Table 13.

Figure No.4. 5: Table 13: Non-Resident Local On-Street Parking Bay Details

Source: https://opendata.camden.gov.uk/Transport/Parking-Bay-Map/miup-aubx

Location	Parking Type	Details	Number	Distance from 1 Triton Square
Drummond Street	Pay & Display	Times of Operation: Mon-Fri 08:30-18:30 Maximum Stay: 2 hours Tariff: £2.70/hour	3 2 3 3 3	80m 100m 120m 160m 170m
Stanhope Street	Solo Motorcycles	Times of Operation: Mon-Fri 08:30-18:30 Maximum Stay: N/A Tariff: N/A	1	120m
	Pay & Display	Times of Operation: Mon-Fri 08:30-18:30 Maximum Stay: 2 hours Tariff: £2.70/hour	4	140m
Laxton Place	Disabled	Times of Operation: At any time Maximum Stay: N/A Tariff: N/A	1	190m
Longford Street	Disabled	Times of Operation: At any time Maximum Stay: N/A Tariff: N/A	1 1	210m 220m
	Pay & Display	Times of Operation: Mon-Fri 08:30-18:30 Maximum Stay: 4 hours Tariff: £2.70/hour	4	270m
	Solo Motorcycles	Times of Operation: Mon-Fri 08:30-18:30 Maximum Stay: N/A Tariff: N/A	1	260m
Osnaburgh Street	Pay & Display	Times of Operation: Mon-Fri 08:30-18:30 Maximum Stay: 2 hours Tariff: £2.70/hour	2 1 2 10	250m 290m 280m 280m
	Disabled	Times of Operation: At any time Maximum Stay: N/A Tariff: N/A	1	300m

4.5.3 CAR PARKS

There are two off-street car parks in the vicinity of both sites, as detailed in Table 14.

Figure No.4. 6: Table 14: Local Car Park Details

Source: http://www.lomaxcarpark.co.uk/bucklebury_house.html

Location	Operator	Opening Hours	Rates	Number	Distance from 1 Triton Square
Bucklebury Car Park, accessed from Laxton Place or Munster Square via Wybert Street	Lomax Carpark Corporation Ltd	Monday-Friday: 07:00-20:00 Saturday, Sunday and public holidays: Closed	0-2hrs: £7 2-3hrs: £9 3-4hrs: £1 4-5hrs: £13 5-6hrs: £15 6-7hrs: £17 7-24hrs: £19	60	280m
George Mews Car Park, accessed from North Gower Street via George Mews	Lomax Carpark Corporation Ltd		0-2hrs: £6.50 2-3hrs: £8.50 3-4hrs: £10.50 4-5hrs: £12.50 5-6hrs: £14 6-7hrs: £15.50 7-24hrs: £17	40	350m

4.5.4 4.5.4 CAR CLUBS

There are a number of car club bays in the vicinity of the site, details of which are provided in Table 15.

Figure No.4. 7: Table 15: Local Car Club Details

Source: https://tfl.gov.uk/modes/driving/car-clubs

Location	Operator	Capacity	Distance from 1 Triton Square
Longford Street	Car City Club	1	250m
Albany Street (South)	Zipcar	1	350m
Warren Street	Zipcar	1	400m
Albany Street (North)	Zipcar	2	500m
Park Crescent	Zipcar	2	500m
Conway Street	City Car Club	1	750m

4.6 FUTURE TRANSPORT PROPOSALS

4.6.1 PUBLIC TRANSPORT UPGRADES

FOUR LINES MODERNISATION

The Circle, District, Hammersmith & City and Metropolitan lines are being upgraded under the Four Lines Modernisation plan with new technology reducing journey times and increasing capacity. The plan is due for completion in 2023. Modern, air-conditioned S-stock trains now in operation across the Circle, Hammersmith & City and Metropolitan lines are gradually being introduced onto the District line and the roll-out is expected to be completed by the end of 2016. The new trains are longer and more spacious, with bigger doors, creating extra space for more people to get on and off at stations, speeding up journeys. The new trains are also walk-through with air conditioning, as well as improved audio and visual information, dedicated wheelchair spaces and colour-contrasting interiors.

Work to install a new signalling and control system began in the summer of 2016, eventually allowing trains to be driven automatically with a train operator in the cab to open and close the doors and to run more frequently, with 32 trains per hour, a 33% increase in peak-hour capacity.

The combined line capacity of the Circle and Hammersmith & City lines will increase by 65%, equating to a capacity increase of 17,000 more passengers an hour. Likewise, the capacity of the Metropolitan line will increase by 27%. This means that an additional 9,500 customers per hour will be able to be carried at the busiest times.

NORTHERN LINE

The Northern line signalling upgrade carried out over the past few years has delivered a 20% increase in capacity through central London during the busiest times. Further train frequencies are planned in the early 2020s once the number of trains on the line has been increased.

VICTORIA LINE

Further work on signalling and track is planned to increase frequency to 36 trains per hour – a train every 100 seconds – in the peak hours by 2017.

HIGH SPEED 2

High Speed 2 train services that will link London to Birmingham and the West Midlands (Phase One) and, at a later date, from the Birmingham and the West Midlands to Leeds and Manchester (Phase Two) will be departing from Euston station. No opening date for Phase One has been set yet but services are likely to commence in the mid- to late 2020s.

It is estimated that there will be three trains per hour from Euston to Birmingham Curzon Street and the future journey times will be represent a reduction of approximately 35 minutes when compared with current standard journey times.

CROSSRAIL (ELIZABETH LINE)

Crossrail is a new rail link which will provide frequent high-capacity rail services running in an east-west direction across Central London, stretching from Reading and Heathrow Airport in the west across to Shenfield and Abbey Wood in the east.
Services on the central section are due to start in 2018, when Crossrail will officially become the Elizabeth Line.
The two nearest Crossrail stations to the development will be Tottenham Court Road and Bond Street, approximately a 1.4km and a 1.8km walk from the 1 Triton Square building. The stations will also provide interconnections with the Central, Northern, Victoria and Bakerloo lines. Trains will run every two and a half minutes at peak times in each direction.

4.6.2 CYCLE SUPERHIGHWAYS AND QUIETWAYS

As part of the development of the Central London Grid, a set of connected routes for cyclists is being developed across central London comprising a network of Quietways and Cycle Superhighway routes.

CYCLE SUPERHIGHWAY CS6 ('NORTH-SOUTH CYCLE SUPERHIGHWAY): ELEPHANT & CASTLE – GREVILLE STREET

The North-South Cycle Superhighway (CS6) is currently being built and, upon completion, will run between Elephant & Castle to the south and (subject to consultation) King's Cross/St. Pancras to the north (approximately 1.4km north-east of the site). The section between Elephant & Castle and Greville Street, near Farringdon, was fully delivered in June 2016.

Cycle Superhighway CS11: Swiss Cottage – Portland Place
TfL is exploring the feasibility of a new Cycle Superhighway route which would be a continuous link from Swiss Cottage, in the London Borough of Camden, to Portland Place, in Marylebone, City of Westminster, via the Regent's Park's Outer Circle. The route would end at the junction with New Cavendish Street where it would link with the planned Central London Grid.
CS11 would be accessed from the junction of the A501 Marylebone Road/Euston Road and Park Crescent/Park Square East, some 350m to the south-west of the site.

4.6.3 HIGHWAY NETWORK UPGRADES

As part of its Road Modernisation Plan, TfL is investing more than £4 billion to improve London's highway network. Local improvement and road projects are detailed below.

GREAT PORTLAND STREET GYRATORY

It is planned to make the Great Portland Street gyratory more accessible for pedestrians and cyclists and facilitate travel between the London Borough of Camden and the City of Westminster. Construction is proposed to start in March 2018.

05 DEVELOPMENT ACCESS AND PARKING PROPOSALS

This section sets out details on the pedestrian routes serving the proposed development and the levels of cycle and car parking that will be provided.

5.1 PEDESTRIAN ACCESS

1 TRITON SQUARE

Pedestrian access into the building will continue to be from the four corners of the site:

- The south-east corner will provide the main office entrance and will benefit from the removal of the vehicular drop-off loop that is currently provided outside the entrance. The removal of the vehicular route will enable improvements to be made to the pedestrian environment on this prominent corner of the site;
- The south-west corner of the building located at the junction of Triton Square with Triton Street will provide a second office entrance;
- The north-east corner will provide a pedestrian entrance to the gym located off Triton Square (East); and
- The entrance to the community facility will be located off Longford Street in the north-west corner of the site.

ST ANNE'S

The pedestrian entrance to the proposed residential development will be located on Laxton Place.

5.2 CYCLE ACCESS AND PARKING

1 TRITON SQUARE

Long-stay cycle parking will be provided in accordance with the London Plan (2016) standards. The application of the long-stay cycle parking standards to the proposed development is set out in Table 16.

Table 16 illustrates that a total of 516 long-stay cycle parking spaces are required. The development proposals for 1 Triton Square will provide 532 long-stay cycle parking spaces.

The development proposals for 1 Triton Square will meet this minimum provision required by the London Plan (2016) standards.

The cycle parking facilities will be provided at ground floor level with showers, changing facilities, lockers and drying facilities. The proposed development will provide one shower for every ten long stay cycle parking space and one locker for every long stay cycle parking space.

Short-stay cycle parking will also be provided in accordance with the London Plan (2016) standards. The application of the short-stay cycle parking standards to the proposed development is set out in Table 17. These spaces will be provided in the public realm.

Figure No.5.1: Table 16: Required Cycle Parking Spaces (1 Triton Square, Long-Stay)

Land Use	GEA (m²)	Long- Stay Cycle Parking Standards	Cycle Parking Spaces
Office (B1)	44,877	1 space per 90 m²	499
Retail (A1, A3, A4)	348	From a threshold of 100m²: 1 space per 175m²	2
Affordable Workspace (B1)	1,028	1 space per 90m²	11
Leisure (D2)	1,881 (or 1,853m² GIA, i.e. 29 staff)	1 space per 8 staff	4
Total			516

Figure No.5. 2: Table 17: Required Cycle Parking Spaces (1 Triton Square, Short-Stay)

Land Use	GEA (m²)	Short Stay Cycle Parking Standards	Cycle Parking Spaces
Office (B1)	44,877	Ffirst 5,000 sqm²: 1 space per 500 sqm².	18
Retail (A1, A3, A4)	348	Ffrom a threshold of 100 sqm²: 1 space per 40 sqm²	9
Community (D1)Affordable Workspace (B1)	1,028	First 5,000m²: 1 space per 500m². Thereafter: 1 space per 5,000m²	2
Leisure (D2)	1,183	1 space per 100 m²	19
Total			49

ST ANNE'S

Long-stay cycle parking will be provided for residents in accordance with the London Plan (2016) standards. The application of the long-stay cycle parking standards to the proposed residential development of St Anne's is set out in Table 18.

Figure No.5. 3: Table 18: Required Cycle Parking Spaces (St Anne's, Long-Stay)

Unit Type	Number of UnitsCount	Long-Stay Cycle Parking Standards	Cycle Parking Spaces
One-bed unit	1	1 space per unit	1
Two-bed unit	11	2 spaces per unit	22
Three-bed unit	10		20
Total			43

Table 18 illustrates that a total of 43 long-stay cycle parking spaces are required. The development proposals for St Anne's will provide 44 long-stay cycle parking spaces.

Planning policy thresholds for short-stay spaces are not reached and, accordingly, no dedicated provision is proposed. Public cycle parking is provided at 1 Triton Square in the vicinity of the site and will cater for visitors.

5.3 VEHICLE ACCESS AND CAR PARKING

5.3.1 TAXI DROP-OFF LOOP ON TRITON SQUARE

A vehicle drop-off area is currently provided on the eastern side of 1 Triton Square overlooking the plaza, in the form of a loop. It is accessed from Drummond Street to the north.

The development proposals will remove this under-used facility to improve the pedestrian permeability throughout the public realm on the east side of the building.

The CCTV footage of the 1 Triton Square taxi rank has been reviewed and the results are presented in Table 19. The data covered a total of 72 hours over three full neutral weekdays, from Tuesday 20th to Thursday 22nd September 2016.

Day	Vehicles In	Vehicles Out
Tuesday 20th September 2016		
00:00-01:00	2	2
01:00-02:00	0	0
02:00-03:00	0	0
03:00-04:00	2	2
04:00-05:00	1	1
05:00-06:00	4	3
06:00-07:00	7	5
07:00-08:00	2	4
08:00-09:00	4	6
09:00-10:00	4	4
10:00-11:00	5	5
11:00-12:00	4	4
12:00-13:00	3	3
13:00-14:00	2	1
14:00-15:00	4	4
15:00-16:00	3	3
16:00-17:00	4	4
17:00-18:00	5	5
18:00-19:00	4	4
19:00-20:00	3	3
20:00-21:00	3	3
21:00-22:00	1	1
22:00-23:00	0	0
23:00-00:00	0	0
Total (all day)	**67**	**67**
Wednesday 21st September 2016		
00:00-01:00	1	1
01:00-02:00	0	0
02:00-03:00	1	1
03:00-04:00	1	0
04:00-05:00	1	2
05:00-06:00	4	4
06:00-07:00	11	9
07:00-08:00	2	3
08:00-09:00	1	1
09:00-10:00	2	1
10:00-11:00	4	6
11:00-12:00	6	4
12:00-13:00	3	5
13:00-14:00	6	6
14:00-15:00	2	2
15:00-16:00	5	4
16:00-17:00	4	4
17:00-18:00	5	7
18:00-19:00	8	6
19:00-20:00	3	3
20:00-21:00	3	3
21:00-22:00	1	1
22:00-23:00	0	0
23:00-00:00	0	1
Total (all day)	**74**	**74**
Thursday 22nd September 2016		
00:00-01:00	0	0
01:00-02:00	2	2
02:00-03:00	0	0
03:00-04:00	0	0
04:00-05:00	3	2
05:00-06:00	5	4
06:00-07:00	5	6
07:00-08:00	9	10
08:00-09:00	8	6
09:00-10:00	6	7
10:00-11:00	4	5
11:00-12:00	8	7
12:00-13:00	2	2
13:00-14:00	4	1
14:00-15:00	8	8
15:00-16:00	4	5
16:00-17:00	10	12
17:00-18:00	10	10
18:00-19:00	1	1
19:00-20:00	5	6

Day	Vehicles In	Vehicles Out
20:00-21:00	6	5
21:00-22:00	1	2
22:00-23:00	4	
23:00-00:00	3	
Total (all day)	**108**	**108**

Figure No.5.4: Table 19: Taxi Rank Usage Review

Daily usage ranged from 67 to 108 vehicles, with an average of three to five vehicles per hour and Thursday being the busiest day.
Activity between the core hours of 07:00 to 19:00 ranged from 47 to 74, with an average of four to six vehicles per hour.
A quick accumulation exercise has also been carried out to show that there were up to four vehicles waiting in the rank on Thursday 22nd September 2016 between the hours of 13:00 and 14:00, and 14:00 and 15:00.
It is considered that the removal of the taxi rank should not pose any particular problem and taxis should be able to drop off and pick up passengers along Longford Street/ Drummond Street to the north of 1 Triton Square.
Longford Street/Drummond Street is a lightly trafficked street and it is likely that any taxis dropping off or picking up passengers near the kerbside would only make up a small percentage of all traffic travelling along that street and would therefore not disrupt it.

5.3.2 VEHICLE RAMP

A two-way vehicle ramp to the basement servicing area of Triton Square is located off Longford Street to the north of the building. The basement servicing area serves the whole of the Regent's Place estate.

Of benefit to the surrounding public realm will be the relocation of the security hut to the opposite side of the ramp where it can be integrated into the existing north-west core of the building. The ramp is currently located on the right-hand side of the ramp upon entering; moving it to the left-hand side will place it on the same side as the vehicle entry lane and reduce the visual impact of the security cabin in the surrounding public realm.

5.3.3 LOADING BAY ON LONGFORD STREET

A loading bay is provided on Longford Street to the north of 1 Triton Square. This is proposed to remain in place and continue to serve the local area as existing.

5.3.4 CAR PARKING

The Camden Development Policies 2010-2025 document specifies that one car parking space per dwelling is acceptable for wheelchair housing and must be suitable for use by people with disabilities.

Two car parking spaces will therefore be provided on-street if necessary for St Anne's (depending on demand) and three disabled parking spaces will be provided in the basement of Regent's Place for 1 Triton Square.

06 TRIP GENERATION

This section summarises the expected levels of trips that will be associated with the proposed development and outlines how these differ from those of the existing development.

6.1 PERSON TRIPS

6.1.1 METHODOLOGY

Due to the large mixed-use nature of the current and proposed developments, a standard TRICS methodology for assessing the potential trip generations has not been deemed appropriate. As such, the following methodology which is more bespoke to the development has been applied:

- The staff and visitor trips generated by the existing and proposed office space were calculated using a first principles methodology;
- The trips associated with the residential element have been calculated using TRICS trip rates;
- The trips associated with the proposed affordable workspace have been calculated as office space, using the same first principles methodology;
- The trips associated with St Anne's Church in the weekday peak periods are assumed to be negligible;
- As the proposed changes in the provision of leisure and retail floor space at Triton Square are very minor and trips are predominantly expected to be linked to other uses, it is considered that any change in associated trips will also be negligible; and
- The modal splits for the office and residential land uses are based on 2011 Census daytime population method-of-travel-to-work data for the area in which the development is located.

Detailed methodologies for all land uses have been set out in the individual trip generation sections.

For the purposes of this study, the trip generations for the existing and proposed development have been estimated for the AM and PM commuter peak hours which are between the hours of 08:00 and 09:00 and 17:00 and 18:00.

6.1.2 EXISTING DEVELOPMENT

6.1.2.1 OFFICE TRIP GENERATION

In order to calculate the peak hour person trips that the recently vacated existing office floor area would generate, the following methodology has been adopted:

- It is assumed that each office employee occupies 13.6m² GIA (factored from 10.9m² NIA estimated in the London Office Floorspace Projections Report, GLA, July 2014);
- 85% of employees attend each day. The other 15% account for those on annual leave, sick leave and those working away from the office;
- It is assumed that 55% of office employees travel in the peak direction during the AM or PM peak hour. This is as set out in the TfL Transport Assessment Best Practice Guidance;
- A further 2% of employees have been assumed to travel in the opposite direction to the peak flow to account for differing working patterns or trips to meetings; and
- To account for visitors a trip rate of 0.3 person per 100m² GIA has been applied to the office floorspace. Visitors are assumed to arrive in the AM peak hour and depart in the PM peak hour.

The resulting person trips that would be generated by the existing 28,370m² GIA of office floorspace are contained in Table 20.

Figure No.6. 1: Table 20: Existing Office Person Trips

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Staff	975	35	1,010	35	975	1,010
Visitors	85	-	85	-	85	85

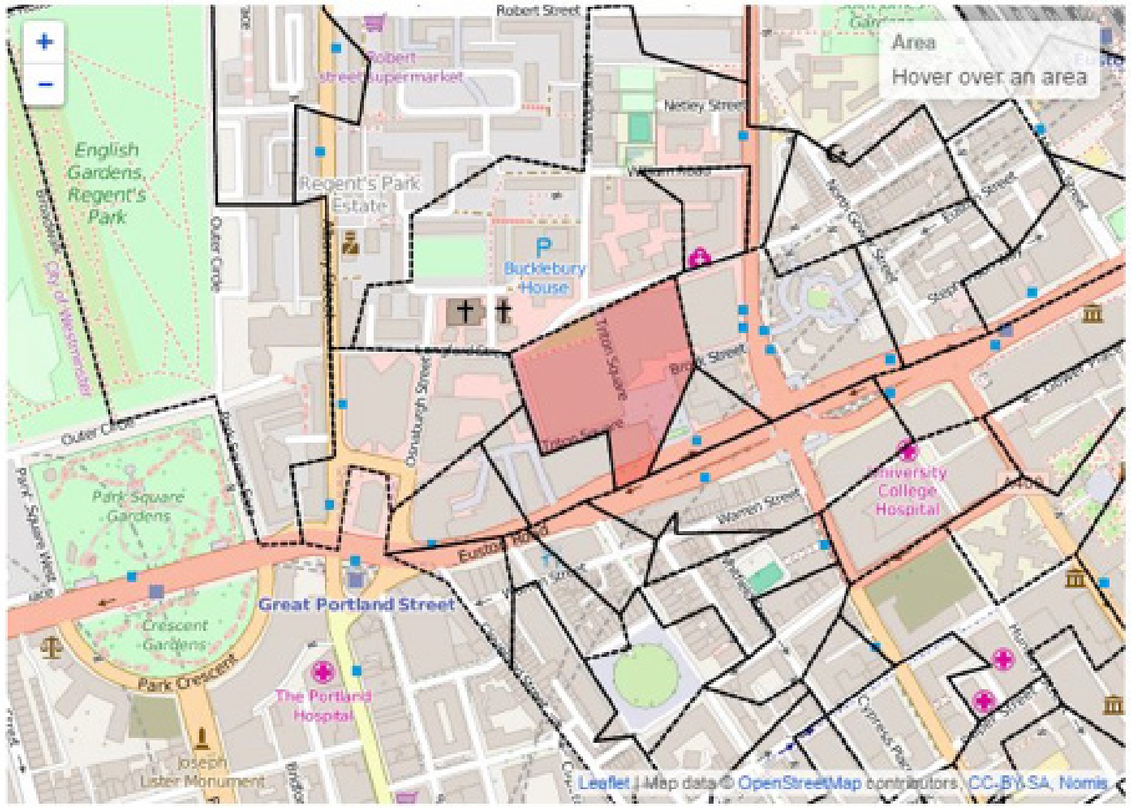
6.1.2.2 OFFICE MODAL SPLIT

The modal split for the existing office land use of the development has been derived from local method-of-travel-to-work data from the 2011 Census, as contained in Table 21. The local workplace modal split data has been extracted from www.nomisweb.co.uk. Nomis is a service provided by the Office for National Statistics (ONS) that gives free access to the most detailed and up-to-date UK labour market statistics from official sources.

Table WP7103EW – Workplace and usual residence by method of travel to work (2011 specification) (Workplace population) has been downloaded for 2011 Census workplace area E33029517 encompassing the site and adjacent Regent's Place buildings (see Figure 1).

Figure No.6.2: Figure 1: Selected 2011 Workplace Zone (Area E33029517)

Source: www.nomisweb.co.uk



In order to account for the site specific characteristics of the existing office development, the following adjustments have been made:

- As no car parking spaces are provided on-site and parking in the surrounding area is restricted, the private car modes (including drivers and passengers) have been reduced from 12.4% to 0.0%; and
- The remaining 12.4% of the original car mode split has been proportionally redistributed across all other modes.
- The original and adjusted modal splits are contained in Table 21.

Figure No.6.3: Table 21: 2011 Census Method-of-Travel-to-Work Existing Office Modal Splits

MODE	AREA E33029517	ADJUSTED
London Underground	30.2%	34.5%
National Rail	48.8%	55.7%
London Bus	4.7%	5.4%
Taxi	0.0%	0.0%
Motorcycle	1.0%	1.1%
Car/Van Driver	12.0%	0.0%
Car/Van Passenger	0.4%	0.0%
Bicycle	1.0%	1.1%
On Foot	1.9%	2.2%

Note: Totals may not add up due to rounding.

The person trips that are expected to be generated by the existing development have been allocated in accordance with the modal split set out in Table 21 and the resulting person trips per mode are set out in Table 22.

Figure No.6.4: Table 22: Existing Office Person Trips by Mode

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Underground	366	412	444	12	366	378
Train	590	419	610	194	590	610
Bus	457	2	59	2	57	59
Taxi	0	0	0	0	0	0
Motorcycle	12	00	12	00	12	12
Driving a car or van	0	0	0	0	0	0
Passenger in a car or van	0	0	0	0	0	0
Bicycle	12	0	12	0	12	12
On foot	23	1	24	1	23	24
Total	1,060	35	1,095	35	1,060	1,095

6.1.3 PROPOSED DEVELOPMENT

The trip generation for the proposed development at 1 Triton Square has been carried out using the proposed office floor areas set out in Section 2.2. As the changes in the provision of leisure, community and retail floor spaces at 1 Triton Square are very minor and trips are predominately of a linked nature, it is considered that any changes in trips associated within these ancillary land uses will be negligible.

6.1.3.1 OFFICE TRIP GENERATION

The same methodology as for the existing development has been used to calculate the trips that are expected be generated by the proposed development. The resulting person trips that will be generated by the 43,825 + 1,015 = 44,840m² GIA of office and affordable workspace floor area are contained in Table 23.

Although the affordable workspace might have different (assumed lower) trip rates, it has been considered that applying the same first principles approach to it would give the assessment more robustness.

Figure No.6. 5: Table 23: Proposed Office Person Trips

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Staff	1,540	46	1,596	56	1,540	1,596
Visitors	134	-	134	-	134	134
Total	1,674	56	1,730	56	1,674	1,730

The person trips that are expected to be generated by the proposed residential development have been allocated by mode.

The modal split set out in Table 21 has been altered to reflect the characteristics of the proposed development:

- As no car parking spaces will be provided on-site and parking in the surrounding area will still be restricted, the private car mode has been further reduced from 1.5% to 0.0%;

- The mode share for cycling has been set in such a way that full utilisation of the proposed 418 cycle parking spaces for office employees can be reached as early as upon first full occupation. Based on an office employee density of 13.6m² GIA, a proposed office floor area of 36,648m² GIA and an 85% employee daily attendance rate, the target would be a cycling mode share of 18.2%; and

- The above means that the public transport mode share would decrease accordingly to accommodate increases in cycling and walking trips, which is in line with LBC and Mayoral policy.

The adjusted modal split for the proposed office is shown in Table 24 and the resulting person trips per mode are set out in Table 25.

Figure No.6.6: Table 24: 2011 Census Method-of-Travel-to-Work Proposed Office Modal Split

MODE	EXISTING OFFICE	PROPOSED OFFICE
London Underground	34.5%	28.5%
National Rail	55.7%	46.1%
London Bus	5.4%	4.5%
Taxi	0.0%	0.0%
Motorcycle	1.1%	0.9%
Car/Van Driver	0.0%	0.0%
Car/Van Passenger	0.0%	0.0%
Bicycle	1.1%	18.2%
On Foot	2.2%	1.8%

Note: Totals may not add up due to rounding.

Figure No.6. 7: Table 25: Proposed Office Person Trips by Mode

Note: Totals may not add up due to rounding.

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Underground	477	16	493	16	477	493
Train	772	26	798	25	772	798
Bus	75	3	78	3	75	78
Taxi	0	0	0	0	0	0
Motorcycle	15	1	16	1	15	16
Driving a car or van	0	0	0	0	0	0
Passenger in a car or van	0	0	0	0	0	0
Bicycle	305	10	315	10	305	315
On foot	30	1	31	1	30	31
Total	1,674	56	1,730	56	1,674	1,730

6.1.3.2 RESIDENTIAL TRIP GENERATION

RESIDENTIAL TRIP RATES

The trips associated with the proposed residential development at St Anne's have been derived using trip rates from TRICS. The comparable sites used to calculate the residential trip rates were:

- HM-03-C-01, Vanston Place, Hammersmith and Fulham; and
- HO-03-C-02, High Street, Brentford.

As only office trips have been considered as part of the proposed development, it has been assumed that there will be no linked trips between the residential and commercial element of the development to present a robust assessment. However, it is likely there would be some interaction with the retail and community land uses in addition to the potential for linked trips to the office land uses. The resulting person trips derived from the TRICS trip rates are shown in Table 26.

Figure No.6. 8: Table 26: Proposed Residential Person Trips

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Person Trip rate (per bedroom)	0.086	0.328	0.414	0.266	0.164	0.43
All UnitsTrips (22 units, 53 bedrooms)	5	17	22	14	9	23
'Car-free' Units (20 units, 50 bedrooms)	4	16	21	13	8	22
Wheelchair-accessible Units (2 units, 3 bedrooms)	1	1	1	1	1	1

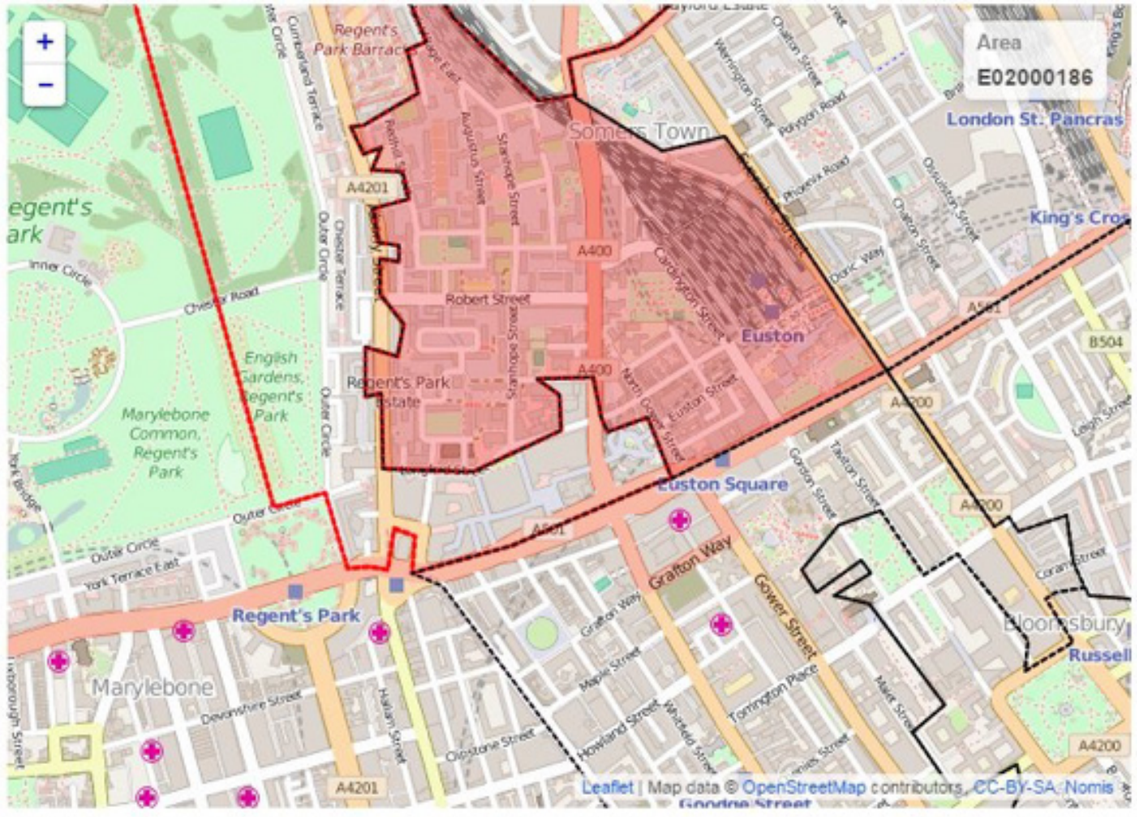
RESIDENTIAL MODAL SPLIT

The modal split for the proposed residential land use of the development has been derived from local method-of-travel-to-work data from the 2011 Census, as contained in Table 27. The residential element will be a trip generator thus a trip origin and is therefore likely to mimic other local residential trip patterns for the AM and PM peak journey-to-work and journey-from-work trips.

The dataset has been downloaded from www.nomisweb.com. Table WU03EW: Location of usual residence and place of work by method-of-travel-to-work (MSOA level) has been extracted for the residents of 2011 Super Output Area (SOA) Camden 023 (Area E02000188) that encompasses St. Anne's Church (see Figure 2).

Figure No.6. 9: Figure 2: Selected Super Output Area Camden 023 (Area E02000188)

Source: www.nomisweb.co.uk



In order to account for the site specific characteristics of the proposed residential development, the following adjustments have been made:

- It is recognised that, of the 22 units, the 20 'car-free' residential units will still generate occasional vehicle trips in the form of taxis, deliveries and visitors. It is expected that these trips would generally occur outside peak traffic hours and would be small in number. In order to estimate the number of trips by mode that would be generated by the 20 'car-free' units, the residential modal split has been re-adjusted to assign all car driver and passenger trips to alternative modes of transport in the area; and
- The modal split derived from the 2011 Census does however remain unchanged for two wheelchair-accessible units.

The original and adjusted residential modal splits are contained in Table 26.

The person trips that are expected to be generated by the proposed residential development have been allocated in accordance with the modal splits set out in Table 27 and the resulting person trips per mode are set out in Table 28 for the wheelchair-accessible units and Table 29 for the 'car-free' units.

MODE	ORIGINAL SPLIT (FOR WHEELCHAIR-ACCESSIBLE UNITS)	ADJUSTED SPLIT (FOR 'CAR-FREE' UNITS)
London Underground	23.9%	26.3%
National Rail	5.2%	5.7%
London Bus	25.4%	28.0%
Taxi	0.2%	0.2%
Motorcycle	0.7%	0.8%
Car/Van Driver	8.3%	0.0%
Car/Van Passenger	0.9%	0.0%
Bicycle	5.4%	5.9%
On Foot	30.1%	33.1%

Figure No.6.10: Table 27: 2011 Census Method-of-Travel-to-Work Residential Modal Splits

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Underground	0	0	0	0	0	0
Train	0	0	0	0	0	0
Bus	0	0	0	0	0	0
Taxi	1	1	1	1	1	1
Motorcycle	0	0	0	0	0	0
Driving a car or van	0	0	0	0	0	0
Passenger in a car or van	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0
On foot	0	0	0	0	0	0
Total	1	1	1	1	1	1

Figure No.6.11: Table 28: Proposed Residential Person Trips by Mode (Wheelchair-Accessible Units)

Note: Totals may not add up due to rounding.

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Underground	1	4	6	3	2	6
Train	0	1	1	1	0	1
Bus	1	4	6	4	2	6
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Driving a car or van	0	0	0	0	0	0
Passenger in a car or van	0	0	0	0	0	0
Bicycle	0	1	1	1	0	1
On foot	1	5	7	4	3	7
Total	4	16	21	13	8	22

Figure No.6.12: Table 29: Proposed Residential Person Trips by Mode ('Car-Free' Units)

Note: Totals may not add up due to rounding.

6.1.3.3 TOTAL PROPOSED DEVELOPMENT TRIP GENERATION

The total person trips that are expected to be generated by the entire proposed development are set out in Table 30. These trips do not include the delivery and servicing trips which are detailed separately in Section 6.3.

The multi-modal trip generation for the proposed development is given in Table 30.

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Person Trips	1,679	73	1,752	70	1,683	1,753

Figure No.6.13: Table 30: Total Proposed Development Person Trips

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Underground	478	20	498	19	479	498
Train	772	27	799	27	772	799
Bus	774	8	85	8	78	85
Taxi	0	0	0	0	0	0
Motorcycle	15	1	16	1	15	16
Driving a car or van	0	0	0	0	0	0
Passenger in a car or van	0	0	0	0	0	0
Bicycle	305	11	316	11	305	316
On foot	31	6	38	5	33	38
Total	1,679	7	1,752	70	1,683	1,753

Figure No.6.14: Table 31: Proposed Development Person Trips by Mode

6.2 NET CHANGE IN PERSON TRIPS

Table 32 displays overall net change in trips from the existing development to that proposed.

It is expected that an additional 657 two-way person trips will be generated in the AM peak hour and an additional 658 in the PM peak hour. The multi-modal net trip generation for the proposed development is given in Table 33.

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Existing development	1,060	35	1,095	35	1,060	1,095
Proposed Development	1,679	73	1,752	70	1,683	1,753
Net Change	+619	+38	+657	+35	+623	+658

Figure No.6. 15: Table 32: Total Net Change in Person Trips

	AM PEAK HOUR (08:00-09:00)			PM PEAK HOUR (17:00-18:00)		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Underground	+112	+8	+121	+7	+113	+121
Train	+182	+8	+189	+8	+182	+189
Bus	+20	+46	+26	+64	+21	+26
Taxi	0	0	0	0	0	0
Motorcycle	+3	+1	+4	+1	+3	+4
Driving a car or van	0	0	0	0	0	0
Passenger in a car or van	+1	0	0	0	0	0
Bicycle	+293	+11	+304	+11	+293	+304
On foot	+8	+5	+14	+4	+10	+14
Total	+619	+38	+657	+35	+623	+658

Figure No.6. 16: Table 33: Total Multi-Modal Net Trip Generation

6.3 DELIVERY AND SERVICING VEHICLE TRIPS

The daily delivery and servicing vehicle trips generated by the proposed development have been calculated using an Arup in-house vehicle generation tool developed to utilise Arup's own research and other survey information from similar developments. The generation tool uses design guidelines and local authority regulations to calculate volumes of deliveries and materials based on the proposed building use and floor area. Trip rates from the Arup in-house generation tool are generally accepted by TfL and London boroughs. The resultant servicing trip rates for the proposed development are:

- Office (B1): 0.21 trip per 100m² GIA office and affordable workspace floor areas
- Retail (A1, A3, A4): 0.60 trip per 100m² GIA applied to the total A1, A3, A4 retail floor
- Gym (D2): 0.10 trip per 100m² GIA applied to the total D2 floor area
- Residential (C3): 0.07 trip per 100m² GIA applied to the total C3 floor area

The trip rate of 0.21 trip per 100 m² GIA for office use has been used as a 'worst case' assessment for assessing the proposed development rather than the trip rate associated with the existing building as it currently only generates approximately 35 deliveries a day, which equates to a lower trip rate.

The anticipated number of servicing trips generated by the proposed development is outlined in Table 34. The peak hour is 09:00 to 10:00; a 10% peak hour has been assumed as a 'worst case' assessment.

LAND USE	GIA (M²)	UNITS	AVERAGE DAILY TRIP RATE PER 100 M² GIA	NUMBER OF DELIVERIES PER UNIT	NUMBER OF DAILY DELIVERIES	SERVICING PEAK HOUR (09:00-10:00)
Office	43,775	-	0.21	-	92	9
Retail (A1, A3 and A4)	339	1	-0,60	-	2	0
Affordable Workspace (B1)	1,015	-	0.21	-	2	0
Leisure (D2)	1,853	-	0.10	-	4	0
Total					100	9

Figure No.6. 17: Table 34: Delivery and Servicing Vehicle Trips

Table 35 sets out the daily and peak hour deliveries by vehicle type.

VEHICLE TYPE	DAILY DELIVERIES	PEAK HOUR DELIVERIES
Up to 4.6 ton panel van	74	7
Up to 7.5 ton box van	18	1
Up to 10 metre rigid vehicle	6	1
Total	98	9

Figure No.6.18: Table 35: Delivery and Servicing Vehicles by Vehicle Type

The peak hour servicing bay requirements is set out in Table 36.

VEHICLE TYPE	PEAK HOUR DELIVERIES	AVERAGE DWELL TIME (MINUTES)	VEHICLES PER BAY (PER HOUR)	NUMBER OF BAYS REQUIRED
Up to 4.6 ton panel van	7	15	4	1.75
Up to 7.5 ton box van	1	15	4	0.3
Up to 10 metre rigid vehicle	1	25	2.4	0.4
Total	9	-	-	2.45

Figure No.6.19: Table 36: Servicing Bay Requirements

A total of three loading bays are provided in the basement of Triton Square. As illustrated by Table 36 it will therefore be possible to accommodate the peak hour deliveries within the three loading bays provided.

07 SERVICING AND WASTE MANAGEMENT STRATEGY

7.1 VEHICLE TRIPS

1 TRITON SQUARE

As outlined in Section 6, the proposed 1 Triton Square development is expected to generate up to 98 daily service vehicle trips, with a peak hour of nine trips. The majority of trips are expected to be made by small goods vehicles and the trips will be accommodated within the three loading bays provided in the basement of Triton Square. Loading and un-loading will be carried out 24 hours a day.

ST ANNE'S

It is anticipated that deliveries to the residential units will be limited and any servicing associated with the proposed residential units will be accommodated via existing arrangements on Laxton Place or Longford Street.

7.2 ACCESS ARRANGEMENTS

1 TRITON SQUARE

A servicing basement is provided under Regent's Place which, in part, serves 1 Triton Square.
Servicing for the proposed development will continue to be accommodated via the existing off-street basement servicing area, accessed from Drummond Street and Longford Street via the private access road and ramp.

A strict pre-booked delivery system will be operated at this development to ensure an even arrival profile of service vehicles to optimise use of the loading facilities and ensure there is no queuing. Any vehicles that arrive which are not registered on the manifest would be rejected or allowed to wait in the loading bay; this will be at the discretion of the dock master.

ST ANNE'S

As servicing and delivery vehicle trips to the residential units is anticipated to be low, vehicles will be accommodated on street on Laxton Place or Longford Street. In addition:

- Residents must not travel more than 30m in a horizontal distance to reach a waste store;
- Residents waste must not be mixed with commercial waste in the same refuse store; and
- Residential waste rooms should be at grade unless a management team is on-site to move bins to the ground floor.

7.3 WASTE MANAGEMENT

The waste generation and storage requirements have been calculated in accordance with the British Standard for Waste Management in Buildings – Code of Practice (BS5906:2005). This assessment has been based on a number of key assumptions:

- One employee per 8m² NIA of office floor space, with one employee generating 50 litres of waste (British Standard);
- A1, A3, A4 Retail generates 10 litres of waste per m² NIA;
- The gym generates 5 litres of waste per m² of NIA:
- The gym and crèche generate 5 litres of waste per m² of NIA;
- The following splits have been applied:

  B1 Office/Affordable Workspace: 20% residual and 80% recyclable (61% paper, 7% cardboard, 5% plastic, 4% aluminium, 8% glass and 36% food waste),

  A1, A3, A4 Retail: 40% residual and 60% recyclable (7% cardboard, 5% plastic, 4% aluminium, 8% glass and 3% food waste),

  D2 Gym: 50% residual and 50% recyclable (2% paper, 10% cardboard, 25% plastic, 5% aluminium, 5% glass and 3% food waste);
- The temporary storage of residual waste in 1,100-litre Eurobins prior to compaction in the central compactor;
- The temporary storage of dry recyclable waste in 1,100-litre Eurobins prior to compaction in the central compactor;
- The temporary storage of cardboard in 1,100-litre eurobins prior to baling in the central baler;
- The provision of 360-litre Eurobins for the storage of glass; and
- The provision of 240-litre Eurobins for the storage of food waste.

The waste rooms will be managed by an on-site management company. Waste will continue to be processed through the central compactors and balers. Collections will be undertaken by a private contractor.

7.4 WASTE GENERATION

1 TRITON SQUARE

The waste generation for the proposed commercial development at Triton Square is provided in Table 37.

It is estimated that the development will generate 77.40 m³ of un-compacted waste in two days.

Table 38 sets out the storage facilities required to accommodate one day of waste generation.

UN-COMPACTED WASTE (M³)					
Waste Type	Office	A1, A3, A4 Retail	Gym	Affordable Workspace	Total
Residual	14.48	0.03	0.75	0.36	15.61
Cardboard	5.07	0.09	0.30	0.13	5.58
Dry recyclables	47.79	0.09	1.04	1.43	50.10
Glass	3.62	0.01	0.15	0.09	3.87
Food waste	1.45	0.01	0.75	0.04	2.24
Total	72.41	0.23	2.99	1.79	77.40

Figure No.7.1: Table 37: 1 Triton Square Waste Generation (Two Days)

ST ANNE'S

The waste generation for the proposed residential development at St Anne's is provided in Table 39.

WASTE TYPE	UN-COMPACTED WASTE (M³)	COMPACTED WASTE (M³)	WASTE CONTAINER		
			Description	Volume (m³)	Number Required
Residual	15.61	3.90	18 m³ compactor	18.0	0.21
Cardboard	5.58	1.40	100 kg bales	-	7
Dry recyclables	50.10	12.53	18 m³ compactor	18.0	0.70
Glass	3.87	3.87	360 litre eurobin	0.36	10
Food waste	2.24	2.24	240 litre eurobin	0.24	10
Total	77.40	23.94	-	-	-

Figure No.7.2: Table 38: 1 Triton Square Waste Generation and Storage Requirements (Two Days)

WEEKLY RESIDENTIAL WASTE GENERATION						
No. Bedrooms	**No. Habitable**	**No. Units**	**Waste**	**Refuse (m³)**	**Dry Mix**	**Total (m³)**
1	2	1	0.10	0.05	0.05	0.10
2	3	10	0.17	0.94	0.94	1.70
3	4	10	0.24	1.20	1.20	2.40
Total	-	**21**	-	**2.19**	**2.19**	**4.20**

Figure No.7.3: Table 39: St Anne's Residential Waste Generation

7.5 WASTE STORAGE

1 TRITON SQUARE
A waste room has been provided at basement level in 1 Triton Square. This storage area will provide:

- 1 x 1,100 litre eurobin for the temporary storage of uncompacted residual waste;
- 3 x 1,100 litre eurobins for the temporary storage of uncompacted dry recyclable waste;
- 1 x 1,100 litre eurobin for the temporary storage of uncompacted cardboard waste;
- 2 x 360 litre eurobins for the temporary storage of glass; and
- 4 x 240 litre eurobins for the temporary storage of food waste.

Within the operational parts of the building waste will be stored at recycling points distributed throughout each floor. Waste streams will be segregated using colour coded polythene sacks. Office cleaners or the on-site management team will collect the waste using wheeled containers. Lifts will be used to move between office floors. Waste will be transferred to the waste room in the basement for processing and disposal.

Similarly, waste generated within the retail units, crèche and gym will be transferred to the interim waste room in the basement for processing and disposal.

ST ANNE'S
A waste storage facility is provided on the ground floor, with the following capacity in bins shown in Table 40

A waste store sized at 20.67m² (5.5m x 3.9m) will hold:

- 2No. 1,100 litre eurobins for residual waste;
- 2No. 1,100 litre eurobins for mixed recyclables (DMR); and
- 1No. 240 litre eurobins for food waste

7.6 WASTE COLLECTION

1 TRITON SQUARE
Waste collections for this commercial waste will be undertaken by a private contractor. Waste will be collected every two days. The on-site management company will transport the waste bins from the waste room to the collection point within the basement gyratory on the day of collection. Compactors will be collected direct from their location.

ST ANNE'S
Waste bins will be placed on Laxton Place for collection in line with existing arrangements.

WEEKLY RESIDENTIAL WASTE STORAGE			
	No. 1,100 litre bins	**No. 1,100 litre bins**	**No. 240 litre bins**
Residual	2	-	-
Mixed Reciclables	-	2	-
Food	-	-	1
Total	2	2	1

Figure No.7.4: Table 40: St Anne's Residential Waste Weekly Storage Requirements

08 IMPACT ASSESSMENT

This section assesses the net transport impact of the proposed development on individual modes of transport based on the changes in trip generation described in Section 6. As both peak hours generate the same overall volume of person trips in both directions, and this section only considers the inbound AM peak hour between 08:00 and 09:00 for the purpose of the assessment.

Table 41 presents the expected net change in AM peak hour inbound trips as a result of the proposed development.

AM PEAK HOUR INBOUND TRIPS (08:00-09:00)			
	Existing Development	Proposed Development	Net Change
Underground	366	478	+112
Train	590	772	+182
Bus	57	77	+20
Taxi	0	0	0
Motorcycle	12	15	+3
Driving a car or van	0	0	0
Passenger in a car or van	0	0	0
Bicycle	12	305	293
On foot	23	31	+8
Total	1,06	1,679	+619

Figure No.8. 1: Table 41: Expected Net Changes in AM Peak Hour Inbound Trips

8.1 IMPACT ON THE PEDESTRIAN AND CYCLING NETWORKS

8.1.1 PEDESTRIAN MOVEMENTS

It is predicted that there will be a net increase of eight walking inbound trips during the AM peak hour, where walking is the main mode (see Table 40). The final mode of all public transport trips will also be walking and, therefore, it is expected that the proposed development will generate an additional 314 walking inbound trips during the AM peak hour.

1 Triton Square and St Anne's are well located in between the various access points to the public transport network, meaning pedestrian trips will be distributed well across the pedestrian network. When it is considered that the pedestrian network connecting to and surrounding 1 Triton Square is of a high quality (as identified in Section 4.1), the network should be well suited to handling the predicted uplift in pedestrian movement.

8.1.2 CYCLIST MOVEMENTS

It is predicted that there will be a net increase of 293 cycle inbound trips during the AM peak hour (see Table 41). As identified in Section 4.2, 1 Triton Square connects well into the surrounding cycling network, notably including the Quietway system, and is located near five Santander Cycles docking stations. The number of trips forecast should have no notable impact on these networks.

8.2 IMPACT ON THE PUBLIC TRANSPORT NETWORK

8.2.1 LONDON UNDERGROUND SERVICES

It is predicted that there will be a net increase of 112 London Underground inbound trips during the AM peak hour (see Table 41). It is assumed that all additional trips will arrive at the stations outlined in Table 9 in the AM peak hour.

In order to assess the net impact at station level, the additional London Underground trips have been split between the stations at which the London Underground lines are most closely accessible. As there is no information for the distribution of trips for the existing development, the distribution is based on the number of train arrivals during the AM peak hour. The resulting distributions and distributed trips are shown in Table 42

It is predicted that, during the AM peak hour, an extra 49, 23, 19 and 21 passengers will arrive at Warren Street, Great Portland Street, Regent's Park and Euston London Underground stations, respectively. These increases add an average of less than one passenger per train, which is considered insignificant, and will therefore be comfortably accommodated within the existing train and station capacities.

STATION AND DISTANCE	MOST CLOSELY ACCESSIBLE LINES SERVING THE STATION	NUMBER OF AM PEAK TRAIN ARRIVALS (ALL DIRECTIONS)	DISTRIBUTION	ADDITIONAL TRIPS PER STATION	ADDITIONAL TRIPS PER TRAIN (ALL DIRECTIONS)
Warren Street (270m)	Northern (Charing Cross branch Victoria	44+68 = 112	44.1%	49	<1
Great Portland Street (400m)	Circle Hammersmith & City Metropolitan	13+12+26 = 51	20.1%	23	<1
Euston Square (450m)	Passengers would favour Great Portland Street which offers the same London Underground services as Euston Square but is closer.				
Regent's Park (600m)	Bakerloo	44	17.3%	19	<1
Euston (600m)	Northern (Bank branch)	47	18.5%	21	<1
	Passengers would favour Warren Street for the Northern line (Charing Cross branch) and Victoria services as it is closer.				
Goodge Street (800m)	Passengers would favour Warren Street which offers access to the Northern line (Charing Cross) services as well as it is closer.				
Total	-	254	100.0%	112	-

Figure No.8.2: Table 42: Distribution of Additional London Underground and DLR Inbound Trips in the AM Peak Hour

8.2.2 NATIONAL RAIL AND LONDON OVERGROUND SERVICES

It is predicted that there will be a net increase of 182 National Rail and London Overground inbound trips during the AM peak hour (see Table 42). It is assumed that all additional trips will arrive at the stations outlined in Table 10 and Table 11 in the AM peak hour.

Adopting the same approach as in Section 8.2.1, in order to assess the net impact at station level, the additional National Rail and London Overground trips have been split between the stations at which the National Rail and London Overground lines are most closely accessible. As there is no information for the distribution of trips for the existing development, the distribution is based on the number of train arrivals during the AM peak hour. The resulting distributions and distributed trips are shown in Table 43.

It is predicted that, during the AM peak hour, an extra 182 passengers will arrive at Euston station. The increase amounts to an average of three passengers per train, which is considered insignificant, and will therefore be comfortably accommodated within the existing train and station capacities.

8.2.3 LONDON BUS SERVICES

The proposed development is forecast to generate an additional 20 inbound trips on the London Bus network in the AM peak hour, as shown in Table 41. As the site is within a 640m walking distance of 14 different bus routes, providing an approximate total of 150 buses an hour, it is not anticipated that the uplift forecast would have any noticeable impact on the network..

STATION AND DISTANCE	SERVICES	NUMBER OF AM PEAK TRAIN ARRIVALS (ALL DIRECTIONS)	DISTRIBUTION	ADDITIONAL TRIPS PER SERVICE	ADDITIONAL TRIPS PER TRAIN (ALL DIRECTIONS)
Euston (600m)	National Rail	11+38+0=49	94.2%	171	3
	London Overground	3	5.8%	11	4
Total	-	52	100.0%	182	-

Figure No.8. 3: Table 43: Distribution of Additional National Rail and London Overground Inbound Trips in the AM Peak Hour

8.3 HIGHWAY NETWORK

8.3.1 MOTORCYCLE, PRIVATE CAR AND TAXI TRIPS

No standard car parking is provided on site and as such the number of car and taxi trips to the site is currently, and forecast to remain, zero. It is predicted that there will be a net increase of three motorcycle inbound trips during the AM peak hour (see Table 40).

The forecast increases will not have any substantial impact on the local highway network. The numbers of additional motorcycles is well within the daily variations that would be expected in highway traffic and thus the resulting impact is considered to be negligible.

As part of the proposed redevelopment, the taxi access loop provided to the main entrance from Drummond Street is to be removed and replaced with a landscaped shared surface area. As usage of the taxi loop is minimal, it is not expected its removal would have any noticeable impact upon taxi services serving 1 Triton Square. The lay-by on Drummond Street will be able to serve any taxi trips serving the proposed development.

8.3.2 8.3.2 DELIVERY AND SERVICING TRIPS

As set out in Section 6.3, a total of 85 servicing trips are forecast to be required daily to the proposed development, with this peaking at nine vehicles an hour between 09:00 and 10:00. The current underground servicing arrangements at 1 Triton Square are sufficient to cater for the increase in servicing vehicles. As the servicing vehicles are predominately forecast to be LGVs and the total hourly generation is minimal, the impact on the highway network itself is also expected to be negligible.

09 FRAMEWORK TRAVEL PLAN

As a mixed-use development, this section outlines the proposed framework for a Travel Plan which will be developed further with future occupiers. A separate Travel Plan for each element of the development, based on this framework, may be applicable and it is expected that the requirement will be secured, monitored and funded as part of the Section 106 agreement for the proposed development.

9.1 TRAVEL PLAN STRUCTURE

This document sets out the Travel Plan proposals being developed as part of the planning application for the proposed development. The Framework Travel Plan forms a central element of the overall transport strategy and as part of a systematic approach to influence long term travel choice. This document:

- Articulates a series of objectives;
- Provides an indicative set of targets;
- Identifies and describes the initiatives proposed to support the objectives; and
- Proposes a management strategy for delivery and monitoring.

The structure of this Travel Plan Framework has been informed by recent guidance published by Transport for London in November 2013, TfL Travel Planning Guidance 2013. The recent guidance sets out the recommended format for preparing Travel Plans for new developments in London.

9.2 TIMESCALES

It is expected that a Travel Plan will be required upon occupation of aspects of the development. Within one year of at least 50% of the commercial development or residential units being occupied, a baseline travel survey will be undertaken to confirm and revise, if necessary, the baseline mode shares applied from the TA. Subsequent travel surveys will take place annually to monitor the progress of each Travel Plan.

9.3 BENEFITS OF A TRAVEL PLAN

A Travel Plan has the potential to bring real benefits to the residents and staff on a site, and to the wider community as a whole. There are many possible benefits of introducing a Travel Plan some of which are noted below. A Travel Plan can:

- Act as a tool for resource, facility and site management, and bring expenditure under control;
- Increase site accessibility i.e. reduce congestion and improve links for other modes;
- Help public image and external relations;
- Assist in controlling transport and travel expenditure;
- Create a healthy environment, residents and workforce;
- Help meet environmental goals;
- Provide fair travel costs for residents and staff; and
- Improve resident and staff facilities.

9.4 AIMS AND OBJECTIVES

In line with guiding policy, the following preliminary Travel Plan objectives have been prepared for both the residential and commercial aspects of the proposed development. As the Travel Plan is an evolving document, these will be continually reviewed. The initial objectives are as follows:

- To influence the travel behaviour of residents and employees of the commercial floor space;
- To encourage travel by cycle and by foot by improving their attractiveness;
- To minimise the number of car trips generated by the development;
- To help reduce local road congestion; and
- Promote healthy lifestyles and a sustainable, vibrant community.
- The site-specific objectives of the Travel Plan will respond to the aims through:
- Making alternative travel modes to the car very accessible and user-friendly. The Travel Plan will be positively promoted whilst not aspiring to dictate development user lifestyles;
- Providing incentives to cycle and walk including the provision of walking and cycle route information and maintaining high standards of cycle parking within the site;
- Linking the development to the surrounding area by the strong promotion of walking, cycling and public transport, thus minimising the effect of the new development on the surrounding infrastructure;
- Providing an on-site Travel Plan contact who will ensure the Travel Plan measures are implemented and monitored; and
- Monitoring the travel patterns of building users and measuring against targets, also monitoring and measuring the demand of the cycle parking facilities, and providing additional cycle parking when required.

9.5 BASELINE MODE SHARE

The baseline office and residential modal splits, set out in Table 21 and Table 26, are summarised in Table 44.

It can be seen that the baseline car mode share forecasts are low and the Travel Plan will ensure this baseline is maintained and even reduced if possible. The mode share forecasts indicate that the site will be very sustainable from the outset and therefore there appears to be minimal scope to influence travel behaviour as people will already travel sustainably to and from the site. However, increasing the amount of cycling trips made by both residents and employees of the commercial element will achieve many of the overarching objectives of the Travel Plan and this strategy will be reflected in the Travel Plan targets.

LAND USE	PRIVATE VEHICLE	CYCLE	WALK	PUBLIC TRANSPORT
Office	0.0%	18.2%	1.8%	79.1%
Residential Units (Car-Free)	9.2%	5.4%	30.1%	54.5%
Residential Units (Wheelchair-Accessible)	0.0%	5.9%	33.1%	60%

Figure No.9.1: Table 44: Summary of the Office and Residential Modal Splits

9.6 TARGETS

In order for the Travel Plan to succeed, and to enable a measurement of success, targets must be set which allow for the assessment of its measures and data. Such targets need to be Specific, Measurable, Achievable, Realistic and Timed (SMART) ensuring that wherever possible targets for modal spilt can be achieved.

However as noted above, the residents and employees who will based within the proposed development are already forecast to travel sustainably to the site. Nevertheless, targets will still be set to maintain sustainable travel patterns and encourage more cycling trips to achieve the key objectives of reducing congestion and promoting healthy lifestyles.
The targets outlined herein are preliminary targets as details about the residents' or employees' mode share cannot be determined at this stage. This information will be reviewed when the site is occupied and further information about future travel characteristics are known. It is anticipated that travel surveys will be carried within one year of at least 50% of the development being occupied to inform the revision of these targets.

Table 45 summarises the draft mode share targets over a five-year time frame. As noted above, the overall strategy of the Travel Plan is to encourage a long-term shift towards cycling and walking, and this is represented in the targets shown below.

Although there is an aspiration to increase the number of walking-only trips as well, it is felt that the scope for increase is limited due to the location of the development. It is unlikely that a large number of employees live within walking distance of 1 Triton Square site, but the orientation of Mayoral policy towards more trips made on foot (including people running to work) means that a modest increase in walking-only trips to 5% is an achievable and appropriate mode share target for the proposed office development.

OBJECTIVE	INDICATOR	BASE ESTIMATE	YEAR ONE TARGET	YEAR THREE TARGET	YEAR FIVE TARGET
Facilitate the opportunities to achieve a healthy lifestyle	Number of non-disabled residents cycling to work	5.9%	6%	8%	10%
	Number of employees cycling to work	18.2%	18.2%	18.2%	18.2%
Promote a sustainable, vibrant community	Number of non-disabled residents walking to work	33.1%	33%	35%	37%
	Number of employees walking to work	1.8%	3%	4%	5%
Encourage Maintain or decrease the use of public transport to its existing level	Number of non-disabled residents using public transport	60%	60%	56%	52%
	Number of employees using public transport	79.1%	77.8%	76.8%	75.9%

Figure No.9.2: Table 45: Suggested Travel Plan Objectives, Indicators and Targets

The first travel survey will update the estimated mode split to a confirmed baseline. Once this data has been obtained, the future year targets can be amended as required. If, by the end of a particular year, travel surveys indicate that mode shifts are not following the aspired patterns, the effectiveness of the Travel Plan measures will be reviewed and adjusted accordingly.

9.7 ATTRBUTE

The Travel Plan targets will be assessed using the online Travel Planning tool ATTrBuTE. The tool comprises a series of questions designed to test the extent to which a Travel Plan delivers against its objectives and is fit for purpose. It does not however predict whether the Travel Plan will achieve the targets set or whether the measures proposed are appropriate.

9.8 INITIATIVES AND MEASURES

The proposed development is located in an area of excellent public transport accessibility and it is expected that a minimal number of car trips to the proposed development will be made. Despite this, a series of initiatives will still need to be implemented to further encourage the use of non-car modes and secure and promote incentives that actively encourage sustainable travel. Some measures will be applicable to all users of the development whereas others may be targeted at specific user groups.

MEASURES TO FACILITATE WALKING AND CYCLING

Walking and cycling are the most sustainable modes of transport and have many benefits not only to the environment but to the individual, including improving physical and psychological health. The location of the site will automatically result in many people walking and cycling to and from local facilities; however the Travel Plan aspires to increase use of these modes further by Year Three. Measures that will be applied to achieve the targets include:

- Providing information on walking (including the strategic walk network) and cycling routes on notice boards within the residential development;
- Providing employees in Triton Square with information packs about local transport options and include walking maps to key facilities;
- Ensuring the site website contains information on how to access the proposed development by walking or cycling;
- Raising the awareness of the health benefits of walking and cycling through promotional material and events throughout the year;
- Providing secure cycle parking to meet demands. The amount of cycle parking provided in both aspects of the development exceeds the London Plan (2016) standards and is therefore expected to be more than adequate to accommodate demand but a Travel Plan Steering Group will be established which will be responsible for ensuring the level of provision is sufficient as demand grows; and
- Encouraging the establishment of a resident Bicycle User Group (BUG) and ensuring they have a representative on the Travel Plan Steering Group.
- Measures to Facilitate Public Transport Use
- Measures that will be considered to facilitate public transport use include:
- Displaying up-to-date public transport information on notice boards located centrally within the site where all employees can view them. Such information will include timetables, frequencies, maps and fares; and
- Exploring opportunities to offer discounted season tickets/season ticket loans to employees.

MEASURES TO REDUCE CAR DEPENDENCY

Considering that parking will not be available (with the exception of the two wheelchair units) to residents of the St Anne's development, it will be necessary for sales and marketing staff working on behalf of the Management to promote the sustainability of the site and discourage new residents from owning their own car. Acknowledging that residents may still wish to make some journeys by car, alternatives to car ownership should be promoted, including the benefits of car clubs and car sharing. Measures include:

- Promoting publicly accessible car share databases such as Liftshare.com; and
- Promoting the use of car clubs to residents by providing details of the car club spaces in the vicinity of the development and by exploring opportunities to arrange for membership discounts with the local operators.

9.9 MANAGEMENT

In order to maximise the chances of success, it is important to have a clear implementation strategy, identifying roles and responsibilities to maintain the momentum of each Travel Plan.

Prior to occupation, a Travel Plan Co-ordinator(s) will be appointed to oversee the implementation and monitoring of the Travel Plans. The Co-ordinator(s) will be appointed by the Management. This may be an employee on the building management staff; however the Building Manager reserves the right to sub-contract the role to a third party organisation. The appointed co-ordinator(s) will have overall responsibility for:

- Establishing and co-ordinating a Travel Plan Steering Group with meetings as required;
- Identifying key milestones, deliverables and a programme to oversee the development and implementation of specific initiatives;
- Development and dissemination of appropriate marketing / information materials;
- Overseeing implementation of Travel Plan measures in a timely manner;
- Liaison with any appropriate groups / organisations (e.g. the LBC Travel Plan Officer) to ensure co-ordinated working;
- Undertaking appropriate monitoring of the Travel Plan, including any appropriate review and revisions;
- Monitoring and reviewing progress and identifying targets for taking the Travel Plan forward; and
- Ensuring that the work of the Travel Plan is co-ordinated with other activities of the proposed development.

9.10 TRAVEL PLAN STEERING GROUP

A Travel Plan Steering Group will be set up to provide support to the Travel Plan Co-ordinator(s) and to allow residents and commercial tenants to become involved in the development of the Travel Plan.

The Steering Group will include residents as well as representatives from the commercial elements of the development to support joint working. Details of all meetings will be advertised and undertaken at a convenient time to ensure that all residents who wish to attend are able to do so. The invitation for attendance will also be extended to local organisations associated with the Travel Plan such as cycle groups, cycle shop traders and public transport operators.

The Travel Plan Steering Group will provide a forum to feedback on the success of any implemented measures and to raise awareness of the Travel Plan. The Steering Group will allow for momentum to be maintained and ensure the Travel Plan is a dynamic process and not simply a one-off production of a document.

9.11 MARKETING AND PROMOTION

It is recognised that for the Travel Plan to be successful, it is essential that the target audience are involved and made aware of its implementation and evolution.
A detailed strategy for on-going promotion and awareness raising of the Travel Plan will be developed by the Travel Plan Co-ordinator(s). The strategy will include:

- A series of meetings to explain the purpose of the Travel Plan;
- 'Branding' the Travel Plan to raise its profile and to make it instantly recognisable. An official 'launch event' will be held. All leaflets and publications produced as a part of the Travel Plan will take on this branding;
- Information about transport options and the Travel Plan will be included in new resident packs and recruitment packs; and
- Transport and travel information will be provided in areas where people congregate throughout the development.

9.12 MONITORING

An important part of any Travel Plan is the continual monitoring and review of its effectiveness. Regular monitoring and review will help to gauge progress towards achieving targets and objectives, and if necessary, allow each Travel Plan to be refined and adapted in order to improve.
It is proposed that both the residential and commercial Travel Plans be monitored annually for the first five years of the development. In accordance with TfL recommendations the Travel Plan will also be subsequently monitored at Year Eight and Year Ten. Monitoring (i.e. 'Year One') will commence when 50% of the proposed development is occupied.
The monitoring will be the responsibility of the Travel Plan Co-ordinator(s) and will review:

- Travel patterns (via a travel survey) – comprehensive travel surveys will be undertaken with a commitment to review the Travel Plan targets at each monitoring phase. This review will identify elements of the Plan that are not working as well as others. The surveys will comply with the TRICS standard survey methodology;
- Full site audit – undertaken by the Travel Plan Co-ordinator(s), the audit will identify any barriers that obstruct walking, cycling and using public transport and make recommendations for improvements; and
- Parking counts (all vehicles including bicycles).
- The programme of monitoring will enable review and refinement of the Travel Plan over the phase of development and beyond. It will assist in identifying priorities and reflect the needs and priorities of residents, employees and visitors to ensure their continued commitment to and ownership of the Travel Plan.

9.13 ACTION PLAN

An Action Plan will be developed which outlines the actions that will be the responsibility of the developer and subsequently the Travel Plan Co-ordinator and Steering Group. The performance of all roles will be judged against the criteria contained within the action plan and the Travel Plan targets on a bi-annual basis.

9.14 SECURING THE TRAVEL PLAN

This Framework Travel Plan will serve as a basis for producing a full Travel Plan for both the commercial and residential aspects of the development. The requirement to produce the Travel Plan will be secured by planning condition.

10 SUMMARY AND CONCLUSIONS

10.1 SUMMARY

This Transport Assessment (TA) has been prepared in support of the planning application for the extension and refurbishment of the 1 Triton Square office building and the redevelopment of St Anne's for residential use along with works to the public realm. The existing office building has a floor area of 29,106m² GEA and the area at St Anne's is 511m² GEA. The sites are respectively located to the south and north of Longford Street in the London Borough of Camden (LBC).

The development proposals comprise:

- A refurbished office building of 44,877m² GEA;
- An affordable workspace area totalling 1,105m² GEA, A1, A3, A4 retail units and a gym;
- 22 residential units
- Enhancements to the public realm.

A total of up to five disabled car parking spaces and 607 cycle parking spaces will be included to serve the proposed developments.

Servicing for 1 Triton Square will take place off-street using the existing arrangements, with all land uses being serviced from a dedicated basement service yard. Residential deliveries would take place on Laxton Place or Longford Street.

A review of current national, regional and local transport policies revealed wide policy support for the promotion of public transport, walking and cycling as alternatives to the use of private vehicles.

The site benefits from a Public Transport Accessibility Level (PTAL) rating of 6b (excellent) and is within a convenient walk of several high frequency bus routes, London Underground and National Rail services.

The trip generation for the proposed development indicates that there will be an increase in trips generated by the site, all of which are expected to be made on foot, by bicycle or using public transport. The TA demonstrates that there will be an insignificant impact on the local transport network as a result of the proposed development

10.2 CONCLUSIONS

Overall it can be concluded that the proposals comply with relevant transport and associated policy because of their central London location close to a range of sustainable transport modes and the measures that will be taken to encourage the use of those modes. The proposed development is designed to maximise accessibility by non-car modes and the parking and servicing arrangements will minimise any impacts on the surrounding roads. The operation of the proposed development is shown to be acceptable by this TA and this will be reinforced by travel planning initiatives that promote walking, cycling and public transport use by employees, residents and visitors

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