Bangor Wharf



Report to accompany planning application:

Transport Statement Vectos

February 2016





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1 INTRODUCTION

- 1.1 Vectos has been commissioned by One Housing Group to provide transport and highways advice in relation to the development of the site at Bangor Wharf, Georgiana Street, London, NW1 0QS. The Local Planning and Highway Authority is the London Borough of Camden (LBC).
- 1.2 The site is currently vacant. However, the site was occupied by EDF Energy as a depot for storage of materials with ancillary workshop and offices. The site accommodates low level office and storage buildings and vehicle parking. The existing site contains 774 sqm of B1a floorspace, 193 sqm of B8 floorspace, 4 sqm of Sui Generis floor area (total Gross Internal Area of 971 sqm) plus approximately nine vehicular parking spaces.
- 1.3 The redevelopment of the site will:

create a residential-led mixed-use development comprising 46 residential units (Use Class C3) (18 x 1 bed, 19 x 2 bed and 9 x 3 bed), new office floorspace (Use Class B1a) (686 sq.m) with associated works to highways and landscaping following demolition of existing buildings.

- 1.4 As part of the proposals, no car parking is provided on site and this has been discussed and agreed with the London Borough of Camden (LBC).
- 1.5 This Transport Statement has been prepared in accordance with the scope agreed by LBC.

Report Structure

- 1.6 Following this introductory section, the report is structured as follows:
 - Section 2: Existing Transport Context A review of accessibility by walking, cycling and public transport plus an analysis of road collision data.
 - Section 3: Policy Context A review of the key policy documents informing the proposed residential schemes.
 - Section 4: The Proposed Development A description of the scheme with a focus on transport infrastructure.
 - Section 5: Trip Generation An estimate of anticipated person trips to and from the developments.



• Section 6: Summary & Conclusions – The report is summarised with brief details of the key issues and conclusions reached.



2 EXISTING TRANSPORT CONTEXT

2.1 This section sets out the prevailing transport conditions at the site and surrounding area.

Site Location

- 2.2 The site is located at Bangor Wharf, Georgiana Street, London, NW1 0QS.
- 2.3 The site is bound by established residential units to the north and west, Georgiana Street to the south and the Grand Union (Regents) Canal to the east. The local area is characterised predominantly by residential dwellings although the site is located opposite a commercial centre, 'The Camden Studio' and close to public houses, such as The Prince Albert (60m west of the site) and The Constitution (45m east of the site).
- 2.4 Existing pedestrian and vehicular access is attained via Georgiana Street, which acts as the site frontage. The site has three crossovers on Georgiana Street, of which the middle crossover is blocked by a wall.
- 2.5 A site location plan is contained at **Figure 1** for reference.

Site Accessibility

Walking & Cycling

- 2.6 Figure 2 shows a two kilometre walk catchment from the site.
- 2.7 The footways on Georgiana Street are of satisfactory width and condition. At the Georgiana Street junction with Royal College Street, there are flush kerbs and tactile paving to assist the mobility and visually impaired. At this junction, a zebra crossing with a pedestrian island which separates the main carriageway from the cycle way is also located across Royal College Street. There is also a zebra crossing located on the northern arm of St Pancras Way at the St Pancras Way / Georgiana Street junction.
- 2.8 There is stepped access to the Grand Union Tow Path to rear of site from St Pancras Way. Ramped access to the tow path is provided from Baynes Street close to its junction with Royal College Street.
- 2.9 **Figure 3** shows a five kilometre cycle catchment from the site.



- 2.10 According to the TfL London Cycle Guide 7 (2012/13), the stretch of Georgiana Street between Royal College Road and St Pancras Way is part of a network signed or marked for use by cyclists on a mixture of quieter or busier roads.
- 2.11 The local area more generally has very good provision for cyclists which include segregated cycle ways (on-carriageway, but segregated by fixed infrastructure) on Royal College Street and St Pancras Way. There is signage available for cyclists (e.g. on Georgiana Street, west of its junction with Royal College Street and also on Georgiana Street, west of its junction with St Pancras Way). The Grand Union Tow Path is also a cycle route.
- 2.12 The closest TfL cycle hire docking station is located on Camden Street at the junction with St Martins Close, 270m west of the site. This docking station has capacity for a maximum of 18 cycles. There is also another docking station at the junction of Camden Road and Bonny Street, located approximately 350m north of the site. This docking station has capacity for a maximum of 45 cycles.

Public Transport

2.13 According to TfL, the site has a Public Transport Accessibility Level (PTAL) rating of 6a on a scale of 1a ('very poor') to 6b ('excellent'). This excellent local PTAL rating is met through a combination of bus, London Underground and Overground services for which further information is provided below.

Bus

2.14 The closest bus stops are located on Camden Street ('Pratt Street' stop located approximately 230m west of the site) and Royal College Street ('Camden Road' stop located approximately 260m north of the site). Information on accessible bus services are shown in Table 2.1.



No.	Destinations	Week	Sat	Sun
C2	Parliament Hill Fields – Royal College Street – Oxford Circus –	6 – 10	7 – 10	9 – 12
	Victoria Station			
24	Hampstead Heath – Pratt Street – Westminster Station –	4 – 8	5 – 8	6 - 10
	Victoria Station – Grosvenor Road			
27	Chalk Farm – Pratt Street – Baker Street – Notting Hill Gate –	6 – 10	7 – 10	11 – 13
	Kensington Olympia – Chiswick Business Park			
29	Wood Green – Finsbury Park – Pratt Street – Trafalgar Square	3 – 7	4 – 8	4 – 8
31	Bayham Street – Swiss Cottage – Westbourne Park – White City	4 – 8	5 – 8	5 – 8
	Bus Station			
46	Lancaster Gate – St John's Wood – Royal Free Hospital – Royal	6 – 10	10 - 14	15
	College Street – St Bartholomew's Hospital			
88	Camden Gardens – Pratt Street – Piccadilly Circus – Vauxhall	6 – 8	6 - 10	10 - 13
	Park – Omnibus Clapham			
134	Tottenham Court Road – Camden Town – Friern Barnet – Tally	3 – 7	6 - 10	6 – 9
	Ho Corner			
168	Hampstead Heath – Euston Station – Elephant & Castle – Old	7 – 8	6 – 7	10
	Kent Road			
214	Highgate School – Kentish Town – Royal College Street – Angel	6 – 10	6 - 10	10 - 12
	– Finsbury Square			
253	Euston – St Pancras Way – Hornsey Road – Stamford Hill –	4 – 8	5 – 8	6 - 10
	Clapton Station – Hackney Central			
274	Angel – Camden Town – Pratt Street – Baker Street – Lancaster	7 – 10	7 – 10	5 – 8
	Gate			

Table 2.1: Accessible	Bus Services: A	pproximate Peak	Frequencies ((Mins)

London Underground

2.15 The closest London Underground station is Camden Town Station located 500m west of the site. This station is located in Zone 2 of the London public transport network. Camden Town Station is served by the Northern Line which provides direct access across London to destinations such as High Barnet; Archway; Edgware; Hendon Central; Bank; Waterloo; Balham and Morden.

Overground

2.16 The closest Overground station is located at Camden Road, approximately 260m north of the site. Overground services from this station provide direct access to a range of destinations inclusive of Stratford, Highbury & Islington, West Hampstead, Gunnersbury and Richmond.



Car Club

2.17 There are two car club bays in the vicinity of the site. City Car Club has a vehicle located 250m away from the site on Lyme Street. Alternatively, Zipcar has two car club spaces on Pratt Street at a location 350m south west of the site.

Highway Network

- 2.18 Georgiana Street at the site's frontage is a single carriageway which accommodates traffic in both directions. From the eastern end of Georgiana Street, vehicles are only permitted to turn right and travel southbound on St Pancras Way. At the junction with Royal College Street, vehicles are only permitted to turn right from Georgiana Street for northbound travel on Royal College Street. Vehicles are guided by road markings and signage.
- 2.19 The A5202 St Pancras Way and Royal College Street are both single carriageways which run between St Pancras to the south and Kentish Town to the north. The closest TfL managed route is the A400 Camden Street located 170m west of the site.

On Street Parking

- 2.20 Georgiana Street is single yellow lined on both sides between Royal College Street and St Pancras Way with no kerb blips on either side. This restriction is located within a Controlled Parking Zone (CPZ) that in operation on weekdays, 08:30 to 18:30. A copy of the LBC Controlled Parking Zone Map is contained at **Appendix A**.
- 2.21 The Royal College Street carriageway in the vicinity of the site (north of Georgiana Street) has resident permit parking on its eastern side. The St Pancras Way carriageway in the vicinity of the site (north of Georgiana Street) has zig-zag markings on the approach to the zebra crossing and single yellow lines (with double yellow lines at the junction of Barker Drive. South of Georgiana Street, there are some pay and display bays close to the junction with Pratt Street.



3 POLICY CONTEXT

3.1 This section of the report provides a summary of relevant policy guidance at national and local levels.

National Policy

- 3.2 The National Planning Policy Framework (NPPF) set out the Government's planning policies for England and how these are expected to be applied.
- 3.3 One of the 12 core land-use principles within the NPPF includes:

"[to] actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable."

3.4 Section 4 of the NPPF deals with 'Promoting sustainable transport.' Paragraph 29 states that:

"The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel."

- 3.5 Paragraph 30 says that "in preparing Local Plans, local planning authorities should therefore support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport".
- 3.6 Paragraph 32 sets out the transport issues which should be addressed within Development Plans and decisions. These are:
 - "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.

3.7 Paragraph 32 also states:



"Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."

Regional Policy

The London Plan 2015

- 3.8 The London Plan, Spatial Development Strategy for Greater London (March 2015) sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.
- 3.9 One of the Mayor's six objectives for London is (para. 1.53):

"A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling, makes better use of the Thames and supports delivery of all the objectives of this Plan."

- 3.10 The transport aspects of the London Plan, relevant to the proposed development, are discussed in the following paragraphs.
- 3.11 Policy 6.1 establishes the Mayor's strategic approach to transport. Of relevance it states that the mayor will encourage the closer integration of transport and development by:
 - *"a. encouraging patterns and nodes of development that reduce the need to travel, especially by car;*
 - b. seeking to improve the capacity and accessibility of public transport, walking and cycling;
 - *g.* supporting measures that encourage shifts to more sustainable modes and appropriate demand management; and
 - *i.* promoting walking by ensuring an improved urban realm."
- 3.12 In relation to walking, Policy 6.10B states that in respect of planning decisions:

"Development proposals should ensure high quality pedestrian environments and emphasis the quality of the pedestrian and street space."



Local Policy

3.13 Local policy is contained within the Camden Local Development Framework (LDF) which was adopted in November 2010 and superseded the 2006 Camden Unitary Development Plan. The LDF documents consist of the London Borough of Camden Core Strategy 2010-2025 and Development Policies.

Core Strategy

- 3.14 The Camden Core Strategy 2010-2025 is part of the Camden Local Development Framework, which sets out the Council's planning strategy and policies.
- 3.15 Policy CS3 states that the Council will promote appropriate development in the "highly accessible areas".
- 3.16 In order to support growth, the Council will promote key transport infrastructure proposals a to improve facilities 'at Camden's London Underground and Overground stations, including at Camden Town...[as well as support]...improvements to encourage walking and cycling as part of transport infrastructure works' (Policy CS11).
- 3.17 In addition, 'as part of its approach to minimising congestion and addressing the environmental impacts of travel, the Council will...minimise provision for private parking in new developments, in particular through car free developments in the borough's most accessible locations' (Policy CS11).

Camden Development Policies, 2010

3.18 Policy DP16 looks at the transport implications of development, and expects development proposals to ensure that there are sufficient walking, cycling and public transport links. Developers are expected to assess and address the need for:

"a) movements to, from and within the site, including links to existing transport networks. The Council will expect proposals to make appropriate connections to highways and street spaces, in accordance with Camden's road hierarchy, and to public transport networks..

3.19 Policy DP17 relates to the development's requirement to provide suitable walking, cycling and public transport facilities, and also provision for interchanging between different modes of transport. This provision may include:



"a) convenient, safe and well-signalled routes including footways and cycleways designed to appropriate widths;

b) other features associated with pedestrian and cycling access to the development, where needed, for example seating for pedestrians, signage and high quality cycle parking;

c) safe road crossings where needed;

d) bus stops, shelters, passenger seating and waiting areas, signage and timetable information"

- 3.20 Policy DP17 states that the Council will resist development that would be dependent on travel by private motor vehicles.
- 3.21 Policy DP18 relating to car parking standards states that development should comply with the Council's parking standards, and areas easily accessible by public transport are expected to be 'car free'. The Council will:

"a) limit on-site car parking to:

- spaces designated for disabled people,
- any operational or servicing needs
- b) not issue on-street parking permits
- c) use a legal agreement to ensure that future occupants are aware they are no entitled to on-street parking permits"

Cycle Parking Standards

3.22 The cycle parking standards as set by the London Plan are shown in **Table 3.1**.



Table 3.1 Cycle Parking Standards

Land Use	Development Ouantum	London Plan Standards			
	Quantam	Long-Stay	Short-Stay		
B1 Office	686 sqm	1 space per 90 sqm	1 space per 500 sqm		
С3	46 Units	1 bedroom: 1 space per unit	1 space per 40 units		
Residential		2+ bedrooms: 2 spaces per			
		unit			
Total	N/A	82 spaces	2 spaces		



4 THE PROPOSED DEVELOPMENT

4.1 This section provides information on the development proposals with a focus on the transport infrastructure to be implemented at the site. **Appendix B** shows the proposed development's ground floor layout.

Development Proposals

4.2 The redevelopment of the site will:

create a residential-led mixed-use development comprising 46 residential units (Use Class C3) (18 x 1 bed, 19 x 2 bed and 9 x 3 bed), new office floorspace (Use Class B1a) (686 sq.m) with associated works to highways and landscaping following demolition of existing buildings.

4.3 The proposed development is car-free.

Pedestrian Access

- 4.4 Access to the site will be secured for all pedestrians including the mobility impaired.
- 4.5 The primary access will be from Georgiana Street. This access will lead directly to respective entrance points for the uses on site. Residential plot A can be accessed directly from Georgiana Street. This access is at grade to assist the mobility impaired.
- 4.6 The remaining plots will access their respective pedestrian points via the site access gates (leading from Georgiana Street) which provide direct access the undercroft and courtyard areas. The B1 uses will have separate entrances to the C3 residential units. There will be direct access to two of the B1 units (at blocks A and B) from Georgiana Street.

Vehicular Access

- 4.7 The proposed development is car free and therefore, the development will be accessed by vehicles on-street (Georgiana Street).
- 4.8 In case of emergency, the site has a large gate (directly from Georgiana Street) to allow emergency access to access the site. This access has been designed into the scheme following consultation with the London Fire and Emergency Planning Authority. The gate will not be open for general vehicular access by the public or residents of the development. In

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addition, there will be rising bollards behind the gates within the courtyards which will also serve to prevent ad hoc access by non-emergency vehicles.

- 4.9 Emergency vehicles will access the site via a dropped kerb access via Georgiana Street.However, this will be significantly smaller than the existing crossover and as such the level of single yellow line on Georgiana Street will be greater than existing.
- 4.10 The site access proposals for emergency vehicles is shown on **Appendix C.** Swept path output showing vehicle movement by a fire tender is contained at **Appendix D.**

Service Vehicle

- 4.11 The proposed development is expected to be serviced directly from Georgiana Street. Occasional deliveries will be made to site by postal / courier deliveries, food home delivery vehicles, waste and recyclables vehicles and infrequent maintenance vehicles. Waste storage has been designed to be located within local minimum trundle distances. Swept path analysis is included at **Appendix D** which shows that a vehicle can pass when a delivery vehicle is in situ.
- 4.12 Waste / recyclables storage will be located on the ground floor to the west of the undercroft.Swept path analysis is included at **Appendix D** which shows that a vehicle can pass when a refuse vehicle is in situ.

Parking

Car Parking

4.13 The proposed development has been design to be car free and this has been agreed with LBC. As a result, no car parking has been provided on site. During the discussions LBC has confirmed that Georgiana Street has capacity for disabled parking and servicing from the street as it is lined with a single yellow line, which means that when the existing crossovers are removed, disabled users would be able to park directly outside the site and other than reinstating the footway no further works to Georgian Street are required.

Cycle Parking

4.14 The residential element of the scheme will have 75 cycle parking spaces which adheres to cycle parking requirements. These will be located in secure and covered storage areas which



are accessed either via the building plot A pedestrian entrance which provides an onward route through to its own cycle storage or through the courtyard to storage for building plots B and C.

4.15 In addition, B1 office cycle parking will provided according to standards in the courtyard.



5 TRIP GENERATION & TRIP IMPACT

5.1 This section forecasts the trip impact of the proposed development in traffic and transport terms.

Trip Generation

Existing Site

- 5.2 Reference was made to the TRICS database (v. 7.2.3) to identify trip rates for the existing site. However, there were limitations in data availability for London based sites. On that basis, reference was made to the TRAVL extraction tool instead. The site was used as an EDF Depot and as such is mixed between B1 and B8 uses (with a minor Sui Generis use).
- 5.3 The search criteria used is shown below:
 - Land Use: General Industry;
 - PTAL Rating: 4 or above;
 - Days: Weekdays only; and
 - Date: 2008 onwards.
- 5.4 There are three sites on the database that meet the criteria. However, one was discounted because the TRAVL extraction tool does not hold information on its Gross Floor Area and therefore the trip rates could not be ascertained. The TRAVL outputs are contained in **Appendix E**.
- 5.5 Information on the sites used to inform the trip rates are provided in **Table 5.1**.

TRAVL Survey	Name	Borough	Survey	PTAL	Area	GFA
Code			Date			
641	Stratford	Newham	09/07/08	6	Inner	5109
	Workshops					
1121	Powerday	Brent	20/01/14	5	Outer	36421

Table 5.1: TRAVL Sites for Existing Site Trip Rates

5.6 The trip rates were identified per 100 sqm. These and the resulting trip generation are shown in **Table 5.2**. It is noted that the trip rates have been applied to the full quantum of the existing site (971 sqm).



Mode		08:00 - 09:00			17:00 - 18:00		
		In	Out	Total	In	Out	Total
All Modes	Rates	0.104	0.041	0.144	0.065	0.190	0.255
	Trips	1	0	1	1	2	2
Car Driver	Rates	0.053	0.022	0.075	0.014	0.079	0.094
	Trips	1	0	1	0	1	1

Table 5.2: Existing Use: Trip Rates & Trip Generation (971 sqm)

5.7 The existing site generates few trips between 08:00 to 09:00 and 17:00 to 18:00 although this site may have been slightly more intensively used when EDF used it as a depot however this would be primarily throughout a working day.

Proposed Development

Residential

- 5.8 Reference has been made to the TRICS database for residential trip rates using the following search criteria:
 - Residential Flats Privately Owned;
 - Region London;
 - Days Weekdays;
 - Location Types Town Centre or Edge of Town Centre; and
 - Dates 2010 onwards.
- 5.9 The TRICS database had eight sites which met the above criteria and were used to inform the trip rates. The TRICS output is contained in **Appendix F**. The criteria privately owned flats has been selected as this is the most robust
- 5.10 The trip rates and trip generation for the 46 residential units is shown in **Table 5.3**.

Table 5.3 All Modes Trip Rates (Per Unit) & Trip Generation (46 Residential Units)

Period	In	Out	Total	In	Out	Total
08:00 - 09:00	0.114	0.575	0.689	5	26	32
17:00 - 18:00	0.336	0.196	0.532	15	9	24



5.11 As the residential units will be car free, there will be no opportunity for residents to drive to/from the development. The site is located in a CPZ and residents will be ineligible for onstreet parking permits by condition. Potential occupants will be aware of this and their ineligibility for on-street parking permits from the outset and therefore they will make an active choice not to drive if they choose to reside at the proposed development. However, residents can be car passengers, taxi passengers or users of other modes of transport. On that basis, the car driver mode split has been reassigned to the other modes according to existing proportions.

Mode	Percentage	Readjusted	AM Peak		PN	1 Peak
		Percentage	Arrivals	Departures	Arrivals	Departures
Underground	26%	28%	1	7	4	3
Train	6%	7%	0	2	1	1
Bus	30%	32%	2	8	5	3
Taxi	0%	0%	0	0	0	0
Motorcycle	1%	1%	0	0	0	0
Car Driver	8%	0%	0	0	0	0
Car Passenger	1%	1%	0	0	0	0
Cycle	7%	8%	0	2	1	1
Pedestrian	21%	22%	1	6	3	2
Other	0%	0%	0	0	0	0
Total	100%	100%	5	26	15	9

Table 5.4 Residential Mode Split (Census 2011)

B1 Office

5.12 The TRICS database was used to ascertain B1 office trips using the following search criteria:

- Employment Office
- Region: London;
- Days: Weekdays;
- Location Types: Town Centre or Edge of Town Centre; and
- Dates: 2010 onwards.
- 5.13 The TRICS output is contained at **Appendix G**.
- 5.14 The TRICS database had four sites that met the above criteria and were used to inform the trip rates. The trip rates and trip generation are shown in **Table 5.5**.



Period	AM				PM	
	In	Out	Total	In	Out	Total
08:00 - 09:00	3.46	0.07	3.53	23	0	24
17:00 - 18:00	0.171	2.978	3.149	1	20	21

Table 5.5 All Modes Trip Rates (Per 100 sqm) & Trip Generation (686 sqm)

5.15 Census 2011 Method of Travel to Work data for people working in the in Camden 019 middle super output area is provided in **Table 5.6**. The splits have been readjusted proportionately to account for the car free nature of the employment scheme.

Mode	Percentage	Readjusted	AM Pe	AM Peak Hour		eak Hour
		Percentage	Arrivals	Departures	Arrivals	Departures
Underground	31%	36%	8	0	0	7
Train	27%	31%	7	0	0	6
Bus	12%	13%	3	0	0	3
Тахі	0%	0%	0	0	0	0
Motorcycle	2%	2%	0	0	0	0
Car Driver	14%	0%	0	0	0	0
Car Passenger	1%	1%	0	0	0	0
Cycle	5%	6%	1	0	0	1
Pedestrian	8%	9%	2	0	0	2
Other	0%	0%	0	0	0	0
Total	100%	100%	23	0	1	20

Table 5.6 Employment Mode Split (Census 2011)

5.16 As shown above, the majority of employees at the site are anticipated to make use of public transport to access the site.

Total Development Trips (excluding servicing)

5.17 The Proposed Development is expected to generate the trips shown in **Table 5.7**.

Table 5.7 Proposed Development Trips (Excluding Servicing)

Period	Gross: All Modes				
	In	Out	Total		
08:00 - 09:00	28	27	55		
17:00 - 18:00	17	29	46		



Proposed Development Servicing Trips

- 5.18 In addition to the trip generation provided above it is also expected that servicing movements associated with the proposed development would occur.
- 5.19 The daily delivery and servicing vehicle trips for the development have been calculated using the servicing trip rates agreed with Transport for London for the redevelopment of BBC Television Centre in White City. The trip rates are provided in **Table 5.8** below.

Table 5.8 Proposed Development Servicing Trips

Land Use	Daily Trip	08:00 – 0	9:00	17:00 – 18:00			
	Rate per	Percentage of	Trip Rate per	Percentage of	Trip Rate		
	100 sqm	Deliveries in Hour	100 sqm	Deliveries in Hour	per 100 sqm		
Residential	0.07	5%	0.0035	6%	0.0042		
Office	0.20	8%	0.0160	3%	0.0060		

5.20 The estimated numbers of servicing trips required for the site are shown in **Table 5.8** below. It is noted that the proposed development has a floor area of 5,157 sqm (4,471 sqm for the residential units and 686 sqm for the office). The trip rates have been applied to this quantum.

Table 5.8 Pro	posed Develo	ppment Gross	Servicing	Trips
10010 0.0110		pincine Gross	Jei vieing	11103

Period	Residential		Office			Total			
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
08:00 - 09:00	1	1	2	0	0	0	1	1	2
17:00 - 18:00	1	1	2	0	0	0	1	1	2

Total Trip Generation (including servicing)

5.21 The total trip generation inclusive of non-servicing and servicing trips are shown in **Table 5.9**.

Table 5.9. Proposed Development Total Trips

Period	In	Out	Total
08:00 - 09:00	30	28	58
17:00 - 18:00	18	30	48

- 5.22 The proposed development is expected to generate a gross of 58 two-way trips during 08:00 to 09:00 and 48 two-way trips during 17:00 to 18:00.
- 5.23 This is broken down by mode as shown in **Table 5.10** below.



Mode	AM Peak Hour		PM Pe	ak Hour
	In	Out	In	Out
Underground	10	8	5	10
Train	8	2	1	7
Bus	5	9	5	6
Тахі	0	0	0	0
Motorcycle	1	0	0	0
Car Driver	1	1	1	1
Car Passenger	0	0	0	0
Cycle	2	2	1	2
Pedestrian	3	6	4	4
Other	0	0	0	0
Total	30	28	18	30

Table 5.10 Total Development Trips by Mode

5.24 As can be seen the majority of trips are made by mode other than car driver which is expected as the site is car free.

Net Trip Generation

5.25 As a result, the net trip generation as a result of the redevelopment of the site is shown below in **Table 5.11** and **Table 5.12**. In order to establish the net trip generation, the existing use was split using the adjusted Census split (for the daytime population) with the exception of the car driver trips.

Table 5.11 Net Trips

Period	In	Out	Total
08:00 - 09:00	29	28	57
17:00 - 18:00	17	29	46



Mode	AM Peak Hour		PM Pe	ak Hour
	In	Out	In	Out
Underground	+10	+8	+5	+9
Train	+8	+2	+1	+7
Bus	+5	+9	+5	+5
Taxi	0	0	0	0
Motorcycle	0	0	0	0
Car Driver	1	1	1	1
Car Passenger	0	0	0	0
Cycle	+2	+2	+1	+2
Pedestrian	+3	+6	+4	+4
Other	0	0	0	0
Total	+29	+28	+17	+29

Table 5.12 Net Trips by Mode

5.26 As can be seen the net effect of the redevelopment is a negligible impact on car driver trips with a total increase in the number of two-way trips by 57 during the AM peak and 46 twoway trips during the PM peak. These are generated by walking, cycling and public transport and the effect of these trips is explained further in the section below.

Proposed Development Impact

- 5.27 The proposed development is estimated to generate 56 additional person trips in the AM Peak hour and 46 additional person trips in the PM Peak hour.
- 5.28 However, as the proposed development is car free, the impact will be negligible on the local highway network with the exception of car driver trips generated by servicing the site and it has been shown that these can be undertaken on the single yellow line in front of the site without restricting the free flow of traffic on Georgiana Street.
- 5.29 The number of additional trips on bus services will be 13 and 10 during the AM and PM peaks respectively. This equates to one trip every 5-6 minutes which will not result in a material impact on the local bus networks.
- 5.30 Travel by rail modes (underground and train) will be the most popular mode. The proposed development is expected to generate 27 additional two-way trips by underground/rail between 08:00 09:00 and 22 two-way trips by underground / rail between 17:00 18:00.
 Travel by these modes will be split between Camden Town Station and Camden Road

Bangor Wharf, London Borough of Camden



Station. This equates to 1 additional trip every 2-3 minutes which will not have a significant effect on the operation of the underground and rail network surrounding the site.

- 5.31 The proposed development is expected to generate an additional 13 two-way trips by walking and cycling combined between 08:00 09:00 and 10 additional two-way trips by walking and cycling combined between 17:00 18:00. This will have a minimal impact on the local walking and cycling network. It is noted that the surrounding area has very good provision for cyclists and the travel plan, which is prepared as a standalone report for this application seeks to encourage more active travel by site users.
- 5.32 In summary, it can be seen that the proposed development will not have a material impact on the local transport network.



6 SUMMARY & CONCLUSIONS

6.1 Vectos has been commissioned by One Housing Group to prepare a Transport Statement to support the planning application for a car free development consisting of the creation of :

a residential-led mixed-use development comprising 46 residential units (Use Class C3) (18 x 1 bed, 19 x 2 bed and 9 x 3 bed), new office floorspace (Use Class B1a) (686 sq.m) with associated works to highways and landscaping following demolition of existing buildings.

- 6.2 Servicing will take place from the single yellow lined carriageway (no kerb blips) outside the site. Waste / recyclables storage has been designed to be located within the local minimum trundle distances for convenient collection by waste / recyclables vehicles.
- 6.3 The trip generation shows that the site will generate a net increase of 57 two-way all modes trips during 08:00 to 09:00 and a net increase of 46 two-way all modes trips during 17:00 to 18:00. It is noted that the site is expected to only generate trips through sustainable modes of travel as the development is car free.
- 6.4 A separate travel plan has been prepared in order to support sustainable travel to and from the development.
- 6.5 Given the negligible change in vehicle trips as a result of proposals and the increase in trips by all modes other than car diver, it is considered that the transport impact generated by the proposals would be negligible. As a result this would not have a material impact on the location highway, public transport and walking / cycling network.

Conclusions

- 6.6 In conclusion, it can be seen that the site is accessible by all modes and that the proposals would not result in a material change to demand on the existing pedestrian, cycling and public transport facilities and services.
- 6.7 The effect of the proposals has been assessed and it has also been concluded that the transport effects would not be material.
- 6.8 It is therefore considered that the site complies with the transport tests set out in NPPF i.e.:
 - The opportunities for sustainable transport modes have been taken up;

Bangor Wharf, London Borough of Camden

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- Safe and suitable access can be achieved for all people; and
- The impacts of the development are not severe.
- 6.9 As such, it is concluded that the proposals are acceptable from a transport and highways perspective.

FIGURES







APPENDIX A

Controlled Parking Zone Map

Controlled Parking Zones in Camden

Times shown are correct at time of publication (April 2010). Please check controlled times on-street when you park. You can park in any sub-area or 'buffer zone' with the main letter of your permit. For example, with a Swiss Cottage permit, CA-R, you can park in either sub-areas, CA-R(a) and CA-R(b), or any of the buffer zones with this letter - e.g. CA-R/Q, CA-Q/R, CA-R/K/Q. The zone times of the buffer zones follow the first letter - e.g. CA-D/E follows CA-D zone times, rather than those of CA-E.

CA-B Belsize Mon-Fri 09:00-18:30 Sat 09:30-13:30

CA-C Holborn & Covent

Garden **Residents Bays are controlled**

24 hrs a day, 7 days a week. Parking controls on single yellow lines/Pay & Display bays are Mon-Sat 8:30-18:30

CA-D Kings Cross Area Mon-Fri 08:30-18:30 Sat 08:30-13:30

CA-E Bloomsbury & Fitzrovia Mon-Sat 08:30-18:30

CA-F(n) Camden Town: North Mon-Fri 08:30-18:30 Sat & Sun 09:30-17:30

CA-F(nw) Camden Town: North West Mon-Fri 08:30-23:00 Sat & Sun 09:30-23:00



CA-G Somers Town Mon-Fri 08:30-18:30



CA-H(a) Hampstead: South Hill Park Mon-Sat 09:00-18:00

CA-H(b) Hampstead: **Town Centre & Vale of** Heath Mon-Sat 09:00-20:00 No charge on Pay & Display after 18.00 CA-H(c) Frognal Mon-Sat 09:00-19:00 No charge on Pay & Display after 18.00 CA-H(d) Hampstead: **Church Row** Mon-Sat 09:00-22:00

No charge on Pay & Display after 18.00

CA-H/B Mon-Sat 09:00-20:00

CA-J Primrose Hill Mon-Fri 08:30-18:00

CA-K Kilburn Priory Mon-Fri 08:30-18:30

CA-L West Kentish **Town: Inner** Mon-Fri 09:00-11:00

CA-L West Kentish Town: Outer Mon-Fri 08:30-18:30 St Leonards Square Mon-Fri 08:30-18:30 Sat & Sun 09:30-17:30











CA-M East Kentish Town

Mon-Fri 08:30-18:30

Mon-Fri 08:30-18:30

Mon-Fri 08:30-18:30

Mon-Sat 08:30-18:30

Mon-Fri 10:00-12:00

Mon-Fri 08:30-18:30

CA-Q Kilburn

Central

East

West

CA-N Camden Square

CA-P(a) Fortune Green:

CA-P(b) Fortune Green:

CA-P(c) Fortune Green:



CA-R(a) Swiss Cottage: West End Lane Mon-Fri 08:30-18:30

> CA-R(b) Swiss Cottage: **Finchley Road** Mon-Sat 08:30-22:00

HAMPSTEAD

AMPSTEAD

HEATH

PARLIAMENT HILL

CA-

PRIMROSE

CA-S(a) Redington & Frognal: North Mon-Fri 12:30-14:30

CA-S(b) Redington & Frognal: South Mon-Sat 09:00-18:00

CA-S/W(a) Redington & Frognal: West(a) Mon-Fri 12:30-14:30

CA-S/W(b) Redington & Frognal: West(b) Mon-Sat 09:00-18:00

CA-U Highgate Mon-Fri 10:00-12:00 Dartmouth Park Hill Mon-Fri 08:30-18:30 Sat 08:30-13:30



Mon-Fri 11:00-13:00 Sandy Road Mon-Sun 08:30-18:30

CA-X Elm Village Mon-Fri 08:30-18:30



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APPENDIX B

Site Layout Plan



Notes

General:

- Do not scale from this drawing. All dimensions are millimeters unless otherwise stated. 1.
- 2. This drawing is for information purposes only. Any dimensions and levels data are indicative only and subject to detailed structural and architectural design.
- Copyright Tranter McManus Architects Ltd. This drawing not to be re-produced without the permission of the architect. 3.
- All areas and sizes are approximate only. Based on Ordnance Survey data only and subject to measured survey. 4.





Notes	Chkd	Date	Rev
Preliminary Issue for Comment	kb	29/09/15	P1
Plans updated	kb	13/10/15	P2
Plans updated	ml	16/10/15	P3
Plans updated	ml	27/10/15	P4
Plans updated	ml	12/11/15	P5
Plans updated	ml	18/01/16	P6
Plans updated	ml	22/01/16	P7

TM Architects 102 Screenworks 522 Highbury Grove London N5 2EF / T: 020 35671508

Bangor Wharf London NW1 0QS

Preliminary Floor Plans Sheet 1

Job Ref

Scale : 1:500 @ A3

Dwg No Rev

APPENDIX C

Site Access Proposals for Emergency Vehicles





APPENDIX D

Swept Path Output







	Notes: 1. This is not a construction drawing a 2. White lining is indicative only. 3. Site Plan is 194 Ranger What 001	nd is intended for illustra	tive purposes of	nly.				
	3. Site Marins 194-bangor Witan_00-	Pan_160215_WIP_BO	DIV DY TIMA.					
· · · · · · · · · · · · · · · · · · ·								
	Pumping Appliance Overall Length7.90 2.50 Overall WidthOverall Width2.50 3.30 Min Body HeightMin Body Ground Clearance0.14 Track WidthTrack Width2.50 2.50 Lock-to-lock timeLock-to-lock time4.00 7.75							
RY	REV. DETAILS	DRAV	VN CHECKED	DATE				
KIT	CLIENT: One Ho	ousing G	roup					
	PROJECT: Bangor Wharf Camden							
	Fire Tenc	ler Acces	sibility	/				
	scales: 1:2	250 at A3						
		ED: MdC	DATE: 16/	02/2016				
$\sum_{i=1}^{n}$		transport pl	anning spec	S cialists				
	t: 020 7580 7373	einiam Court Road e: enq	i, London W uiries@vecto	s.co.uk				
)		055/1/0	5	REVISION:				
	101	933/A/0	0					

APPENDIX E

TRAVL Output - Existing Site

Survey Cod Name	Borough	Survey Date	PTAL	Area	Total Parking	Survey Hrs1	GFA	Em	ploy
641 Stratford Workshops	NEWHAM	09/07/200	8	6 Inner	e	5 07:00-19:00		5109	550
1121 Powerday	BRENT	20/01/201	4	5 Outer	(0600-1900	3	36421	100

ARRIVALS

Ref No	GFA	Survey Date	Start Time	End Time	Car Driver (C	ar Driver (C	ar Passen _i HGV	/	Motor Cycl Pe	edal Cycle Rail		Unknown	Walk	All Modes
1121	. 36421	. 20/01/2014	0	2400	23			194	0				15	232
641	. 5109	09/07/2008	0	2400	140	4	15			6	17	1	165	348
Total	41530				163	4	15	194	0	6	17	1	180	580
Trip Rate p	per 100 sqm	1			0.392	0.010	0.036	0.467	0.000	0.014	0.041	0.002	0.433	1.397
DEPARTUR	RES													
Ref No	GFA	Survey Date	Start Time	End Time	Car Driver (C	ar Driver (C	ar Passen _i HGV	/	Motor Cycl Pe	edal Cycle Rail		Unknown	Walk	
1121	. 36421	20/01/2014	0	2400	30			186	1				16	233
641	. 5109	09/07/2008	0	2400	135	3	16			6	13	0	159	332
Total	41530				165	3	16	186	1	6	13	0	175	565
Trip Rate p	per 100 sqm	1			0.397	0.007	0.039	0.448	0.002	0.014	0.031	0.000	0.421	1.360
TOTALS														
Ref No	GFA	Survey Date	Start Time	End Time	Car Driver (C	ar Driver (C	ar Passen _i HGV	/	Motor Cycl Pe	edal Cycle Rail		Unknown	Walk	
1121	. 36421	20/01/2014	0	2400	53			380	1				31	465
641	. 5109	09/07/2008	0	2400	275	7	31			12	30	1	324	680
Total	41530)			328	7	31	380	1	12	30	1	355	1145
Trip Rate p	per 100 sqm	1			0.790	0.017	0.075	0.915	0.002	0.029	0.072	0.002	0.855	2.757

ARRIVALS																	
Ref No	GF	A	Survey Date	Start Time	Ind Time	Car Driver (alone)		Car Driver (with pass)	Car Pa	assen{ HG	V I	Notor Cycl Pe	dal Cycle Ra	il	Unknown	Walk	All Modes
	1121	36421	20/01/2014	800	900		6				7					2	15
	641	5109	09/07/2008	800	900		16			0				3		9	28
Total		41530					22	C)	0	7	0	0	3	0	11	43
Trip Rate per 1	00 sqm					0	.053	0.000) (0.000	0.017	0.000	0.000	0.007	0.000	0.026	0.104
DEPARTURES																	
Ref No	GF	A	Survey Date	Start Time	nd Time	Car Driver (alone)		Car Driver (with pass)	Car Pa	assen{ HG	v r	Notor Cycl Pe	dal Cycle Ra	il	Unknown	Walk	
	1121	36421	20/01/2014	800	900		0				5					0	5
	641	5109	09/07/2008	800	900		9			0				0		3	12
Total		41530					9	0)	0	5	0	0	0	0	3	17
Trip Rate per 1	00 sqm					0.	.022	0.000) (0.000	0.012	0.000	0.000	0.000	0.000	0.007	0.041
TOTALS																	
Ref No	GF	A	Survey Date	Start Time	nd Time	Car Driver (alone)		Car Driver (with pass)	Car Pa	assen _{ HG	v r	Motor Cycl Pe	dal Cycle Ra	il	Unknown	Walk	
	1121	36421	20/01/2014	800	900		6				12					2	20
	641	5109	09/07/2008	800	900		25			0				3		12	40
Total		41530					31	C)	0	12	0	0	3	0	14	60
Trip Rate per 1	00 sqm					0.	.075	0.000) (0.000	0.029	0.000	0.000	0.007	0.000	0.034	0.144

Ref No	GF/	4	Survey Date	Start Time	End Time	Car Driver (Car Driver (C	ar Passen _{ HG	SV	Motor Cycl Pe	edal Cycle Rail		Unknown	Walk	All Modes
	1121	36421	20/01/2014	1700	1800	0			5					0	5
	641	5109	09/07/2008	1700	1800	6		1				1	1	13	22
Total		41530				6	0	1	5	0	0	1	1	13	27
Trip Rate per 1	100 sqm					0.014	0.000	0.002	0.012	0.000	0.000	0.002	0.002	0.031	0.065
DEPARTURES															
Ref No	GF/	4	Survey Date	Start Time	End Time	Car Driver (Car Driver (C	ar Passen _{ HG	SV	Motor Cycl Pe	edal Cycle Rail		Unknown	Walk	
	1121	36421	20/01/2014	1700	1800	11			1					6	18
	641	5109	09/07/2008	1700	1800	22		4				7	0	28	61
Total		41530				33	0	4	1	0	0	7	0	34	79
Trip Rate per 1	100 sqm					0.079	0.000	0.010	0.002	0.000	0.000	0.017	0.000	0.082	0.190
TOTALS															
Ref No	GF/	4	Survey Date	Start Time	End Time	Car Driver (Car Driver (C	ar Passen _{ HO	SV	Motor Cycl Pe	edal Cycle Rail		Unknown	Walk	
	1121	36421	20/01/2014	1700	1800	11			6					6	23
	641	5109	09/07/2008	1700	1800	28		5				8	1	41	83
Total		41530				39	0	5	6	0	0	8	1	47	106
Trip Rate per 1	100 sqm					0.094	0.000	0.012	0.014	0.000	0.000	0.019	0.002	0.113	0.255

APPENDIX F

TRICS Output – Residential Land Use

Calculation Reference: AUDIT-152301-151006-1014

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL Category : C - FLATS PRIVATELY OWNED MULTI-MODAL VEHICLES

ted reg	gions and areas:	
GRE	ATER LONDON	
HM	HAMMERSMITH AND FULHAM	1 days
HO	HOUNSLOW	1 days
KI	KINGSTON	1 days
KN	KENSINGTON AND CHELSEA	2 days
SK	SOUTHWARK	2 days
WH	WANDSWORTH	1 days
	ted red GRE HM HO KI KN SK WH	ted regions and areas:GREATER LONDONHMHAMMERSMITH AND FULHAMHOHOUNSLOWKIKINGSTONKNKENSINGTON AND CHELSEASKSOUTHWARKWHWANDSWORTH

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

Filtering Stage 2 selection:

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

Parameter:	Number of dwellings
Actual Range:	29 to 294 (units:)
Range Selected by User:	9 to 530 (units:)

Public Transport Provision:

Selection by:

Include all surveys

Date Range: 01/01/10 to 23/04/15

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

<u>Selected survey days:</u>	
Monday	1 days
Tuesday	1 days
Wednesday	3 days
Thursday	1 days
Friday	2 days

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

Selected survey types:	
Manual count	8 days
Directional ATC Count	0 days

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

Selected Locations:	
Town Centre	2
Edge of Town Centre	6

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

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

Filtering Stage 3 selection:

Use Class:

C3

8 days

Page 2 Licence No: 152301

Tuesday 06/10/15

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

Population within 1 mile:	
5,001 to 10,000	1 days
10,001 to 15,000	1 days
25,001 to 50,000	2 days
50,001 to 100,000	2 days
101,000 or More	2 days

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

Population within 5 miles:	
125,001 to 250,000	1 days
250,001 to 500,000	1 days
500,001 or More	6 days

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

Car ownership within 5 miles:	
0.5 or Less	1 days
0.6 to 1.0	6 days
1.1 to 1.5	1 days

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

Travel Plan:	
Yes	2 days
No	6 days

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

TRICS 7.2.3	3 250915 B17.26 (C) 2015 TRICS Con	sortium Ltd	Tuesday 06/10/15 Page 3
VECTOS 9	7 TOTTENHAM COURT ROAD LONDO	N	Licence No: 152301
LIST	OF SITES relevant to selection paramete	<u>ers</u>	
1	HM-03-C-01 BLOCK OF FLAT VANSTON PLACE	S	HAMMERSMITH AND FULHAM
2	FULHAM Town Centre High Street Total Number of dwellings: Survey date: WEDNESDAY HO-03-C-02 BLOCK OF FLAT HIGH STREET	42 16/07/14 S	Survey Type: MANUAL HOUNSLOW
3	BRENTFORD Town Centre Built-Up Zone Total Number of dwellings: Survey date: WEDNESDAY KI-03-C-02 BLOCK OF FLAT SOPWITH WAY	86 03/09/14 S	Survey Type: MANUAL KINGSTON
4	KINGSTON UPON THAMES Edge of Town Centre No Sub Category Total Number of dwellings: Survey date: MONDAY KN-03-C-02 BLOCK OF FLAT BECKFORD CLOSE	132 14/06/10 S	Survey Type: MANUAL KENSINGTON AND CHELSEA
5	SOUTH KENSINGTON Edge of Town Centre Residential Zone Total Number of dwellings: Survey date: TUESDAY KN-03-C-03 BLOCK OF FLAT ALLEN STREET	294 15/06/10 ⁻ S	Survey Type: MANUAL KENSINGTON AND CHELSEA
6	KENSINGTON Edge of Town Centre Residential Zone Total Number of dwellings: Survey date: FRIDAY SK-03-C-01 BLOCK OF FLAT PARK STREET	72 11/05/12 °S	Survey Type: MANUAL SOUTHWARK
	SOUTHWARK Edge of Town Centre Built-Up Zone Total Number of dwellings: Survey date: FRIDAY	53 19/09/14	Survey Type: MANUAL

TRICS 7.2	.3 250915 B17.26 (C) 2015 TRICS Cor	sortium Ltd		Tuesday 06/10/15 Page 4
VECTOS	97 TOTTENHAM COURT ROAD LONDO	N		Licence No: 152301
LIS	T OF SITES relevant to selection parameter	ers (Cont.)		
7	SK-03-C-02 BLOCK OF FLAT LAMB WALK	S	SOUTHWARK	
8	BERMONDSEY Edge of Town Centre Built-Up Zone Total Number of dwellings: Survey date: THURSDAY WH-03-C-01 BLOCKS OF FLA AMIES STREET	29 23/04/15 ATS	Survey Type: MANUAL WANDSWORTH	
	CLAPHAM JUNCTION Edge of Town Centre Residential Zone Total Number of dwellings: Survey date: WEDNESDAY	30 09/05/12	Survey Type: MANUAL	

TR

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED MULTI-MODAL VEHICLES Calculation factor: 1 DWELLS BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	5		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	92	0.015	8	92	0.077	8	92	0.092
08:00 - 09:00	8	92	0.051	8	92	0.131	8	92	0.182
09:00 - 10:00	8	92	0.058	8	92	0.057	8	92	0.115
10:00 - 11:00	8	92	0.031	8	92	0.042	8	92	0.073
11:00 - 12:00	8	92	0.049	8	92	0.037	8	92	0.086
12:00 - 13:00	8	92	0.041	8	92	0.041	8	92	0.082
13:00 - 14:00	8	92	0.038	8	92	0.034	8	92	0.072
14:00 - 15:00	8	92	0.035	8	92	0.053	8	92	0.088
15:00 - 16:00	8	92	0.066	8	92	0.045	8	92	0.111
16:00 - 17:00	8	92	0.058	8	92	0.046	8	92	0.104
17:00 - 18:00	8	92	0.077	8	92	0.049	8	92	0.126
18:00 - 19:00	8	92	0.076	8	92	0.066	8	92	0.142
19:00 - 20:00	2	162	0.065	2	162	0.053	2	162	0.118
20:00 - 21:00	2	162	0.050	2	162	0.031	2	162	0.081
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.710			0.762			1.472

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

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

Parameter summary

Trip rate parameter range selected:	29 - 294 (units:)
Survey date date range:	01/01/10 - 23/04/15
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED MULTI-MODAL TOTAL PEOPLE Calculation factor: 1 DWELLS BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES	5		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	92	0.049	8	92	0.294	8	92	0.343
08:00 - 09:00	8	92	0.114	8	92	0.575	8	92	0.689
09:00 - 10:00	8	92	0.125	8	92	0.215	8	92	0.340
10:00 - 11:00	8	92	0.080	8	92	0.172	8	92	0.252
11:00 - 12:00	8	92	0.130	8	92	0.125	8	92	0.255
12:00 - 13:00	8	92	0.153	8	92	0.141	8	92	0.294
13:00 - 14:00	8	92	0.165	8	92	0.152	8	92	0.317
14:00 - 15:00	8	92	0.138	8	92	0.164	8	92	0.302
15:00 - 16:00	8	92	0.279	8	92	0.123	8	92	0.402
16:00 - 17:00	8	92	0.243	8	92	0.148	8	92	0.391
17:00 - 18:00	8	92	0.336	8	92	0.196	8	92	0.532
18:00 - 19:00	8	92	0.324	8	92	0.145	8	92	0.469
19:00 - 20:00	2	162	0.294	2	162	0.108	2	162	0.402
20:00 - 21:00	2	162	0.180	2	162	0.105	2	162	0.285
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.610			2.663			5.273

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

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

Parameter summary

Trip rate parameter range selected:	29 - 294 (units:)
Survey date date range:	01/01/10 - 23/04/15
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

APPENDIX G

TRICS Output – B1 Office

Calculation Reference: AUDIT-152301-151006-1010

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT Category : A - OFFICE MULTI-MODAL VEHICLES

Selected regions and areas: 01 GREATER LONDON

GRE/	ATER LONDON	
CI	CITY OF LONDON	2 days
HD	HILLINGDON	1 days
WH	WANDSWORTH	1 days
		j -

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

Filtering Stage 2 selection:

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

Parameter:	Gross floor area
Actual Range:	1215 to 12100 (units: sqm)
Range Selected by User:	408 to 17187 (units: sqm)

Public Transport Provision: Selection by:

Include all surveys

Date Range: 01/01/10 to 19/05/15

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

<u>Selected survey days:</u>	
Tuesday	1 days
Thursday	1 days
Friday	2 days

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

Selected survey types:	
Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:	
Town Centre	
Edge of Town Centre	

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

3 1

> 3 1

Selected Location Sub Categories:	
Commercial Zone	
Built-Up Zone	

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

Filtering Stage 3 selection:

Use Class:

B1

4 days

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

Population within 1 mile:	
10,001 to 15,000	1 days
25,001 to 50,000	1 days
50,001 to 100,000	2 days

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

Population within 5 miles:	
250,001 to 500,000	1 days
500,001 or More	3 days

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

Car ownership within 5 miles:	
0.5 or Less	2 days
0.6 to 1.0	1 days
1.1 to 1.5	1 days

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

Travel Plan:	
Yes	1 days
No	3 days

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

LONDON

LIST OF SITES relevant to selection parameters

97 TOTTENHAM COURT ROAD

VECTOS

1	CI-02-A-02 OFFICES GRACECHURCH STREET MONUMENT CITY OF LONDON		CITY OF LONDON
2	Commercial Zone Total Gross floor area: Survey date: FRIDAY CI-02-A-03 OFFICES MONUMENT STREET MONUMENT CITY OF LONDON Town Centre	9803 sqm 29/11/13	Survey Type: MANUAL CITY OF LONDON
3	Commercial Zone Total Gross floor area: Survey date: FRIDAY HD-02-A-07 DATA CENTRE MILLINGTON ROAD HYDE PARK	1951 sqm 29/11/13	Survey Type: MANUAL HILLINGDON
4	HAYES Edge of Town Centre Commercial Zone Total Gross floor area: Survey date: TUESDAY WH-02-A-02 OFFICES BATTERSEA PARK ROAD	12100 sqm 19/05/15	Survey Type: MANUAL WANDSWORTH
	BATTERSEA Town Centre Built-Up Zone Total Gross floor area: Survey date: THURSDAY	1215 sqm 10/05/12	Survey Type: MANUAL

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

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

	ARRIVALS		DEPARTURES		TOTALS				
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	5708	0.236	4	5708	0.009	4	5708	0.245
07:30 - 08:00	4	5708	0.364	4	5708	0.048	4	5708	0.412
08:00 - 08:30	4	5708	0.832	4	5708	0.048	4	5708	0.880
08:30 - 09:00	4	5708	0.666	4	5708	0.013	4	5708	0.679
09:00 - 09:30	4	5708	0.241	4	5708	0.018	4	5708	0.259
09:30 - 10:00	4	5708	0.079	4	5708	0.022	4	5708	0.101
10:00 - 10:30	4	5708	0.070	4	5708	0.035	4	5708	0.105
10:30 - 11:00	4	5708	0.083	4	5708	0.039	4	5708	0.122
11:00 - 11:30	4	5708	0.039	4	5708	0.022	4	5708	0.061
11:30 - 12:00	4	5708	0.048	4	5708	0.057	4	5708	0.105
12:00 - 12:30	4	5708	0.053	4	5708	0.118	4	5708	0.171
12:30 - 13:00	4	5708	0.066	4	5708	0.061	4	5708	0 127
13:00 - 13:30	4	5708	0.066	4	5708	0.039	4	5708	0.105
13:30 - 14:00	4	5708	0.074	4	5708	0.044	4	5708	0.118
14.00 - 14.30	4	5708	0.035	4	5708	0.048	4	5708	0.083
14:30 - 15:00	4	5708	0.026	4	5708	0.035	4	5708	0.061
15:00 - 15:30	4	5708	0.028	4	5708	0.044	4	5708	0.092
15:30 - 16:00	4	5708	0.009	4	5708	0.0118	4	5708	0.127
16:00 - 16:30	4	5708	0.026	4	5708	0.285	4	5708	0.311
16:30 - 17:00	4	5708	0.026	4	5708	0.280	4	5708	0.306
17:00 - 17:30	4	5708	0.020	4	5708	0.200	4	5708	0.460
17:30 - 18:00	4	5708	0.039	4	5708	0.766	4	5708	0.805
18:00 - 18:30	4	5708	0.007	4	5708	0 372	4	5708	0.385
18:30 - 19:00	4	5708	0.004	4	5708	0.072	4	5708	0.166
19.00 - 19.30		0700	0.001		0700	0.102	· ·	0700	0.100
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21.00 - 21.30									
21.30 - 22.00									
22.00 - 22.00									
22.00 - 22.00									
22.30 - 23.00									
23.00 - 23.30									
Z3.30 - Z4.00			2 170			2 100			6 204
TUTAL RALES:			3.178			3.108			0.200

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

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

Parameter summary

Trip rate parameter range selected:	1215 - 12100 (units: sqm)
Survey date date range:	01/01/10 - 19/05/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

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

ARRIVALS DEPARTURES TOTALS No. Ave. Trip No. Ave. Trip No. Ave. Trip Time Range GFA Rate GFA Rate GFA Rate Days Days Days 00:00 - 00:30 00:30 - 01:00 01:00 - 01:30 01:30 - 02:00 02:00 - 02:30 02:30 - 03:00 03:00 - 03:30 03:30 - 04:00 04:00 - 04:30 04:30 - 05:00 05:00 - 05:30 05:30 - 06:00 06:00 - 06:30 06:30 - 07:00 07:00 - 07:30 4 5708 0.385 4 5708 0.018 4 5708 0.403 4 07:30 - 08:00 4 5708 0.745 5708 0.057 4 5708 0.802 1.721 08:00 - 08:30 4 5708 4 5708 0.048 4 5708 1.769 08:30 - 09:00 4 5708 1.739 4 5708 0.022 4 5708 1.761 09:00 - 09:30 4 5708 0.762 4 5708 0.022 4 5708 0.784 09:30 - 10:00 4 5708 0.311 4 5708 0.109 4 5708 0.420 10:00 - 10:30 4 5708 0.201 4 5708 0.145 4 5708 0.346 10:30 - 11:00 4 5708 4 0.223 5708 0.096 4 5708 0.319 11:00 - 11:30 4 5708 0.166 4 5708 0.210 4 5708 0.376 11:30 - 12:00 4 5708 0.145 4 5708 0.276 4 5708 0.421 12:00 - 12:30 4 5708 0.250 4 5708 0.565 4 5708 0.815 12:30 - 13:00 4 5708 0.508 4 5708 0.701 4 5708 1.209 13:00 - 13:30 4 5708 0.578 4 5708 0.473 4 5708 1.051 4 13:30 - 14:00 4 5708 0.491 5708 0.188 4 5708 0.679 14:00 - 14:30 4 4 0.267 5708 4 0.455 5708 0.188 5708 4 14:30 - 15:00 4 4 5708 0.241 5708 0.210 5708 0.451 15:00 - 15:30 4 5708 4 5708 4 5708 0.377 0.171 0.206 15:30 - 16:00 4 5708 0.105 4 5708 0.399 4 5708 0.504 16:00 - 16:30 4 5708 0.166 4 5708 0.762 4 5708 0.928 16:30 - 17:00 4 5708 0.131 4 5708 0.666 4 5708 0.797 17:00 - 17:30 4 5708 4 5708 0.083 1.406 4 5708 1.489 17:30 - 18:00 1.572 4 5708 4 5708 0.088 5708 4 1.660 5708 0.736 5708 18:00 - 18:30 4 4 5708 4 0.780 0.044 18:30 - 19:00 4 5708 0.018 4 5708 0.320 4 5708 0.338 19:00 - 19:30 19:30 - 20:00 20:00 - 20:30 20:30 - 21:00 21:00 - 21:30 21:30 - 22:00 22:00 - 22:30 22:30 - 23:00 23:00 - 23:30 23:30 - 24:00 Total Rates: 9.539 9.395 18.934

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Parameter summary

Trip rate parameter range selected:	1215 - 12100 (units: sqm)
Survey date date range:	01/01/10 - 19/05/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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