CANEPARO ASSOCIATES
Transport Planning & Highway Design

GMS Estates Ltd.

KINGSWAY HOUSE, KINGSWAY, LONDON BOROUGH OF CAMDEN

Transport Statement

May 2016

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1 INTRODUCTION

1.1 Caneparo Associates Limited is retained by GMS Estates Ltd. (the 'Applicant') to provide traffic and transportation advice with regard to the proposed extension and refurbishment of Kingsway House, Kingsway, in the London Borough of Camden.

1.2 The site is located west of Kingsway carriageway, with frontage onto Parker Street to the north, A4200 Kingsway to the east and Great Queen Street to the south. The site location is shown in **Figure 1**.

1.3 The planning application seeks approval to refurbish the ground floor retail facilities and 7 storeys of office floor space at Kingsway House and the construction of an 8th floor.

1.4 The proposal includes provision of 48 cycle parking spaces at basement level, located in close proximity to cycle welfare facilities. The proposed welfare facilities will include lockers, as well as showers and changing facilities.

1.5 This report reviews the proposal in traffic and transportation terms setting out the existing situation and considering the effects of the proposal in terms of access, parking, trip generation and servicing / refuse collection. It concludes that the proposal will not result in an unacceptable impact on the surrounding transport network.

1.6 The remainder of the report is as follows;

- Section 2 summarises the existing site conditions;
- Section 3 details the accessibility of the site via various modes of travel;
- Section 4 summarises the relevant transport planning policy;
- Section 5 provides details of the proposed development;
- Section 6 assesses the effects of the development proposal; and,
- Section 7 summarises and concludes.

2 EXISTING SITUATION

The Site and Surrounding Area

2.1 The proposal seeks to extend and refurbish the existing commercial building located at Kingsway House. The site includes Kingsway House consisting of ground floor retail facilities and 7 storeys of office floor space above.

2.2 The site currently provides ground floor retail facilities including Starbucks Coffee and Eat, while office floor space is provided on upper floors. The proposal will increase the site's office floor space through construction of an 8th storey.

2.3 The site building has frontage onto Parker Street to the north, A4200 Kingsway to the east and Great Queen Street to the south. The surrounding area is typically commercial in nature and is in close proximity to Holborn Underground Station, the A40 High Holborn and Covent Garden.

Highway Network

2.4 The A4200 Kingsway carriageway runs broadly in a south-east to north-west direction. To the north-west of the site the A4200 provides a direct link to Mornington Crescent and forms a staggered junction with Camden High Street (A400), Crowndale Road (B512), and Hampstead Road (A400). To the south-east Kingsway joins the A4 Aldwych one-way system, at which point the Strand Underpass joins the A4200 northwards.

2.5 In the vicinity of the site, Kingsway carriageway provides one south-east bound lane for general traffic and one lane designated for bus services, while providing two lanes plus a designated bus lane for north-west bound traffic.

2.6 No on-street parking facilities are located on Kingsway, however a number of loading facilities are provided south of the site, either with restrictions on Monday – Friday between 7am – 7pm and Saturday between 8.30am – 1.30pm or Monday – Saturday between 7-11am and 4-7pm.

2.7 Great Queen Street is a two-way single lane carriageway providing a link between Kingsway to the north-east and Drury Lane to the south-west.

2.8 Various on-street parking and loading facilities are provided on Great Queen Street, including Taxi Only, Loading Only and Disabled Parking bays. In the vicinity of the site there are a number of Pay by Phone bays with restrictions Monday – Saturday between 8.30am – 6.30pm, with a maximum stay of 2 hours. Additionally, Permit Holder Only bays are provided with 24/7 provision and others with restrictions Monday – Saturday between 8.30am – 6.30pm.

2.9 Parker Street is a one-way street providing a link between Kingsway and Drury Lane. In the vicinity of the site, Parker Street also provides Pay by Phone bays with restrictions Monday – Saturday between 8.30am – 6.30pm, with a maximum stay of 2 hours. Additionally, on-street motorcycle parking and further Permit Holder Only bays are provided. An on-pavement loading bay is provided on the northern side of Parker Street immediately in front of the site.

3 ACCESSIBILITY

3.1 The site is accessible by all modes, being within walking and cycling distance of much of central London and with access to numerous bus and underground services within convenient walking distances.

Walking

3.2 It is widely accepted that walking offers the greatest potential to replace car journeys for distances less than 2 km. The site is well located for journeys on foot, with a number of local amenities and public transport services in the vicinity of the site.

3.3 **Table 3.1** sets out details of approximate distances between the site and local amenities. Assuming an average walk speed of 80m per minute, Table 3.1 identifies a number of local amenities located within a reasonable walk distance of the site.

Table 3.1: Approximate Distances to local amenities

Amenity	Location	Distance (metres)	Approximate Walking Time (minutes)
Public Transport Opportunities			
Bus stops	Kingsway (Bus Stop M)	40	<1
	Kingsway (Bus Stop N)	50	<1
Holborn Underground Station	Kingsway, High Holborn	120	2
Facilities and Amenities			
Co-op Bank	Remnant Street, Kingsway	40	<1
Sainsbury's Supermarket	High Holborn, Kingsway	130	2
NatWest Bank	High Holborn, Newton Street	180	2
Pharmacy	Drury Lane, Betterton Street	350	4
Post Office	High Holborn, Drury Lane	400	5

3.4 As shown above, there are a number of local amenities and public transport services located within convenient walking distance of the site, including bus stops, banking services, a pharmacy and a supermarket.

Cycling

3.5 There is a good network of cycle ways in the local area with a number of roads designated by TfL's Cycle Guide No.7 as appropriate for cycling.

3.6 There are a number of local roads which have been designated as '*Routes signed or marked for use by cyclists*' including Great Queen Street, Long Acre and Drury Lane. While further roads have been labelled '*Other roads that have been recommended by cyclists*' including Lincoln's Inn Fields, Newman's Row and Chancery Lane.

3.7 There are also a number of London Cycle Hire facilities within walking distance of the site, with the nearest docking station located 130 metres walking distance south-west of the site on Newton Street.

Bus Services

3.8 In total 35 bus routes are available within a 640 metre walking distance of the site. A list of the bus routes shown in TfL's Bus Spider Map for Holborn, alongside a summary of the frequency of services, is provided in **Table 3.2**, while the Bus Spider Map is included at **Appendix A**.

Table 3.2 Local Bus Services				
Route Number	**Route**	**Frequency (in minutes)**		
		Weekday Frequency	**Saturday Frequency**	**Saturday Frequency**
1	Canada Water – Tottenham Court Road	6-10	8-12	11-13
8	Bow Church – Tottenham Court Road	4-8	6-10	9-11
9	Battersea Bridge – Finsbury Park	5-8	6-10	9-12
25	Ilford – Oxford Circus	4-10	5-8	5-8
38	Clapton – Victoria	3-6	3-7	4-8
55	Layton – Oxford Circus	5-9	7-11	8-11
59	King's Cross – Streatham Hill	5-9	6-8	9-12
68	Euston – West Norwood	7-10	6-10	10-13
91	Crouch End – Trafalgar Square	6-10	7-10	7-11
98	Willesden – Holborn	5-8	6-10	6-12
168	Hampstead Heath – Old Kent Road	5-8	8-12	10-14
171	Bellingham – Holborn	5-9	7-10	10-14
188	North Greenwich – Russel Square	7-9	7-9	10-14
242	Homerton Hospital – Tottenham Court Road	6-9	5-8	7-12
243	Waterloo – Wood Green	4-8	7-10	8-12
521	London Bridge – Waterloo	2-10	NA	NA
X68	Russell Square – West Croydon	Am Peak Only	NA	NA

Underground Services

3.9 Holborn Underground Station is the closest underground station to the site, located 120 metres walking distance north on Kingsway carriageway. Underground services available from Holborn run on the Central and Piccadilly Lines.

3.10 The Central Line runs between West Ruislip in the west and Epping in the north-east. While the Piccadilly Line runs between Heathrow and Uxbridge to the west and Cockfosters to the north. The Central Line runs 9 services per hour in each direction during the peak travel periods, while the Piccadilly Line runs 24 services in each direction during peak periods.

3.11 The site is also within suitable walking distance of Temple, Chancery Lane, Covent Garden and Leicester Square Underground Stations. These stations also provide convenient access to services on the Circle, District and Northern Lines.

Public Transport Accessibility Level (PTAL) Rating

3.12 Public Transport Accessibility Levels (PTALs) are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at a particular point.

3.13 The PTAL is categorised into six levels, 1 to 6 where 6 represents a high level of accessibility and 1 a low level of accessibility. The PTAL levels 1 and 6 are further subdivided into A and B levels, with level A indicating the location is rated towards the lower end of the PTAL category and B towards the higher end.

3.14 The site has a PTAL rating of 6B, demonstrating that it has an 'excellent' rating of accessibility to public transport. **Appendix B** includes a copy of TfL's PTAL Calculation for the site.

4 PLANNING POLICY

National Transport Policy

National Planning Policy Framework (NPPF)

4.1 The National Planning Policy Framework (NPPF) was published on 27th March 2012 and sets out the Government's planning policies for England and how these are expected to be applied.

4.2 Chapter 4, 'Promoting Sustainable Transport' states at Paragraph 29 that:

'Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.

Encouragement should be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. 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.'

4.3 Paragraph 32 continues by stating:

'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.'*

Regional Transport Policy

The London Plan (2015)

4.4 The Further Alterations to the London Plan (FALP) were adopted in March 2015. It is a requirement that local policies, as set out in Unitary Development Plans (UDPs) and emerging Local Development Frameworks (LDFs), should be in accordance with it. The transport aspects of the London Plan, relevant to the proposed development, are discussed in the following paragraphs.

4.5 Policy 6.1 Strategic Approach states that:

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

4.6 Policy 6.13 Parking states that:

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

4.7 The relevant London Plan cycle parking standards for the proposed development are summarised in **Table 4.1**.

Table 4.1 London Plan Cycle Parking Requirements

Land Use	Long Stay	Short stay
A3	From a threshold of 100sqm: 1 space per 175sqm	From a threshold of 100sqm: 1 space per 40sqm
B1	Inner/ central London: 1 space per 90sqm	First 5,000sqm: 1 space per 500sqm Thereafter: 1 space per 5,000sqm

Local Guidance

Camden Local Development Framework

4.8 LBC policy guidance is set out in the Core Strategy and Development Policies, both of which were adopted in November 2010 with policies DP16 through DP19 covering transport related issues.

4.9 Policy DP16 states that:

'The Council will seek to ensure that development is properly integrated with the transport network. We will resist development that fails to assess and address any need for the following:

- *Movements to, from and within the site;*
- *Links to existing transport networks;*
- *Additional transport capacity off-site (such as improved infrastructure and services) where existing or committed capacity cannot meet additional need generated by the development; and*
- *Safe pick-up, drop-off and waiting areas for taxis, private cars and coaches where this activity is likely to be associated with the development.'*

4.10 Policy DP17 encourages walking, cycling and the use of public transport in all new developments. Finally policies DP18 ('Parking standards and limiting the availability of car parking') and DP19 ('Managing the impact of parking') look to minimise the impact and amount of parking that comes forward as part of any new development.

Camden Transport Strategy

4.11 Camden's Transport Strategy was published in August 2011 as part of the Local Implementation Plan. It sets out the direction the Council are taking in relation to local transport and puts in place the associated objectives. The objectives relevant to the planning application site are as follows:

1. 'Reduce motor traffic levels and vehicle emissions to improve air quality, mitigate climate change and contribute to making Camden a low carbon and low waste borough.

2. Encourage healthy and sustainable travel choices by prioritising walking, cycling and public transport in Camden.

3. Develop and maintain high quality, accessible public streets and spaces and recognise that streets are about more than movement.'

Policy Summary

4.12 The main objective of all development is to promote sustainability, reduce reliance on the car and minimise impacts on road users. With zero parking this development in this highly accessible area meets these policy objectives. The proposed cycle parking facilities will contribute towards encouraging this travel mode. The development proposals are therefore considered to be in accordance with national, regional and local transport planning policy guidance.

5 DEVELOPMENT PROPOSAL

5.1 The planning application seeks approval to refurbish the ground floor retail facilities and 7 storeys of office floor space at Kingsway House and the construction of an 8th floor. The proposal includes provision of retail floor space at ground and lower ground floor providing two units comprising floor areas of 241sqm and 261sqm (NIA). With the additional floor, the proposal seeks to increase the office floor area from 1,721sqm to 2,269sqm (NIA).

5.2 The proposal includes provision of 48 cycle parking spaces and refuse and recycling storage at basement level. The cycle parking facilities are located in close proximity to cycle welfare facilities which will include lockers, as well as showers and changing facilities.

5.3 There will be no on-site car parking included as part of the proposals.

Access

5.4 A number of alterations are proposed for pedestrian access to Kingsway House. The existing access via Great Queen Street will be relocated eastward, while the access on the corner of Great Queen Street and Kingsway will be retained.

5.5 The two existing pedestrian access points via the Kingsway frontage will be removed, while the access on the corner of Kingsway and Parker Street will be retained. An existing access via Parker Street will be retained, while the proposals seek to provide an additional access, providing convenient access to the site's 'goods' lift for servicing activities and cycle users.

6 EFFECTS OF DEVELOPMENT PROPOSAL

6.1 This section of the report considers the effects of the proposal in terms of parking, trip generation and servicing/refuse collection. The Architect's Layout Plans are included at **Appendix C**.

Parking

6.2 The proposals will provide no on-site car parking. The site will be car free, which is in accordance with policy guidance. The development is located in an accessible location and thus travel to / from the site is available via sustainable modes, reducing the need for site users to travel by private vehicles.

Trip Generation

6.3 As previously noted, the site will retain its retail use while increasing the quantum of office floor area. As such the trip generation assessment will consider the office component only.

6.4 The Trip Rate Information Computer System (TRICS) database was used to select a number of surveys for developments with similar characteristics to the proposed development. This survey data provides trip rates per 100sqm and can be used to extrapolate how many person trips a development is likely to generate. A summary of the peak AM and PM periods is provided at **Table 6.1**. The rates have been applied to the existing and proposed B1 office floor area.

Table 6.1 Predicted Two-Way Office Person Trips based on TRICS Data			
Time Period	**Existing (1,721sqm)**	**Proposed (2,250sqm)**	**Difference**
AM Peak			
07:00 – 08:00	6 trips (0.34)	8 trips (0.34)	+2 trips
08:00 – 09:00	28 trips (1.65)	37 trips (1.65)	+9 trips
09:00 – 10:00	38 trips (2.22)	50 trips (2.22)	+12 trips
PM Peak			
16:00 – 17:00	22 trips (1.26)	28 trips (1.26)	+6 trips
17:00 – 18:00	35 trips (2.06)	46 trips (2.06)	+11 trips
18:00 – 19:00	19 trips (1.12)	25 trips (1.12)	+6 trips

Note: Trip rate per 100sqm shown in parentheses

6.5 The trip rate assessment results shown above highlight the peak AM and PM travel periods, namely 09:00 – 10:00 and 17:00-18:00. The results have been displayed in order to directly compare the existing and proposed trip rates, while providing a summary of the change in trip rate.

6.6 The trip rate assessment indicates a peak trip rate of 50 trips per hour, which includes an additional 12 trips compared to the existing situation, during the AM peak period. Considering the numerous public transport services available in the local area, the predicted trip rate will not result in a material impact on the local public transport network.

6.7 The full TRICS Output is included at **Appendix D**.

Servicing and Refuse Collection

6.8 The proposal includes a dedicated servicing access, located directly opposite a designated servicing area located on the northern side of Parker Street. This arrangement will reduce the dwell time required for servicing activities compared to the existing situation.

6.9 The increase in office floor space is predicted to generate 1-2 additional deliveries per day. This takes into account the site's central London location, and assumes a 'rule of thumb' of 0.2 deliveries per 100sqm, which the City of London, for example, use for the purpose of assessing B1 office delivery requirements..

6.10 Prior to refuse collection, refuse will be stored within the designated refuse store at basement level. Commercial waste collection services will continue to be utilised in order to remove both A3 and B1 waste materials. All waste collection activities will occur as per the existing situation, with the additional office waste generation to be consolidated with the existing quantum of office waste.

7 SUMMARY AND CONCLUSION

Summary

7.1 Caneparo Associates Limited is retained by GMS Estates Ltd (the 'Applicant') to provide traffic and transportation advice with regard to the proposed redevelopment of Kingsway House, Kingsway, in the London Borough of Camden.

7.2 The planning application seeks to refurbish the existing building, and, also the introduction of an additional floor. The quantum of office floor space will increase by 529sqm.

7.3 The proposal has been assessed taking into consideration policy and existing conditions and can be summarised as follows:

- The Site is accessible by modes other than the private car with 'excellent' provision for pedestrians, cyclists and public transport users in the surrounding area;
- The proposal will result in additional office trips on foot, by bicycle and by public transport albeit the potential increases are anticipated to be low and as such will not result in any noticeable changes in levels of service;
- The proposal includes provision of cycle parking and welfare facilities for cyclists at basement floor level, while a new dedicated servicing access and lift will be provided with access via Parker Street; and,
- The proposal will provide no on-site vehicle parking, which is in accordance with national, regional and local planning policy which promotes sustainable travel.

Conclusion

7.4 In conclusion, it is considered that the development proposal is appropriate for the location, will have no material impact on the local transport network, and is in accordance with relevant national, regional and local policy guidance.

Figures

TITLE:

Site Location Plan

PROJECT:

Kingsway House

CLIENT:

GMS Estates Ltd.

CANEPARO ASSOCIATES

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DRAWN:	CHECKED:	DATE:	SCALE:	DRAWING REFERENCE:	REVISION:
L.D	P.C	17.05.2016	NTS	Figure 1	1

Appendix A

Bus ‘Spider’ Map

Day buses from Holborn

Route finder

Bus route	Towards	Bus stops
1	Canada Water	E M
	Tottenham Court Road	P S
8	Bow Church	E H
	Tottenham Court Road	K R
9	Battersea Bridge	A B C
	Finsbury Park	E F G
25 24hr Daily	Ilford	E H
	Oxford Circus	K R
38	Clapton	E F G
	Victoria	A B C
55	Leyton	E F G
	Oxford Circus	A B C
59	King's Cross	N Y
	Streatham Hill	M X
68	Euston	N Y
	West Norwood	M X
91	Crouch End	N Y
	Trafalgar Square	M X
98	Willesden	W
168	Hampstead Heath	N Y
	Old Kent Road	M X
171	Bellingham	E M
188 24hr Daily	North Greenwich	M X
	Russell Square	N Y
242 24hr Daily	Homerton Hospital	E H
	Tottenham Court Road	K O S
243 24hr Daily	Waterloo	A M
	Wood Green	G P
521	London Bridge ■	H P
	Waterloo ■	K M
X68	Russell Square ▼	N Y
	West Croydon ◆	M X

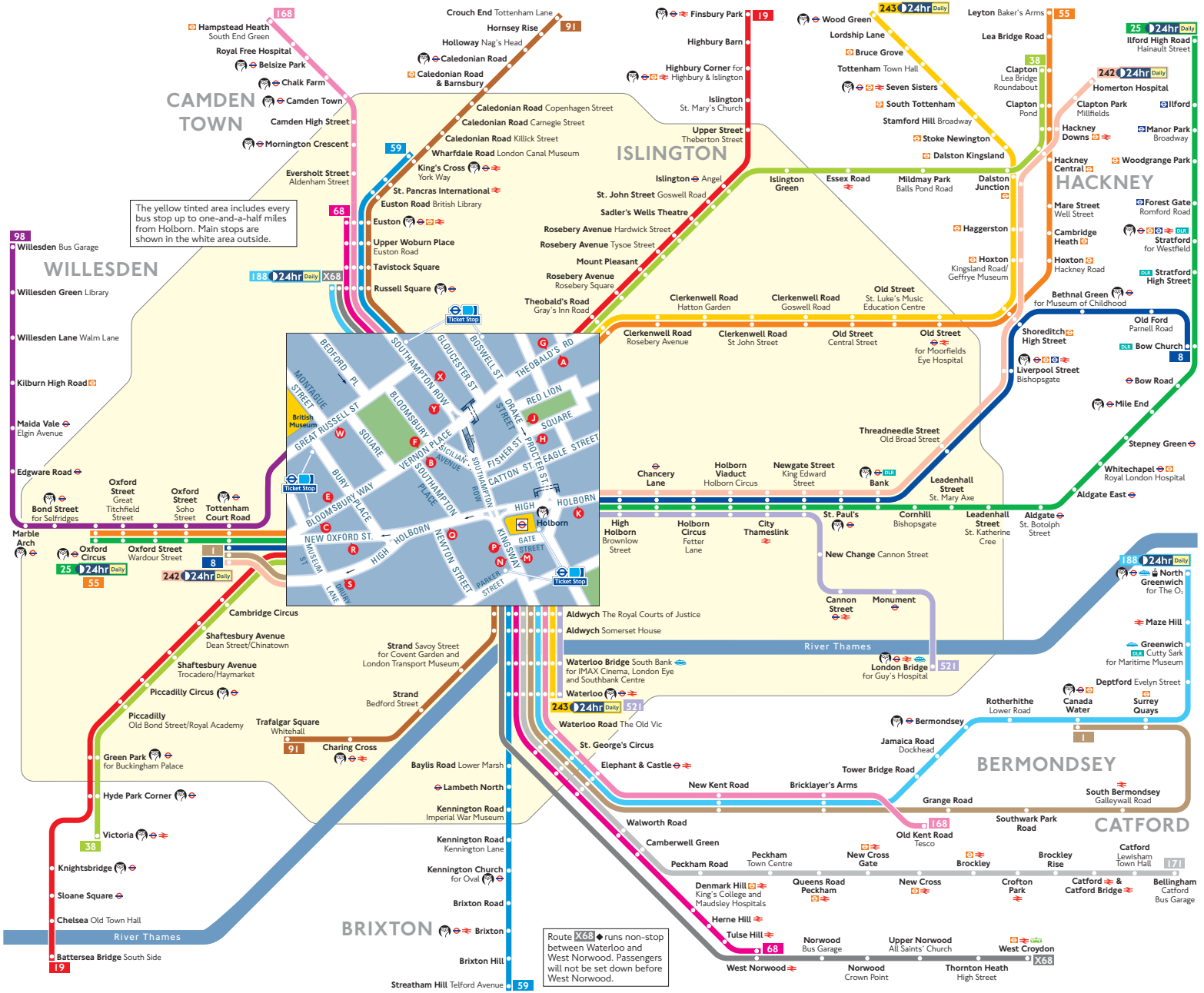
For night bus information, please see separate poster

Key

	Connections with London Underground
	Connections with London Overground
	Connections with TfL Rail
	Connections with National Rail
	Connections with Tramlink
	Connections with river boats
DLR	Connections with Docklands Light Railway
	Connections with Emirates Air Line
◆	Limited stops, Mondays to Fridays afternoon peak hours only
▼	Mondays to Fridays morning peak hours only
■	Mondays to Fridays
	Tube station with 24-hour service Friday and Saturday nights when Night Tube services operate

Ways to pay

	Use your contactless debit or credit card. It's the same fare as Oyster and there is no need to top up.
Ticket Stop	Top up your Oyster pay as you go credit or buy Travelcards and bus & tram passes at around 4,000 shops across London.
	Sign up for an online account to top up online and see your travel history and spending

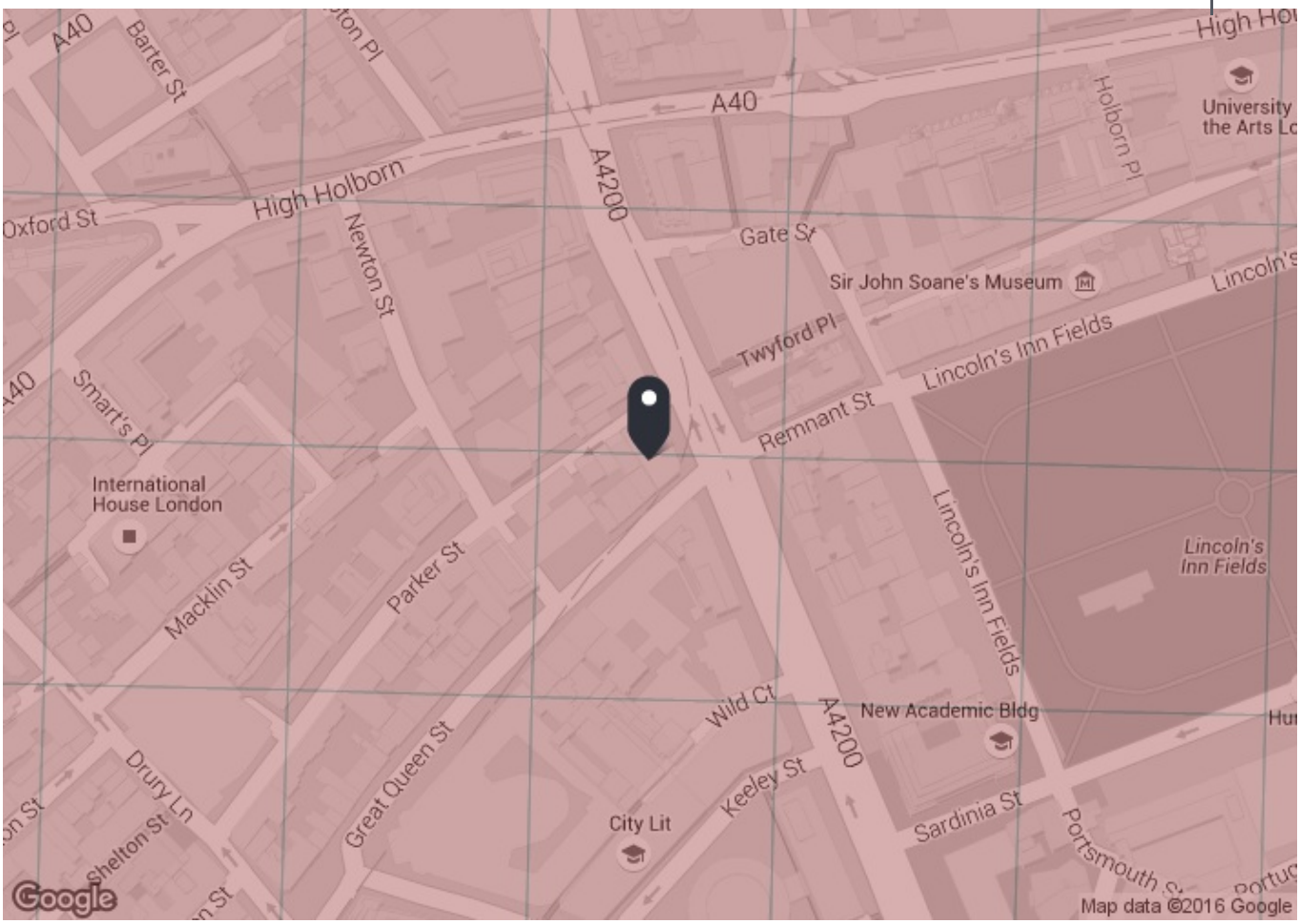


Information correct from 12 September 2015
 TFL30371.08.15 (F)

Appendix B

TfL's PTAL Calculation

TRANSPORT FOR LONDON



PTAL output for 2011 (Base year)

6b

Kingsway House, London WC2B, UK

Easting: 530542, Northing: 181391

Grid Cell: 84834

Report generated: 16/05/2016

Map key - PTAL

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

Map layers

PTAL (cell size: 100m)

Calculation Parameters

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

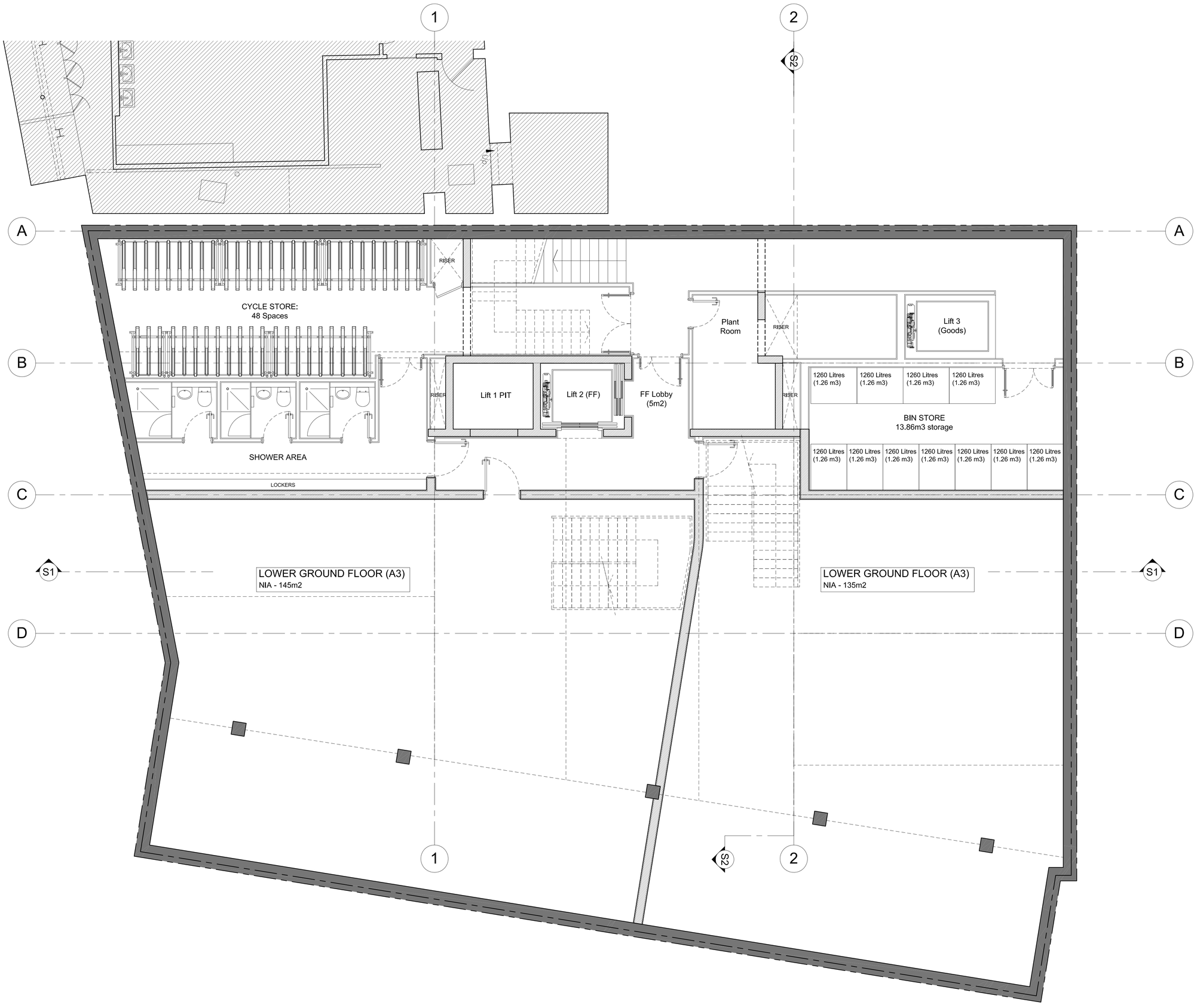
Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	ALDWYCH WEST ARM	11	507.2	7.5	6.34	6	12.34	2.43	0.5	1.22
Bus	ALDWYCH WEST ARM	23	507.2	8	6.34	5.75	12.09	2.48	0.5	1.24
Bus	ALDWYCH WEST ARM	9	507.2	12	6.34	4.5	10.84	2.77	0.5	1.38
Bus	ALDWYCH WEST ARM	26	507.2	7.5	6.34	6	12.34	2.43	0.5	1.22
Bus	ALDWYCH WEST ARM	13	507.2	8	6.34	5.75	12.09	2.48	0.5	1.24
Bus	ALDWYCH WEST ARM	4	507.2	6	6.34	7	13.34	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	15	507.2	7.5	6.34	6	12.34	2.43	0.5	1.22
Bus	ALDWYCH WEST ARM	341	507.2	6	6.34	7	13.34	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	76	507.2	7.5	6.34	6	12.34	2.43	0.5	1.22
Bus	ALDWYCH WEST ARM	87	507.2	10	6.34	5	11.34	2.65	0.5	1.32
Bus	ALDWYCH WEST ARM	172	507.2	6	6.34	7	13.34	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	RV1	507.2	6	6.34	7	13.34	2.25	0.5	1.12
Bus	ALDWYCH WEST ARM	6	507.2	10	6.34	5	11.34	2.65	0.5	1.32
Bus	HOLBORN STATION KINGSWAY	59	124.88	10	1.56	5	6.56	4.57	0.5	2.29
Bus	HOLBORN STATION KINGSWAY	243	124.88	11	1.56	4.73	6.29	4.77	0.5	2.39
Bus	HOLBORN STATION KINGSWAY	521	124.88	27	1.56	3.11	4.67	6.42	1	6.42
Bus	HOLBORN STATION KINGSWAY	91	124.88	9	1.56	5.33	6.89	4.35	0.5	2.18
Bus	HOLBORN STATION KINGSWAY	1	124.88	8	1.56	5.75	7.31	4.1	0.5	2.05
Bus	HOLBORN STATION KINGSWAY	68	124.88	9	1.56	5.33	6.89	4.35	0.5	2.18
Bus	HOLBORN STATION KINGSWAY	X68	124.88	4	1.56	9.5	11.06	2.71	0.5	1.36
Bus	HOLBORN STATION KINGSWAY	188	124.88	8	1.56	5.75	7.31	4.1	0.5	2.05
Bus	HOLBORN STATION KINGSWAY	171	124.88	7.75	1.56	5.87	7.43	4.04	0.5	2.02
Bus	HOLBORN STATION KINGSWAY	168	124.88	9	1.56	5.33	6.89	4.35	0.5	2.18
Bus	BLOOMSBURY SQUARE	38	424.67	10	5.31	5	10.31	2.91	0.5	1.46
Bus	BLOOMSBURY SQUARE	19	424.67	8	5.31	5.75	11.06	2.71	0.5	1.36
Bus	BLOOMSBURY SQUARE	55	424.67	10	5.31	5	10.31	2.91	0.5	1.46
Bus	HIGH HOLBORN NEWTON ST	8	292.83	10	3.66	5	8.66	3.46	0.5	1.73
Bus	HIGH HOLBORN NEWTON ST	242	292.83	6.5	3.66	6.62	10.28	2.92	0.5	1.46
Bus	HIGH HOLBORN NEWTON ST	25	292.83	8	3.66	5.75	9.41	3.19	0.5	1.59
Bus	BLOOMSBURY ST SHAFTESBURY AVE	24	627.56	10	7.84	5	12.84	2.34	0.5	1.17
Bus	BLOOMSBURY ST SHAFTESBURY AVE	134	627.56	12	7.84	4.5	12.34	2.43	0.5	1.22
Bus	BLOOMSBURY ST SHAFTESBURY AVE	29	627.56	15	7.84	4	11.84	2.53	0.5	1.27
Bus	BLOOMSBURY ST SHAFTESBURY AVE	176	627.56	8.5	7.84	5.53	13.37	2.24	0.5	1.12
Bus	BLOOMSBURY ST SHAFTESBURY AVE	14	627.56	13	7.84	4.31	12.15	2.47	0.5	1.23
Bus	BRITISH MUSEUM	98	573.09	9	7.16	5.33	12.5	2.4	0.5	1.2
LUL	Leicester Square	'Morden-Edgware'	820.15	4.67	10.25	7.17	17.43	1.72	0.5	0.86
LUL	Leicester Square	'HighBarnet-Morden'	820.15	0.33	10.25	91.66	101.91	0.29	0.5	0.15
LUL	Leicester Square	'Kennington-Edgware'	820.15	14.67	10.25	2.79	13.05	2.3	0.5	1.15
LUL	Leicester Square	'HighBarnet-Kenningt'	820.15	5.33	10.25	6.38	16.63	1.8	0.5	0.9
LUL	Leicester Square	'MillHill-Morden'	820.15	1.67	10.25	18.71	28.97	1.04	0.5	0.52
LUL	Leicester Square	'MillHillE-Kenningt'	820.15	1.67	10.25	18.71	28.97	1.04	0.5	0.52
LUL	Covent Garden	'ArnosGrove-Uxbridge'	468.01	1	5.85	30.75	36.6	0.82	0.5	0.41
LUL	Temple	'Edgware-Hammersmith'	890.78	6	11.13	5.75	16.88	1.78	0.5	0.89
LUL	Temple	'Upminster-EalingBwy'	890.78	5	11.13	6.75	17.88	1.68	0.5	0.84
LUL	Temple	'TowerHill-EalingBwy'	890.78	0.33	11.13	91.66	102.79	0.29	0.5	0.15
LUL	Temple	'EalingBwy-Barking'	890.78	1.33	11.13	23.31	34.44	0.87	0.5	0.44
LUL	Temple	'Upminster-Richmond'	890.78	6	11.13	5.75	16.88	1.78	0.5	0.89
LUL	Temple	'Richmond-DagEast'	890.78	0.67	11.13	45.53	56.66	0.53	0.5	0.26
LUL	Temple	'Wimbledon-Upminster'	890.78	4	11.13	8.25	19.38	1.55	0.5	0.77
LUL	Temple	'Wimbledon-DagEast'	890.78	1	11.13	30.75	41.88	0.72	0.5	0.36
LUL	Temple	'Barking-Wimbledon'	890.78	0.67	11.13	45.53	56.66	0.53	0.5	0.26
LUL	Temple	'TowerHill-Wimbledon'	890.78	2.67	11.13	11.99	23.12	1.3	0.5	0.65
LUL	Temple	'DagEast-EalingBwy'	890.78	0.67	11.13	45.53	56.66	0.53	0.5	0.26
LUL	Chancery Lane	'WhiteCity-Loughton'	766.48	0.33	9.58	91.66	101.24	0.3	0.5	0.15
LUL	Holborn	'Epping-Ealing'	168.35	3	2.1	10.75	12.85	2.33	0.5	1.17
LUL	Holborn	'Epping-Wruislip'	168.35	3	2.1	10.75	12.85	2.33	0.5	1.17
LUL	Holborn	'RuislipGar-Epping'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'WhiteCity-Epping'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
LUL	Holborn	'Epping-NActon'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'Northolt-Epping'	168.35	0.67	2.1	45.53	47.63	0.63	0.5	0.31
LUL	Holborn	'Debden-WRuislip'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'WhiteCity-Debden'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'Debden-Northolt'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'RuislipGdns-Debden'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'Loughton-WRuislip'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'NActon-Loughton'	168.35	0.67	2.1	45.53	47.63	0.63	0.5	0.31
LUL	Holborn	'RuislipGdns-Loughton'	168.35	0.67	2.1	45.53	47.63	0.63	0.5	0.31
LUL	Holborn	'Loughton-Northolt'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'Ealing-Loughton'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'Ealing-NewburyPark'	168.35	0.67	2.1	45.53	47.63	0.63	0.5	0.31
LUL	Holborn	'WRuislip-NewburyPark'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'NActon-NewburyPark'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'Ealing-Hainault'	168.35	5	2.1	6.75	8.85	3.39	0.5	1.69
LUL	Holborn	'Hainault-Nacton'	168.35	1.33	2.1	23.31	25.41	1.18	0.5	0.59
LUL	Holborn	'Hainault-WRuislip'	168.35	3.33	2.1	9.76	11.86	2.53	0.5	1.26
LUL	Holborn	'RuislipGdns-NP-Hain'	168.35	0.67	2.1	45.53	47.63	0.63	0.5	0.31
LUL	Holborn	'Hainault-WhiteCity'	168.35	1.67	2.1	18.71	20.82	1.44	0.5	0.72
LUL	Holborn	'Hainault-NP-Northolt'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'GrangeHill-WD-Eal'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'GrangeHill-Wdfd-Whit'	168.35	0.67	2.1	45.53	47.63	0.63	0.5	0.31
LUL	Holborn	'GrangeHill-Wdfd-WRsp'	168.35	0.67	2.1	45.53	47.63	0.63	0.5	0.31
LUL	Holborn	'Cockfosters-LHRT4LT'	168.35	4.67	2.1	7.17	9.28	3.23	0.5	1.62
LUL	Holborn	'RayLane-Cockfosters'	168.35	3.67	2.1	8.92	11.03	2.72	0.5	1.36
LUL	Holborn	'LHRT4LT-ArnosGrove'	168.35	4.67	2.1	7.17	9.28	3.23	0.5	1.62
LUL	Holborn	'ArnosGrove-RayLane'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'ArnosGrove-Nthfields'	168.35	3	2.1	10.75	12.85	2.33	0.5	1.17
LUL	Holborn	'Oakwood-RayLane'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'Nthfields-Cockfoster'	168.35	1	2.1	30.75	32.85	0.91	0.5	0.46
LUL	Holborn	'LHRT5-Cockfosters'	168.35	6	2.1	5.75	7.85	3.82	1	3.82
LUL	Holborn	'Uxbridge-Cockfosters'	168.35	3.67	2.1	8.92	11.03	2.72	0.5	1.36
LUL	Holborn	'Ruislip-Cockfosters'	168.35	2.33	2.1	13.63	15.73	1.91	0.5	0.95
LUL	Holborn	'Oakwood-Uxbridge'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
LUL	Holborn	'Oakwood-Ruislip'	168.35	0.33	2.1	91.66	93.76	0.32	0.5	0.16
									Total Grid Cell AI:	**93.77**

Appendix C

Architect's Layout Plans



NOTES:

- Drawing based upon the formal survey information issue by Greenhatch dated November 2014
- Information to read in conjunction with Structural Engineer and MEP Engineer package information
- All levels indicated as height above Ordinance Survey
- Datum taken from survey. To be confirmed.
- All dimensions subject to a tolerance of +/-5mm.
- All details are indicative and should be reviewed against contractors selected supplier / manufacturer / system. Any variations are to be advised to and approved by the Contract Administrator prior to commencement on site.
- Refer to CDM Risk Schedule 1415-0000-CDM-001
- Refer to Design Risk Schedule 1415-0000-DRS-001

N

0 0.5m 1m 2.5m 5m

DATE	REVISIONS	
09.03.2016	P05	DRAWING UPDATE
12.06.2015	P04	DRAWING UPDATE
17.03.2015	P03	CLIENT ISSUE
27.02.2015	P02	FOR INFORMATION
06.02.2015	P01	FOR INFORMATION

EMRYS
CAP House | 9-12 Long Lane | London | EC1A 9HA
mail@emrysarchitects.com
www.emrysarchitects.com T : 020 7726 5060

JOB NO. 1415 | CLIENT GMS ESTATES LTD

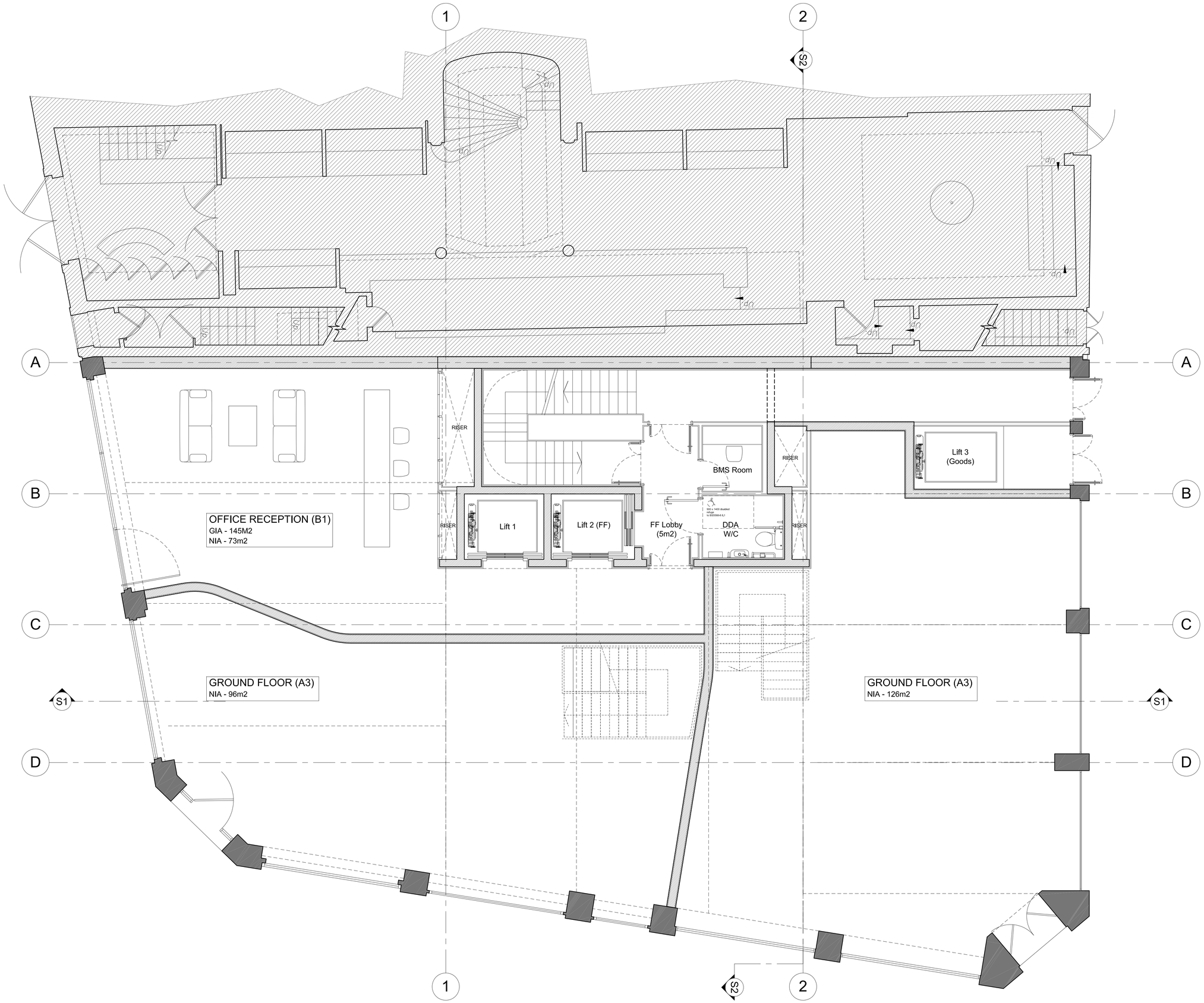
TITLE KINGSWAY HOUSE
LONDON, WC2B 6QX

DWG PRPOSED PLANS
LOWER GROUND FLOOR

DRAWN GWJ | DATE 06.02.2015 | SCALE @ A1 1/50

CHECKED GE | STATUS PRELIM | REV P05

DWG NO. 1415-0200-AL-001



NOTES:

- Drawing based upon the formal survey information issue by Greenhatch dated November 2014
- Information to read in conjunction with Structural Engineer and MEP Engineer package information
- All levels indicated as height above Ordinance Survey
- Datum taken from survey. To be confirmed.
- All dimensions subject to a tolerance of +/-5mm.
- All details are indicative and should be reviewed against contractors selected supplier / manufacturer / system. Any variations are to be advised to and approved by the Contract Administrator prior to commencement on site.
- Refer to CDM Risk Schedule 1415-0000-CDM-001
- Refer to Design Risk Schedule 1415-0000-DRS-001

N

0 0.5m 1m 2.5m 5m

DATE	REVISIONS	
09.03.2016	P05	DRAWING UPDATE
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27.02.2015	P02	FOR INFORMATION
06.02.2015	P01	FOR INFORMATION

EMRYS
CAP House | 9-12 Long Lane | London | EC1A 9HA
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JOB NO.	1415	CLIENT	GMS ESTATES LTD
TITLE	KINGSWAY HOUSE LONDON, WC2B 6QX		
DWG	PRPOSED PLANS GROUND FLOOR		
DRAWN	GWJ	DATE	06.02.2015
SCALE @ A1	1/50		
CHECKED	GE	STATUS	PRELIM
REV	P05		
DWG NO.	1415-0200-AL-002		

Appendix D

TRICS Output

LIST OF SITES relevant to selection parameters

1	**CI-02-A-02**	**OFFICES**		**CITY OF LONDON**
	GRACECHURCH STREET			
	MONUMENT			
	CITY OF LONDON			
	Town Centre			
	Commercial Zone			
	Total Gross floor area:		9803 sqm	
	Survey date: FRIDAY		*29/11/13*	*Survey Type: MANUAL*
2	**CN-02-A-01**	**OFFICES**		**CAMDEN**
	ELY PLACE			
	HOLBORN CIRCUS			
	HOLBORN			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:		4062 sqm	
	Survey date: THURSDAY		*23/10/08*	*Survey Type: MANUAL*
3	**CN-02-A-02**	**OFFICES**		**CAMDEN**
	GRAYS INN ROAD			
	CLERKENWELL			
	Town Centre			
	Built-Up Zone			
	Total Gross floor area:		6056 sqm	
	Survey date: WEDNESDAY		*22/10/08*	*Survey Type: MANUAL*
4	**IS-02-A-01**	**OFFICES**		**ISLINGTON**
	ESSEX ROAD			
	ISLINGTON			
	Suburban Area (PPS6 Out of Centre)			
	Built-Up Zone			
	Total Gross floor area:		5500 sqm	
	Survey date: FRIDAY		*24/10/08*	*Survey Type: MANUAL*
5	**SK-02-A-01**	**GLA HQ**		**SOUTHWARK**
	THE QUEENS WALK			
	SOUTHWARK			
	Town Centre			
	Commercial Zone			
	Total Gross floor area:		17187 sqm	
	Survey date: TUESDAY		*21/10/08*	*Survey Type: MANUAL*
6	**SK-02-A-02**	**OFFICES**		**SOUTHWARK**
	ST OLAV'S COURT			
	ROTHERHITHE			
	Edge of Town Centre			
	Commercial Zone			
	Total Gross floor area:		2371 sqm	
	Survey date: MONDAY		*20/10/08*	*Survey Type: MANUAL*

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BT-02-A-02	Council housing office open to public
HD-02-A-07	Data centre, shift patterns, low density of employment

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	6	7497	0.011	6	7497	0.004	6	7497	0.015
07:30 - 08:00	6	7497	0.020	6	7497	0.002	6	7497	0.022
08:00 - 08:30	6	7497	0.082	6	7497	0.004	6	7497	0.086
08:30 - 09:00	6	7497	0.107	6	7497	0.004	6	7497	0.111
09:00 - 09:30	**6**	**7497**	**0.136**	6	7497	0.000	6	7497	0.136
09:30 - 10:00	6	7497	0.089	6	7497	0.011	6	7497	0.100
10:00 - 10:30	6	7497	0.051	6	7497	0.011	6	7497	0.062
10:30 - 11:00	6	7497	0.022	6	7497	0.007	6	7497	0.029
11:00 - 11:30	6	7497	0.022	6	7497	0.033	6	7497	0.055
11:30 - 12:00	6	7497	0.029	6	7497	0.036	6	7497	0.065
12:00 - 12:30	6	7497	0.062	6	7497	0.018	6	7497	0.080
12:30 - 13:00	6	7497	0.018	6	7497	0.038	6	7497	0.056
13:00 - 13:30	6	7497	0.047	6	7497	0.024	6	7497	0.071
13:30 - 14:00	6	7497	0.020	6	7497	0.009	6	7497	0.029
14:00 - 14:30	6	7497	0.029	6	7497	0.013	6	7497	0.042
14:30 - 15:00	6	7497	0.033	6	7497	0.040	6	7497	0.073
15:00 - 15:30	6	7497	0.031	6	7497	0.047	6	7497	0.078
15:30 - 16:00	6	7497	0.016	6	7497	0.062	6	7497	0.078
16:00 - 16:30	6	7497	0.013	6	7497	0.084	6	7497	0.097
16:30 - 17:00	6	7497	0.004	6	7497	0.031	6	7497	0.035
17:00 - 17:30	6	7497	0.007	**6**	**7497**	**0.133**	**6**	**7497**	**0.140**
17:30 - 18:00	6	7497	0.007	6	7497	0.125	6	7497	0.132
18:00 - 18:30	6	7497	0.000	6	7497	0.071	6	7497	0.071
18:30 - 19:00	6	7497	0.002	6	7497	0.020	6	7497	0.022
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:			0.858			0.827			1.685

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:	2371 - 17187 (units: sqm)
Survey date date range:	01/01/07 - 19/05/15
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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.