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EUSTON CIRCUS

PROPOSED RETENTION OF DIGITAL LED
ILLUMINATED ADVERTISING PANELS
AT EUSTON ROAD UNDERPASS

PUBLIC SAFETY REPORT

GDB/4498/PSR.2

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1.0 INTRODUCTION

- 1.1 This report deals with the public safety aspects of the proposal to renew consent for the existing digital LED advertising panels on the east and west facing fascias to the bridge deck carrying the ground level road network over the A501 Euston Road underpass at Euston Circus.
- 1.2 The existing panels were commissioned on 10th October 2010. The original consent was granted following a detailed examination of the public safety aspects, which included a Public Safety report prepared by Bellamy Roberts, and detailed consideration by TfL Network Management and Safety Audit officers. Then current traffic flow and injury accident data was included in the examination, together with site visits.
- 1.3 This current report examines the visibility of these advertising panels, and their location in relation to highway safety related street furniture, in the context of the latest traffic and injury accident data supplied by TfL.

2.0 LOCATION

- 2.1 As described above, the proposal is to retain the existing LED digital advertising panels on the fascias and parapet fences facing east and west on the bridge carrying the ground level road network over the A501 Euston Road underpass at Euston Circus. These advertising panels face east and west respectively towards drivers travelling through the underpass on the Euston Road main line. The location is shown on the plan at **Appendix 1**.
- 2.2 By virtue of their location and directional orientation, the advertisement panels are not properly visible to drivers from the ground level highway network around Euston Circus itself, and there is no clear visibility from the eastbound off-slip from Euston Road due to the parapet fencing between the slip-road and Euston Road itself. The top rail of the parapet fence significantly obstructs that visibility so that only one top corner of the display is visible from parts of the

slip road, which is further affected by the oblique views through the closely spaced wire mesh infill on the parapet fence.

- 2.3 There is no westbound off-slip towards the east facing advertising panel, as that section of Euston Road is one-way eastbound away from Euston Circus towards Gower Street.
- 2.4 A501 Euston Road underpass is a two-lane dual carriageway which drops down beneath the existing ground level junction at Euston Circus. All turning movements are possible between Euston Road and Tottenham Court Road/Hampstead Road (classified A400), albeit the westbound off-route from Euston Road is taken southwards into Gower Street as part of a one-way traffic circulation system, immediately before Euston Road commences the dip down through the underpass.
- 2.5 The ground level junction is a complex layout controlled by traffic signals with extensive pedestrian facilities. Warren Street tube station is close to this junction on its south side, and generates high levels of pedestrian activity in the vicinity.
- 2.6 All of the roads in this area are well lit and are subject to 30mph speed restrictions.
- 2.7 The advertising panels are of limited size and cover the bridge deck fascia and the parapet fencing above it. They are set back from the sides of the underpass, following comment from TfL's safety auditors during design development. Combined with the vertical and horizontal alignment of the underpass, these advertising panels do not form a backdrop to any traffic signals or other traffic signs facing drivers travelling in either direction along Euston Road.

3.0 TRAFFIC AND ACCIDENT DATA

Traffic Flow

- 3.1 The proposed advertising panels will be clearly visible only to traffic using the A501 Euston Road main line. This is a very heavily trafficked route. DfT traffic flow data for the underpass is included as **Appendix 2** and shows the high volumes of daily traffic. However, it also demonstrates the dramatic reduction in flows between 2009 and 2013, as shown in Table 1 below.

Table 1 - A501 Euston Road AADF Flows

Year	AADF Total Motor Vehicles
2008	70,486
2009	81,793
2010	64,279
2011	46,325
2012	47,457
2013	59,460

- 3.2 Traffic flows now are therefore considerably lower than they were in 2009/10 when the original application for these advertising panels was being considered.

Traffic Speeds

- 3.3 TfL data was available for the whole of November 2009 at the time of the original application. Table 2 summarises the key figures for a typical day (Wednesday 11th November).

**Table 2 - Wednesday 11th November
Traffic Speeds (mph)**

Location	85 th Percentile		Mean	
	12-hour	24-hour	12-hour	24-hour
Site 2 westbound	19.9	20.2	15.3	16.1
Site 4 westbound	20.8	22.8	15.4	16.8
Site 9 eastbound	35.5	36.2	29.0	30.3
Site 13 eastbound	30.5	34.5	19.4	24.0

3.4 There are consistent patterns to be observed. The 24-hour figures are a little higher than the 12-hour figures, but not markedly so, confirming that this route is heavily trafficked at all times. In addition, the eastbound speeds are higher than the westbound. This probably reflects the degree of traffic congestion downstream in each direction, which tails back and reduces speeds through the underpass. However, the precise location of the survey points relative to other junctions etc. would also affect these values so no clear conclusions can be drawn in that respect.

3.5 Overall, speeds are moderate considering the high standard of this section of road, and that reflects the heavy flows.

Accidents

3.6 TfL have provided personal injury accident data for the Euston Circus area, extending over a 46 month period ending December 2013. A plot of the recorded accidents and the related data is included at **Appendix 3**.

3.7 All of these accidents occurred at the ground level junctions where pedestrians and turning movements create large numbers of potential conflicts. None of those accidents were in locations where the advertisement panels would be visible to drivers.

3.8 Since the existing panels were commissioned on 10th October 2010, there have been 11 accidents, all at the ground level junctions. Between the beginning of January 2012 and the end of December 2013 (i.e. 2 yrs) there were only 3 accidents.

3.9 The accident location plan at **Appendix 3** shows that 3 of the 11 accidents since the existing displays were commissioned, have occurred on the left turn movement from the eastbound slip road (accidents 3, 6 and 8). However, these accidents are all at a point where the driver is physically turning left and therefore looking left – away from the display panels on the west-facing fascia of the underpass. Combined with the absence of any accidents involving vehicles proceeding straight ahead from the slip road at that point, it is very

unlikely that the substantially obstructed view of the advertising display available from that slip road (see para. 2.2) contributed to any of these accidents.

- 3.10 Given the high levels of traffic using the underpass, and the congested nature of that traffic for long periods of the day, the figures indicate a good safety record for this section of road.

4.0 ANALYSIS

- 4.1 The proposed advertising panels are clearly visible to drivers for a distance of approximately 200m in the eastbound direction, and some 150m in the westbound direction (the forward visibility from this direction is affected by a twist in the horizontal alignment of Euston Road at the Gower Street junction). At the median average speeds set out in Table 2 above, these panels are, therefore, in view for approximately 15 seconds (eastbound) – 20 seconds (westbound). That is a relatively long time during which drivers are able to take-in any message from the advertising.
- 4.2 They are located directly in the drivers' line of sight when first viewed and then gradually move up the windscreen as the vehicle drops down into the underpass. There is no need, therefore, for drivers to look away from the road ahead to take in the display.
- 4.3 Drivers normally view these advertising panels by means of a series of quick glances taken as part of their visual scan of road conditions ahead. The nature of this type of advertising is such that there is no need for a driver to fixate on the advertisement in order to read a large amount of detail. In this case, the extent of the deflection required of the driver's view is less than that required to glance into the car to check the instruments. In addition, no change in focal length is required, whereas it is in the case of reading the vehicle instruments.
- 4.4 The arrangement of the west-facing panel has deliberately been reduced in width and height to ensure that the display does not sit alongside the offside

primary traffic signal facing eastbound traffic on the off-slip. It also allows for intervisibility between drivers and pedestrians at this controlled crossing point.

- 4.5 The eastbound underpass entry is a relatively easy stretch of road for drivers to negotiate with no pedestrian activity or turning movements (because left-turning traffic off the main line is allocated a separate lane some distance before the underpass), and a straight approach. The westbound approach is similar, except for the slight deflection of the main line to the north at the Gower Street junction, immediately before the road drops down into the underpass. This deflection prevents a clear view of the proposed display panel site until drivers have negotiated the curve.
- 4.6 Advice with regard to public safety and advertisements is set out in the Planning Practice Guidance document.
- 4.7 The PPG describes the locations where advertisements are more likely to affect public safety on the roads in the following terms:

All advertisements are intended to attract attention but proposed advertisements at points where drivers need to take more care are more likely to affect public safety. For example, at junctions, roundabouts, pedestrian crossings, on the approach to a low bridge or level crossing or other places where local conditions present traffic hazards. There are less likely to be road safety problems if the advertisement is on a site within a commercial or industrial locality, if it is a shop fascia sign, name-board, trade or business sign, or a normal poster panel, and if the advertisement is not on the skyline.

- 4.8 The PPG then goes on to set out the main types of advertisement which may cause danger to road users and these are as follows:

The main types of advertisement which may cause danger to road users are:

- (a) those which obstruct or impair sight-lines at corners, bends or at a junction, or at any point of access to a highway;*

(b) those which, because of their size or siting, would obstruct or confuse a road-user's view, or reduce the clarity or effectiveness of a traffic sign or signal, or would be likely to distract road-users because of their unusual nature;

(c) those which effectively leave insufficient clearance above any part of a highway, or insufficient lateral clearance for vehicles on the carriageway (due allowance being made for the camber of the road-surface);

(d) those externally or internally illuminated signs (incorporating either flashing or static lights) including those utilising light emitting diode technology:

i. where the means of illumination is directly visible from any part of the road;

ii. which, because of their colour, could be mistaken for, or confused with, traffic lights or any other authorised signals;

iii. which, because of their size or brightness, could result in glare and dazzle, or distract road-users, particularly in misty or wet weather; or

iv. which are subject to frequent changes of the display;

(e) those which incorporate moving or apparently moving elements in their display, or successive individual advertisements which do not display the whole message;

(f) those requiring close study (such as Public Information Panels), which are situated so that people looking at them would be insufficiently protected from passing vehicles; or those advertisements sited on narrow

footpaths where they may interfere with safe passage by causing pedestrians to step into the road;

(g) those which resemble traffic signs, as defined in section 64 of the Road Traffic Regulation Act 1984.

(h) those which embody directional or other traffic elements and which need special scrutiny because of possible resemblance to, or confusion with, traffic signs.

- 4.9 As described in the preceding sections of this report, the advertising panels do not obstruct or impair sightlines, they do not otherwise obstruct or confuse a road-user's view or affect the clarity or effectiveness of any traffic sign or traffic signal. There are no issues with regard to clearance to any part of the highway and there are no issues regarding conflict of illumination.
- 4.10 The existing displays are subject to conditions which control the brightness of the display so as to avoid glare and dazzle, and there are conditions which prevent any animation or moving images within the display, including any link to the next display. The frequency of change shall not be more than once every 10 seconds.
- 4.11 The only, potential, issue is therefore whether or not the displays would be likely to distract road users because of their unusual nature (reference para 068(b)) of the PPG.
- 4.12 In this case, the location is such that the size of the advertisement is limited by the bridge structure and is also 'naturally' contained by the structures around it. It is also directly in a driver's line of sight on the immediate approach from either direction.
- 4.13 There is nothing about the siting of the signs, therefore, which makes them either confusing or abnormally distracting, and subject to appropriate Conditions regarding the display, there is no reason why they should be exceptionally distracting by virtue of their nature. There is no evidence that

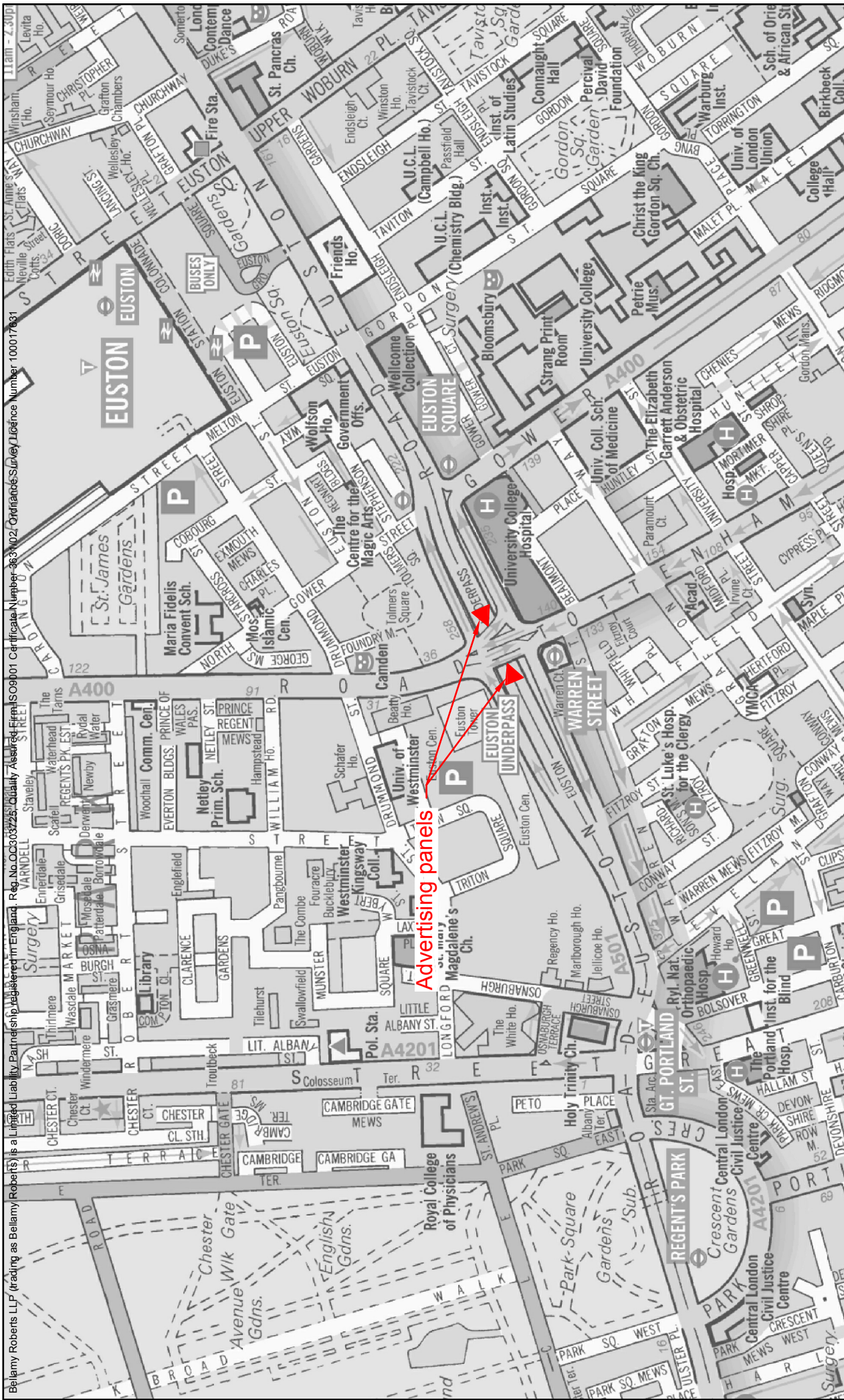
this has been an issue with the existing displays, and the absence of accidents in the vicinity of those displays confirms that the advertising panels meet the requirements of the advice set out in the PPG in respect of not causing danger to road users.

5.0 CONCLUSIONS

- 5.1 The existing advertising display panels have been in place for 3½ years and it is evident from the absence of accidents during that time that they do not constitute a hazard to drivers. It can be seen on-site that they do not conflict with any traffic signs or signals. The displays therefore satisfy the requirements of the advice set-out in the PPG in respect of public safety.


APPENDICES

APPENDIX 1



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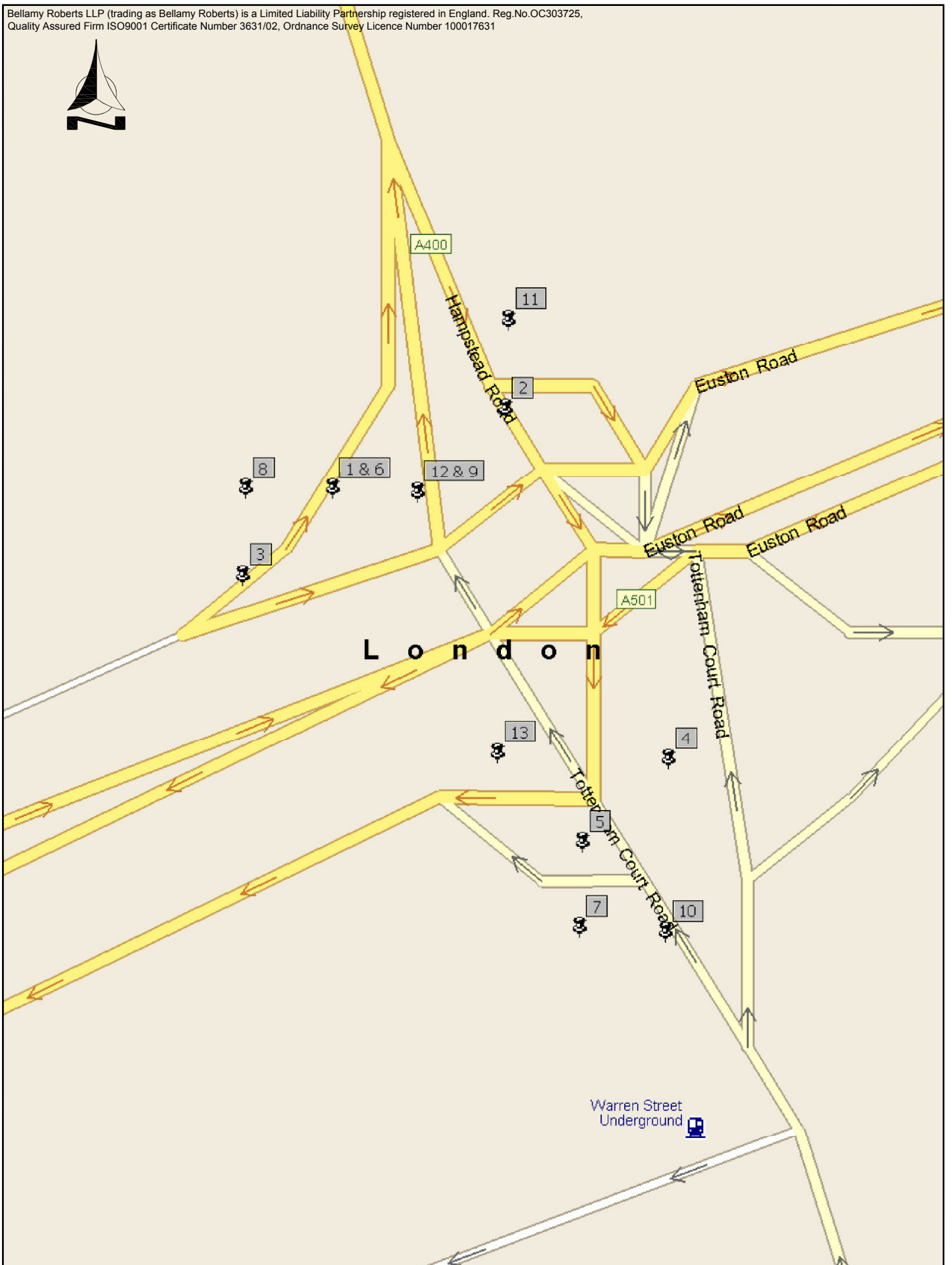
Advertising panels

<p>PROJECT Euston Circus-Proposed Advertising Panels</p> <p>TITLE Site location</p>	<p>DATE 25/06/14</p> <p>SCALE N.T.S. @ A4</p> <p>CLIENT -</p>	<p>DRAWN BY GPW</p> <p>CHECKED BY GDB</p> <p>REVISED -</p>
		
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4498 / 301		

APPENDIX 2

AAFYear	CP	Region	LocalAutho	RoadCategr	Easting	Northing	StartJunctr	EndJunctio	LinkLength	LinkLength	PedalCycle	Motorcycle	CarsTaxi	BusesCoacl	LightGoods	V2AxleRigi	V3AxleRigi	V4or5AxleF	V3or4AxleF	V5AxleArtir	V6orMore	AllHGVs	AllMotorVehicles
2000	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	1016	4882	54611	1224	7429	1861	159	185	78	60	29	2372	70518
2001	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	1158	5434	53355	1220	7593	1854	185	188	71	54	34	2386	69988
2002	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	1539	4147	59370	1507	7932	1353	170	167	58	60	96	1904	74860
2003	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	1796	4321	57351	1822	8472	1204	159	162	63	61	121	1770	73736
2004	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	1902	4541	51559	1983	8861	1364	191	201	62	55	136	2009	68953
2005	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	1622	4215	53475	1800	8502	1844	220	177	159	139	124	2663	70655
2006	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	2106	4588	55535	1966	9013	1755	204	177	155	133	143	2567	73669
2007	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	2083	4697	54869	1934	9220	1604	186	179	129	122	143	2363	73083
2008	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	1620	3068	53951	2458	8978	1484	151	201	62	77	56	2031	70486
2009	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	3338	5104	61459	2080	10531	1856	158	300	126	120	59	2619	81793
2010	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	2091	3170	48619	2145	8134	114	146	100	100	125	64	2211	64279
2011	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.12	428	1786	35339	825	5700	1616	397	239	134	182	107	2675	46325
2012	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.124274	1129	1804	36102	1315	5306	1944	260	410	0	97	218	2929	47457
2013	76054	London	Camden	A501	529360	182384	Tottenham	Gower Str	0.2	0.1	1137	2093	44748	1438	9053	1336	38	478	16	29	231	2128	59460

APPENDIX 3



PROJECT
Euston Circus-Proposed Advertising Panels

TITLE
Accident locations



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DATE	25/06/14	DRAWN BY	GPW
SCALE	N.T.S. @ A4	CHK BY	GDB
CLIENT	-		
DRAWING No.		REV No.	
4498 / 302			



Date: 23 APR 2014 10:07 Stick Diagram

Page: 1 of 1 (summary)

Euston Circus - Collisions recorded 46 months to December 2013

Summary of Accidents Selected

Site Reference and Description (zero accident counts shown in bold)

Date Period	Accidents
-------------	-----------

Topic Based Query

13

The description of how the accident occurred and the contributory factors are the reporting officer's opinion at the time of reporting and may not be the result of extensive investigation



Euston Circus - Collisions recorded 46 months to December 2013

ORDER BY AREFNO ASC

Topic Based Query		11	12	13
Accident Reference		0112EK40448	0112EK40650	0112TD00015
Day		WEDNESDAY	SUNDAY	SATURDAY
Date		15/08/2012	25/11/2012	14/01/2012
Time		18:30	13:20	17:23
Light Conditions		LIGHT	LIGHT	LIGHT
Road Surface		DRY	WET	DRY
Severity		SLIGHT	SLIGHT	FATAL
Conflict				
Pedestrian Location				
Contributory Factors (* denotes pre 2005)		405 V002 A 308 V002 A	301 V001 B 301 V002 B 405 V001 A 405 V002 A	X 803 C001 A 802 C001 A 405 V001 A 602 V001 B
Easting/Northing		529250 182350	529240 182330	529250 182300



Network Details (FACC002)

Borough : 2 (CAMDEN) Status : L (LIVE) Type : Node
 Description : EUSTON ROAD/TOTTENHAM COURT ROAD
 Node : 88 Highway : 1 (TLRN) Radius : 50 (50M)
 Easting : 529260 Northing : 182320 Old Highway : 1 (TRUNK)

Associated Network Nodes and Links				
Boro	Description	Node	To	
2	EUSTON ROAD (A 0501)	88	711	
2	EUSTON ROAD (A 0501)	88	89	
2	HAMPSTEAD ROAD (A 0400)	88	103	
2	TOTTENHAM COURT ROAD (A 0400)	88	644	

Maintaining and Interested Boroughs	
Borough	
2 (CAMDEN)	

MAR-2010 to DEC-2013

Vehicle Location Summary (Veh. Counts)

Junction Location	Vehicle Movement From									Total Vehicles
	N	NE	E	SE	S	SW	W	NW	--	
ENTERING FROM SLIP	0	0	0	0	0	0	0	0	0	0
ENTERING MAIN RD	0	0	0	0	0	0	0	0	0	0
ENTERING R'ABOUT	0	0	0	0	0	0	0	0	0	0
JCT APP	2	0	0	1	3	4	0	0	0	10
JCT CLEARED	0	0	0	0	0	0	1	0	0	1
JCT MID	1	1	0	0	4	4	0	0	0	10
LEAVING MAIN RD	0	0	0	0	0	0	0	0	0	0
LEAVING R'ABOUT	0	0	0	0	0	0	0	0	0	0
NOT AT JCT	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
UNKNOWN (S/R)	0	0	0	0	0	0	0	0	0	0
Total Vehicles	3	1	0	1	7	8	1	0	0	21

Location Totals Pg1 (Acc. Counts) Against averages for 1 (INNER LONDON)

All accs by severity	Total	%	Average %	Pedestrian accs by severity	Total	%	Average %
FATAL	1	8	0	FATAL	1	8	0
SERIOUS	0	0	14	SERIOUS	0	0	5
SLIGHT	12	92	86	SLIGHT	4	31	18
Total Accidents	13			Total Ped Accidents	5		
<u>Accidents involving one vehicle</u>				<u>Accidents involving one vehicle</u>			
1 VEH NO PED	1	8	10	1 VEH WITH PED	5	38	23
<u>Attendant Circumstances</u>				<u>Attendant Circumstances</u>			
DARK	4	31	32	ROAD-FROST/ICE	0	0	0
ROAD-WET	3	23	19	SKIDDING	0	0	1

Location Totals Pg2 (Acc. Counts) Against averages for 1 (INNER LONDON)

Casualty Groups	Total	%	Average %		Total	%	Average %
CHILD (0-15)	0	0	6				
MASKED PEDESTRIAN	1	8	3				
PSV PASSENGER	1	8	6				
<u>Vehicle Types</u>				<u>Vehicle Types</u>			
PEDAL CYCLE	3	23	14	POWERED 2 WHEELER	3	23	24
<u>Vehicle Manouvres</u>				<u>Vehicle Manouvres</u>			
CHANGE LANE TO L	1	8	2	CHANGE LANE TO R	0	0	2
OVERTAKING	0	0	5	PARKED	0	0	2
TURNING L W/OUT PED	0	0	6	TURNING L WITH PED	1	8	1
TURNING R W/OUT PED	0	0	19	TURNING R WITH PED	1	8	1