TRANSPORTATION

ADL Transportation Ltd
9 Coldbath Square, London, EC1R 5HL
Tel: 020 7278 8844 Fax: 020 7278 8810 Email: admin@adltransportation.co.uk

TRANSPORT STATEMENT
2 – 6 QUEENS ROAD
TEDDINGTON
MIDDLESEX
TW11 0LB

MMC Investments
12 Castle Business Village
Station Road
Hampton
Middlesex
TW12 2BX

ADL/CC/T133/21A

August 2014

REPORT CONTROL

Document:	Transport Statement
Project:	2 – 6 Queens Road, Teddington
Client:	MMC Investments
ADL Reference:	T133

Document Checking

Primary Author	Catherine Chapman	Initialled:	CC

Contributor		Initialled:	

Review by	Catherine Chapman	Initialled:	CC

Issue	**Date**	**Status**	**Checked for Issue**
1	21.08.14	Final	CC

CONTENTS

APPENDICES

1.0 INTRODUCTION

1.1 Purpose of Report

1.1.1 ADL Transportation have been appointed by MMC Investments to provide this Transport Statement in support of the provision of 14 residential flats at 2-6 Queens Road (known as Livingston House), Teddington, London Borough of Richmond upon Thames.

1.2 Scope of Study

1.2.1 Chapter 2.0 describes the site and surrounding area, existing and permitted uses of the site and traffic generation.

1.2.2 Chapter 3.0 outlines the accessibility of the site by non-car modes.

1.2.3 Chapter 4.0 provides details of the development proposals and calculates the proposed traffic generation.

1.2.4 Chapter 5.0 assesses the impacts of the development.

1.2.5 Chapter 6.0 evaluates the national planning policy guidance.

1.2.6 Chapter 7.0 summarises and concludes the report.

1.2.7 The Appendices are provided at the rear of this report.

2.0 EXISTING SITUATION

2.1 Site Location and Surrounding Road Network

2.1.1 The site is located 800m walking distance west of Teddington Railway Station and 500m west of Teddington Town Centre, as shown on the map in Appendix 1.1.

2.1.2 The eastern site boundary is formed by Queens Road, to the northeast is the Queens Road/Broad Street/Hampton Road junction, to the west is Teddington Memorial Hospital and to the south are residential properties on Queens Road.

2.1.3 A plan showing the site and surrounding area is included as Appendix 2.2.

2.2 Road Network

2.2.1 Queens Road (B358) forms the eastern site boundary and runs north south from the signalised four arm junction with Broad Street (A313), Hampton Road (A313) and Stanley Road (B358) 60m to the north of the site access to the junction with Park Road (A309) 624m to the south of the site access.

2.2.2 Queens Road is a 6m wide single carriageway road which is subject to a 20mph speed limit and street lighting facilities.

2.2.3 On the eastern side of Queens Road there are double yellow lines which restrict waiting 'at any time' for 44m from the A313/B358 junction. On the western side of Queens Road waiting is restricted by double yellow lines for 22m from the signal junction and a single yellow line restriction from 22m – 44m from the junction. There are no loading restrictions on Queens Road in the vicinity of the site, parking on Queens Road in the vicinity of the site (other than specified above) is unrestricted.

2.3 Existing/Permitted Use of the Site

2.3.1 The permitted use of the site comprises of 2540sqm (GIA) (2,662sgm GEA) of B1 office use with 41 car parking spaces.

2.3.2 Vehicle access to the site is via a simple crossover the footway on Queens Road for the offices close to the A313/B358 junction.

2.3.3 The site is currently partially occupied by Livingston Ltd. Currently 1,920sqm (76%) of the development is occupied and 620sqm (24%) is vacant.

2.4 Existing/Permitted Traffic Generation and Parking Demand

Existing Traffic and Parking Demand

2.4.1 ADL commissioned Axiom Traffic Ltd to undertake a survey of the existing offices. The survey was undertaken on Tuesday 29/07/14 and the vehicles in and out of the site were recorded in 15-minute intervals between 07:00-19:00 hours. The number of vehicles parked on site at the start of the survey was also recorded to enable an accumulation profile to be calculated. The hourly traffic profile maximum accumulation recorded in each hour is summarised in Appendix 3.0. The peak hour traffic and maximum parking demand is shown in Table 2A below.

Table 2A Existing Traffic Generation and Parking Demand

	Traffic			Maximum Parking Demand
	In	Out	Two-Way	
AM Peak 08:00-09:00 hours	10	1	11	18
PM Peak 17:00-18:00 hours	5	17	22	
Daily	49	51	100	

2.4.2 Table 2A demonstrates that the existing offices generate 11 trips (two-way) during the morning peak and 22 trips (two-way) during the evening peak. The maximum recorded parking demand was 18 vehicles.

Permitted Traffic and Parking Demand

2.4.3 The permitted office traffic has been calculated by increasing the existing traffic pro rata by 1.32 to account for the proportion of the site which is currently vacant. The results are shown in Table 2B below.

Table 2B Permitted Traffic Generation and Parking Demand

	Traffic			Maximum Parking Demand
	In	Out	Two-Way	
AM Peak 08:00-09:00 hours	13	1	14	24
PM Peak 17:00-18:00 hours	7	22	29	
Daily	65	67	132	

2.4.4 Table 2B demonstrates that the permitted offices could generate 14 trips (two-way) during the AM peak and 29 trips (two-way) during the PM peak. The maximum parking demand is expected to be 24 vehicles.

3.0 ACCESSIBILITY

3.1 Walking/Cycling

3.1.1 The site is located in a mature urban environment with a well development footpath network. There are footways on both sides of Queens Road and there are controlled signalised crossing facilities for pedestrians at the A313/B358 junction.

3.1.2 The cycle routes in the vicinity of the site are shown on the extract of the TfL Local Cycle Guide № 9 in Appendix 4.1. Queens Road is a route recommended for cyclists and provides a link to Teddington via Park Lane (278m south of site) and Richmond via Coleshill Road (147m south of the site).

3.1.3 The site is reasonably accessible by walking and cycling.

3.2 Public Transport

Bus

3.2.1 The nearest bus stops to the site are located on Hampton Road within 70m of the site. The bus stops are equipped with shelters, seating and travel information. These bus stops are served by route №s 285, X26 and R68 which provide services to Hanworth, Hampton, Kingston, West Croydon and Richmond.

3.2.2 There are additional bus stops on Stanley Road within 140m of the site which are served by route №s 33, 281 and 481 which provide services to Fullwell, Twickenham, Hounslow, Richmond and Barnes.

3.2.3 A plan showing the local bus routes is included in Appendix 4.2.

Rail

3.2.4 The site is located 800m walking distance west of Teddington Railway Station. Teddington is on the South West Trains line which links to Waterloo Station with lines via Richmond or Wimbledon.

3.2.5 The site is therefore reasonably accessible by road and rail based public transport.

3.3 PTAL Rating

3.3.1 The ease with which a person is able to gain access to public transport is a useful measure of the level of accessibility.

3.3.2 The TfL's PTAL (Public Transport Accessibility Level) index is based on both distances to public transport services and quality of services available from a given location. The PTAL is defined as follows:

Accessibility Level	Range of Accessibility Indices
1 (lowest)	0.00 – 5.00
2	5.01 – 10.00
3	10.01 – 15.00
4	15.01 – 20.00
5	20.01 – 25.00
6 (highest)	25.01 – 30.00

3.3.3 The TfL database has confirmed that the proposed development site has a PTAL Rating of 3 which identifies a 'moderate' level of accessibility. Details of the PTAL for this site can be found at Appendix 4.3 of this report.

4.0 PROPOSED DEVELOPMENT

4.1 Proposed Development Details

Schedule of Development

4.1.1 The proposed 14 unit residential element of the development would take the form of two additional storeys above the existing two storey section of the building facing Queens Road.

4.1.2 The schedule of proposed development is summarised in Table 4A below. Due to minor reconfiguration of the ground floor there would be a small reduction in the B1 floor space by 142sqm.

Table 4A Schedule of Development

	Studios	1-Bed Units	Total
Residential	6	8	14
Office	2,398sqm GIA/2,520sqm GEA		

4.1.3 The Architect's proposed site layout is included as Appendix 5.0.

Parking Provision

4.1.4 The proposal would have a car parking provision of 41 spaces.

- 26 spaces would be for the office use (including two disabled spaces) plus one delivery bay
- 14 spaces would be for the residents

4.1.5 TRACK analysis for the residential car parking spaces is included in Appendix 6.1.

4.1.6 It is proposed to provide 12 cycle parking spaces for the existing B1 offices and 14 spaces for residents. The cycle parking for the offices and residents would be located in separate secure cycle stores accessed from the southeast corner of the building, as shown on the plan in Appendix 5.0.

Access Arrangements

4.1.7 It is proposed that vehicle access for the development would be via the existing arrangements on Queens Road. 'Keep Clear' markings are proposed to be provided at the site access to assist right turn movements into the site when queues form on Queens Road from the A313/B358 junction.

4.1.8 It is proposed to provide a separate pedestrian access from Queens Road for residents, as shown on the plan in Appendix 5.0.

Refuse Collection and Servicing

4.1.9 Bins for residents and the offices would be located within the car park, as shown on the plan in Appendix 5.0.

4.1.10 TRACK analysis for a refuse vehicle is included in Appendix 6.2 and demonstrates that a refuse vehicle can access the site, turn and exit in a forward gear.

4.1.11 Servicing of the existing offices would occur on site within the car park. TRACK analysis for an 8.0m box van is included in Appendix 6.3 and demonstrates that a refuse vehicle can access the site, turn and exit in a forward gear.

4.2 Traffic Generation

4.2.1 ADL have reviewed the TRICS database for comparable residential sites, a copy of the data is included in Appendix 7.0.

4.2.2 The proposed total development peak hour and daily traffic is summarised in Table 4B below.

Table 4B Total Proposed Development Traffic Generation

	Use	Traffic		
		In	Out	Two-Way
AM Peak	Proposed Residential	2	1	3
	Permitted Offices	13	1	14
	Total	15	2	17
PM Peak	Proposed Residential	3	0	3
	Permitted Offices	7	22	29
	Total	10	22	32
Daily	Proposed Residential	16	18	34
	Permitted Offices	65	67	132
	Total	81	85	166

4.2.3 Table 4B demonstrates that the proposed residential units would generate 3 additional trips (two-way) during the morning and evening peak periods. This level of traffic increase is not considered to be material in traffic engineering terms.

4.2.4 The total development traffic would be 17 trips (two-way) during the morning peak and 32 trips (two-way) during the evening peak.

4.3 Assessment of Parking Standards

4.3.1 Appendix 4 of LB Richmond upon Thames Local Development Framework Development Management Plan (Nov 2011) sets out the Council's maximum car parking standards and minimum cycle parking standards for new development.

4.3.2 The car parking standards for the development are shown in Table 4C below and demonstrate that the proposal for 14 spaces accords with the Council's maximum residential parking standards. The proposal for 26 spaces for the offices is slightly above the Council's standard of 25 spaces. Section 2.4 has demonstrated that the maximum permitted parking demand is expected to be 24 vehicles, therefore the proposal for 26 spaces is considered appropriate to accommodate the sites operational requirements and allows for small scale fluctuations in peak demand.

Table 4C Car Parking Standards

Use Class	Maximum Parking Standard	Proposed Development	Maximum Standard for Development
Residential (C3)	1-2 bedrooms – 1 space	14 units	14 spaces
Office (B1)	1/100sqm	2,520sqm	25 spaces
Total			**39 spaces**

4.3.3 The cycle parking standards for the development are shown in Table 4D below and demonstrate that the proposed cycle parking provision of 26 spaces accords with the Council's standards.

Table 4D Cycle Parking Standards

Use Class	Minimum Cycle Parking Standard	Proposed Development	Minimum Cycle Parking for Development
Residential (C3)	1-2 bedrooms – 1 space	14 units	14 spaces
Office (B1)	1/200sqm	2,520sqm	12 spaces
Total			**26 spaces**

4.3.4 The parking standards state that for B1 offices the standard for lorry parking is 1 space per 2,500sqm (minimum 1 space). It is proposed to provided 1 space for delivery vehicles for the offices in accordance with the Council's standards.

5.0 IMPACT ASSESSMENT

5.1 It has been demonstrated that the proposed traffic generated by the residential units is not material in traffic engineering terms, therefore no further assessment is required.

5.2 It has been demonstrated that the proposed level of parking is sufficient to accommodate the operational requirements for the offices and accords with the Council's maximum parking standards for the residential element of the scheme. Therefore, no further assessment is required.

6.0 NATIONAL PLANNING POLICY FRAMEWORK 2012

6.1 National Planning Policy Framework (March 2012) sets out the Government's planning policies for England and how these are expected to be applied. In its Ministerial Foreword The Framework states that:

> ***"Sustainable development is about positive growth"***
> ***"Development that is sustainable should go ahead"***

6.2 The core planning principle in transport terms (paragraph 17) is to:

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

6.3 Chapter 3.0 has demonstrated that the site is reasonably accessible by walking, cycling and public transport.

6.4 Paragraph 32 states that:

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

6.5 There are no residual impacts.

6.6 This Transport Statement has been prepared to support the planning application. To be robust, the proposal has been tested against the following 4 criteria (paragraph 32):

> ***"Planning policies and decisions should consider whether:***
> - ***the opportunities for sustainable transport modes have taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure."***

The site is accessible by all modes of transport.

- ***"Safe and suitable access to the site can be achieved by all people"***

The site is located within a mature urban environment which provides existing facilities for access by non motorised users.

- ***"Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development"***

Section 4.2 has demonstrated that the proposal would have no traffic impact and Section 4.3 demonstrates that parking is proposed in accordance with the Council's maximum standards. It is proposed to provide 'Keep Clear' markings at the site access. No further mitigation measures are required.

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

There are no residual impacts and therefore the development should not be refused on transport grounds.

6.7 The NPPF continues (paragraph 35):

"Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods and people. Therefore, developments should be located and designed where practical to:

- ***accommodate the efficient deliveries of goods and supplies"***

A dedicated bay for delivery vehicles for the offices is proposed to be provided.

- ***give priority to pedestrians and cycle movements, and have access to high quality public transport facilities.***

The site is accessible by walking, cycling and public transport

- ***create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians.***

Queens Road is subject to a 20mph speed limit to restrict traffic speeds in the vicinity of the site. Separate access points would be provided for pedestrians and vehicles.

And

- ***Consider the need of disabled people by all modes of transport***

Two disabled parking spaces are proposed to be provided.

6.8 The proposal therefore accords with The Framework ‘guidance’.

7.0 SUMMARY AND CONCLUSIONS

7.1 ADL Transportation have been appointed by MMC Investments to provide this Transport Statement in support of the provision of 14 residential flats at 2-6 Queens Road (known as Livingston House), Teddington, London Borough of Richmond upon Thames.

7.2 The permitted use of the site comprises of 2540sqm (GIA) (2,662sgm GEA) of B1 office use with 41 car parking spaces. The site is currently partially occupied by Livingston Ltd. Currently 1,920sqm (76%) of the development is occupied and 620sqm (24%) is vacant.

7.3 The permitted offices could generate 14 trips (two-way) during the AM peak and 29 trips (two-way) during the PM peak. The maximum parking demand is expected to be 24 vehicles.

7.4 The site is reasonably accessible by walking, cycling and public transport.

7.5 The proposed 14 unit residential element of the development would take the form of two additional storeys above the existing two storey section of the building facing Queens Road. The proposal would have a car parking provision of 41 spaces (26 spaces for the offices and 14 spaces for residents). Cycle parking is proposed in accordance with the Council's standards.

7.6 It has been demonstrated that adequate provision has been made for refuse collection and servicing.

7.7 Keep clear markings are proposed to be provided at the site access to assist right turn movements into the site when queue form on Queens Road from the A313/B358 junction.

7.8 The proposed residential units would generate 3 additional trips (two-way) during the morning and evening peak periods. This level of traffic increase is not considered to be material in traffic engineering terms.

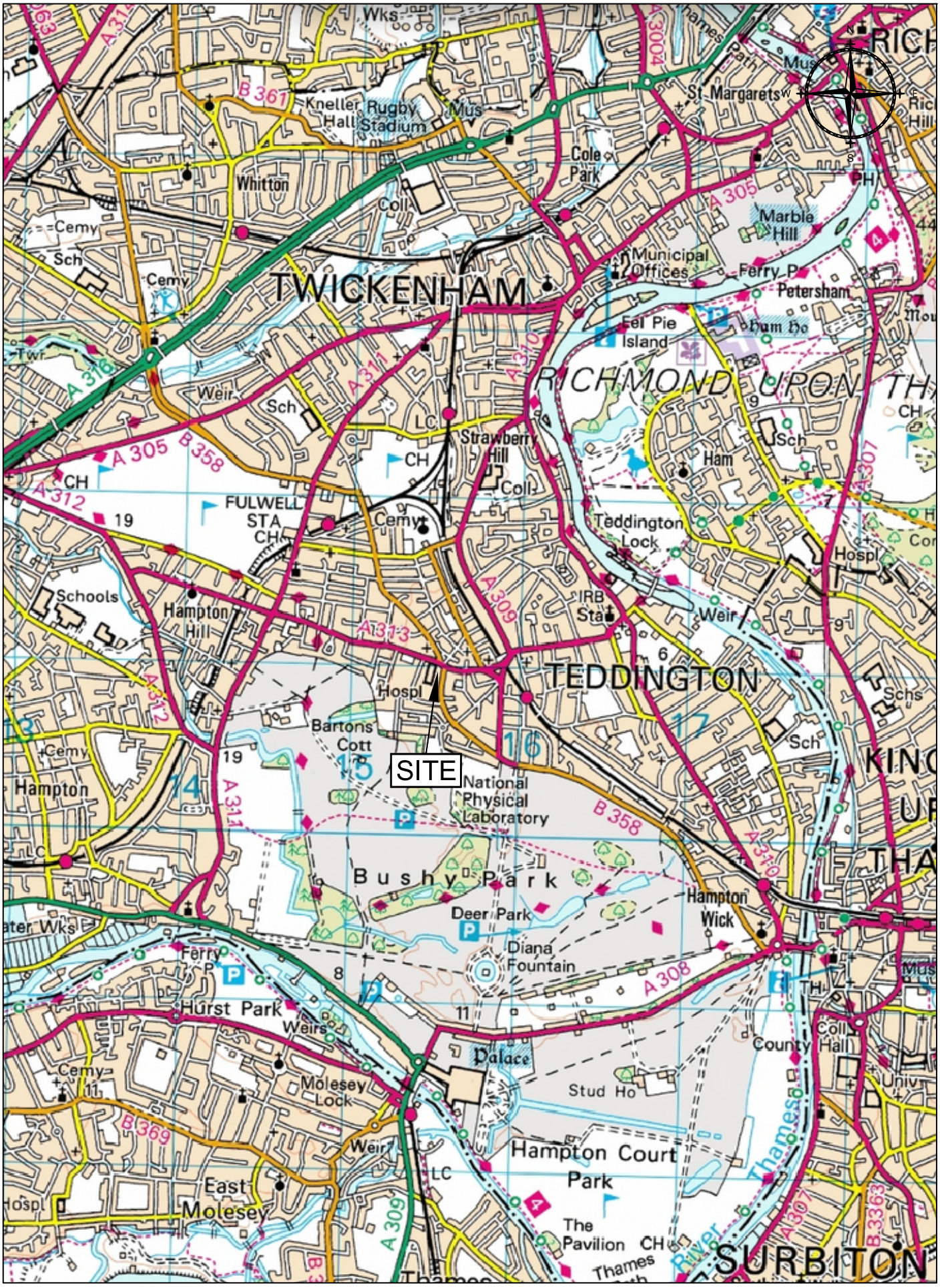
7.9 It has been demonstrated that the proposed level of parking is sufficient to accommodate the operational requirements for the offices and accords with the Council's maximum parking standards for the residential element of the scheme. Therefore, no further assessment is required.

7.10 The proposal accords with The Framework guidance.

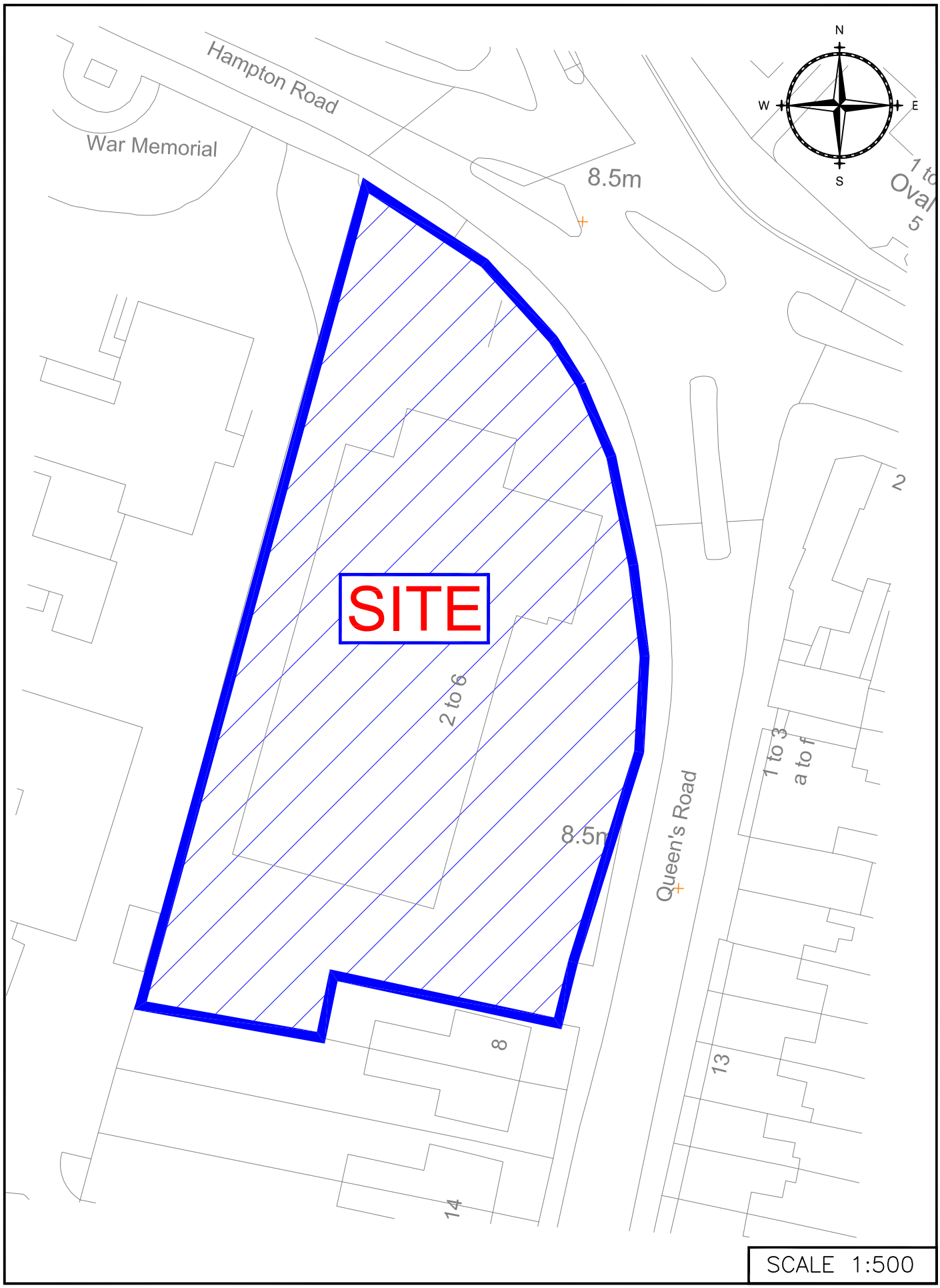
7.11 It is concluded that there are no justifiable transport or highway grounds for refusing this application.

APPENDIX 1.0

SITE LOCATION AND SURROUNDING AREA



APPENDIX 1.1
SITE LOCATION



SCALE 1:500

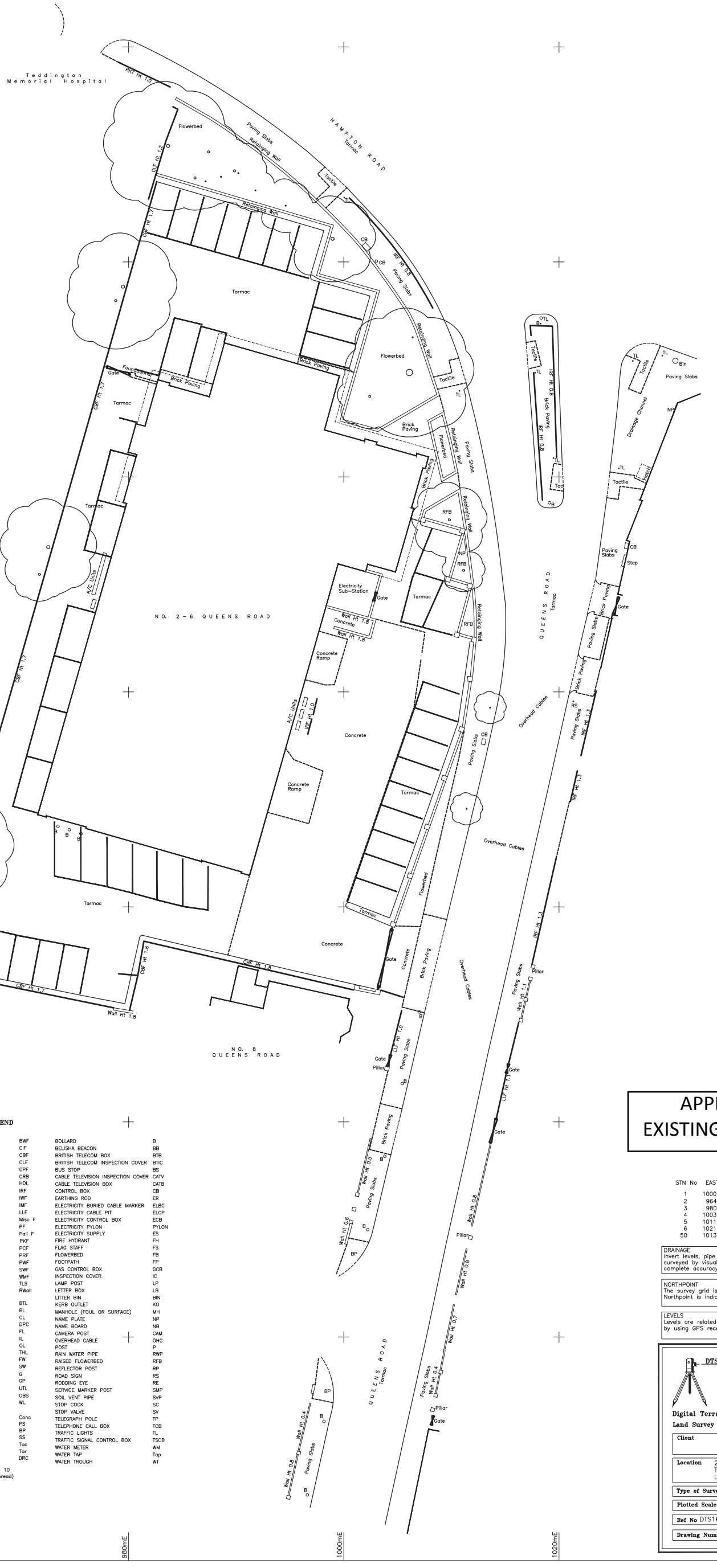
APPENDIX 1.2
SITE AND SURROUNDING AREA

APPENDIX 2.0

EXISTING SITE LAYOUT

DTS

"Quality to Build on"



1080mN
1060mN
1040mN
1020mN
1000mN
980mN
960mN
960mE
980mE
1000mE
1020mE

LEGEND

ALDER	ALD	BARBED WIRE FENCE	BWF	BOLLARD	B
ASH	ASH	CORRUGATED IRON FENCE	CIF	BELISHA BEACON	BB
ASPEN	ASP	CLOSE BOARD FENCE	CBF	BRITISH TELECOM BOX	BTB
BEECH	BCH	CHAIN LINK FENCE	CLF	BRITISH TELECOM INSPECTION COVER	BTIC
BOX ELDER	BOX	CHESTNUT PALING	CPF	BUS STOP	BS
CEDAR	CED	CRASH BARRIER	CRB	CABLE TELEVISION INSPECTION COVER	CATV
CHERRY	CHY	HANDRAIL	HDL	CABLE TELEVISION BOX	CATB
COTTONEASTER	COT	IRON RAILINGS	IRF	CONTROL BOX	CB
CYPRESS	CYP	INTERWOVEN FENCE	IWF	EARTHING ROD	ER
ELM	ELM	IRON MESH FENCE	IMF	ELECTRICITY BURIED CABLE MARKER	ELBC
FIR	FIR	LARCH LAP FENCE	LLF	ELECTRICITY CABLE PIT	ELCP
FRUIT	FRT	MISCELLANEOUS FENCE	Misc F	ELECTRICITY CONTROL BOX	ECB
HAWTHORN	HAW	PALING FENCE	PF	ELECTRICITY PYLON	PYLON
HAZEL	HZL	PALISADE FENCE	Pali F	ELECTRICITY SUPPLY	ES
HOLLY	HLY	PICKET FENCE	PKF	FIRE HYDRANT	FH
HORSE CHESTNUT	HCH	POST AND CHAIN FENCE	PCF	FLAG STAFF	FS
HORNBEAM	HRM	POST AND RAIL FENCE	PRF	FLOWERBED	FB
LABURNUM	LRM	POST AND WIRE FENCE	PWF	FOOTPATH	FP
LARCH	LAR	STOCK WIRE FENCE	SWF	GAS CONTROL BOX	GCB
LAUREL	LRL	WIRE MESH FENCE	WMF	INSPECTION COVER	IC
LIME	LIM	TRELLIS	TLS	LAMP POST	LP
LOCUST	LOC	RETAINING WALL	RWall	LETTER BOX	LB
LONDON PLANE	LPN			LITTER BIN	BIN
MAGNOLIA	MAG	BASEMENT LEVEL	BTL	KERB OUTLET	KO
MAPLE	MPL	BED LEVEL	BL	MANHOLE (FOUL OR SURFACE)	MH
MULBERRY	MUL	COVER LEVEL	CL	NAME PLATE	NP
OAK	OAK	DAMP PROOF COURSE	DPC	NAME BOARD	NB
PINE	PNE	FLOOR LEVEL	FL	CAMERA POST	CAM
POPLAR	POP	INVERT LEVEL	IL	OVERHEAD CABLE	OHC
PRUNUS	PNS	OUTFALL LEVEL	OL	POST	P
RHODODENDRONS	RDN	THRESHOLD LEVEL	THL	RAIN WATER PIPE	RWP
ROWAN	RWN	FOUL WATER	FW	RAISED FLOWERBED	RFB
SILVER BIRCH	SIB	SURFACE WATER	SW	REFLECTOR POST	RP
SORBUS	SOR	GULLY	G	ROAD SIGN	RS
SPRUCE	SPR	GULLY POT	GP	RODDING EYE	RE
STRAWBERRY	STB	UNABLE TO LIFT	UTL	SERVICE MARKER POST	SMP
SWEET CHESTNUT	SCH	OBSTRUCTED	OBS	SOIL VENT PIPE	SVP
SYCAMORE	SYC	WATER LEVEL	WL	STOP COCK	SC
WALNUT	WNT			STOP VALVE	SV
WILLOW	WLW	CONCRETE	Conc	TELEGRAPH POLE	TP
YEW	YEW	PAVING SLABS	PS	TELEPHONE CALL BOX	TCB
SPECIES UNKNOWN	SPU	BRICK PAVING	BP	TRAFFIC LIGHTS	TL
		STONE SETS	SS	TRAFFIC SIGNAL CONTROL BOX	TSCB
		TACTILE PAVING	Tac	WATER METER	WM
		TARMAC	Tar	WATER TAP	Tap
		DRAINAGE CHANNEL	DRC	WATER TROUGH	WT

TREES .3 / 3T or Multi / 12 / Sp 10
(Bole Size) (No of Boles) (Multi Bole) (Height) (Spread)

Spreads and heights are indicative only

APPENDIX 2.0
EXISTING SITE LAYOUT

STATION SCHEDULE

STN No	EASTINGS	NORTHINGS	HEIGHT	TYPE
1	1000.000	1000.000	8.775	Nail
2	964.771	999.674	8.775	Nail
3	980.192	1056.001	8.823	Nail
4	1003.201	1073.271	8.739	Nail
5	1011.616	1044.181	8.485	Nail
6	1021.611	1015.024	8.552	Nail
50	1013.506	982.590	8.460	Nail

DRAINAGE
Invert levels, pipe sizes and pipe connections have been surveyed by visual inspection only and therefore the complete accuracy of this information cannot be guaranteed

NORTHPOINT
The survey grid is based on arbitrary co-ordinates and the Northpoint is indicative only

LEVELS
Levels are related to OSGM02 and have been obtained by using GPS receivers

DTS

Tanners Court
Tanners Lane
East Wellow
ROMSEY
SO51 6DP
Tel 01794 514978
Fax 01794 517653
E-Mail sales@dtsurveys.co.uk
Web Site www.dtsurveys.co.uk

Digital Terrain Surveys LLP
Land Survey Partnership

Client	A N Architects
Location	2-6 Queens Road Teddington London
Type of Survey	Site Survey
Plotted Scale 1:200@A1	**Date** July 2014
Ref No DTS160714-1R4	**Q A Checked** DH/RP
Drawing Number 1 of 1	**Revision**

APPENDIX 3.0

TRAFFIC SURVEY SUMMARY: EXISTING OFFICES

APPENDIX 3.0

TRAFFIC SURVEY SUMMARY: EXISTING OFFICE

Table A Traffic Survey Results

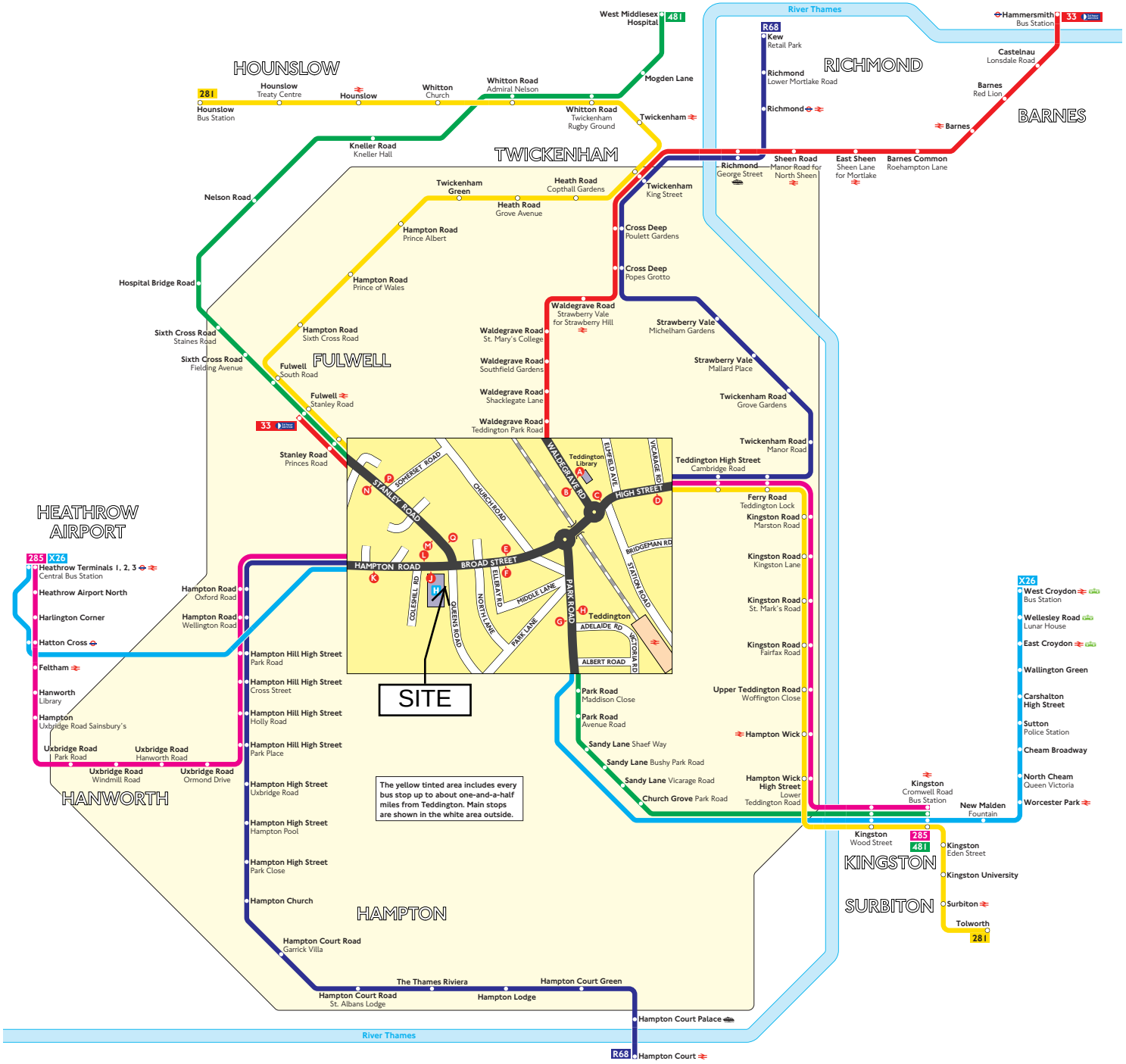
Time	Traffic		Maximum Recorded Acc
	In	Out	
07:00	1	0	4
08:00	10	1	13
09:00	5	3	16
10:00	4	2	17
11:00	3	5	18
12:00	6	6	15
13:00	3	3	15
14:00	3	3	16
15:00	7	4	18
16:00	2	4	16
17:00	5	17	16
18:00	0	3	2
Total	49	51	

APPENDIX 4.0

ACCESSIBILITY

APPENDIX 4.1
CYCLE ROUTES

Buses from Teddington



Key

- Connections with Underground
- Connections with National Rail
- Connections with river boats
- Connections with Tramlink

Red discs show the bus stop you need for your chosen bus service. The disc (A) appears on the top of the bus stop in the street (see map of town centre in centre of diagram).

Route finder

Day buses including 24-hour routes

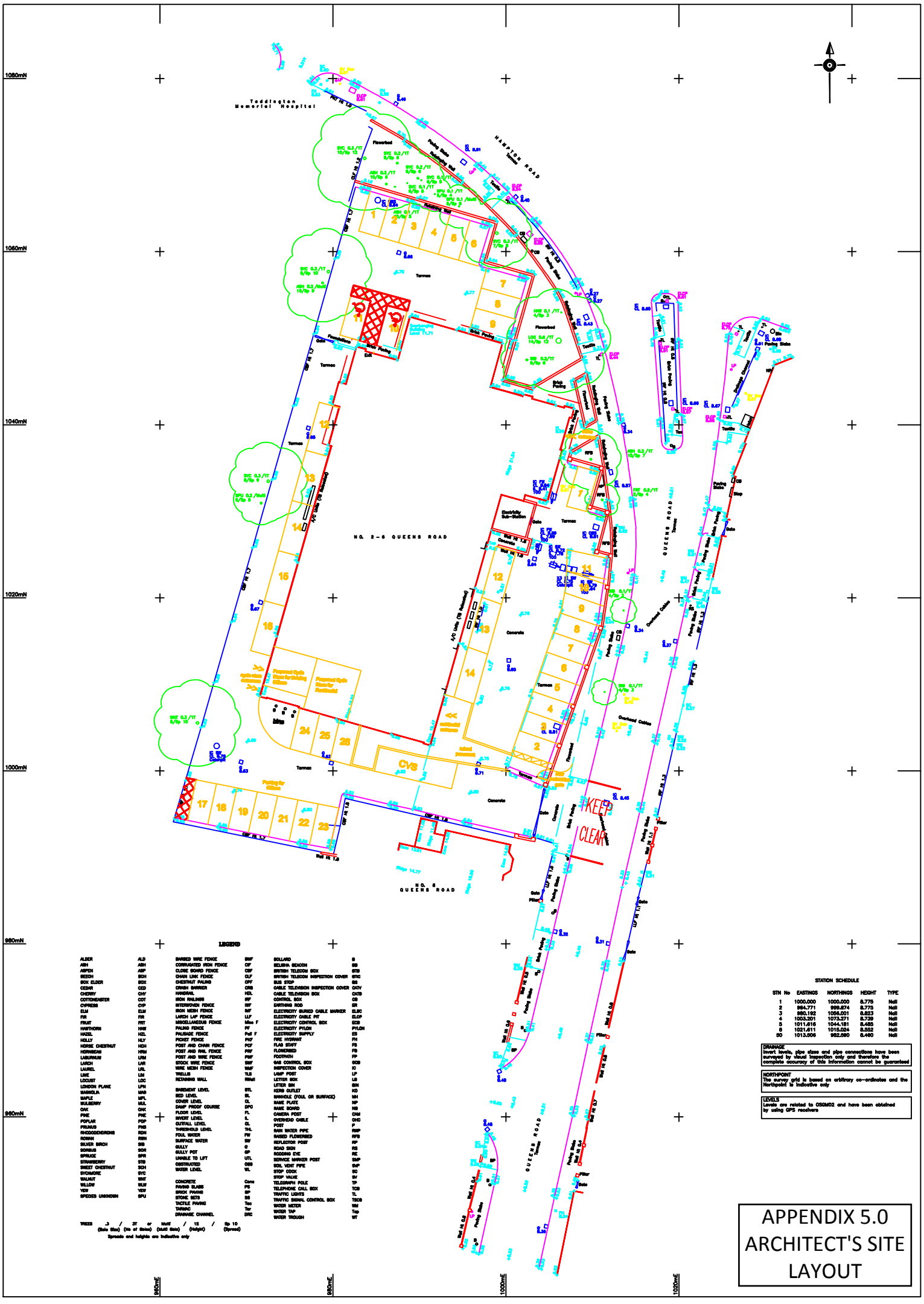
Bus route	Towards	Bus stops
33 (24 hour service)	Fulwell	A F M N
	Hammersmith	B E P Q
281 (24 hour service)	Hounslow	D F M N
	Tolworth	C E P Q
285 (24 hour service)	Heathrow Terminals 1, 2, 3	D F J K
	Kingston	C E L
481	Kingston	E H P Q
	West Middlesex Hospital	F G M N
R68	Hampton Court	D F J K
	Kew	C E L
X26	Heathrow Terminals 1, 2, 3	F
	West Croydon	B

APPENDIX 4.2
BUS ROUTES

TFL 17193.01.10 (P)

APPENDIX 5.0

ARCHITECT'S SITE LAYOUT



LEGEND

ALDER	ALD		BARBED WIRE FENCE	BWF		BOLLARD	B		
ASH	ASH		CORRUGATED IRON FENCE	CIF		BELISHA BEACON	BB		
ASPEN	ASP		CLOSE BOARD FENCE	CBF		BRITISH TELECOM BOX	BTB		
BEECH	BCH		CHAIN LINK FENCE	CLF		BRITISH TELECOM INSPECTION COVER	BTIC		
BOX ELDER	BOX		CHESTNUT PALING	CPF		BUS STOP	BS		
CEDAR	CED		CRASH BARRIER	CRB		CABLE TELEVISION INSPECTION COVER	CATV		
CHERRY	CHY		HANDRAIL	HDL		CABLE TELEVISION BOX	CATB		
COTONEASTER	COT		IRON RAILINGS	IRF		CONTROL BOX	CB		
CYPRESS	CYP		INTERWOVEN FENCE	IWF		EARTHING ROD	ER		
ELM	ELM		IRON MESH FENCE	IMF		ELECTRICITY BURIED CABLE MARKER	ELBC		
FIR	FIR		LARCH LAP FENCE	LLF		ELECTRICITY CABLE INF	ELCB		
FRUIT	FRT		MISCELLANEOUS FENCE	Misc F		ELECTRICITY CONTROL BOX	ECB		
HAWTHORN	HAW		PALING FENCE	PF		ELECTRICITY PYLON	PYLON		
HAZEL	HZL		PALISADE FENCE	Pall F		ELECTRICITY SUPPLY	ES		
HOLLY	HLY		PICKET FENCE	PKF		FIRE HYDRANT	FH		
HORSE CHESTNUT	HCH		POST AND CHAIN FENCE	PCF		FLAG STAFF	FS		
HORNBEAM	HRM		POST AND RAIL FENCE	PRF		FLOWERBED	FB		
LABURNUM	LBM		POST AND WIRE FENCE	PWF		FOOTPATH	FP		
LARCH	LAR		STOCK WIRE FENCE	SWF		GAS CONTROL BOX	GCB		
LAUREL	LRL		WIRE MESH FENCE	WMF		INSPECTION COVER	IC		
LIME	LM		TRELLIS	TLS		LAMP POST	LP		
LOCUST	LOC		RETAINING WALL	Retwl		LETTER BOX	LB		
LONDON PLANE	LPN					LITTER BIN	BIN		
MAGNOLIA	MAG		BASEMENT LEVEL	BTL		MENS OUTLET	MO		
MAPLE	MPL		BED LEVEL	BL		MANHOLE (FOUL OR SURFACE)	MH		
MULBERRY	MUL		COVER LEVEL	CL		NAME PLATE	NP		
OAK	OAK		DAMP PROOF COURSE	DPC		NAME BOARD	NB		
PINE	PNE		FLOOR LEVEL	FL		CAMERA POST	CAM		
POPLAR	POP		INVERT LEVEL	IL		OVERHEAD CABLE	OHC		
PRUNUS	PRU		OUTFALL LEVEL	OL		POST	P		
RHODODENDRONS	RDN		THRESHOLD LEVEL	THL		RAIN WATER PIPE	RWP		
ROWAN	RWN		FOUL WATER	FW		RAISED FLOWERBED	RFB		
SILVER BIRCH	SIB		SURFACE WATER	SW		REFLECTION POST	RP		
SORBUS	SOR		GULLY	G		ROAD SIGN	RS		
SPRUCE	SPR		GULLY POT	GP		RODDING EYE	RE		
STRAWBERRY	STB		UNABLE TO LIFT	UTL		SERVICE MARKER POST	SMP		
SWEET CHESTNUT	SCH		OBSTRUCTED	OBS		SOIL VENT PIPE	SVP		
SYCAMORE	SYC		WATER LEVEL	WL		STOP COCK	SC		
WALNUT	WNT					STOP VALVE	SV		
WILLOW	WLW		CONCRETE	Conc		TELEGRAPH POLE	TP		
YEW	YEW		PAVING SLABS	PS		TELEPHONE CALL BOX	TCB		
SPECIES UNKNOWN	SPU		BRICK PAVING	BP		TRAFFIC LIGHTS	TL		
			STONE SETS	SS		TRAFFIC SIGNAL CONTROL BOX	TSCB		
			TACTILE PAVING	Tac		WATER METER	WM		
			TARMAC	Tar		WATER TAP	T/p		
			DRAINAGE CHANNEL	DRC		WATER TROUGH	WT		

TREES .3 / 3T or 9m/ff / 12 / Sp 10
(Girth Size) (No of Stems) (Adult Girth) (Height) (Spread)
Spreads and heights are indicative only

STATION SCHEDULE

STN No	EASTINGS	NORTHINGS	HEIGHT	TYPE
1	1000.000	1000.000	8.775	Nail
2	994.771	999.674	8.775	Nail
3	980.192	1056.001	8.823	Nail
4	1003.201	1073.271	8.739	Nail
5	1011.616	1044.181	8.485	Nail
6	1021.611	1015.024	8.552	Nail
50	1013.506	982.580	8.480	Nail

DRAINAGE
Invert levels, pipe sizes and pipe connections have been surveyed by visual inspection only and therefore the complete accuracy of this information cannot be guaranteed

NORTHPOINT
The survey grid is based on arbitrary co-ordinates and the Northpoint is indicative only

LEVELS
Levels are related to OSGM02 and have been obtained by using GPS receivers

APPENDIX 5.0
ARCHITECT'S SITE LAYOUT

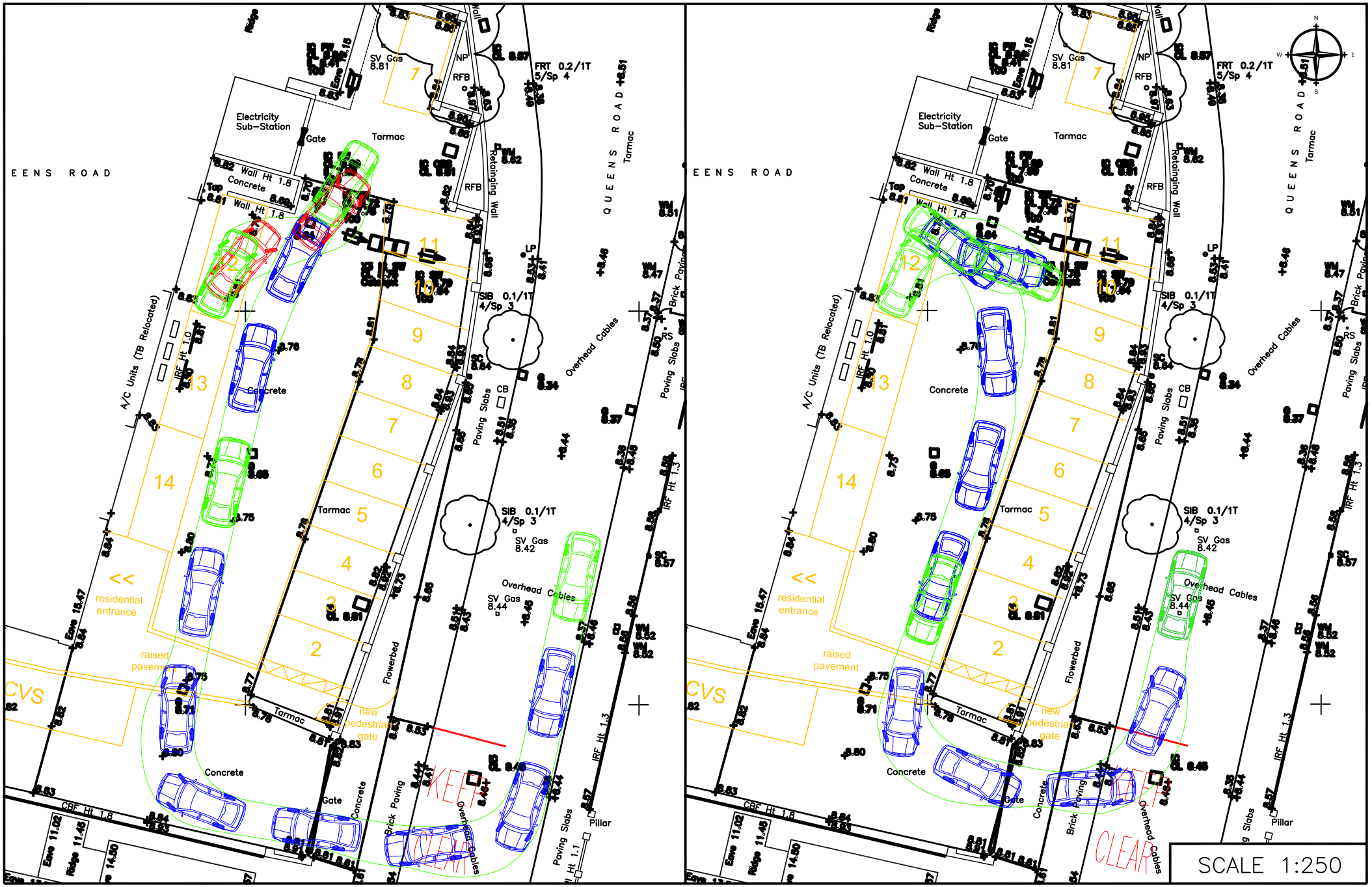
AMENDMENT	
	A: Amend pedestrian entrance; car parking layouts; add disabled spaces; adjust bin spaces. 27 05 2014
	B: Amend Layout to Topo Survey Base; 22 07 2014
	C: Amend Parking Spaces to 26 Office + 14 Resid'l + CVS. Add Disabled bays and Keep Clear at Ent. 20 08 2014

PROJECT	2-6 Queens Road Teddington Middlesex TW11 0LB					
CLIENT	MMC Investments Ltd.					
DRAWING	Proposed Site Plan					
DRAWING NUMBER	391 D/L (90) 00C	DATE	Mar 2014	SCALE	1 : 500	DRAWN BY
AMENDMENT	C					CK

ANDREW NESBITT architects
CARNEGIE STUDIO
LIBRARY HILL
121 DONEGALL ROAD
BELFAST BT12 5JL
TELEPHONE +44 28 90 80 90 60
FACSIMILE +44 28 90 80 90 66

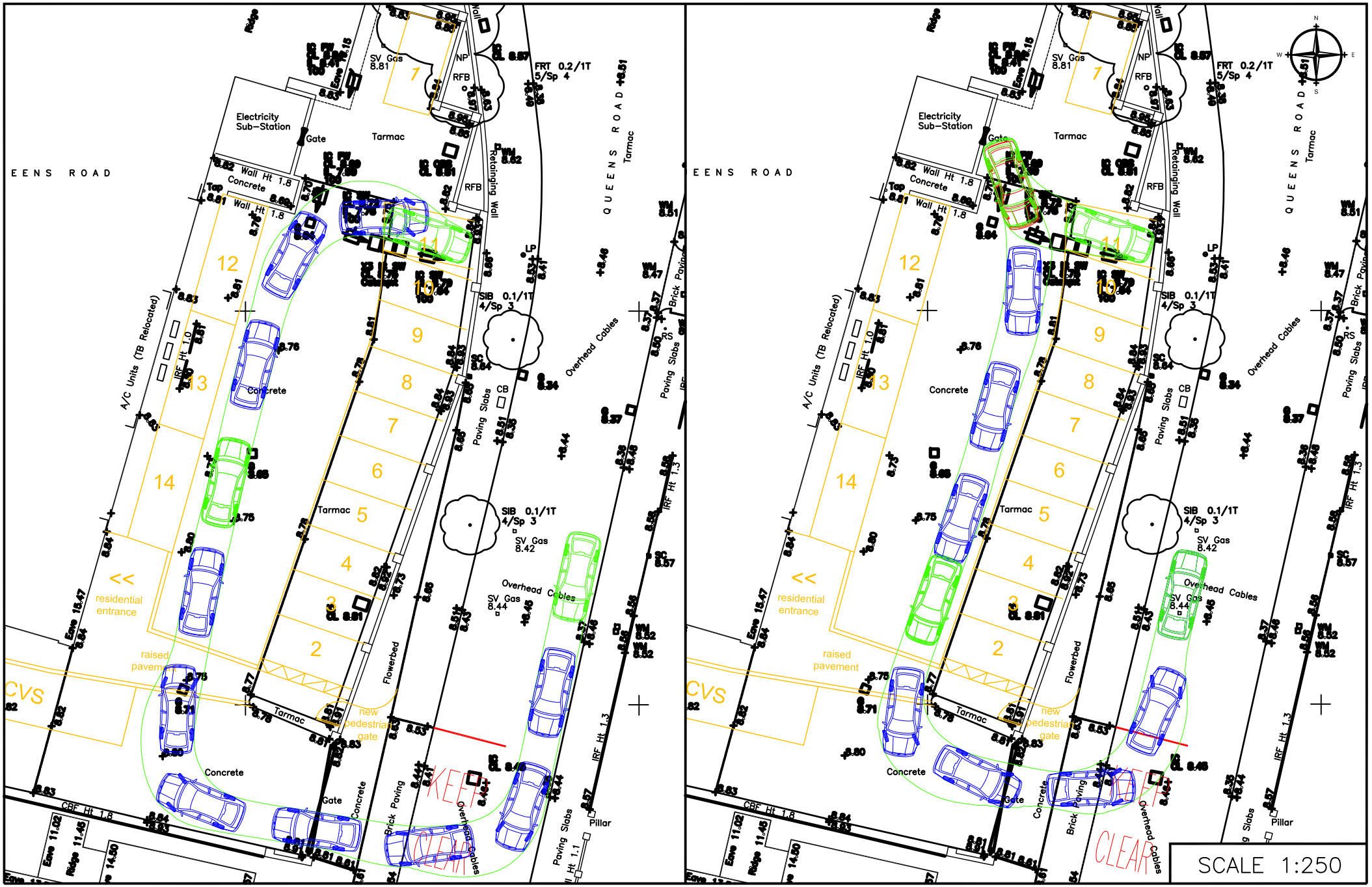
APPENDIX 6.0

TRACK ANALYSIS



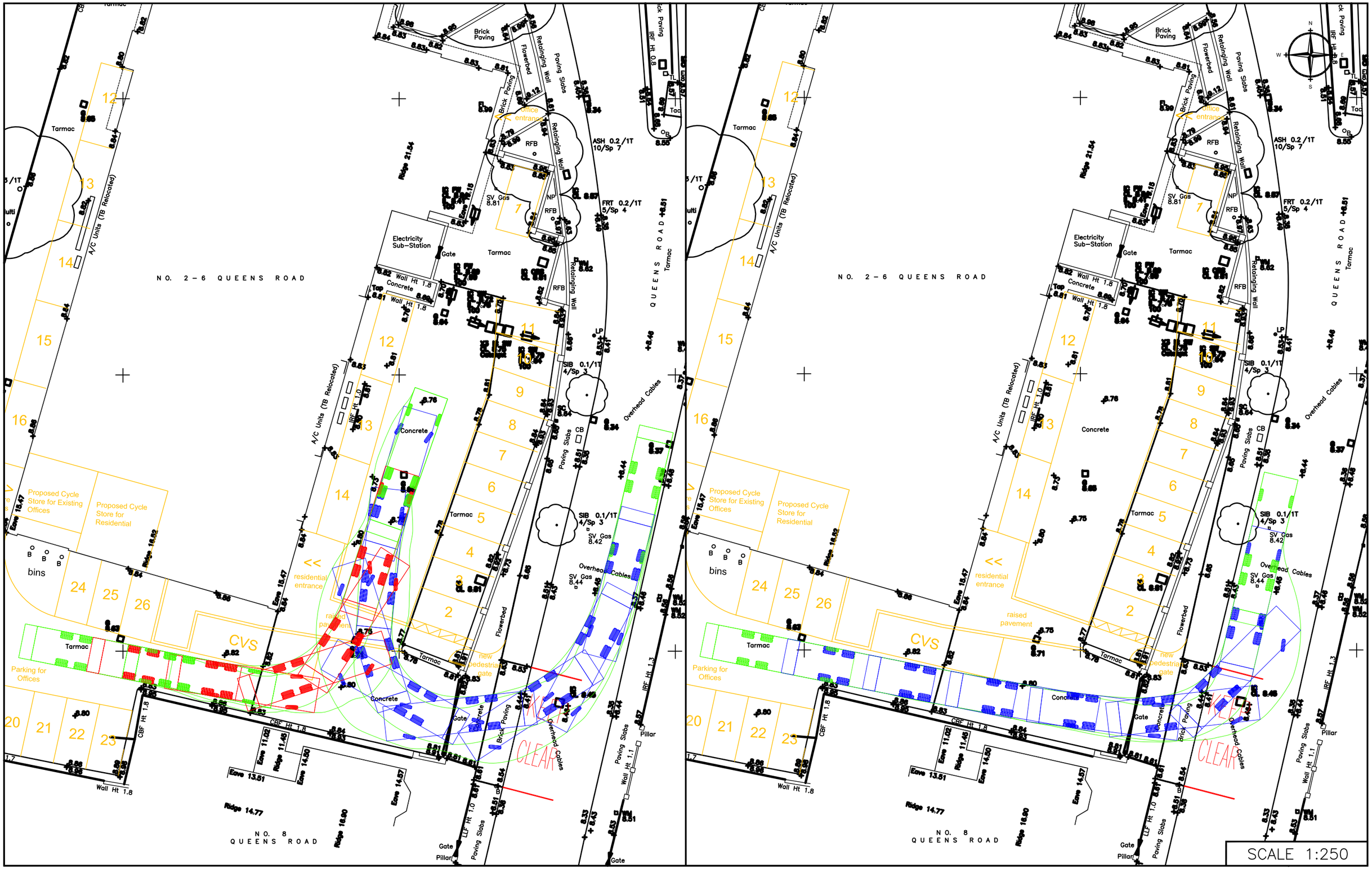
APPENDIX 6.1i

RESIDENTIAL PARKING SPACES



APPENDIX 6.1ii

RESIDENTIAL PARKING SPACES



APPENDIX 6.2
REFUSE VEHICLE

APPENDIX 6.3
8M BOX VAN

APPENDIX 7.0

TRICS DATA: PROPOSED USE

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:
01 GREATER LONDON
WH WANDSWORTH 1 days

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: 30 to 30 (units:)
Range Selected by User: 9 to 294 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/06 to 21/11/13

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.

Selected survey days:
Wednesday 1 days

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

Selected survey types:
Manual count 1 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:
Edge of Town Centre 1

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.

Selected Location Sub Categories:
Residential Zone 1

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 1 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®.

APPENDIX 7.0
TRICS DATA: PROPOSED USE

Filtering Stage 3 selection (Cont.):

Population within 1 mile:
10,001 to 15,000 1 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

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

Car ownership within 5 miles:
0.6 to 1.0 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:
No 1 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.

LIST OF SITES relevant to selection parameters

1 WH-03-C-01 BLOCKS OF FLATS WANDSWORTH
AMIES STREET

CLAPHAM JUNCTION
Edge of Town Centre
Residential Zone
Total Number of dwellings: 30
Survey date: WEDNESDAY 09/05/12 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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CN-03-C-01	central london
KN-03-C-02	too large
KN-03-C-03	too large
NH-03-C-01	neighbourhood centre
RD-03-C-02	suburban area

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip 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	1	30	0.000	1	30	0.400	1	30	0.400
08:00 - 09:00	1	30	0.167	1	30	0.400	1	30	0.567
09:00 - 10:00	1	30	0.200	1	30	0.033	1	30	0.233
10:00 - 11:00	1	30	0.000	1	30	0.133	1	30	0.133
11:00 - 12:00	1	30	0.033	1	30	0.033	1	30	0.066
12:00 - 13:00	1	30	0.033	1	30	0.033	1	30	0.066
13:00 - 14:00	1	30	0.100	1	30	0.033	1	30	0.133
14:00 - 15:00	1	30	0.000	1	30	0.133	1	30	0.133
15:00 - 16:00	1	30	0.300	1	30	0.000	1	30	0.300
16:00 - 17:00	1	30	0.000	1	30	0.033	1	30	0.033
17:00 - 18:00	1	30	0.233	1	30	0.000	1	30	0.233
18:00 - 19:00	1	30	0.100	1	30	0.033	1	30	0.133
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.166			1.264			2.430

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:	30 - 30 (units:)
Survey date date range:	01/01/06 - 21/11/13
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	5

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.