

BARRATT WEST LONDON

SITE AT KIDDERPORE AVENUE, LONDON

TRANSPORT STATEMENT

REPORT REF. K641-01A

PROJECT NO. K641

JUNE 2017

Date : June 2017
Project Ref : K641
Report Ref : K641-01 Rev. A

DOCUMENT CONTROL

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft Client Issue	DH	SJH	DRAFT	10/05/17
-	Final Client Issue	DH	ATB	SJH	26/05/17
A	Drawing revised	SJB	MNR	SJB	14/06/17

MNR

1.0 INTRODUCTION AND BACKGROUND SITUATION

1.1 This Transport Statement (TS) has been prepared by Ardent Consulting Engineers (ACE) in respect of Barratt London's consented proposals for the redevelopment of the King's College Hampstead Campus South site at Kidderpore Avenue, London.

1.2 A planning application was submitted to London Borough of Camden (LBC) under planning application reference 2013/0685/P for the "redevelopment of the site to create 128 residential units (Class C3) including affordable housing and a community use facility (Class D1), following demolition and conversion/refurbishment of existing buildings used for student accommodation and ancillary offices (sui generis) and construction of new buildings ranging between 3 - 5 storeys in height, together with associated works to create basements, car parking, landscaping and public realm improvements". The application was submitted in February 2013 and was granted approval September 2013, subject to a number of conditions.

1.3 The following subsequent Section 73 applications were made:

- LBC Reference 2014/5593/P Variation of Condition 34 (approved plans) of planning permission 203/0685/P (dated 13/09/2013) for the

redevelopment of the site for residential and community use, namely to relocate bin store, chiller units and cycle enclosures alter boundary treatment, garden layouts, roof materials and fenestration of Blocks A-C. Relocation of main entrance of Block C. Alter dormer windows of Block A1. To Block D there will be no alteration to the retaining wall at level -01, alterations to cycle storage, balconies, roof layout, louvres on north-east elevation, privacy screen, increase in PV panels and new pedestrian entrance to south-west elevation. To Finchley Road elevation, installation of security gates, elevation changes and change of material to rear walkway. Alterations to Kidderpore Walk and removal of trees T15, T16, inclusion of T68 on the plans. This application was granted consent in August 2015.

- LBC Reference 2014/7844/P Variation of Condition 34 (approved plans) of planning permission 203/0685/P (dated 13/09/2013) for redevelopment of the site to create 128 residential units namely for the following amendments: Block C two car parking spaces to the front of the building, Block E (Art School) relocated 3.5m towards Kidderpore Avenue, new basement, alterations to elevations, new bin store. Phase 2 amendments: Block J terrace at level -02, extension of basement and amendments to windows and recesses, Block K basement reduced in size and relocated (from under K1 to K2), alterations to elevations of K1 and K2, distance between K1 and K2 increased to 1.8m, enlargement of Block K by 80sqm, alteration to internal layout, Blocks L and M amendments to elevations, Block M moved 300mm back from Kidderpore Avenue and removal of trees T21, T24, T25, T30, T31, T37, T38, T58, T65 and T68. This application was granted consent in December 2016.

1.4 This TS will support a further Section 73 application to vary permission granted in December 2016 to incorporate four parking spaces adjacent to Block B.

1.5 The site has consent for a total of 128 units including affordable housing and units for private sale and 84 parking spaces. The scheme comprises the following unit mix: -

Private Sale Units

- 16 x 1-bedroom flats
- 36 x 2-bedroom flats
- 35 x 3-bedroom flats
- 1 x 2-bedroom house
- 1 x 4-bedroom house
- 4 x 4-bedroom flats
- Total – 93 units

Affordable Units

- 13 x 1-bedroom flats
- 8 x 2-bedroom flats
- 14 x 3-bedroom flats
- Total – 35 units

1.6 The specific purpose of this TS is to consider the impact of incorporating an additional four parking spaces over and above the provision permitted to date.

1.7 Following this introduction, this TS has been structured as follows: -

- **Section 2.0** reviews the proposals, including undertaken a review of adopted planning policy relating to transport; and
- **Section 3.0** provides a summary and sets out the conclusions.

2.0 PROPOSED AMENDMENTS TO CONSENTED SCHEME

Proposed Amendments

- 2.1 It is proposed to incorporate an additional four car parking spaces adjacent to Block B of the consented development scheme, which will result in a total of 88 spaces on the site. The proposed arrangements are outlined on **ACE Drawing No. K641-470 Rev. A** and outline that circa 12m of the existing on-street parking bay provision will be removed to accommodate the vehicle crossover. This equates to two parking spaces.
- 2.2 The proposed spaces will each measure 2.4m wide and 4.8m long, and will be accessed via a dropped kerb vehicle crossover directly from Kidderpore Avenue. Clear pedestrian inter-visibility of a minimum 1.5m x 1.5m is provided to the rear of the parking bays to ensure the safety of pedestrians walking along the southern footway of Kidderpore Avenue. In order to accommodate the parking spaces, a tree will need to be removed but it is proposed that a replacement will be provided to ensure no net loss in trees as a result of the proposals, as outlined on **ACE's Drawing No. K641-470 Rev. A**.
- 2.3 The impact of providing these additional spaces has been considered below in terms of adopted planning policy, Census data on car ownership, the context of the consented scheme and the potential impact on the local road network.

Policy

- 2.4 National Policy is set within the *National Planning Policy Framework (NPPF, March 2012)* and states at paragraph 32 that "*Development should only be prevented or refused on transport grounds where the residual cumulative impacts of developments are severe*". Given the proposals are minor in nature, it is considered the impact is not "severe" and should not be refused.
- 2.5 LBC Policy in respect of the Council's planning vision and strategy for the Borough is outlined within the *Camden Core Strategy 2010-2025 Local Development Framework*, with detailed planning criteria that the Council use

to determine planning applications set out in the supporting document, the *Camden Development Policies 2010-2025 Local Development Framework (CDP)*. The Council have also prepared a series of *Camden Planning Guidance (CPG)* documents to provide information on how the Council apply their planning Policy. **Policy DP18** of the *CDP* relates to car parking provision for new developments whilst *CPG7* relates to Transport.

2.6 **Policy DP18: Parking Standards and Limiting the Availability of Car Parking** states:

"The Council will seek to ensure that developments provide the minimum necessary car parking provision. The Council will expect development to be car free in the Central London Area, the town centres of Camden Town, Finchley Road/Swiss Cottage, Kentish Town, Kilburn High Road and West Hampstead, and other areas within Controlled Parking Zones that are easily accessible by public transport.

Development should comply with the Council's parking standards, as set out in Appendix 2 to this document. Where the Council accepts the need for car parking provision, development should not exceed the maximum standard for the area in which it is located (excluding spaces designated for disabled people). Developments in areas of on-street parking stress should be 'car capped'."

2.7 In respect to the Council's parking standards for residential developments (C3 Land Use class), Appendix 2 of the *CDP* states the following:

- A maximum of 0.5 spaces per dwelling in low parking provision areas; and
- A maximum of 1 space per dwelling for the rest of the Borough.

2.8 Applying these parking standards to the consented site equates to a maximum provision of 128 spaces. The scheme proposed a total of 84 spaces, which is well below the maximum provision that could be provided and still be in accordance with LBC standards.

- 2.9 The additional four parking spaces proposed under this application amounts to a total provision of 88 spaces, which is still significantly below the maximum permissible (128 spaces) in accordance with Policy requirements.
- 2.10 Section 5 of *CPG7* provides further guidance in respect of car-free and car-capped developments in the Borough, outlining that car-free development is expected in the Borough's most accessible locations. Paragraphs 5.7 clarifies that these areas are considered to be locations with a Public Transport Accessibility Level (PTAL) of 4 and above.
- 2.11 Utilising the Transport for London (TfL) WebCAT planning tool, which is a connectivity assessment toolkit to allow a site's PTAL rating to be calculated, the site has a PTAL of 2. The WebCAT output is included at **Appendix A**.
- 2.12 The WSP Group TA undertook a site specific calculation of the PTAL for the site and concluded that the site had a PTAL of 3. A site specific analysis allows for better assessment of walking distance from the site to local public transport interchanges and a refinement of service frequency information.
- 2.13 Using both calculation methods, it is clear that the site is below the PTAL 4 threshold the Council refer to within *CPG7* in respect of requiring car-free development.
- 2.14 Providing parking as part of the proposals is therefore Policy compliant and is required in order to support anticipated parking demand arising from the proposals given the accessibility of the site.

Census Data

- 2.15 In order to consider the level of parking demand that could arise as a result of the proposals. Car ownership data has been obtained for the Frognaal and Fitzjohn Ward from the 2011 Census. This data gives ownership by dwelling type, tenure and size (number of rooms including kitchens but excluding bathrooms) and is summarised in **Table 2.1**. The full data is in **Appendix B**.

Table 2.1: Average car ownership per household by dwelling type, tenure and size in Frognal and Fitzjohn ward (source: 2011 Census)

No of Rooms	Houses		Flats	
	<i>Owner occupied</i>	<i>Rented</i>	<i>Owner occupied</i>	<i>Rented</i>
1-3	0.65	0.41	0.62	0.26
4	0.86	0.64	0.77	0.52
5	1.02	0.90	1.08	0.64

2.16 Applying this data to the development mix gives the projected car ownership shown in **Table 2.2**:

Table 2.2: Predicted Scheme Car Ownership (source: 2011 Census Frognal and Fitzjohn Ward)

Unit tenure and type	No of rooms	No of dwellings	Projected average ownership per household	Projected ownership for development (cars)
Private		93	0.70	65
<i>Flats</i>		91	0.70	63
1-bed	2	16	0.62	9
2-bed	3	36	0.62	24
3-bed	4	35	0.77	27
4-bed	5	4	1.08	4
<i>Houses</i>		2	0.84	2
2-bed	3	1	0.65	1
4-bed	5	1	1.02	1
Affordable		35	0.36	13
<i>Flats</i>		35	0.36	13
1-bed	2	13	0.26	3
2-bed	3	8	0.26	2
3-bed	4	14	0.52	7
TOTAL		128	0.61	78

2.17 **Table 2.2** shows that, based on the Census car ownership data, the revised level of parking provision within the proposed development at 88 spaces will satisfactorily cater for the expected demand resulting from the development and will allow some scope for fluctuation in demand.

2.18 It is further considered that the increased parking provision over that which has been consented to date, will strike a more appropriate balance between

the maximum provision permitted in accordance with LBC parking policy and anticipated demand as derived from the latest available Census data.

- 2.19 It is noted that residents local to the development raised concerns in regards to potential overspill parking associated with previous proposals for the site. This increase in parking provision associated with the site will therefore act to better ease the concerns of locals in this regard.

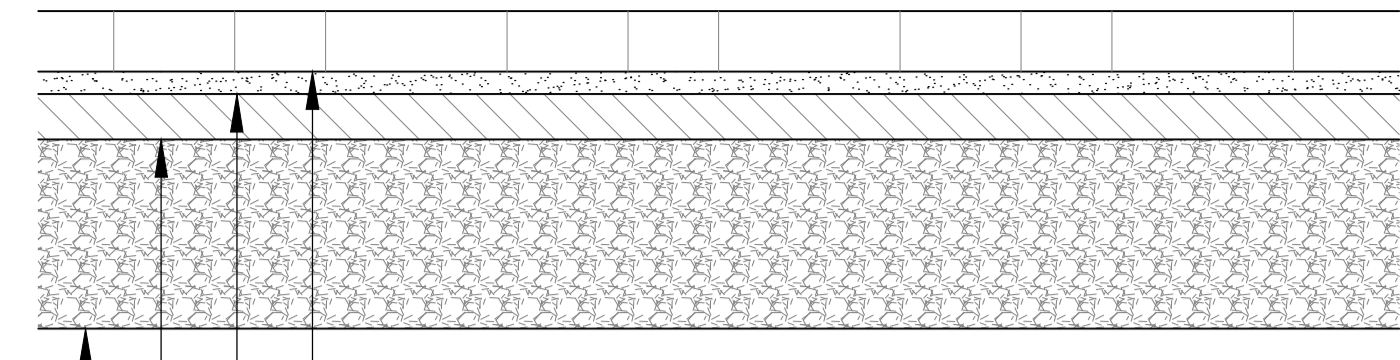
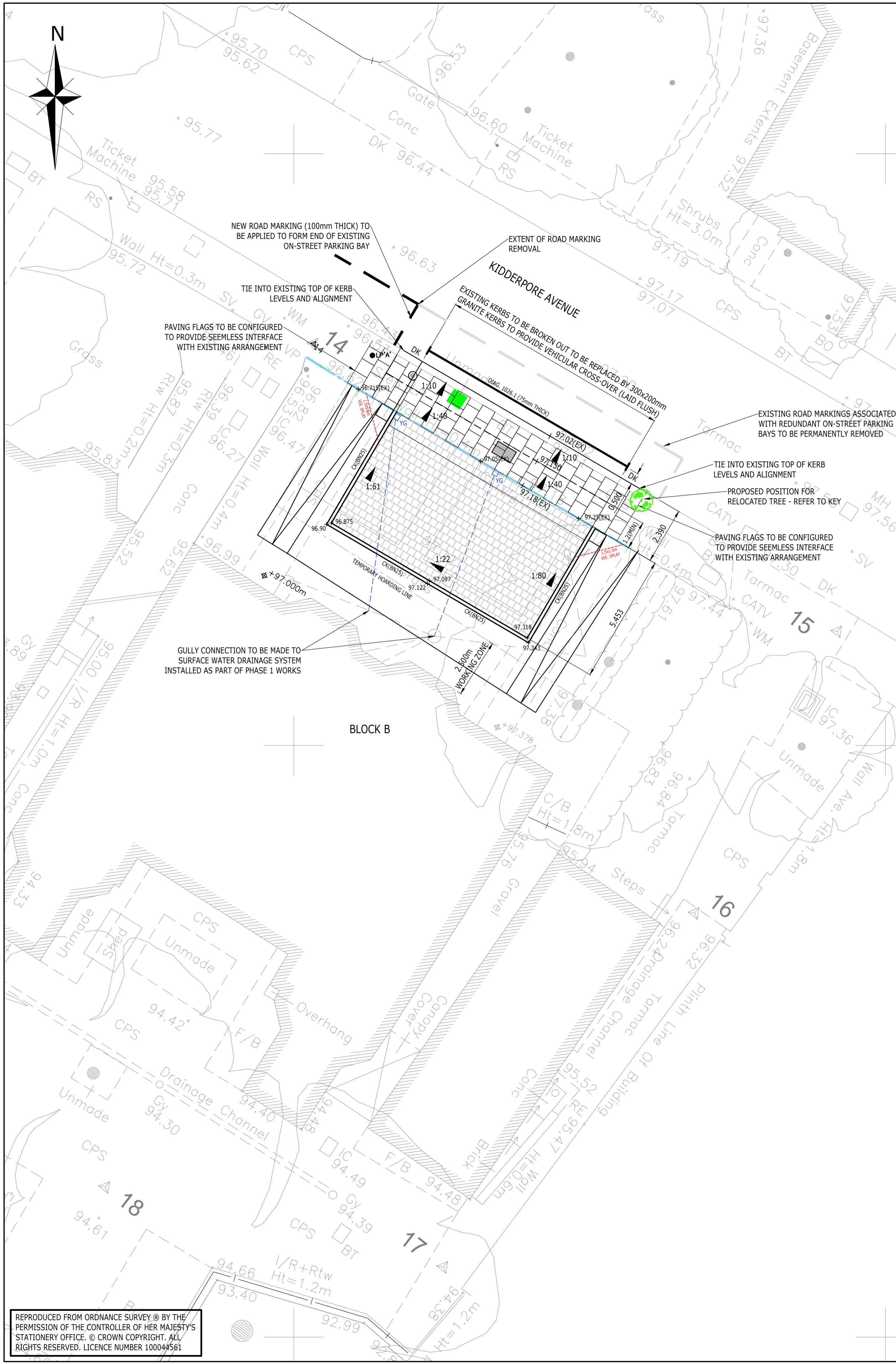
Consented Scheme

- 2.20 Within the Transport Assessment (TA) prepared by WSP Group which accompanied the consented scheme, an on-street parking survey was undertaken to review the current parking demand along Kidderpore Avenue. The TA concluded that from a total of 45 spaces available following implementation of the consented scheme, a maximum of 41 would be occupied.
- 2.21 The parking survey only considered vehicles parked along Kidderpore Avenue on the site frontage and did not review parking further east or on other local streets, where further parking space is available.
- 2.22 The revised proposals would result in a reduction in available on-street parking space available amounting to 12m, which is equivalent to two spaces. In the context of the maximum parking demand identified within the results reported in the WSP Group TA, this would still leave two spaces available along the site frontage.
- 2.23 It should however be noted that additional parking opportunities for existing residents in the vicinity are available to the east of the site on Kidderpore Avenue, and on other local streets, and so there is ample space to accommodate displaced parking arising from the removal of these on-street bays. Furthermore, the proposals add four parking spaces within the site that will satisfactorily accommodate demand arising from the proposals, and hence, no overspill is anticipated as a result.

3.0 SUMMARY AND CONCLUSIONS

- 3.1 This Transport Statement (TS) has been prepared to accompany a Section 73 application in relation to the consented redevelopment proposals of the King's College Hampstead Campus South site at Kidderpore Avenue, London.
- 3.2 The site has consent for a total of 128 dwellings (C3 Land Use Class), including a mix of affordable units and units for private sale and a total of 84 parking spaces.
- 3.3 This TS supports a Section 73 application in respect of proposals to make a minor amendment to the consented scheme involving the provision of an additional four parking spaces adjacent to Block B, to provide a total of 88 spaces on the site.
- 3.4 This TS has reviewed the Policy context, the relevant planning background, including the Transport Assessment (TA) submitted with the original scheme, and the potential parking demand from Census data in order to consider the potential impact of this amendment.
- 3.5 This review has confirmed: the proposals are in accordance with current adopted LBC planning policy and the applicable maximum parking standards; that accommodating the amendments will not have a material impact on on-street parking in the area; and that the provision will strike a better balance between maximum permitted parking levels outlined in Council parking standards and the anticipated parking demand derived from Census data on car ownership for the area. The proposals will therefore not result in a "severe" impact and as a result should not be refused on transport grounds will also act to ease the concern of local residents in respect of potential for overspill parking.
- 3.6 Having fully considered highways/transport matters in respect of the proposals, we consider that there are no reasons to object to the application on highways/transportation grounds.

Drawings



CONSTRUCTION SPECIFICATION FOR NON PERMEABLE BLOCK PAVED SHARED PRIVATE DRIVE AREAS

- PAVING SLABS**
80mm THICK PCC BLOCKS. LAYING PATTERN, COLOUR AND TYPE TO LANDSCAPE ARCHITECT'S SPECIFICATION (REFER TO HARD LANDSCAPE DRAWINGS).
- LAYING COURSE**
30mm SHARP SAND TO BS EN 12620.
- RUNNING COURSE**
80mm AC 20 DENSE BIN 100/150 REC TO BS EN 13108-1 ASPHALT CONCRETE.
- SUB-BASE**
(ASSUME 2.5% CBR FOR TENDER PURPOSES)
325mm MIN. TYPE 1 GRANULAR MATERIAL TO CLAUSE 803 OF THE SPECIFICATION FOR HIGHWAY WORKS, LAID AND COMPACTED IN TWO LAYERS.
- ALL MATERIAL SPECIFICATION AND WORKMANSHIP OF PAVING CONSTRUCTION TO BE STRICTLY IN ACCORDANCE WITH RECOMMENDATIONS BY CHARCON (OR PREFERRED MANUFACTURE)

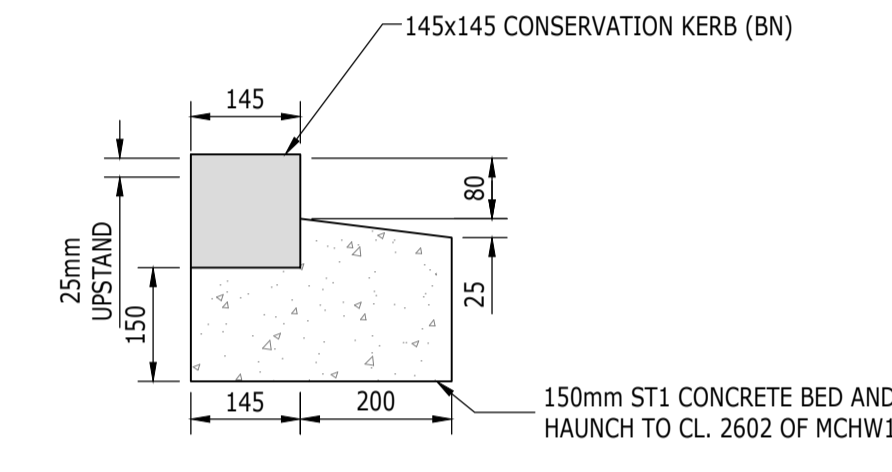
- BLOCK PAVING NOTES:**
1. ALL CONCRETE BLOCK PAVERS SHALL COMPLY WITH THE REQUIREMENTS OF BS 7533 AND BE A MINIMUM THICKNESS OF 80mm.
 2. BLOCK SURFACING SHALL BE LAID IN A 45 OR 90 DEGREE HERRINGBONE PATTERN UNLESS AGREED OTHERWISE WITH SOLDIER COURSE ALONG ALL EDGES AND SINGLE STRETCHER COURSE AROUND IRONWORK AND SERVICE COVERS.
 3. THE BLOCKS SHALL BE LAID HAND TIGHT IN THE DESIGN PATTERN, WORKING FROM AN EXISTING LAYING FACE EDGE OR EDGE RESTRAINT WHEREVER POSSIBLE. MECHANICAL FORCE SHOULD NOT BE USED TO OBTAIN TIGHT JOINTS.
 4. FULL BLOCKS SHALL BE LAID FIRST, WITH CUT BLOCKS LAID AFTERWARDS. THE ENTIRE AREA SHOULD BE COMPLETED USING FULL BLOCKS AS FAR AS IS PRACTICALLY POSSIBLE.
 5. THE MINIMUM SIZE FOR ANY CUT BLOCK SHALL BE ONE QUARTER OF A FULL BLOCK. ALL CUTS ARE TO BE MADE USING A DIAMOND EDGE CUTTER. INTILING ALONG BOUNDARIES AND AROUND OBSTRUCTIONS SHOULD PROCEED AS THE LAYING OF THE ENTIRE SURFACE CONTINUES AND MUST BE COMPLETED BEFORE COMPACTION TAKES PLACE.
 6. WHERE CUT BLOCKS ARE NOT SUITABLE AND A MORE REGULAR SHAPE IS REQUIRED AROUND OBSTRUCTIONS, EITHER DRY PACKED SAND/CEMENT MORTAR OR CONCRETE (10mm MAX AGGREGATE SIZE & 28 DAY COMPRESSIVE STRENGTH OF 40N/mm²) CAN BE USED AS INFILL. THE MORTAR OR CONCRETE SHOULD BE COLOURED TO MATCH THAT OF THE ADJACENT BLOCK PAVERS.
 7. ALL BLOCK PAVING TO BE COMPACTED BY USE OF APPROPRIATE EQUIPMENT IN ORDER TO ENSURE THE FILLING OF THE LOWER PORTION OF THE BLOCK TO BLOCK JOINT BY THE LAYING COURSE MATERIAL. TWO OR THREE PASSES OF THE COMPACTING EQUIPMENT SHOULD BE SUFFICIENT TO ACHIEVE THIS CONDITION.
 8. COMPACTION SHALL FOLLOW LAYING AS SOON AS POSSIBLE BUT SHALL NOT BE CARRIED OUT WITHIN ONE METRE OF THE LAYING FACE. AWAY FROM THIS EDGE STRIP NO AREA OF PAVING SHALL BE LEFT UNCOMPACTED AT THE COMPLETION OF THE DAYS WORK.

ALL SUB-GRADES TO BE PROOF ROLLED WITH A SUITABLE ROLLER TO IDENTIFY ANY SOFT SPOTS WITHIN THE SUB-GRADE AT FORMATION. ALL SOFT SPOTS TO BE REMOVED AND BACKFILLED WITH WELL COMPACTED TYPE 1 MATERIAL TO CLAUSE 803 OF THE SPECIFICATION FOR HIGHWAY WORKS.

WHERE CBR VALUES ARE BELOW 2% A 300mm THICK CAPPING LAYER IS TO BE PROVIDED. ALSO, IF THE SUB-GRADE IS SUSCEPTIBLE TO FROST, A CAPPING LAYER OF TYPE 6F1 MATERIAL (TO CLAUSE 613 OF THE SPECIFICATION FOR HIGHWAY WORKS) SHOULD BE PROVIDED TO INCREASE THE OVERALL CONSTRUCTION THICKNESS TO A MINIMUM OF 450mm.

CBR	Sub Base
7%-20%	100mm
5%-7%	150mm
3%-5%	250mm
2%-3%	325mm

TABLE 1 - SUB-BASE THICKNESS



KERB DETAIL-TYPE CK (BN25) (25mm UPSTAND)

IMPORTANT NOTE REGARDING SITE WON MATERIAL AS FILL

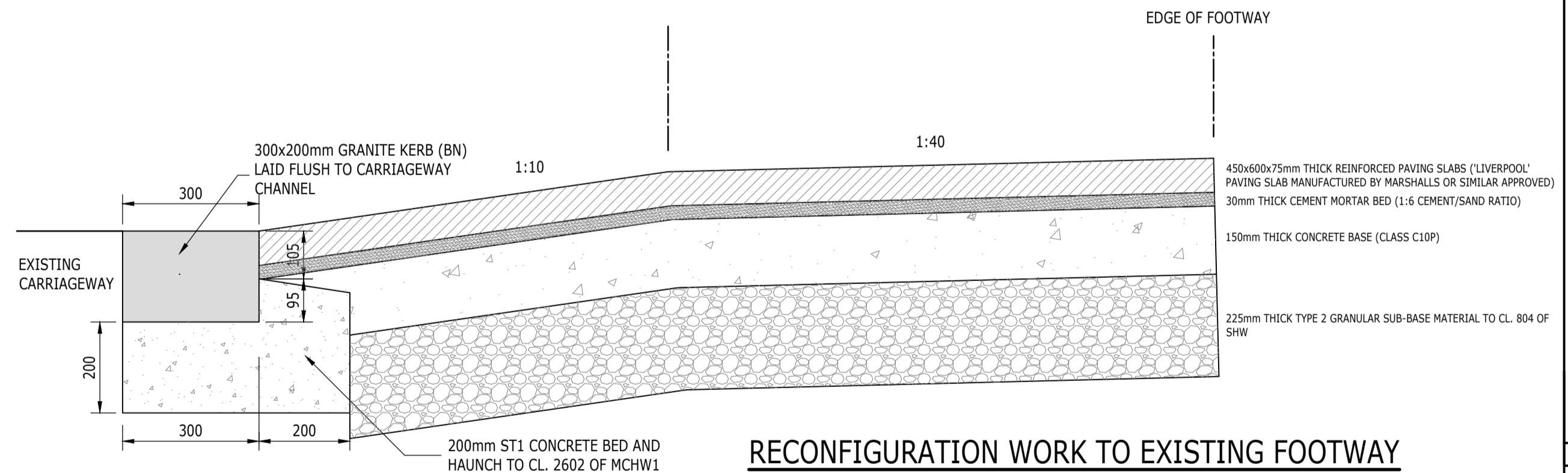
SITE WON MATERIAL TO CONFORM TO REQUIREMENTS OF CLASS 2A - WET COHESIVE MATERIAL (WITH LOWER MOISTURE CONTENT LIMIT OF -4% OF PLASTIC LIMIT), TO TABLE 6/1 600 SERIES OF MCHW1

FILL MATERIAL TO BE LAID AND COMPACTED STRICTLY IN ACCORDANCE WITH TABLE 6/4 METHOD 1 USING A VIBRATORY TAMPING ROLLER

BASED UPON A MIN CBR VALUE OF 2.5%, HAND SHEAR VANE TESTS (PILCON TYPE ONLY) TO BE CARRIED OUT AT 30m CENTRES ON FORMATION TO CONFIRM AN UNDRAINED SHEAR STRENGTH OF >60kPa

SITE WON NON GRANULAR MATERIAL

GRANULAR MADE GROUND WON FROM SITE TO BE CRUSHED FOR RE-USE AS BACKFILL (GENERAL FILL) IN ACCORDANCE WITH TABLE 6/1 600 SERIES OF MCHW1



RECONFIGURATION WORK TO EXISTING FOOTWAY TO PROVIDE VEHICULAR CROSS-OVER

- KEY:**
- EXISTING FOOTWAY CONSTRUCTION TO BE EXCAVATED TO PROVIDE VEHICULAR CROSSOVER CONSTRUCTION. CONSTRUCTION MATERIAL TO COMPRISE:
 - 450x600x75mm THICK REINFORCED PAVING SLABS ('LIVERPOOL' FLAG MANUFACTURED BY MARSHALLS OR SIMILAR APPROVED TO LOCAL AUTHORITY'S SPECIFICATION);
 - 30mm THICK CEMENT MORTAR BED (1:6 CEMENT/SAND RATIO);
 - 150mm THICK CONCRETE BASE (CLASS C10P);
 - 225mm THICK TYPE 2 GRANULAR SUB-BASE MATERIAL TO CL. 804 OF SHW
 - PROPOSED 145x145mm CONSERVATION KERB (BULLNOSED) WITH 25mm UPSTAND FOR PARKING BAY INTERFACE
 - 200x100x80mm THICK BLOCK PAVING UNIT - REFER TO DETAILS PRODUCED BY LANDSCAPE ARCHITECT
 - ASSUMED EXTENT OF PUBLIC HIGHWAY ASSOCIATED WITH THE REAR OF THE FOOTWAY TO KIDDERPORE AVENUE (TBC)
 - EXISTING COVER TO BE ADJUSTED TO SUIT VEHICULAR CROSSOVER PROFILE/LEVELS IN ACCORDANCE WITH THE UTILITY COMPANY'S SPECIFICATION
 - EXISTING LIGHTING COLUMN TO BE DISCONNECTED FROM LV ELECTRICITY SUPPLY, COLUMN TAKEN DOWN AND RELOCATED TO POSITION 'A' - ALL WORKS IN ACCORDANCE WITH THE UTILITY COMPANY'S SPECIFICATION AND REQUIREMENTS
 - EXISTING TREE TO BE REMOVED (INCLUDING ROOT SYSTEM) AND RELOCATED TO ALTERNATIVE POSITION SHOWN - SEE BELOW
 - PROPOSED POSITION FOR RELOCATED TREE - TO BE POSITIONED TO AVOID CLASH WITH ANY UTILITY PLANT PRESENT IN THE FOOTWAY. CONTRACTOR TO TRACE AND CHECK THE LOCATION OF ALL PLANT PRIOR TO WORKS

- ROAD MARKINGS:**
1. ALL ROAD MARKINGS SHALL BE IN ACCORDANCE WITH THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS 2016 AND TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
 2. ALL SURFACE MARKINGS SHALL BE SCREEN APPLIED IN THERMOPLASTIC MATERIAL COMPLYING WITH BS2622: PART 1, CLASS A. MARKING THICKNESS SHALL BE 4mm + OR - 1mm.
 3. ALL SURFACE MARKINGS SHALL BE REFLECTORISED BY MEANS OF SPHERICAL GLASS BEADS TO BS EN1423, CLASS A, PREMIXED DURING COMPOUNDING AT A RATE OF 20% BY WEIGHT AND ADDITIONALLY BY SPHERICAL GLASS BEADS TO BS EN1423, CLASS B, SURFACE APPLIED DURING APPLICATION AT A RATE OF 400-500g/m².
 4. THE SKID RESISTANCE OF ALL SURFACE MARKINGS SHALL NOT BE LESS THAN 55.
 5. EXACT LOCATIONS OF THE SURFACE MARKINGS SHALL BE AGREED ON SITE WITH THE ENGINEER PRIOR TO THEIR PERMANENT APPLICATION.

- NOTES:**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT SPECIFICATION AND ALL OTHER RELATED DRAWINGS ISSUED BY THE ENGINEER.
 2. DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
 3. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METRES UNLESS OTHERWISE STATED.
 4. ALL DIMENSIONS, LEVELS AND SURVEY GRID CO-ORDINATES ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF THE WORKS.
 5. NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS PERMITTED WITHOUT PRIOR PERMISSION FROM THE ENGINEER.

- CONSTRUCTION NOTES:**
1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY FULLY WITH THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, VOLUME ONE, SPECIFICATION FOR HIGHWAY WORKS AND THE LOCAL AUTHORITY'S SPECIFICATION FOR ROAD CONSTRUCTION AND STANDARD DETAILS.
 2. THE CONTRACTOR SHALL UNDERTAKE SUCH MATERIALS TESTING AS INDICATED IN THE SPECIFICATIONS AND SHALL INCLUDE THE COST OF TESTING IN THE TENDER.
 3. UNLESS STATED OTHERWISE, ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF AT AN APPROVED TIP OFF-SITE.
 4. THE PUBLIC HIGHWAY AND WORKS WILL BE KEPT CLEAN AND FREE OF DEBRIS BY USE OF WHEEL WASHING FACILITIES AND ROAD SWEEPERS TO THE COUNCIL'S SATISFACTION.
 5. ALL SETTING OUT SHALL BE AGREED ON-SITE WITH THE ENGINEER, PRIOR TO THE COMMENCEMENT OF THE WORKS.
 6. UPON COMPLETION OF THE WORKS, THE CONTRACTOR SHALL UNDERTAKE ALL NECESSARY MAINTENANCE REPAIRS TO RETURN THE HIGHWAY TO ITS FORMER CONDITION.
 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS FROM THE LOCAL AUTHORITY PRIOR TO COMMENCING WORKS ON THE HIGHWAY.
 8. ALL FLEXIBLE CARRIAGEWAY MATERIALS SHALL BE SUPPLIED AND LAID IN ACCORDANCE WITH BS594 PARTS 1 AND 2 AND/OR BS4987 PARTS 1 AND 2 ACCORDINGLY.
 9. ALL CONCRETE AND CONCRETE PRODUCTS BELOW GROUND LEVEL SHALL BE CLASS DS-1 AND AC1 SULPHATE RESISTANT IN ACCORDANCE BRE SPECIAL DIGEST 1.
 10. ALL SOFT SPOTS AND VOIDS SHALL BE REMOVED PRIOR TO CONSTRUCTION AND REPLACED WITH SUITABLE FILL MATERIAL AS AGREED WITH THE ENGINEER.
 11. APPROVED RESIDUAL WEED KILLER (WHICH DOES NOT CONTAIN ATRAZINE OR SIMAZINE) MUST BE APPLIED TO ALL FORMATIONS.
 12. FACES BETWEEN THE EXISTING AND PROPOSED CARRIAGEWAY CONSTRUCTION SHALL BE CLEANED OF ALL LOOSE MATERIAL AND BITUMINOUS LAYERS COATED WITH AN APPROPRIATE HOT BITUMINOUS BINDER TO CL.706.7 OF SHW.
 13. CONTRACTOR TO LOCATE THE POSITION AND DEPTH OF ALL SERVICES PRIOR TO COMMENCING SITE CLEARANCE WORKS.
 14. ALL EXISTING IRON WORK SHALL BE ADJUSTED TO SUIT PROPOSED FINISHED LEVELS USING CLASS B ENGINEERING BRICKS TO BS3921 AND/OR CEMENT MORTAR DESIGNATION (I) TO CLAUSE 2404 OF SHW.
 15. ALL FOUNDATIONS TO EXISTING KERBS TO BE REMOVED SHALL BE BROKEN OUT AND DISPOSED OF (INCLUDING THE BED AND HAUNCH).

- KERB NOTES:**
1. WHERE THE BED IS LAID IN ADVANCE OF THE KERBS, A 200 x 200mm DIA. MILD STEEL SOWEL BAR WILL BE REQUIRED IN THE BACKING AT 600mm CENTRES. KERBS SHALL BE BEDDED ON 100mm THICK CEMENT MORTAR, DESIGNATION (I) TO CL.2404 OF SHW.
 2. KERBS SHALL BE LAID WITH DRY JOINTS AND CLOSELY BUTTED TO ADJACENT KERBS.
 3. CUTTING OF KERBS SHALL BE OF MECHANICAL MEANS TO THE APPROVAL OF THE ENGINEER.
 4. THE LENGTH OF ANY KERB SHALL NOT BE LESS THAN 300mm.
 5. ALL KERBS AND EDGINGS SHALL COMPLY WITH BS7263 PART 3:2001.

- CDM NOTES:**
1. THE ATTENTION OF THE CLIENT AND THE PRINCIPAL CONTRACTOR IS DRAWN TO THE FOLLOWING POTENTIAL RISKS IN CONDUCTION WITH THE PROPOSED ON-SITE AND OFF-SITE WORKS AS DESIGNED FOR THIS PROJECT.
 2. WORKS IN THE VICINITY OF LIVE SERVICES INCLUDING GAS, ELECTRICITY AND BT WILL BE NECESSARY AND THE ADVICE OF ALL STATUTORY SERVICE COMPANIES MUST BE SOUGHT BEFORE ANY WORKS COMMENCE.
 3. WORKS WITHIN AND ABUTTING THE EXISTING HIGHWAY WILL ENTAIL TRAFFIC HAZARDS AND ALL APPROPRIATE SAFETY MEASURES INCLUDING BARRIERS, SIGNS AND LIGHTING MUST BE UNDERTAKEN TO THE APPROVAL OF THE LOCAL AUTHORITY, THE HIGHWAY AUTHORITY AND THE POLICE DEPARTMENT.
 4. HAZARDOUS MATERIALS INCLUDING CEMENT AND BITUMINOUS MATERIALS ARE SPECIFIED AND THE MANUFACTURER'S ADVICE ON SAFE HANDLING PROCEDURES MUST BE OBTAINED AND MADE CLEAR TO ALL OPERATIVES.
 5. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING ALL EXISTING SERVICES WITHIN THE VICINITY OF THE WORKS HAND DUG AND ENSURE THESE ARE PROTECTED THROUGHOUT THE DURATION OF THE WORKS. ALL UTILITY PLANT SHOULD BE CLEARLY MARKED ON THE GROUND PRIOR TO COMMENCEMENT OF THE WORKS.
 6. THE CONTRACTOR MUST ENSURE ALL WORKING AREAS ARE FULLY SECURE.
 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIAISON WITH THE RELEVANT BUS COMPANIES TO ENSURE ALL ROUTES ARE MAINTAINED DURING THE HIGHWAY WORKS.

- TRAFFIC MANAGEMENT:**
1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A SATISFACTORY TRAFFIC MANAGEMENT SYSTEM FOR THE DURATION OF THE WORKS.
 2. ALL TRAFFIC MANAGEMENT PROPOSALS SHALL BE SUBMITTED TO AND AGREED WITH THE LOCAL AUTHORITY AND POLICE CONSTABULARY PRIOR TO IMPLEMENTATION.

ISSUED FOR APPROVAL

Rev	Description	Drn	Chk	App	Date
A	PARKING BAYS RECONFIGURED.	SJB	MNR	SJB	12/06/17

ARDENT CONSULTING ENGINEERS

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worksafe consultant
www.smasid.com

SSIP
Safely Managed
Professional Institution

Client
BARRATT LONDON

Project Title:
PHASE 1 KIDDERPORE AVENUE LONDON

Drawing Title:
BLOCK B: ADDITIONAL PARKING BAYS

A1 Scale	Date	Designed by
1:100	09.05.17	SJB

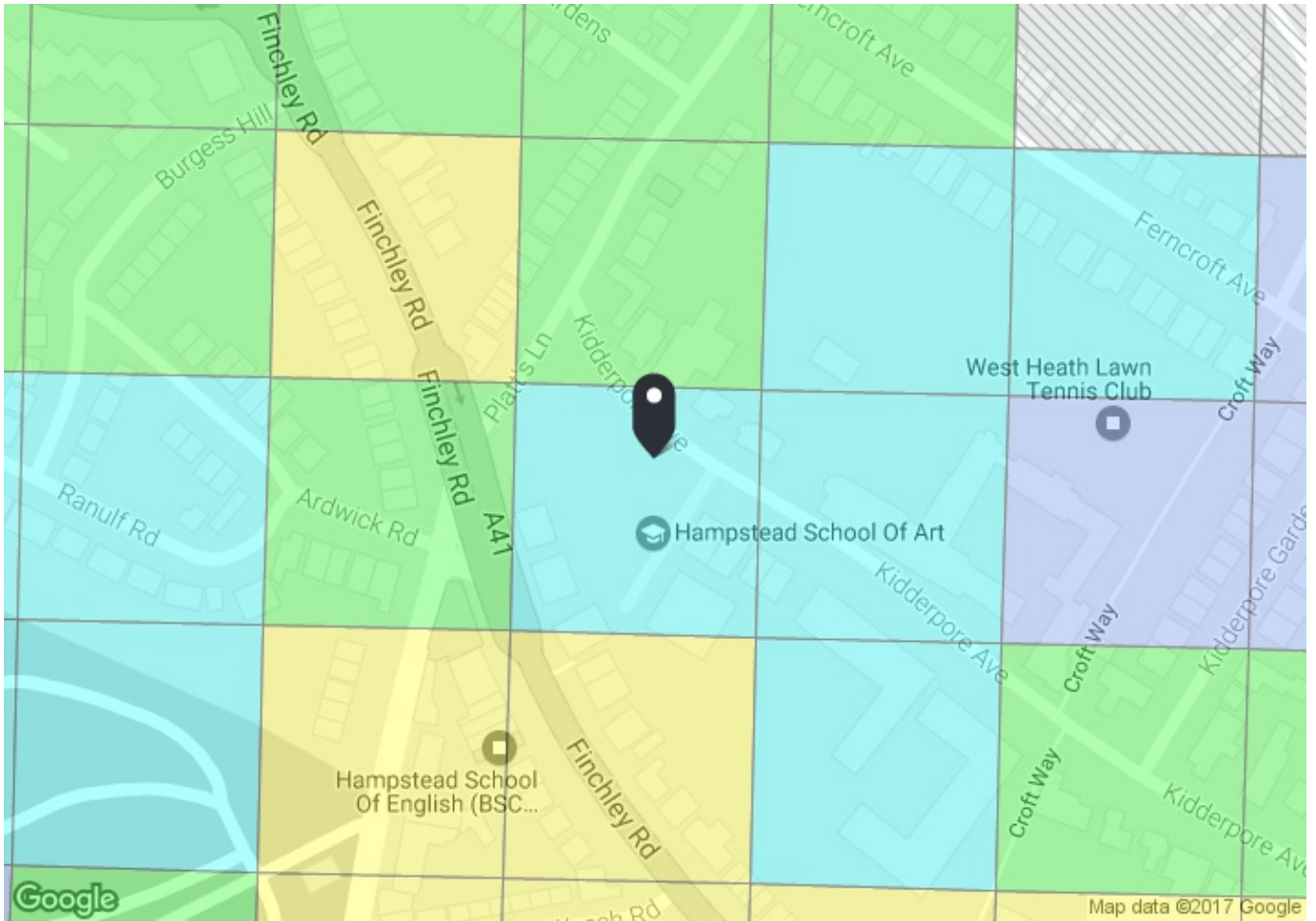
Drawn by	Checked by	Approved by
SDM	MNR	SJB

Drawing Number
K641/470

Rev
A

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Appendix A
PTAL



PTAL output for Base Year

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14 Kilderpore Ave, London NW3 7SU, UK
Easting: 525254, Northing: 185865

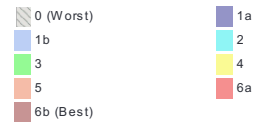
Grid Cell: 108654

Report generated: 05/05/2017

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

Map key - PTAL



Map layers

 PTAL (cell size: 100m)

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	FINCHLEY RD PLATTS LA	113	313.76	7	3.92	6.29	10.21	2.94	0.5	1.47
Bus	FINCHLEY RD PLATTS LA	82	313.76	8.75	3.92	5.43	9.35	3.21	0.5	1.6
Bus	FINCHLEY RD PLATTS LA	13	313.76	8	3.92	5.75	9.67	3.1	0.5	1.55
Bus	FORTUNE GN R FINCHLEY RD	328	283.03	9	3.54	5.33	8.87	3.38	1	3.38
Total Grid Cell AI:										8.01

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Appendix B
Census Data

		Total: Car or van availability	No cars or vans in household	1 car or van in household	2 cars or vans in household	3 or more cars or vans in household		No cars or vans in household	1 car or van in household	2 cars or vans in household	3 or more cars or vans in household	Average cars/household
E36007162 Frogna and Fi Total: Accommodation type	Total: Tenure	4,940	2,012	2,056	676	196		41%	42%	14%	4%	0.81
E36007162 Frogna and Fi Total: Accommodation type	Total: Tenure	1,347	940	360	41	6		70%	27%	3%	0%	0.34
E36007162 Frogna and Fi Total: Accommodation type	Total: Tenure	1,131	507	537	74	13		45%	47%	7%	1%	0.64
E36007162 Frogna and Fi Total: Accommodation type	Total: Tenure	1,095	331	571	166	27		30%	52%	15%	2%	0.90
E36007162 Frogna and Fi Total: Accommodation type	Total: Tenure	468	129	238	87	14		28%	51%	19%	3%	0.97
E36007162 Frogna and Fi Total: Accommodation type	Total: Tenure	223	44	98	69	12		20%	44%	31%	5%	1.22
E36007162 Frogna and Fi Total: Accommodation type	Total: Tenure	676	61	252	239	124		9%	37%	35%	18%	1.63
E36007162 Frogna and Fi Total: Accommodation type	Owned: Owned outright or with a mortgage or loan	2,429	543	1,190	532	164		22%	49%	22%	7%	1.13
E36007162 Frogna and Fi Total: Accommodation type	Owned: Owned outright or with a mortgage or loan	298	144	127	23	4		48%	43%	8%	1%	0.62
E36007162 Frogna and Fi Total: Accommodation type	Owned: Owned outright or with a mortgage or loan	526	174	300	49	3		33%	57%	9%	1%	0.77
E36007162 Frogna and Fi Total: Accommodation type	Owned: Owned outright or with a mortgage or loan	615	126	345	120	24		20%	56%	20%	4%	1.07
E36007162 Frogna and Fi Total: Accommodation type	Owned: Owned outright or with a mortgage or loan	277	48	153	69	7		17%	55%	25%	3%	1.13
E36007162 Frogna and Fi Total: Accommodation type	Owned: Owned outright or with a mortgage or loan	162	22	66	62	12		14%	41%	38%	7%	1.40
E36007162 Frogna and Fi Total: Accommodation type	Owned: Owned outright or with a mortgage or loan	551	29	199	209	114		5%	36%	38%	21%	1.74
E36007162 Frogna and Fi Total: Accommodation type	Shared ownership; rented and living rent free	2,511	1,469	866	144	32		59%	34%	6%	1%	0.50
E36007162 Frogna and Fi Total: Accommodation type	Shared ownership; rented and living rent free	1,049	796	233	18	2		76%	22%	2%	0%	0.26
E36007162 Frogna and Fi Total: Accommodation type	Shared ownership; rented and living rent free	605	333	237	25	10		55%	39%	4%	2%	0.52
E36007162 Frogna and Fi Total: Accommodation type	Shared ownership; rented and living rent free	480	205	226	46	3		43%	47%	10%	1%	0.68
E36007162 Frogna and Fi Total: Accommodation type	Shared ownership; rented and living rent free	191	81	85	18	7		42%	45%	9%	4%	0.74
E36007162 Frogna and Fi Total: Accommodation type	Shared ownership; rented and living rent free	61	22	32	7	0		36%	52%	11%	0%	0.75
E36007162 Frogna and Fi Total: Accommodation type	Shared ownership; rented and living rent free	125	32	53	30	10		26%	42%	24%	8%	1.14
E36007162 Frogna and Fi House or bungalow	Total: Tenure	971	152	404	292	123		16%	42%	30%	13%	1.40
E36007162 Frogna and Fi House or bungalow	Total: Tenure	52	28	22	2	0		54%	42%	4%	0%	0.50
E36007162 Frogna and Fi House or bungalow	Total: Tenure	58	22	30	6	0		38%	52%	10%	0%	0.72
E36007162 Frogna and Fi House or bungalow	Total: Tenure	157	38	87	31	1		24%	55%	20%	1%	0.97
E36007162 Frogna and Fi House or bungalow	Total: Tenure	97	24	52	20	1		25%	54%	21%	1%	0.98
E36007162 Frogna and Fi House or bungalow	Total: Tenure	79	8	29	35	7		10%	37%	44%	9%	1.52
E36007162 Frogna and Fi House or bungalow	Total: Tenure	528	32	184	198	114		6%	35%	38%	22%	1.75
E36007162 Frogna and Fi House or bungalow	Owned: Owned outright or with a mortgage or loan	704	70	269	250	115		10%	38%	36%	16%	1.58
E36007162 Frogna and Fi House or bungalow	Owned: Owned outright or with a mortgage or loan	20	9	2	0	0		45%	45%	10%	0%	0.65
E36007162 Frogna and Fi House or bungalow	Owned: Owned outright or with a mortgage or loan	22	7	11	4	0		32%	50%	18%	0%	0.86
E36007162 Frogna and Fi House or bungalow	Owned: Owned outright or with a mortgage or loan	85	18	48	18	1		21%	56%	21%	1%	1.02
E36007162 Frogna and Fi House or bungalow	Owned: Owned outright or with a mortgage or loan	54	11	28	14	1		20%	52%	26%	2%	1.09
E36007162 Frogna and Fi House or bungalow	Owned: Owned outright or with a mortgage or loan	71	5	24	35	7		7%	34%	49%	10%	1.62
E36007162 Frogna and Fi House or bungalow	Owned: Owned outright or with a mortgage or loan	452	20	149	177	106		4%	33%	39%	23%	1.82
E36007162 Frogna and Fi House or bungalow	Shared ownership; rented and living rent free	267	82	135	42	8		31%	51%	16%	3%	0.91
E36007162 Frogna and Fi House or bungalow	Shared ownership; rented and living rent free	32	19	13	0	0		59%	41%	0%	0%	0.41
E36007162 Frogna and Fi House or bungalow	Shared ownership; rented and living rent free	36	15	19	2	0		42%	53%	6%	0%	0.64
E36007162 Frogna and Fi House or bungalow	Shared ownership; rented and living rent free	72	20	39	13	0		28%	54%	18%	0%	0.90
E36007162 Frogna and Fi House or bungalow	Shared ownership; rented and living rent free	43	13	24	6	0		30%	56%	14%	0%	0.84
E36007162 Frogna and Fi House or bungalow	Shared ownership; rented and living rent free	7	3	5	0	0		38%	63%	0%	0%	0.63
E36007162 Frogna and Fi House or bungalow	Shared ownership; rented and living rent free	76	12	35	21	8		16%	46%	28%	11%	1.33
E36007162 Frogna and Fi Flat, maisonette or apartment	Total: Tenure	3,969	1,860	1,652	384	73		47%	42%	10%	2%	0.66
E36007162 Frogna and Fi Flat, maisonette or apartment	Total: Tenure	1,295	912	338	39	6		70%	26%	3%	0%	0.34
E36007162 Frogna and Fi Flat, maisonette or apartment	Total: Tenure	1,073	485	507	68	13		45%	47%	6%	1%	0.64
E36007162 Frogna and Fi Flat, maisonette or apartment	Total: Tenure	938	293	484	135	26		31%	52%	14%	3%	0.89
E36007162 Frogna and Fi Flat, maisonette or apartment	Total: Tenure	371	105	186	67	13		28%	50%	18%	4%	0.97
E36007162 Frogna and Fi Flat, maisonette or apartment	Total: Tenure	144	36	69	34	5		25%	48%	24%	3%	1.06
E36007162 Frogna and Fi Flat, maisonette or apartment	Total: Tenure	148	29	68	41	10		20%	46%	28%	7%	1.22
E36007162 Frogna and Fi Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	1,725	473	921	282	49		27%	53%	16%	3%	0.95
E36007162 Frogna and Fi Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	278	135	118	21	4		49%	42%	8%	1%	0.62
E36007162 Frogna and Fi Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	504	167	289	45	3		33%	57%	9%	1%	0.77
E36007162 Frogna and Fi Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	530	108	297	102	23		20%	56%	19%	4%	1.08
E36007162 Frogna and Fi Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	223	37	125	55	6		17%	56%	25%	3%	1.13
E36007162 Frogna and Fi Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	91	17	42	27	5		19%	46%	30%	5%	1.22
E36007162 Frogna and Fi Flat, maisonette or apartment	Owned: Owned outright or with a mortgage or loan	99	9	50	32	8		9%	51%	32%	8%	1.39
E36007162 Frogna and Fi Flat, maisonette or apartment	Shared ownership; rented and living rent free	2,244	1,387	731	102	24		62%	33%	5%	1%	0.45
E36007162 Frogna and Fi Flat, maisonette or apartment	Shared ownership; rented and living rent free	1,017	777	220	18	2		76%	22%	2%	0%	0.26
E36007162 Frogna and Fi Flat, maisonette or apartment	Shared ownership; rented and living rent free	569	318	218	23	10		56%	38%	4%	2%	0.52
E36007162 Frogna and Fi Flat, maisonette or apartment	Shared ownership; rented and living rent free	408	185	187	33	3		45%	46%	8%	1%	0.64
E36007162 Frogna and Fi Flat, maisonette or apartment	Shared ownership; rented and living rent free	148	68	61	12	7		46%	41%	8%	5%	0.72
E36007162 Frogna and Fi Flat, maisonette or apartment	Shared ownership; rented and living rent free	53	19	27	7	0		36%	51%	13%	0%	0.77
E36007162 Frogna and Fi Flat, maisonette or apartment	Shared ownership; rented and living rent free	49	20	18	9	2		41%	37%	18%	4%	0.86