25 MAR 2019

David Chidlow
Aquinna Homes Plc
Highway House
17 London End
Beaconsfield
Buckinghamshire
HP9 2HN

19th March 2019

Our ref. LP1412/OTS/1

Dear David

Connaught Close, Hillingdon, UB8 3DX

Statement on Removal of Oil Tank

1 Introduction

The National House-Building Council (NHBC) requires Aquinna Homes plc to provide confirmation that an oil above ground storage tank (AST) has been removed at Connaught Close, Hillingdon, Uxbridge, UB8 3DX (Figure 1 of Appendix A) and that the underlying ground has been remediated as per Leap Environmental's (LEAP) previous site investigations reported in the following documents:

- LEAP: *'Site Investigation Report at Punters Garage, New Road Hillingdon UB8 3DX'*, dated 30th August 2017 (Ref: LP1412/1).
- LEAP: *'Supplementary Site Investigation at Punters Garage, New Road Hillingdon UB8 3DX'*, letter report dated 11th January 2018 (Ref: BCG/vlw/LP1412/Supp.SI).

The requirements are set out in NHBC's correspondence with Aquinna Homes plc ref. 01169/2017/HO dated 12 March 2019.

2 Background

The site was formerly a garage and MOT station, is irregularly-shaped and covers approximately 0.12 ha. It is subject to approved planning application 4519/APP/2017/361 for the demolition of the industrial units and the construction of eight dwellings (4 x 3-bed houses and 4 x 1-2 bed apartments) with associated parking, amenity space and access. Landscaping includes private gardens and open communal space (estimated to be approximately 450 sq.m in area) as per the attached layout in Figure 2 of Appendix A.

The LEAP reports were submitted by Aquinna Homes plc to successfully discharge parts a). and b). of planning condition 10 relating to land contamination (desk study and site investigation).

In relation to the oil AST, the findings of these reports were that a localised area of black staining and moderate hydrocarbon odours was present at approximately 1.0 to 1.5 m begl (below existing ground level) in the immediate vicinity of the tank within WS02 and TP104 (Figure 3). The laboratory analysis detected total petroleum hydrocarbons in this area of around 1,000 $mgkg^{-1}$, comprising mainly >C21-C35 aliphatic and aromatic fractions. The other investigation locations did not encounter any evidence of petroleum hydrocarbon contamination in the field or the laboratory analytical results, indicating that the impact was localised.

No significant risks to human health were determined from the available data, and LEAP recommended that the black and odorous material was removed during the redevelopment as a precaution to protect controlled waters, the site being located on the Boyn Hill Gravel Member Secondary A aquifer.

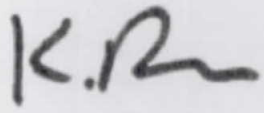
3 Evidence of Removal Works

LEAP was not in attendance during the redevelopment of the site. Aquinna Homes plc has provided LEAP with information, as summarised below, with which to collate the evidence of compliance with NHBC's requirements. Photographs are provided in Appendix B and engineers drawings in Appendix C.

- Based on the site investigation findings, and site layout drawings, the area of contamination is expected to be restricted to the southern half of Plot 6 including the front garden and permeable block paved area to the south (see Figure 4) and at a depth of c.0.9 to 1.5 m bgl.
- Photograph 1 shows the small oil AST in situ prior to the demolition of the site.
- Photographs 2 to 6 show excavation of the ground in the area of the tank during redevelopment.
- The finished ground levels were reduced by approximately 100mm.
- Drawing 5641:102A shows that finished foundation level for Plots 5 and 6 is 45.15m and the minimum founding level is 43.4m, which corresponds to a minimum excavation of 1.75 m bgl to comply with the architectural designs.
- Section D-D on Drawing 5641-20E shows that the construction for the permeable block paving was required to be 1.26 m deep. Taking into account the reduced finished levels, this would have been expected to result in an excavation of 1.36 m across this area.

We hope that this information is sufficient to satisfy the NHBC requirements for Part C Condition 2 of ref. 01169/2017/HO dated 12 March 2019.

Yours sincerely



Kate Baker

Leap Environmental

Wyvols Court, Swallowfield, Reading, RG7 1WY

Appendix A – Figures

Appendix B – Photographs

Appendix C – Engineering Drawings

Limitations

This letter has been prepared by Leap Environmental Ltd on the basis of information received from a variety of sources which Leap Environmental Ltd believes to be accurate. Nevertheless, Leap Environmental Ltd cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Leap Environmental Ltd has used all reasonable skill, care and diligence in the execution of this work, taking into account the manpower and resources devoted to it in agreement with the Client. Although every reasonable effort has been made to obtain all relevant information, all potential liabilities associated with the sites may not necessarily have been revealed.

The inspections undertaken were visual only. No specific pressure, integrity or destructive testing nor measurements were undertaken as part of this work.

This document is confidential to the Client, and Leap Environmental Ltd accepts no responsibility whatsoever to third parties to whom this document, or any part thereof, is made known, unless formally agreed by Leap Environmental Ltd beforehand. Any such party relies upon the document at their own risk.

APPENDIX A – FIGURES

Figures



Site Boundary

Image from Bing Maps

leap environmental	**Client:**	Aquinna Homes plc	**Title:**	Site Location Plan	**Project:** LP1412
	Project:	Connaught Close, Hillingdon, UB8 3DX	**Date:**	15th March 2019	**Figure No.:** 1

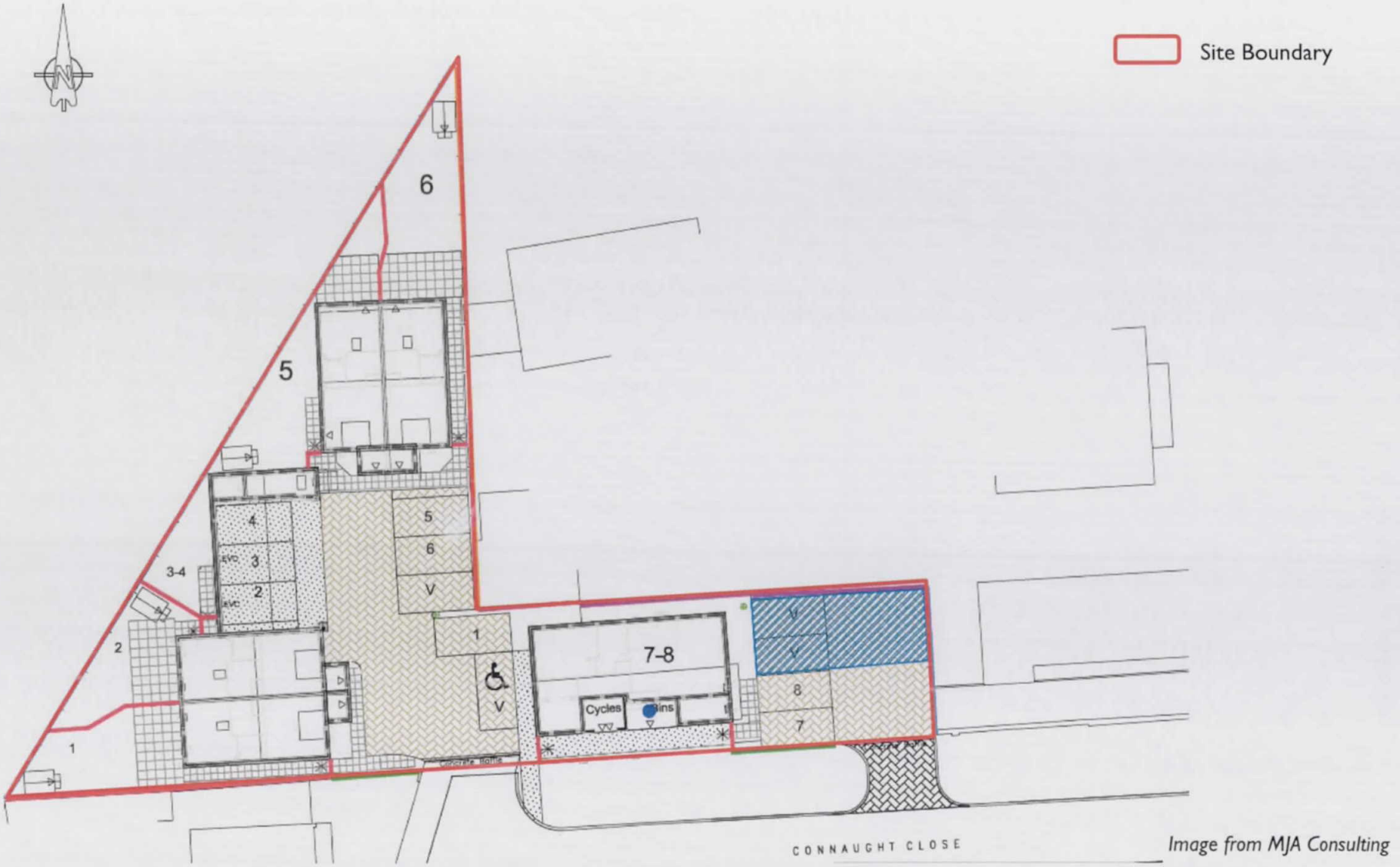
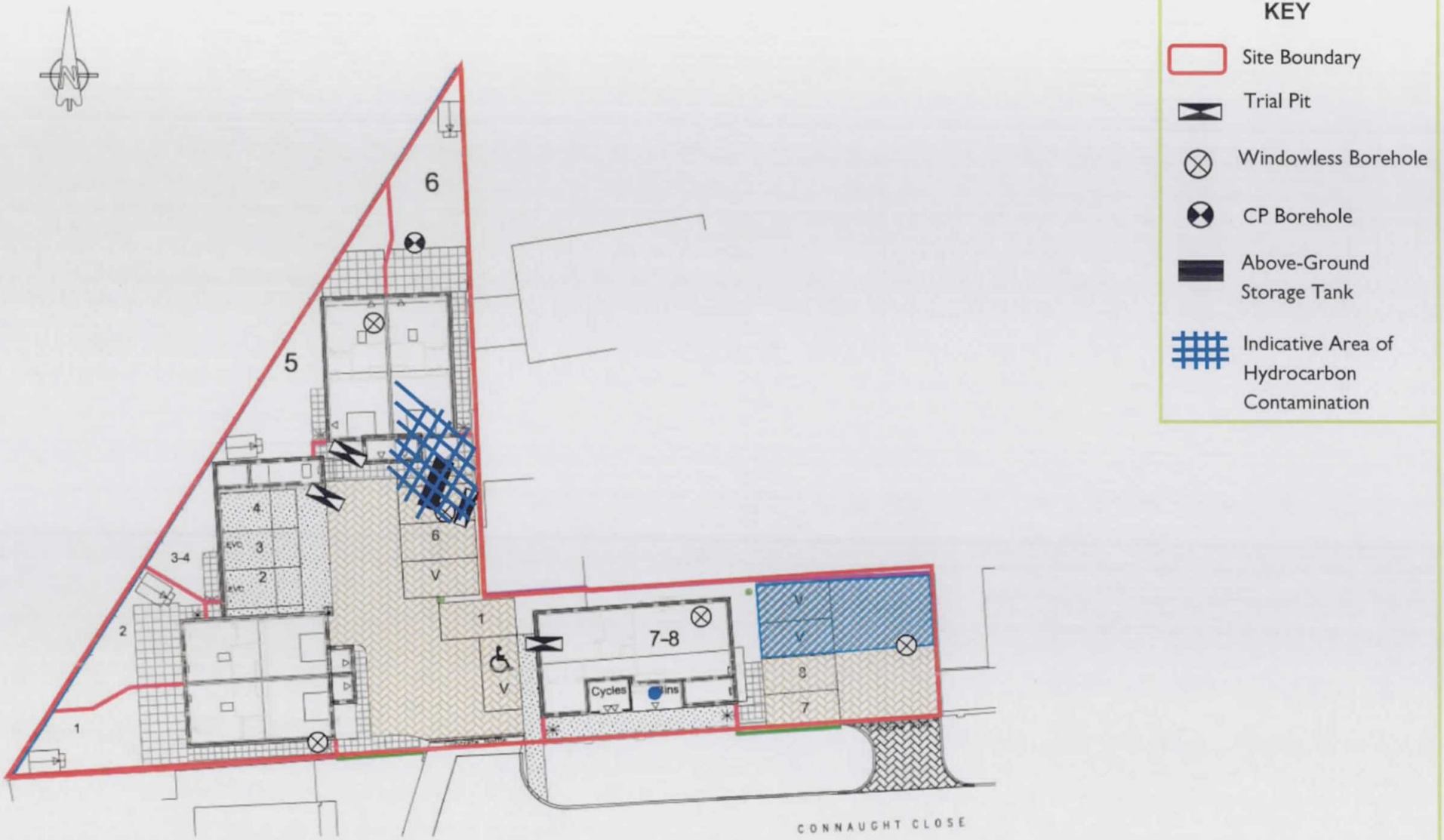


Image from MJA Consulting

Client:	Aquinna Homes plc	**Title:**	Proposed Site Layout	**Project:**	LP1412
Project:	Connaught Close, Hillingdon, UB8 3DX	**Date:**	15th March 2019	**Figure No.:**	2



leap environmental	**Client:**	Aquinna Homes plc	**Title:**	Plan of all Intrusive Holes on Site	**Project:** LP1412
	Project:	Connaught Close, Hillingdon, UB8 3DX	**Date:**	March 2019	**Figure No.:** 3



leap environmental	**Client:**	Aquinna Homes plc	**Title:**	Intrusive Location Plan in Relation to the Proposed layout	**Project:** LP1412
	Project:	Connaught Close, Hillingdon, UB8 3DX	**Date:**	March 2019	**Figure No.:** 4

APPENDIX B – PHOTOGRAPHS

Photographs



Photo 1 – Former above-ground storage tank in the north of the site (taken during original site investigation)



Photo 2 – Excavation of foundations for Plots 5 and 6



Photo 3 – Construction of foundations in Plots 5 and 6 and paved area to the front of the properties.



Photo 4 – Foundations of Plots 1 and 2 in the foreground with Plots 5 and 6 in the top left-hand corner



Photo 5 – Foundations of Plots 5 and 6 to the left with the paved block area beyond (facing south).



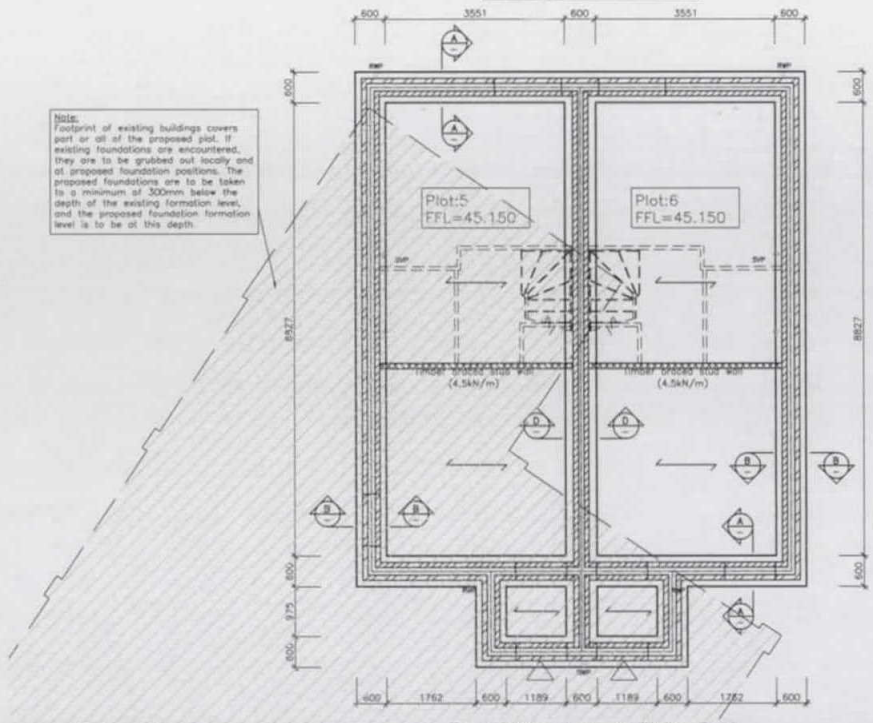
Photo 6 – Foundations of Plots 5 and 6 with the paved block area beyond (facing southwest).

APPENDIX C – ENGINEERING DRAWINGS

Engineering Drawings

Mass Concrete Footings
MIN founding level 43.400m throughout
(Deepen if required strata not reached)

Note:
Footprint of existing buildings covers part or all of the proposed plot. If existing foundations are encountered, they are to be grubbed out locally and at proposed foundation positions. The proposed foundations are to be taken to a minimum of 300mm below the depth of the existing formation level, and the proposed foundation formation level is to be at this depth.



Foundation Layout Plots 5–6

(Scale 1:50)
Layout based on aap architecture
drawing P1327/50/100 Rev C Dated 13/11/17

Masonry Specification

All masonry below DPC to be in accordance with BS EN 771.

Brickwork to be durability designations F2, S2 to be laid in class (ii) M6 mortar to BS 5628.

All sub structure blockwork to be in accordance with BS 5628 and NHBC technical standards.

Minimum requirements of blockwork to not be less than 1500kg/m3 or 7N/mm2.

Lean mix infill to be used in accordance with standards; at least 225mm below DPC level.

Foundation Notes

1. Dimensions must not be scaled from this drawing.

2. This drawings must be read in conjunction with the Architect's drawings.

3. All foundations shall be a minimum 450mm wide and a minimum 300mm thick unless noted otherwise.

4. Foundations have been designed using the following information:

a). Ground Investigation Report: Site Investigation Report at Punters Garage New Road, Hillingdon, UB8 3DX. Reference: LP1412/1 dated 30 August 2017

b). Soil conditions: Made Ground Overlying Gravel/Sand. The Clay soil is defined as having no shrinkage potential.

c). A safe bearing pressure of 175 kN/m² for natural virgin material.

The Engineer shall be informed of the location and species of any new trees to be planted as they may generate variations in foundation depth requirements. Alternatively, relocation of the new trees may be required.

5. All foundations shall be central about the walls above unless noted otherwise. The setting out of the foundations in relation to the masonry is as shown on the relevant plans and sections. The Engineer shall be informed of any variations required on site to allow for possible revision of the foundation setting out details.

6. The depths of the foundations shall conform to whichever of the following criteria generates the greater depth:–

a). To a min. 1000mm below the existing ground levels

b). To a min. 1000mm below the new ground levels

c). To depths as shown on The Engineer's drawings.

d). To a min 500 mm below any tree roots exposed during excavations, where founded in shrinkable material.

e). Foundations adjacent to pipe runs or manholes are to have their formation level set above the invert level no higher than the equivalent of the horizontal distance between the pipe/excavation trench and the foundation, minus 500 mm.

f). A minimum of 200mm into undisturbed natural ground.

Any existing foundations encountered are to be grubbed out locally at new foundation positions, to 300mm below the depth of the existing formation level, and the new foundation formation level is to be at this depth, with stepping to adjoining foundations accordingly (refer to note 7).

7. Construction joints and steps in foundations are to be in accordance with NHBC standards Chapter 4.4. All foundations shall have a common top level unless noted otherwise.

8. All excavations shall be kept free from water, loose material and rubbish etc. The formation level shall not be exposed until the day of the concrete pour.

9. Foundation concrete to be mix FND2 to BS 8500 & BS 206–1 and classes DS–2, AC–1s & DC–2 in accordance with BRE Special Digest No 1: Part 1. Concrete test samples shall be provided in accordance with the requirements of BS EN 12350–1.

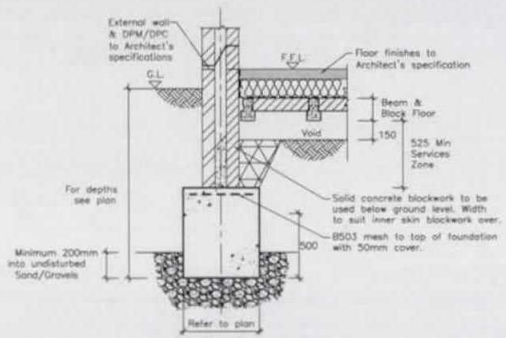
10. The layout of any existing drainage or services is to be confirmed upon excavation. Split sleeve ducting is to be used where services are to remain, and any new drainage or services pass through new foundation concrete. Ducting should be suitably sized to provide a minimum 50mm clear void around the pipe or service. The void may be formed using expanded polystyrene or similar material.

11. Where foundations require compressible material, this shall be provided to the internal face of external foundations to within 500 mm of the base. The compressible material shall be 'Claymaster' by 'Cordek Ltd'. Where a slip membrane is required, this shall be 'Correx' sheeting by Cordek Ltd (alternative materials may be used with the Engineer's approval). Thicknesses of compressible and slip materials shall be as shown on the relevant sections on the Engineer's drawings. All products shall be installed in strict accordance with the manufacturer's instructions and shall be provided with adequate temporary support during pouring of concrete to ensure restraint against movement.

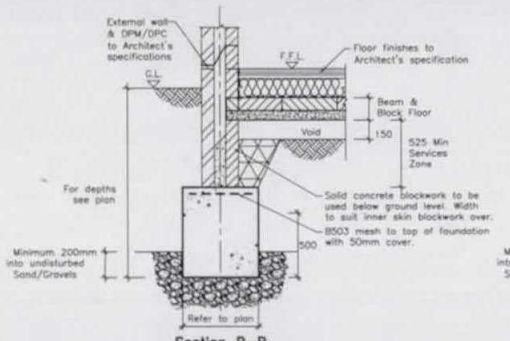
12. The Building Inspector and Engineer are to be afforded the opportunity of inspecting the formation level of any foundations prior to the placing of the concrete. Allow a minimum 24 hours notice for inspection.

KEY

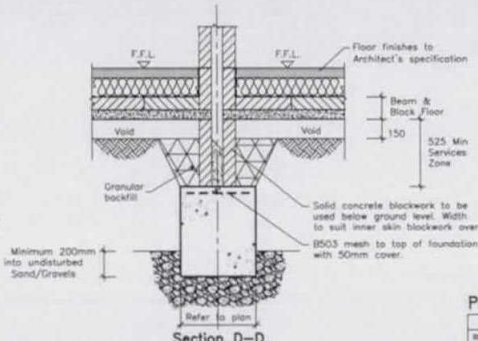
- Denotes span of precast beam & block ground floor. (To specialist manufacturer's specification).
- Denotes Non–load bearing partitions
- Denotes front door threshold.
- Denotes existing building.



Section A–A
Through External Wall
Floor Beams Span Adjacent to wall
(1:20)



Section B–B
Through External Wall
Floor Beams Span Onto wall
(1:20)



Section D–D
(1:20)

PRELIMINARY FOR TENDER

REV. No.	DATE	DESCRIPTION	INITIALS
A	30/11/17	Revised to suit latest Architect's layout	JP

Client

MJA CONSULTING
CIVIL AND STRUCTURAL ENGINEERS

Project: New Road, Hillingdon

Title: Plots 5–6 Foundation Layout

Scale: 1:50/1:20@A1 | Date: Sept'17 | Drawing No.: 5641:102 | Rev: A

Checked | Drawn: JP

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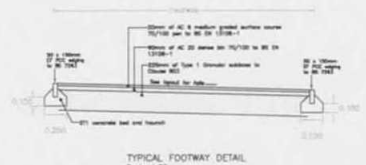
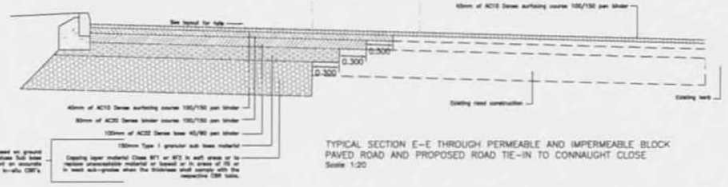
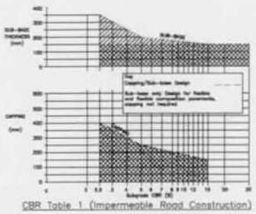


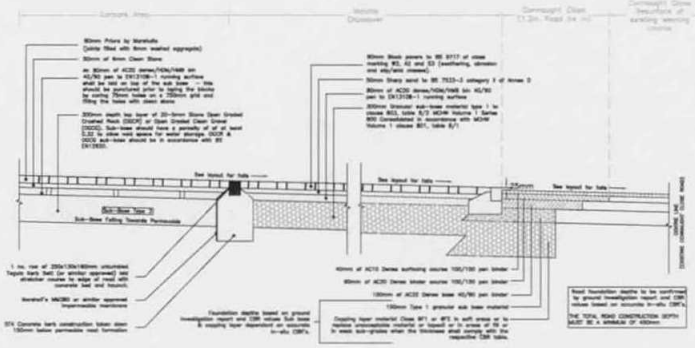
TYPICAL FOOTWAY DETAIL
Scale 1:20



TYPICAL SECTION E–E THROUGH PERMEABLE AND IMPERMEABLE BLOCK PAVED ROAD AND PROPOSED ROAD TIE–IN TO CONNAUGHT CLOSE
Scale 1:20



CBR Table 1 (Impermeable Road Construction)



TYPICAL SECTION C–C THROUGH PERMEABLE AND IMPERMEABLE BLOCK PAVED ROAD AND PROPOSED ROAD TIE–IN TO CONNAUGHT CLOSE
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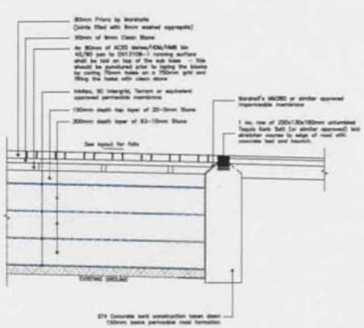
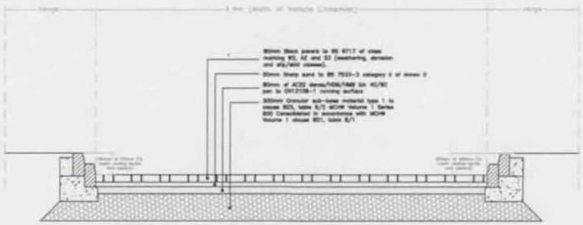
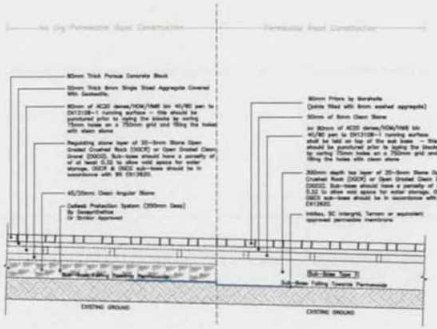


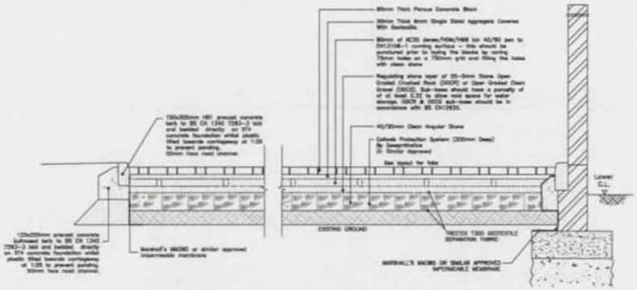
TYPICAL SECTION D–D THROUGH PERMEABLE BLOCK PAVING
Scale 1:20



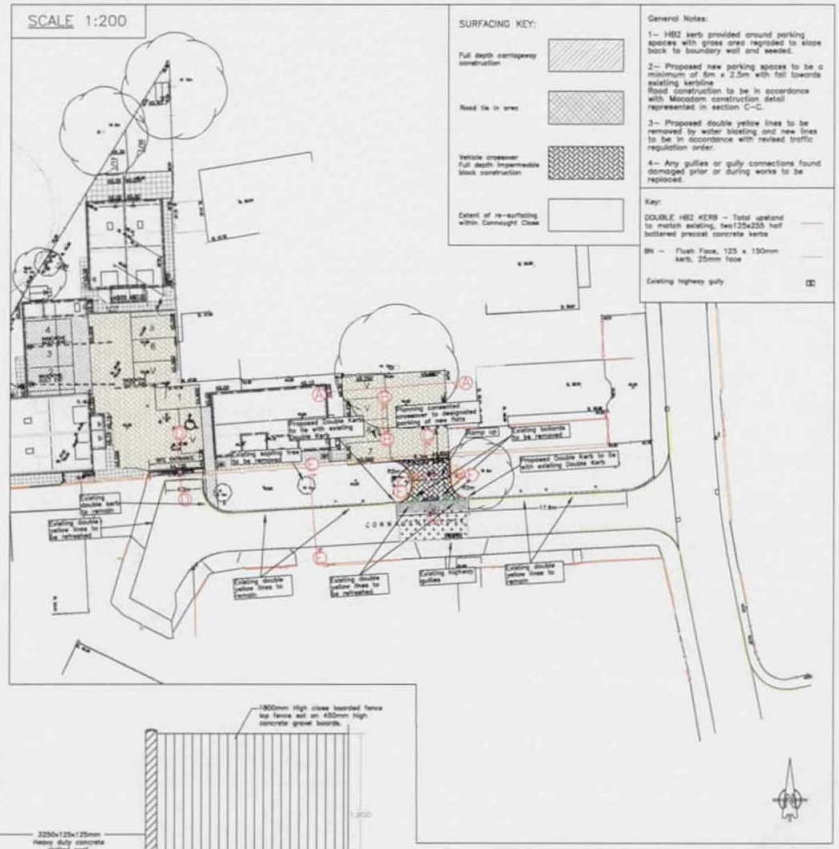
TYPICAL SECTION F–F THROUGH IMPERMEABLE BLOCK PAVED CROSSOVER
Scale 1:20

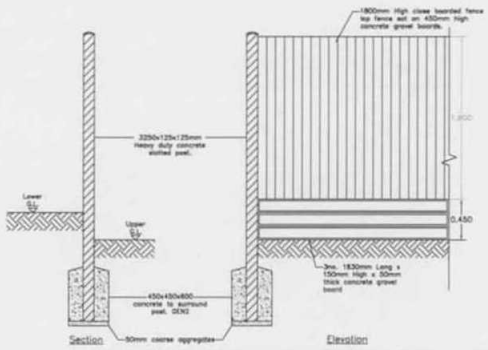


TYPICAL SECTION B–B THROUGH NO DIG PERMEABLE BLOCK PAVING AND PERMEABLE ROAD CONSTRUCTION
Scale 1:20

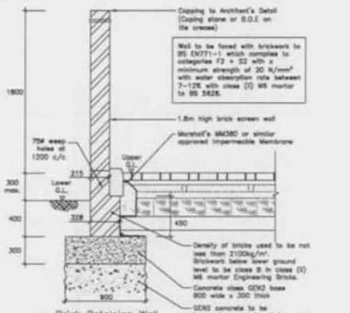


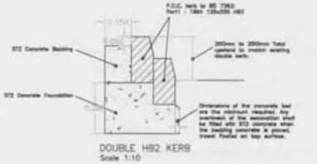
TYPICAL SECTION A–A THROUGH NO DIG PERMEABLE BLOCK PAVING ROAD CONSTRUCTION
Scale 1:20

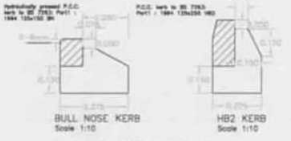




TYPICAL SECTION THROUGH CONCRETE GRAVEL BOARD RETAINING WALL
Scale 1:20







KERB/EDGING DETAILS
Scale 1:10

PRELIMINARY - FOR TENDER ONLY

REV. No.	DATE	DESCRIPTION	INITIALS
E	17.03.18	Brick retaining wall construction detail added to drawing as requested by client.	JRV
D	10.01.17	Proposed parking bays adjacent to Connaught Close Road removed, double HB2 kerb extended to welcome buffer located in the vehicle crossover. Double HB2 kerb detail and section 1-1 added to drawing.	JRV
C	28.11.17	Issue revised in accordance with latest planning layout.	JRV
B	18.10.17	Levels shown on issue revised in accordance with client's comments.	JRV

Client: [redacted]
Project: New Road Hillingdon
Title: Engineering Layout
MJA CONSULTING
Scale: As shown @A2
Date: Sept' 17
Drawing No.: 5641:20
Rev.: E
Checked: KTD
Drawn: JRV