

BASEMENT PLAN
showing possible underpin sequence

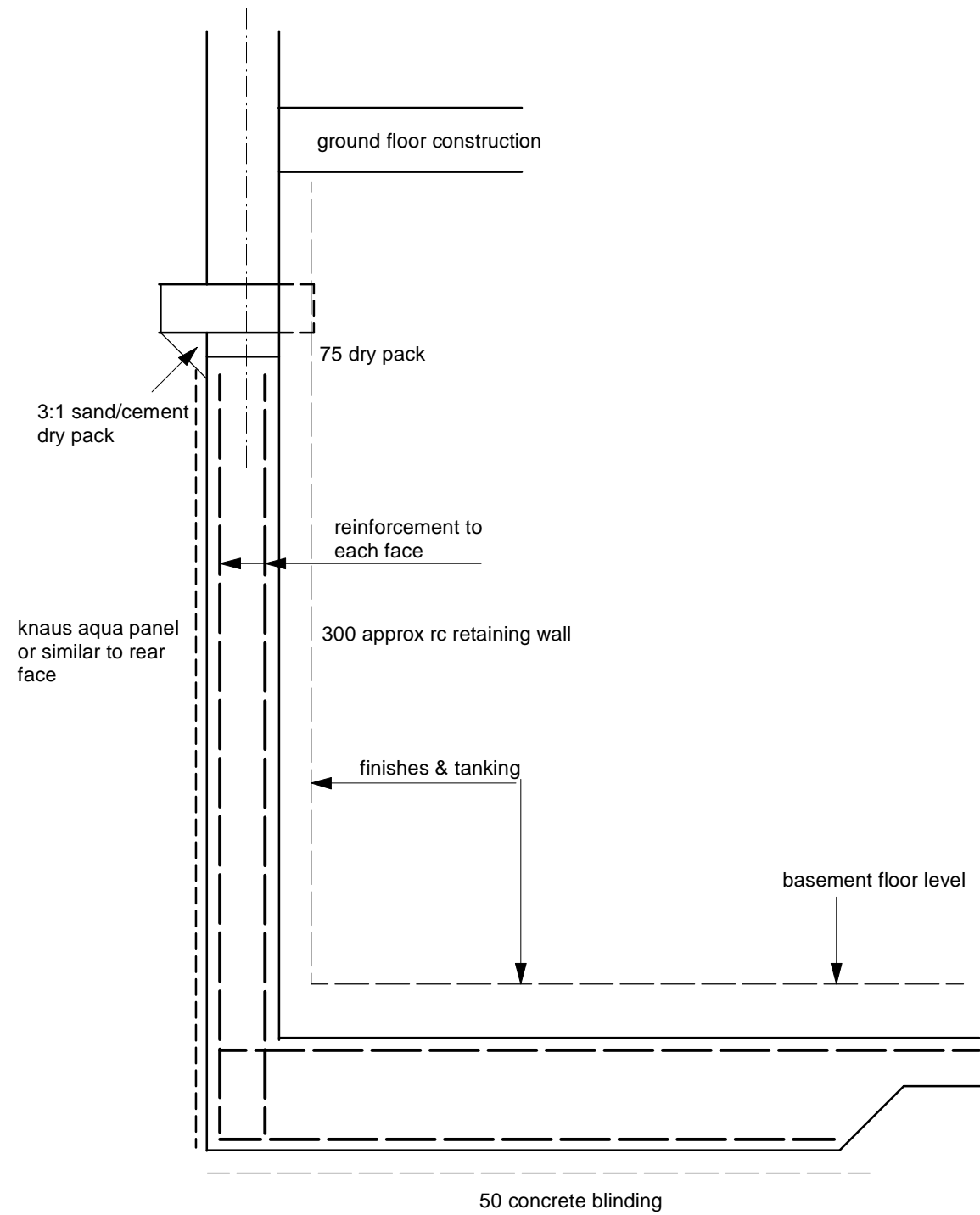
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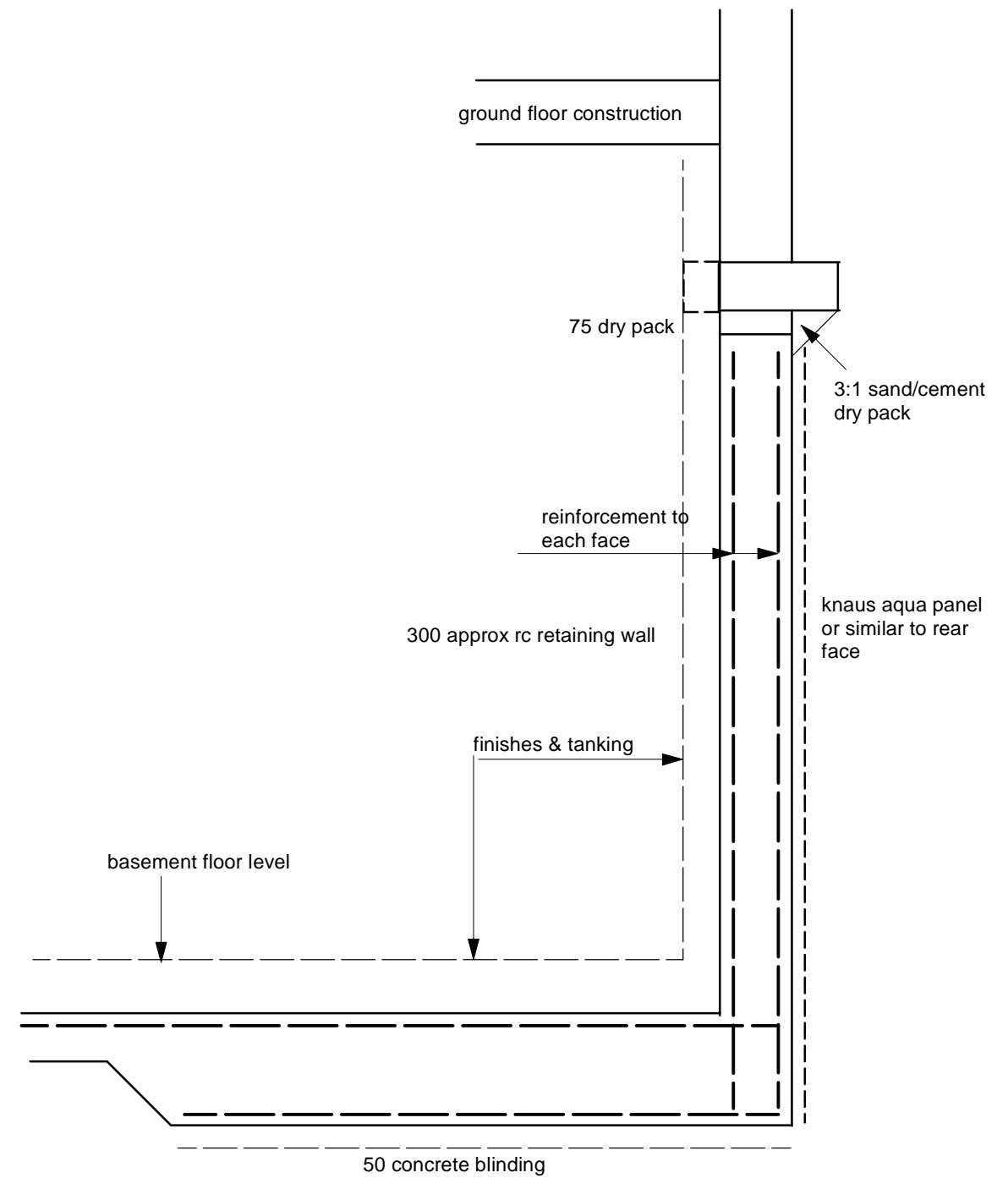
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Project
75 Okehampton Road
London NW10 3EN

Drawing No 15180- 01CS
Scale 1:100 @ A3
Date August 2015



SECTION 1-1



SECTION 2-2

STRUCTURAL DETAILS AND SECTIONS

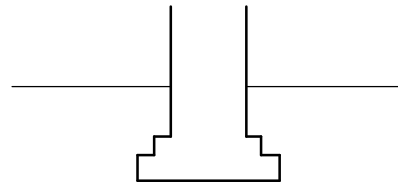
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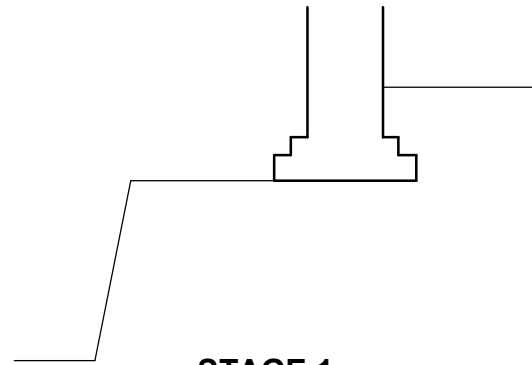
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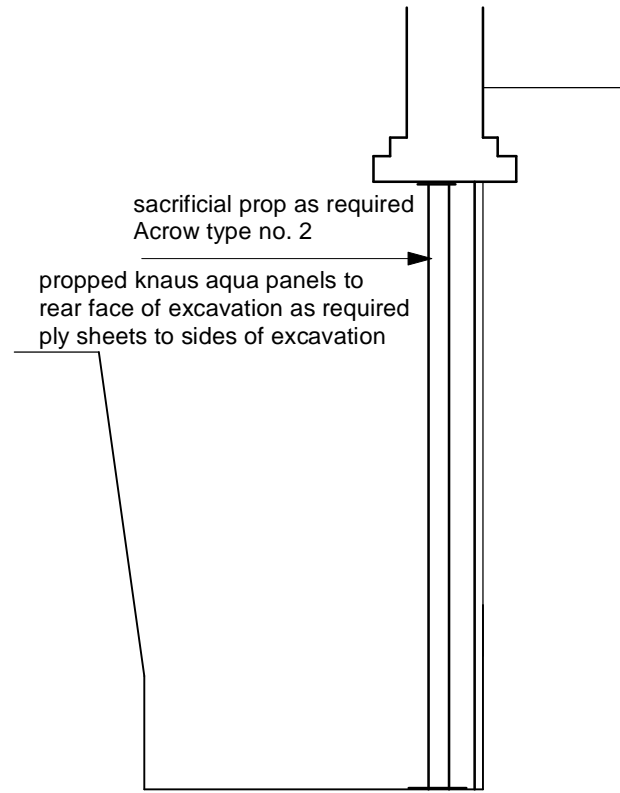
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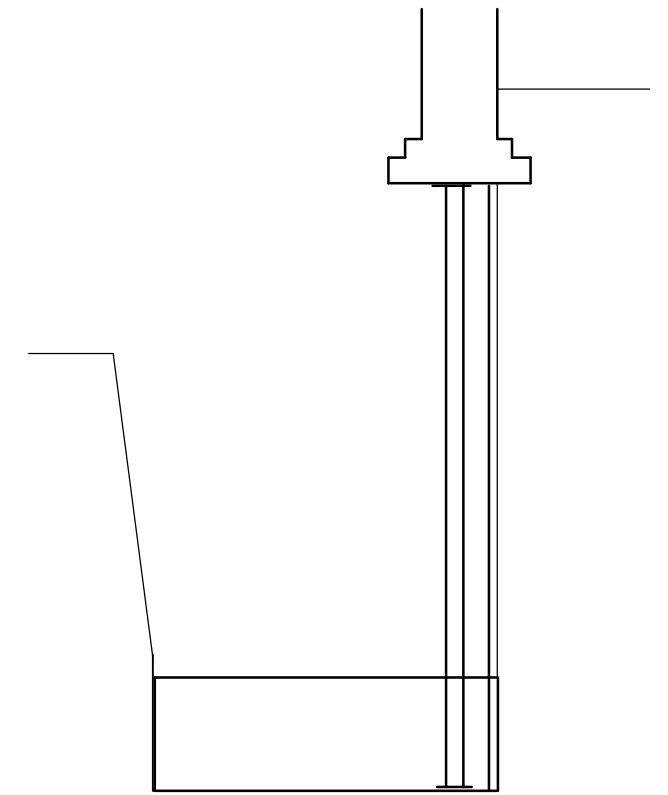
STAGE 0
existing condition



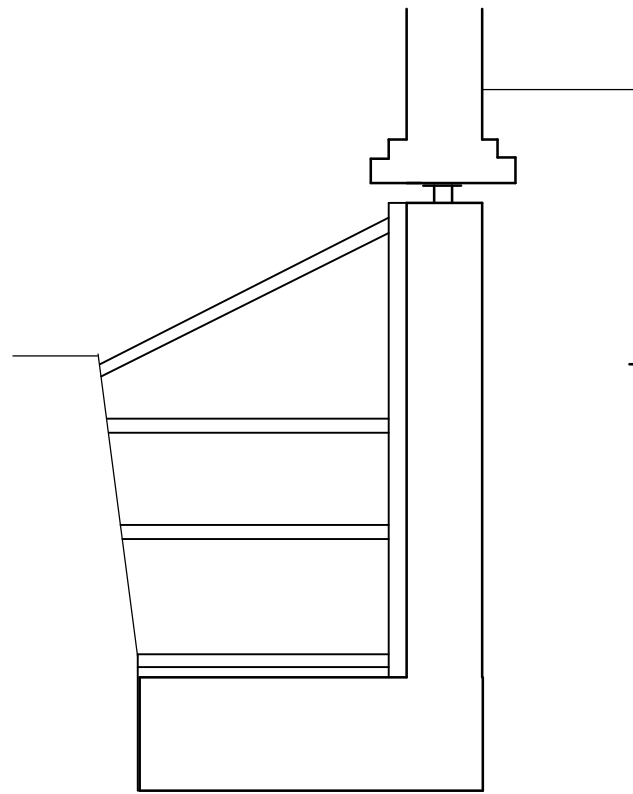
STAGE 1
general level excavation



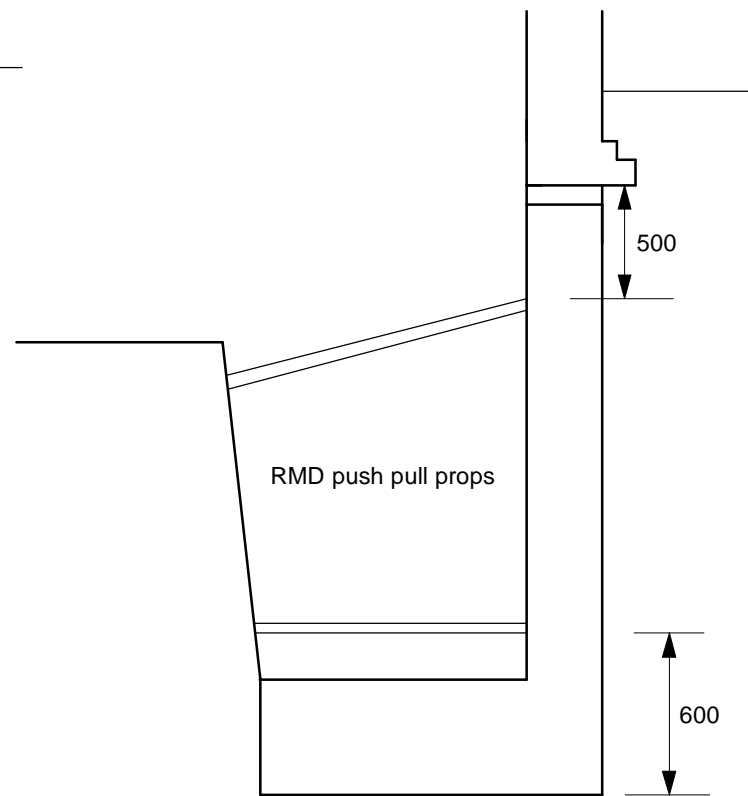
STAGE 2
excavate to form underpin



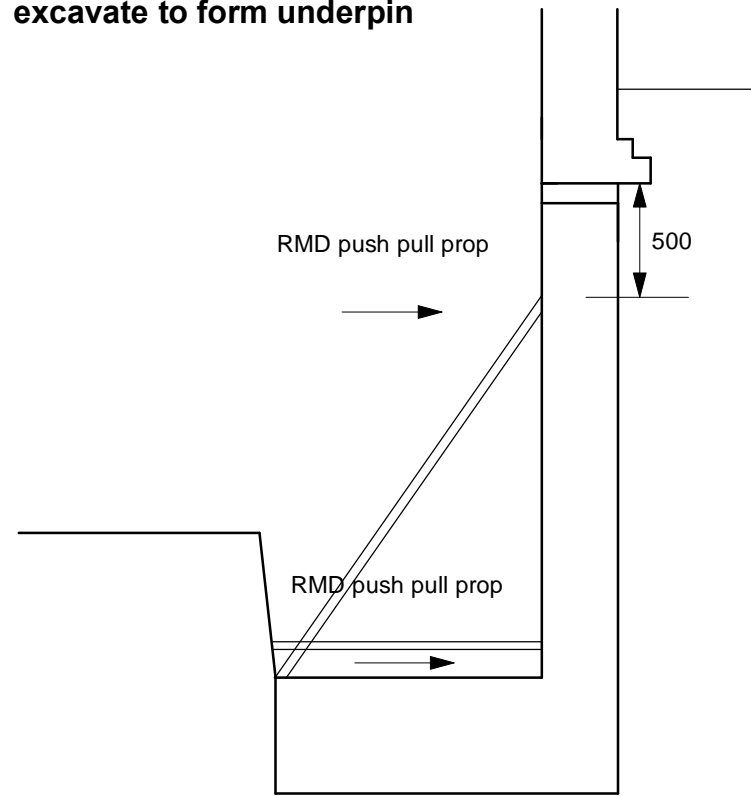
STAGE 3
concrete base of slab



STAGE 4
concrete underpin stem



STAGE 5
strike shutter when concrete had gained sufficient strength (3day min), dry pack, remove projecting brickwork, cast base slab



STAGE 6
install RMD prop at high level across site commence excavation of berm

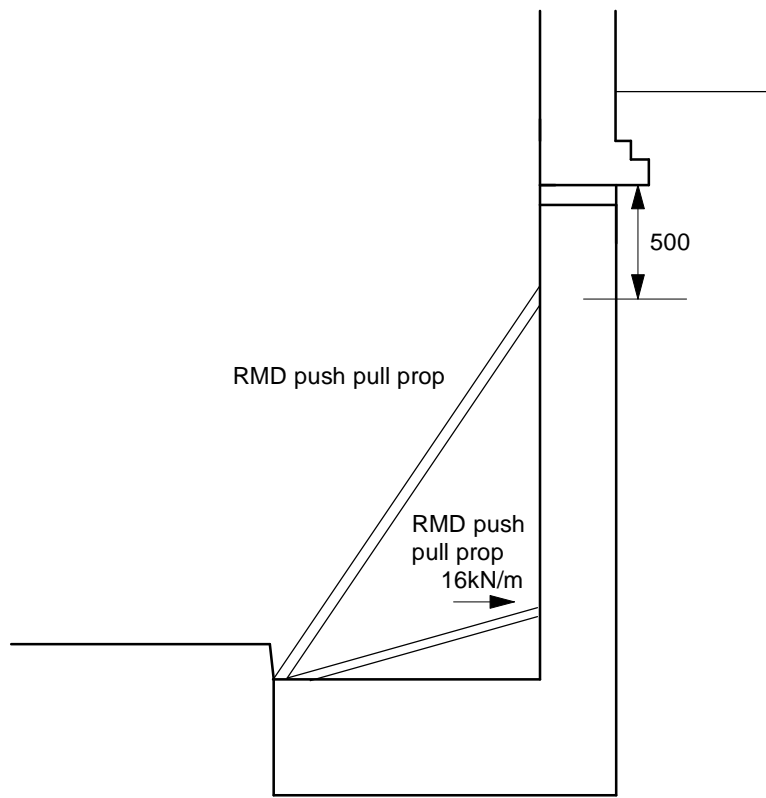
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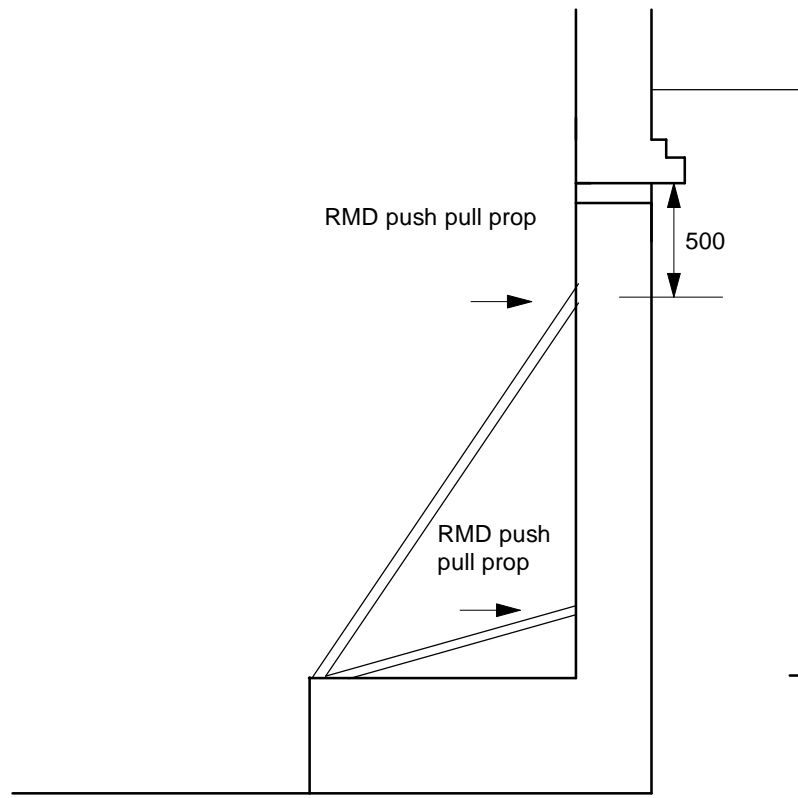
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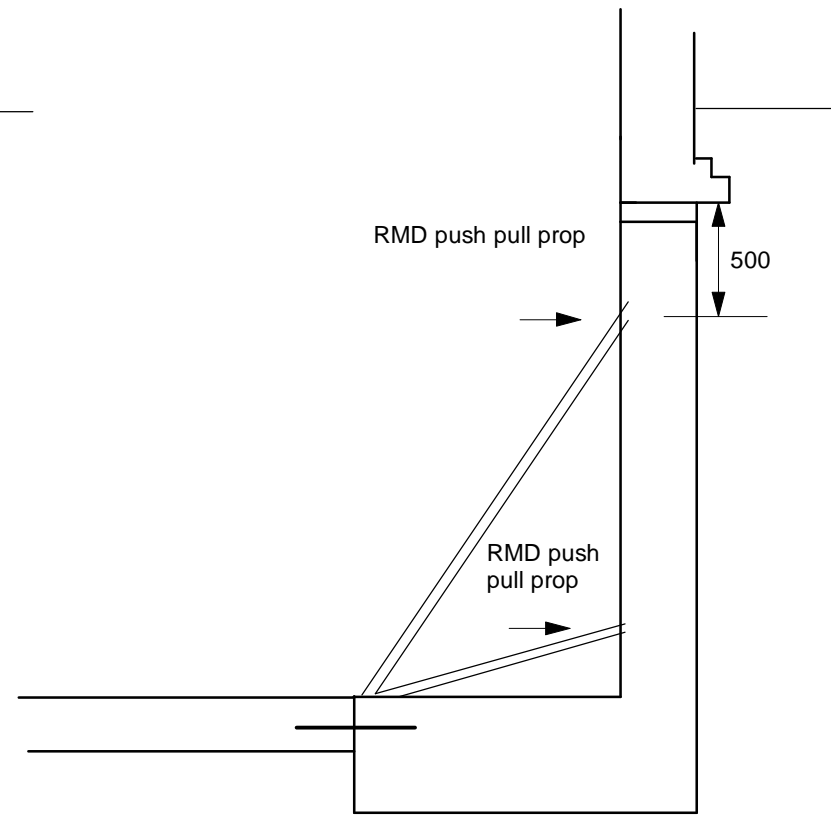
Drawing No 15180- TW1
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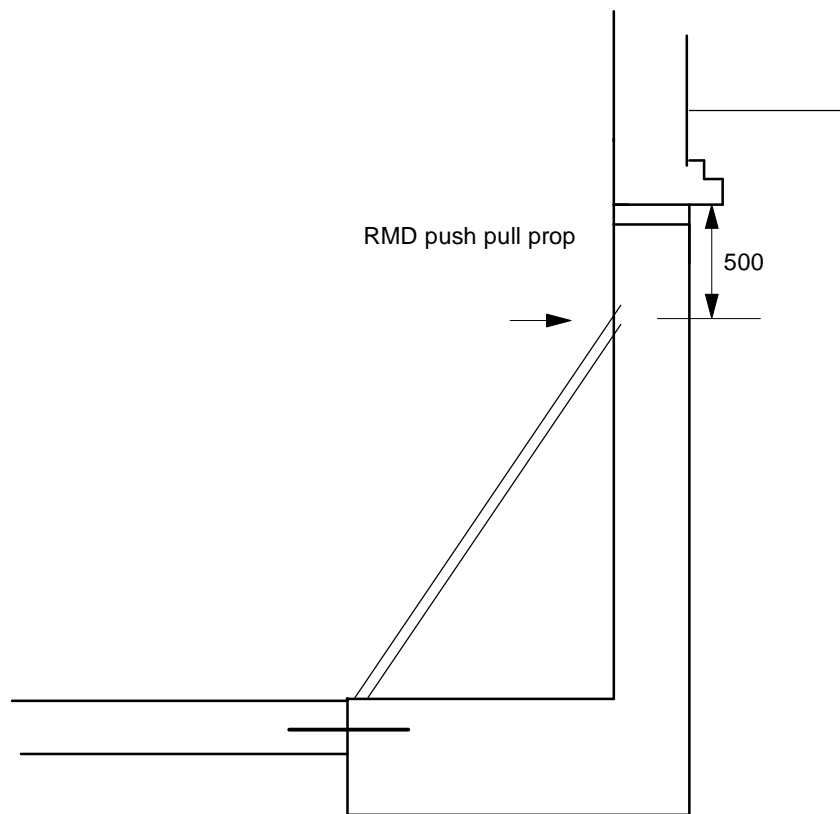
STAGE 7
when excavation is 500mm above formation level install prop at low level across site



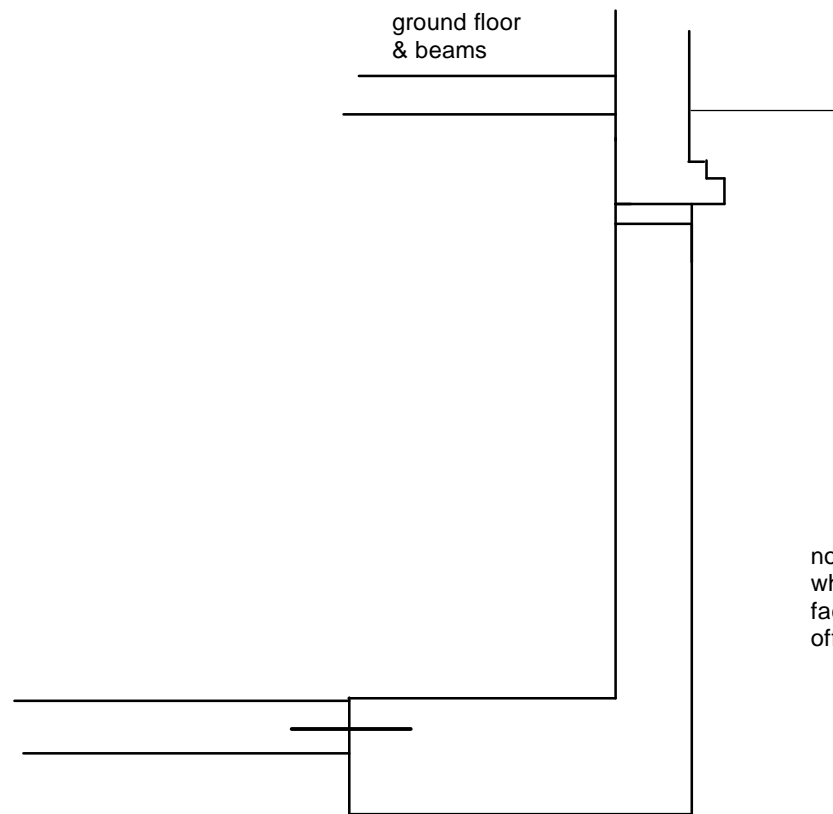
STAGE 8
complete excavation to formation level



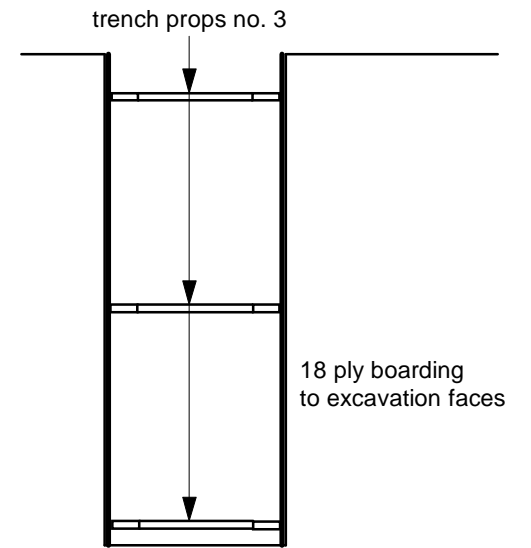
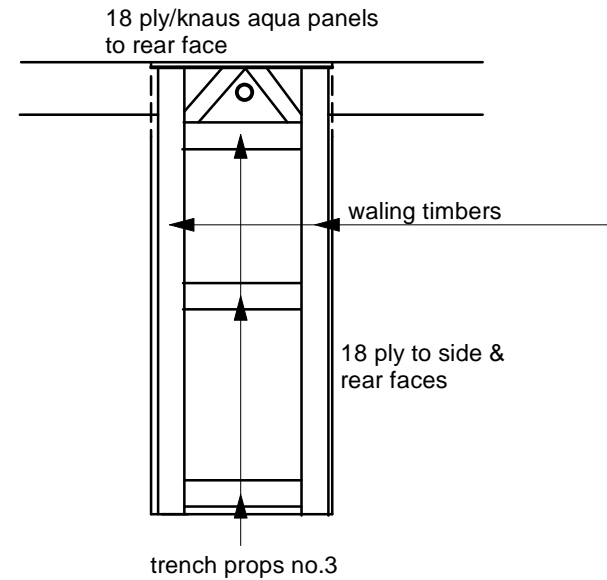
STAGE 9
cast basement slab & let cure



STAGE 10
remove bottom props



STAGE 11
install ground floor & remove remaining props



note:
when adjacent bay is cast remove face of already cast bay to be propped off base slab

PLAN & SECTION OF TRENCH EXCAVATION FOR UNDERPINNING

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Project 75 Okehampton Road
London NW10 3EN
Drawing No 15180-TW2
Scale 1:
Date August 2015

	Construction Method Statement for 75 Okehampton Road, London NW10 3EN		15180

1.0 Introduction

- 1.1 This Construction Method Statement is produced for submission to Brent Council Planning Department for the purpose of a planning application only and should not be used for any other purposes such as party wall awards.
- 1.2 This statement is to be read in conjunction with spaceAgent architects drawings.

2.0 Scope of Works

- 2.1 The proposed works consist of an extension to both ground and first floors, a loft conversion and the construction of a new basement underneath the building footprint complete with front and rear lightwells. The new space will incorporate additional bedrooms and utility areas, an enlarged kitchen and storage areas.

3.0 Description of property and adjoining properties

- 3.1 The existing and adjoining properties are semi detached and are generally constructed with timber floors and roof frames and masonry walls. They are in sound condition.

4.0 Soil Conditions

- 4.1 To support this statement we would confirm that we have successfully completed several similar basement developments in similar ground. The depths of excavation were similar to this proposal and we can confirm that no groundwater was encountered. The North London Geological Map indicates that the area is underlain by London clay and this will be confirmed by a site investigation and trial pits. The soil bearing capacity is likely to be at least 150kN/m².

5.0 Structural proposals

- 5.1 The structural proposals are shown on drawings series 15180. These show the suggested underpinning sequence and temporary works for the new basement together with typical structural details and sections.

6.0 Underpinning & Construction sequence

- 6.1 Deliveries, spoil removal and access will be from Okehampton Road. The entrance will be manned throughout to ensure that there is no potential risk to pedestrians.
- 6.2 There will be a site hoarding and entrance gates to protect passers by.
- 6.3 Existing services including drainage will be protected through the construction period.
- 6.4 A conveyor belt will be set up to convey spoil from the excavations to skips located at ground floor level.

	Construction Method Statement for 75 Okehampton Road, London NW10 3EN		15180

- 6.5 The existing property will be underpinned in a hit and miss sequence. Soil will be excavated in 1.2m maximum lengths by approximate 2.5m off wall to the proposed basement depth of approximately 2800mm. Temporary side shutters and propping will be installed if required to retain the soil and to provide protection to operatives. The underpinning will be monitored by the structural engineer.
- 6.6 As excavation progresses the existing ground floor structure will be broken up and removed.
- 6.7 The underpins to form the new basement will require horizontal propping until completion of the basement slab.
- 6.8 As excavation progresses any existing foundation discovered will be broken up and removed from site to allow for the new construction.
- 6.9 The existing walls and floors will be temporarily propped with steel beam needles at regular intervals as necessary. Temporary concrete pad foundations may be required beneath the props or they may also be supported on underpin concrete already completed.
- 6.10 New concrete pad and strip foundations will be constructed where specified on the structural drawings.
- 6.11 New steel beams and stanchions will be installed where specified on the structural drawings. These will be supported on the underpin concrete or new foundations. Beams supported on existing masonry walls will bear on concrete or steel plate padstones. Bearing stresses will be kept to acceptable levels.
- 6.12 The top of installed steel beams will be dry packed to the underside of existing masonry and this will be made good as required.
- 6.13 When all underpins are complete bulk excavation of the site will be carried out and completed.
- 6.14 Horizontal propping will if required by the design be installed as a proprietary system such as Mabey.
- 6.15 Once the bulk excavation is approximately 500mm above the proposed basement level a second level of props, if required, will be installed.
- 6.16 Excavation will then be carried out to formation level.
- 6.17 Both foul and surface water drainage, sumps and pumps will then be installed. They will discharge into the existing sewer system.
- 6.18 The new ground bearing basement slab will then be constructed.
- 6.19 Once the basement slab has achieved sufficient strength the horizontal propping will be removed.
- 6.20 A drained cavity layer waterproofing system will then be laid to the slab and walls.

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6.21 An insulation layer will be placed on top of the drainage system on the slab and in front of the system on the walls.

6.22 Finally a screed layer will be laid on the finished basement slab.

7.0 Potential Impact on adjoining properties.

7.1 The proposed basement under the existing property will be formed in the main by using an underpinning method constructed in sections no wider than 1200mm with no adjacent underpins constructed within a 72 hour period. This method of construction reduces the amount of potential ground movement and minimises the effects of settlement on adjoining properties.

Provided an experienced contractor is appointed who undertakes the works using good practices in accordance with the structural design and follows all agreed method statements and installs all temporary vertical and horizontal supports the expected settlement will be zero. In practice some minor cracking may occur but this should be aesthetic as described in the BRE definition of damage. This has been borne out in the vast majority of past projects on similar properties.

The design and construction methodology as described above, deals with potential risks and ensures that the excavation and construction of the proposed basement will not affect the structural integrity of this and the adjoining properties.

8.0 Impact on existing and surrounding utilities, and infrastructure

8.1 Any local services on the property's land will be maintained during construction and re routed if necessary. Their exact location will not be known until work starts. However the impact will be negligible as these services will be maintained. If it is necessary to relocate or divert any utilities the contractor and design team will be under statutory obligation to notify the utility owner before works start. This will be so that they can assess the impact of the works and deal with any approvals.

9.0 Potential impact on drainage, foul and surface water levels and flows.

9.1 All existing drainage and sewer connections will be maintained throughout the construction works so there will be no impact on them. The proposed basement will remain as a single family residence and therefore there will be no significant increased discharge into the existing system. Also there will be no change in the amount of surface water discharged into the existing system.

10.0 Potential impact on trees

10.1 We understand that the proposed basement is not within the zone of influence of any existing trees.

Prepared by

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	Underpinning specification for 75 Okehampton Road London NW10 3EN		15180

General Underpinning Specification

1. The walls to the perimeter of the new basement will be underpinned in reinforced concrete. They will support the vertical loads from the walls above and lateral loads from the soil.
2. Underpin bases shall be constructed in short sections, generally no more than 1.2m wide.
3. The underpin sequence shall be such that any given underpin will be completed, dry packed and a minimum period of 48 hours lapsed before an adjacent excavation starts to form another underpin.
4. In the event that the existing foundations to the wall are unstable sacrificial steel jacks shall be installed underneath the foundation. They shall be left in place and incorporated into the concrete stem.
5. In the event that the ground is unstable lateral propping shall be provided as required to the rear and sides of the excavated trench. This shall be a combination of trench sheeting, plywood, knaus aqua panels and trench props as appropriate. Sacrificial back shutters shall be used to the rear face of the excavation if required. Cementitious grout shall be poured behind the back of the shutter to fill any voids.
6. Excavation for underpin sections shall be dug in a day and the concrete base shall be poured by the end of the same day.
7. The concrete stem shall be poured on the following day up to within 50-75mm of the underside of the existing wall foundations.
8. On the following day the gap between the concrete and underside of the existing foundation shall be dry packed with C35 concrete using 10mm aggregate and Combex expanding admixture by Fosroc and in accordance with their instructions.
9. Once the dry pack has achieved sufficient strength any protruding footings shall be carefully trimmed using hand tools to avoid causing damage to the foundations. The protrusions shall be trimmed back to be flush with the face of the wall above.
10. A minimum period of 48 hours shall elapse before adjacent sections are excavated.
11. Adjacent pins shall be connected using H12 dowel bars 800mm long and set equally in each pin at 450ccs.
12. Concrete cover to any reinforcement shall be 35mm when cast against a shutter or the top surface of the basement slab, 50mm cover against blinding and 75mm cover when cast against earth.
13. Concrete grade shall be as specified but no less than C35 with a minimum cement content of 350kg/m³ and 20mm aggregate, water/cement ratio 0.60 and 100mm slump.