engineersHRW

7 GREENAWAY GARDENS
LONDON NW3 7DJ

STRUCTURAL ENGINEER'S CONSTRUCTION METHOD STATEMENT

This report was written/compiled by Krzysztof Balcerowicz MEng and reviewed by Simon Robinson CEng MIStructE of engineersHRW

Signed ..... Date 19.01.2021

Job Number: 2095
Rev A – 16.08.2021

STRUCTURAL ENGINEER'S STATEMENT

This Structural Engineer's Statement has been prepared by engineersHRW, based on the planning proposals by SHH Architects in support of a new planning application to develop the site located at 7 Greenaway Gardens in Hampstead, London. It is for the use of the client, the client's professional advisers and London Borough of Camden and is for their use only. The report should not be used for any purposes other than for which it was considered. The report should be read in conjunction with EngineersHRW Structural drawings (drawing references listed in 9.3.1), Desk Study and Site Investigation Report including Basement Impact Assessment by GEA.

1.0 Introduction

1.1 Engineers HRW have been asked to consider the engineering issues surrounding the proposed construction works to support the planning application.

1.2 The proposed structural works comprise of:

- Extension of the Lower Ground floor level to the whole footprint of the main house.
- Construction new lightwells to the new Lower Ground floor at the front of the property.
- Demolition conservatory at the rear of the Ground floor level and constructing new single storey extension at the rear of the Ground floor level.
- Replacement of the recent single storey extensions at the rear of the main house.
- Demolition of the above ground part (superstructure) of the existing rear garden pool pavilion.
- Construction new connection link between the main house Lower Ground floor and the existing pool basement at the garden.
- Construction of the new roof light over 2nd floor and rearranging roof dormer at NW elevation.
- Layout amendments at the 1st and 2nd floor level.
- Repair works to the existing property where required.

1.3 This report has been prepared in compliance with Camden's CPG Basements 2018 requirements for basement extensions. It is the equivalent of Appendix 5 of the Camden BIA proforma and signed off by a Chartered Structural Engineer (MIStructE) and includes proposals for a sequence of construction. A desk study and site-specific soils investigation have been carried out by GEA and signed off by a Chartered Geologist and Hydrologist.

2.0 Site Information

The site is located within the London Borough of Camden, approximately 650m southwest of Hampstead Underground Station and 1200 m northeast of West Hampstead London Underground Station. It fronts onto Greenaway Gardens to the northeast. There are similar detached residential 2-storey properties with living spaces at the roof level at each side of 7 Greenaway Gardens.
There is a private driveway at the front of the property with two car gates allowing for 'in and out' access. The southeast gable wall of the house lies directly adjacent the boundary with No 6a Greenaway Gardens. There is approximately 2m wide alleyway connecting front courtyard with the rear garden to the northwest of 7 Greenaway Gardens.

The site is in the Redington and Frognal Conservation Area.

Figure 1 - Extract from Camden Redington and Frognal Conservation Areas Map

2.1 Existing Building

The existing house is two storeys plus a residential loft space and lower ground floor under approximately one third of the ground floor footprint.
The main house is constructed of loadbearing external and internal solid brick walls supporting timber joists at ground, 1st and 2nd floor. The timber structure roof is covered with clay tiles.

There are two single storey wings at the rear of the original house. These extensions are located symmetrically each side of the rear facade. They are of masonry cavity wall construction with brickwork externally and blockwork internally. They have a suspended ground floor slab formed with precast concrete beams placed next to each other.

The original lower ground floor which extends approximately one quarter of the ground floor footprint towards the northwest is constructed with solid brick walls and a ground bearing concrete slab. The newer, lower ground extension located between rear ground floor wings (under the existing ground floor conservatory) is of reinforced concrete construction.

There is a detached Pool Pavilion at the northwest side of the rear garden. The Pool Pavilion comprises of steel glazed superstructure over the swimming pool area and loadbearing masonry changing area with a concrete basement plantroom under the changing rooms.

The neighbouring houses at No 6/6a and No 8 Greenaway Gardens appear to be of a traditional construction with loadbearing masonry walls and timber floors which is a similar construction to No 7 Greenaway Gardens.

Figure 2 – 7 Greenaway Gardens – front facade

Figure 3 – 7 Greenaway Gardens – rear garden pool pavilion

2.2 Geotechnical Ground Conditions

2.2.1 Geology

A detailed Geotechnical Site Investigation has been carried out by GEA Ltd. and it is reported in the GEA Ground Investigation and Basement Impact Assessment Report dated January 2021.
The British Geological Survey indicates that the site is directly underlain by the Claygate Member over London Clay Formation.

The exploratory boreholes and trial pits revealed that ground conditions were generally consistent with the geological records and known history of the area. Beneath a generally nominal thickness of made ground, the Claygate Member was encountered of the London Clay Formation to the maximum depth investigated. Made ground was encountered to depths of between 0.50 m (90.97 m OD) and 1.30 m (88.83 m OD), although it was only encountered to below 1.00 m in a single location. The Claygate Member comprised an initial weathered horizon of firm orange-brown mottled pale grey and reddish brown silty slightly sandy clay with occasional pockets and partings of dark orange-brown and yellowish-brown fine sand, occasional ironstone nodules and occasional reddish-brown iron staining to a depth of 6.00 m (85.47 m OD), whereupon stiff grey to dark brownish grey silty clay was encountered to a depth of 7.00 m (84.47 m OD). The underlying London Clay comprised stiff becoming very stiff fissured dark grey and brownish grey silty clay with mica and occasional fine pockets and partings of pale grey silt and was encountered to the maximum depth investigated, of 20.00 m (71.47 m OD).
The results of laboratory Atterberg Limit tests indicated the Claygate to be of medium volume change potential.

2.2.2 Groundwater

During the drilling of the boreholes on site, a very minor inflows of groundwater seepages were encountered in two locations at various depths of between 3.30 m (88.17 m OD) and 6.00 m (85.47 m OD). The groundwater monitoring not indicated a continuous groundwater table below the site. The Claygate member and underlying London Clay comprise predominantly clay soils and they cannot support ground water flow nor can be considered to support ‘water table’.

2.2.3 Contamination

The desk study research has indicated that the site and surrounding area have not had a potentially contaminative history, having only been occupied by the existing residential property.

The results of the chemical analyses have generally indicated low concentrations of the contaminants tested, with the made ground also noted to be free from the evidence of significant contamination and each sample found to be free from asbestos fibres. A sample recovered from Trial Pit No 3 was however found to have an elevated concentration of sulphide. This does not pose a risk to end users but should only be taken into consideration in the design of buried concrete. The made ground in this part of the site will in any case be removed through the basement excavation. As such there is not considered to be a requirement for remedial measures.
However it would be prudent for ground workers to maintain a watching brief and if any suspicious or malodourous soils are encountered, further investigation may be required. Furthermore, a programme of working should be identified to protect workers handling any soil.

2.3 Trees

An arboricultural survey of all trees within impacting distance of the site was undertaken. Refer to Arboricultural Method Statement by Arbtech Consulting dated 11 January 2021 for details.
Construction of the new Lower Ground floor extension at the proposed swimming pool area will require 3No individual trees to be removed. 2No groups of trees will also need to be removed to construct rear terrace steps and nearby landscaping. Confirmation and details of the removed trees are noted in the Arboricultural Method Statement.The depth of the proposed Lower Ground floor extension is below the tree roots influence zone therefore the existing and removed trees will not have an impact on the proposed extension structural performance. As noted in the Arboricultural Method Statement the proposed development will not impact upon any of the retained trees and it will not require any specialist construction methodology to protect trees.

2.4 Flood Risk

A site-specific Flood Risk Assessment has been carried out by Evans Rivers and Coastal Ltd. A copy of FRA Report reference 2628/RE/01-21/01, dated January 2021 is included within Ground Investigation and Basement Impact Assessment Report by GEA.

2.4.1 Fluvial Flood Risk

The Environmental Agency maps indicates that the proposed development site lies entirely within area of a Very Low Risk of fluvial flooding (Zone 1) which is classified as land assessed as having a less than 1 in 1000 annual probability of river or sea flooding and is appropriate to all uses of land.

2.4.2 Surface Water Flood Risk

The Environmental Agency surface water flood data for the site, shown below, indicates that the site flood risk from the surface water is Very Low which is classified as land assessed as having a less than 1 in 1000 annual probability of surface water flooding.
The site is not listed within the Floods in Camden Report by the Floods Scrutiny Panel as having suffered from surface water flooding in the 1975 or 2002 flooding event.

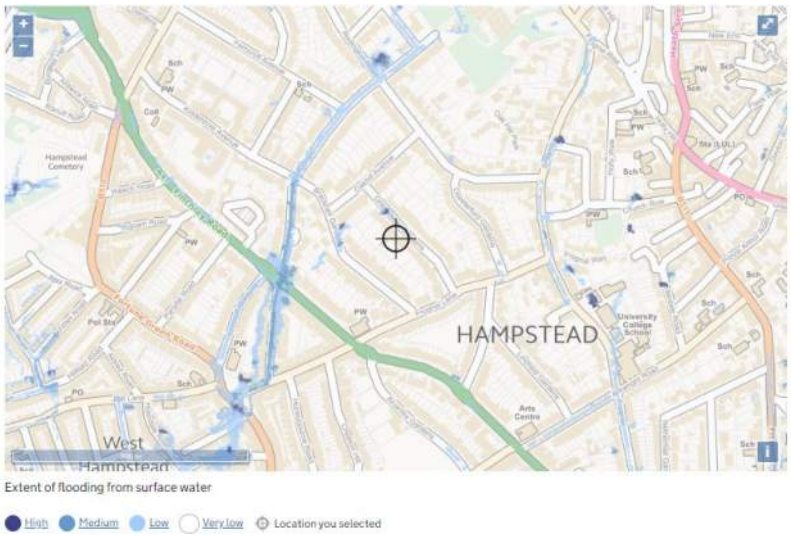


Figure 4 – Extend of flooding from surface water

2.4.3 Design Implications

Based on the above there is a very low surface water flood risk at this site and also a low sewer flooding risk. For details refer to Energy and Sustainability Statement JB/692 January 2021 by ME7 Ltd. and Flood Risk Assessment carried out by Evans Rivers and Coastal Ltd. A copy of FRA report ref. 2628/RE/01-21/01, dated January 2021 is included within Ground Investigation and Basement Impact Assessment Report by GEA.

3.0 Proposed Structural Works

3.1 Introduction

The proposed development involves extending of the Lower Ground floor to the whole footprint of the main house with a deeper section of the proposed swimming pool plant room to extend slightly beyond the south corner of the building footprint. Two lightwells to the new Lower Ground floor are to be formed outside the front facade of the property.
The Ground Floor glazed conservatory at the rear of the building to be demolished and a new single storey extension to be constructed at this level.
The existing rear garden Swimming Pool Ground Floor Pavilion is to be demolished. The existing basement of the Swimming Pool Pavilion to be partially demolished. The retained part of the Swimming Pool Pavilion basement to be partially submerged. It will form a Workshop below the garden level which will be connected with a link to the Lower Ground level of the main house.

The construction of the new Lower Ground Floor will involve excavation below the existing main house to a depth of approximately 4.0m with the deeper portion of the excavation for the proposed swimming pool in south of the main house. The excavation will be formed within propped, underpinned existing walls, piled retaining walls and reinforced walls constructed in hit and miss sequence.

The new Lower Ground structure will be a reinforced concrete ‘box’ to provide a robust, high quality structure.

3.2 Demolition Works

It is proposed that all demolition works will be carried out in accordance with BS 6187 ‘Code of practice for demolition’ and an appropriately skilled and experienced contractor is to be appointed. The works are to be carefully sequenced and undertaken and the contractor is to provide full temporary works and supervision to ensure that the stability of the remaining structure and surrounding structures are maintained at all times.

3.3 New Lower Ground Floor Structure

3.3.1 The new Lower Ground Floor structure to be constructed as a reinforced concrete box formed within the concrete underpinned existing walls. Due to the depth of the proposed Lower Ground Floor, the underpinning to the existing masonry walls along the southeast elevation and partially along the front part of the northwest elevation will be formed in two stages. The reinforced concrete lightwells at the front to be constructed within a temporary contiguous piled wall installed along the front elevation.

3.3.2 The Lower ground floor slab will be in the form of the ground bearing reinforced concrete raft. The perimeter reinforced concrete walls together with new reinforced concrete ground floor slab will

form a robust Lower Ground floor concrete box. Internal Lower Ground floor reinforced concrete columns and walls (including lift shaft walls) will provide support for the ground floor slab as well as providing lateral stability for the Lower Ground structure.

3.3.3 The new Workshop in the rear garden and the connection Link to the main house Lower Ground floor level is to be constructed in a solid reinforced concrete box below the garden level. The Workshop and Link is to be constructed in a temporary propped excavation. It is proposed to construct a temporary minipiled contiguous wall or propped sheet piles along the boundary with No 8 Greenaway Gardens to secure the excavation for the Workshop and Link construction.

3.3.4 The groundwater monitoring has not indicated a continuous groundwater table below the site. Site investigation revealed only very minor inflows of groundwater seepages in two locations at various depths of between 3.30 m and 6.00 m. Therefore, the need to control significant amounts of water during the construction period is unlikely. However, the contractor to make allowance for pumping out any water ingress during the construction works.

3.3.5 The concrete structure will be designed to BS8110 with full top and bottom reinforcement to all sections. The concrete in itself is not a watertight / waterproof construction and in order to achieve a Grade 3 'habitable' basement in accordance with BS8102 a combination of tanking with an internal drained cavity system will be provided. However, the final waterproofing system is yet to be agreed with the architect.

3.3.6 The proposed reinforced concrete Lower Ground floor structure form is classified as a "robust" structure and will be designed to accommodate any lateral loading that will develop.

4.0 Control of Movement

The proposed basement scheme and method of construction are of a typical form for which we are confident that resulting ground movements can be controlled in both the temporary and permanent condition.
In the temporary condition the underpinned walls will be horizontally propped at each stage of the construction. The temporary contiguous piled wall/ sheet piling is to be propped at the ground level.
The permanent Lower Ground extension will be constructed as robust reinforced concrete box.

4.1 Vertical Movement

The ground movement analysis has indicated that the maximum vertical settlement that will result from the retaining wall (propped underpinning and propped contiguous piled wall) installation is likely to fall below 5 mm. The movements arising from the combined retaining wall installation and excavation are likely to range between 3 mm to 8 mm vertical settlement.
The movements noted above are the maximum movements and the analysis has indicated that they occur immediately or just outside the line of the retaining walls.

The Ground Movement analysis indicates that in the short term, between 11 mm and 6 mm of heave can be expected across the basement excavation, reducing to less than 3mm at the edges. The proposed raft pressures have been taken into account when modelling the total drained movements, with the proposed loads likely to keep total heave movements to a similar magnitude of the undrained short-term movements.

4.2 Horizontal Movement

Horizontal deflection to the perimeter of the proposed Lower Ground will be limited by casting the underpins in short sections and temporary propping them. Where possible a contiguous propped piled wall has been adopted.
The analysis has indicated that the maximum horizontal movement that will result from the retaining wall (propped underpinning and propped contiguous piled wall) installation are likely to fall below 5 mm. The horizontal movements arising from the combined wall installation and excavation are likely to range between 6 to 12 mm. The movements noted above are the maximum movements and the analysis has indicated that they occur immediately or just outside the line of the retaining walls.

4.3 Ground Movement Analysis

A Ground Movement Analysis has been carried out by GEA Ltd. and the results are included within Ground Investigation and Basement Impact Assessment Report dated January 2021.
The analysis has concluded that the predicted damage to the neighbouring properties from the construction of the Lower Ground floor extension to No. 7 Greenaway Gardens would be 'Negligible' to 'Very Slight' and therefore the damage that would occur would fall within the acceptable limits.

5.0 Superstructure

5.1 The structural amendments proposed to the existing superstructure will include construction of a new single storey extension at the rear of the Ground Floor, minor layout amendments at 1st and 2nd floors resulting in new steel transfer beams spanning over increased wall openings.
It is also proposed to construct a new rooflight over the 2nd floor and rearranging the roof dormer at NW elevation. Some minor repair works to the existing structure are also anticipated.

6.0 SUDs and Drainage

6.1 Refer to Energy and Sustainability Statement JB/692 January 2021 by ME7 Ltd. and Flood Risk Assessment carried out by Evans Rivers and Coastal Ltd. A copy of FRA report ref. 2628/RE/01-21/01, dated January 2021 is included within Ground Investigation and Basement Impact Assessment Report by GEA.

7.0 Temporary Works

7.1 Temporary Works

The contractor will be responsible for the design, erection, and maintenance of all temporary works in accordance with all relevant British Standards. The contractor will be contractually obligated to appoint a qualified temporary works engineer to provide adequate temporary works and supervision to ensure that the stability of the existing structure, excavations and surrounding structures are maintained at all times. The proposed temporary works and sequence of works scheme are shown on the attached drawings 2095-HRW-XX-XX-DR-S-0900 to 0903 and 910.

7.2 Submissions

The contractor will be required to submit full proposals, method statements and calculations to the engineer and all appropriate parties (party wall surveyors, AIP etc.) for approval prior to the start of any works on site.

The contractor will also be required to appoint a Temporary Works Co-ordinator for the duration of the contract in accordance with the specification and BS 5975.

7.3 Monitoring – Rev A (16.08.2021)

7.3.1 Prior to the basement excavation, an external survey control system is to be established around the site. This will be carried out using traditional closed traverse surveying techniques and will involve the setting up of sufficient external control stations to allow monitoring of the existing structure during and after the demolition, ground works, substructure and superstructure works. The control stations are to have co-ordinates which are directly correlated to the building grids and datum levels. This initial control survey is to be carried out by the Contractor and may be independently checked and verified by the appointed survey contractor.

7.3.2 To monitor the existing No 7 Greenaway Gardens and neighbouring structures No 8 Greenaway Gardens and No 6 Greenaway Gardens (subject to Party Wall agreement) the Contractor is to install reflective distometer targets at the intersection of the existing floors and walls on a grid not greater than 3m c/c at each existing floor and roof level and/or in critical locations (corners, protruding elements, rails, cornices etc). These targets consist of reflective plastic elements that shall be adhered to the surface of the building and reflect the electromagnetic waves such as those emitted by electromagnetic distance measurement equipment within modern theodolite total survey stations. The targets shall be used as a basis for remote distance measurements. The final locations and number of the targets are to be proposed (for agreement) by the Contractor to suit specific site conditions and temporary works proposals. Positioning needs to be such that they are not obscured by the temporary steelwork, scaffold access or any sheeting or other protection afforded to the works

7.3.3 The positions of the monitoring targets are to be measured and their co-ordinates in easting, northing and elevation (E, N, Z) established.

7.3.4 A minimum of 3 No. sets of baseline co-ordinates is to be recorded and checked for control purposes prior to commencement of the excavation. Accuracy level is to be confirmed by the contractor (consider +/- 0.55mm).

7.3.5 During the critical excavation and basement works monitoring readings shall be taken weekly (each set of readings separated by at least 4 days) on a minimum of 75% of the fixed targets. The results are to be recorded and the directional change and quantum movement from the controls and previous readings calculated.

7.3.6 Movements of any target position equal to or greater than trigger values (refer to Section 7.3.10) from the previous shall be addressed by the Contractor. The Contractor shall advise the Engineer, the Contract Administrator on the reasons for the movement and advise his proposals to control further movement. Contractor should consider increasing number of monitoring readings to confirm that the movement is not ongoing or modifying works to avoid further movement.

7.3.7 All results are to be issued to the Engineer, Contract Administrator, Party wall surveyors and their advising engineers on weekly basis unless agreed otherwise.

7.3.8 The monitoring of the existing buildings shall continue after completion of the ground works and basement construction on a monthly basis until the superstructure is tied and the temporary works removed.

7.3.9 The survey equipment to be used and the details of calibration is to be advised to the Engineer prior to work commencing.

7.3.10 Limitations on movement on structures

Damage to adjacent structures
- Permissible damage criteria:
Structures: Damage category 1 to BRE251

- If the Contractor is of the opinion that by any means arising from the Works neighbouring property may be damaged this shall be stated in his tender and the extent and nature of the necessary protective or other temporary works described therein.

Limits on survey points movement during construction must not exceed:
Lateral displacement: trigger level (amber) 7mm, action level (red) 9mm
Settlement: trigger level (amber) 7mm, action level (red) 9mm

Movement approaching critical values:
Trigger: Submit proposals for ensuring action values are not exceeded
Action: Stop work and inform Structural Engineer and CA immediately and await further instructions

8.0 Method Statement / Sequence of Works – Lower Ground Floor Construction

Construction methodology and temporary works assumed in the design as described below and on drawing 2095-HRW-XX-XX-DR-S-900 to 903 and 910. These will be superseded by the contractor's proposals.

8.1 Lower Ground floor under the existing house – Sequence of Construction

1. The main house ground floor timber structure and garage concrete slab to be removed.
2. 1st stage of the existing masonry side walls underpinning to be constructed (Approx. half depth of the proposed full underpinning depth. Due to the depth, the underpinning in some locations to be undertaken in two stages). Each pin of the 1st stage of underpinning to be

backfilled and compacted prior excavating/ constructing next sequence of 1st stage underpinning.

3. Existing rear extension roof/terrace (grids D-E/1-3 and D-E/4-5), rear extension glazed roof (grids D-E/3-4) and masonry walls (grid line E/2-6) to be demolished. Masonry side walls on grid lines 2/D-E and 6/D-E to be retained. Prior extension demolition the retained walls to be temporary propped.
4. Concrete ground floor over the existing basement to be removed to allow for piling mat installation and access for piling rig. Existing basement walls supporting the walls above to be retained and laterally propped.
5. Piling mat to be installed inside the existing main house building, at front courtyard (and in the garden proposed workshop area – subject to the existing swimming pool retaining structure confirmation on site).
6. Temporary RC piles to be installed:
    a. Contiguous piling along front elevation.
    b. Piles with steel plunged columns inside the main house to provide support for retained internal walls.
    c. Continuous piling to the proposed garden workshop and link – subject to the existing swimming pool retaining structure confirmation.
7. Steel runner beams between the internal temporary piles and needles through the existing internal walls to be installed and drypacked.
8. 1st level of horizontal propping to external walls/underpinning at approx. top of 1st stage underpinning level to be installed.
9. Commence 1st stage of new lower ground floor excavations to the top level of the 1st stage underpinning toe. Allow for pumping out any ground water ingress.
10. 2nd level of horizontal propping to external walls/underpinning at the level just above 1st stage underpinning toe to be installed.
11. Temporary propped trench sheeting to be installed at deeper swimming pool area and rear terrace sump. Trench sheathing to be propped at 3 levels during excavation commencement.
12. Commence 2nd stage of underpinning to the level to suit the proposed new lower ground floor and swimming pool level. Allow for pumping out any ground water ingress.
13. Lower ground floor raft slab to be installed.
14. 1st stage of perimeter lining/retaining walls to be installed to underside of the low level temporary works propping underpinning walls.
15. 1st stage of lining wall to be diagonally propped of the raft slab.
16. Low level of underpinning horizontal propping to be removed.
17. 2nd stage of lining walls to be constructed to underside of the top level of underpinning horizontal propping.
18. RC lining walls to be propped at top as shown (alternatively lining walls to be designed as cantilever in temporary conditions – TBC subject to propping levels and external ground levels).
19. Top level of the underpinning propping to be removed.
20. Remain top part of the RC lining walls to be constructed to underside of proposed RC ground floor slab.
21. Lower ground floor internal RC walls to be constructed.
22. RC ground floor slab to be constructed.
23. Top level horizontal propping to the RC lining walls to be removed.
24. Existing ground floor loadbearing masonry walls to be re-supported on the new RC ground floor slab by drypacking gap between the walls and RC slab.
25. Temporary propping to the existing internal walls to be removed except the locations where it is still needed for the higher level works (e.g. grid D).

26. Lower ground, ground level RC slab and lower ground level RC walls holes remained after the temporary works removal to be structurally infilled (maintaining structural continuity).
27. Superstructure structural alterations to commence.

8.2 Lower Ground Garden Workshop and Link – Sequence of Construction

1. Garden swimming pool superstructure to be demolished.
2. Swimming pool substructure to be investigated to confirm if any of the existing retention structure can be reused (e.g. existing contiguous piled walls, RC retaining walls).
    a. If confirmed suitable the existing retention substructure to be reused for the temporary works purpose – TBC after investigation on site.
    b. If the existing retention structure cannot be reused, new temporary works for the basement to be provided (allow for contiguous minipiling or propped trench piling).
3. The existing swimming pool basement plantroom wall to be locally underpinned and new RC below ground wall constructed.
4. Existing plantroom wall to be temporary diagonally propped.
5. Piling mat to be installed.
6. Propped temporary minipiles, trench piling along No 8 Greenaway Gardens rear garden to be installed (piling to be fully on No 7 Greenaway Gardens side). Existing basement RC walls in the area between grid lines I-H could be retained (subject to investigation on site) and temporary propped – tbc after further site survey.
7. Excavate to proposed workshop and link formation level.
8. Extend down the existing RC walls between grid lines I-H (subject to investigation on site) and construction of the reinforced concrete basement workshop and link structure.

9.0 Design Criteria

9.1 Code of Practice

The design and construction of the works shall conform to the relevant Eurocodes with UK annexes and other Technical Publications latest editions as amended, in particular:

Building Regulations 2010 Edition.

BS EN 1991 Eurocode 1: Actions on Structures

BS EN 1992 Eurocode 2: Design of Concrete Structures

BS EN 1993 Eurocode 3: Design of Steel Structures

BS EN 1994 Eurocode 5: Design of Timber Structures

BS EN 1996 Eurocode 6 Design of Masonry Structures

BS EN 1997 Eurocode 7: Geotechnical Design

9.2 Loading – Imposed loadings to BS 6399

Domestic areas = 1.5 kN/m2
Roof (flat with no access) = 0.75 kN/m2
Roof (pitched) = 0.6 kN/m2

9.3 List of relevant structural drawings and reports

9.3.1 eHRW Drawings:

- 2095-HRW-XX-B2-DR-S-0108 Proposed Basement, GA P1
- 2095-HRW-XX-B1-DR-S-0109-1 Proposed Lower Ground Floor, GA, Sheet 1 P1
- 2095-HRW-XX-B1-DR-S-0109-2 Proposed Lower Ground Floor, GA, Sheet 2 P1
- 2095-HRW-XX-00-DR-S-0110-1 Proposed Ground Floor, GA, Sheet 1 P1
- 2095-HRW-XX-00-DR-S-0110-2 Proposed Ground Floor, GA, Sheet 2 P1
- 2095-HRW-XX-01-DR-S-0111 Proposed First Floor, GA P1
- 2095-HRW-XX-02-DR-S-0112 Proposed Second Floor, GA P1
- 2095-HRW-XX-04-DR-S-0113 Proposed Roof, GA P1
- 2095-HRW-XX-XX-DR-S-0200-1 Proposed Section A-A, Sheet 1 P1
- 2095-HRW-XX-XX-DR-S-0200-2 Proposed Section A-A, Sheet 2 P1
- 2095-HRW-XX-XX-DR-S-0202 Proposed Section C-C P1
- 2095-HRW-XX-XX-DR-S-0300 Proposed Basement To Ground Floor, Sections & Details, Sheet 1 P1
- 2095-HRW-XX-XX-DR-S-0301 Proposed Basement To Ground Floor, Sections & Details, Sheet 2 P1
- 2095-HRW-XX-XX-DR-S-0900 Proposed Main House, Sequence of Construction, Stages 1 & 2 P1
- 2095-HRW-XX-XX-DR-S-0901 Proposed Main House, Sequence of Construction, Stages 3 & 4 P1
- 2095-HRW-XX-XX-DR-S-0902 Proposed Main House, Sequence of Construction, Stages 5 & 6 P1
- 2095-HRW-XX-XX-DR-S-0903 Proposed Main House, Sequence of Construction, Stages 7 & 8 P1
- 2095-HRW-XX-XX-DR-S-0910 Proposed Workshop, Sequence of Construction, Stages 1 to 4 P1

9.3.2 Reports

- Ground Investigation and Basement Impact Assessment J20269 dated January 2021
- Flood Risk Assessment Report by Evans Rivers and Coastal Ltd. ref. 2628/RE/01-21/01, dated January 2021.
- Energy and Sustainability Statement JB/692 January 2021 by ME7 Ltd.
- Arboricultural Method Statement by Arbtech Consulting dated 11 January 2021.

9.3.3 Appendixes

- Appendix 1 - EngineersHRW Proposed Structuctural Drawings
- Appendix 2 - EngineersHRW Proposed Sequence of Construction Drawings

10.0 Conclusion

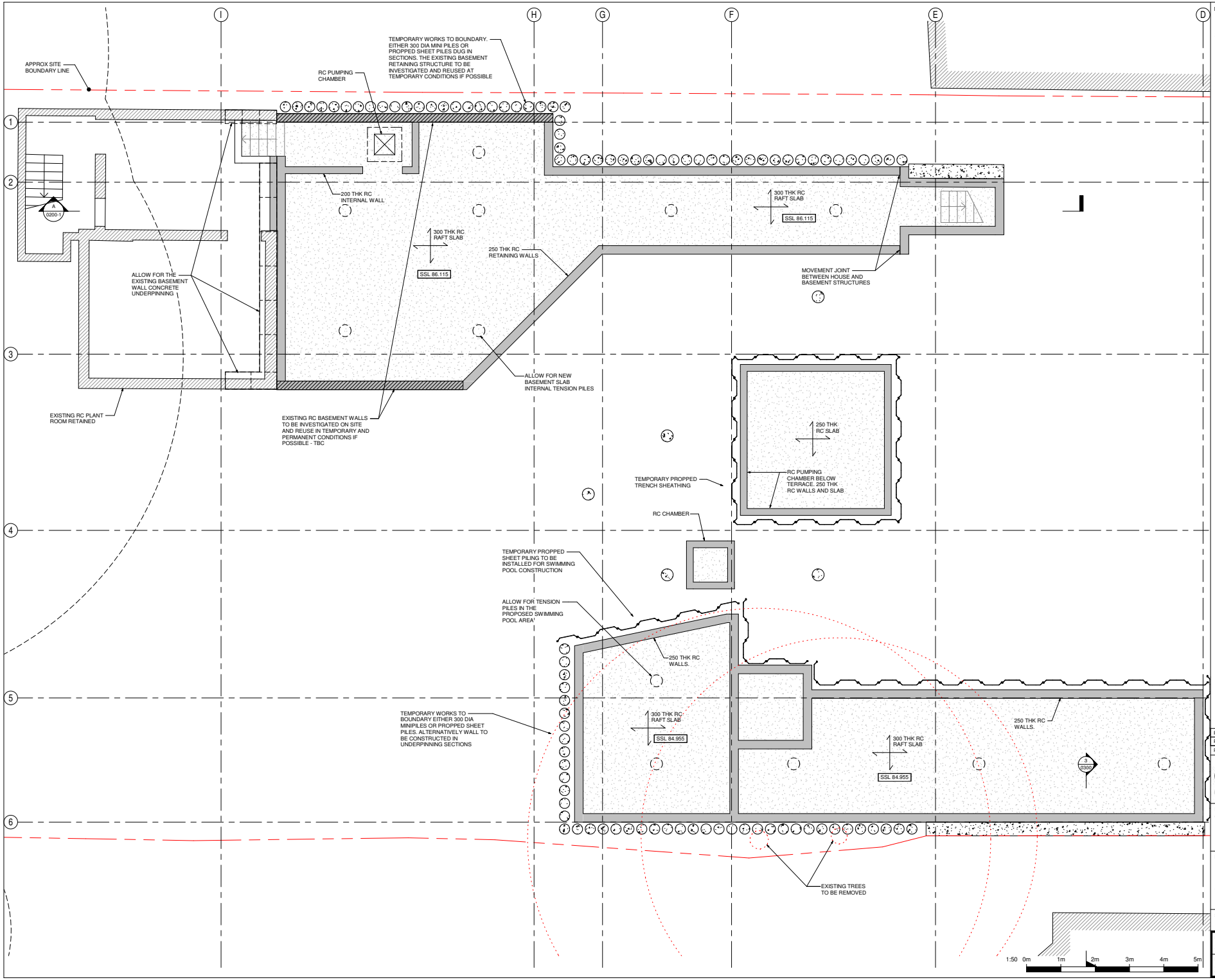
The following has been carried out in preparing this Structural Engineer's Construction Method Statement:

- A Desk Study followed by a full Site Investigation were undertaken to establish ground conditions, soil contamination and groundwater levels.
- A Ground Movement Assessment
- A Basement Impact Assessment
- An engineering scheme design was developed considering the surrounding structures and site constraints. This includes a sequence of construction.

Based on the above we are satisfied that the scheme is viable and is designed and can be constructed in accordance with Camden Council's CPG Basements dated 2018.

APPENDIX 1

EngineersHRW Proposed Structure Drawings



NOTES

1. DO NOT SCALE FROM THIS DRAWING
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS INFORMATION

Legend

- DENOTES EXISTING STRUCTURE TO BE RETAINED.
- DENOTES RC WALL UNO.
- DENOTES STRUCTURE UNDER
- DENOTES EXISTING STRUCTURE TO BE DEMOLISHED
- DENOTES ASSUMED SPAN DIRECTION OF EXISTING TIMBER JOISTS
- TJ — DENOTES TIMBER JOISTS WITH 18 THK PLY DECK
- MD — DENOTES RC SLAB ON METAL DECK
- DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION
- DJ — DENOTES DOUBLE JOIST

Rev	Date	Amendments	By	Chk'd
P2	03.02.21	ISSUED FOR PLANNING	DJP	KB
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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London 0207 407 9575 Oxford 01865 957360 www.ehrw.co.uk

Project:
7 Greenaway Gardens, London, NW3 7DJ

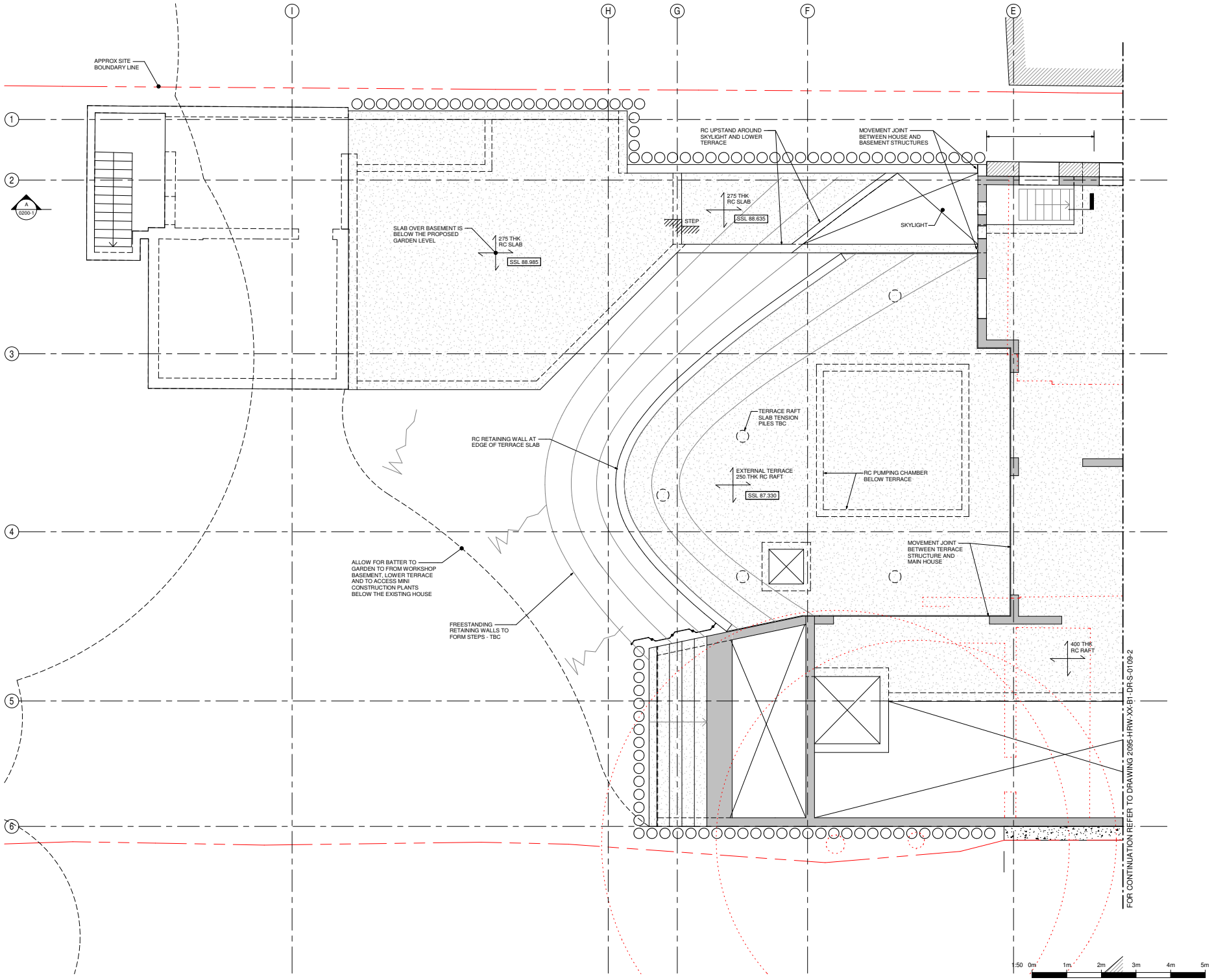
Drawing title:
Proposed Basement General Arrangement

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: S2 INFORMATION

Purpose For Issue:

Drawing Number: 2095-HRW-XX-B2-DR-S-0108 Rev: P2



NOTES

1. DO NOT SCALE FROM THIS DRAWING
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Legend

- DENOTES EXISTING STRUCTURE TO BE RETAINED.
- DENOTES RC WALL UNO.
- DENOTES STRUCTURE UNDER
- DENOTES EXISTING STRUCTURE TO BE DEMOLISHED
- DENOTES ASSUMED SPAN DIRECTION OF EXISTING TIMBER JOISTS
- TJ — DENOTES TIMBER JOISTS WITH 18 THK PLY DECK
- MD — DENOTES RC SLAB ON METAL DECK
- DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION
- DJ — DENOTES DOUBLE JOIST

Rev	Date	Amendments	By	Chk'd
P2	03.02.21	ISSUED FOR PLANNING	DJP	KB
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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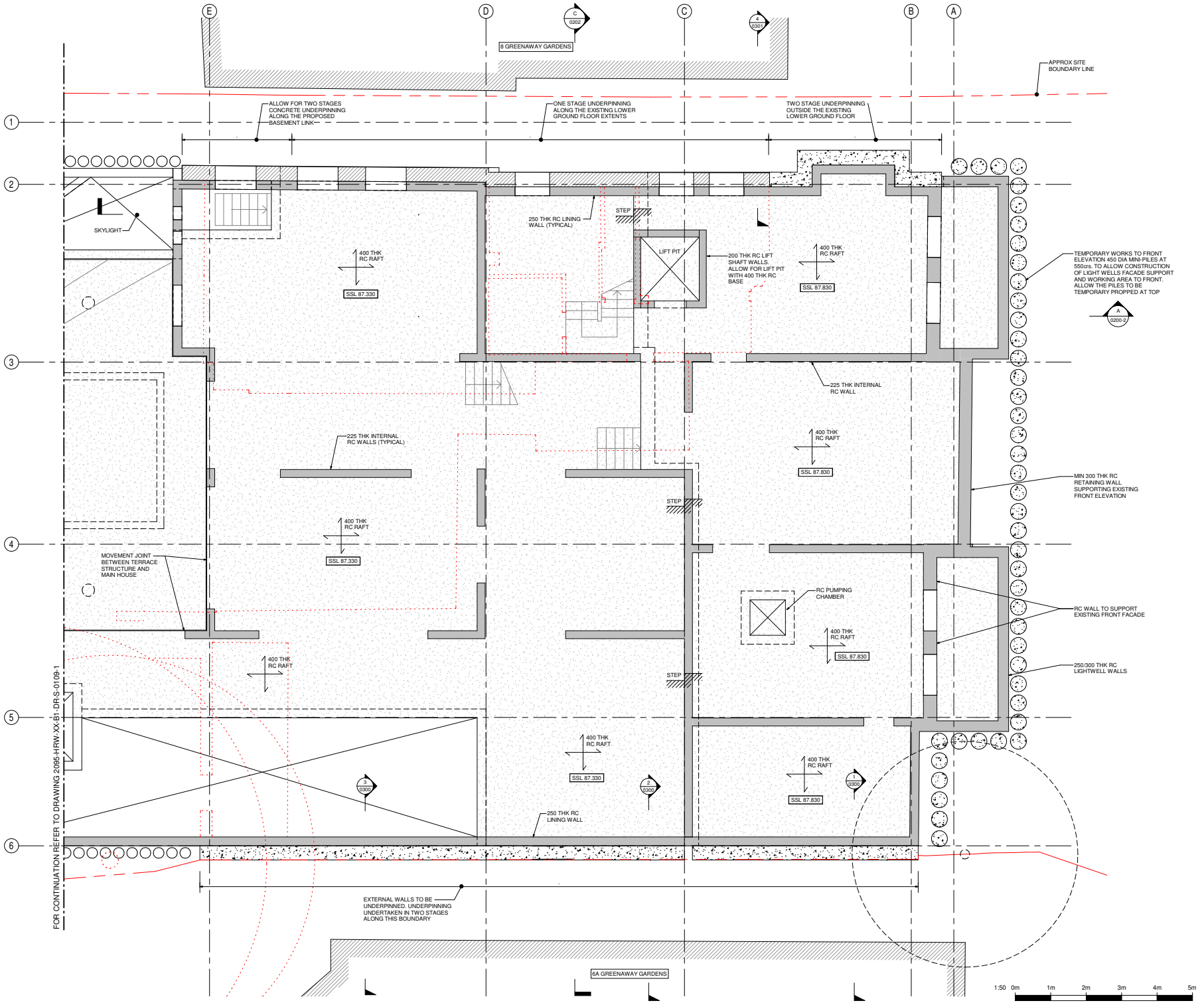
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Lower Ground Floor General Arrangement Sheet 1

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: S2 INFORMATION
Purpose For Issue:

Drawing Number: 2095-HRW-XX-B1-DR-S-0109-1 P2
Rev:



NOTES

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Rev	Date	Amendments	By	Chk'd
P2	03.02.21	ISSUED FOR PLANNING	DJP	KB
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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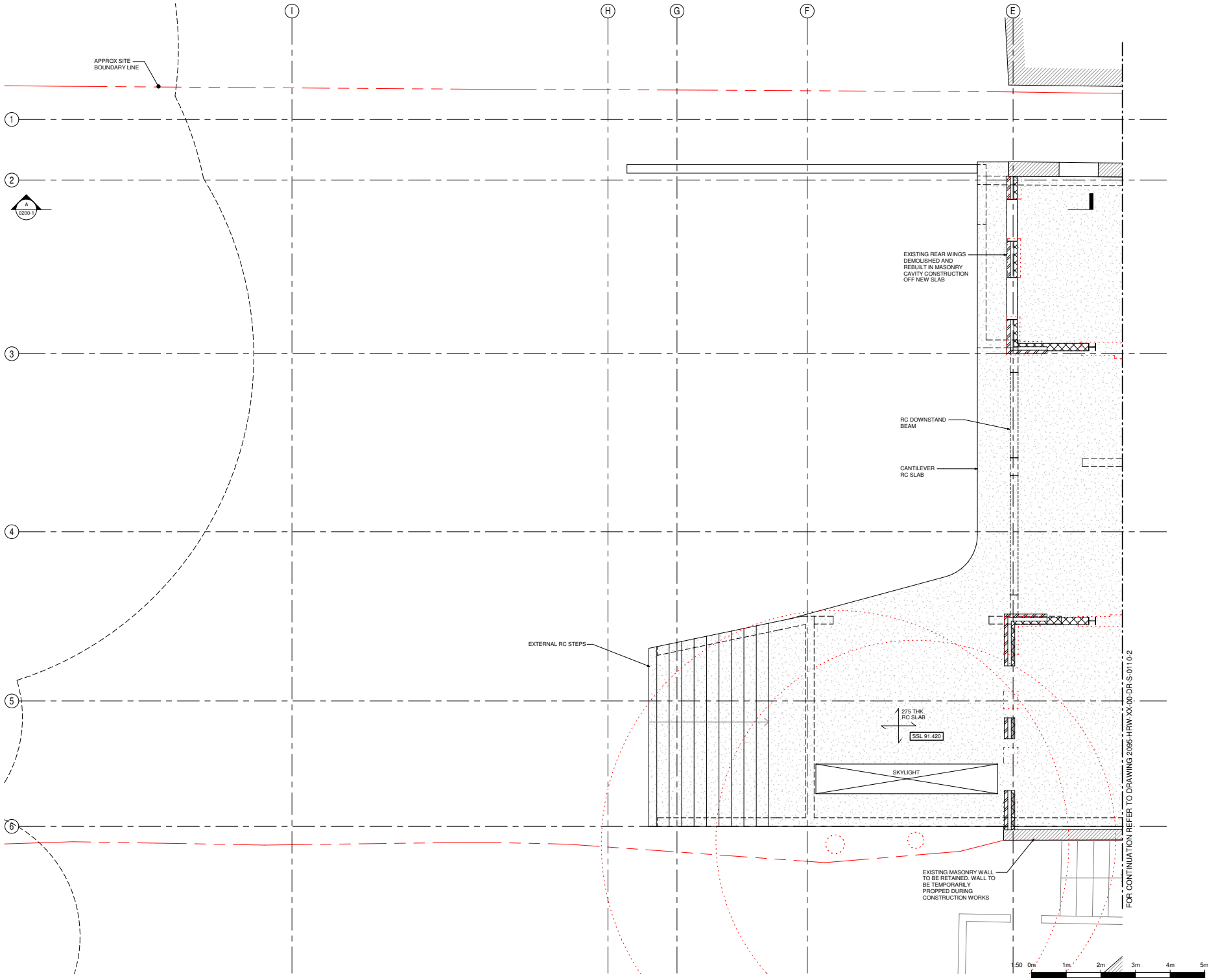
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Lower Ground Floor General Arrangement Sheet 2

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: S2 Purpose For Issue: **INFORMATION**

Drawing Number: **2095-HRW-XX-B1-DR-S-0109-2** Rev: **P2**



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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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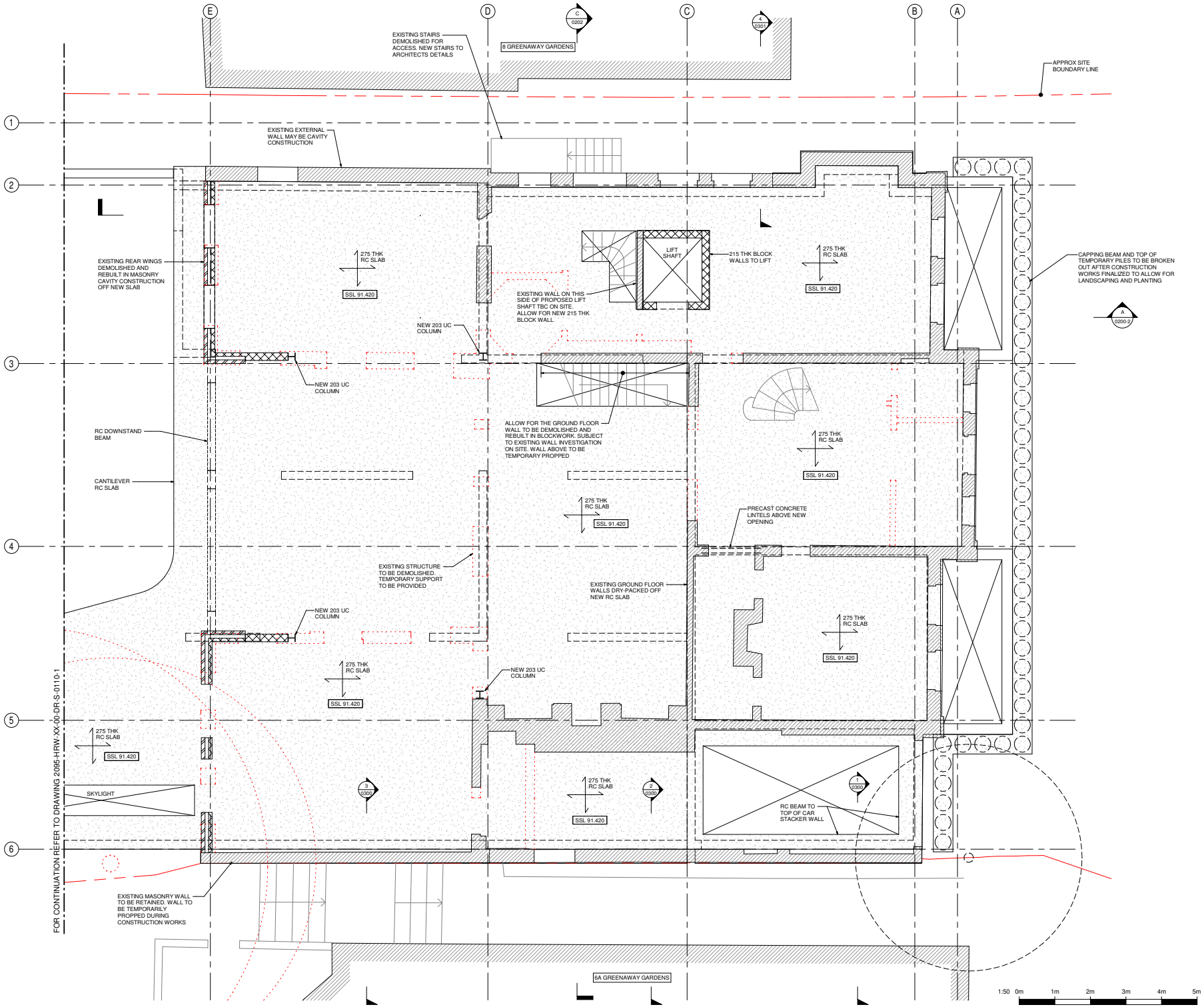
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Ground Floor General Arrangement Sheet 1

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: S2 INFORMATION
Purpose For Issue:

Drawing Number: 2095-HRW-XX-00-DR-S-0110-1 P1
Rev:



NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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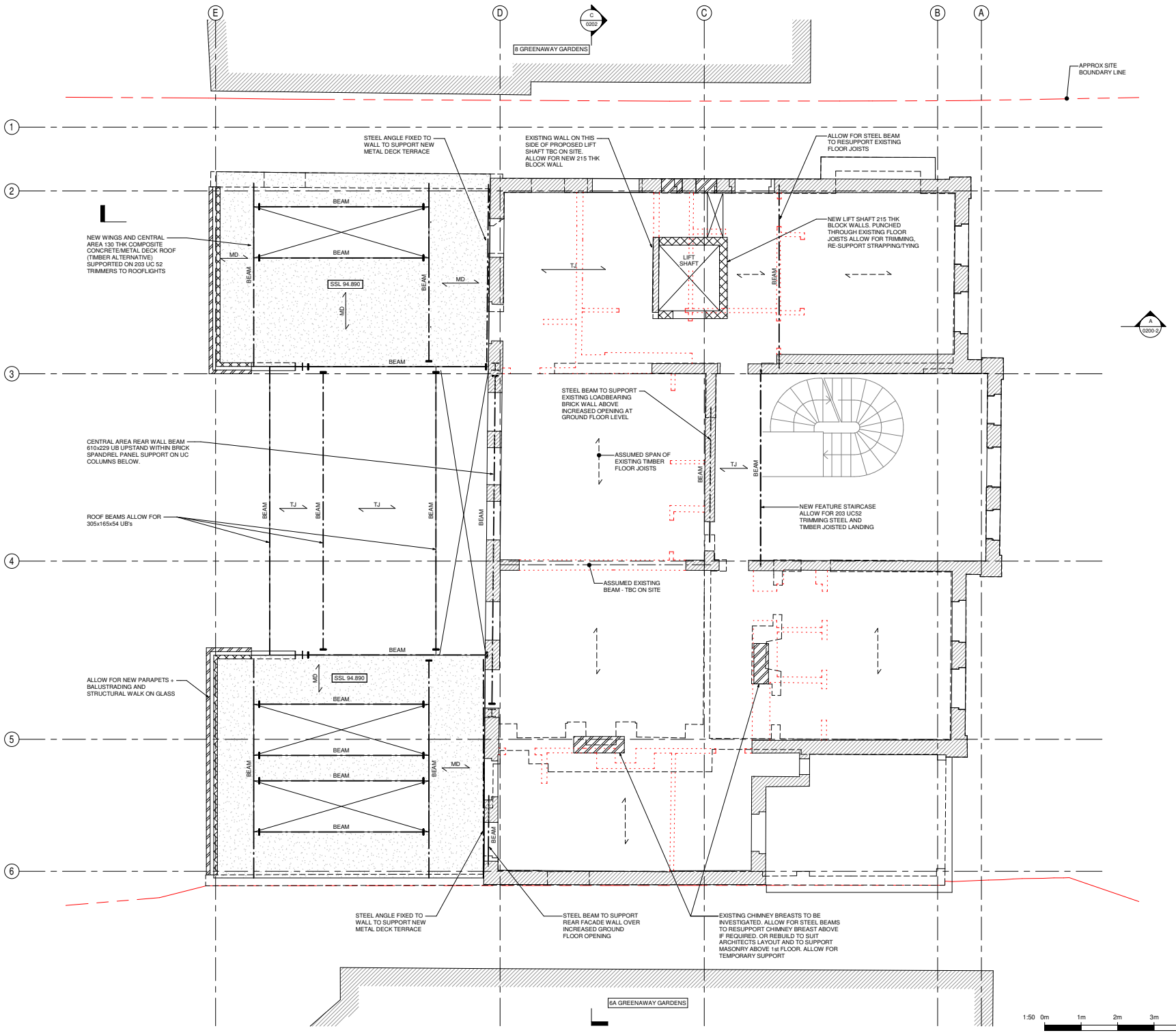
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Ground Floor General Arrangement Sheet 2

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: S2 Purpose For Issue: INFORMATION

Drawing Number: 2095-HRW-XX-00-DR-S-0110-2 Rev: P1



NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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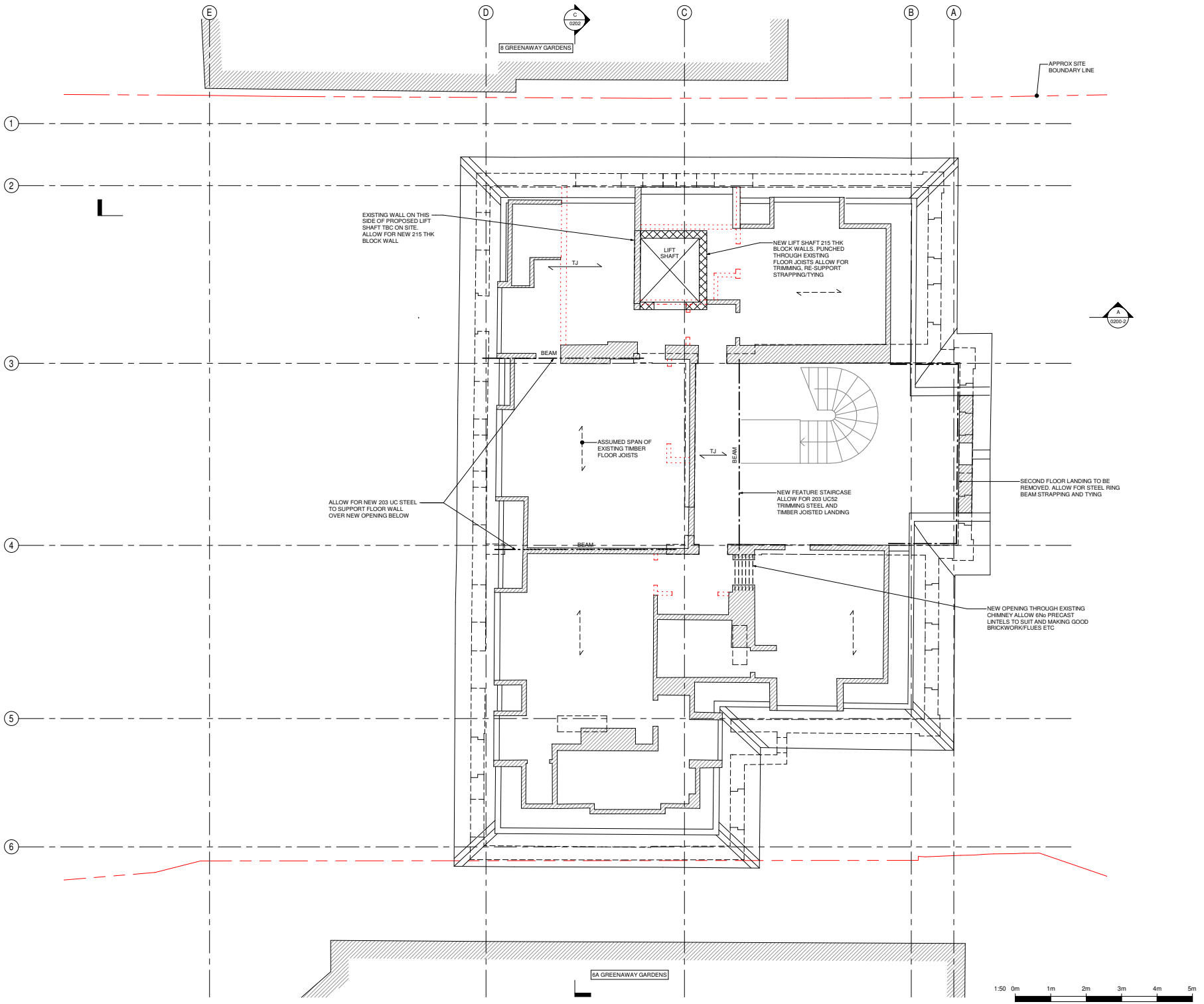
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed First Floor General Arrangement

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: Purpose For Issue:
S2 INFORMATION

Drawing Number: **2095-HRW-XX-01-DR-S-0111** Rev: **P1**



NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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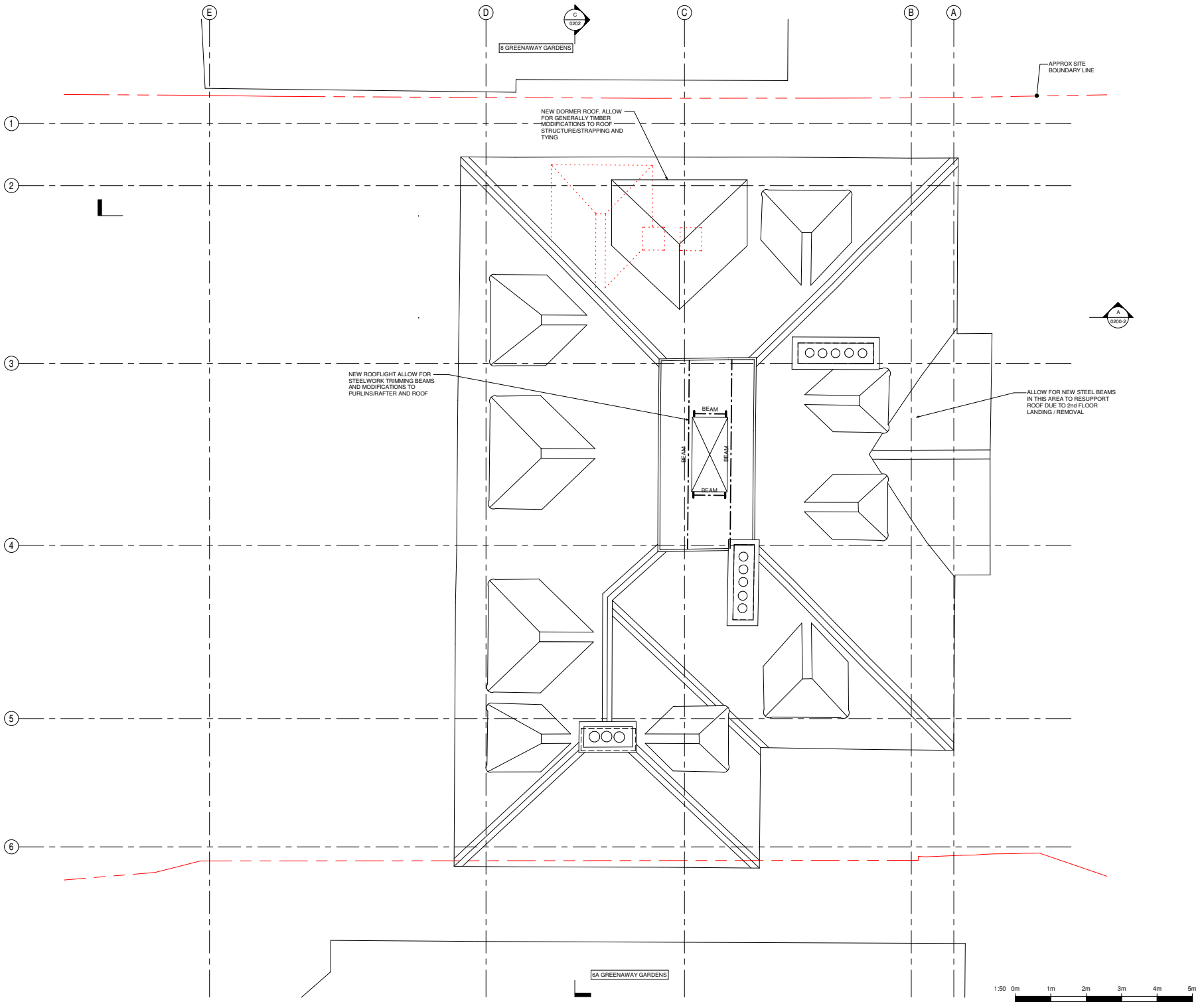
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Second Floor General Arrangement

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: S2 Purpose For Issue: INFORMATION

Drawing Number: 2095-HRW-XX-02-DR-S-0112 Rev: P1



NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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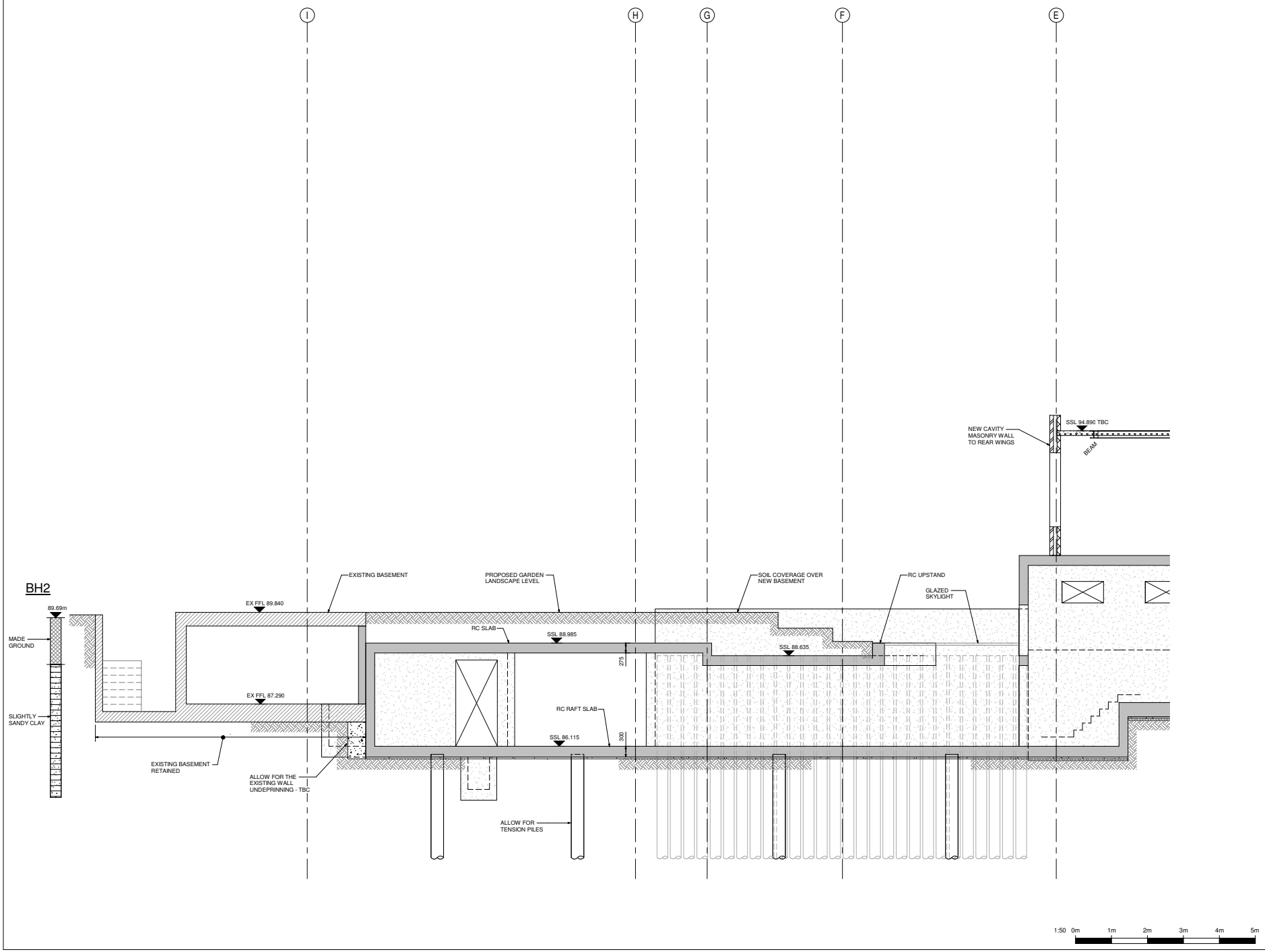
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Roof General Arrangement

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: Purpose For Issue:
S2 INFORMATION

Drawing Number: **2095-HRW-XX-04-DR-S-0113** Rev: **P1**



NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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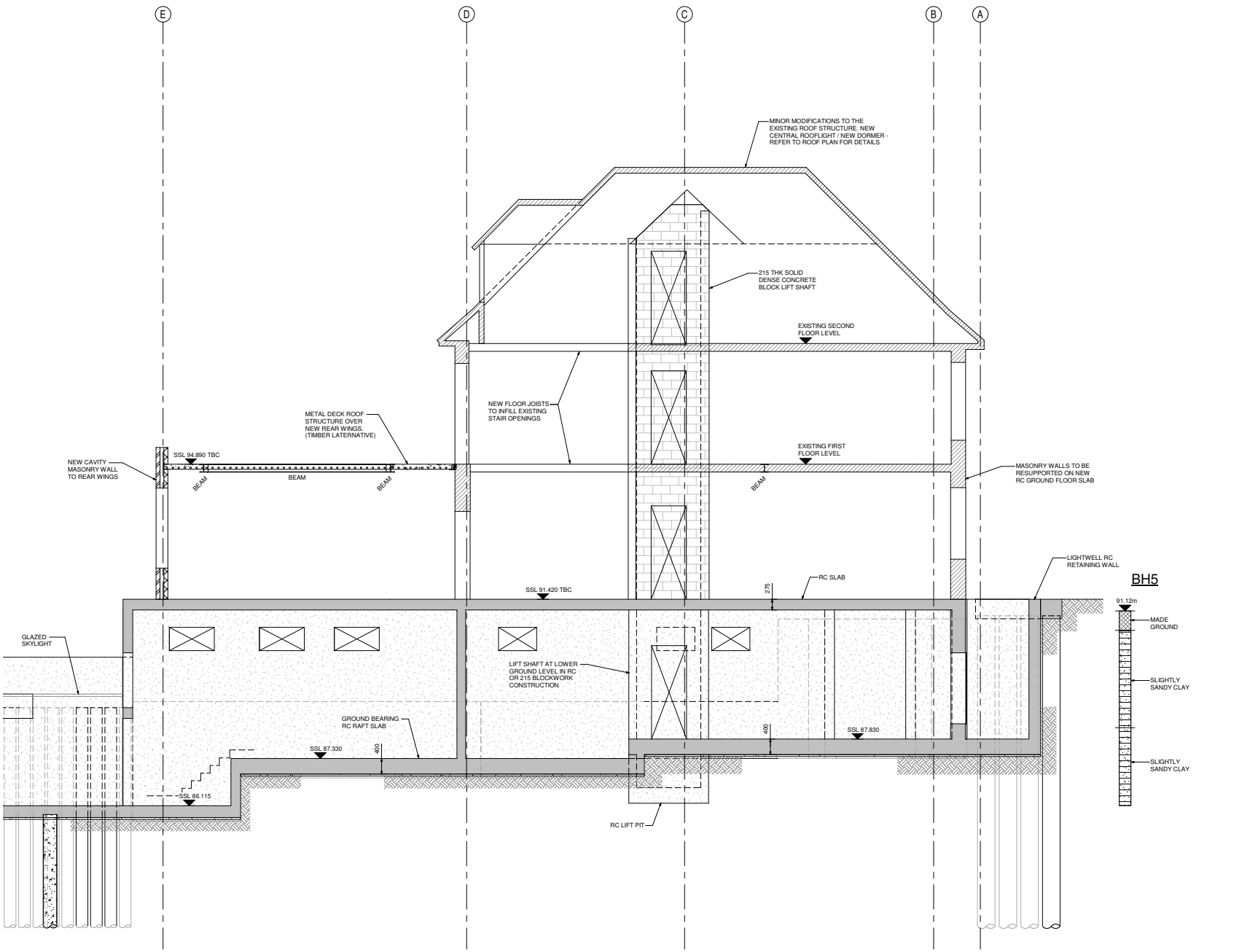
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Section A-A

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: S2 Purpose For Issue: **INFORMATION**

Drawing Number: **2095-HRW-XX-XX-DR-S-0200-1** Rev: **P1**



NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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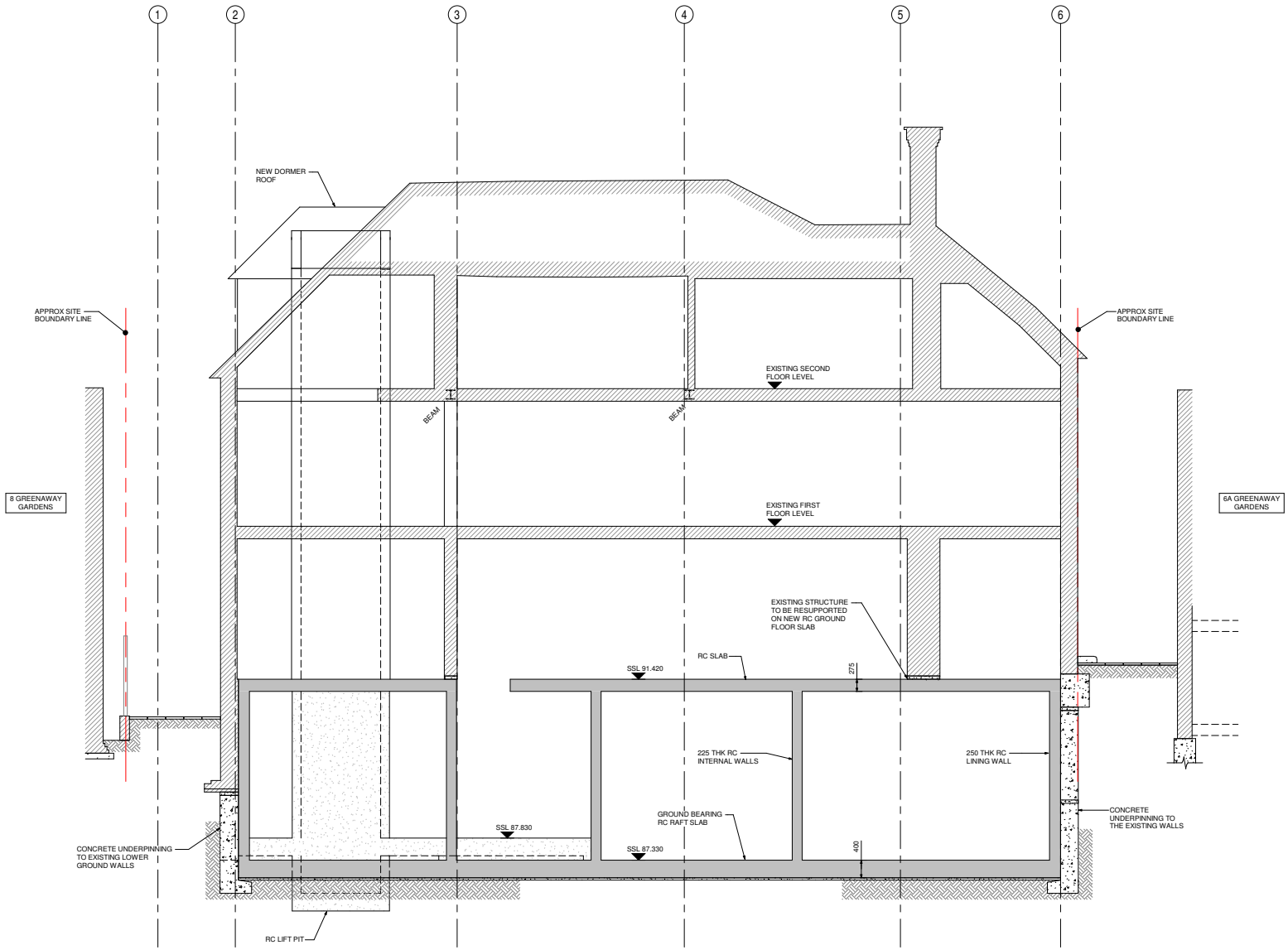
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Section A-A

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: Purpose For Issue:
S2 INFORMATION

Drawing Number: Rev:
2095-HRW-XX-XX-DR-S-0200-2 P1



1:50 0m 1m 2m 3m 4m 5m

NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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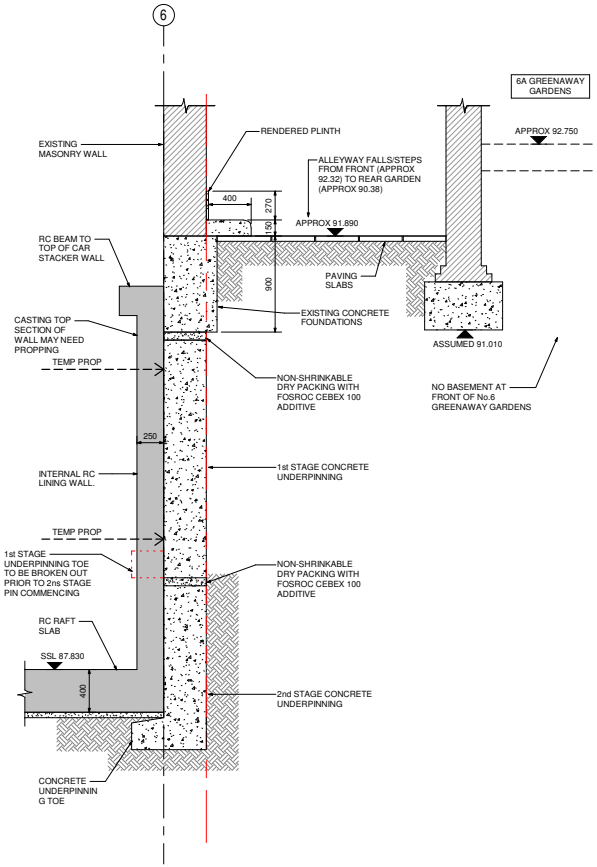
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Section C-C

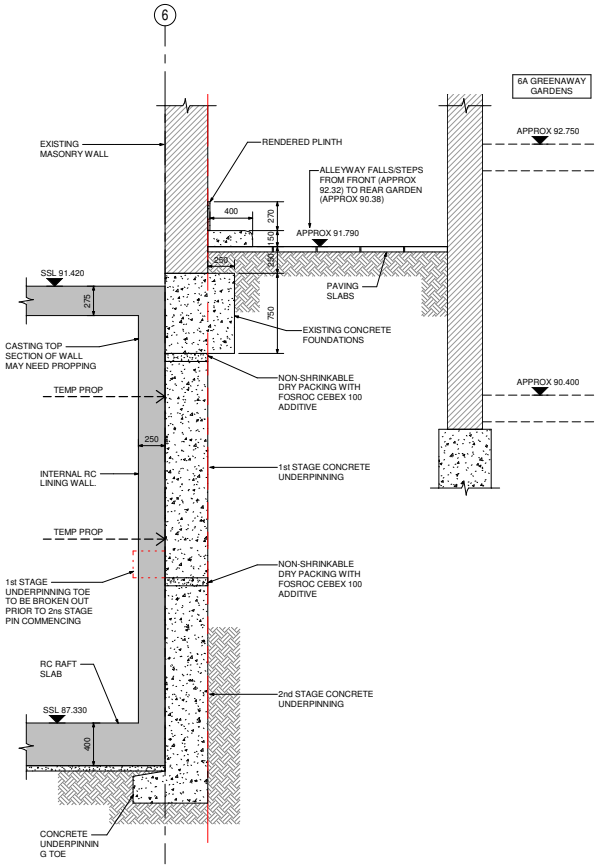
Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	DJP	JAN 2021	KB

Status: Purpose For Issue:
S2 INFORMATION

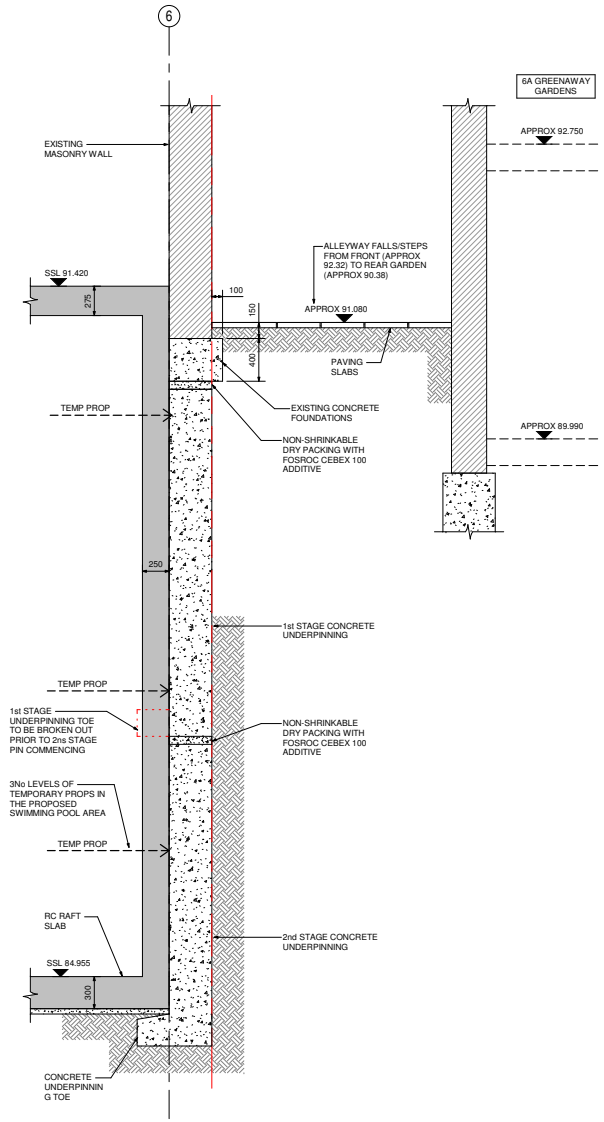
Drawing Number: **2095-HRW-XX-XX-DR-S-0202** Rev: **P1**



Section 1 - 1
Scale 1 : 25



Section 2 - 2
Scale 1 : 25



Section 3 - 3
Scale 1 : 25

1:50 0m 1m 2m 3m 4m 5m

NOTES

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P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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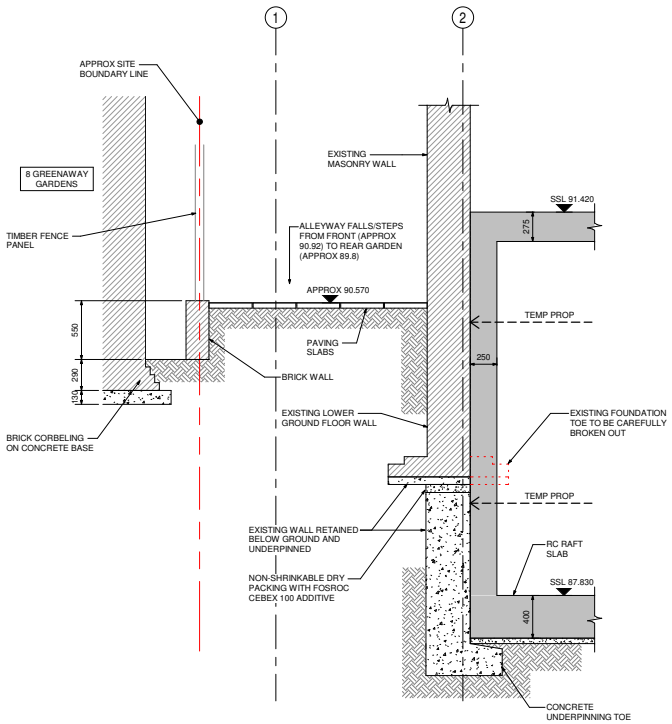
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed Basement To Ground Floor Sections & Details Sheet 1

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 25	DJP	JAN 2021	KB

Status: S2 Purpose For Issue: INFORMATION

Drawing Number: 2095-HRW-XX-XX-DR-S-0300 Rev: P1



Section 4 - 4
Scale 1 : 25

NOTES

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Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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Project:
7 Greenaway Gardens,
London, NW3 7DJ

Drawing title:
Proposed
Basement To Ground Floor
Sections & Details
Sheet 2

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 25	DJP	JAN 2021	KB

Status: S2 INFORMATION
Purpose For Issue:

Drawing Number: 2095-HRW-XX-XX-DR-S-0301 Rev: P1

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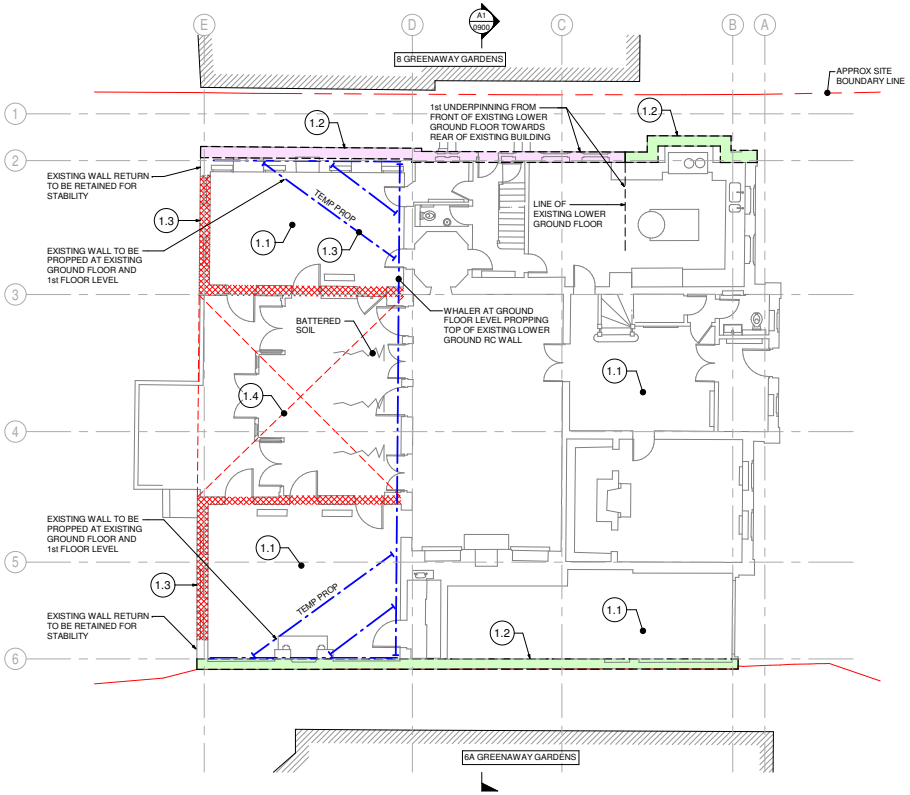
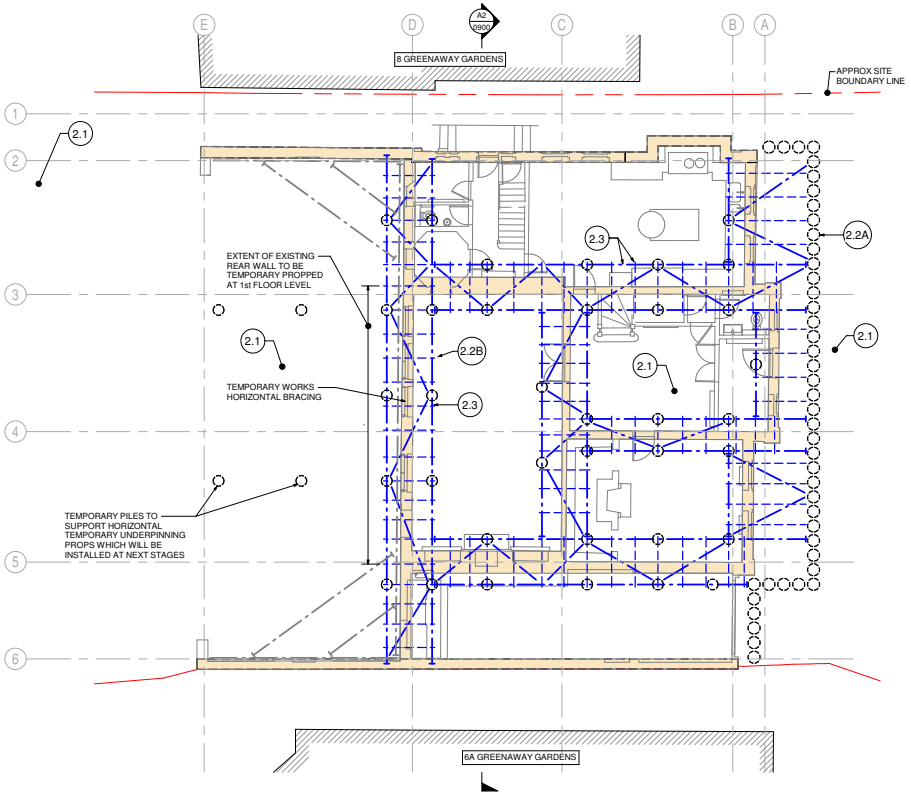
APPENDIX 2

EngineersHRW Proposed Sequence of Construction



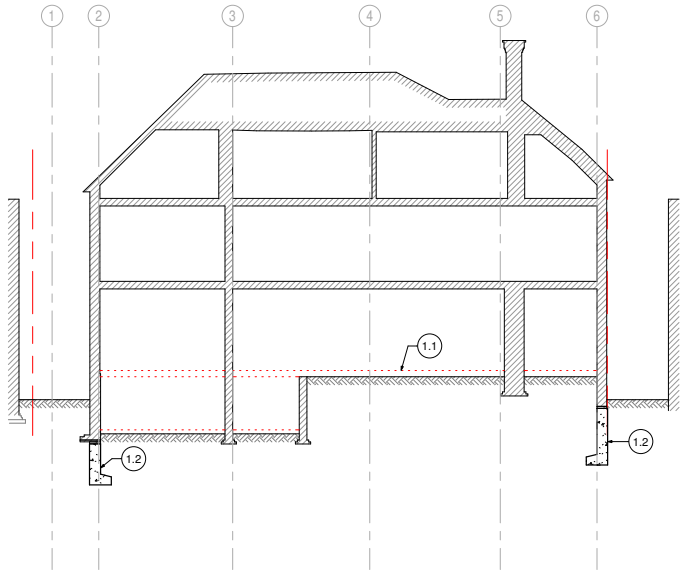
Stage 1 - Ground Floor Level

Scale 1 : 100



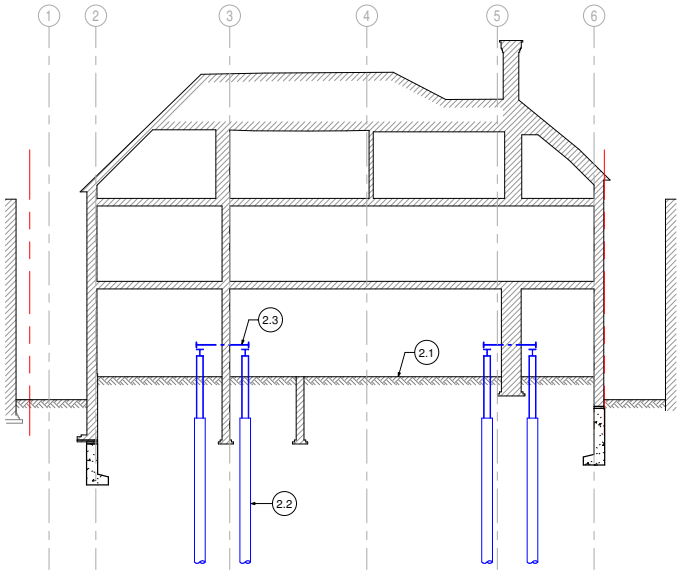
Stage 2 - Ground Floor Level

Scale 1 : 100



Stage 1 - Section A-A

Scale 1 : 100



Stage 2 - Section A-A

Scale 1 : 100

1:50 0m 1m 2m 3m 4m 5m

NOTES

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STAGE 1

1.1 THE MAIN HOUSE GROUND FLOOR TIMBER STRUCTURE, GARAGE CONCRETE SLAB AND REAR WINGS CONCRETE BEAMS GROUND FLOOR TO BE REMOVED.

1.2 1st STAGE OF THE EXISTING MASONRY SIDE WALLS UNDERPINNING TO BE CONSTRUCTED (APPROX. HALF DEPTH OF THE PROPOSED FULL UNDERPINNING DEPTH. DUE TO THE DEPTH, THE UNDERPINNING IN SOME LOCATIONS TO BE UNDERTAKEN IN TWO STAGES). EACH PIN OF THE 1ST STAGE OF UNDERPINNING TO BE BACKFILLED AND COMPACTED PRIOR EXCAVATING/ CONSTRUCTING NEXT SEQUENCE OF 1st STAGE UNDERPINNING.

1.3 EXISTING REAR EXTENSION ROOF/TERRACE (GRIDS D-E/1-3 AND D-E/4-5), REAR EXTENSION GLAZED ROOF (GRIDS D-E/3-4) AND MASONRY WALLS (GRID LINE E/2-6) TO BE DEMOLISHED. MASONRY SIDE WALLS ON GRID LINES 2/D-E AND 6/D-E TO BE RETAINED. PRIOR EXTENSION DEMOLITION THE RETAINED WALLS TO BE TEMPORARY PROPPED.

1.4 CONCRETE GROUND FLOOR OVER THE EXISTING BASEMENT TO BE REMOVED TO ALLOW FOR PILING MAT INSTALLATION AND ACCESS FOR PILING RIG. EXISTING BASEMENT WALLS SUPPORTING THE WALLS ABOVE TO BE RETAINED AND LATERALLY PROPPED.

STAGE 2

2.1 PILING MAT TO BE INSTALLED INSIDE THE EXISTING MAIN HOUSE BUILDING, AT FRONT COURTYARD (AND IN THE GARDEN PROPOSED WORKSHOP AREA – SUBJECT TO THE EXISTING SWIMMING POOL RETAINING STRUCTURE CONFIRMATION ON SITE).

2.2 TEMPORARY RC PILES TO BE INSTALLED:
A. CONTIGUOUS PILING ALONG FRONT ELEVATION.
B. PILES WITH STEEL PLUNGED COLUMNS INSIDE THE MAIN HOUSE TO PROVIDE SUPPORT FOR RETAINED INTERNAL WALLS.
C. CONTINUOUS PILING TO THE PROPOSED GARDEN WORKSHOP AND LINK – SUBJECT TO THE EXISTING SWIMMING POOL RETAINING STRUCTURE CONFIRMATION.

2.3 STEEL RUNNER BEAMS BETWEEN THE INTERNAL TEMPORARY PILES AND NEEDLES THROUGH THE EXISTING INTERNAL WALLS TO BE INSTALLED AND DRYPACKED.

DRAWING TO BE READ IN CONJUNCTION WITH SEQUENCE OF CONSTRUCTION DRAWINGS 0901, 0902 & 0903

Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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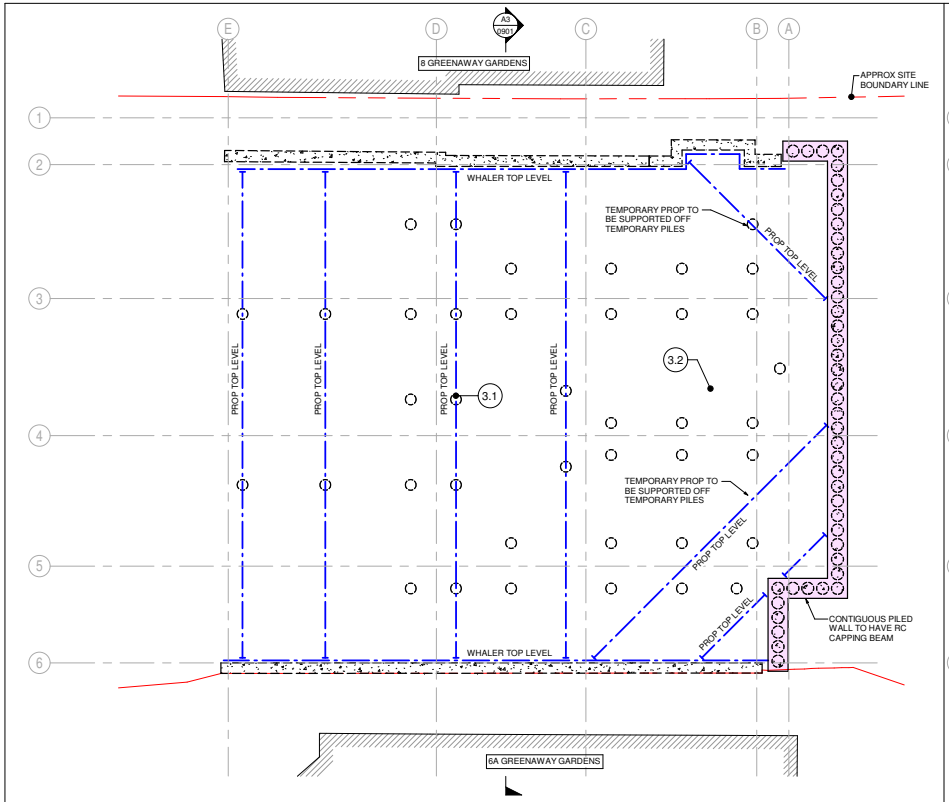
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed - Main House Sequence of Construction Stages 1 & 2

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 100	DJP	JAN 2021	KB

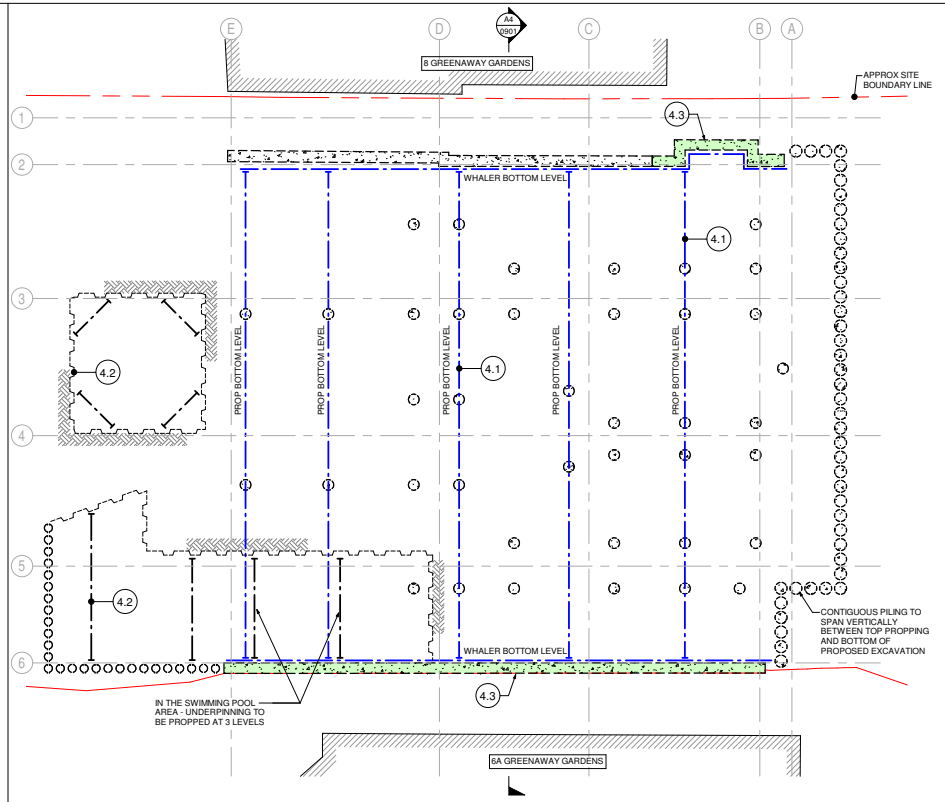
Status: S2 Purpose For Issue: INFORMATION

Drawing Number: 2095-HRW-XX-XX-DR-S-0900 Rev: P1



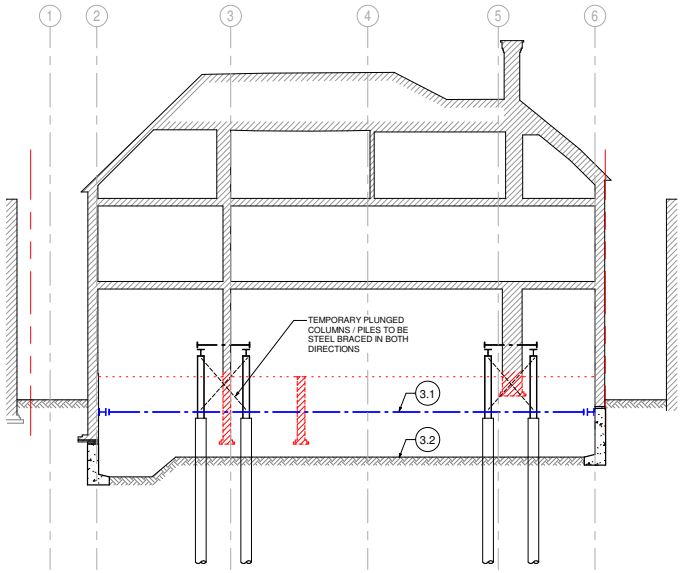
Stage 3 - Lower Ground Floor Level

Scale 1 : 100



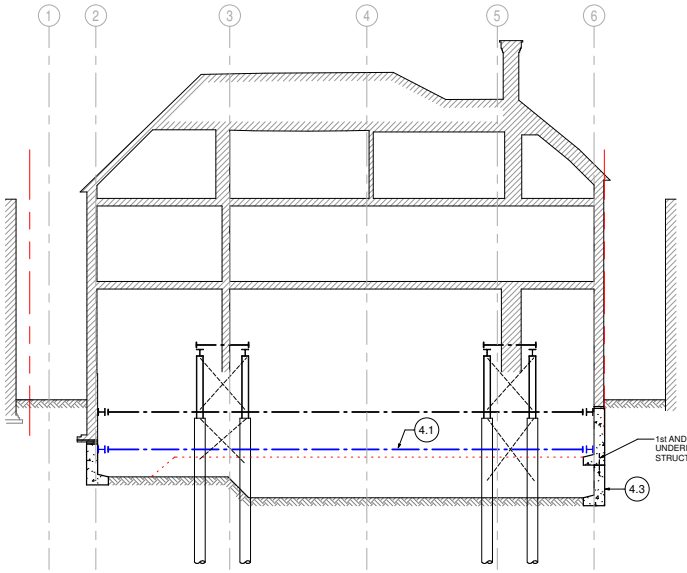
Stage 4 - Lower Ground Floor Level

Scale 1 : 100



Stage 3 - Section A-A

Scale 1 : 100



Stage 4 - Section A-A

Scale 1 : 100

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NOTES

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STAGE 3

- 3.1 1st LEVEL OF HORIZONTAL PROPPING TO EXTERNAL WALLS/UNDERPINNING AT APPROX. TOP OF 1st STAGE UNDERPINNING LEVEL TO BE INSTALLED.
- 3.2 COMMENCE 1st STAGE OF NEW LOWER GROUND FLOOR EXCAVATIONS TO THE TOP LEVEL OF THE 1st STAGE UNDERPINNING TOE. ALLOW FOR PUMPING OUT ANY GROUND WATER INGRESS.

STAGE 4

- 4.1 2nd LEVEL OF HORIZONTAL PROPPING TO EXTERNAL WALLS/UNDERPINNING AT THE LEVEL JUST ABOVE 1st STAGE UNDERPINNING TOE TO BE INSTALLED.
- 4.2 TEMPORARY PROPPED SHEET PILING/ MINI PILES AS SHOWN TO BE INSTALLED AT DEEPER SWIMMING POOL AREA AND SUMP. SHEET PILING/ MINI PILES TO BE PROPPED AT 3 LEVELS DURING THE EXCAVATION COMMENCEMENT
- 4.3 COMMENCE 2nd STAGE OF UNDERPINNING TO THE LEVEL TO SUIT THE PROPOSED NEW LOWER GROUND FLOOR LEVEL.

DRAWING TO BE READ IN CONJUNCTION WITH SEQUENCE OF CONSTRUCTION DRAWINGS 0900, 0902 & 0903

Rev	Date	Amendments	By	Chk'd
P2	03.02.21	ISSUED FOR PLANNING	DJP	KB
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed - Main House Sequence of Construction Stages 3 & 4

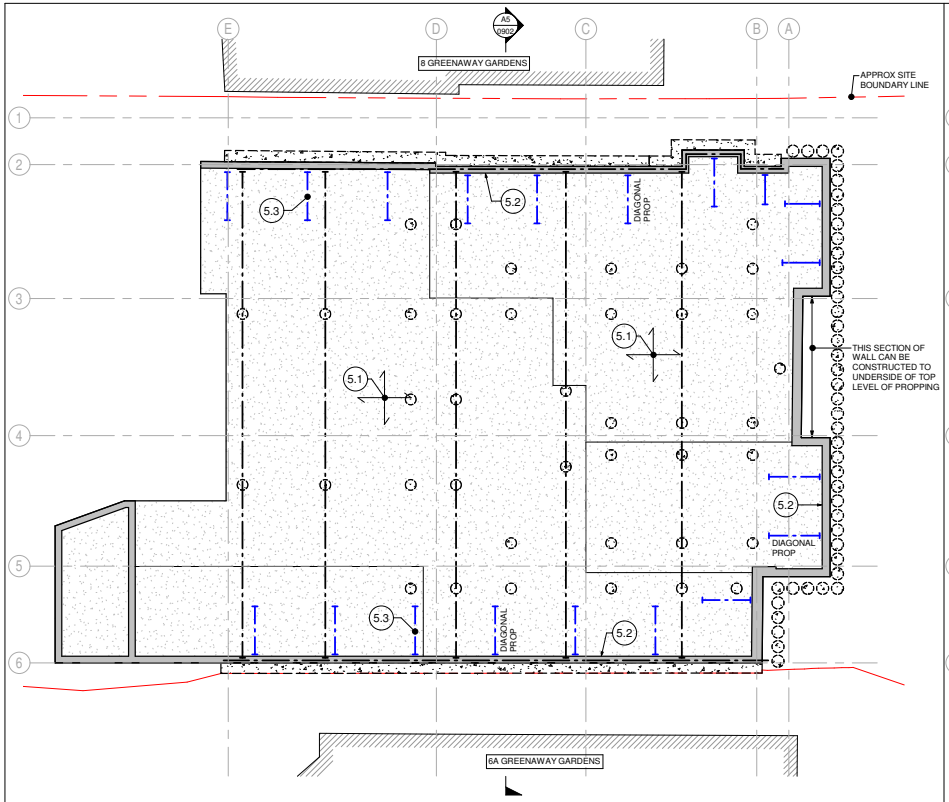
Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 100	DJP	JAN 2021	KB

Status: S2 INFORMATION

Purpose For Issue:

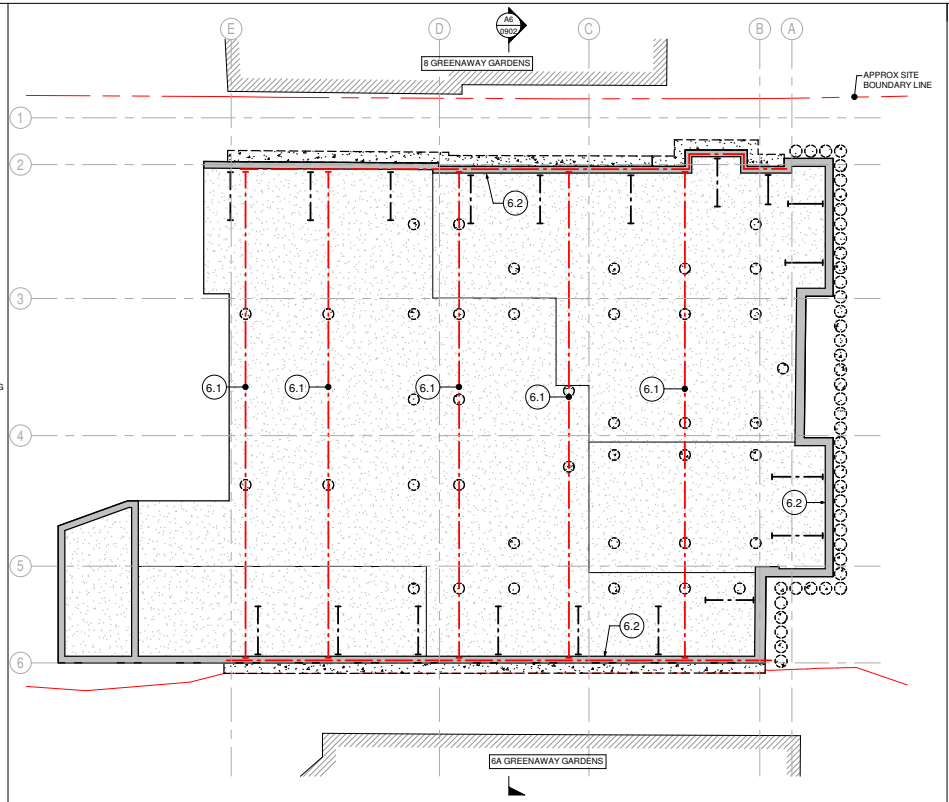
Drawing Number: 2095-HRW-XX-XX-DR-S-0901

Rev: P2



Stage 5 - Lower Ground Floor Level

Scale 1 : 100



Stage 6 - Lower Ground Floor Level

Scale 1 : 100

NOTES

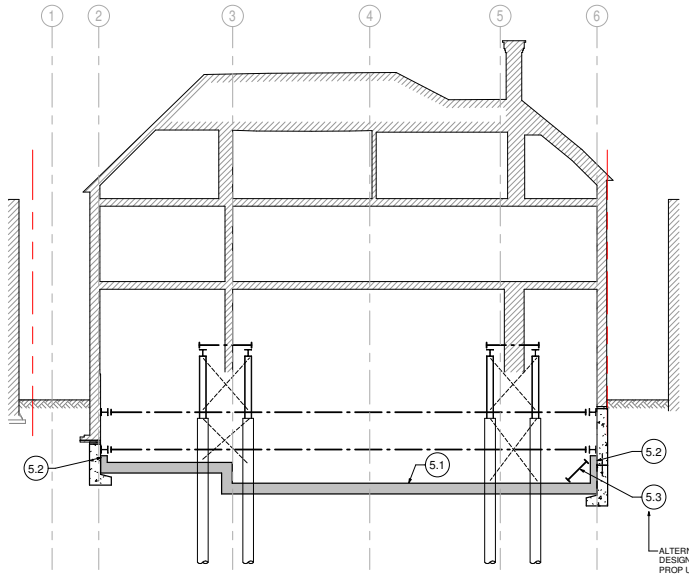
1. DO NOT SCALE FROM THIS DRAWING
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS INFORMATION

STAGE 5

- 5.1 LOWER GROUND FLOOR RAFT SLAB TO BE INSTALLED.
- 5.2 1st STAGE OF PERIMETER LINING/RETAINING WALLS TO BE INSTALLED TO UNDERSIDE OF THE LOW LEVEL TEMPORARY WORKS PROPPING UNDERPINNING WALLS.
- 5.3 1st STAGE OF LINING WALL TO BE DIAGONALLY PROPPED OF THE RAFT SLAB.

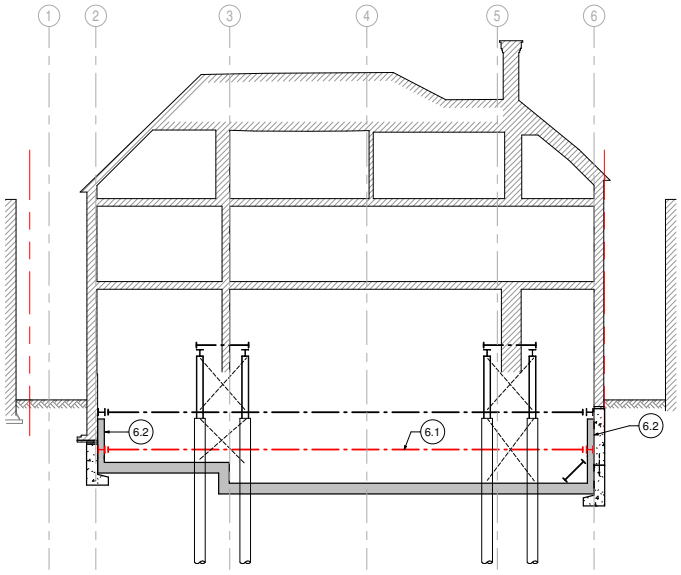
STAGE 6

- 6.1 LOW LEVEL OF UNDERPINNING HORIZONTAL PROPPING TO BE REMOVED.
- 6.2 2nd STAGE OF LINING WALLS TO BE CONSTRUCTED TO UNDERSIDE OF THE TOP LEVEL OF UNDERPINNING HORIZONTAL PROPPING.



Stage 5 - Section A-A

Scale 1 : 100



Stage 6 - Section A-A

Scale 1 : 100

1:50 0m 1m 2m 3m 4m 5m

DRAWING TO BE READ IN CONJUNCTION WITH SEQUENCE OF CONSTRUCTION DRAWINGS 0900, 0901 & 0903

Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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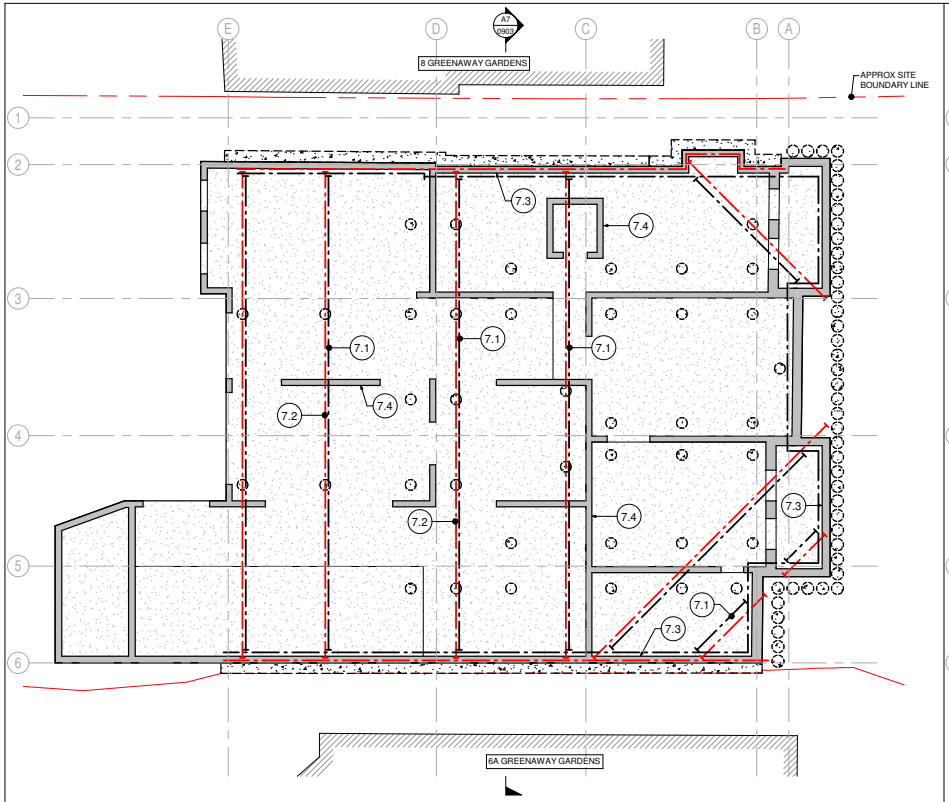
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed - Main House Sequence of Construction Stages 5 & 6

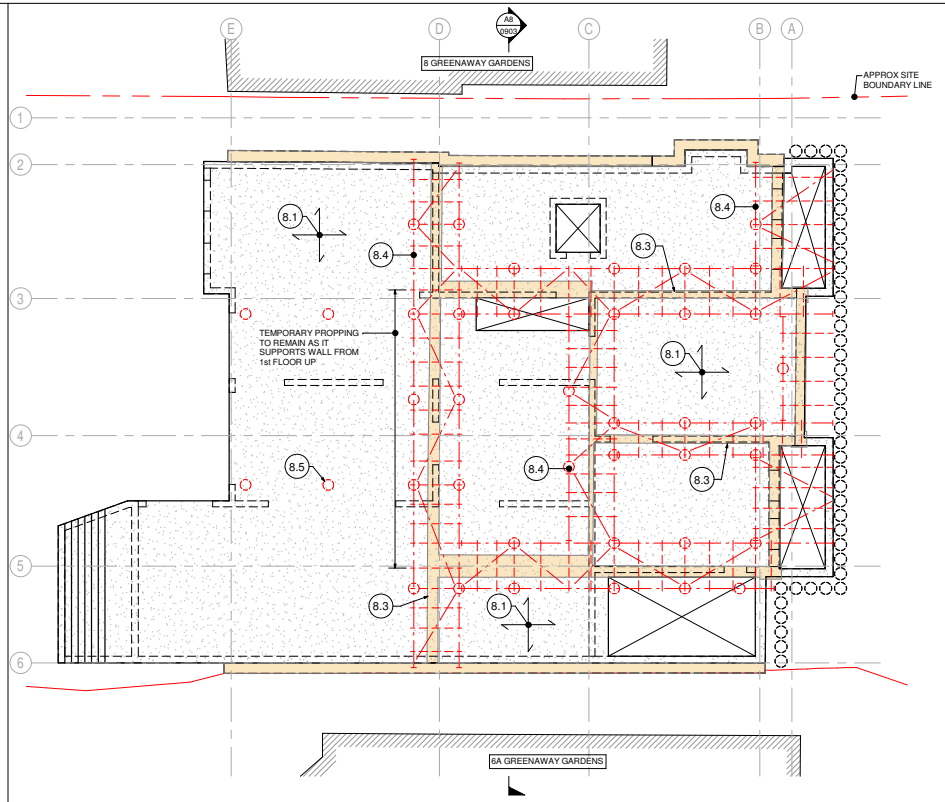
Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 100	DJP	JAN 2021	KB

Status: S2 Purpose For Issue: INFORMATION

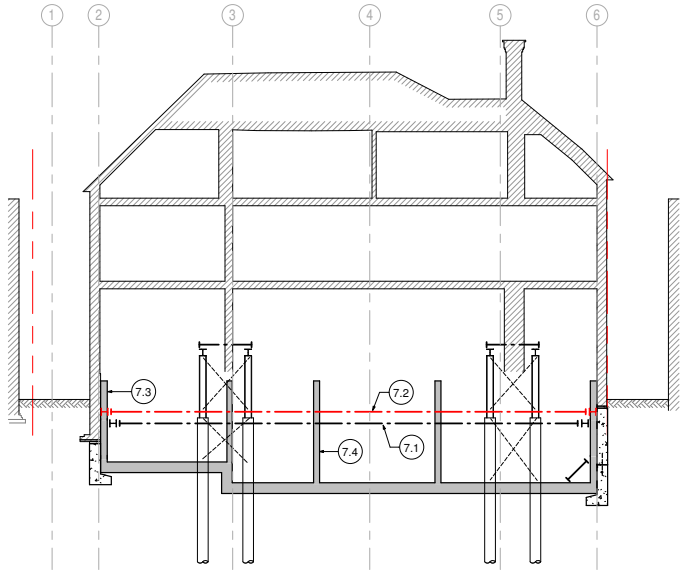
Drawing Number: 2095-HRW-XX-XX-DR-S-0902 Rev: P1



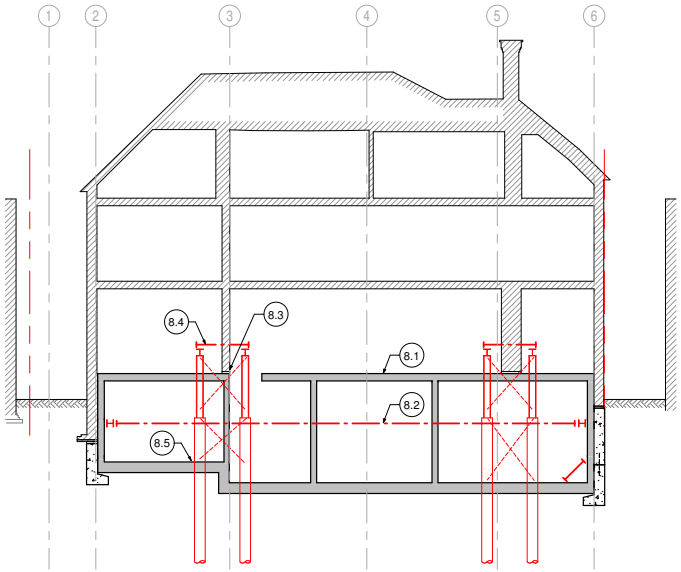
Stage 7 - Lower Ground Floor Level
Scale 1 : 100



Stage 8 - Ground Floor Level
Scale 1 : 100



Stage 7 - Section A-A
Scale 1 : 100



Stage 8 - Section A-A
Scale 1 : 100

1:50 0m 1m 2m 3m 4m 5m

NOTES

1. DO NOT SCALE FROM THIS DRAWING
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS INFORMATION

STAGE 7

- 7.1 CONSTRUCTED RC LINING WALLS TO BE PROPPED AT TOP AS SHOWN (ALTERNATIVELY LINING WALLS TO BE DESIGNED AS CANTILEVER IN TEMPORARY CONDITIONS – TBC
- 7.2 TOP LEVEL OF THE UNDERPINNING PROPPING TO BE REMOVED.
- 7.3 REMAIN TOP PART OF THE RC LINING WALLS TO BE CONSTRUCTED TO UNDERSIDE OF PROPOSED RC GROUND FLOOR SLAB.
- 7.4 LOWER GROUND FLOOR INTERNAL RC WALLS TO BE CONSTRUCTED.

STAGE 8

- 8.1 RC GROUND FLOOR SLAB TO BE CONSTRUCTED.
- 8.2 TOP LEVEL HORIZONTAL PROPPING TO THE RC LINING WALLS TO BE REMOVED.
- 8.3 EXISTING GROUND FLOOR LOADBEARING MASONRY WALLS TO BE RE-SUPPORTED ON THE NEW RC GROUND FLOOR SLAB BY DRYPACKING GAP BETWEEN THE WALLS AND RC SLAB.
- 8.4 TEMPORARY PROPPING TO THE EXISTING INTERNAL WALLS TO BE REMOVED EXCEPT THE LOCATIONS WHERE IT IS STILL NEEDED FOR THE HIGHER LEVEL WORKS (EG. GRID D).
- 8.5 LOWER GROUND, GROUND LEVEL RC SLAB AND LOWER GROUND LEVEL RC WALLS HOLES REMAINED AFTER THE TEMPORARY WORKS REMOVAL TO BE STRUCTURALLY INFILLED (MAINTAINING STRUCTURAL CONTINUITY).
- 8.6 SUPERSTRUCTURE STRUCTURAL ALTERATIONS TO COMMENCE.

DRAWING TO BE READ IN CONJUNCTION WITH SEQUENCE OF CONSTRUCTION DRAWINGS 0900, 0901 & 0902

Rev	Date	Amendments	By	Chk'd
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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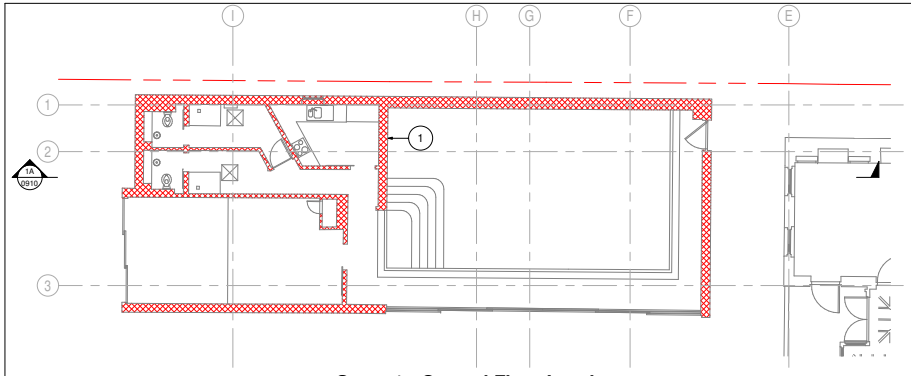
Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed - Main House Sequence of Construction Stages 7 & 8

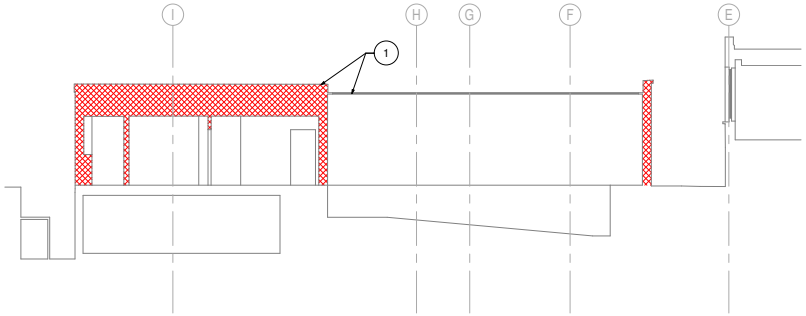
Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 100	DJP	JAN 2021	KB

Status: S2 INFORMATION
Purpose For Issue:

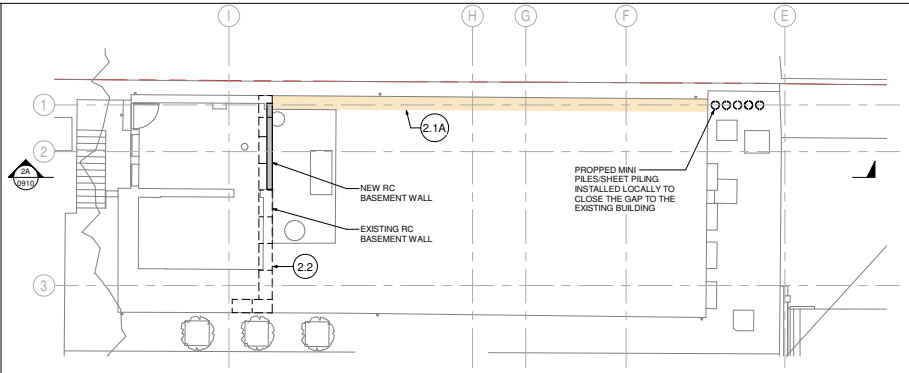
Drawing Number: 2095-HRW-XX-XX-DR-S-0903
Rev: P1



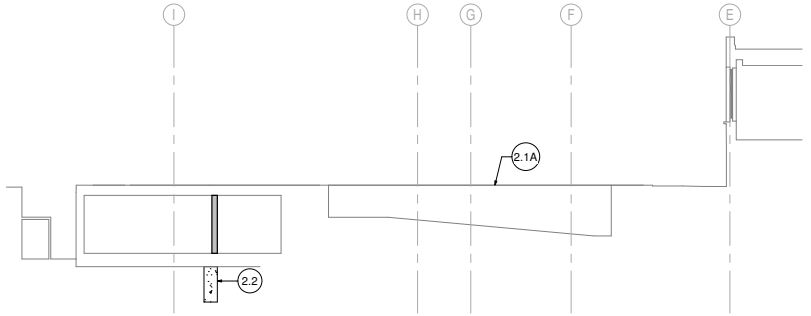
Stage 1 - Ground Floor Level
Scale 1 : 100



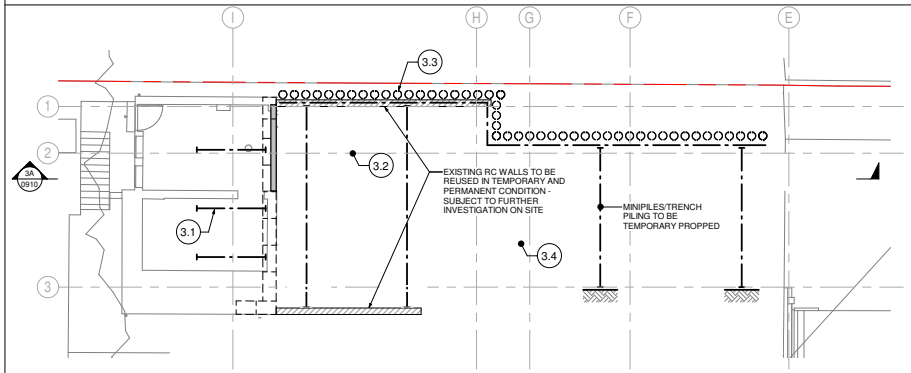
Stage 1 - Section A-A
Scale 1 : 100



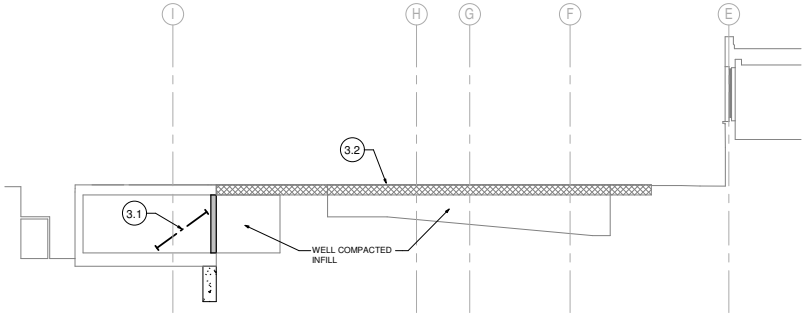
Stage 2 - Basement Level
Scale 1 : 100



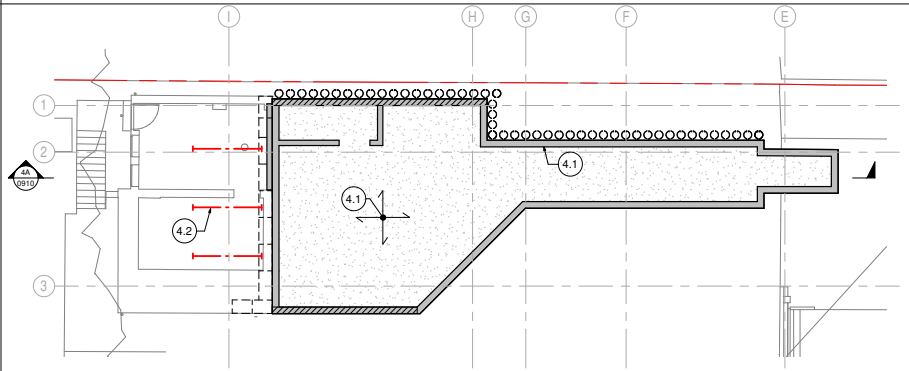
Stage 2 - Section A-A
Scale 1 : 100



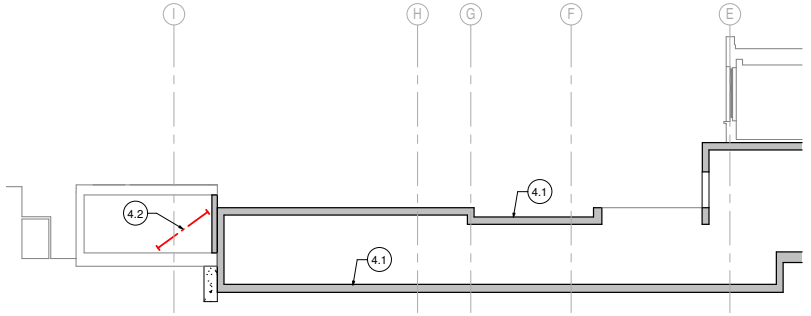
Stage 3 - Basement Level
Scale 1 : 100



Stage 3 - Section A-A
Scale 1 : 100



Stage 4 - Basement Level
Scale 1 : 100



Stage 4 - Section A-A
Scale 1 : 100

1:50 0m 1m 2m 3m 4m 5m

NOTES

1. DO NOT SCALE FROM THIS DRAWING
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS INFORMATION

STAGE 1

(1) GARDEN SWIMMING POOL SUPERSTRUCTURE TO BE DEMOLISHED.

STAGE 2

(2.1) SWIMMING POOL SUBSTRUCTURE TO BE INVESTIGATED TO CONFIRM IF ANY OF THE EXISTING RETENTION STRUCTURE CAN BE REUSED (EG. EXISTING CONTIGUOUS PILED WALLS, RC RETAINING WALLS).

A. IF CONFIRMED SUITABLE THE EXISTING RETENTION SUBSTRUCTURE TO BE REUSED FOR THE TEMPORARY WORKS PURPOSE – TBC AFTER INVESTIGATION ON SITE.
B. IF THE EXISTING RETENTION STRUCTURE CAN NOT BE REUSED, NEW TEMPORARY WORKS FOR THE BASEMENT TO BE PROVIDED (ALLOW FOR CONTIGUOUS MINIPILING OR PROPPED TRENCH PILING).

(2.2) THE EXISTING SWIMMING POOL BASEMENT PLANT ROOM WALL TO BE LOCALLY UNDERPINNED AND NEW RC BASEMENT WALL CONSTRUCTED.

STAGE 3

(3.1) DIAGONALLY PROP BASEMENT WALL AS SHOWN

(3.2) INSTALL PILING MAT

(3.3) INSTALL TEMPORARY PROPPED MINI PILES / TRENCH PILES / OR REUSE THE EXISTING BASEMENT WALLS IF POSSIBLE - TBC ON SITE

(3.4) EXCAVATE TO PROPOSED FORMATION LEVEL

STAGE 4

(4.1) CONSTRUCT BASEMENT WORKSHOP AND LINK RC STRUCTURE.

(4.2) REMOVE TEMPORARY PROPS

Rev	Date	Amendments	By	Chk'd
P2	03.02.21	ISSUED FOR PLANNING	DJP	KB
P1	29.01.21	ISSUED FOR PLANNING	DJP	KB

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Project:
7 Greenaway Gardens, London, NW3 7DJ

Drawing title:
Proposed - Workshop Sequence of Construction Stages 1 To 4

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 100	DJP	JAN 2021	KB

Status: S2 INFORMATION

Drawing Number: 2095-HRW-XX-XX-DR-S-0910 Rev: P2