engineersHRW

17 BRANCH HILL
LONDON NW3 7NA

BASMENT CONSTRUCTION PLAN: UPDATED 02 AUGUST 2017

(SUPERSEDED BY CONTRACTORS PROPOSAL)

EngineersHRW have been in discussion with the appointed contractor MyConstruction who intend to change the basement construction sequence from a bottom up sequence to a top down sequence.

The propping philosophy as shown on engineersHRW drawings of May 2017 will be used for the basement construction but the works will be carried out in a different order.

Attached are updated construction sequence drawings provided by Cranston Consulting on behalf of MyConstruction with the same calculations previously approved as the same propping philosophy has been used.

This report was written/compiled by Brett Scott BEng (Hons) and reviewed by Simon Robinson BSc (Hons) CEng MIStructE of Engineers Haskins Robinson Waters Limited

Job Number: 1281

This Basement Construction Plan has been prepared for and on behalf of our clients, Adam Kaye and Lucy Ronson, based on the planning proposals by SHH Architects (drawing references listed in section 8.3.2). 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 Engineers HRW Structural drawings 1281/GA/01, 02, 03, 04, 05, 1281/SE/011, 12, 1281/TW/80, 81, 82 and SAS Site Investigation Reports, Basement Impact Assessment dated November 2014, Cranston Consulting Drawings TW-06, 07, 09, 10, 11, 11, 13, 14 and Cranston Consulting Temporary Works Calculations.

1.0 Introduction

1.0.1 Engineers HRW have been asked to prepare a Basement Construction Plan in response to the Camden Section 106 Agreement relating to 17 Branch Hill.

1.0.2 The development proposals comprise the almost full demolition of the existing residence on the site to allow construction of a new three storey property inclusive of lower ground (rear garden level) and basement levels.

1.0.3 This report has been prepared in compliance with the London Borough of Camden's DP27 and CPG4 Basements and Lightwells requirements for basement extensions. It includes a construction methodology statement prepared and signed off by a Chartered Structural Engineer (MIStruct.E) and includes proposals for temporary supports and sequence of construction. A site specific soils investigation report is also attached.

2.0 Site Information

The site is situated in the Hampstead district of London and access is from Branch Hill along a private drive. It is behind "The Chestnuts" formerly a hotel but now two private houses. The overall site is circa 30.0m long x 19.0m wide excluding drive and car parking. To the north is Savoy Court, a modern five storey apartment block. The ground slopes steeply to the south and west across the property. This site has been stepped by use of retaining walls to the lower ground floor and the external ground level at the rear of the existing property is approximately 3.0 m below the level at the front of the property.

There are boundary retaining walls to most of the site. The Chestnuts has a single storey lean-to structure on the north east boundary.

The adjacent properties have large trees, some subject to TPO, close to the boundary. See Landmark Trees Report SHH/17BRH/AIA/01 dated July 2014 for recommendations for protection of the trees.

2.1 Existing Building

The existing building to be demolished on the site consists a three storey (inclusive of lower ground floor) building set back from Branch Hill. It is of recent construction and the structure appears to be traditionally constructed above ground floor, with load-bearing external solid brickwork walls, assumed timber floors and timber roof. The ground and lower ground floors are assumed to be constructed in reinforced concrete.

2.2 Geotechnical Ground Conditions

2.2.1 Geology

A detailed Geotechnical Site Investigation has been carried out and full report is attached. The British Geological Survey maps indicate the site is located on the alluvial Bagshot Formation consisting clay and fine grained sand underlain by the Claygate member of the London Clay Formation. The suitably qualified site investigation consultant has commented on hydrological issues and groundwater flows in the SAS Basement Impact Assessment. The exploratory holes revealed that ground conditions are generally consistent with the geological records and known history of the area and comprised MADE GROUND approx. 0.8m in thickness over the typical BAGSHOT Formation. These soils extended for the full depth of the investigation of 15.0m and comprised of loose becoming medium dense clayey silty fine sand locally becoming stiff silty sandy clay.

2.2.2 Groundwater

The geological build up noted above could suggest that perched ground water may be present locally within the made ground. Groundwater was encountered at a depth of 7.2m below ground level (112.70mOD). Groundwater was subsequently found to have stabilised at a depth of 7.11m below ground level (112.79mOD) in the monitoring standpipe. The ground water is therefore below existing and proposed floor levels. The SAS Basement Impact Assessment states that it is considered that the proposed development will have minimal impact on any nearby watercourses.

2.2.3 Contamination

The site investigation identifies concentrations of lead in excess of Level 4 and asbestos within the made ground. It is recommended that remediation is carried out, consisting of removing the top 600mm of soil from the site and replaced with clean cohesive fill. It may be possible that the extent of remediation required could be reduced by further investigation.

2.3 Flood Risk

2.3.1 Tidal Flood Risk

The site is not situated within a tidal flood zone as designated by the Environment Agencies Tidal Flood Map.

2.3.2 Surface Water Flood Risk

The site risk category as defined by the Environment Agencies Surface Water Flood Map is very low.

3.0 Proposed Structural Works

3.1 Introduction

The proposed development of the site involves the demolition of the existing building and construction of a new three storey property inclusive of lower ground (rear garden level). Generally, the proposed depth of excavation below the existing ground level to the front of the property (high level) is to be a maximum of 4.0m, however in the area of the proposed study/ games room to the rear of the property this will decrease to around 2.5m (circa 2.8m below existing garden level to the rear of the property). The existing ground level is to be raised in this area resulting in a final retained height of 6.0m against the northern boundary. The existing retained height at the boundary retaining wall is approximately 3.5m.

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.

3.2.1 Outline Method statement / Sequence of Demolition Works of Existing Building

Generally the demolition works are to be carried out from top to bottom and temporary works are to be introduced as required. See engineersHRW sketches 1281/SK/008 and 009 for initial proposals.

1. Prior to demolition works the contractor is to undertake a detailed survey of the existing structure, site and the surrounding areas and provide a full method statement and temporary works proposals to the Structural Engineer for comment.

2. The existing roof and first floor structure is to be demolished down to ground level.

3. Elements not contributing to the lateral restraint of the existing retaining walls to be demolished down to the lower floor level.

4. Permanent contiguous bored piles walls and lateral restraint installed.

5. Elements of the existing lower ground floor slab and walls to be removed as required.

3.3 New Lower Ground Floor Structure

3.3.1 The new lower ground floor structure is to consist a reinforced concrete box constructed partly within the existing walls and within a propped contiguous wall. The propped contiguous bored pile wall approach is to deal with the multiple levels and existing basement walls. Temporary propping is proposed to be installed during the demolition and excavation works and as the internal concrete box is formed. The piles will be propped below floor levels to allow construction of the new horizontal slab elements that prop the walls of the reinforced concrete box in the permanent condition.

3.3.2 As the new lower ground floor to the rear is deeper than the existing floor level heave of the underlying clay soils is to be allowed for. This is achieved by supporting the building on piles and constructing the floor slabs on compressible fill.

3.3.3 The presence of groundwater was observed during the site investigation (refer to section 2.2.2). It is below the deepest excavation however perched water may be present. In the permanent condition the reinforced concrete box within the contiguous piled wall perimeter will be designed to resist vertical and lateral water pressures.

3.3.4 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 external tanking system with an internal drained cavity system will be provided. However the final waterproofing system is yet to be agreed with the architect.

3.3.5 The RC basement structure is classified as a "robust" structure and any accidental lateral loading applied to the new basement structure can be resisted / absorbed by the new RC structure.

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.

4.0.1 Vertical Movement

Vertical movement resulting from heave of the strata below the basement slab following excavation will be allowed for by adopting a compressible filler beneath the lower ground floor.

4.0.2 Horizontal Movement

Horizontal deflection adjacent to existing structures to the perimeter of the basement void will be limited by propping of the contiguous piled walls in both the temporary and permanent conditions. The adjacent structures are limited to retaining walls and the adjacent single storey lean-to garden building. In the temporary condition steel props will be installed between waling beams to mass concrete bases as excavation progresses. In the permanent condition the concrete walls will be propped by the reinforced concrete slabs forming the lower ground and ground floor.

5.0 New Superstructure

5.1 Superstructure - Overall Stability / Load Transfer

5.1.1 The proposed reinforced concrete frame will take stability from the RC columns and walls with RC columns continuing to the top level to provide stability for the steel structure.

5.1.2 Reinforced concrete columns will carry vertical loads down the structure and back to the ground through the lower ground floor to the piled foundation. In some locations reinforced concrete transfer beams form part of the load path where column free spaces are required below.

5.1.3 The new reinforced concrete lower ground floor structure will be designed to resist upwards and lateral water pressures resulting from groundwater, as well as vertical loads from above and horizontal ground forces imposed via the propping action of low level slabs to the perimeter concrete wall.

5.2 Superstructure - Disproportion Collapse

5.2.1 The proposed reinforced concrete shear core structure is an inherently robust structural form. Compliance with disproportionate collapse requirements will be ensured by the tying of reinforcement through the structure to include peripheral ties, horizontal ties, vertical ties, internal ties and corner column ties.

6.0 Temporary Works

6.0.1 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.

6.0.2 Submissions

The contractor will be required to submit full proposals, method statements and calculations to the engineer and all appropriate parties (party wall surveyors, 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.

6.0.3 Monitoring

All items of temporary works and surrounding structures should be monitored in a manner and frequency commensurate with the construction activity taking place. The extent will limited to the existing retaining walls and the adjacent garden lean-to building. As a minimum the monitoring should include a daily full visual survey of all temporary works and surrounding structures and a weekly measured survey using fixed survey points during the main basement works, subject to proposed construction sequence, party wall agreement, etc.

7.0 Method Statement / Sequence of Works

Outline construction sequence and temporary works assumed in the design as described below will be superseded by the contractor's proposals.

1. The existing building is to be demolished top to bottom and temporary works installed as noted in section 3.2.1

2. Existing foundations and any other obstructions that may have a detrimental impact on the foundation works to be undertaken are to be carefully grubbed up and backfilled.

3. The lower ground floor will contiguous piled wall and internal basement slab piles are then to be bored and cast. The contiguous piled wall will be constructed on a hit one miss three basis which will mean fresh piles are cast at a nominal spacing of 1.8 centre to centre. This will ensure bore stability during construction and limit the numbers of piles bored next to adjacent properties in one go.

4. The capping beam is to be cast to the perimeter contiguous piled wall, installing any temporary works as required next to the adjacent properties.

5. Further to the capping beam and pile concrete achieving full strength excavation of the basement can commence, installing temporary propping to capping beams as necessary. A sump / pumping system should be put in place to remove any water seepage into the basement void when excavations descend below the stabilised water level as observed in the SI.

6. Safe slopes may then be formed within the basement void to the underside of the pool / spa / gym and lift pit formations to allow construction of low level reinforced concrete slabs and walls.

7. The basement slab can then be constructed, followed by the contiguous pile lining walls and lower ground floor slab. When the basement box concrete has achieved full design strength remove temporary propping.

8. Construct superstructure.

8.0 Design Criteria

8.1 Code of Practice

Structural use of Concrete BS 8110-1:1997

Structural use of Concrete BS 8110-3:1985

Code of practice for foundations BS 8004

Structural use of Steel BS 5950-1:2000

Structural use of Timber BS 5628-2:2002

Structural Use of Masonry BS 5628-1:2005

Loading for Buildings BS 6399: Part 1:1996, Part 2:1997

8.2 Loading – Imposed loadings to BS 6399

Domestic areas = 1.5 kN/m2

External areas = 3.0 kN/m2

Roof (flat with access) = 0.75 kN/m2

Roof (pitched) = 0.6 kN/m2

8.3 List of relevant drawings

8.3.1 engineersHRW Drawings

1281/GA/001 T4
1281/GA/002 T4
1281/GA/003 T4
1281/GA/004 T4
1281/GA/005 T4
1281/SE/011 T4
1281/SE/012 T4

8.3.2 Architects Drawings

(779)020_T01 Lower Ground Floor Plan
(779)020a_T01 Undercroft
(779)021_T01 Ground Floor Plan
(779)023_T01 First Floor Plan
(779)024_T01 Roof
(779)204_T01 North Elevation
(779)205_T01 East Elevation
(779)206_T01 South Elevation
(779)207_T01 West Elevation
(779)300_T01 Proposed Section AA
(779)301_T01 Proposed Section BB
(779)311_T01 Existing Section BB
(779)313_T01 Existing Section DD

8.3.3 Temporary Works Designers Drawings

170608-Temp Works Calcs R1
170608-TW-06 Top Down Adj Savoy Ct at Front
170608-TW-07 Top Down Adj Savoy Ct at rear
170608-TW-09 Top Down Basement plan
170608-TW-10 Top Down Garden Level plan
170608-TW-11 Top Down Ground Floor Level plan
170608-TW-13-Top Down Layout Stages 1-4
170608-TW-14-Top Down Layout Stages 5-6

9.0 Conclusion

As noted above the Basement Construction Plan for the proposed scheme has been undertaken and detailed calculations carried out. Input is required from the appointed contractor to confirm the construction sequence and prepare calculations for the temporary works. At this stage we are satisfied that the proposed scheme is viable and that if carried out in a carefully defined sequence such as noted above, it can be completed without compromising the structural stability of any adjacent properties or structures. Note that site is largely bounded by gardens so the adjacent structures are limited to retaining walls and a lean-to garden building.

Pile Schedule

Pile Ref:	Pile Size	Cut-off	Vertical Permanent Actions Gk (kN)	Vertical Water Uplift Action Gk (kN)	Vertical Imposed Action Qk (kN)	Vertical Wind Action Qk (kN)	Horizontal Soil Action Gk (kN)	Horizontal Wind Action Qk (kN)
P1	450	75	100	-50	25	-25	50	25
P2	450	75	100	-50	25	-25	50	25
P3	450	75	100	-50	25	-25	50	25
P4	450	75	100	-50	25	-25	50	25
P5	450	75	175	-175	50	-25	50	25
P6	450	75	200	-175	50	-25	50	25
P7	450	75	175	-100	50	-25	50	25
P8	450	75	200	-100	50	-25	50	25
P9	450	75	225	-100	50	-25	50	25
P10	450	75	225	-100	50	-25	50	25
P11	450	75	225	-100	50	-25	50	25
P12	450	75	250	-100	50	-25	50	25
P13	450	75	250	-125	50	-25	50	25
P14	450	75	275	-125	50	-25	50	25
P15	450	75	275	-125	50	-25	50	25
P16	450	75	250	-100	75	-25	50	25
P17	450	75	150	-50	50	-25	50	25
P18	450	75	150	-50	50	-25	50	25
P19	450	75	150	-75	50	-25	50	25
P20	450	75	150	-75	50	-25	50	25
P21	450	75	150	-25	75	-25	50	25
P22	450	75	150	-25	75	-25	50	25
P23	450	75	150	-25	75	-25	50	25
P24	450	75	150	-50	75	-25	50	25
P25	450	75	150	-25	75	-25	50	25
P26	450	75	150	-25	75	-25	50	25
P27	450	75	175	-25	75	-25	50	25
P28	450	75	120	-25	50	-25	50	25
P29	450	75	120	-25	50	-25	50	25
P30	450	75	225	-50	75	-25	50	25
P31	450	75	100	-25	25	-25	50	25
P32	450	75	100	-25	25	-25	50	25
P33	450	75	275	-75	75	-25	50	25
P34	450	75	250	-100	50	-25	50	25
P35	450	75	250	-100	50	-25	50	25
P36	450	75	250	-100	50	-25	50	25
P37	450	75	200	-75	25	-25	50	25
P38	450	75	200	-75	25	-25	50	25
P39	450	75	300	-125	50	-25	50	25
P40	450	75	300	-125	50	-25	50	25
P41	450	75	275	-125	50	-25	50	25
P42	450	75	300	-125	50	-25	50	25
P43	450	75	250	-125	50	-25	50	25
P44	450	75	275	-125	50	-25	50	25
P45	450	75	200	-100	50	-25	50	25
P46	450	75	200	-100	50	-25	50	25
P53	450	75	250	0	0	0	50	25

Contiguous Pile Schedule

Pile Ref:	Pile Size:	Cut-off	Vertical Permanent Actions Gk (kN)	Vertical Water Uplift Action Gk (kN)	Vertical Imposed Action Qk (kN)	Vertical Wind Action Qk (kN)	Horizontal Wind Action Qk (kN)	Horizontal Soil Action Gk (kN)
CP1 - CP22	350	75	100	-25	25	-25	50	25
CP23 - CP44	350	75	75	-25	25	-25	50	25
CP45 - CP51	350	75	75	-25	50	-25	50	25
CP52 - CP63	350	75	100	-25	50	-25	50	25
CP64 - CP79	350	75	100	-25	50	-25	50	50

PILING CONTRACTOR TO ALLOW FOR 10kN/m2 SURCHARGE LOAD IN DESIGN

EXISTING BASEMENT WALL TO BE RETAINED, DETAIL TBC

CONTIGUOUS PILED WALL WITH TEMPORARY PROPS TO FORM NEW BASEMENT

ASSUMED SITE BOUNDARY

450mmØ PILES SUPPORTING THE STRUCTURE

TEMPORARY TRENCH SHEETING

CONTIGUOUS PILED WALL WITH TEMPORARY PROPS TO FORM NEW BASEMENT

ASSUMED SITE BOUNDARY

CONTIGUOUS PILED WALL WITH TEMPORARY PROPS TO FORM NEW BASEMENT

EL/040 EL/041 EL/042 EL/043

1750 5660 4820 1240 10060 3750 5260 4850

NOTES

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3. INTERNAL BLOCKWORK NON-STRUCTURAL

Rev	Date	Amendments	By	Chk'd
T4	29/03/17	PARTY WALL ISSUE	EP	BS
T3	20/03/2017	TENDER ISSUE	EP	BS
T2	20/01/2017	TENDER ISSUE	EP	BS
T1	07/11/2016	TENDER ISSUE	TB	BS
P3	07/10/2016	PRELIMINARY ISSUE	TB	BS
P2	31/08/2016	PRELIMINARY ISSUE	TB	BS
P1	03/08/2016	PRELIMINARY ISSUE	TB	BS

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Project:
17 Branch Hill

Drawing title:
Pile Layout

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	TB	07/08/16	BS

TENDER

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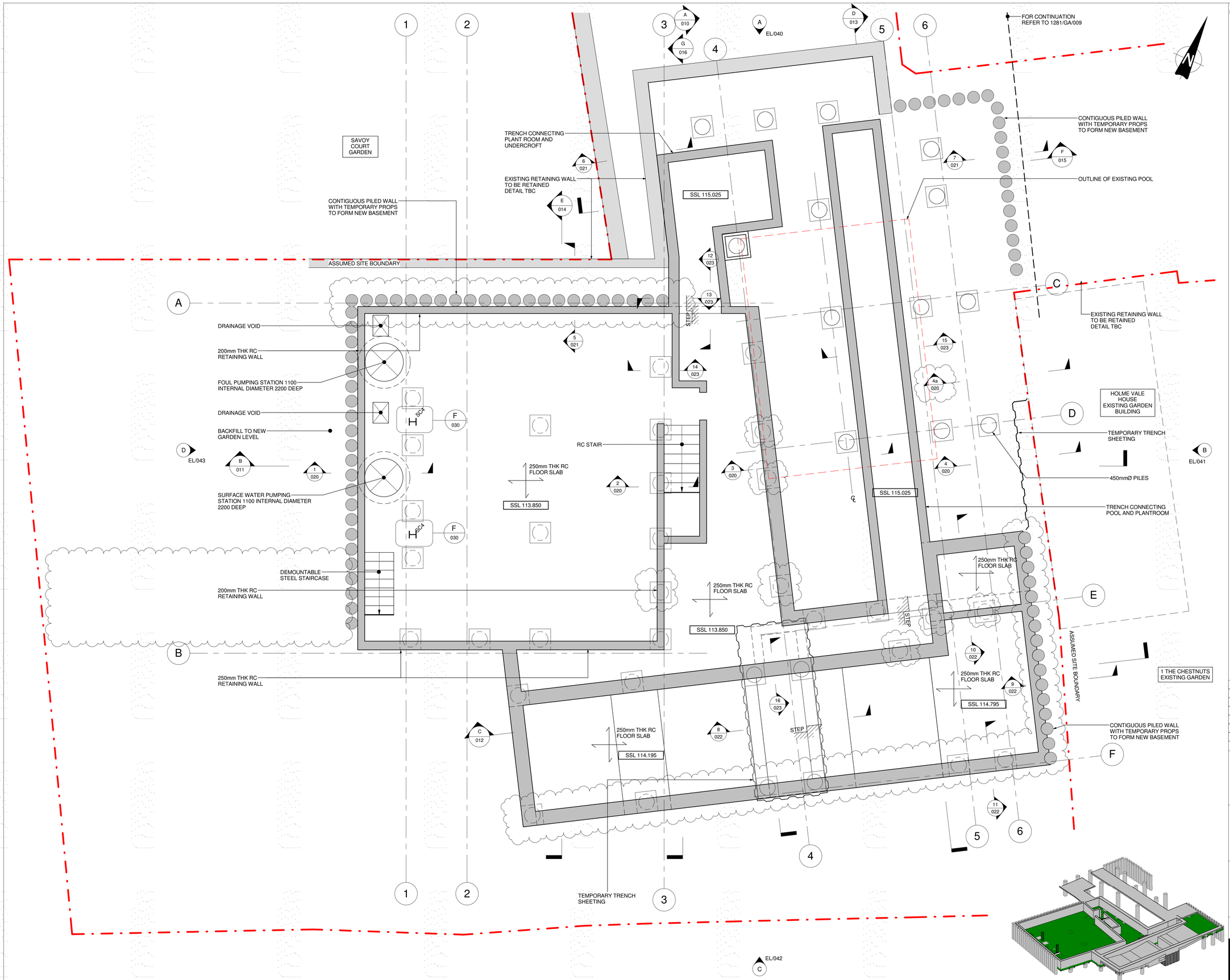
1281	GA	001	T4



NOTES

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Legend

	DENOTES EXISTING RETAINING WALLS
	DENOTES RC WALL
	DENOTES WALL UNDER
	DENOTES RC SLAB
MD	DENOTES 10 THK METAL DECK WITH 65 THK SCREED
	DENOTES 10 THK METAL DECK
CU	DENOTES COLUMN UNDER

Steel Column Schedule

REF	SIZE	GRADE
SC1	RHS200x100x6.3	S355
SC2	SHS180x180x8	S355
SC3	SHS80x80x5	S355
SC4	UC203x203x46	S355
SC5	UC203x203x52	S355
SC6	UC152x152x30	S355
SC7	SHS100x100x6.3	S355
SC8	SHS60x60x5	S355

RC Column Schedule

REF	SIZE
CC1	200 x 500mm

Rev	Date	Amendments	By	Chk'd
T4	29/03/17	PARTY WALL ISSUE	EP	BS
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P1	03/08/2016	PRELIMINARY ISSUE	TB	BS

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Project:
17 Branch Hill

Drawing title:
Basement Level Floor Plan

Scale at A1:	Drawn by:	Date:	Chk'd by:
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TENDER

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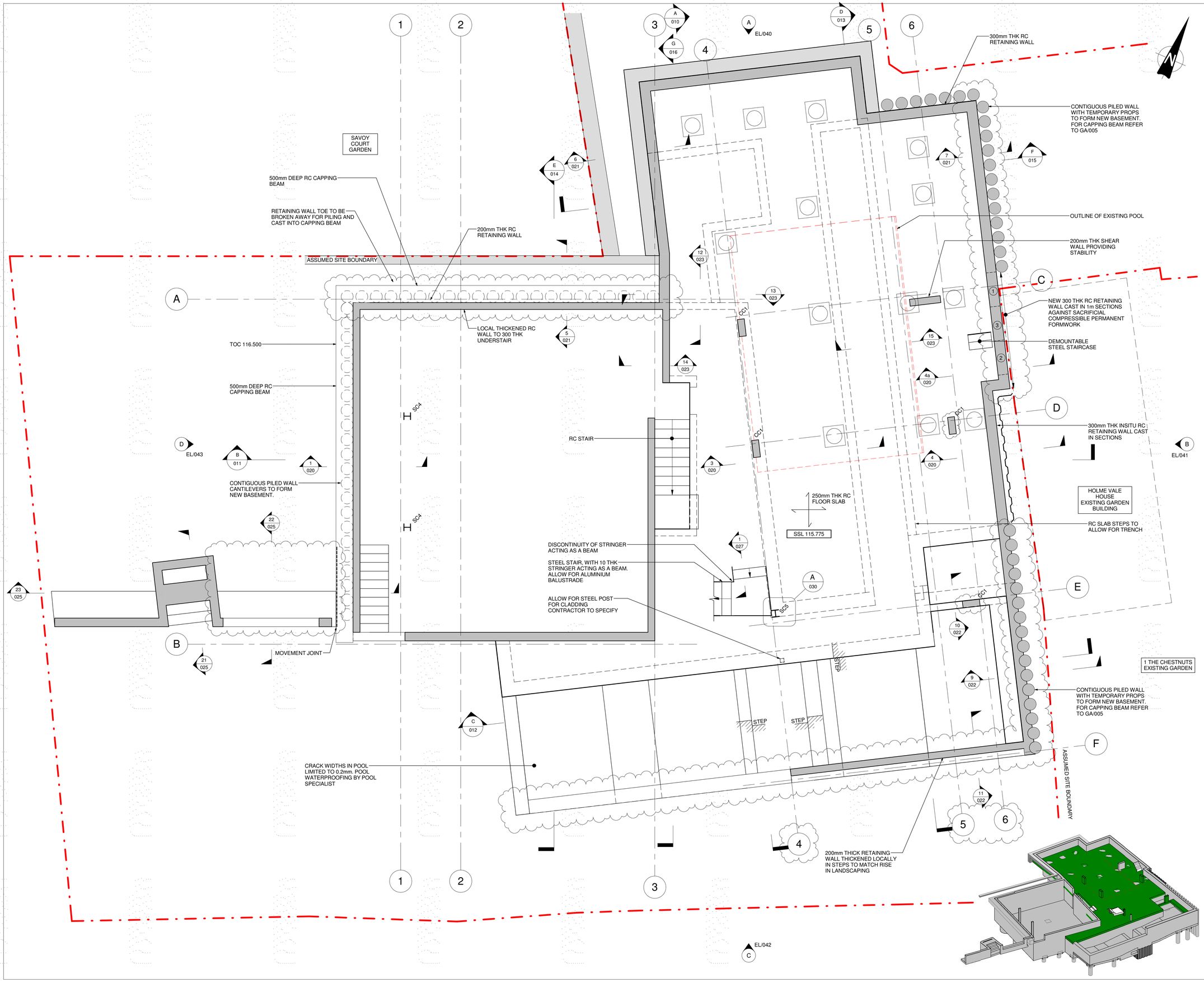

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SC7	SHS100x100x6.3	S355
SC8	SHS60x60x5	S355

RC Column Schedule

REF	SIZE
CC1	200 x 500mm

Beam Schedule

REF	SIZE	GRADE
SB1	UC152x152x37	S355
SB2	UC203x203x46	S355
SB3	SHS80x80x6.3	S355
SB4	PFC125x65x15	S355
SB5	L90x90x10	S355
SB6	L125x75x10	S355
SB7	PFC180x90x26	S355
SB8	UC152x152x23	S355

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Project:
17 Branch Hill

Drawing title:
Lower Ground Level Floor Plan

Scale at A1:	Drawn by:	Date:	Chk'd by:
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TENDER

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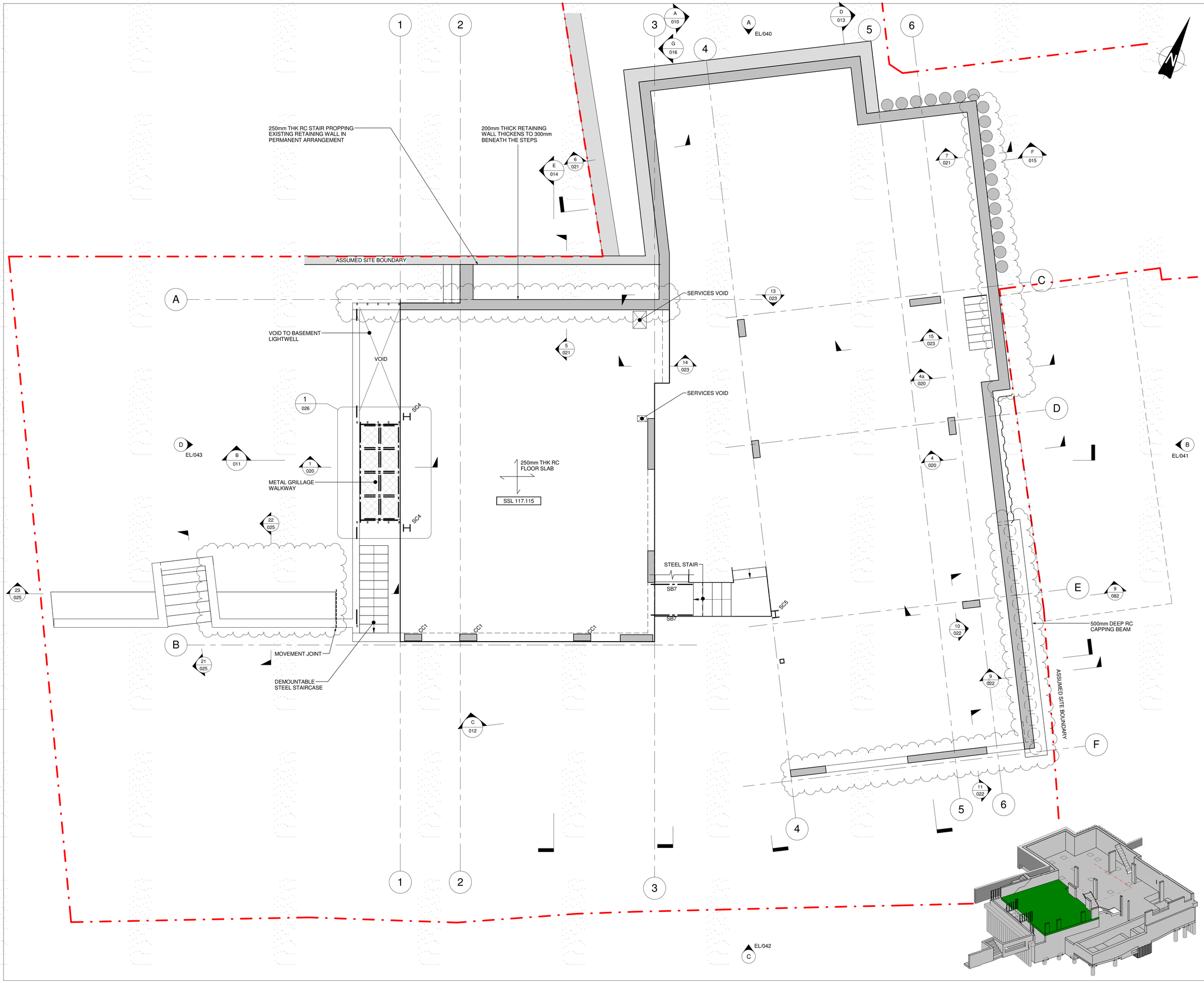
1281	GA	003	T4



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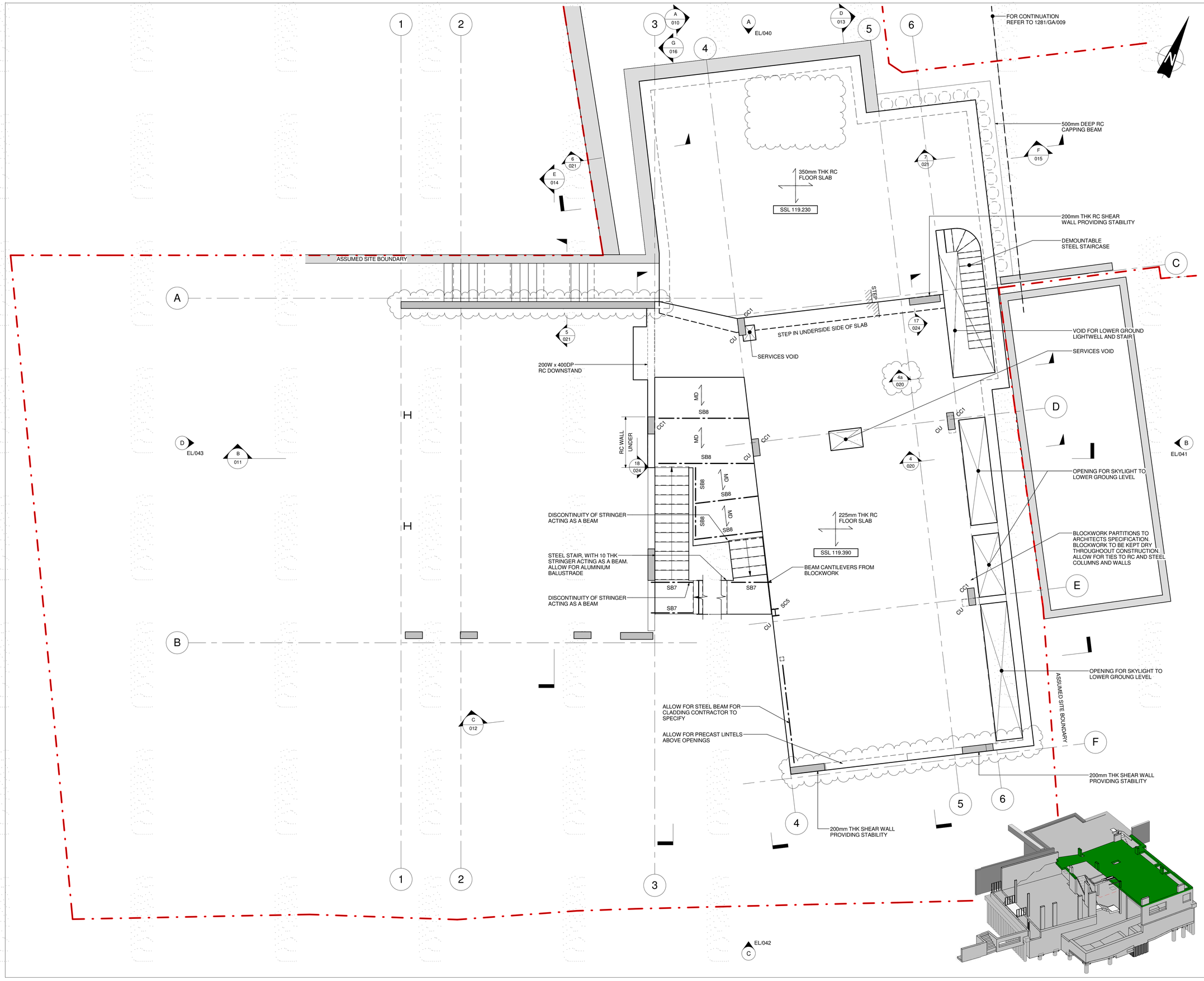
Project:
17 Branch Hill

Drawing title:
Garden Level Floor Plan

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	LDM	07/01/16	BS

TENDER

Project Number:	Drawing Type:	Drawing No:	Revision:
1281	GA	004	T4



NOTES

1. DO NOT SCALE FROM THIS DRAWING
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS INFORMATION
3. INTERNAL BLOCKWORK NON-STRUCTURAL

Legend

	DENOTES EXISTING RETAINING WALLS
	DENOTES RC WALL
	DENOTES WALL UNDER
	DENOTES RC SLAB
MD	DENOTES 10 THK METAL DECK WITH 65 THK SCREED
	DENOTES 10 THK METAL DECK
CU	DENOTES COLUMN UNDER

Steel Column Schedule

REF	SIZE	GRADE
SC1	RHS200x100x6.3	S355
SC2	SHS180x180x8	S355
SC3	SHS80x80x5	S355
SC4	UC203x203x46	S355
SC5	UC203x203x52	S355
SC6	UC152x152x30	S355
SC7	SHS100x100x6.3	S355
SC8	SHS60x60x5	S355

RC Column Schedule

REF	SIZE
CC1	200 x 500mm

Beam Schedule

REF	SIZE	GRADE
SB1	UC152x152x37	S355
SB2	UC203x203x46	S355
SB3	SHS80x80x6.3	S355
SB4	PFC125x65x15	S355
SB5	L90x90x10	S355
SB6	L125x75x10	S355
SB7	PFC180x90x26	S355
SB8	UC152x152x23	S355

Rev	Date	Amendments	By	Chk'd
T4	29/03/17	PARTY WALL ISSUE	EP	BS
T3	20/03/2017	TENDER ISSUE	EP	BS
T2	20/01/2017	TENDER ISSUE	EP	BS
T1	07/11/2016	TENDER ISSUE	TB	BS
P3	07/10/2016	PRELIMINARY ISSUE	TB	BS
P2	31/08/2016	PRELIMINARY ISSUE	TB	BS
P1	03/08/2016	PRELIMINARY ISSUE	TB	BS

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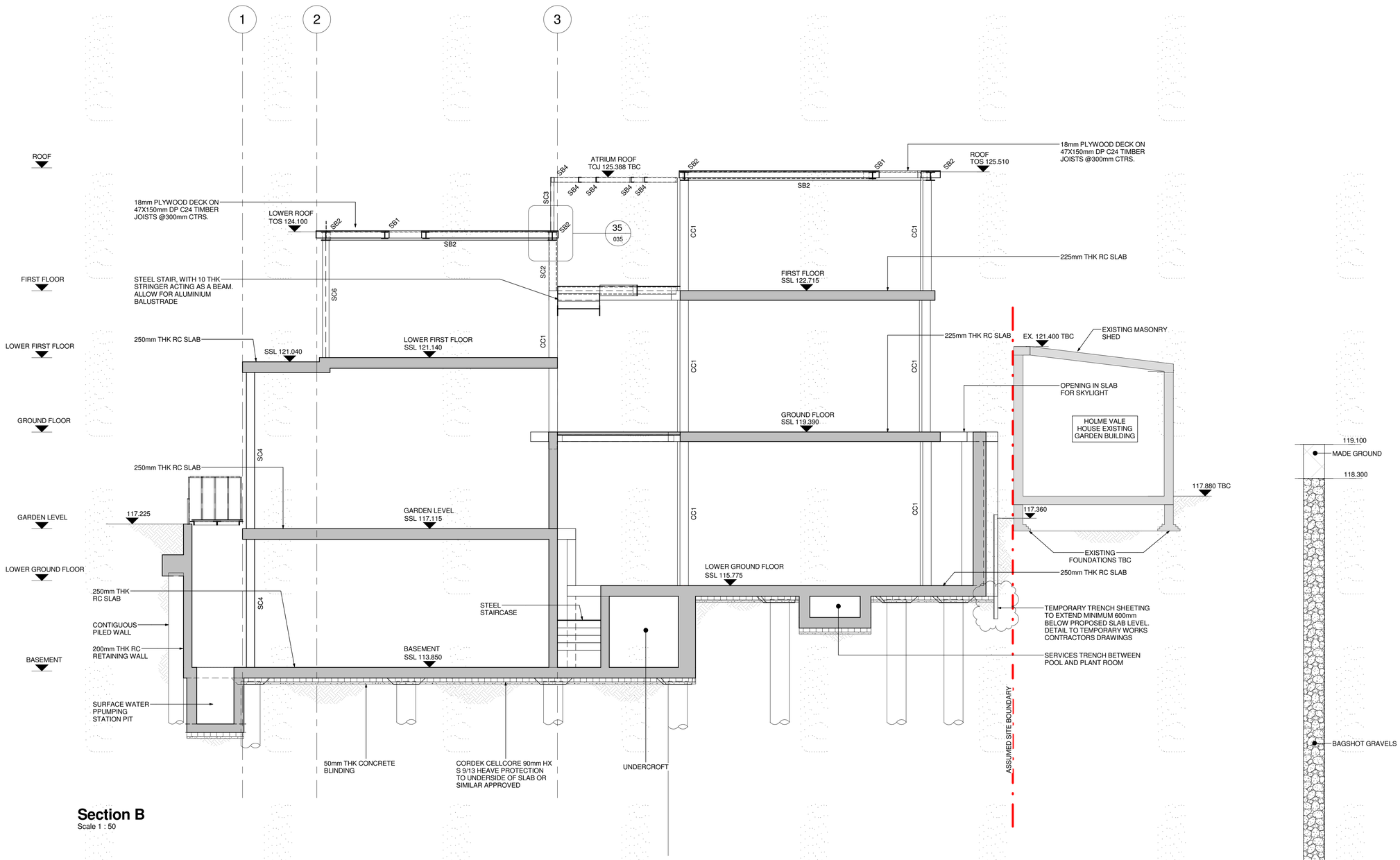
Project:
17 Branch Hill

Drawing title:
Ground Floor Plan

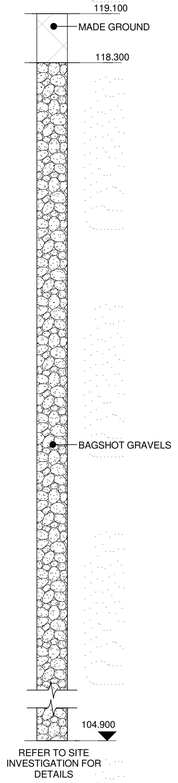
Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	LDM	07/01/16	BS

TENDER

Project Number:	Drawing Type:	Drawing No:	Revision:
1281	GA	005	T4



Section B
Scale 1 : 50



NOTES

1. DO NOT SCALE FROM THIS DRAWING
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS INFORMATION
3. INTERNAL BLOCKWORK NON-STRUCTURAL

Legend

- DENOTES RC WALLS AND FLOORS
- DENOTES MASS FILL CONCRETE
- DENOTES HEAVE PROTECTION

Beam Schedule

REF	SIZE	GRADE
SB1	UC152x152x37	S355
SB2	UC203x203x46	S355
SB3	SHS80x80x6.3	S355
SB4	PFC125x65x15	S355
SB5	L90x90x10	S355
SB6	L125x75x10	S355
SB7	PFC180x90x26	S355
SB8	UC152x152x23	S355

RC Column Schedule

REF	SIZE
CC1	200 x 500mm

Steel Column Schedule

REF	SIZE	GRADE
SC1	RHS200x100x6.3	S355
SC2	SHS180x180x8	S355
SC3	SHS80x80x5	S355
SC4	UC203x203x46	S355
SC5	UC203x203x52	S355
SC6	UC152x152x30	S355
SC7	SHS100x100x6.3	S355
SC8	SHS60x60x5	S355

Rev	Date	Amendments	By	Chk'd
T4	29/03/17	PARTY WALL ISSUE	EP	BS
T3	20/03/2017	TENDER ISSUE	EP	BS
T2	20/01/2017	TENDER ISSUE	EP	BS
T1	07/11/2016	TENDER ISSUE	TB	BS
P3	07/10/2016	PRELIMINARY ISSUE	TB	BS
P2	31/08/2016	PRELIMINARY ISSUE	TB	BS
P1	03/08/2016	PRELIMINARY ISSUE	TB	BS

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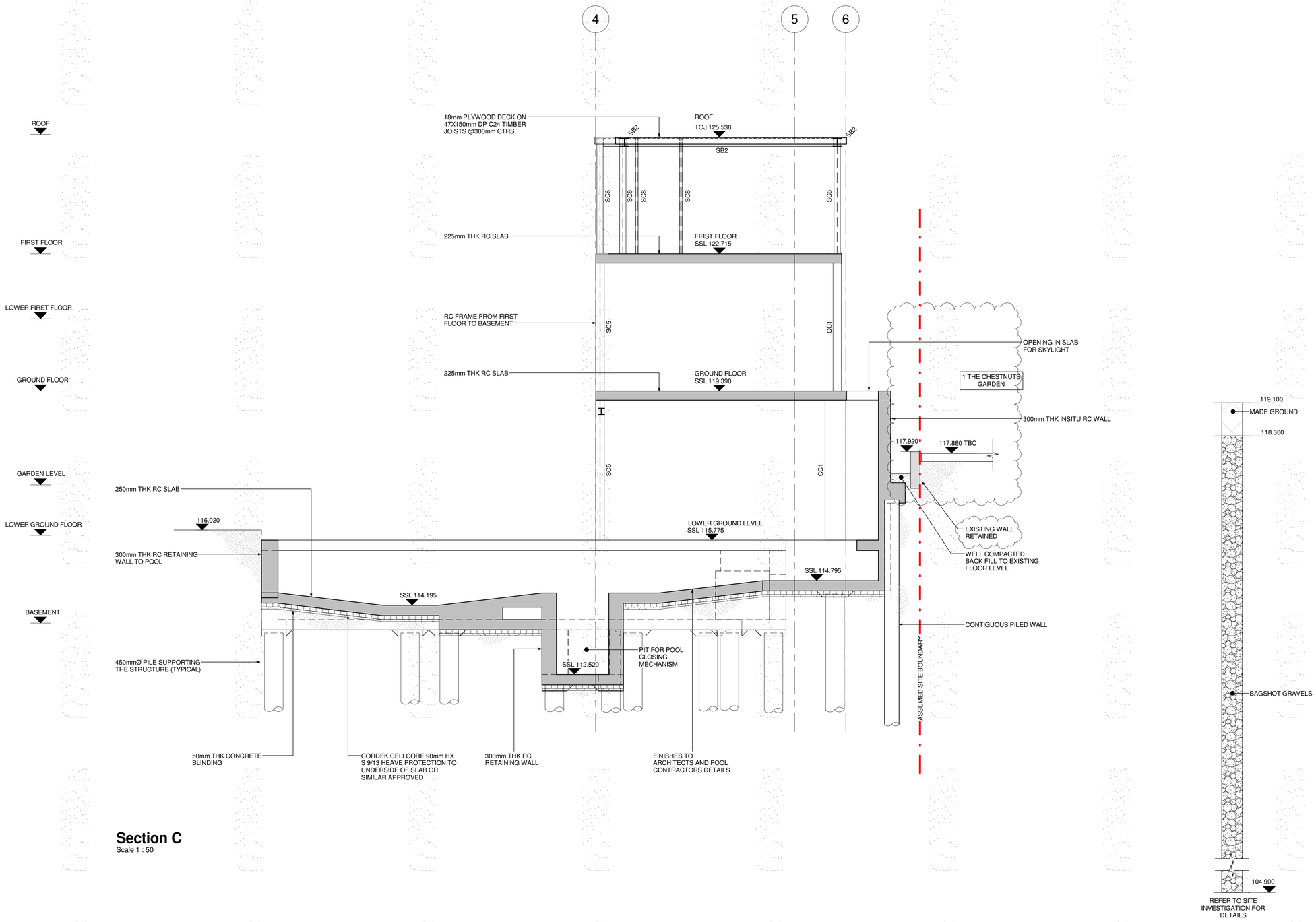
Project:
17 Branch Hill

Drawing title:
Section B

Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	LDM	07/08/16	BS

TENDER

Project Number:	Drawing Type:	Drawing No:	Revision:
1281	SE	011	T4



Section C
Scale 1 : 50

NOTES

1. DO NOT SCALE FROM THIS DRAWING
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS INFORMATION
3. INTERNAL BLOCKWORK NON-STRUCTURAL

Legend

	DENOTES RC WALLS AND FLOORS
	DENOTES MASS FILL CONCRETE
	DENOTES HEAVE PROTECTION

Beam Schedule

REF	SIZE	GRADE
SB1	UC152x152x37	S355
SB2	UC203x203x46	S355
SB3	SHS80x80x6.3	S355
SB4	PFC125x65x15	S355
SB5	L90x90x10	S355
SB6	L125x75x10	S355
SB7	PFC180x90x26	S355
SB8	UC152x152x23	S355

RC Column Schedule

REF	SIZE
CC1	200 x 500mm

Steel Column Schedule

REF	SIZE	GRADE
SC1	RHS200x100x6.3	S355
SC2	SHS180x180x8	S355
SC3	SHS80x80x5	S355
SC4	UC203x203x46	S355
SC5	UC203x203x52	S355
SC6	UC152x152x30	S355
SC7	SHS100x100x6.3	S355
SC8	SHS60x60x5	S355

Rev	Date	Amendments	By	Chk'd
T4	29/03/17	PARTY WALL ISSUE	EP	BS
T3	20/03/2017	TENDER ISSUE	EP	BS
T2	20/01/2017	TENDER ISSUE	EP	BS
T1	07/11/2016	TENDER ISSUE	TB	BS
P3	07/10/2016	PRELIMINARY ISSUE	TB	BS
P2	31/08/2016	PRELIMINARY ISSUE	TB	BS
P1	03/08/2016	PRELIMINARY ISSUE	TB	BS

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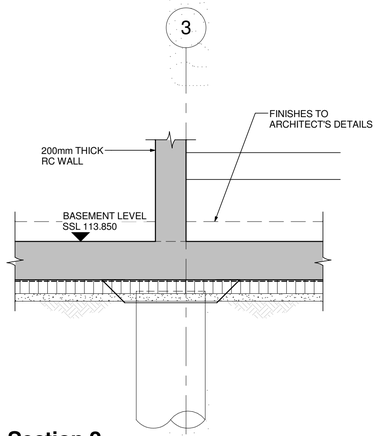
Project:
17 Branch Hill

Drawing title:
Section C

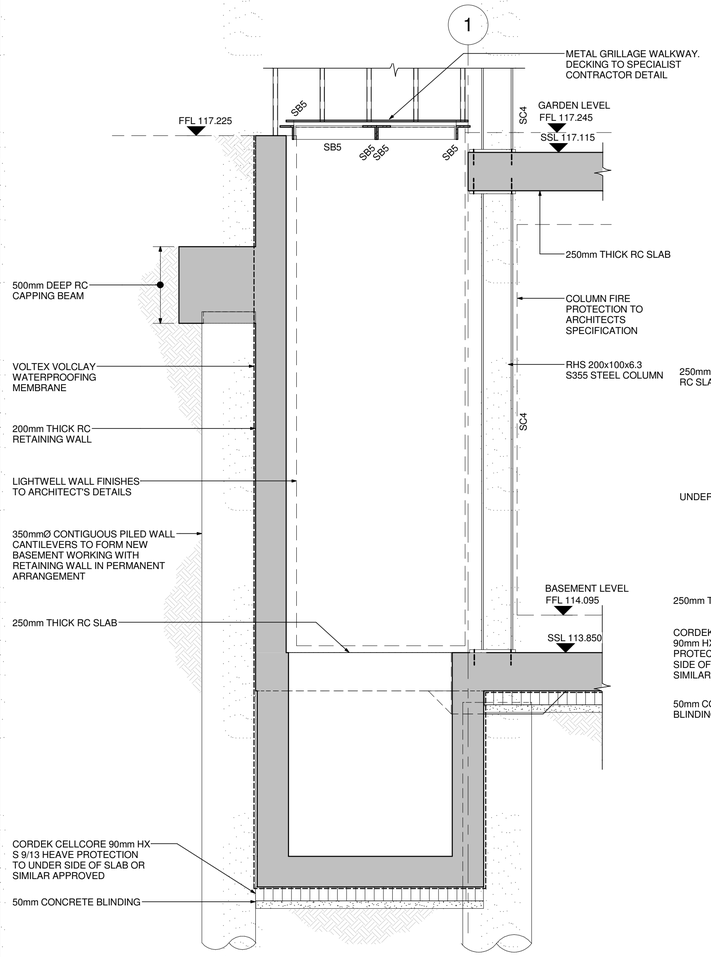
Scale at A1:	Drawn by:	Date:	Chk'd by:
1 : 50	LDM	07/08/16	BS

TENDER

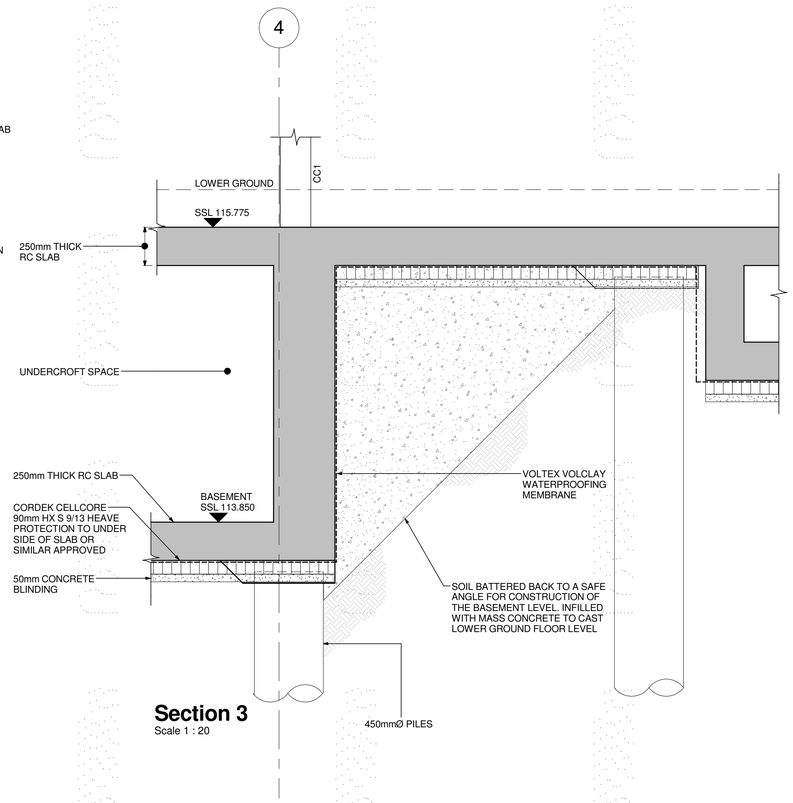
Project Number:	Drawing Type:	Drawing No:	Revision:
1281	SE	012	T4



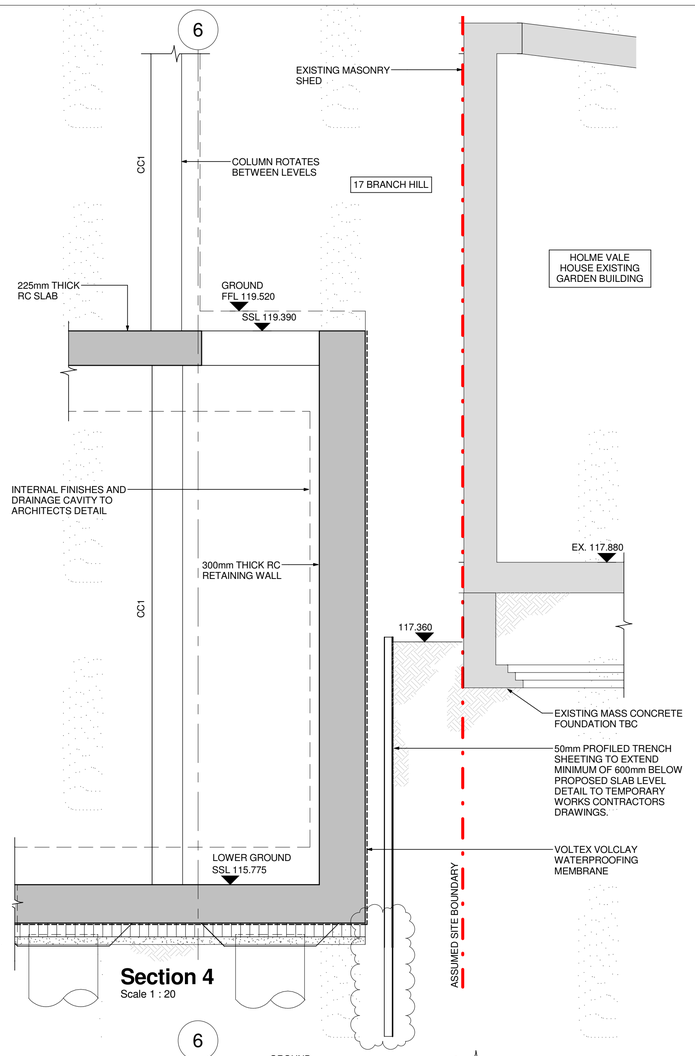
Section 2
Scale 1 : 20



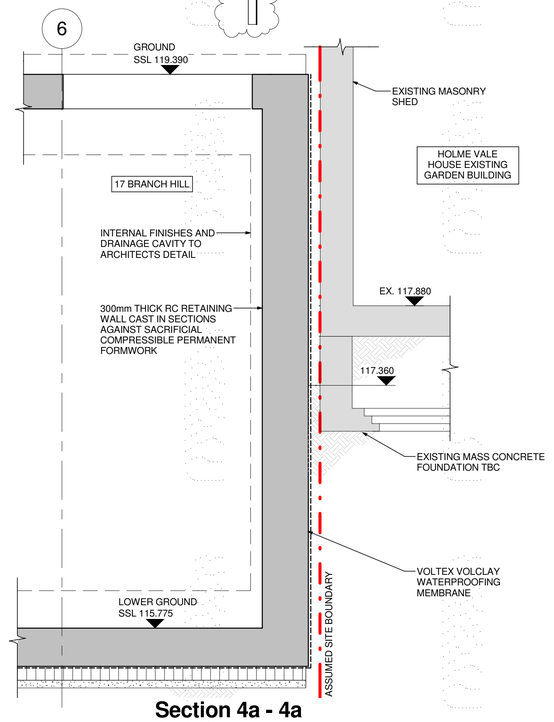
Section 1
Scale 1 : 20



Section 3
Scale 1 : 20



Section 4
Scale 1 : 20



Section 4a - 4a
Scale 1 : 20

NOTES

1. DO NOT SCALE FROM THIS DRAWING
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3. INTERNAL BLOCKWORK NON-STRUCTURAL

Legend

- DENOTES RC WALLS AND FLOORS
- DENOTES MASS FILL CONCRETE
- DENOTES HEAVE PROTECTION

Beam Schedule

REF	SIZE	GRADE
SB1	UC152x152x37	S355
SB2	UC203x203x46	S355
SB3	SHS80x80x6.3	S355
SB4	PFC125x65x15	S355
SB5	L90x90x10	S355
SB6	L125x75x10	S355
SB7	PFC180x90x26	S355
SB8	UC152x152x23	S355

RC Column Schedule

REF	SIZE
CC1	200 x 500mm

Steel Column Schedule

REF	SIZE	GRADE
SC1	RHS200x100x6.3	S355
SC2	SHS180x180x8	S355
SC3	SHS80x80x5	S355
SC4	UC203x203x46	S355
SC5	UC203x203x52	S355
SC6	UC152x152x30	S355
SC7	SHS100x100x6.3	S355
SC8	SHS60x60x5	S355

Rev	Date	Amendments	By	Chk'd
T4	29/03/17	PARTY WALL ISSUE	EP	BS
T3	20/03/2017	TENDER ISSUE	EP	BS
T2	20/01/2017	TENDER ISSUE	EP	BS
T1	07/11/2016	TENDER ISSUE	EP	BS
P2	07/10/2016	PRELIMINARY ISSUE	TB	BS
P1	31/08/2016	PRELIMINARY ISSUE	TB	BS

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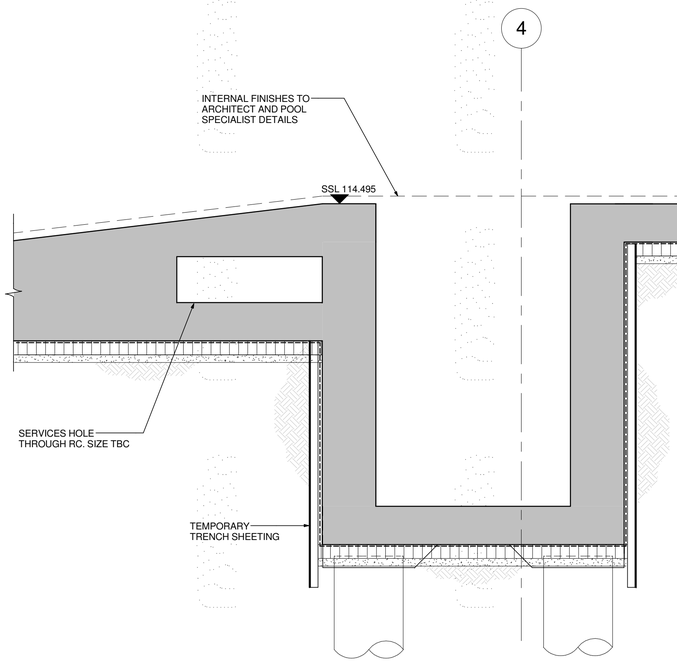
Project:
17 Branch Hill

Drawing title:
Basement and Lower Ground Floor Sections and Details-Sheet 1

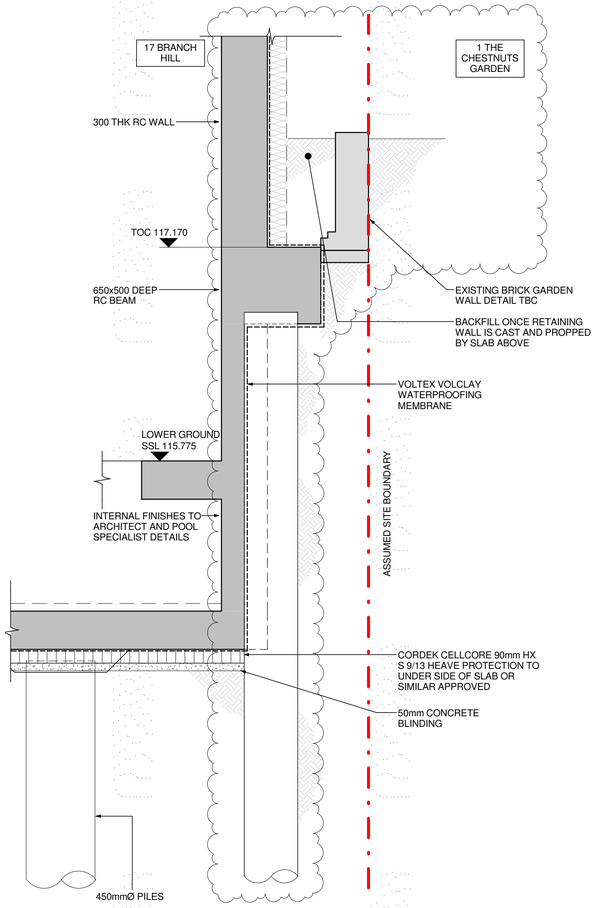
Scale at A1:	Drawn by:	Date:	Chk'd by:
As indicated	TB	07/26/16	BS

TENDER

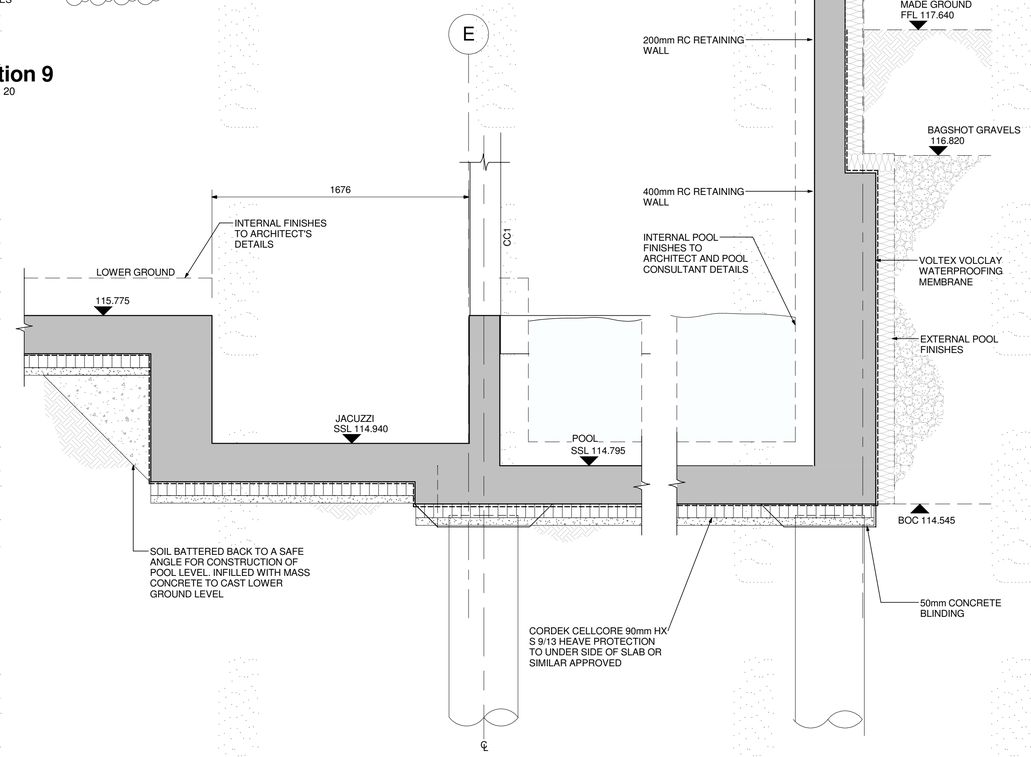
Project Number:	Drawing Type:	Drawing No:	Revision:
1281	DE	020	T4



Section 8
Scale 1 : 20



Section 9
Scale 1 : 20



Section 10
Scale 1 : 20

Section 11
Scale 1 : 20

NOTES

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3. INTERNAL BLOCKWORK NON-STRUCTURAL

Legend

- DENOTES RC WALLS AND FLOORS
- DENOTES MASS FILL CONCRETE
- DENOTES HEAVE PROTECTION

Beam Schedule

REF	SIZE	GRADE
SB1	UC152x152x37	S355
SB2	UC203x203x46	S355
SB3	SHS80x80x6.3	S355
SB4	PFC125x65x15	S355
SB5	L90x90x10	S355
SB6	L125x75x10	S355
SB7	PFC180x90x26	S355
SB8	UC152x152x23	S355

RC Column Schedule

REF	SIZE
CC1	200 x 500mm

Steel Column Schedule

REF	SIZE	GRADE
SC1	RHS200x100x6.3	S355
SC2	SHS180x180x8	S355
SC3	SHS80x80x5	S355
SC4	UC203x203x46	S355
SC5	UC203x203x52	S355
SC6	UC152x152x30	S355
SC7	SHS100x100x6.3	S355
SC8	SHS60x60x5	S355

Rev	Date	Amendments	By	Chk'd
T4	29/03/17	PARTY WALL ISSUE	EP	BS
T3	20/03/2017	TENDER ISSUE	EP	BS
T2	20/01/2017	TENDER ISSUE	EP	BS
T1	07/11/2016	TENDER ISSUE	EP	BS
P2	07/10/2016	PRELIMINARY ISSUE	TB	BS
P1	31/08/2016	PRELIMINARY ISSUE	TB	BS

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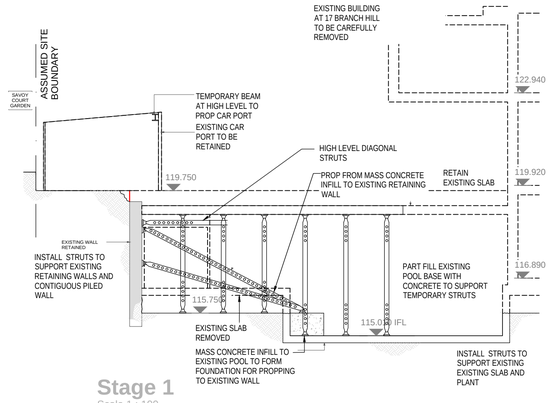
Project:
17 Branch Hill

Drawing title:
Basement and Lower Ground Floor Sections and Details-Sheet 3

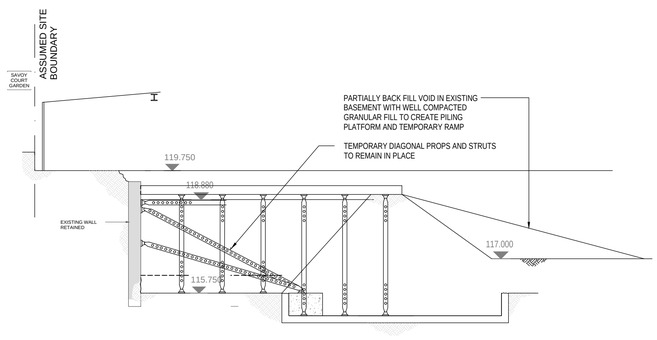
Scale at A1:	Drawn by:	Date:	Chk'd by:
As indicated	TB	July 2016	BS

TENDER

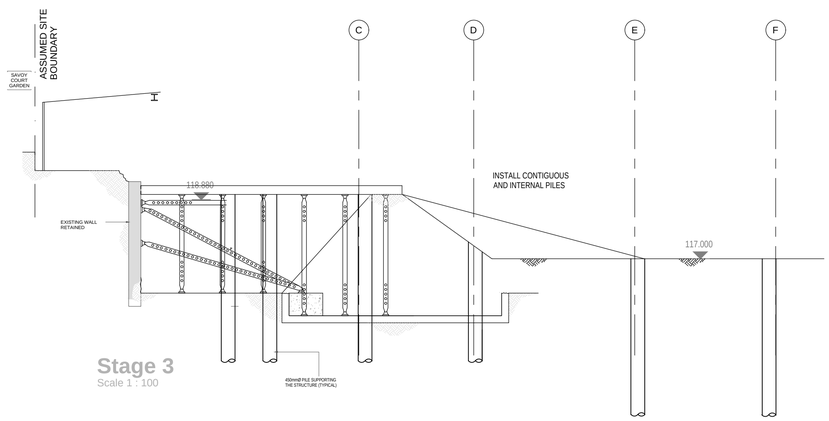
Project Number:	Drawing Type:	Drawing No:	Revision:
1281	DE	022	T4



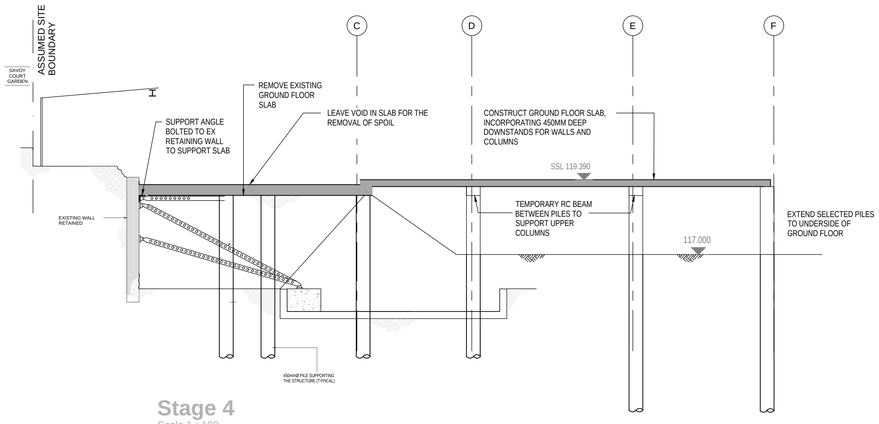
Stage 1
Scale 1 : 100



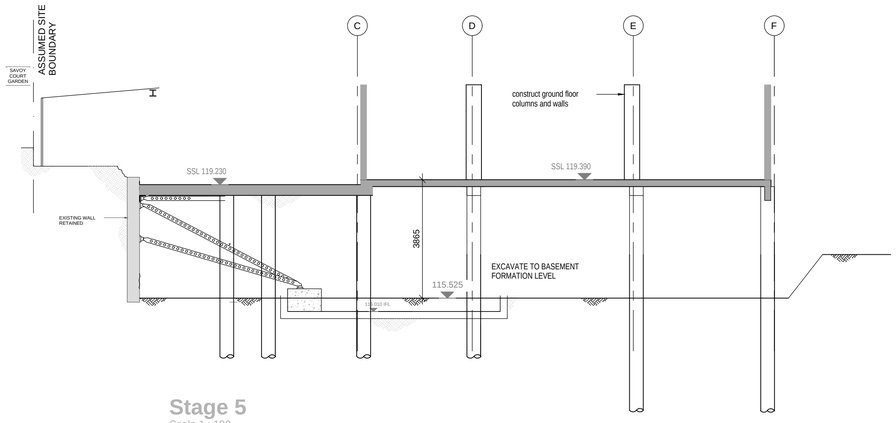
Stage 2
Scale 1 : 100



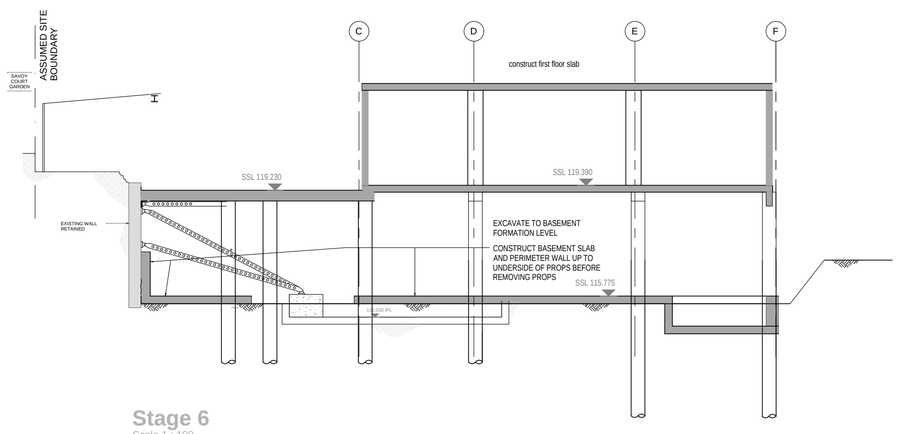
Stage 3
Scale 1 : 100



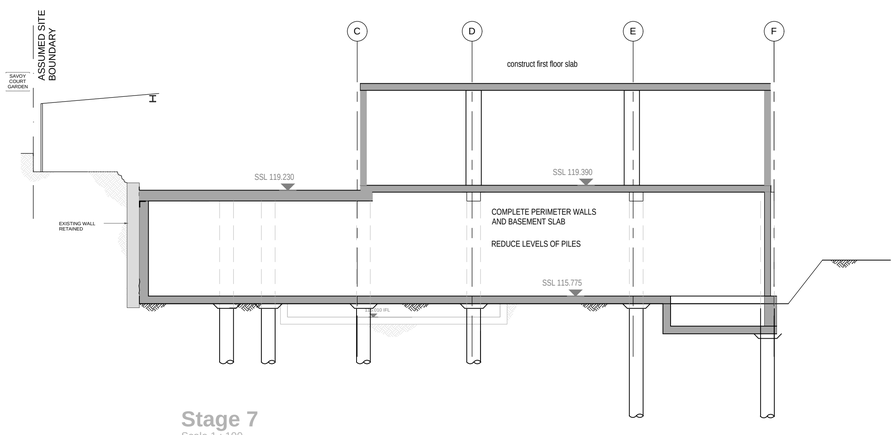
Stage 4
Scale 1 : 100



Stage 5
Scale 1 : 100



Stage 6
Scale 1 : 100



Stage 7
Scale 1 : 100

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Rev	Revision Details	Drn. By Date	Chk. By Date

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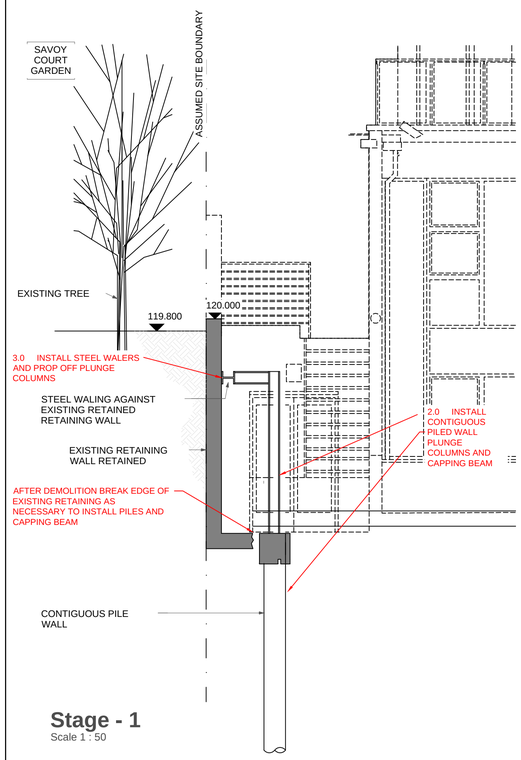
Structural & Civil Engineers
Skerrick House
Jubilee Road
Newtownards,
BT23 4YH
T. (028) 9181 5900
E. ross@cranstonni.com

Client
MY Construction
Architect

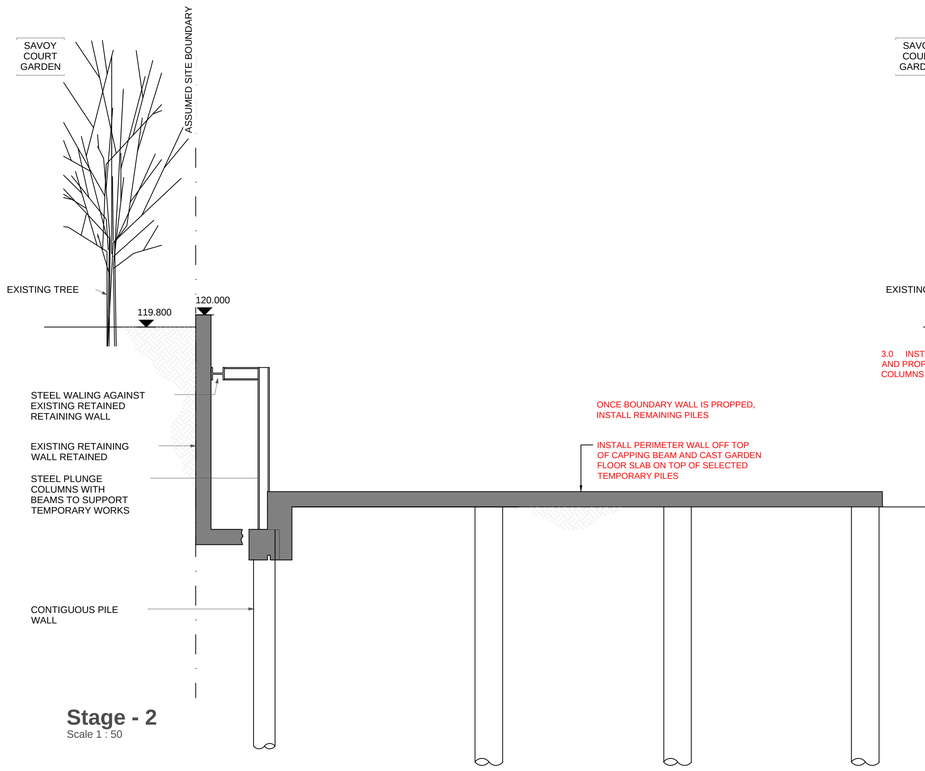
Project
17 Branch Hill
London

Drawing
Temporary Works - Top Down
Sequence of Construction at Savoy Court

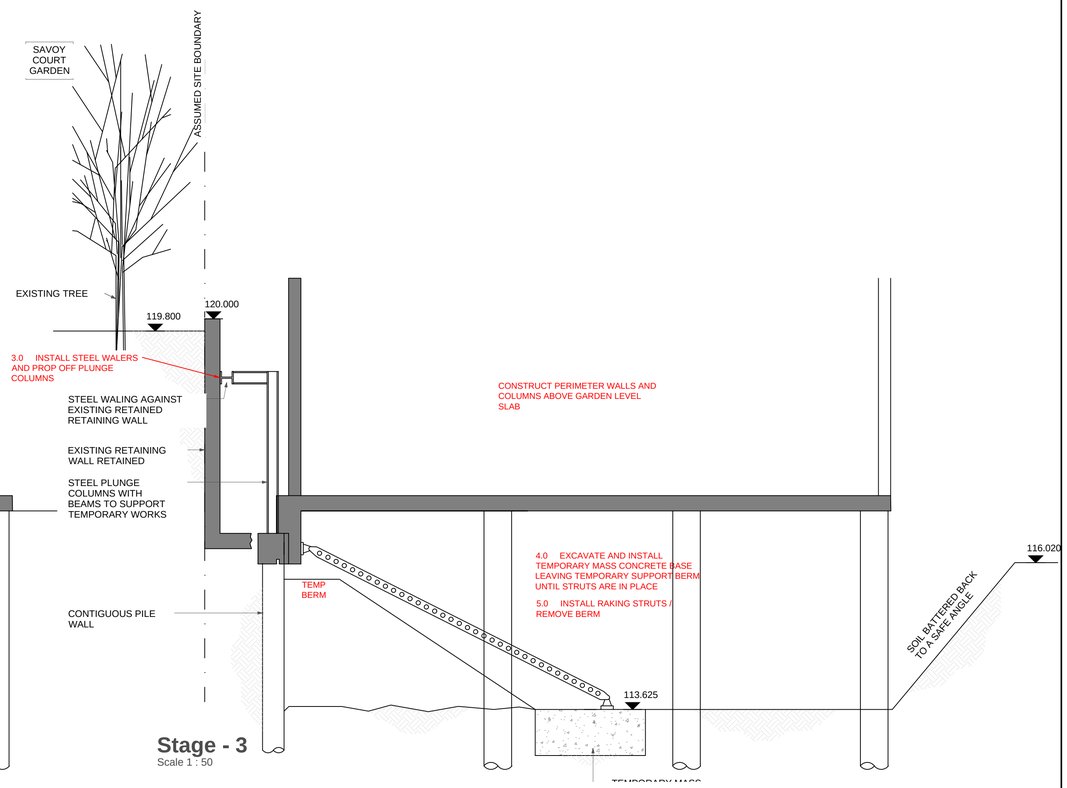
Date	Scale	Drawing No.	Rev.
June 17	A1@1:100	170608-TW-06	
Drawn by KSC	Checked by AT		



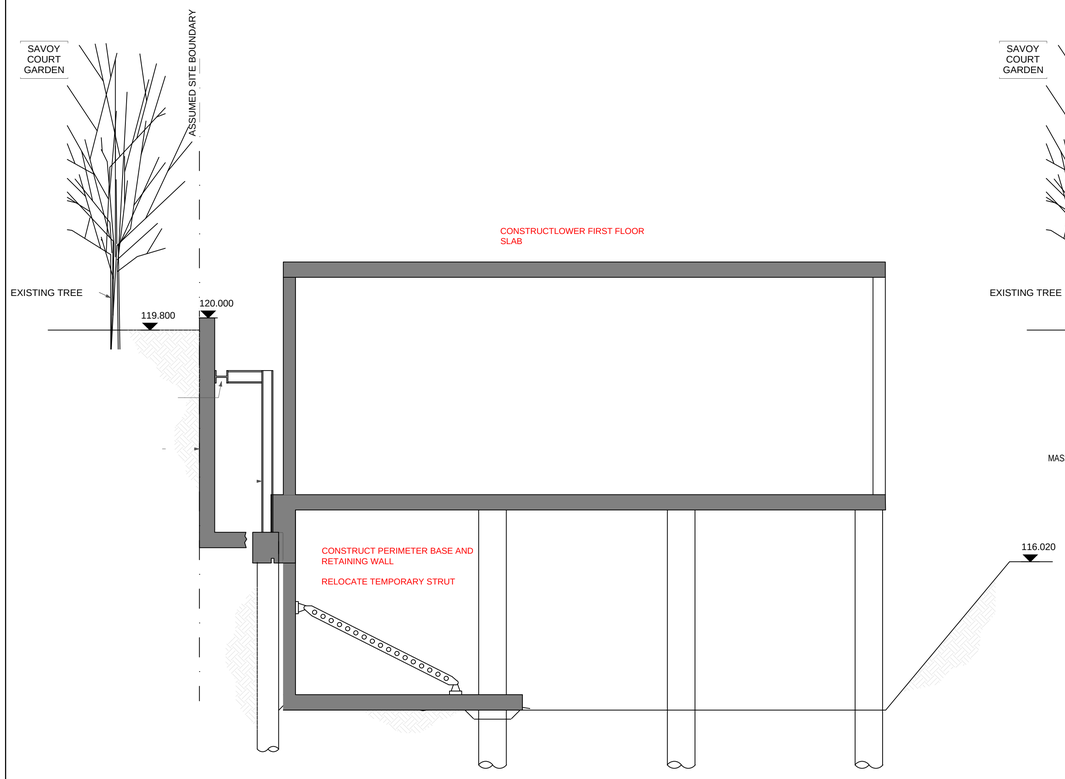
Stage - 1
Scale 1 : 50



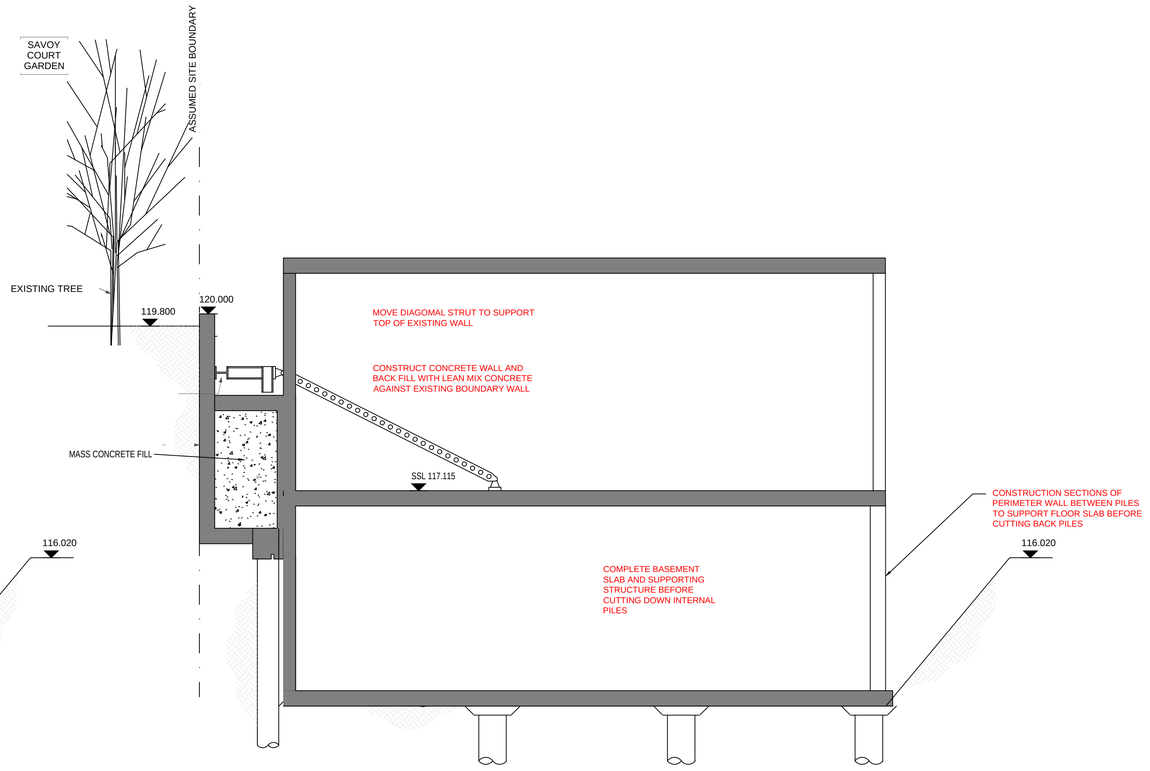
Stage - 2
Scale 1 : 50



Stage - 3
Scale 1 : 50



Stage - 4
Scale 1 : 50



Stage - 5
Scale 1 : 50

Rev	Revision Details	Drn. By Date	Chk. By Date

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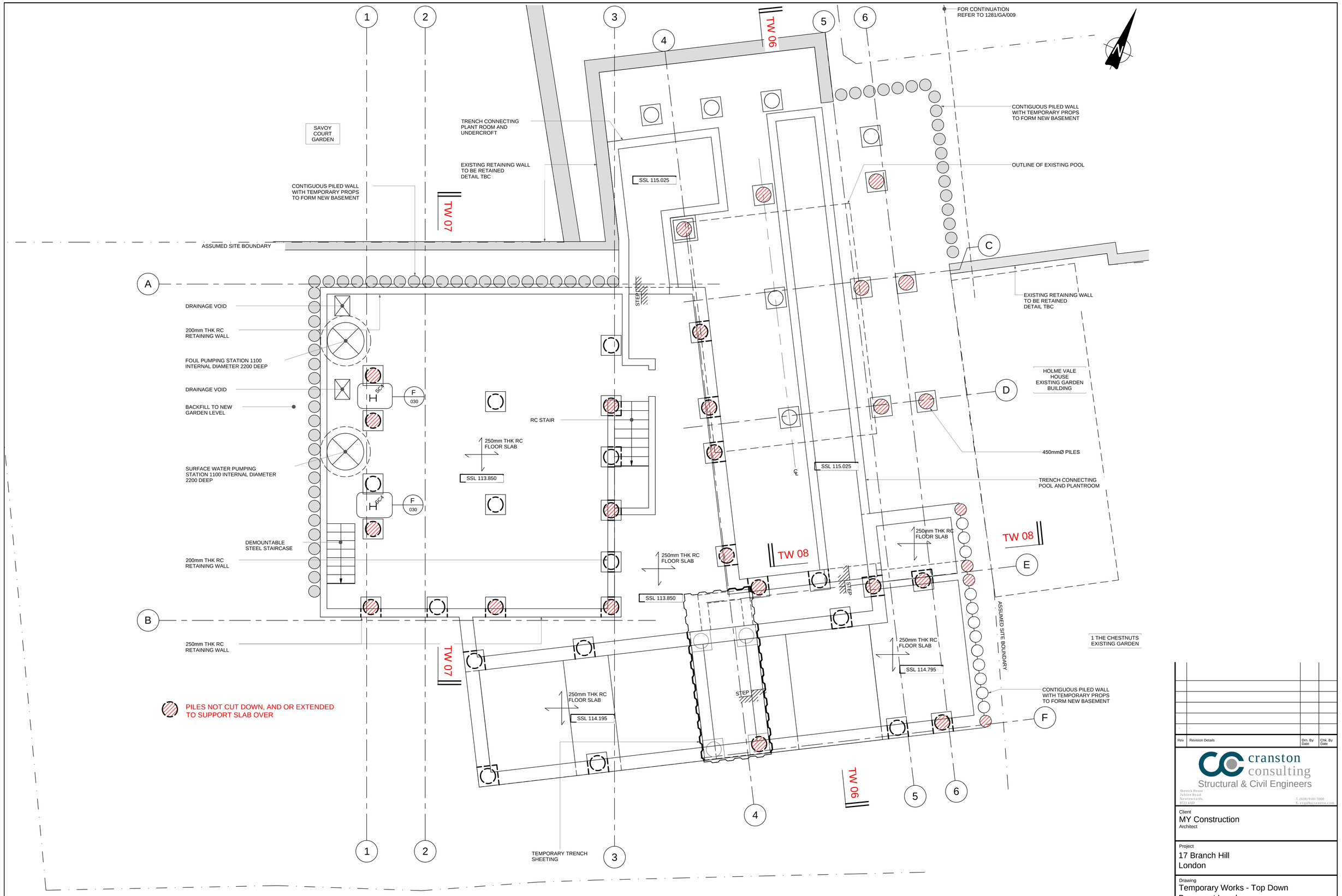
Structural & Civil Engineers
Sketrick House
Jubilee Road
Newtownards,
BT23 4AD
T. (028) 9181 5900
E. eng@cranston.com

Client
MY Construction
Architect

Project
17 Branch Hill
London

Drawing
Temporary Works - Top Down
Sequence of Construction at Savoy Garden

Date	Scale	Drawing No.	Rev.
June 17	A1@1:50	170608-TW-07	
Drawn by KSC	Checked by AT		



Rev	Revision Details	Drn. By Date	Chk. By Date

cranston consulting
Structural & Civil Engineers
Skerrick House
Jubilee Road
Newtownards,
BT23 4AD
T. (028) 9181 5900
E. eng@kerranston.com

Client
MY Construction
Architect

Project
17 Branch Hill
London

Drawing
Temporary Works - Top Down
Basement Level

Date	Scale	Drawing No.	Rev.
July 17	A1@1:50	170608-TW-09	
Drawn by KSC	Checked by AT		

250mm THK RC STAIR PROPPING
EXISTING RETAINING WALL IN
PERMANENT ARRANGEMENT

200mm THICK RETAINING
WALL THICKENS TO 300mm
BENEATH THE STEPS

SAVOY
COURT
GARDEN

TW 07

TW 06

ASSUMED SITE BOUNDARY

SERVICES VOID

VOID TO BASEMENT
LIGHTWELL

VOID

1
026

SC3

SC4

METAL GRILLAGE
WALKWAY

250mm THK RC
FLOOR SLAB

SSL 117.115

STEEL STAIR

SB7

SB7

SC5

CC1

CC1

CC1

MOVEMENT JOINT

DEMOUNTABLE
STEEL STAIRCASE

PILES TO REMAIN EXTENDED
TO SUPPORT GARDEN LEVEL
SLAB

TW 08

EXISTING SHARED MASS
CONCRETE BOUNDARY
FOUNDATION TO BE
CAREFULLY CUT ON 17
BRANCH HILL SIDE ONLY

HOLME VALE
HOUSE
EXISTING GARDEN
BUILDING

EXISTING SHARED MASS
CONCRETE BOUNDARY
FOUNDATION TO BE
CAREFULLY CUT ON 17
BRANCH HILL SIDE ONLY

TW 08

500mm DEEP RC
CAPPING BEAM

ASSUMED SITE BOUNDARY

TW 06

TW 07

1 2 3 4 5 6

A B C D E F

N

Rev.	Revision Details	Drn. By Date	Chk. By Date

cranston consulting
Structural & Civil Engineers
Sketrick House
Jubilee Road
Newtownards,
BT23 4AD
T. (028) 9181 5900
E. ens@lscranston.com

Client
MY Construction
Architect

Project
17 Branch Hill
London

Drawing
Temporary Works - Top Down
Garden Level

Date	Scale	Drawing No.	Rev.
July 17	A1@1:50	170608-TW-10	
Drawn by KSC	Checked by AT		

FOR CONTINUATION
REFER TO 1281/GA/009

SAVOY
COURT
GARDEN

ASSUMED SITE BOUNDARY

TW 06

TW 07

500mm DEEP RC
CAPPING BEAM

350mm THK RC
FLOOR SLAB

SSL 119.230

200mm THK RC SHEAR
WALL PROVIDING STABILITY

DEMOUNTABLE
STEEL STAIRCASE

STEP IN UNDERSIDE SIDE OF SLAB

SERVICES VOID

VOID FOR LOWER GROUND
LIGHTWELL AND STAIR

SERVICES VOID

200W x 400DP
RC DOWNSTAND

RC WALL
UNDER

MD
SB8

DISCONTINUITY OF STRINGER
ACTING AS A BEAM

STEEL STAIR, WITH 10 THK
STRINGER ACTING AS A BEAM.
ALLOW FOR ALUMINIUM
BALUSTRADE

DISCONTINUITY OF STRINGER
ACTING AS A BEAM

SB7

225mm THK RC
FLOOR SLAB

SSL 119.390

BEAM CANTILEVERS FROM
BLOCK

TW 08

OPENING FOR SKYLIGHT TO
LOWER GROUNG LEVEL

HOLME VALE
HOUSE
EXISTING GARDEN
BUILDING

BLOCKWORK PARTITIONS TO
ARCHITECTS SPECIFICATION.
BLOCKWORK TO BE KEPT DRY
THROUGHOUT CONSTRUCTION.
PROVIDE TIES TO RC AND
BLOCK COLUMNS AND WALLS

TW 08

OPENING FOR SKYLIGHT TO
LOWER GROUNG LEVEL

ASSUMED SITE BOUNDARY

ALLOW FOR STEEL BEAM FOR
CLADDING CONTRACTOR TO
SPECIFY

ALLOW FOR PRECAST LINTELS
ABOVE OPENINGS

PILES EXTENDED TO SUPPORT
GROUND FLOOR SLAB

200mm THK SHEAR WALL
PROVIDING STABILITY

TW 06

TW 07

Rev.	Revision Details	Drn. By Date	Chk. By Date

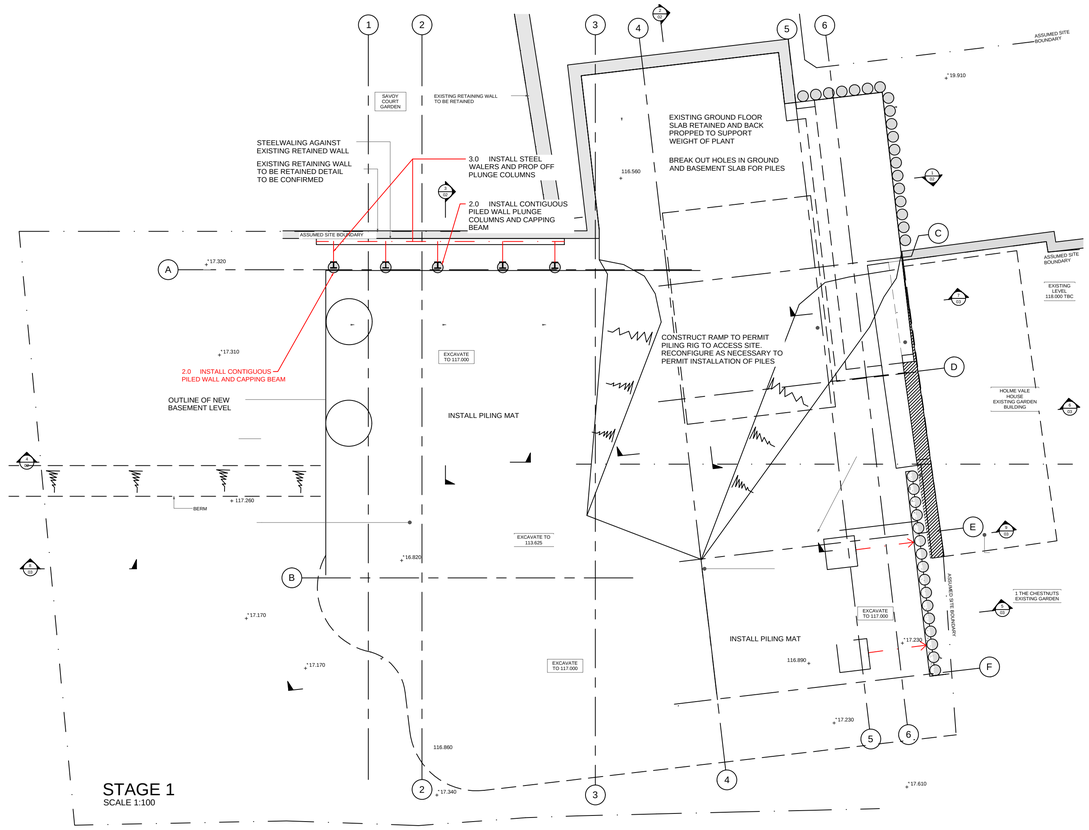
cranston consulting
Structural & Civil Engineers
Sketrick House
Jubilee Road
Newtownards,
BT23 4AD
T. (028) 9181 5900
E. ross@lscranston.com

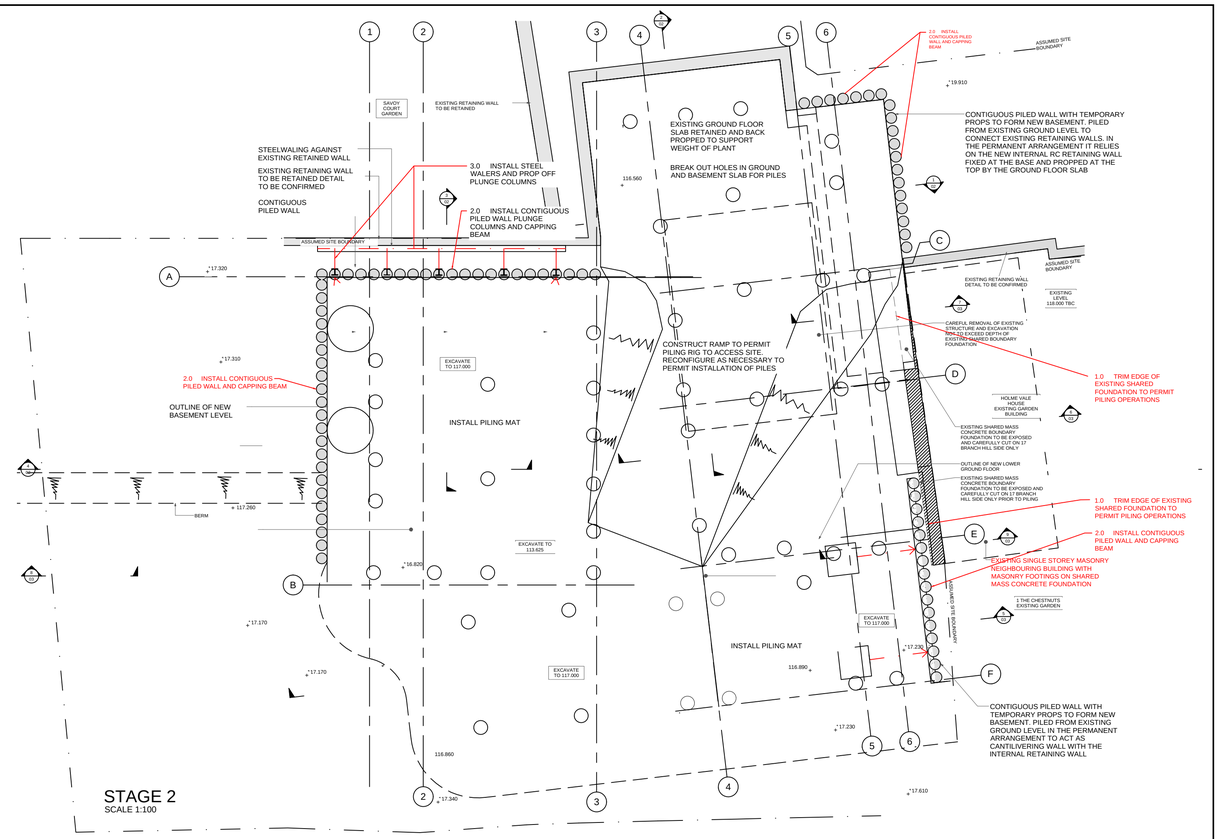
Client
MY Construction
Architect

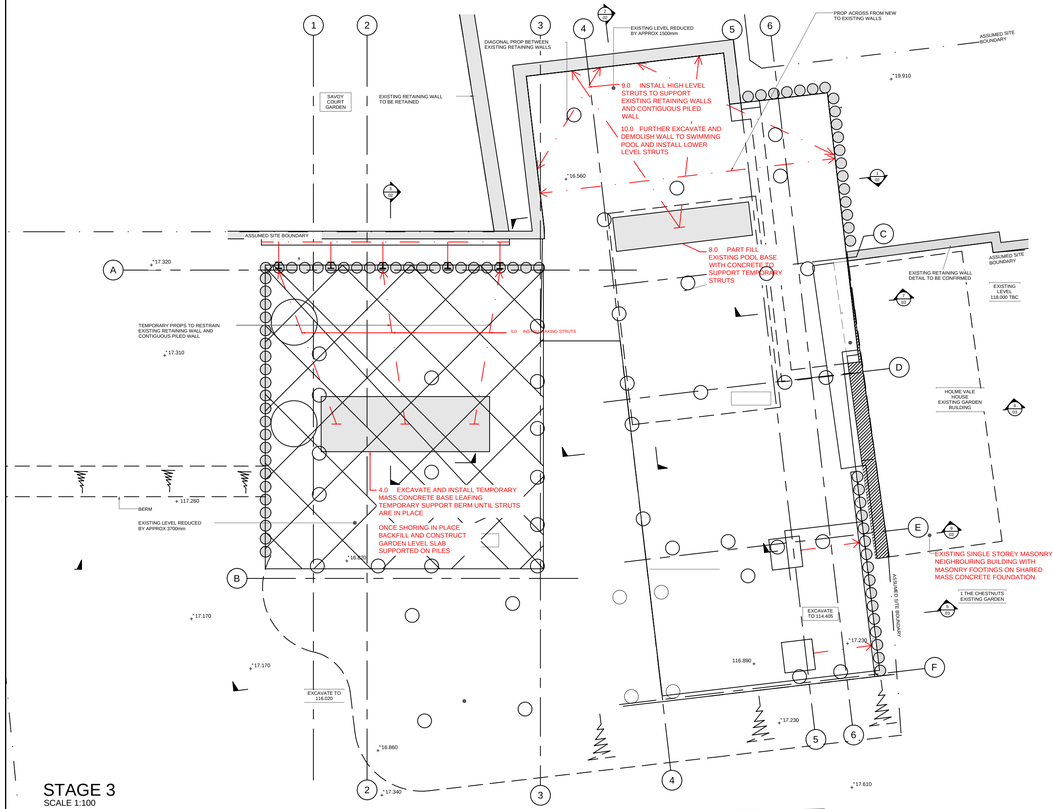
Project
17 Branch Hill
London

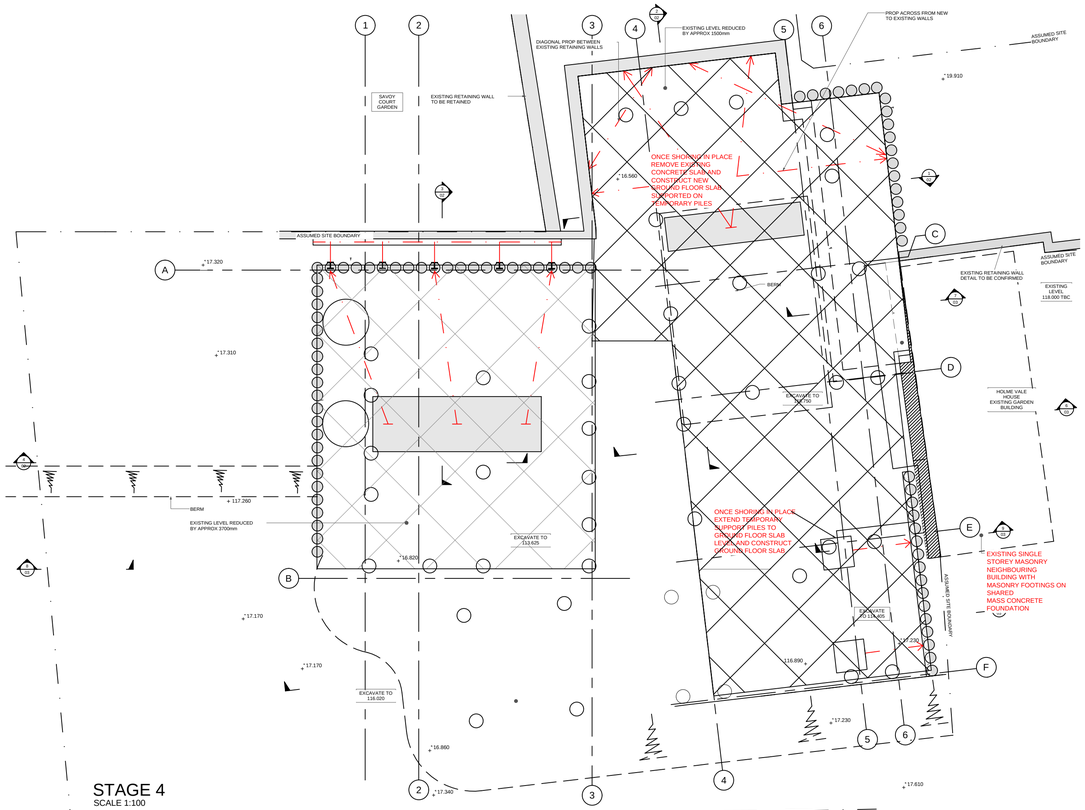
Drawing
Temporary Works - Top Down
Ground Floor Level

Date	Scale	Drawing No.	Rev.
July 17	A1@1:50	170608-TW-11	
Drawn by KSC	Checked by AT		









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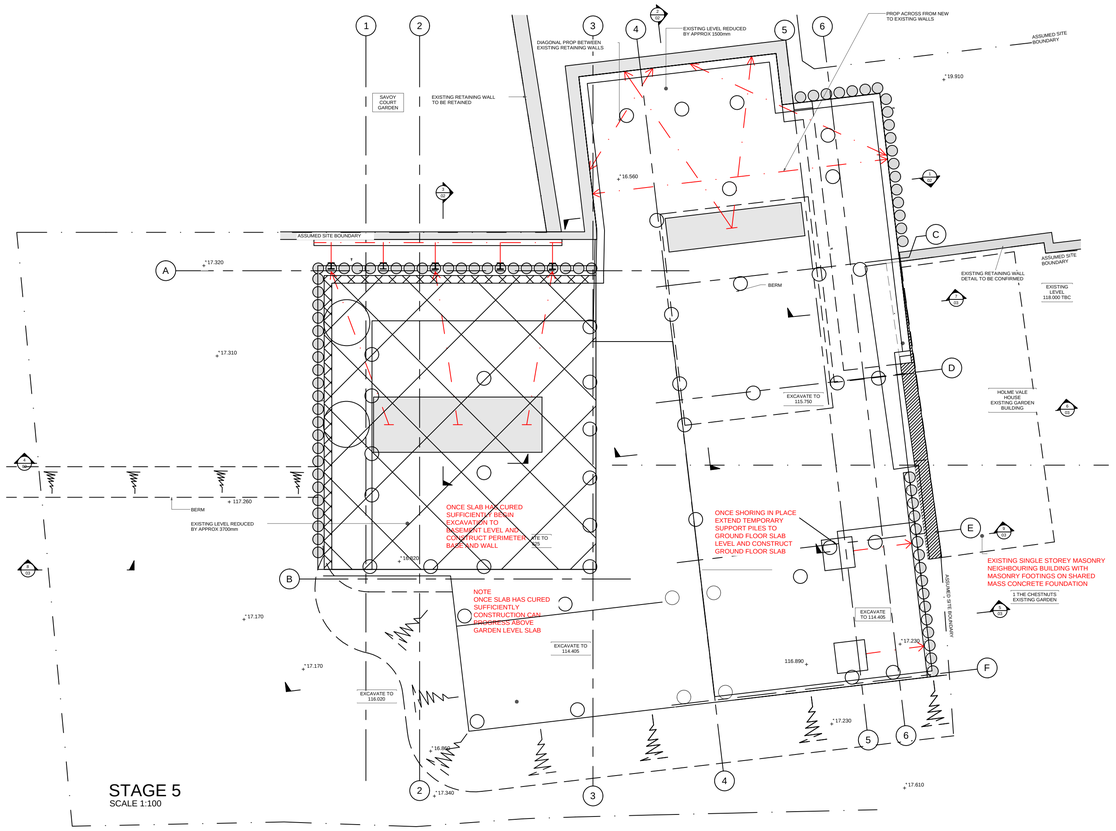
cranston consulting
Structural & Civil Engineers
Skerrick House
Jubilee Road
Newtownards,
BT23 4AD
T. (028) 9181 5900
E. eng@cranston.com

Client
MY Construction
Architect

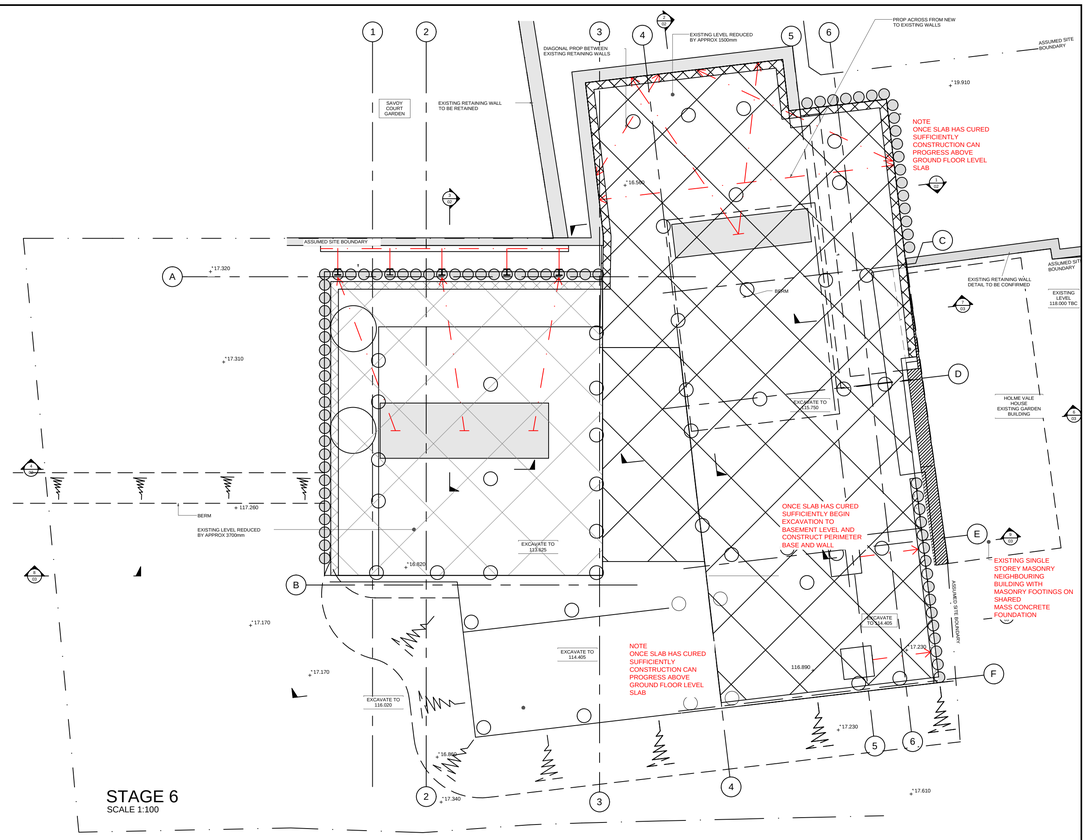
Project
17 Branch Hill
London

Drawing
Temporary Works - Top Down
Layout Stages 1-4

Date	Scale	Drawing No.	Rev.
July 17	A1@1:100	170608-TW-13	
Drawn by KSC	Checked by AT		



STAGE 5
SCALE 1:100



STAGE 6
SCALE 1:100

Rev	Revision Details	Drn. By Date	Chk. By Date

cranston consulting
Structural & Civil Engineers
Sketrick House
Jubilee Road
Newtownards,
BT23 4AD
T. (028) 9181 5900
E. eng@cranston.com

Client
MY Construction
Architect

Project
17 Branch Hill
London

Drawing
Temporary Works - Top Down
Layout Stages 5-6

Date	Scale	Drawing No.	Rev.
July 17	A1@1:100	170608-TW-14	
Drawn by KSC	Checked by AT		