



DOCUMENT HISTORY AND STATUS

Revision	Date	Purpose/ Status	File Ref	Author	Check	Review
D1	08/06/23	Draft	AAep-14006-11- 080623-13 St Mark's Crescent-D1	AA	EJP	EJP
F1	24/07/23	For planning	AAEJP-14006-11- 240723-13 St Mark's Crescent-F1	AA	EMB	EMB

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Document Details

Last Saved	24/07/2023 15:42
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Project Number	14006-11
Project Name	Basement Impact Assessment Audit
Revision	F1
Planning Reference	2022/5539/P
File Ref	AAEJP-14006-11-240723-13 St Mark's Crescent-F1



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1.0 NON-TECHNICAL SUMMARY

- 1.1 CampbellReith was instructed by London Borough of Camden, (LBC) to carry out an audit on the Basement Impact Assessment submitted as part of the Planning Submission documentation for 13 St Mark's Crescent (planning reference 2022/5539/P). The basement is considered to fall within Category A as defined by the Terms of Reference.
- 1.2 The Audit reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development in accordance with LBC's policies and technical procedures.
- 1.3 CampbellReith was able to access LBC's Planning Portal and gain access to the latest revision of submitted documentation and reviewed it against an agreed audit check list.
- 1.4 The Basement Impact Assessment (BIA) has been conducted by engineering consultants Lustre Consulting Ltd, with qualified individuals involved in its production.
- 1.5 The proposed development includes lowering the existing lower ground floor by 400mm, necessitating underpinning for construction.
- 1.6 Information has been presented to demonstrate the depth of neighbouring basements and foundations in relation to the proposed development.
- 1.7 The site's location within the Primrose Hill Local Flood Risk Zone is acknowledged, however, as the proposed development will be within the existing building footprint without changes to hardstanding, the risk of surface water and groundwater flooding is low.
- 1.8 The geology of the site comprises London Clay, which does not support significant groundwater flows. No impact to hydrogeology is predicted.
- 1.9 Outline structural engineering information showing the proposed construction methodology has been provided with confirmation that a significant differential depth between adjacent foundations will not be created. It is accepted a damage assessment is not required.
- 1.10 The BIA indicates that impacts to the stability of the surrounding slopes to the development site are negligible.
- 1.11 The BIA and additional supporting information (Appendix 3) comply with the requirements of CPG: Basements.



2.0 INTRODUCTION

- 2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 12/05/2023 to carry out a Category A audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 13 St Mark's Crescent, London, NW1 7TS and Planning Reference No. 2022/5539/P.
- The audit was carried out in accordance with the Terms of Reference set by LBC. It reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development.
- 2.3 A BIA is required for all planning applications with basements in Camden in general accordance with policies and technical procedures contained within
 - Camden Local Plan 2017 Policy A5 Basements.
 - Camden Planning Guidance (CPG): Basements. January 2021.
 - Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.
- 2.4 The BIA should demonstrate that schemes:
 - a) maintain the structural stability of the building and neighbouring properties;
 - b) avoid adversely affecting drainage and run off or causing other damage to the water environment;
 - c) avoid cumulative impacts upon structural stability or the water environment in the local area;

and evaluate the impacts of the proposed basement considering the issues of hydrology, hydrogeology and land stability via the process described by the GSD and to make recommendations for the detailed design.

- 2.5 LBC's Audit Instruction described the planning proposal as "Erection of single storey rear extension with roof terrace above, involving lowering of lower ground level. Associated works including alterations to rear bay and side elevation."
- The Audit Instruction confirmed 13 St Mark's Crescent did not involve, nor was a neighbour to, listed buildings.
- 2.7 CampbellReith accessed LBC's Planning Portal on 23/05/2023 and gained access to the following relevant documents for audit purposes:
 - Basement Impact Assessment by Lustre Consulting Ltd, dated October 2022, Ref No. 4358.
 - Design, Access and Heritage by Statement by Stylus Architects, dated December 2022.
 - Planning Application Drawings by Stylus Architects:
 - Location Plan, dated 25th October 2022, Rev P01, Drg No. 565 P01.



- Existing Plans including Sections and Elevations, dated 5th April 2022, Rev A.
- Proposed Section, dated 11th October 2022, Rev A.
- Proposed Floor Plans Sheet 1, dated 14th April 2023, Rev B.
- Proposed Elevations, dated 14th April 2023, Rev B.
- In response to CampbellReith's initial audit report and subsequent queries, the following information was received (see Appendix 3):
 - Photographs showing relationship between Nos 12 and 13 St Mark's Crescent.
 - Structural engineering drawings showing basement and ground floor of No 14 St Mark's Crescent.
 - Structural Design Studio drawings, project no 223210:
 - Lower ground and ground floor plans, drawings no S-090 and S-100, showing foundations and underpin sequence
 - Building section 1-1, drawing no S-200, showing proposed foundations
 - Building cross sections, drawing no S-201, showing record foundation information for No 14 St Mark's Crescent.



3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are DIA Author(a) are dentials estisfactors (2)		Costion 2.1 of DIA
Are BIA Author(s) credentials satisfactory?	Yes	Section 2.1 of BIA.
Is data required by CI.233 of the GSD presented?	Yes	Section 3.0 of BIA.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	
Are suitable plan/maps included?	Yes	Within Appendices of BIA.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 4.3 of BIA. Question 13 will need to be reviewed to consider presence of neighbouring basements/foundations.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 4.2 of BIA.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 4.4 of BIA.
Is a conceptual model presented?	No	No ground investigation undertaken to present model.



Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 5.0 of BIA.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 5.0 of BIA.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	proposed development will be within the existing building footprint with no changes to hardstanding
Is factual ground investigation data provided?	No	None undertaken.
Is monitoring data presented?	No	None undertaken.
Is the ground investigation informed by a desk study?	No	None undertaken.
Has a site walkover been undertaken?	Yes	Mentioned in Section 2.2 of BIA.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	Photographic and record evidence presented.
Is a geotechnical interpretation presented?	No	
Does the geotechnical interpretation include information on retaining wall design?	No	No ground investigation undertaken.
Are reports on other investigations required by screening and scoping presented?	NA	
Are the baseline conditions described, based on the GSD?	Yes	Presence and depth of neighbouring basements confirmed.



Item	Yes/No/NA	Comment
Do the base line conditions consider adjacent or nearby basements?	Yes	As above.
Is an Impact Assessment provided?	No	None required.
Are estimates of ground movement and structural impact presented?	No	No potential for significant ground movement identified in BIA.
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	NA	
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	NA	
Has the need for monitoring during construction been considered?	No	
Have the residual (after mitigation) impacts been clearly identified?	Yes	
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	No potential for significant ground movement identified in BIA.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	



Item	Yes/No/NA	Comment
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	No	No potential for significant ground movement identified in BIA.
Are non-technical summaries provided?	Yes	Section 1.0 of BIA.



4.0 DISCUSSION

- 4.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Lustre Consulting Ltd and the individuals concerned in its production have suitable qualifications.
- 4.2 The site is roughly rectangular in plan and occupies an approximate area of 0.02ha. The site currently comprises a four-storey semi-detached residential property. The property fronts onto St Mark's Crescent on the south eastern boundary and the Grand Union Canal on the northwestern boundary. The Design & Access Statement identified that 13 St Mark's Crescent is located in the Primrose Hill Conservation Area.
- 4.3 The proposed basement consists of a single storey construction formed by lowering an existing lower ground floor by 400mm in a traditional underpinning technique, with internal reconfigurations proposed. Additionally, it is proposed to add a rear extension at lower ground floor level at the same finished floor level. The proposed extension will incorporate the footprint of the existing conservatory and extend across the whole of the rear elevation, extending c.3.10m from the rear elevation of the original property.
- 4.4 At the time of writing, a ground investigation has not been conducted. However, information obtained from a desk study includes the consultation of historical borehole records located 100 metres southeast and 100 metres northwest of the site. The findings from these records indicate the presence of Made Ground ranging from 1.20 to 3.30m below ground level (assumed street level), underlain by London Clay Formation to depth.
- The BIA reports there are no recorded groundwater monitoring records, and since the London Clay Formation is considered an unproductive stratum, it is unlikely to hold significant volumes of water.
- The initial audit requested that further information was provided to justify the response to Question 13 of the Land Stability screening concerning the potential for differential depths with neighbours' foundations. Information was subsequently provided to confirm that neighbouring properties have lower ground floors at a similar level to No 13 St Mark's Crescent (see Appendix 3) and that a significant differential will not be introduced.
- 4.7 Noting the small increase in the depth of the foundations (c 400mm), it is accepted that the assumptions concerning the founding stratum for the proposed underpins (London clay) are reasonable. The BIA advises that site investigation will be carried out once planning permission is granted.
- The site is located within a Critical Drainage Area and falls within the Primrose Hill Local Flood Risk Zone. However, considering that the proposed development will be contained within the footprint of the existing building, it is recognized that the surface water regime will not have an impact on the site or neighbouring properties.
- 4.9 Additionally, it is important to note that approximately 70% of the site consists of hardstanding, while the remaining 30% is soft landscaping. Therefore, it is acknowledged that the proposed development will not have any significant impact on the wider hydrogeology.



- 4.10 A Structural Strategy Report (SSR) is not provided; however, the BIA notes the lower ground floor will be constructed in an 'hit and miss' underpinning sequence. Drawings showing the proposed foundation and underpinning strategy were provided in response to the initial audit report (see Appendix 3).
- 4.11 It is accepted that there are no slope stability concerns regarding the proposed development and it is not in an area prone to flooding.



5.0 CONCLUSIONS

- 5.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Lustre Consulting Ltd and the individuals concerned in its production have suitable qualifications.
- 5.2 It is proposed to lower the existing lower ground floor by 400mm. Underpinning is proposed to facilitate the deepening. The founding stratum is assumed to be London Clay.
- 5.3 The site's location within the Primrose Hill Local Flood Risk Zone is acknowledged. However, as the proposed development will be within the existing building footprint with no changes to hardstanding, the risk of surface water and groundwater flooding is low.
- 5.4 The site is not underlain by an aquifer; consequently no impact to hydrogeology is predicted.
- 5.5 Structural engineering information is provided demonstrating proposals for underpinning and new foundations. A monitoring regime may be agreed as part of the party wall award if required.
- 5.6 Further information has been presented to demonstrate the depth of neighbouring basements and foundations in relation to the proposed development. No significant differential depth between foundations will be created and a damage assessment is not required.
- 5.7 It is accepted that the surrounding slopes to the development site are stable.
- It is confirmed that the BIA and supporting information (see Appendix 3) comply with the requirements of CPG: Basements.

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Appendix 1

Consultation Responses

None

F1 Appendices

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Residents' Consultation Comments

None relevant to the BIA.

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Appendix 2

Audit Query Tracker

F1 Appendices



Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Land Stability	Presence and depth of neighbouring basements/foundations will need to be confirmed. Founding stratum of the proposed underpins is requested.	Closed – see Appendix 3. Applicant proposes to undertake site investigation after planning permission is granted (BIA section 2.0.3)	24/07/2023
2	Land Stability	A Structural Strategy Report will be required to present sequence of underpinning, construction sequence and monitoring regime.	Closed – see Appendix 3. Monitoring, if required, may be agreed as part of party wall award.	24/07/2023

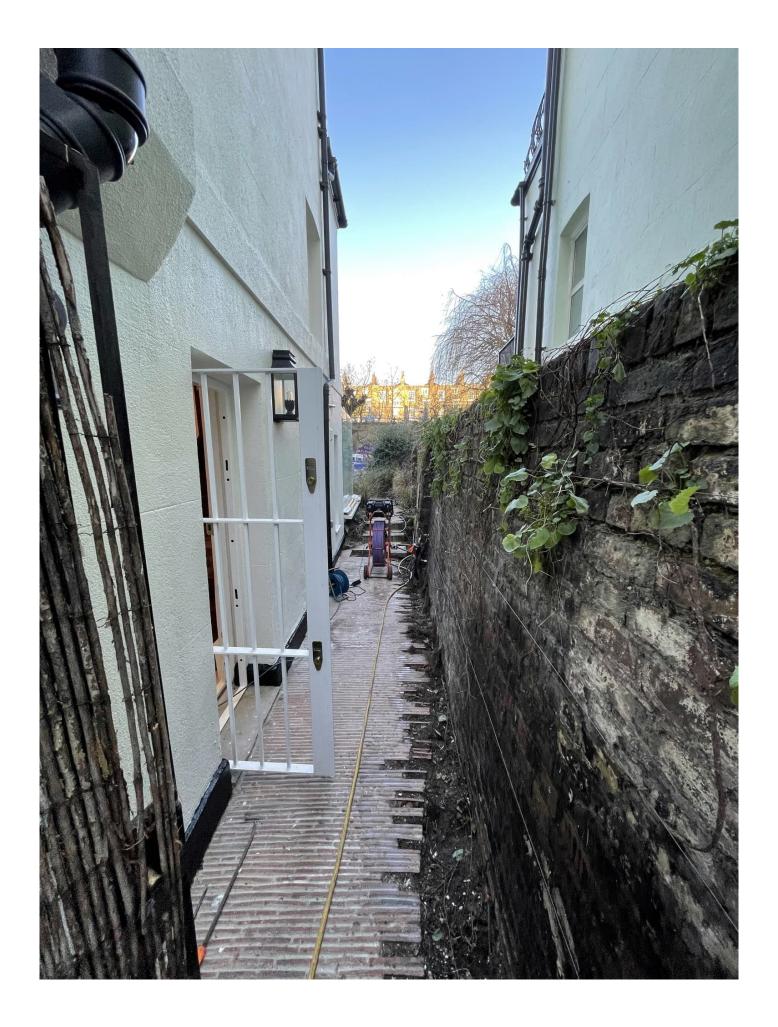
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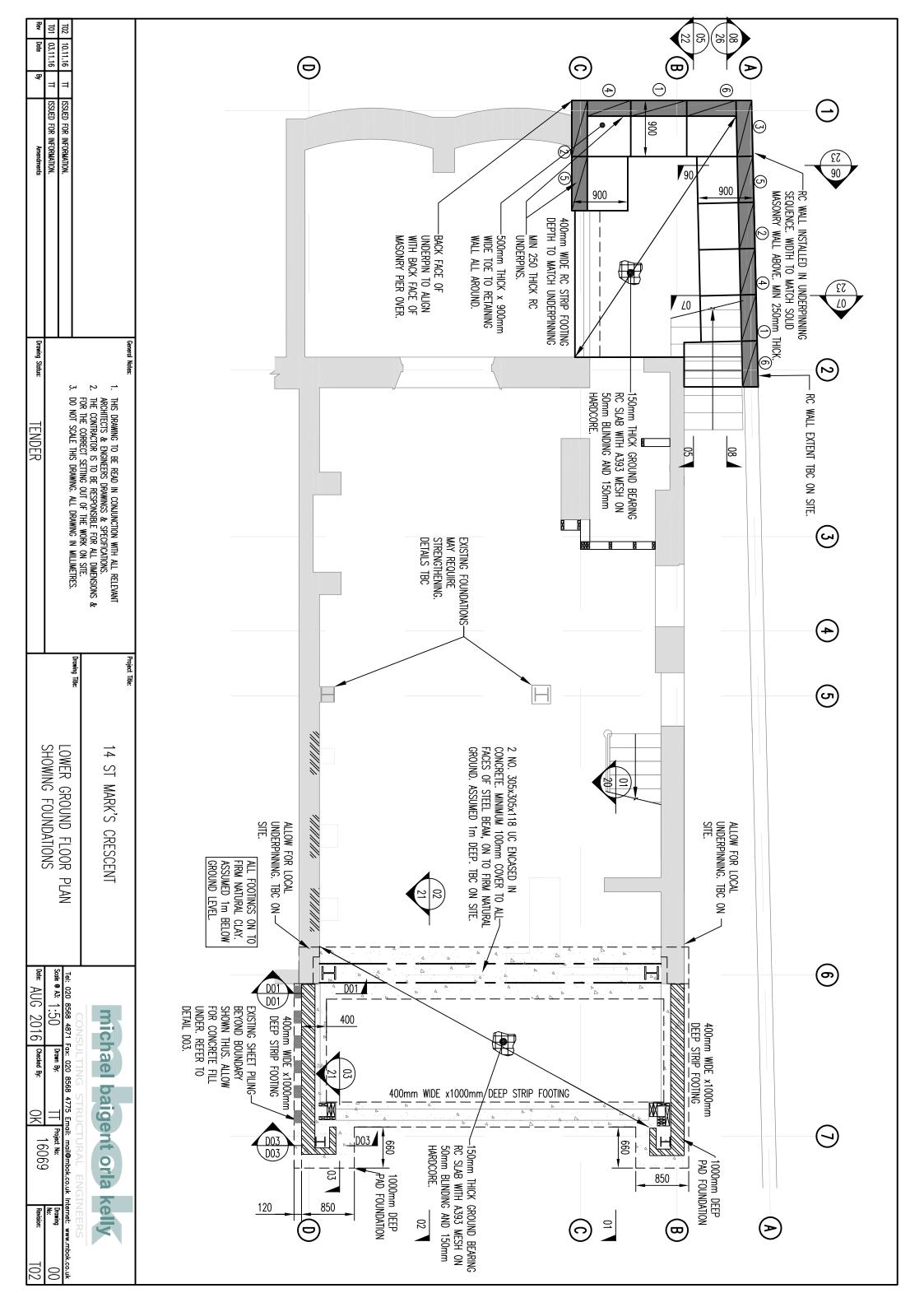
Appendix 3

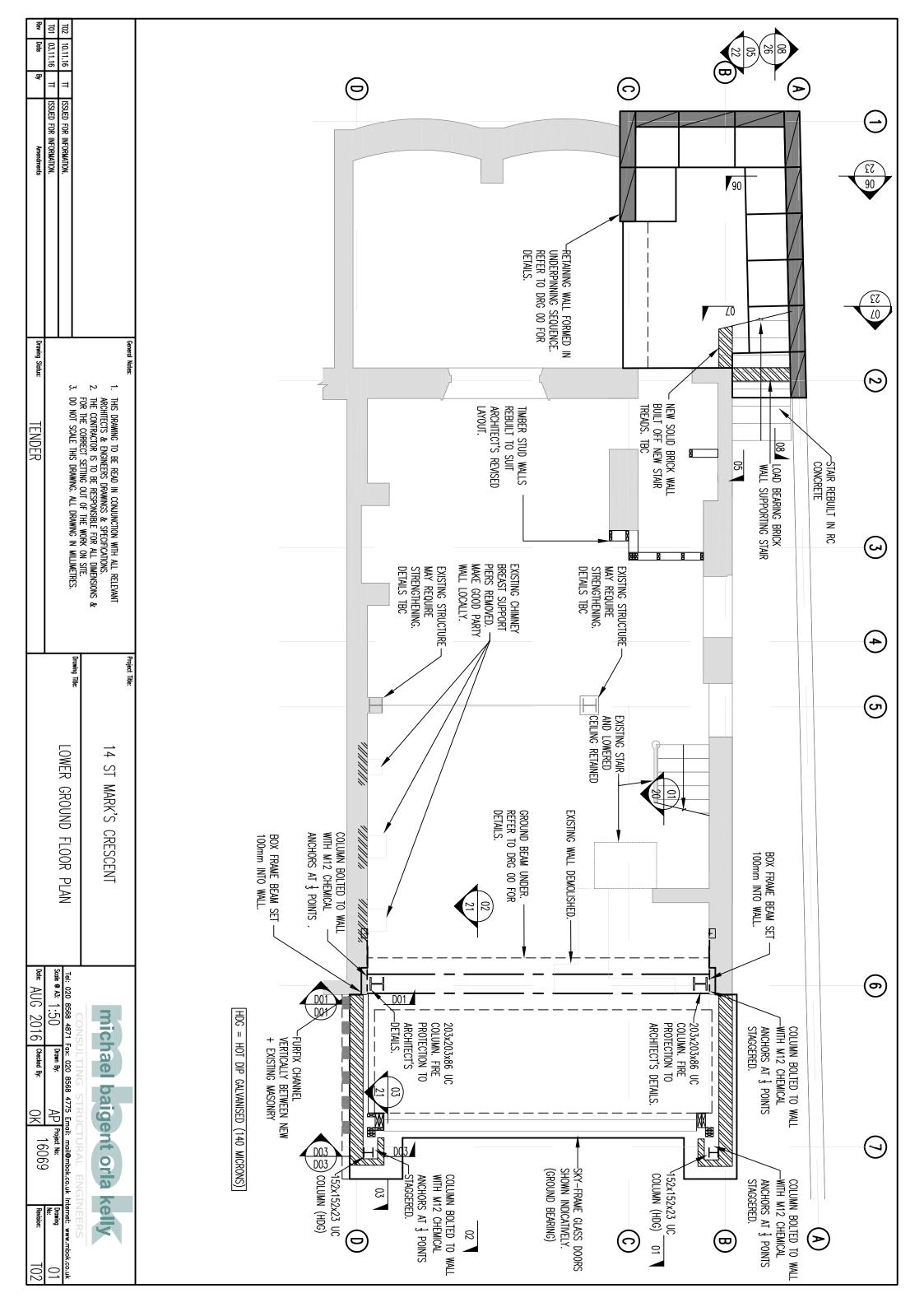
Supplementary Supporting Documents

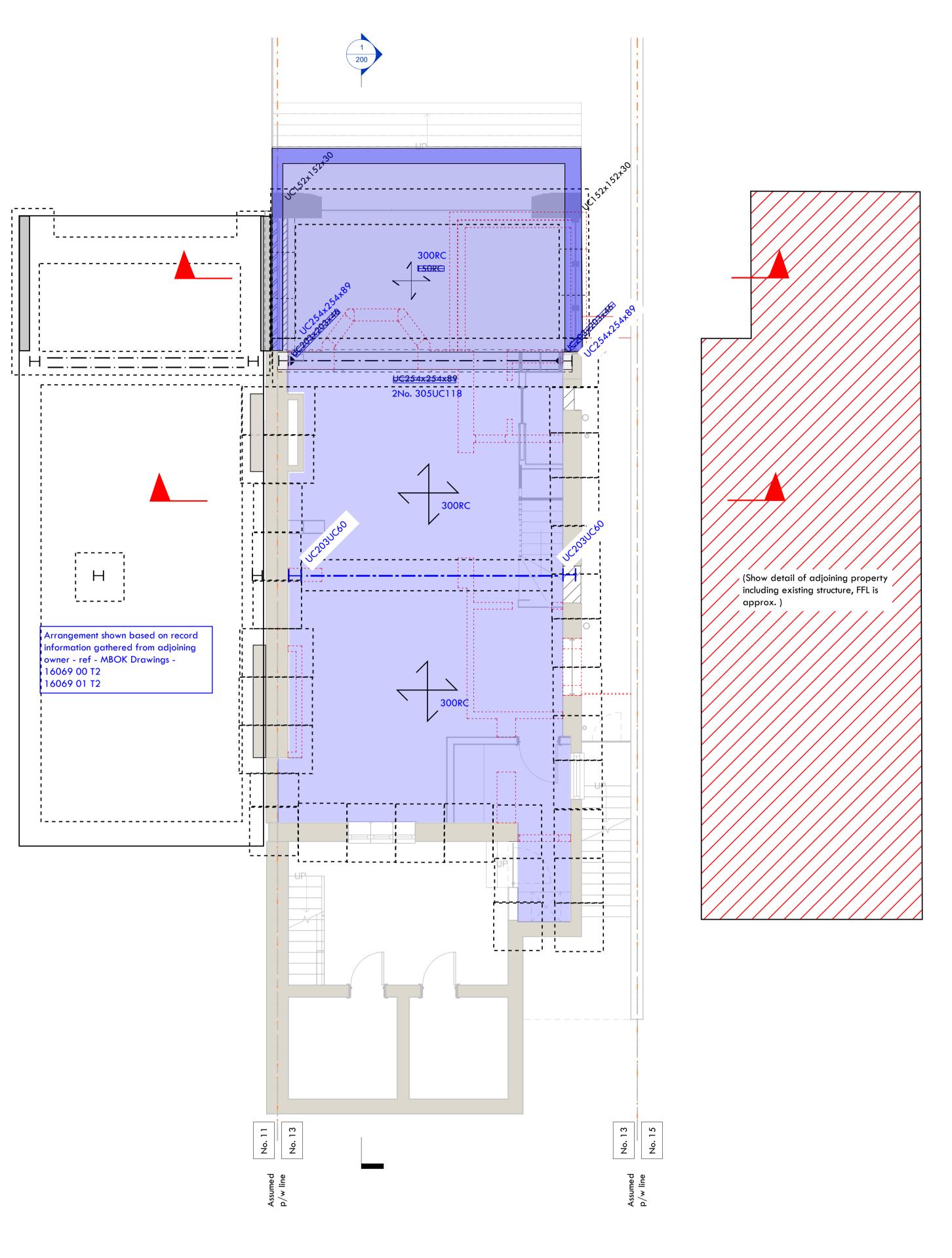
F1 Appendices





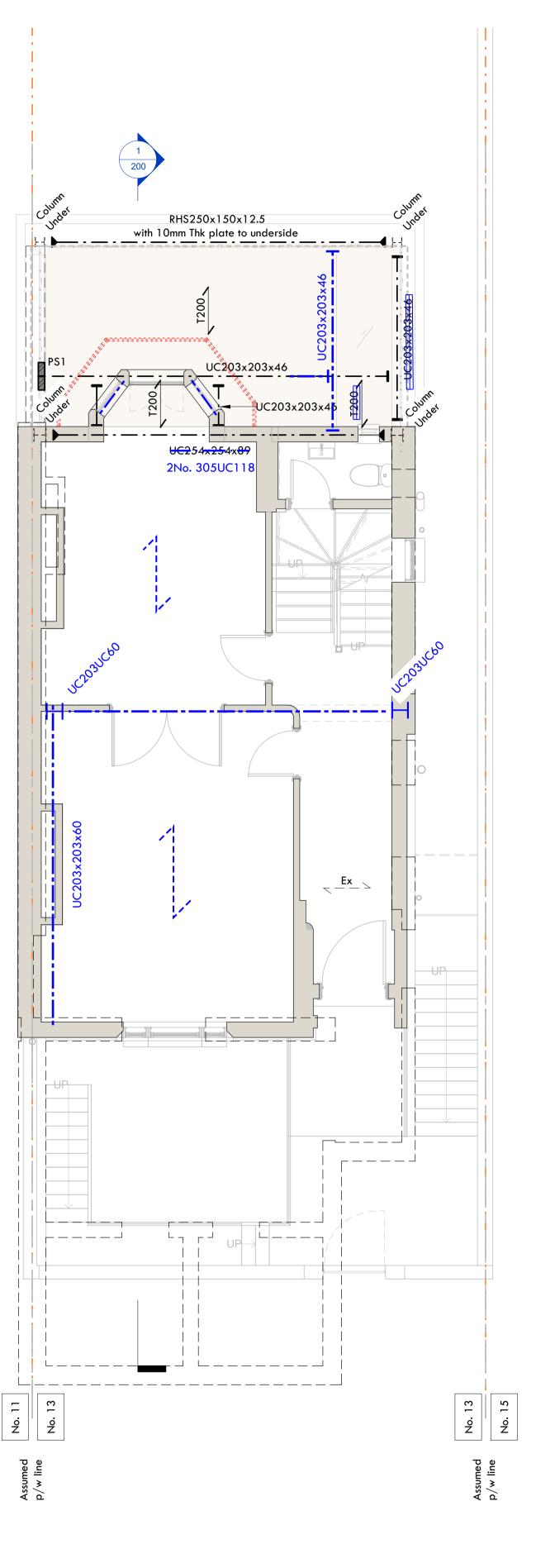






LOWER GROUND FLOOR PLAN

Scale 1 : 50



GROUND FLOOR PLAN

Scale 1 : 50

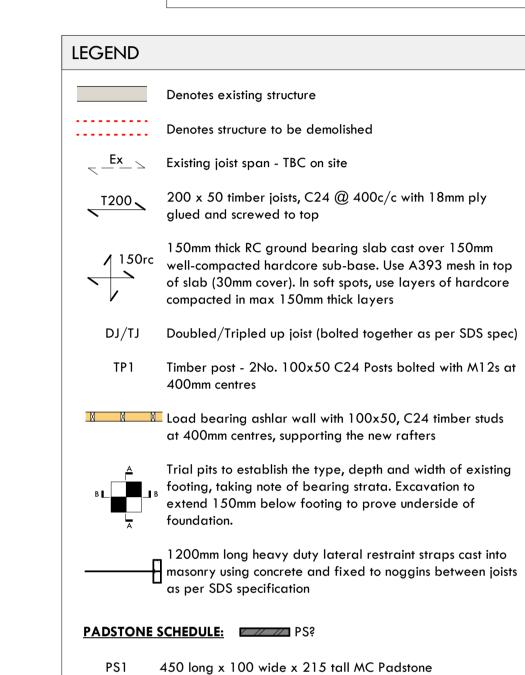
Drawing Notes:

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- Contact Structural Design Studio Ltd in the event of any discrepancies between findings on site and these drawings.
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- 4. 3D views are indicative only and any conflicting 2D information should take precedence. If in doubt contact Structural Design Studio Ltd prior to starting work

INFORMATION RECEIVED:

This drawing has been developed using information received up to and including 19/06/2023

Where information provided to us is incomplete or subject to change, our drawings will need to be updated accordingly.



New lintel over opening. All liontels to have min. 150mm bearings UNO.

Doubled up 150x50 C24 timbers to form lintel

LN2 Catnic Standard Duty CG90/100 cavity wall lintel

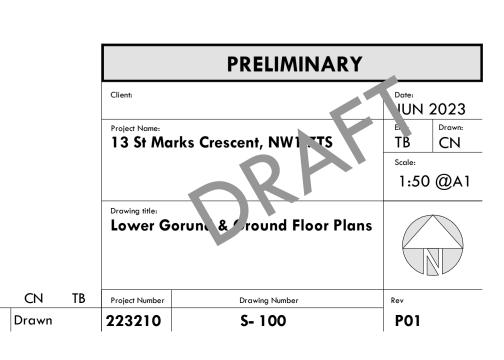
bolted together with M12s at 400mm c/c, supported on doubled up studs either side of the opening



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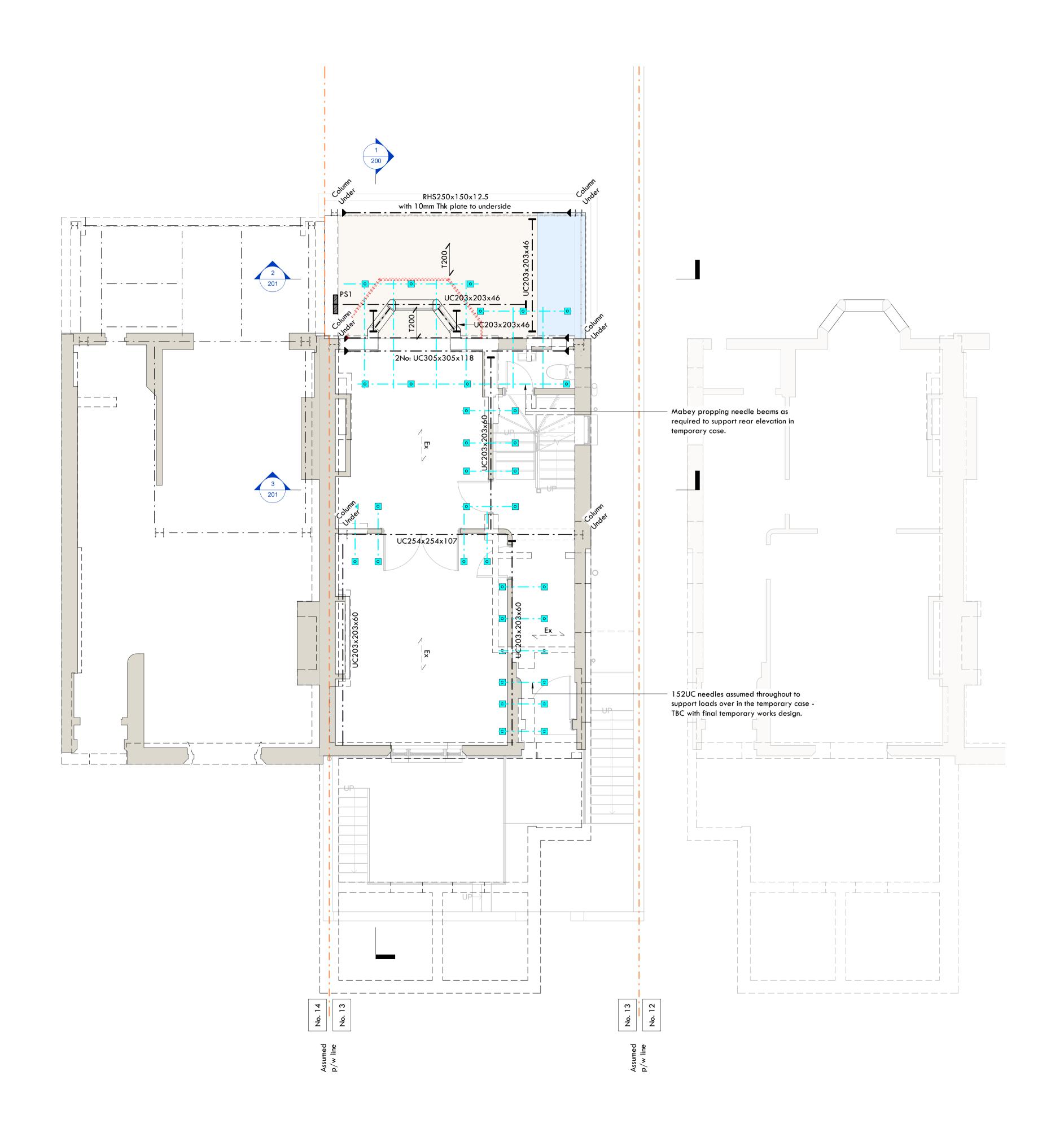
STUDIO



P01 First Issue

Rev Amendment

Date



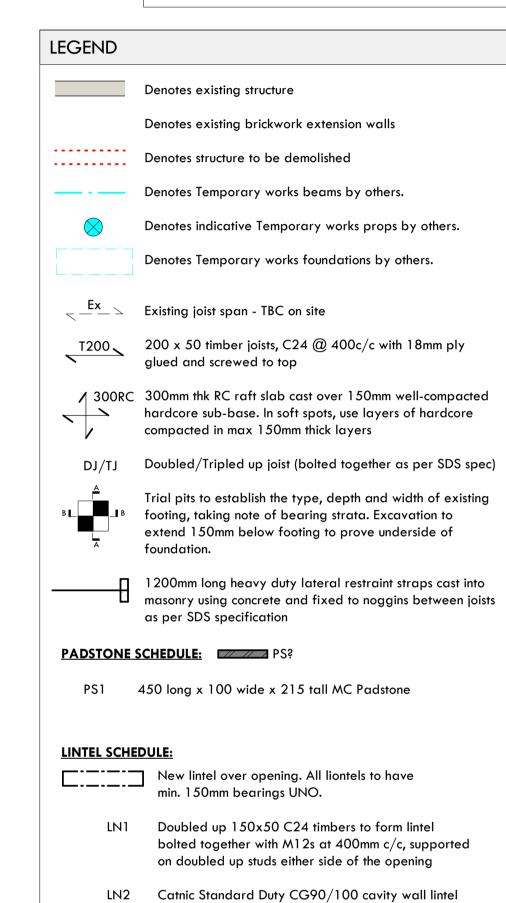
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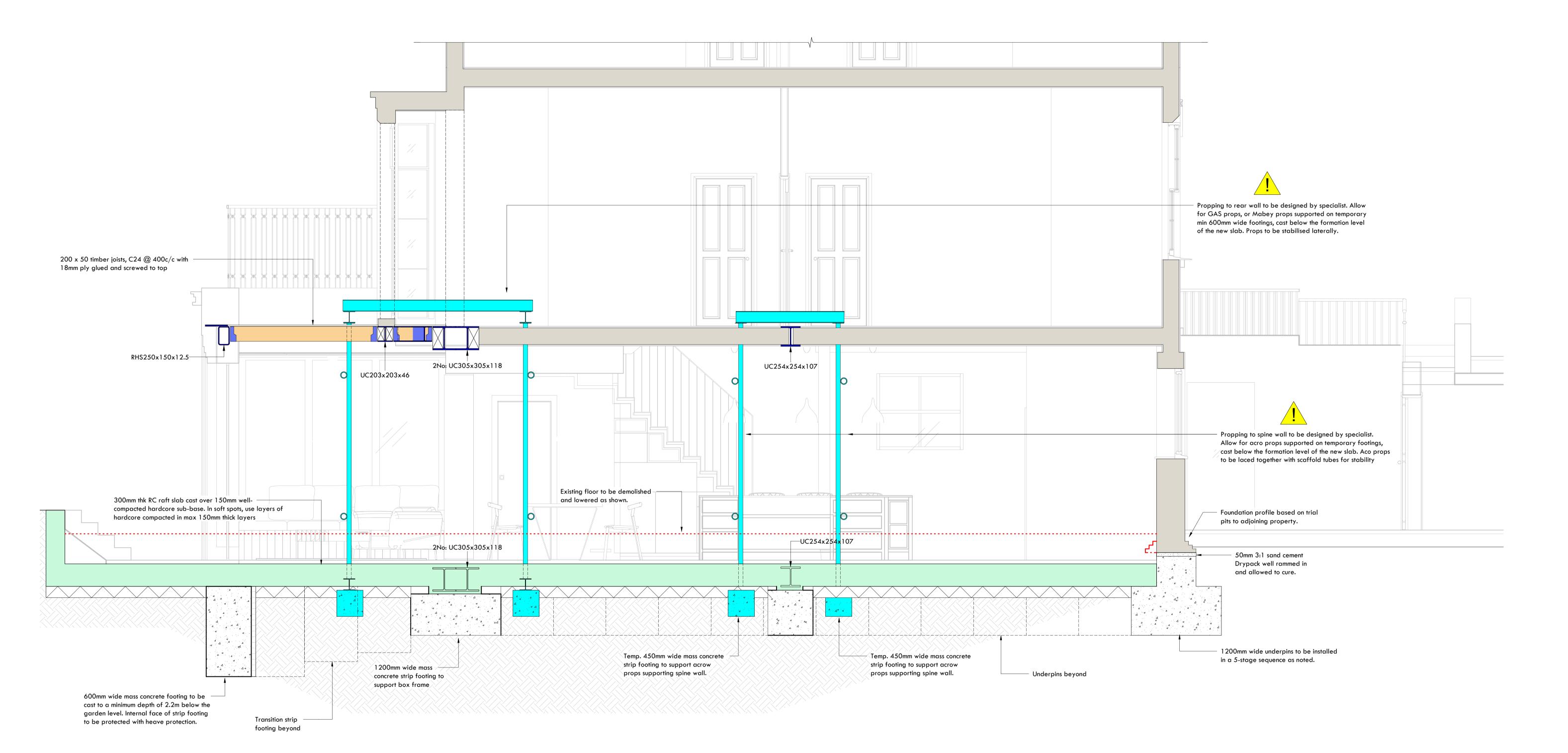
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	PRELIMINARY	
Client:		Date: JUN 2023
Project Name: 13 St Marks	Crescent, NW1 7TS	TB CN
		Scale: 1:50 @A
Drawing title: Ground Floo	r Plan	
Project Number	Drawing Number	Rev
223210	S- 100	P01



Section 1-1

Scale 1 : 25

INFORMATION RECEIVED: This drawing has been developed using information received

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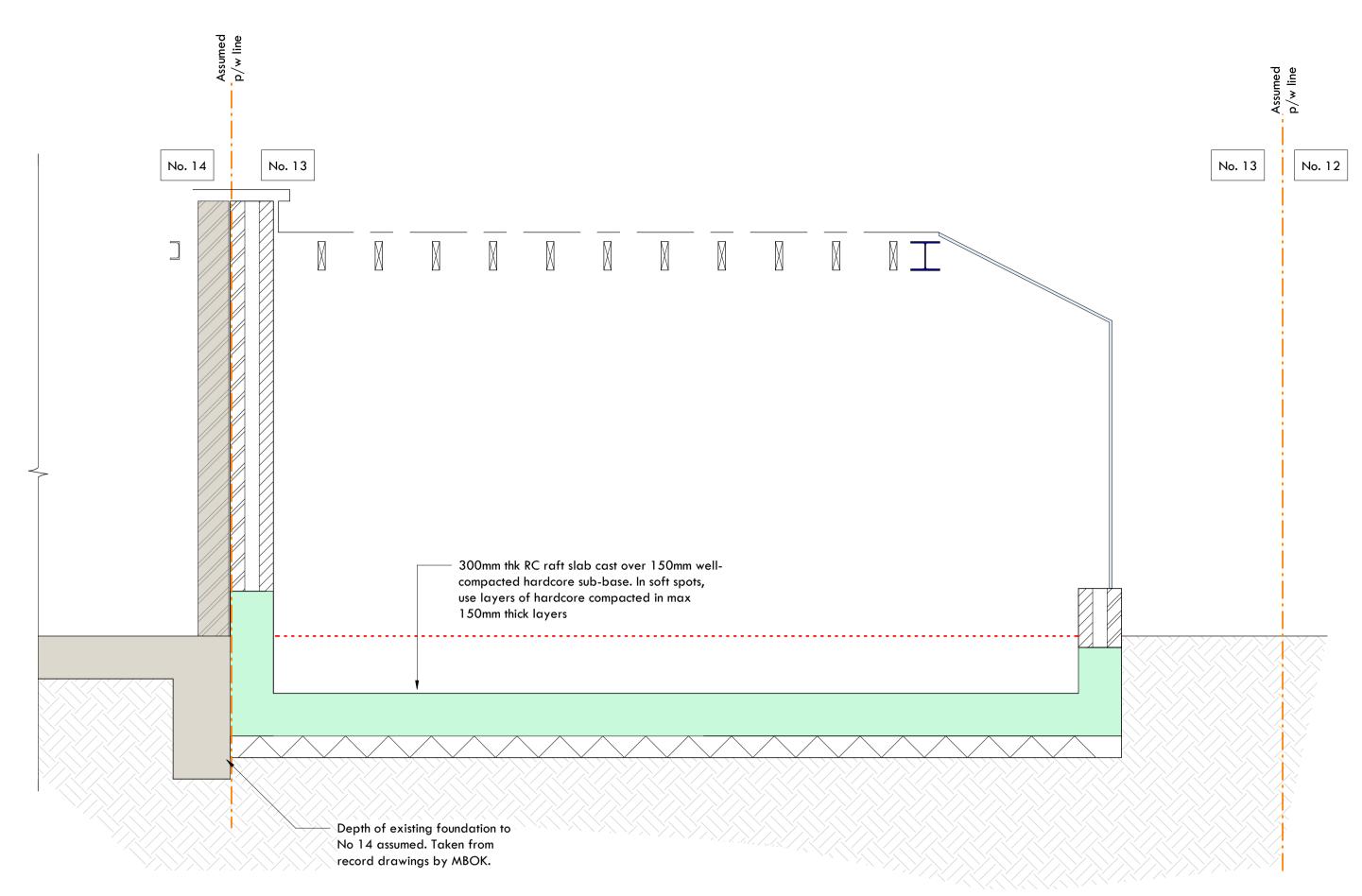
- **Drawing Notes:** 1. These drawings are not to be used for setting out purposes. Refer to the latest Architects information and site measure as required.
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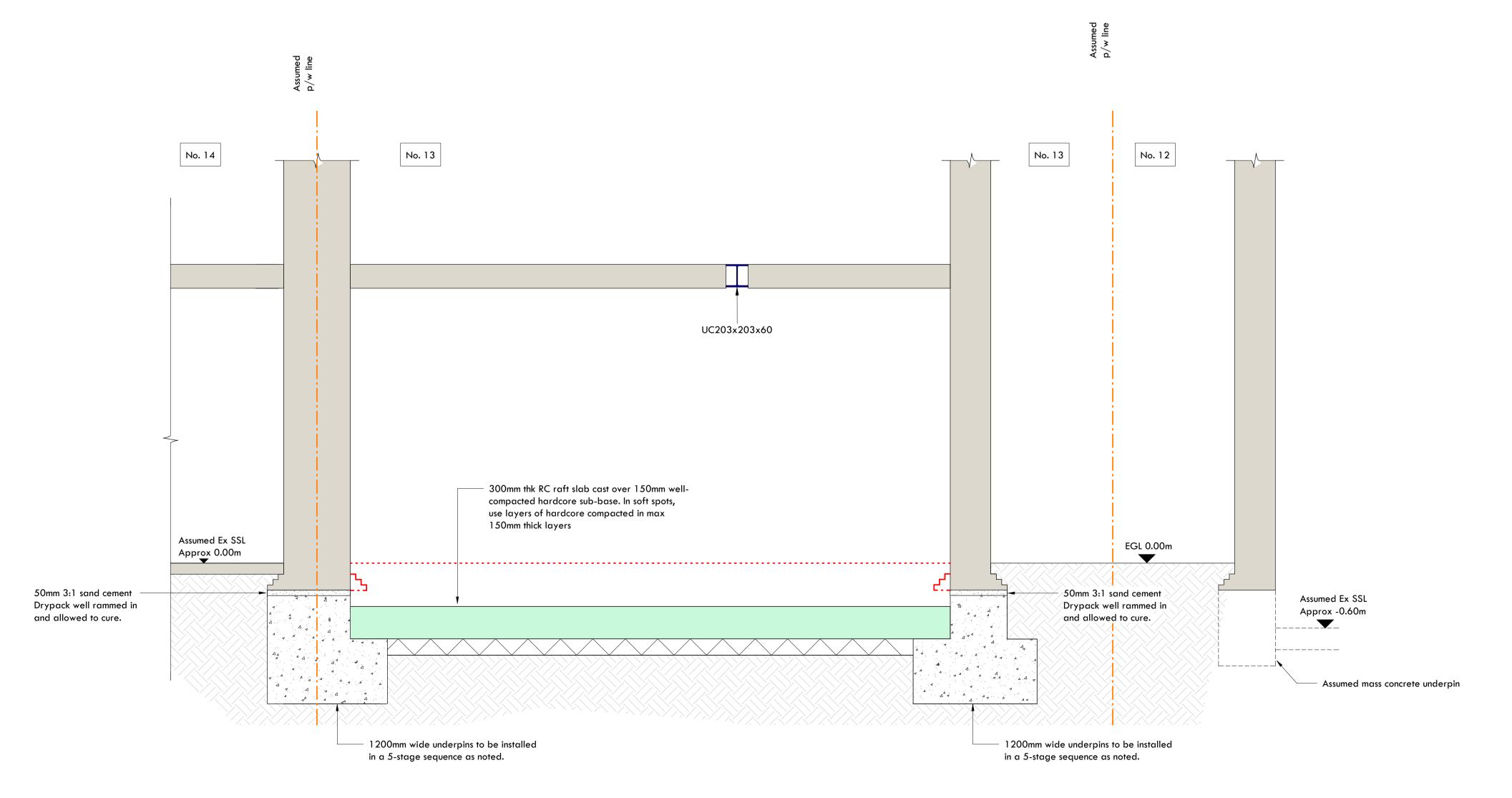
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						PRELIMINARY		
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							Scale: 1:2	5 @A
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PO1	First Issue	29.06.2023	CN	ТВ	Project Number	Drawing Number	Rev	
Rev	Amendment	Date	Drawn	Eng	223210	S- 200	P01	



Section 2-2

Scale 1 : 25



Section 3-3

Scale 1 : 25

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PRELIMINARY							
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		Scale: 1:25	5 @A1				
Drawing title: Building Cro	ss Sections						
Project Number	Drawing Number	Rev					
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