



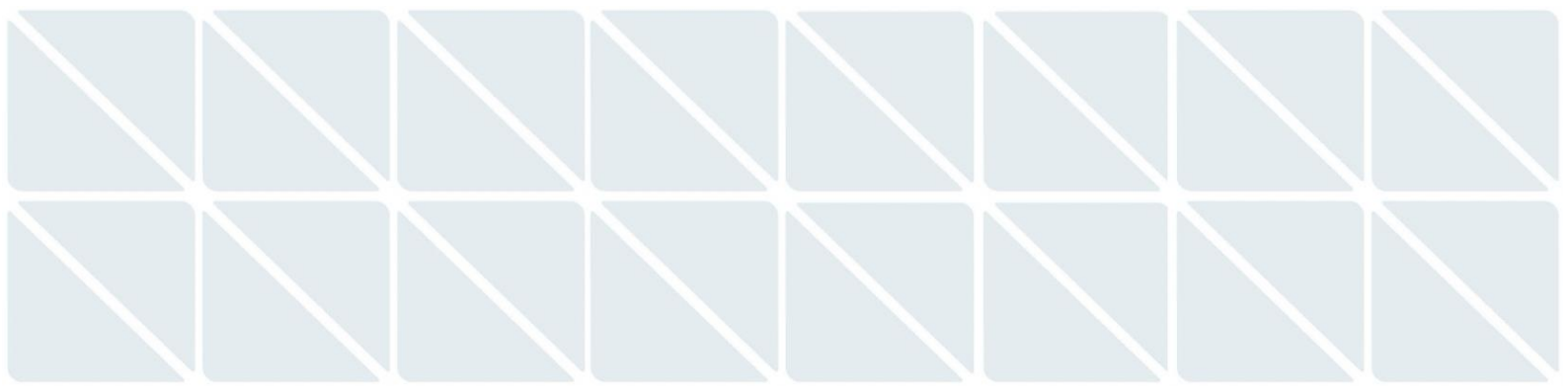
A-squared Studio

Channing School - Main Building Development

Building Damage Ground Movement Assessment

February 2024

3251-A2S-XX-XX-RP-Y-0002-00





Project Name	Channing School - Main Building Development
Project Number	3251
Client	Heyne Tillett Steel Limited
Document Name	Building Damage Ground Movement Assessment

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Document Reference	Status	Notes	Revision	Issued by	Date
3251-A2S-XX-XX-RP-Y-0002-00	First Issue		00	SS	23.02.2024



Contents

1.	Introduction	1
2.	The Site and Proposed Development.....	2
3.	Ground Conditions	4
4.	Impact Assessment Methodology	5
5.	Results	10
6.	Conclusions & Closing Remarks	12

Appendices

Appendix A: Selected Supporting Information

Appendix B: Oasys PDisp Input and Output

Appendix C: Oasys XDisp Input and Output



1. Introduction

A-squared Studio Engineers Ltd (A-squared) has been instructed by Heyne Tillett Steel Limited (HTS) to prepare a building damage Ground Movement Assessment (GMA) for the proposed development at Channing School, The Bank, Highgate, London, N6 5HF (herein referred to as the 'site').

The A-squared scope comprises an assessment of the potential impact of the proposed redevelopment works on the existing buildings on site and on various neighbouring building façades.

1.1. Study Aims & Objectives

A ground movement and impact assessment has been carried out in order to estimate the potential damage induced by the proposed redevelopment works at Channing School on the existing buildings on site and on the neighbouring building façades.

The existing school comprises three terraced masonry grade II listed structures with a single-storey basement. The buildings are up to 4-storeys in height.

The scheme for the proposed redevelopment will see the addition of a new single-story glazed structure and basement in the north-eastern portion of the site. The basement forming part of the new structure will be linked to the existing building basement. On the fourth floor, a rooftop extension is proposed for the construction of additional classroom space.

The assessment encompasses properties located within the *zone of influence* of the proposed scheme. The GMA assessment is based on *greenfield* ground movements which are unlikely to be exceeded. The adopted assessment methodology provides a robust and conservative assessment, representative of current industry best practice, as detailed in Section 4.

The assessment carried out and described herein aims to:

- Assess the impact of ground movements induced by the proposed works on the existing buildings on site and properties adjacent to the development under consideration.
- Provide performance criteria and inform aspects of substructure construction and design.

This report provides a detailed description of the:

- Site and proposed development.
- Modelling parameters and input.
- Analyses and results.

1.2. Information Sources

The following baseline data has been referenced to complete the GMA in relation to the proposed development:

- Current design information/data and drawings (available at the time of undertaking the assessment), provided by the project design team, included as Appendix A.
- *Site Investigation & Basement Impact Assessment Report* for Channing School prepared for (and provided by) HTS, prepared by Geotechnical & Environmental Associated Limited (GEA), issued January 2012 (ref. J11240).
- *Phase I Desk Study Report* for Channing School - Main Building Development prepared by A-squared, issued October 2023 (ref. 3251-A2S-XX-XX-RP-Y-0001-00).



2. The Site and Proposed Development

2.1. Site Location and Current Site Use

The site is located at Channing School, The Bank, Highgate, London, N6 5HF as shown in Figure 2.1. The approximate National Grid reference for the site is 528730, 187340 with a site footprint that covers approximately 0.1 hectares. The approximate ground surface 114.4m above Ordnance Datum (OD).

The site falls within the administrative boundaries of the London Borough of Haringey and currently includes three terraced school buildings that are up to 4-storeys in height with a basement.



Figure 2.1 Location of the proposed development (red line reflects the site boundary used for this assessment)

2.2. Proposed Development

As shown in Figure 2.2, the scheme for the proposed redevelopment will see the addition of a new single-story glazed structure and basement in the northern-eastern portion of the existing buildings. The new structure will be linked to the existing buildings. An excavation of 4m will be required to form the basement.

On the fourth floor, a rooftop extension is proposed for the construction of additional classroom space.

Figure 2.3 shows that the basement will be supported in part by embedded pile walls and underpins. It is noted that a portion of the basement will also be formed using a battered back excavation. At this design stage, A-squared has conservatively assumed a 6m deep embedded pile wall will be required. It is noted that the exact extents of the existing basement boundary wall is unknown at this stage, however it has been conservatively assumed that 1m thick underpins will be required in order to reach the basement formation level.

A proposed section of the basement extension is presented in Figure 2.4.

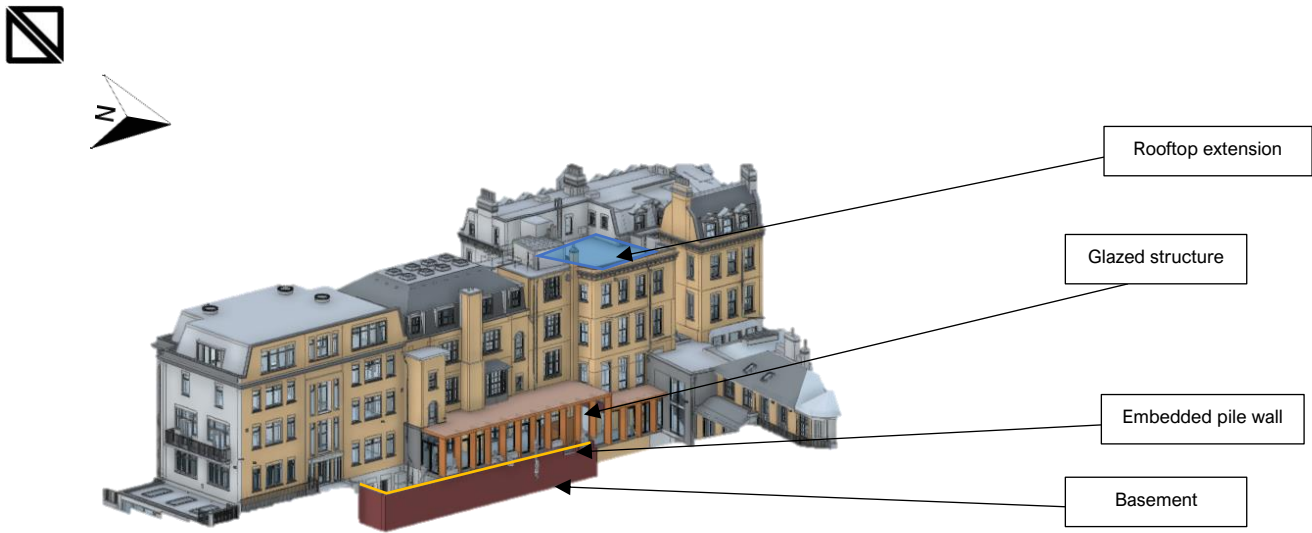


Figure 2.2 3D geometry of the proposed development

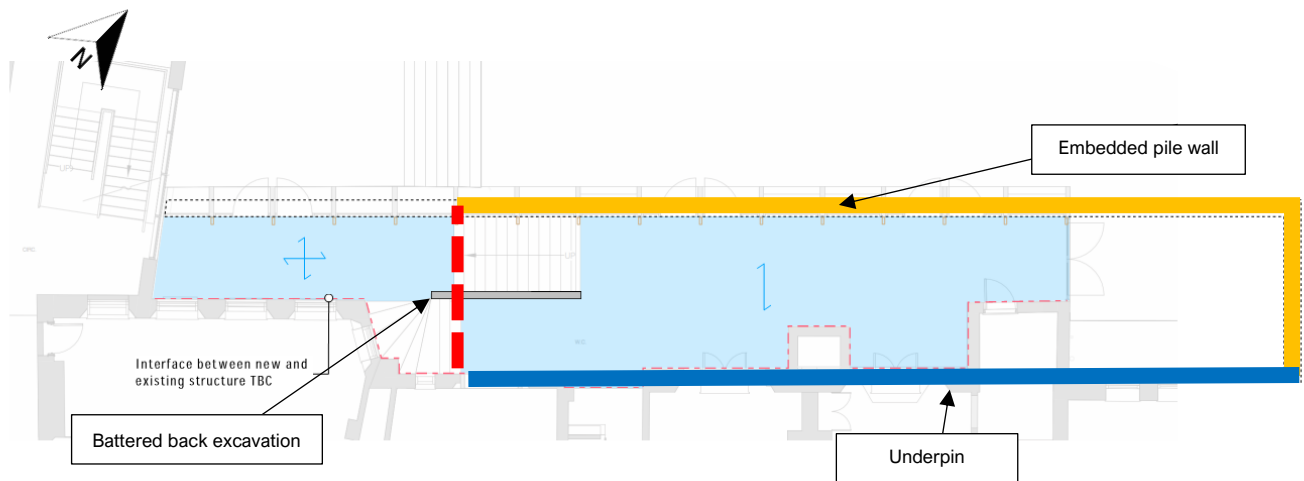


Figure 2.3 Plan of the glazed structure and the excavation support systems

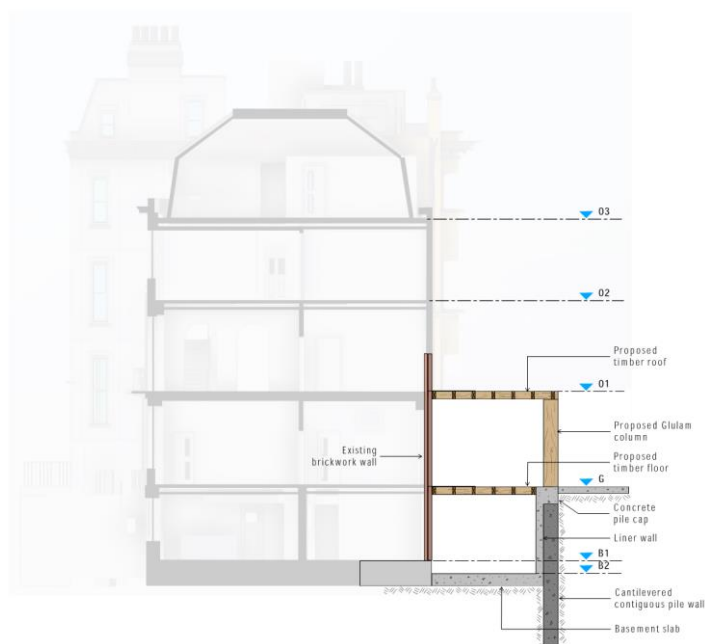


Figure 2.4 Proposed (south-west to north-east)



3. Ground Conditions

A *Site Investigation (SI) and Basement Impact Assessment (BIA) Report*, issued January 2012 (ref. J11240), for the wider Channing School site has been prepared for HTS by Geotechnical & Environmental Associated Limited (GEA), dated January 2012 (ref. J11240). This report was issued to A-squared by HTS as an archived information source. The *SI & BIA Report* is associated with the proposed demolition of a sports hall, the construction of a building with a partial basement and the extension of the dining hall located in the wider school site (correct at the time of issuing the report in January 2012).

Additional ground investigation information from the Channing School, Brunner House Redevelopment completed in 2024 was also issued to and reviewed by A-squared.

Based on a review of ground investigation data from available BGS data and the additional aforementioned information, the ground conditions at the site were generally found to comprise the following (in order of succession):

- **Made Ground** – Dark brown sandy CLAY becoming sandy gravelly CLAY with depth with occasional fragments of flint, ash, brick, glass, pottery, concrete and old roots and clinker (variable anthropogenic deposits).
- **Bagshot Formation** – Variable sequence of light brown occasionally clayey and silty fine to medium SAND and firm light brown silty sandy CLAY.
- **Claygate Member** – Variable sequence of orange to brown and mottled grey silty very sandy and a very clayey silty SAND.
- **London Clay Formation** – Firm becoming stiff brownish grey silty fissured CLAY with depth, with occasional selenite crystals (in BH4 between 12.70 to 16.50mbgl).

The above include the strata of engineering interest and significance, taking cognisance of the scale of the proposed redevelopment, depth of the proposed basement excavation, and zone of influence.

The ground model adopted for this assessment is presented in Table 3.1. Material strength and stiffness parameters have been derived and assumed from ground investigation data and previous experience in this area of London.

Table 3.1 Ground model and geotechnical parameters adopted for analysis purposes

Stratum	Elevation (mOD)	Thickness (m)	Undrained Young's Modulus, E_u (MPa) ^[2]	Drained Young's Modulus, E' (MPa) ^[2]	Poisson's ratio
Made Ground	114 .0	1.0	-	10.0	$\nu' = 0.2$ $\nu_u = 0.5$
Bagshot Formation	113.0	5.5	18.0	14.4	$\nu' = 0.2$ $\nu_u = 0.5$
Claygate Member	107.5	6.0	21.6	17.3	$\nu' = 0.2$ $\nu_u = 0.5$
London Clay Formation	101.5	>12.5	$28.8 + 3.3z^{[3]}$	$23.0 + 2.7z^{[3]}$	$\nu' = 0.2$ $\nu_u = 0.5$

1. Ground model based on site specific ground investigation data in the vicinity of the site. This data has been interpreted specifically for the scope of the GMA presented herein. Rigid boundary taken as 89mOD.
2. Stiffness data (E_u and E') has been evaluated empirically from in-situ testing data taking into consideration the nature of the geotechnical/soil-structure interaction mechanisms and level of anticipated strain within the soil mass.
3. z refers to the depth in metres below the top of the London Clay formation. Lower bound stiffness values have been adopted for GMA purposes only.



4. Impact Assessment Methodology

4.1. Assessment Details

The assessment has been undertaken using proprietary spreadsheets and the commercially available software Oasys Pdisp and Xdisp, which consider the three-dimensional ground movement field induced by the proposed excavation works.

Ground movements will arise as a result of various mechanisms which are mobilised as part of the construction works for the proposed redevelopment. The excavation process will induce ground movements arising from the overburden removal and installation of the proposed retention systems. The permanent condition loading will partially reinstate a portion of the removed overburden, yielding settlements across the foundation system. The induced ground movements will extend over a given zone of influence surrounding the building/excavation footprint. The assessment presented herein consists of general impact and building damage assessment considering the ground movement impacts on all surrounding structures.

A series of three-dimensional models of the proposed scheme have been developed in Oasys Xdisp/Pdisp for the impact assessment and combined by means of superposition in order to enable ground movement assessments to be carried out representing the various construction stages. The ground movement displacement fields are separated in two groups (A & B) based on the approach followed, as detailed below:

Group A – Unloading/loading ground movement mechanisms

- A1. Basement excavation (short-term).
- A2. Basement excavation and application of the proposed building extension loading (long-term).

Group B – CIRIA C760/loading-based ground movement mechanisms

- B1. Embedded pile wall and underpin installation and basement excavation.
- B2. Embedded pile wall and underpin installation, basement excavation, and application of the proposed building extension loading (long term).

The Group A assessments are based on *greenfield* ground movements evaluated from linear half space (Pdisp) analyses and focus on vertical ground movements induced by the unloading/re-loading processes.

The Group B assessments adopt the normalised ground displacement curves reported in CIRIA C760. In addition to the effects arising from basement excavation, the ground movement effects associated with the installation of the embedded pile wall and underpins have been considered. The following CIRIA C760 normalised ground movement curves were adopted to assess ground movements due to embedded pile wall and underpin installation and excavation works:

- *Embedded pile wall*: Installation of contiguous bored pile wall in stiff clay.
- *Underpin installation*: Installation of planar diaphragm wall in stiff clay.
- *Excavation to formation*: Excavation in front of a high stiffness wall in stiff clay.
- *Battered back excavation to formation*: Excavation in front of a high stiffness wall in stiff clay.

The empirical data set for diaphragm wall installation is not strictly compatible with the construction technologies adopted in underpinning. However, it is assessed that the ground movement mechanisms are reasonably well-matched and, in lieu of better empirical relationships, the diaphragm wall curves are considered to provide a satisfactory and conservative approximation.

The “Installation of contiguous bored pile wall in stiff clay” CIRIA C760 curve has been adopted as it provides a more representative ground movement field for this assessment. It is widely accepted in industry that the “Installation of secant bored pile wall in stiff clay” dataset is an upper bound for the movements induced by pile wall installations – based on data measured in the field – and the



contiguous curve presents a better fit to the empirical data set should a secant pile wall be required. For this reason, the contiguous pile wall curve has been adopted for the analysis presented herein.

The empirical data set for the installation of a contiguous bored pile wall has been reduced by 50% based on guidance from technical paper published by Ball & Langdon (2014). Given the depths of the walls and proximity to sensitive infrastructure, utilities and buildings, it is assumed that suitable construction controls and temporary works, including rigorous monitoring methodologies, will be implemented during the wall installation and basement excavation works on site to reduce the overall impact of the development.

The two sets of analyses enabled the production of an envelope of results – with the worst-case results presented herein. A representative geometry has been adopted for defining the wall installation and excavation geometry implemented in the 3D modelling efforts. Figure 4.1 shows the Xdisp model geometry used to determine the impact of the proposed development works on the buildings nearby.

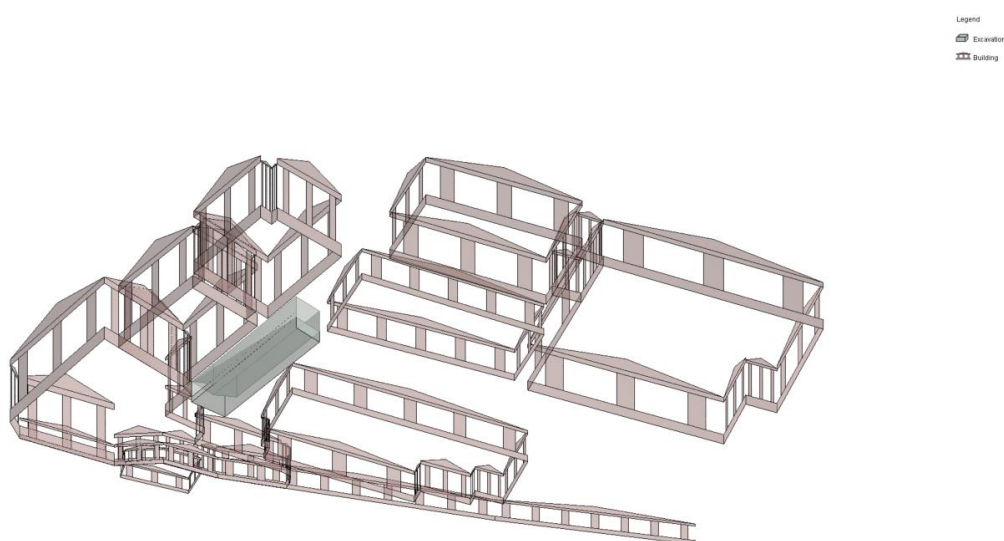
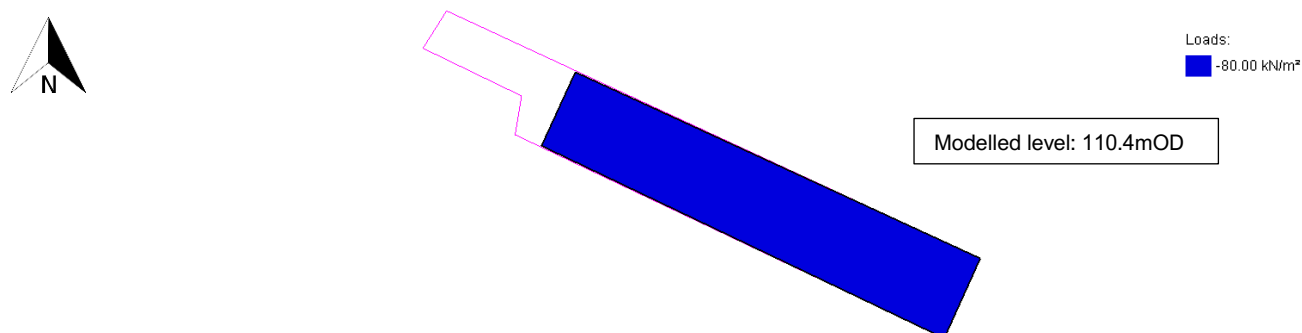


Figure 4.1 Three-dimensional analytical model from Xdisp

4.2. Loading Conditions

4.2.1. Excavation of the Basement

As described in Section 2, the basement will be extended along the north-eastern boundary of the existing building. The blue zone will be excavated 4m below the existing ground level. The corresponding unloading pressure zone and level are presented in Figure 4.2.



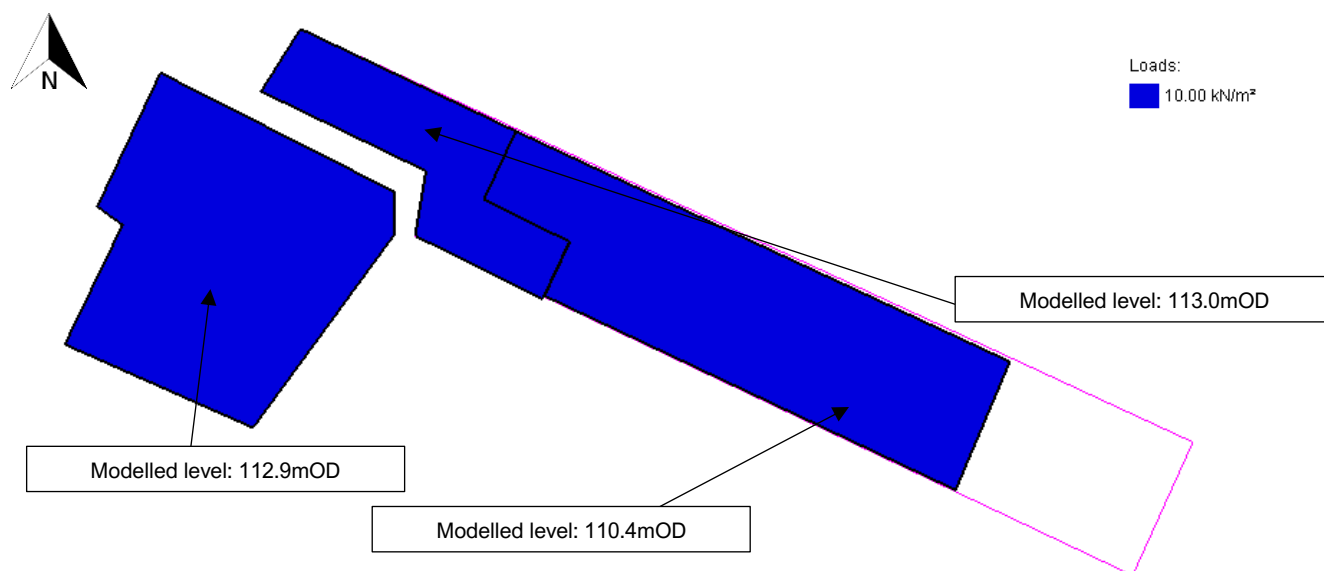
Extension footprint shown in purple.

Figure 4.2 Excavation unloading zones



4.2.2. Proposed Loading

The proposed pressure patches corresponding to the single-story glazed structure and the fourth floor rooftop extension are shown in blue in Figure 4.2.



Extension footprint shown in purple.

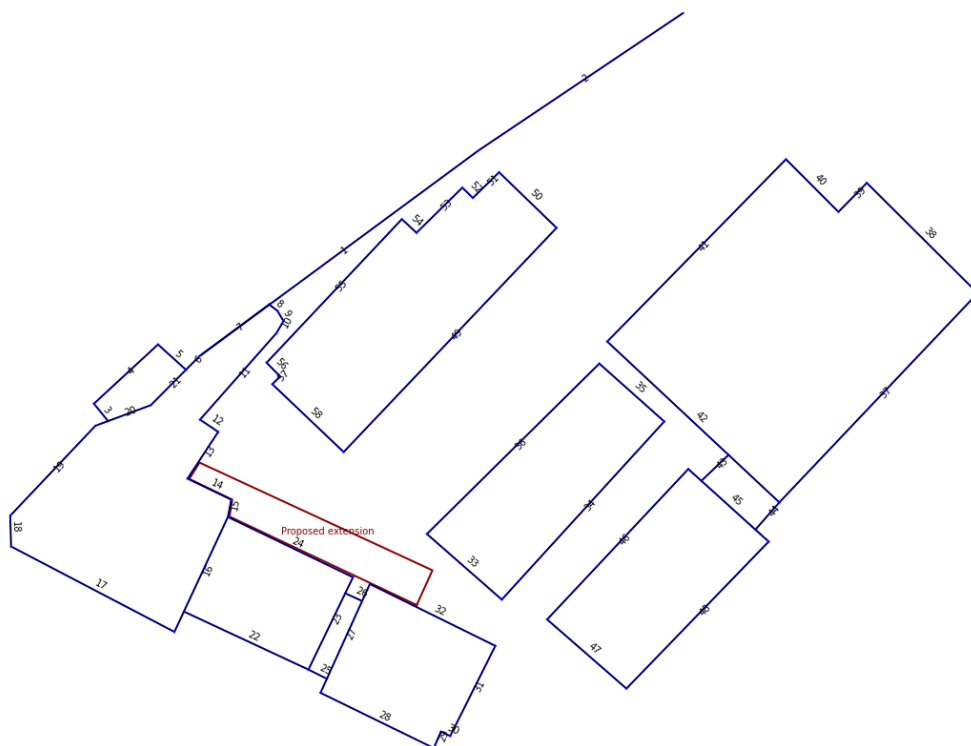
Figure 4.3 Proposed loading across the B1 basement level

4.3. Impact Assessment

4.3.1. General

The potential impact/damage induced on primary façade/wall elements of the existing buildings on site and buildings surrounding the proposed development have been evaluated on the basis of the calculated ground movement fields. The walls of concern are shown in Figure 4.4, including the wall nomenclature/reference system adopted. The arrangement is based on the currently available survey information and presents an array of façades running both perpendicular and parallel to the proposed lower ground floor (covering the key deformation mechanisms). In total, 58 building façades were considered for the current study, and these are grouped in the following manner:

- BW.1 to BW.2, Boundary wall
- CC.1 to CC.3, “Channing Cottage”
- CH.1 to CH.16, “Channing House”
- SWH.1 to SWH.3, “Singly House and Wesview House”
- SWH-HH.1 to SWH-HH.2, “Singly and Wesview House” and “Haigh House”
- HH.1 to HH.6, “Haigh House”
- FH.1 to FH.4, “Founder’s Hall”
- SSH.1 to SSH.6, “Sixth Form Centre”
- SS-AC.1 to SS-AC.2, “Sixth Form Centre”
- AC.1 to AC.4, “Arundel Centre”
- BH.1 to BH.10, “Brunner House”



#	IDs
1	BW.1
2	BW.2
3	CC.1
4	CC.2
5	CC.3
6	CH.1
7	CH.2
8	CH.3
9	CH.4
10	CH.5
11	CH.6
12	CH.7
13	CH.8
14	CH.9
15	CH.10
16	CH.11
17	CH.12
18	CH.13
19	CH.14
20	CH.15
21	CH.16
22	SWH.1
23	SWH.2
24	SWH.3
25	SWH-HH.1
26	SWH-HH.2
27	HH.1
28	HH.2
29	HH.3
30	HH.4
31	HH.5
32	HH.6
33	FH.1
34	FH.2
35	FH.3
36	FH.4
37	SSH.1
38	SSH.2
39	SSH.3
40	SSH.4
41	SSH.5
42	SSH.6
43	SS-AC.1
44	SS-AC.2
45	AC.1
46	AC.2
47	AC.3
48	AC.4
49	BH.1
50	BH.2
51	BH.3
52	BH.4
53	BH.5
54	BH.6
55	BH.7
56	BH.8
57	BH.9
58	BH.10

Figure 4.4 Simplified scheme and nomenclature for each building façade/wall elements

Each wall has been assumed to behave as an equivalent beam subject to a bending and extension/compression deformation mechanism, based on the evaluated greenfield ground movement, as outlined previously.

Tensile strains induced within the building masonry walls have been evaluated based on the deflection ratios Δ/L and horizontal extension mechanisms estimated from the analyses. The assessment considers the well-established Burland (1997) damage classification method, as presented and summarised in Figure 4.5 and Figure 4.6. This method involves a relatively simple but robust means of assessment, which is widely adopted and is considered to comprise an industry standard / best practice basis for impact assessments of this typology.

Potential damage categories are directly related to the tensile strains induced by the proposed construction stages, arising from a combination of direct tension and bending induced tension mechanisms. The evaluated damage categories correspond to an *unlikely to be exceeded* scenario (on the basis of the data sets adopted and greenfield assumptions).

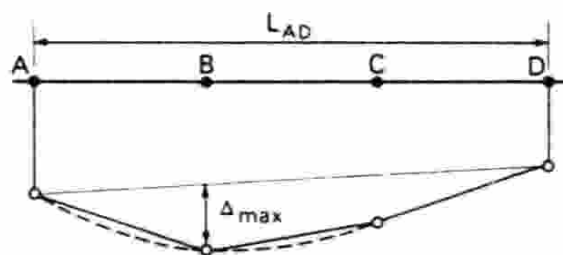


Figure 4.5 Definition of relative deflection Δ and deflection ratio Δ/L

Category of damage	Description of typical damage (ease of repair is underlined)	Approximate crack width (mm)	Limiting tensile strain ϵ_{lim} (per cent)
0 Negligible	Hairline cracks of less than about 0.1 mm are classed as negligible.	< 0.1	0.0–0.05
1 Very slight	<u>Fine cracks that can easily be treated during normal decoration.</u> Perhaps isolated slight fracture in building. Cracks in external brickwork visible on inspection.	< 1	0.05–0.075
2 Slight	<u>Cracks easily filled. Redecoration probably required.</u> Several slight fractures showing inside of building. Cracks are visible externally and <u>some repointing may be required externally</u> to ensure weathertightness. Doors and windows may stick slightly.	< 5	0.075–0.15
3 Moderate	<u>The cracks require some opening up and can be patched by a mason. Recurrent cracks can be masked by suitable linings. Repointing of external brickwork and possibly a small amount of brickwork to be replaced.</u> Doors and windows sticking. Service pipes may fracture. Weathertightness often impaired.	5–15 or a number of cracks > 3	0.15–0.3
4 Severe	<u>Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows.</u> Windows and frames distorted, floor sloping noticeably. Walls leaning or bulging noticeably, some loss of bearing in beams. Service pipes disrupted.	15–25 but also depends on number of cracks	> 0.3
5 Very severe	<u>This requires a major repair involving partial or complete rebuilding.</u> Beams lose bearings, walls lean badly and require shoring. Windows broken with distortion. Danger of instability.	usually > 25 but depends on number of cracks.	

After Burland et al. 1977, Boscardin and Cording 1989, and Burland 2001.

Figure 4.6 Building damage classification – relationship between category of damage and limiting strain ϵ_{lim}



5. Results

5.1. Overview

The damage category results of the assessment are presented in Table 5.1. It is noted that the results presented in this table represent the worst-case output arising from all analysis runs. Figure 5.1 and Figure 5.2 depict the vertical and horizontal displacements, respectively, induced by the embedded pile wall and underpin installation, excavation (calculated as per CIRIA C760 datasets) and the application of the proposed building extension loading (assessment B2).

Table 5.1 Evaluated damage categories extracted from Xdisp (façades which do not exceed *Category 0 – Negligible* are not presented)

Façade Reference	Analysis Scenario			
	A1	A2	B1	B2
SWH.2	Category 1 - Very Slight	Category 1 - Very Slight	Category 0 – Negligible	Category 0 – Negligible
HH.1	Category 1 - Very Slight	Category 1 - Very Slight	Category 0 – Negligible	Category 0 – Negligible

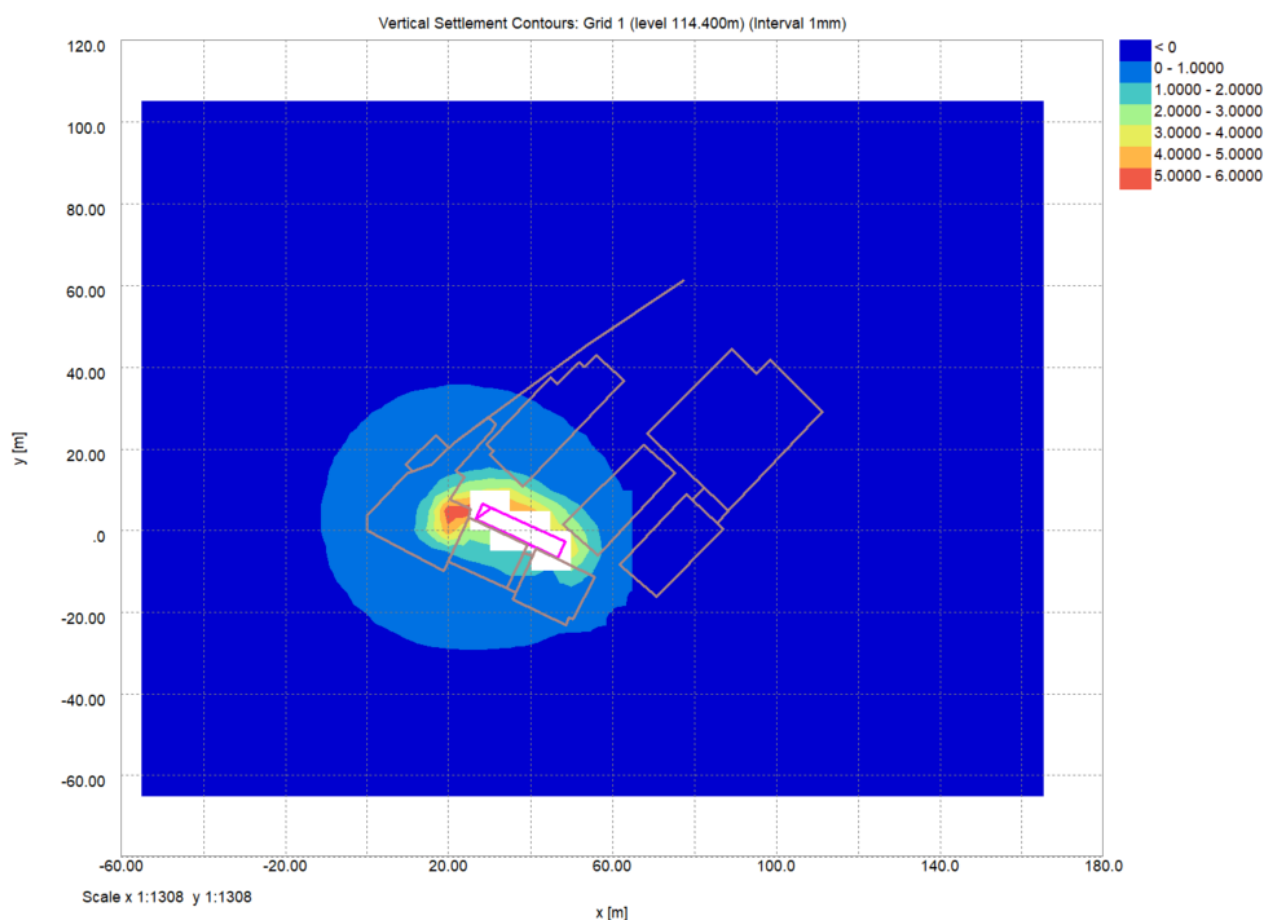


Figure 5.1 Resultant XDisp vertical displacement contours for scenario B2 – embedded pile wall and underpin installation and excavation (CIRIA C760) + building extension loading

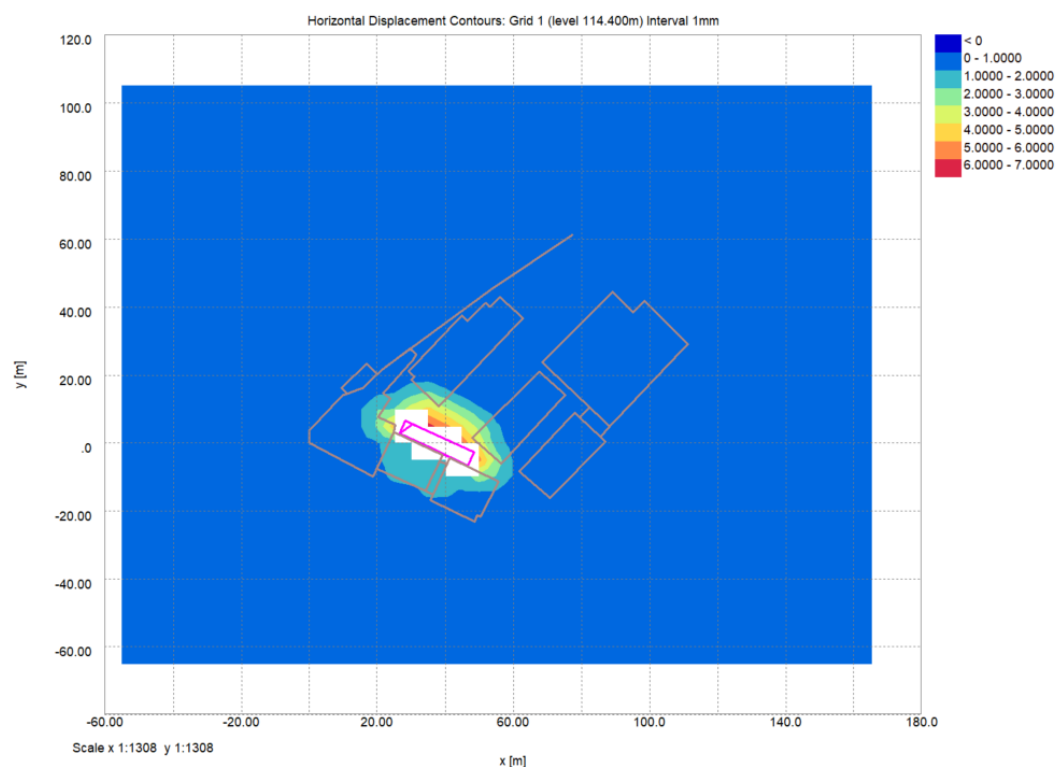


Figure 5.2 Resultant XDisp horizontal displacement contours for scenario B2 – embedded pile wall and underpin installation and excavation (CIRIA C760) + building extension loading

5.2. Basement Excavation Criteria

A maximum horizontal and vertical movement of 7mm and 6mm respectively are anticipated from the proposed development. The results of this analysis show that all buildings fall within acceptable damage classifications if the ground movements caused by the proposed development are limited to the values presented in Table 5.2.

Table 5.2 Limiting ground movement values for the project at various construction stages

Stage	Maximum Cumulative Ground Movement (mm)	
	Vertical	Horizontal
Installation of embedded pile wall	2	2
Underpinning and excavation	5	7
Long term	6	7

It is recommended that ground movement / earth retention system design and construction movement criteria are developed based on the results presented herein. This will enable the design of the retention system and any required temporary propping measures to be undertaken in a holistic fashion, ensuring ground movements are limited to no greater than that presented herein.

Specific wall/façade deflection limits and trigger levels may also be developed as part of the scheme monitoring regime. Such limits and trigger levels should be coordinated with the scheme monitoring specification and monitoring action plan / emergency preparedness plan.



6. Conclusions & Closing Remarks

A-squared Studio Engineers Ltd has been instructed by Heyne Tillett Steel Limited to prepare a building damage ground movement assessment for the proposed development at Channing School, The Bank, Highgate, London, N6 5HF.

The A-squared scope comprises an assessment of the potential impact of the proposed redevelopment works on the existing buildings on site and on various neighbouring building façades.

The scheme for the proposed redevelopment will see the addition of a new single-story glazed structure and basement in the northern-eastern portion of the existing buildings. On the fourth floor, a rooftop extension is proposed for the construction of additional classroom space. The basement will be supported in part by embedded pile walls and underpins. A portion of the basement will also be formed using bermed excavation.

The impact of the various construction stages has been reviewed on the basis of two alternative methods, i.e. evaluating the effects of unloading / overburden removal using Pdisp and simulating the excavation-induced ground movement fields using empirical CIRIA curves in Xdisp. In the latter case, the movements from the installation retention systems and excavation that will be used to support the basement excavation has been considered, utilising the CIRIA C760 ground movement curves.

These two different scenarios have been considered in order to bind the potential ground movements arising from excavation operations (i.e. maximum potential heave and settlement respectively). This strategy ensures a robust evaluation of potential impact in light of the bespoke, intricate, and workmanship-dependent construction methodology. Both short-term (undrained) and long-term (drained) conditions have been assessed by adopting the relevant soil stiffness parameters for each case.

In order to best limit ground movements in proximity to buildings, due consideration may be given to suitable means and methods of construction. For example, reducing the extent of temporary excavations during earth removal operations in close proximity to buildings considered to be at most risk of damage.

The results from the GMA (denoting the evaluated damage categorisation in accordance with the Burland criteria described herein) considering existing buildings on site and neighbouring properties are presented in Section 5. It is observed that the maximum damage classification for the existing buildings on site and neighbouring properties is Category 1 – Very Slight.

It is noted that the predicted ground movements, the associated wall tensile strains, and the level of damage categorisation are considered to be moderately conservative in view of the relatively cautious data selection and greenfield nature of the assessment undertaken.

It is also noted that the GMA will be supplemented by a project-specific monitoring regime and Action Plan, which will delineate lines of responsibility, trigger levels in accordance with those presented in this GMA, and appropriate mitigation measures. The assessment presented herein is dependent and reliant on the works being undertaken by an experienced contractor, high quality workmanship and appropriate supervision of construction means and methods by experienced personnel.

It is recommended that this report is reviewed and understood in full by the project team and relevant stakeholders. Where significant changes are made to items such as construction sequencing, temporary propping arrangements and scheme design, the engineer should thoroughly review the change and evaluate any potential impacts on ground movement and building damage. If necessary, the building damage categories should be re-evaluated.

During the design of the retention system and temporary propping measures, deflection performance criteria for these design elements should be derived on the basis of the results presented herein to ensure that the maximum damage classification of Category 1 – Very Slight is not breached.

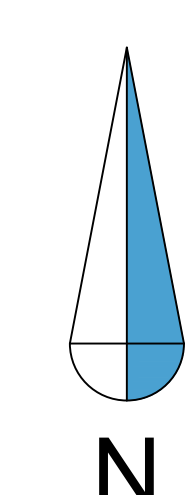


It is critical that the permanent and temporary works designs are carried out in a coordinated manner between performance specified elements and substructure contractors, with the aim to ensure that such design elements are in alignment with the assumptions/findings of the GMA and overall design intent.

The client should inform A-squared of the foundation termination depths once final designs have been prepared so that no requirement for a foundation works risk assessment can be confirmed.



Appendix A: Selected Supporting Information



SITE

[illegible]

KEY:

250mm RC slab

Ground bearing RC slab

400thk piled wall

200thk RC wall

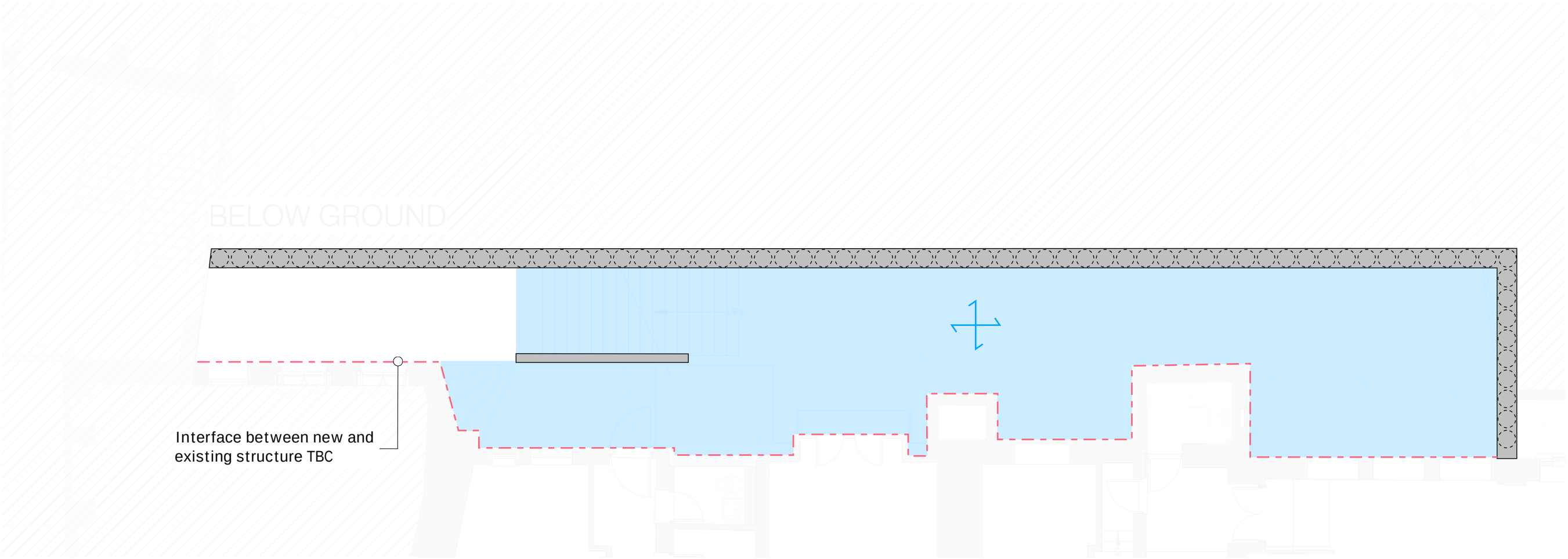
Piled wall below

160x240 glulam column

Glulam column below

100x240 timber beam

50x200 timber joists @ 400c/c



Preliminary
only

HEYNE
TILLET
STEEL

KEY:

→

250mm RC slab

⊕

Ground bearing RC slab

400thk piled wall

200thk RC wall

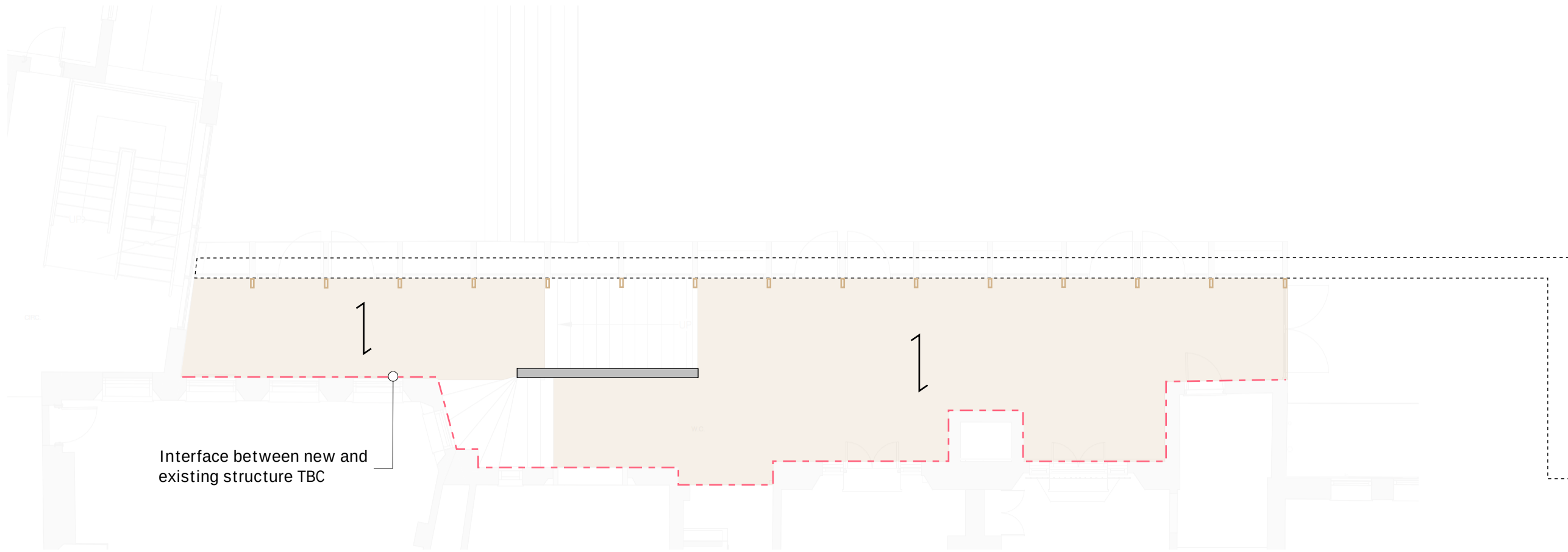
Piled wall below

160x240 glulam column

Glulam column below

100x240 timber beam

50x200 timber joists @ 400c/c



Preliminary
only

HEYNE
TILLET
STEEL

KEY:

→

250mm RC slab

⊕

Ground bearing RC slab

400thk piled wall

200thk RC wall

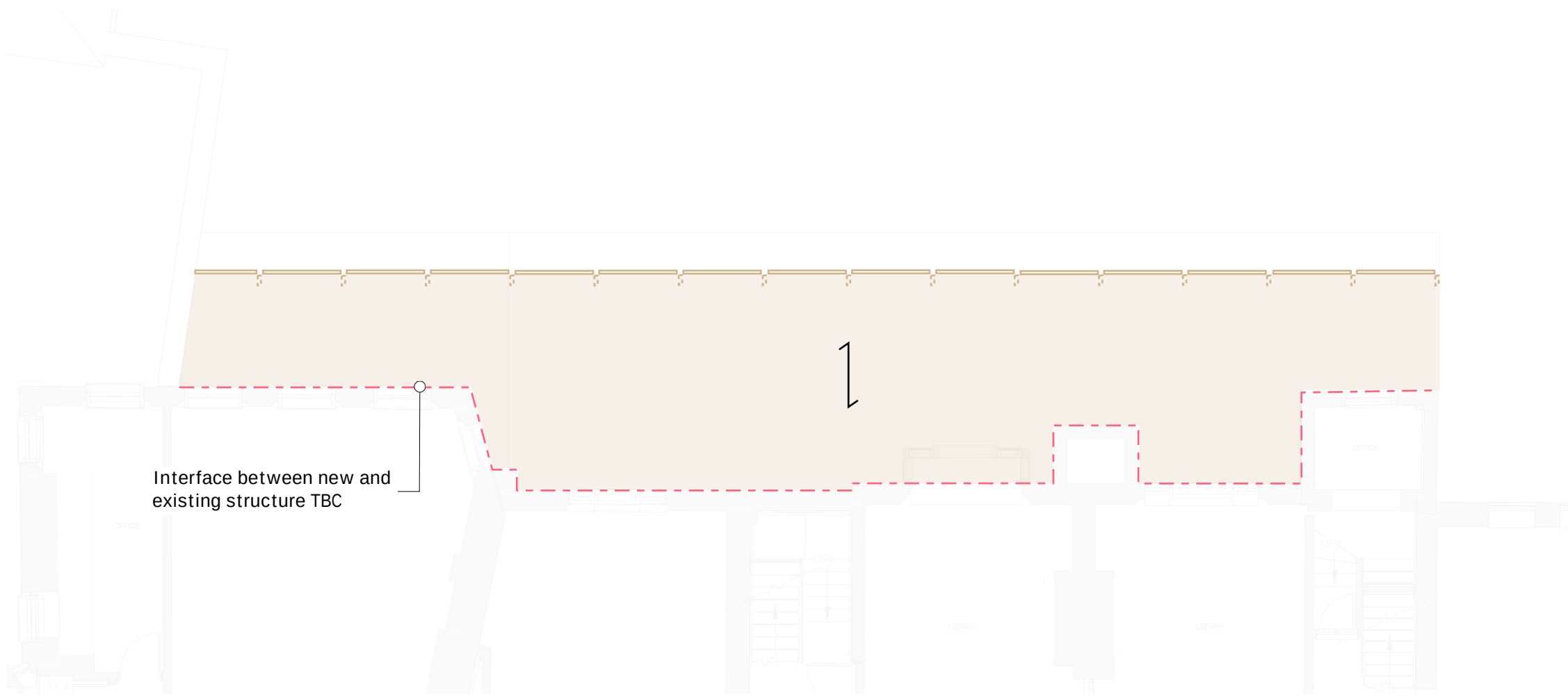
Piled wall below

160x240 glulam column

Glulam column below

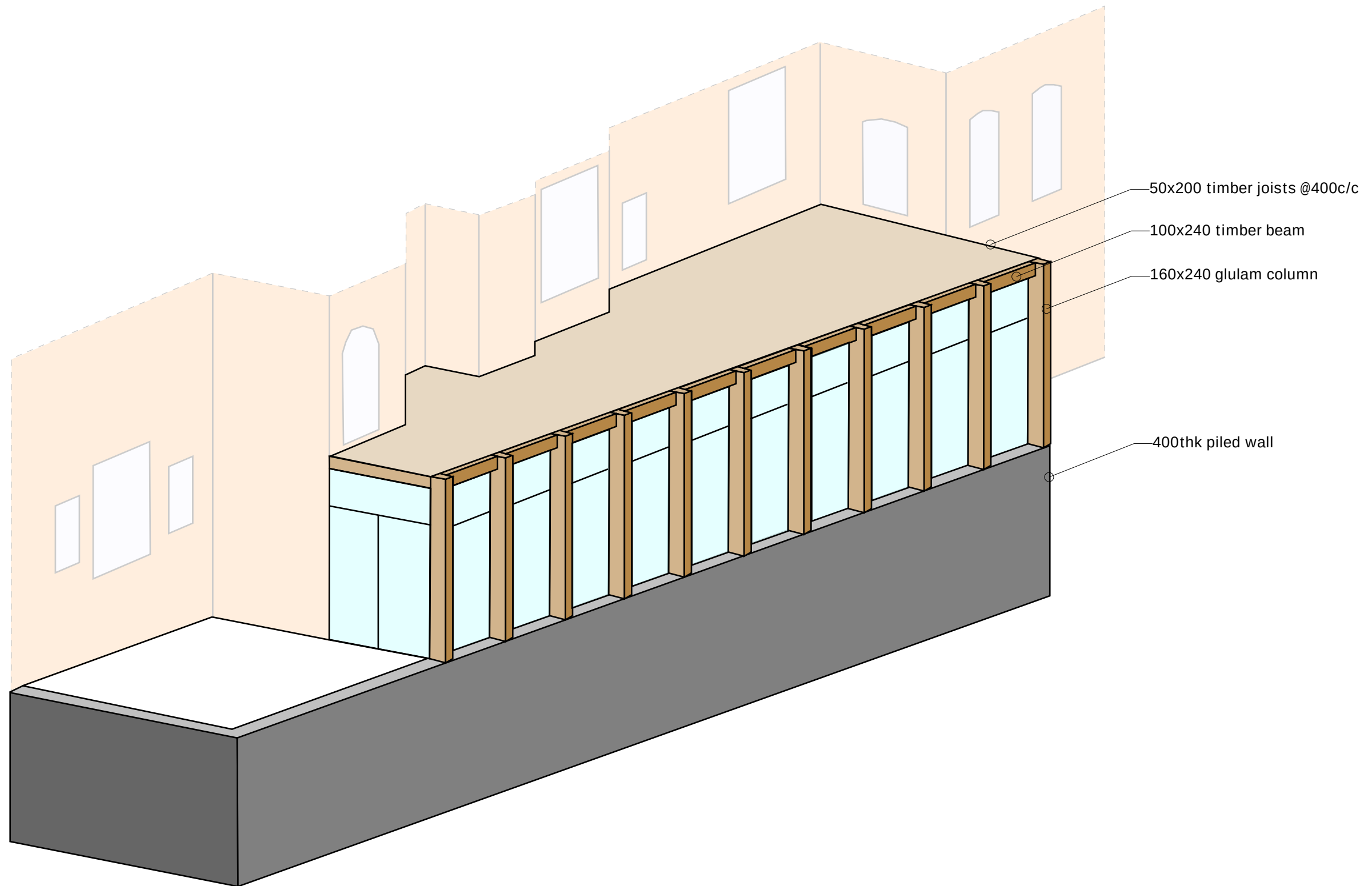
100x240 timber beam

50x200 timber joists @ 400c/c



Preliminary
only





Preliminary
only

Job Channing School, Brunner House

Date 18.10.23

Title Perspective View of Proposed Extension

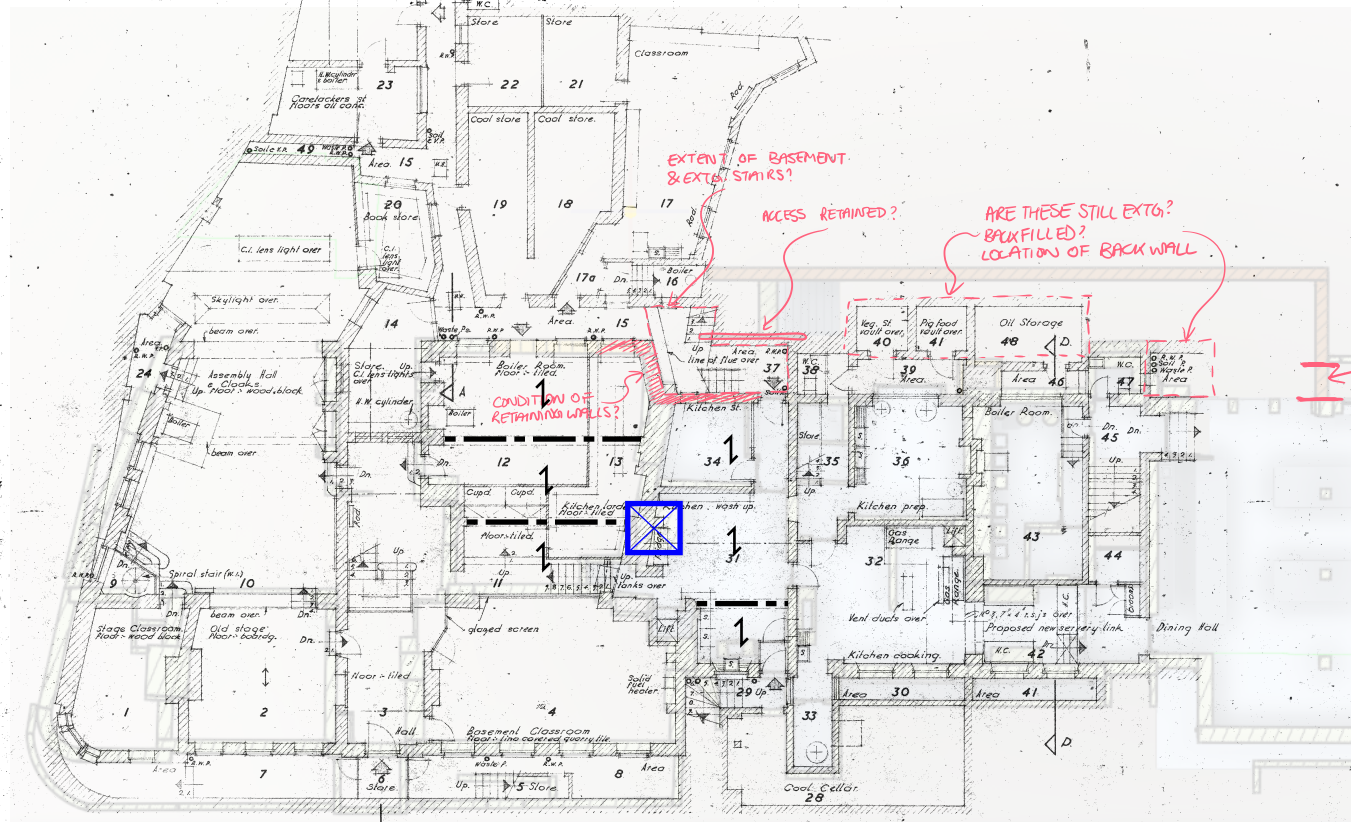
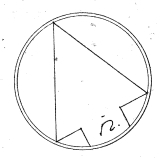
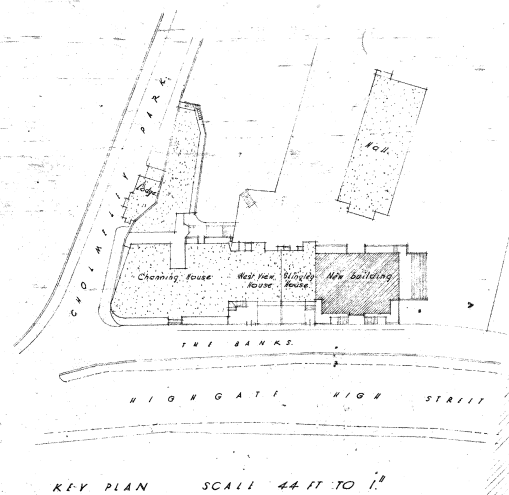
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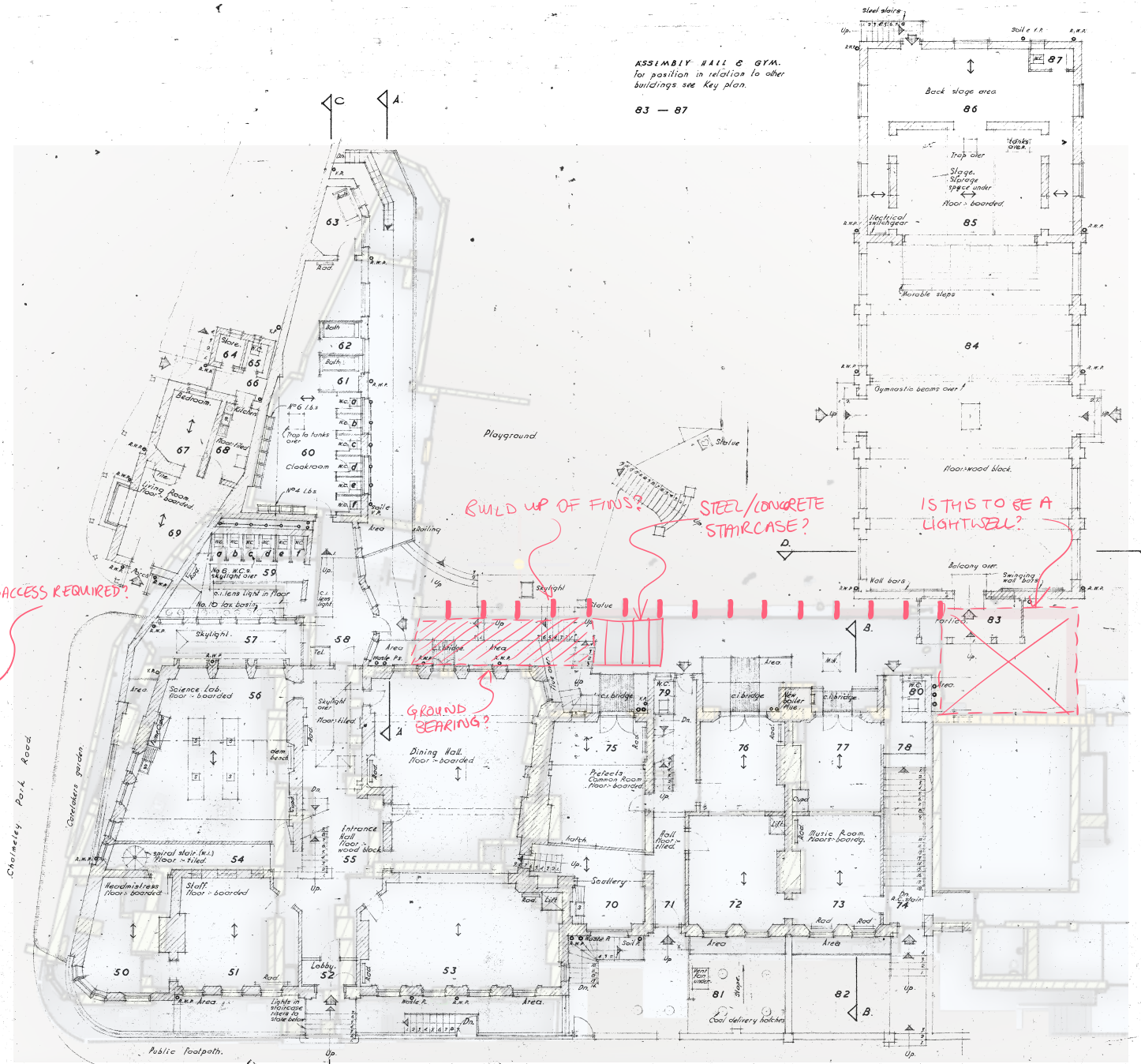
Sheet SK014.4

Rev. **P1**

HEYNE
TILLET
STEEL



CHANNING HOUSE WEST VIEW HOUSE SLINGLEY HOUSE NEW BUILDING
 BASEMENT PLAN 1 - 49



CHANNING HOUSE WEST VIEW HOUSE SLINGLEY HOUSE NEW BUILDING
 GROUND FLOOR PLAN 50 - 82

Scale 1/8" to 1' 0"
 Date 2-7-51
 Drawn by 215/1
 Issue No. 116
 Size 43" x 29"

NUMBERS
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 TO
 87

CHANNING SCHOOL SUR SLINGLEY - WEST VIEW & CHANNING HOUSES

Gollins Melvin Ward & Partners
 Chartered Architects
 17, Manchester Sq.
 London W.1

Job Channing School, Brunner House

Date 19.10.23

Title Existing and Proposed Overlaid Basement & Ground Floor Plans

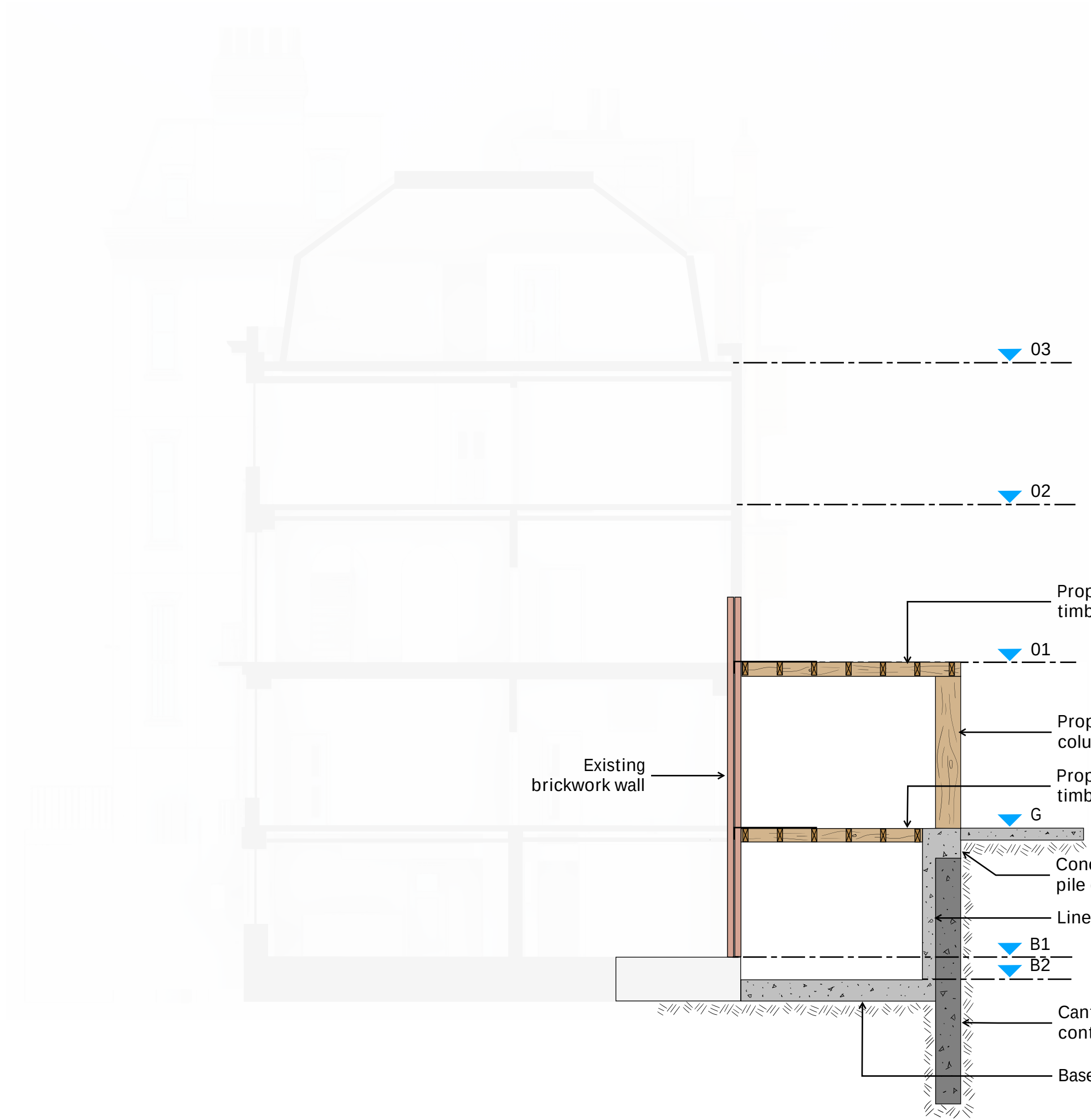
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Job No. 2884

Sheet SK014.5

Rev. P1





FFL 130.186 m
Building A Ridge

FFL 126.126 m
Level 3.5

FFL 124.046 m
Level 3

FFL 123.056 m
Level 2.5

FFL 121.021 m
Level 2

FFL 119.643 m
Level 1.5

FFL 117.686 m
Level 1

FFL 115.948 m
Level 0.5

FFL 114.246 m
Level 0

FFL 112.941 m
Level B0.5

FFL 110.881 m
Level B1

FFL 130.186 m
Building A Ridge

FFL 126.126 m
Level 3.5

FFL 124.046 m
Level 3

FFL 123.056 m
Level 2.5

FFL 121.021 m
Level 2

FFL 119.643 m
Level 1.5

FFL 117.686 m
Level 1

FFL 115.948 m
Level 0.5

FFL 114.246 m
Level 0

FFL 112.941 m
Level B0.5

FFL 110.881 m
Level B1

Existing Section C
1 : 100

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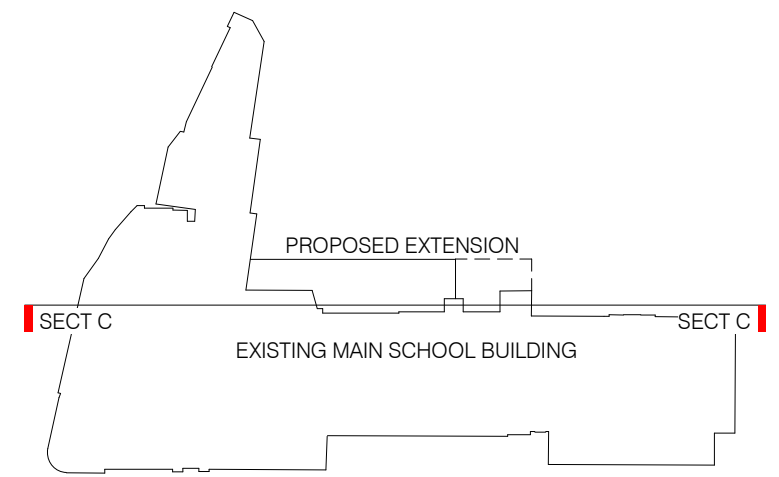
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Contact: 01373 468 030
mailto:mailbox@nvbarchitects.co.uk

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Scale: 1:100 @ A1 (1:200 @ A3)
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Key
Existing
Proposed



SECTION KEY PLAN

FFL 130.186 m
Building A Ridge

FFL 126.126 m
Level 3.5

FFL 124.046 m
Level 3

FFL 123.056 m
Level 2.5

FFL 121.021 m
Level 2

FFL 119.643 m
Level 1.5

FFL 117.686 m
Level 1

FFL 115.948 m
Level 0.5

FFL 114.246 m
Level 0

FFL 112.941 m
Level B0.5

FFL 110.881 m
Level B1

FFL 130.186 m
Building A Ridge

FFL 126.126 m
Level 3.5

FFL 124.046 m
Level 3

FFL 123.056 m
Level 2.5

FFL 121.021 m
Level 2

FFL 119.643 m
Level 1.5

FFL 117.686 m
Level 1

FFL 115.948 m
Level 0.5

FFL 114.246 m
Level 0

FFL 112.941 m
Level B0.5

FFL 110.881 m
Level B1

Proposed Section C
1 : 100

P01 Issued for Information
Rev. Description Date 22/11/2023

Client & Project
NVB Architects
Channing School For Girls

Document Title
Main School Building
Existing and Proposed - Section C

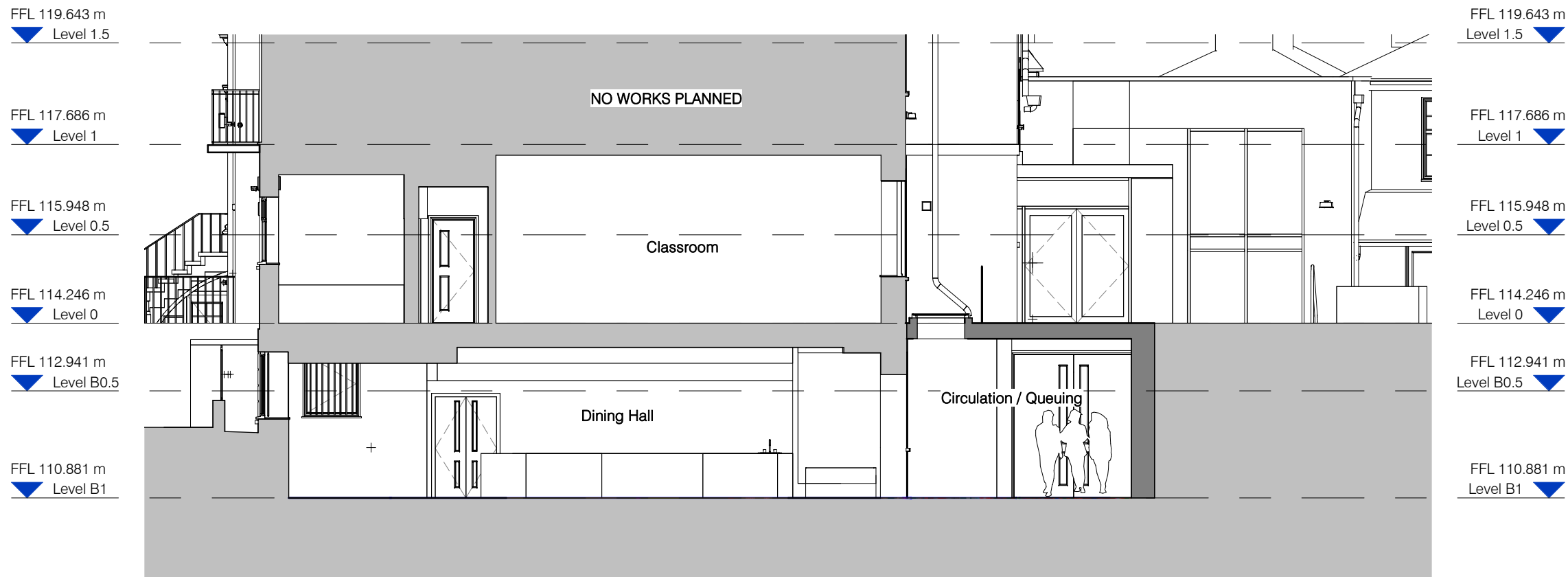
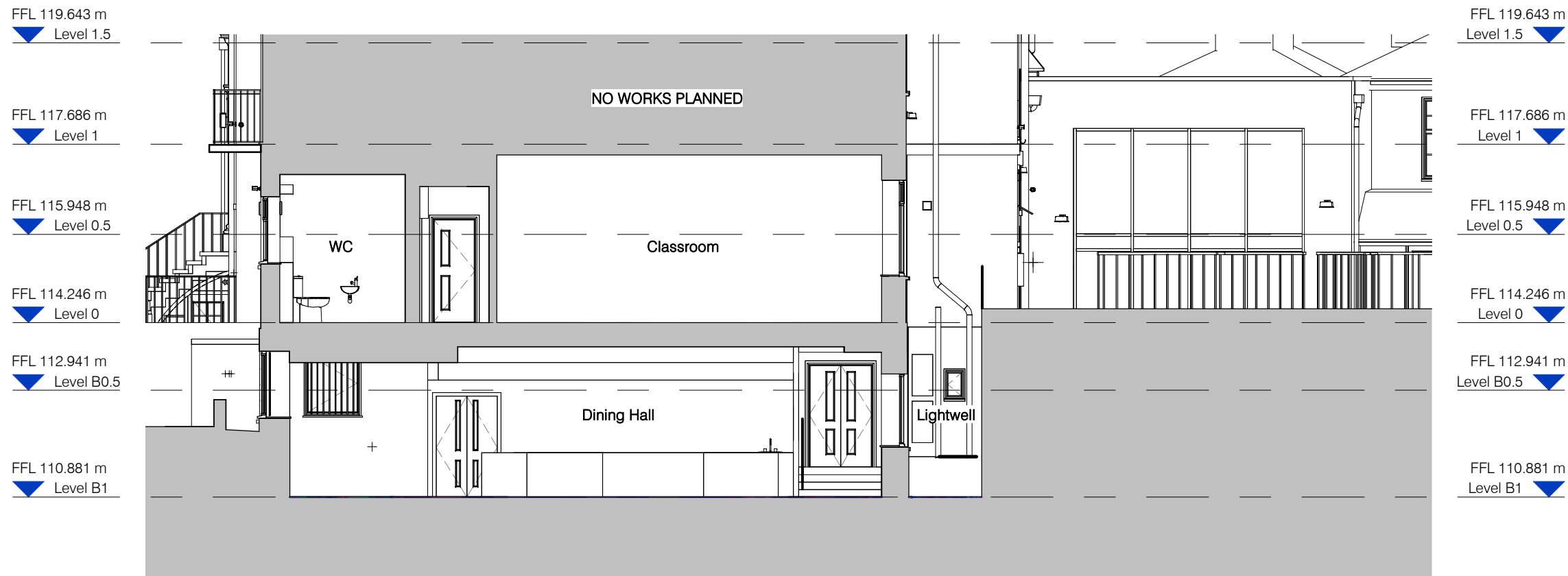
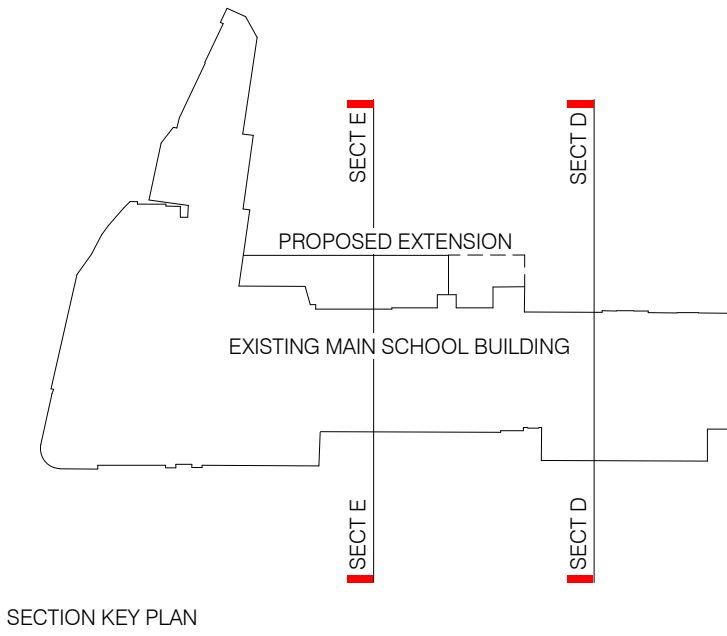
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CHA-NVB-MSB-ZZ-DR-A-2202 P01 S2

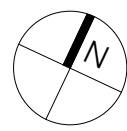
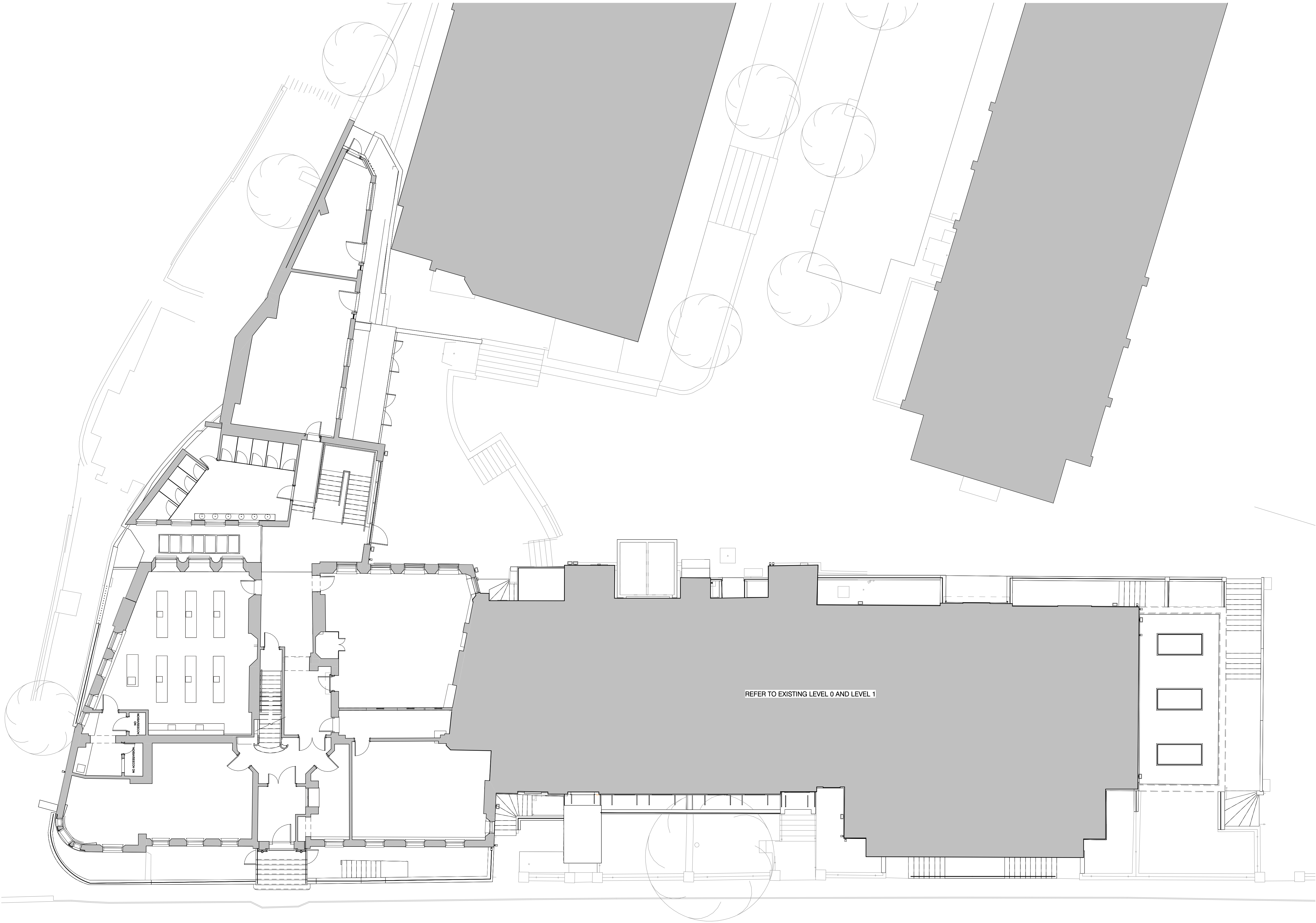
NVB Architects
ROOK LANE

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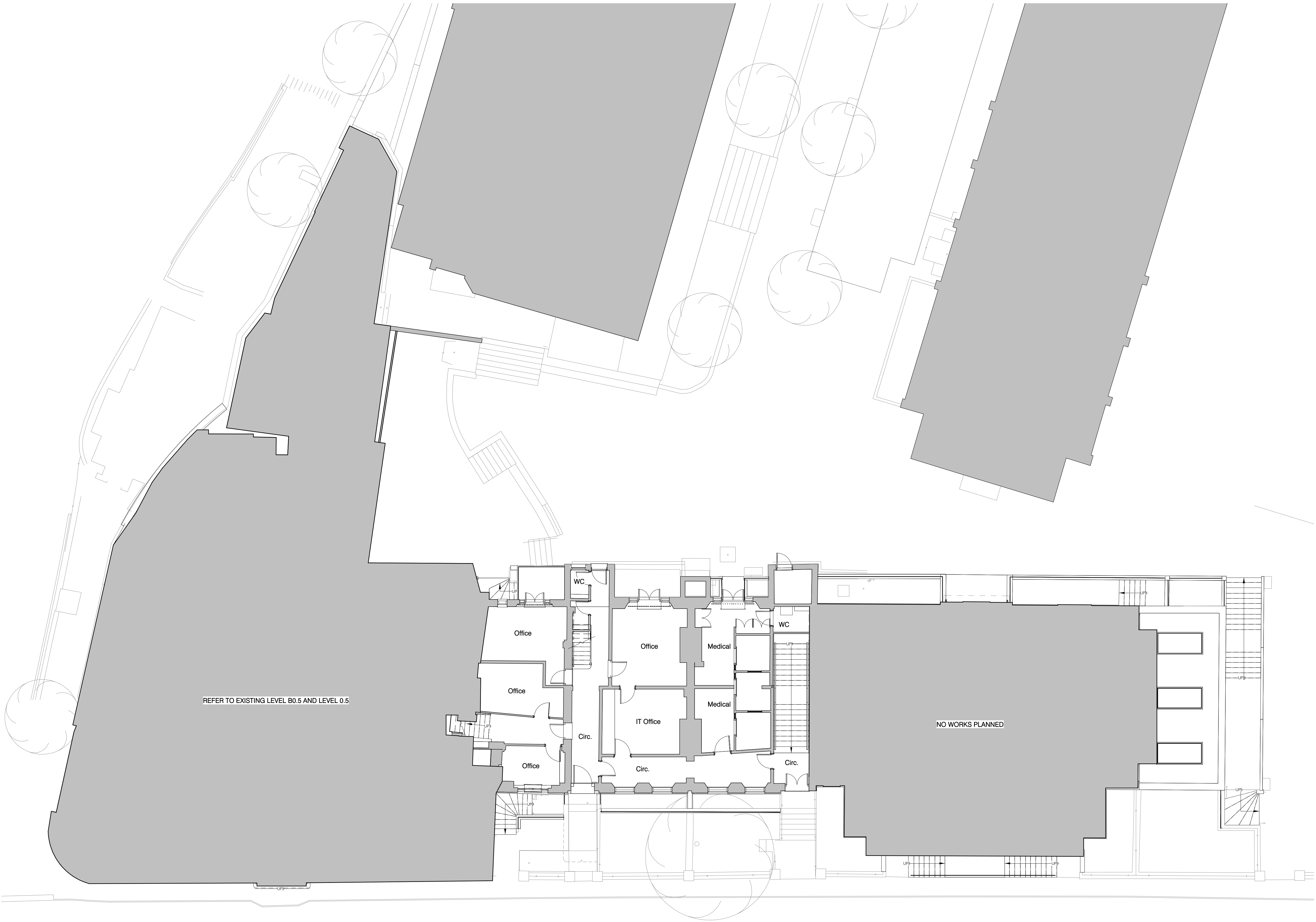
- Key
- Existing
 - Proposed



P01	Issued for Information	Date 22/11/2023
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NVB Architects		
Channing School For Girls		
Document Title		
Main School Building		
Existing and Proposed - Section D and E		
Project Stage	Purpose	Scale
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Document Reference.	Revision	Status
CHA-NVB-MSB-ZZ-DR-A-2203	P01	S2



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Rev.	Description		
Client & Project			
NVB Architects			
Channing School For Girls			
Document Title			
Existing Level 0.5 Plan			
Project Stage		Purpose	Scale
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Document Reference:		Revision	Status
CHA-NVB-MSB-0.5-DR-A-2043		A	S1



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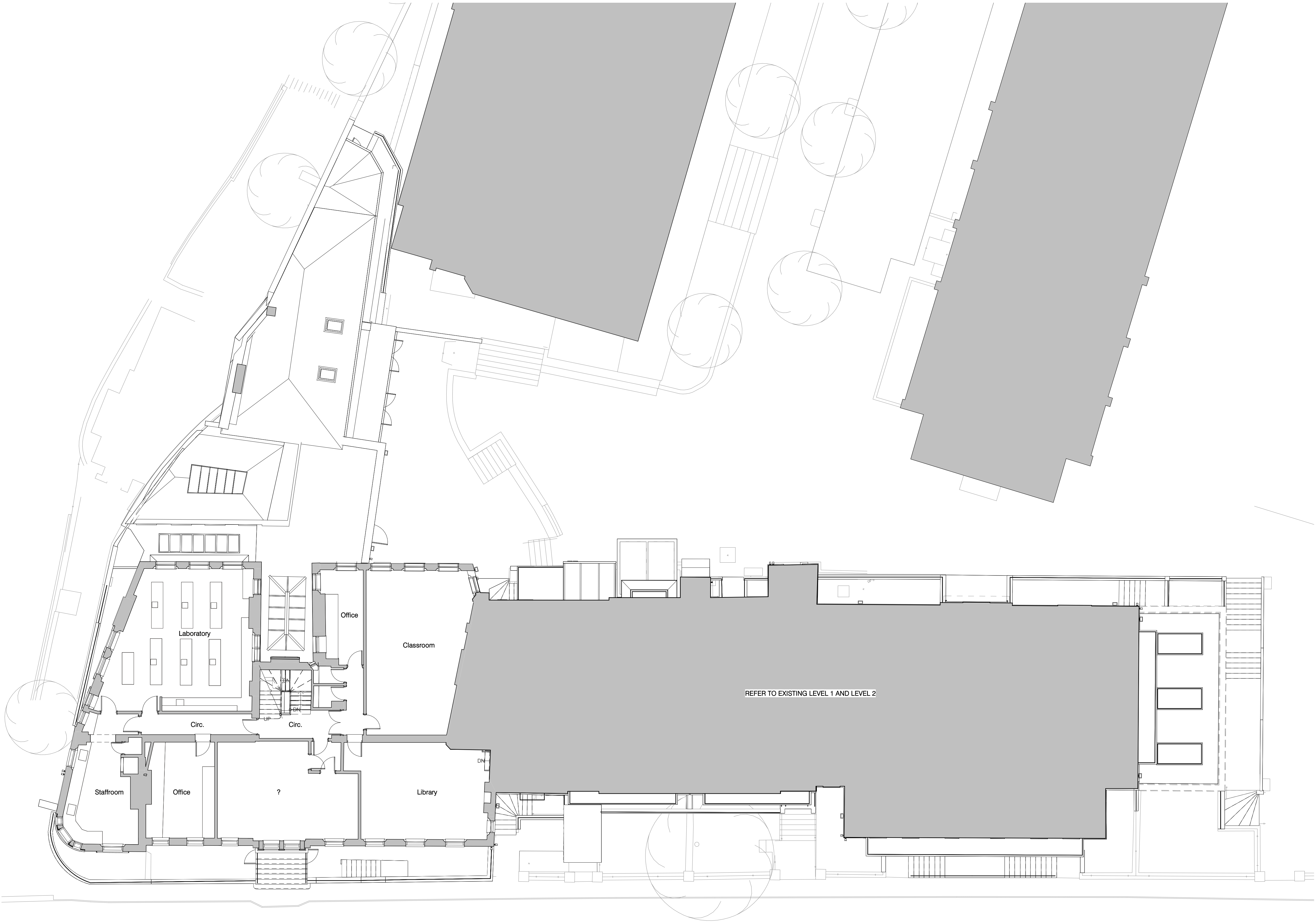
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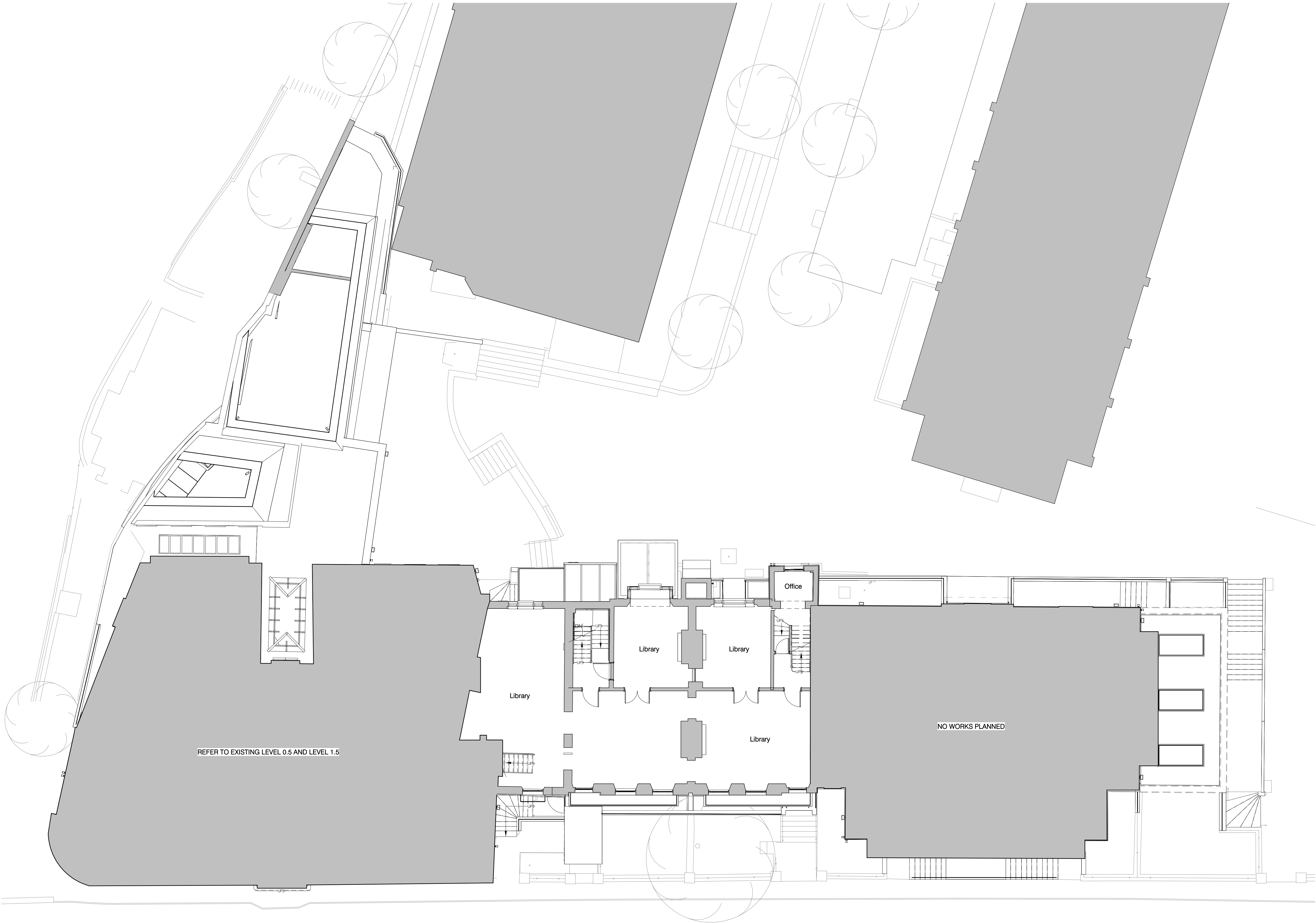
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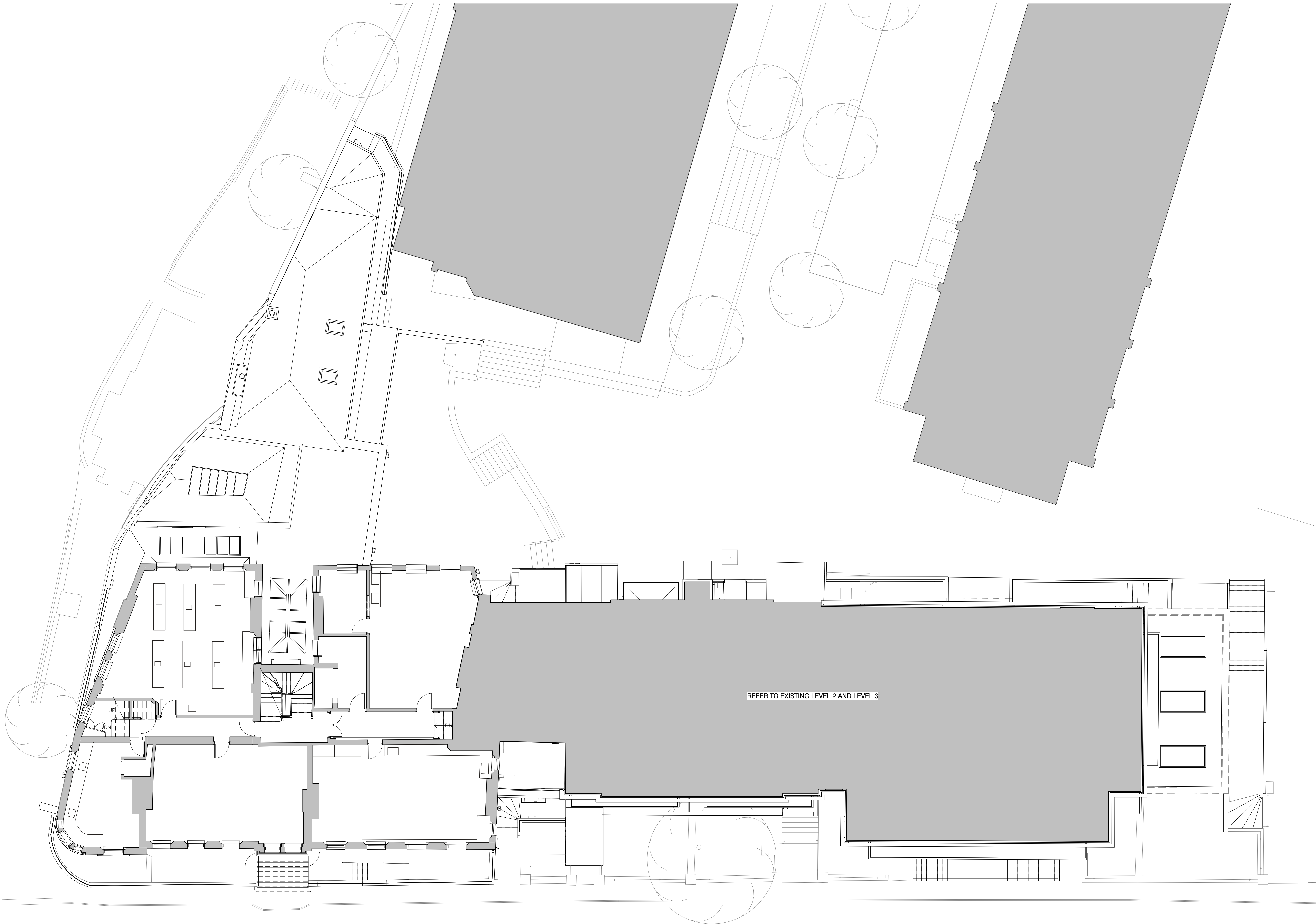
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Client & Project		
NVB Architects		
Channing School For Girls		
Document Title		
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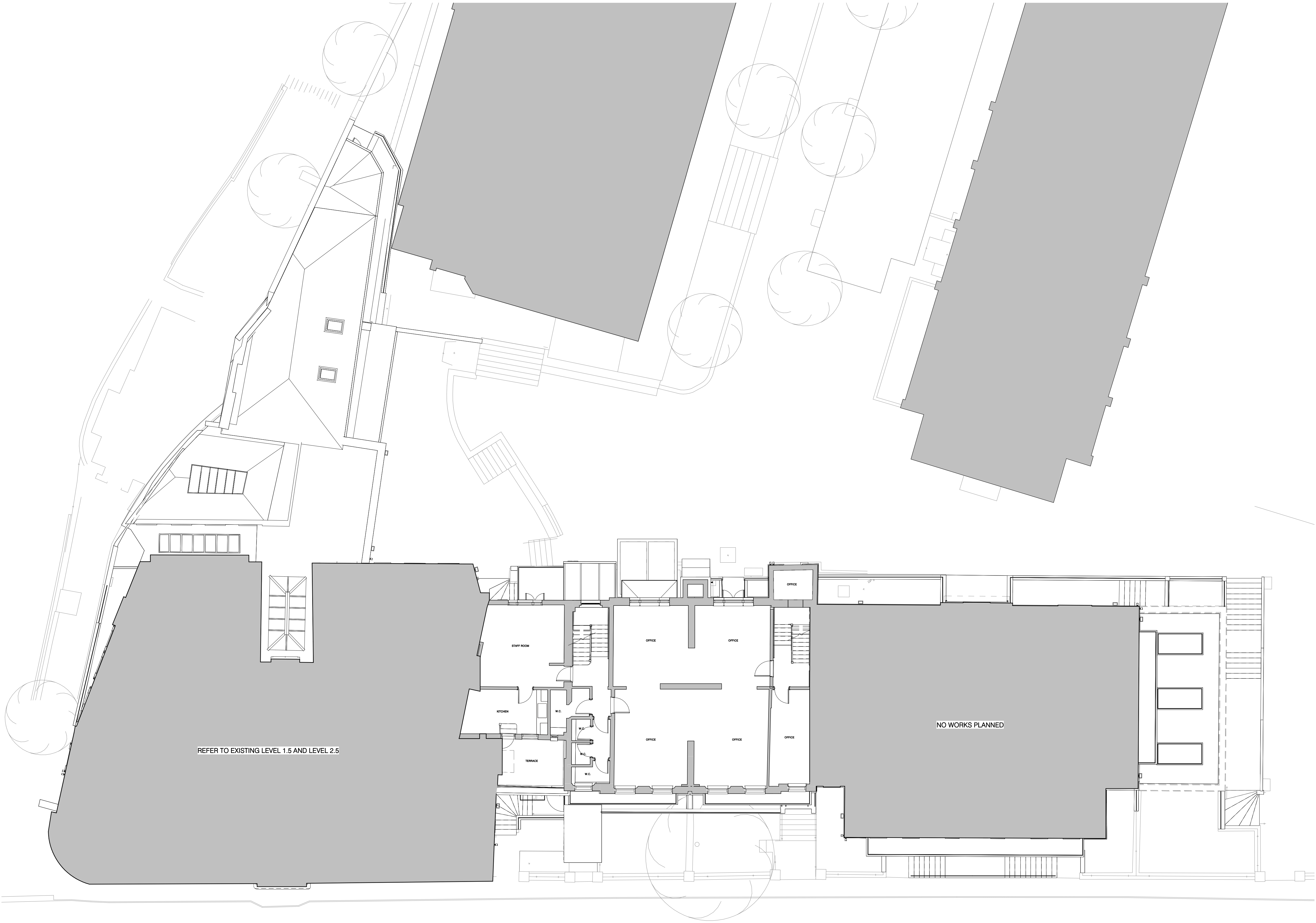


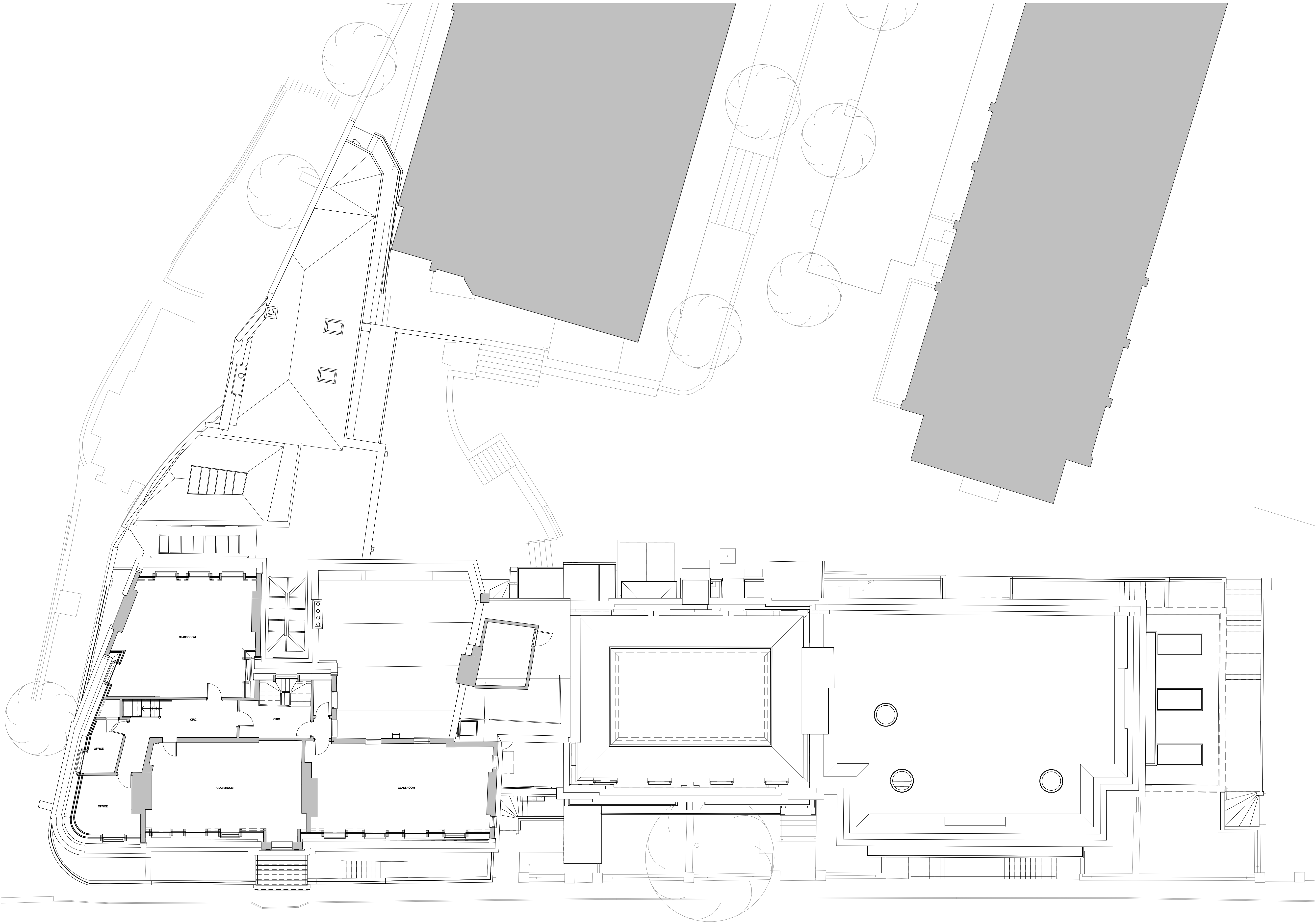


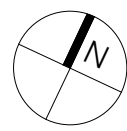
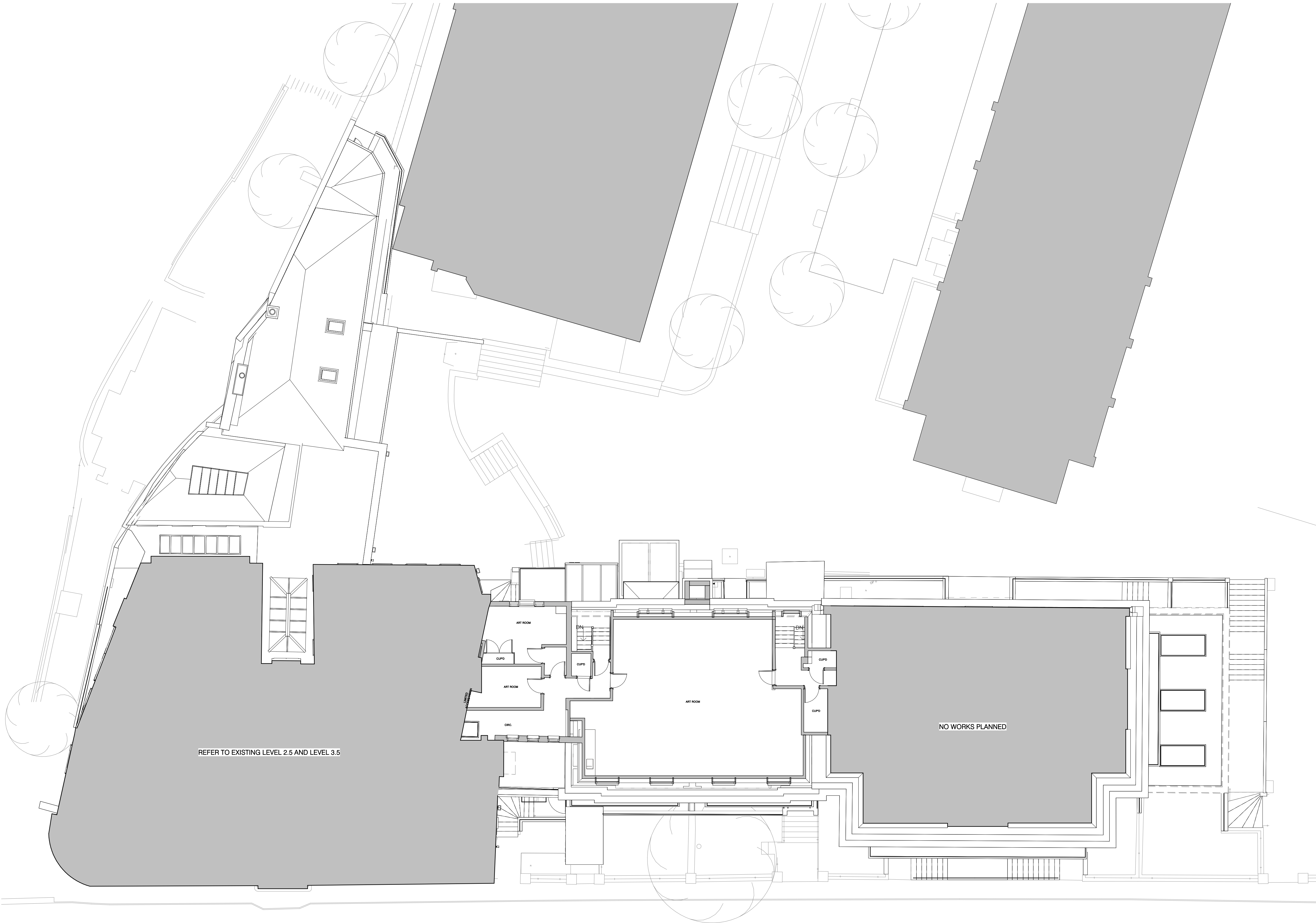
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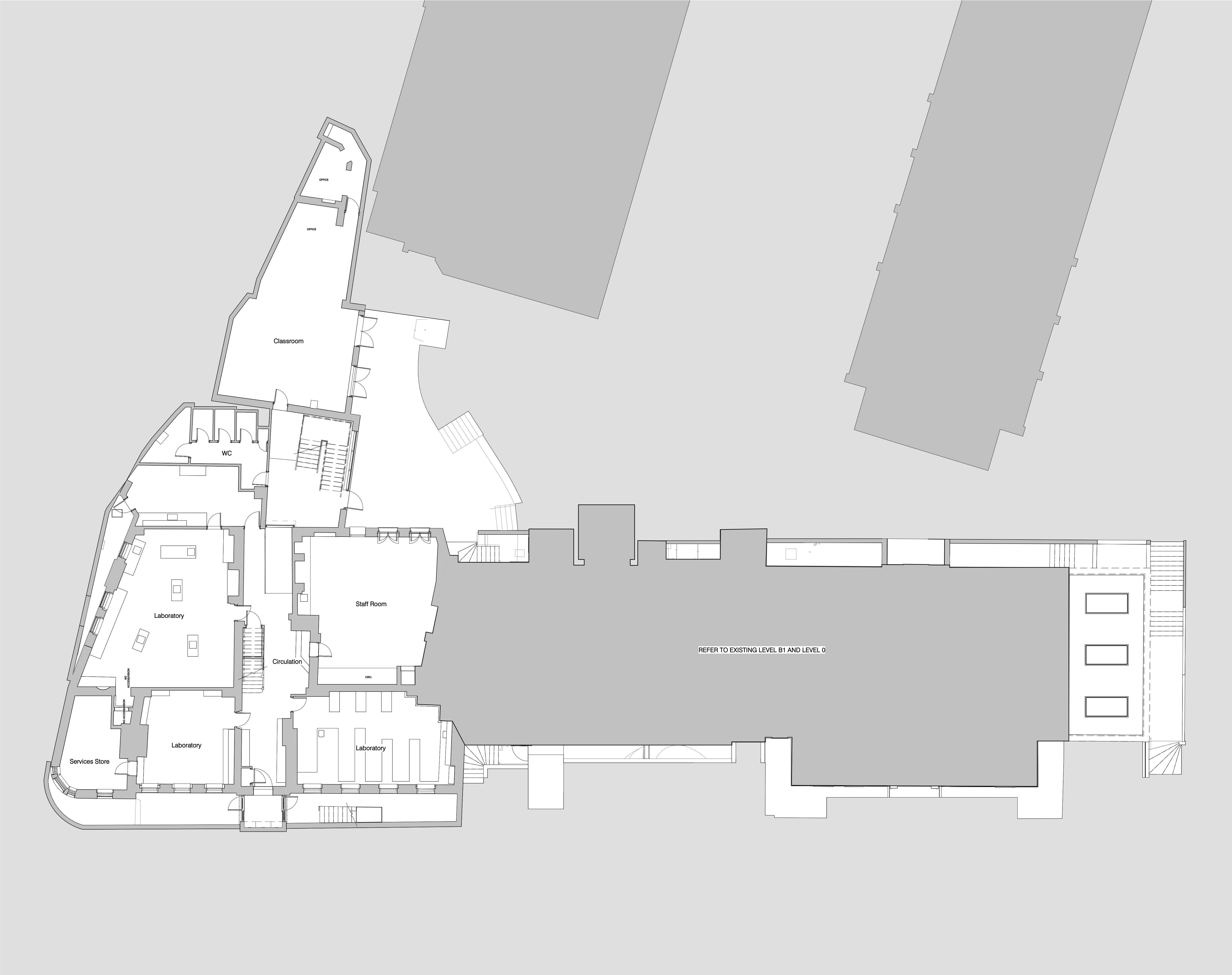
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NVB Architects		
Channing School For Girls		
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A Issued for Information		Date 04/10/2023
Rev.	Description	
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NVB Architects		
Channing School For Girls		
Document Title		
Existing Level 3 Plan		
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CHA-NVB-MSB-3-DR-A-2048		A CR



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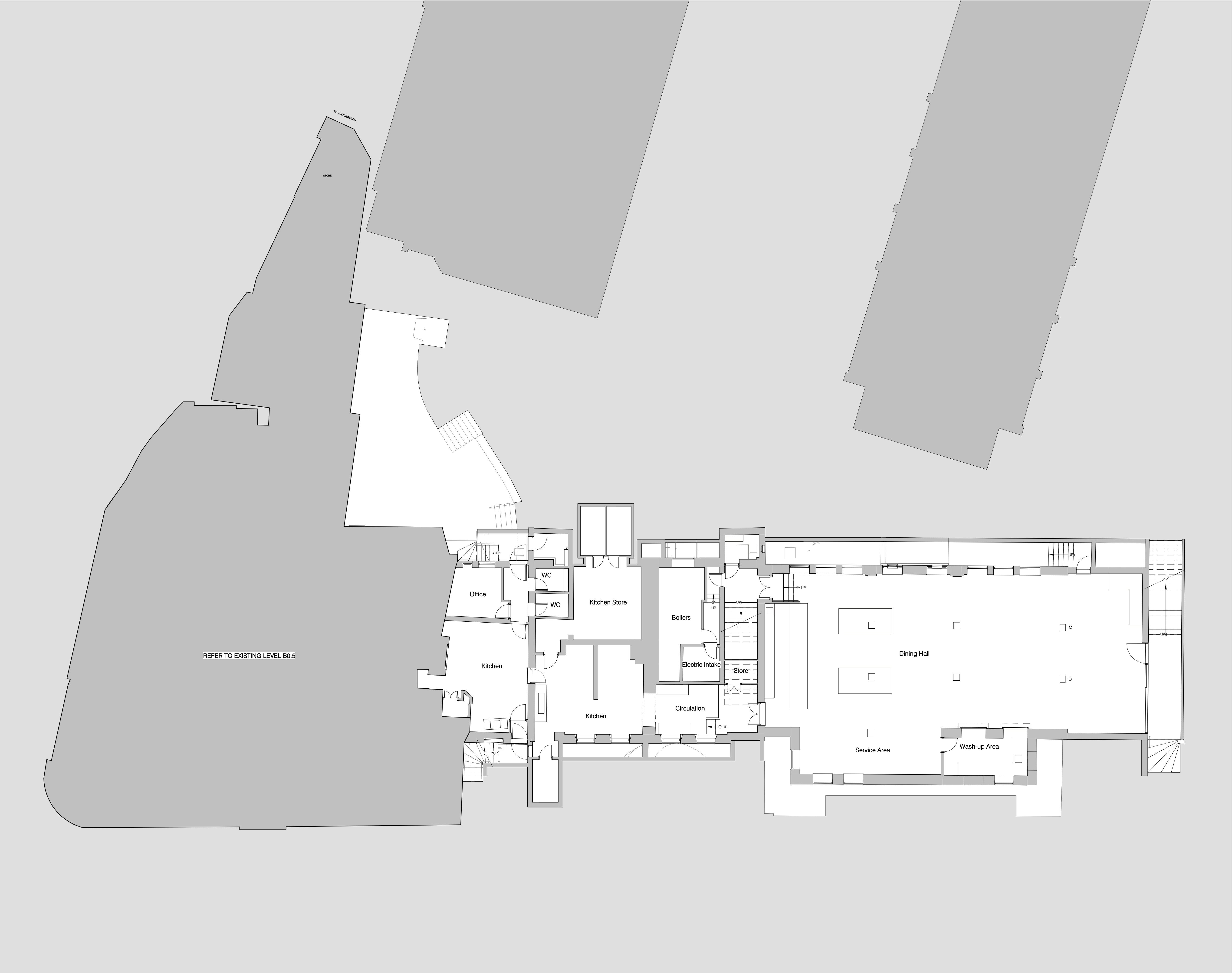
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Rev.	Description			
Client & Project				
NVB Architects				
Channing School For Girls				
Document Title				
Existing Level B0.5 Plan				
Project Stage	Purpose		Scale	
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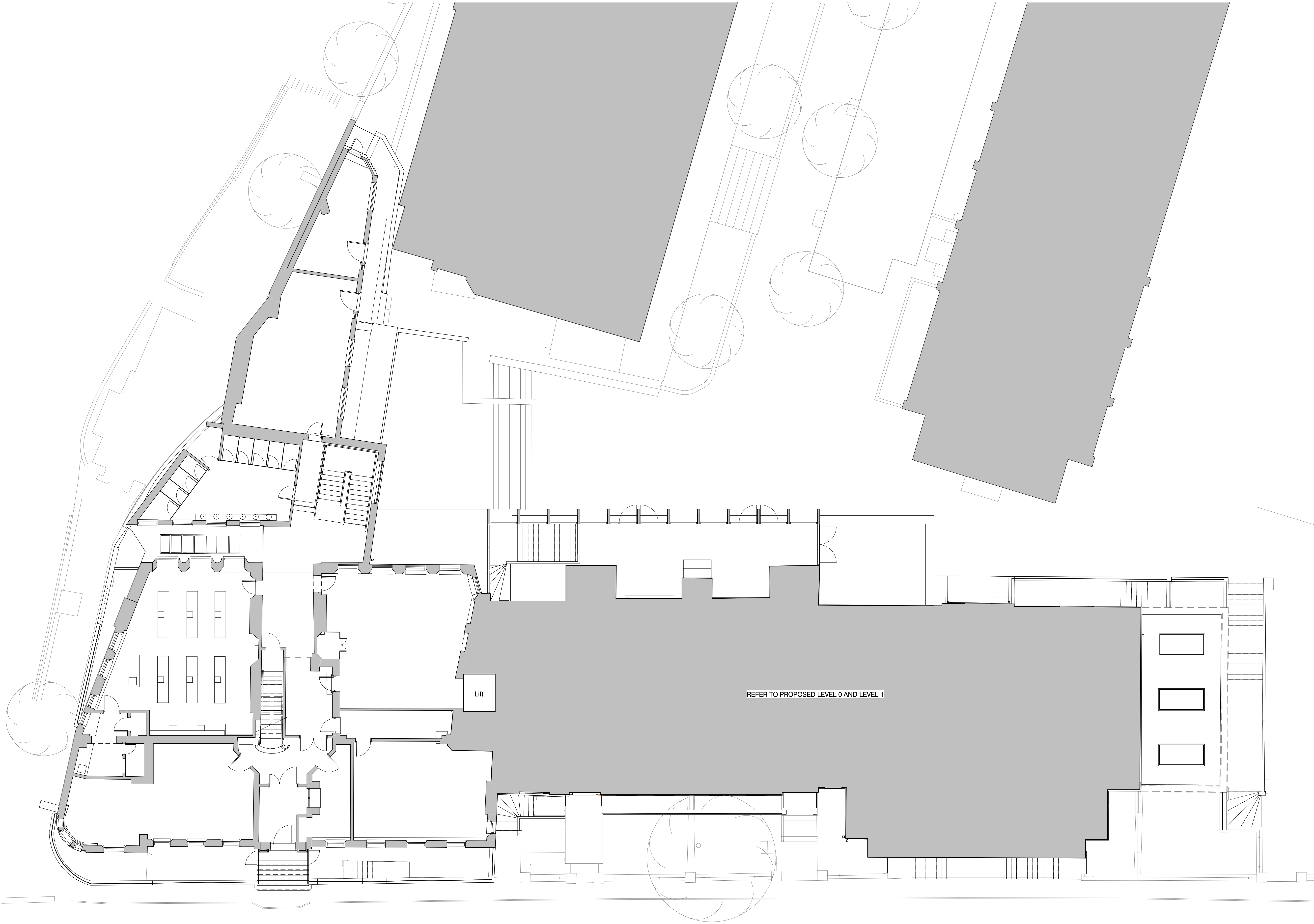
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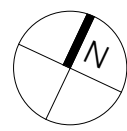
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Rev. Description Date 04/10/2023

Client & Project
NVB Architects
Channing School For Girls

Document Title
Proposed Level 0.5 GA Plan

Project Stage Purpose Scale
RIBA 2 INFORMATION 1:100 @A1

Document Reference: Revision Status
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