

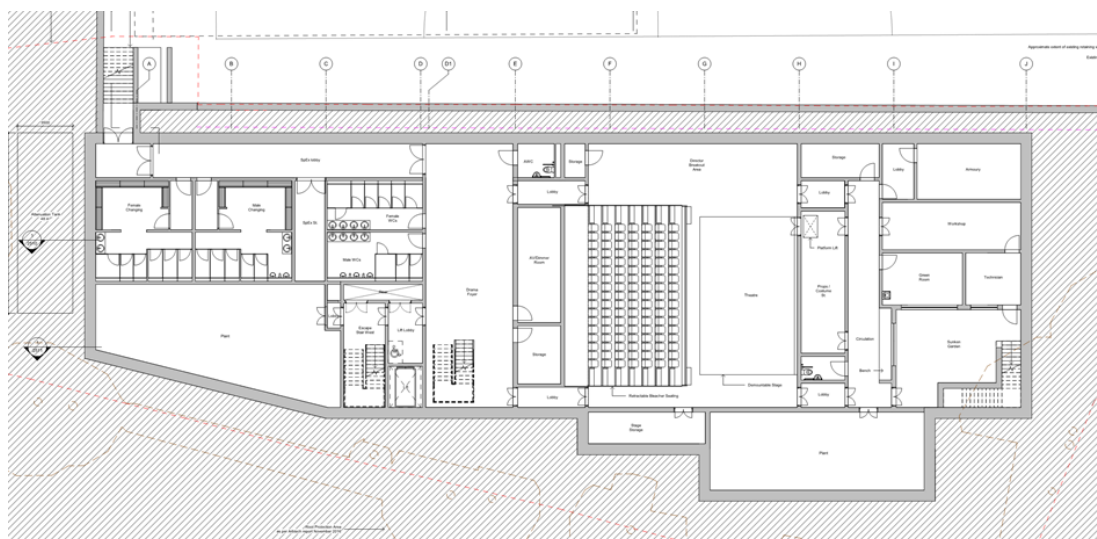


Figure 2.2 Richards Music Centre proposed basement footprint



3. Geology

Site-specific ground investigation works were carried out on the project site by Soil Consultants Ltd in February and April 2016. The ground conditions were found to comprise the following (in order of succession):

- Made Ground – topsoil and anthropogenic deposits of undifferentiated clays, sands and gravels.
- Claygate Member – firm to stiff brown / orange slightly silty CLAY with occasional silt partings.
- London Clay Formation – stiff to very stiff fissured brown CLAY with occasional rare bands of silty sand.

The above include the strata of engineering interest and significance, taking cognisance of the scale of the proposed development, and zone of influence. The ground model adopted for this assessment is presented in Table 3.1.

Table 3.1 Ground model and geotechnical parameters adopted for analysis purposes

Stratum	Elevation of top of stratum (mOD)	Thickness (m)	Undrained Young's Modulus, E_u ^[2] (MPa)	Drained Young's Modulus, E' ^[2] (MPa)
Made Ground	+113.0	2.0	-	10.0
Claygate Member	+111.0	2.0	21.6	17.3
London Clay	+109.0	39.0 ^[3] ^[4]	28.8 + 3.3z ^[5]	23.0 + 2.7z ^[5]

1. Ground model based on previous site-specific ground investigation undertaken by Soil Consultants Ltd. This data has been interpreted specifically for the scope of the GMA presented herein.
2. Stiffness data (E_u and E') has been evaluated empirically from in-situ and laboratory testing data taking into consideration the nature of the geotechnical/soil-structure interaction mechanisms and level of anticipated strain within the soil mass.
3. *Rigid boundary* assumed at 70mOD for analytical purposes.
4. The closest deep BGS boreholes show that the London Clay formation extends to depths of approximately -17.0mOD. The entire excavation is thus assumed to take place within the London Clay.
5. z refers to the depth in metres below the top of the London Clay formation.



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 scheme. The demolition of the existing building and basement excavation will induce ground movements arising from the overburden removal and installation of the proposed retention system. 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.

A series of three-dimensional models of the proposed scheme have been developed in Oasys Xdisp/Pdisp 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 were separated in two groups (A & B) based on the approach followed, as detailed below:

Group A – Unloading/loading ground movements

- A1. Building demolition and basement excavation (short-term).
- A2. Building demolition, basement excavation, and application of the proposed building loading (long-term).

Group B – CIRIA-based ground movements

- B1. Piled retaining wall installation and basement excavation.
- B1. Piled retaining wall installation, basement excavation, and application of the proposed building 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 overburden removal unloading and reloading processes.

A demolition unloading pressure of 20kPa has been applied over the footprint of the existing building on site (approximately 20kPa/storey). A 97kPa unloading pressure has been modelled at the excavation formation level representing the removal of approximately 4.85m of overburden (i.e. excavation from +113.0mOD to +108.15mOD) to create the one-level basement. The modelled demolition and excavation geometries are shown in Figure 4.1 and Figure 4.2, respectively.

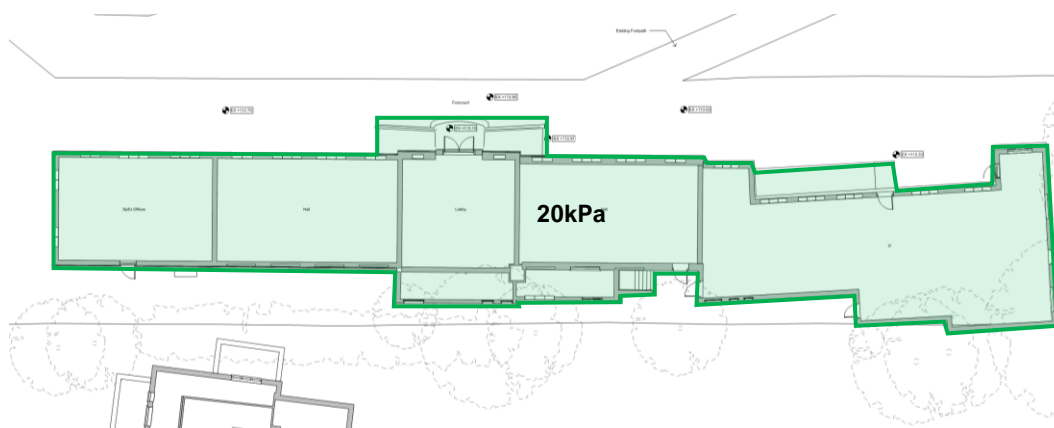


Figure 4.1 Modelled demolition area in Pdisp

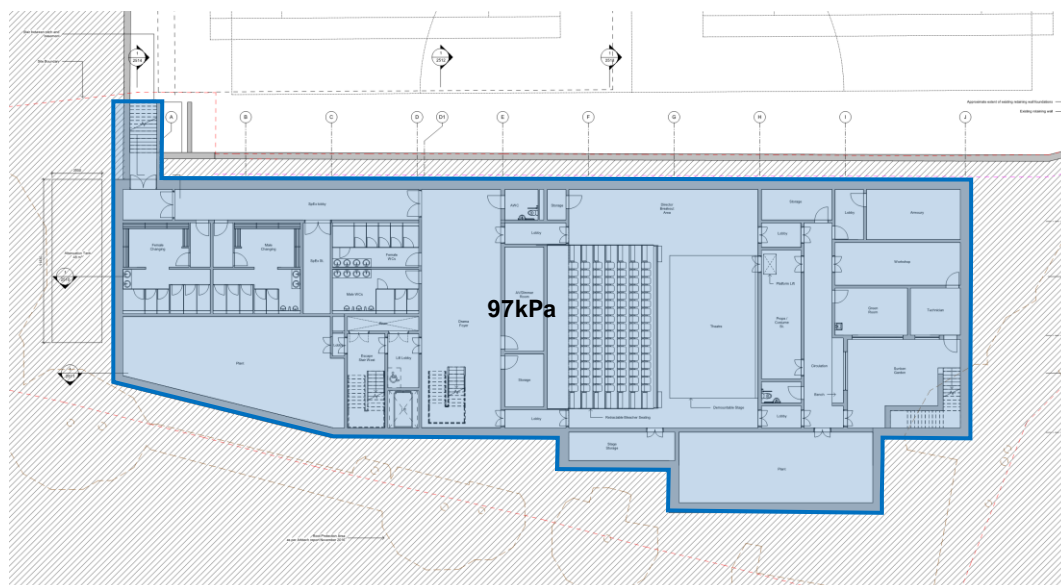


Figure 4.2 Modelled excavation area in Pdisp

The proposed structure will have two storeys and a one-level basement. The proposed basement has a larger footprint than that of the overlying building. Based on an assumed surcharge of 15kPa per storey, a uniformly distributed load of 30kPa, representing the two-storey structure, has been modelled as an equivalent pressure of 18kPa at a depth equal to 2/3 of the proposed bearing pile length, assuming a 1:4 (horizontal:vertical) load spread distribution with depth. Pile lengths of 20m have been assumed based on the *RMC II – Stage 2 Report* provided by Expedition. A uniformly distributed load of 15kPa has also been modelled at basement formation level to represent the sunken garden in the eastern section of the site supported by shallow foundations.

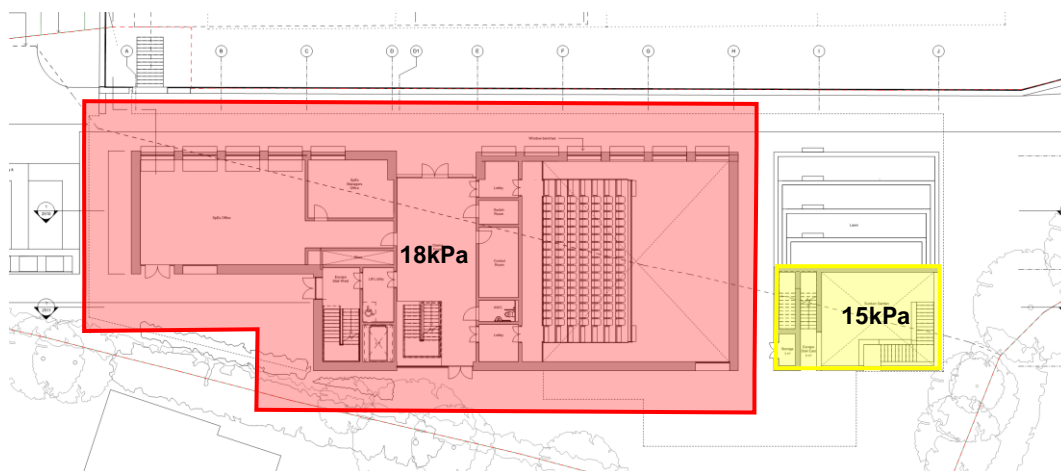


Figure 4.3 Modelled loading area in Pdisp

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

- *Piled retaining wall*: Installation of contiguous bored pile wall in stiff clay.
- *Excavation to formation*: Excavation in front of a high stiffness wall in stiff clay.

The modelling of the contiguous pile wall curve has been deemed suitable for calculating the installation effects of secant piled walls, contiguous piled walls, and/or sheet pile walls (assuming pre-boring which may be required).



In the B2 assessment, the CIRIA ground movements are combined with the long-term settlements induced by the proposed loading (evaluated in Pdisp).

The two sets of analyses enabled the evaluation of an envelope of damage classification results, with the worst-case output presented herein. A representative geometry has been adopted for defining the excavation/installation geometry implemented in the 3D modelling efforts, as shown in Figure 4.4.

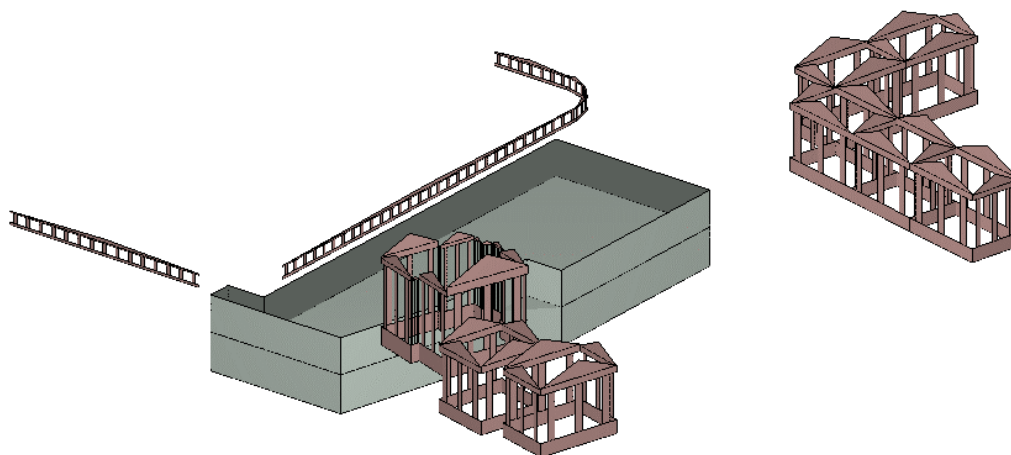


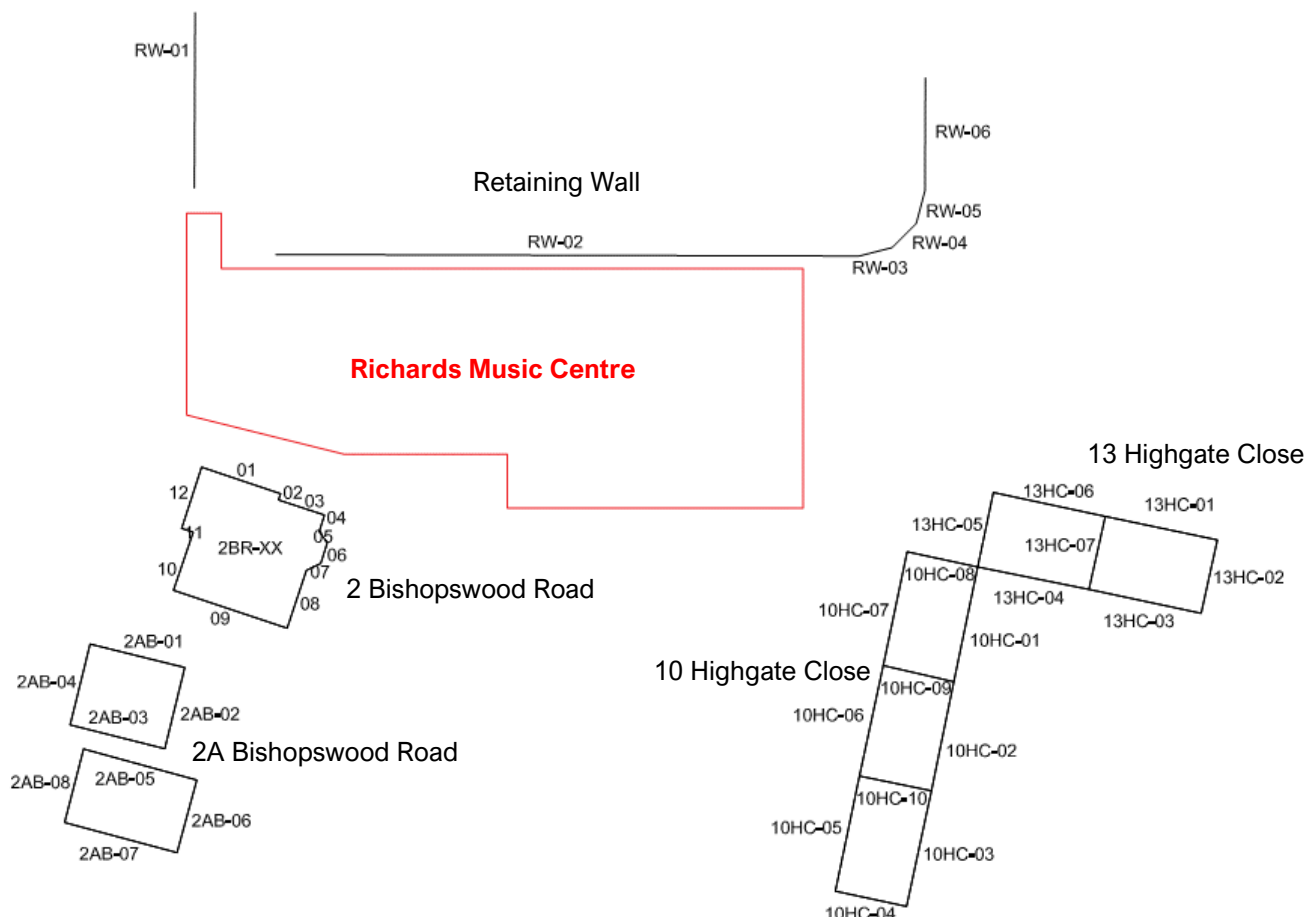
Figure 4.4 Indicative plot of the three-dimensional analytical model using the Oasys Xdisp software suite

4.2. Impact Assessment

4.2.1. General

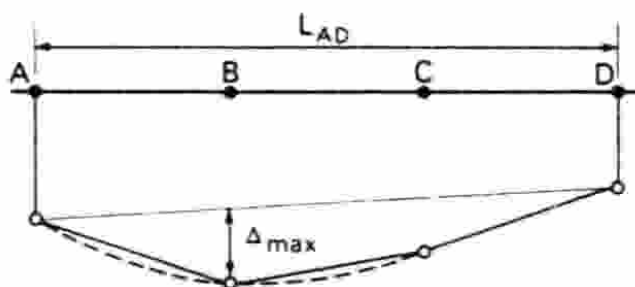
The potential impact/damage induced on primary façade/wall elements of the buildings around the proposed scheme, including the reinforced concrete retaining wall directly north of the site, have been evaluated on the basis of the calculated ground movement fields. The masonry walls of concern are shown in Figure 4.5, including the wall nomenclature/reference system adopted. The arrangement is based on the currently available survey information and presents an array of masonry façades running both perpendicular and parallel to the proposed lower ground floor (covering the key deformation mechanisms). In total, 43 façades of the neighbouring buildings were considered for the current study and these are grouped in the following manner:

- RW-01 – RW-06: RC Retaining Wall.
- 13HC-01 – 13HC-07: 13 Highgate Close.
- 10HC-01 – 10HC-10: 10 Highgate Close.
- 2BR-01 – 2BR-12: 2 Bishopswood Road.
- 2AB-01 – 2AB-08: 2A Bishopswood Road.



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.

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).



Highgate School - Richards Music Centre Site - Ground Movement Assessment Report
1157-A2S-XX-XX-RP-Y-0001-01



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

4.2.2. Results

The results of the assessment are presented in Table 4.1. Note that the results presented in this table represent the worst-case output arising from the various analysis runs detailed herein. Damage category results are also presented in Figure 4.8 for the affected façades. Figure 4.9 and Figure 4.10 depict the vertical and horizontal displacements, respectively, induced by the retaining wall installation and excavation calculated using CIRIA C760 datasets (i.e. assessment B1). It is noted that the excavation of the staircase to the sports pitch in the northwest corner of the site will require local temporary works. Ground movements that may arise during the installation and excavation works are not anticipated to significantly affect the surrounding façades and have not been considered in this analysis.



Table 4.1 Evaluated damage categories extracted from Xdisp

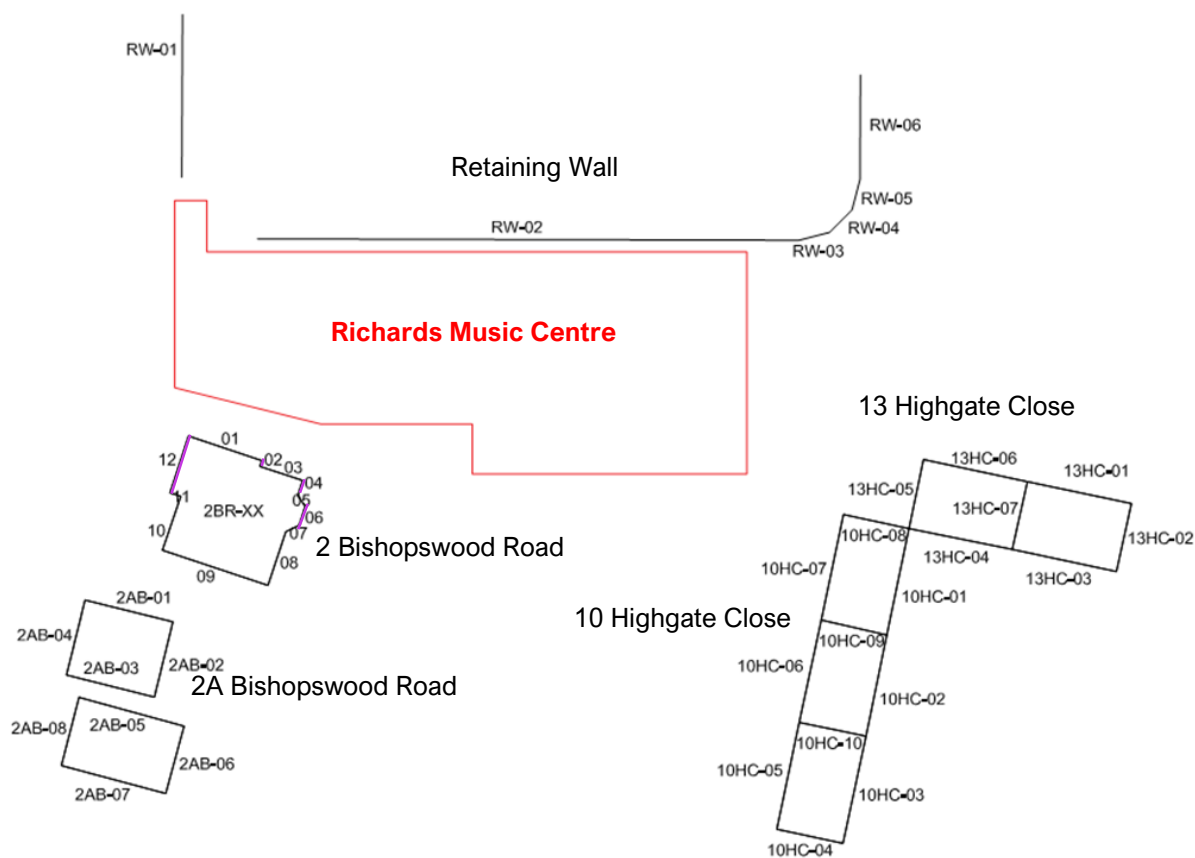
Façade Reference	Analysis Scenario			
	A1	A2	B1	B2
RW-01	Category 1 – Very Slight	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
RW-02	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
RW-03	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
RW-04	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
RW-05	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
RW-06	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
13HC-01	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
13HC-03	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
13HC-04	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
13HC-05	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
13HC-06	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
13HC-07	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-01	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-02	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-03	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-05	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-06	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-07	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible



10HC-08	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-09	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
10HC-10	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-01	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-02	Category 0 – Negligible	Category 0 – Negligible	Category 1 – Very Slight	Category 1 – Very Slight
2BR-03	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-04	Category 0 – Negligible	Category 0 – Negligible	Category 1 – Very Slight	Category 1 – Very Slight
2BR-05	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-06	Category 0 – Negligible	Category 0 – Negligible	Category 1 – Very Slight	Category 1 – Very Slight
2BR-07	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-08	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-09	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-10	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-11	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2BR-12	Category 0 – Negligible	Category 0 – Negligible	Category 1 – Very Slight	Category 1 – Very Slight
2AB-01	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2AB-02	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2AB-03	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2AB-04	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2AB-05	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible



2AB-06	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2AB-07	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible
2AB-08	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible	Category 0 – Negligible



Purple – Category 1 (Very Slight)

Figure 4.8 Damage category results after analysis B2

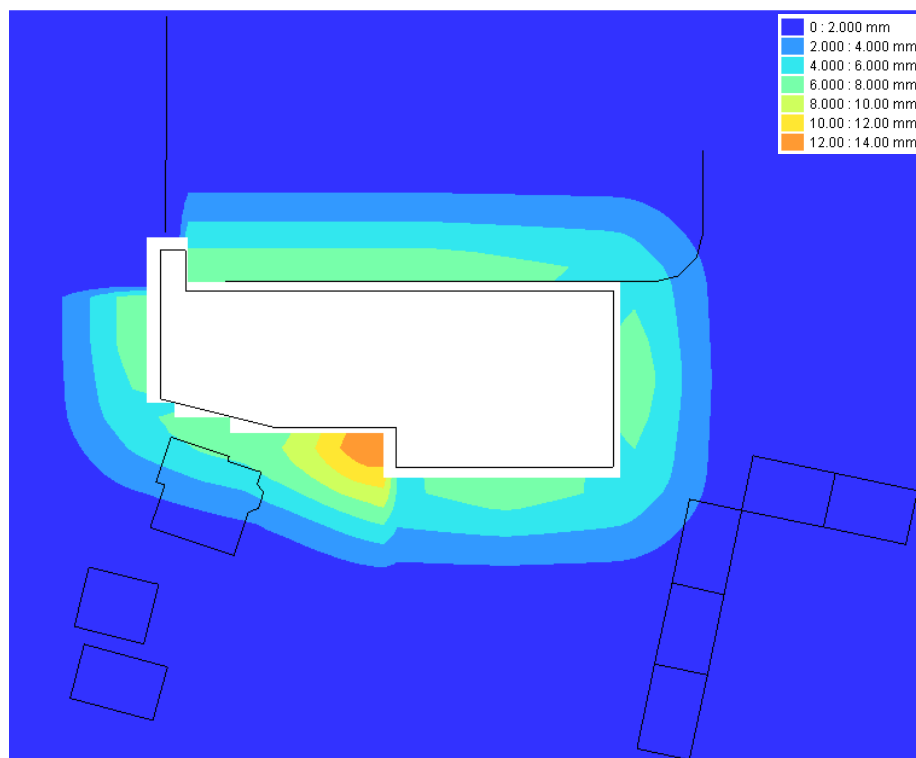


Figure 4.9 Resultant Xdisp vertical displacement contours for scenario B1 – units in mm – retaining wall installation and excavation (CIRIA C760)

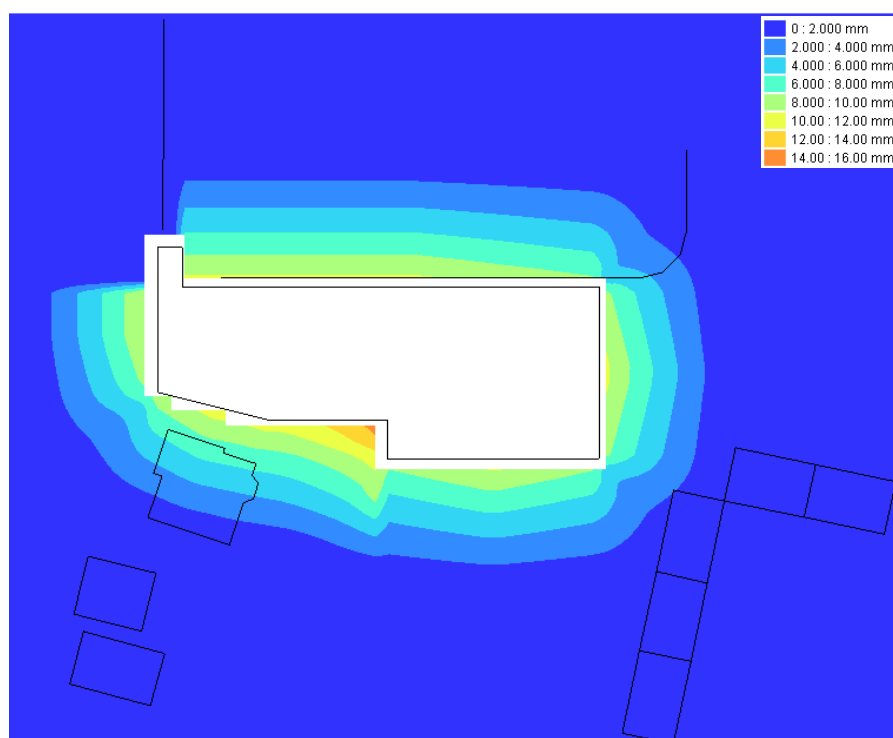


Figure 4.10 Resultant Xdisp horizontal displacement contours for scenario B1 – units in mm – retaining wall installation and excavation (CIRIA C760)



5. Conclusions & Closing Remarks

The interaction between the proposed Richards Music Centre development and the neighbouring properties within the zone of influence of the scheme has been reviewed as part of the GMA study presented herein.

The proposed development construction operations comprise a series of stages, including the demolition of the existing structure, installation of the piled retaining wall, bulk excavation, and the construction of the proposed permanent works elements. 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, a propped retaining wall solution (during the temporary works stage) has been considered, utilising the CIRIA C760 ground movement curves for high stiffness walls in stiff clay.

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 movement sensitive neighbouring 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) are presented in Table 4.1. It is observed that the maximum damage classification for the 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.

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.



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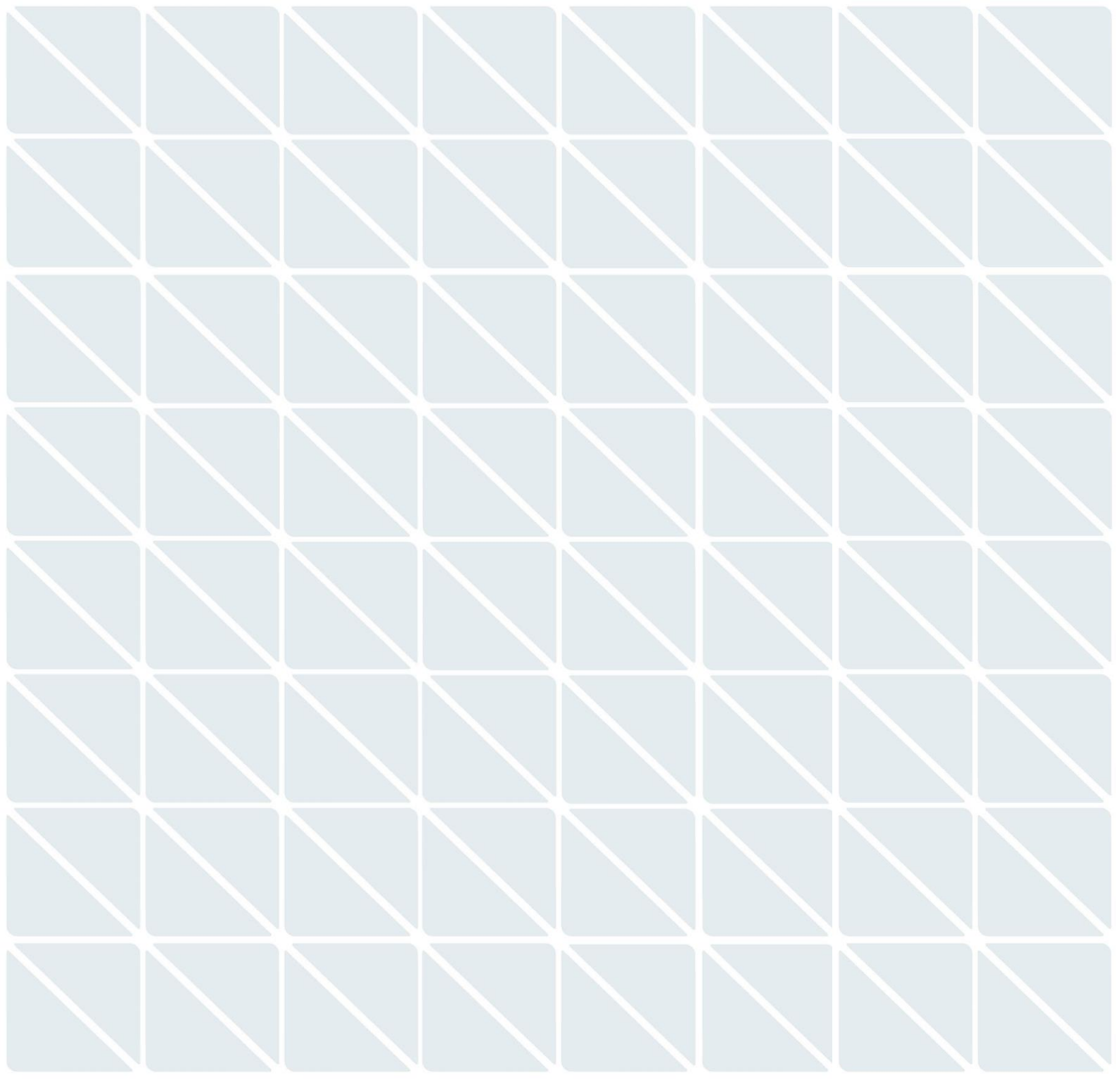
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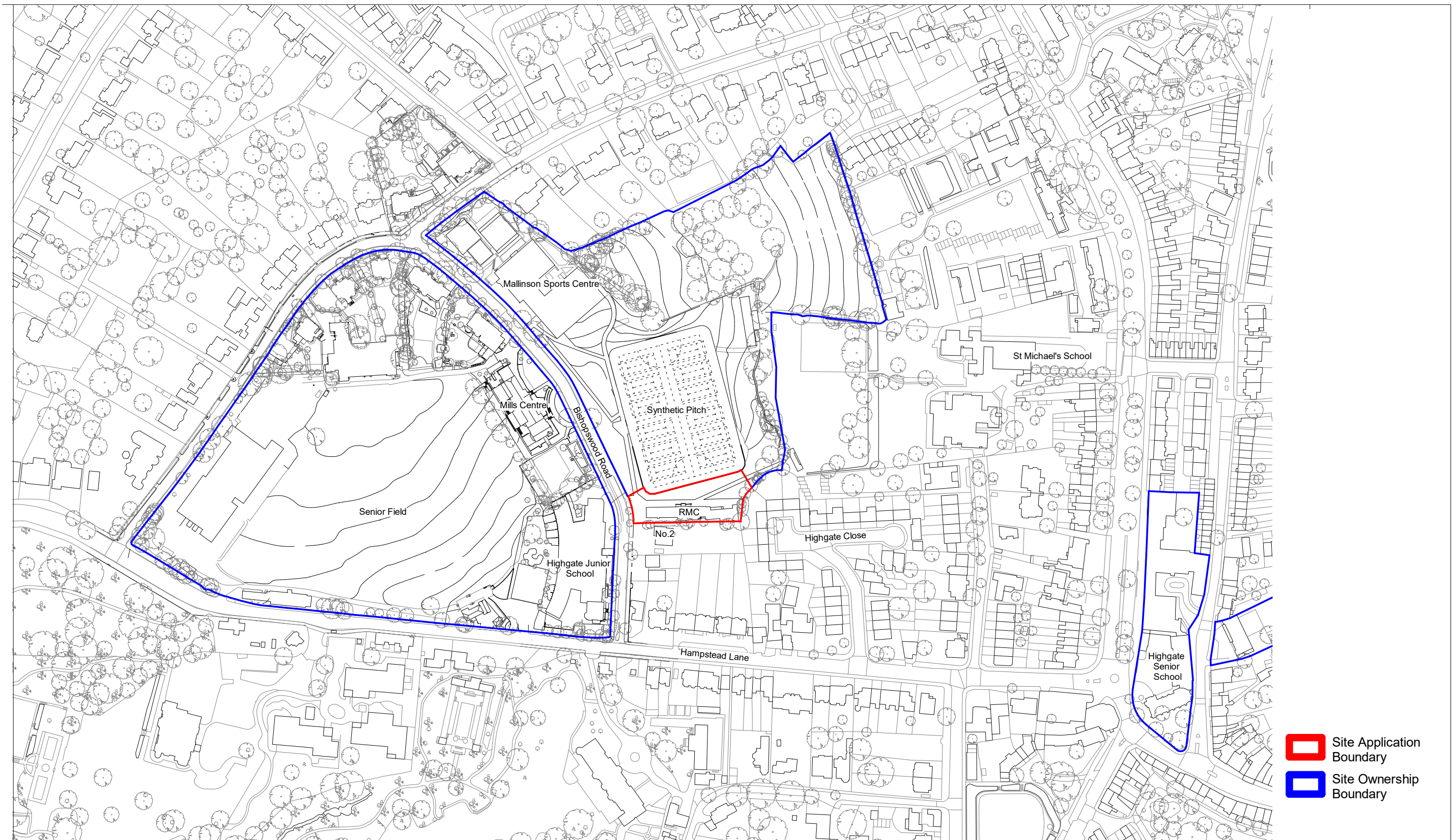
020 7620 2868

contact@a2-studio.com

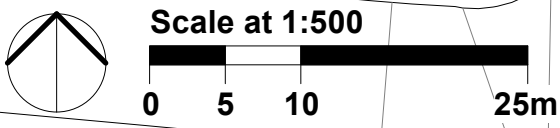
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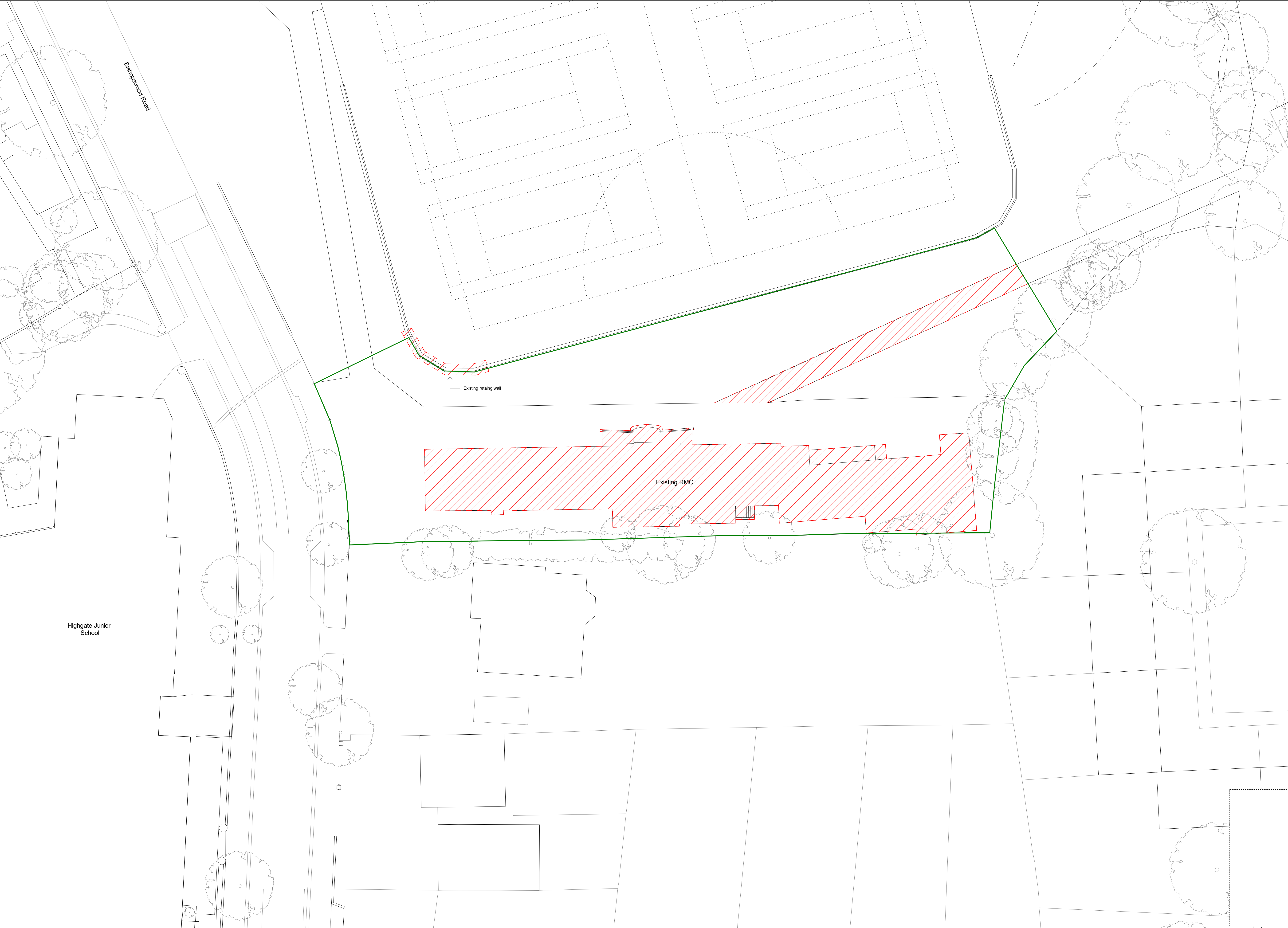


Appendix C. Selected supporting information



Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.
27.07.2018	A	Memo_0006_Stage 2 Background & Costing Issue	JG	Subject	Application Site Location & Ownership Boundary	A/HS-RMC2	2000	C
29.09.2018	B	Memo_0008_Stage 2 Issue	JG					
11.07.2019	C	Draft Planning Issue to Client	JW					
				Architects	Hopkins Architects Partnership LLP 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date 12/23/16	Scale1 : 2500	at A3

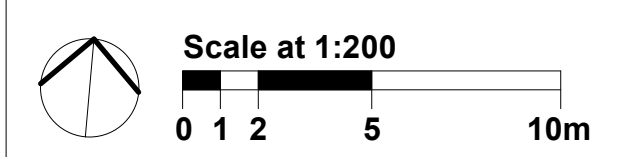
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- General Notes:**
- G1** All Levels are above ordnance datum (AOD)
New Levels are shown thus: [Symbol] 20.345
Retained Existing Levels thus: [Symbol] EX+20.345
Existing Levels are shown: [Symbol] EX+20.345
- G2** Door tags are shown thus: [Symbol] DG-011 ← Instance of doors per room
[Symbol] DRS-XXX ← Door type
[Symbol] FR-XXS ← Fire rating, 'S' denotes smoke seal
- G3** Abbreviations:
GN/AWC: Gender Neutral / Accessible WC
CS: Cleaner's Store
PH: Printer hub
ST: Store
RWP: Rain water pipe

- [Symbol] Planned Demolition
- [Symbol] Site Boundary

DRAFT PLANNING



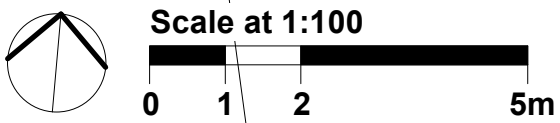
Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction

Date	Rev.	Description	Approved By
31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG
27.07.2018	B	Memo_0006_Stage 2 Background & Costing Issue	JG
29.09.2018	C	Memo_0008_Stage 2 Issue	JG
11.07.2019	D	Draft Planning Issue to Client	JW

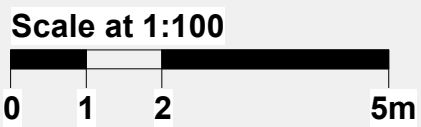
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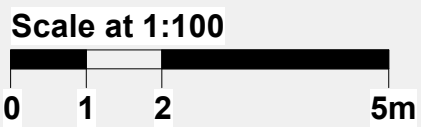
Project	Highgate School Richards Music Centre 2
Subject	Demolition Plan
Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk

Sort Code	Drawing Number	Rev.
A/HS-RMC2	2110	D
Date: 11/04/2018	Scale: 1 : 200	at A1

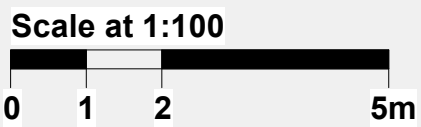


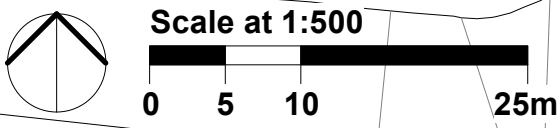
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						29.09.2018	B	Memo_0008_Stage 2 Issue	JG									
						11.07.2019	C	Draft Planning Issue to Client	JW									
														Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 07/25/18	Scale: 1 : 100	at A1

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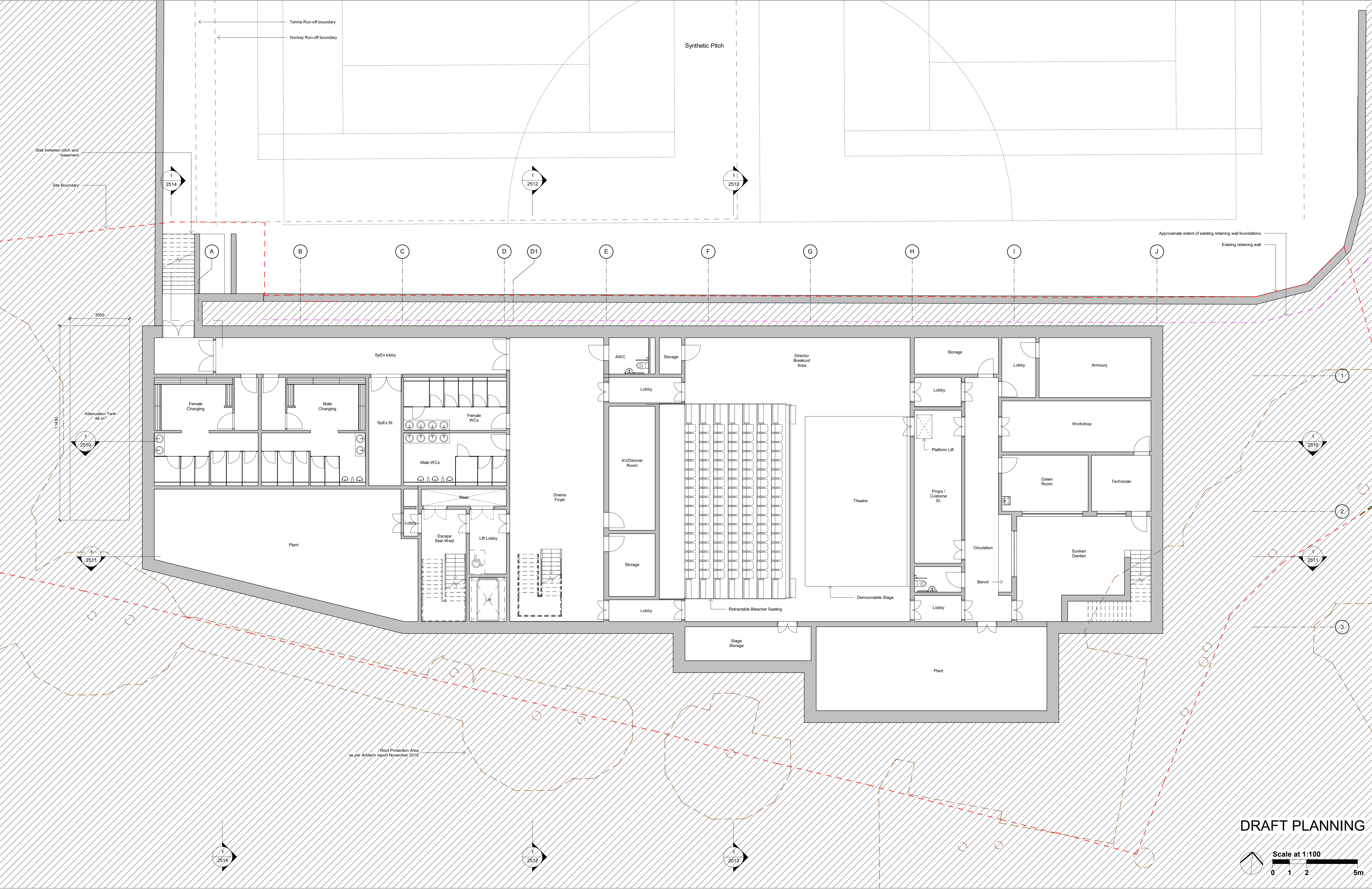


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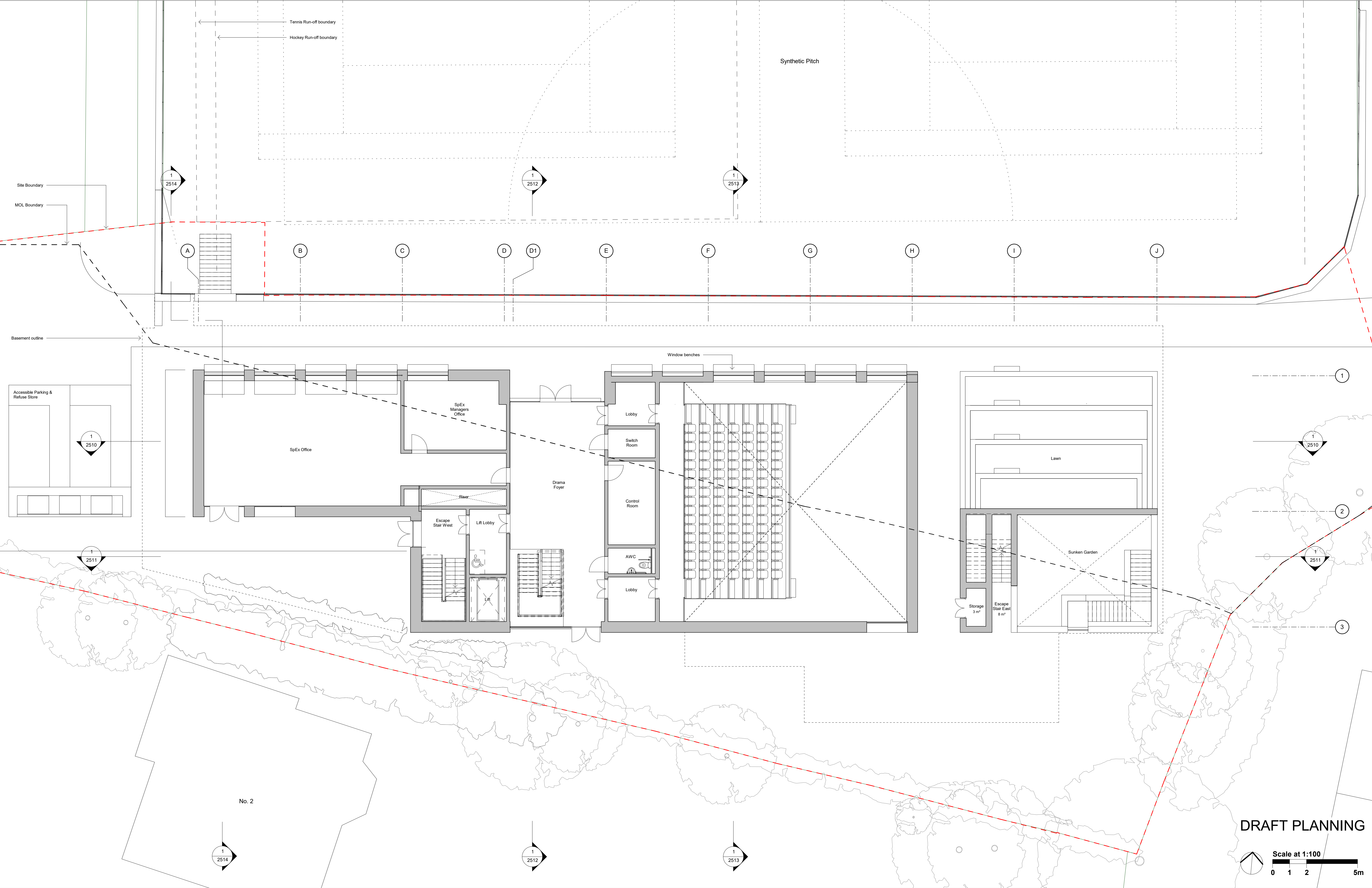
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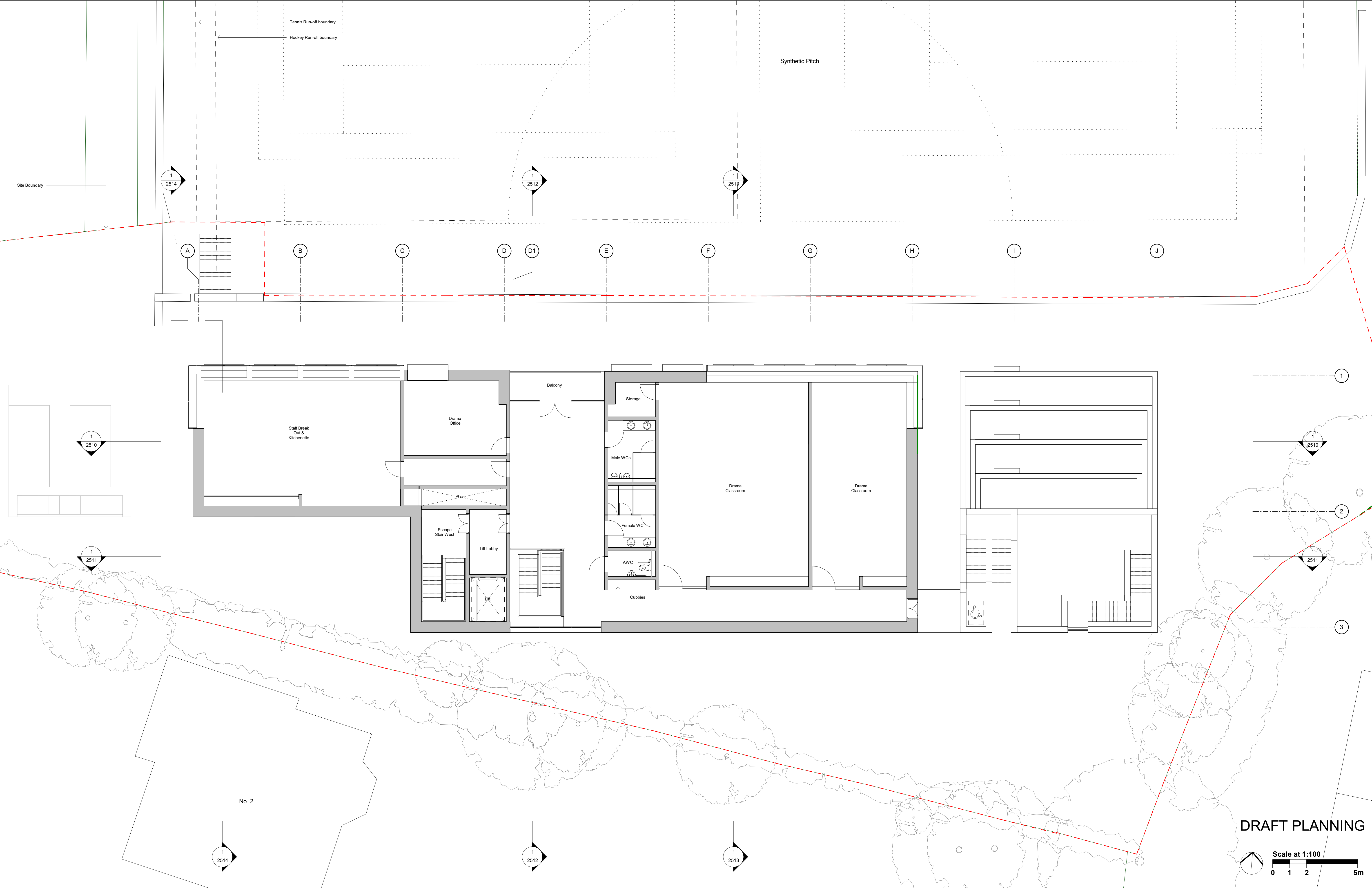
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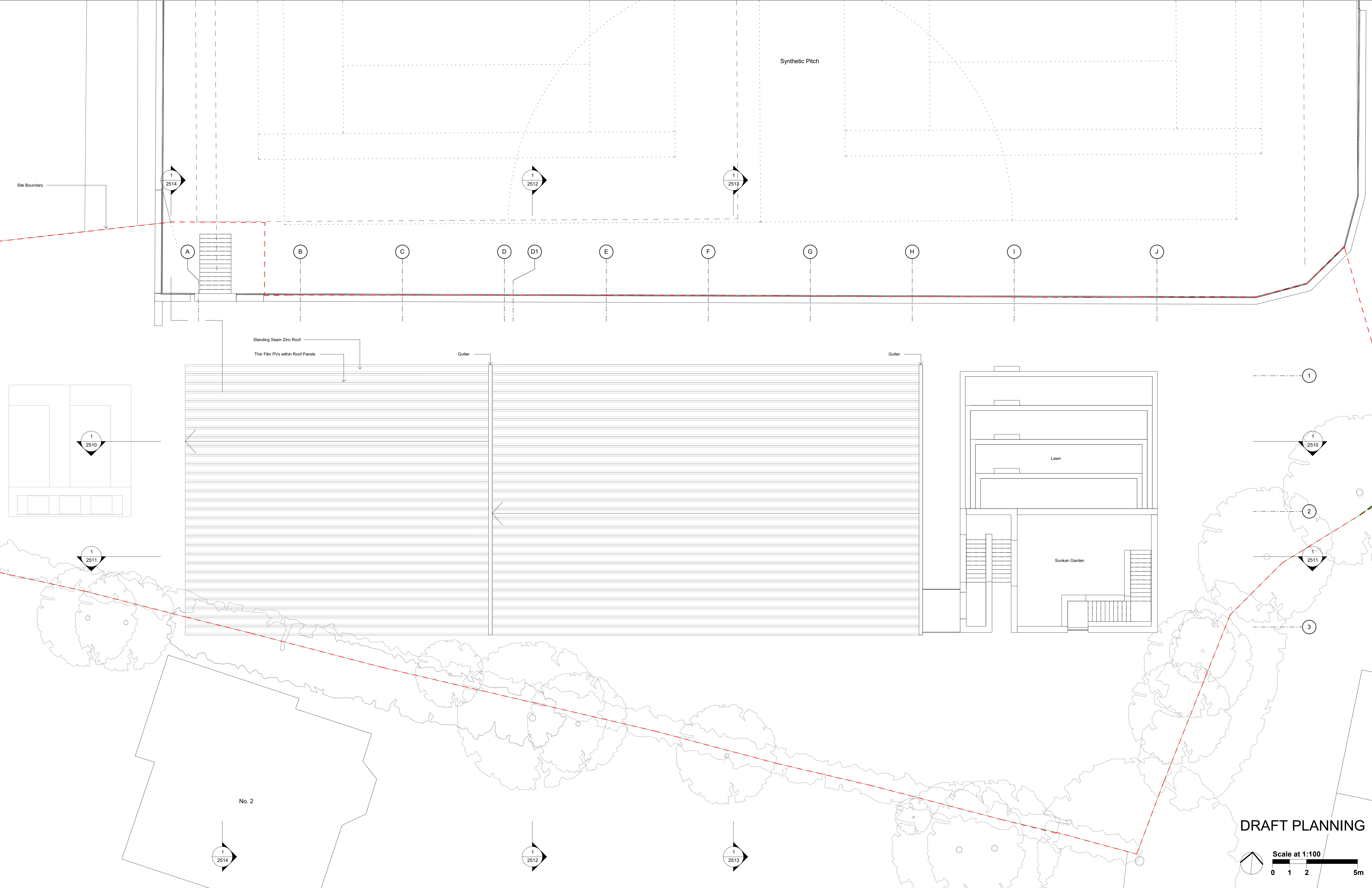
Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.	
						31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG					Subject	Proposed GA Basement Plan	A/HS-RMC2	2310	H	
						07.06.2018	B	Memo_0003_Updated basement and east stair layout. Draft GA Issue for Interim Cost Check	JG										
						29.06.2018	C	Memo_0004_Update GA progress issue	JG										
						16.07.2018	D	Draft Issue to Fire Consultant	JG										
						20.07.2018	E	Memo_0005_Draft Stage 2 backgrounds issue	JG										
						27.07.2018	F	Memo_0006_Stage 2 Background & Costing Issue	JG										
						29.09.2018	G	Memo_0008_Stage 2 Issue	JG										
						11.07.2019	H	Draft Planning Issue to Client	JW										
															Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 11/04/2018	Scale: 1 : 100	at A1



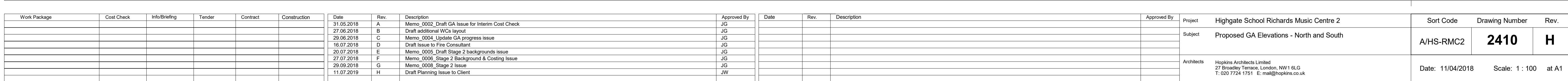
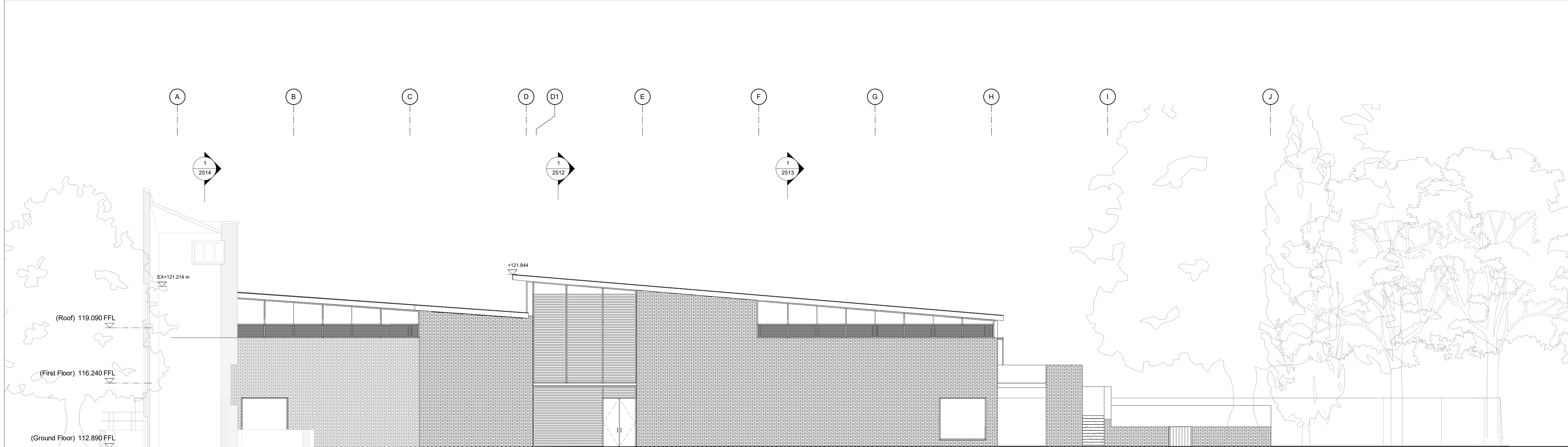
Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.
						31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG					Subject	Proposed GA Ground Floor Plan	A/HS-RMC2	2311	H
						07.06.2018	B	Memo_0003_Updated basement and east stair layout. Draft GA Issue for Interim Cost Check	JG									
						29.06.2018	C	Memo_0004_Update GA progress issue	JG									
						16.07.2018	D	Draft Issue to Fire Consultant	JG									
						20.07.2018	E	Memo_0005_Draft Stage 2 backgrounds issue	JG									
						27.07.2018	F	Memo_0006_Stage 2 Background & Costing Issue	JG									
						29.09.2018	G	Memo_0008_Stage 2 Issue	JG									
						11.07.2019	H	Draft Planning Issue to Client	JW									
														Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 11/04/2018	Scale: 1 : 100	at A1

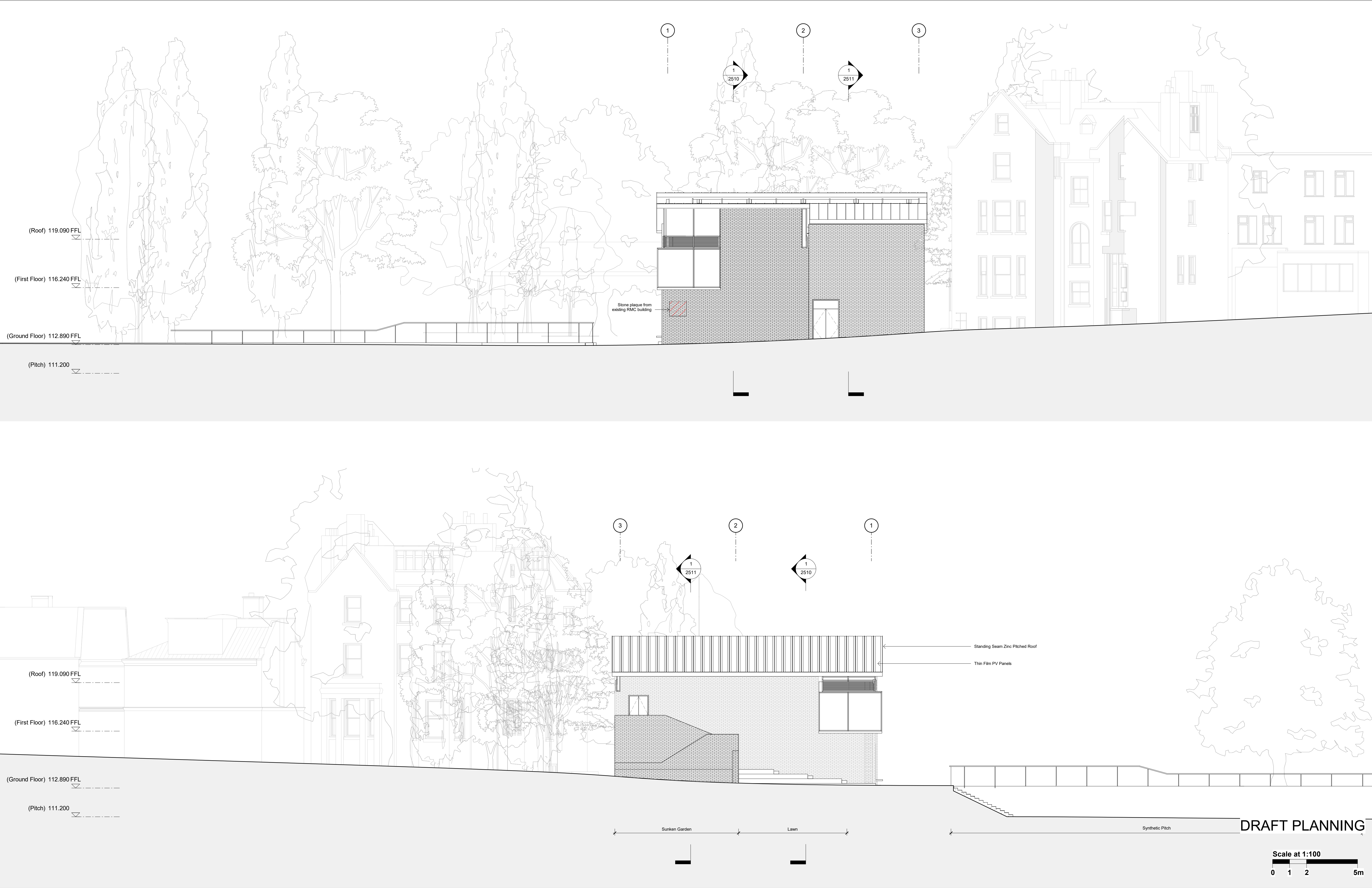


Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.
						31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG					Subject	Proposed GA First Floor Plan	A/HS-RMC2	2312	H
						07.06.2018	B	Memo_0003_Updated basement and east stair layout. Draft GA Issue for Interim Cost Check	JG									
						29.06.2018	C	Memo_0004_Update GA progress issue	JG									
						16.07.2018	D	Draft Issue to Fire Consultant	JG									
						20.07.2018	E	Memo_0005_Draft Stage 2 backgrounds issue	JG									
						27.07.2018	F	Memo_0006_Stage 2 Background & Costing Issue	JG									
						29.09.2018	G	Memo_0008_Stage 2 Issue	JG									
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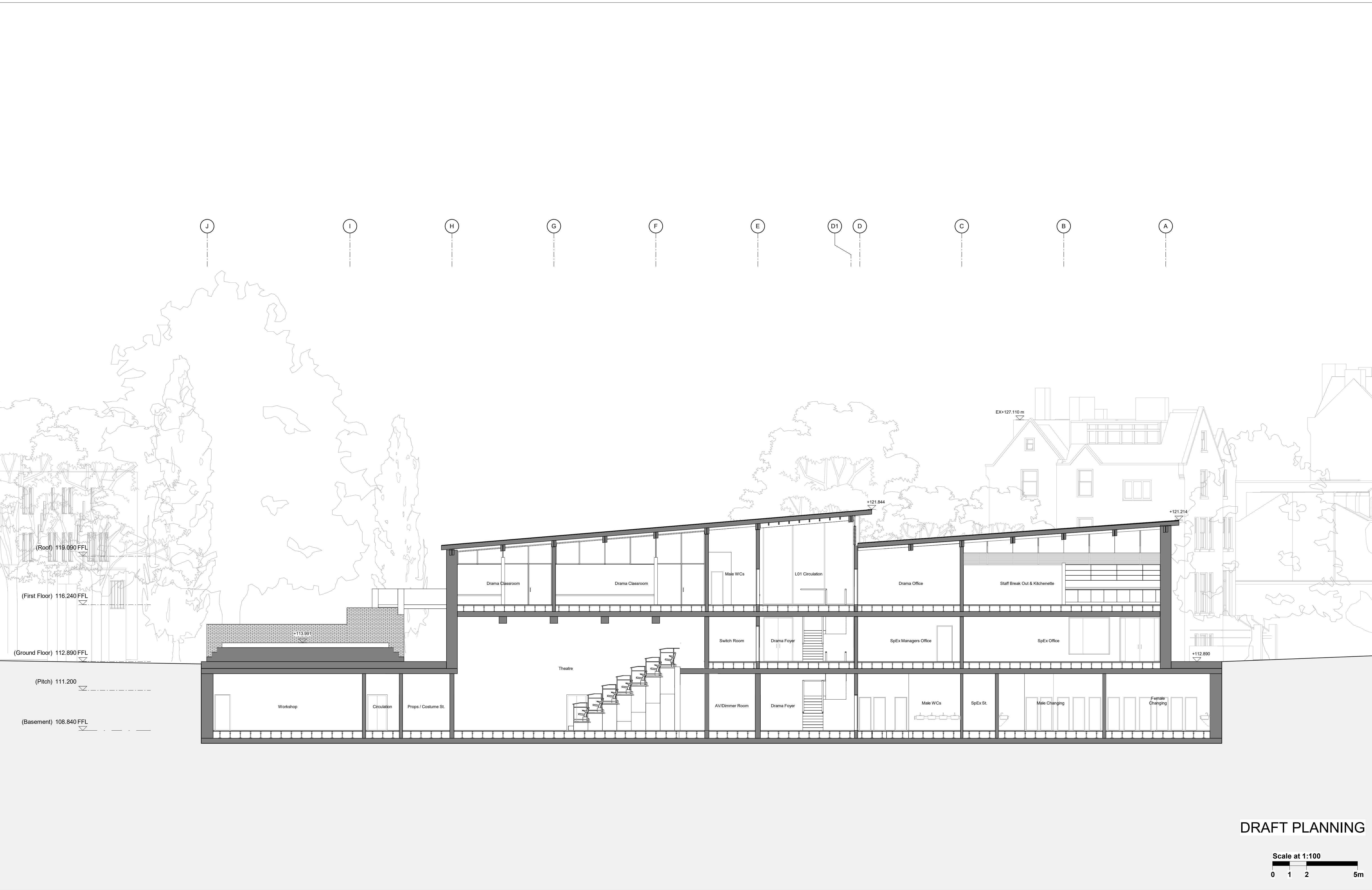


Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Subject	Architects	Sort Code	Drawing Number	Rev.
						31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG					Highgate School Richards Music Centre 2	Proposed GA Roof Plan	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	A/HS-RMC2	2313	H
						07.06.2018	B	Memo_0003_Updated basement and east stair layout. Draft GA Issue for Interim Cost Check	JG										
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						20.07.2018	E	Memo_0005_Draft Stage 2 backgrounds issue	JG										
						27.07.2018	F	Memo_0006_Stage 2 Background & Costing Issue	JG										
						29.09.2018	G	Memo_0008_Stage 2 Issue	JG										
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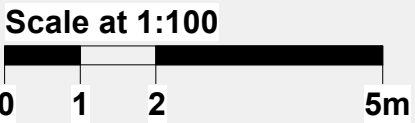
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						31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG					Subject	Proposed GA Elevations - East and West	A/HS-RMC2	2411	H
						27.06.2018	B	Draft additional WCs layout	JG									
						29.06.2018	C	Memo_0004_Update GA progress issue	JG					Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 11/04/2018	Scale: 1 : 100	at A1
						16.07.2018	D	Draft Issue to Fire Consultant	JG									
						20.07.2018	E	Memo_0005_Draft Stage 2 backgrounds issue	JG									
						27.07.2018	F	Memo_0006_Stage 2 Background & Costing Issue	JG									
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						11.07.2019	H	Draft Planning Issue to Client	JW									



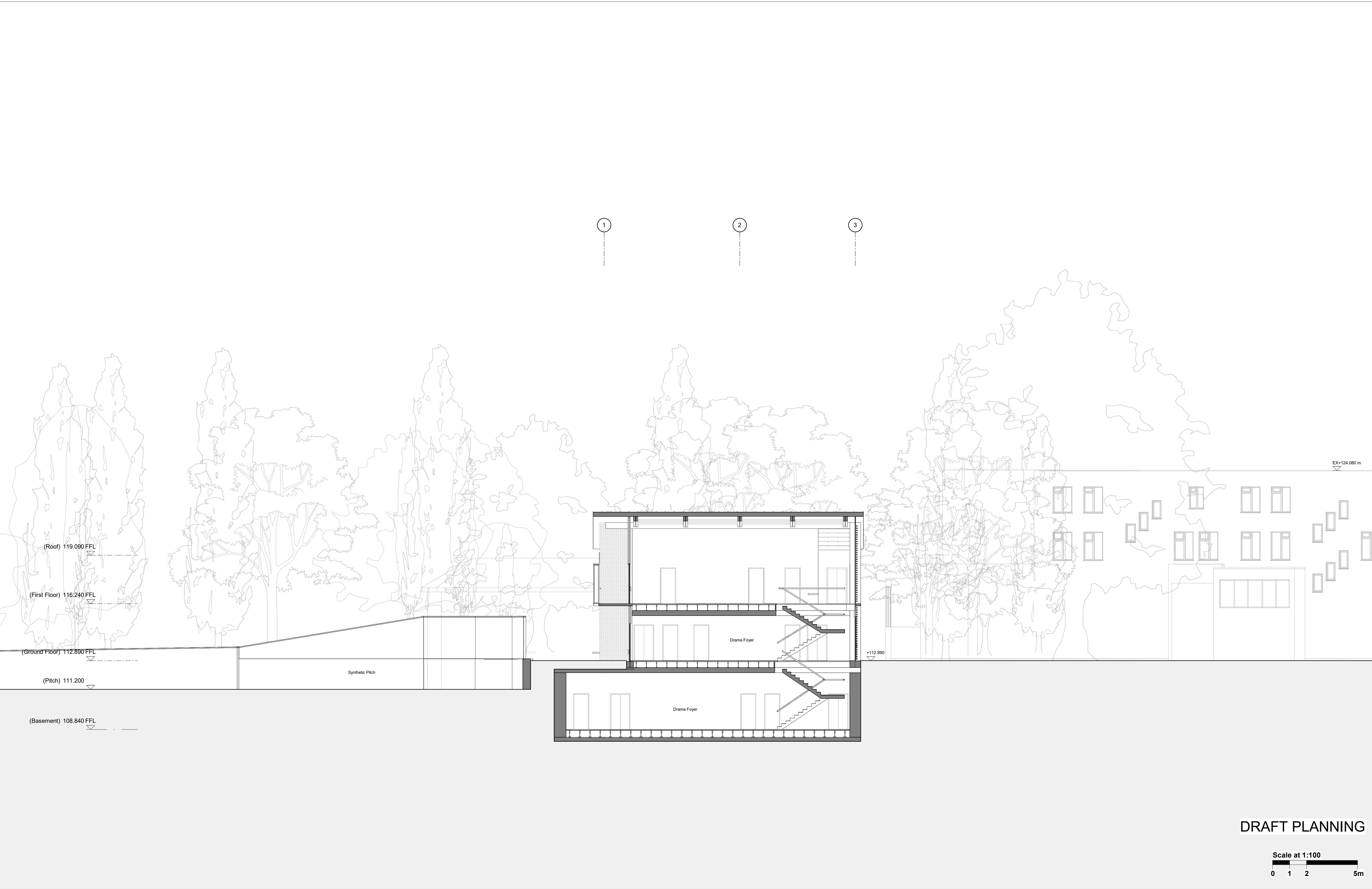
Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.
						31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG					Subject	Proposed GA Long Section Through Foyer	A/HS-RMC2	2510	H
						27.06.2018	B	Draft additional WCs layout	JG									
						29.06.2018	C	Memo_0004_Update GA progress issue	JG									
						16.07.2018	D	Draft Issue to Fire Consultant	JG									
						20.07.2018	E	Memo_0005_Draft Stage 2 backgrounds issue	JG									
						27.07.2018	F	Memo_0006_Stage 2 Background & Costing Issue	JG									
						29.09.2018	G	Memo_0008_Stage 2 Issue	JG									
						11.07.2019	H	Draft Planning Issue to Client	JW									
														Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 11/04/2018	Scale: 1 : 100	at A1



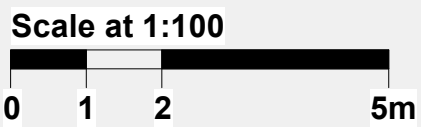
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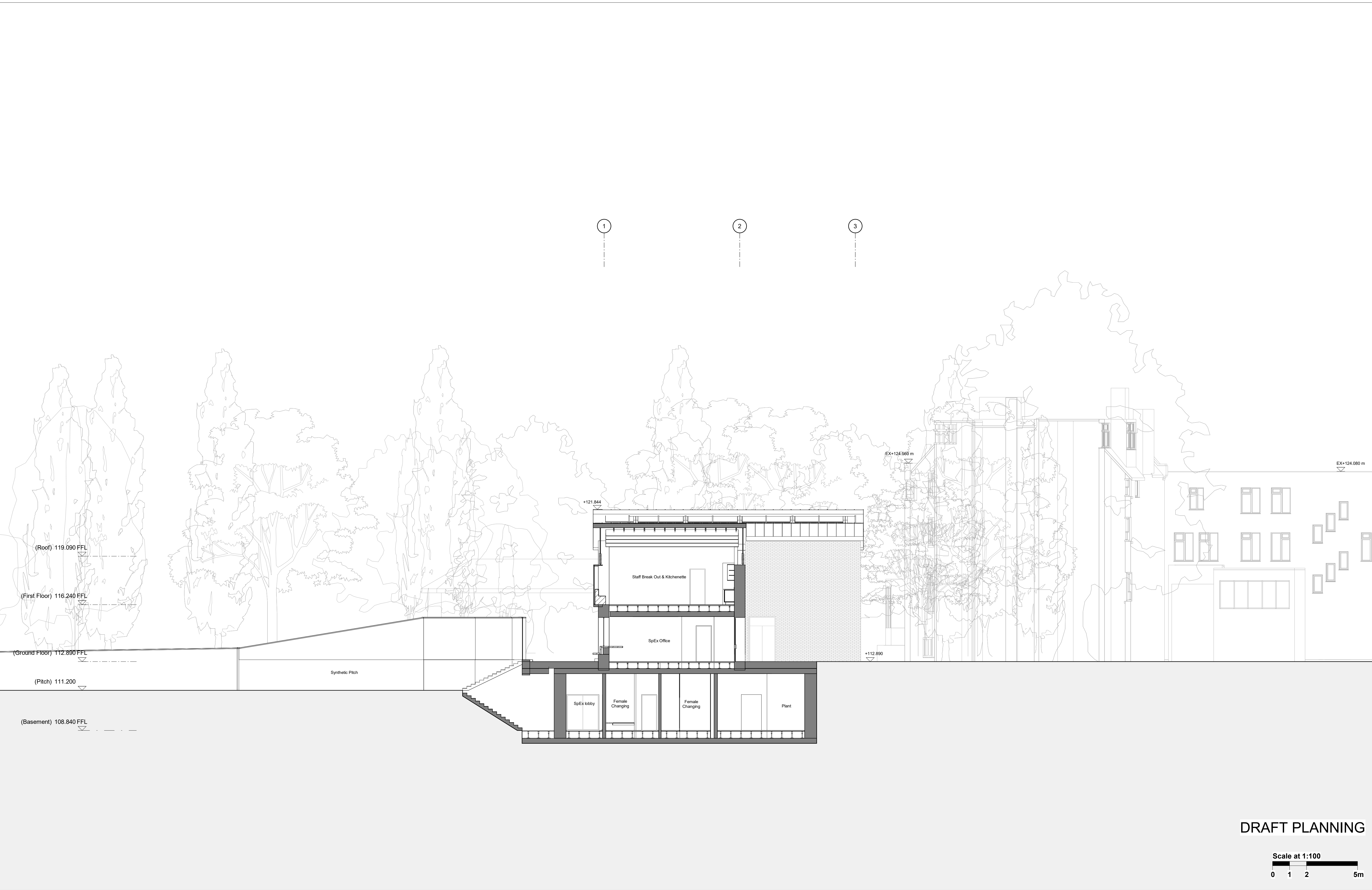


Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.
						27.07.2018	A	Memo_0006_Stage 2 Background & Costing Issue	JG					Subject	Proposed GA Long Section Through Stairs and Sunken Garden	A/HS-RMC2	2511	C
						28.09.2018	B	Memo_0008_Stage 2 Issue	JG									
						11.07.2019	C	Draft Planning Issue to Client	JW									
														Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 07/24/18	Scale: 1 : 100	at A1



Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.
						31.05.2018	A	Memo_0002_Draft GA Issue for Interim Cost Check	JG					Subject	Proposed GA Cross Section Through Foyer	A/HS-RMC2	2512	H
						27.06.2018	B	Draft additional WCs layout	JG									
						29.06.2018	C	Memo_0004_Update GA progress issue	JG					Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 07/24/18	Scale: 1 : 100	at A1
						16.07.2018	D	Draft Issue to Fire Consultant	JG									
						20.07.2018	E	Memo_0005_Draft Stage 2 backgrounds issue	JG									
						27.07.2018	F	Memo_0006_Stage 2 Background & Costing Issue	JG									
						29.09.2018	G	Memo_0008_Stage 2 Issue	JG									
						11.07.2019	H	Draft Planning Issue to Client	JW									

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Work Package	Cost Check	Info/Briefing	Tender	Contract	Construction	Date	Rev.	Description	Approved By	Date	Rev.	Description	Approved By	Project	Highgate School Richards Music Centre 2	Sort Code	Drawing Number	Rev.
						27.07.2018	A	Memo_0006_Stage 2 Background & Costing Issue	JG					Subject	Proposed GA Cross Section through offices/pitch connection stair	A/HS-RMC2	2514	C
						28.09.2018	B	Memo_0008_Stage 2 Issue	JG									
						11.07.2019	C	Draft Planning Issue to Client	JW									
														Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7724 1751 E: mail@hopkins.co.uk	Date: 07/24/18	Scale: 1 : 100	at A1

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