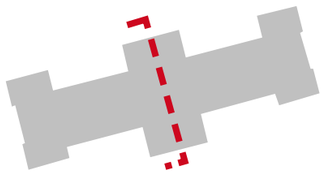
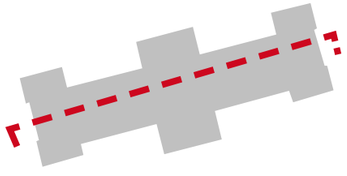
Part 05 Design Proposals

5.1 Visuals & Drawing Pack - Proposed
5.2 Accommodation Schedule
5.3 Area Plans
5.4 Site Plan & Landscaping
5.5 Accessibility
5.6 Stair Cores/Lift Access
5.7 WC Provision
5.8 Drainage/Damp Proofing
5.9 Kitchen/Service Strategy
5.10 Refuse Strategy
5.11 Cycle / Vehicle Parking
5.11 Environmental & Services Integration
5.12 Acoustic
5.13 Structure
5.14 Fire Strategy
5.15 External Lighting
5.16 Roof Access

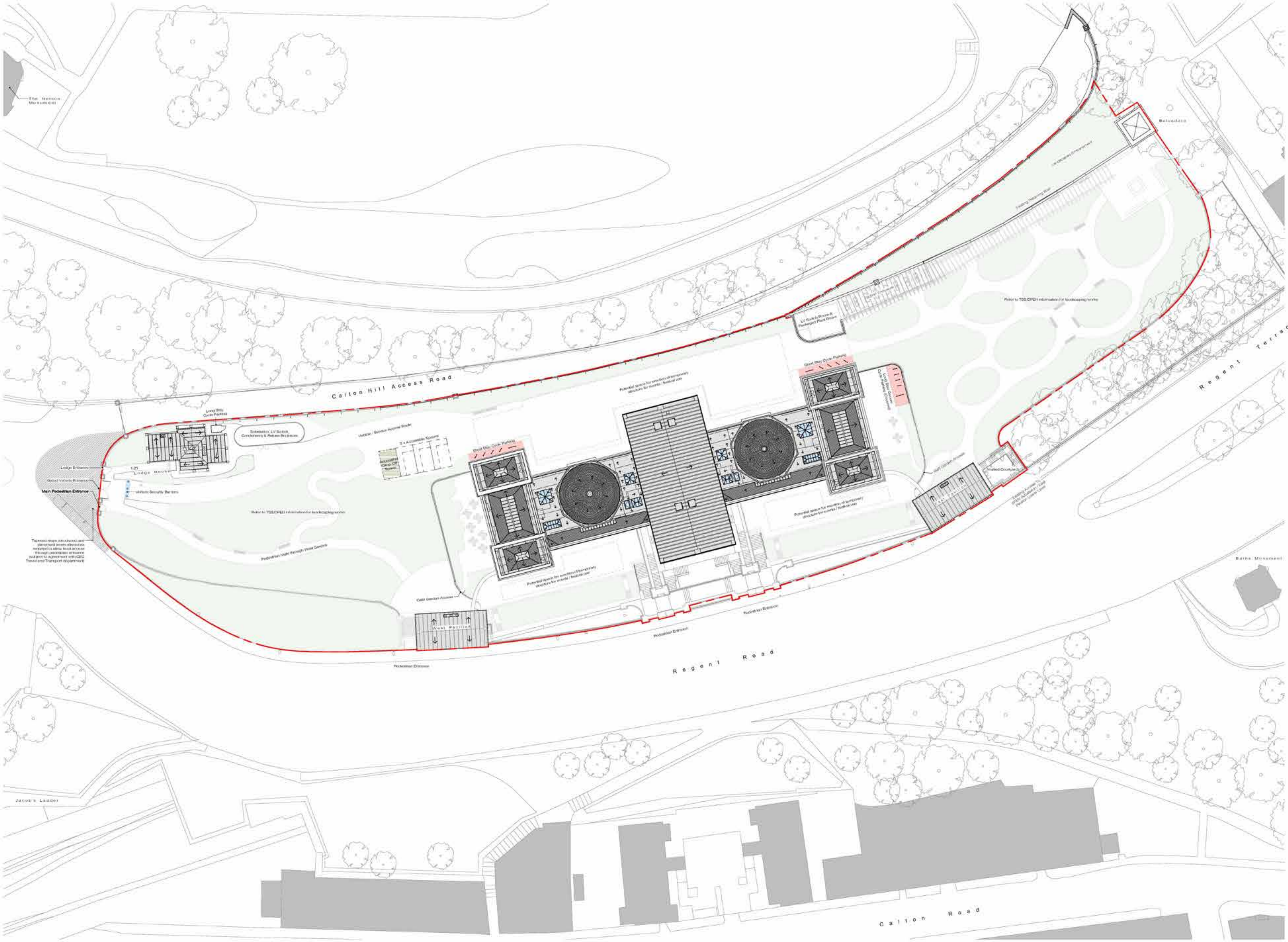
05



> Sectional Perspective - North - South



> Sectional Perspective - East - West



(1) Site Plan
1 : 250

NOTES

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GENERAL NOTES:

Refer to TDS / OPEUs for detailed information on soft and hard landscaping.

Site Boundary

Cycle Parking

Vehicle Security Barriers

Area outwith site to be upgraded to improve accessibility and wayfinding (subject to agreement with CEC Travel and Transport department)

Cycle Parking Provision:

Lodge House:	2 x Secure Long Stay
Site Wide Short Stay:	8 x Standard 800mm Long Sheffield Stands + 2 x Non-Standard 1500mm Long Sheffield Stands (as per minimum 20% guidance)
Long Stay Cycle Parking:	4 x Standard 800mm Long Sheffield Stands + 1 x Non-Standard 1500mm Long Sheffield Stands (as per minimum 20% guidance). Parking to be secured via locked gate to Staff Garden and weather protected by overhang to upstairs enclosure / landscaped terrace

P01	First Issue for Planning	05.04.24

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Richard Murphy Architects

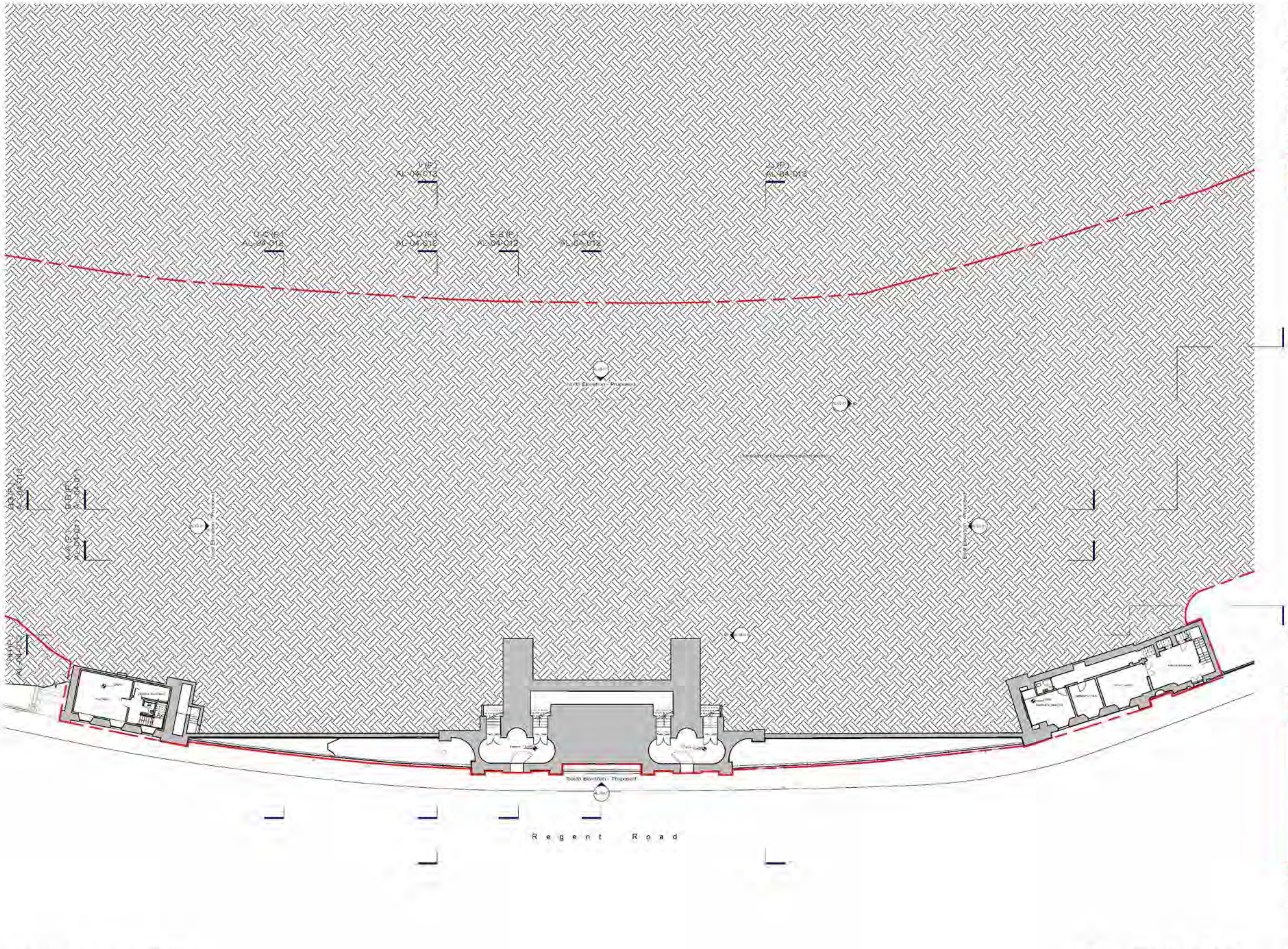
PROJECT TITLE: National Centre for Music, Royal High School, Edinburgh.

DRAWING TITLE: Site Plan Proposed

ISSUE STATUS: PLANNING

DRAWN	IM	JOB NO	554C
CHECKED	AB	DATE	05.04.24
ISSUED	JM	SCALE	As indicated

DWG NO: 554C-RMA-HS-XX-AL-02-010 REV: P01



1 Regent Road Entrance Level Plan
1 : 200

NOTES

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GENERAL NOTES

For detailed repairs to listed fabric, refer to conservation architect's information.

Drawings to be read in conjunction with the following information:

Existing Plans/Elevation/Sections	AL 01 Series
Demolition Plans	AL 02-001-004
Demolition & Proposed Elevations	AL 03 Series
Demolition & Proposed Sections	AL 04 Series

Site Boundary
Existing wall retained
New wall / element
Estimated extent of existing below ground structure. Survey to be undertaken prior demolition / excavation works.

P01 First Issue for Planning 05.04.24

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Richard Murphy Architects

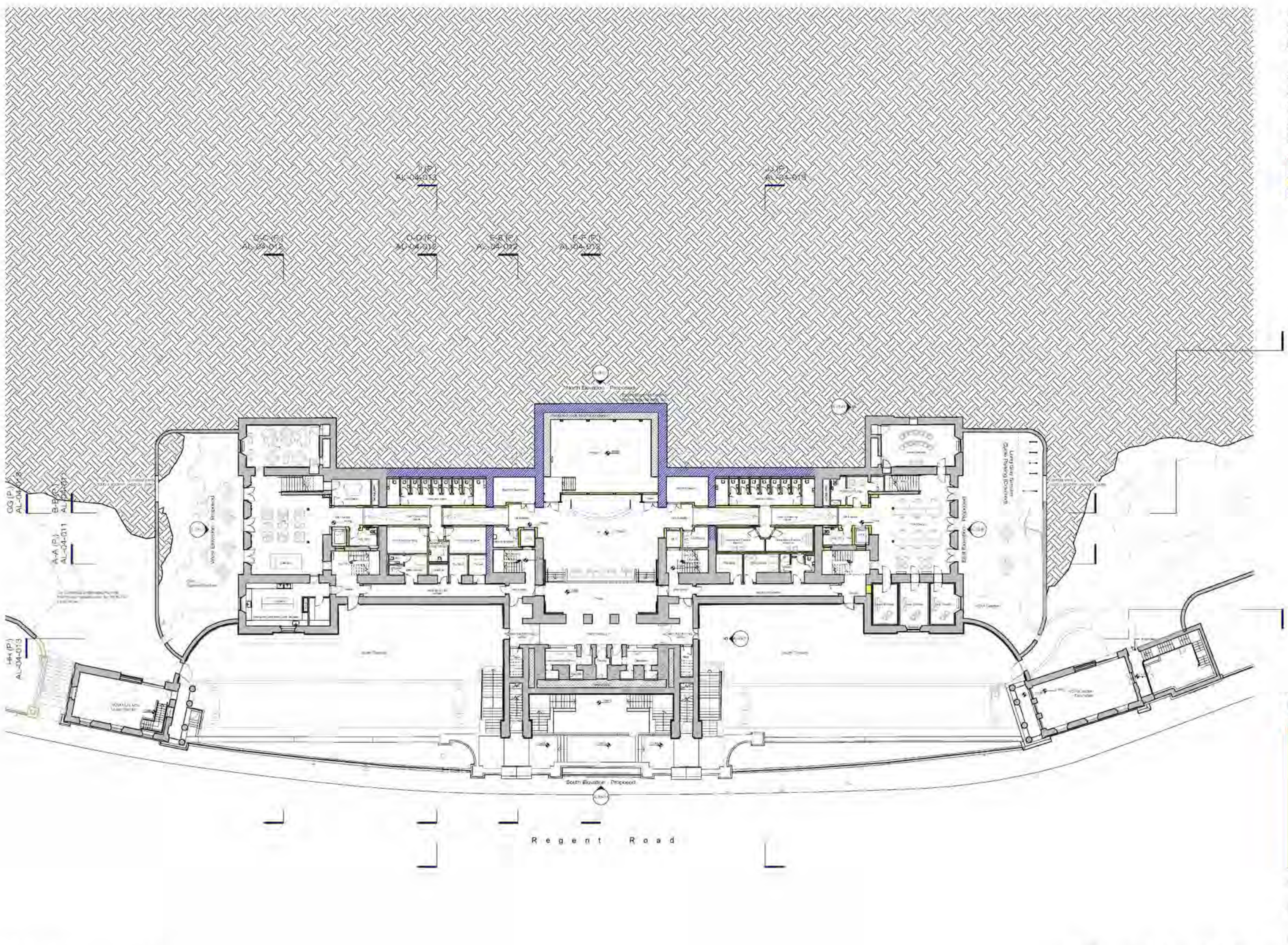
PROJECT TITLE National Centre for Music, Royal High School, Edinburgh.

DRAWING TITLE GA Plan Proposed Regent Road Level

DRAWING STATUS PLANNING

DRAWN	JM	JOB NO.	354C
CHECKED	AB	DATE	05.04.24
PASSED	JM	SCALE	1 : 200

DRAWING 354C-RMA-HS-XX-AL-02-011 REV P01



1 Lower Ground Floor GA Plan
1 : 200

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GENERAL NOTES

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Drawings to be read in conjunction with the following information:

Existing Plans/Elevation/Sections	AL-01 Series
Demolition Plans	AL-02-001-004
Demolition & Proposed Elevations	AL-03 Series
Demolition & Proposed Sections	AL-04 Series

Site Boundary
Existing wall retained
New wall / element
Estimated extents of existing below ground structure. Survey to be undertaken post demolition / excavation works.

P01 First Issue for Planning 05.04.24

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Richard Murphy Architects

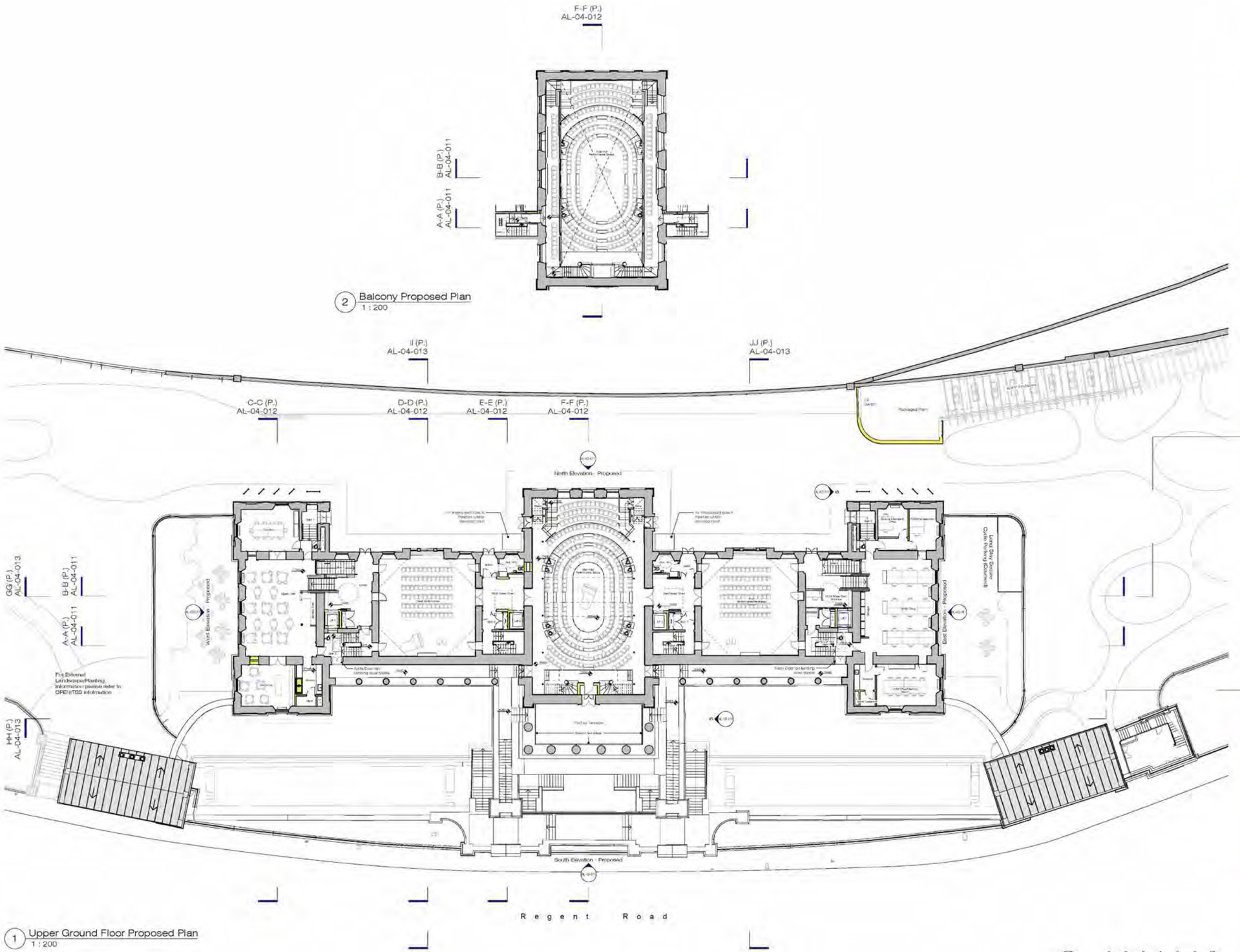
PROJECT TITLE National Centre for Music, Royal High School, Edinburgh.

DRAWING TITLE GA Plan Proposed Lower Ground Floor Level

DWG STATUS PLANNING

DRAWN	IM	PROJECT	554C
CHECKED	AB	DATE	05.04.24
PASSED	IM	SCALE	1 : 200

DWG NO. 554C-RMA-HS-XX-AL-02-012 REV P01



2 Balcony Proposed Plan
1 : 200

1 Upper Ground Floor Proposed Plan
1 : 200

SCALE
1:200

NOTES

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GENERAL NOTES:

For detailed repairs to listed fabric, refer to conservation architects information.

Drawings to be read in conjunction with the following information:

Existing Plans/Elevation/Sections:	AL-01 Series
Demolition Plans:	AL-02-001-004
Demolition & Proposed Elevations:	AL-03 Series
Demolition & Proposed Sections:	AL 04 Series

Site Boundary
Existing wall retained
New wall / element
Estimated extents of existing below ground structure. Survey to be undertaken post demolition / excavation works

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Richard Murphy Architects

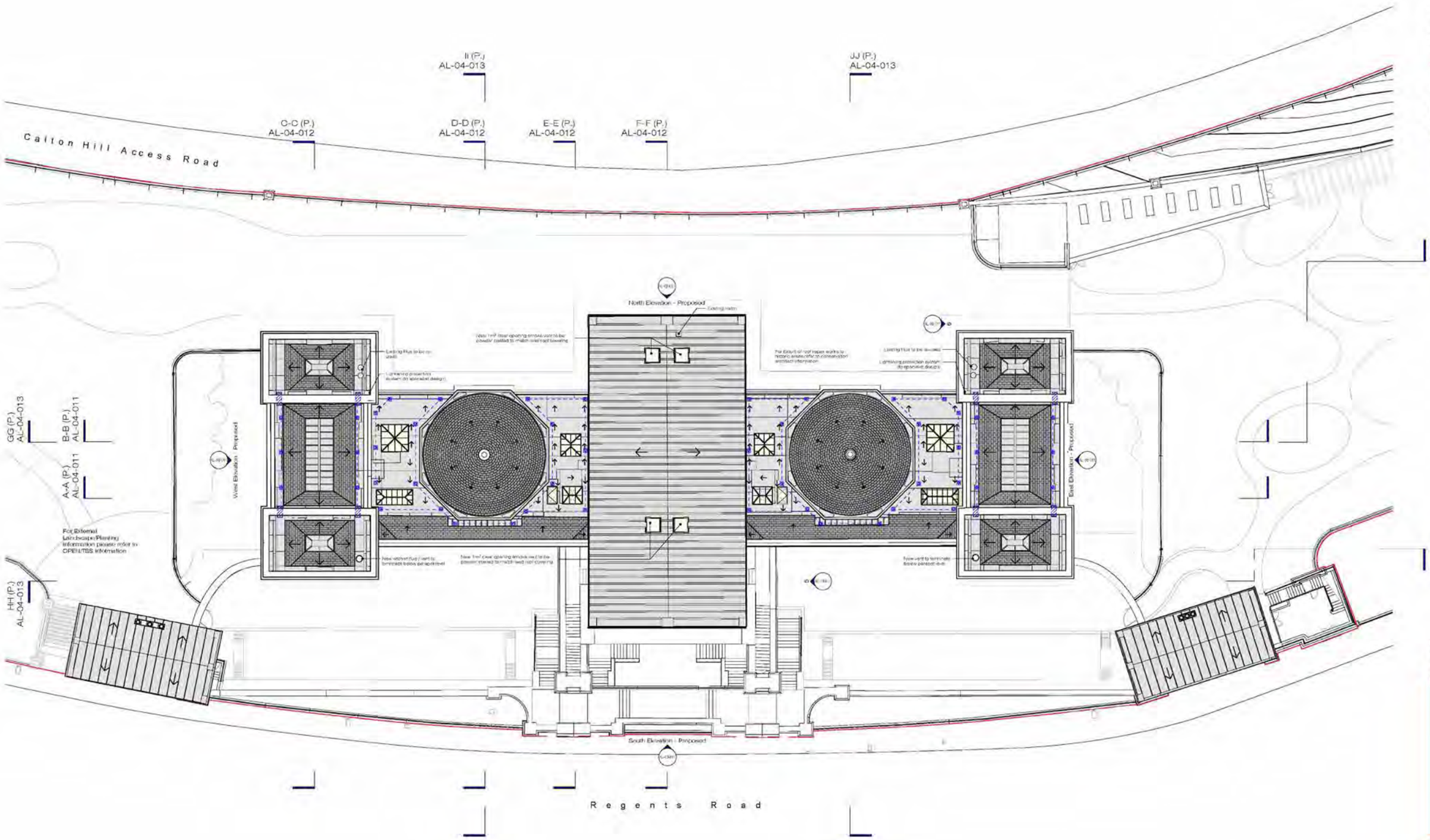
PROJECT TITLE: National Centre for Music, Royal High School, Edinburgh.

DRAWING TITLE: GA Plan Proposed Upper Ground & Balcony Level

STAGE STATUS: PLANNING

DRAWN	IM	JOB NO.	554C
CHECKED	AB	DATE	05.04.24
PASSED	JM	SCALE	1 : 200

DWG NO. 554C-RMA-HS-XX-AL-02-013 REV: P01



1 Roof Proposed Plan
1 : 200

SCALE 1:200

NOTES

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GENERAL NOTES

For detailed repairs to listed fabric, refer to conservation architects information. Existing cast iron and lead rainwater goods to be upsized with indicating overflows introduced to lead hoppers.

Drawings to be read in conjunction with the following information:

Existing Plans/Elevations/Sections:	AL-01 Series
Demolition Plans:	AL-02-001-004
Demolition & Proposed Elevations:	AL-03 Series
Demolition & Proposed Sections:	AL-04 Series

Site Boundary

Lead Roof
See Conservation Arch Information for extent of works

Slate Roof
See Conservation Arch Information for extent of works

New building fabric/new installations into existing building

Proposed Access Ladder/Parapet Step over

Proposed Latchway/Manisafe System to specialist design

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Richard Murphy Architects

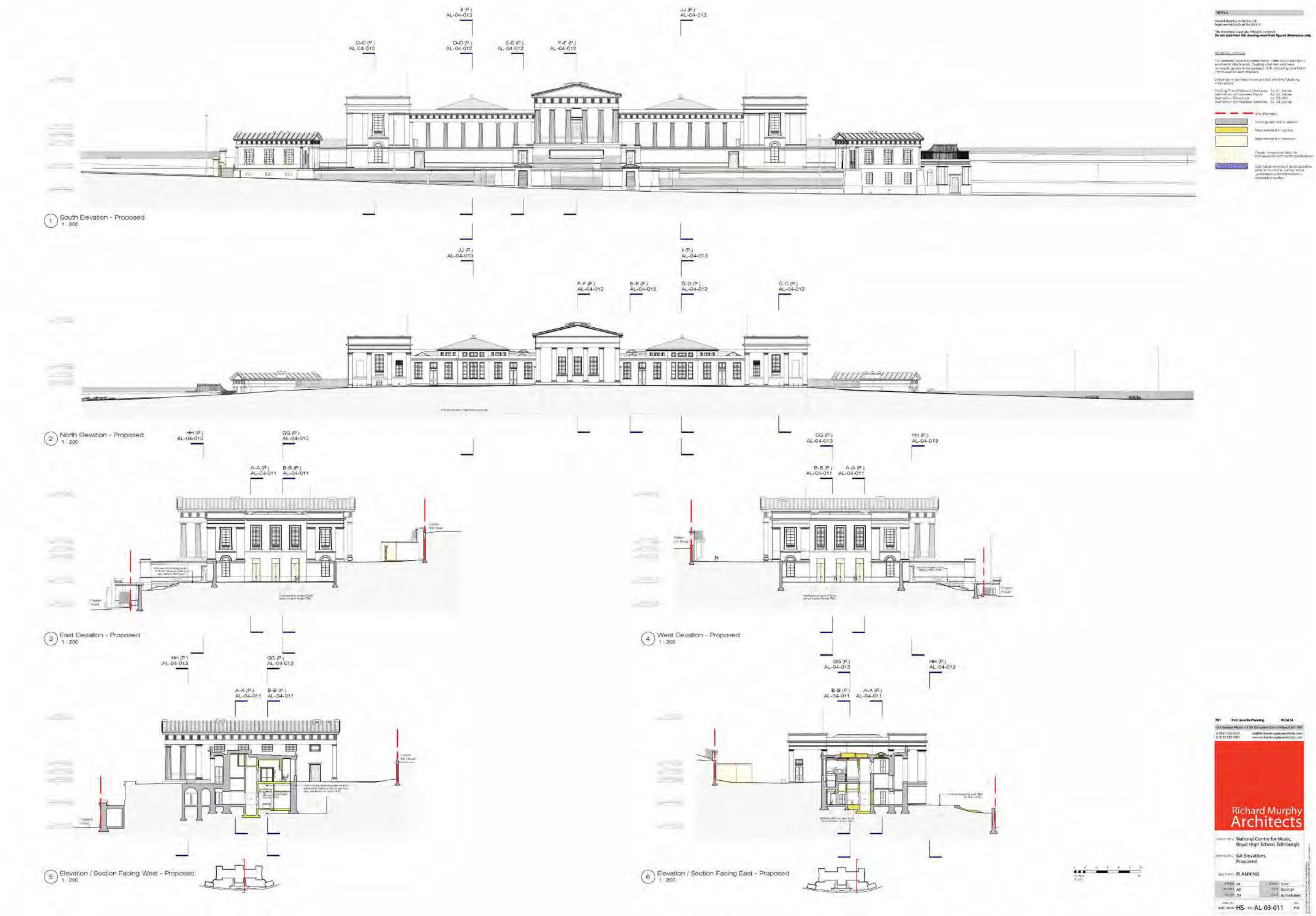
PROJECT TITLE: National Centre for Music, Royal High School, Edinburgh.

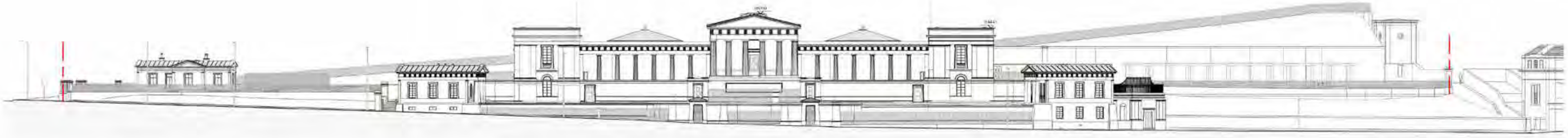
DRAWING TITLE: GA Plan Proposed Roof Level

DWG STATUS: PLANNING

DRAWN	IM	JOB NO	554C
CHECKED	AB	DATE	05.04.24
PASSED	JM	SCALE	1 : 200

DWG NO. 554C-RMA-HS-XX-AL-02-014 REV P01


South Elevation - Proposed
1 : 200
North Elevation - Proposed
1 : 200
East Elevation - Proposed
1 : 200
West Elevation - Proposed
1 : 200
Elevation / Section Facing West - Proposed
1 : 200
Elevation / Section Facing East - Proposed
1 : 200
Richard Murphy Architects
National Centre for Music, Royal High School, Edinburgh
GA Elevations Proposed
PLANNING

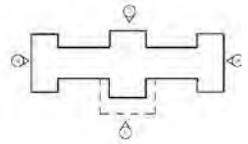


1 South Elevation - Proposed - Within Wider Context
1 : 250

2 North Elevation - Proposed - Within Wider Context
1 : 250

3 East Elevation - Proposed - Within Wider Context
1 : 250

4 West Elevation - Proposed - Within Wider Context
1 : 250



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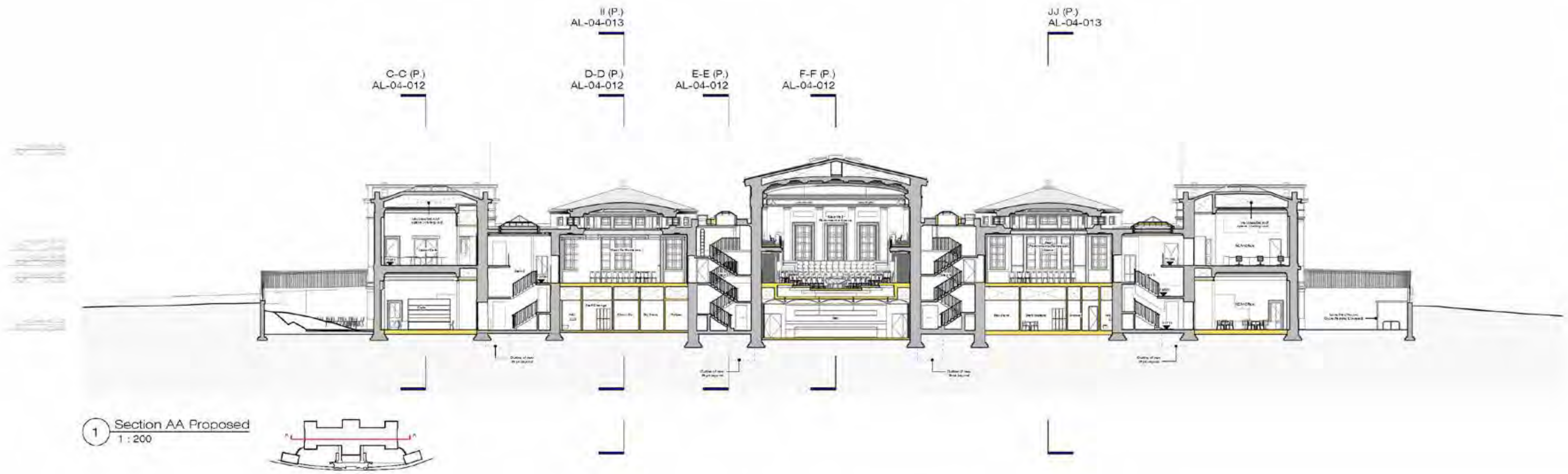
National Centre for Music, Royal High School, Edinburgh

GA Elevations Proposed - Within Wider Context

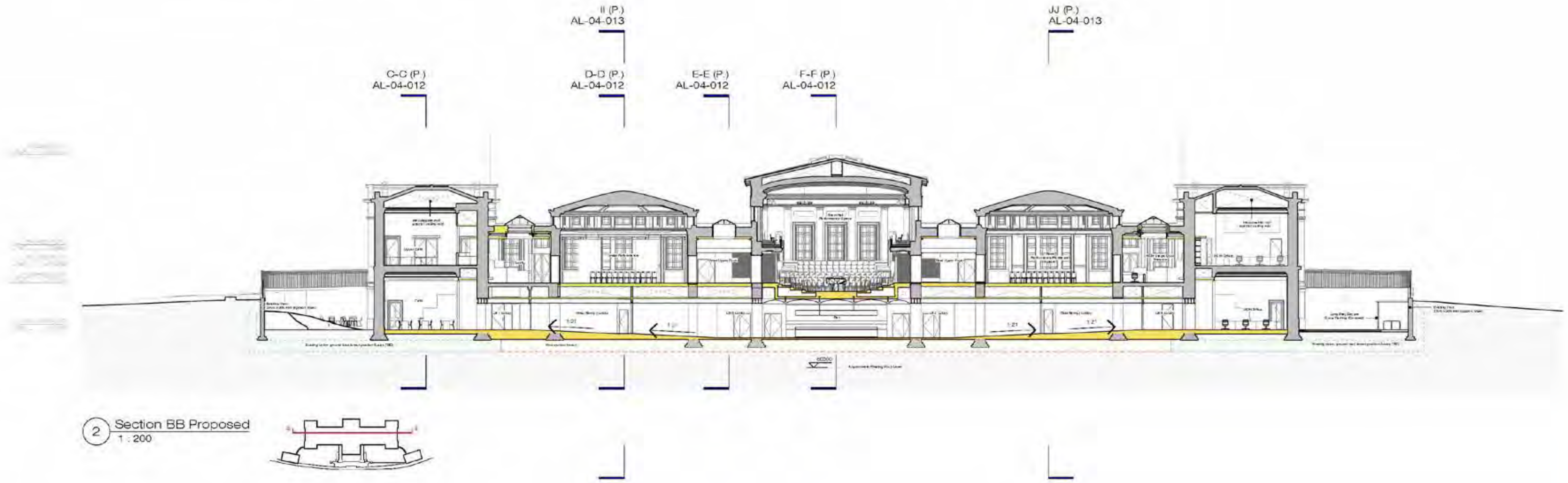
PLANNING

	JM		554C
	AR		03.04.24
	JM		As indicated

HS- -AL-03-012 P01



1 Section AA Proposed
1 : 200



2 Section BB Proposed
1 : 200

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GENERAL NOTES:

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Drawings to be read in conjunction with the following information

Existing Plans/Elevation/Sections	AL-01 Series
Demolition & Proposed Plans	AL-02 Series
Demolition & Proposed Elevations	AL-03-Series
Demolition Sections	AL-04-001/002

Existing element in section

New element in section

Estimated extents of existing below ground structure. Survey to be undertaken post demolition / excavation works

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Richard Murphy Architects

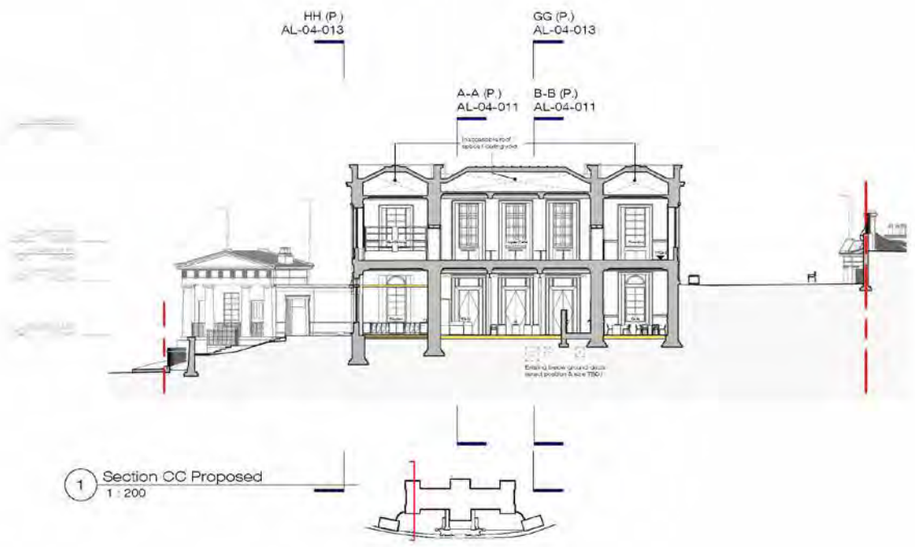
PROJECT TITLE National Centre for Music, Royal High School, Edinburgh.

DRAWING TITLE GA Sections - Proposed (Sheet 1 of 2)

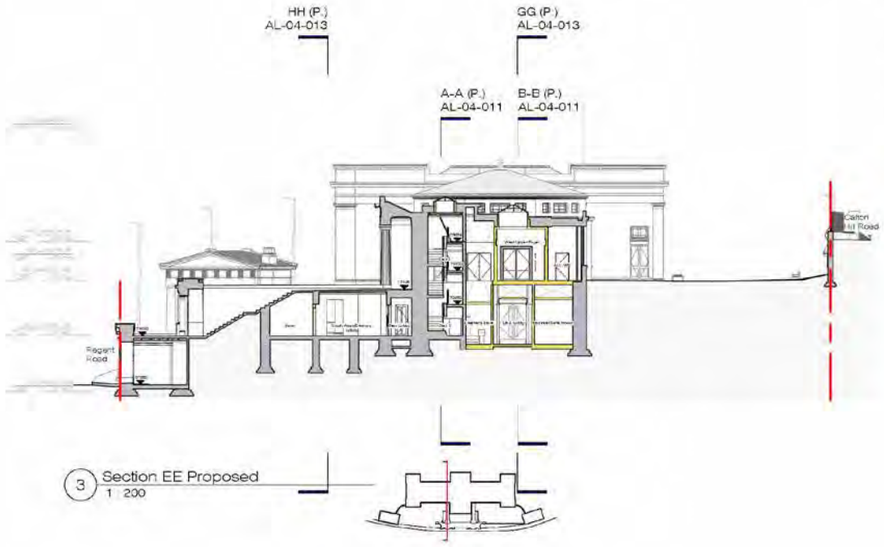
DWG STATUS PLANNING

DRAWN	IM	JOB NO	554C
CHECKED	AB	DATE	05.04.24
PASSED	JM	SCALE	As indicated

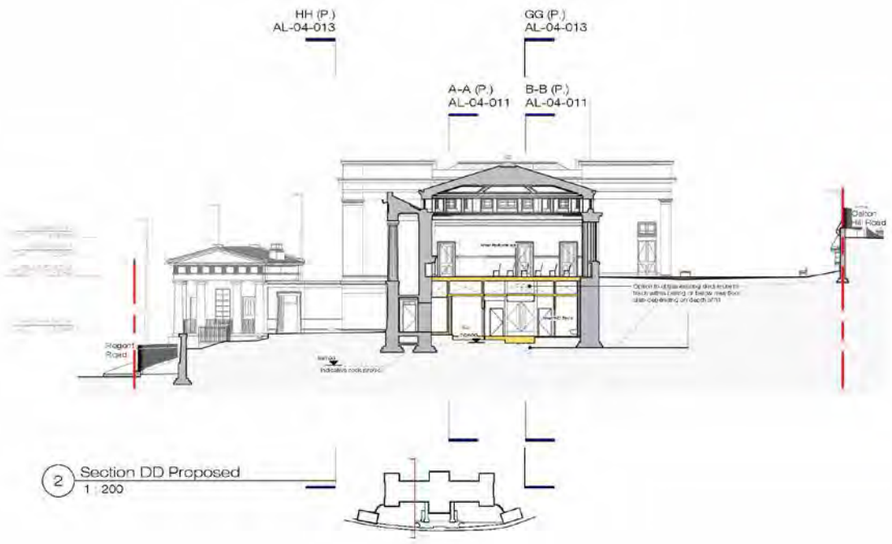
DWG NO 554C-RMA-HS-XX-AL-04-011 REV P01



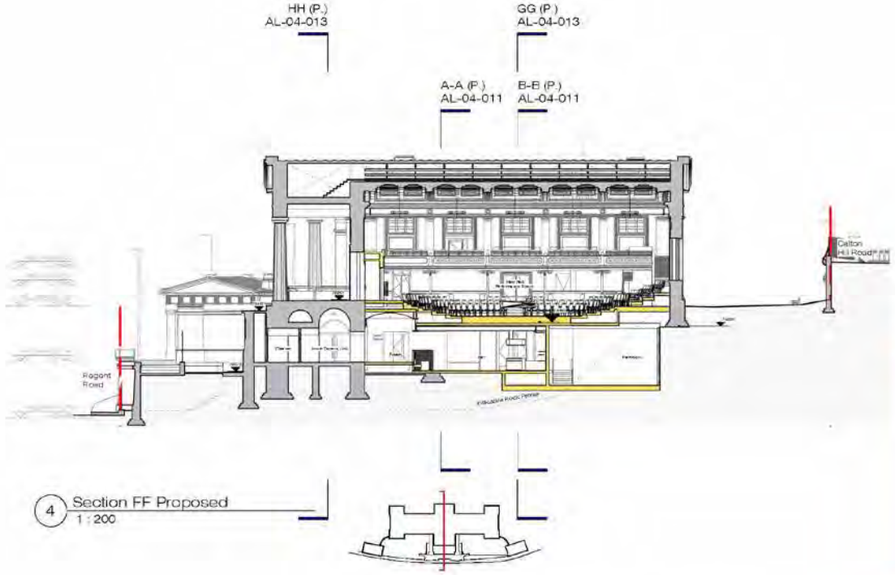
1 Section CC Proposed
1 : 200



3 Section EE Proposed
1 : 200



2 Section DD Proposed
1 : 200



4 Section FF Proposed
1 : 200

NOTES:

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GENERAL NOTES:

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Drawings to be read in conjunction with the following information:

Existing Plans/Elevations/Sections:	AL-01 Series
Demolition & Proposed Plans:	AL-02 Series
Demolition & Proposed Elevations:	AL-03 Series
Demolition Sections:	AL-04-001,002

Existing element in section

New element in section

Estimated extents of existing below ground structure. Survey to be undertaken post demolition / excavation works.

SCALE @ A1
1:200

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Richard Murphy Architects

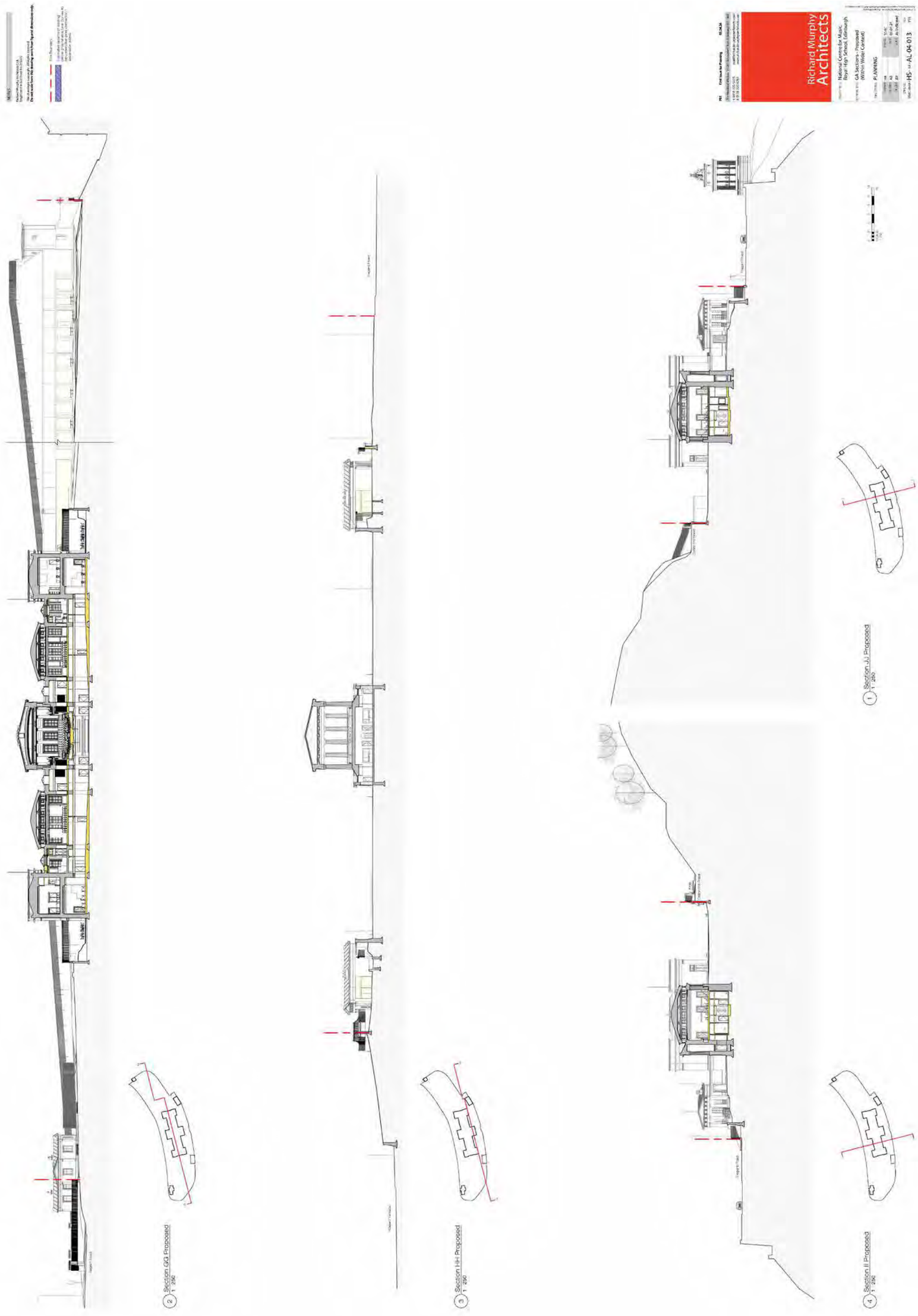
PROJECT TITLE: National Centre for Music, Royal High School, Edinburgh.

DRAWING TITLE: GA Sections - Proposed (Sheet 2 of 2)

DRAWING STATUS: PLANNING

DRAWN	IM	JOB NO.	554C
CHECKED	AB	DATE	05.04.24
PROJECT	JM	SCALE	As indicated

DWG NO. 554C-RMA-HS-XX-AL-04-012 REV P01

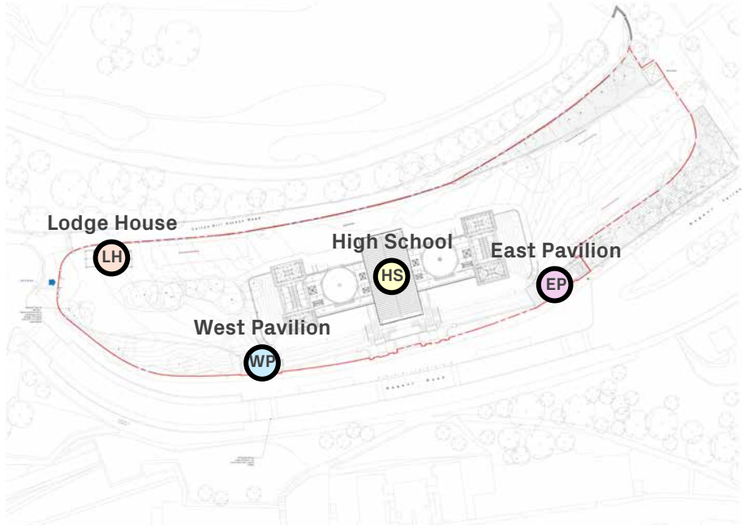

Richard Murphy Architects
National Centre for Music
Royal High School, Edinburgh
GA Sections - Proposed
(Within Wider Context)
PLANNING
HS-XX-AL-04-013
1 Section JJ Proposed
1 : 250
2 Section GG Proposed
1 : 250
3 Section HH Proposed
1 : 250
4 Section II Proposed
1 : 250

> 05.2 Accommodation Schedule

> Proposed Accommodation Schedules

Level	Room Number	Room Name	Area m²	Area sqft
HS_Regent Road	HS RR 001	East Porch (External Entrance)	26	280
HS_Regent Road	HS RR 002	West Porch (External Entrance)	26	280
HS_LGF	HS LGF 001	Café/Multi Use	46	495
HS_LGF	HS LGF 002	Cafe	84	904
HS_LGF	HS LGF 003	Kitchen	46	495
HS_LGF	HS LGF 004	F&B Office	13	140
HS_LGF	HS LGF 005	Lift 1 Lobby	10	108
HS_LGF	HS LGF 006	Accessible WC	6	65
HS_LGF	HS LGF 007	Stair 2	15	161
HS_LGF	HS LGF 008	Corridor	8	86
HS_LGF	HS LGF 009	Assited WC/Baby Change	8	86
HS_LGF	HS LGF 010	West WC Block	35	377
HS_LGF	HS LGF 011	West Connecting Route	35	377
HS_LGF	HS LGF 011	NCM General Store -A	13	140
HS_LGF	HS LGF 012	NCM General Store - B	13	140
HS_LGF	HS LGF 013	Kitchen Store	6	65
HS_LGF	HS LGF 014	Chem Store	3	32
HS_LGF	HS LGF 015	Refuse	4	43
HS_LGF	HS LGF 016	WC/Change	11	118
HS_LGF	HS LGF 017	West South Link Corridor	20	215
HS_LGF	HS LGF 018	Electrical Switch West	14	151
HS_LGF	HS LGF 020	Lift 2 Lobby	8	86
HS_LGF	HS LGF 021	Cleaner Store	6	65
HS_LGF	HS LGF 022	Stair 3	13	140
HS_LGF	HS LGF 023	Stair Lobby	4	43
HS_LGF	HS LGF 024	South West Entrance Lobby	13	140
HS_LGF	HS LGF 025	Store	5	54
HS_LGF	HS LGF 026	Plantroom	100	1076
HS_LGF	HS LGF 027	Foyer	47	506
HS_LGF	HS LGF 028	Bar/Foyer	125	1345
HS_LGF	HS LGF 029	South Terrace Link	35	377
HS_LGF	HS LGF 030	Information/Box Office	7	75
HS_LGF	HS LGF 030A	Elec DB	2	22
HS_LGF	HS LGF 031	Cleaner	3	32
HS_LGF	HS LGF 032	Cloakroom	7	75
HS_LGF	HS LGF 034	Comms Room	14	151
HS_LGF	HS LGF 035	Lift 3 Lobby	8	86
HS_LGF	HS LGF 036	NCM Store	6	65
HS_LGF	HS LGF 037	Stair 4	13	140
HS_LGF	HS LGF 038	Stair Lobby	4	43
HS_LGF	HS LGF 039	South East Entrance Lobby	14	151
HS_LGF	HS LGF 040	Store	5	54
HS_LGF	HS LGF 041	East WC Block	35	377
HS_LGF	HS LGF 043	East Connecting Route	35	377
HS_LGF	HS LGF 044	Recording/Practice Room	13	140
HS_LGF	HS LGF 044A	Recording/Practice Room	13	140
HS_LGF	HS LGF 046	Bar Store	7	75
HS_LGF	HS LGF 047	Staff Welfare	9	97
HS_LGF	HS LGF 048	Staff Shower/WC	9	97
HS_LGF	HS LGF 050	South Link Corridor	19	205
HS_LGF	HS LGF 051	Performer Change	14	151
HS_LGF	HS LGF 052	Lift 4 Lobby	8	86
HS_LGF	HS LGF 053	Acc. WC	5	54
HS_LGF	HS LGF 054	Stair 5	15	161
HS_LGF	HS LGF 055	Corridor	7	75
HS_LGF	HS LGF 056	Music Practice	41	441
HS_LGF	HS LGF 057	NCM Office	84	904
HS_LGF	HS LGF 058	Music Practice	13	140
HS_LGF	HS LGF 059	Music Practice	15	161
HS_LGF	HS LGF 060	Music Practice	13	140
HS_LGF	HS LGF S6	Stair 6	7	75
HS_LGF	HS LGF S1	Stair 1	8	86
HS_UGF	HS UGF 001	Function	34	366
HS_UGF	HS UGF 002	Stair 7	9	97
HS_UGF	HS UGF 003	Upper Café	92	990
HS_UGF	HS UGF 004	Bar/Dining	30	323
HS_UGF	HS UGF 005	Servery	9	97
HS_UGF	HS UGF 006	Lobby	26	280
HS_UGF	HS UGF 008	Stair 2	16	172
HS_UGF	HS UGF 009	West Performance	131	1410
HS_UGF	HS UGF 010	West Upper Foyer	19	205
HS_UGF	HS UGF 010A	Lobby	4	43
HS_UGF	HS UGF 011	Acc. WC	5	54
HS_UGF	HS UGF 012	Stair 3	13	140
HS_UGF	HS UGF 012A	Stair 3 (extension)	5	54
HS_UGF	HS UGF 013	Store	3	32
HS_UGF	HS UGF 014	Store	3	32
HS_UGF	HS UGF 015	Main Hall Performance Space	291	3132
HS_UGF	HS UGF 016	East Upper Foyer	9	97
HS_UGF	HS UGF 016A	Lobby	4	43
HS_UGF	HS UGF 017	Acc. WC	5	54
HS_UGF	HS UGF 018	Stair 4	13	140
HS_UGF	HS UGF 018A	Stair 4 (extension)	5	54
HS_UGF	HS UGF 019	East Performance/Rehearsal Space	130	1399
HS_UGF	HS UGF 020	NCM Stage Door Entrance	26	280
HS_UGF	HS UGF 020A	NCM Stage Door Store	2	22
HS_UGF	HS UGF 021	Stair 5	16	172
HS_UGF	HS UGF 021A	Store	2	22
HS_UGF	HS UGF 022	Stair 8	10	108
HS_UGF	HS UGF 023A	NCM Office Corridor	5	54
HS_UGF	HS UGF 023	Building Manager's Office	11	118
HS_UGF	HS UGF 024	NCM Management	15	161
HS_UGF	HS UGF 025	NCM Office	90	969
HS_UGF	HS UGF 026	Teapoint	7	75
HS_UGF	HS UGF 027	Store Cupboard	3	32
HS_UGF	HS UGF 028	NCM Office/Meeting Room	34	366
HS_Balcony	HS BL 01	Main Hall Balcony East	30	323
HS_Balcony	HS BL 02	Main Hall Balcony West	30	323

Level	Room Number	Room Name	Area m²	Area sqft
EP_Regent Road	EP RR 001	Circulation	23	248
EP_Regent Road	EP RR 002	WC	2	22
EP_Regent Road	EP RR 003	Gardener's Break Out	20	215
EP_Regent Road	EP RR 004	Gardener's Office	11	118
EP_Regent Road	EP RR 005	SPEN Substation	19	205
EP_Regent Road	EP RR 006	Stores	1	11
EP_LGF	EP LGF 001	Gardener Hub/Multi Use	58	624
WP_Regent Roac	EP RR 001	Plantroom	29	312
WP_Regent Roac	EP RR 002	Elec Switchroom	7	75
WP_Regent Roac	EP RR 003	WC	2	22
WP_Regent Roac	EP RR 004	Lobby	4	43
WP_LGF	HS LGF 001	Music Recital/Multi Use	55	592
LH_GF	LH GF 001	Bedroom 1	18	194
LH_GF	LH GF 002	Hall	4	43
LH_GF	LH GF 003	Shower room	4	43
LH_GF	LH GF 004	Bedroom 2	14	151
LH_GF	LH GF 005	Lounge	18	194
LH_GF	LH GF 006	Kitchen/Dining	15	161



> Building Key

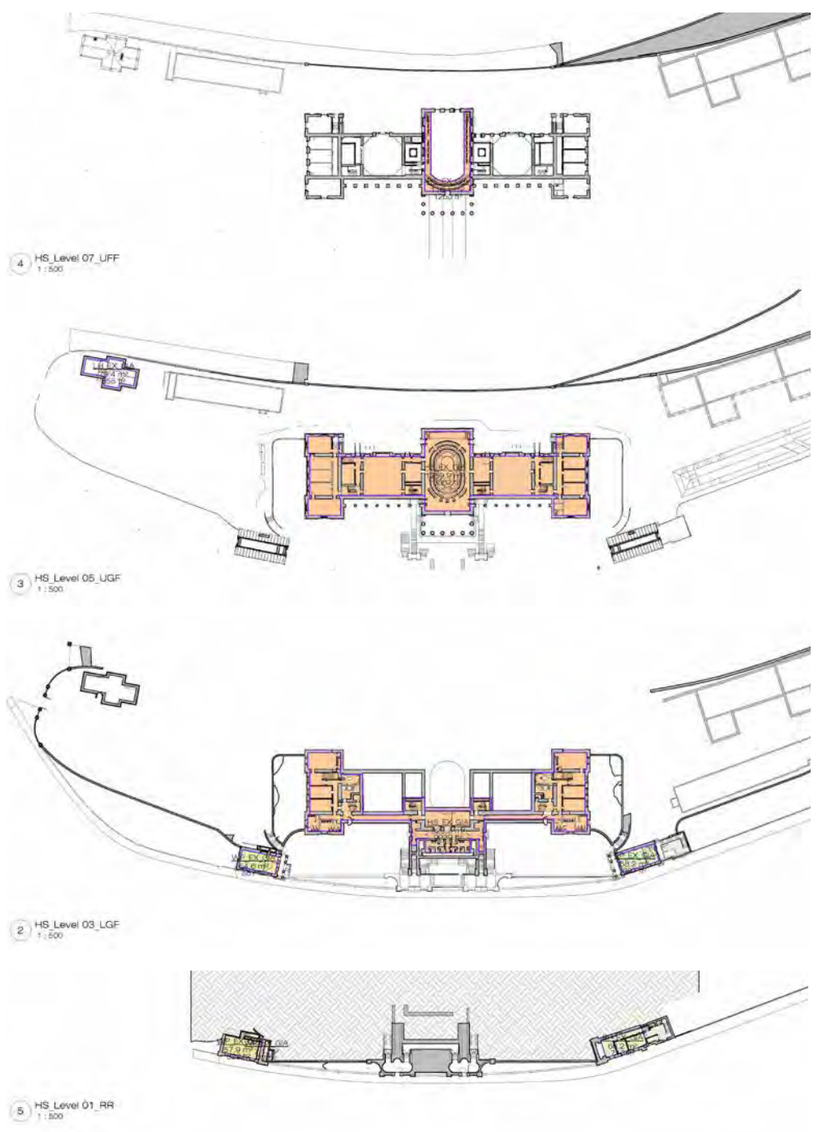
> 05.3 Area Plans

> The proposed development develops within the existing footprint of the building only with new area being created through excavation of the Lower Ground Floor.

> Approx. Gross Internal Area (GIA) summary

Existing
Lodge House - 79m²
East Pavilion - 124m²
West Pavilion - 113m²
Hamilton Building - 2299m²
Belvedere - 19m²
SITE TOTAL - 2634m²

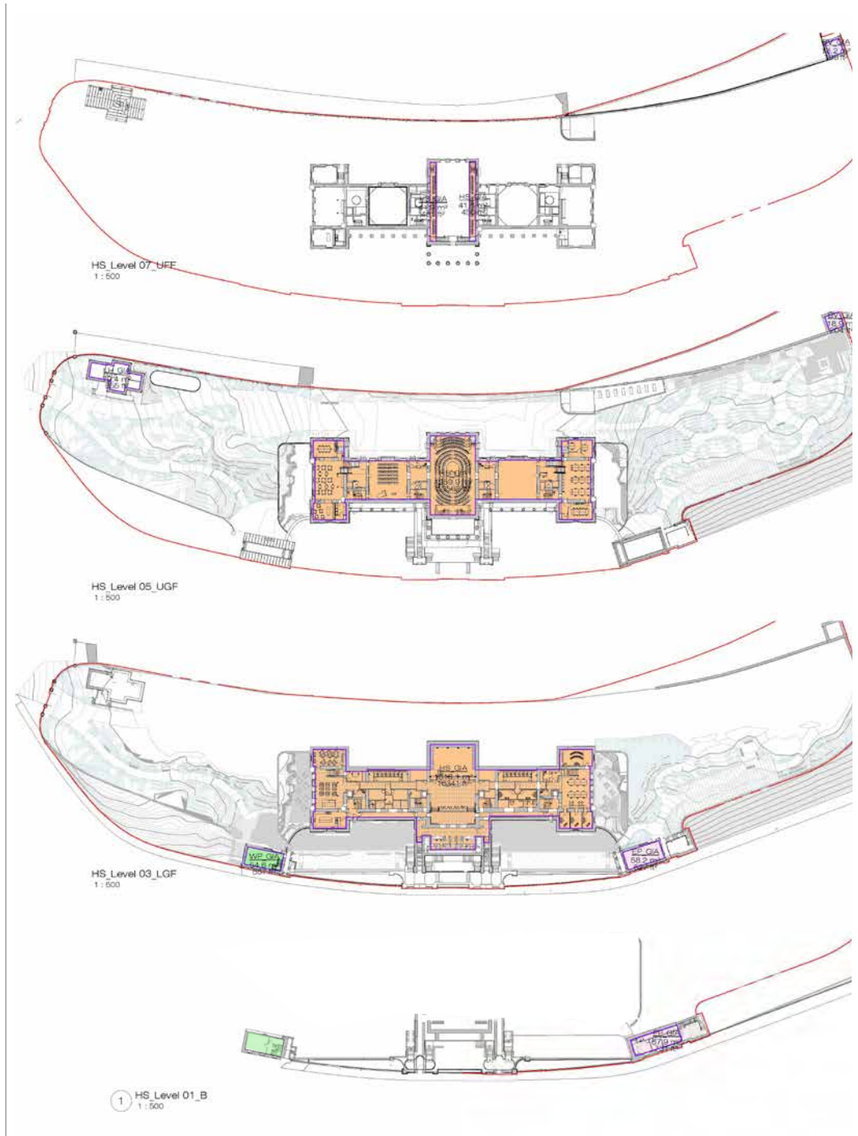
Proposed
Lodge House - 79m²
East Pavilion - 124m²
West Pavilion - 111m²
Hamilton Building - 2892m²
Belvedere - 19m²
SITE TOTAL - 3215m²



> Existing GIA - Area Plans

Area Schedule (Existing GIA)		
Level	Name	Area
HS_Level 05_BL	HS_EX_GIA	116 m²
HS_Level 03_UGF	HS_EX_GIA	1260 m²
LH_Level 03_UGF	LH_EX_GIA	79 m²
HS_Level 02_LGF	HS_EX_GIA	923 m²
HS_Level 02_LGF	WP_EX_GIA	55 m²
HS_Level 02_LGF	EP_EX_GIA	58 m²
HS_Level 01_RR	EP_EX_GIA	66 m²
HS_Level 01_RR	WP_EX_GIA	58 m²

> Existing GIA - Area Schedule



> Proposed GIA - Area Plans

Area Schedule Existing Buildings as Proposed (Gross Internal Area)		
Name	Level	Area
BV_GIA	HS_Level 03_UGF	19 m²
EP_GIA	HS_Level 01_RR	66 m²
EP_GIA	HS_Level 02_LGF	58 m²
HS_GIA	HS_Level 02_LGF	1518 m²
HS_GIA	HS_Level 03_UGF	1260 m²
HS_GIA	HS_Level 05_BL	42 m²
HS_GIA	HS_Level 05_BL	42 m²
LH_GIA	HS_Level 03_UGF	79 m²
WP_GIA	HS_Level XX_UB	56 m²
WP_GIA	HS_Level 02_LGF	55 m²

> Proposed GIA - Area Schedule

> 05.4 Site Plan & Landscaping

> The site plan and external landscape proposals have been developed alongside TSS and Open - please refer to their report for detailed landscape design information.

> The landscape has been developed to enhance the setting of the historic building within the site with the visitable public garden an integral part of the proposal.

> There are a number of key principles which have been followed:

- Maximise greenspace to create a greater area of accessible garden and promote biodiversity.
- Use materials and plants that link the local landscape to its wider context so it becomes part of a great panorama of landscape and wildness.
- Create a contemporary setting but one that respects the neoclassical and picturesque traditions.

Summary:

A West entrance gate widened for emergency vehicle access with security bollards

B Proposed new stepped site entrance at West Pavilion

C 3 accessible car parking spaces & drop off

D 20 short stay Bike spaces (16 standard 4 oversized)

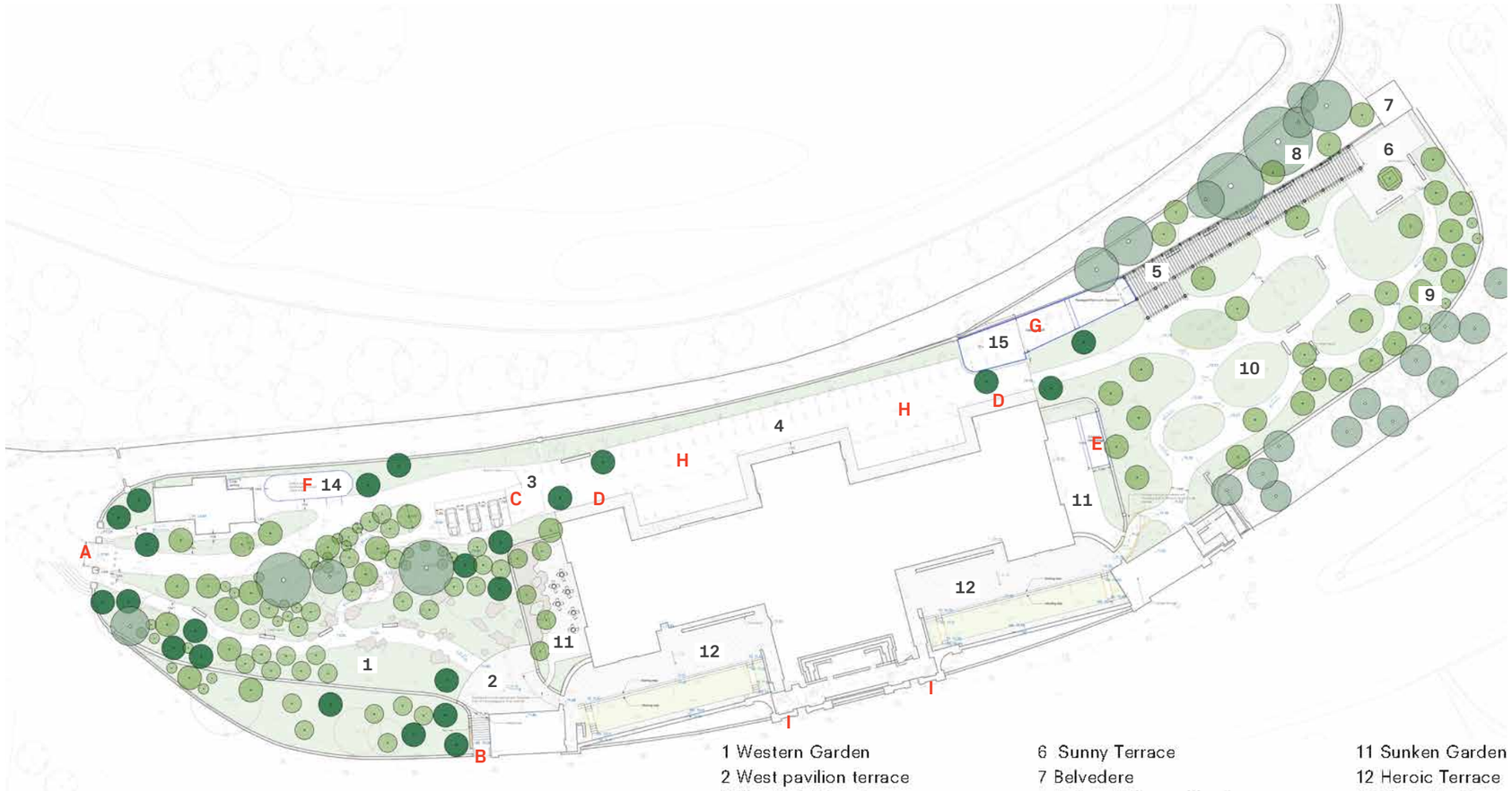
E Long stay secure bike storage 10 no. (8 standard 2 oversized)

F Substation & Refuse Store

G External plant screening & noise attenuation to plant area within the East Garden

H Hardstanding drop-off/Marquee Event Area

I Repair/refurbishment of existing porch entrances & stepped access.



1 Western Garden
2 West pavilion terrace
3 Car Park/ Event space
4 North Entrance
5 Pergola
6 Sunny Terrace
7 Belvedere
8 Calton Hill wood land
9 Woodland Edge
10 Eastern Garden
11 Sunken Garden
12 Heroic Terrace
13 Cycle Parking
14 Bin Store
15 External Plant

> Landscape Plan

> KEY

> TSS Gardens - Hepworth Gallery, Wakefield & Aldourie Castle, Loch Ness

> 05.5 Accessibility

> The proposed development has endeavoured to provide provision for accessibility and inclusively to visitors across the site.

> Reviews have been undertaken periodically by *ABT Access Consultant* to assess the proposed development with a reports generated identifying areas to improve accessibility across the development which were incorporated or provide justification for the proposed arrangement.

> Accessible and non-accessible primary public areas are indicated on the adjacent plan diagrams. (Access to the main hall is indicated illustrating the in the round tiered floor layout).

> Access is provided to all public areas, this has been achieved through adjustment of existing site levels to provide level access at building entrances alongside the incorporation of 4 new 8 person passenger lifts.

> Portico Terrace access is available using a mobile lifting platform stored locally within the Main Hall.

> The Main Hall Balcony is considered non-accessible. The areas function is offered within accessible areas with varied accessible viewing locations provided within the entrance level to the Main Hall to compensate for the lack of accessible spaces to the balcony.

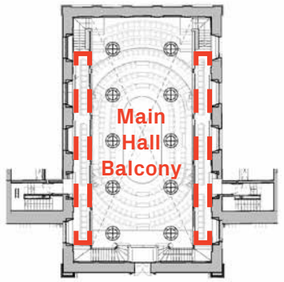
> The Proposal has been developed to incorporate:
- Assisted Accessible WC Provision (enlarged area providing left and right transfer)
- Accessible WC Facilities (mirrored arrangements with Left and Right transfer)
- Accessible Performer Changing
- Level access to entrances
- Level access route across site
- Lift access to all primary levels

> The detail of the proposed interiors including design, material selection and colour used throughout will be developed to consider the accessibility of the building, catering for visitors with Neurodiversity in accordance with BS 8300 .

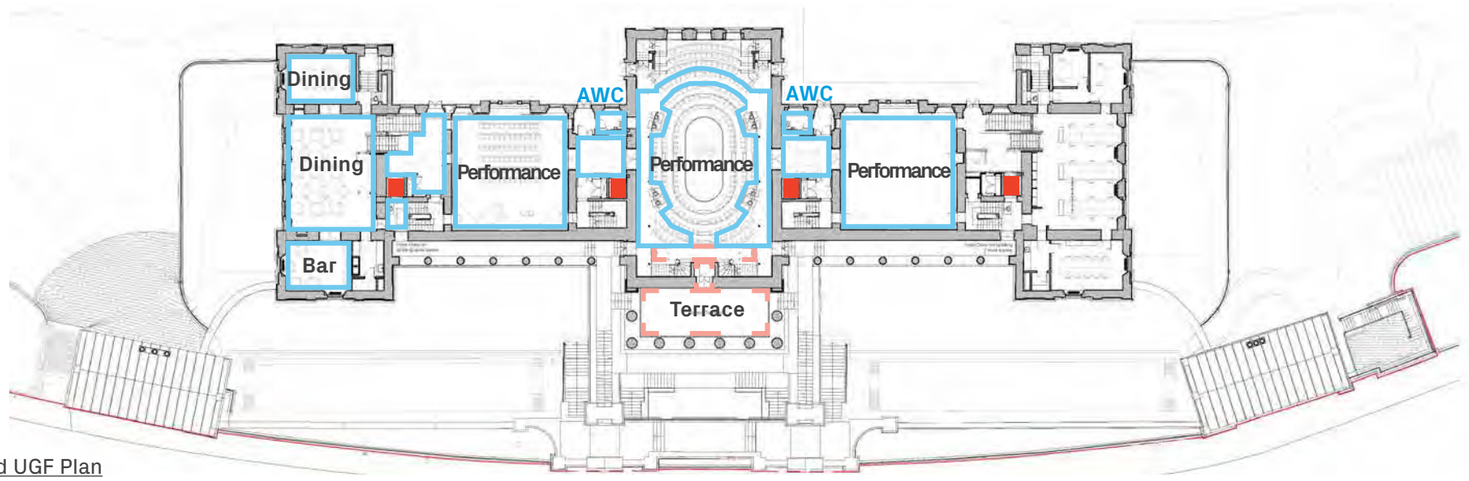
> KEY

- Proposed Lift
- Non-Accessible Area
- Accessible Area
- Level Access Entrance Route

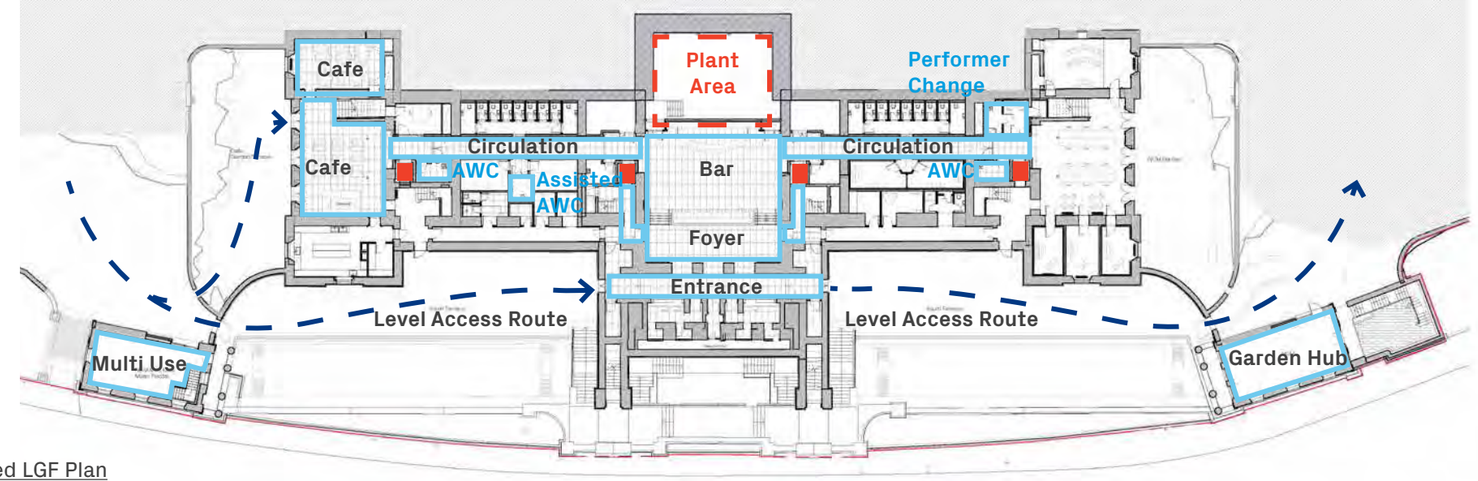
> Proposed Balcony Plan



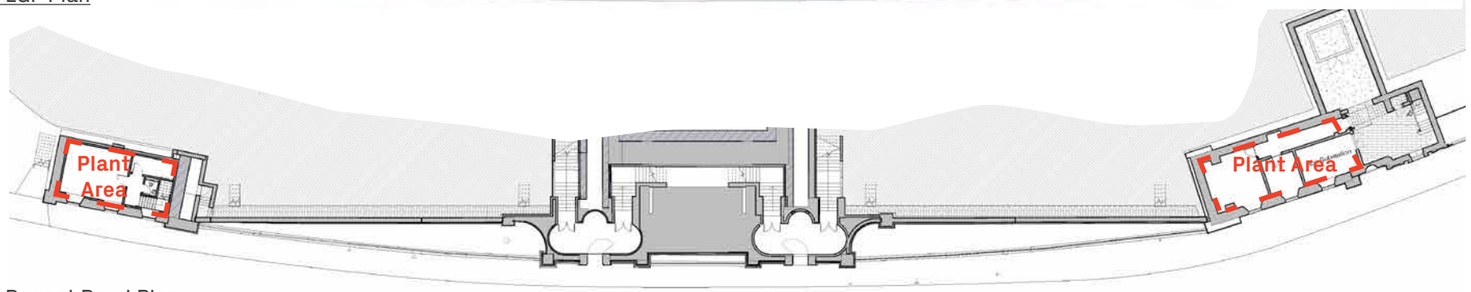
> Proposed UGF Plan



> Proposed LGF Plan



> Proposed Regent Road Plan



> 05.6 Stair Cores/Lift Access

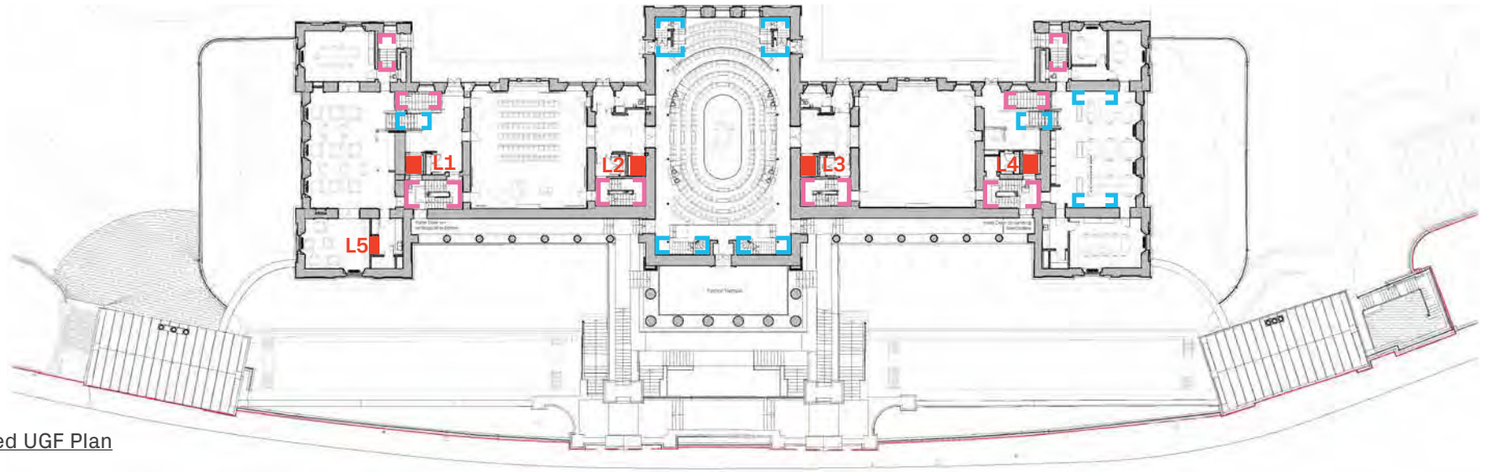
> 4no. Passenger lifts proposed to serve all primary levels of building. LGF(Bar), LGF(Entrance), UGF(Main Hall), UGF(Wing).

> All 4no. proposed lifts are 8 person - car size 1100 x 1400mm

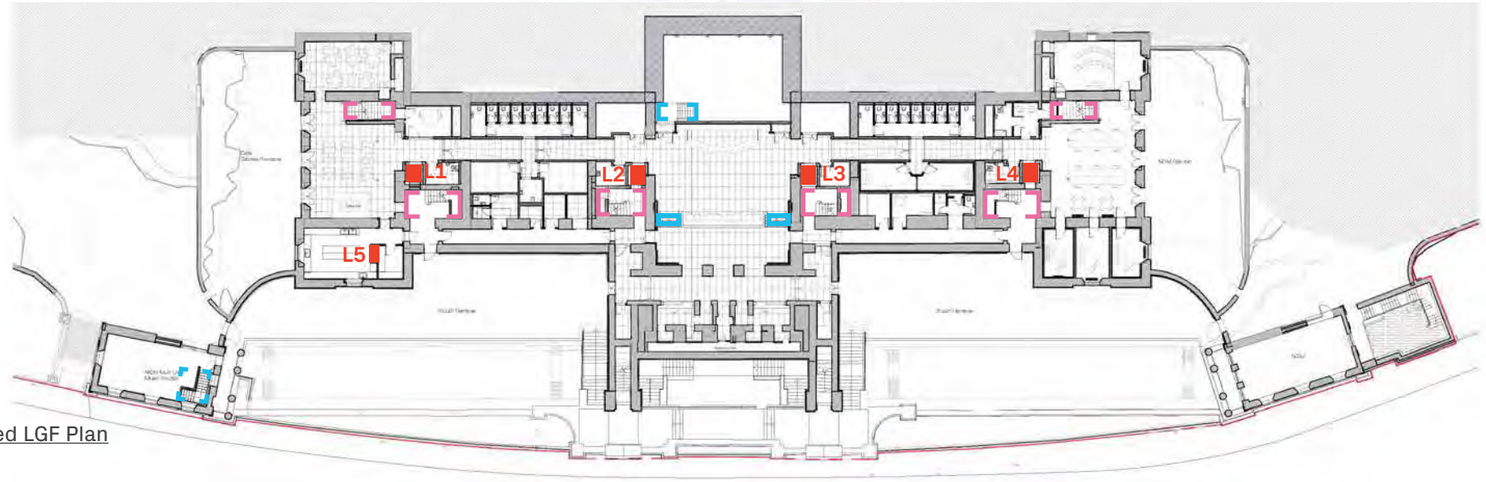
> Reduced over-run requirement - Derogation required to reduce over-run to within the existing roof level. This has been discussed with potential lift manufacturers.

> A Dumb waiter is proposed providing 2 adjacent shafts to allow for separation fresh and return routes

> Proposed & existing internal stairs are identified on the adjacent plans
- Existing stairs will be retained in their current arrangement.
- New stairs are introduced to improve access and connect half level difference within the building



> Proposed UGF Plan



> Proposed LGF Plan

> KEY

- Proposed Lift
- Existing Stair
- Proposed New Stair

NCM Lift Summary Schedule

Jan-24
Rev A

Lift no.	Location	no.stops	Floors served	Lift Type	Door type	Floor Levels	Total Travel Distance	Car size w	Car size d	Shaft size w	Shaft size d	Over-run	Pit	Evacuation Lift (Y/N)	Manufacturer ref	Comments
HS Lift 1	Hamilton Building - West Wing	3	LGF (West Wing) UGF (West Performance), UGF (West Wing)	Passenger	Through Car	71.70 75.80 77.30	5.60m	1100	1400	1700	1900	3000	1100	N	Manufacturer tbc based on Stannah Xtralift	*Derogation for reduced lift over-run required below existing steps. Requires section of existing masonry to be removed to accommodate lift shaft width. S.Eng to confirm
HS Lift 2	Hamilton Building - Assembly Hall West	3	LGF Foyer Bar LGF South West Entrance UGF Upper Foyer West	Passenger	Through Car	71.02 71.63 75.78	4.76m	1100	1400	1700	1900	3000	1100	N	Manufacturer tbc based on Stannah Xtralift	*Min shaft size tbc - constrained by existing walls & services riser **Max lift over-run height to be reviewed to accommodate ducted services route over.
HS Lift 3	Hamilton Building - Assembly Hall East	3	LGF Foyer Bar LGF South East Entrance UGF Upper Foyer East	Passenger	Through Car	71.02 71.76 75.83	4.81m	1100	1400	1700	1900	3000	1100	N	Manufacturer tbc based on Stannah Xtralift	*Min shaft size tbc - constrained by existing walls & services riser **Max lift over-run height to be reviewed to accommodate ducted services route over.
HS Lift 4	Hamilton Building - West Wing	2	Regent Rd Entrance, Foyer, LGF (South Terrace Garden)	Passenger	Through Car	71.70 75.83 77.34	5.64m	1100	1400	1700	1900	3000	1100	N	Manufacturer tbc based on Stannah Xtralift	*Min shaft size tbc - constrained by existing walls & services riser **Max lift over-run height to be reviewed to accommodate ducted services route over.
HS Lift 5	Kitchen	2	LGF (Kitchen), UGF (Servery)	Food Lift	Through Car	71.70 77.34	5.64m	545*	420*	1600	600	N/A	N/A	N	based on Stannah Microlift	*double shaft for 2 cars (food up/food down)

> 05.7 WC Provision

> The proposed development provides modern WC provision and facilities replacing all existing WC facilities found within the building. These existing WC facilities have now been stripped out as part of the enabling works.

> Due to the Assembly use and potential varied users (office, cafe, performance) within the building a WC scheme which offers flexibility to the end user and maximises provision within the building was a key consideration of the Trust's brief.

> The development locates 2 primary WC banks within the new LGF floor area formed below the Secondary Performance Spaces. Accessed via new East-West connecting route. These provide unisex *superloo* style cubicles which can be accessed by all building users. Accessible WC's are located adjacent to these banks on LGF and at performance level.

> Through discussion with the accessibility consultant it was agreed to provide one Assisted Acc. WC (increased width) which provides a peninsula WC arrangement.

> Types of WC facilities available:
- Assisted Acc. WC - 1
- Acc. WC - 4
- Unisex Public WC - 18WC
- Performer Change - 1Acc.WC
- Bar Staff - 1 WC
- Kitchen staff - 1WC

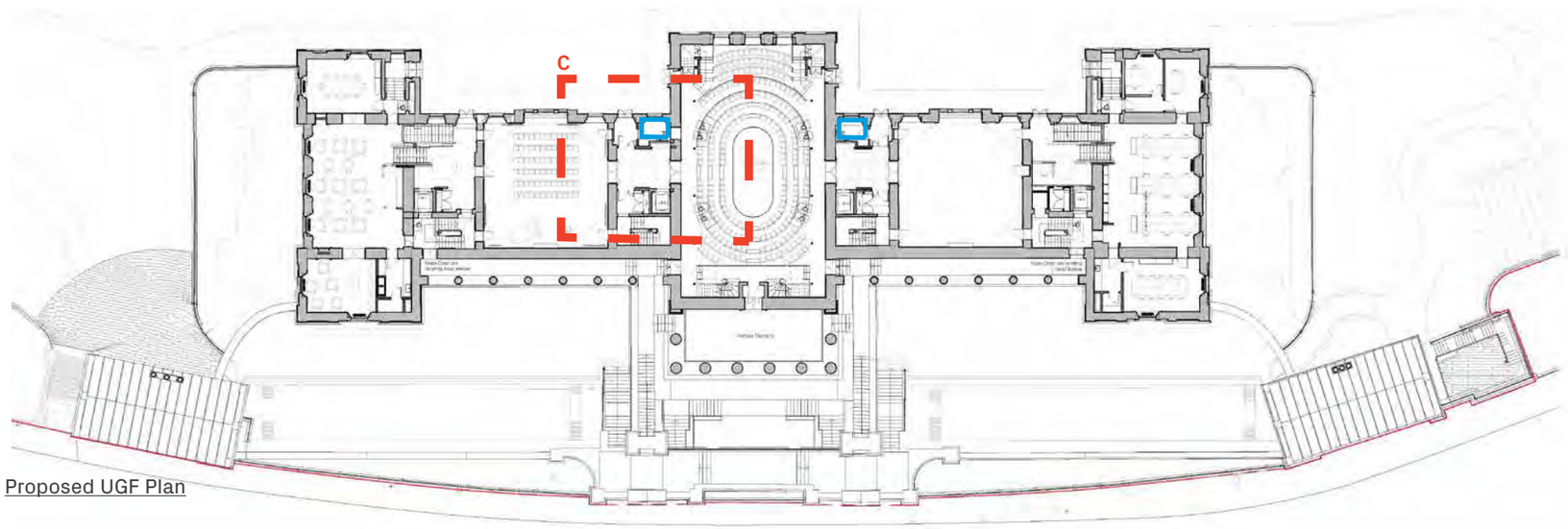
> Discussions were previously held with CEC regarding WC provision agreeing that in providing provision for the primary Venue/function (300 person auditoria) the other public facilities are occupied by the same people i.e. we do not require additional toilets for the café.

> The proposed scheme exceeds Building Control & ABTT (Association of British Theatre Technicians) recommendations based on audience of 300.

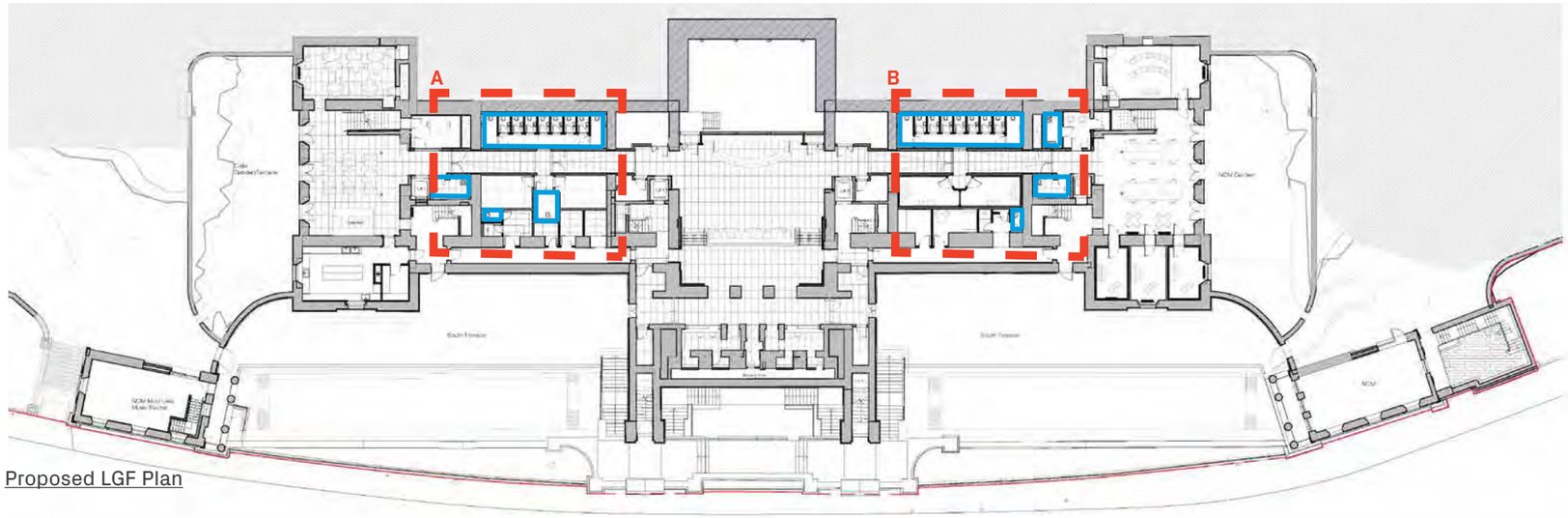
> Based on Assembly building use class sanitary calculations outlined in the *Technical Handbook 22:non-domestic* the proposed Public WC provision (18 total) supports 555 Total persons.

> Due to the *superloo* arrangement increasing WC facilities visit time a 20% increase to provision may be considered 15WC + 20% = 18WC. This would equate to 15 WC's - 450 Total persons

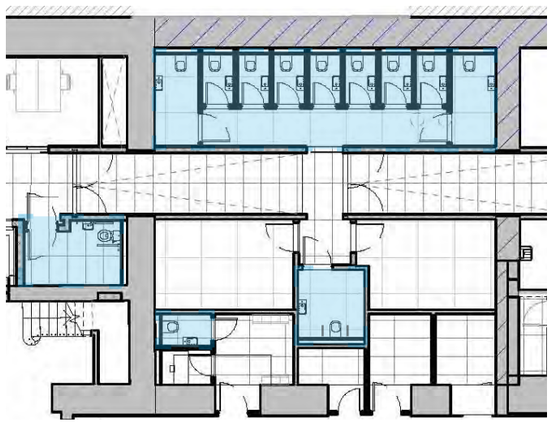
> An additional Staff Unisex WC is proposed within the Regent Road level of both the East & West Pavilion.



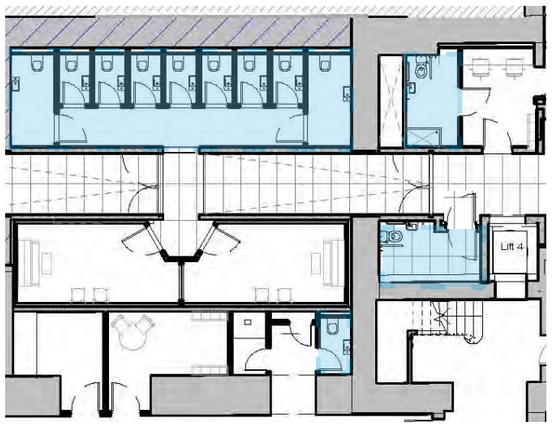
> Proposed UGF Plan



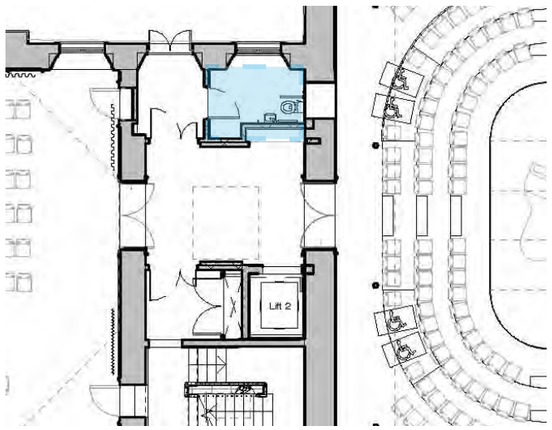
> Proposed LGF Plan



> Proposed LGF Plan Extract - A



> Proposed LGF Plan Extract - B



> Proposed UGF Plan Extract - C

> 05.8 Drainage/Damp Proofing

> The existing condition of below ground walls has been reviewed on site, a strategy is to be developed for repair to existing areas of water ingress alongside mitigation to any new or exposed existing below ground walls.

> The primary area of water ingress is the internal corridor area below the colonnade & Portico outer paving. The primary factors causing this is the existing paving joint's opening up between the slabs and blocked existing downpipes.

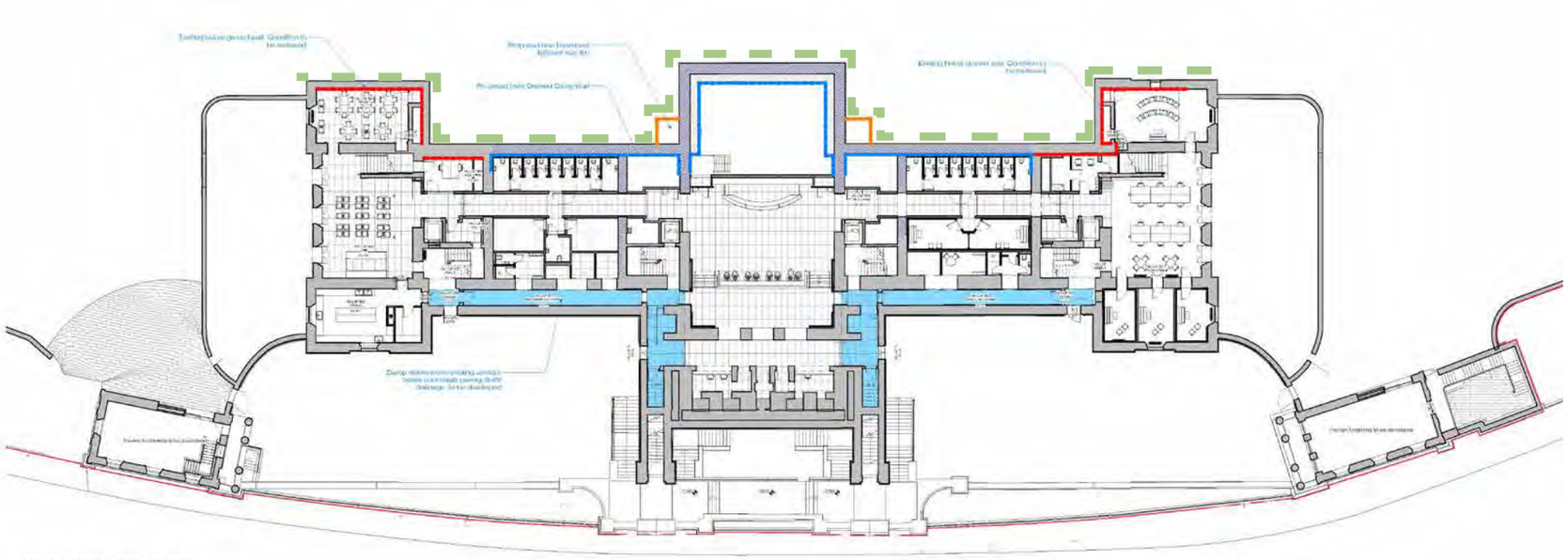
> Initial discussions regarding a damp proofing approach was held with ***Town & Country*** Edinburgh - a specialist in remedial basement waterproofing - to review the most appropriate solutions available.

> The wall scoping diagram highlights areas for review and further development ahead of construction to ensure a robust proposal is developed for each area:

- Existing Below Ground walls
- Exposed existing below ground walls.
- New Below Ground walls
- Areas below colonnade paving
- Existing Hamilton Culvert repaired and connected to proposed drainage.

> A review of the existing RWP's condition is detailed within the Conservation Architects (S&B) information. The number & size of outlets will be reviewed at Stage 4 with the potential for additional RWP's identified and developed with the design team to tie into existing drainage routes.

> The colonnade area has been identified as a potential location for additional RWP's should clearing of existing downpipes prove insufficient in reducing water ingress to these areas.



> Damp Proofing - Below Ground Wall Scoping

> Existing Colonnade View West

> Existing Colonnade roof drainage route

> Existing Colonnade LGF corridor

> 05.9 Kitchen/Service Strategy

> The UGF & LGF Cafe has been developed to operate independently from the NCM facilities retaining flexibility within the business plan.

> A kitchen on LGF directly serves the LGF Cafe area with a kitchen lift connection to a servery on the UGF

> Deliveries vehicles can be brought onto the site before making deliveries to the kitchen areas internally through the building utilising the passenger lift or through the step free garden route to the kitchen door.

> Kitchen storage & support facilities are accessible from the South Service Corridor.

> The South Service Corridor provides a back of house link to the NCM Foyer.

> An internal refuse store is located within the South Service corridor to temporarily store waste prior to transferring to the external bin store for collection.

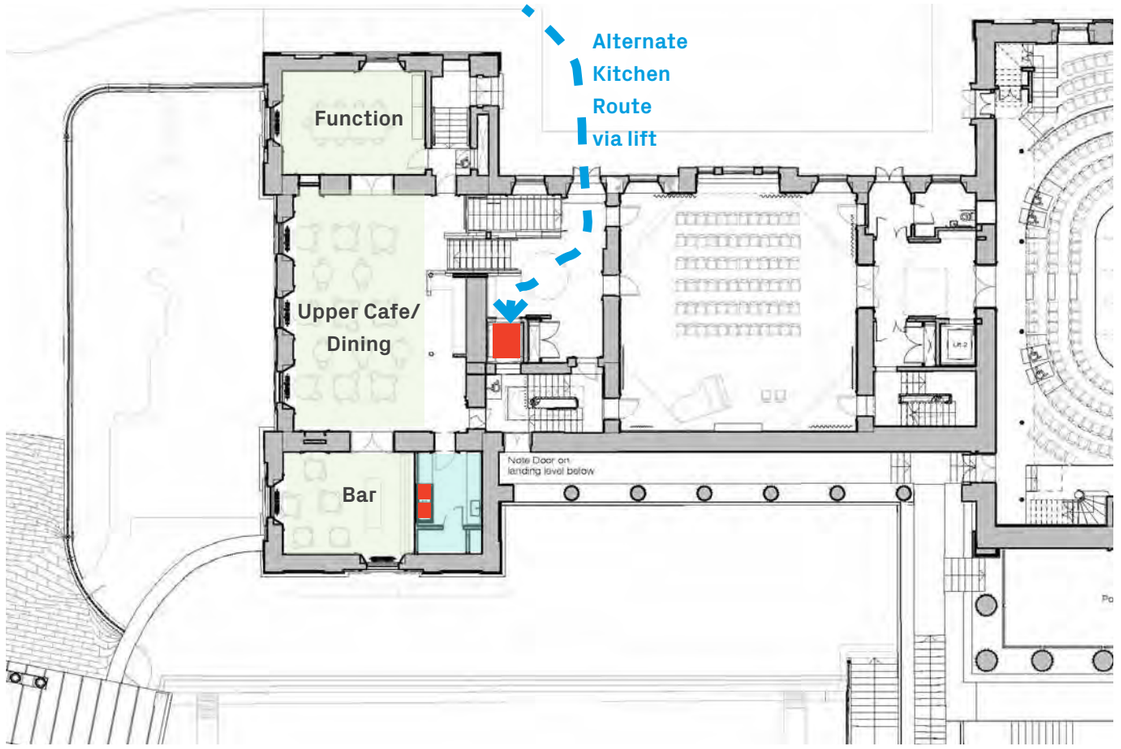
> The Kitchen extract flue is to route directly to roof with any live equipment located at high level within the kitchen's ceiling area.

> A Cafe counter is proposed within the LGF open plan area,

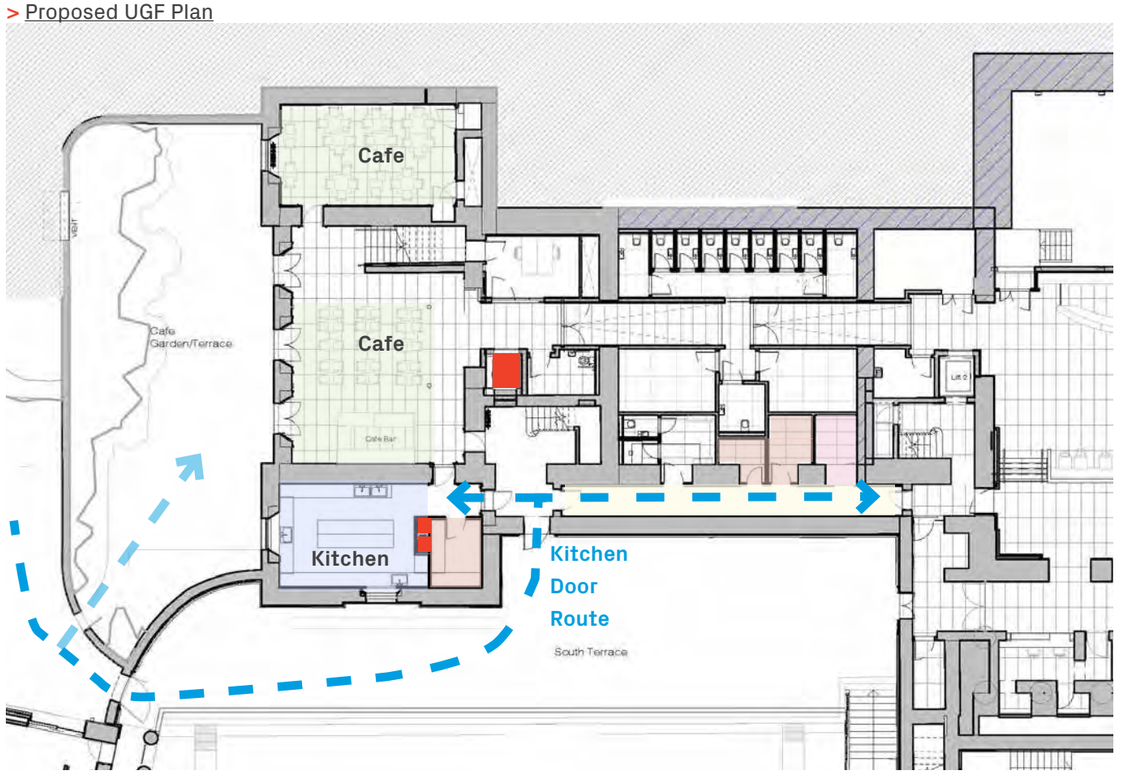
> The UGF layout is developed to be flexible to cater for Bar space, Dining, Private Dining/functions and Conference use.

> KEY

- Kitchen
- Cafe/Dining/Bar
- Servery
- Kitchen Store
- Service Corridor
- Refuse
- Lift

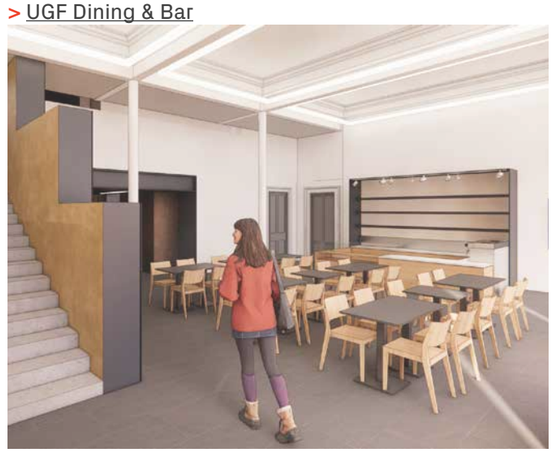


> Proposed UGF Plan



> Proposed LGF Plan

> UGF Dining & Bar



> LGF Cafe

> 05.10 Refuse Strategy

> Refuse will be collected through a licensed waste carrier. The frequency of collection will be determined by the site management strategy and be linked to performance programme.

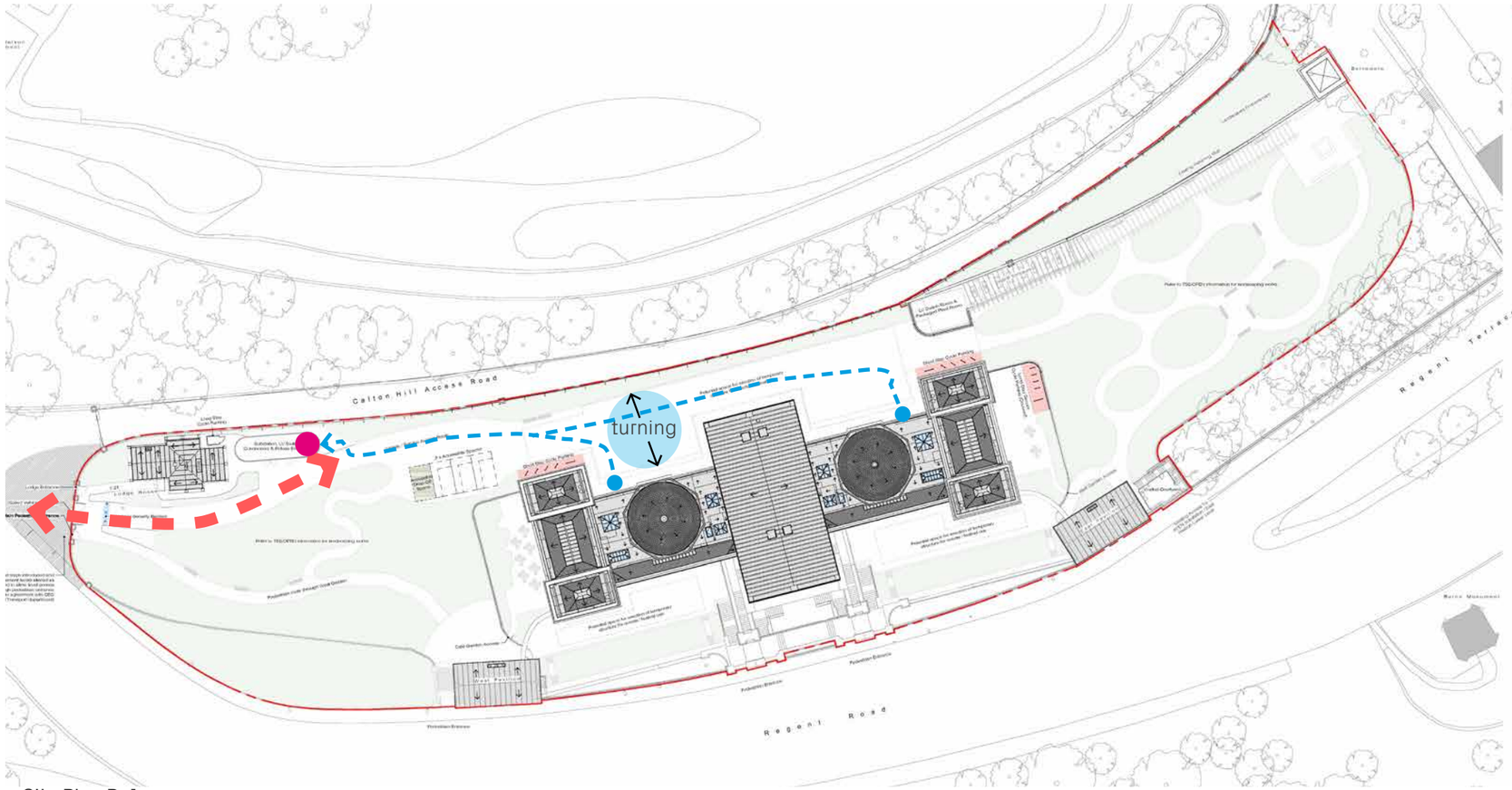
> Refuse will be moved into an external refuse store adjacent to the Lodge House for external collection.

> The landscaping and planting strategy is developed to conceal the refuse store.

> The vehicle roadway has been designed for refuse, delivery and emergency vehicles separating the vehicle and pedestrian route on entry at the West Gate - turning space available behind the building.

> KEY

- Refuse Store
- Vehicle Route
- Staff Route
- Cycle Stand



> Site Plan Refuse

> 05.11 Cycle / Vehicle Parking

> Three accessible parking spaces with 1 accessible drop off space are proposed on site.

> Delivery and drop off of performance equipment/ musicians will be facilitated at the north of the site behind the secondary performance spaces separated from public pedestrian routes.

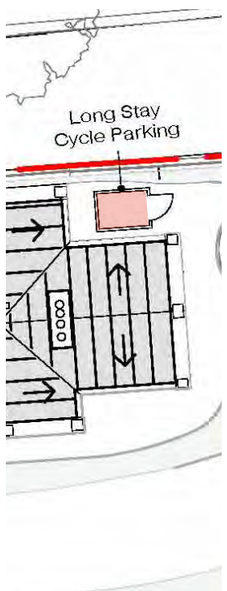
> Secure cycle parking is provided on the site. With provision based on occupancy staff numbers.

> Sheffield Stands are proposed as detailed in the *Edinburgh Street Design Guidance* with provision for oversize/cargo style cycles incorporated. Positions are illustrated on adjacent plans.

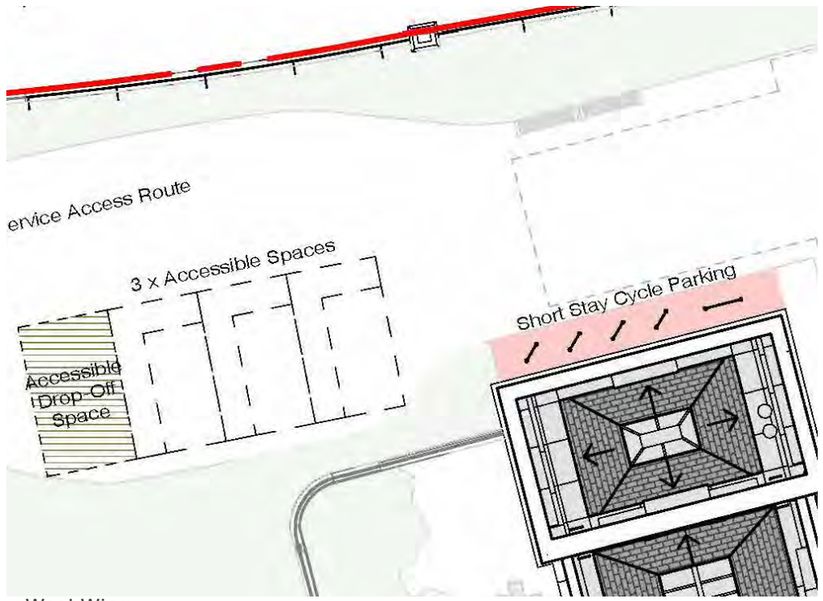
> Long Stay (Staff use) - 10 Spaces (2 Oversize) located within East Sunken Garden

> Short Stay - 20 Spaces (4 Oversize)

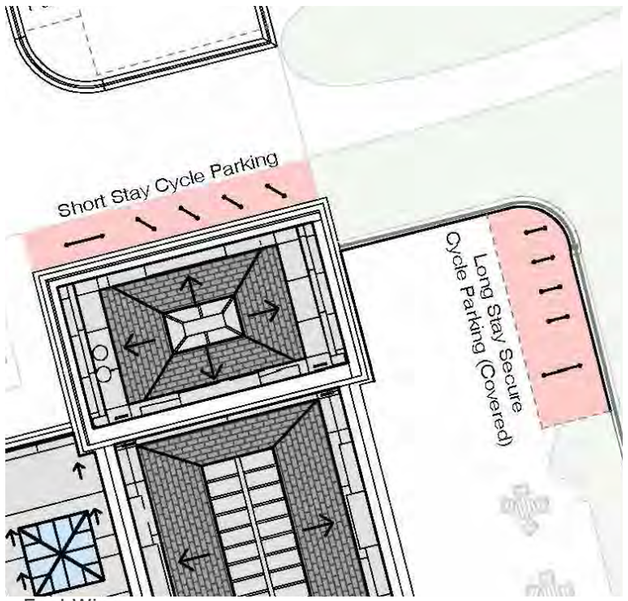
> Lodge House Accommodation - 2 Spaces



> Lodge House



> West Wing



> East Wing

> 05.11 Environmental & Services Integration

> The environmental and services integration has been developed with A10 MEP engineers. Please refer to the submitted sustainability statement and S1 form for further information.

>Substation
Located within the East Pavilion is an existing SPEN transformer named Scottish Assembly, this transformer was sited here in the late 1970s to supply the proposed Scottish Assembly Building. Prior to the latest enabling works this machine provided a Low Voltage supply into the adjacent electrical switch room, the transformer also supplies residential customers in Regent Terrace and beyond. As the estimated maximum demand from the NCM is substantial, the existing transformer does not have the capacity to supply the redeveloped building, and a new 1000kVA machine will be necessary. This is proposed in an external enclosure adjacent to the Lodge House. As the substation is some distance from the building an adjacent main LV switch room is to be provided within the enclosure.

> Mechanical Services
The mechanical engineering services will be provided with the following aims at the forefront of the design:
·Low energy performance
·High quality of user comfort
·Ease of installation on this constrained site
·Ease of operation and maintenance
·Flexibility

The systems developed will be designed in accordance with CIBSE guides, relevant British Standards and the Non Domestic Technical Standards.

The mechanical strategies within the building have been developed based on intended operational profiles of the different spaces and their differing demands.

Mechanical supply and extract ventilation from the central plant room in the basement will condition the Performance Space, Octagons and the Basement Bar area. The remaining basement back of house areas will have local mechanical ventilation systems, General Offices and the Café will be naturally ventilated utilising the existing open able windows to the Café and general offices.
The Kitchen will have dedicated plant serving the server and cooking areas.

Space heating will be provided by wall mounted radiators, with the hot water source located externally in the North plant area containing Air Source Heat Pumps.

> Electrical Services
The outline design proposals for the Electrical Services in The National Centre for Music have been developed and incorporated. The design parameters given in this report have been drawn from a variety of sources to provide an energy efficient, maintainable installation.

The systems developed will be designed in accordance with IET Wiring regulations, relevant British Standards and the Non-Domestic Technical Standards.

The electrical engineering services will be provided with the following aims at the forefront of the design:
· Reliable and flexible electrical infrastructure
· Ease of operation and controls
· Low energy performance
· Concealed cable runs in voids and within existing wall fabric.
· Accessories sympathetic to the historical nature of the building

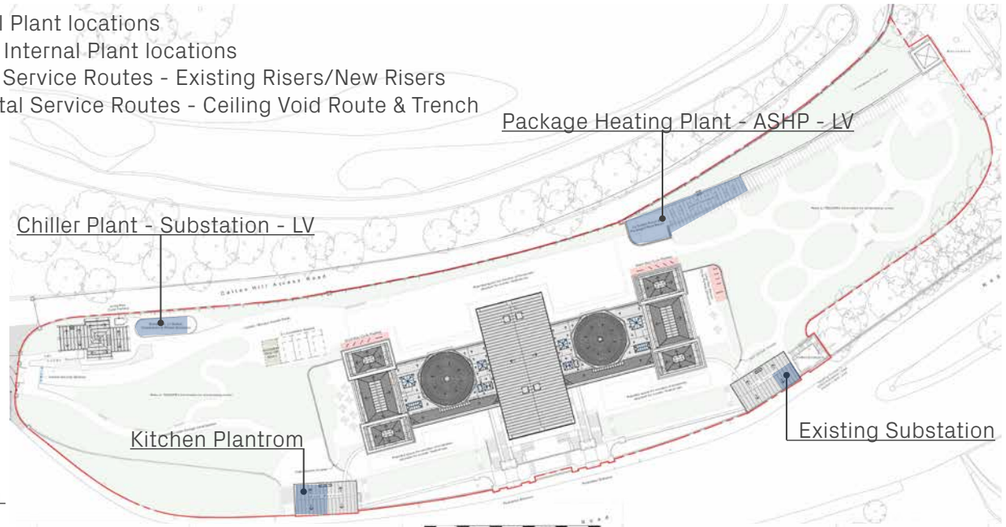
> External Plant
To support the Historic building with modern services external plant enclosures are required within the landscaped areas. Two external compounds are proposed, these areas have been developed and positioned to the north of the site to act as background structures within the site to minimize impact on the historic setting and visibility from views into the site from street level alongside distant views. The ASHP enclosure and Package Heating plant appearing as a Garden Wall and extension to the Pergola in the East Garden utilising reclaimed stone elements from the site. The new Substation and Main LV Switch room & Air Conditioning plant are set within a bronzed metal enclosure facilitating vegetation growth from the adjacent planting.

> Utilities
Consultation with the Authorities and Utilities Suppliers have taken place to date and will continue through the design phases of the project.

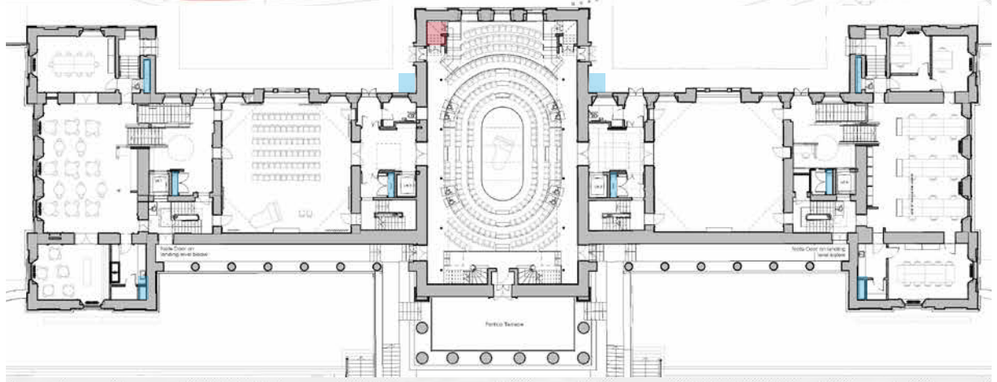
As the building will use electrical energy to provide heat from externally located Air Source Heat Pumps there will be no requirement for main gas.

KEY:
External Plant locations
Primary Internal Plant locations
Vertical Service Routes - Existing Risers/New Risers
Horizontal Service Routes - Ceiling Void Route & Trench

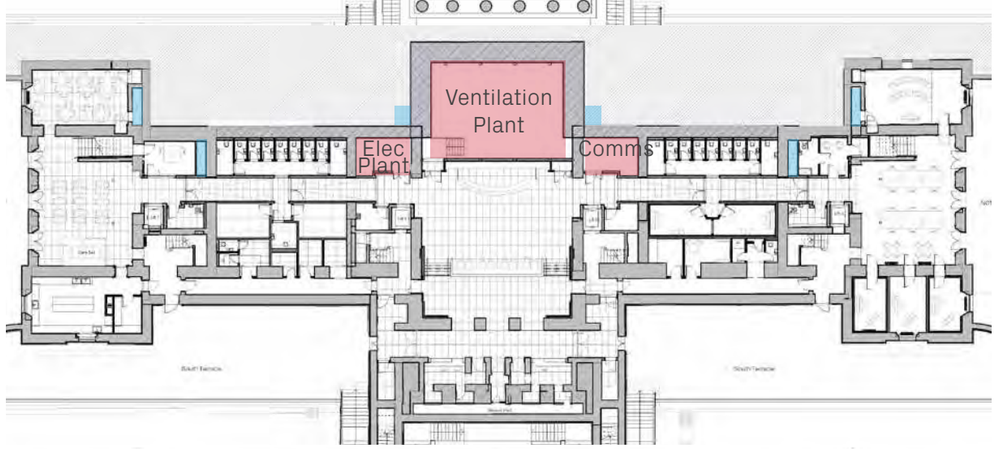
> Site Plan



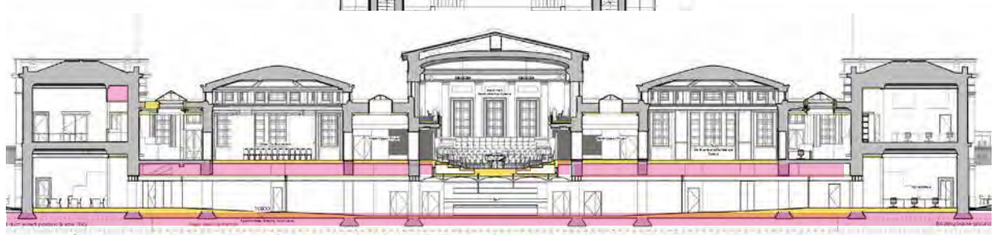
> UGF



> LGF



> East - West Section



> 05.12 Acoustic

> Site noise climate
The existing noise climate around the existing building is dominated by road traffic noise from Regent Road, railway activity and general city activity noise from the wider urban area. Traffic flows on Regents Road are notably low, considering that it is an A-road. A full baseline noise survey has been undertaken. The measured daytime noise levels at the road side to the front of the development are in the range 63-68 dBLAeq,T. These measurements were undertaken during rush hour where traffic flows are at their daily maximum level. During the evening measurements, noise levels in this location were 59-61 dBLAeq,T. It should be noted that the building is set back from the road and is partially screened by the wall along the road frontage, therefore noise levels at the building facades will be less than these figures by approximately 5-10 dB depending on location. Noise levels to the rear of the site were around 55 dBLAeq,T which, in subjective terms, could be described as typical of a fairly quiet urban area.

> Noise affecting the development
To function properly for its intended uses, namely as a performance space & rehearsal space internal noise targets are applicable to these spaces within the building. Despite its urban location, the relatively low noise levels at the site mean that it is anticipated to be possible to use natural ventilation and standard glazing constructions to control noise break-in to many parts of the existing development. It is also expected that the historic glazing and façade elements can be retained without any adverse impact in terms of environmental noise break-in.

> Noise from the development
The development has the potential to generate noise levels at a level which, if not adequately controlled, could cause disturbance. The effects of noise from the development on nearby noise sensitive receptors are considered in detail in the Environmental Statement. In summary, as expected, during construction, the proposed development is predicted to have a temporary adverse noise effect on the nearest noise sensitive receptors (estimated to be for no more than 18 months), but no adverse effect is predicted during the operational phase. The lack of any adverse effect during the operation of the development is due to a number of acoustic mitigation measures which are built into the design of the proposed development.
Space planning: acoustic considerations. The space planning and layout of the proposed development is one key aspect of the noise mitigation which has been designed in to the proposed scheme.

> Main Hall geometry and dimensions
The Main Hall's high ceiling and rectilinear geometry will provide excellent acoustics for classical music performance and rehearsal. Its internal dimensions of approximately 23×13×10m are broadly consistent with other well regarded rehearsal and performance Halls (e.g. BBC Glasgow, 24×17×10m) and align well with the classic shoebox hall proportions. Shoebox halls are widely considered to provide the optimum acoustic conditions for music performance due to their ability to create a sense of envelopment and by providing beneficial side reflections.

> Hall acoustic volume
The volume of the hall is a key acoustic consideration in terms of the maximum audience size and also the maximum ensemble size which can be accommodated without compromising the acoustic conditions. The maximum proposed audience size is circa 300 and the room volume per audience member of just under 10 m3/person compares favourably with the guideline volume/ person target for a performance hall. For ensemble rehearsals, the hall's ceiling height and diffuse surface finishes are considered well suited to provide feedback to performers and the volume of the room would be acoustically well suited to ensembles of up to 30 musicians without any additional acoustic absorption being necessary. With the addition of acoustic absorption to control the loudness of sound, larger ensembles and chamber orchestras could use the hall.

> Hall room acoustics and internal finishes
The existing internal finishes in the Hall are considered to be highly beneficial to the room acoustics, with the ceiling and balcony fronts expected to provide diffusion over a broad frequency range. Re-instating the original staircase is anticipated to add further beneficial diffusion and is considered a positive inclusion in terms of room acoustics. An initial assessment indicates that the existing curvature of the ceiling will not result in unwanted focusing effects and as such no interventions are anticipated to be required for the ceiling for room acoustics. During the detailed design, consideration will be given to the reinstatement of the timber panelling on the side walls, particularly if it is possible to use the panelling to provide beneficial acoustic diffusion

> Variable acoustic absorption
For rehearsal without an audience, amplified music, film or speech purposes it will be beneficial to incorporate variable acoustic absorption. Drop-down acoustic banners concealed below the existing Cornice level offer a visually discrete design solution which works well with the heritage/conservation strategy for the building. This type of solution has been used in historic performance with great success.

> Hall noise break-in/out
The lack of glazing on the Regents Rd façade and the substantial construction of the building itself mean that design interventions for control of noise break-in will be minimised. Secondary glazing to the existing windows is proposed to upgrade the sound insulation performance of the building envelope. This is a tried and tested solution for historic buildings and has been used with success and minimal visual impact in many similar buildings. The internal noise criteria on for the Hall will be NR20 and the results of the noise survey show that the site noise levels are supportive of a natural ventilation strategy however the ventilation strategy is to mechanically vent the performance space to better control the ventilation levels within the space and align with the secondary glazing strategy.

> Internal sound insulation for the Hall
Where practicable, sound lobbies will be introduced to minimise noise breakout from the hall. Consideration will be given to upgrading or replacing the existing doors, with consideration to the heritage/conservation strategy for the building. The existing walls and floor are anticipated to provide very high levels of sound insulation and no acoustic interventions are expected to be required to improve their performance.

> M&E Ventilation Services noise
It will be critical to ensure M&E services noise levels are appropriate in all spaces, but particular care must be paid to the design of the system for the performance halls. Low velocity ductwork, over-sized plant and specially designed low-noise air diffusers/grilles will be incorporated into the design to mitigate against this.

> Main Hall - Hamilton Historic Interior View

> Main Hall View South - Acoustic Finishes

> 05.12 Acoustic contd.

> Smaller Performance Hall
Many of the issues discussed for the main Hall will also apply to the smaller halls. The geometry of the hall is less favourable in terms of acoustics than the main Hall due to its square footprint, however the ceiling is a good height for musical performance and rehearsals It will be necessary to introduce acoustic treatments to the side walls using a combination of acoustically absorptive and diffusive finishes, in order to mitigate the effect of the square plan. With the incorporation of suitably design mitigation, coordinated with the heritage constraints of the room, it is considered that the rooms can provide an excellent environment for chamber ensemble performance and rehearsal.

> Foyer space
The room acoustic design in the foyer space will incorporate acoustic absorption in order to provide a comfortable acoustic environment and also to permit the space to serve a dual purpose during daytime as a teaching space or activity studio. Sound insulation between the Hall above and the Foyer will ensure noise disturbance does not occur.

> Music Practice & Recording rooms
Practice rooms, in particular those used for percussion instruments and amplified instruments, can generate significantly high noise levels. In order to ensure the practice rooms can be used without causing disturbance either to each other, or to other people outside the rooms, it is necessary to carefully consider the design of the building envelope, the ventilation strategy and the internal sound insulation. Mechanical ventilation is proposed for all practice and Recording spaces in order to further minimise noise break-out. Acoustically enhanced glazing will be provided for practice rooms in order to ensure maximum flexibility of use and minimum noise break-out. The practice rooms will be well isolated from each other through the use of highly rated acoustic partitions/doors, sound lobbies, acoustically floated floors and by use of a full acoustic box-in-box isolation system as required, depending on the specific adjacency of spaces.

> Administrative offices and other spaces
The acoustic standards will be considered in all administrative offices and other occupied spaces within the development in order to provide appropriate acoustic environments. The proposed location of the offices in the existing buildings and on those facades which are exposed to higher noise levels is considered a good choice in terms of acoustics. This is because the internal noise criteria for offices is less onerous than for the other spaces within the development and as such, a natural ventilation strategy with open windows is possible and no further acoustic mitigation required to for the existing glazing or external walls.

Privacy between adjacent offices will be achieved by the provision of suitable acoustic partitions and doors, working within the constraints of the building's heritage/conservation strategy.

> External Areas
Externally noise will be generated by two sources, Mechanical plant equipment (primarily the Air Source Heat pumps) and the visitors/events on site particularly during times of festival use. To mitigate against noise break-out from the site the following strategies are implemented:
External plant - Noise attenuation provided by plant screening walls and by locating away from sensitive areas & neighbouring properties.
Temporary/Festival activities - External event spaces are located centrally on the site around the Hamilton Building to maintain a distance from the neighbouring residential properties and utilising the existing and proposed landscaping/vegetation to reduce any potential noise break out from the site. Please see supporting acoustic report for further details.

> Summary
In terms of acoustics, the existing historic buildings and site are ideally suited for a music performance spaces which would be open to the public for performances.

Noise ingress to the site is surprisingly low for such a central city location and, conversely, noise egress from music activities can be readily controlled to avoid disturbance. Noise egress from performance spaces and site activities are to be mitigated as best as possible using secondary glazing.

The scheme has substantial potential for enhancing the cultural and architectural heritage of the city of Edinburgh.

> Smaller Hall (East & West) - 2022

> Smaller Hall (East & West) - Proposed NCM Music Venue

> 05.13 Structure

> The following Text has been prepared by NARRO Structural Engineers as part of their Stage 3 Report to support the Planning Application. Please see see “Notes for Planning” document submitted separately for illustrations and drawing pack.

>1. Introduction

The Old Royal High School is located at 5-7 Regent Road, Edinburgh, which lies within the Old and New Towns of Edinburgh World Heritage Site (WHS), the New Town Conservation Area and the New Town Gardens. The site overlooks the Waverley Valley to the south and St. Andrew’s House to the west. To the north of the site lies Calton Hill, part of the Arthur’s Seat Volcano Site of Special Scientific Interest (SSSI). Residential properties are located immediately to the east, fronting onto Regent Terrace. The site includes a number of Category A listed buildings and features, including the main building, the Hamilton Building, which originally housed a school, but has lain disused for several decades. The reports details the structural implications of proposals to transform the site into a new National Centre for Music.

> 2. General Description

> 2.1. The Hamilton Building

The Hamilton building comprises of three levels: a lower ground floor, an upper ground floor and a gallery in the main hall; with a timber leaded roof over. The building is formed in cellular masonry with vaulted arches in the basement, supporting the structure over. The stone is Craigleith sandstone, typical of buildings of this age and importance in Edinburgh. Original drawings indicate that the foundations were built over different levels directly off the igneous rock below, however following intrusive site investigations with rotary boreholes and trial pits, it has been confirmed that a rock shelf the size of the entire Hamilton Building was cut out, to form one level for the foundations to sit on. The floors were originally largely formed of suspended timber, but a number of the floors have since then been replaced with poured concrete slabs. Generally, the central section of the building is single storey, with the main hall having a mezzanine, and the east and west wings having an additional lower storey. The roof is formed of long span composite trusses formed in timber and cast iron.

> 2.2. The Pavilions

> 2.2.1 West Pavilion

The two storey Palladian Style building was formed using Craigleith sandstone walls with suspended timber floors. Intrusive site investigations show the foundations are supported directly on to the bedrock below. Half of the lower ground floor sits below ground level. The lower ground floor of the building extends further eastwards, supporting four columns on the east elevation. Flagstones have been used to span between the lower ground floor walls, providing access to the colonnade, and forming the entrance to the upper ground floor level of the building. The roof is a trussed timber roof with a suspended timber ceiling providing attic storage internal space. A staircase has been formed outwith the building’s footprint to the north, providing access from the upper ground floor, to the lower ground floor.

> 2.2.2 East Pavilion

The East Pavilion is a two storey building constructed in the Palladian style using Craigleith sandstone, the same as the Hamilton Building and the West Pavilion. The floors are suspended timber with a trussed timber roof over. The west elevation of the building mirrors the West Pavilion, with four columns supporting the portico. The floor below the portico consist of flagstones spanning between the lower ground floor walls. A courtyard was formed to the east of the building, providing direct access from RegentRoad, with an external pencheck staircase providing further access to the upper ground floor level of the East Pavilion. The floor build-up has changed to a ground bearing concrete slab at this location, with suspended timber floors assumed to still be present in the front rooms of the lower ground floor. The northern wall of the plant room is lined in non-structural brickwork, assumed to have been added as a fire protection measure. The upper ground floor has timber joists spanning east/west, supported on primary timber beams. To the east of the building, the lower ground floor extends below, with iron columns and beams supporting the eastern facade of the upper ground floor. The internal partitions are a modern addition and are formed using timber studs.

> 3. Structural Condition

From initial non-invasive site inspections, the existing masonry appears to be in very good condition, with no cracking observed, which indicates very little movement has occurred over the building’s lifetime. The buildings appear to have been maintained fairly well, although there are areas of significant water ingress, particularly around the roof lights and in the corridors under the arcades in the Hamilton Building. Water ingress has been an issue for the existing timber roof, which has caused some of the timber rafters to rot. Drainage appears to be an ongoing problem, with many parapet gutters showing vegetation growth and signs of blockages. Extensive repair work has been done over the years, however the rot survey carried out in 2015 indicated that further rot repairs are required. Further investigations are required to determine the full extent of rot in the existing building. An initial asbestos survey was carried out in 2015, and concluded that asbestos was found in the windowsills, pipe insulation, in the gasket from the boiler, the gasket in the flow pump and the gasket in the ventilation unit. Not all areas of the building were surveyed. A Full Demolition and Refurbishment Survey was carried out as part of the demolition and enabling works package, to understand the full extent of asbestos present in the building.

Condition Survey Reports have been undertaken and provided for the following:

- Hamilton Building and Pavilions
- Retaining wall at Rear of Site
- Cracking to front of Hamilton Portico
- Bulging to Rear Retaining Wall (caused by tree above).

> 4. Proposed Works

4.1. The Hamilton Building

The proposed alterations to the Hamilton building can be summarised as follows:

4.1.1 New Foyer

The lower ground floor is to be lowered to form a new foyer and multi-use space under the main hall. This may require underpinning of the primary masonry walls around this space and to the ancillary rooms either side, which will connect the east- and west-wings and provide back of house rooms, along with new toilets. An existing vault is to be removed as part of these works. A new plant room will be built to the rear of the new foyer. Access from Regent Road will be provided through the existing south gates, with the existing doors to the east and west of the portico used to draw the crowd into the foyer area.

4.1.2 New Floor to Main Hall

At ground floor level, the current tiered floor will be carefully removed and replaced with a new concrete floor spanning between new steel beams within the floor. The floor will be designed to rake to the centre and support a new performance area and retractable seating above.

4.1.3 Octagonal Anti Chambers

To achieve acoustic separation between the proposed plant and toilet spaces below, a new solid floor will be installed in these rooms.

4.1.4 New Lifts

To service the Hamilton Building, a series of new lifts will be installed. The floors will need to be cut and trimmed to suit using timber or steel beams. Localised underpinning may be required.

4.1.5 East Wing

A general refurbishment of the East Wing is proposed, including new services routes and formation of office space and practice rooms.

4.1.6 General

A series of new openings will be formed throughout the Hamilton Building and the East- and West-Pavilions. Two new precast concrete staircases are to be installed to the south of the Main Hall, to replicate the original Hamilton staircase. Further new staircases will be provided to improve the flow throughout the building. New room-in-room music studios have been proposed to acoustically sound proof between practise rooms located in the east wing at the lower ground floor.

> 4.2. The Pavilions

4.2.1 West Pavilion – New Multi-use Space

An opening will be formed in the North façade of the pavilion to allow access into the space. A steel beam will be carefully inserted so as not to interrupt the frieze. The ground will be locally lowered to meet the existing ground floor level, reducing the height of retention on the north side of the structure.
It is likely the floor will need strengthening to accommodate the additional variable loads that the floor will be subjected to.

4.2.2 East Pavilion – New Multi-use Space

A similar approach will be taken to the East pavilion, forming a new opening in the north elevation and generally refurbishing throughout. The basement space will be used as a plant room

> **4.3. Integration of Services**
The general strategy for the new services is to work with the grain of the existing structure. The 1970s interventions to the building saw very large air ducts being introduced from two new plant rooms in the basement. This means that there is already a generous plant route through the building.
As far as reasonable, ducting will sit above the ceiling levels in dedicated ceiling voids, to allow horizontal distribution. New risers will be formed adjacent to the proposed lifts to limit the trimming and cutting of floors whilst facilitating vertical distribution. Penetrations through historic fabric will be kept to a minimum.

> **4.4. Temporary Works**
Forming the new openings through the walls will require temporary works to support the existing masonry above. Similarly, propping the existing vault below the main hall is required temporarily, as it is removed. These temporary works will be a specialist piece of design and will be substantial engineering elements in themselves. However, in scale and complexity they are no greater and no less feasible than similar temporary works undertaken for other projects work on the highest category of historic buildings in Scotland and elsewhere in recent years. Assumed sequence sketches have been provided as part of the NARRO submission. At the detailed design stage, Narro will draw on the expertise of specialist subcontractors, equally experienced in this type of large-scale temporary works, so that the nature, complexity, cost and timescale are fully understood by all parties and stakeholders.
To ensure the structural integrity of the façade is maintained during the works, careful consideration will be made to the allowable deflections of the temporary and permanent supports as they take up the loads. Detailed monitoring of the surrounding structures will be carried out throughout the process so that the type, rate and scale of any movement that occurs can be recorded. This will act as an early warning should problems occur. Works will also require to be carried out in such a way as to limit the vibrations which may affect the historic fabric of the building.

> **4.5. Network Rail**
The proposed works include structural alterations to the Hamilton Building. None of the significant alterations are located within the rail tunnels' zone of influence. Movement of the existing building will be monitored throughout the works, to ensure vibrations are kept to a minimum, and therefore also minimising risks of movement to the neighbouring rail tunnels. Early engagement with Network Rail has not resulted in them having any significant concerns and we do not expect any significantly onerous requirements. Locations of the Tunnels in relation to the rock removal can be seen in the NARRO submission.

> **4.6. Rock Excavation**
To form the basement lobby, some rock below will need to be removed. The excavation methods adopted should mitigate any negative impact on the listed building. Vibration monitoring should be in place during the works and agreed with Network Rail in advance of the excavations beginning.
The Contractor will ultimately be responsible for the excavation method; however, the following approach should be adopted to establish the working strategy for the rock excavation:
• Carry out a full geotechnical site investigation and testing of rock.
• Consult with specialists in this field to discuss the most appropriate methods for excavating the ground/rock encountered.
• Consult with Historic Environment Scotland to discuss the options and the limitations of the available techniques and the impact on the adjacent structures.
• Submit proposal to the design team for approval.
A range of low impact rock excavation techniques are available. The methods adopted will be specifically tailored to the site and will not involve blasting.
• Non-Detonating Propellants - Rock breaking using a product such as Royex or Cardox, which are non-detonating propellants enclosed in a plastic housing with an electrical ignition. The process works by releasing a fast expanding gas volume which fills the small natural fractures existing in the rock. The gas will expand the natural weaknesses of the rock into the nearest free face. This causes the rock fractures to expand and the rock to break. The process minimises fly rock, and keeps ground vibrations to a minimum.
• Chemical Rock Breaking – Rock breaking using a product such as Dexpan, which is poured into pre-drilled holes within the rock and expands causing silent expansive pressure. This product results in low vibration and noise.
• Hydraulic Rock Splitting - A splitting cylinder is inserted into a pre-drilled hole. Hydraulic pressure causes the components of the splitter to expand exerting a force on the surrounding rock causing it to split along the line of the pre-drilled holes.
All the above methods will involve pre-drilling pilot holes into the rock mass in a predetermined pattern, to control the sections of rock to be affected. It is assumed that the rock will be excavated from the south side of the building, slowly progressing under the building to the north, to form the space beneath.

> **5. Drainage**
The proposed drainage scheme for the New National Centre for Music includes separating the foul drainage and surface water into two separate systems on-site. These two systems will drain to disconnecting manholes prior to exiting the site, discharging to the combined Scottish Water sewer below Regent Road. The proposal includes making use of the existing pipes, as far as is reasonably possible, for the surface water, as well as keeping two of the three current discharge points; the one to the west of the site and the one south of the portico. The one to the east of the site has been proposed to be made redundant. The proposed drainage plan is shown in NARRO submission.

5.1. Foul Drainage
All foul drainage on the site requires new drainage runs, to ensure the surface water and foul is kept separate, for future flexibility. The West Pavilion will be connected to the new drainage from the Hamilton Building and the East Pavilion , which will discharge to the combined sewer through the existing connection south of the site. Compared to recent usage when the site housed the Old Royal High School, the foul drainage is not considered to increase by significant amounts. A revised PDE has been completed, and direct liaison with Scottish Water is underway to confirm the best approach.

5.2. Surface Drainage
To ensure the site remains future proof, the surface water will be kept separate from the foul drainage, up until the point where the site connects into the combined sewer. The existing surface water drainage on the Old Royal High School site is proposed to be reused, along with the existing rainwater pipes and drainage runs, as far as possible.
As a number of the existing buildings have been removed, and new landscaping will be formed across the east of the site, the overall surface water run-off of the site is considered to be significantly reduced. Overall, the hardstanding surface area is decreasing, with more green space and plants implemented.
It is proposed that the flow of surface water to the main sewer will be restricted through the use of permeable paving and potentially the use of attenuation crates below paved areas. This is still in the process of being agreed with Scottish Water.

> 05.14 Fire Strategy

> The Fire Strategy for the proposed scheme has been developed by *A10 Fire*.

> The proposed project is a two storey music centre on a split level site located in Edinburgh Scotland. The building is an existing building with a topmost storey height of not more than 7.5 m. This is due to the split level nature of the building. The fire service access is provided to both levels of the building.

> This fire design is in accordance with the Building Standards (Scotland) Regulations 2004 by the application of Mandatory Standards Sections 2.1 – 2.15 as described in the Technical Handbook 2023. Compliance is mostly achieved by complying with the prescriptive guidance of the Technical Handbook. However, in some areas fire engineering design methods may be used to present an alternative solution to meet the objectives of the Mandatory Standards as permitted under section 2.0.7 of the Technical Handbook.

> Final exists are available on each level indicated on the adjacent plans with multiple routes provided generating no areas of extended escape travel distances within the proposed building.

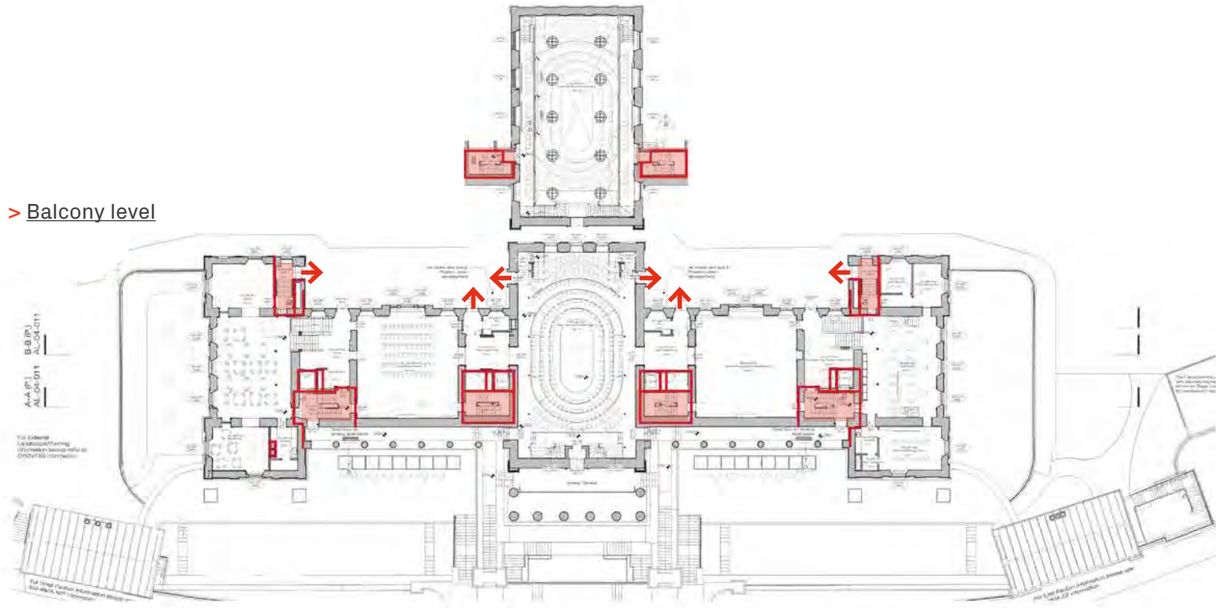
> The Existing stair cores (highlighted in light red) provide protected routes between all levels with a final exit on LGF.

> The sloped corridor route highlighted in green incorporates cross corridor doors and by providing the 30 min FR to the corridor, this reduces the risk of the occupants having to pass the fire source which could result in exposure to radiant heat. Once occupants are in the protected corridor, they have the option of two directions of escape. The 30 min FR corridor creates a degree of sub-compartmentation in the area. Therefore, in the event of a fire in one direction, the occupants are able to evacuate away from the fire and into the opposite sub-compartment created by the 30 min enclosure.

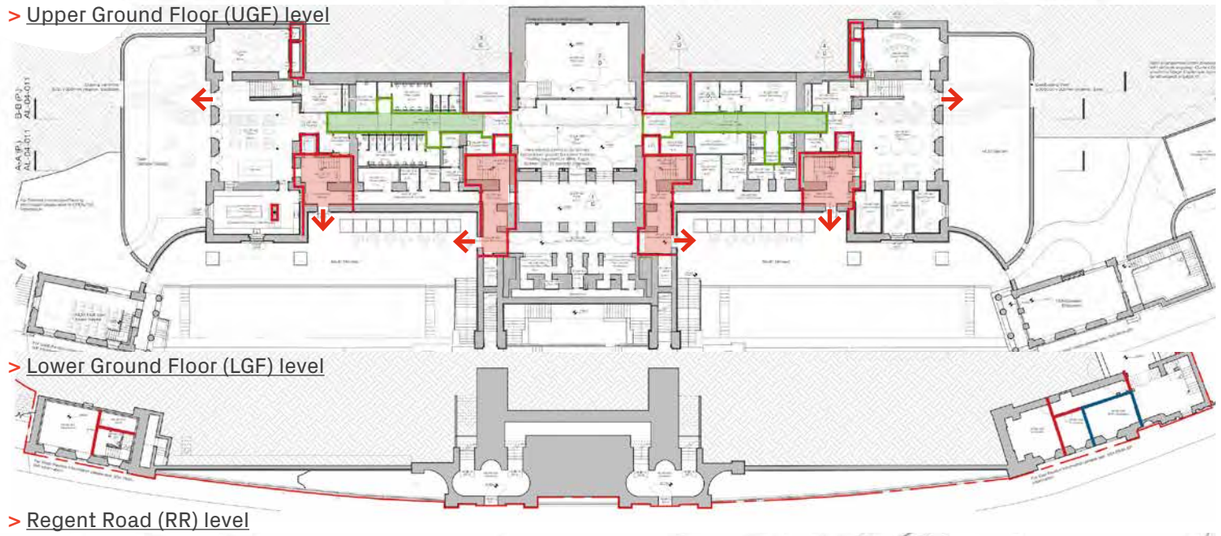
>The adjacent fire vehicle access plan indicates proposed fire Hydrant locations with a turning area available behind the building.

>FIre tender access is available to >50% of the facade through use of Regent Road and the access road provided on the site.

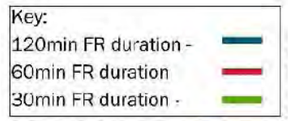
> Balcony level



> Upper Ground Floor (UGF) level

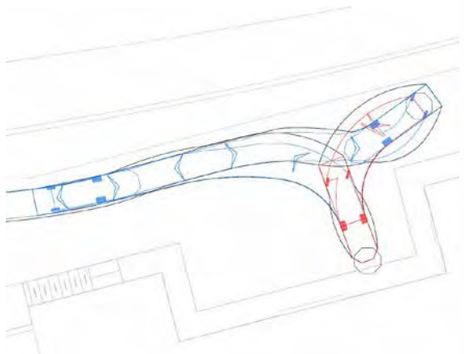


> Lower Ground Floor (LGF) level



> Fire Strategy Building Plans

> Regent Road (RR) level



> Fire Vehicle Turning

> Fire Vehicle Access

> 05.15 External Lighting

> The following specialist lighting information has been prepared by Arup lighting as part of their Stage 3 Report to support the Planning Application.

> Facade Lighting

The former Royal High School is of significant heritage value and has considerable prominence in the city of Edinburgh skyline. The Neo-Classical building designed by Thomas Hamilton, completed in the early part of the 19th Century, takes up an elevated position on Calton Hill and can be viewed at night from various locations within the city.

While the building is located within the city centre and there are therefore higher ambient light levels in the vicinity from streetlighting, we propose to provide a restrained and controlled lighting scheme to ensure it is lit in a sensitive manner and respects the darker Calton Hill landscape behind.

The lighting proposals have been designed to take into account the buildings' historic importance, it's new use as a centre for music excellence while considering energy use and environmental impact on the surroundings. The proposal ensures the scheme is sustainable and can be easily maintained in the future.

A large proportion of the exterior light fittings will be located in the ground surrounding the building, this will assist with maintenance and limit the need for luminaires to be fitted to the historic fabric of the building. Where lighting is proposed to the facade careful consideration has been given to locations where existing cable routes will be used where possible.

Light spill is carefully managed and the design takes into account best practise approaches on light spill mitigation.

A control system is to be installed to allow dimming and scene setting of the external lighting for various uses allowing areas to be adapted for external events that the spaces will host.

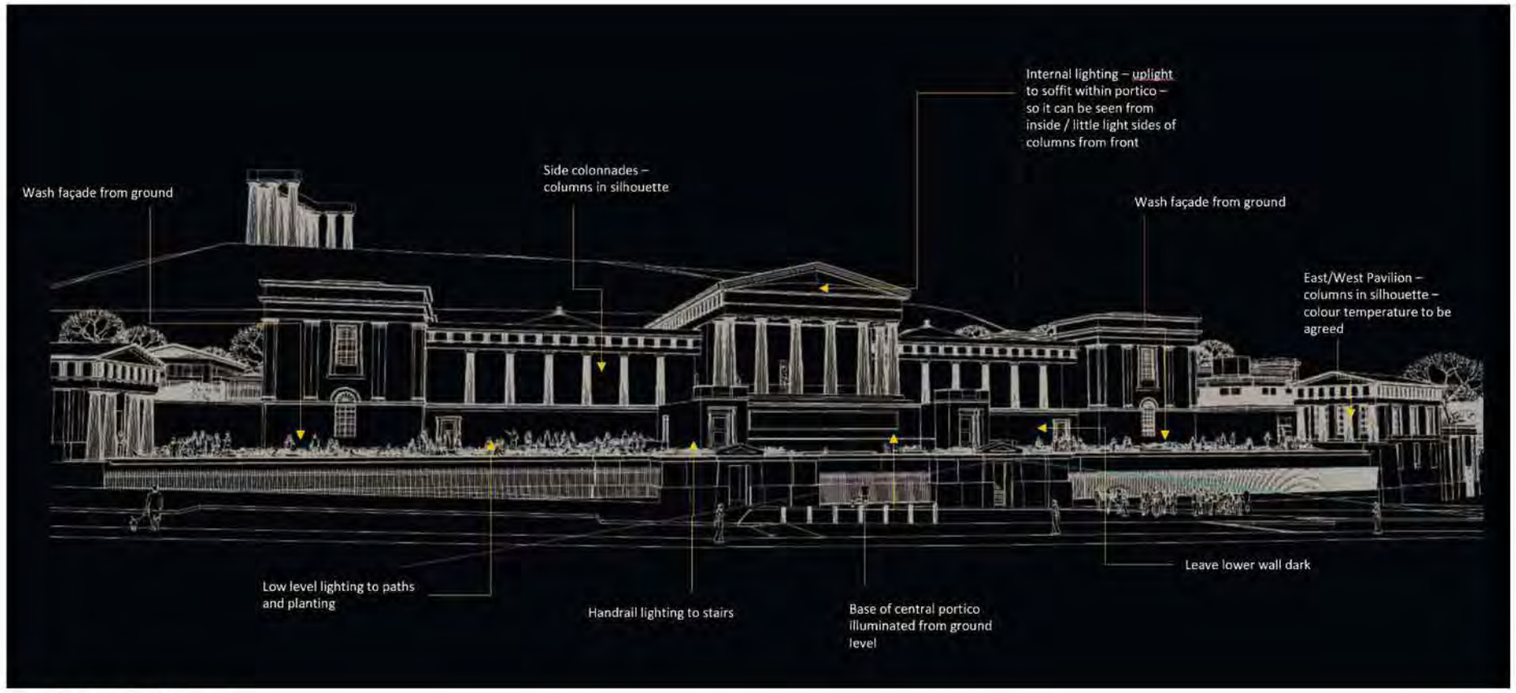


Figure 47: Overview of Elements

Figure 48: Precedent images

> **05.15 External Lighting contd.**

> Facade Concept - Visualisation

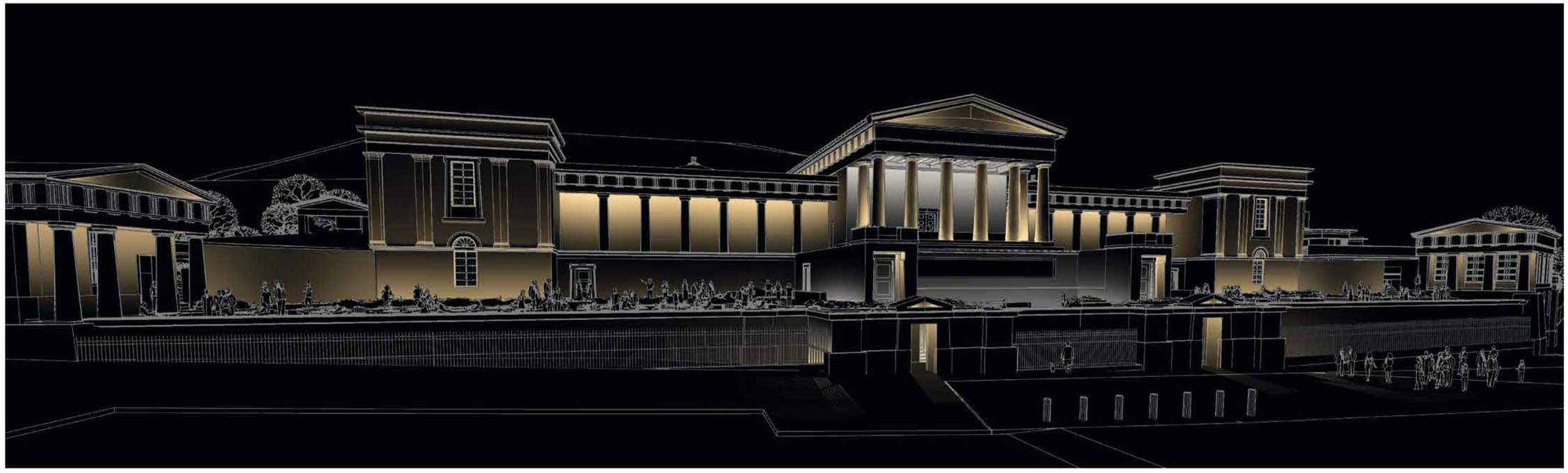


Figure 49: Front elevation - lighting concept sketch

Figure 50: East and West Pavilion reference image

Figure 51: Handrail lighting to entrance steps

Figure 52: Uplight at key thresholds

Figure 53: Main facade uplit from ground recessed luminaires

A level of illumination to the façade provides a backdrop to the terraces and allowing less light to be used in the surrounding landscape areas. Light levels are adequately provided for safety and security and areas such as steps and stairs have integrated handrail lighting to efficiently illuminate these areas. Technical models and calculations will be provided at RIBA Stage 4.

> 05.15 External Lighting contd.

> Landscape Lighting

The landscape areas around the Royal High School provides a unique setting and an opportunity for visitors to enjoy the setting of the building and views across the city, during the day and into the evening.

The landscape proposals provide a series of different spaces across the site which require considered lighting approaches depending on uses. As indicated in the previous section of this report the facade lighting will provide a backdrop to the landscape areas will deliver a level of ambient light from reflected light.

The lighting for the landscape will :-

- Meet all recommended illuminance criteria for safe movement.
- Provide a comfortable and enjoyable space at night.
- Provide the correct lit character to encourage night time uses.
- Consider light spill and use shielded sources and directional lighting.

With the exception of a small number of columns to light the car entry to the space and the multi-function space to the rear of the building all landscape lighting will be low level. Bollards where used will be 600mm high in main path routes and 450mm in the East Garden. All light sources are specified to be fully shielded where a direct view of the lamp will not be seen.

Light spill is carefully managed and the design takes into account best practise approaches on light spill mitigation.

A level of illumination to the façade provides a backdrop to the terraces and allowing less light to be used in the surrounding landscape areas. Light levels are adequately provided for safety and security and areas such as steps and stairs have integrated handrail lighting to efficiently illuminate these areas.

The approaches outlined on the following pages will provide a pleasant lightscape, where the heritage of the building is enjoyed and a new unique vantage point is created to allow views across the city from the various vantage points within the terraces and gardens in the evening.

Figure 54: Landscape Plan - space uses

> **05.15 External Lighting contd.**

> Landscape - Entry Experience

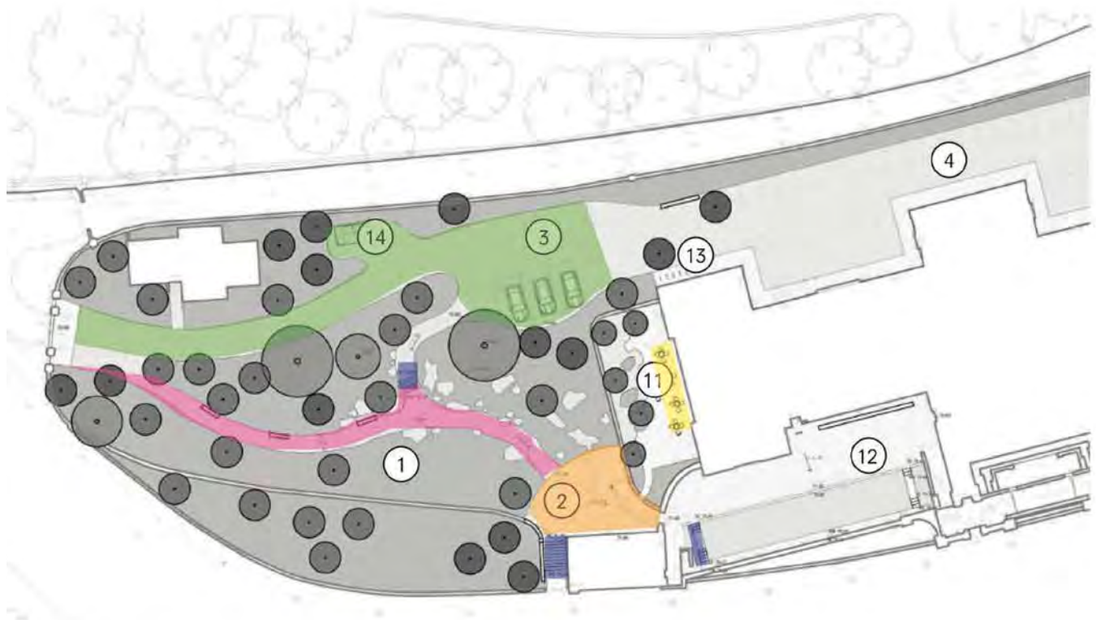


Figure 55: Light level plan

	Description	Target Horizontal Illuminance [lux]	Reference
	Traffic Areas	10 (ave)	BSEN 12464-2: 5.1.2
	Pedestrian Pathways	5 (ave)	BSEN 12464-2: 5.1.1
	Building Entrances + Adjacent routes/stairs	100 [min]	BS 8300-1:Table 5
	Gathering Area	10	CIBSE LG6 4.16
	Ramps & Stairs	30 / 15 [av/min]	BS 8300-1:Table 5

Table 1: Light level plan

Figure 56: Bollards to entrance path

Figure 57: Select tree to help indicate entrance

Figure 58: Uplight to facade at entrances

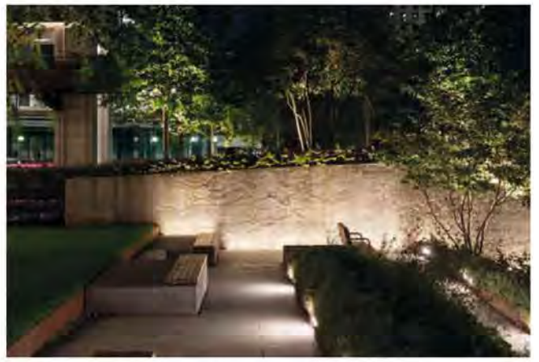


Figure 59: Low level light in Courtyards at Cafe entrance

On arrival visitors will be directed down the entrance path via a seies of light bollards that take then down to the lower entrance and into the building via the lower couryard. Changes of level such as stairs and steps will be lit from low level light such as handrail lighting or bollards.

All light sources will be white light and final colour temperatures of light will be finalised pending site mock-ups with stonework.

The courtyard will be lit from ground buried lights that uplight the facade and low level spotlights to planting and integrated lighting to graze the rock areas that will be revealed through the excavation work in this area.

The courtyard lighting will be layered rich and impactful to provide a brigher area to mark the entrance to the building. A control system is to be installed to allow dimming and scene setting of the external lighting for various uses.

> 05.15 External Lighting contd.

> Landscape - Multi-use Space

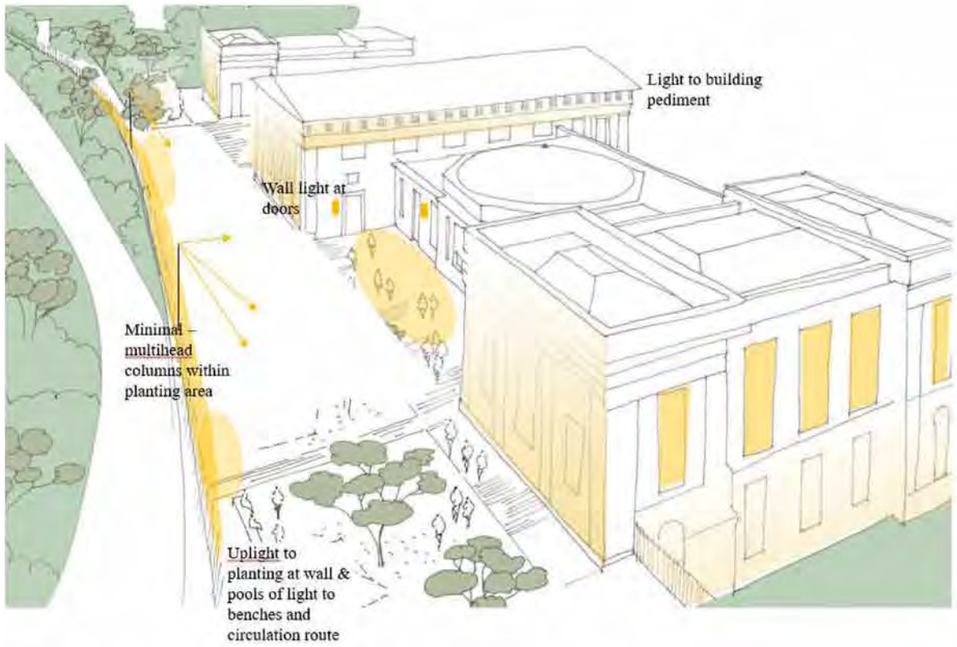


Figure 64: Lighting approach to plaza

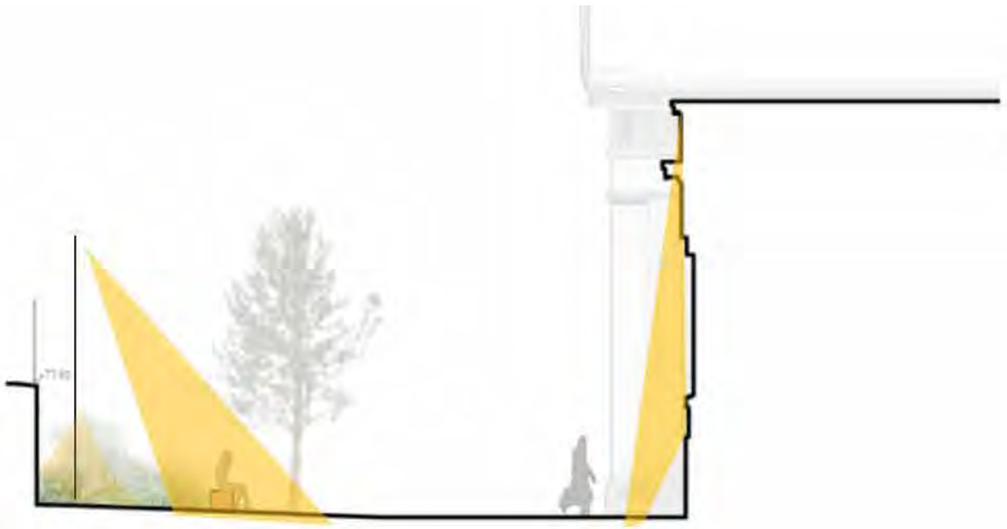


Figure 63: Lighting approach for multi-use space

To the rear of the building an open space has been created within the landscape plans to facilitate events, it has been left open to allow room for structures to be erected. The space is open with seating and planting to the edge. The lighting in this space consists of a series of columns at the edge of the space that are furnished with multihead fittings to light the main circulation routes and provide a level of ambient light for night time uses. The planting at the edge of the space will be lit from spike mounted fittings mounted within the planting beds.

The facades of the building will be illuminated from ground buried uplighting. A light fitting will be located at each door to provide ambient light and emergency lighting requirements.

All lighting in this area will be dimmable via a central DALI lighting control system.

Figure 65: Flood to planting

Figure 60: Light at doors

Figure 61: Uplight to building facade

Figure 62: Multihead column fitting to function space

> 05.15 External Lighting contd.

> Landscape - Terraces

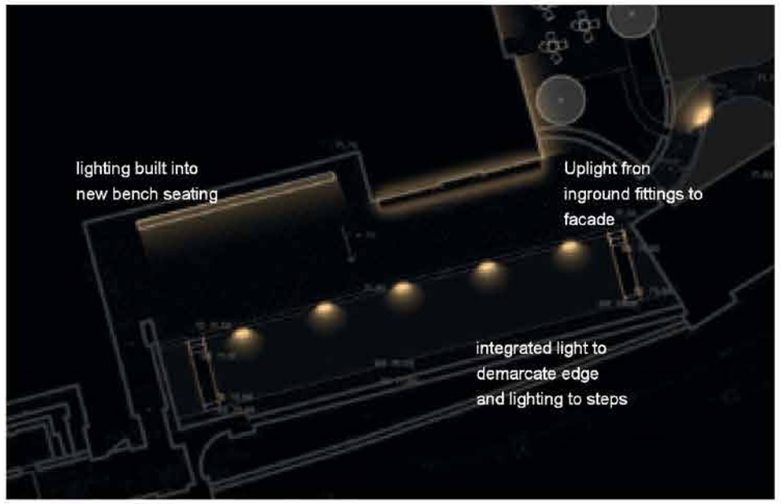


Figure 71: Location plan

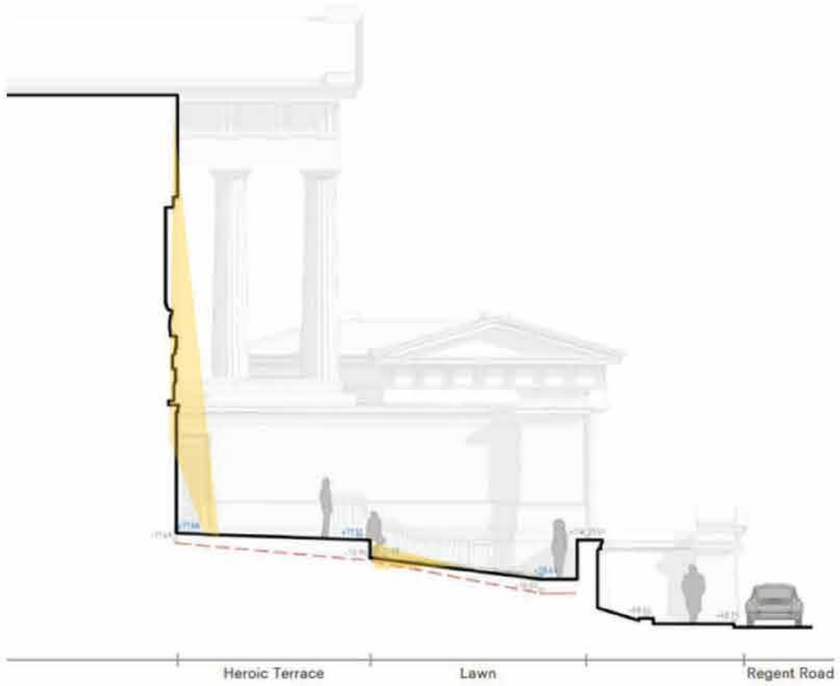


Figure 66: Section at ront Terraces

Figure 67: Light quality reference image

The front terrace lighting proposals consist of a minimal level of light to allow safe egress across the space at night. All light sources are shielded and from low level so no lighting detracts or obscures the views of the city from this space at night. The character of the space is largely provided at night through uplighting to the main building facade illuminated from ground buried uplights. A new bench is being introduced to the back of the space which will incorporate lighting to provide the required light levels for safe movement across the space at night.

It is proposed that the edge between the grass and hard scape is marked in some way to ensure safety. Similarly the stairs and steps will have localised lighting to meet the required light levels. This will be delivered through low level wall recessed lighting or handrail lighting.

All lighting in this area will be dimmable via a central DALI lighting control system.

Figure 68: Low level lighting

Figure 69: Integrated light to new bench

Figure 70: Light within handrail to steps

> 05.15 External Lighting contd.

> Landscape - East Garden

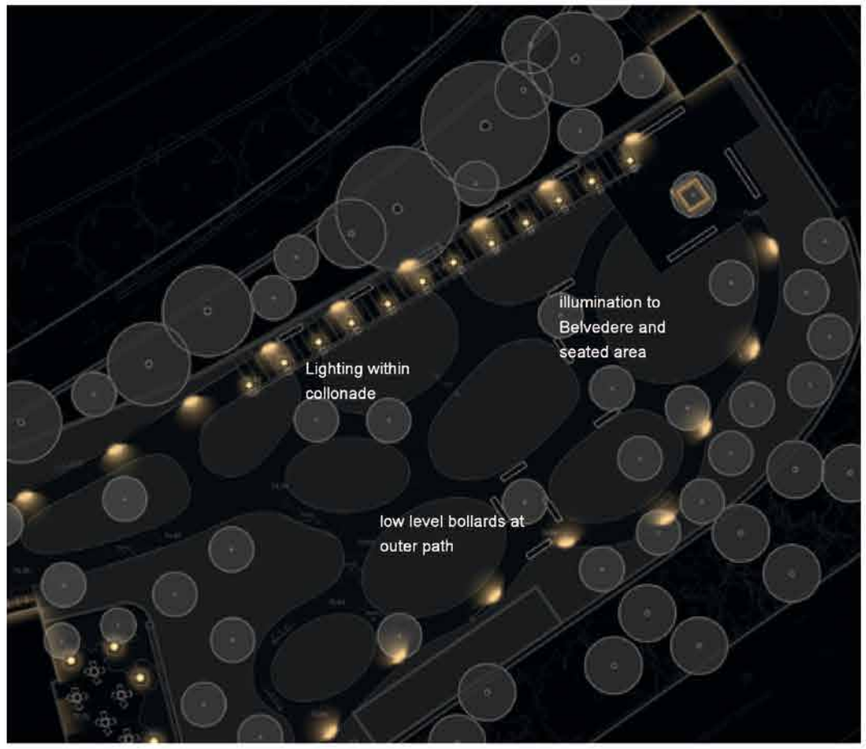


Figure 76: East Garden Light plan

Figure 72. Bollard with shielded source

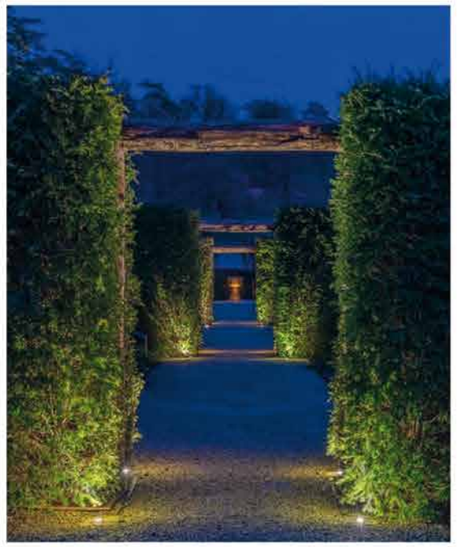


Figure 73: Uplight from ground to colonnade arbour

Figure 74: Floodlighting to Belvedere

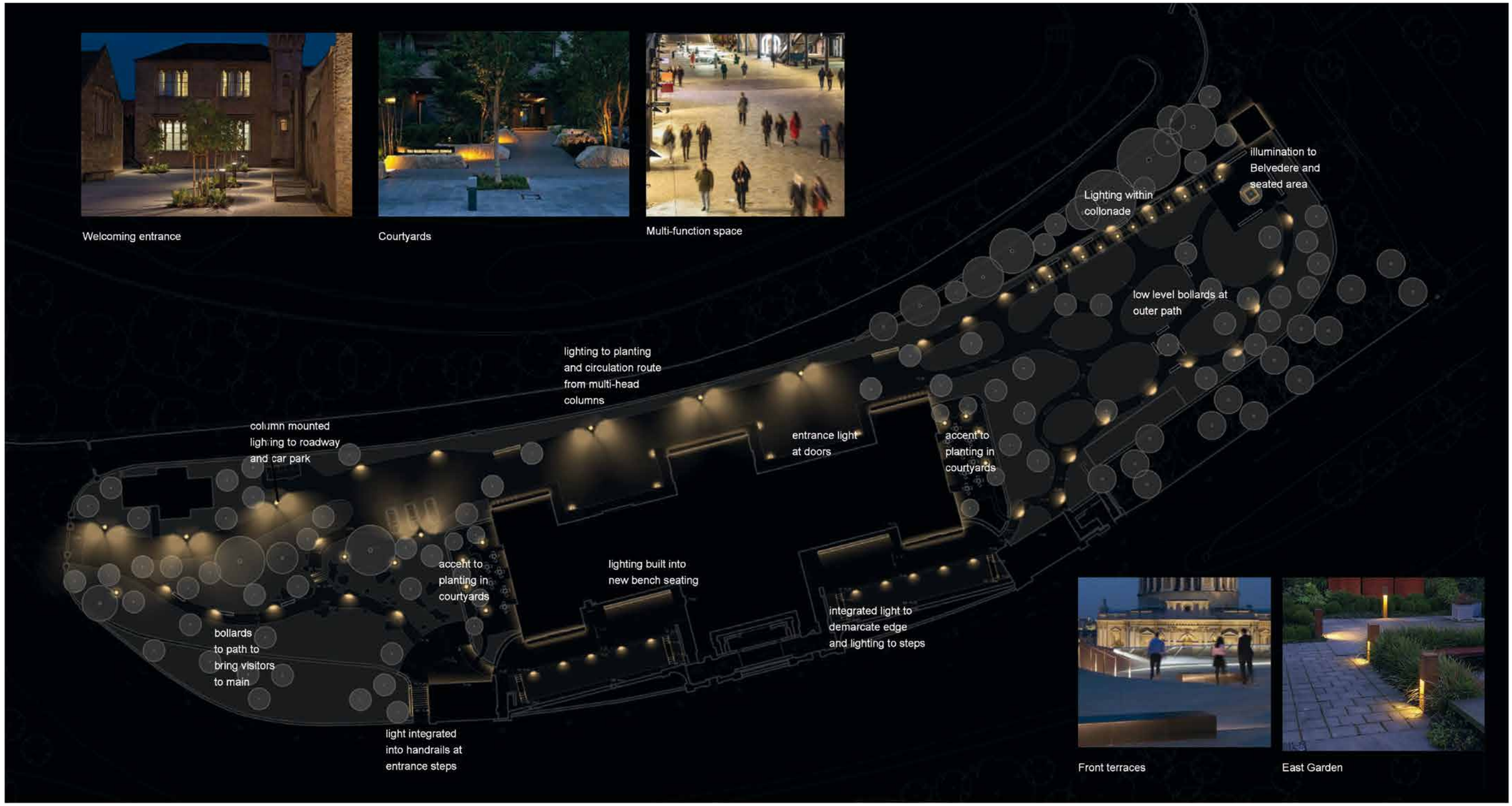
To the east of the building a new garden with low level topiary hedging provides a walk. We propose the outer path is illuminated with low level bollards to guide visitors around the space at night but retains a dark lit character at night. Visitors will be guided to the corner Belvedere building and seat where they can explore the space at night before completing their route round the perimeter of the garden. Building lighting in the distance will provide a backdrop to the space which will ensure it does not feel dark or unsafe.

Lighting is to be dimmable in this space to allow levels to be dimmed to a low level for night time uses.

Figure 75: Accent light under bench at seating area

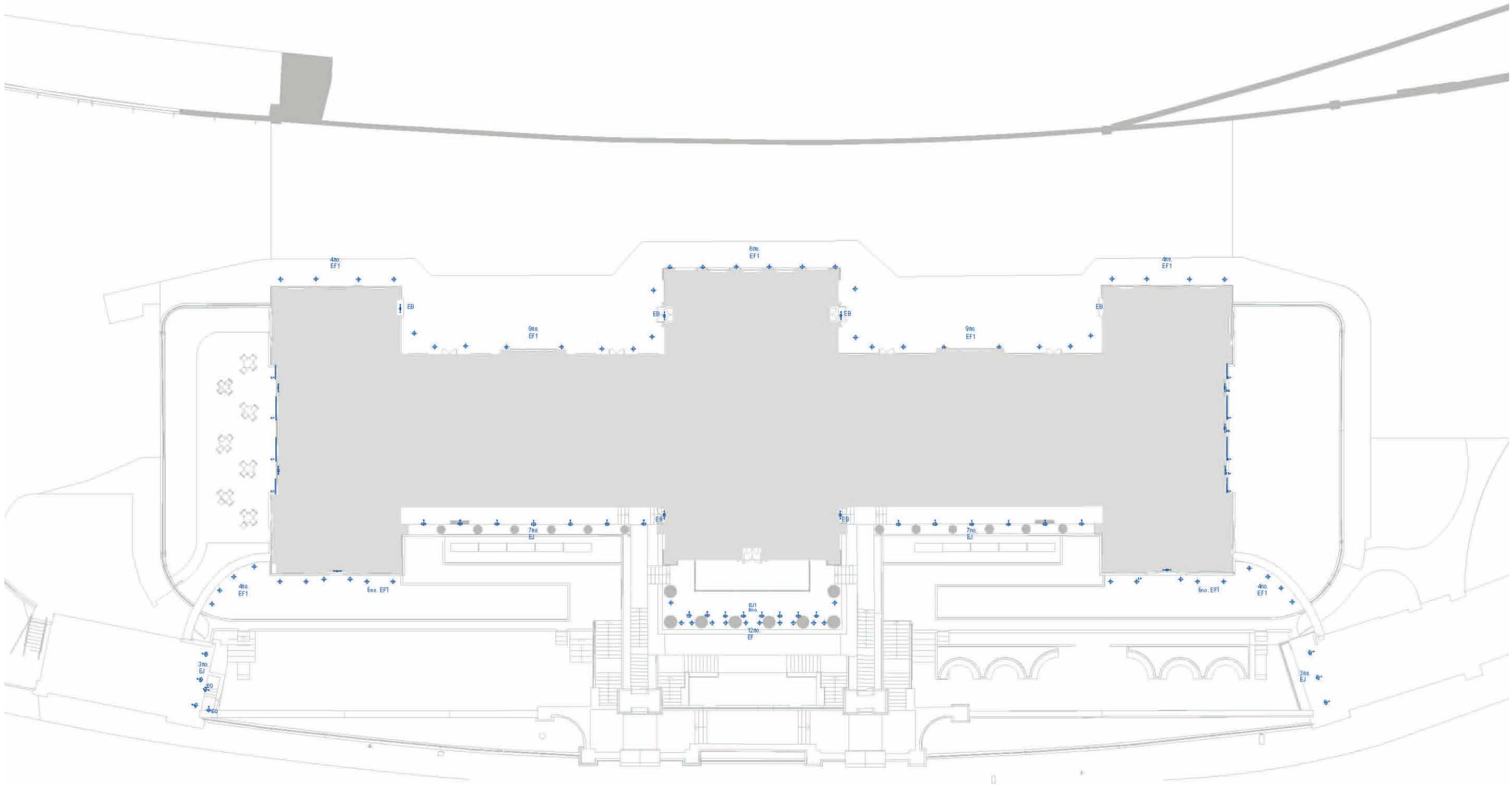
> **05.15 External Lighting contd.**

> Landscape - Lighting Plan



> **05.15 External Lighting contd.**

> Facade Lighting Layout



> 05.16 Roof Access

> Proposal is to provide a robust access strategy to roof areas whilst creating minimal impact on the buildings 5th Elevation" which is visible from Calton Hill.

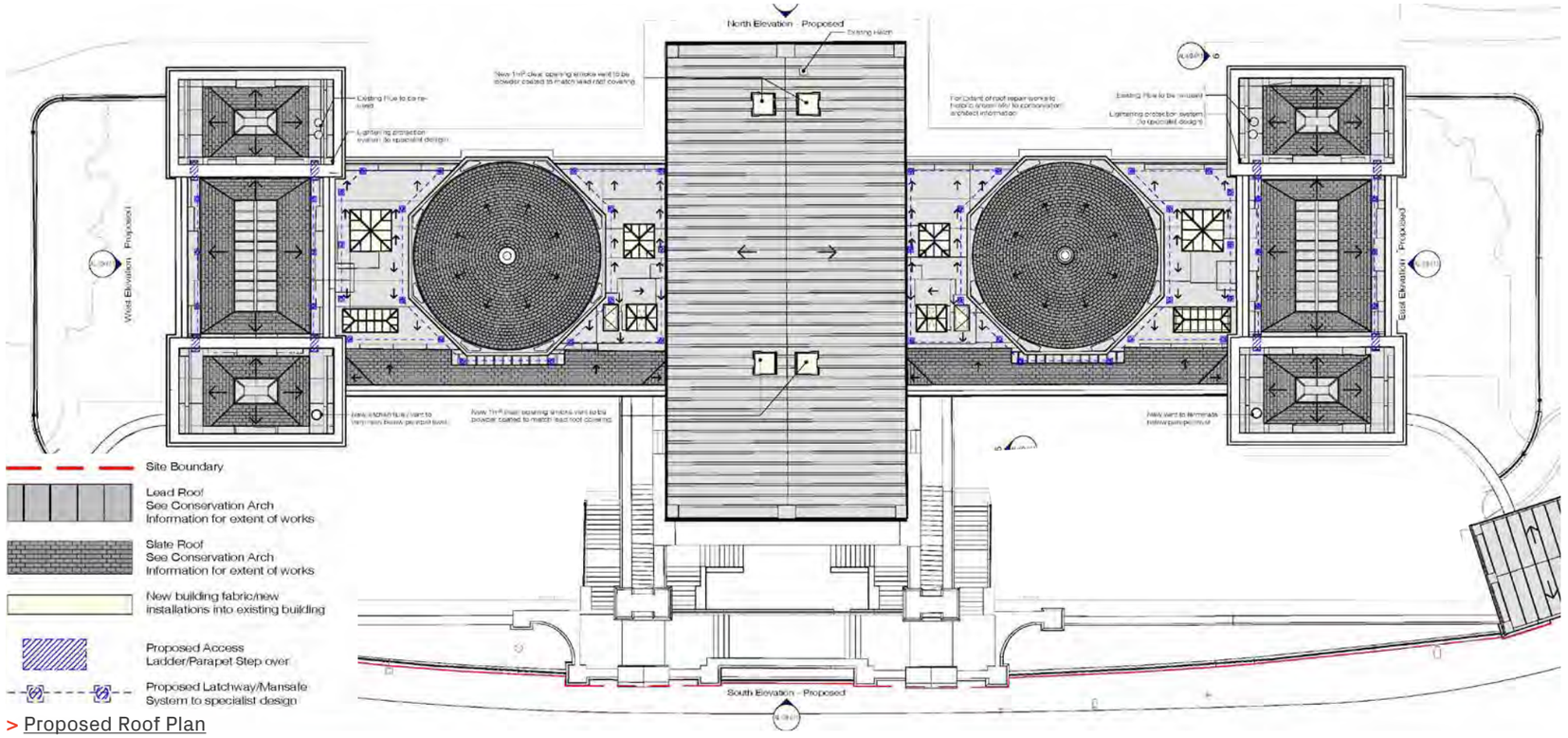
> *Heightsafe Systems* have undertaken an initial Roof & Facade Access Strategy report identifying potential methods for access and maintenance.

> In order to limit the extent of access required to roof areas it is proposed to restrict the installation of live kit requiring routine maintenance from the upper roofs of the building. Internal Access via an access hatch within the Main Hall Balcony Access staircases.

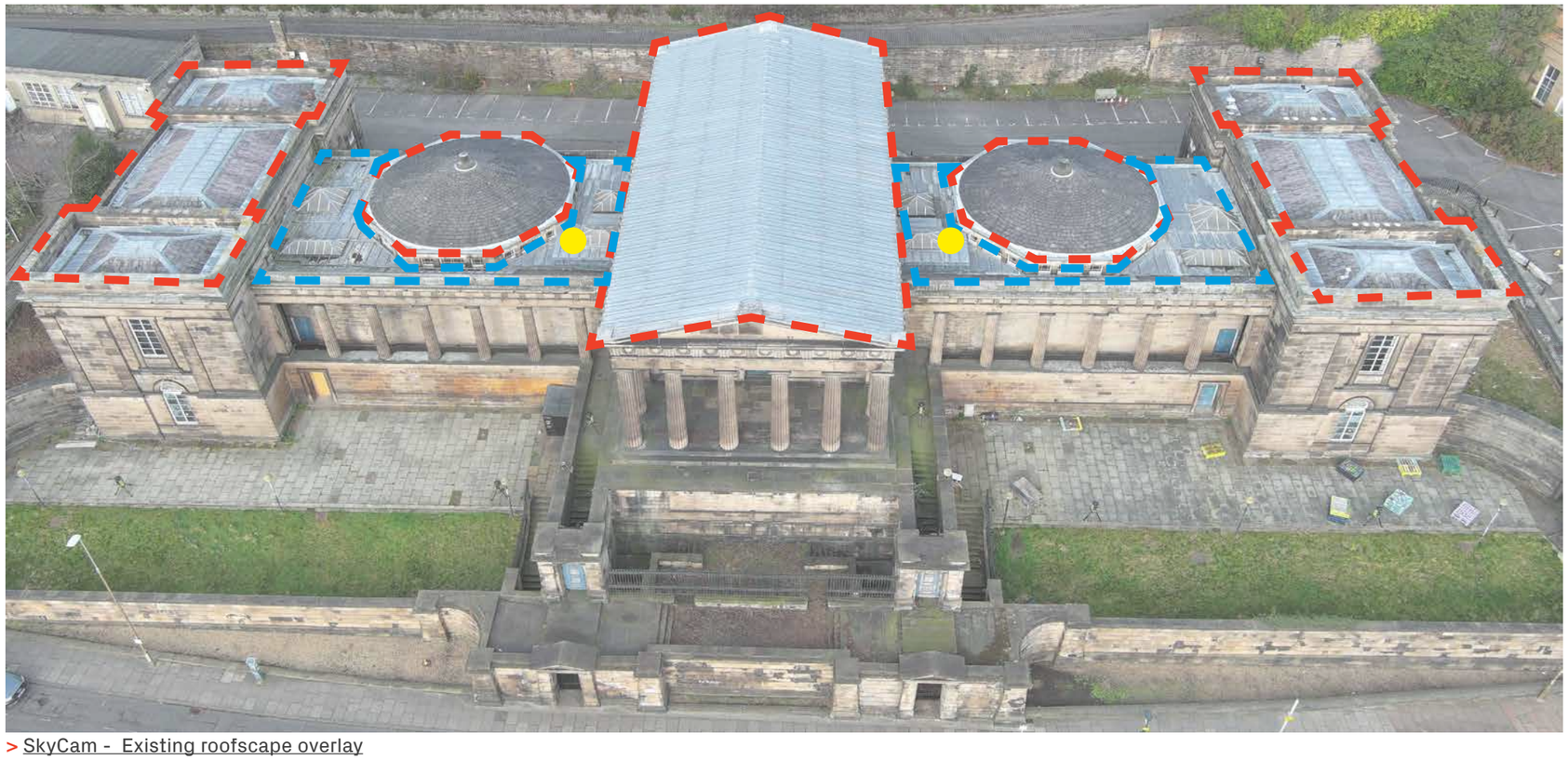
> A latchway/mansafe system with fall restraint is proposed to allow trained personnel to move safely around the lower roof area.

> The Upper roof areas of the Secondary Performance spaces, Main Hall and East/West Wings are not directly accessible from the lower roof to omit the use of fixed external ladders on the building. Occasional Maintenance & Repair access is proposed from the North Facade with MEWP/Cherry Picker access.

> This Strategy is to be further developed with the Design Team and specialist consultants ahead of construction.



> Proposed Roof Plan



> SkyCam - Existing roofscape overlay

> KEY

- Proposed Roof Access Hatch
- Accessible Roof
- Upper Roof Level

Part 06 Appendices

6.1 HES - Pre Application Response Letter

06

> **06.1 HES Pre-App Response**

> The following response was shared by Historic Environment Scotland (HES) to CEC as part of the Pre-Application response.

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email to:
Clare.Macdonald@edinburgh.gov.uk

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Planning and Strategy
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East Market Street
Edinburgh
EH8 8BG

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Enquiry Line: 0131-668-8716
HMConsultations@hes.scot

Our case ID: 300071833

3 April 2024

Dear City of Edinburgh Council

New National Centre for Music Former Royal High School, Regent Road, Edinburgh - proposals
Statutory Designation: 5 AND 7 REGENT ROAD, FORMER ROYAL HIGH SCHOOL, INCLUDING LODGE, CLASSROOM BLOCK, RETAINING/ BOUNDARY WALLS, GATEPOSTS AND RAILINGS
Designation Reference: LB27987

Thank you for your pre-application consultation which we received on 14 March 2024.

We have the following comments to make on the proposals.

The former Royal High School, designed by the architect Thomas Hamilton and built between 1825-9, is one of Scotland's most significant buildings, arguably the most accomplished Greek Revival building in the UK, with claims to prominence on an international level.

Current application
The current application is a significant revision from the last approved scheme which combined a new National Centre for Music with a new home for the city's St Mary's Music School. This application is now confined to the National Centre for Music alone. The change in emphasis has removed many of the elements of concern we had with the previous scheme(s) affecting both the main building and its setting. We are most supportive of the current proposals.

The concept for the new application aims to return the main building closer to its original solitary setting on the site with the majority of later buildings having been removed (with the exception of the listed gatehouse) and the former playgrounds landscaped to provide new pleasure grounds and event spaces for the main building.

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

Main Building - exterior

Access to the building would be reconfigured to provide a new at-grade entrance to the frontage building utilising the existing entrance to the side of the portico via the western pavilion and paved terraces to the south. We support this sensitive approach which avoids the previous scheme's large new opening under the portico, and also necessitated the removal of the original frontage railings (which will now be happily retained). The former planned access routes, requiring visible barriers (planters and rails) will also no longer be required. The current proposals have the great benefit of retaining the monumental character of the building with very limited visual or physical alteration to its frontage.

The primary alteration to the main building is the proposal to drop the three windows to the lower ground floor to access the sunken garden areas (on the side elevations). In terms of the overall scheme we are content with this alteration, but would suggest a simple approach with the top of the current windows retained as a multi-paned fanlight and new doors underneath on the same plane, i.e. same depth within the stone reveal.

The west pavilion is being altered, (as consented) accompanied with a considerable lowering of ground levels – we would suggest the new stonework required here follows the tooling of the ashlar upper levels. The east pavilion is to be altered in the same manner, although if a similarly large opening is not required, a smaller one could suffice. The removed steps and railings by the east pavilion should be salvaged and reused where possible.

There is a change, from previous schemes, to increase the area of useable space under the columned portico, accessed from the restored opening in the main hall. It is now intended to bring forward the safety railings to immediately behind the columns. We have had previous discussions about the visibility of glass, and our preference would be a bronze rail with uprights hidden from view behind columns. If 100mm centred barriers are required for safety reasons we would suggest a bronzed wire (or thin railing) as this may be the least visible approach.

Main Building - interior

The current proposals have reduced the need for intervention into the fabric, retaining rather than replacing, later stairs. It is also hoped to retain the existing furnace room vaulting (altered by the PSA and removed in the approved scheme). We would welcome its retention but accept that there are structural issues that may require more radical treatment. We understand the treatment of the main hall is unchanged, so our previous comments would apply, but we would be happy to look at any further details.

Setting

The new use will also require far less intervention to the setting of the category A listed building than the previous scheme that incorporated the music school. The proposed large school building to the east of the site will now be removed and replaced with a specially landscaped garden. This will improve views of Hamilton's rear retaining wall and the Belvedere, now revealed for the first time in over a century. To the north of the main building the formerly proposed range of music school practice rooms and ancillary spaces, which impacted on the appreciation of the northern façade of the building, will give way to an open terrace. The formerly proposed reception gatehouse, which would have impacted on the setting of the western approach to the main building, will likewise be replaced by open ground. More of the site will become publicly accessible.

The setting of the building, which formed a significant part of discussions in the public inquiry, will be improved markedly from previous schemes and we welcome the designed landscaping which promises to be an exciting addition to the site.

Conclusion

We strongly support the current proposals by the RHSPT to create a National Centre for Music in the Royal High School. The current proposals are a very welcome project for one of Scotland's most significant buildings and will be sensitive to the building and its important setting. We hope the application can be approved and work can start on site before too long.

We look forward to receiving your statutory consultation if an application comes forward.

Detailed guidance on the application of national policy is set out in our 'Managing Change in the Historic Environment' series available online at www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/. Technical advice is available through our Technical Conservation website at www.engineshed.org.

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Steven Robb and they can be contacted by phone on 0131 668 8089 or by email on Steven.Robb@hes.scot.

Yours faithfully

Historic Environment Scotland

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