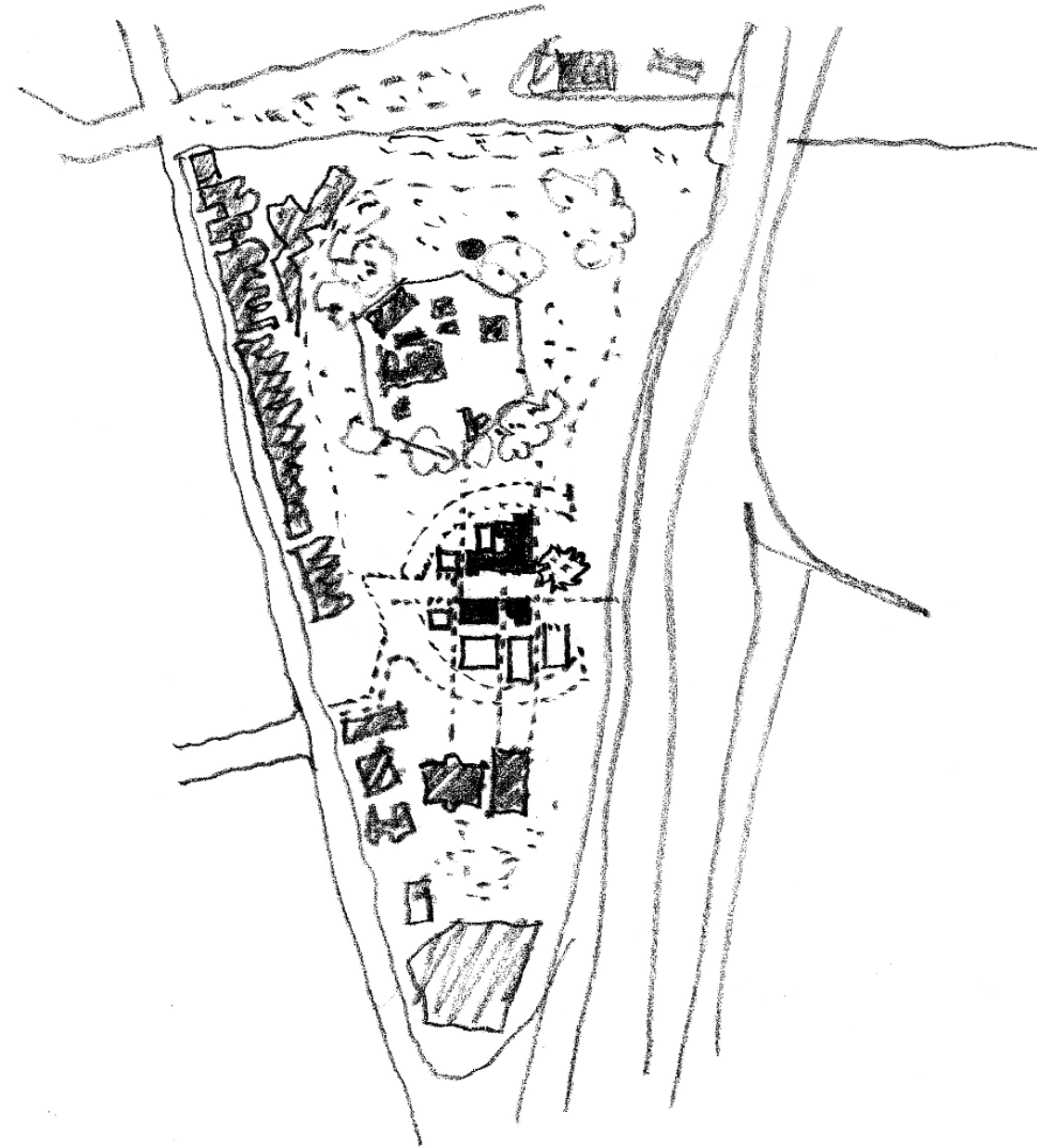




Fort Street Public School / Architectural Design Statement
Section 4.55 Modification

Department of Education [SSDA 10340] — REV 04 — 15/04/2021

Upper Fort Street, Observatory Hill, Sydney

We would like to acknowledge the Gadigal of the Eora Nation, the traditional custodians of this land and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past, present and emerging.

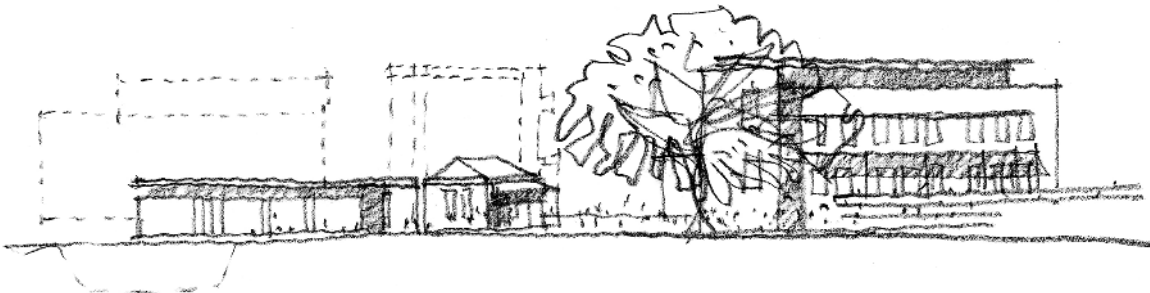


Contents

EXECUTIVE SUMMARY	5
Introduction	5
Executive Summary	5
RESPONSE TO CONDITIONS OF CONSENT	7
SCHEDULE OF MODIFICATIONS	11
URBAN DESIGN PRINCIPLES	13
FUNCTIONAL LAYOUTS	14
Lower Ground Floor	14
Ground Floor	16
Level 1	18
Level 2	20
Level 3	22
Roof	24
KEY MODIFICATIONS	27
MET Lift Removal / Building J Level 3	27
Lower Ground Removal	32
Rainwater Tank Enclosures	33
Rooftop PV Panels	34
Revised Drop-Off, Pick-up at Loop Road	35
SECTIONS: NORTH - SOUTH	42

MATERIALITY	43
Materials Sample Board	44
ELEVATIONS	45
REVISED FACADES	47
Facade Type 01 and 02	47
Facade Type 03	48
Facade Type 04	49
Facade Type 07	50
Facade Type 13	51
Facade Type 10	52
Facade Type 13	51
Facade Type 11 - C.O.L.A	52
Facade Type 12 - Services Enclosure	55
LIGHTING STRATEGY	56
BRADFIELD SERVICES SHED AND PINCH POINT	57
SHADOW STUDIES	60

Project Name		Fort Street Public School	
Project Code		FSS	
Document Name		S4.55 Report	
Revision	Date	Comment	Approved
00	18/12/2020	DRAFT Section 4.55 Report	DB
01	02/02/2021	Final Draft Section 4.55 Report	DB
03	16/02/2021	SECTION 4.55 SUBMISSION	DB
04	15/04/2021	S4.55 Submission - p43 amended	DB





Executive Summary

Introduction

The purpose of this report is to provide a brief Architectural Design Statement to support and explain the Section 4.55 Modification Application to SSD 10340. This report should be read in conjunction with the architectural drawings, landscape drawings and design statement, supporting consultants’ reports and the Environmental Impact Statement prepared by Ethos Urban.

The report should also be read in conjunction with the Architectural Design Statement that accompanied the approved State Significant Development Application. This report does not attempt to provide an overall description of the project, only details specific to the proposed modifications are outlined in detail within this report.

The project involves the expansion of Fort Street Public School to accommodate a total of 550 primary school students, with provisions reserved for future growth beyond 550 for the school, excluded from this proposal.

Executive Summary

The principles of the proposed school upgrade captured in the original planning application remain the same in this proposed modification. The design shall still uphold the educational and functional qualities of the campus, ensuring a rich, supportive and dynamic environment is achieved that meets the needs of today’s students and tomorrow’s decision makers.

Since the original application, the details of the proposed expansion have been subject to an increase in the amount of detail available to the project team. This has been obtained through activities including:

- advanced site investigations of the existing buildings
- review of the extent of dilapidation and deterioration of the Metereological Building fabric and struct
- advancement of the detail of School’s Infrastructure’s brief for the project
- expert analysis corresponding with the above activities across a range of disciplines including engineering design and cost forecasting.

The individual aspects of the proposed amendments are either minor in nature or are indeed improvements to the design. Each measure proposed in this amendment, both in isolation and in aggregate, has been assessed on balance with the general uplift of the quality of the campus design, amenity, functionality and heritage outcomes. This design statement focusses on addressing the detail of each principle amendment, its bearing on the as-approved scheme and the attributes established in the initial Architectural Design Statement report.

The proposed amendments to Fort Street Public School approved scheme maintain responses to the physical environment, the context of Observatory Hill and Miller’s Point and best practice for primary school campus development.

The proposal for the School still relies on it maintaining its status as an essential as a part of Observatory Hill. Strategies shall be put in place to enable to school to integrate more cohesively into the surrounding precinct.

As identified within our initial proposal, one of the fundamental principles of our response is the establishment of a strong identity and a sense of place for the campus which will support the school as an inclusive, community focused campus that can support the holistic education of each learner. Our response unlocks the potential of the site through a number of strategic moves which provide ongoing opportunities for increased amenity and functionality. The key modifications proposed herein are intended to respond to factors identified since the initial approval, and arguably enhance the quality of the response to the Site and the fundamental principles. Specifically:

Site preparation, demolition and excavation

- Site remediation measures.
- Demolition of the southernmost school building (aka the original Observatory Hill Environmental Education Centre building (OHEEC), the garage and storage shed west and east of the Bureau of Meteorology Building, and the toilet block adjoining the main school building
- Selective removal of various elements of the main school building, as well as minor and insignificant elements of the Bureau of Meteorology Building and the Messenger’s Cottage to facilitate refurbishment and future use of these buildings. Inspections of the existing structure and advancement of the engineering since the initial application have further informed these responses
- Reduction of the extent of bulk excavation works to facilitate the new southern buildings and western addition to the main school building
- Tree removal and proposed plantings
- Installation and integration of hydraulic and electrical services.

Land use

- Use of all buildings for the purpose of a school.

Existing buildings

- Retention, refurbishment and extension of the existing Fort Street Public School, including construction of a new roof and rooftop additions.
- Retention and refurbishment of the Bureau of Meteorology Building and internal alterations and additions, with specific user consultation to further inform use.
- Retention and minor alterations to the Messenger’s Cottage.

New buildings

- Construction of a new building on the western part of the site for a staff room.
- Construction of two new, interconnected school buildings on the southern third of the site.
- Construction of a new communal hall and canteen building.

Landscaping

- Retention of the existing large fig tree.
- Landscaping works throughout the site, including construction of a new amphitheatre, a deck around the fig tree, new central plaza, and a multi-purpose fore court.
- Landscaping of roof gardens on top of the new southern buildings and the existing Bureau of Meteorology Building (MET).

Other works

- Works to the existing entrance road, including alterations to the Bradfield Tunnel Services Building.
- Modifications to existing pick-up / drop-off arrangements.
- Provision of signage zones.

Client Team — Project Reference Group

- Dan Herbertson, Senior Project Director Major Precincts, SINSW
- Karissa Kendall, Project Director, Major Projects, SiNSW
- Sylvia Corish, Executive Director School Performance, DoE
- Richard Skinner, Director Education Leadership, DoE Port Jackson Area
- Michele Peel-Yates, FSPS Principal, DoE
- Luke Lee, P&C Representative FSPS
- AMU, SINSW representative present
- Esben Jensen, Community Engagement Manager
- Elizabeth Carpenter, Managing Principal, FJMT
- Chris Crick, Director
- Justine Newby, Senior Project Manager
- Client Team — Lend Lease
- Jon Davis, Senior Project Manager, Lend Lease
- Tasmin Trickett, Senior Project Manager, Lend Lease

Consultant Team (Lend Lease)

- Architecture - fjmtstudio
- Landscape Architecture - fjmtstudio
- Heritage (Existing Building Condition) - Purcell
- Structure - Costin Roe Consulting
- Mechanical - Stantec Australia
- Hydraulics, Wet Fire - Warren Smith and Partners
- Civil - Costin Roe Consulting
- Certifier - Group DLA
- BCA/NCC & Accessibility/DDA - BM+G
- Fire Engineering - Innova Services
- Acoustics - Stantec Australia
- Traffic Engineer - Arup
- Electrical , Comms, Dry Fire and Security - Stantec Australia
- Greenstar and ESD Consultants- Stantec Australia
- Arborist - Birds Tree Consultancy
- Planning Consultant - Ethos Urban
- Heritage and Archaeology - Curio Projects

Consultant Team (SiNSW)

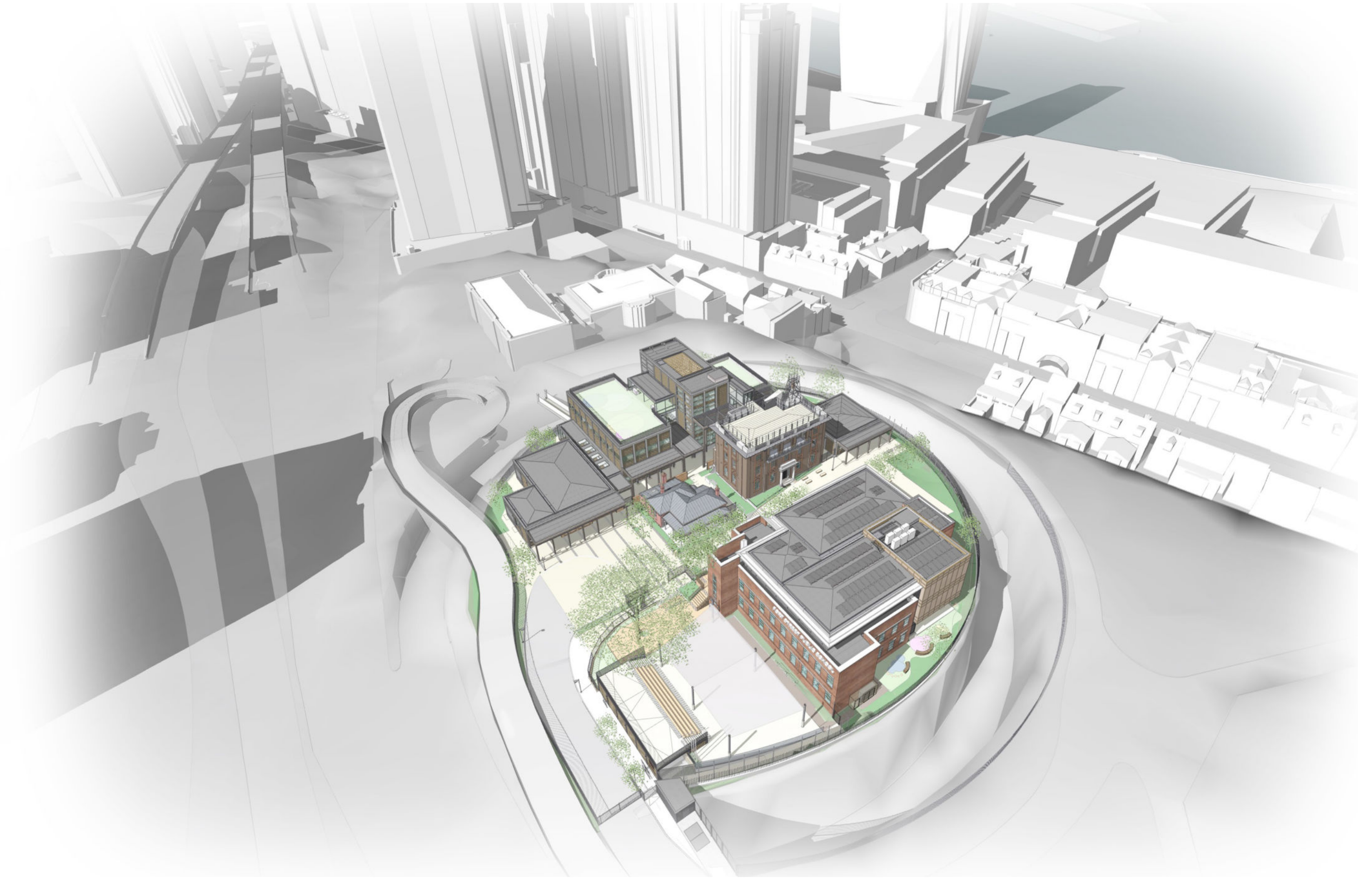
- Quantity Surveyor - MBM
- Educational Planning - New Learning Environments



Response to Conditions of Consent

▮ Extract from SSDA Notice of Decision (7/10/2020) - SSD-10340 Fort Street Public School

Issues Related to the Design	Consideration / Conditions of Consent requirement	Section 4.55 Response	Page Reference
Traffic and pedestrian safety — The proposal would result in conflicts between pedestrians, cyclists and drivers. — Council requested that the drop- off and pick-up zone be located along Upper Fort Street, separate to the play area due to potential conflict between vehicles, students and cyclists	— a School Transport Plan to be prepared in consultation with Council and TfNSW to detail management arrangements for pick-up / drop-off operations to minimise conflicts and encourage active travel.	Refer to proposed amendments described at section Revised Drop-off, Pick-up at Loop Road	
Heritage — Council noted that the proposal should be sympathetic to the heritage items onsite, including the Fort Street Public School Building, the Meteorology Building and the Messenger’s Cottage, the surrounding heritage items, including the Sydney Observatory and the National Trust Centre, and State and locally significant conservation areas.	— Conditions of consent require the Applicant to ... develop the detailed designs of rooftop photovoltaic panels and plant and equipment, raised walkways in consultation with Heritage NSW.	The Building A/D rooftop PV and plant design has been developed and updated.	
Built form and urban design — The proposal would be an over- development of the site. — The proposed height being below the Meteorology Building is supported.	— No conditions of consent noted.	An additional partial storey on building J is proposed in this S4.55 modification to house a new bridge connection, lift and two egress stairs to provide access to and from the MET rooftop. The lift previously proposed in the existing MET building has been deleted. As a result, the envelope and height of Building J is taller for a portion of this building compared to that shown in the approved SSDA.	
Visual Amenity — The proposal would impact views from keys sites, including the Harbour Bridge and the Agar Steps. — Council raised concern in relation to the potential intrusiveness of the proposed lift overrun above the Meteorology Building.	— Conditions of consent require the Applicant to prepare the detailed design of the lift overrun, including materials and colours, in consultation with Heritage NSW.	The removal of the lift and lift overrun from the MET, and relocation into Building J beyond, directly resolves the negative aspects of the impact of the approved lift overrun upon the MET building.	
Tree removal and landscaping — Council raised concerns regarding the extent of tree removal proposed, recommended that additional trees could be retained on site and requested that additional information be provided in relation to protection of retained trees on site.	— Conditions of consent require the Applicant to investigate methods and measures to retain two additional trees so that five trees in total are retained and 17 trees will be removed, implement tree protection during works and to undertake landscaping prior to operation.	Refer to S4.55 Modification Landscape Report accompanying this Statement.	Refer to Landscape Report



Traffic and Pedestrian Safety

- a Construction Traffic and Pedestrian Management Plan be prepared in consultation with Transport for NSW (TfNSW) prior to the commencement of any works.
- a School Transport Plan to be prepared in consultation with Council and TfNSW to detail management arrangements for pick-up / drop-off operations to minimise conflicts and encourage active travel.

Sydney Harbor Bridge Cycleway

Conditions of consent require the Applicant to consult with:

- TfNSW in relation to the potential coordination of the two projects.
- Council, Bicycle NSW and TfNSW (RMS) regarding any cycleway diversion works to accommodate the school construction works.

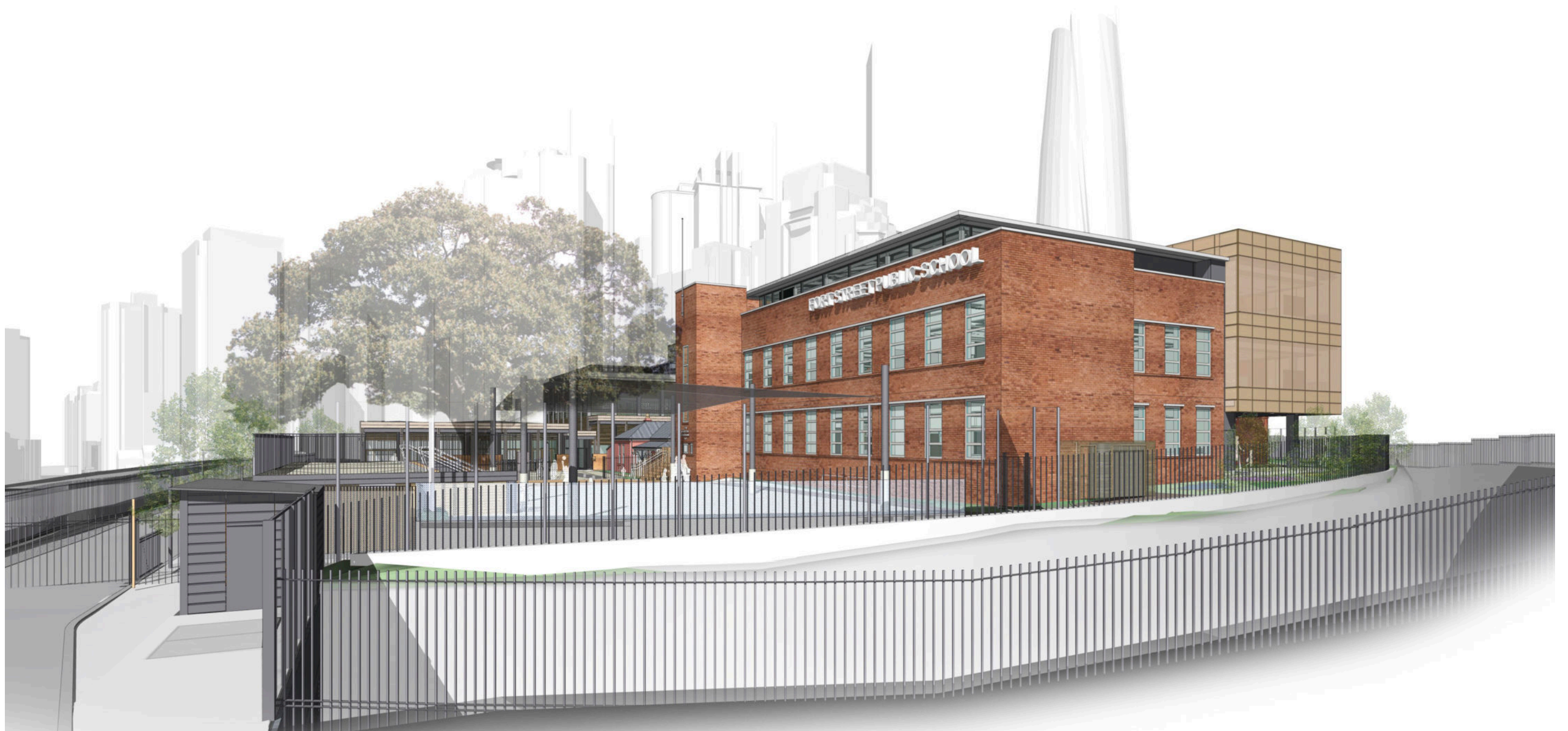
Issue	Consideration
<i>Traffic and pedestrian safety</i> - Construction and operational traffic would worsen congestion on the surrounding road network which is already constrained - The proposal would result in conflicts between pedestrians, cyclists and drivers. - Council requested that the drop-off and pick-up zone be located along Upper Fort Street, separate to the play area due to potential conflict between vehicles, students and cyclists.	<i>Assessment</i> - The EIS included a Traffic Impact Assessment (TIA) that assessment the impacts of construction and operational traffic on the local road network. This determined that the local road network could accommodate construction and operational traffic generated by the proposal subject to mitigation, including the widening and implementation of parking restrictions on Upper Fort Street. Construction vehicle arrival and departure routes would also be confirmed in consultation with the relevant government authorities prior to commencement of construction. - In response to comments made in relation to the proposed drop-off and pick-up arrangements, the Applicant provided justification for the proposed arrangements, including the need for drop-off / pick-up zone to occur close to the school entry. - The Department is satisfied the local road network could reasonably accommodate the additional traffic generated by the development and that the proposed mitigation measures would alleviate strain during peak periods. The Department is also satisfied that the widening of Upper Fort Street, including the provision of a widened footpath into the site, would provide improved access arrangements to avoid conflicts between road users. <i>Conditions</i> - Conditions of consent require: - a Construction Traffic and Pedestrian Management Plan be prepared in consultation with Transport for NSW (TfNSW) prior to the commencement of any works. - a School Transport Plan to be prepared in consultation with Council and TfNSW to detail management arrangements for pick-up / drop-off operations to minimise conflicts and encourage active travel.
<i>Sydney Harbour Bridge Cycleway</i> - The temporary diversion of the cycleway to accommodate construction would cause significant disruption and inconvenience. - The upgrade to the Sydney Harbour Bridge cycleway should be undertaken prior to the commencement of the school redevelopment.	<i>Assessment</i> - Funding and timing of the upgrade of the cycleway is under the control of TfNSW. - The Applicant has consulted with TfNSW in relation to the design of the proposed school redevelopment and to examine options for coordination of the two projects. The school redevelopment makes provision for appropriate landscaping and fencing treatments at the front of the site to accommodate operation of the cycleway before and after the upgrade of the cycleway. - The Department supports the coordination of the two projects and has met with the Applicant and TfNSW to advocate for this outcome. - The Applicant has committed to liaise with Council, Bicycle NSW and TfNSW in relation to temporary cycleway diversion. <i>Conditions</i> - Conditions of consent require the Applicant to consult with: - TfNSW in relation to the potential coordination of the two projects. - Council, Bicycle NSW and TfNSW (RMS) regarding any cycleway diversion works to accommodate the school construction works.

Consultations

Further consultations have been conducted across a broad range of stakeholders and expert consultants to inform amendments proposed as part of this modification. These contributors have been:

- NSW Department of Education
 - Schools Infrastructure
 - Schools Performance group
 - Sustainable Transport
 - Asset Management Unit
 - WHS Department
- NSW / Local Gov't Agencies
 - Transport for NSW
 - City of Sydney
- Consultant / Design Team
 - AMWC RSA (Road Safety Auditor)
 - Arup, Traffic Engineer
 - Lend Lease (ECI Contractor)
 - Costin Roe, Civil Engineering
 - fjmt studio, architecture and landscape

Through a series of workshops and expert reviews a range of measures have been identified to improve the safety and functionality of the various user circulation routes in and around the eastern and north eastern fringe of the proposal.



Schedule of Modifications

#	Item	Description	Sheets
1.0	General		
1.1	Revised COLA colonnades	Revised materiality and footprint COLA colonnades. Change to steel structure, clad with timber elements. Solid ceiling/soffit and roof for one storey colonnades.	DA-2002, DA-2003, DA-2004
1.2	Rainwater Treatments	Revised footprint size of On-Site Detention under ground tank. External rainwater storage tanks added to the perimeter on buildings A/D, F, J/H/G.	DA-2001, DA-2002
1.3	Existing heritage fences	Extent of MET existing entry fence amended. Revised positions of brick heritage wall openings.	DA-2002, DA-2101
1.4	Services Building	Amendments to service building and arrangement of room. Facade cladding amended to profiled metal cladding.	DA-2002
1.5	Bradfield Shed height	Minor revisions to new shed including RLs.	DA-5003
1.6	Design of new facades	Face brick facade elements proposed in lieu of exposed concrete for buildings F, G J/H.	DA-5905, DA-5907,
1.7	Existing Heritage masonry wall	Revised positions of heritage wall openings.	DA-5001
1.8	Loop Road, Drop Off, Pick Up	Revisions to design of the loop road, Drop Off, Pick Up arrangements for Phases 1 & 2. Clash between heritage stone pillar and loop road circulation resolved with relocation of pillar to alternate location.	DA-2002, Landscape Plans
1.9	Internal room layouts	Assorted minor internal layout changes	Plans
2.0	Building A/D		
2.1	Internal door and window openings	Amended strategy for retained existing heritage door and window openings, and new proposed openings.	DA-2002, DA-2101
2.2	Skylights at Building A & D junction	Level 1 Building A South extent of skylights revised	DA-5006
2.3	Photovoltaic rooftop design	Photovoltaic design revised	DA-2005
2.4	Building D Roof design	Building D roof design revised: pitches and shapes amended	
2.5	Level 2 Building D facade glazing extent revised	Minor amendments to the ratio of solid and glazed panels revised	DA-3001

3.0	Building M (MET)		
3.1	Lift in MET	Removal of approved lift in MET. Lift, rooftop lift room and overrun relocated to Building J behind.	DA-2001, DA-2002, DA-2003, DA-2004, DA-2005, DA-2006
3.2	Rooftop	Rooftop paved area amended to suit 5.1	DA-2005
3.3	North Stair	Existing north stair to be reconstructed to suit current BCA and Department of Education properties.	
3.4	Existing Stair	Removal of existing South East Stair from Ground to L2, to be replaced with new timber-framed floor infill, proposed as store rooms	DA-2002, DA-2003, DA-2004,
3.5	Revised Balustrades	Extent and design of new balustrades to Rooftop and L2 amended to allow retention of existing retained.	DA-2005, DA-3001, DA-3002, DA-4002, DA-4003
3.6	Reinstate Existing MET flagpoles on rooftop	Rooftop MET flagpoles	DA-2005, DA-3001, DA-3002, DA-4002, DA-4003
4.0	Building G/H/J		
4.1	Lower Ground Floor - Building G	Removal of Lower Ground floor accomodation beneath building G. Reduction in extent of excavation.	DA-2001
4.2	Building J	Proposed lift and stair to service all levels including new level 3 (relocated from MET). New covered bridge to the MET at each level. Proposed additional partial floor at Building J to provide connection to MET Rooftop.	DA-2001, DA-2002, DA-2003, DA-2004, DA-2005, DA-2006
4.3	Roofscape Design	Ridge and valley changes to building G, pitch increased to 4 degrees. Ratio of solid to louvred roof to Building J upper amended	DA-2005
4.4	Structural design	Minor revisions to structural footings and piles of building J and H.	DA-2001
4.5	Mechanical Plant L3	Mechanical Plant to be placed on L3 within partial J extension, away from the rooftop play space on L2.	DA-2006
4.6	Skylights to G+H	Extent of skylights to glazed connection between G & H reduced.	DA-2003
5.0	Building F		
5.1	Roof Design	Pitch revised to 4 degrees, shape amended	DA-2003
	Building C (Messenger Cottage)		
6.1	Removal of Extension	Removal of South West extension (previously shown as an interview room in SSDA)	DA-2002, DA-4001



Urban Design Principles

▣ / Height, Density, Bulk, Scale and Setbacks

The height, density, bulk and scale attributes of the proposed scheme and amendments described as part of this Section 4.55 Modification are still informed by the 3 significant heritage items on the site - the Messenger's Cottage, the MET and the Fort Street Public School building.

The proposed amendments fundamentally retain views to and from the important vantage points within and surrounding the site. The degree to which archaeological impacts have been altered is negligible, and indeed in the case of the relocation of the MET lift, is improved. The lift is now proposed to be located within the new Building J form behind the MET. The move results in the elimination of any additions to the top of the MET, instead being placed on top of the Building J form.

There is an additional part-storey proposed to the top of Building J that provides enclosed connection and bridge link to the MET rooftop. This part-storey is placed centrally within the building form, and is configured with sensitive setbacks from the eastern and western elevations, ameliorating its apparent impact upon bulk and scale. Portions of the Building H and J forms act as visual buffers further concealing the impact of the partial storey added, and the apparent lift room impact is concealed within the form and hence less apparent. The raising of the proposed forms is beyond and behind the important heritage buildings, and therefore deferential to the heritage fabric as viewed from the vantage points. The hierarchy of forms as presented in the approved design is hence retained.

All new buildings are set back from the heritage fabric either with a physical gap or a lightweight C.O.L.A structure. These setbacks are unchanged as a result of these S4.55 modifications.

Buildings A, D, F and G

The proposed Section 4.55 Modification does not include any amendments to the urban design principles observed in the approved SSDA.

The deletion of the Lower ground Floor footprint below Building G substantially reduces the quantum of rock and soil being excavated and removed from the site. In archaeological terms this is an improvement over the approved scheme.

Building H

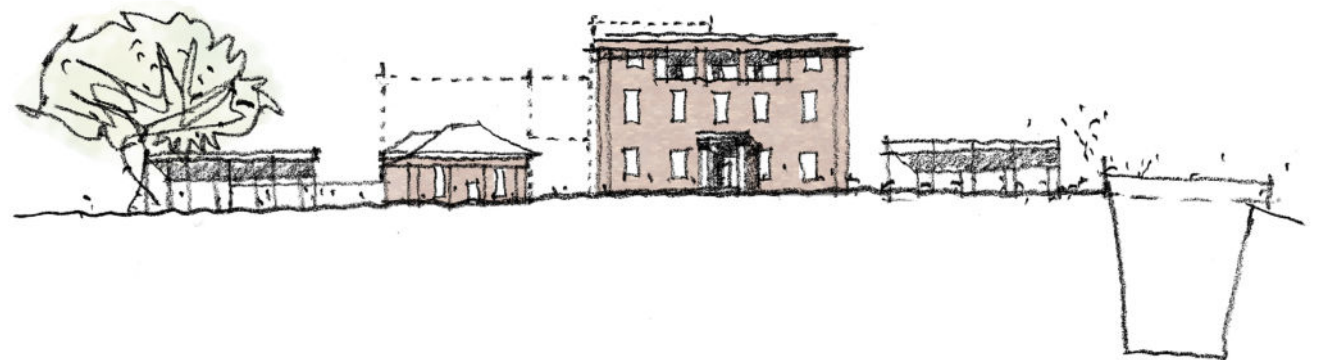
The design illustrated in the approved SSDA included an enclosed stair landing at the rooftop level (Level 2). This stair has been moved further into the adjacent Building J form. The enclosing facade of this stair has hence been removed and whilst the proposed roof and awning are retained to provide some covered protection for rooftop play, the bulk is somewhat reduced in this area.

Building J

A portion of the Building J floor plan is proposed to be lifted an additional storey. The lift relocated from the MET building, and the communication stair previously located in the north-west corner of Building J in the approved scheme, have been moved to the northern face of Building J. This move enables the uppermost portions of the lift to be buried as deep as possible into the floor plan to in turn keep its visual impact from vantage points to a minimum. The graduated western elevation of Building J in the approved scheme consisted of a pop-up at the north-western corner to house the stair; the relocation removes this pop-up further improving its elevational qualities.

The raising of the rear-most, south-facing portion of J enables the interstitial stair between H and J visible in the approved scheme to be pulled into the Building J volume. This enables this 2nd stair to provide another compliant point of egress choice from the upper levels of the H+J form and the MET rooftop.

Whilst the bulk and scale of Building J is somewhat increased, the net impact is deemed minimal and consistent with the hierarchical arrangement of the forms proposed in the approved scheme. Furthermore, on balance the refinements proposed are considered a net improvement for the site and the manner in which alterations are proposed to be conducted to the heritage items, both internally and externally.



Functional Layouts

Lower Ground Floor

/ Removal of Lower Ground level

In the SSDA submission there was a proposed lower ground level in building G (see extract) to accommodate stores and plant areas. Due to further design development and value management the lower ground level is proposed to be removed and plant/store rooms relocated across the site. This means a reduction in proposed excavation. Note that electrical, hydraulic and mechanical services previously planned for these areas has been re-engineered to result in the previous rooms either no longer being required or completely removed from the scheme.

/ Reduced size of OSD tank

Rainwater tanks are proposed to be placed on the perimeter of the buildings on ground floor which will reduce the excavation footprint and size required for the On Site Detention (OSD) tank.

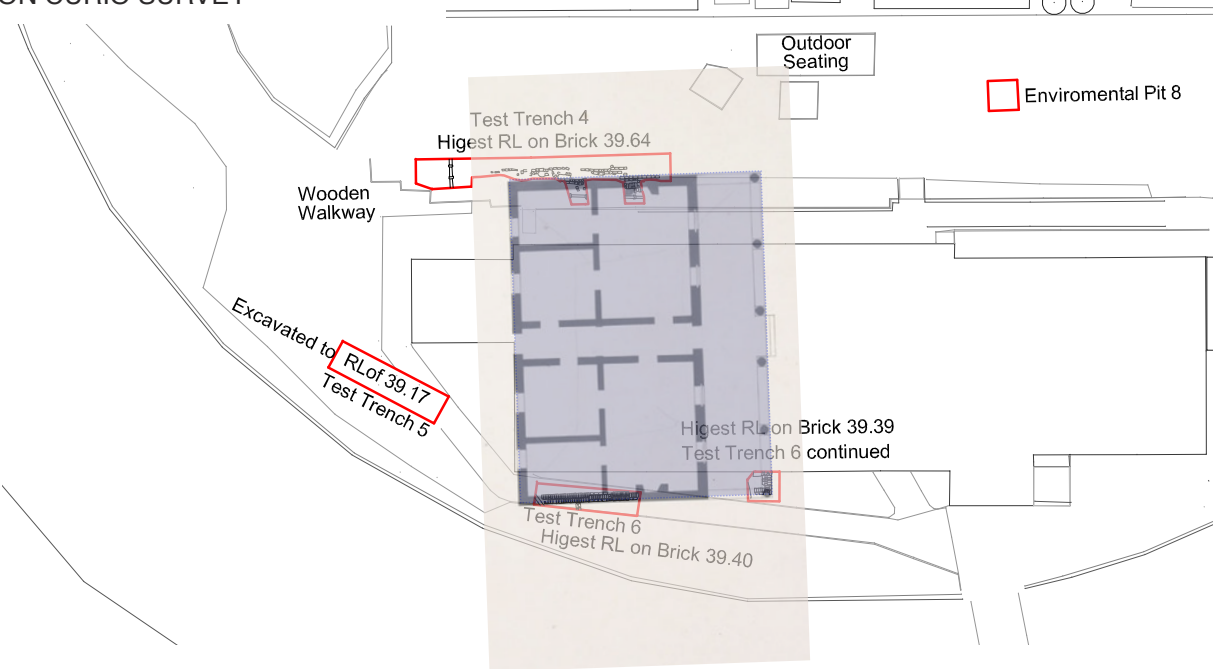
/ Lift pit extent and locations

The lift pit within the MET building has been relocated into Building J. This new location is situated north of the surgeon's cottage footings. Excavations in the vicinity of the MET and surgeon's cottage subterranean walls and foundations, and hence risks associated with these works, are hence improved.

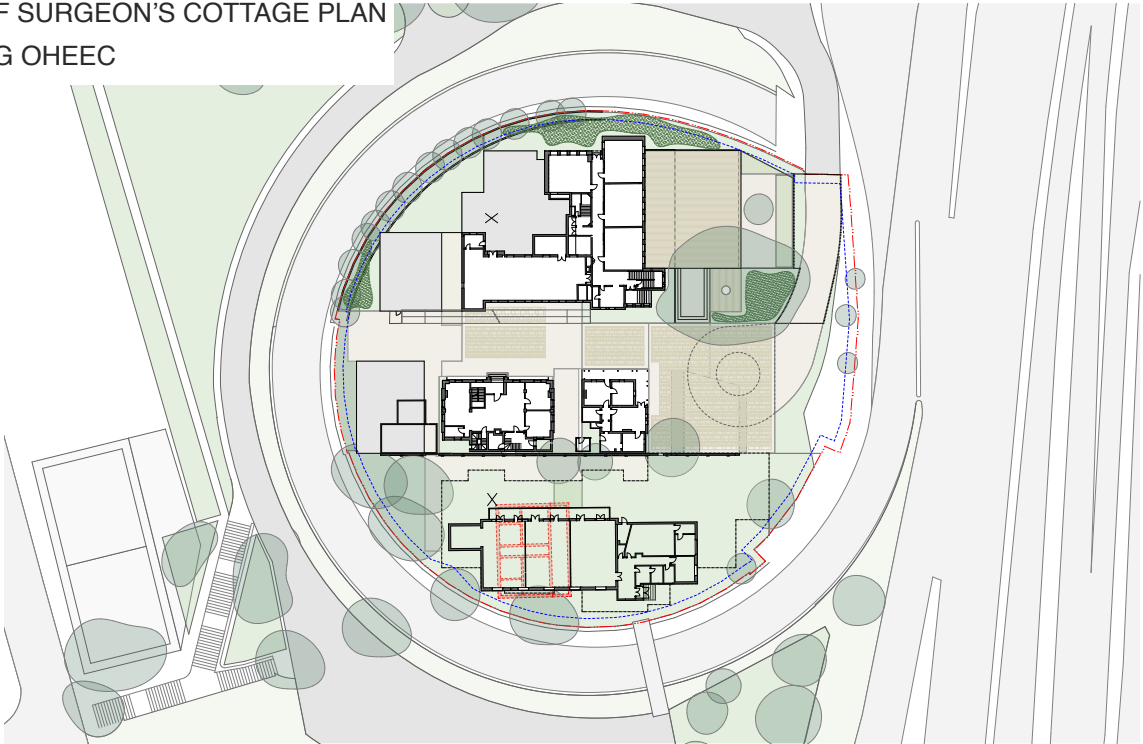
/ Heritage footings - revised structural design

The structural design of the piles and structural footings in building J/H/G have been updated to avoid the surgeon's heritage footings.

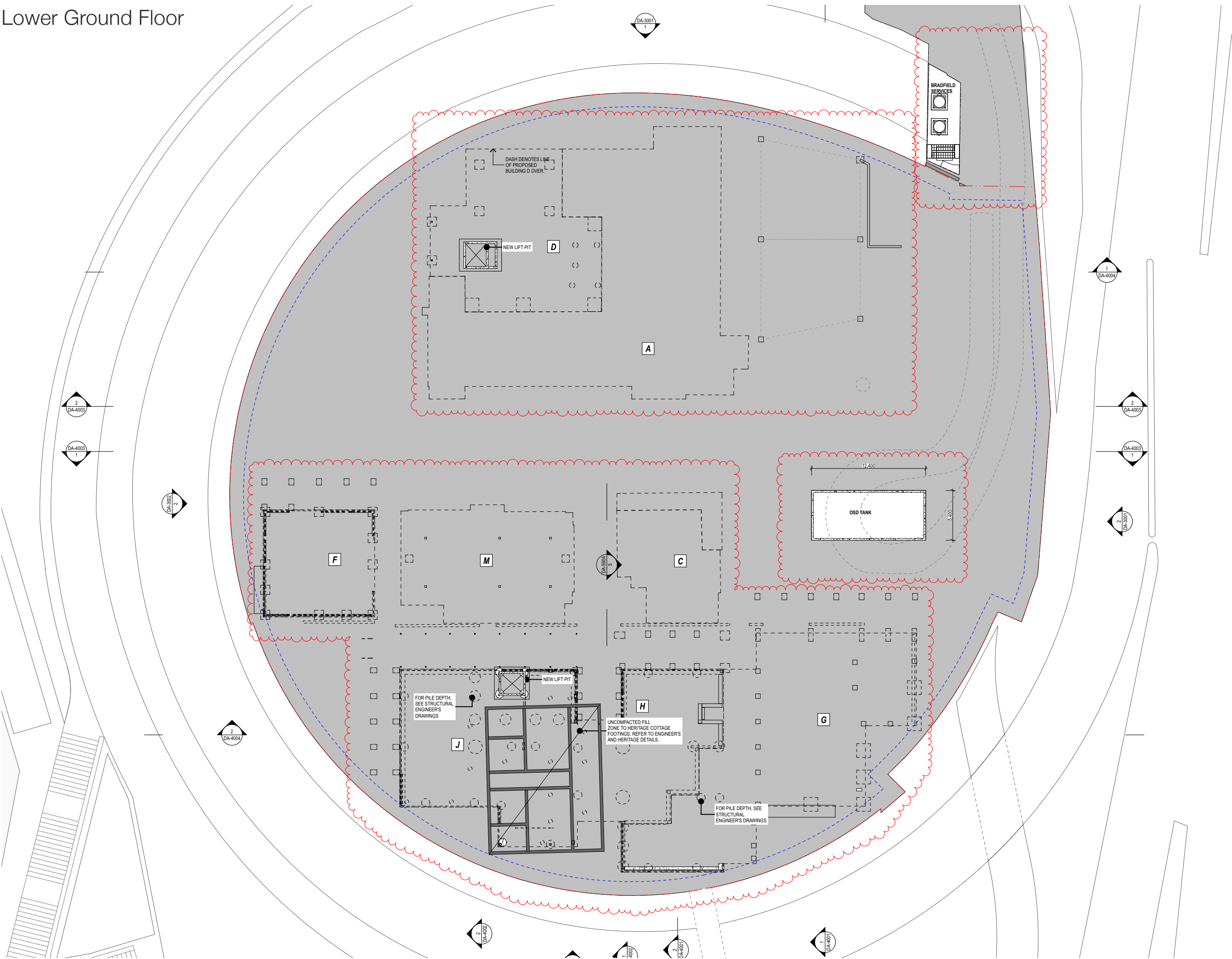
OVERLAY OF SURGEON'S COTTAGE PLAN ON CURIO SURVEY



OVERLAY OF SURGEON'S COTTAGE PLAN ON EXISTING OHEEC



Lower Ground Floor



/ Overall and General

Rainwater tanks within enclosures have been added in discrete locations on the perimeter of the buildings A/D, F and J/H/G. These enclosures have been located away from play space areas where possible, or enclosed where adjacent to play areas. The inclusion of these rainwater tanks enables a reduction to the size of the OSD tank, and the excavation associated.

The design of the loop road and corresponding Drop-off and Pick-up arrangements have been amended to better account for risks in both Phases of the cycleway development.

Minor plan modifications have been conducted to various rooms across the campus to account for detailed analyses of teaching spaces that have advanced from those illustrated in the original SSDA. These amendments, where not described herein, do not affect the context of the approval and are considered inconsequential to the application for modification.

/ C.O.L.As

The C.O.L.A extent and coverage has been revised as per plans. The existing north-east play court tensile mesh COLA and cover is now proposed to be replaced.

/ Building A/D

The extent of the internal heritage doors and windows to be retained and demolished towards the North East has been revised.

/ Building J/H/G

The MET lift from the approved scheme has been moved into Building J. The stair

proposed in the approved SSDA has been moved from its previous location in the north-west of this building into the north east corner, wrapping around the relocated lift. This lift and stair spine carries through to the upper levels and provides an important equitable access link to all levels of the MET and rooftop. This creates a consolidated circulation spine and provides a centralised and activated node for this part of the campus.

The stair located between building J and H in the SSDA has been relocated to the south of building J and increased to a third storey to allow for compliant access and a 2nd point of egress for NCC compliance. In its place an expanded foyer space is created with an increased amenity for the entrance/waiting area, assisting in the effectiveness of the student - staff interactions at the clerical reception area.

The Building J stair north west stair being located with the lift liberates floor space along the western edge of this building. Non-teaching spaces have in turn been brought deeper into the plan to also liberate more floor area along the facades. These measures result in an improved configuration of home base teaching spaces and circulation zones.

The Building G Communal hall envelope, and Building H home bases, support spaces and store areas have undergone minor functional layout alterations.

/ Building M (MET, Meteorological Building)

The existing northern stair presently connects Ground to Level 1 within the MET. Recent site investigations have revealed that the existing stair consists of risers and goings, and other missing elements, that are not NCC compliant and hence render the stair unsafe. Rather than lock this stair off and render it inaccessible, it is proposed to demolish the existing stair and a number of the bounding stair walls, and reconstruct a new stair and load-bearing walls in their place to permit compliant dimensions to be achieved. In conjunction, a series of the existing walls

will be retained for support. This adaptation ensures the a degree of sustainable re-use whilst balancing the extent of demolish and preserved function.

The existing south eastern stairway is proposed to be dismantled. With the inclusion of a new timber-framed floor infill in its place, a store room is proposed on Ground, Level 1 and Level 2.

The lift within the MET shown at SSDA has been relocated to within the new Building J structure, just south of the MET.

/ Building C (Messenger's Cottage)

The South West extension that was shown in SSDA is proposed to be removed. This was previously shown as an interview room.

Services Enclosure

The services building has increased in extent to accommodate the required services rooms and equipment. Amendments have been conducted to the extent of timber linings to play surfaces, and facade materials have been revised.

[illegible]

Level 1

/ C.O.L.As

The C.O.L.A extent and coverage has been revised as per plans.

/ Building A/D

The extent of the internal heritage doors and windows to be retained and demolished, and new openings internal openings towards the North East has been revised to reflect the amendments on Ground Floor.

/ Building J/H/G

The lift relocation to building J (from the MET building) is reflected on this level as per the Ground Floor. This lift carries through to the upper levels within J, and provides access to the MET rooftop, adding an extra partial storey for the stairs/ lifts in building J.

The stair located between Building J and H in the SSDA has been relocated to the south of building J and increased in height within the partial third storey housing the extended lift and stair. This provides to allow for compliant access and consolidate the building form.

The area which was previously taken by the stair between J and H has now been utilised for the Home base learning spaces.

The Building J stair has been relocated to the North East of building J to allow for a consolidated home base teaching space as well as a circulation core. Associated relocation of functional and back-of-house spaces within J to optimise outlook, reflecting Ground Floor amendments, have also been conducted on Level 1.

The roof of Building G has been revised to a pitch of 4 degrees with a change in the shape to a more cohesive set of hipped roof forms.

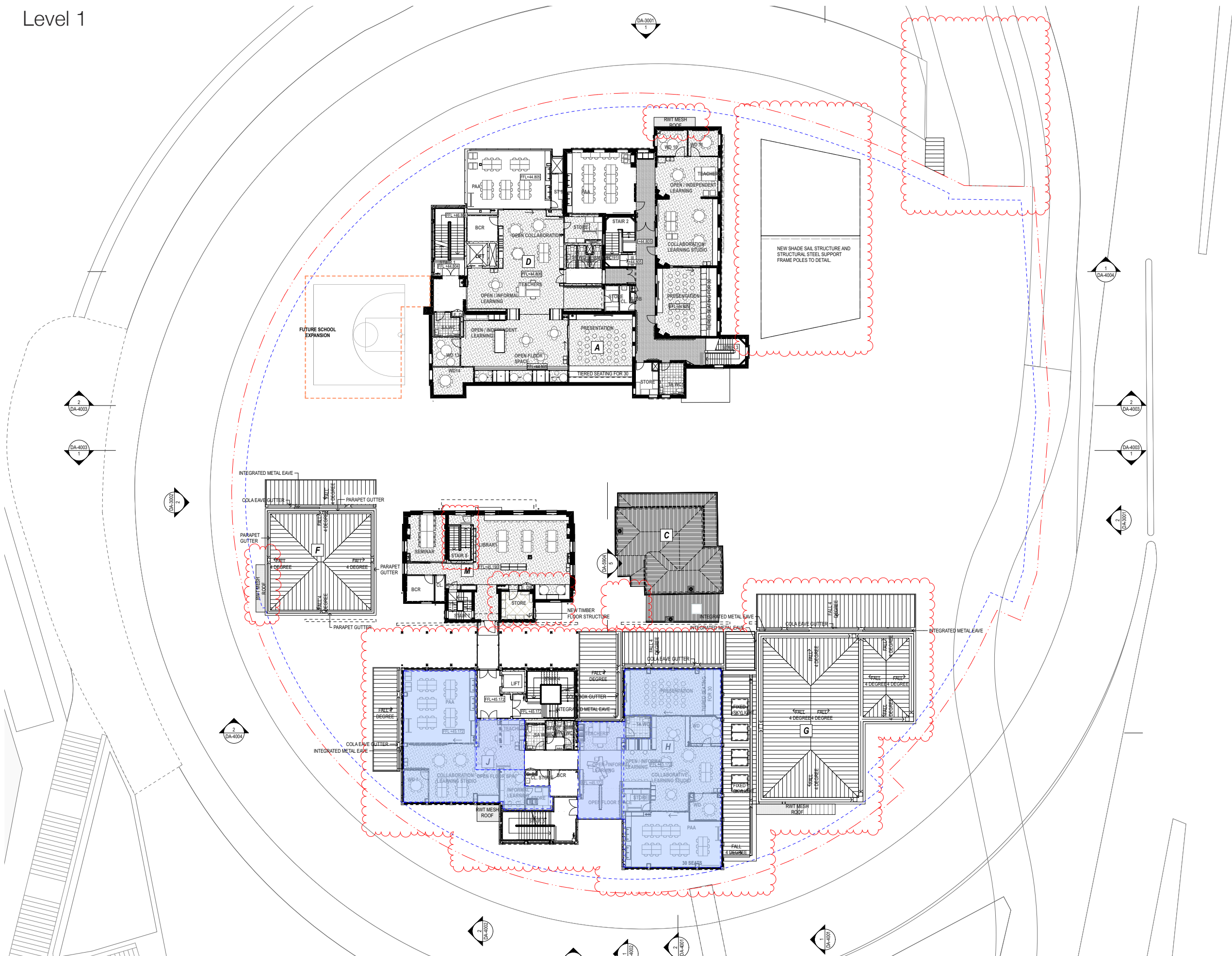
/ Building M (MET)

The existing south eastern stairway is proposed to be dismantled. With the inclusion of a new timber-framed floor infill in its place, a store room is proposed on ground, Level 1 and Level 2.

The lift within the MET shown at SSDA has been relocated to Building J.

/ Building F

The roof of Building F has been revised to a pitch of 4 degrees with a change in the shape to a more singular hipped roof form.



Level 2

/ C.O.L.A.s

The C.O.L.A extent and coverage has been revised as per plans.

/ Building J/H/G

Adjustments to lifts, stairs, and back-of-house areas have been conducted on this level to reflect the amendments described on lower levels. The relocated lift within J continues up to this upper levels. Access from this level provides connection to the MET rooftop beyond. The stair extension is housed in a partial additional storey on top of Building J.

The stair located between Buildings J and H in the approved design has been relocated to the south of Building J and increased to a third storey to allow for compliant 2nd point of egress, and consolidate the building form. The Building J stair has been relocated to the North East of building J to allow for a consolidated home base teaching space as well as a circulation core.

These measures have provided an increase in rooftop play area from 457 sqm (per approved SSDA), versus 521 sqm proposed in this modification. The increase is 64 sqm. This improvement is seen as a positive contribution to overall play area quantum and is in part a result of the consolidation of the Building J form and additional part-storey.

/ Building M (MET)

The existing south eastern stairway is proposed to be demolished. With the inclusion of a new timber-framed floor infill in its place, a store room is proposed on ground, Level 1 and Level 2.

The lift within the MET shown at SSDA has been removed/relocated.

A new glass balustrade is proposed to prevent access to the non-compliant existing verandah balustrades.

Level 3

/ Building A/D

Roof pitch and supporting structure revised to accommodate 4 degree pitch.

PhotoVoltaic (PV) Cells layout revised and updated per services coordination. 155 PVs were shown at SSDA. This section 4.55 modification layout proposes 134 PVs.

Mechanical Plant condensers are also shown to be placed on this rooftop.

/ Building J/H/G

An additional lift has been added to building J (relocation of the MET building lift proposed in SSDA). This lift carries through to the upper levels and provides access to the MET rooftop therefore adding an extra storey for the stairs/lifts in building J.

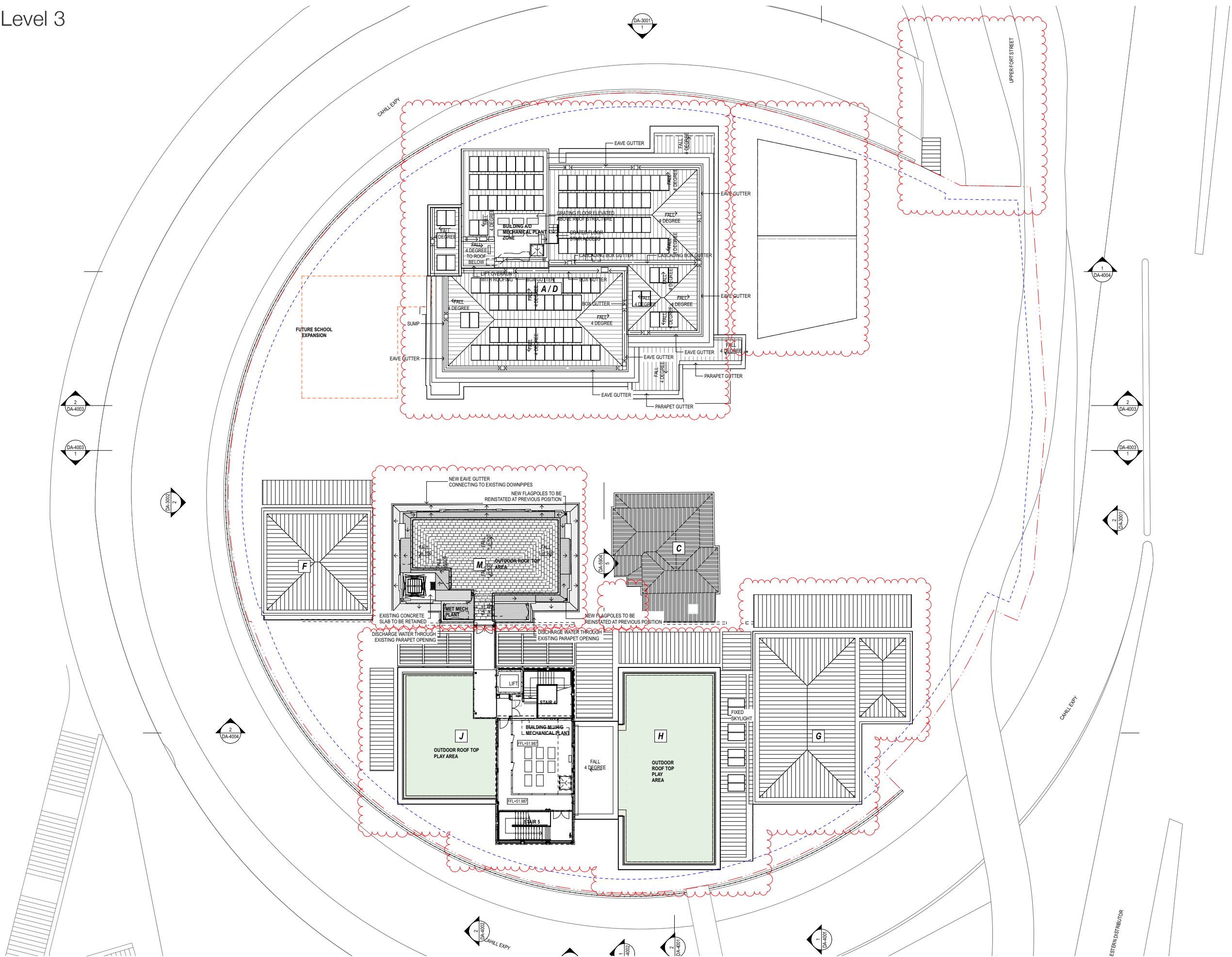
The stair located between building J and H in the SSDA has been relocated to the south of building J and increased to a third storey to allow for compliant access and consolidate the building form.

The building J stair has been relocated to the North East of building J to allow for a consolidated home base teaching space as well as a circulation core.

Mechanical Plant is proposed to be placed on L3 away from the rooftop play space.

/ Building M (MET)

The MET rooftop has been revised in extent with the removal of the proposed lift in SSDA. The balustrade has been further developed to be a 1900mm high glazed balustrade. See elevations and facade for more information. A mechanical plant fan to the South Western corner of the rooftop is proposed with appropriate screening.



Roof

Overall

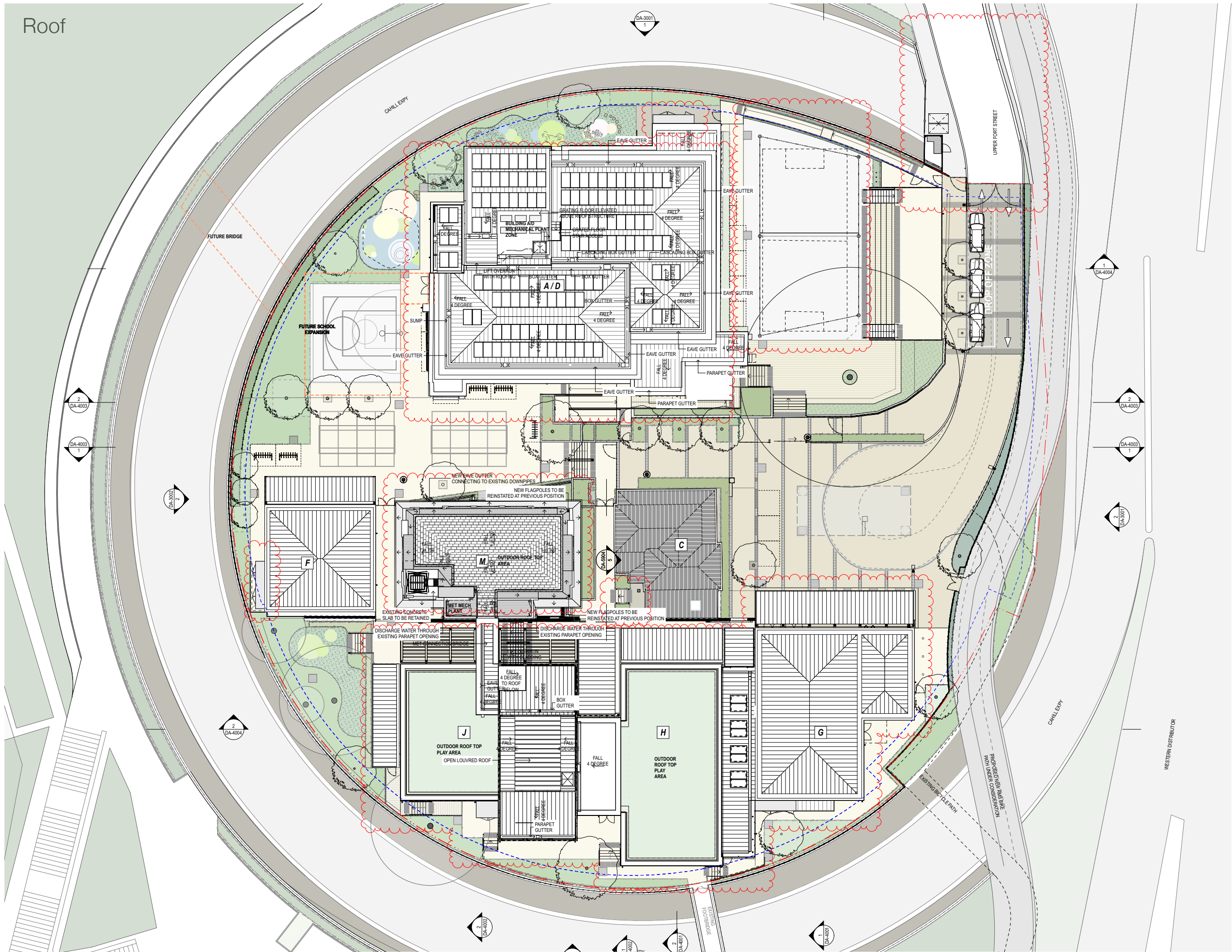
Roofs shapes and geometry have been revised for Buildings A/D, F and G. Pitches have been modified from 3 degree to 4 degree pitches, and shapes consolidated into more cohesive hipped forms. Photovoltaic panel coverage and spatial designs on top of Building A have also been advanced.

A portion of fixed skylights proposed for the connecting corridor between Building G & H is proposed to be reduced somewhat from the extent approved, to simplify the roof shape and framing in this area. The retained portion of skylights will maintain a high degree of direct natural daylight penetration into this corridor preserving its internal amenity. The treatment of finishes to this interstitial building form will maintain a subdued palette to keep the connecting piece recessive, contributing to the perception of contiguous forms of buidings rather than a single amorphous volume.

The extent of roof sheet and profiled roof louvres proposed above Building J has been amended. The mechanical plant design has advanced in conjunction with spatial arrangements of infrastructure below and the raising of storeys in this portion of the building.

All of these measures have been assessed in relation to their potential effect upon bulk and scale concerns, and in terms of their details in this important heritage context. The impact upon articulations of the new elements and their interface with heritage has been minimised where possible, and where alterations to the approved design have been required, the merits of the previous design have been carefully reapplied in all instances.

Photovoltaic cells retain a recessive character, and are positioned with setbacks from the leading edges of parapets and eaves. New roof forms are also setback and deferential to main volumes and the heritage forms adjacent, to preserve the core hierarchy and amenity aspirations for the design.





Key Modifications

MET Lift Removal

MET Lift Removal

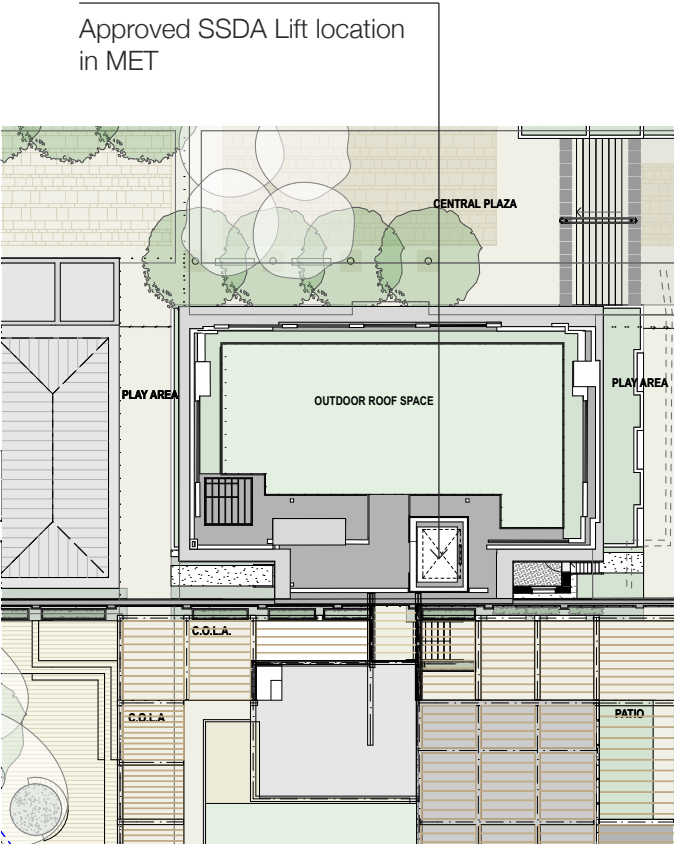
The approved SSDA proposes access to the MET rooftop playspace via a new lift within the footprint of the existing south east MET stair. Detailed investigations of the existing fabric and corresponding cost estimate highlighted associated risks. In conjunction, space planning amendments within Building J & H identified some potential efficiencies to liberate space for the relocated lift moving into Building J, hence avoiding cost and complexity risks. Through further consultation with the heritage and archaeological specialists, the more viable Building J location and corresponding raising of a portion of Building J was identified as the optimal amendment.

This removal of the lift within the MET building will have a number of positive outcomes including:

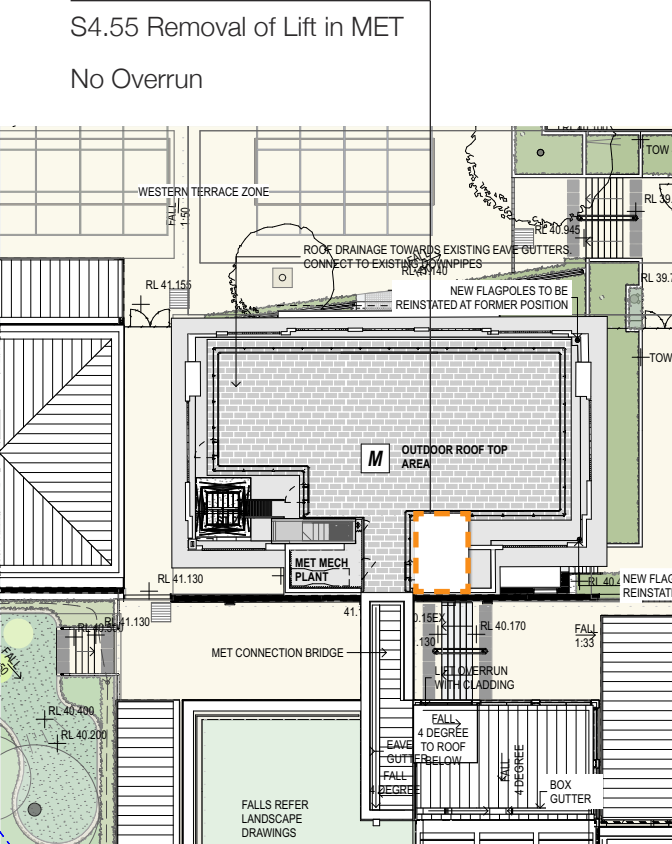
- Minimised heritage impact to existing MET building. This includes the removal of the lift pit excavation required with an introduction of a lift, and invasive works within this existing stair shaft.
- Improved amenity, legibility and visual impact to MET heritage building roofscape.

Timber infill floor structure

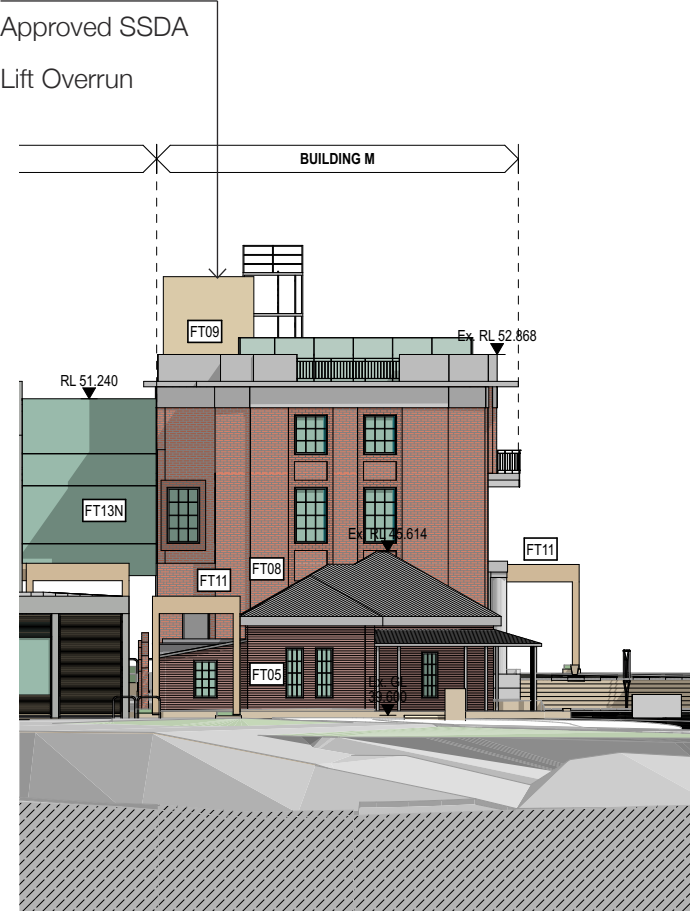
The existing south east stair is still to be removed as noted in the approved SSDA. However, where the lift was previously shown, a new flat timber floor will be introduced to allow for additional store rooms.



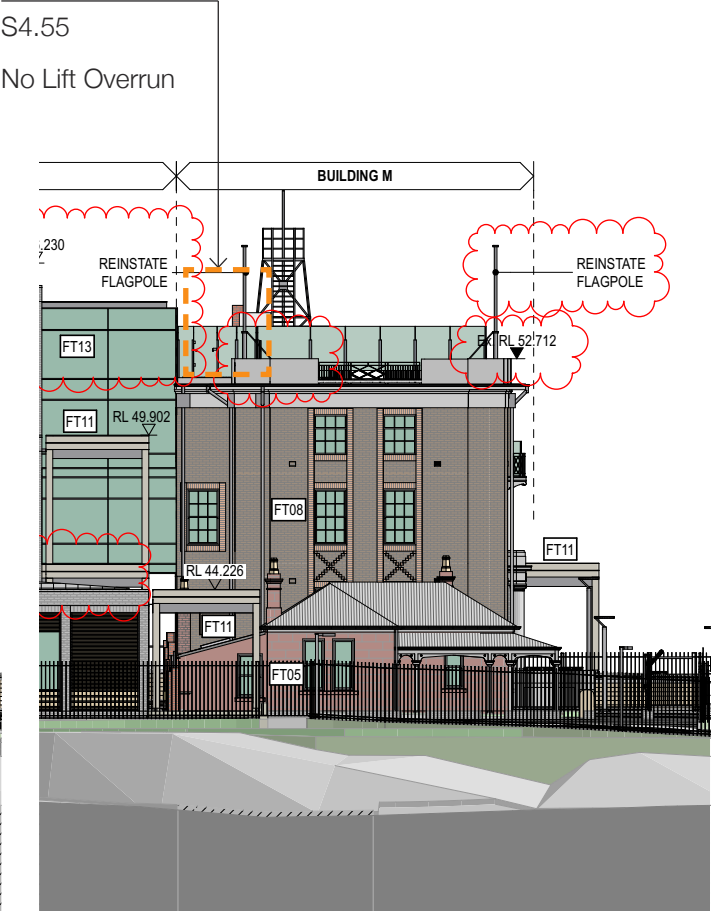
/ Approved SSDA
/ MET Ground Floor Plan



/ S4.55
/ MET Ground Floor Plan



/ Approved SSDA
/ MET East Elevation



/ S4.55
/ MET East Elevation

Building J - Lift Relocation and Additional Level 3

/ Building J Level 3

The lift to service the MET rooftop is to be relocated to building J. As a result, an additional level with lift and stairs from the approved SSDA is to be incorporated into building J.

According to the NCC two points of egress are required from every storey / compartment. This is applicable to the MET rooftop. The existing stair connecting Level 2 to the rooftop consists of non-compliant treads, risers and fixtures such as handrails and the like. Reconstruction of this stair would require highly invasive works due to spacial and heritage constraints. Hence the two new stairs for egress are to be provided within the adjacent Building J.

This has in turn provided opportunity to consolidate the building form and internal layouts to accommodate these 2 stairs within Building J. Firstly, the relocation of the Building J stair to the North East Corner allows for an opportunity to create a light filled circulation axis which provides views across the school site. This shift combined with the placement of the lift creates an improved and consolidated

circulation core for the campus. Secondly, the approved SSDA location of the stair between Building J and H is proposed to relocate to the south aligning with the North East Stair. This shift not only allows for compliant distances to the exits but also maintains a cohesive building form. The circulation corridor in place of the previously located stair is now proposed to accommodate a larger school entry foyer in front of the reception and tiered seating for informal activities, improving its amenity and quality of space.

The additional part-storey created within Building J provides an opportunity to relocate the mechanical plant to this level therefore increasing amenity to the rooftop playspace area on Level 2. An increase in the rooftop play areas is also provided.

The link towards the MET rooftop from Building J is proposed to be through an undercover extension to the bridge at level 3. This additional level for the bridge would follow the below levels in facade and material treatments (See FT13).

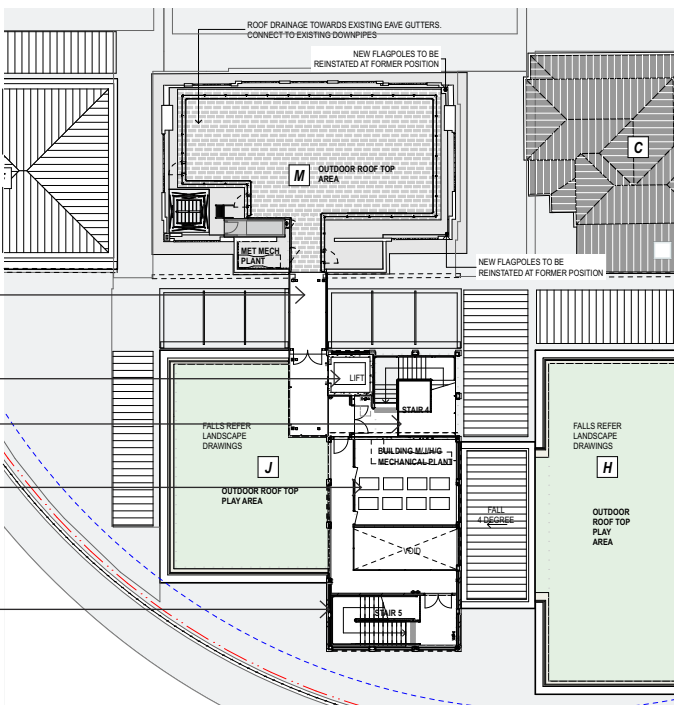
Bridge Link to MET rooftop

Lift relocation

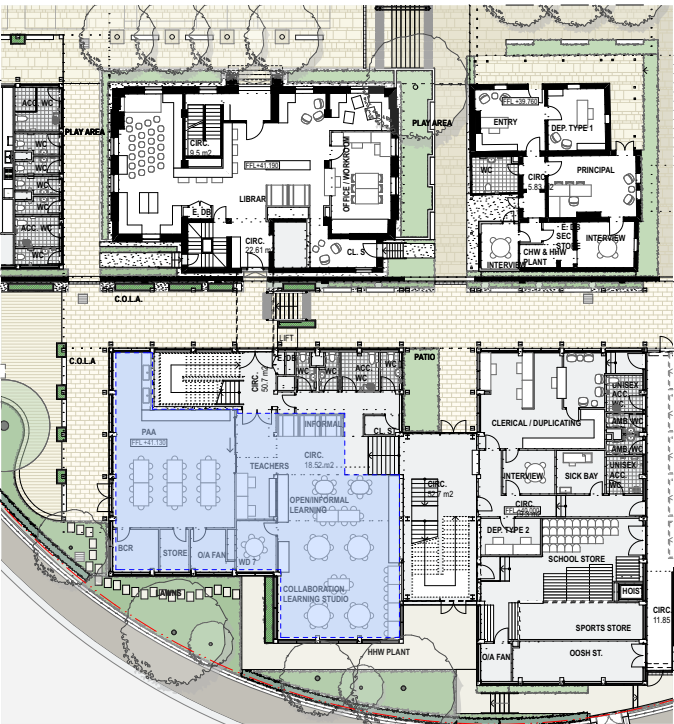
Stair relocation

Mechanical Plant

Stair relocation

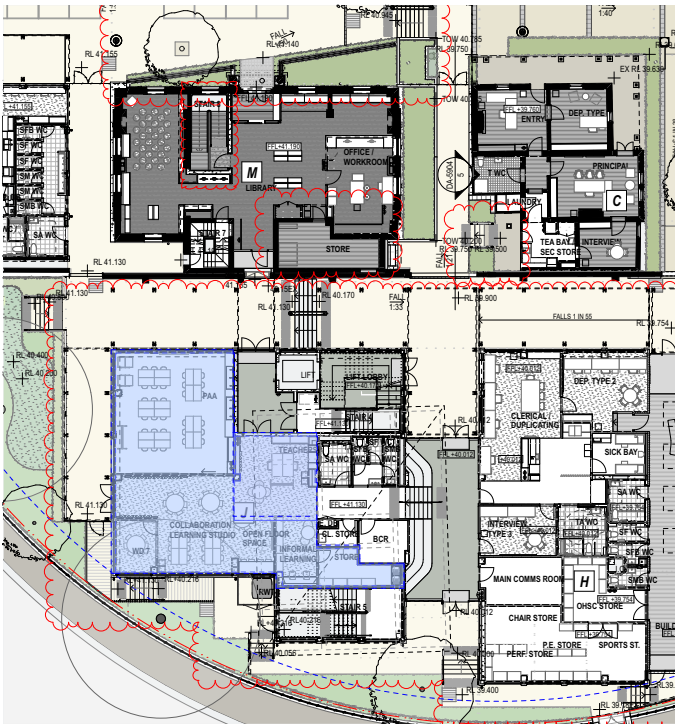


/ S4.55 - MET and Building J/H Level 3 Plan



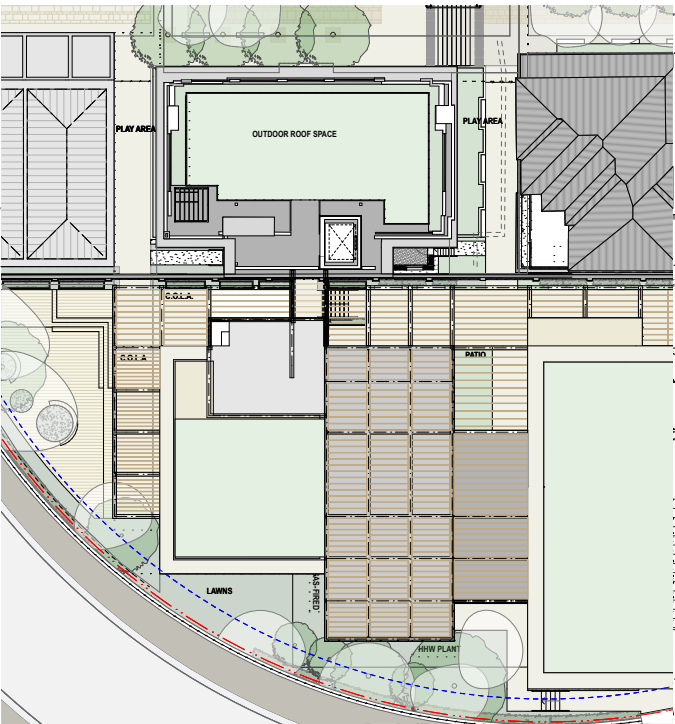
/ Approved SSDA

/ - MET and Building J/H Ground Floor Plan



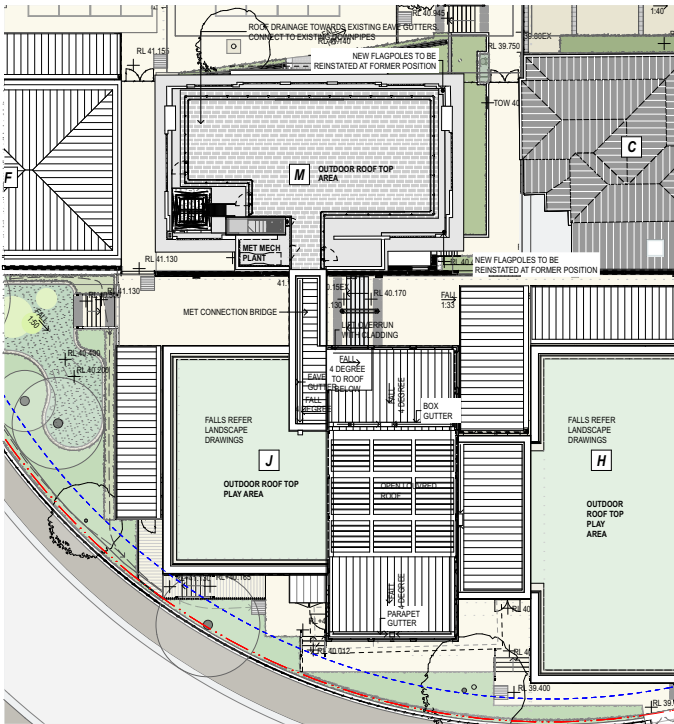
/ S4.55

/ MET and Building J/H Ground Floor Plan



/ Approved SSDA

/ MET and Building J/H Roof Plan



/ S4.55

/ MET and Building J/H Roof Plan

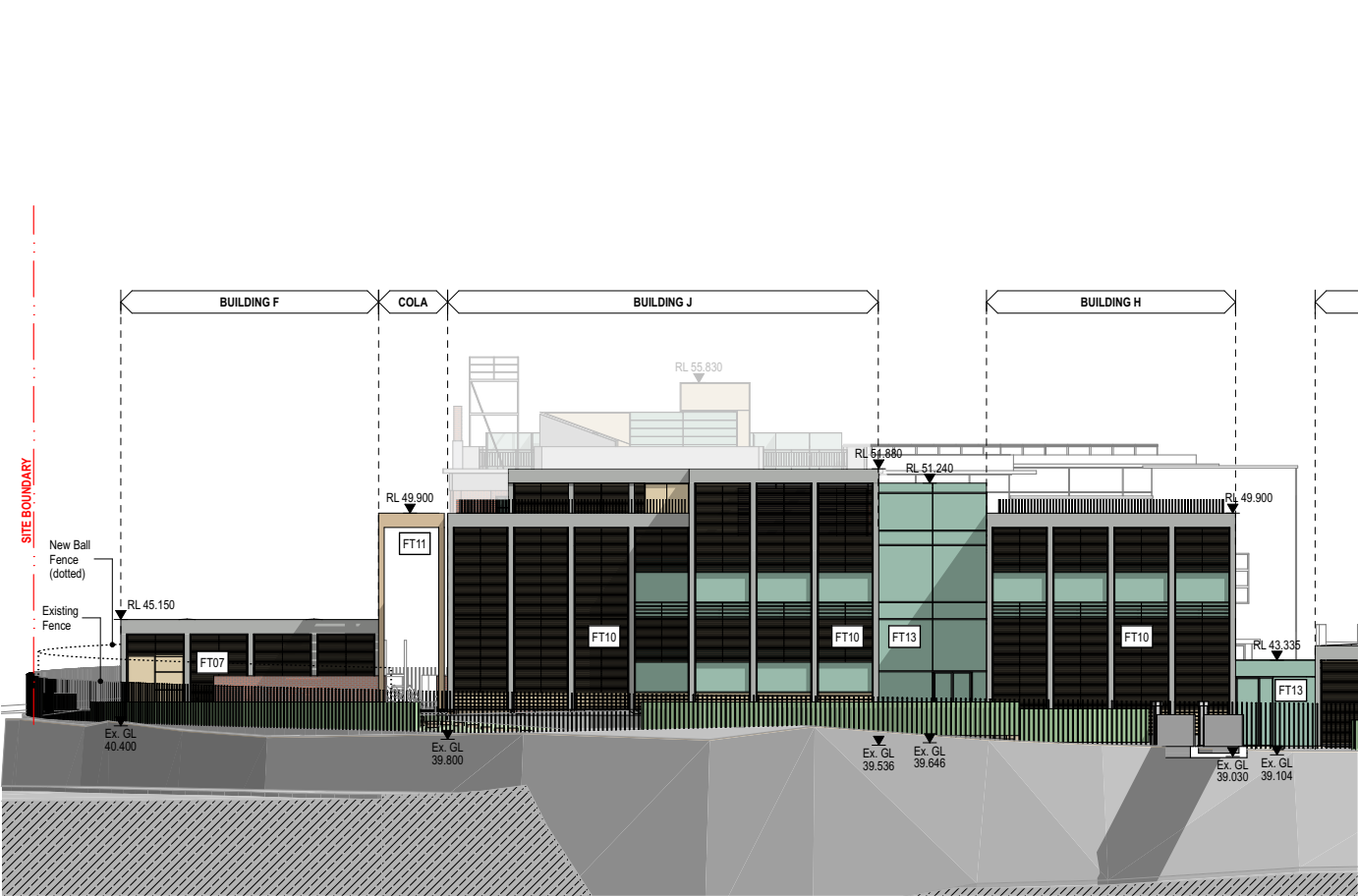
Visual Amenity

Conditions of consent require the Applicant to prepare the detailed design of the lift overrun, including materials and colours, in consultation with Heritage NSW.

The relocation/removal of the lift and lift overrun from the MET rooftop eliminates the overrun, hence resolving the concerns raised regarding the impact to the heritage building and affect upon visual amenity.

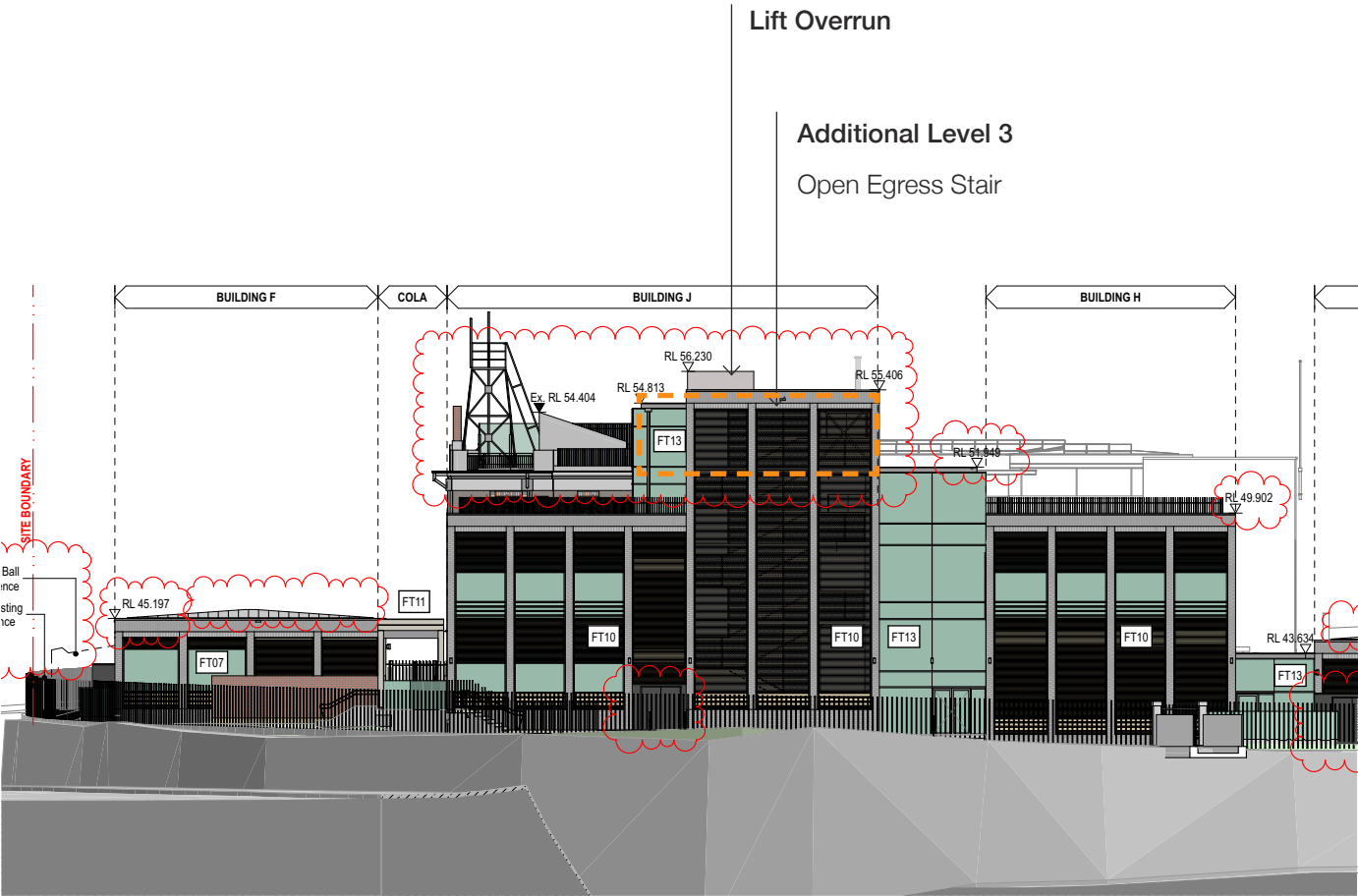
Visual amenity - The proposal would impact views from keys sites, including the Harbour Bridge and the Agar Steps. - Council raised concern in relation to the potential intrusiveness of the proposed lift overrun above the Meteorology Building.	Assessment - The EIS included a visual impact assessment that considered the impacts of the proposed development on significant views to the site. - In response to the comments made, the Applicant advised that the proposed lift run would be setback from the edges of the Meteorology Building and colours and materials would minimise visual impacts of the structure. - The Department is satisfied that the proposal would have acceptable impacts on views to the site from the public domain. Conditions - Conditions of consent require the Applicant to prepare the detailed design of the lift overrun, including materials and colours, in consultation with Heritage NSW.
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/ Extract from Notice of Decision - Conditions of Consent SSD-10340 7/10/20



/ Approved SSDA

/ South Elevation Building J/H



/ S4.55

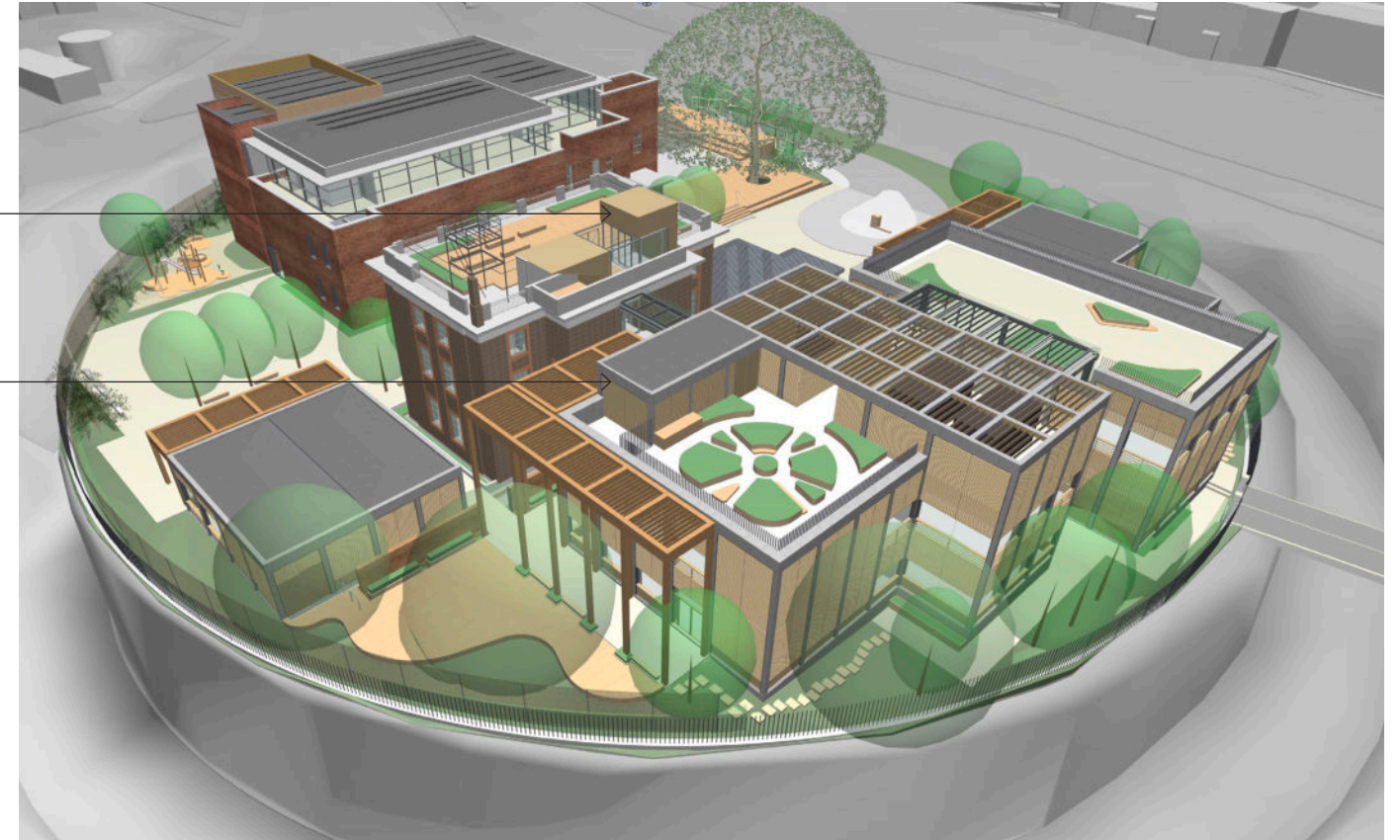
/ South Elevation Building J/H

SSDA MET Lift location

Propose to remove/relocate

SSDA Building J Stair location

Propose to relocate

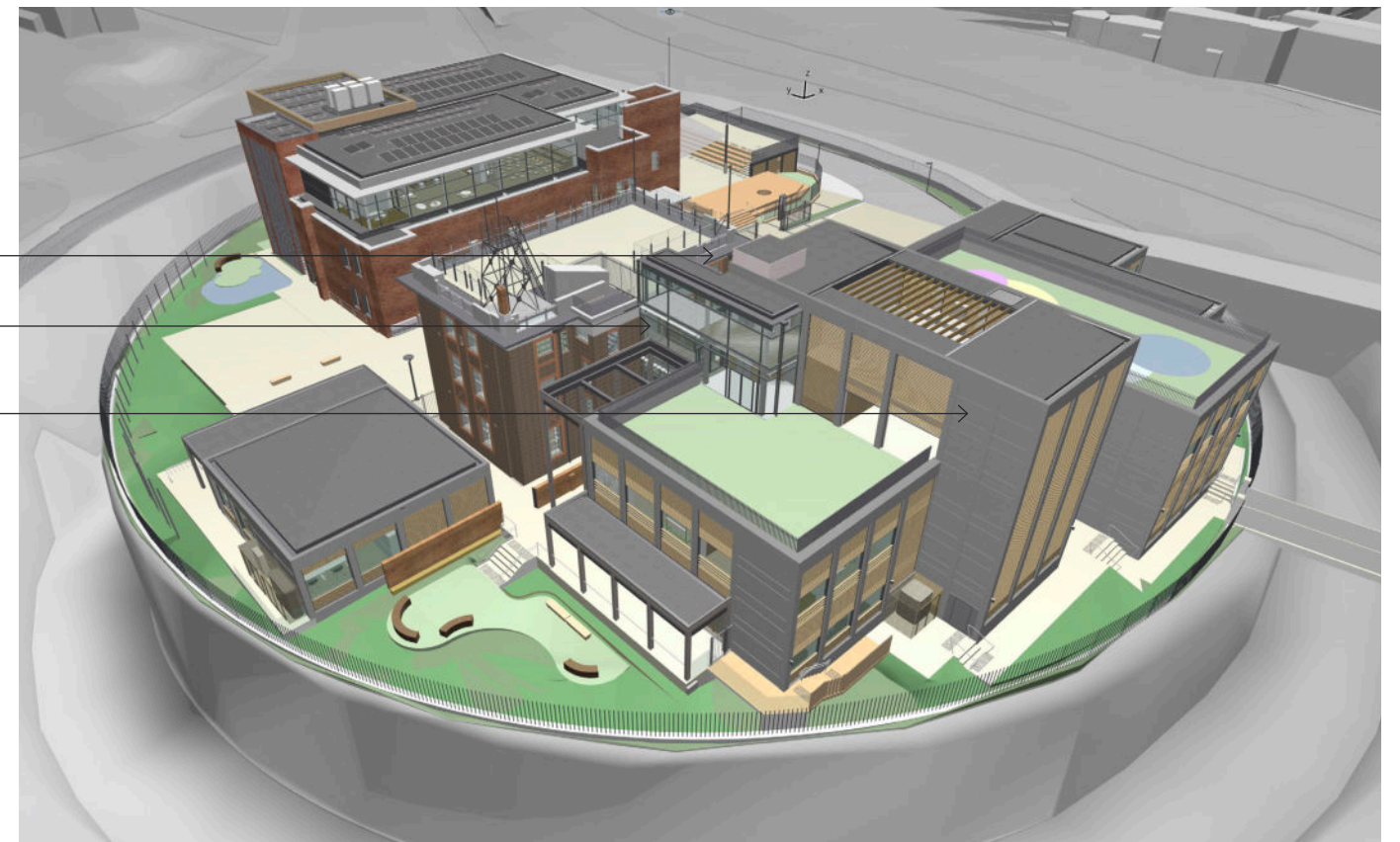


/ Approved SSDA - South West View

Proposed Lift and Overrun

**Additional Covered Walkway to
MET Rooftop**

**Additional Partial Level with
Stair**



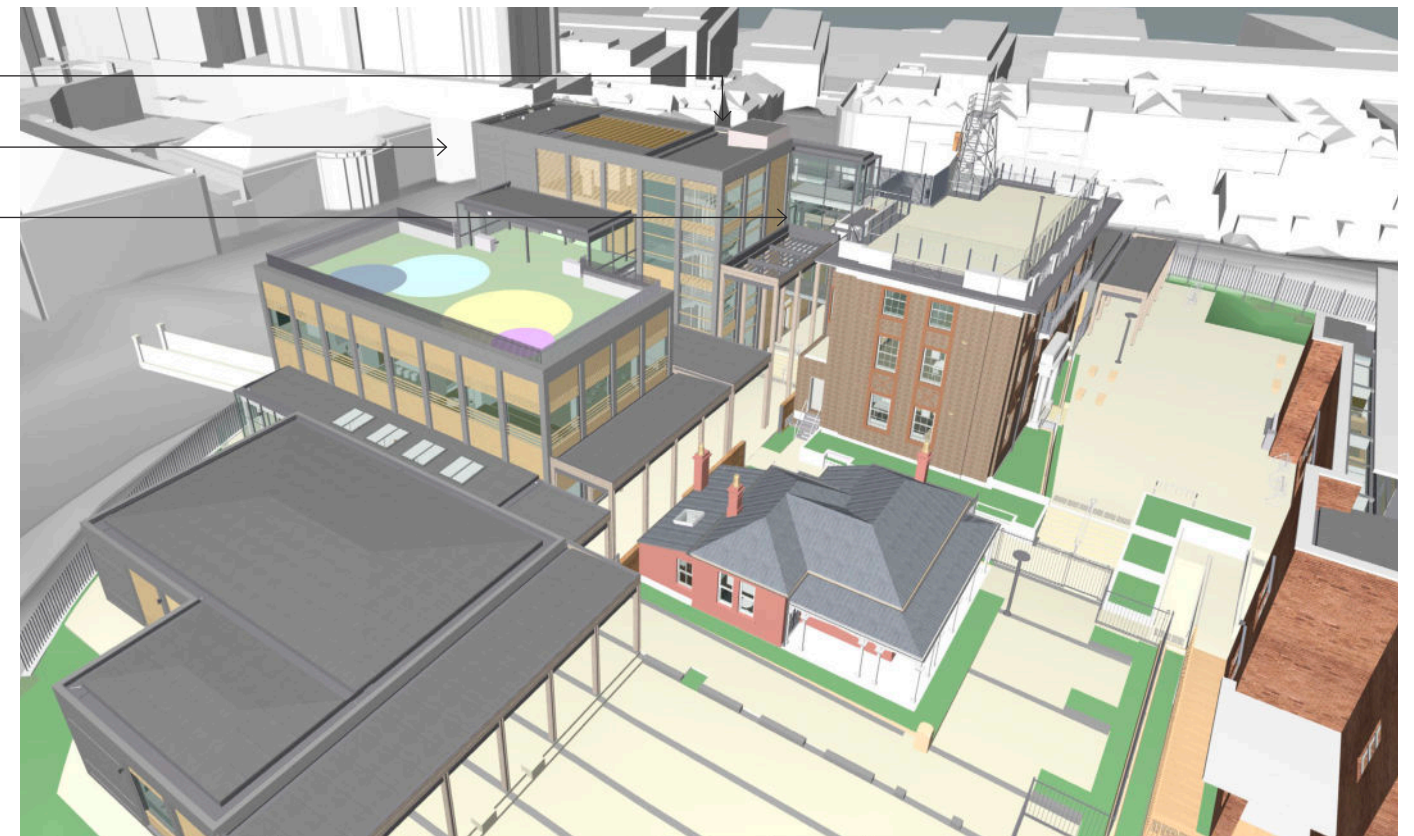
/ S4.55 - South West View

SSDA MET Lift location
Propose to remove/relocate



/ Approved SSDA - North East View

Proposed Lift and Overrun
Additional Partial Level with Stair
Additional Covered Walkway to MET Rooftop



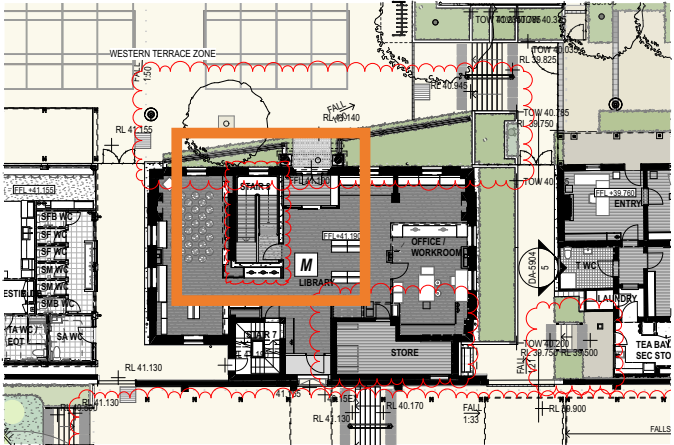
/ S4.55 - North East View

MET North Stair

MET North Stair

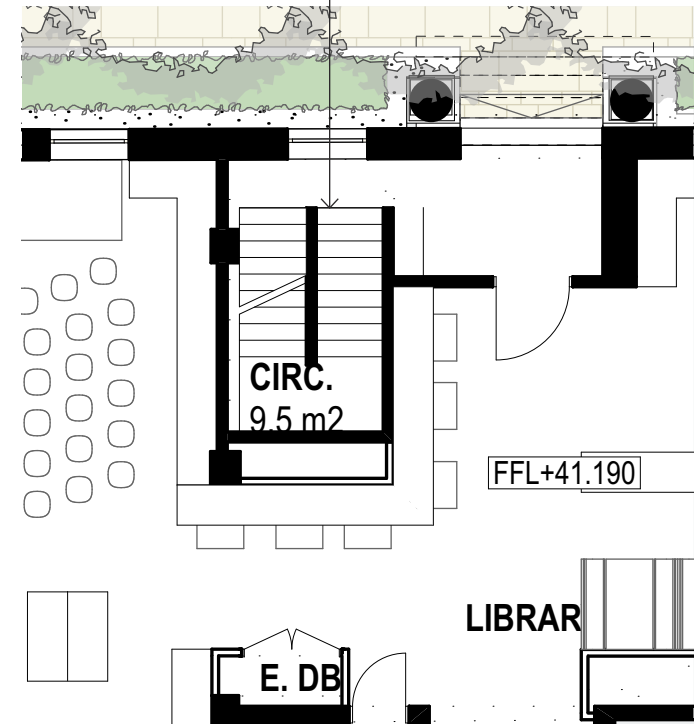
The proposed function of the MET building is to house the school library. The librarian's office and counter, catalogue check-in and some reading spaces are proposed to be placed on Ground Floor, whilst Level 1 is proposed to house shelving, a meeting rooms and study spaces. The quality and atmosphere of these spaces as well as the 'centre of learning' connection with the MET's previous functions is an important philosophical reference point for the campus' concept.

However the existing north stair is a constraint. The stair currently connects Ground Floor to Level 1. Further detailed investigations of the existing structure have revealed that its existing configuration is non-compliant when compared against both the NCC (BCA) and the Department of Education's Education Facilities Standards and Guideline (EFSG) which stipulates DOE specific dimensions of stairs.



/ MET Plan legend - Ground Floor

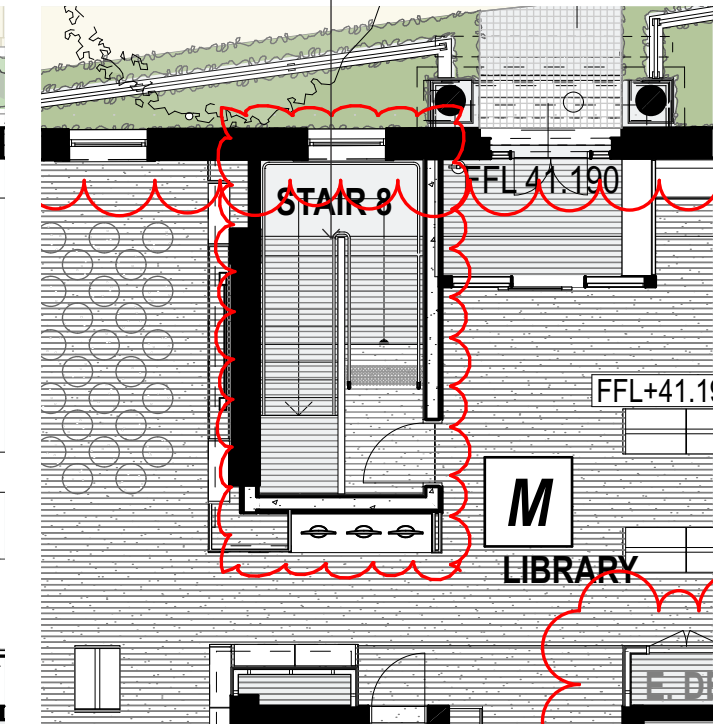
Approved SSDA
Existing Stair Retained



/ Approved SSDA

/ MET North Stair - Ground Floor

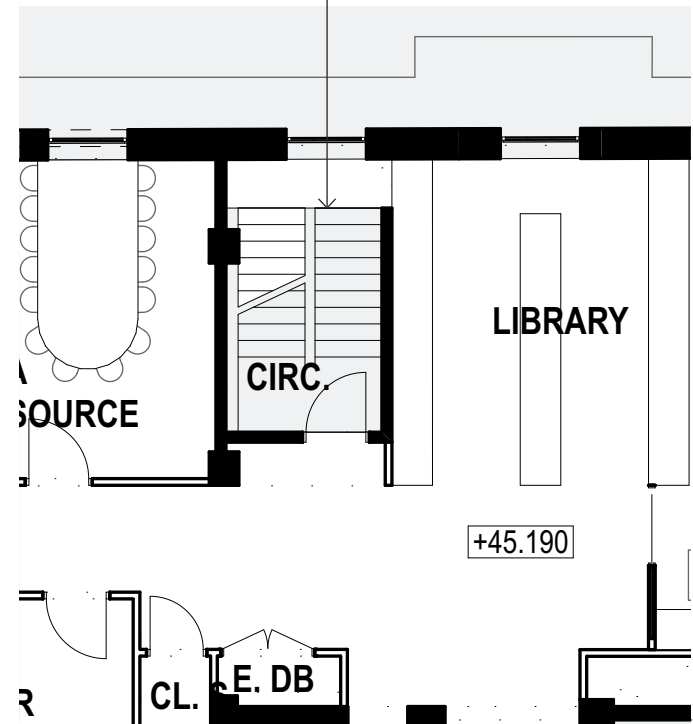
S4.55
New Stair



/ S4.55

/ MET North Stair - Ground Floor

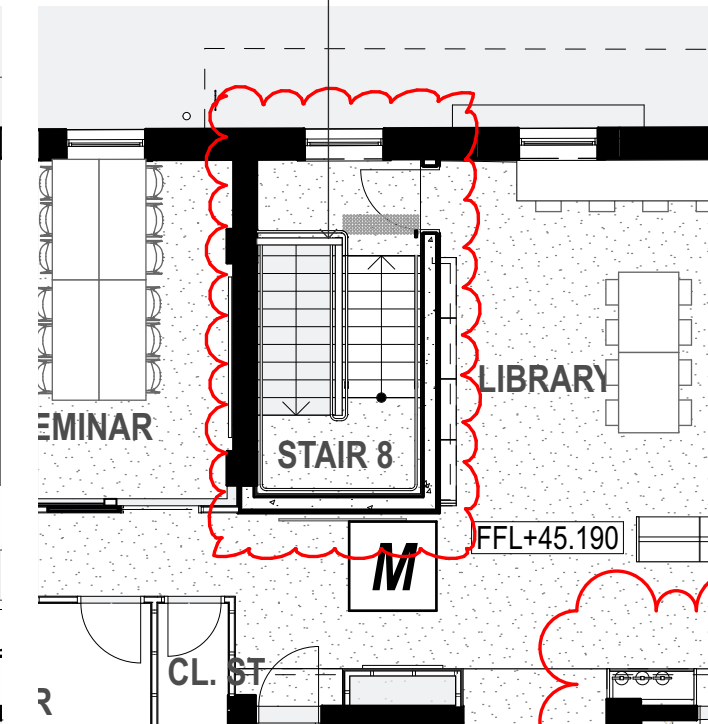
Approved SSDA
Existing Stair Retained



/ Approved SSDA

/ MET North Stair - Level 1

S4.55
New Stair



/ S4.55

/ MET North Stair - Level 1

In order to facilitate a degree of connection and vertical movement between the two library levels it is proposed to demolish the existing stair, and reconstruct a new stair in its place. The new stair will be built with compliant dimensions and fixtures, including goings and risers, handrails, etc. Adjustments to configurations of the flights, landings and springing point allow the proposed stair to enhance the appreciation of the existing north-facing window, liberating unsympathetic existing landings. The size of this new stair will require a small increase in the size of the Level 1 floor opening to facilitate. Construction methodology will include careful integration into the existing fabric and assessment of load paths to respect the existing fabric, and also permit removal of the new works at a later date.

The extent of dilapidation observed in the MET is advanced. This will allow ready access to assess the degree of repair required in conjunction with the potential of load path support offered by the new stair works. The configuration of the proposed stair will allow structural engagement the existing wall to the west of the existing stair, and will preserve the amenity and visibility of the existing northern window within this stair. A small amount of demolition of the existing vestibule western wall is required to permit the width of the new stair.

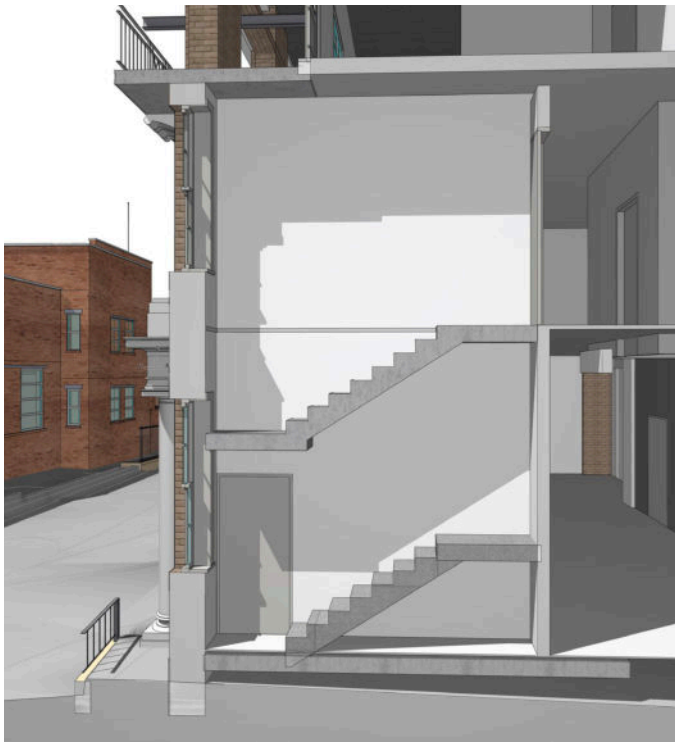
This reconstructed stair is proposed in the broader context of parallel improvements over and above the approved SSDA. These include the removal of the previously proposed lift within the MET, the removal of new additions on the rooftop and the deletion of sprinklers. On balance these measures will preserve more of the tangible existing functionality and fabric, whilst balancing sustainable reuse for the future.



/ Approved SSDA
/ East 3D Sectional View - Existing Stair



/ S4.55
/ East 3D Sectional View - New Stair



/ Approved SSDA
/ West 3D Sectional View - Existing Stair



/ S4.55
/ West 3D Sectional View - New Stair

Lower Ground Removal

/ Removal of Lower Ground level

The approved scheme consisted of a lower ground level in Building G (see below) to accommodate stores and various services plant areas. Subsequently further engineering analysis has been conducted in the fire engineering and electrical engineering disciplines to target simplification of the systems proposed.

Alteration of the proposed Performance Solutions and related fire performance features of the campus has resulted

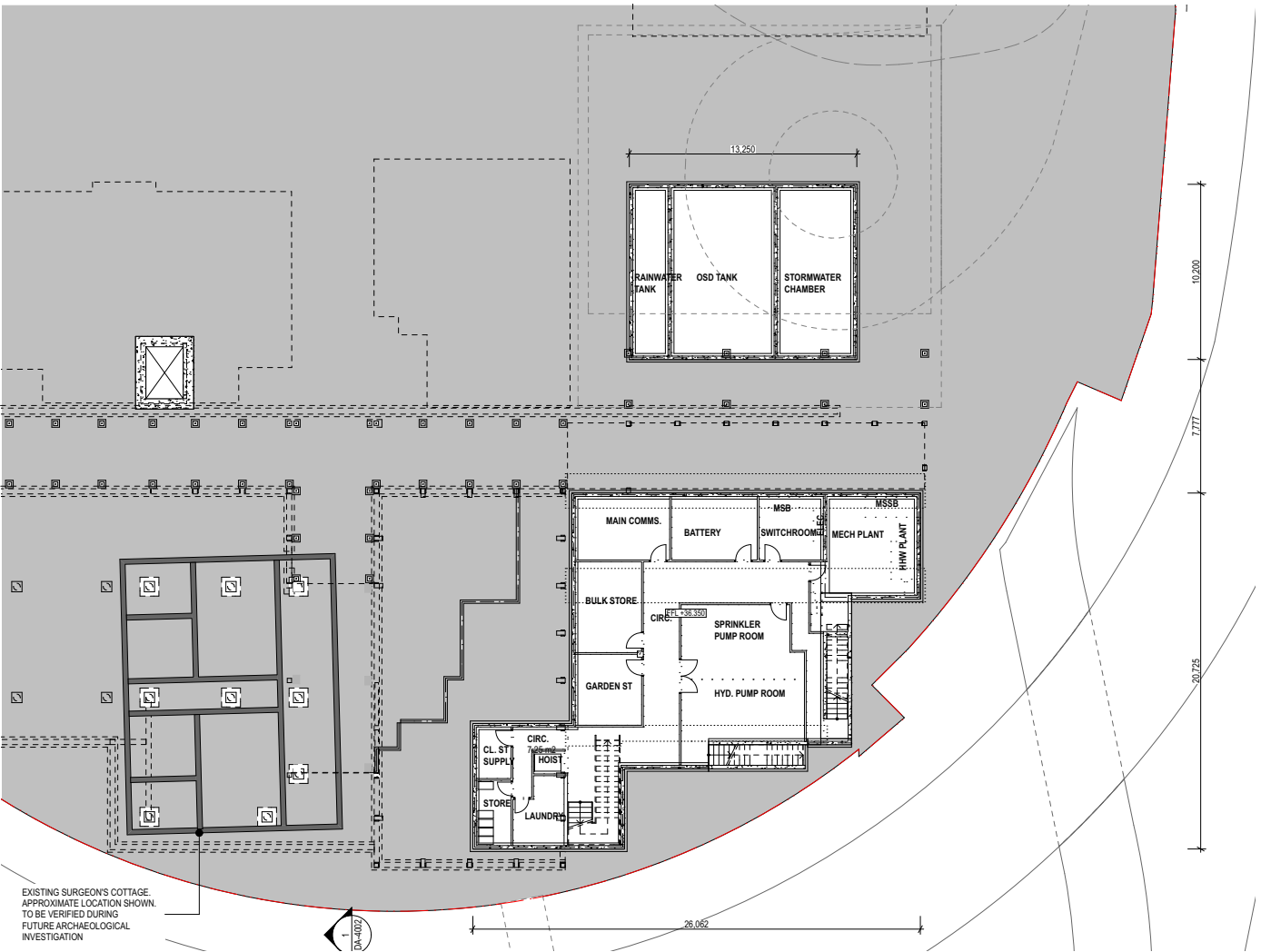
in the removal of sprinklers from the proposal across all buildings. The measures have in part been driven by a need to ameliorate the impacts upon heritage fabric and fire resisting measures, and also the benefits in deleting the sprinkler system along with its associated infrastructure (storage tanks and pumps at this level, sprinklers and reticulation, etc). Also, the refinement of electrical supply analysis, campus demand, and offset provided by rooftop photovoltaic cells, has identified that the infrastructure previously proposed for the Lower Ground Floor can be partially reduced, and moved to other locations on the campus.

These combined measures have allowed the footprint of these functions at Lower Ground to be removed, hence reducing the volume and extent of the excavations in this area and reducing cost impost.

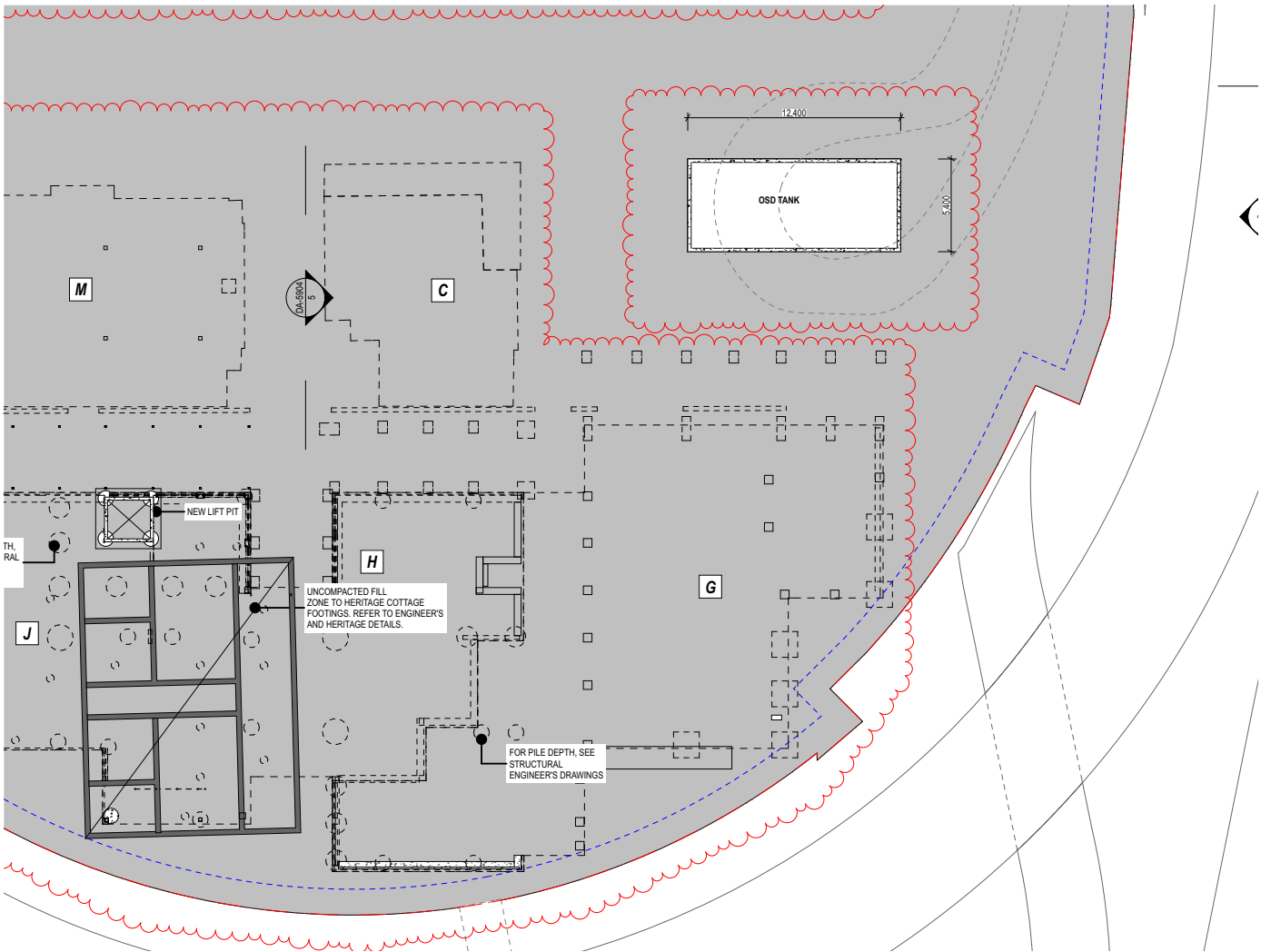
/ Reduced size of OSD tank

A series of new supplementary satellite rainwater tanks are proposed to be placed around the perimeter of the buildings on ground floor at landscaped areas. These will in turn enable

a corrsponding reduction in the footprint and volume of the On Site Detention (OSD) tank below the eastern courtyard. This in turn permits a reduction in the volume and footprint of the excavation required for the OSD tank.



/ Approved SSDA - Lower Ground Floor Plan



/ S4.55 - Lower Ground Floor Plan

Rainwater Tank Enclosures

/ Rainwater Tank Enclosures

Small supplementary rainwater tanks are proposed within enclosures around the perimeter of the buildings A/D, F and J/H/G. These enclosures have been located away from play space areas where possible. The inclusion of these rainwater tanks enables a reduced size of the OSD tank below the eastern courtyard. The rainwater tanks are

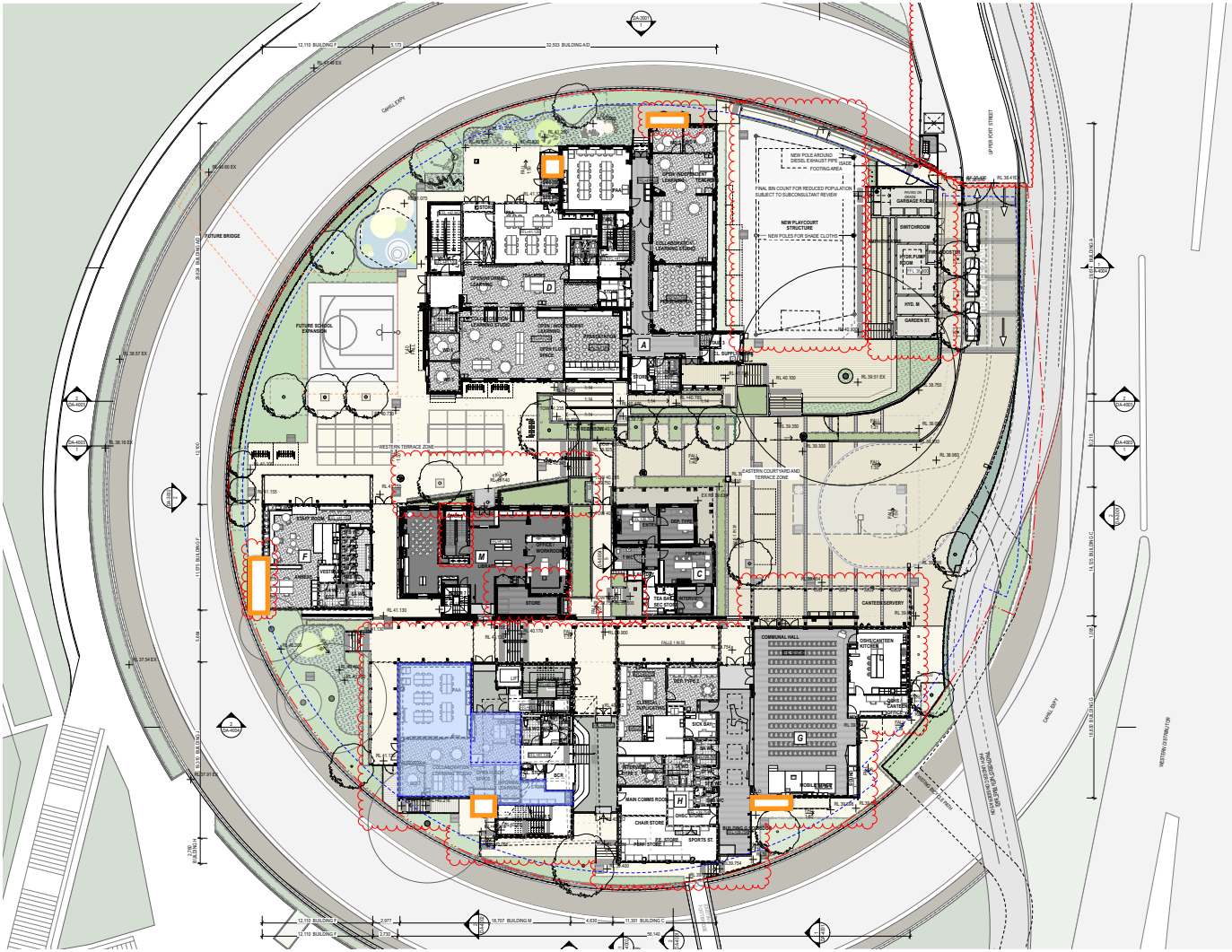
screened with enclosures to limit visual disturbance and to provide secure screens.

- Roofing
- Doors to Rainwater Tank Enclosure to access tank
- Lightweight Cladding to Enclosure



/ 3D View - Rainwater Enclosure

 Rainwater Tank locations



/ Diagrammatic Ground Floor Plan - Locations of Rainwater tank enclosures

Rooftop PV Panels and Plant

/ Heritage - Conditions of consent

Conditions of consent require the Applicant to prepare a final Construction Management Plan and develop the detailed designs of rooftop photovoltaic panels and plant and equipment, raised walkways in consultation with Heritage NSW.

/ Photovoltaic Cells (PV)

The photovoltaic (PV) cell layout has been revised after detailed services coordination and development. 155 PVs were shown at SSDA. This section 4.55 modification layout proposes 134 PVs which maintains the required 40kW.

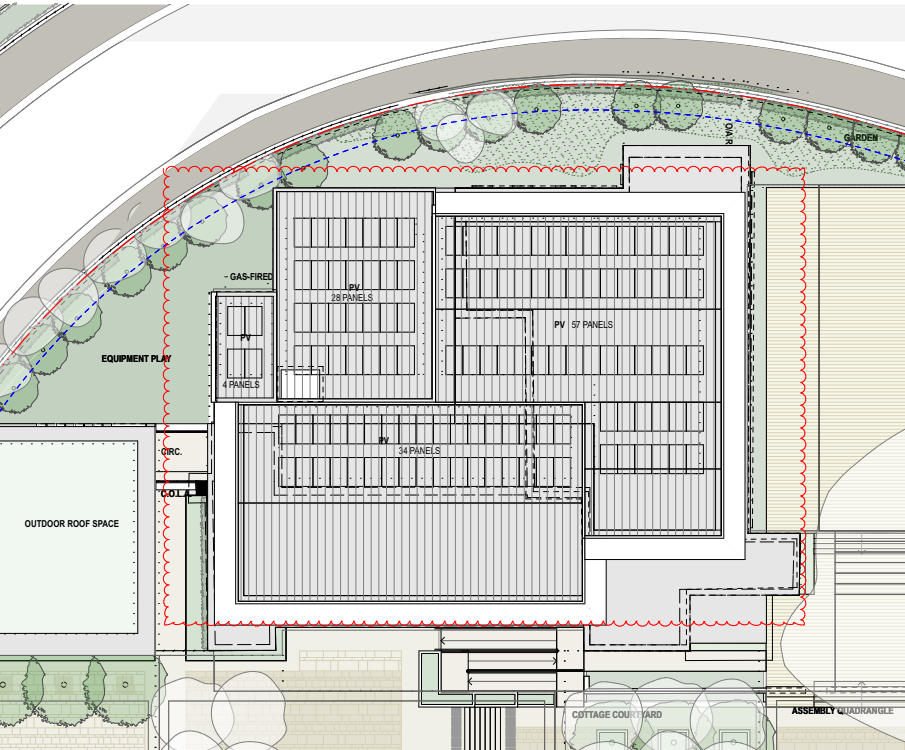
The panels have been placed and angled on the roof to minimise visual impact across the surrounding site context. The panels towards the east have been removed to aid in the reducing the visual impact towards the Cahill Expressway.

/ Roof Mechanical Plant Condensers

Mechanical plant condensers have been added on the rooftop to the North West of the building A/D roof to service building A/D. The placement on the roof was decided after testing of locations around the building on Ground Floor. Having the plant located on the ground floor had multiple issues including inhibition of perimeter circulation zones, heritage visual impacts and addition bulk from required screening. The placement of the condensers on the roof are setback from the perimeter to assist in minimising the visual impact from the surrounding public domain, footpaths and roads.

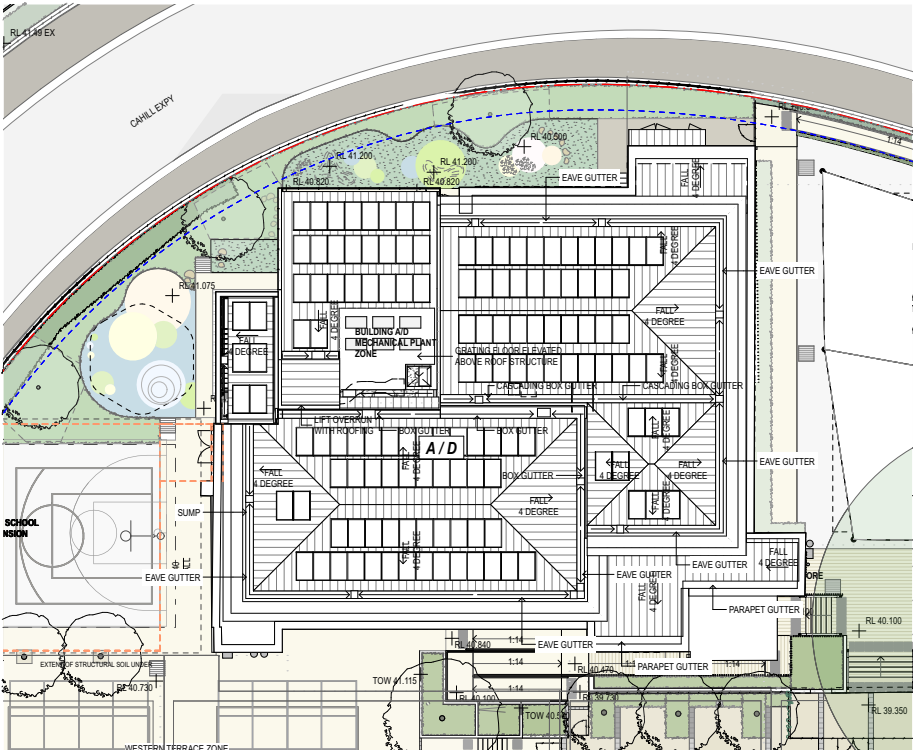
Heritage	Assessment
Council noted that the proposal should be sympathetic to the heritage items onsite, including the Fort Street Public School Building, the Meteorology Building and the Messenger's Cottage, the surrounding heritage items, including the Sydney Observatory and the National Trust Centre, and State and locally significant conservation areas.	- The EIS included a Heritage Impact Statement and Conservation Management Plan that assessed the heritage significance of the site and its context and the impacts of the proposed redevelopment of the school. - The Department is satisfied the proposal has been designed to minimise physical intervention to the heritage items on-site where possible and the new buildings would respect the heritage values of the site and surrounding heritage items / conservation areas.
	Conditions Conditions of consent require the Applicant to prepare a final Construction Management Plan and develop the detailed designs of rooftop photovoltaic panels and plant and equipment, raised walkways in consultation with Heritage NSW.

/ Extract from Notice of Decision - Conditions of Consent SSD-10340 7/10/20



/ Approved SSDA

/ Building A/D Roof PV arrangement



/ S4.55

/ Building A/D Roof PV arrangement



/ S4.55

/ 3D View from the NE



Drop Off/Pick Up, and the Loop Road

Risks identified

Key risks for the scope of the project and user interfaces were broadly identified as follows:

- perimeter apertures and controlability
- competing and overlapping routes between school and public users, and compression at 'pinch points'
- motor vehicles within playground areas
- clarity of materiality and demarcation of trafficable surfaces
- sightlines
- movement of children within the playground to/from perimeter points and holding areas
- position of vehicles during queueing for DO/PU

Measures

Essential responses canvassed and agreed during consultations:

- reconfigure vehicular and pedestrian entry format for Phase 1, prior to future cycleway commencement
- increase in roadway width to constant 6m
- introduce a new school pedestrian entry point at north-eastern corner, adjacent to the Bradfield Services Shed for Phase 1
- introduce segregation elements, split pathways and staging of DO/PU activities to split user types for entry sequence, hence improving safety at convergence locations
- add physical enhancements to playground and perimeter zones to address risks associated with out-of-control motor vehicles, and with bicycle users

- define user pathways by improving linemarkings, adding a pedestrian crossing (Phase 1 only), adding fences and gates
- re-confirming all sightlines within, surrounding and across convergent zones to ensure potential obstructions are removed or ameliorated
- testing of playground pockets as catchment opportunities to hold children during morning arrivals at drop-off, and vice versa times when children are held at the 'home time' bell for pickup. Catchments are adequately sized to accomodate portions of the student body according to respective transport mode
- to facilitate flexibility of populations in pockets and catering to emergent use scenarios to be tested by the school, movements between different areas have been tested to verify ability to move portions of children to respective DO/PU zones behind physical obstructions, achieving segregation from vehicular movements and public spaces.
- specific, segregated and demarked zones for vehicles during DO/PU moments for stationary vehicles to come to rest for movements of children

The collective measures have been reviewed and endorsed across the range of key stakeholders and landowners, including The Department of Education (and groups within including Schools Infrastructure, FSPS Senior Staff, and Project Executive Group, OH&S, Sustainable Transport), TfNSW, MAAS, Lend Lease, Arup (Traffic Engineer), and Civil engineering consultants.

A Road Safety Audit has also been conducted by a 3rd party expert consultant, which informed the altered design illustrated here.

/ Phasing 3D View, bird's eye from east

/ Phase 1 (Day 1), existing shared path



/ Phase 2, future shared path



Drop Off/Pick Up, and the Loop Road

/ Phasing 3D View from Phase 1 vehicle gate

/ Phase 1 (Day 1), existing shared path



/ Phasing 3D View from Phase 2 future vehicle gate

/ Phase 1 (Day 1), existing shared path



/ Phase 2, future shared path



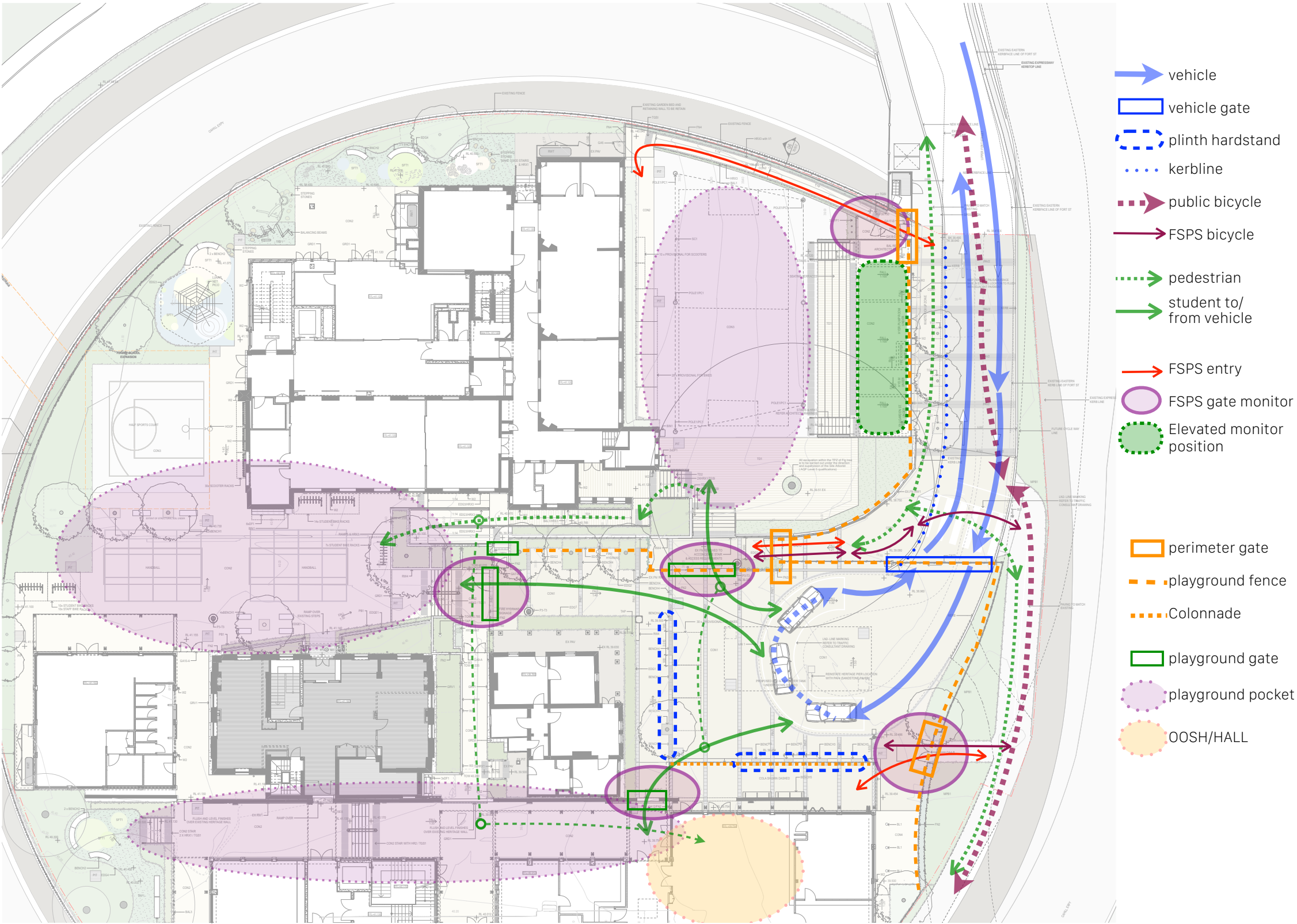
/ Phase 2, future shared path



Loop Road, Phase 1

Key measures:

- vehicular entry gates reconfigured, and setout adjustments made to roadway, vehicle and public pedestrian approach paths to improve approach angles, oversight and spatial amenity. Roadway in front of the Services Amphitheatre building straightened to improve sight lines around vehicles;
- materials definitions and linemarkings refined for loop road and threshold moments for optimised definition;
- new pedestrian crossing added beyond vehicular gate, to enable public pedestrian movements to occur away from FSPS pedestrian entry gates;
- new north-east pedestrian entry gate and rampway added, adjacent services amphitheatre. This provides an additional entry/exit point, alleviating pressure of numbers and frequency of movement at current eastern entry points. A traffic warden/teacher's eyrie on the amphitheatre terrace aids oversight and control for DO/PU times;
- gateway improvements conducted within the site, around the eastern courtyard. These improve function as restraint barriers around pockets of the school grounds. The pockets and attended gates will act as holding areas for children during DO/PU times beyond the eastern courtyard, in turn enabling the courtyard to be kept clear of errant children;
- movements of children in this eastern courtyard area will be overseen by teachers at pocket gates. Oversight of explicit movements to/from vehicles will be unimpeded by competing play times or landscape elements;
- physical barriers around the eastern courtyard are proposed to add vehicular incident protection and improve visual cue's to the DO/PU zone. These are proposed for the western and southern edges (adjacent Cottage and Hall buildings respectively), and shall be configured as hardened playground seats to add functionality during playground mode;
- investigations with landowners (DoE and TfNSW), has driven refinements to the Bradfield Services Shed and Upper Fort Street approaches. Refinements conducted in response to opportunities and constraints of retaining the eastern kerblines of Upper Fort Street, to preserve functionality of the existing breakdown zone and potential future cyleway footprints.



/ S4.55- Phase 1 - Drop off Diagram