

APPENDIX B ARCHITECTURAL DESIGN REPORT

Lahznimmo Architects





BUILDING J DESIGN REPORT SSD Application

Museums Discovery Centre



Museum of
Applied Arts
& Sciences



Create NSW
Arts, Screen & Culture

September 9th, 2020

lahznimmo
architects

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01- PROJECT INTRODUCTION

The report supports a State Significant Development (SSD) Application for the proposed construction and use of a new building to facilitate the expansion of the Museums Discovery Centre (MDC) site at 2 Green Road, Castle Hill.

The primary objective of the SSD Application is to provide expanded facilities to accommodate the Powerhouse collection including spaces for storage, conservation, research and display and spaces to facilitate increased public access to the collection through education, public programs, workshops, talks, exhibitions and events. The expansion of the existing MDC facility within the site at 2 Green Road Castle Hill will integrate with the existing MDC site located at 172 Showground Road, Castle Hill and its operations on a permanent basis.

The proposal is a type of “Information and Education Facility” with a Capital Investment Value (CIV) in excess of \$30 million and is classified as SSD under Schedule 1 Clause 13 of the State Environmental Planning Policy (State and Regional Development) 2011 (State and Regional Development SEPP).

Create Infrastructure is the proponent of the SSD Application.

Background

The MDC is owned and operated by the Museum of Applied Arts and Sciences (MAAS) and features exhibitions and displays in collaboration with Australian Museum and Sydney Living Museums, who also maintain collection storage and conservation facilities on the site. The MDC is located at 172 Showground Road, Castle Hill. There are six buildings primarily providing collection storage as well as areas for displays and education and public programs, accessible to visitors (Building E). During 2017-2018 a total of 17,481 persons visited the MDC site.

The MDC Expansion is part of the renewal of the Museum of Applied Arts and Sciences, known as the Powerhouse Program, that includes:

- **Powerhouse Parramatta:** A new benchmark in cultural placemaking for Greater Sydney that will be a symbol of a new approach to creative activity and engagement.
- **Powerhouse Ultimo:** The NSW Government recently announced that the Museum’s Ultimo site will be retained, and the Museum will operate over four sites across the Greater Sydney area.
- **Powerhouse Collection Relocation and Digitisation Project:** The relocation of the Powerhouse collection and digitisation of around 338,000 objects, enhancing the collection’s accessibility for local, national and international audiences.

The MDC expansion is an integral component of the Powerhouse Program and will provide the opportunity to increase visitation to the site, forming an important and significant cultural institution within The Hills Shire. In addition to the storage component of the proposal, the expansion will increase access to the Powerhouse collection through a range of spaces for visible storage, research and viewing of the collection, as well as flexible spaces for education and public programs, workshops, talks, exhibitions and events.

Site Description



01- PROJECT INTRODUCTION

The proposed Building J site is located within the property known as 2 Green Road, Castle Hill which comprises a single lot legally described as Lot 102 DP 1130271. The site is generally square in shape with a splay corner to the intersection of Green Road and Showground Road and a total area of approximately 3.8ha. The site has a primary frontage of approximately 183m to Green Road and a secondary frontage of approximately 186m to Showground Road. Refer to Figure 1. The location of the proposed new MDC building (to be known as “Building J”) is located on the western end of the site and is marked on Figure 1 in a dashed yellow line (referred as the Building J Site). The overall site contains large institutional buildings set within a landscaped setting featuring a high tree canopy.

The overall site is a TAFE campus that caters for approximately 400 enrolled students, and provides courses on business and financial services, hospitality, general education, community services, health, nursing, carpentry, building and retail. The site currently includes TAFE buildings, car parking and vegetated open space areas. A dam is situated in the north eastern part of the site.

The MDC site is located immediately west of the existing TAFE site at 172 Showground Road, Castle Hill. A subdivision application (included within this SSD Application) will consolidate the site of the proposed Building J with the existing MDC site. The main public vehicle access to the MDC site is via Windsor Road. There is also a vehicular access point to the MDC on Showground Road. The MDC and TAFE have a longstanding arrangement, that permits vehicle access to the MDC site from Green Road, allowing vehicles to traverse across the TAFE site to access the MDC site.

neighbourhoods generally comprising two storey detached dwellings. Opposite the site to the south east and south west are a mix of warehouses, industrial units, and large format bulky goods retail premises. Views into the TAFE and MDC site from the surrounding roads is obscured by dense trees and vegetation along the perimeter of the sites.

A public park and children's playground is adjacent to the north of the site that is bound by Sunderland Avenue to the east and Castlegate Place to the west. The dwellings along Sunderland Avenue and the southern side of Pentonville Parade are the nearest residential properties to the proposed Building J site.

Overview of Proposed Development

The successful delivery of this SSD project supports a priority cultural infrastructure project and is a NSW Government 2019 election commitment (Powerhouse Precinct at Parramatta). This application will deliver a significant cultural institution for Castle Hill and The Hills Shire.

The proposed Building J will offer many opportunities for public engagement as part of a desire to increase public access to the Powerhouse collection. The renewal of the site offers a range of opportunities to increase public access including visible storage facilities, booked tours, Open Days, public and education programs, workshops, talks and other events. The facilities in Building J will serve the needs of a variety of user groups including staff, volunteers, education groups, researchers, artists, scientists, industry partners and the general public.

- The SSD Application seeks consent for the delivery of the MDC expansion as a single stage, comprising:
- Site preparation works, including the termination/relocation and installation of site services and infrastructure, tree removal (337 trees in total), earthworks, and the erection of site protection hoardings and fencing.
 - Demolition of existing car park and vehicle accessway along the eastern and north eastern parts of the site. A new at-grade car park is proposed to be constructed on the eastern side of the TAFE site and will accommodate 24 car parking spaces removed from the Building J site.
 - Construction of the proposed new Building J. The proposed new Building J will cater for the following uses:
 - Storage for the Powerhouse collection and archives (both collected archives and institutional archives).
 - Flexibles spaces for education and public programs, workshops, talks, exhibitions and events.
 - Suites of conservation laboratories and collection work spaces.
 - Photography, digitisation and collection documentation facilities.
 - Work space for staff, researchers, industry partners and other collaborators. This will include amenities, meeting and storage rooms, collection research and study areas as well as other ancillary facilities.
 - Components of the image and research library.
 - Object and exhibition preparation, packing, quarantine and holding areas.
 - Construction of new vehicle accessways to maintain connectivity to the MDC and TAFE sites.

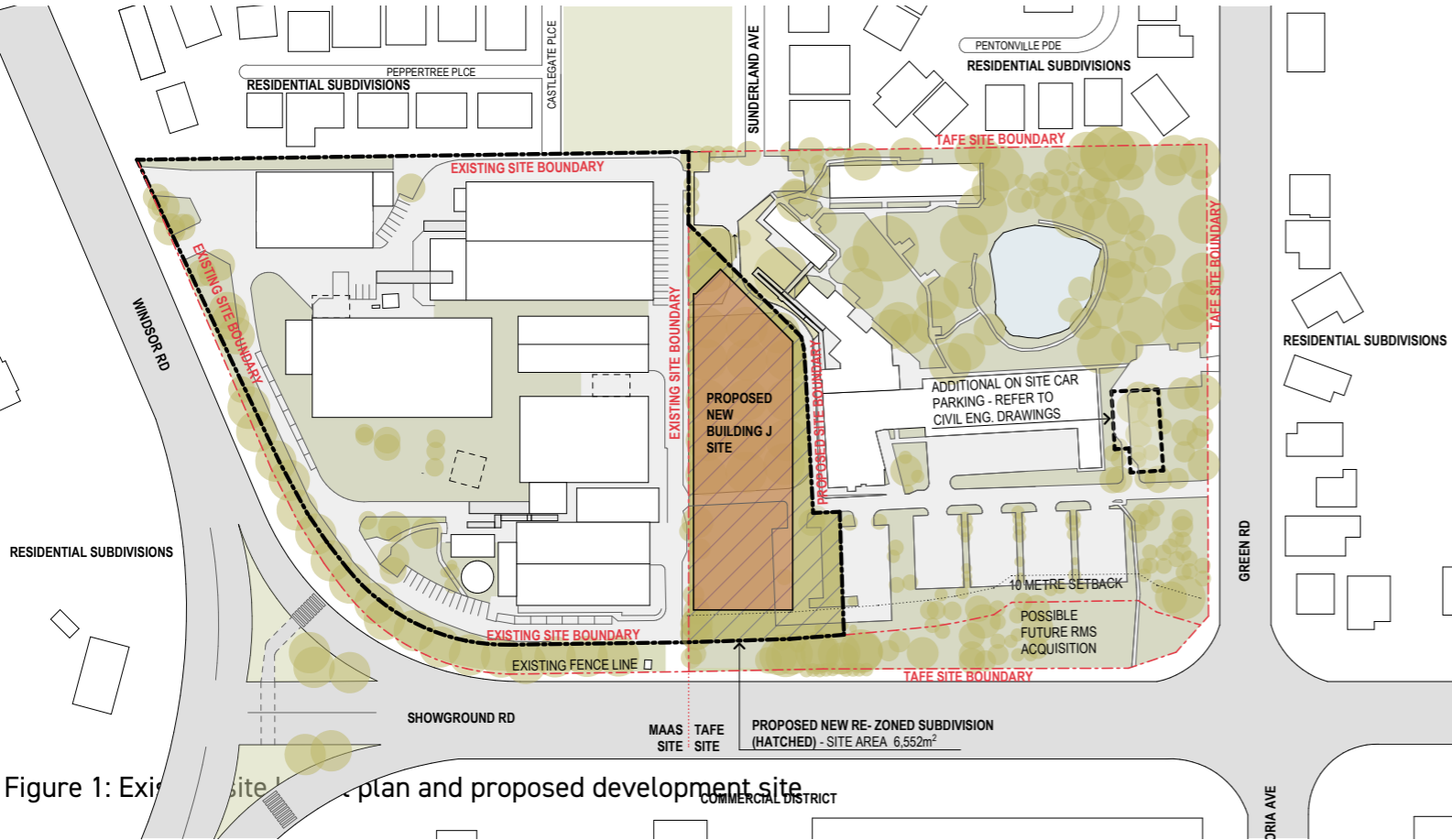


Figure 1: Existing site plan and proposed development site

Development surrounding the site to the east, and north consists of established residential

01- PROJECT INTRODUCTION

- Components of the image and research library.
- Object and exhibition preparation, packing, quarantine and holding areas.
- Construction of new vehicle accessways to maintain connectivity to the MDC and TAFE sites.
- Subdivision of the proposed Building J site from the TAFE site including creation of right-of-carriageway easement to facilitate access over the new realigned accessway by TAFE vehicles and consolidation to form a single lot with the existing MDC site.

Assessment Requirements

The Department of Planning, Industry and Environment have issued Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development. This report has been prepared having regard to the SEARs as follows:

SEAR	Response or Document Reference
2. Design Excellence The EIS shall:	
- detail the design review process that has informed the development, including review by State Design Review Panel (SDRP) prior to lodgement and during assessment of the proposal	The design was presented to the State Design Review Panel on 15 July 2020. Responses to feedback received from the DRP are contained in Appendix D (p40).
- respond to the advice from the SDRP prior to lodgement	Supplementary material has been prepared and is included in Appendix D (p40) of this document. Separate material prepared by the Landscape Architects (Aspect Studios) is found within the Landscape Design Report.
- detail of an ongoing process to ensure design integrity.	A further review by the SDRP will take place during the SSDA process.
3. Built form and urban design The EIS shall:	
- address and respond to the height, bulk and scale of the proposed development within the context, streetscape and visual and physical character of the locality	Refer to Section 3 "Design Vision and Principles" p13-18
- consider the visual and view impact from surrounding areas including from Showground Road, Sunderland Avenue and residential properties and Green Road/ TAFE site and design considerations to mitigate any impacts	Refer to Appendix B (Page 29) for the view analysis report
- Provide details of building materials, finishes and colours	Refer to Section 4 "Building materials" on pages 19-20 of this report
7. Amenity The EIS shall:	
assess potential overshadowing, noise, reflectivity, visual privacy, including any amenity impacts of the proposal on surrounding development and the public domain	Refer to Appendix C (page 36) for the shadow diagrams. Refer to the Acoustic Report for Noise assessment. Refer to the EIS for reflectivity and visual privacy.



02- CONTEXT
POWERHOUSE PROGRAM



SITE LOCATION
CASTLE HILL, SYDNEY



POWERHOUSE MUSEUM
PARRAMATTA



SYDNEY OBSERVATORY
MILLERS POINT, SYDNEY



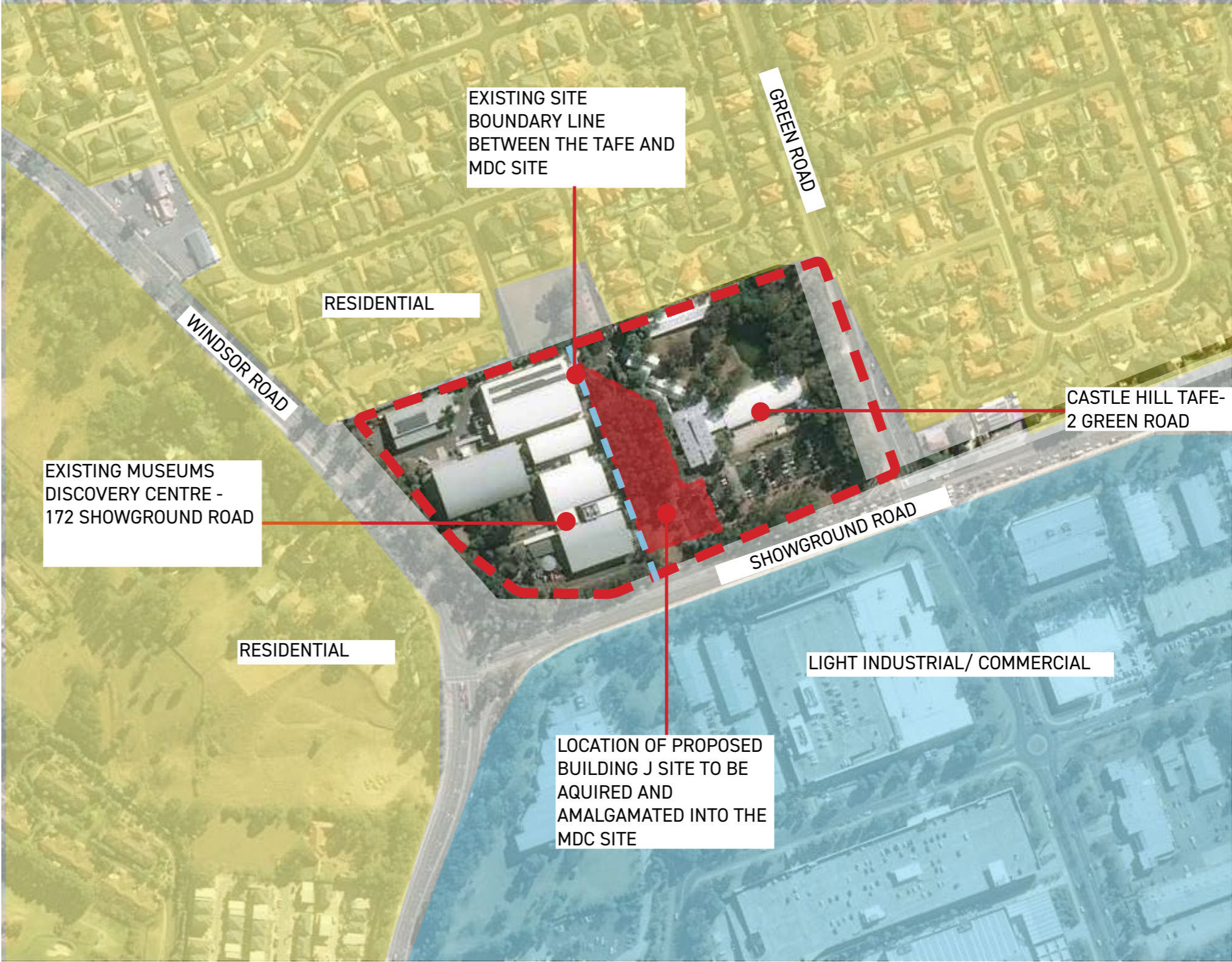
POWERHOUSE MUSEUM
ULTIMO, SYDNEY



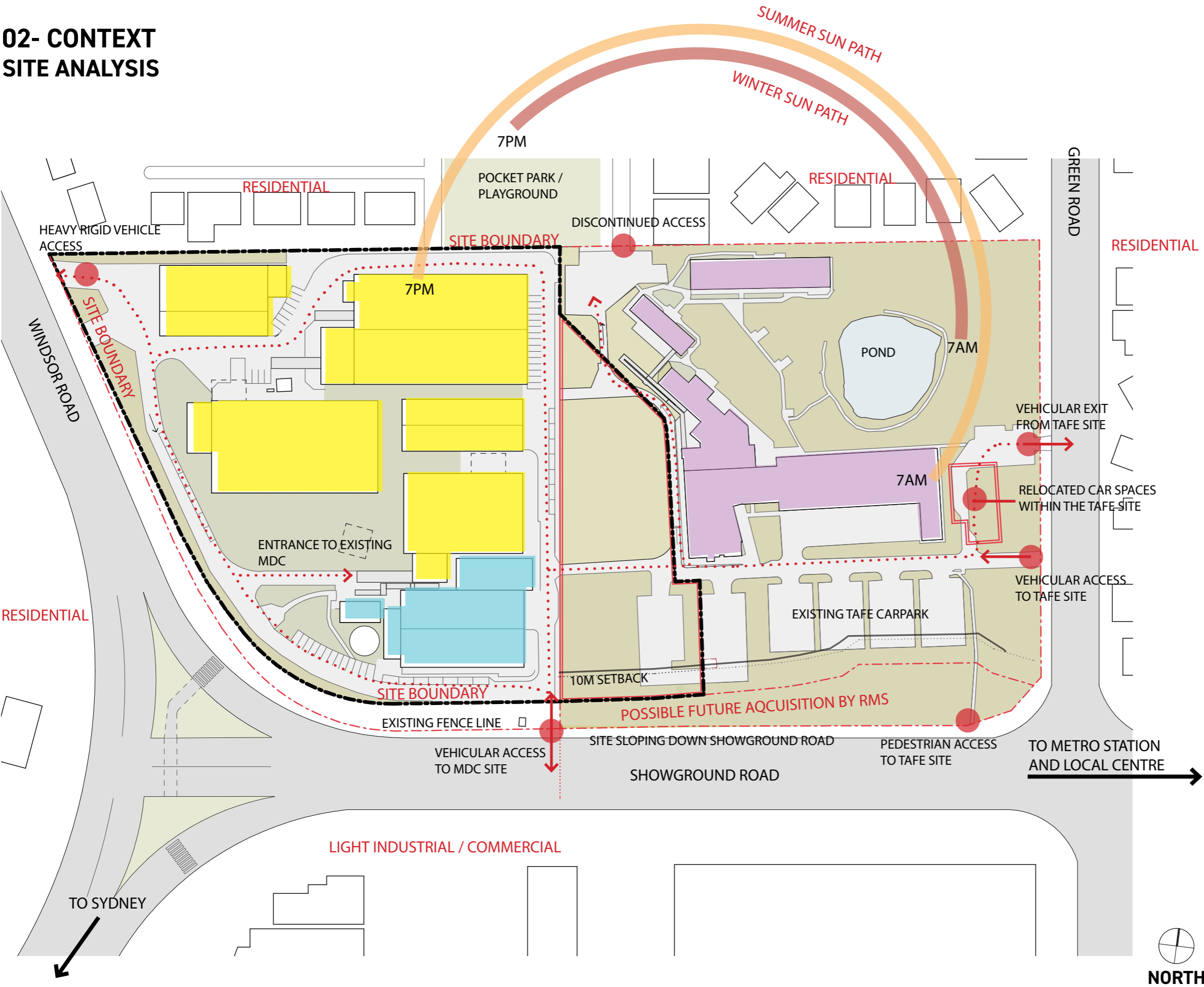
02- CONTEXT
LOCAL CONTEXT

The proposed Building J site is located within the property known as 2 Green Road, Castle Hill which comprises a single Lot legally described as Lot 102 DP1130271.

The Museums Discovery Centre is located immediately west of the existing TAFE site at 172 Showground Road, Castle Hill. A subdivision application (included within this SSD Application) will consolidate the site of the proposed Building J with the existing MDC site. The main public vehicle access to the MDC site is via Windsor Road. There is also a vehicular access point to the MDC on Showground Road. The MDC and TAFE have a longstanding arrangement, that permits vehicle access to the MDC site from Green Road, allowing vehicles to traverse across the TAFE site to access the MDC site.



02- CONTEXT
SITE ANALYSIS



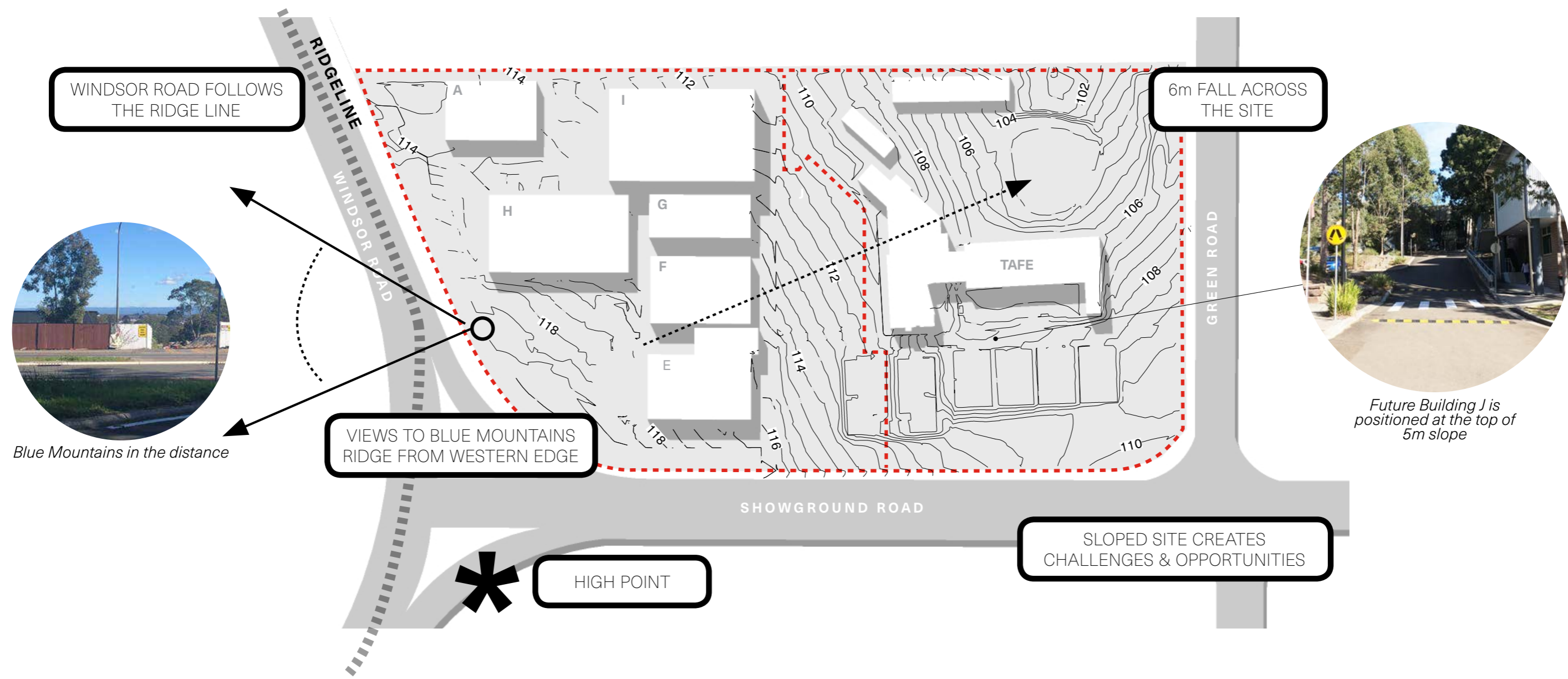
KEY

- MDC BUILDINGS (STAFF ONLY)
- MDC BUILDINGS (STAFF + PUBLIC)
- TAFE BUILDINGS
- INTERNAL VEHICLE AND EXTERNAL ROAD CONNECTIONS
- SUMMER SOLSTICE SOLAR ACCESS
- WINTER SOLSTICE SOLAR ACCESS
- EXISTING VEGETATION
- PROPOSED SITE DEVELOPMENT

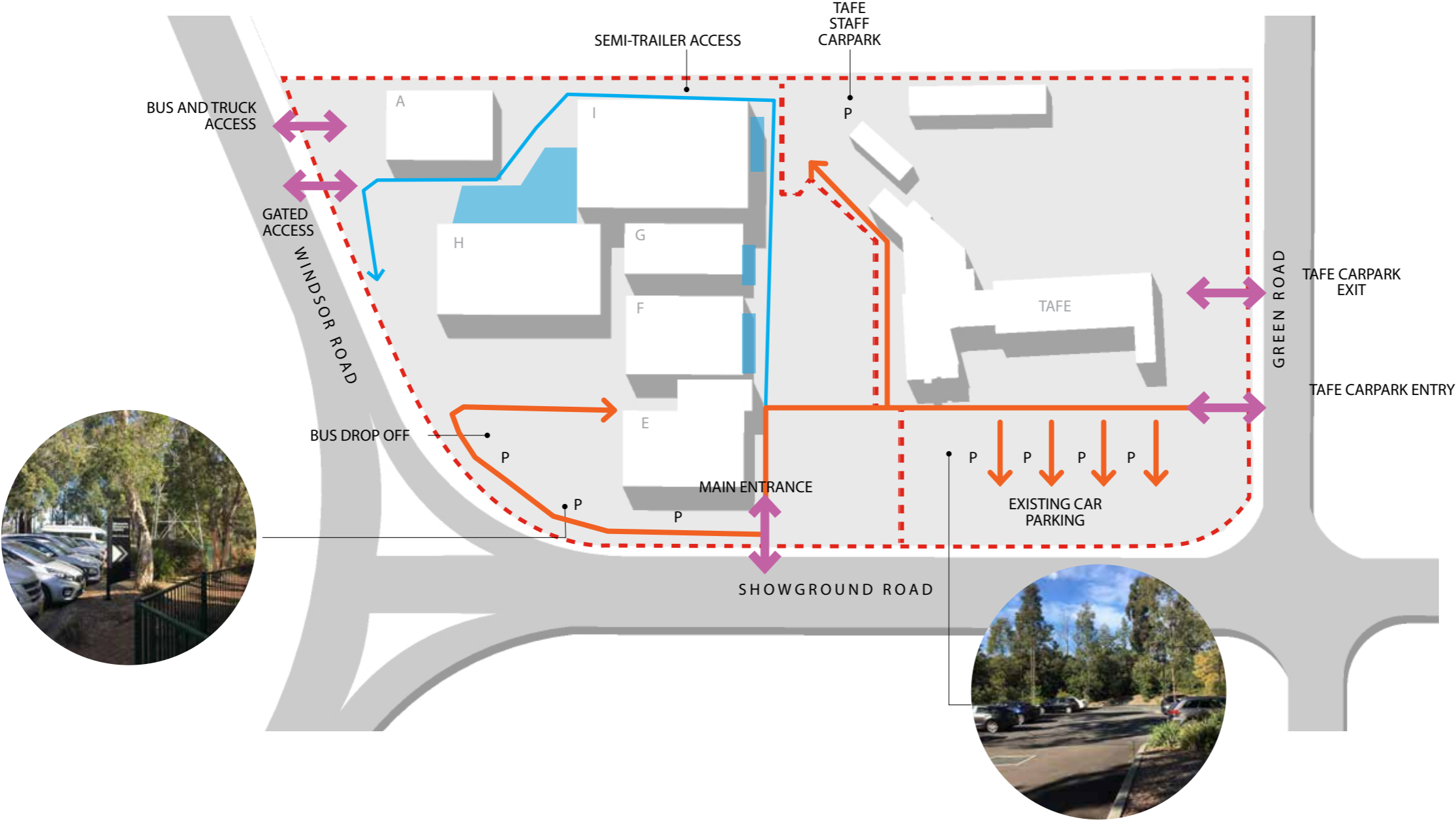
PROPOSED SUBDIVISION



02- CONTEXT
TOPOGRAPHY

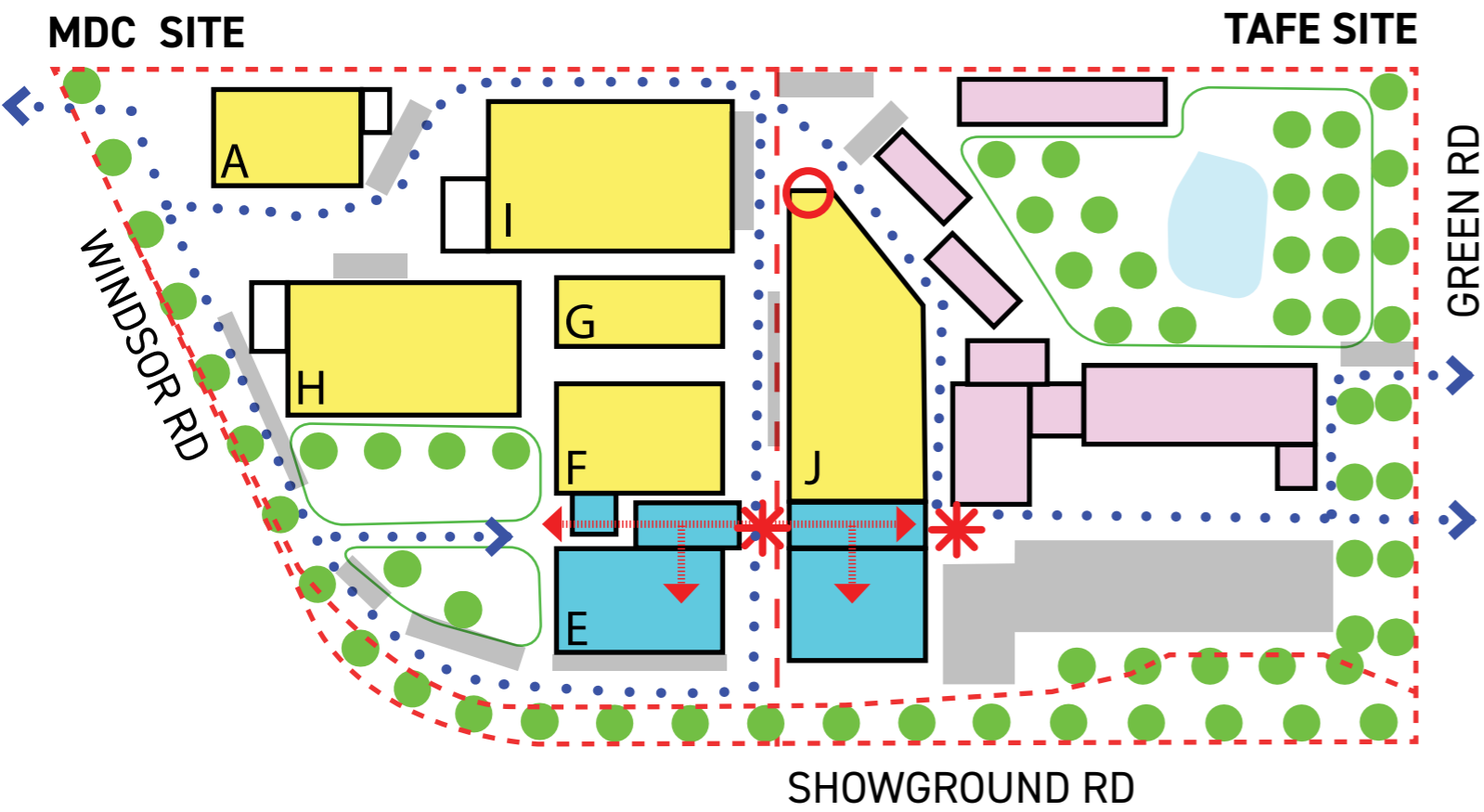


02- CONTEXT
EXISTING SITE ACCESS + CIRCULATION



02- CONTEXT

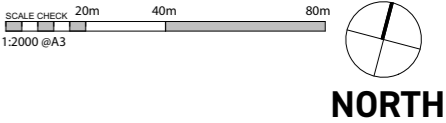
SITING- PROPOSED DEVELOPMENT



SITING

Building J will provide an important new public facing interface with Showground Road. The curtilage of the building has been designed to integrate with the immediate surroundings, to compliment the adjacent TAFE site and to provide a generous and permeable landscaped setting along Showground Road. Functions within the building are arranged such that the staff and public areas are located to the South, and collections stores to the North- this creates a clear relationship with established functions within adjacent buildings on site, and establishes a strong through link between the MDC and TAFE sites. By orientating the building in a North/South direction, the impact to the TAFE site is minimised, with the majority of the existing car spaces retained.

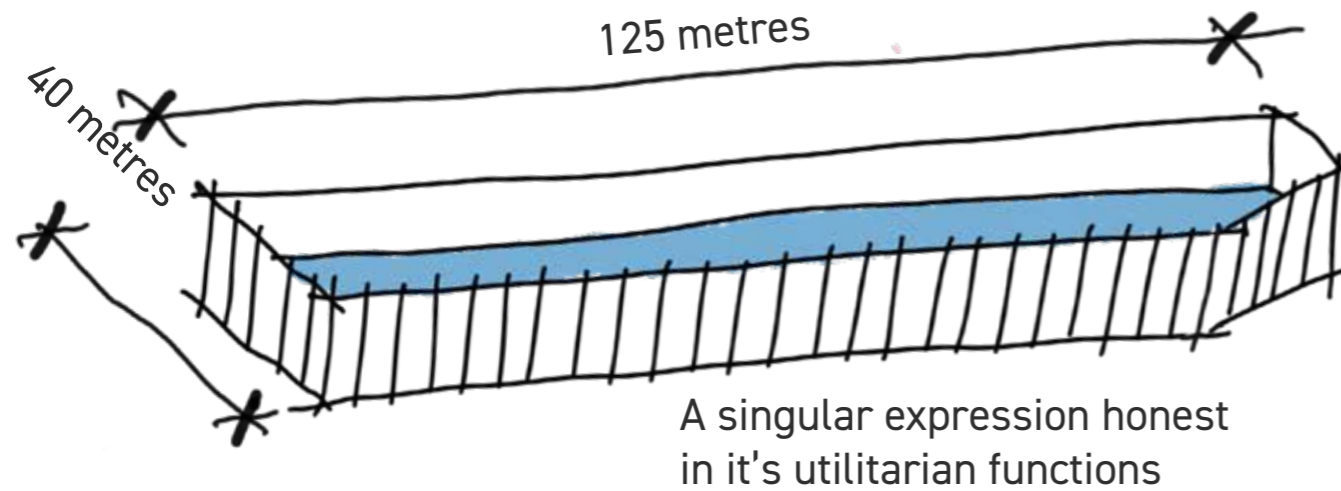
- KEY
- TAFE BUILDING
 - MDC BUILDING - WORKSHOP OR STORAGE USE PRIMARILY
 - MDC BUILDING - STAFF AND PUBLIC USE PRIMARILY
 - INTERNAL VEHICLE ACCESS AND EXTERNAL ROAD CONNECTIONS
 - GREEN SPACE AND MAJOR TREES
 - SURFACE CARPARKING
 - WATER BODY
 - BOUNDARY OR ROAD WIDENING SETBACK (ROAD WIDENING ALLOTMENT ON WINDSOR AND SHOWGROUND RD)
 - NEW MAIN STAFF AND PUBLIC ENTRY
 - CONTROLLED PUBLIC ACCESS
 - NEW LOADING AREA



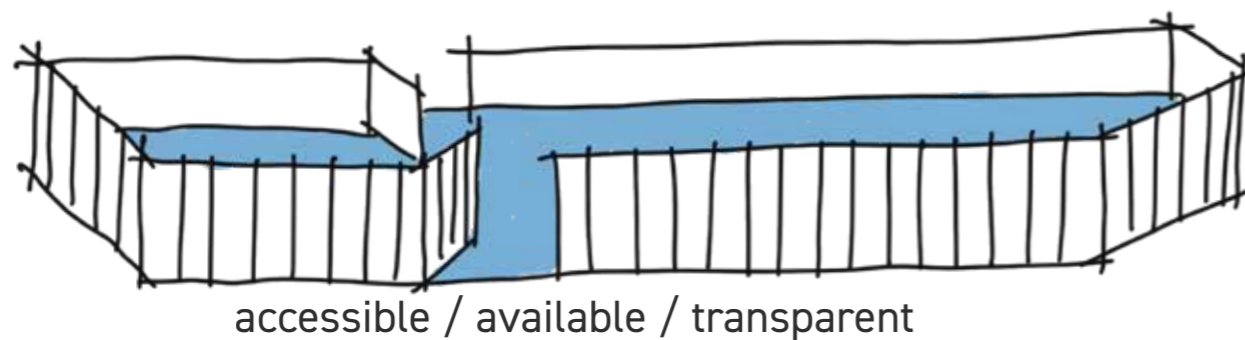
03- VISION + PRINCIPLES

DESIGN IDEAS

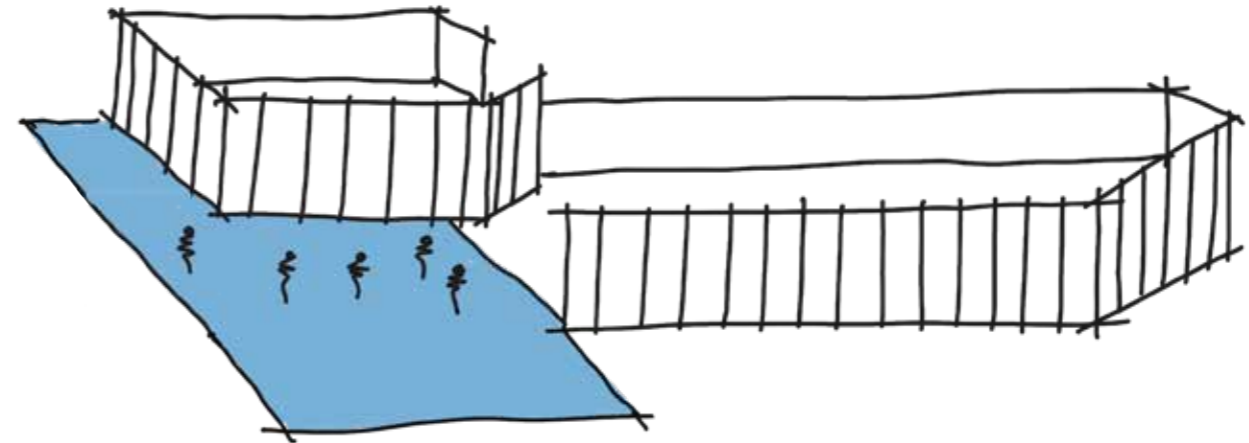
1. STORE J - the new store



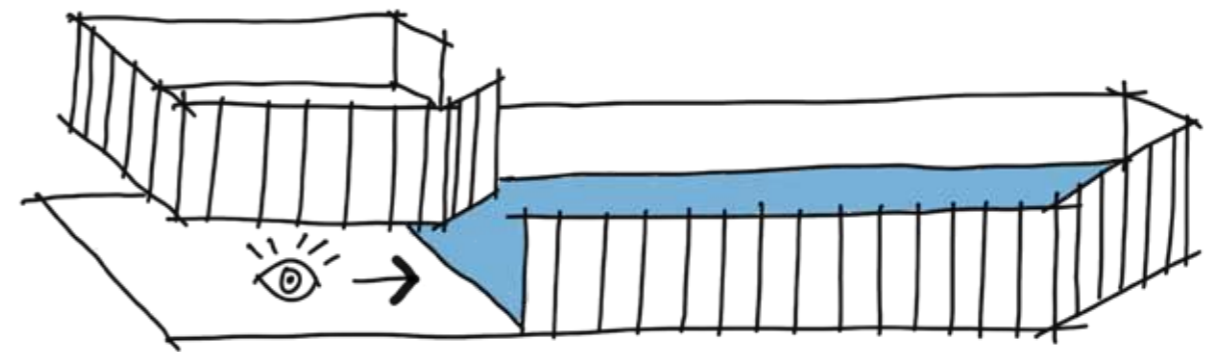
2. ENTRY - a different store - open and active



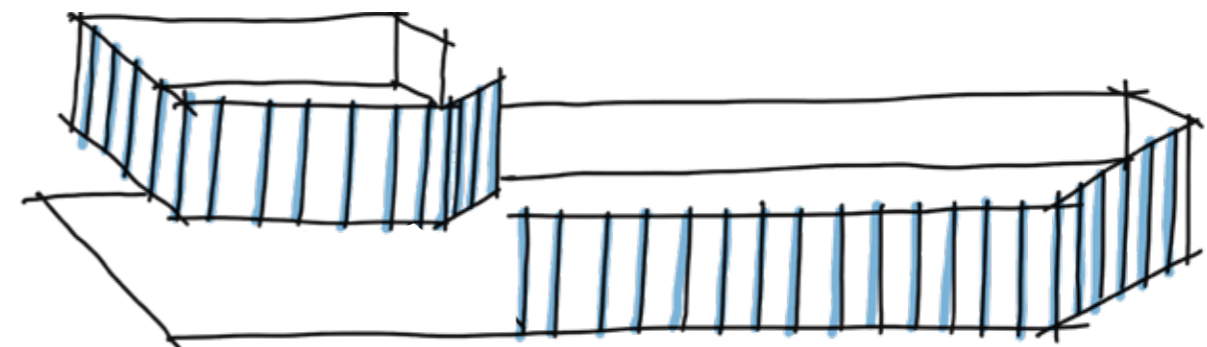
3. LIFT THE LID - a flexible space for live surges / not constrained by the envelope



4. REVEAL - insight



5. LIGHT, VIEW & VENTILATION - facade edges open where required

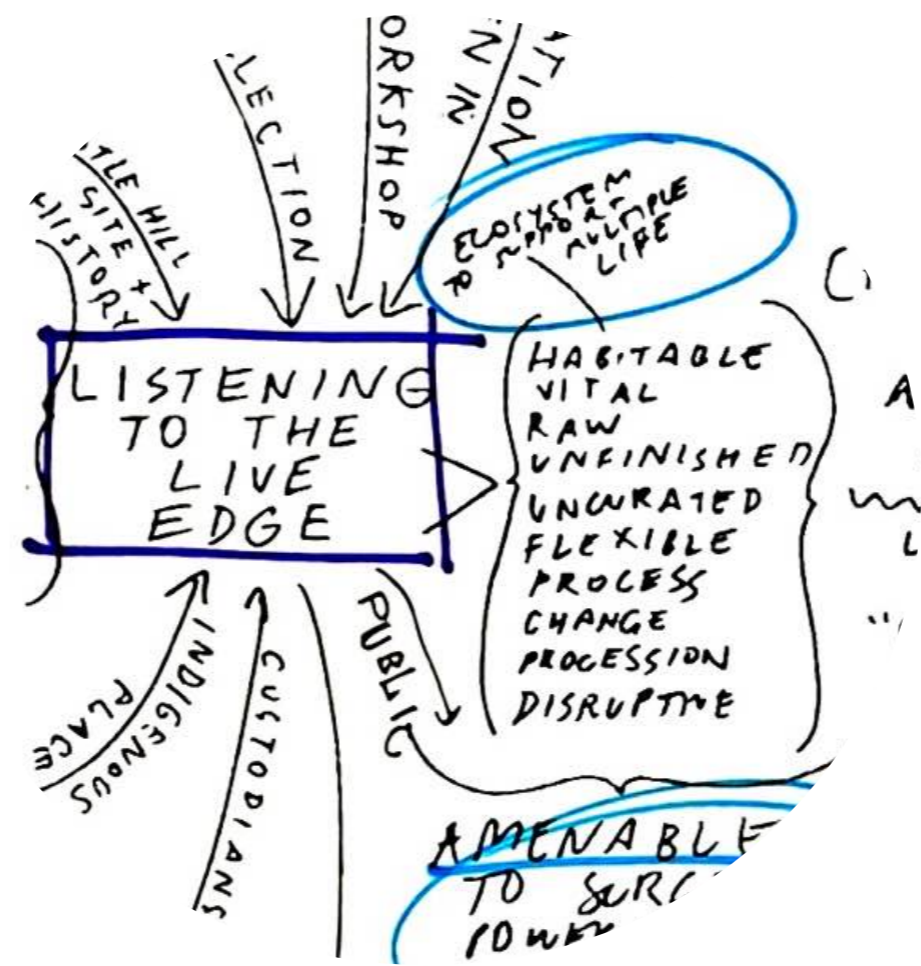


03- VISION + PRINCIPLES

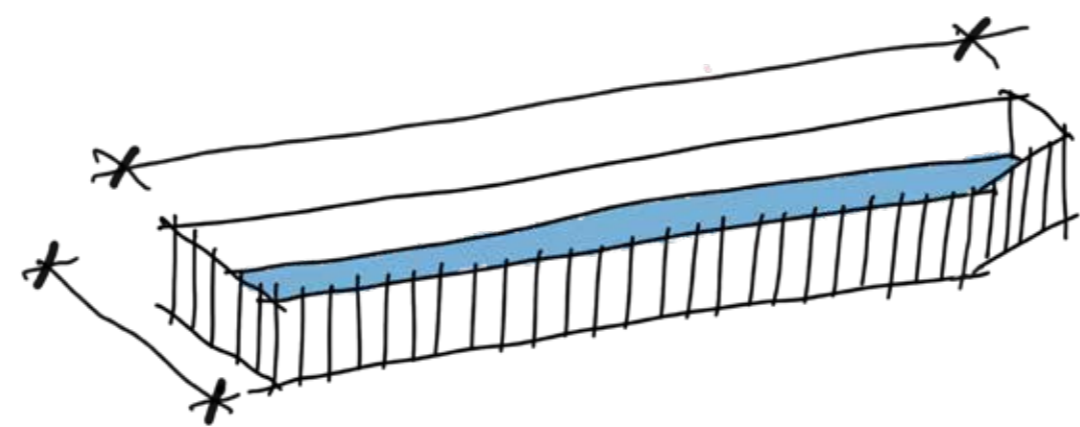
THE VISION AND FACADE EXPRESSION

Building J will be a contemporary building that is civic in nature. It will have a strong street front presence, and act as a clear arrival point to the Museums Discovery Centre.

Whilst industrial in nature, it will recognise its public/ civic role, and will announce the presence of the Powerhouse within the area. The overall form will be simple, minimising expressive elements and articulation. The materials palette will also be simple, yet refined, and be selected for their honesty, and durability. The design of the main entry will provide intuitive wayfinding and act as a point of orientation for visitors to the site.



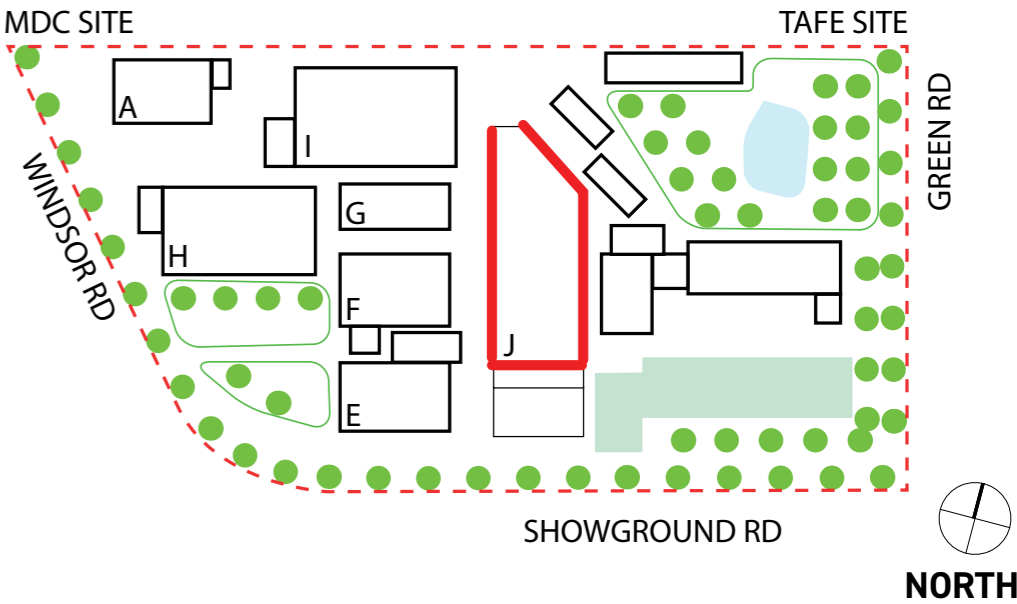
HABITABLE / VITAL / RAW / UNFINISHED / FLEXIBLE / LOW MAINTENANCE / HONEST



STORE J - A VISIBLE STORE / A SINGULAR EXPRESSION



FACTORY OF ELECTRICAL ASSEMBLY - JOSE MARIA SANCHEZ GARCIA



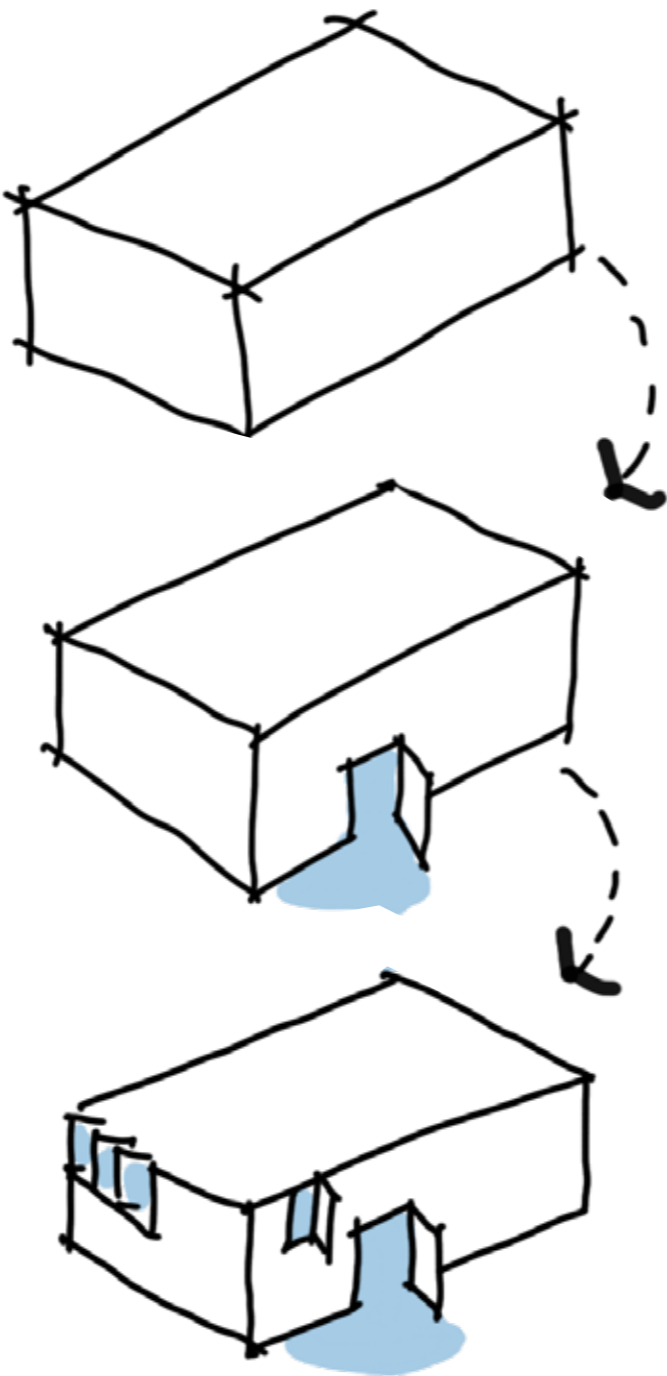
03- VISION + PRINCIPLES
ENTRY / REVEAL / LIGHT & VENTILATION
A SINGULAR DEVICE TILTING/FOLDING/PEELING THE FACADE WHERE REQUIRED

BUILDING EXPRESSION

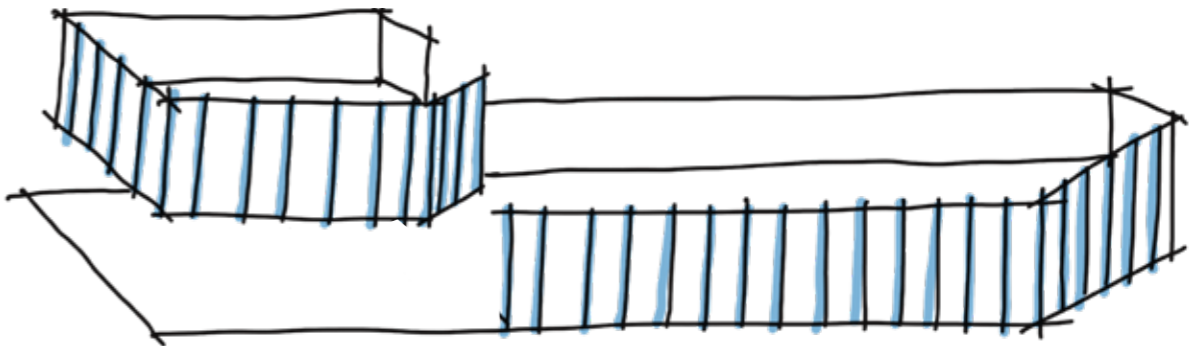
To achieve the principles outlined on the previous page, a singular design device of tilting, folding, peeling the facade has been utilised.

The entries are marked by civic scaled folds in the facade, tilting inward to lead visitors and staff into the building.

As the facade continues to the North, the facade peeling is limited to allow more controlled views into working areas such as the conservation laboratory.

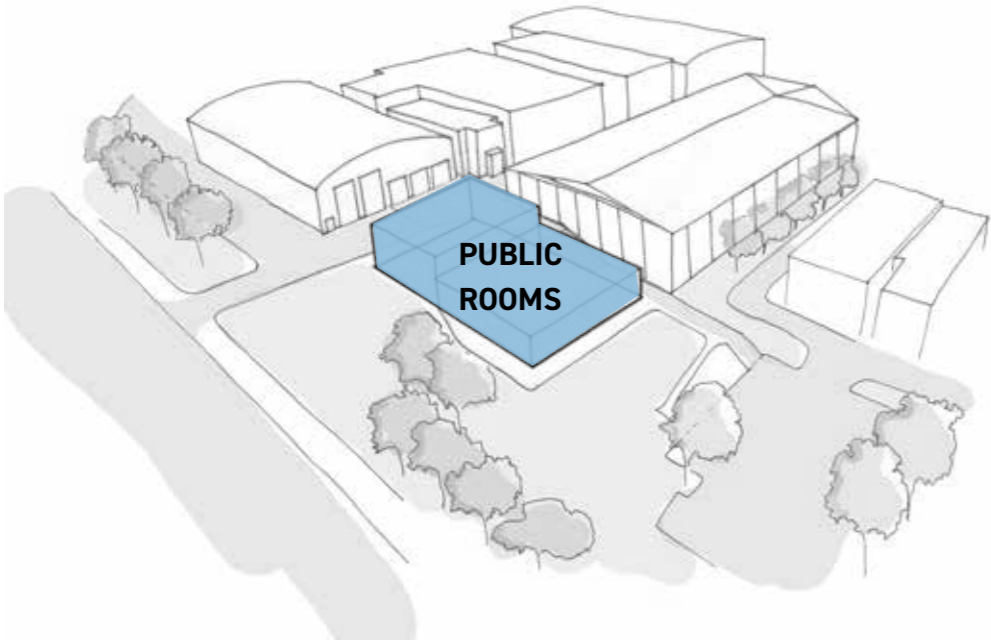


MAKING VISIBLE



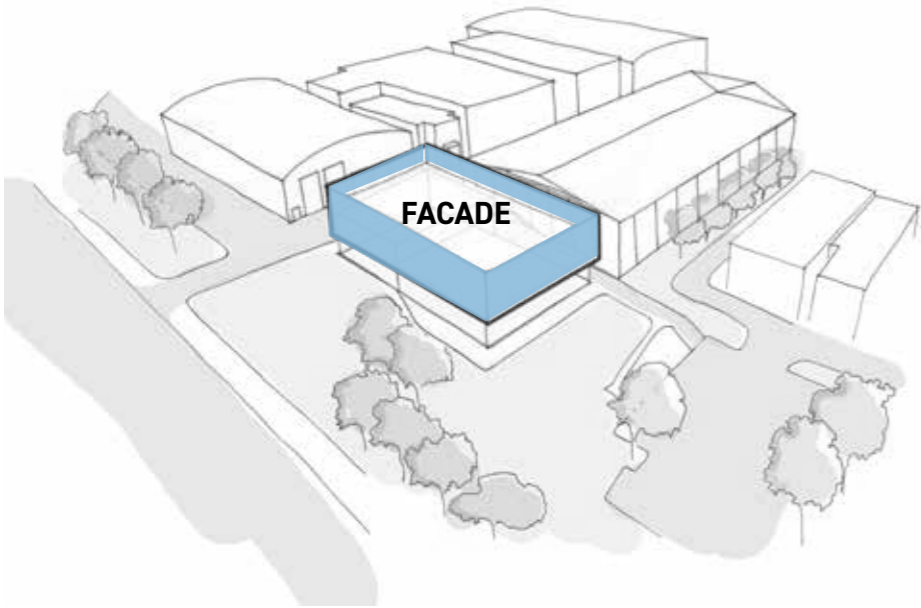
TORQUAY HOUSE - WOLVERIDGE ARCHITECTS

03- VISION + PRINCIPLES VOLUME + STREET PRESENCE



VOLUME

The Showground Road end of the building contains the public/visitor spaces, including a connected single and triple-height flexible space that can be used to display very large objects, or for education purposes. The space connects directly to the East-West link through the building.

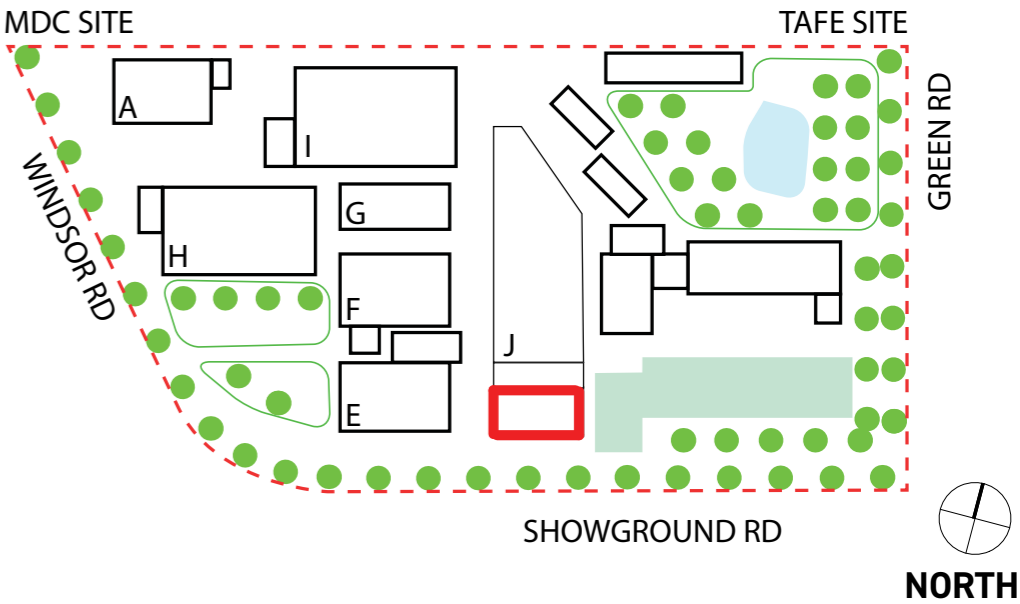


STREET FACADE

The Showground Road facade is purposefully kept unadorned, with the exception of a break in the Aluminium cladding that tilts open in segments, to reveal the triple-height flexible space and any large objects that may be on display.



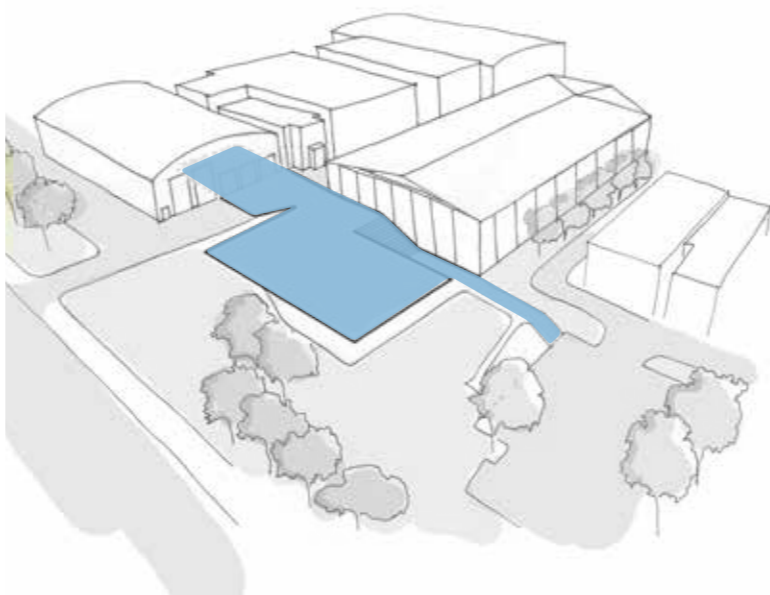
BANDANG MUSEUM OF HISTORY, INDONESIA
COMPETITION ENTRY - DENNIS INDRA



03- VISION + PRINCIPLES VOLUME + STREET PRESENCE



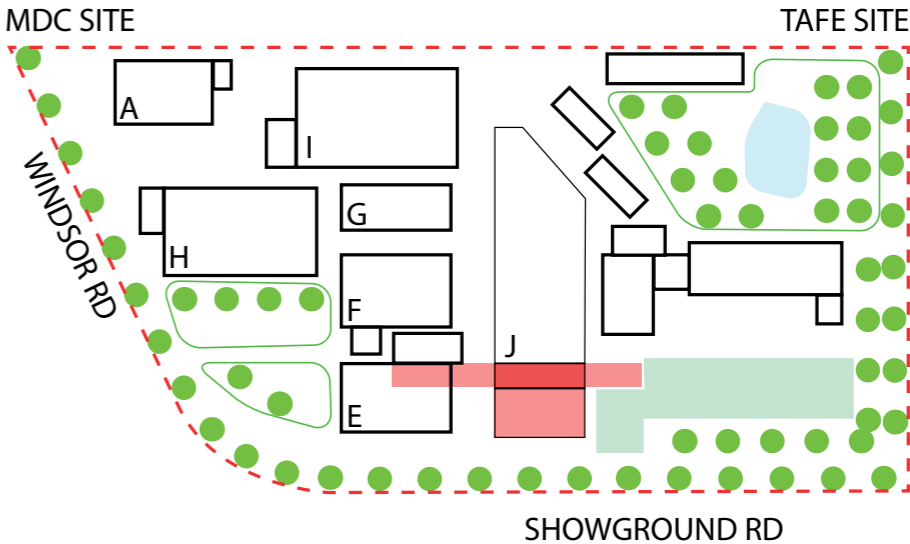
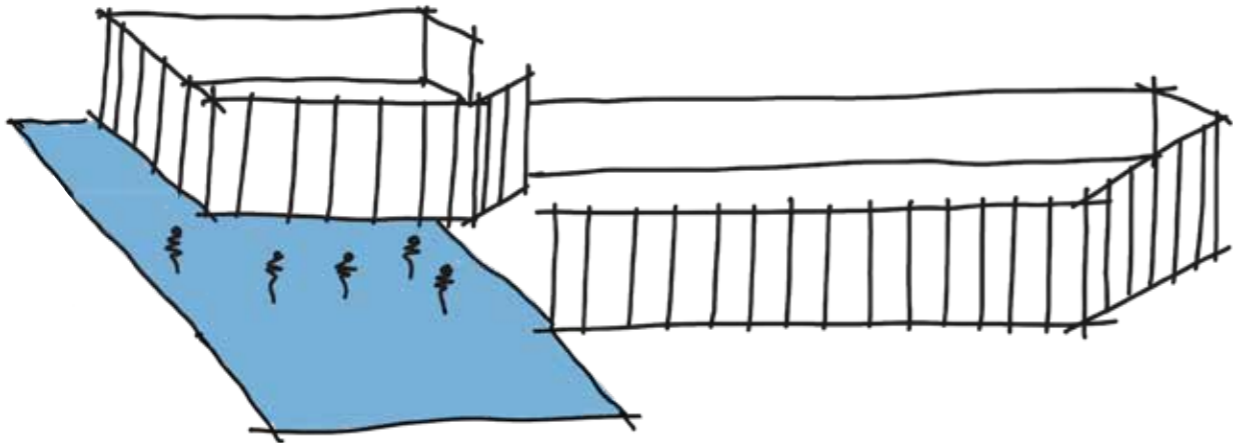
HERE, AN ECHO - SURRY HILLS
AGATHA GOTHE-SNAPE



GROUND PLANE

The ground plane will feel like a continuous public accessible plane, and have strong indoor/outdoor connections. Emphasised by a bold use of embedded colour, the new route will improve pedestrian circulation and flow, invite intuitive wayfinding, and create a new public domain between Building J and Building E, aligning with the MDC vision and principles of an open and connected place.

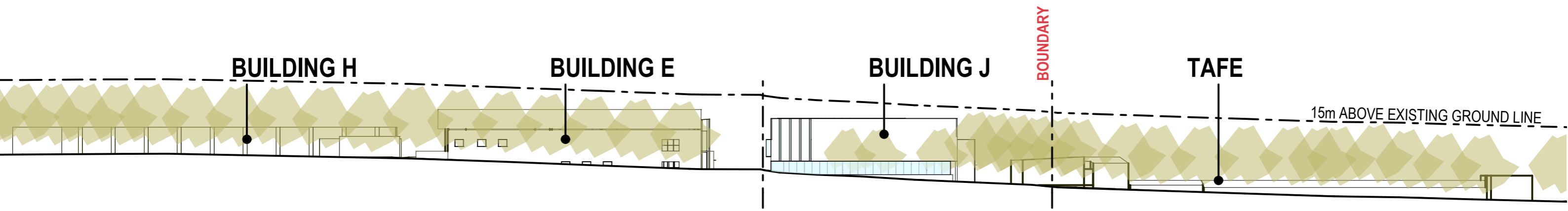
To strengthen the East/West link through the building, key spaces have their entries directly accessed from the link.



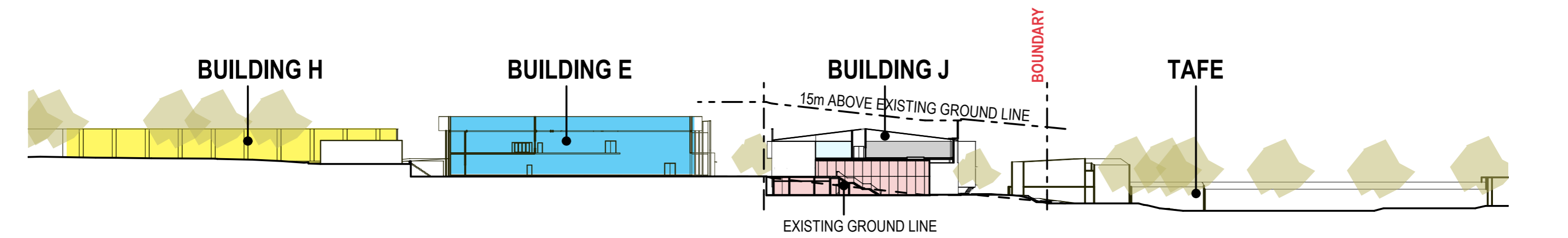
03- VISION + PRINCIPLES

MASSING

The proposed Building J site has a maximum height limit of 15m to ensure consistency in massing with existing buildings on the Museums Discovery Centre site. From Showground Road, Building J presents a consistent bulk and scale to the adjacent Building E to form a new public gateway at the main public arrival point to the site.



SHOWGROUND RD ELEVATION



SITE SECTION

04- PROPOSED MATERIALS

EXTERNAL MATERIALS

A refined palette of materials and finishes is required that is restrained. Materials have been selected for their durability and represented in an honest manner.



PRE-FINISHED
PROFILED STEEL ROOF
SHEETING



CORRUGATED MILL
FINISH ALUMINIUM
CLADDING



CORRUGATED PRECAST
CONCRETE WITH
COLOUR OXIDE COATING
TO THE BUILDING BASE



Barcelona House,
Arquitectura



Rebel House,
MONO Architects

INTERNAL MATERIALS

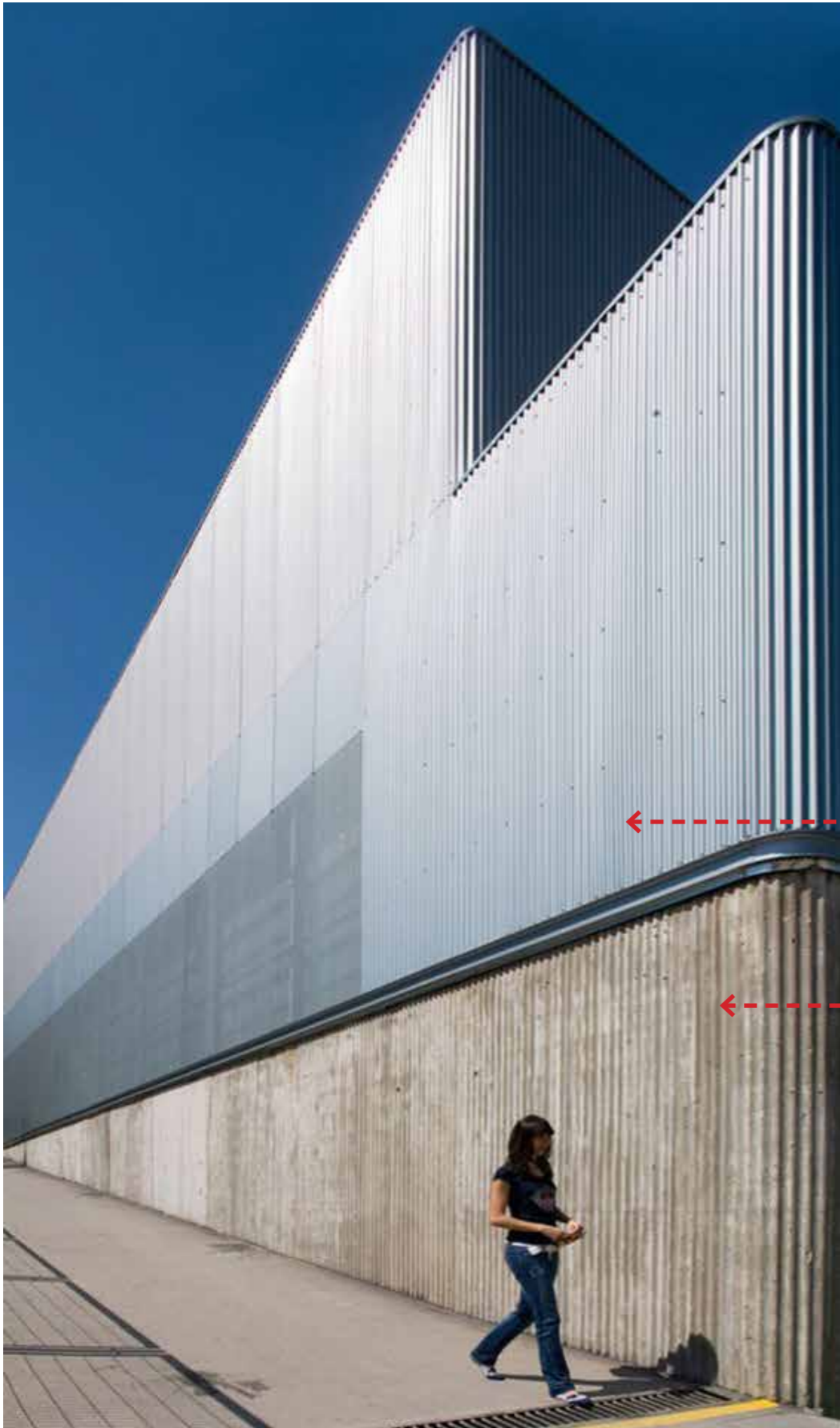
With the building being primarily for collections storage and storage display, a simple and raw finishes palette is being proposed, including:

- an exposed concrete and steel structure
- sealed and polished concrete floors
- exposed services



Nike New York,
Studios Architecture

04- PROPOSED MATERIALS (EXTERNAL)



EXPOSED
STRUCTURE
(INTERNAL)

CORRUGATED MILL
FINISH ALUMINIUM
CLADDING

CORRUGATED PRECAST
CONCRETE WITH
COLOUR OXIDE COATING
TO THE BUILDING BASE

The materials palette for the building is both raw and robust, and used with an honesty in expression, reflecting the primary functions within: to store and to display the rich items within the collective museums inventory.

Bernadette College,
P02 Architectos

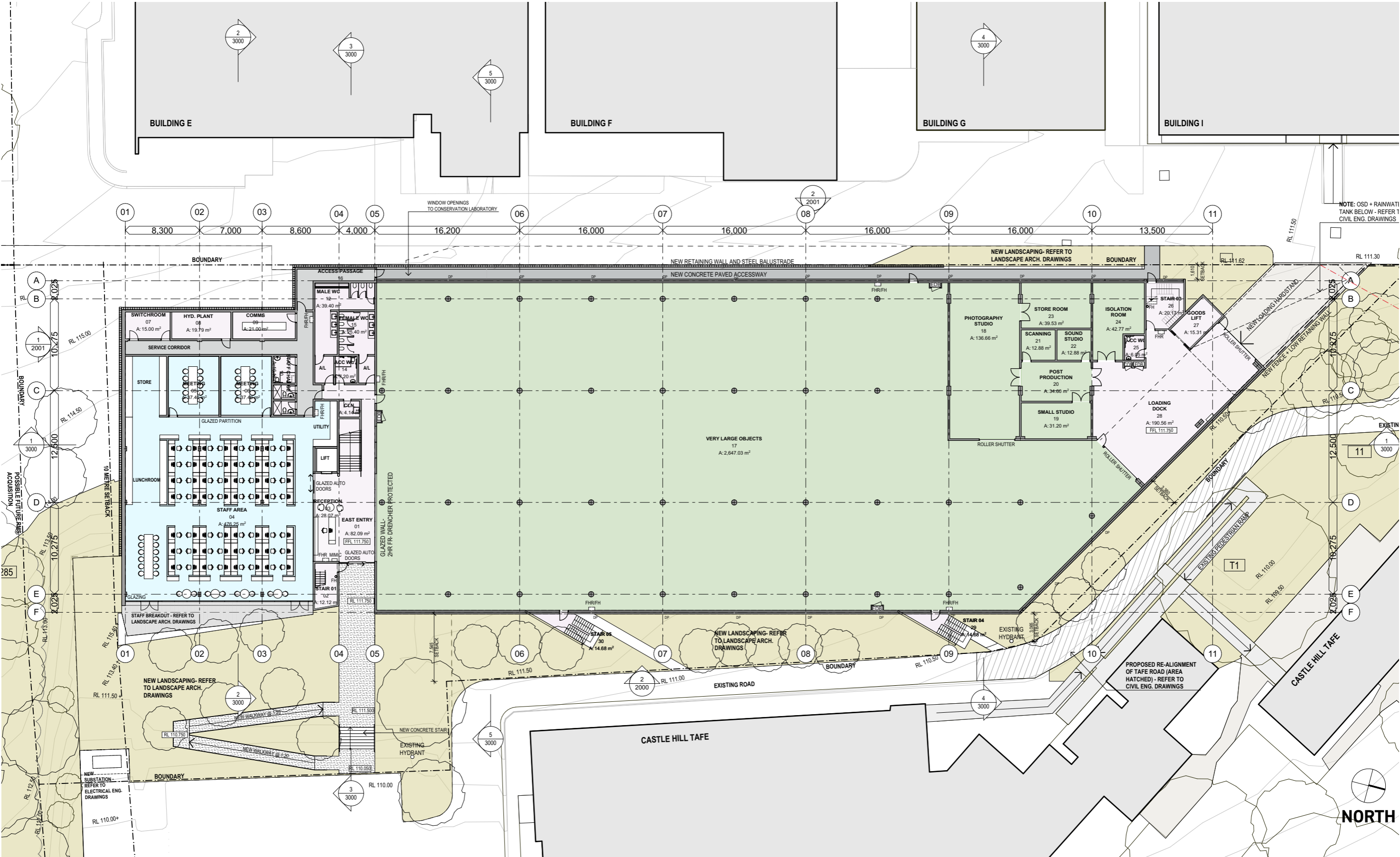


APPENDIX A: ARCHITECTURAL DRAWINGS

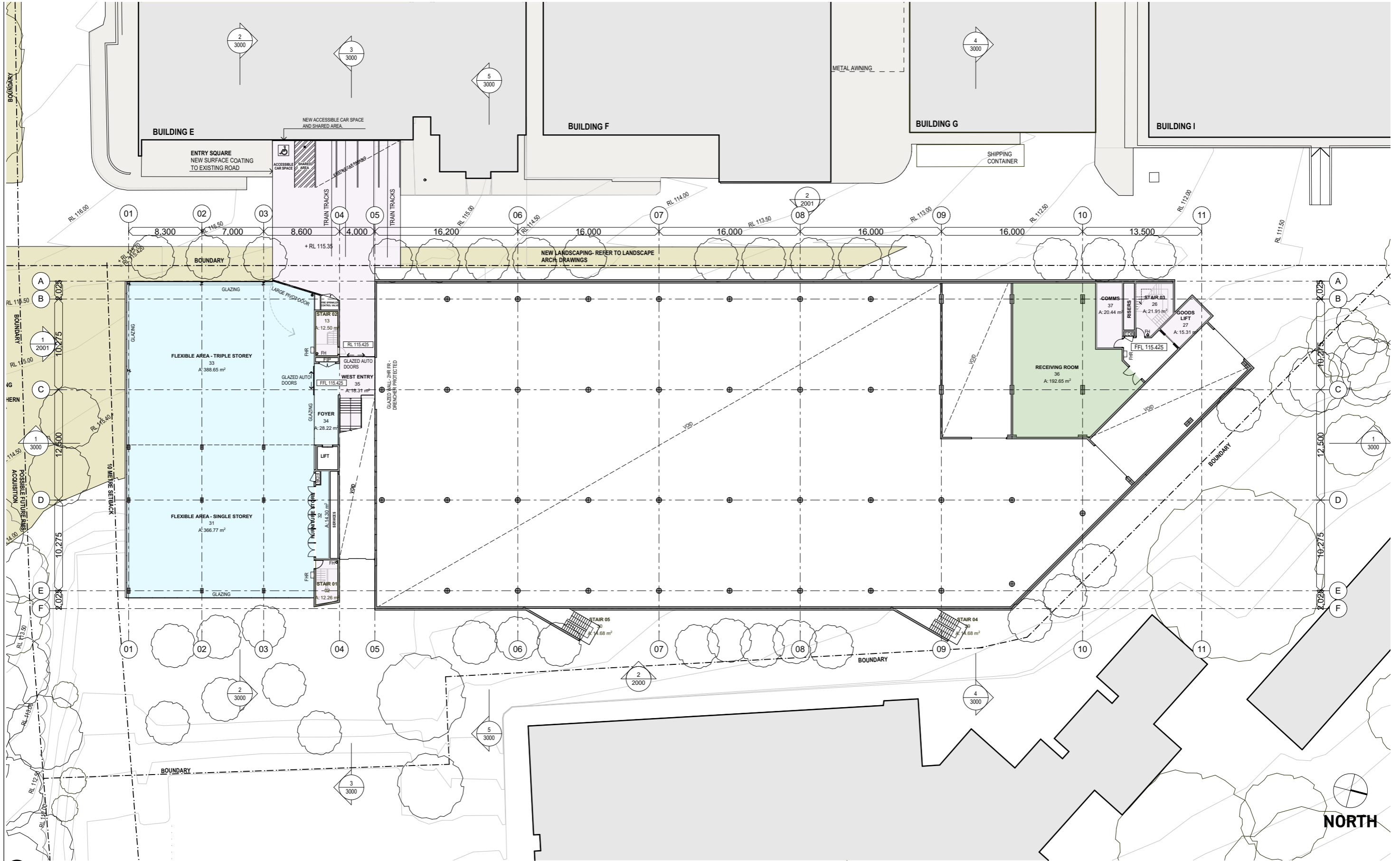


APPENDIX A: ARCHITECTURAL DRAWINGS

LOWER GROUND FLOOR PLAN

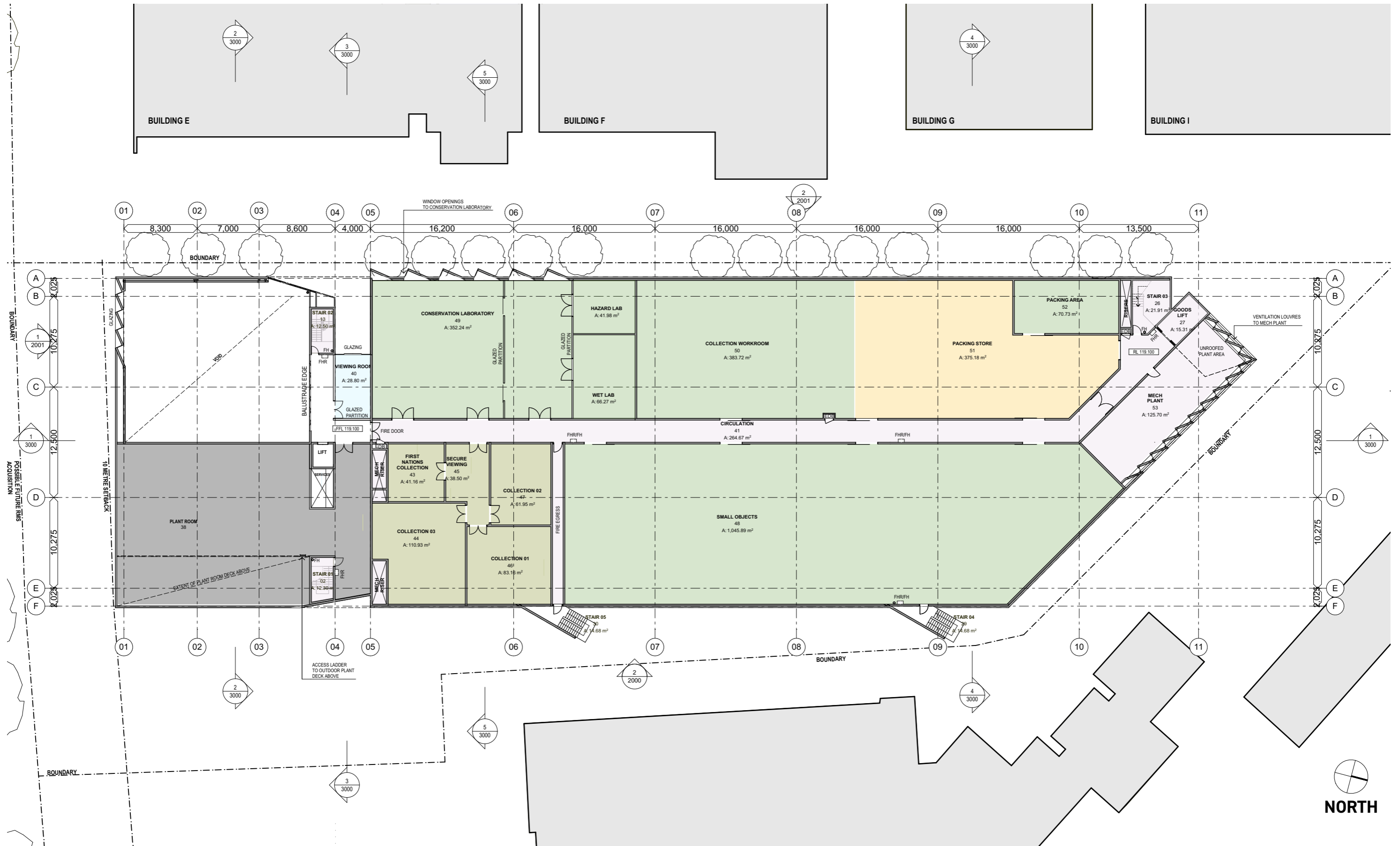


GROUND FLOOR PLAN



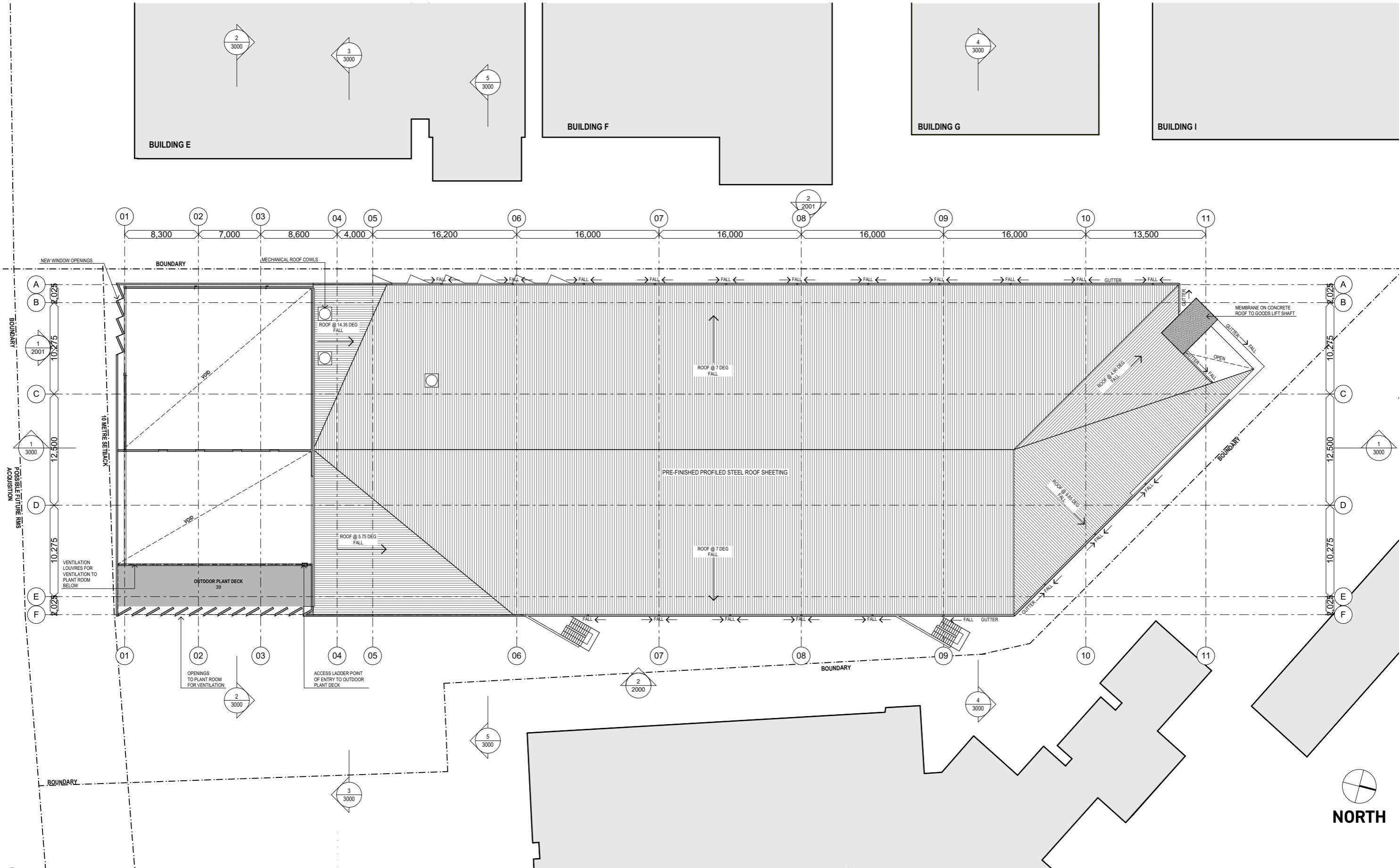
APPENDIX A: ARCHITECTURAL DRAWINGS

LEVEL 1 FLOOR PLAN



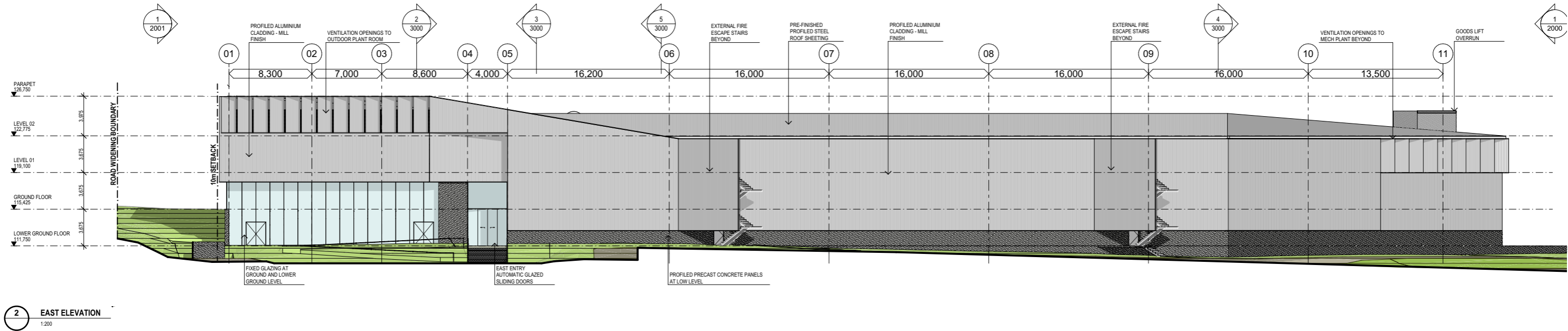
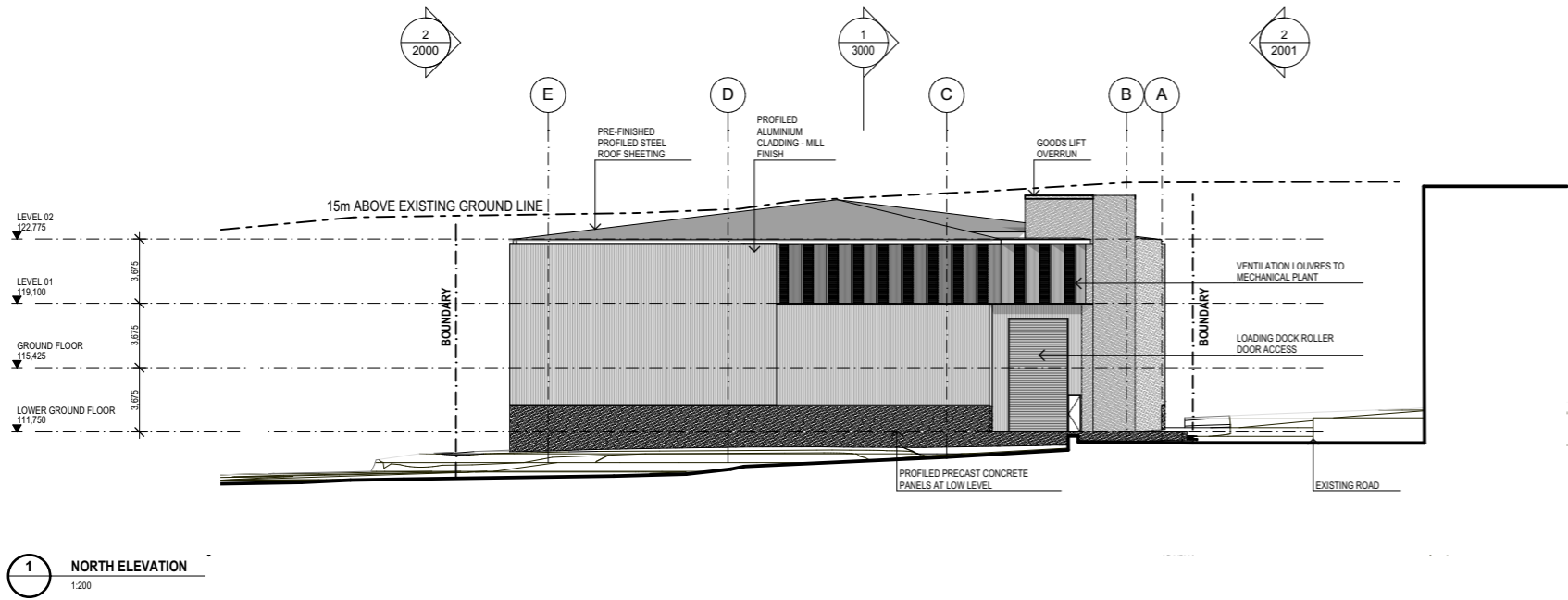
APPENDIX A: ARCHITECTURAL DRAWINGS

LEVEL 2/ ROOF PLAN



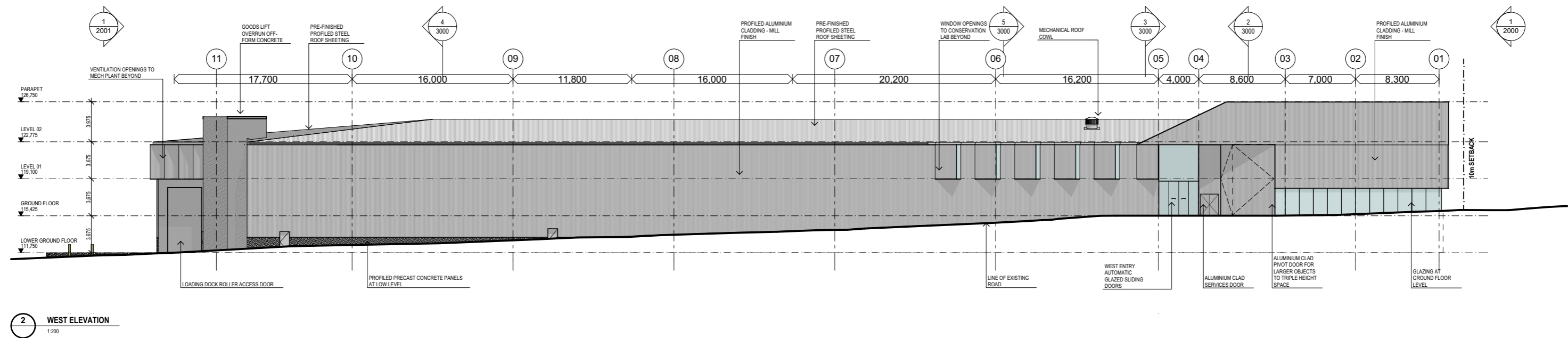
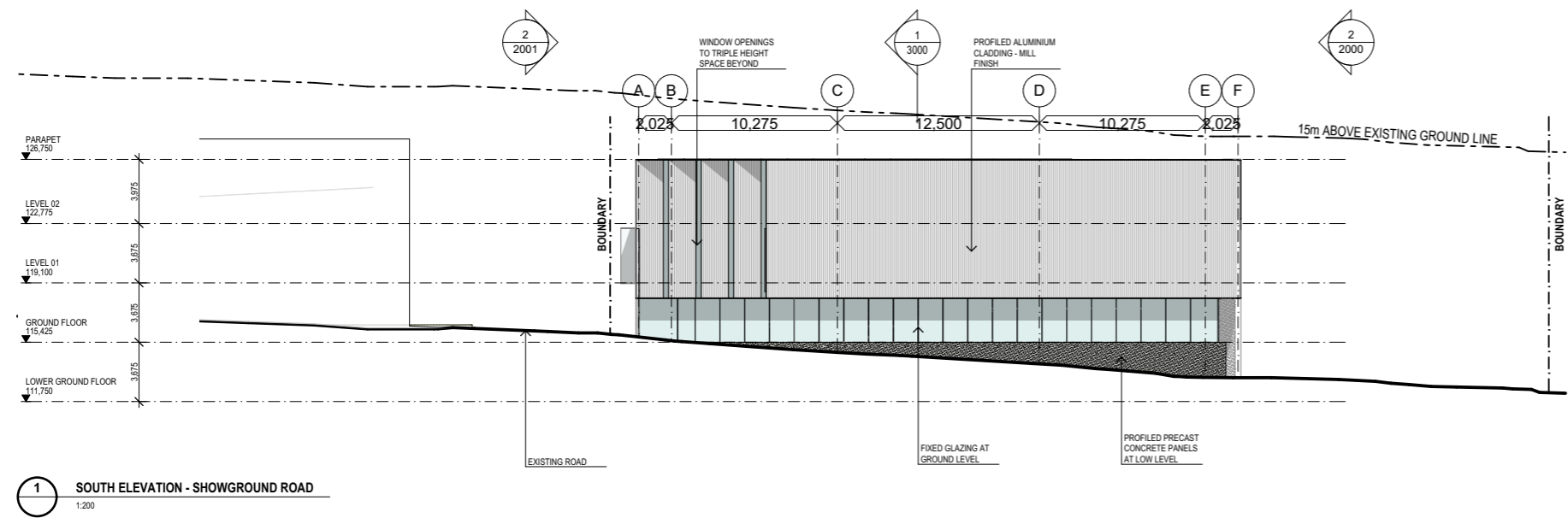
APPENDIX A: ARCHITECTURAL DRAWINGS

ELEVATIONS 01

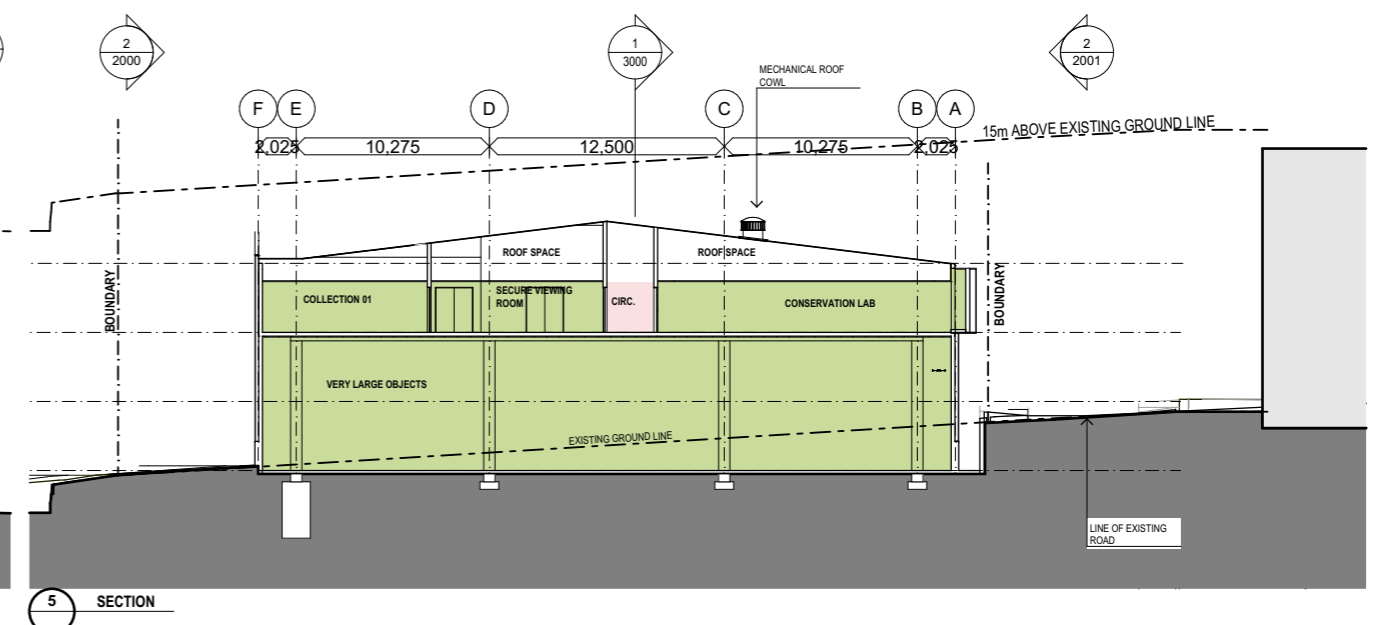
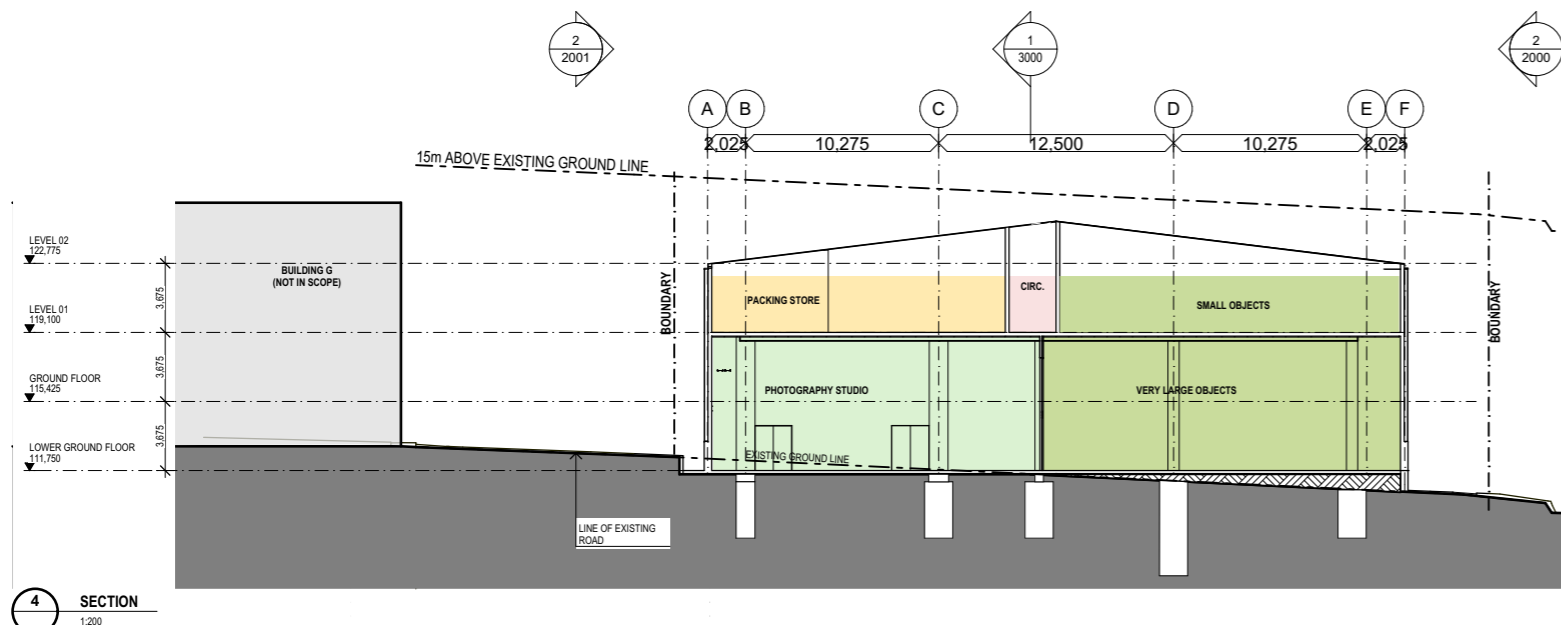
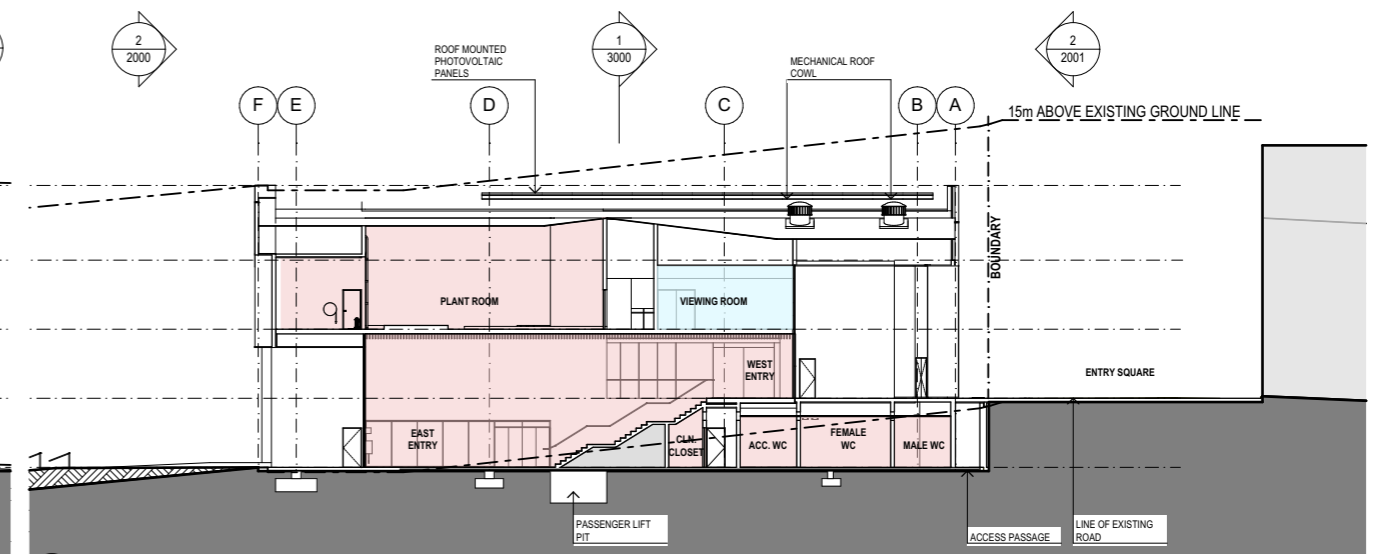
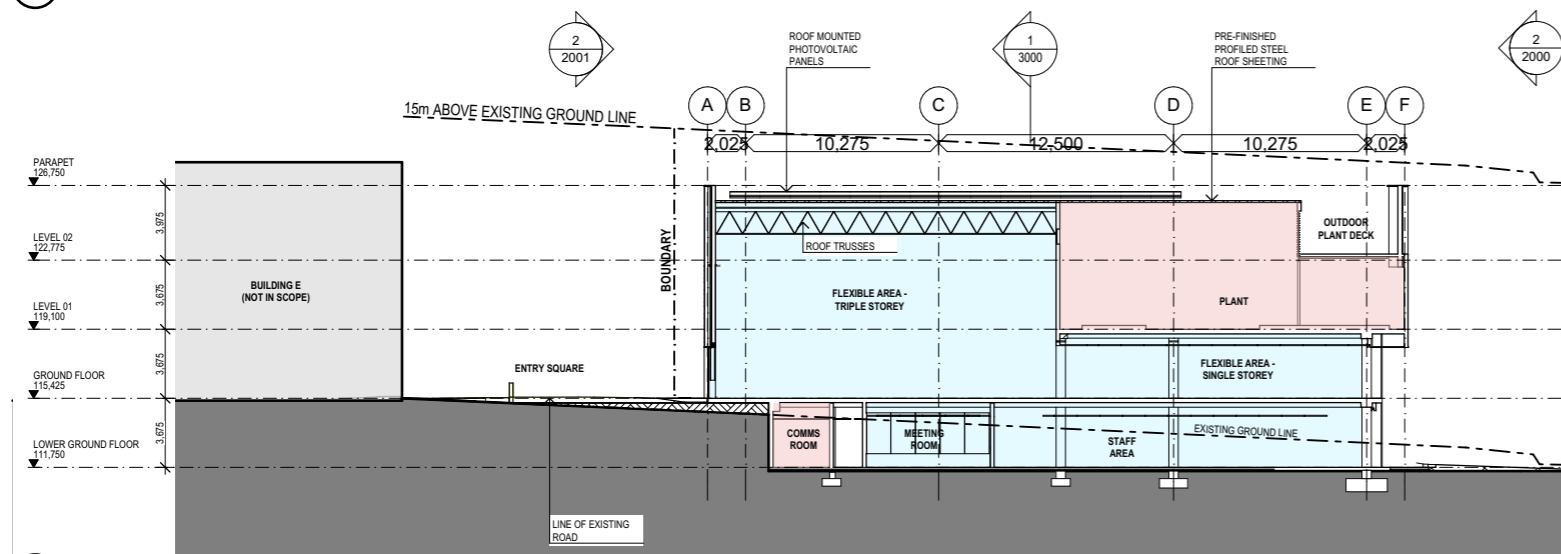
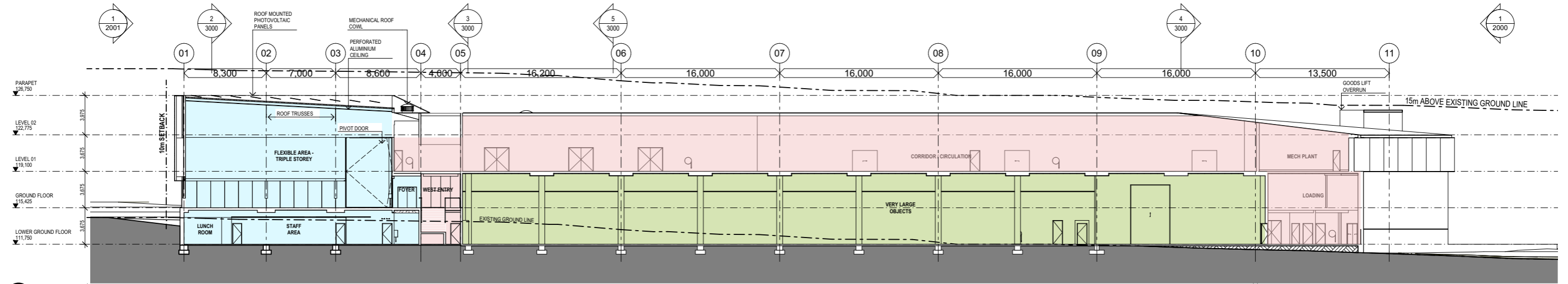


APPENDIX A: ARCHITECTURAL DRAWINGS

ELEVATIONS 02



APPENDIX A: ARCHITECTURAL DRAWINGS SECTIONS



APPENDIX B: VIEW ANALYSIS

1. Introduction

This Visual Impact Assessment has been prepared to address comments from Department of Planning, Industry and Environment and The Hills Shire Council in relation to the planning proposal for 2 Green Road, Castle Hill. The assessment has been prepared to provide further information regarding the potential impact a future building could have should the Planning Proposal and a subsequent development application for construction of a building be approved.

It is noted that further detail regarding visual impact could be provided at the development application stage where further detail regarding building design and materiality is provided. This assessment utilises the building envelope that the Planning Proposal seeks to achieve as a basis for assessment.

2. Methodology

The methodology used in this Visual Impact Assessment is based on the *Roads and Maritime Service Environmental Impact Assessment Guidance Note (EIA-NO4): Guidelines for landscape character and visual impact assessment (December 2018)* and includes reference to the following key visual impact assessment terminology:

Visual sensitivity refers to the quality of the existing view and how sensitive the view is to the proposed change. Visual sensitivity is related to the direction of view, the composition of the view and may cross more than one character zone. For example, a pristine natural environment is likely to be more sensitive to a change of the nature of a four lane motorway than a built up industrial area.

Landscape character zone: An area of landscape with similar properties or strongly defined spatial qualities, distinct from areas immediately nearby.

Magnitude of visual effects: Magnitude refers to the form – scale, size, character – of the project, how distant it is and the contrast it presents to the existing condition. For example, a development situated one kilometre from the viewpoint, will have a much reduced visual effect than one 100 metres away. The consideration of magnitude should only be based on the amount of change which can be inferred within a particular viewpoint.

Overall Visual Impact Rating: The combination of sensitivity and magnitude will provide the rating of the landscape character impact for a project or individual character zone, or visual impact for individual viewpoints as shown in Figure 7 below.

		Magnitude			
Sensitivity		High	Moderate	Low	Negligible
	High	High	High-Moderate	Moderate	Negligible
	Moderate	High-Moderate	Moderate	Moderate-low	Negligible
	Low	Moderate	Moderate-low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Figure 7 Landscape character and visual impact rating matrix.

Source: Environmental Impact Assessment Guidance Note (EIA-NO4): Guidelines for Landscape Character and Visual Impact Assessment (December 2018).

3. Landscape Character Zone Summary Table

The table below summarises the Landscape Character Zones applicable to this Visual Impact Assessment.

Landscape Character Zone	Sensitivity	Magnitude	Overall Visual Impact
TAFE Campus Character Zone: <ul style="list-style-type: none">View 01	Low	Moderate	Moderate-Low
Arterial Road Character Zone: <ul style="list-style-type: none">View 02View 03View 04	Low Low Low	Negligible Negligible Low	Negligible Negligible Low
Low Density Residential Character Zone <ul style="list-style-type: none">View 05View 06	Moderate Low	Low Negligible	Moderate-Low Negligible

APPENDIX B: VIEW ANALYSIS

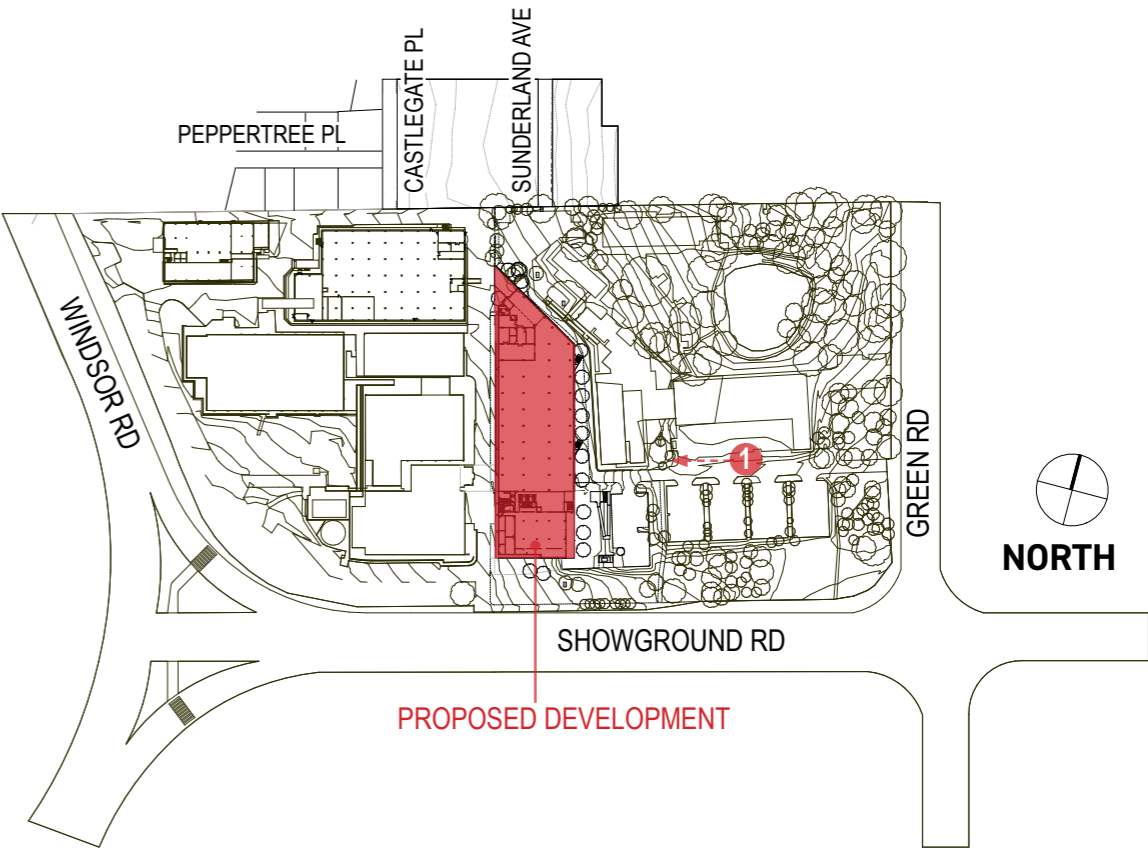
VIEW 01

FROM GREEN ROAD ENTRY TO TAFE

Location of view	<ul style="list-style-type: none">To the east of the site of the proposed building, looking west through the internal TAFE access road.
Description of Existing View	<ul style="list-style-type: none">Road pavement, concrete kerb, gutter and at-grade car parking areas.TAFE buildings featuring metal roofing, glazing and masonry materials.Tall trees dispersed around car parking areas and near buildings.Parked vehicles.
Aesthetic Attributes	Large educational institution site featuring at-grade car parking and large footprint TAFE buildings interspersed with landscaping. Clusters of tall trees are located around buildings and along edges of car parking areas. The main vehicle accessway running east-west is a prominent visual element from this viewpoint.

Visual Sensitivity: Low
Magnitude of Visual Effect: Moderate
Overall Visual Impact Rating: Moderate-Low

Mitigation of Impact	Comment on View Impact of Proposal
Using muted colours, minimal external lighting and illuminated signage, matte external finishes and façade articulation will reduce the visual impact.	The view impact will be moderate from this viewpoint. The current view includes tree canopy in the background that will be removed and will result in the existing TAFE buildings being more prominent. The proposed building will sit within a large educational institution site and have a similar height and scale to the surrounding buildings on the TAFE and MDC sites. The dominant built form character of the setting in the foreground will not be significantly altered by the proposal. Views of the building will be read in context of the existing adjoining MDC buildings.



APPENDIX B: VIEW ANALYSIS

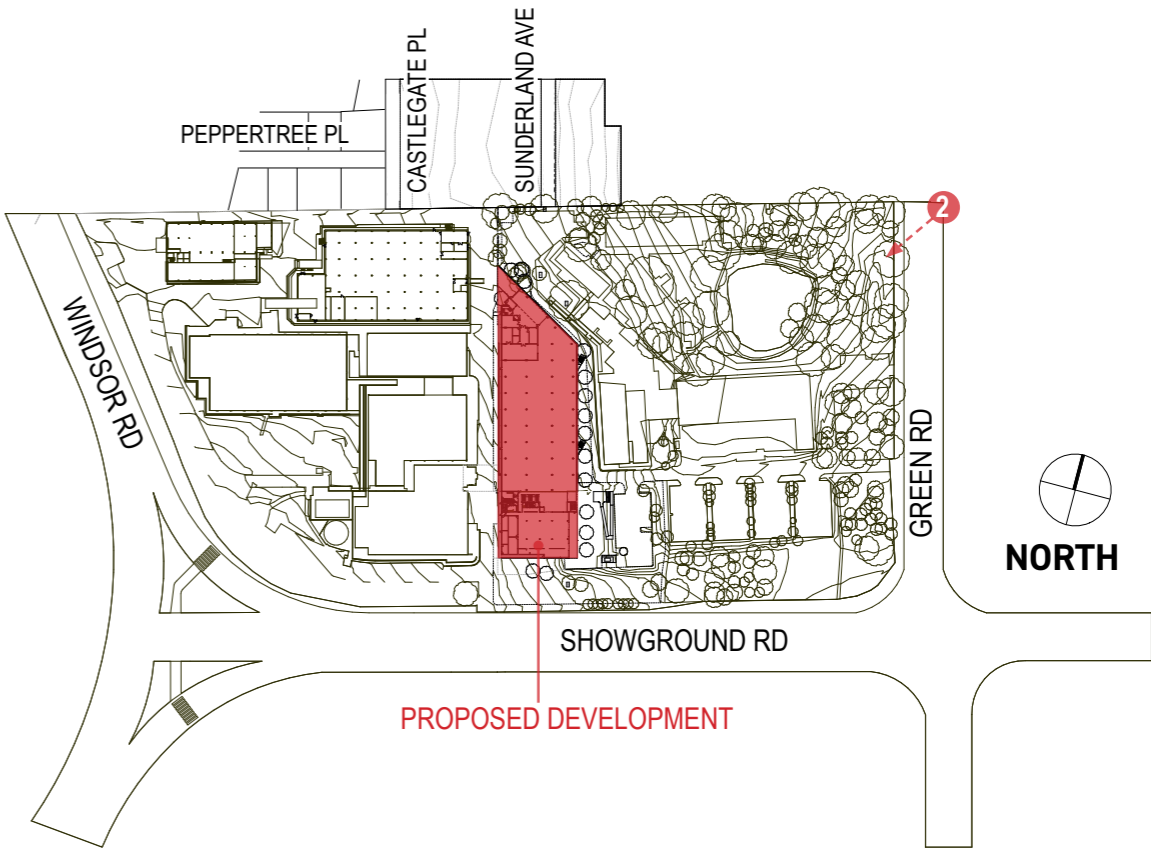
VIEW 02

FROM NORTH EAST SITE BOUNDARY ON GREEN ROAD

Location of view	<ul style="list-style-type: none">To the north east of the site of the proposed building along Green Road, looking south west through the TAFE site
Description of Existing View	<ul style="list-style-type: none">Road pavement, concrete kerb, gutter and median strip along Green Road.Dense multilayered vegetation including shrubs and tall trees.Existing metal fence at ground level.
Aesthetic Attributes	Dominated by road pavement and vehicles in foreground and shrubs and mature trees forming a landscaped backdrop Existing established vegetation and tree canopy provides a focal point

Visual Sensitivity: Low
Magnitude of Visual Effect: Negligible
Overall Visual Impact Rating:Negligible

Mitigation of Impact	Comment on View Impact of Proposal
No mitigation measures are required given the negligible visual impact from this viewpoint.	The visual impact from this viewpoint is negligible. The existing vegetation that screens the proposed development will not be impacted by the proposal. The existing buildings on the TAFE site would also provide visual screening in the event the trees and shrub vegetation is removed.



APPENDIX B: VIEW ANALYSIS

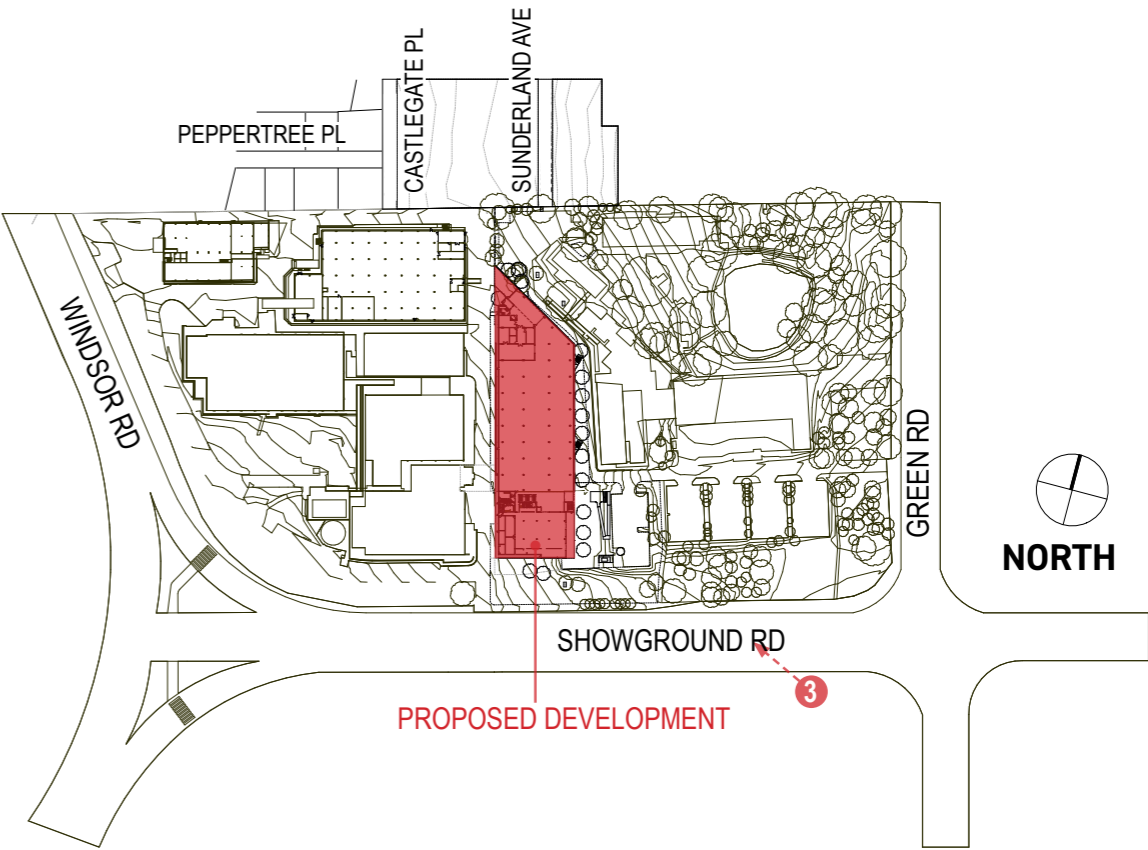
VIEW 03

FROM SOUTH EAST SITE BOUNDARY ON SHOWGROUND RD

Location of view	<ul style="list-style-type: none">To the south east of the site of the proposed building along Showground Road, looking north west.
Description of Existing View	<ul style="list-style-type: none">Road pavement, concrete kerb, gutter, bicycle path and median strip along Showground Road.Dense multilayered vegetation including shrubs and tall trees in the background act as a focal point.Existing metal fence at ground level, power lines and power poles and large street signs occur along this viewpoint.
Aesthetic Attributes	Dominated by road pavement and vehicles in foreground and shrubs and mature trees forming a landscaped backdrop Characterised by large road corridor (6 lanes wide at this viewpoint) with high traffic volumes. Existing established vegetation and tree canopy provides a focal point in the background.

Visual Sensitivity: Low
Magnitude of Visual Effect: Negligible
Overall Visual Impact Rating: Negligible

Mitigation of Impact	Comment on View Impact of Proposal
No mitigation measures are required given the negligible visual impact from this viewpoint.	The visual impact from this viewpoint is negligible by virtue of the existing dense vegetation and distance from the proposed development (Approx. 160m). The existing vegetation that screens the proposed development will not be impacted by the proposal.



APPENDIX B: VIEW ANALYSIS

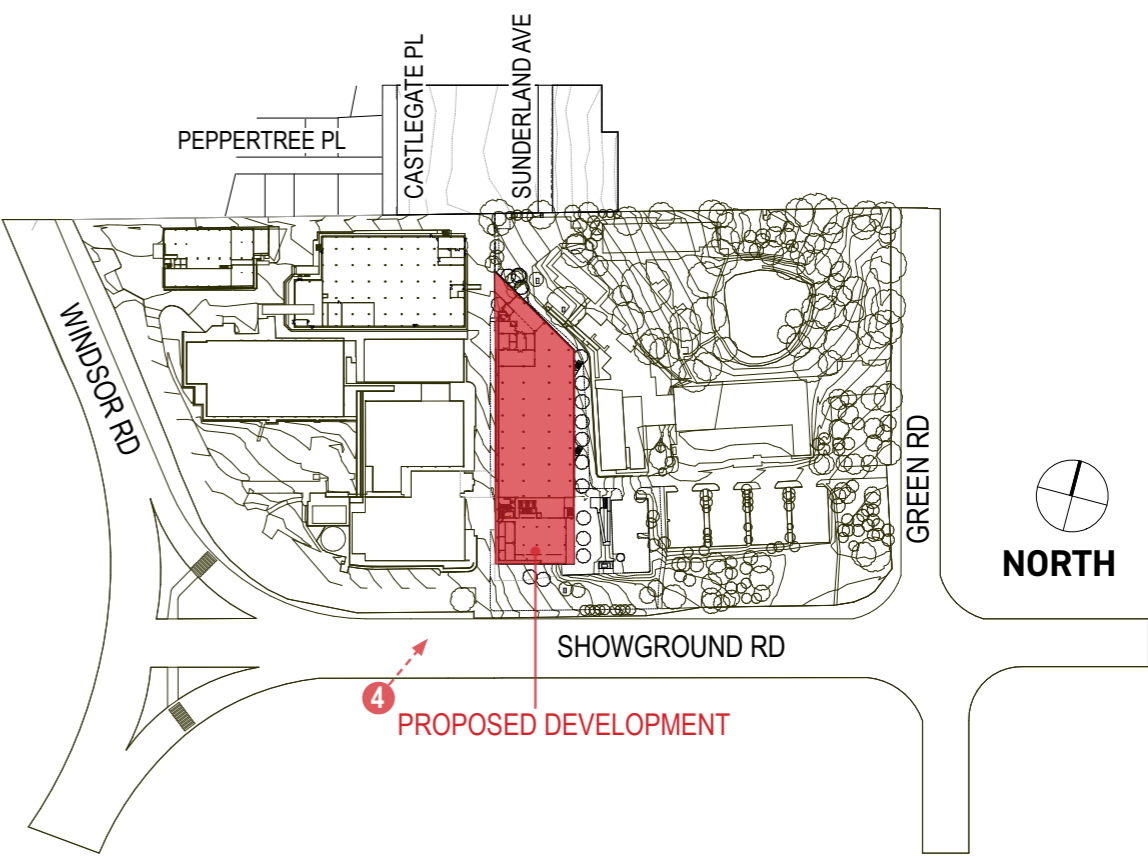
VIEW 04

FROM SOUTH WEST SITE BOUNDARY ON SHOWGROUND ROAD

Location of view	<ul style="list-style-type: none">To the south west of the site of the proposed building along Showground Road, looking north east through the internal TAFE access road.
Description of Existing View	<ul style="list-style-type: none">Road pavement, concrete kerb, gutter, bicycle path and median strip along Showground Road.Vegetation including shrubs and tall trees act as a focal point.Obscured views of Building E on the MDC site are visible.
Aesthetic Attributes	Dominated by road pavement and vehicles in foreground and shrubs and mature trees forming a landscaped backdrop near the site. Existing established vegetation and tree canopy provides a focal point.

Visual Sensitivity: Low
Magnitude of Visual Effect: Low
Overall Visual Impact Rating:Low

Mitigation of Impact	Comment on View Impact of Proposal
Using muted colours, minimal external lighting and illuminated signage, matte external finishes and façade articulation will reduce the visual impact. Planting new landscaping along the southern side of the site may assist with further reducing the low visual impact from this viewpoint.	The visual impact from this viewpoint is low. The existing vegetation that screens the proposed development will not be impacted by the proposal. The proposed building will be of a similar scale and lower in height than the adjoining Building E on the MDC Site. Views of the building will be read in context of the existing adjoining MDC buildings.



APPENDIX B: VIEW ANALYSIS

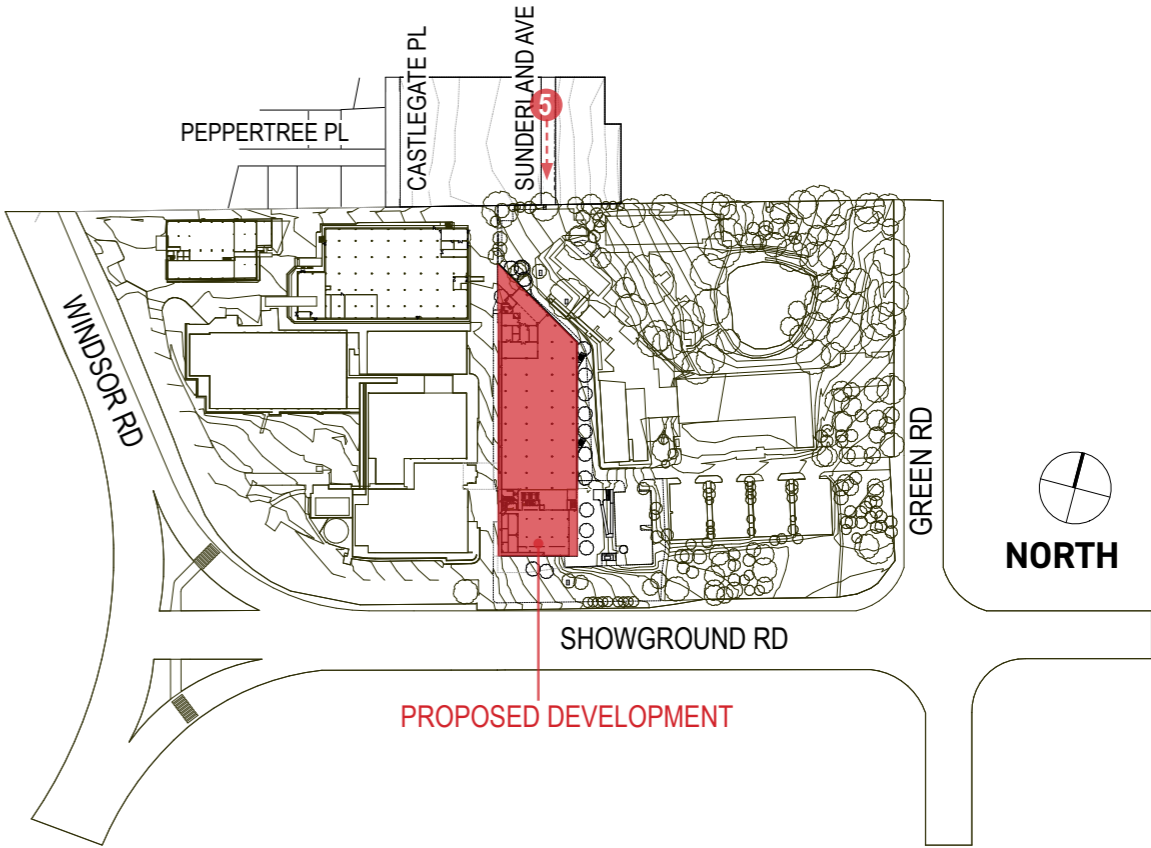
VIEW 05

FROM SUNDERLAND AVENUE NORTH OF SITE

Location of view	<ul style="list-style-type: none">To the north of the site of the proposed building along Sunderland Avenue, looking south.
Description of Existing View	<ul style="list-style-type: none">Road pavement, concrete kerb and formal front gardens and driveways of detached dwellings.Vegetation including shrubs and tall trees act as a focal point.Boundary fencing and obscured views of a building on the TAFE site and its gable roof are visible.
Aesthetic Attributes	Established residential development setting, in a quiet dead-end street with formal structured landscaping and street tree plantings. The views to the site are dominated by a dense vegetation featuring large trees and a canopy backdrop giving a natural bush-like appearance.

Visual Sensitivity: Moderate
Magnitude of Visual Effect: Low
Overall Visual Impact Rating: Moderate-Low

Mitigation of Impact	Comment on View Impact of Proposal
Using muted colours, minimal external lighting and illuminated signage, matte external finishes and façade articulation will reduce the visual impact.	The proposed development will be setback approximately 90m from this viewpoint and views of the splayed northern elevation will be visible through the trees and shrub vegetation on the TAFE site to the north of the proposed Building J.
The lower building height at the northern end of the site reduces visual bulk from this viewpoint.	There will be a loss of tree canopy which will impact views from this viewpoint. The larger trees in the foreground will not be affected by the proposal and will remain dominant visual features in the foreground.
Planting new landscaping along the northern side of the site may assist with reducing the moderate-low visual impact from this viewpoint	The established low density detached residential character will be maintained. The park and existing trees will continue to be key visual elements. The proposed Building J will be setback further away from this viewpoint in comparison to the adjoining existing buildings on the MDC site.



APPENDIX B: VIEW ANALYSIS

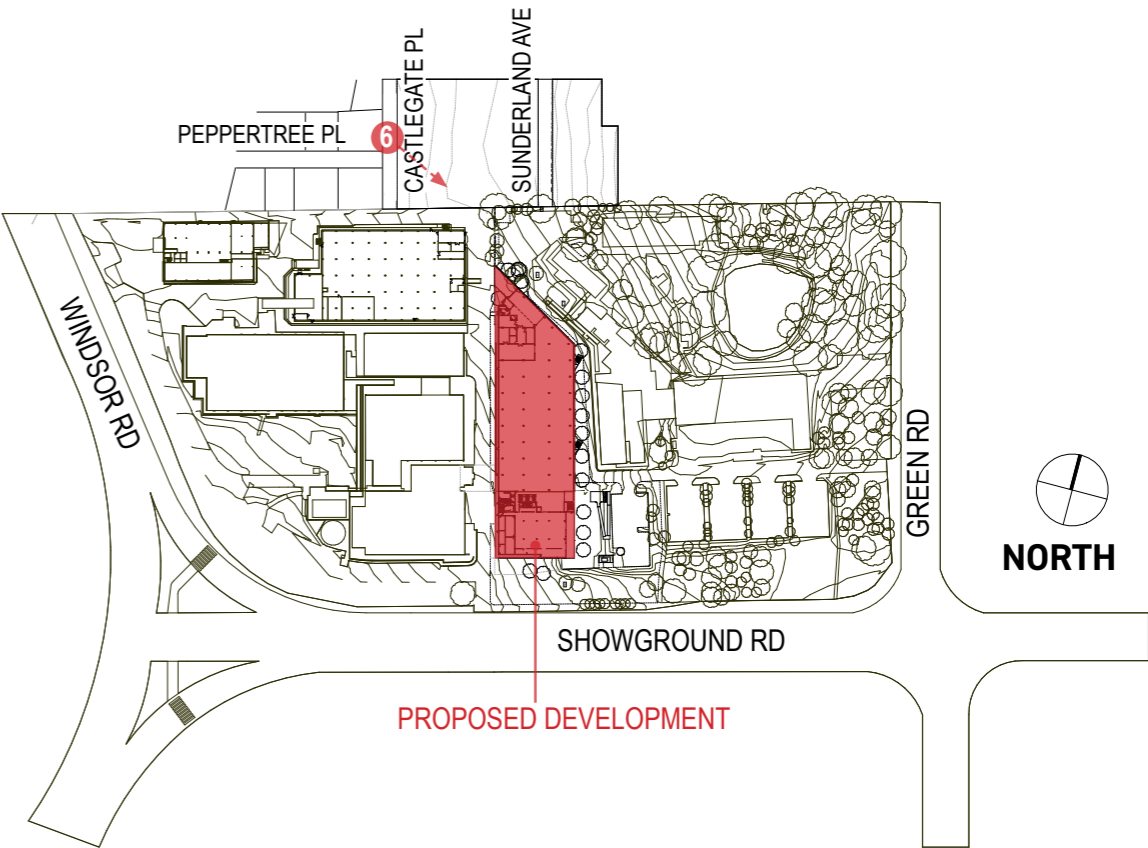
VIEW 06

FROM CASTLEGATE PLACE NORTH WEST OF SITE

Location of view	<ul style="list-style-type: none">To the north west of the site of the proposed building along Peppertree Place, looking south east.
Description of Existing View	<ul style="list-style-type: none">Maintained grassed park bound by quiet residential roads.Large trees and lower level shrubs in act as a backdrop.Views of the wall and part of the roof of Building I on the MDC site are prominent from this viewpoint.
Aesthetic Attributes	A quiet park setting within a low density residential area that has an interface with a large institutional land use that is dominated by large trees along the site perimeter (the existing MDC site).

Visual Sensitivity: Low
Magnitude of Visual Effect: Negligible
Overall Visual Impact Rating:Negligible

Mitigation of Impact	Comment on View Impact of Proposal
No mitigation measures are required given the negligible visual impact from this viewpoint.	The visual impact from this viewpoint is negligible by virtue of the visual screening provided by the existing Building I on the MDC site and dense vegetation along the northern boundary of the MDC site.



APPENDIX C: SHADOW DIAGRAMS

WINTER

LEGEND

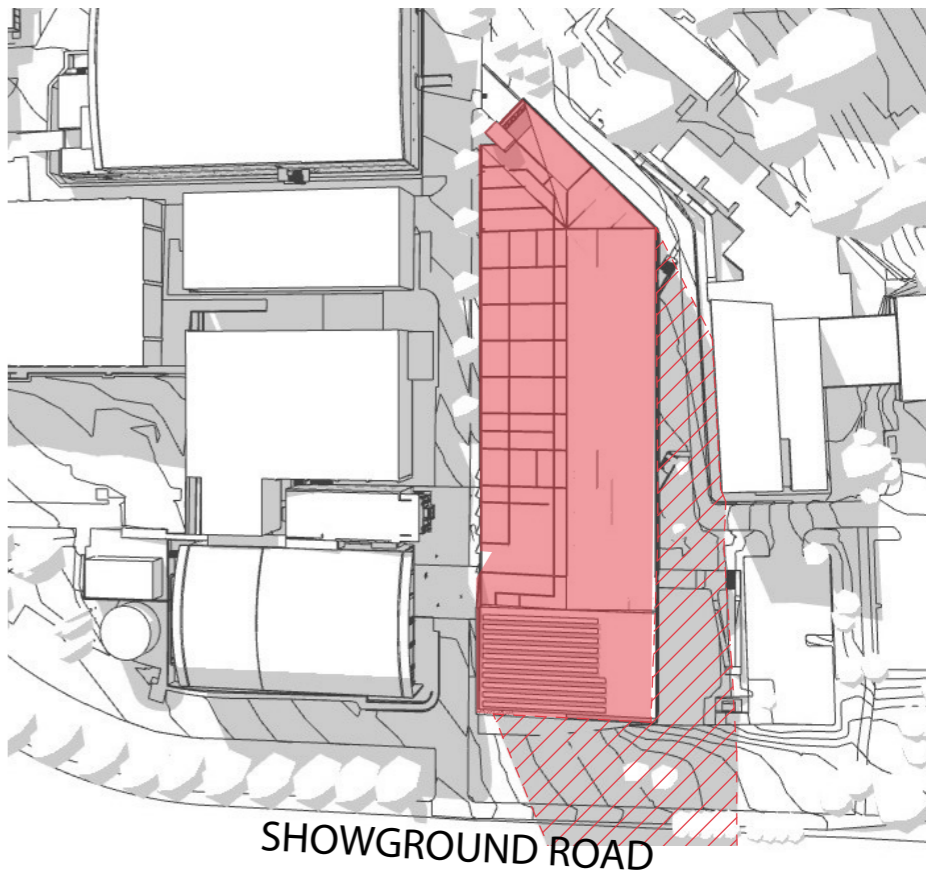
- EXISTING SHADOWS
- ADDITIONAL SHADOWS
- PROPOSED BUILDING J



9AM - WINTER SOLSTICE



12PM - WINTER SOLSTICE



3PM - WINTER SOLSTICE

Comments:
Winter shading from the proposed Building J will have no impact on neighbouring residences to the North, and negligible impact on neighbouring buildings on the MDC site.

APPENDIX C: SHADOW DIAGRAMS

EQUINOX

LEGEND

- EXISTING SHADOWS
- ADDITIONAL SHADOWS
- PROPOSED BUILDING J



9AM - EQUINOX



12PM - EQUINOX



3PM - EQUINOX

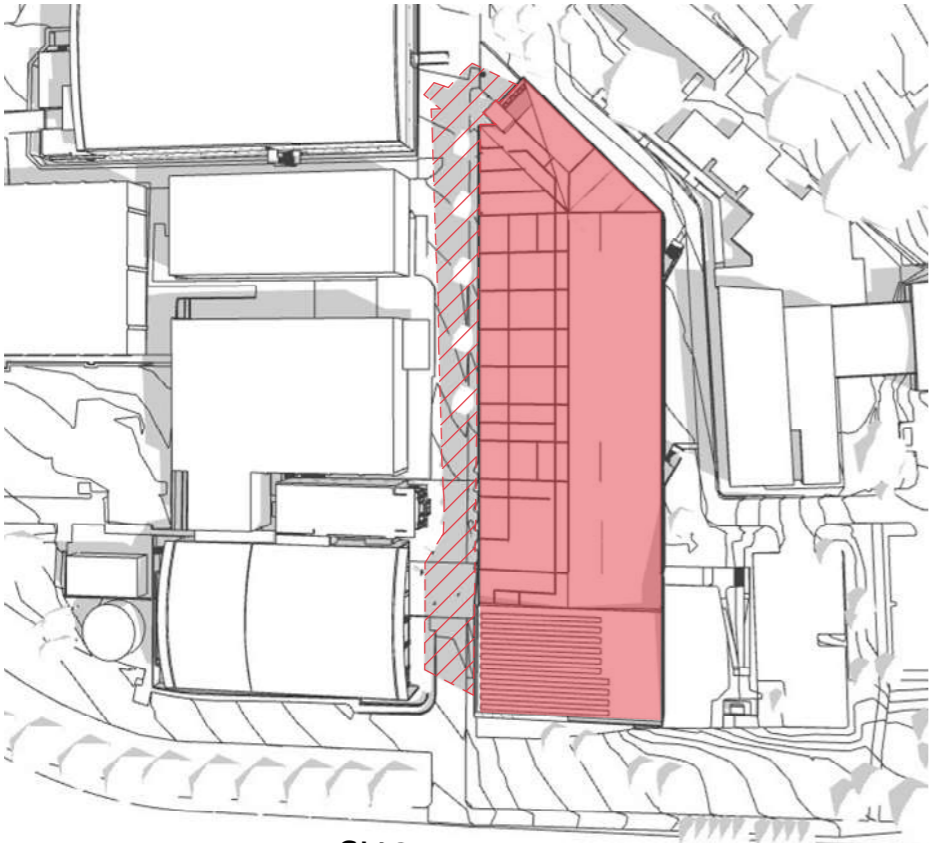
Comments:
Shading from the proposed Building J at the Equinox will have no impact on neighbouring residences to the North, and negligible impact on neighbouring buildings on the MDC site during the morning.

APPENDIX C: SHADOW DIAGRAMS

SUMMER

LEGEND

- EXISTING SHADOWS
- ADDITIONAL SHADOWS
- PROPOSED BUILDING J



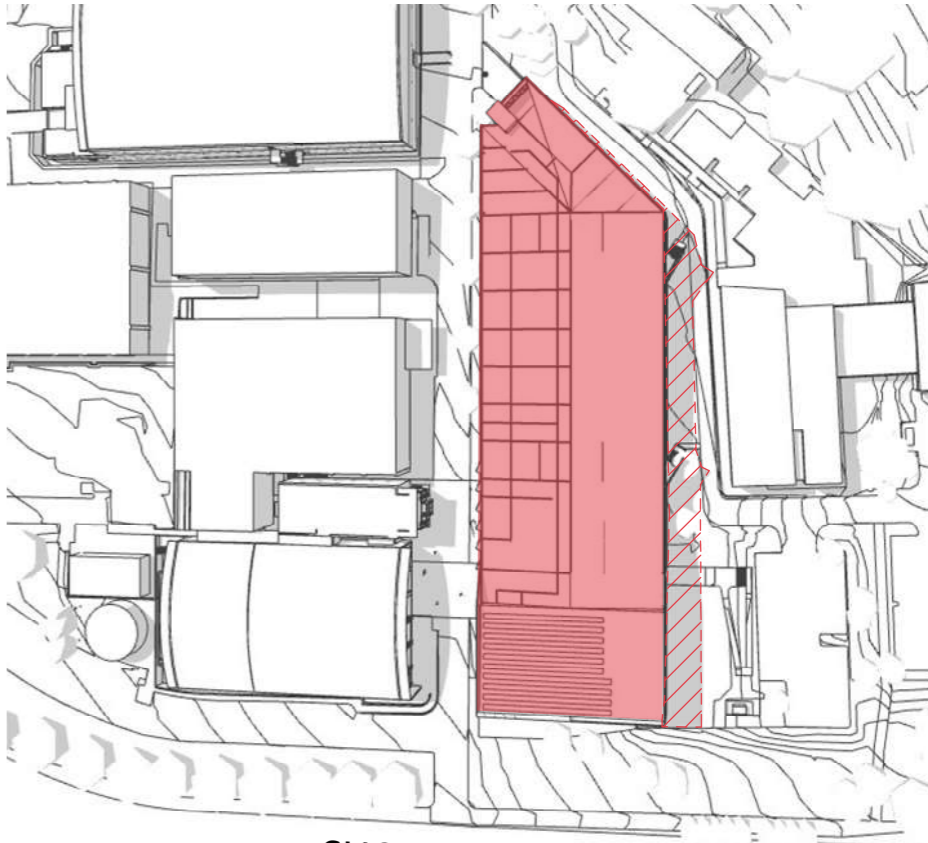
SHOWGROUND ROAD

9AM - SUMMER SOLSTICE



SHOWGROUND ROAD

12PM - SUMMER SOLSTICE



SHOWGROUND ROAD

3PM - SUMMER SOLSTICE

Comments:
Shading from the proposed Building J at the Summer solstice will have no impact on neighbouring residences to the North, and no impact on neighbouring buildings on the MDC site during the morning.

APPENDIX D: SDRP RESPONSE

SDRP COMMENT:

The success of the project hinges on the creation of a public domain framework to civilise the site and create the interface between the building and areas beyond, including the greater site, TAFE and broader urban context. Greater emphasis on the creation of the public domain and its integration with the building is required to support this. Currently the typical suburban/industrial typology of a building surrounded by indeterminate space has not yet been successfully addressed.

PUBLIC DOMAIN

The site area of the proposal is 6,552 square metres of which 4,424 square metres contains the building footprint of the proposed Building J. At 2128 square metres, the public domain component of the proposal is limited.

Whilst the public domain component of the project is limited, consideration has been given to long term aspirations for the entire Museums Discovery Centre (MDC). The Museum of Applied Arts and Sciences has developed master plan principles for the future development of the MDC is and when funds become available. These principles are outlined in the diagrams included in this appendix.

The design of Building J and the associated landscape conforms to these principles and establishes a framework through the design upon which future developments within MDC can build upon.

The landscape design within the proposal has been informed by both the MDC master plan principles as well as detailed review of the site's context and surrounding public domain, landscape and development. Aspect Studios utilised the master plan principles to develop character areas for the public domain within both the proposal and broader MDC site.

These character areas are outlined in the diagram on this page which demonstrates that the landscape design for the proposal is considerate of the context and maximises the utility of these areas in terms of both aesthetics and usable additions to the broader public domain. The diagram is not dependent on further expansion of the MDC site into TAFE, but responds to the existing TAFE site conditions.

BUSHLAND EDGE

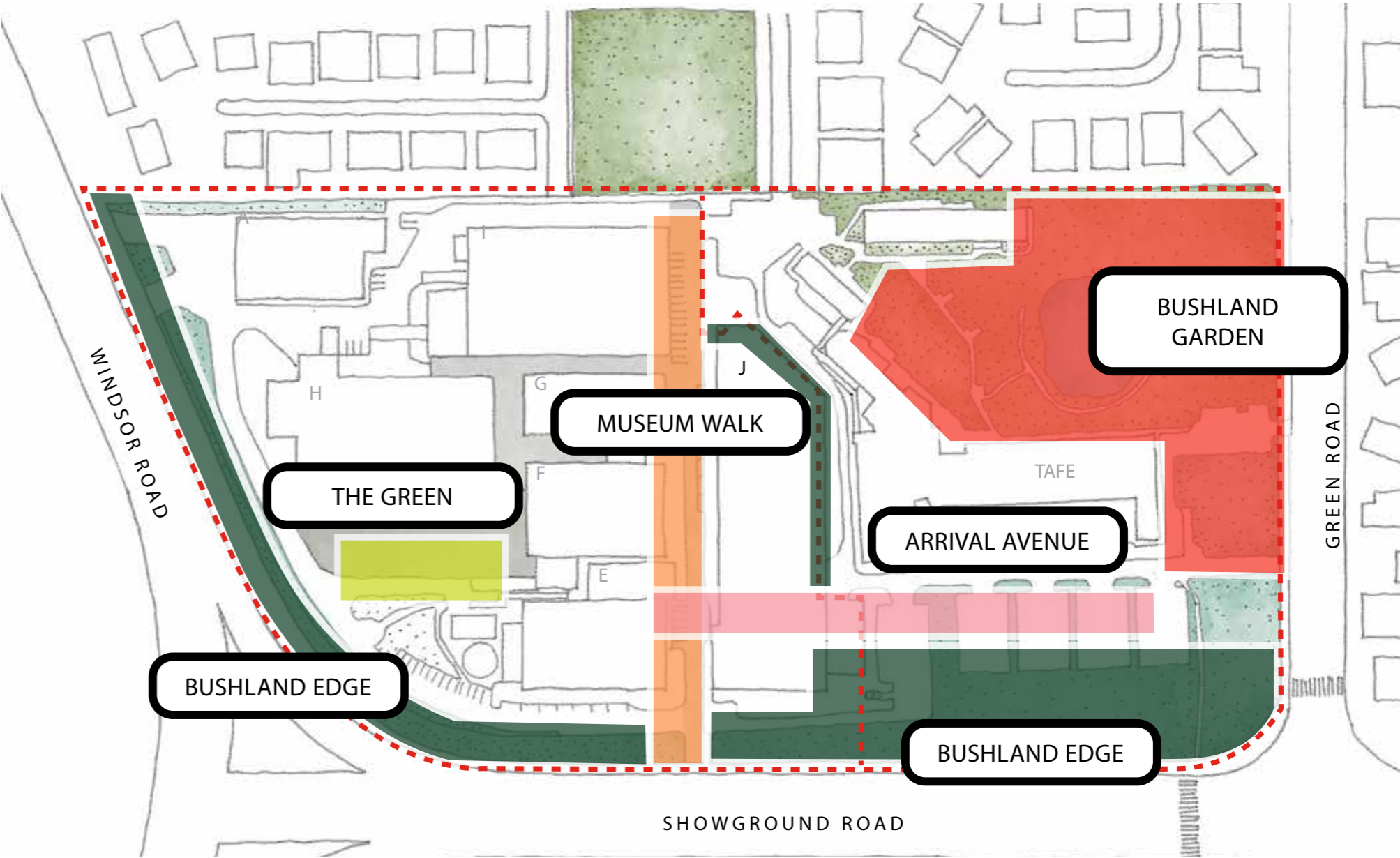
A native bushland garden for visitors to explore that retains the existing plantation and introduces new understorey planting of native species.

MUSEUM WALK

A single surface pedestrian 'street' that unifies the museum store rooms and buildings while maintaining access and loading requirements for staff.

BUSHLAND GARDEN

Create an inviting entrance, retain the existing bushland character and introduce informal routes, pockets of play and a more appropriate secure boundary.



ARRIVAL AVENUE

A grand, green, entrance and arrival for the public, retain existing trees and frame views upto Building J and Building E. A softer surface treatment where possible and WSUD integration in parking areas.

THE GREEN

A open lawn space for staff to enjoy lunch or a break with pockets of seating for groups or individuals to relax from work. Also a redesigned play space that is more appropriate to its bushland setting.

APPENDIX D: SDRP RESPONSE

SDRP Comment:

Provide a masterplan diagram that illustrates the future vision for the entire campus and details how the current plan facilitates this future vision.

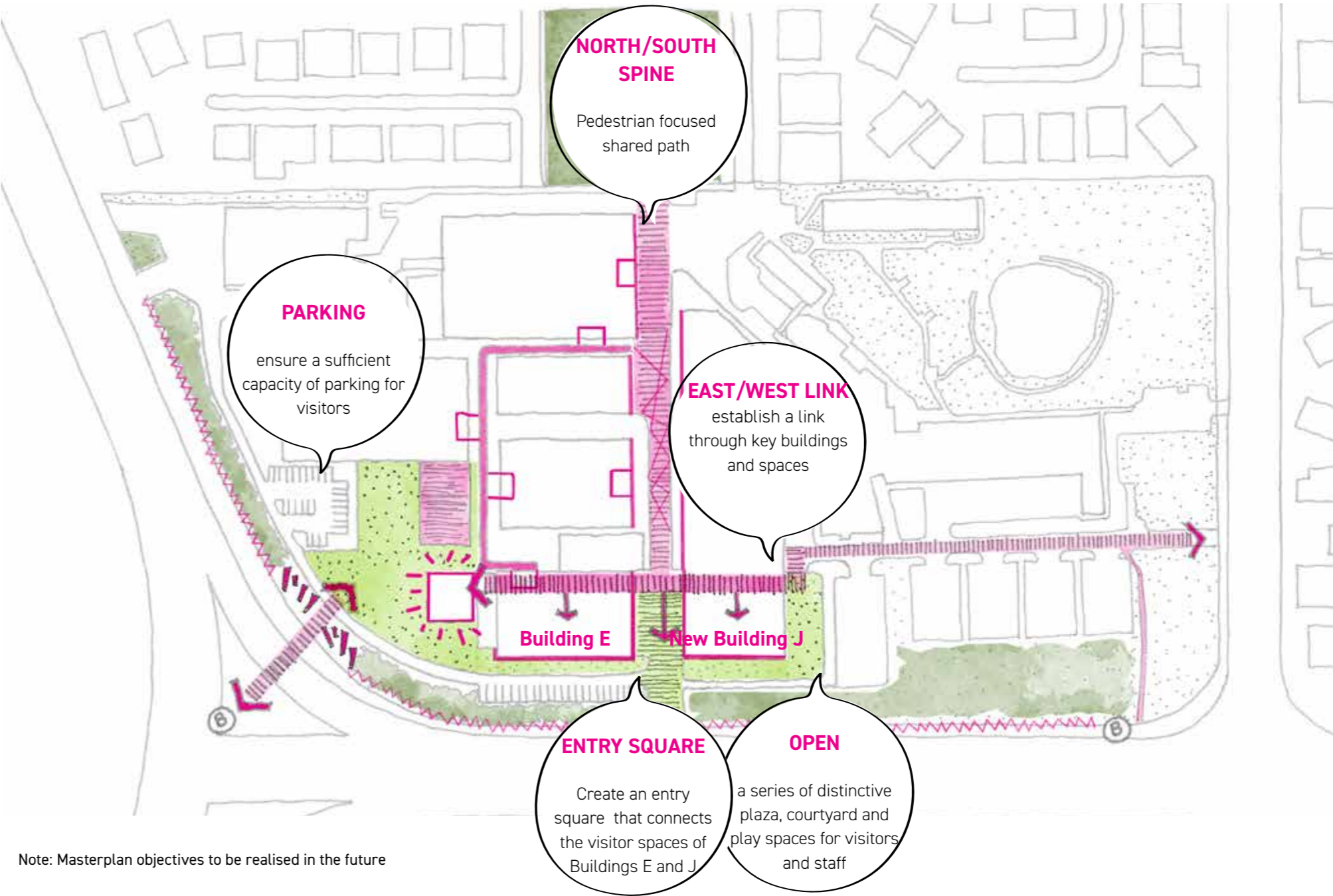
FUTURE VISION

The master plan principles developed by the Museum of Applied Arts and Sciences are contained within the diagram on this page. These principles outline a long term vision for the MDC site and rely on a number of built and landscape upgrades or redevelopments. The principles include:

Strengthening a North South spine through the site- this spine currently operates as a predominately vehicular connection through the site. The vision is to create a more pedestrian focused environment that can also function as a vehicular roadway as and when needed. The proposed Building J relates to this future intention through the incorporation of a landscaped swale and street trees along the north south spine. This will assist in establishing the future design of this spine which could include changes to pavement surfaces and reinvigoration of store entries on the western side of the spine.

Creation of an east-west link- this link will create a primary connection through the site within the public facing components of the MDC site. Building J has been designed to incorporate this link within the architecture. Further the landscape treatment at the eastern edge of Building J works to create a clear delineation of not only the building entry but also the commencement of this link at the Eastern extent of the site. Future works would be required to Building E to continue this link to the western edge of the site. These works would involve a reorientation of the entry to Building E off the north-south spine in line with Building J.

Further works- additional works proposed under the master plan principles include re-orienting car parking and landscape improvements to further enhance the public nature and pedestrian environment of the site.



Note: Masterplan objectives to be realised in the future

APPENDIX D: SDRP RESPONSE

SDRP Comment:

The North-South and East-West axis are key elements of the masterplan that require further development. The N/S axis should be treated as part of the public domain (consistent with the future vision for the campus) with the potential for large scale artworks to be integrated into the ground plane.

PROJECT VISION

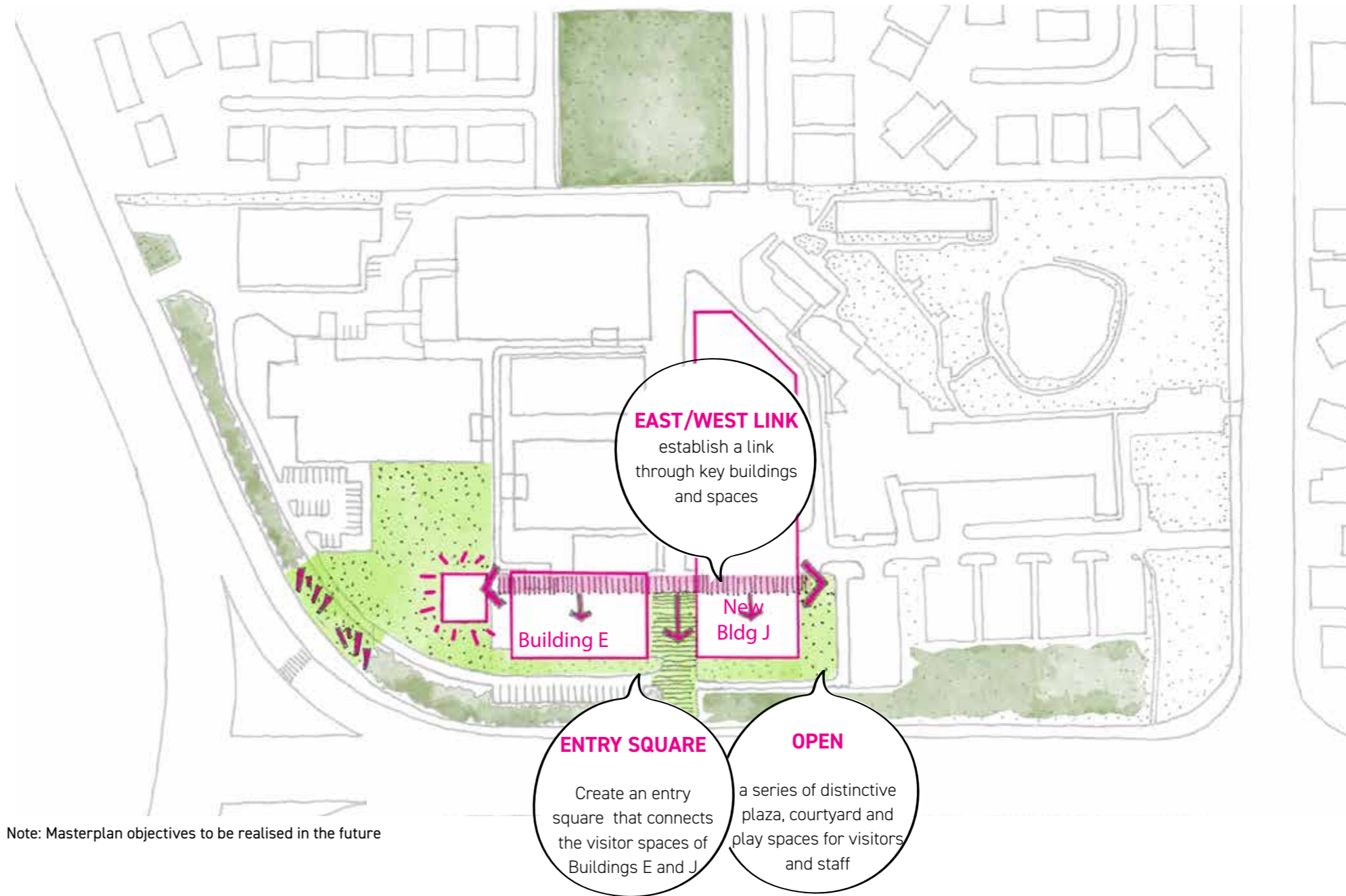
The previous page includes the long term master plan principles which includes the North/South and East/West connections through the site.

The long term design for the North/South link is outside the scope of the proposal and will be pursued by the Museum of Applied Arts and Sciences. If and when funding becomes available for these works, concepts to be explored would include:

- Pavement treatments along the north south spine to create a more pedestrian friendly environment;
- Redevelopment of store entries along the western side of the north south link to better enable connections for tours and public access to stores;
- Reorientation of parking to enable the utility when required but also other temporary community uses when not required; and
- Incorporation of art and/or interpretation that relates to the vast collection of the Museum which exists on the site.

This project will focus on the masterplan principles within the immediate area of the Building J site, being:

- Establishing an East-West through link through Building J
- Defining the entry square



Note: Masterplan objectives to be realised in the future

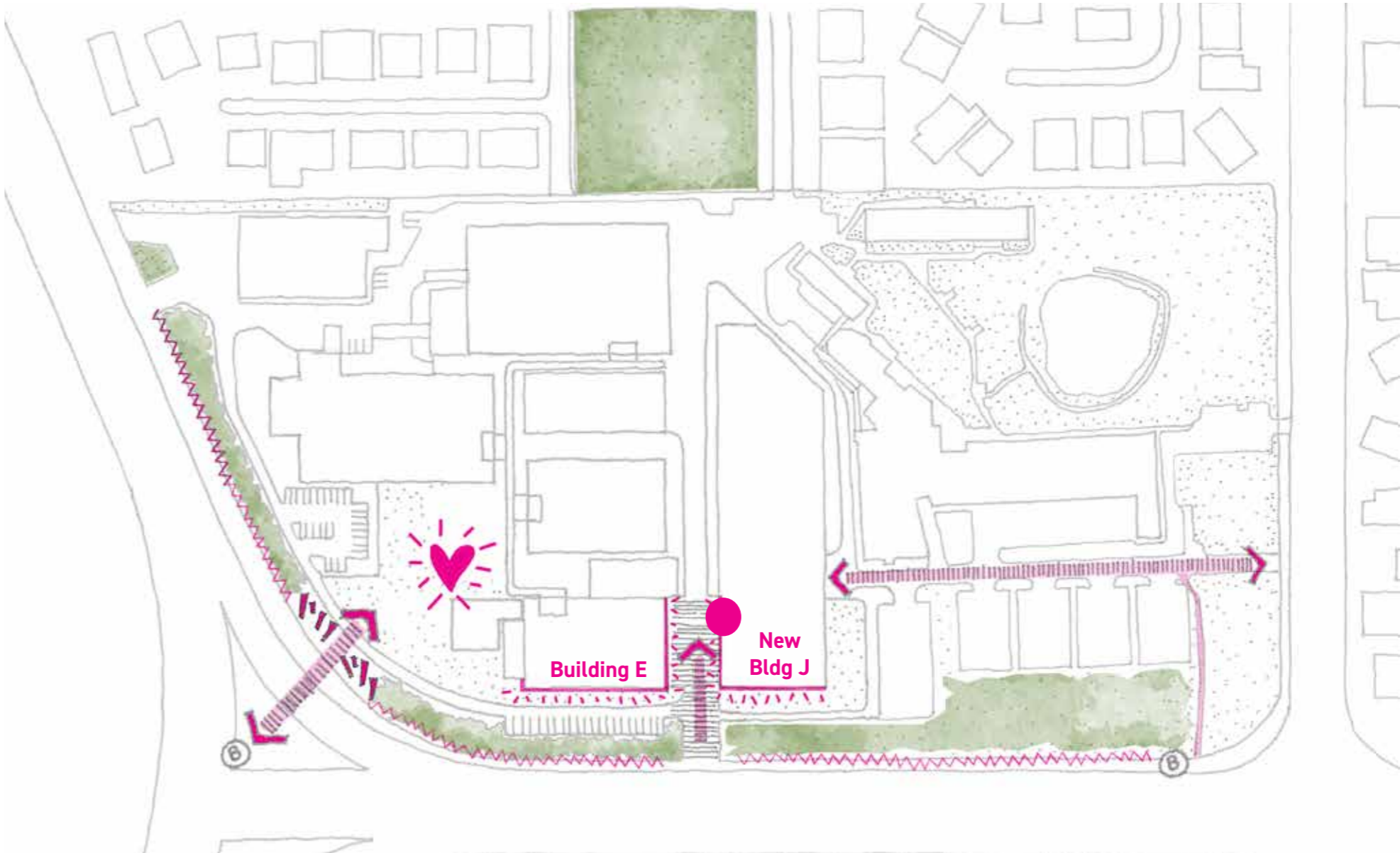
APPENDIX D: SDRP RESPONSE

SDRP Comment:

Provide greater detail on the proposed 'entry' square at the intersection of the N/S and E/W axis, to include short term and longer-term plans. Demonstrate that the scale is appropriate.

ENTRY SQUARE

The diagram on the previous page shows the long term vision for adjacent entries between Building E and the proposed Building J. The design of Building J will catalyse this long term vision by placing a dedicated entry and arrival experience along the North/South spine. The future reorientation of an entry along the North/South spine for Building E will create an arrival 'square' between the two main public buildings within the MDC site. This square will be detailed as part of the Building J works and further developed by MAAS for the North/South spine works that will be undertaken as part of a future works package as and when funding becomes available.

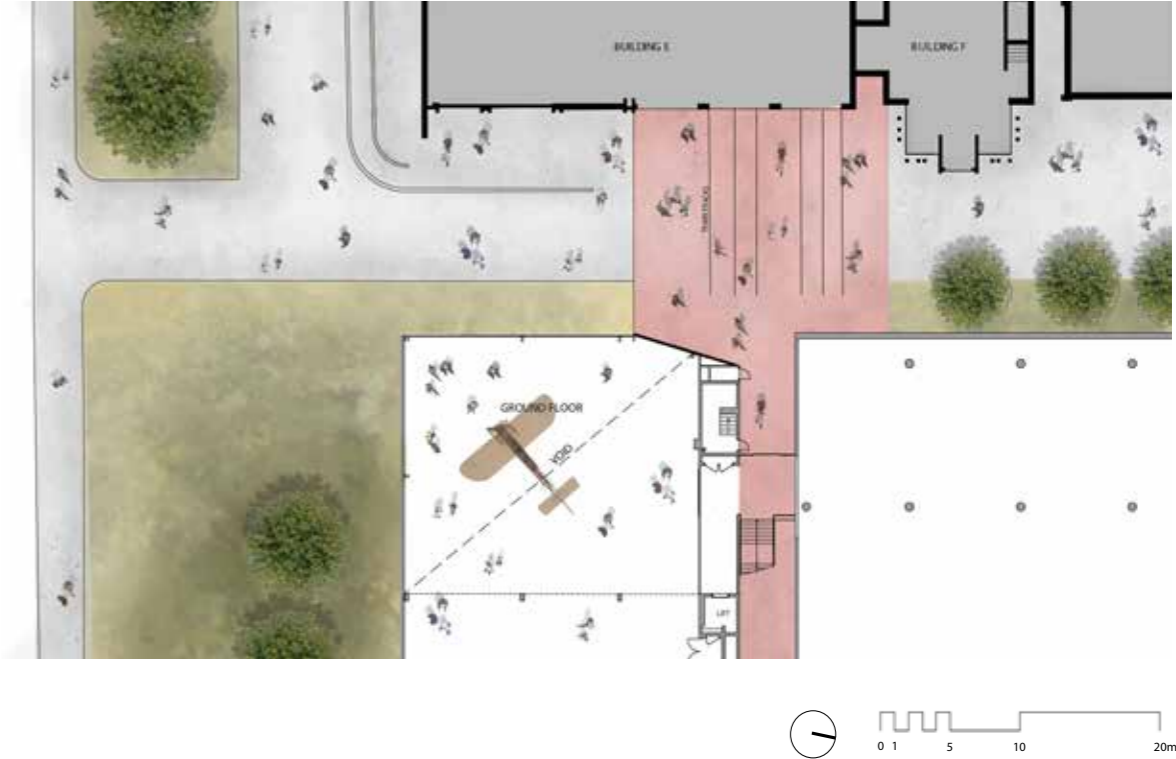


Note: Masterplan objectives to be realised in the future

APPENDIX D: SDRP RESPONSE
ENTRY SQUARE

As part of the Building J works, it is proposed that a surface coating will be applied over the existing concrete surface to be consistent in colour with the new entry ground plane treatment for Building J- the intention is to carry this finish through the public East/West link of the new building.

Installations can temporarily occupy the Entry square, reinforcing the link between Buildings J and E, and activating the space.





APPENDIX D: SDRP RESPONSE

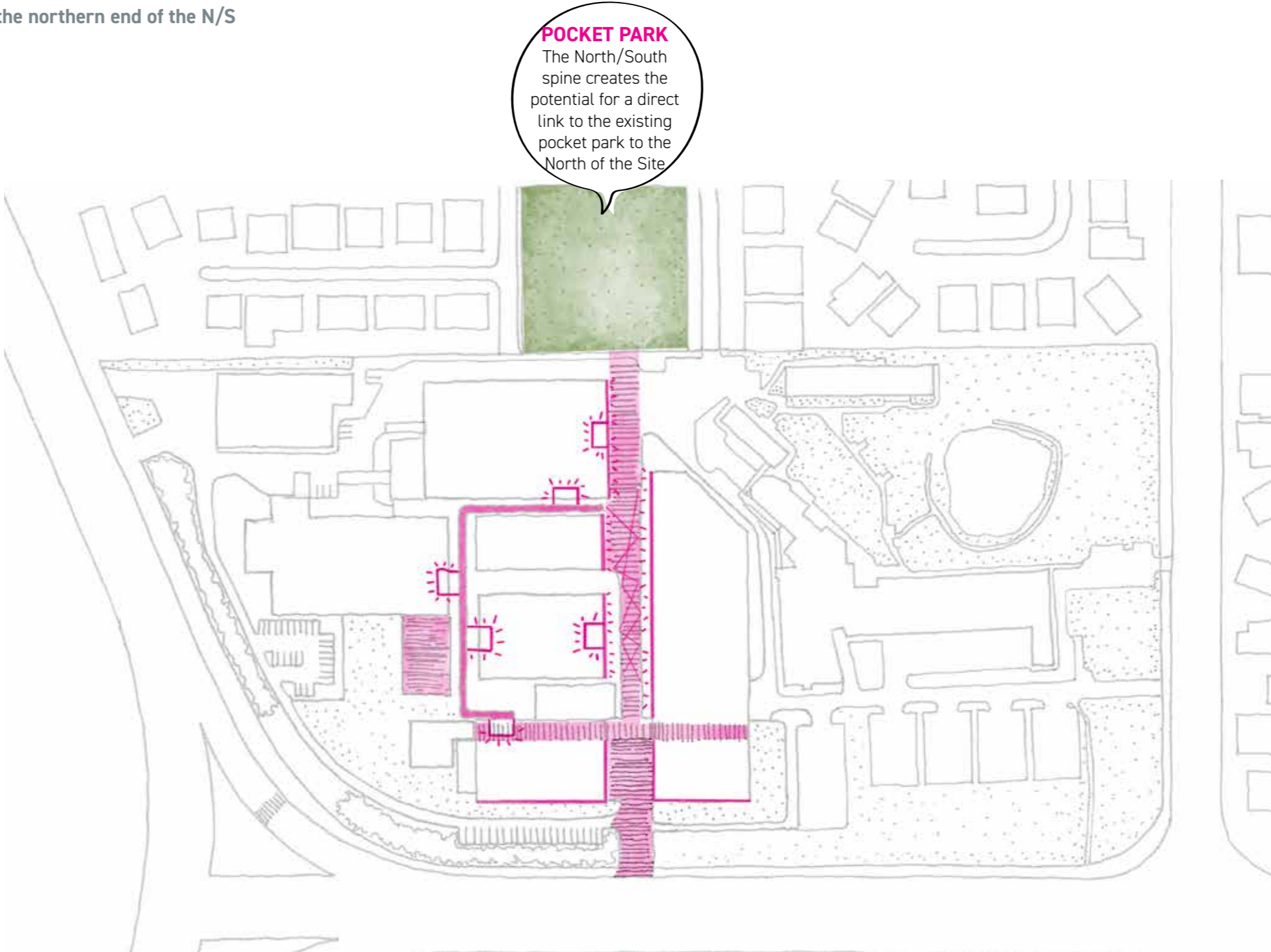
SDRP Comment:

Illustrate the desired future condition for the pocket park/public square at the northern end of the N/S axis and how it will be integrated into the campus.

POCKET PARK

The long term vision for an enhanced north south spine through the site will provide the opportunity for future connections into the pocket park located to the north of the site between Sunderland Avenue and Castlegate Place. Any enhancement of this park is outside of the scope of this project and the long term master planning of the MDC site.

Future connections to this pocket park would be subject to further community consultation as well as the desires of The Hills Shire Council.



Note: Masterplan objectives to be realised in the future

APPENDIX D: SDRP RESPONSE

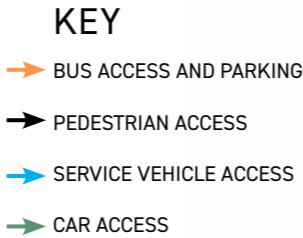
SDRP Comment:

Clarify and provide further analysis of pedestrian and vehicle movements, including hierarchy of entrances, vehicle entry points, visitor bus and car parking, path of travel for visitors and locations and details of any ramp and vertical circulation elements. Illustrate day one and future stage scenarios.

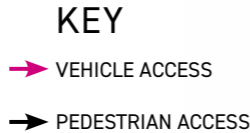
PEDESTRIAN AND VEHICLE MOVEMENTS

The MDC site operates in two main modes:

1. **Weekday operations**- this includes predominantly business activities of the Powerhouse with limited public access Wednesday-Friday through booked tours. The majority of access during weekdays is for service vehicles moving objects as well as staff access and parking.



2. **Weekend operations**- the MDC site is open to the public on weekends. As such service vehicle access is limited and the majority of parking is dedicated for the use of visitors.



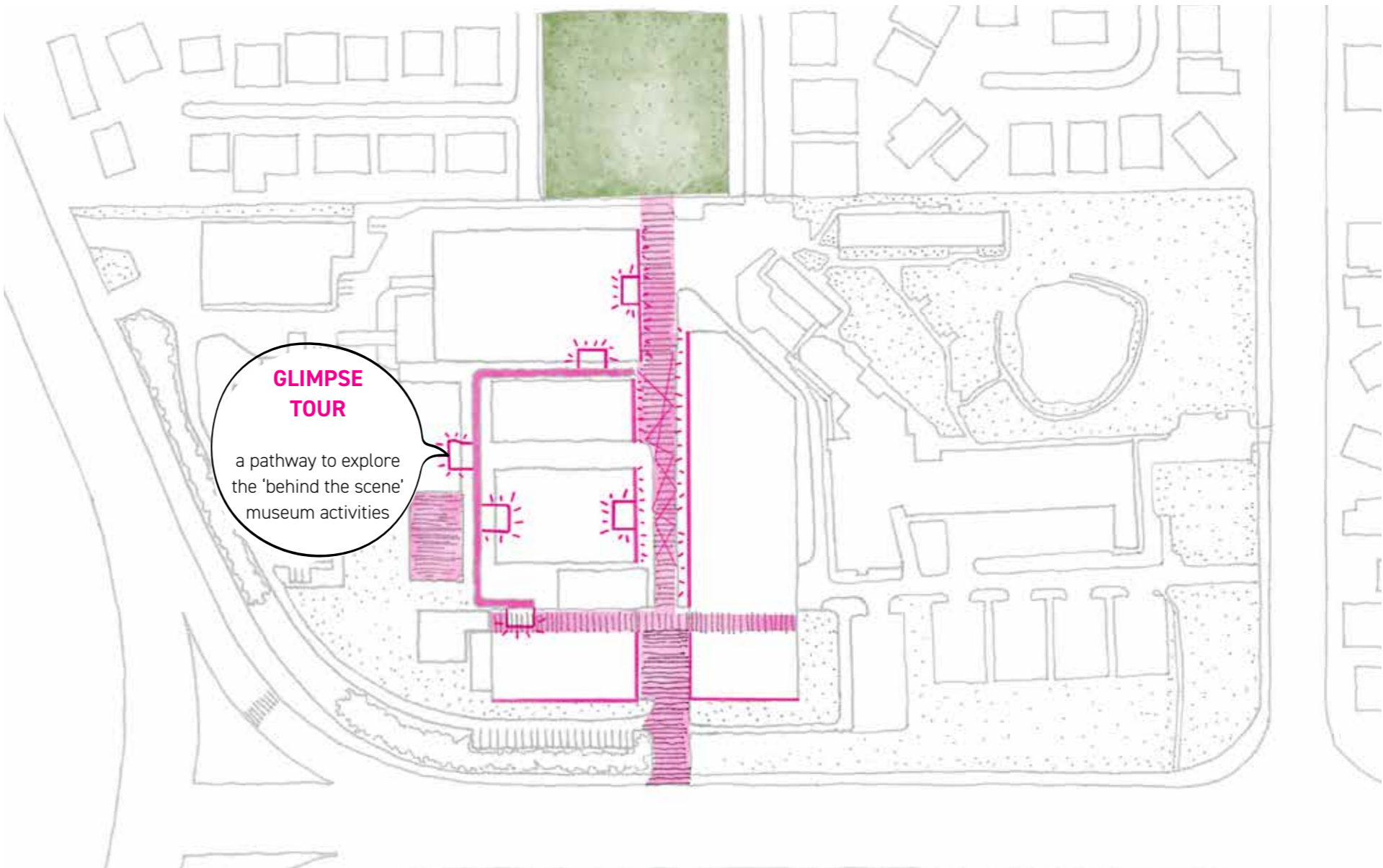
APPENDIX D: SDRP RESPONSE

SDRP Comment:

Provide a series of diagrams to illustrate how temporary activation of exterior spaces will operate and can be staged over time.

The diagram shows the long term vision of the Museum for the creation of a North/South spine through the MDC site. The activation (both short term and long term) is outside the scope of the Building J proposal, however the existing north south spine provides a blank canvas from which a range of temporary activations relating to the operations of the MDC can be undertaken.

Future ideas for the North/South spine include redevelopment of entries into existing stores. This would require re-planning of storage within these stores to permit public access.



Note: Masterplan objectives to be realised in the future

APPENDIX D: SDRP RESPONSE

SDRP Comment:

Provide further details of the proposed connection to Country and how it will be made evident throughout the campus and integrated with the architectural and landscape proposal: for example, using local language for naming, landscape, materials, plant selection, art installations, wayfinding devices, paving, colour, texture and so on.

CONNECTION TO COUNTRY

Design approaches are encouraged that supports the ability to “place yourself relative to Country from wherever you are in the Precinct”. (MAAS Indigenous Perspectives 2019)

The expansion of the MDC provides vital opportunities for the design of a purpose-built environment that is informed by and implicitly supports the cultural practices and values of Australian Aboriginal and Torres Strait Islander peoples' connection to Country and Culture. Such an approach is not limited to design of the built environment, but is made manifest in ongoing programming, collecting policies and reflected in institutional culture. The MAAS Indigenous Perspectives document provides a scaffold for these objectives and will be augmented by ongoing consultancy with local traditional owners via the MAAS Statement of Understanding agreements and further stakeholder engagement. Broadly, MAAS will endeavour to articulate a connection to Country and Culture at the MDC campus via:

1. Truth telling: Critical heritage interpretation

Truth-telling is of importance to this stakeholder group – be it in the form of the provision of spaces to yarn, share, grieve, heal and celebrate; or in the way the building can be layered with the understanding and experience of place.

The expansion of the MDC will recognise and disrupt the legacy of the Eucalypt plantation (and associated tradition of colonial botany) for which the property was acquired in 1948. The history of this plantation and its contribution to burgeoning Eucalyptus oil industry blatantly ignored the pre-existing knowledge held by the Aboriginal people, but rather contributed to the industrialisation of this native resource.

The renewal of this site represents an important moment to reflect upon and critique these institutional origin stories, through:

- commissioned documentary and interpretative works throughout the renewal of the site
- the repurposing of the extracted timber and or oil
- embedded treatments, including subtle reference to colour of trunks in concrete treatments and material choices
- ongoing commissioned programming aligned with MAAS heritage interpretation strategy.

2. Fostering an open edge: Approaches to inform interior/ exterior connection

Underpinning the architectural moves of Building J is the concept of open edge – creating a larger opportunity for public interface as well as visibility and access to large swathes of the collection in its store state. Embedded within the principle of open edge is an inversion of a hierarchical relationship between internal and external spaces and functions. In this sense external space will be recognised as equally significant to the built environment rather than diminished to curtilage or interstitial space. It will be considered ‘the biggest laboratory and the biggest teaching space, with the biggest meeting rooms.’ (Marcus Hughes, MAAS Head of Indigenous Engagement and Strategy, 2020)

3. The care of objects, relationships and place

Space for quiet reflection and connection to cultural material beyond the exhibition floor is critical to the provision of culturally safe and considered community access to the collection.

MAAS will provide a safe keeping place for cultural material and a place which celebrates First Nations achievements in Applied Arts and Sciences. Building J will offer unprecedented space for storing, viewing and handling objects of cultural significance for Aboriginal and Torres Strait Islander communities. To support this

endeavour, access to the spaces has been designed for ease of entrance and exit. Sightlines between interior spaces and exterior spaces have been prioritised. Outdoor spaces for reflection and contemplation are pivotal to the landscape design. All use of outdoor space including entrance spaces, circulation spaces and green spaces will be recognised as always indicative of institutional principles towards Indigenous Perspectives including spaces for gathering, reflection and ceremony.

4. Practical, useful and place appropriate planting

Environmental authenticity is a high priority for Traditional Owner groups – particularly with respect to the reinvigoration and restitution of Indigenous flora and fauna whilst caring for and designing from Country.

Planting will also align with and extend the cultural and practical objectives of the of Powerhouse Indigenous-led Programming. The curtilage spaces of Building J will be repurposed for native and site sensitive planting for practical and educational use. For instance, local elder Uncle Wes has specific plants for ceremony that can be grown on site. Similarly, planting can connect to the Culinary Archive, Parramatta Powerhouse's Powerlab Kitchen and Productive Roof Garden. Native planting will become a site for community led projects and education.

5. Artworks and interpretations will be non-permanent and programmatic, imbuing flexibility in internal and external sites.

Artwork should not be considered for use as a decorative indicator of cultural authenticity.

The commissioning of artwork or interpretation will not have a permanent footprint on the site, but rather form part of a programmatic response to heritage interpretation. As a world class cultural institution, MAAS is best placed to program, present and collect the many stories and objects that illuminate the site and its history.

APPENDIX D: SDRP RESPONSE

SDRP Comment:

The road reserve along Showground Rd presents an untapped opportunity. This space should be incorporated into the public domain of the project as a buffer and green ‘veil’ between the building and the road.

SHOWGROUND ROAD LANDSCAPE

The road reserve along Showground Road contains a number of existing trees that will be retained as part of the proposal. Further, the landscape proposal for Building J will enhance the landscape along the Showground Road frontage as detailed on the Landscape Drawings.

APPENDIX D: SDRP RESPONSE

SDRP Comment:

Provide details of total tree canopy to be achieved, noting a 40% canopy target for Greater Sydney in line with Government policy.

Clarify the mechanics of the proposed tree offset program.

TREE CANOPY

The proposal includes the removal of 337 trees from the site, most of which are from a former plantation. A Tree Replacement Strategy is proposed as part of the SSDA that includes a commitment for replacement planting at a 2:1 ratio within the Hills Shire LGA. This replacement planting will result in a net increase of canopy within the LGA as the existing plantation canopy, whilst dense is not reflective of the potential canopy of the planted species.

Through the proposed 2:1 replacement planting, additional canopy cover will be contribute to the NSW Government's policy to increase canopy cover within Greater Sydney to 40%.

For further information, refer to the Tree Replacement Strategy report.

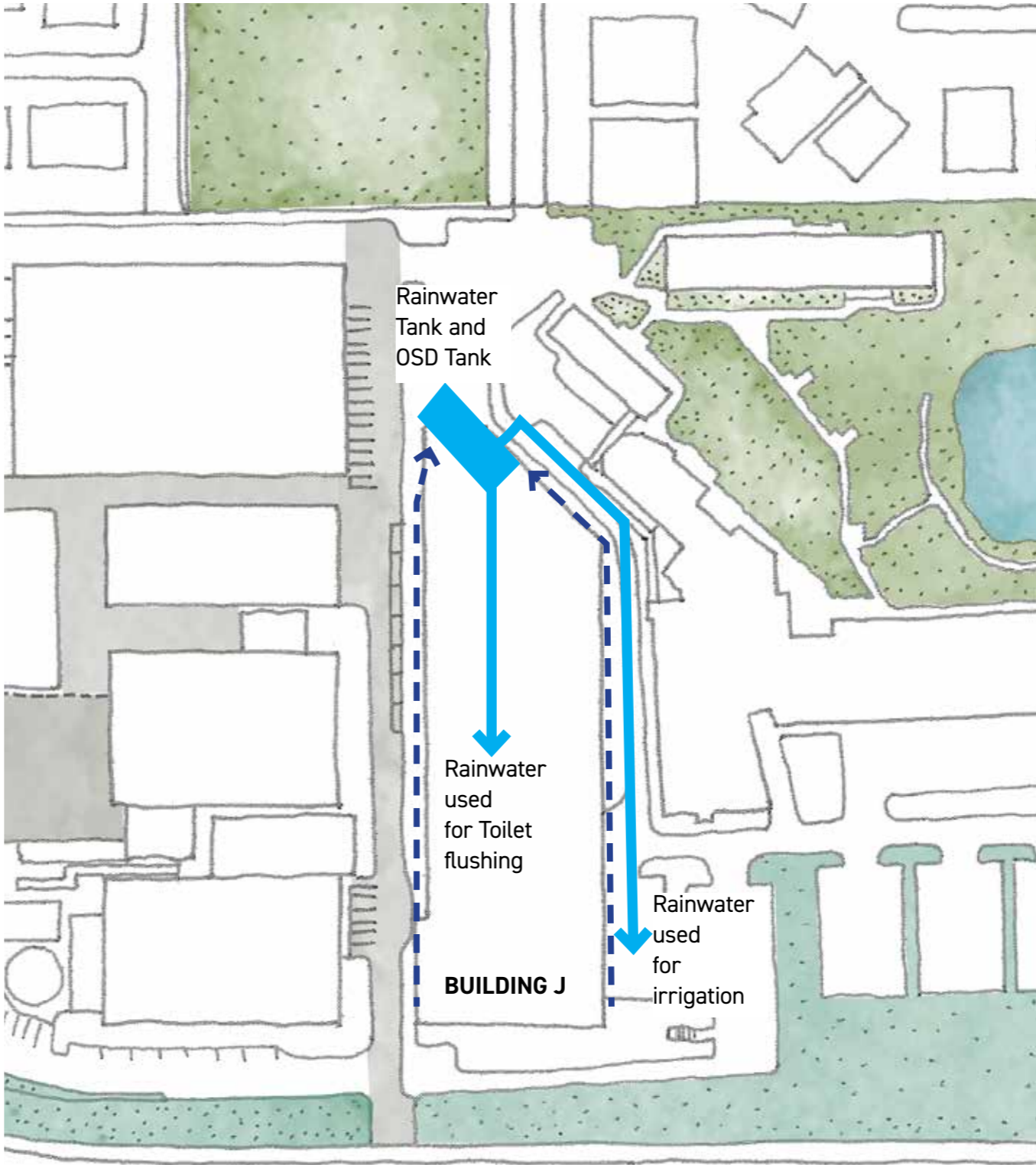
APPENDIX D: SDRP RESPONSE

SDRP Comment:

Address and illustrate water management, detention and reuse across the site in conjunction with the landscape strategy.

WATER MANAGEMENT

A 25,000L rainwater tank is included within the proposal. This water will be utilised for landscape irrigation, and other non-potable uses such as toilet flushing within the building. It is estimated that this size tank will offset 77% of the building's potential potable water use.



APPENDIX D: SDRP RESPONSE

SDRP Comment:

Provide a revised plant palette that considers and responds to specific microclimates around the building.

PLANT PALETTE

The planting palette proposed for the public domain components includes a range of species that are either native or endemic. The variety of species has been selected based on the overall site conditions and includes species that will be appropriate for the micro climates surrounding the building. The detailed layout of planting will be determined at the detailed design stage.

Refer to the Landscape Design Report.

APPENDIX D: SDRP RESPONSE

SDRP Comment:

The building and its contents are primarily inwardly focused. Consider strategies for improved physical and/or visual permeability, integration with and contribution to the context and public domain, consistent with the aspirations for the campus.

Consider strategies to enliven the external façade particularly along the western edge, which may include the incorporation of external circulation.

VISUAL PERMEABILITY

The proposed building contains a significant amount of glazing within all public and activated areas of the building. A number of uses proposed including storage and conservation laboratories and workshops require specific lighting conditions and/or no natural light to ensure the preservation of the collection. Furthermore, the arrangement of these facilities within the building has been designed to maximise efficiency so that circulation areas are minimised. Any change to the circulation areas proposed would reduce this efficiency and result in a net loss of usable museum spaces.

Glazed openings in Level 1 provide views into and out of the Conservation Laboratory- a working function within the building



The perimeter of the flexible space is completely glazed, allowing any exhibited collection items to be viewed from the entry sequence

APPENDIX D: SDRP RESPONSE

SDRP Comment:

Clarify and illustrate signage proposed.

BUILDING SIGNAGE

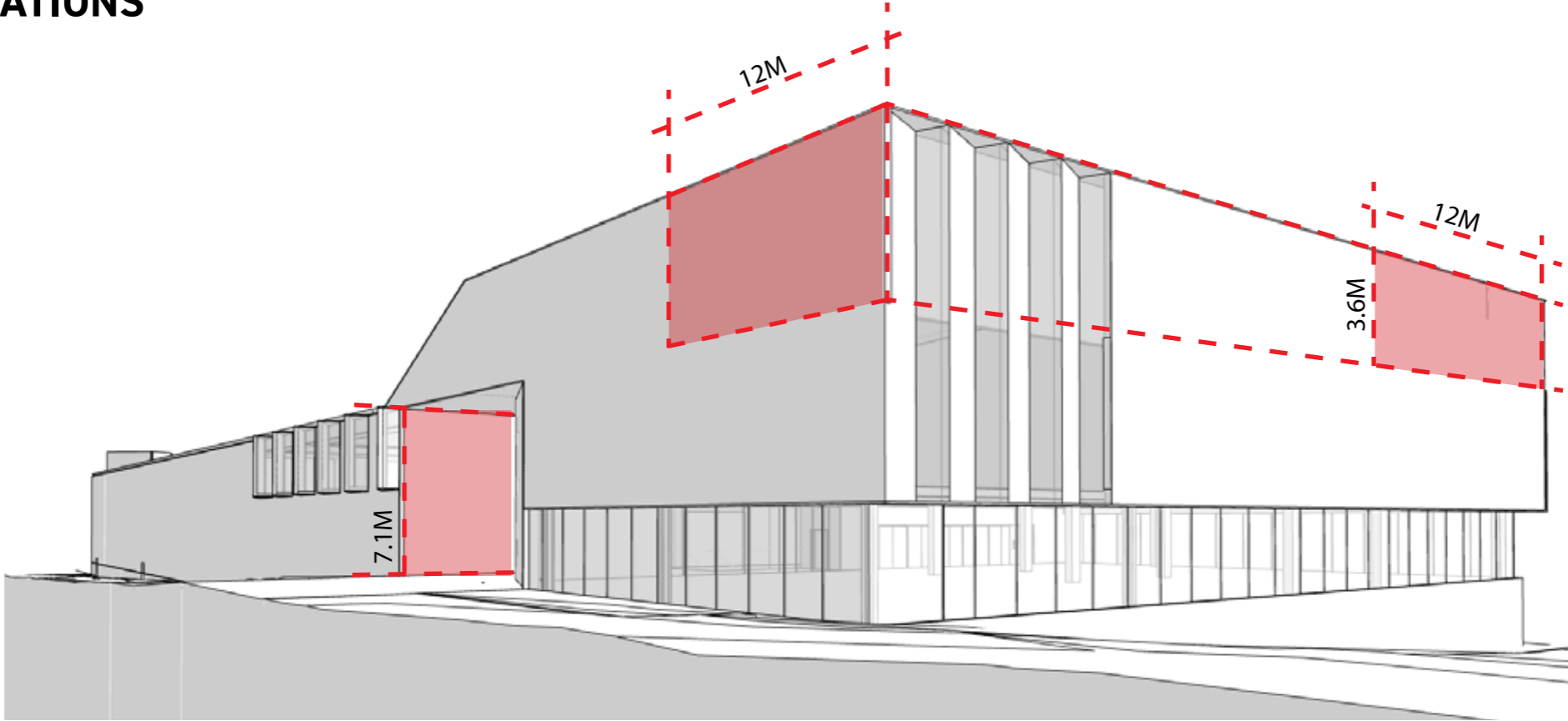
Signage zones are provided in Appendix E. The detail of the signage will be developed at the detailed design stage and included within these zones.

APPENDIX E: SIGNAGE LOCATIONS

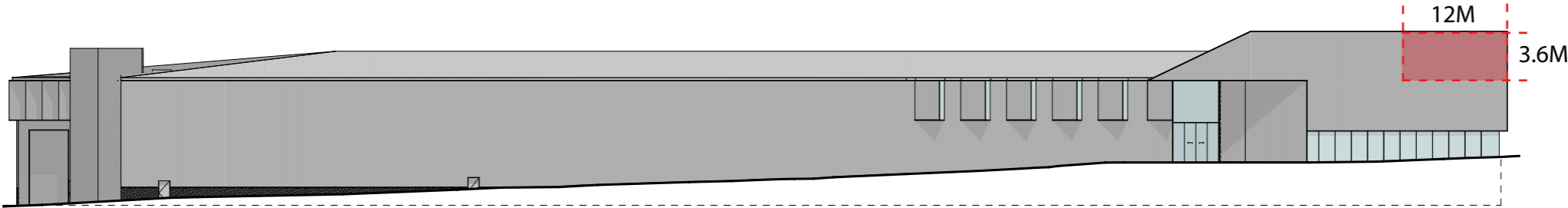
APPENDIX E: SIGNAGE LOCATIONS

BUILDING SIGNAGE

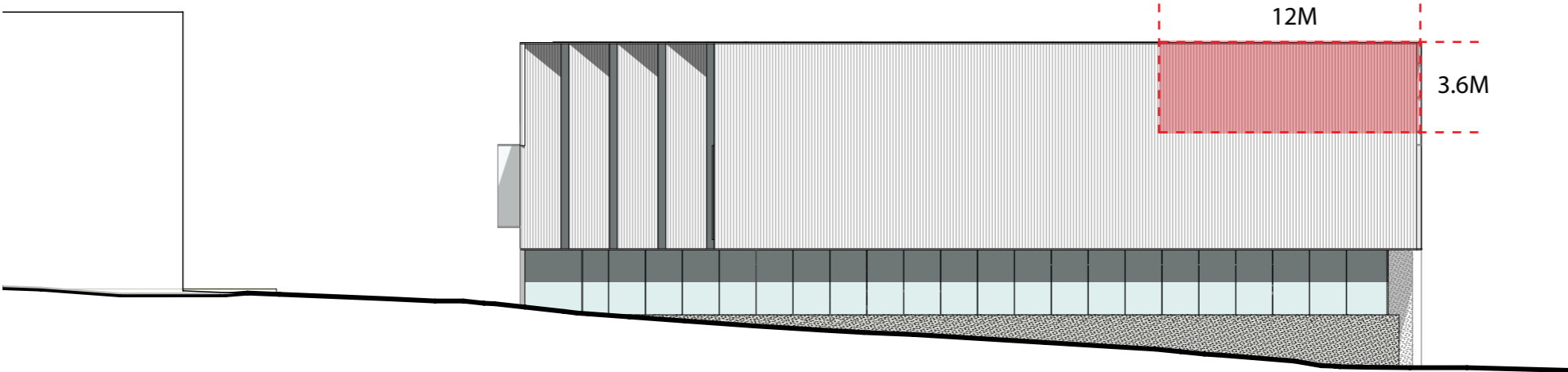
Signage zones have been located around the South end of the building, taking advantage of the proximity to Showground Rd, and to reinforce building entry points.



MAIN ENTRY FROM SHOWGROUND ROAD

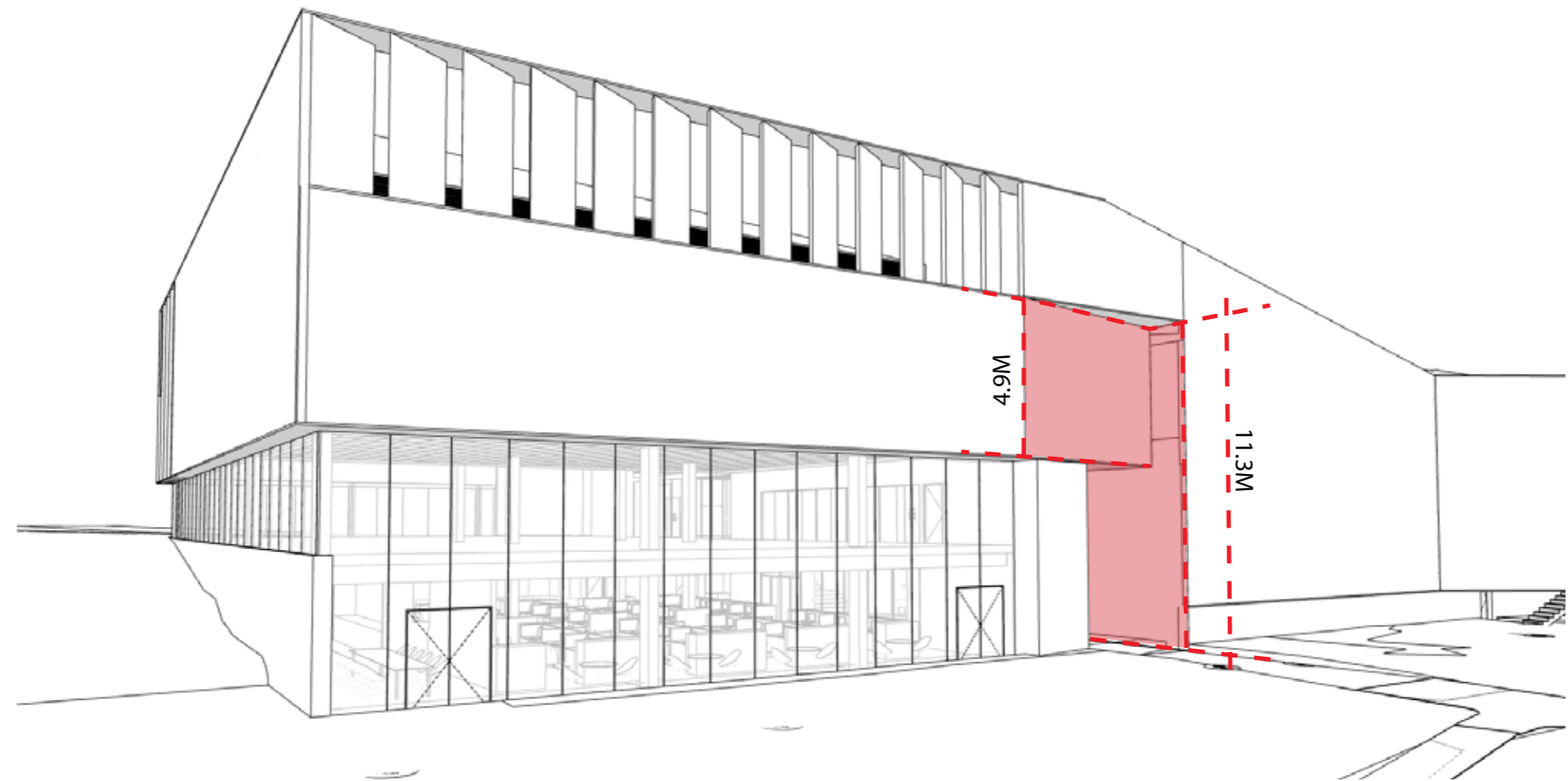


WEST ELEVATION

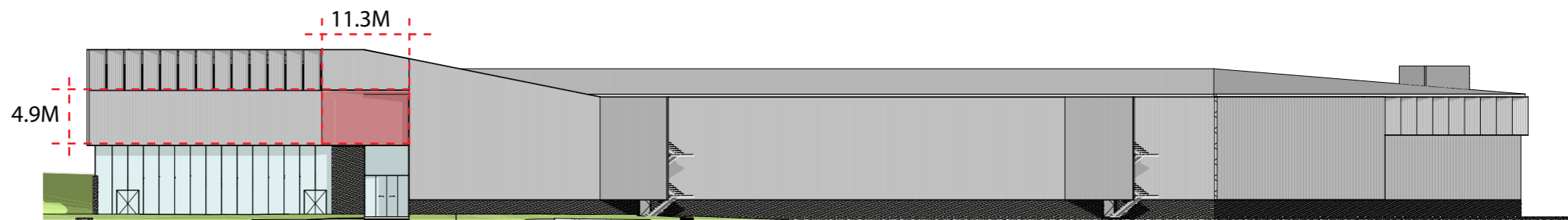


SOUTH ELEVATION

APPENDIX E: SIGNAGE LOCATIONS



VIEW FROM SOUTH-EAST



EAST ELEVATION