MUSEUMS DISCOVERY CENTRE EXPANSION
ENVIRONMENTAL IMPACT STATEMENT

# APPENDIX F
# LANDSCAPE REPORT

Aspect Studios

NSW GOVERNMENT

# MUSEUM DISCOVERY CENTRE
## BUILDING J SSDA LANDSCAPE REPORT

SSD-10439
21 September 2020
FINAL

| | |
|---|---|
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ASPECT Studios
lahznimmo architects
NSW GOVERNMENT Create NSW Arts, Screen & Culture
MAAS

**ASPECT Studios acknowledges the traditional owners of the land we work on and travel through and we pay our respects to elders past, present and emerging.**

We acknowledge the Traditional Custodians of this Country and their continuing connection to culture, community, land, sea and sky.

We also pay respect to all First Peoples of the Sydney area, who have continued through strength and courage to retain and reclaim their culture, languages, identities and connections to Country, and recognise the valuable contribution made by Aboriginal people in Sydney to community, narratives, spaces and places in the past, present and future.

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# 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 signage zone locations, utilities and service provision, stratum subdivision (staged).

# Site Description

**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.

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

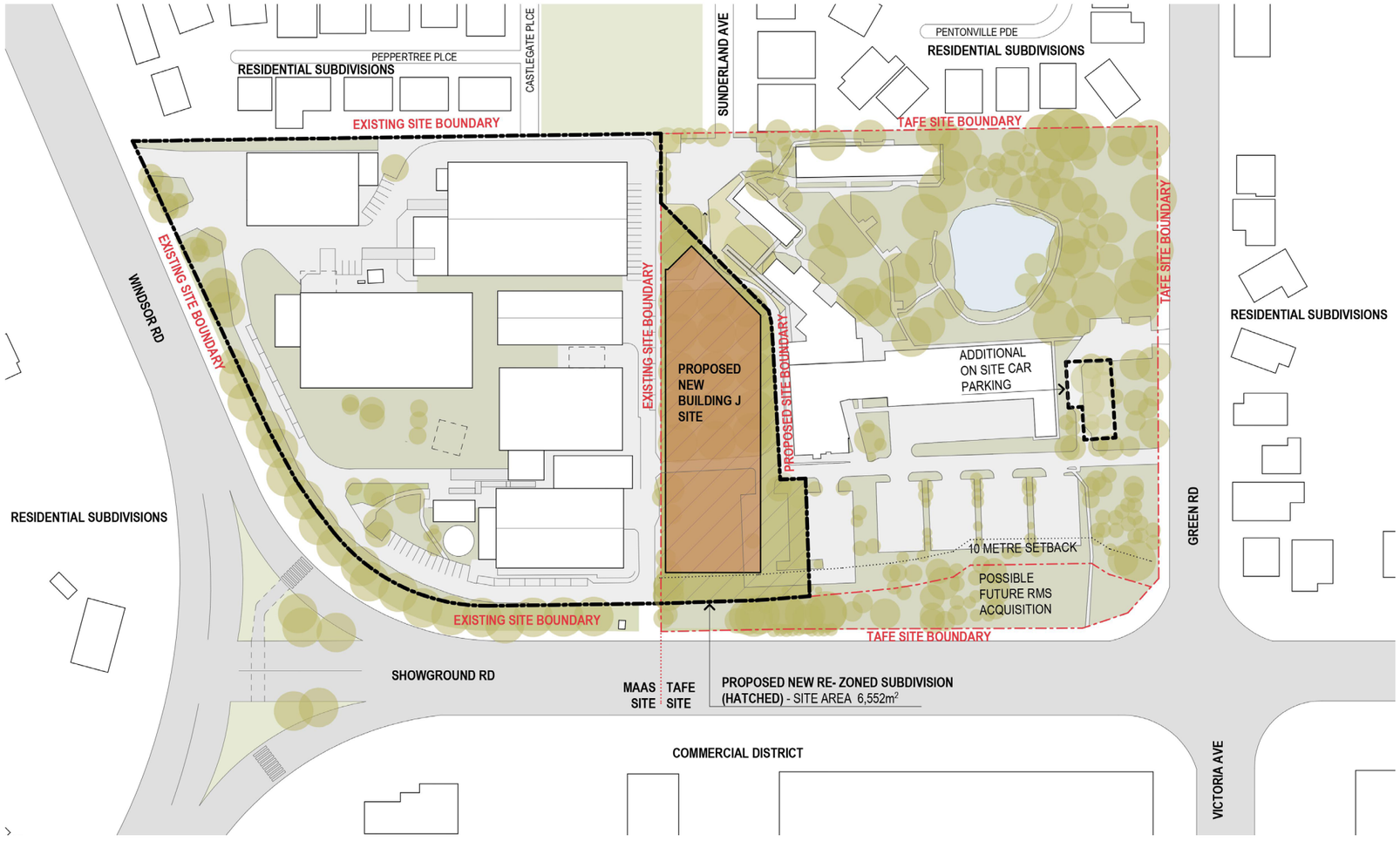



Figure 1: Existing site layout plan and proposed development site
Source: Lahznimmo Architects

# 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.

— 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 (EXTRACT) | |
|---|---|
| 4. LANDSCAPING : THE EIS SHALL: | WHERE ADDRESSED |
| - provide an integrated landscape design for the proposed development, including trees and vegetation to be removed | Refer to landscape plan and design report for details of integrated landscape design proposals.<br>Refer to Tree Removal Plan drawing LA_1103 |
| - detail use of native vegetation communities and plant species | Refer to Section 4 of Landscape Design Report, Planting Strategies. |
| - detail how landscaping will reduce visual, privacy and amenity impacts on surrounding residential development | Refer to landscape plan, planting strategy and schedules in SSDA Landscape Design Report. |
| - consider proximity to electrical infrastructure and water pipes in landscaping selection | Refer to coordinated Landscape Plan LA_1101 |

Section 2

# Landscape Design Proposals

# Landscape Plan

## Introduction

The landscape design for Building J will play an important role in connecting the east and west of the TAFE and Museum Discovery Centre (MDC) site.

The link through Building J is at the intersection of both MDC and TAFE boundaries. Emphasised by a bold use of embedded colour, the new route will improve pedestrian circulation and flow between the sites, create a new public domain between Building J and Building E, align with MDC vision and principles of an open and connected place and gesture towards ongoing Masterplan aspirations.

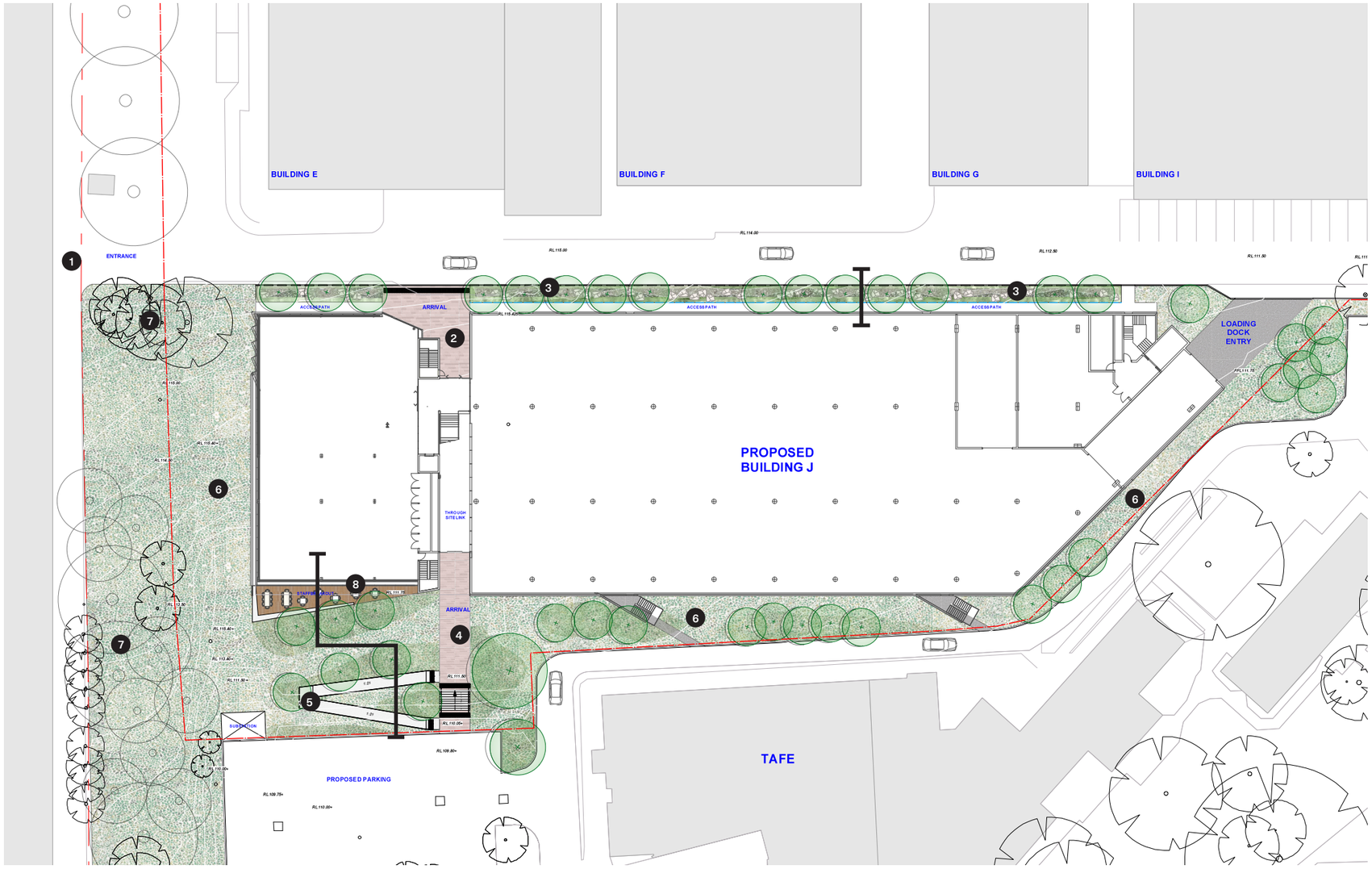
A generous arrival space to the western entrance connects the existing MDC buildings with Building J and ensures the public arrival from Showground Road is legible and welcoming.

Existing mature trees surround the site which the new landscape design will blend into and improve upon. A diverse planting palette of understorey and ground cover species will improve the bare ground of the existing site, creating and connecting to existing fragmented habitat areas.

A variety of endemic tree species will be planted to the edges of the new building to provide a visual barrier to the existing residential areas to the north.

The western facade of Building J will be softened with the use of tree planting and a WSUD strategy. The WSUD will feature a combination of native grasses and sculptural bush rocks that help set the building into the landscape and connect to its southern and eastern edges along the access road.

Building J | Landscape Plan

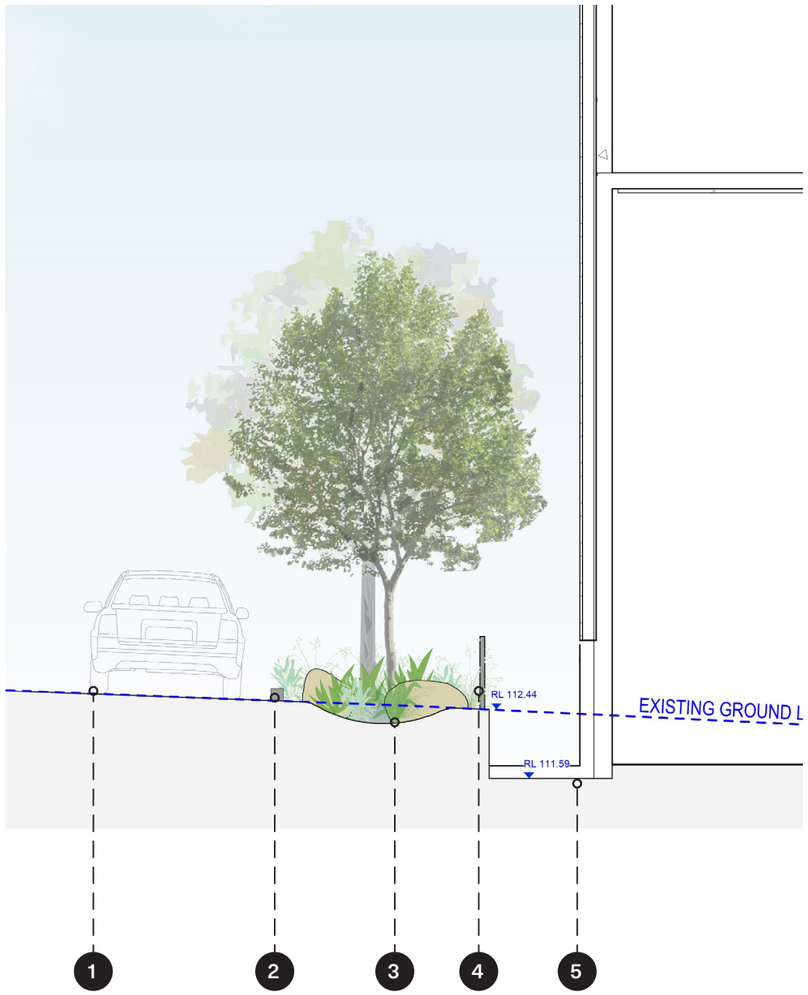



KEY

| | |
|---|---|
| 1 | Showground Road Entrance |
| 2 | Entry Square |
| 3 | WSUD |
| 4 | Feature Path - Through Site Link |
| 5 | DDA Access Ramp |
| 6 | New Mass Planting |
| 7 | Existing Trees Retained |
| 8 | Staff Breakout Space & Seating Area |
| | Site Boundary |

# Landscape Sections

Section A | Western Access Road WSUD




Section B | Eastern Arrival

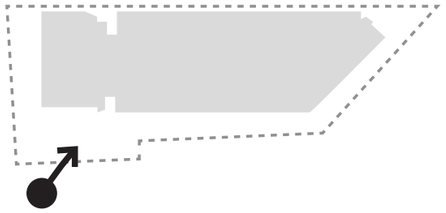

KEY | SECTION A

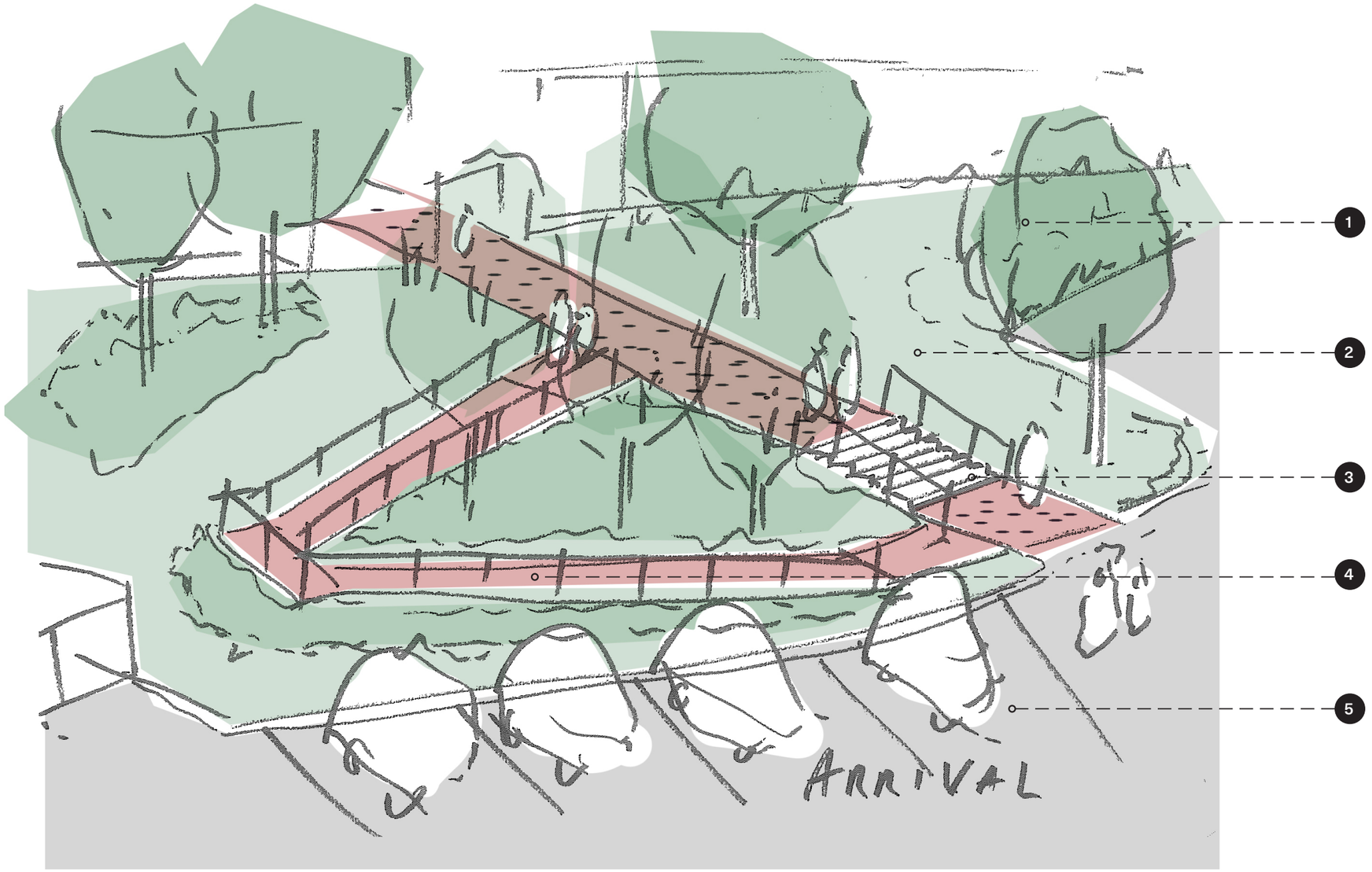
| | |
|---|---|
| 1 | Existing Driveway entrance / exit |
| 2 | Protective Kerb to WSUD |
| 3 | Mass Planting & Bush Rocks |
| 4 | Balustrade |
| 5 | Building J Perimeter Maintenance Path (No Public Access) |

KEY | SECTION B

| | |
|---|---|
| 6 | Staff Break Out space |
| 7 | Seating Edge |
| 8 | Buffer Planting for Staff Privacy |
| 9 | Ramp Mid Level Planting |
| 10 | New Parking |

# Eastern Arrival

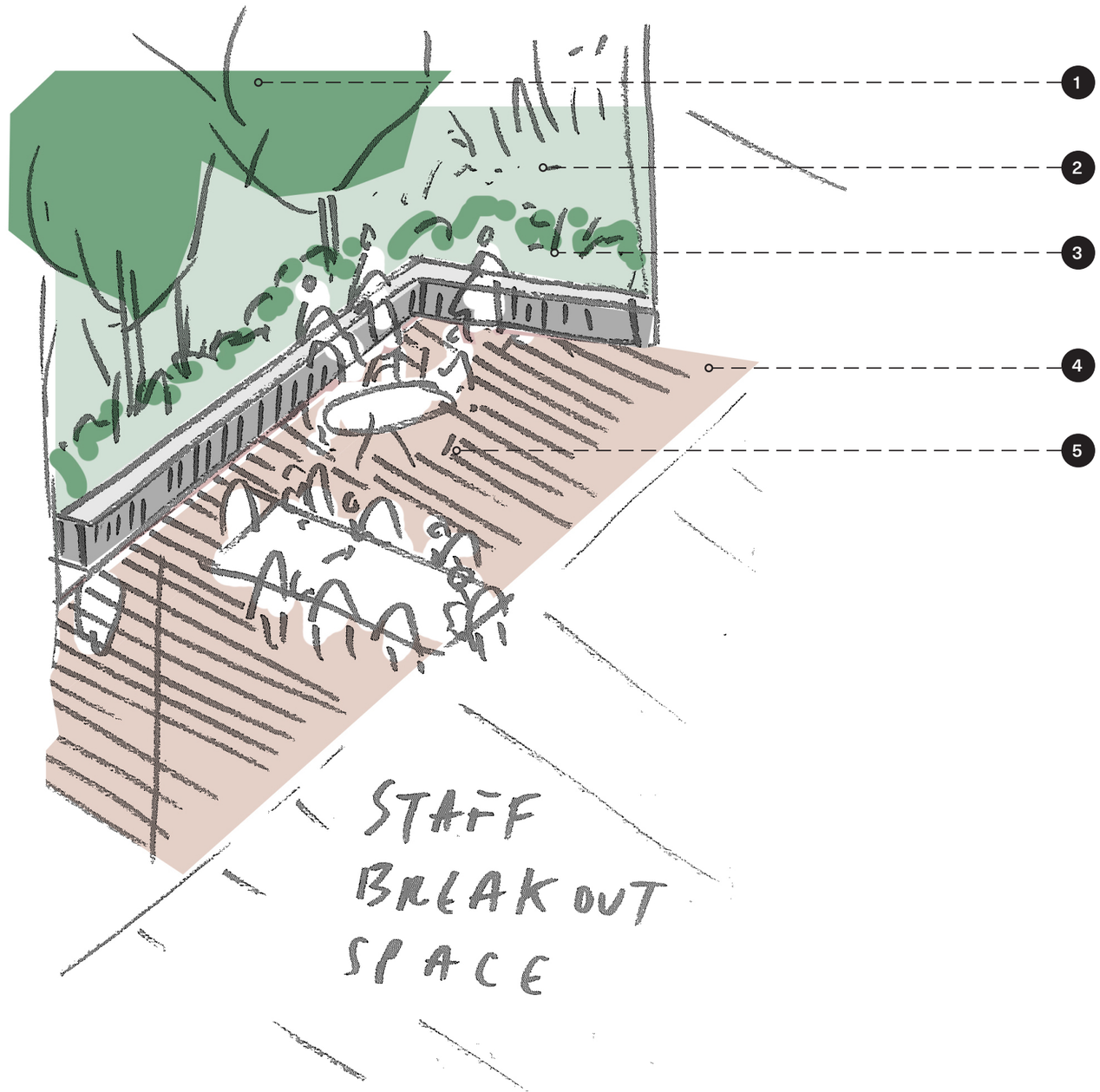





KEY

| | |
|---|---|
| 1 | Proposed Native Tree Planting (Refer to planting palette) |
| 2 | Mass understorey planting (Refer to planting palette) |
| 3 | Concrete Steps & Handrail |
| 4 | DDA Compliant Access to Building J |
| 5 | New Parking |

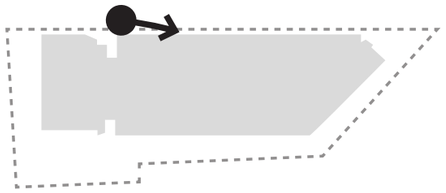
# Staff Breakout Space

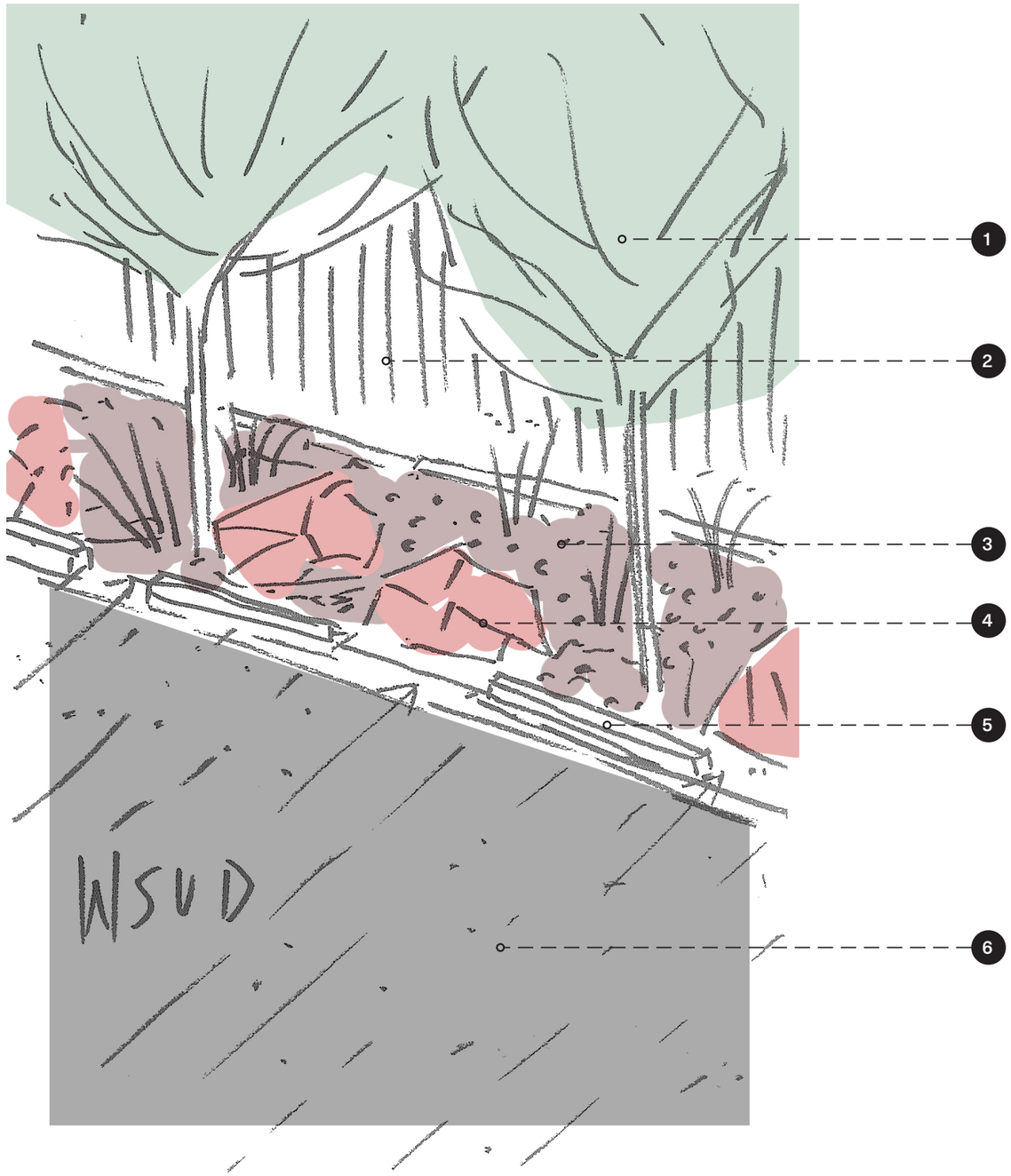



KEY

| | |
|---|---|
| 1 | Native tree planting for privacy |
| 2 | Native understorey buffer planting |
| 3 | Board Formed Concrete Seating Wall |
| 4 | Hardwood Timber Decking |
| 5 | Various sizes of tables and chairs for staff spill out |

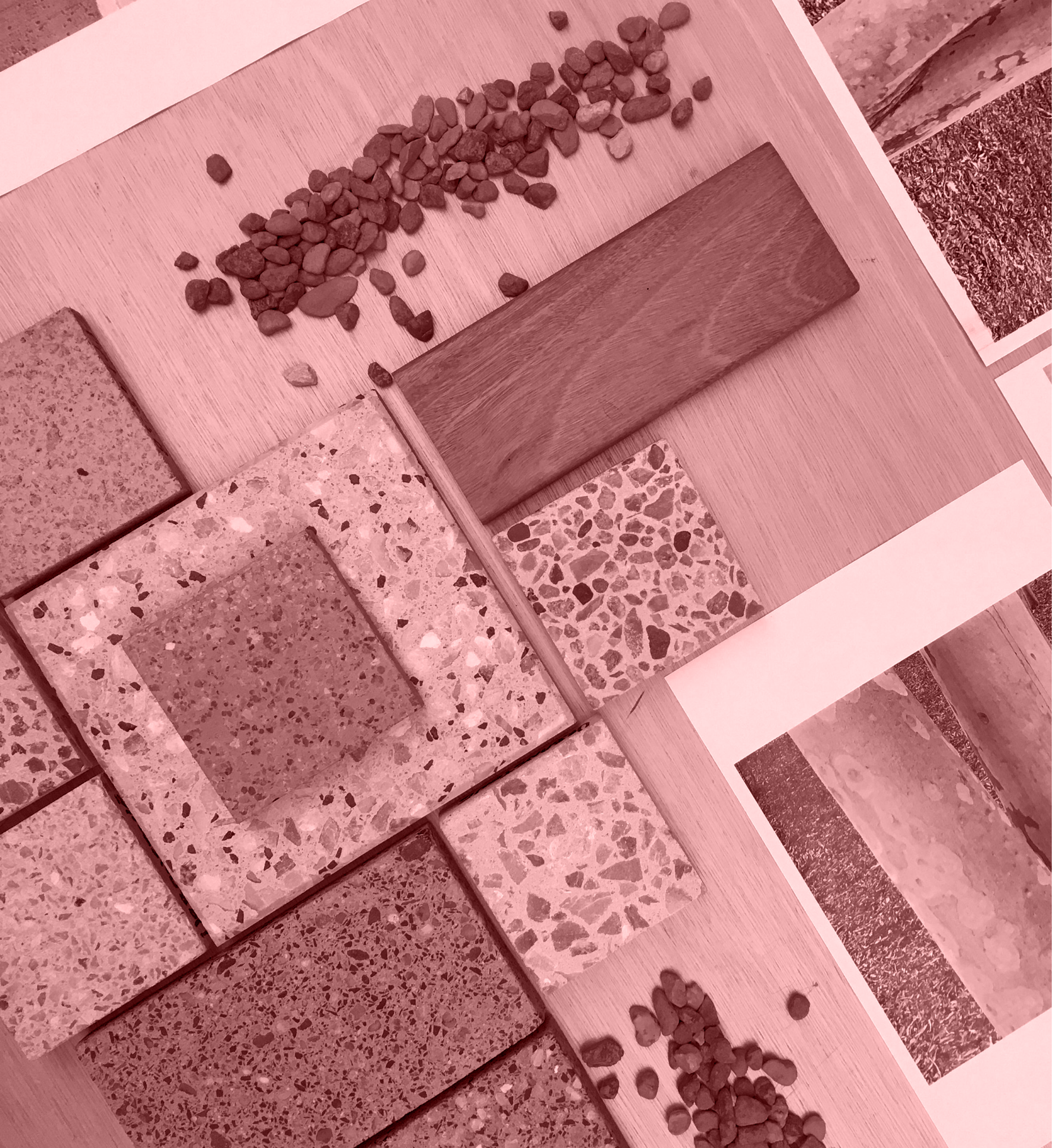
# Western Access Road WSUD






KEY

| | |
|---|---|
| 1 | Tristaniopsis laurina (Refer Planting Palette) |
| 2 | Protective Balustrade (To Architect's detail) |
| 3 | Mass Planting & Gravel Mulch |
| 4 | Flat Bush Rock |
| 5 | WSUD Kerb |
| 6 | MDC Access Road (Retained) |



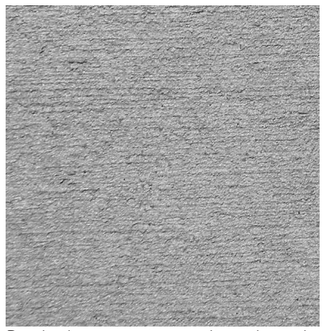
Section 3

# Materials Palette

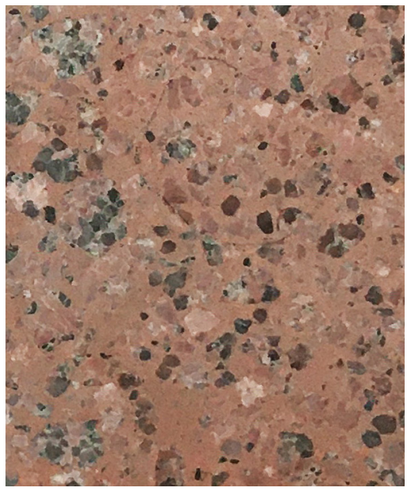
# Material Palette : Hardworks

**The materials take inspiration from the surrounding bushland, blending robust surface finishes with colour and texture of the landscape. The palette has been developed to provide a complimentary aesthetic to the architectural finshes.**

Concept images of site assets, colours and textures to inform the material selections.

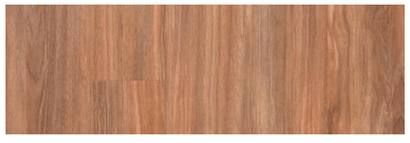


Brushed concrete to amenity paths and secondary routes



Pink hued concrete with exposed aggregate references the pattern of spotted gum bark and provides a visual link to the sites past.

Board formed concrete seating wall to staff breakout.



Australian hardwood to staff breakout area provides a natural connection to the surrounding landscape

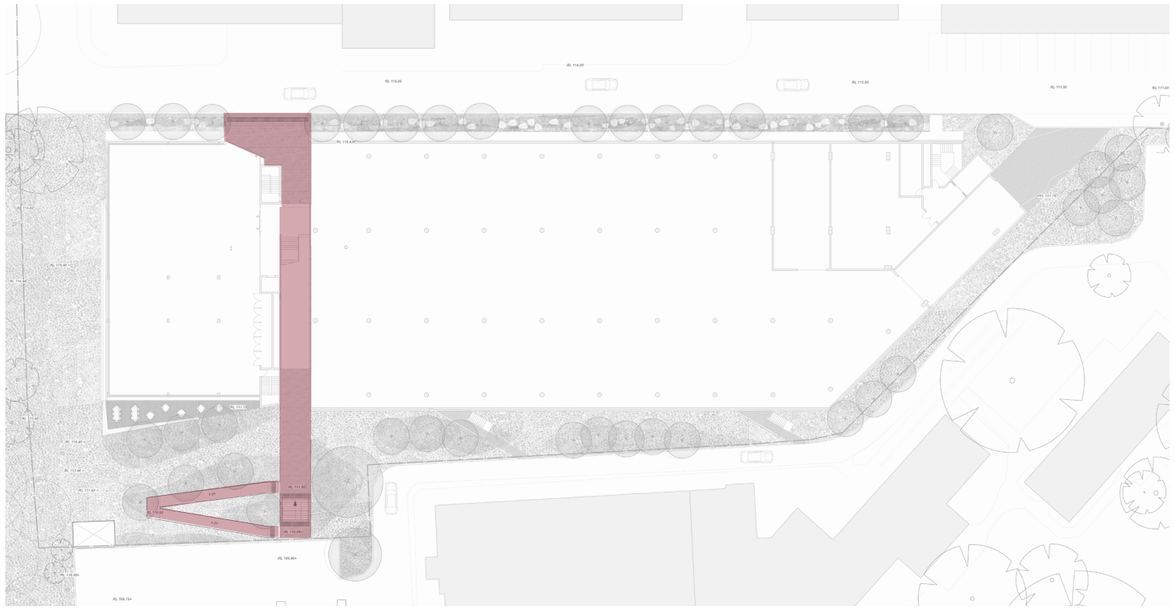
The blend of brown, white and grey aggregates takes notes from the tree species of the plantation. Warm pink hues create a vibrant and welcoming surface for pedestrians arriving from the east and west entry points.

# East West Connectivity

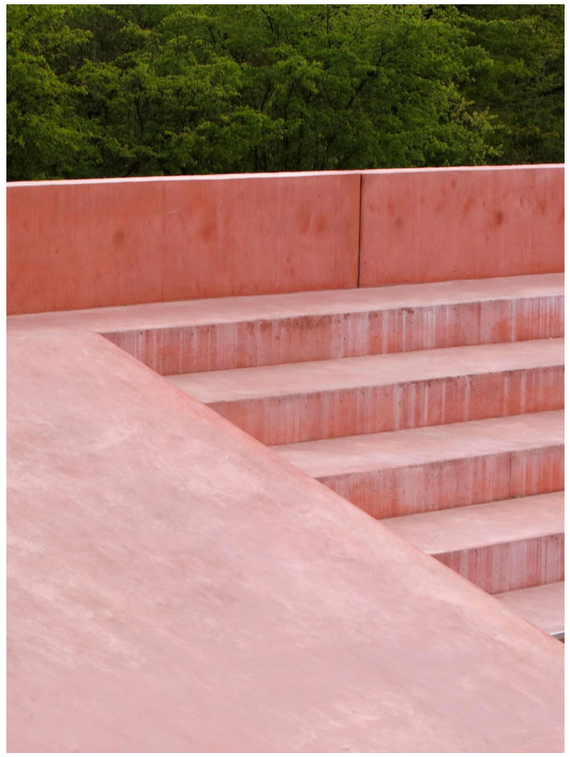
**The East West connection through Building J is an important piece of public domain, providing a new connection between the TAFE and the new MDC entry square.**

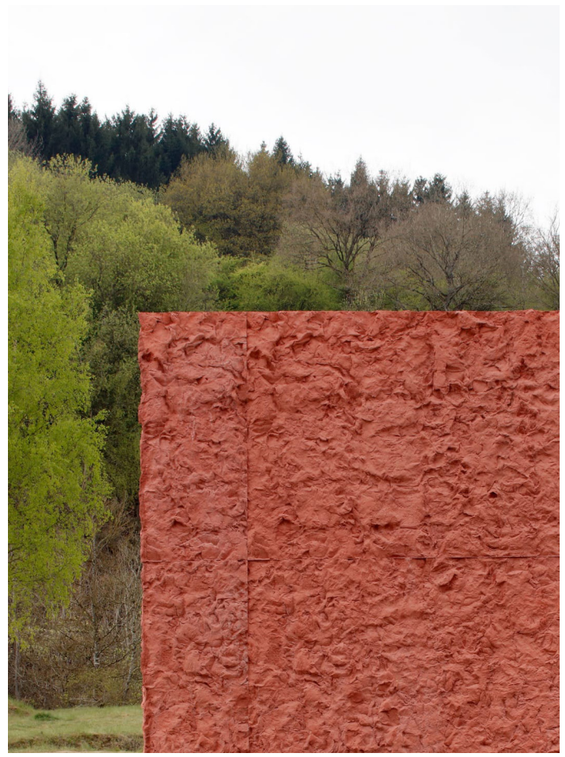
Using bold embedded colour woven into the fabric of the built forms and ground plane, the East West connection will invite intuitive wayfinding and encourage curiosity and enquiry.

The colour and material palette draw on the site history (the warm hues of the ground matter and trunks of the experimental eucalypt plantation) and connects with the MDC vision and principles of being a connected place (connected to Indigenous perspectives, its community, the history of the Museum, the history of the site and its broader context in Castle Hill, and to Powerhouse Parramatta, Sydney Observatory and Powerhouse Ultimo) and an open collaborative place that through visual and physical permeability invites participation and collaboration with the vast and rich resources the MDC has to offer.



Possible location plan for public domain art interpretation.





JOYPARK, Luxembourg (2001 Architects)

Section 4

# Planting Strategy

# Tree Removal Strategy

## Introduction

The proposal for Building J requires the removal of  a total of 337 trees from the TAFE site. Tree removal & retention plan details this quantity and their location.

The Arborist Report prepared by MacKay Tree Management identifies 330 of the 337 to be removed as plantation trees (planted as an experimental oil plantation from the 1940s). The tight spacing of these trees and their '*forest forms*'- *'tall with narrow spreading crowns that are concentrated towards the top of the trees'* - means as a group they provide a mature canopy but individually are less valuable.

## Tree Replacement

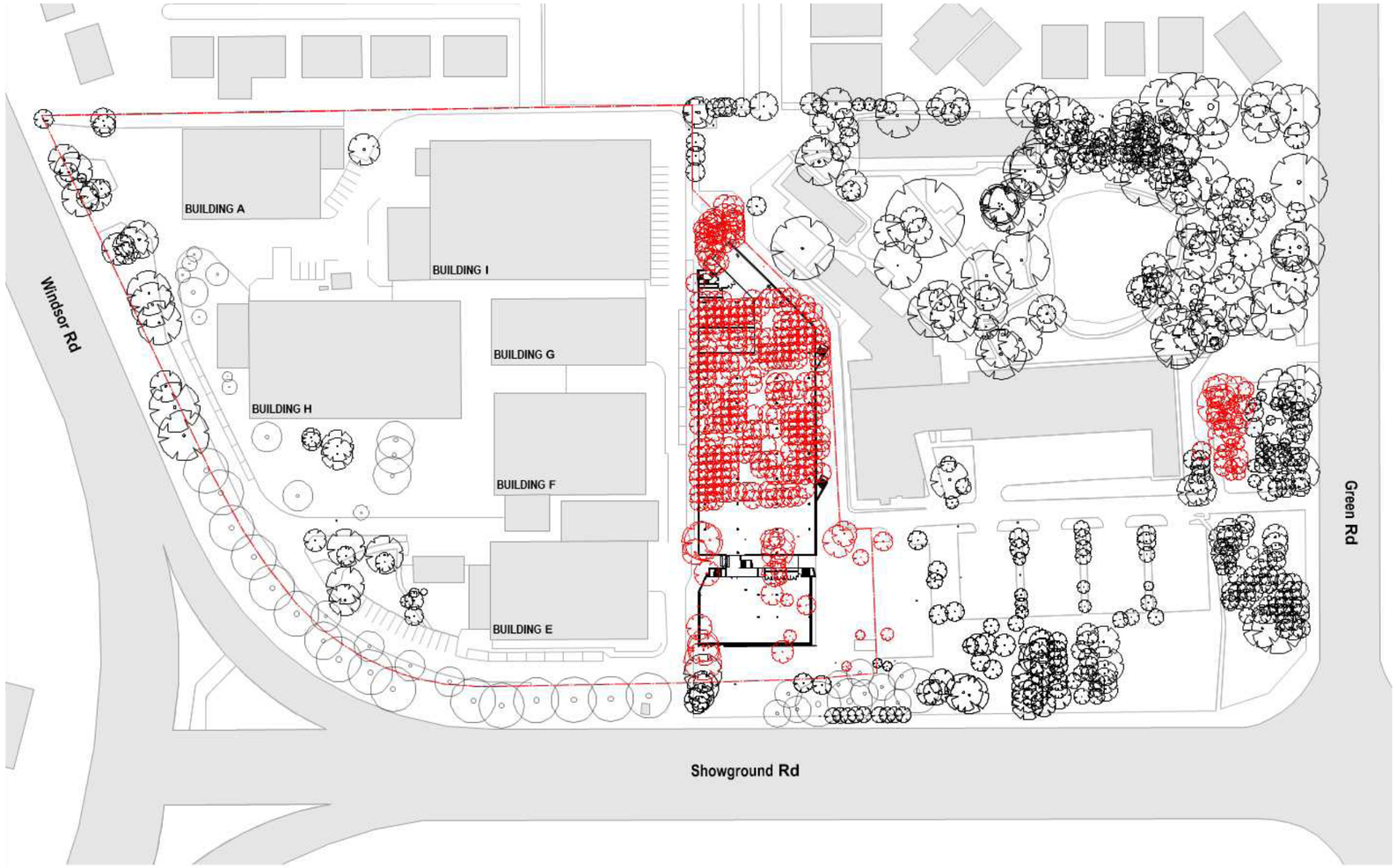
The form and structure of the existing trees mean they are not suitable to be transplanted and therefore this document and the Arborist Report prepared by MacKay Tree Management recommend the removed trees be offset by replacement planting.

Details of tree replacement is contained within the 'Tree Replacement Strategy' prepared by WSP and appended to the EIS.

## Locations

Replacement planting locations will include:

- **On site:** wherever feasible replacement planting across the MAAS site will be proposed. A commitment is made to tree and native understorey planting to screen the relocated substation. As well as strategic planting along the frontage of Building J to ensure its facade is integrated into Showground Road and the landscape whilst also remaining highly visible for all visitors to the Museum. Additional planting along the Museum site boundary (Windsor and Showground Road) will be considered, but existing dense trees may limit opportunities and so alternatives off site will need to be considered.
- **Other Locations within the LGA:** Subject to further discussions with Council and other land owners, suitable locations within the LGA will be identified, these may include Open Space, Parks, Reserves and Streets. Discussion between Council and Create NSW have already commenced.




**BUILDING J SITE BOUNDARY**

TN XXX — **TREE NUMBER** REFER TO ARBORIST REPORT FOR FURTHER INFORMATION

**EXISTING TREE** RETAIN AND PROTECT

**EXISTING TREE - UNSURVEYED** RETAIN AND PROTECT

**EXISTING TREE** FOR REMOVAL SUBJECT TO FUTURE DA

# Planting Concept

## Introduction

The development site is located on the Glenorie soil landscape (low hills on Wianamatta Group Shale). This landscape lies at the edge of the Cumberland Plain and the vegetation is typically characterised by variants of sclerophyll forest particularly the vegetation community Turpentine Ironbark Forest, with minor occurrences of Blue Gum High Forest .

This analysis will provide the concept for the planting palette and a diverse range of endemic species that contribute to the overall biodiversity of the site will be selected.

The planting palette has been carefully curated to address the particular micro climates surrounding the building, i.e. shade. Refer to planting schedules on the following pages for species lists which will be used and further developed during detailed design.

Planting will have a forest character that contrasts with the contemporary aesthetic of the architectural built form.

***UPPER STRATUM***

Tree canopy cover and habitat for birds & bats

***MID STRATUM***

Large shrubs & tall perrenials for foraging mammals

***LOW / GROUND COVER***

Understory planting and ground covers

*CUMBERLAND PLAIN WOODLAND*

*WIANAMATTA SHALE*

Species selection will be informed by the sites locality to Cumberland Plane Region and Wianamatta Shale geology and try to bridge the gap between fragmented habitats.

# Planting Palette (Mid to Upper)

## Introduction

Shrub and tree species have been selected to create a variety of habitat types within the development site. Flowering and fruiting larger shrubs contribute significantly to the overall net biodiversity by providing food and foraging opportunites for birds, bats and small mammals.

| Tree Planting Mix | | | |
|---|---|---|---|
| Botanical Name | Common Name | Mature Height | Origin |
| Angophora costata | Smooth barked Apple | 20m | Native |
| Angophora floribunda | Rough barked Apple | 25m | Native |
| Corymbia exima | Yellow Bloodwood | 10m | Native |
| Backhousia myrtifolia | Grey Myrtle | 3m | Native |
| Elaeocarpus reticlatus | Blueberry Ash | 8m | Native |
| Eucalyptus pilularis | Blackbutt | 25m | Native |
| Eucalyptus tereticornis | Forest Red Gum | 20m | Native |
| Melaleuca decora | Honey Myrtle | 10m | Native |
| **Shrubs & Tall Perrenials** | | | |
| Ceratopetalum gummiferum | NSW Christmas Bush | 4m | Native |
| Persoonia linearis | Narrow Lef Geebung | 3m | Native |
| Alpinia caerulea | Native Ginger | 1.5m | Native |
| Alocasia brisbanensis | Native Lily | 1.5m | Native |
| Bursaria spinosa | Blackthorn | 10m | Native |
| Myrsine variabilis | Muttonwood | 12m | Native |
| Ozothamnus diosmifolius | White Dogwood | 2m | Native |
| Pultenaea microphylla | Bush Pea | 2m | Native |


Angophora costata


Corymbia exima

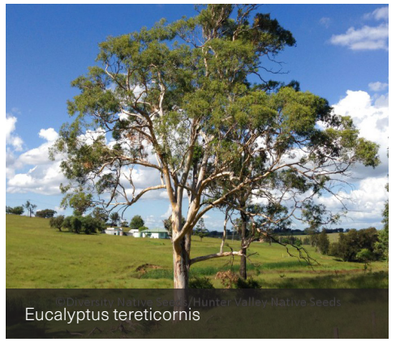

Angophora floribunda


Melaleuca decora

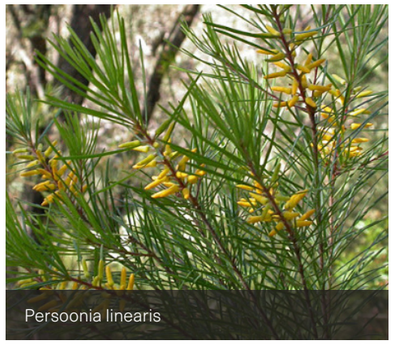

Backhousia myrtifolia


Elaeocarpus reticlatus


Eucalyptus pilularis


Eucalyptus tereticornis


Ceratopetalum gummiferum


Persoonia linearis


Alpinia caerulea


Bursaria spinosa


Alocasia brisbanensis


Myrsine variabilis


Ozothamnus diosmifolius


Pultenaea microphylla

# Planting Palette (Low to Ground)

## Introduction

The existing groundcover is sparse and dominated by leaf litter due to the dense eucalypt canopy of the plantation. The removal of the plantation provides an oppotunity to reintroduce a range of smaller understory planting and groundcovers for insects and snails to forage and feed.

| Understory | | | |
|---|---|---|---|
| Ozothamnus diosmifolius | Rice Flower | 1m | Native |
| Lomandra longifolia | Mat Rush | 1m | Native |
| Dianella caerulea | Blue Flax Lily | .5m | Native |
| Adiantum aethiopicum | Maidenhair fern | .5m | Native |
| Epacris pulchella | Sweet Epacris | 1m | Native |
| Banksia spinulosa | Hairpin Banksia | 1.5m | Native |
| Cymbopogon ambiguus | Native Lemon Grass | .5m | Native |
| **Groundcovers / Climbers** | | | |
| Dicondra repens | Kidney weed | 1m spread | Native |
| Hardenbergia violacea | False Sarsparilla | 2m spread | Native |
| Pandorea pandorana | Wonga wonga vine | 3m spread | Native |
| Violacea hederacea | Native violet | .5m spread | Native |
| Pratia purpurascens | White Root | .5m spread | Native |
| **WSUD** | | | |
| Themeda australis | Kangaroo Grass | .5m | Native |
| Juncus usitatus | Common Rush | .5m | Native |
| Lomandra 'Tanika' | Mat Rish | 1m | Native |
| Vittadinia pustulata | New Holland Daisy | .5m | Native |


Ozothamnus diosmifolius


Lomandra longifolia


Dianella caerulea

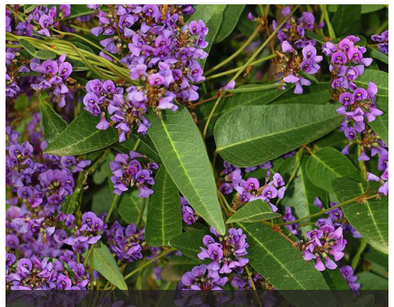

Adiantum aethiopicum

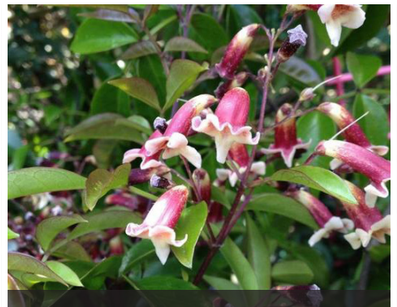

Epacris pulchella

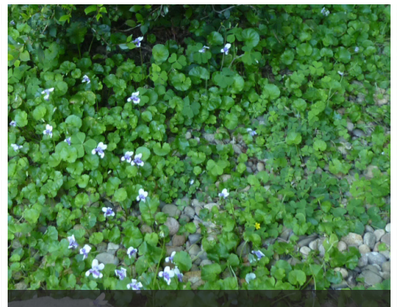

Banksia spinulosa


Cymbopogon ambiguus


Dicondra repens


Hardenbergia violacea


Pandorea pandorana

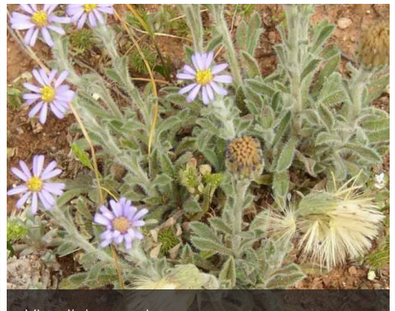

Violacea hederacea


Pratia purpurascens


Themeda australis


Juncus usitatus


Lomandra tanika


Vittadinia pustulata

# Conclusion

In summary the landscape design proposals meet the SEARS requirements as follows:

**Provide an integrated landscape design for the proposed development, including trees and vegetation to be removed.**

— Tree Removal Strategy drawing LA_1103 highlights trees to be removed as part of this application. Existing vegetation to be removed has been surveyed and is outlined in WSP Biodiversity Development Assessment Report.

— Where possible new landscaping will connect with existing areas of vegetation. In addition where possible existing trees have been retained and new understory planting has been proposed using species that integrate with existing vegetation communities.

**Detail use of native vegetation communities and plant species.**

— Using the recommended species outlined in WSP Tree Replacement Strategy, a palette of suitable plants and trees has been presented in Section 4 of this design report.

— Planting will be carefully located during the detail design stage to ensure successful and healthy plant communities thrive and contribute to the overall biodiversity and habitat area of the site.

**Detail how landscaping will reduce visual, privacy and amenity impacts on surrounding residential development.**

— The existing trees on Showground Road and along the residential northern boundary are all being retained and will continue to provide visual screening and privacy for residents next to the MDC and TAFE sites.

— Additional tree planting is also proposed around Building J to create a 'green screen'  to the building and help blend into the surrounding landscape.

**Consider proximity to electrical infrastructure and water pipes in landscaping selection.**

— Careful consideration has been given to tree locations to avoid potential conflicts with root zones and existing service pipes.

— The proposed substation has been located appropriately and coordinated with the architecture and landscape architectural proposals. Refer to Northrop Engineer's drawings for further detail on substation.

# ASPECT Studios