CONTEXT
LANDSCAPE ARCHITECTURE

REPTILE & AMPHIBIAN CONSERVATION CENTRE (RACC)

Landscape Development Application
July 2021

TARONGA CONSERVATION SOCIETY

CONTEXT acknowledges the Traditional Custodians of the land, and recognise Elders past and present. Through authentic engagement with Aboriginal people and the landscapes within which we work, we strive to deepen our understanding of Country and our relationship with its People.

CONTEXT
LANDSCAPE ARCHITECTURE

Reptile & Amphibian Conservation Center (RACC)
Taronga Zoo

Landscape Development Application

by

+

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for

Taronga Conservation Society

CONTENTS

Document Control

Rev	Date	Description	By	Approved
A	07.05.2021	Draft Concept	JR/BN	HD
B	29.06.2021	Concept	JR/BN	HD
C	30.06.2021	Landscape Development Application	JR/BN	HD
D	01.07.2021	Landscape Development Application	JR/BN	HD

Vision

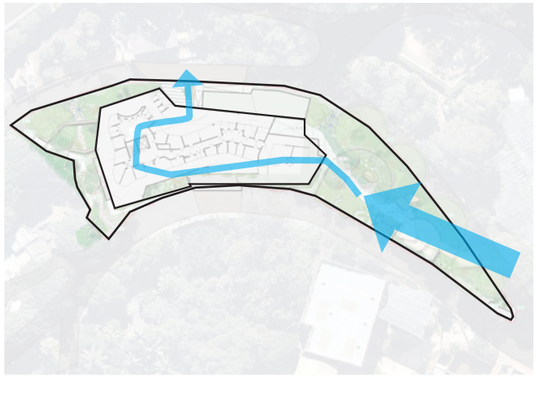
Our vision is to to create an emmersive and exciting visitor entry experience to the RACC facility, creating a sense of wonder and delight along the landscape journey. The role of the RACC entry will be critical to the guest's experience - sight, sound, smell, and touch.

The Forest Entry provides an opportunity to provide guests with a visually striking experience that immerses them in a lush forest habitat when they arrive at the entrance to the east of the site. Existing heritage elements and vegetation are preserved and integrated within the design.

The Gully is located to the west of the site and consists of a dry creek bed that re-intreprets the former creek with boulders and grasses that weave down through the site. Screen planting is provided between the RACC facility and the neighbouring Gorilla Enclosure.

The Green Facade provides an opportunity to integrate the RACC facility within the surrounding landscape, and will provide an interesting and unique green entrance to the southern side of the RACC facility.

Key Moves



1. CREATE AN ENTRY EXPERIENCE

Contribute to a sense of arrival through the provision of an exciting entry experince embedded within a forested landscape.

2. CREATE A STRONG IDENTITY

Natural materiality affirms the design and enhances the visitor experince. Planting and material selection builds upon and enhances the existing landscape character through the use of stone, boulders, and feature slate forms. Existing heritage elements and planting are retained and integrated within the design.

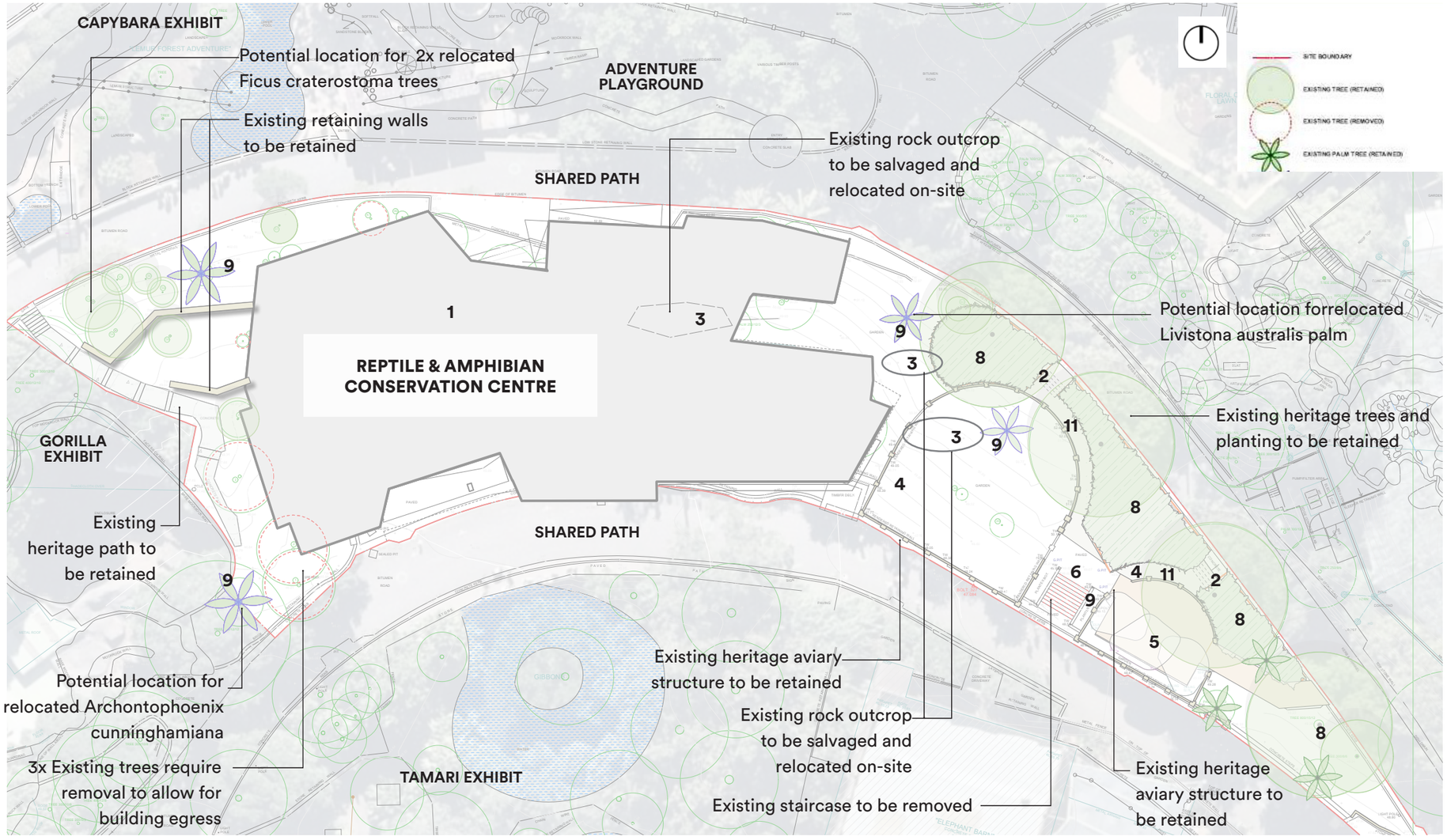
3. INTERPRETATION OPPORTUNITIES

Interpretation and land art opportunities are drawn upon through the use of a slate serpentine swale that frames the entrance path and is integrated with the re-interpreted rock outcrop. Entry planting is inspired by a Gondwana rainforest landscape. The new entry pathway contains geometric sawcuts that integrate with the diamond patterns on the architectural facade.

Site Analysis

SITE ANALYSIS SUMMARY

1. Proposed Reptile and amphibian conservation center (RACC)
2. Existing heritage concrete steps to be retained insitu
3. Existing rock outcrop to be relocated from within building footprint and re-interpreted as three pieces within the landscape.
4. Existing heritage aviary structure to be retained & modified to accomodate new pathway
5. Existing timber decking, seating and timber shade structures to be retained
6. Existing stairs to be removed. New concrete terrace seat proposed to edge of shared path to tie in with existing seat to east of the site.
7. Existing shared path for zoo pedestrians, maintenance and emergency vehicles
8. Existing heritage trees and camellia vegetation groups to be retained
9. Palm tree relocated from within building footprint
10. Existing vegetation retained where possible
11. Existing heritage pathway to be retained insitu

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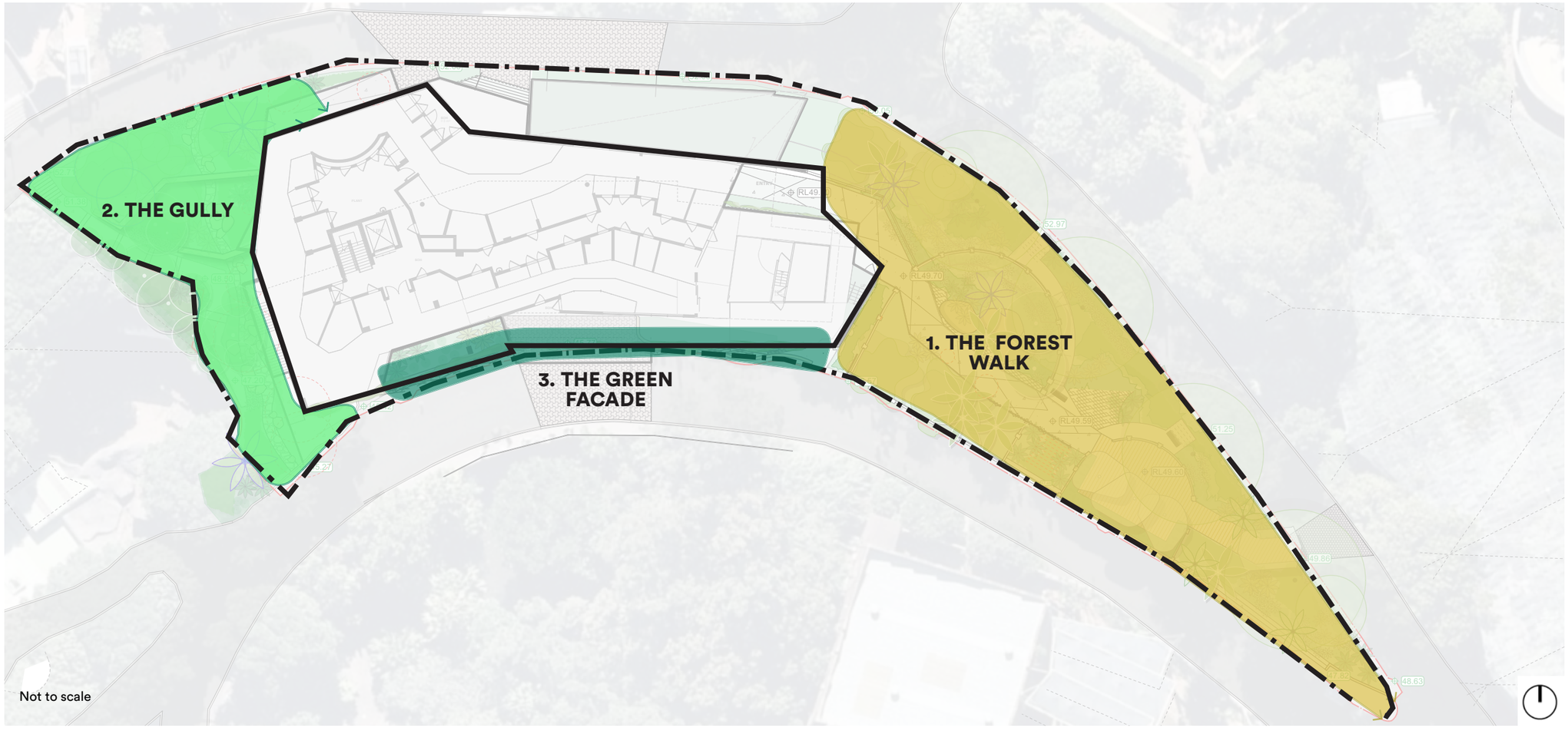
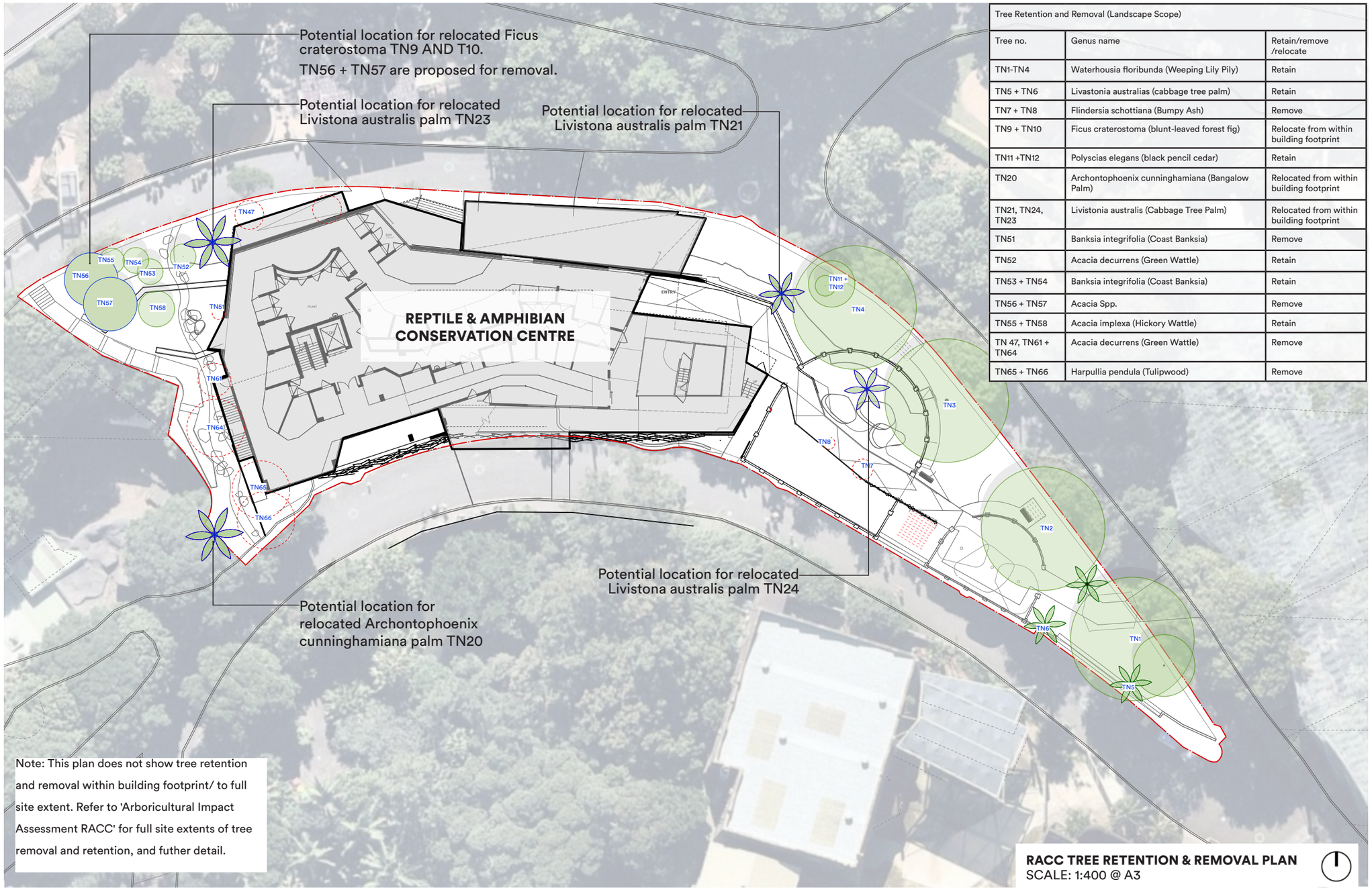
Landscape Structure Plan

The proposed landscape structure plan indentifies three distinct landscape precincts:

1. **The Forest Walk** - The main entrance to the east of the site & the entry point for visitors that arrive at the RACC
2. **The Gully** - The landscape to the western edge of the site, where the former creek is reinterpreted as a gully landscape
3. **The Green Facade** -to the southern side of a building, a green terrace is proposed to integrate the RACC facility within the surrounding landscape



Tree Retention and Removal Plan

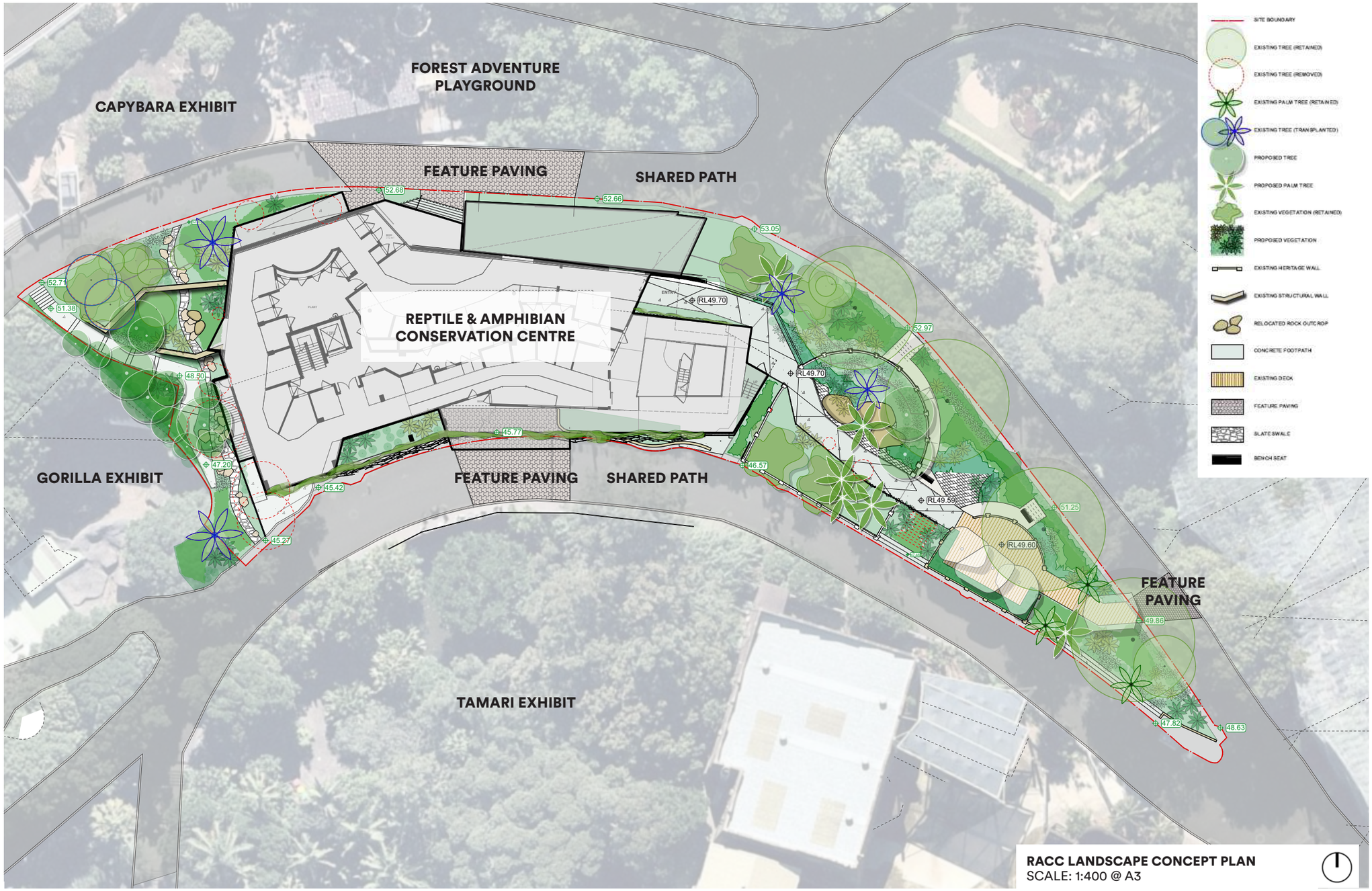


Tree Retention and Removal (Landscape Scope)		
Tree no.	Genus name	Retain/remove /relocate
TN1-TN4	Waterhousia floribunda (Weeping Lily Pily)	Retain
TN5 + TN6	Livastonia australias (cabbage tree palm)	Retain
TN7 + TN8	Flindersia schottiana (Bumpy Ash)	Remove
TN9 + TN10	Ficus craterostoma (blunt-leaved forest fig)	Relocate from within building footprint
TN11 +TN12	Polyscias elegans (black pencil cedar)	Retain
TN20	Archontophoenix cunninghamiana (Bangalow Palm)	Relocated from within building footprint
TN21, TN24, TN23	Livistonia australis (Cabbage Tree Palm)	Relocated from within building footprint
TN51	Banksia integrifolia (Coast Banksia)	Remove
TN52	Acacia decurrens (Green Wattle)	Retain
TN53 + TN54	Banksia integrifolia (Coast Banksia)	Retain
TN56 + TN57	Acacia Spp.	Remove
TN55 + TN58	Acacia implexa (Hickory Wattle)	Retain
TN 47, TN61 + TN64	Acacia decurrens (Green Wattle)	Remove
TN65 + TN66	Harpullia pendula (Tulipwood)	Remove

Note: This plan does not show tree retention and removal within building footprint/ to full site extent. Refer to 'Arboricultural Impact Assessment RACC' for full site extents of tree removal and retention, and futher detail.

RACC TREE RETENTION & REMOVAL PLAN
SCALE: 1:400 @ A3

Concept Plan



RACC LANDSCAPE CONCEPT PLAN
SCALE: 1:400 @ A3

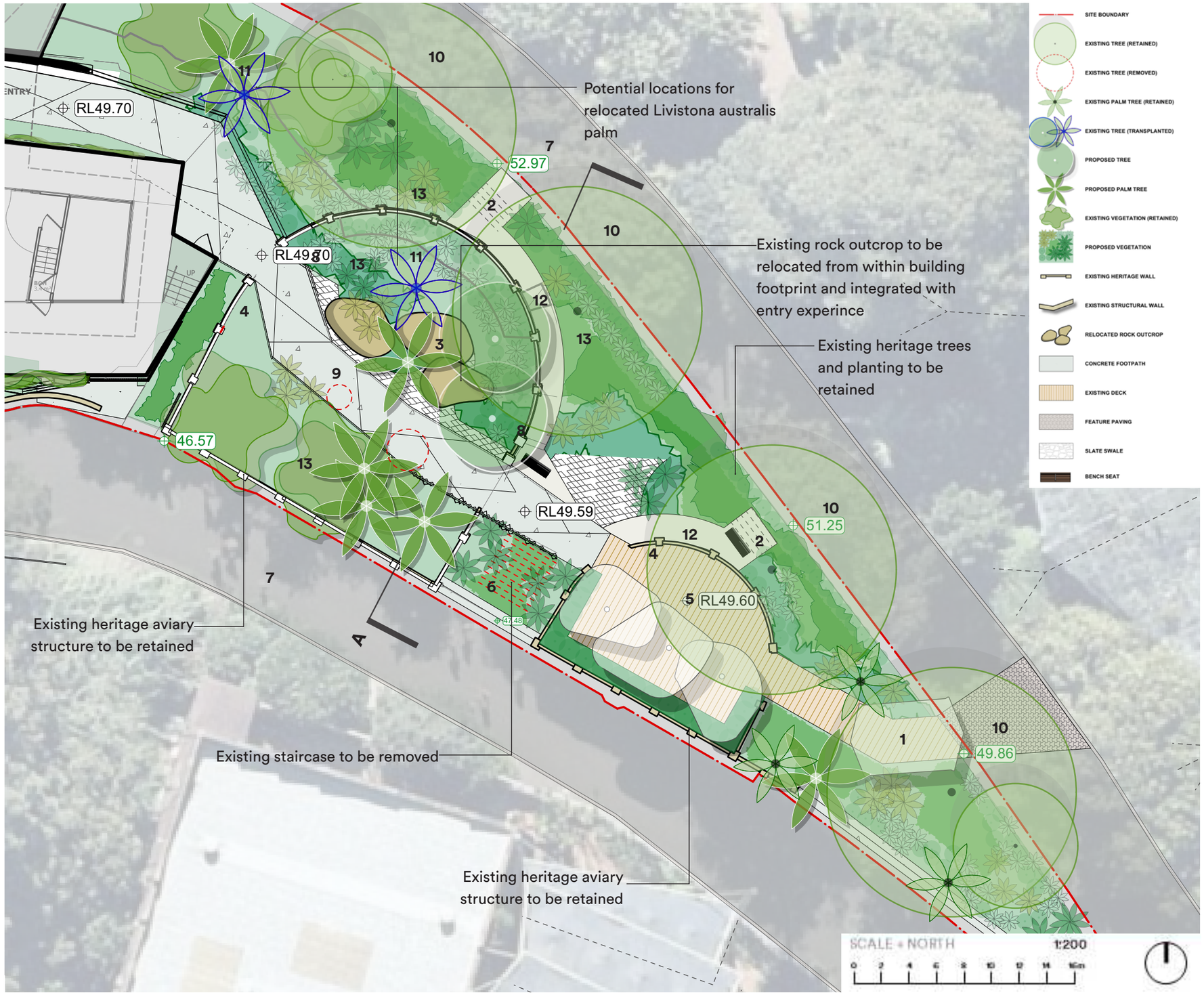
THE FOREST WALK

CONTEXT
LANDSCAPE ARCHITECTURE

Plan - The Forest Walk

CONCEPT SUMMARY

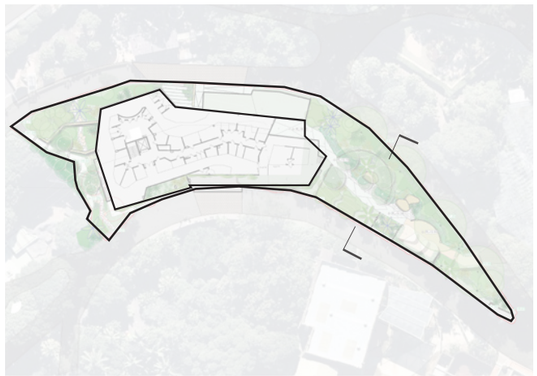
1. Reptile and amphibian conservation center (RACC) entrance structure
2. Existing heritage concrete steps to be retained insitu. Barrier to be installated to top of steps at project boundary.
3. Existing rock outcrop to be relocated from within building footprint and re-interpreted as three pieces within the landscape. Rock to be integrated with feature slate swale
4. Existing heritage aviary structure to be retained & modified to accomodate new pathway
5. Existing timber decking and timber shade structures to be retained
6. Existing stairs to be removed. New concrete terrace seat proposed to edge of shared path to tie in with existing seat to east of the site.
7. Existing shared path for zoo pedestrians, maintenance and emergency vehicles
8. Feature forest walk fern planting eitherside main entrance pathway
9. Main entrance pathway with decorative sawcuts interpretive of reptilian scale
10. Existing heritage trees to be retained
11. Palm tree relocated from within building footprint
12. Existing heritage pathway to be retained insitu
13. Shrub planting to aviary structures to be kept low to ensure views of the structure are retained

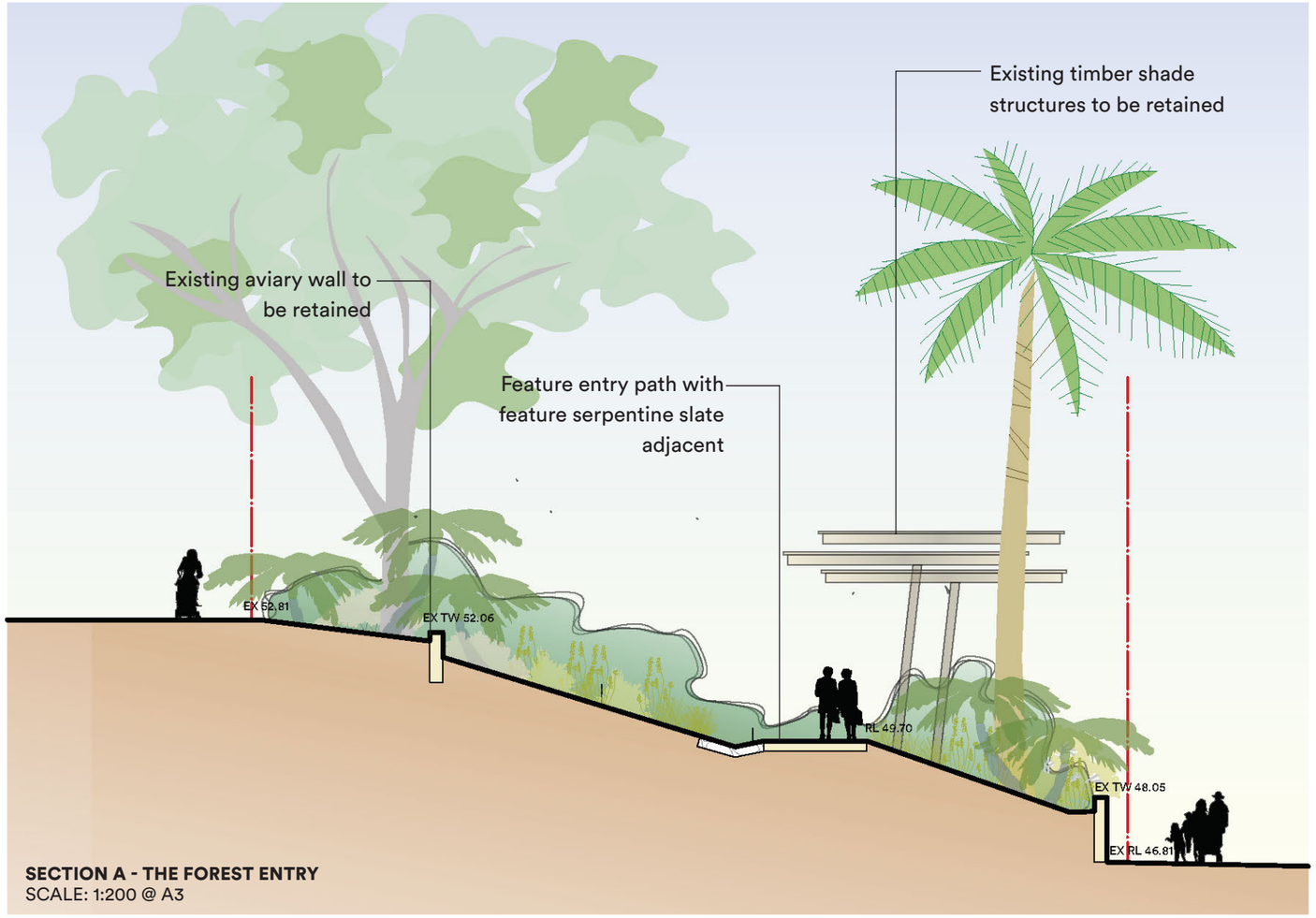


The Forest Entry -Section

Landscape Objectives:

1. New feature paving at RACC entry to consist of concrete with saw-cut patterns to tie in with the design of the architectural facade
2. Forest planting to create emmersive entry experience
3. Feature slate to sides of entrance path in sinuous form
4. Existing significant heritage rock outcrop to be removed from within building footprint and re-interpreted within the landscape at the RACC entry.
5. Existing heritage aviary walls to be retained and adjusted to allow for new entry path.
6. Existing timber shelters, seating and timber decking to be retained

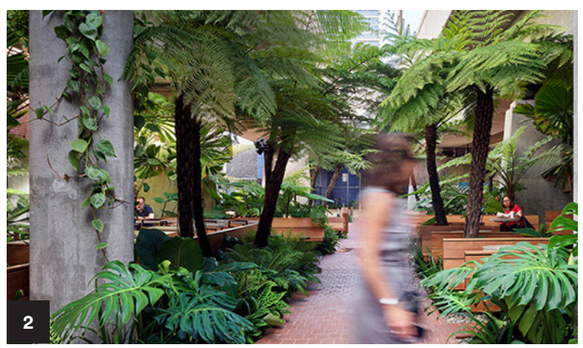




SECTION A - THE FOREST ENTRY
SCALE: 1:200 @ A3

EXISTING SHARED PATH	EXISTING AVIARY WALL & PROPOSED VEGETATION	FEATURE SLATE SWALE	PATH ~3.5m	RETAINED & PROPOSED VEGETATION	EXISTING SHARED PATH


1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Planting - The Forest Walk

Planting Schedule				
Trees				
Code	**Botanical Name**	**Common Name**	**Spacing**	**Mature Size**
CM	Cordyline manners-suttoniae	Giant Palm Lily	-	5m (h) x 1-2 (w)
CP	Cordyline petiolaros	Broad-leaved Palm Lily	-	5-7m (h) x 1-2 (w)
CA	Cyathea australis	Rough Tree Fern	-	2-4m (h) x 2m (w)
LM	Linospadix monostachyos	Walking Stick Plam	-	3-5m (h) x 1-2m (w)
Entry Planting (Shrubs, Grasses & Groundcovers)				
-	Macrozamia-communis	Burrawang	1/m2	1.5-2m (h) x1.5-2m (w)
-	Correa reflexa	Native Fuchsia	5/m2	500 (h) x 1m (w)
-	Dianella revoluta	Blue-flax Lily	6/m2	1m (h) x 1m (w)
-	Liriope muscari	Evergreen Giant	6/m2	500 (h) x 500 (w)
-	Lomanra longifolia	Mat-rush	4/m2	1.2 (h) x 1.2 (w)
-	Rhagodia spinescens	Spiny Saltbush	4/m2	1m (h) x 1.5m (w)
-	Platycerium spp	Staghorn Fern	-	0.6m (h) x 0.5m (w)
-	Themeda australis	Kangaroo Grass	6/m2	500 (h) x 500 (w)
-	Westringia 'Grey Box'	Coastal Rosemary	4/m2	450 (h) x 450 (w)
-	Viola hederacea	Native Violet	6/m2	0.2m (h) x 1m (w)


Cordyline petiolaris (Broad-leaved Palm Lily)


Cyathea australis (Rough Tree Fern)


Cordyline manners-suttoniae (Giant Palm Lily)


Platycerium superbum (Staghorn Fern)


Lomandra longifolia (Lomandra)


Macrozamia communis (Burrawang)

The Forest Walk

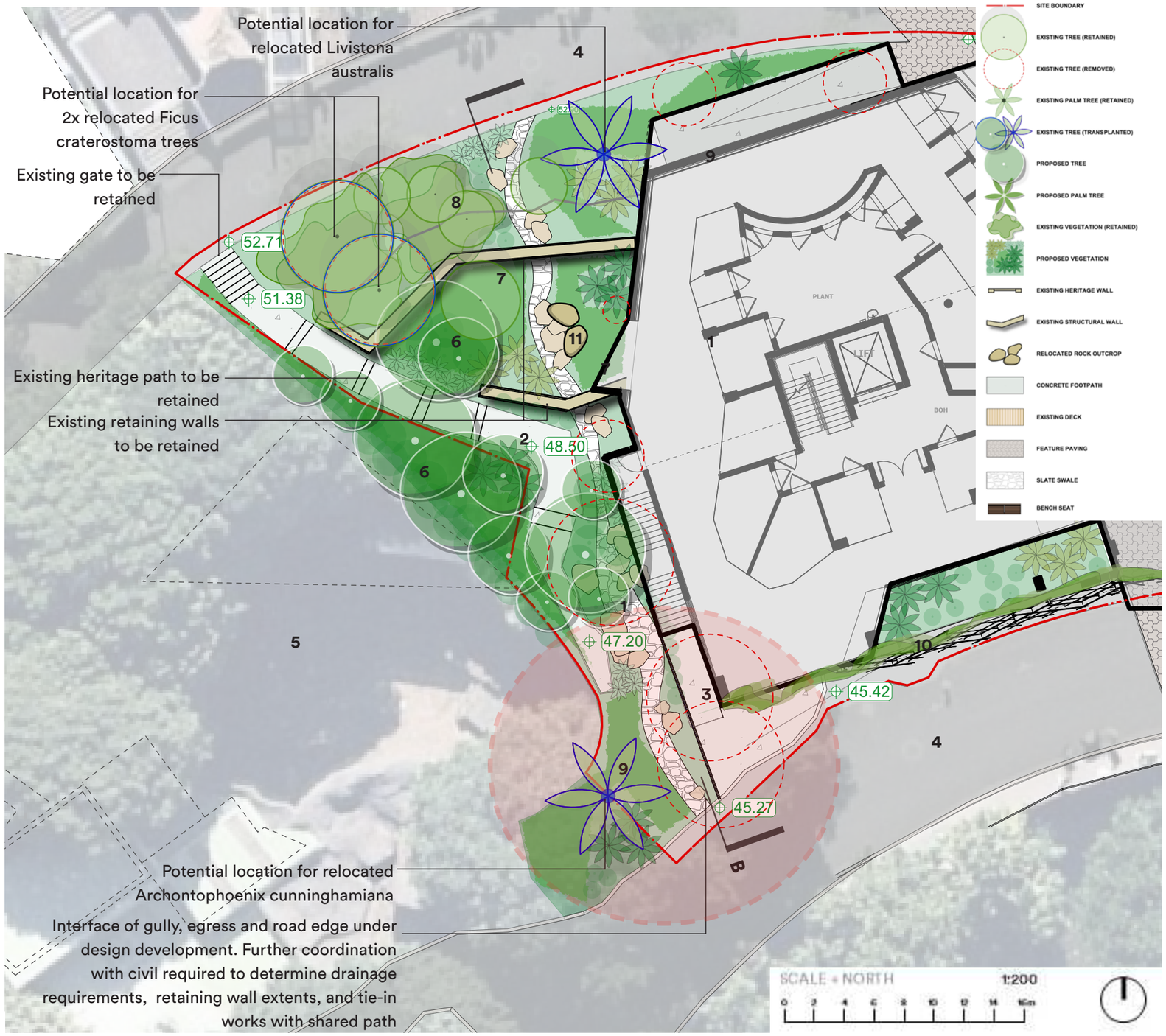
A1 THE GULLY

CONTEXT
LANDSCAPE ARCHITECTURE

Plan - The Gully

CONCEPT SUMMARY

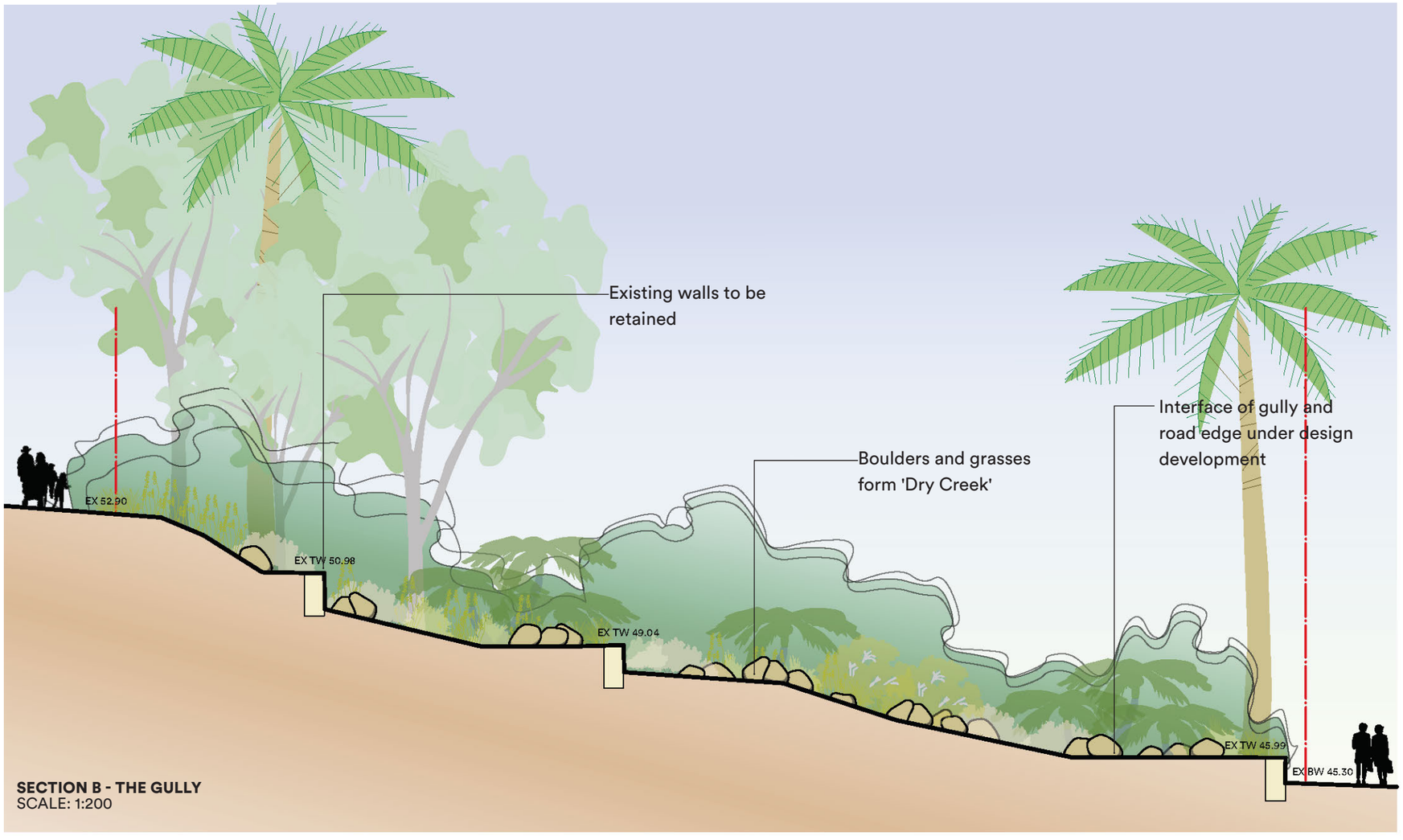
1. Dry creek bed / gully to represent historic gully within the site. Rock and boulders weave their way through planting from the top of the site to the bottom, terminating at the road edge.
2. Existing heritage path and steps to be retained insitu
3. Reptile and amphibian conservation center (RACC) egress stairs / path
4. Existing shared path for zoo pedestrians, maintenance and emergency vehicles
5. Existing Gorilla exhibit to west of the RACC site
6. Screen planting to edge of boundary between gorilla enclosure and RACC site
7. Existing gabion walls to be retained and adjusted to suit new architectural extents
8. Existing trees + planting retained where possible
9. Palm tree relocated from within building footprint
10. Green facade. Climbing plants planted at base of mesh fixed to building to grow up tensioned wire cables
11. Existing rock outcrop within avairy structure to east of site to be salvaged and repurposed within dry creek bed.



Section - The Gully

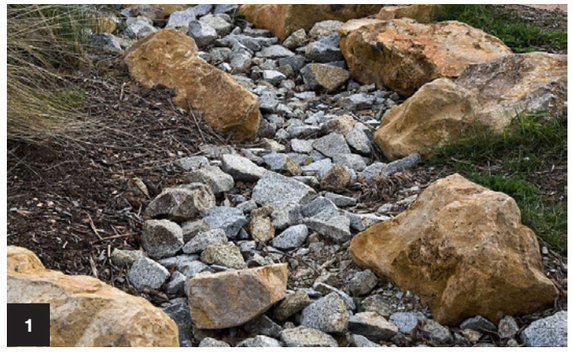
Landscape Objectives:

1. Proposed 'Dry Creek Bed' to represent historic creek that was located on site. Boulders and planting selection to create natural gully aesthetic
2. Exisitng site levels, path and retaining walls are proposed for retention. Viability for wall retention to be determined during construction.
3. Palm trees relocated from within building footprint to sit within gully planting
4. Screen planting within gully to conceal views to the adjacent Gorilla exhibit



SECTION B - THE GULLY
SCALE: 1:200

EXISTING SHARED PATH	TRANSPLANTED PALM AMONGST VEGETATION	EXISTING STRUCTURAL WALL & PROPOSED VEGETATION	PROPOSED VEGETATION & ROCK LINED GULLY	TRANSPLANTED PALM	EXISTING SHARED PATH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4

Planting - The Gully

Planting Schedule			
Trees			
Code	**Botanical Name**	**Common Name**	**Mature Size**
CA	Cyathea australis	Rough Tree Fern	2-4m (h) x 2m (w)
BS	Banksia serrata	Saw Banksia	5-10m (h) x 3-4m (w)
SA	Syzigium australe	Creek Lilly-Pilly	8m (h) x 6m (w)
Entry Planting (Shrubs, Grasses & Groundcovers)			
-	Adiatum aethiopicum	Common Miadenhair Fern	0.5m (h) x 0.5m (w)
-	Asplenium australasicum	Birds Nest Fern	1m (h) x 1m (w)
-	Blechnum nudum	Fishbone Water Fern	1-m (h) x 1m (w)
-	Calochelaena dubia	Bracken Fern	1-2m (h) x 1-1.5m (w)
-	Ceratopetalum gummiferum	NSW Christmas Bush	4m (h) x 3m (w)
-	Dianella caerulea	Blue-Flax Lily	1m (h) x 1m (w)
-	Dichondra repends	Kidney Weed	0.1m (h) x 1-2m (w)
-	Doodia aspera	Prickly Rasp Fern	0.4m (h) x 0.6m (w)
-	Doryanthes excelsa	Gymea Lily	2-4m (h) x 2m (w)
-	Lomandra longifolia	Lomandra	1.2m (h) x 1.2m (w)
-	Viola hederacea	Native Violet	0.2m (h) x 1m (w)

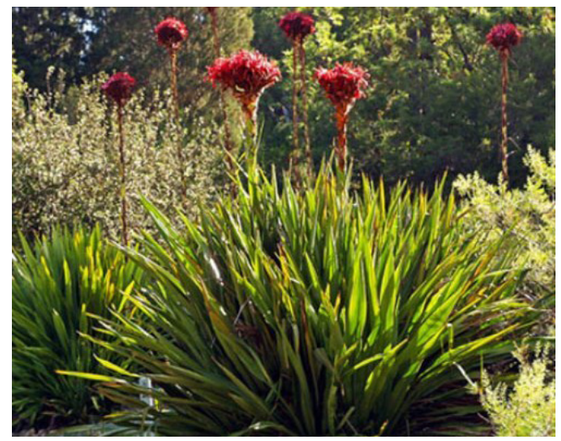

Asplenium australasicum (Bird's Nest Fern)


Lomandra longifolia (Lomandra)


Ceratopetalum gummiferum (NSW Christmas Bush)


Cyathea australis (Rough Tree Fern)


Banksia serrata (Saw Banksia)


Doryanthes excelsa (Gymea Lily)

18
REPTILE & AMPHIBIAN CONSERVATION CENTRE (RACC) / LANDSCAPE DEVELOPMENT APPLICATION JULY 2021

4.1 THE SOUTHERN GREEN FACADE

CONTEXT
LANDSCAPE ARCHITECTURE

The Southern Green Facade

A green facade is a system that mimics self-clinging plants but uses an engineered, trellis system to support climbing plants on the vertical facade of a building.

Green facades are made up of a series of elements fixed to a vertical structure. These typically include:

- Support structure for plants to grow on
- Growing medium
- Drainage
- Plants
- Irrigation

Drainage

Subsoil drainage will be included in in-ground systems. This is especially important when the planter bed is against a building and surrounded by pavement.

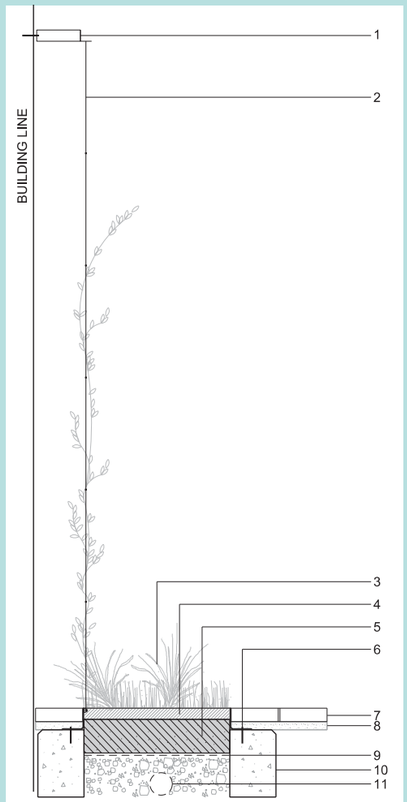
A subsoil drainage pipe (ag line or slotted PVC pipe) embedded within a gravel layer will prevent water-logging

Irrigation

Planting to be irrigated with sub-soil drip system with moisture sensors. Irrigation design to be undertaken

Typical construction

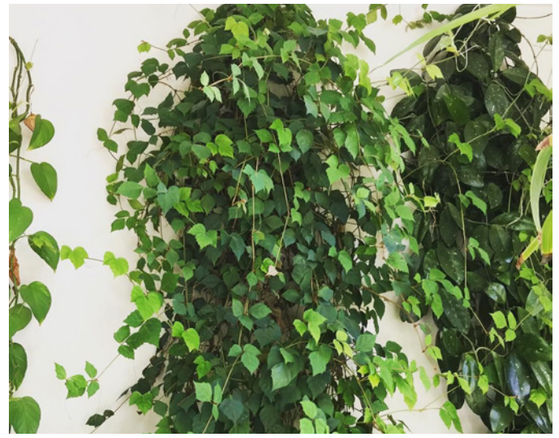
Green facade (cable or wire net system)



1 BUILDING ANCHOR AND BRACKET SYSTEM
2 STAINLESS STEEL CABLE OR WIRE NET
3 PLANTING
4 MULCH (50mm)
5 SOIL TYPE 1
6 GALVANISED STEEL ANGLE
7 PAVING
8 BEDDING COURSE
9 GEOFABRIC FILTER LAYER
10 CONCRETE HAUNCH
11 SUBSOIL DRAINAGE PIPE WITHIN 20mm GRAVEL (NO FINES)

(Source: OEH, 2015)

Cissus antarctica (Kangaroo Vine)



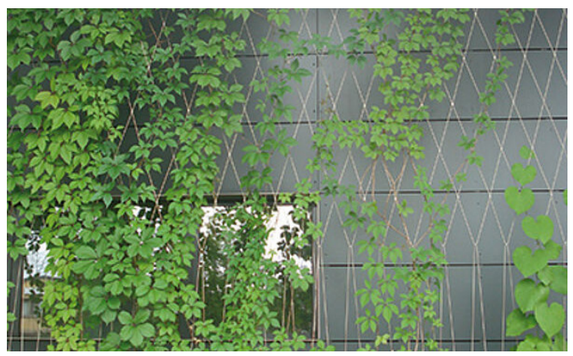
Cissus antarctica (Kangaroo Vine)

Thunbergia grandiflora (Blue Trumpet Vine)

Aphanopetalum resinosum (Gum Vine)

Planting Schedule			
Climbing Plants (Native)			
Code	**Botanical Name**	**Common Name**	**Mature Size**
-	Cissus antartica	Kangaroo Vine	3-4m (h) x 5-6m (w)
	Aphanopetalum resinosum	Gum Vine	3m (h) x 3m (w)
Climbing Plants (Exotic)			
-	Thunbergia grandiflora	Blue Trumpet Vine	1m (h) x 1m (w)

The Southern Green Facade


Webnet panel mesh system


Webnet panel mesh system


Individual tensioned wire cable system


Individual tensioned wire cable system

Internal Planting

Level 1 Internal Planting

Entrance

- Support structure for plants to grow on
- Growing medium
- Drainage
- Plants
- Irrigation

Planter Box

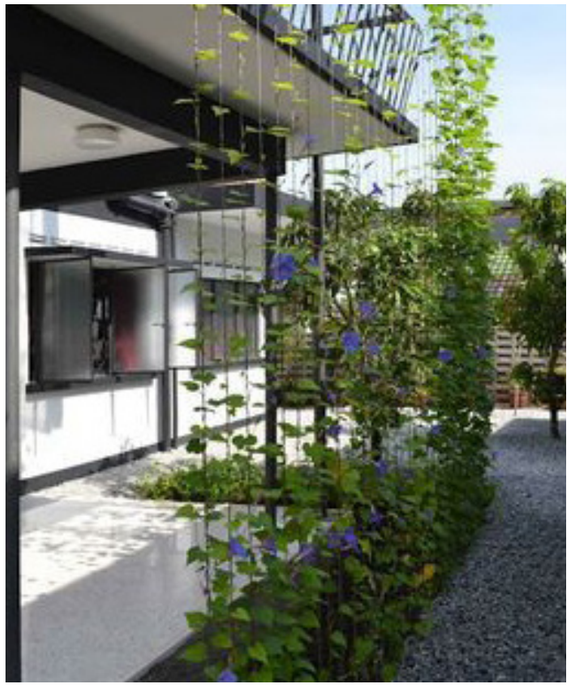
- Growing medium
- Drainage
- Plants
- Irrigation

Level 1 Internal Planting Zones

Cordyline stricta (Slender Palm Lily)

Blechnum nudum (Fishbone Waterfern)

Epipremnum pinnatum (Native Monstera)



Feature entrance climbing trellis

Feature entrance climbing trellis

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