URBIS

101 ALBERT STREET

LANDSCAPE CONCEPT REPORT

24/04/2023
REV [D]

All changes clouded

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2023/1374

Date: 06-Nov-2023

Queensland Government

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2023/1374/2

Date: 18-Jun-2025

Queensland Government

AMENDED IN RED

By: Essen Joseph

Date: 18-Jun-2025

Queensland Government

Urbis acknowledges Aboriginal and Torres Strait Islander peoples as the traditional custodians of the lands on which we do business and we pay our respects to Elders, past and present.

We acknowledge the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

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CONNECTING WITH COUNTRY

APPROACH AND UNDERSTANDING

The following is a snapshot of the approach towards the development of a holistic approach to connection with country that has been developed in partnership with the client, Blacklash and the design team.

Our team has sought the review and commentary on this approach from the local elders and are thankful for the opportunity to listen, learn and understand the most appropriate manner in which to represent their culture, language and country.

The design team thanks the traditional owners of this land for the opportunity to connect with each other which is a process we have taken seriously.

THE AIM OF THIS STRATEGY IS TO

UNDERSTAND THE GOORI CULTURAL ECOSYSTEM

UNDERSTAND COUNTRY

INDIGENOUS DESIGN PRINCIPLLES

Grounding People In Country

Provide opportunities for people to connect physically, emotionally, visually and spiritually to the natural environment

Materiality

Using site specific materiality through contemporary expressions to tell stories of place, culture and traditional technologies.

Care for Country

Country includes land, waters, and sky. It can be tangible or intangible aspects, knowledge and cultural practices, belonging and identity, well-being and relationships. People, flora and non-breathing entities are part of Country.

Eco-system

The city should be fully enriched by nature and have buildings made from organic and local materials that encourage natural growth and wildlife.

Sustain Natural Ecology

A program of restoration and re-vegetation is proposed to sustain the natural ecology of the site.

Geographical Markers

Rivers, Mountains, creeks.

Expressing geographical markers through orientation, form and envelop of the architecture.

Journey & Threshold

Entry to the site considers a journey of arrival, either by land or sea - creating a sense of threshold and space for reflection and grounding in place.

Shared Knowledge Embedded in Place

Use place as a physical resource for sharing knowledge and educating about history and culture through the built environment.

UNDERSTANDING PLACE

PRE COLONISATION

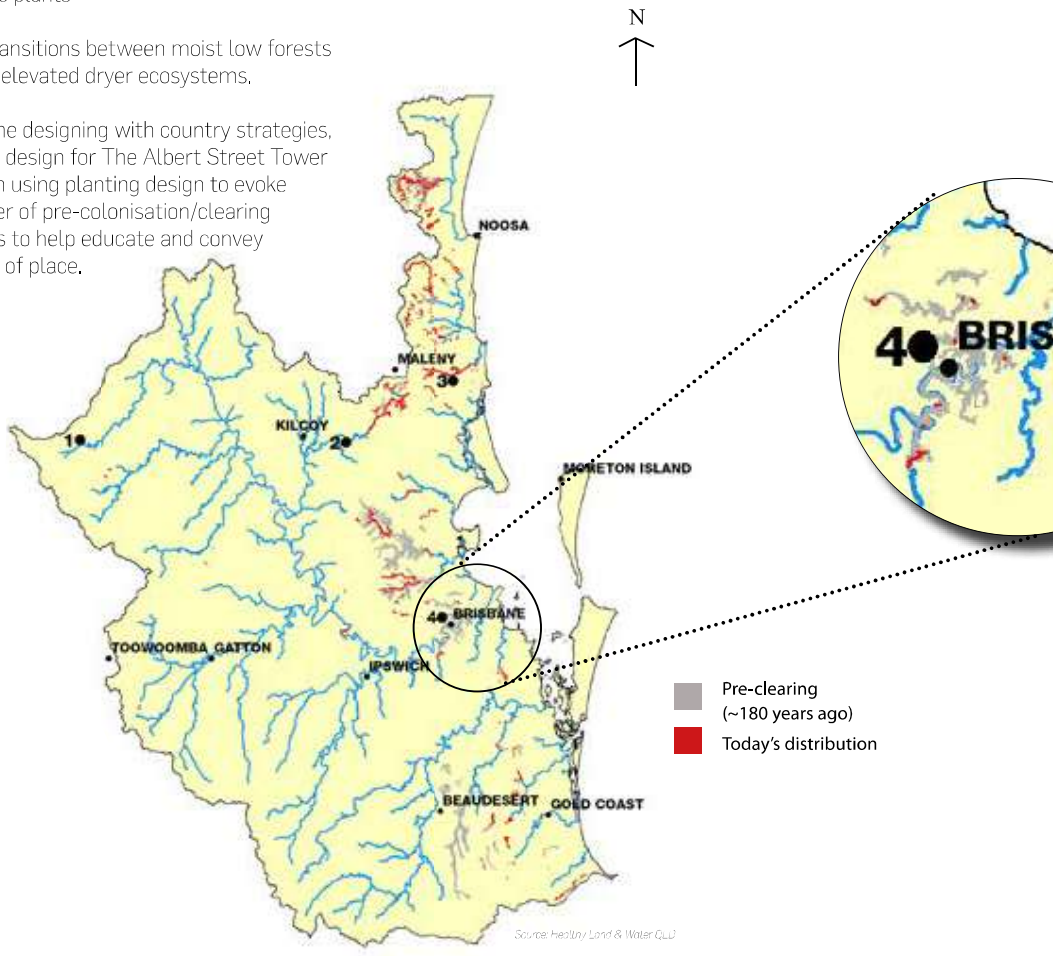
According to mapping from Healthy Land & Water, it is highly likely that pre-clearning the site of The Albert Street Tower was a part of a regional ecosystem known as Gallery Rainforest of Alluvial Plains.

Key character istics of this ecosystem type is:

- Snaking watercourses
- Dense and lush plant communities
- Huge Fig Trees
- Extensive climbing vines
- Epiphytic plants
- Palms
- Sharp transitions between moist low forests to more elevated dryer ecosystems.

As part of the designing with country strategies, the planting design for The Albert Street Tower will focus on using planting design to evoke the character of pre-colonisation/clearing eco-systems to help educate and convey authenticity of place.

A likely present day example of what the natural landscape of the site of The Albert Street Tower could have been is Enoggra Creek.
(see images on right)



PLANTING DESIGN STORY

THE HABITATS

The inspiration for the planting design of The Albert Street Tower comes from 3 very distinct ecologies/habitats of South East Queensland:

The Peak

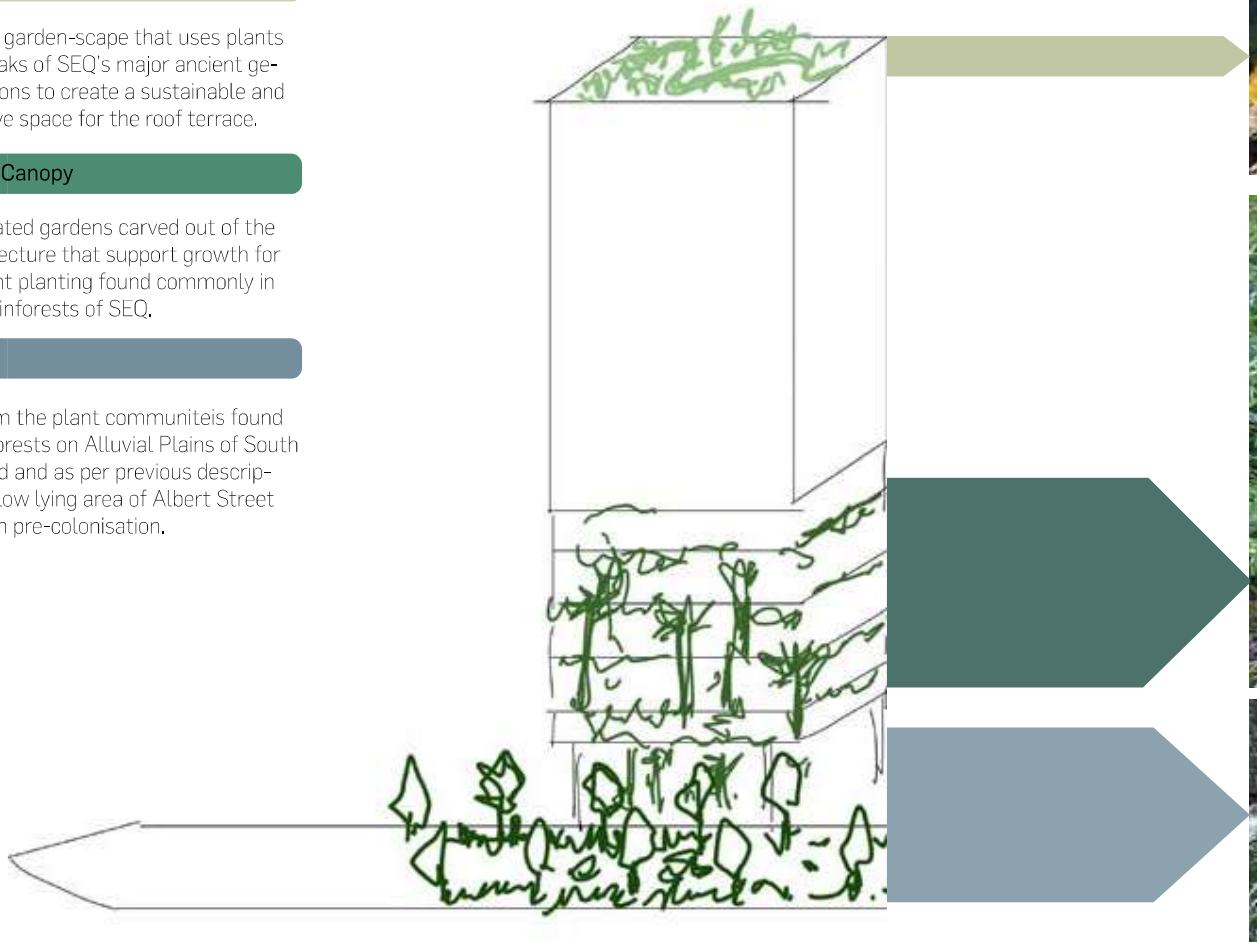
A dry and hardy garden-scape that uses plants found on the peaks of SEQ's major ancient geological formations to create a sustainable and visually evocative space for the roof terrace.

The Rainforest Canopy

A series of elevated gardens carved out of the building's architecture that support growth for low light tolerant planting found commonly in deep Gallery Rainforests of SEQ.

The Creek

Taking cues from the plant communiteis found in Gallery Rainforests on Alluvial Plains of South East Queensland and as per previous descriptions, what the low lying area of Albert Street would have been pre-colonisation.



PLANTING STRATEGY

THE PEAK

DESIGN INTENT

- 100% native SEQ plant community
- Create an experience of a mountain peak landscape
- No walls
- Pathways in a landscape - not gardens between pathways
- Bare feet on the grass
- Moments to be immersed, surrounded and shaded by plants
- All natural materials
- Moments of exposure heightening the sense of vastness
- Reconnecting people to sky
- DRY
- HARDY
- TEXTURES
- LIGHT
- EXPOSURE
- PROSPECT
- RUGGED
- LOOSE
- WEATHERED
- SWAYING IN THE BREEZE










PLANTING STRATEGY
THE RAINFOREST AND CREEK

DESIGN INTENT

- Plants that thrive in shade
- Evoke a sense of overgrown wildness
- Grow plants on every possible surface
- Integrate the element of water
- Diersity in scale and texture
- Deep Greens
- Misty
- Wet
- Climbing
- Dense
- Dripping
- Tall
- Dark
-









DESIGNING FOR PLANT LIFE

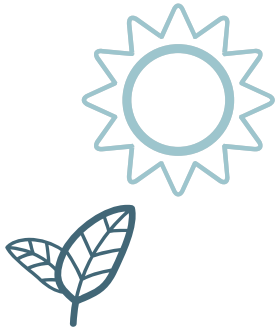
KEY CONSIDERATIONS

Plant life is a fundamental pillar in the appearance of The Albert Street Tower.

It is important that the planting design of this project is approached in a responsible and detailed manner that makes every effort towards a plant community that thrives not just survives.

The landscape architecture team have developed a set of key considerations that have been developed from lessons learnt desinigng habitats for plants to thrive in and around built form.

These key considerations will be developed further as the projects evolves and be used as methods for testing the suitability of plant species for specific locations.



UV EXPOSURE

- The minimum required amount of UV required for photosynthesis
- How much UV exposure across proposed planting areas
- Suitable plant species

WIND

- Where does the most damaging wind come from
- How much and for how long
- Strategies to mitigate wind exposure to sensitive plants

WATER

- What types of irrigation methods
- Irrigation demand
- Rainwater harvesting

SOIL PROFILE

- Soil science for on-structure gardens
- Additives for nutrients and/or water retention
- Promotion of beneficial soil microbes and worm life

FOOD

- low-tech in garden composting methods for promoting soil nutrients without increasing compaction
- utilising food waste

MAINTENANCE

- Accessibility
- Regularity
- Key tasks

KEY CONSIDERATIONS

UV EXPOSURE

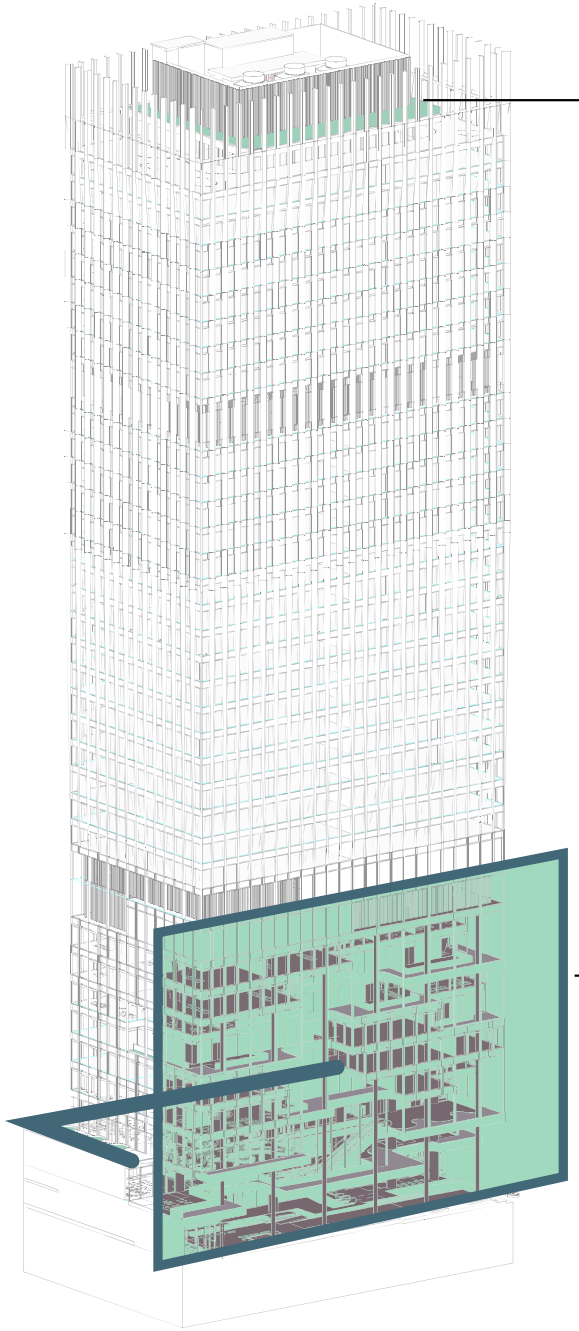
Whilst sun/shade analysis is appropriate to understand basic exposure conditions of a space, the true measure towards understanding the conditions of a space for the photosynthesis requirements of plants is Ultraviolet mapping.

Ultraviolet mapping allows the landscape architecutre team to understand the approximate levels of LUX that will be provided by the sun across various times in the day and seasons.

As a rule of thumb, the landscape architecture team uses 2000lux as the minimum requirement for plants to be able to photosynthesise. The amount of hours of 2000lux required for baseline photosynthesis varies across different species and needs to be assessed on a case by case basis.

The importance of providing the baseline photosynthesis for the plants is to ensure they have some longevity over a longer period of time than that of a plant indoors for example which requires regular rotation from inside to out.

The landscape architecture team has used the 3D Architecutre model and software to develop a basic understanding of LUX levels as a starting point for planting species design. Having a baseline understanding of LUX levels at this phase in the design process allows for identification of challenging locations with low LUX and overarching strategies towards mitigating plant health issues.



The full exposure of the roof is well suited to 'The Peak' planting species palette.

The 'eroded' podium garden terraces are a particular area of focus to ensure that the plant species selected will deal with the estimatedLUX levels.

The rear garden beds are an area of focus given the overshadowing of existing surrounding built form.

UV EXPOSURE

HOW TO READ THIS UV STUDY

These ultraviolet studies are intended to give the design team a preliminary understanding of where there may be areas of proposed garden that are likely to be lower than 2000 LUX.

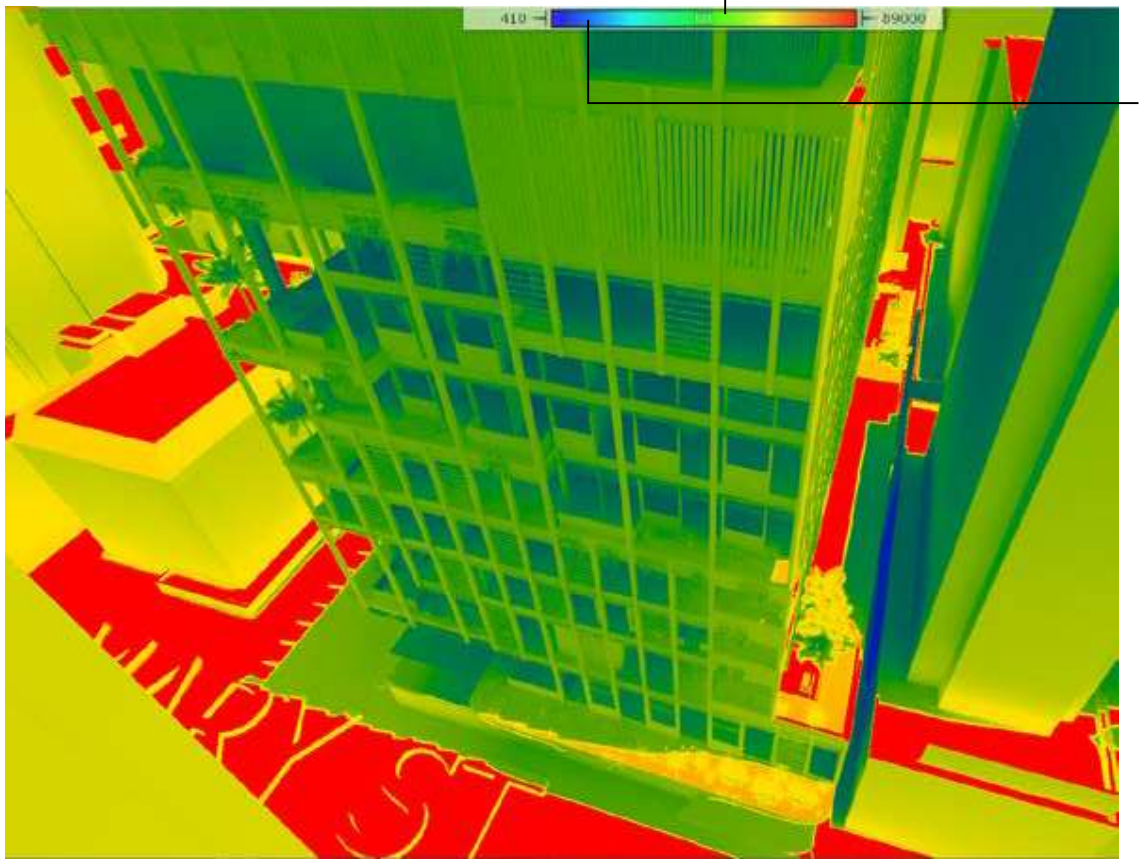
The view to the right is an example of the output of these studies.

Any area showing in the darkest blue has the potential to be lower than 2000 LUX at a given date and time in the year. These areas will be the most challenging to ensure that plants are given the minimum amount of light for a minimum period of time throughout the year to allow them to photosynthesise.

Reflectivity from glass and other surrounding materials is not captured by the software in this study and it can be assumed that UV light will be further increased with the reflectivity of these materials.

This study coupled with the use of low light species where required demonstrates the best possible approach the design team can provide at this stage of the project. Further risk mitigation issues relating low light and plants for future phases includes:

- On-site measurements of lux levels during base build
- Designing the planting palette with a combination of native and exotic low light plants proven to perform in low light situations
- Specifying the required light levels that plants in the nursery should be grown in to acclimatise them as best as possible at least 1 growing season prior to install



Each lux gradient scale bar is unique to each image. Use the gradient scale bar on each image to understand the approximate lux levels.

2000 lux is likely to sit in the mid blue zone

LUX LEVELS

PODIUM

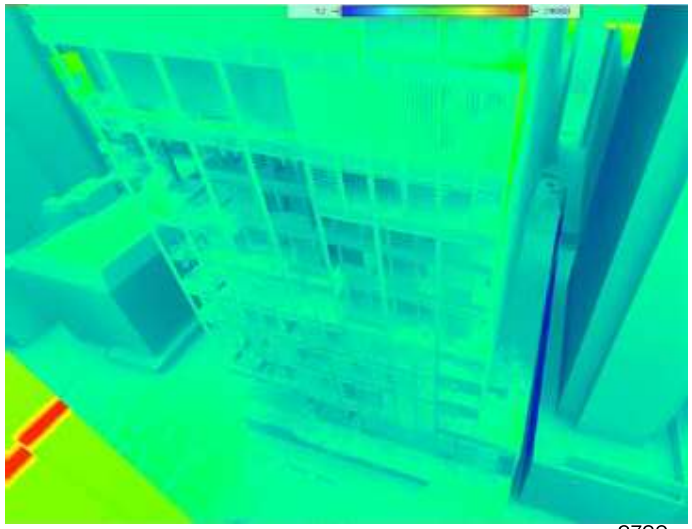
SUMMER SOLSTICE

MARY STREET FACADE
SOUTHEAST ELEVATION

SUMMARY:

LIGHT LEVELS ARE SUITABLE

In summer the planters on the Mary Street facade are showing that they may recieve up to 8 hours of ambient UV light above 2000 LUX. This will need to be confirmed in future phases by an on-site light measure. This level of lux and exposure time is suitable to low light rainforest species that are intended to be used in the podium terrace gardens.



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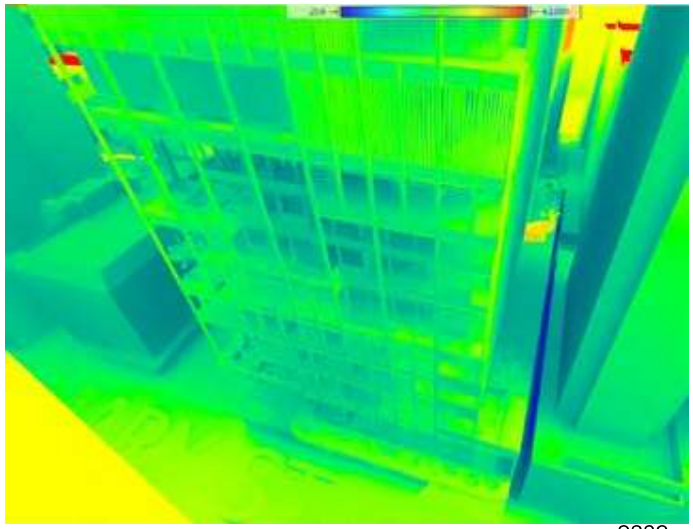

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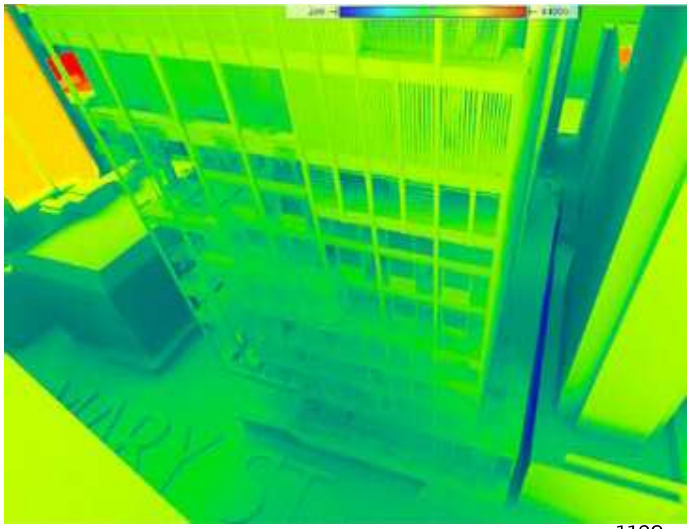

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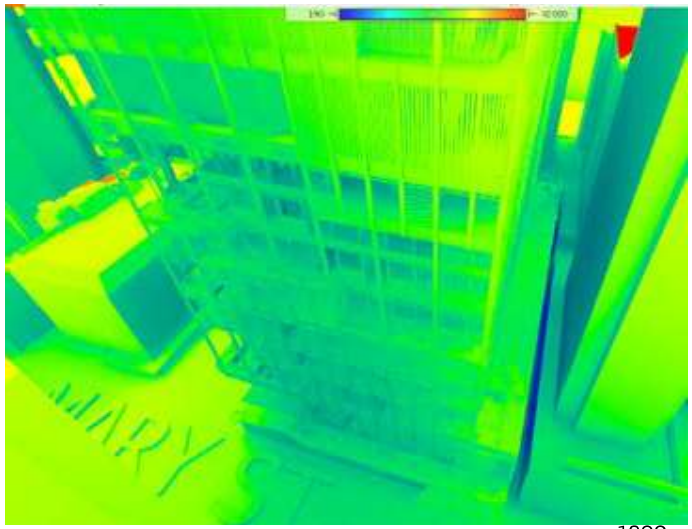

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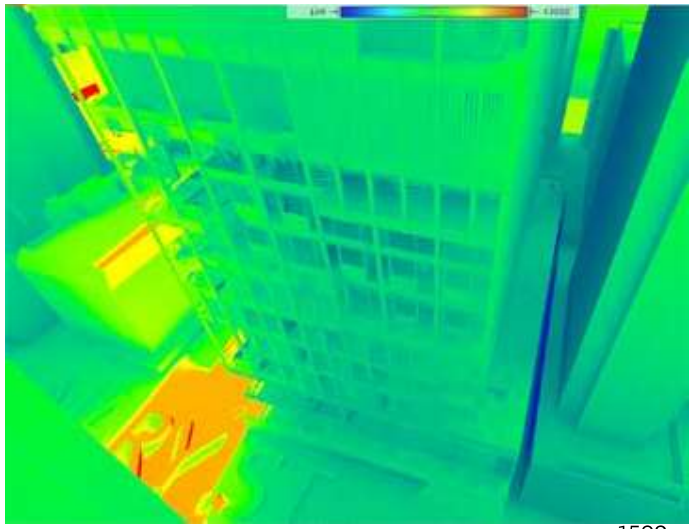

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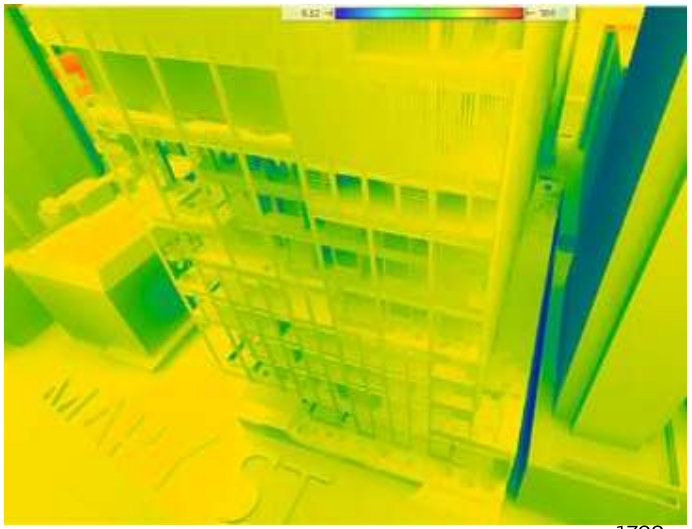

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LUX LEVELS

PODIUM

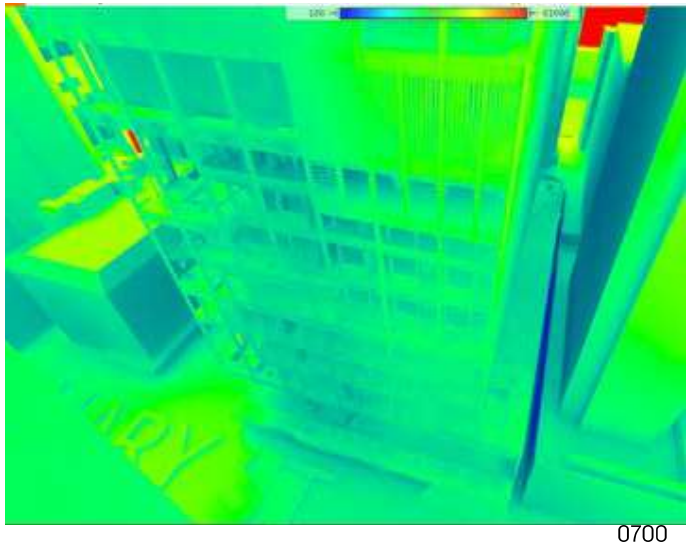
WINTER SOLSTICE

MARY STREET FACADE
SOUTHEAST ELEVATION

SUMMARY:

LIGHT LEVELS ARE SUITABLE

In winter the planters on the Mary Street facade are showing that they may recieve up to 6 hours of ambient UV light above 2000 LUX. This will need to be confirmed in future phases by an on-site light measure. This level of lux and exposure time is suitable to low light rainforest species that are intended to be used in the podium terrace gardens.



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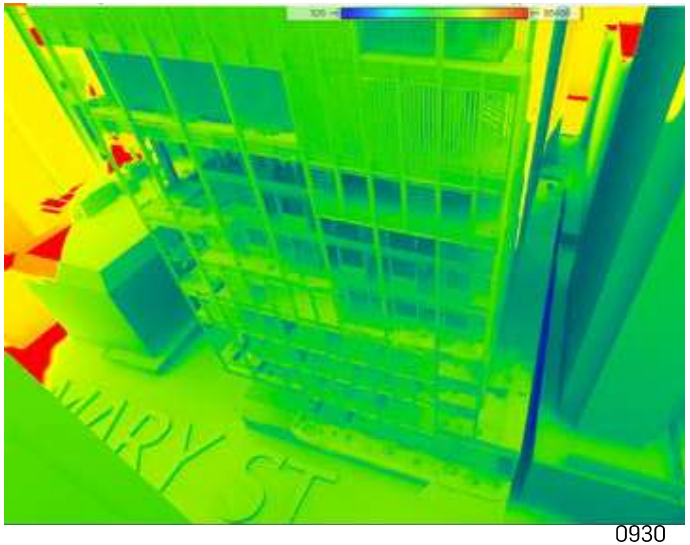

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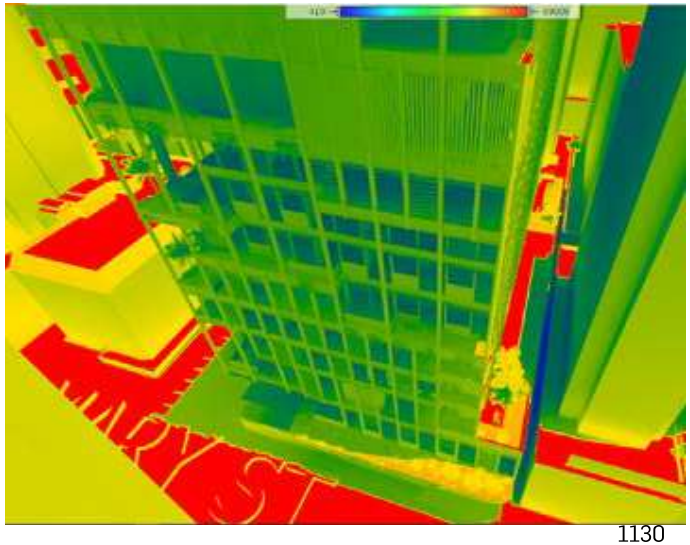

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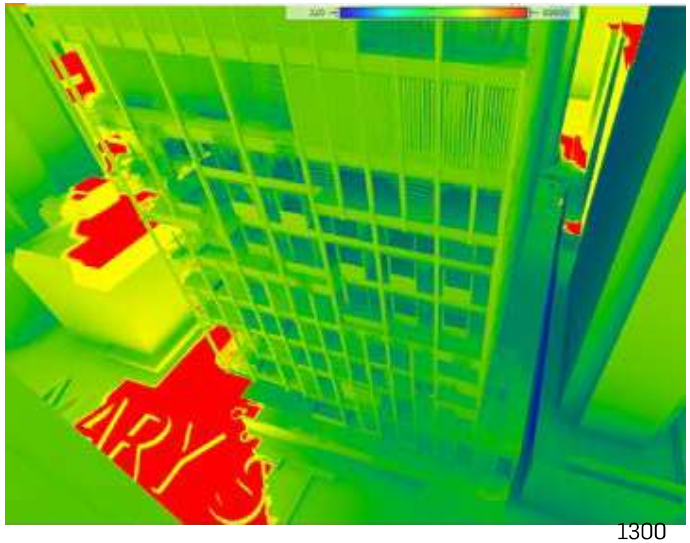

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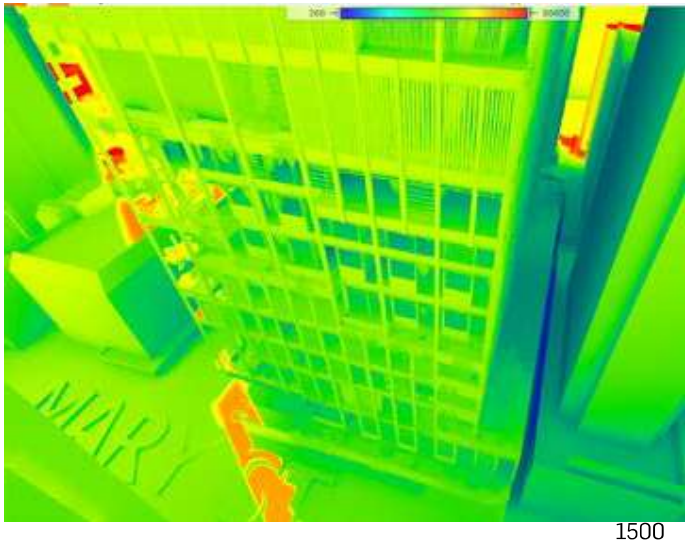

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LUX LEVELS

PODIUM

SUMMER SOLSTICE

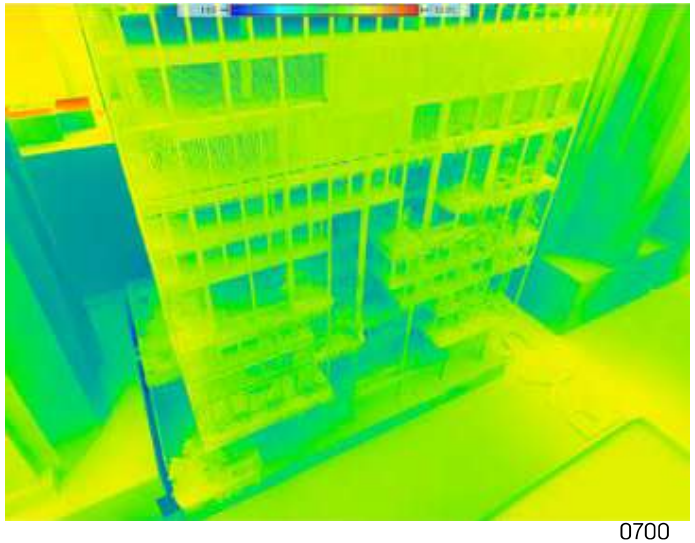
ALBERT STREET FACADE
NORTH WEST ELEVATION

SUMMARY:

VIABLE WITH PROPER PROCURMENT METHODS

In summer the planters on the Albert street facade are showing that they will largly be in shade until a short burst in the late afternoon. The ambient UV levels throughout the day look to be faily low - especially the deeper into the facade the planters go but not so low as to be unsuitable for acclimatised shade tolerant plant species. This will need to be confirmed in future phases by an on-site light measure.

Highly shade tolerant and shade acclimatised planting will be required for planters deep in the facade line. Planters on the edge of the facade look to have more ambient UV light.



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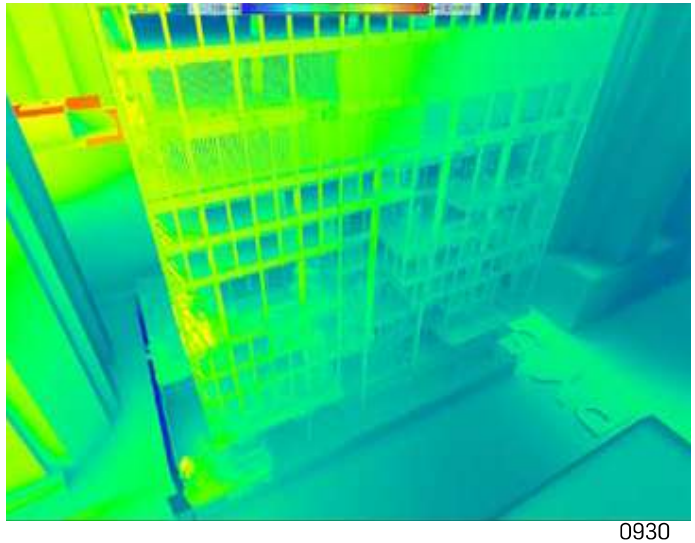

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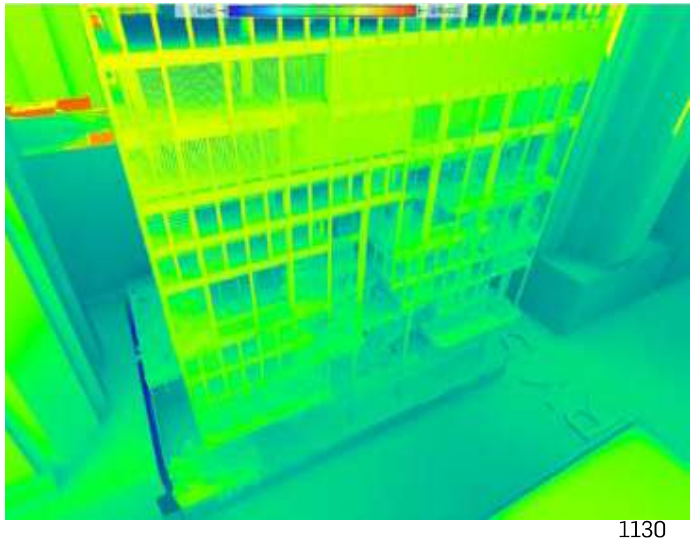

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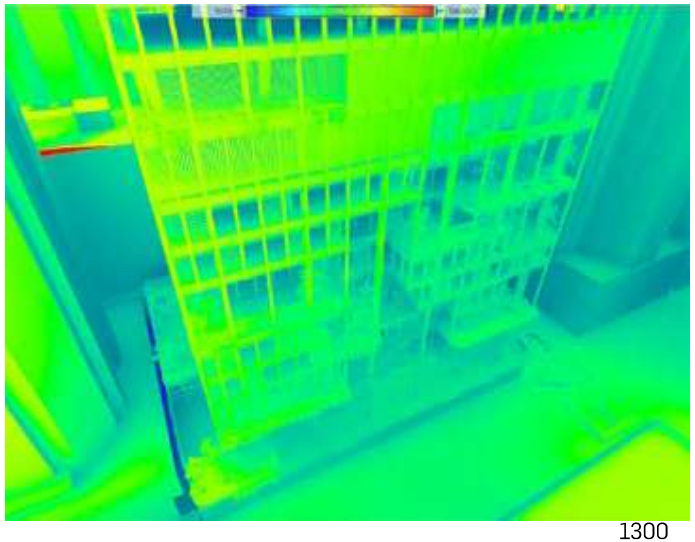

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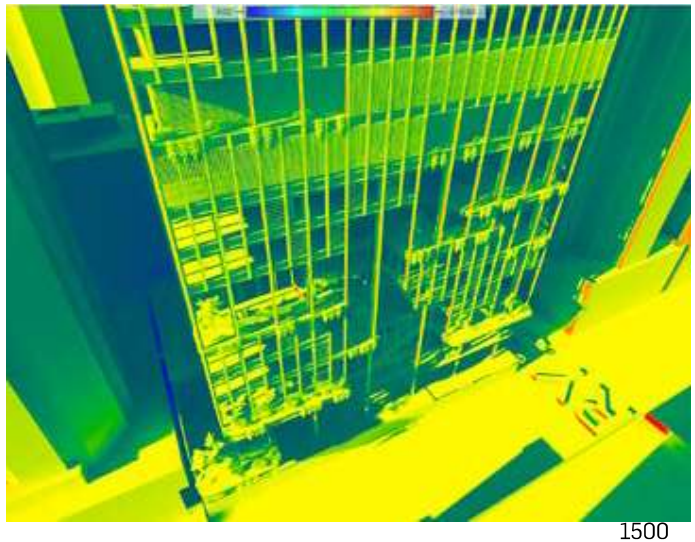

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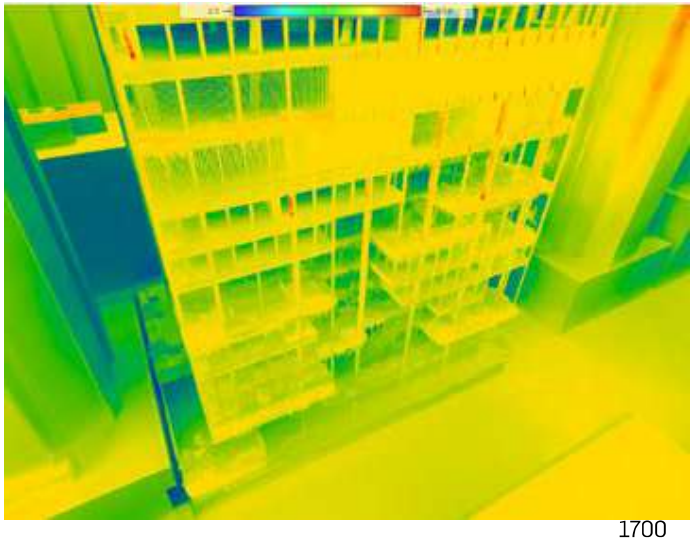

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LUX LEVELS

PODIUM

WINTER SOLSTICE

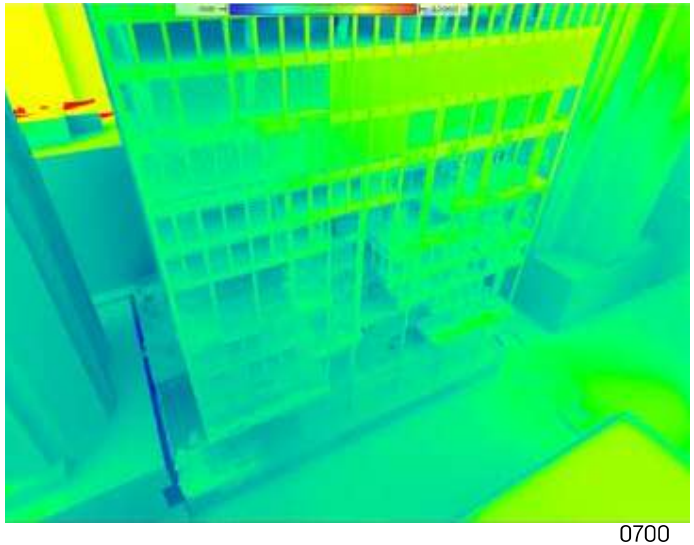
ALBERT STREET FACADE
NORTH WEST ELEVATION

SUMMARY:

VIABLE WITH PROPER PROCURMENT METHODS

Like in summer, in winter the planters on the Albert Street facade are showing that they will largly be in shade until a short burst in the late afternoon. However, the lower angle of the sun looks to improve the duration of the afternoon sun. The ambient UV levels throughout the day look to be fairly low especially the deeper into the facade the planters go. This will need to be confirmed in future phases by an on-site light measure. Acclimatisation of low light planting will be required.

Highly shade tolerant and shade acclimatised planting will be required for planters deep in the facade line. Planters on the edge of the facade look to have more ambient UV light.



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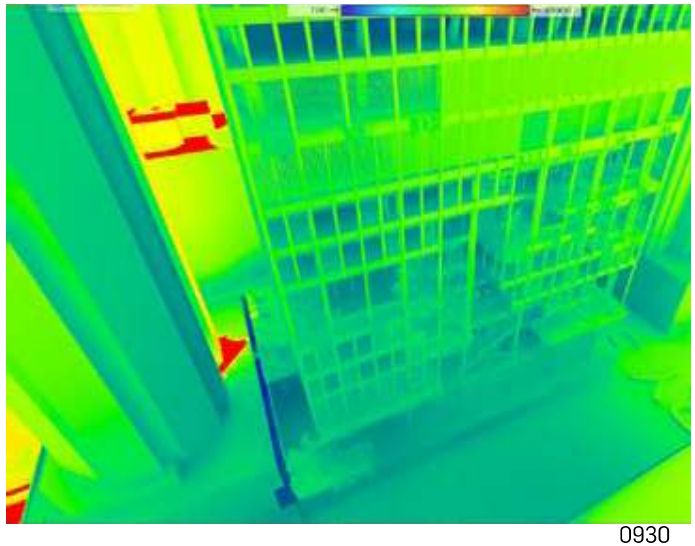

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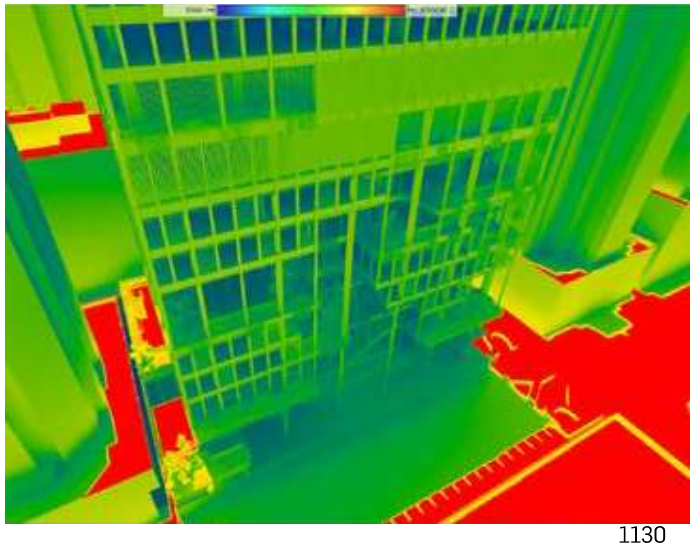

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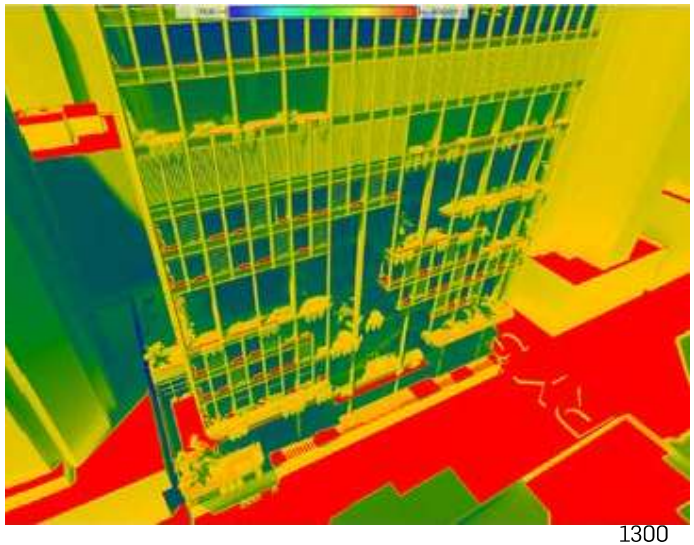

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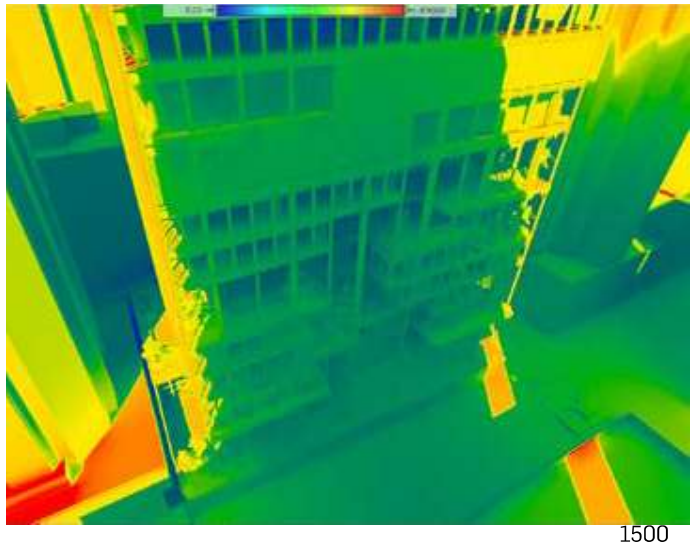

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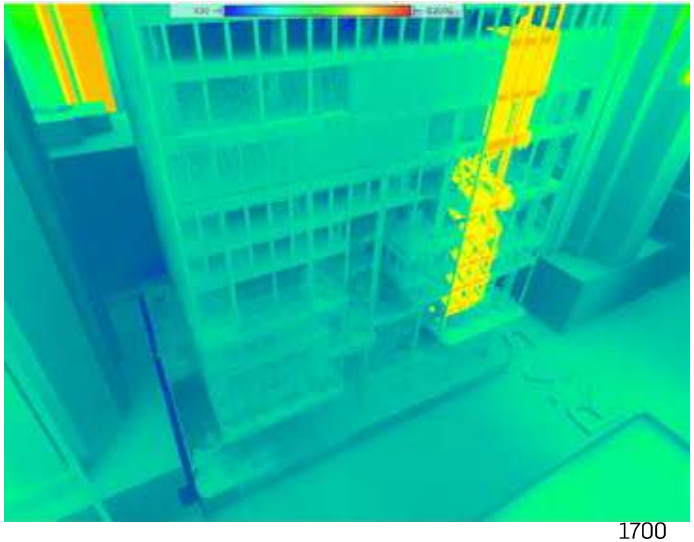

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LUX LEVELS

PODIUM

SUMMER SOLSTICE

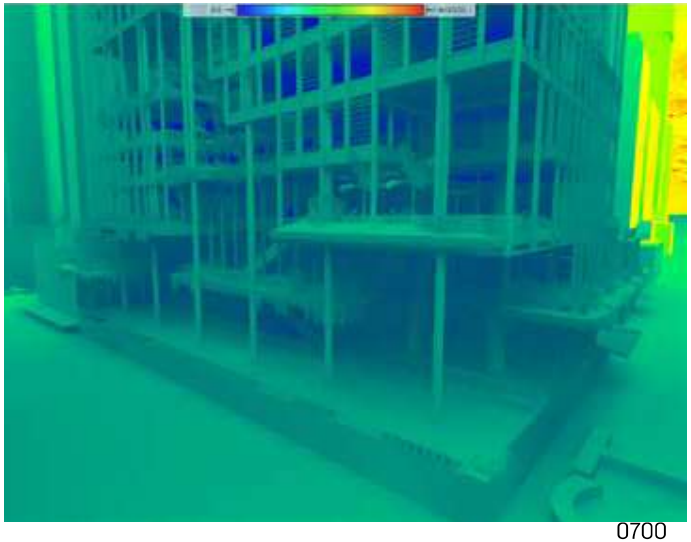
CORNER OF ALBERT AND MARY STREET

SUMMARY:

VIABLE WITH PROPER PROCURMENT METHODS

This view into the ground floor area shows that the level of shading is significant until late afternoon when there is a short burst of about 3-4 hours. The planters on the property line get a good amount of sun. The planters deeper in-board will require suitably acclimatised low shade plant species likely to be made up of typical office plants and/or deep rainforest plant species.

This will need to be confirmed in future phases by an on-site light measure.



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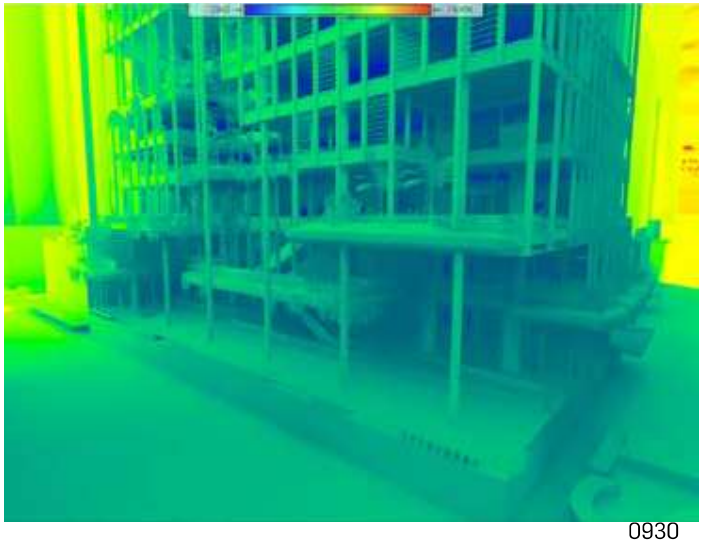

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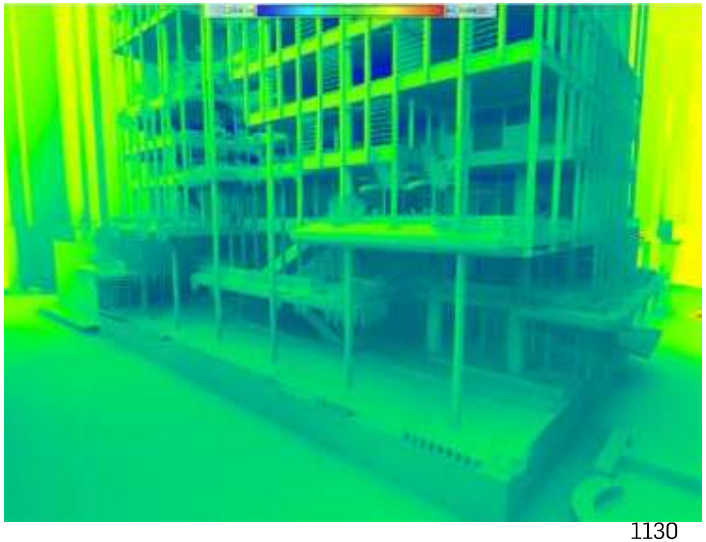

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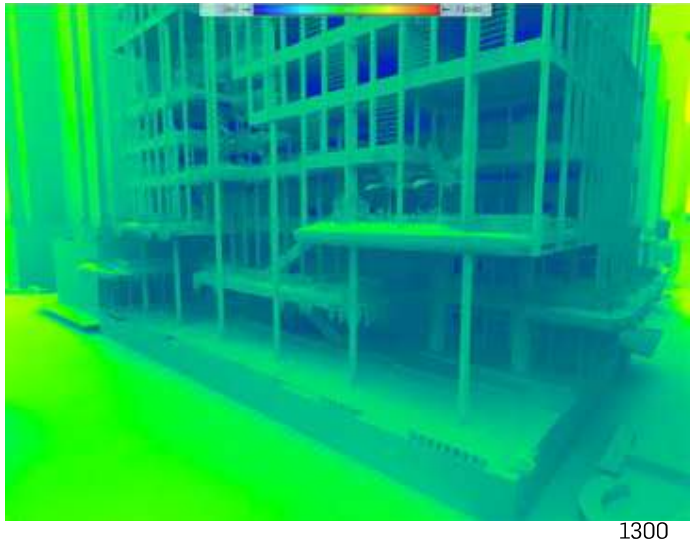

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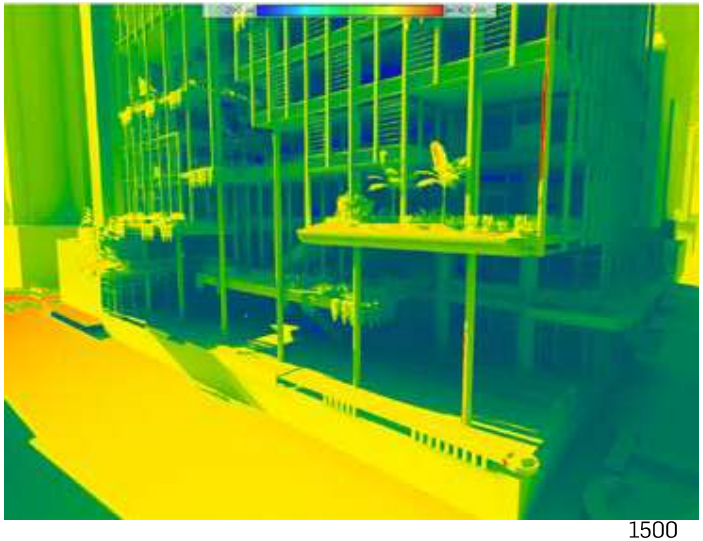

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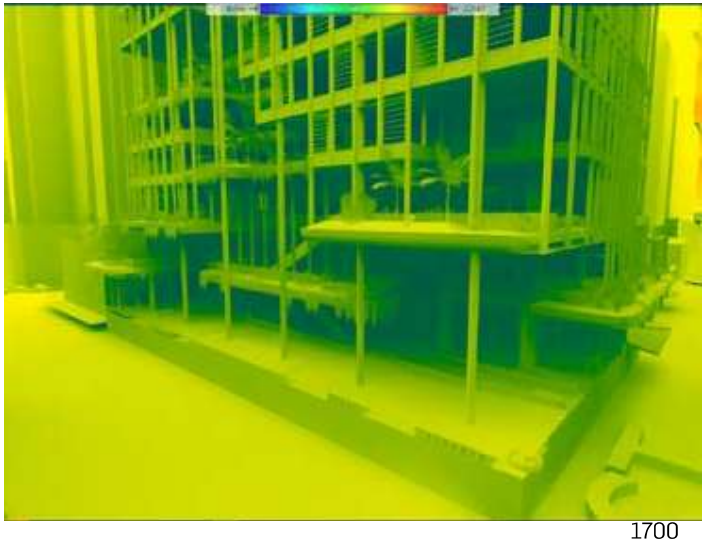

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LUX LEVELS

PODIUM

WINTER SOLSTICE

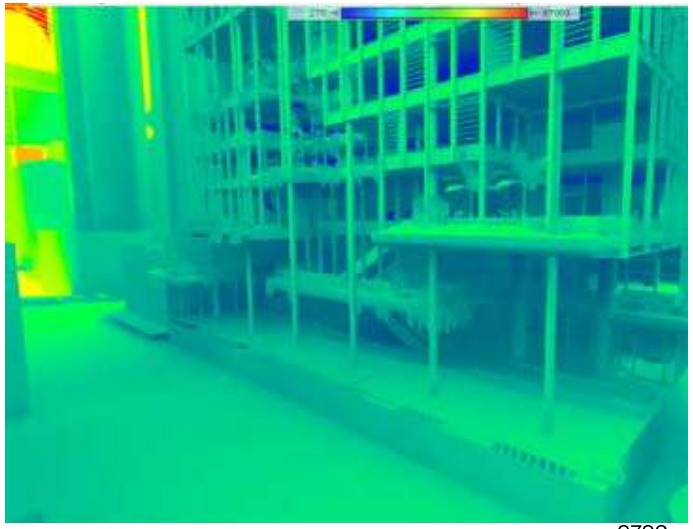
CORNER OF ALBERT AND MARY STREET

SUMMARY:

VIABLE WITH PROPER PROCURMENT METHODS

Like summer, this view into the ground floor area shows that the level of shading is significant until late afternoon however the duration seems to be longer perhaps on account of the lower angle of the sun this time of year. The planters on the property line get a good amount of sun. The planters deeper in-board will require suitably acclimatised low shade plant species likely to be made up of typical office plants and/or deep rainforest plant species.

This will need to be confirmed in future phases by an on-site light measure.



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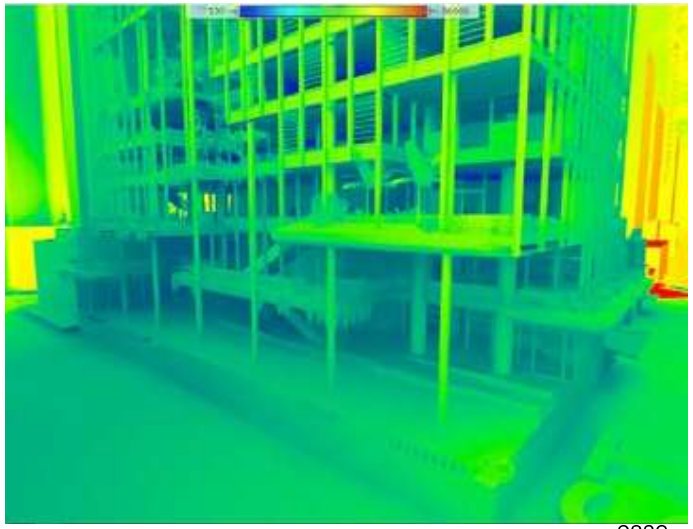

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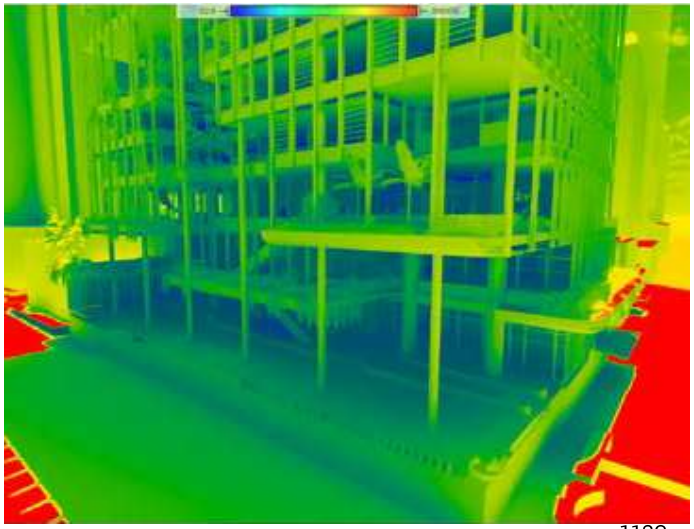

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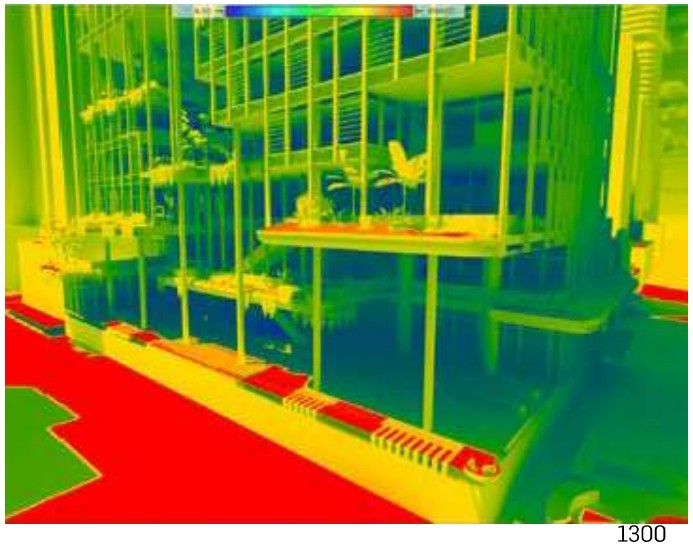

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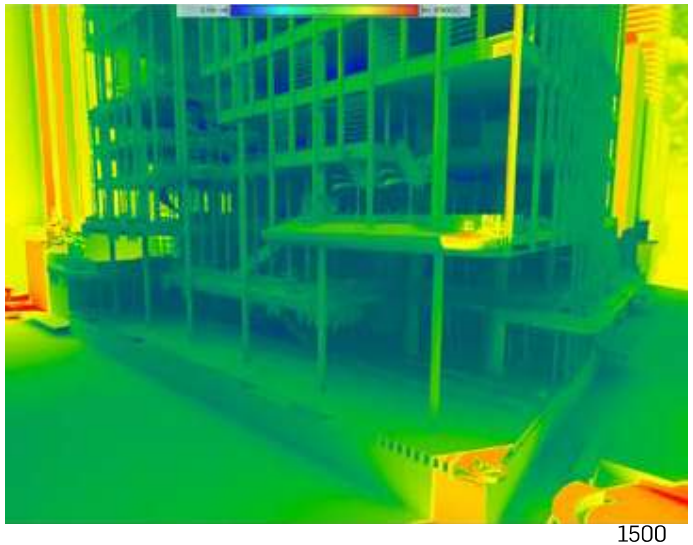

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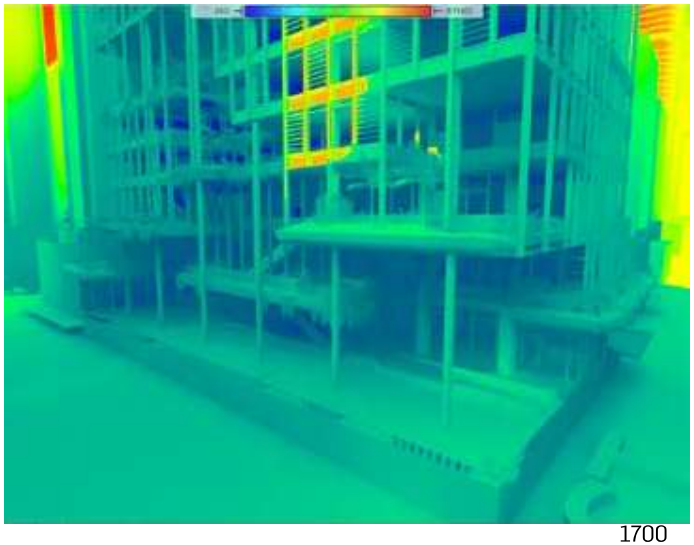


1700

KEY CONSIDERATIONS

LIGHT ZONES FOR PLANTS

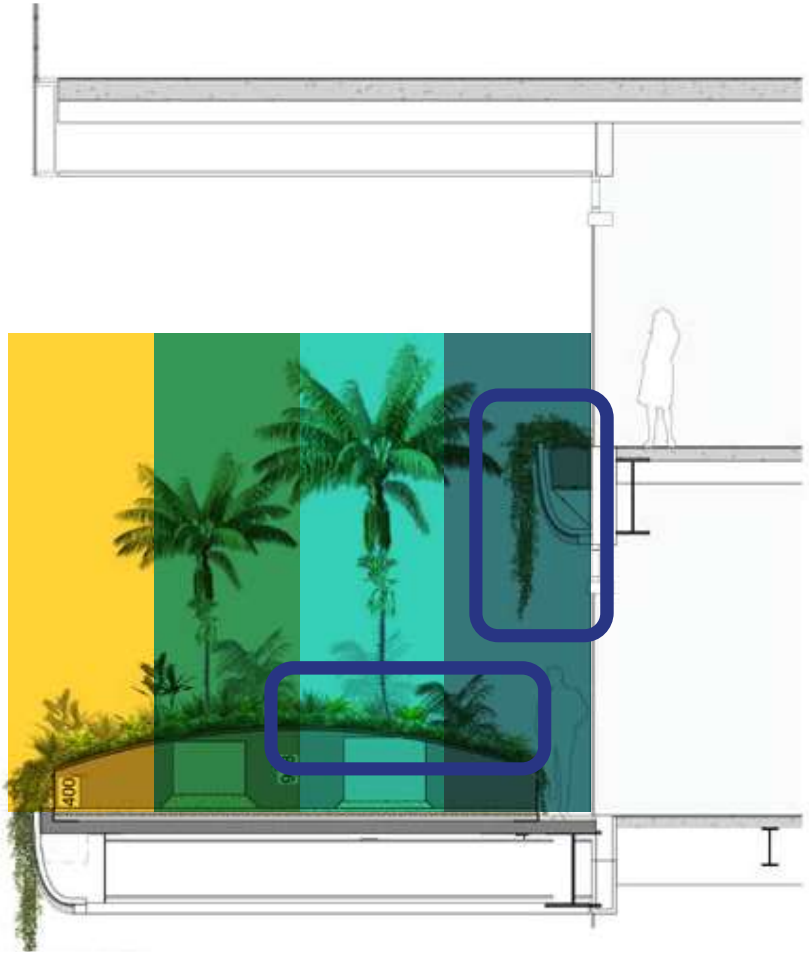
Having a robust and logical planting strategy that responds to light levels is critical for creating a successful and sustainable outcome for the inner areas of ground level and the eroded podium gardens.

There are a series of likely lighting zones that are created not just by shading of built form but also shading of plants themselves.

These zones mimic the natural arrangment and conditions within an SEQ rainforst as light becomes more and more scarce the deeper into the shadier and wetter rainforest areas plants are found.

All proposed plant species will be associated with light zones in which they are likely to thrive and trained to grow within.

This strategy and species list forms the foundation for the strategic approach to planting design to be developed in future phases. This information will be incorporated into the tender and construction documentation to ensure that procurement is undertaken with these zones in mind.



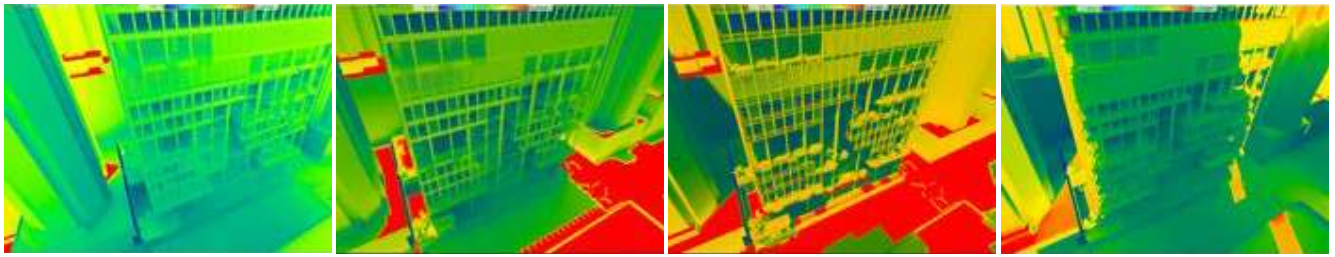
PLANT LIGHT ZONE 1
part sun part shade

PLANT LIGHT ZONE 2
shade

PLANT LIGHT ZONE 3
full shade

PLANT LIGHT ZONE 4
deep shade

PLANT LIGHT ZONE 4
deep shade - below canopy and behind taller planting



KEY CONSIDERATIONS

GROUND LEVEL AND PODIUM PLANT SPECIES

The planting palette for The Albert Street Tower is a combination of both native SEQ rainforest species and shade hardy exotic species common to interior planting palettes. The combination of natives and exotics opens up the ability to have a much more diverse and resilient palette that is able to be mixed according the plants specific needs and what it can tolerate.

Most of the plant species being proposed for the ground and podium are naturally shade tolerant and have the capability to be trained to grow in deep shade in some instances.

PLANT LIGHT ZONE 1
part sun part shade

PLANT LIGHT ZONE 2
shade

PLANT LIGHT ZONE 3
full shade

PLANT LIGHT ZONE 4
deep shade

PLANT LIGHT ZONE 4
deep shade - below canopy and behind teller planting

REF	BOTANIC NAME	COMMON NAME	USE/PURPOSE	POT SIZE	NATIVE Y/N	ZONE
			PALMS			
01	*ARCHONTOPHOENIX cunninghamiana*	Bangalow Palm	Large Feature palm, large shrub, small shrub	200mm - ex-ground	Y	1,2,3,4
02	HOWEA forsetriana	Kentia Palm	Large Feature palm, large shrub, small shrub	200mm - ex-ground	Y	1,2,3,4,5
03	HOWEA belmoreana	Sentry Palm	Large Feature palm	400litre - ex-ground	Y	1,2,3
04	*CYATHEA cooperii*	Lacy Tree Fern	Large Feature specimen, large shrub,	400mm - ex-ground	Y	1,2,3,4,5
			LARGE SHRUBS			
05	LEPIDOZAMIA peroffskyana	Cycad Palm	Isolated feature specimen	45 litre	Y	1,2,3,4,5
06	FICUS lyrata	Fiddle Leaf Fig	Isolated feature specimen	45 litre	Y	1,2,3,4,5
07	ALPINA mutica	False Cardomom	Screening Plant	300mm - 400mm	Y	1,2,3,4
08	CORDYLINE rubra (green)	Palm Lily	Tall groupings	300mm - 400mm	Y	1,2,3,4,5
09	CORDYLINE stricta	Slender Palm Lily	Tall groupings	300mm - 400mm	Y	1,2,3,4,5
10	CORDYLINE manners-suttoniae	Broad Leaf Palm Lily	Tall groupings	300mm - 400mm	Y	1,2,3,4,5
11	LOMANDRA longifolia	Basket Grass	Next to water feature	300mm	Y	1,2,3
12	ALOCASIA macrorrhizos	Giant Taro	Isolated feature specimen	400mm	N	1,2,3,4
13	MOSTERA deliciosa	Swiss Cheese Plant	Isolated feature specimen climbing up columns or draping over edges	400mm	N	1,2,3,4,5
			SMALL SHRUBS			
14	PHILODENDRON rojo (red and green)	Rojo Congo	Small groupings	200mm	N	1,2,3
15	CALATHEA lancifolia	Rattlesnake Plant	Small groupings	200mm	N	3,4
16	BLECHNUM gibbum	Silver Lady Fern	Small groupings	200mm	N	2,3,4
17	ALOCASIA amazonica	Polly	Small groupings	200mm	N	3,4
18	ASPIDISTRA elatior	Cast Iron Plant	Small groupings	200mm	N	3,4,5
19	CLIVIA miniata	Bush Lily	Small groupings	200mm	N	3,4,5
20	CALATHEA zebrina	Zebra Plant	Small groupings	200mm	N	3,4,5
21	CALOCHLAENA dubia	False Bracken Fern	Large groupings in wind protected areas only	200mm	Y	1,2,3
22	MOLINERIA capitulata	Palm Grass	Large groupings in wind protected areas only	200mm	Y	1,2,3
23	HELMHOLTZIA glaberrima	Stream Lily	Next to water feature	200mm	Y	2,3
24	ASPLENIUM australasicum	Bird's Nest Fern	Individual specimens	400mm	Y	2,3
25	ZAMIOCULCAS zamiifolia	Zanzibar Gem	Small groupings in very dark areas	200mm	N	4,5
26	SPATHIPHYLLUM wallisii	Peace Lily	Small groupings in very dark areas	200mm	N	4,5
27	SPATHIPHYLLUM 'sensation'	Giant Peace Lily	Individual specimens in very dark areas	300mm	N	4,5
28	DRACAENA fragrans	Janet Craig	Individual specimens in very dark areas	300mm	N	4,5
			GROUNDCOVERS AND DRAPERS			
29	DOODIA aspera	Rasp Fern	Mass Planting	140mm	Y	1,2,3
30	BLECHNUM cartilagineum	Gristle Fern	Mass Planting	140mm	Y	1,2,3
31	POLLIA macrophylla	Wandering Jew	Mass Planting	140mm	Y	1,2,3
32	VIOLA hederacea	Native Violet	Mass Planting	140mm	Y	1,2
33	DICHONDRA repens	Kidney Weed	Mass Planting	140mm	Y	1,2
34	CISSUS antartica	Kangaroo Vine	Edge Draping	200mm	Y	1,2,3
35	SYNGONIUM podophyllum	Arrowhead Plant	Mass Planting	140mm	Y	3,4,5
36	EPIPREMNUM aureum	Pothos	Edge Draping	200mm	Y	1,2,3,4,5

* preliminary only - to future detailed planting design

GROUND LEVEL AND PODIUM PLANT SPECIES

PALMS


ARCHONTOPHOENIX cunninghamian


HOWEA forsteriana


HOWEA belmoreana


CYATHEA cooperii

LARGE SHRUBS


Lepidozamia peroffskyana


Ficus laurata


Alpinia mutica


Cordyline rubra 'native'


Cordyline stricta


Cordyline manners-suttoniae


Lomandra longifolia


Alocasia macrorrhizos


Monstera delicosa

SMALL SHRUBS


Philodendron Rojo Congo


Calathea 'Rattlesnake'


Blechnum gibbum


Alocasia sp.


Aspidistra elatior


Clivia miniata


Calathea zebrina


Calochlaena dubia


Molineria capitulata


Helmholtzia glaberrima


Asplenium australasicum


Zamioculcas zamiifolia


Spathiphyllum sp.


Spathiphyllum 'Sensation'

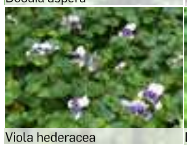

Dracaena fragrans 'Massangeana'

GROUNDCOVERS AND DRAPERS


Doodia aspera


blechnum cartilagineum


Pollia macrophylla


Viola hederacea


Dichondra repens 'Emerald Falls'


Cissus antartica


Syngonium podophyllum "Emerald Green"


Epipremnum aureum

* preliminary only - to future detailed planting design

KEY CONSIDERATIONS

PLANT SPECIES

The planting palette for the roof top utilises predominately native species found on mountain tops of south east queensland.

This palette has the capability to deal with full exposure and requires minimal water.

The look and feel of the palette is intended to evoke the feel of a mountain peak with soft textures and hardy shade trees.

THE PEAK

TREE& PALMS


Banksia integrifolia


Banksia spinulosa


Jacksonia scoparia


Acacia podalyriifolia


Casuarina equisetifolia


Acacia fimbriata


Leptospermum-petersonii


Allocasuarina littoralis

FEATURE SHRUBS


Westringia fruticosa


Austromyrtus dulcis


Xanthorhea latifolia


Acacia myrtifolia


Pennisetum alopecuroides

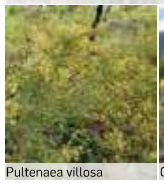

Hibiscus heterophyllus


Lomandra longifolia


Doryanthes palmeri


Themeda australis


Dianella caerulea


Pultenaea villosa


Grevillea 'Sandra Gordon'


Melaleuca thymifolia


Hovea acutifolia

GROUND COVERS & CLIMBERS


MYOPORUM ellipticum


MYOPORUM montanum


HARDENBERGIA violaceae


CARPOBROTUS glaucescens


GOODENIA ovata 'Gold Cover'


CISSUS antarctica


CHRYSACEPHLAUM apiculatum


PANDOREA jasminoides


PYROSTEGIA venusta

* preliminary only - to future detailed planting design

KEY CONSIDERATIONS

WIND

The combination of shade and wind is the most challenging conditions for plants. Ensuring that all shaded areas are well protected from wind allows shade tolerant species to maintain moisture levels and not dry out.

To the right is an extract from the specialist wind consultants report that shows the comfort categories of wind as measured in both summer and winter.

Key observations:

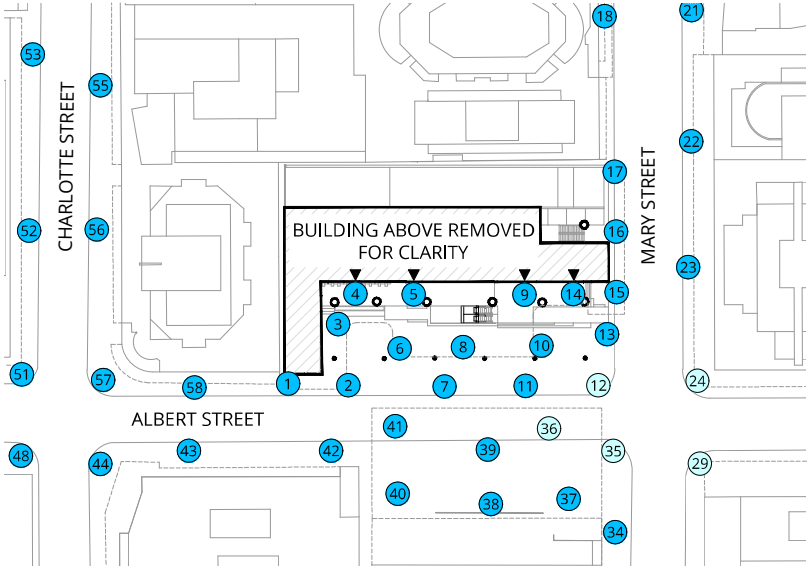
- Overall the level of comfort is within the sitting range
- Wind exposure generally gets greater the higher up the building
- The carved out sections of podium are very well protected from wind
- There appears to be little difference between summer and winter

Extract taken from
RWDI
PEDESTRIAN WIND STUDY
RWDI # 2205902
November 1, 2022

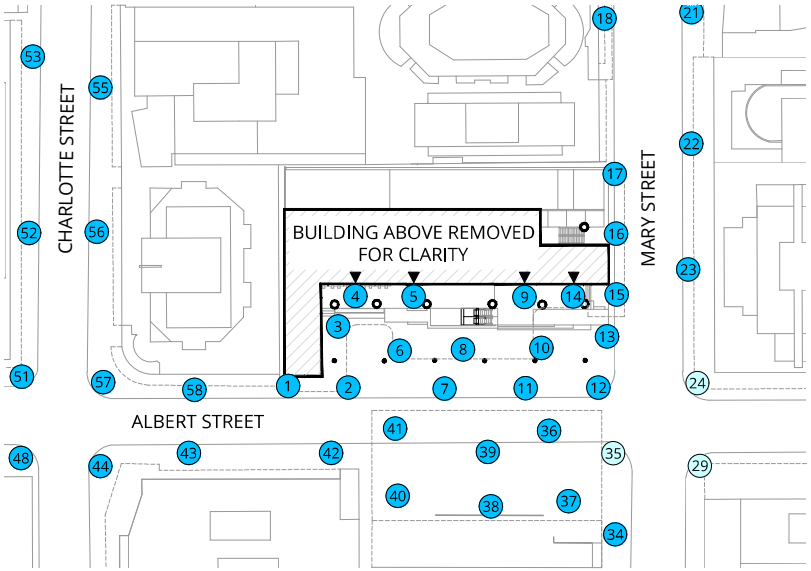
SUMMARY:

Wind conditions are low enough that there are no foreseeable issues with planting on the podium and ground floor. This will need to be tested again during the base build.

The roof top planting will be made up of drought and wind tolerant mountainous plant species.



SUMMER



WINTER

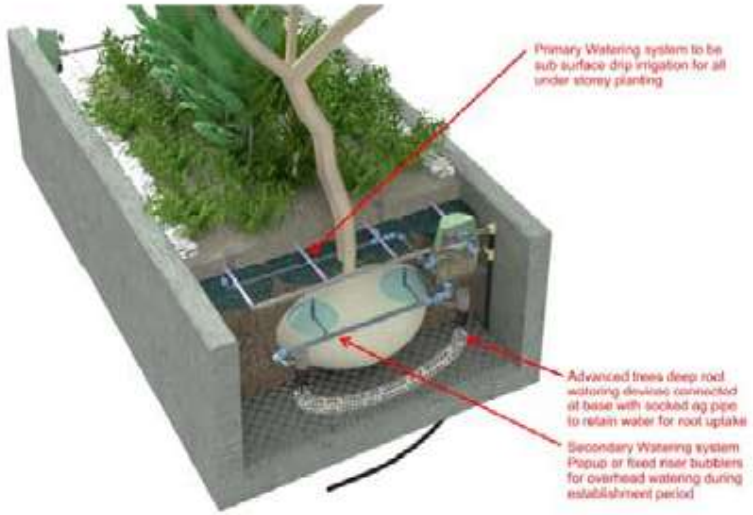
KEY CONSIDERATIONS

WATER

The monitoring and delivery of soil moisture for plant health is important when working with free draining, on-structure gardens.

A professional irrigation designer has worked with the design team to develop an in-depth understanding of the water required for the areas of garden along with water harvesting capacity to fulfil BCC's requirements. Refer to the DPOV Irrigation concept report for an in-depth understanding of the irrigation concept design.

In summary all garden areas will have a drip irrigation system with specialised watering connections for specific plant needs where applicable. A 200KL rainwater harvesting tank has been recommended. Refer to architectural drawings for location of tank which has been split across multiple tanks for efficiency.



The "hybrid" irrigation system for contained planters and podium planted areas is highly recommended to provide the flexibility of additional overhead watering for fast plant establishment

Outlet Data

Type	
Bubbler Trickle Nozzle	
Delivery Method	
Multi stream	

Tree Type 1

Tree Size	Container Size	Flow (L/min)	Bubbler Qty
Large	1000	3.8	4
Soil Type	**Volume per event (L)**		**Run Time (mins)**
Free draining	200		13.16

Tree Type 2

Tree Size	Container Size	Flow (L/min)	Bubbler Qty
Medium	500	3.8	4
Soil Type	**Volume per event (L)**		**Run Time (mins)**
Free draining	100		6.58

Tree Type 3

Tree Size	Container Size	Flow (L/min)	Bubbler Qty
Small	150	1.9	2
Soil Type	**Volume per event (L)**		**Run Time (mins)**
Free draining	30		7.89

Extracts from irrigation concept report

SOIL

Every garden on The Albert Street Tower will sit on top of a concrete slab. It is for this reason that high quality, purpose made soil mixes are used to ensure success and longevity for the gardens.

The soil specification proposed for The Albert Street Tower has been custom made by certfied and well respected soil scientists and is based off of the Australian Standards for on-structure soils. Some of the key characteristics of the soil specification include:

- Free draining
- Two horizon layer - Horizon A = Max 300mm on-strucutre mix with some organic matter - Horizon B = low organic matter high mineral content
- Low slumpage soil structure to reduce garden bed levels dropping over time
- Slow release fertilisers
- Light weight (due to high air-filled porosity)

On Structure soil media A

Quality – Soil must be free from any 'unwanted materials'

Physical Properties

Property	Units	Target range
Texture, preferred range	n/a	Gravelly loamy sand to organic sandy loam
Air-filled porosity	%	≥ 10
Chloride	%	≥ 40
Permeability (@ 16 drops by McIntyre Jakobsen)	mm/h	> 100
Saturated Density	kg/L	< 2.4
Organic matter	% w/w	< 15
Wettability	min	<5
Dispensability in water		1 or 2 (AS4419) Category
Large particles in the largest dimension		
< 2 mm	% w/w	30–70
2–10 mm	% w/w	10 –20
10–20 mm	% w/w	5–10
20–50 mm	% w/w	< 5
> 50 mm	% w/w	0

Chemical Properties

C2. Chemical properties	Units	Target range
pH in water (1:5) Standard range	pH units	5.4–6.8
Electrical Conductivity (1:1.5)	dS/m	< 2.2
Chloride	mg/L	≤ 200
Ammonium-N (NH4)	mg/L	≤ 100
Ammonium-N + nitrate-N (NH4 + NO3)	mg/L	≥ 50
Nitrogen draw-down index	-	≥ 0.7
Toxicity index	mm	≥ 70
Phosphorus – P standard range	mg/L	8–40
Low phosphorus – P (P-sensitive plants)	mg/L	< 3
Potassium (K)	mg/L	50–250
Sulphate (SO_4)	mg/L	≥ 40
Calcium (Ca)	mg/L	≥ 80
Magnesium (Mg)	mg/L	≥ 15
Ca:Mg ratio	–	1.5–10
K:Mg ratio	–	1–7
Sodium (Na)	mg/L	≤ 130
Iron (Fe)	mg/L	≥ 35
Cooper (Cu)	mg/L	0.4 - 15
Zinc (Zn)	mg/L	0.3 - 10
Manganese (Mn)	mg/L	1 - 15
Boron (B)	mg/L	0.02 – 0.65

On Structure soil media B

Quality – Soil must be free from any 'unwanted materials'

Physical Properties

Property	Units	Target range
Texture, preferred range	n/a	Gravelly loamy sand to organic sandy loam
Air-filled porosity	%	≥ 10
Water-holding capacity	%	≥ 40
Permeability (@ 16 drops by McIntyre Jakobsen)	mm/h	> 100
Saturated Density	kg/L	< 1.8
Organic matter	% w/w	< 5
Wettability	min	≤ 5
Dispensability in water		1 or 2 (AS4419) Category
Large particles in the largest dimension		
< 2 mm	% w/w	30–70
2–10 mm	% w/w	10 –20
10–20 mm	% w/w	5–10
20–50 mm	% w/w	< 5
> 50 mm	% w/w	0

Chemical Properties

C2. Chemical properties	Units	Target range
pH in water (1:5) Standard range	pH units	5.4–6.8
Electrical Conductivity (1:1.5)	dS/m	< 2.2
Chloride	mg/L	≤ 200
Ammonium-N (NH4)	mg/L	≤ 100
Ammonium-N + nitrate-N (NH4 + NO3)	mg/L	≥ 50
Nitrogen draw-down index	-	≥ 0.7
Toxicity index	mm	≥ 70
Low phosphorus – P (P-sensitive plants)	mg/L	< 3
Potassium (K)	mg/L	50–250
Sulphate (SO_4)	mg/L	≥ 40
Calcium (Ca)	mg/L	≥ 80
Magnesium (Mg)	mg/L	≥ 15
Ca:Mg ratio	–	1.5–10
K:Mg ratio	–	1–7
Sodium (Na)	mg/L	≤ 130
Iron (Fe)	mg/L	≥ 35
Cooper (Cu)	mg/L	0.4 - 15
Zinc (Zn)	mg/L	0.3 - 10
Manganese (Mn)	mg/L	1 - 15
Boron (B)	mg/L	0.02 – 0.65

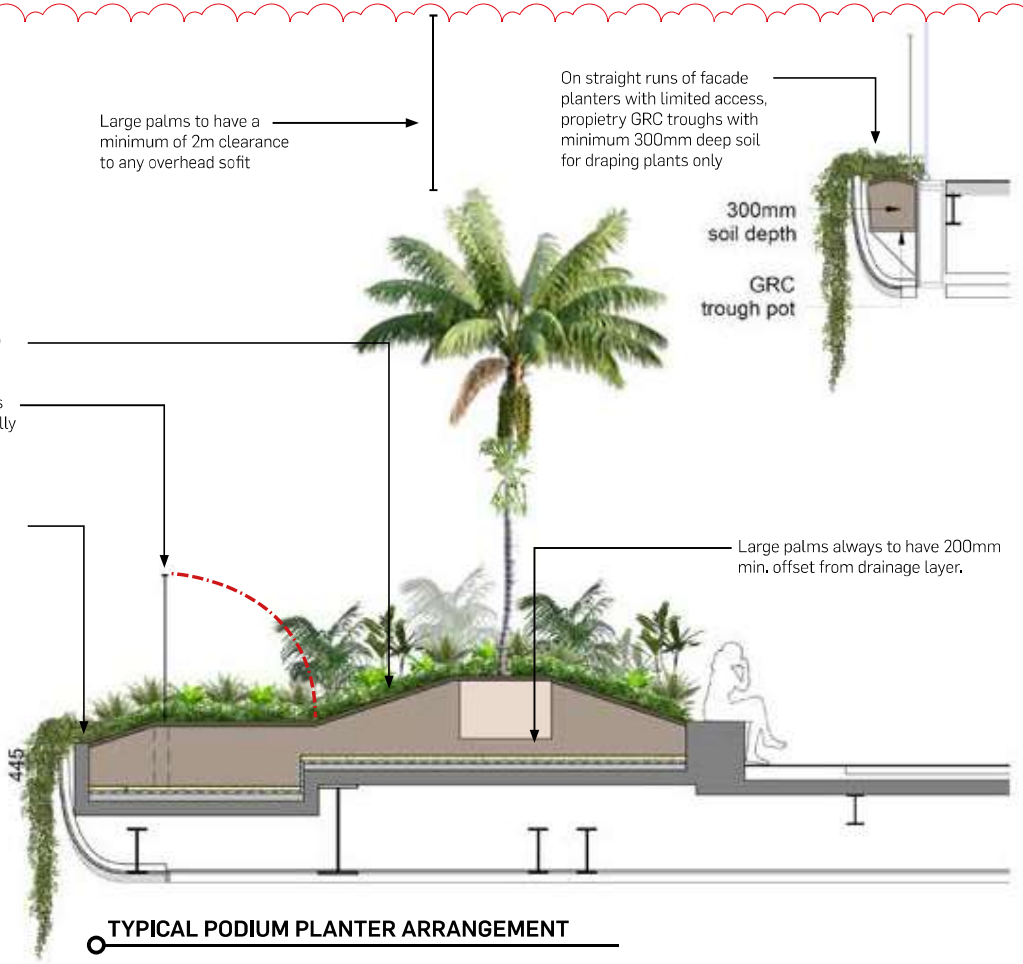
KEY CONSIDERATIONS

TYPICAL PODIUM BUILD UP STRATEGY

Given the spatial and structural constraints on on-structure landscapes, mounding is used to maximise efficiency whilst maintaining required soil depths and volumes for planting success.

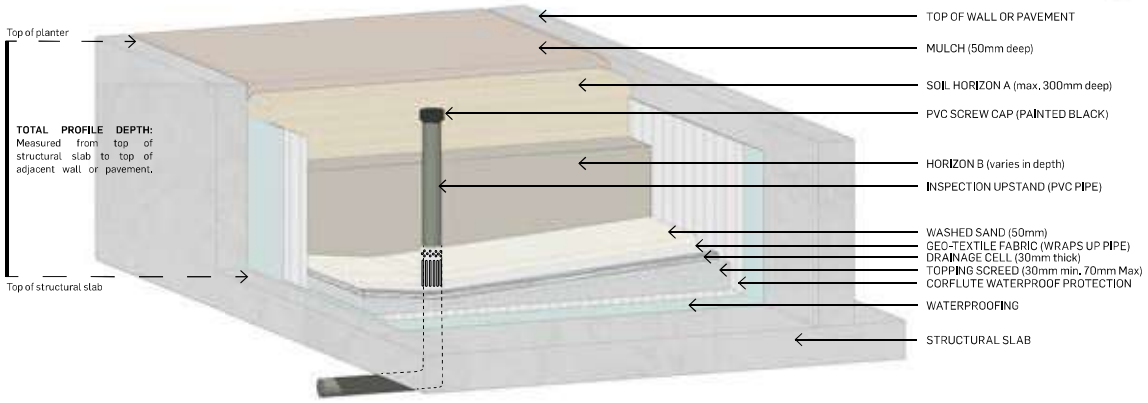
The typical section to the right demonstrates how mounding will be achieved utilising setdowns and upstands. Multiple sections have been provided for each level further on in this report that demonstrate this strategy and how it can vary depending on the location and depth of soil required.

In principal, the depth of soil we will be providing for different scales of planting is shown in the table below.



TYPICAL PODIUM PLANTER ARRANGEMENT

General rule of thumb:
Total planter profile =
required soil depth
+ 150mm for drainage and topping
+ 50mm for mulch.



TYPICAL ON-STRUCTURE PLANTER BUILD-UP

PLANT TYPE	MIN SOIL DEPTH	MAX SOIL DEPTH (if applicable)
TREES (roof only) *(45 litre to ex-ground)*	800mm	1000mm
PALMS (ground and podium) *(45 litre to ex-ground)*	800mm	1000mm
SMALL SHRUBS	400mm	na
LARGE SHRUBS	500mm	na
GROUNDCOVERS, CLIMBERS & DRAPERS	300mm (grc planters) 400mm (podium edges)	na
DRAPERS (GRC troughs only)	300mm	na

TYPICAL ON-STRUCTURE PLANTER SOIL DEPTHS

KEY CONSIDERATIONS

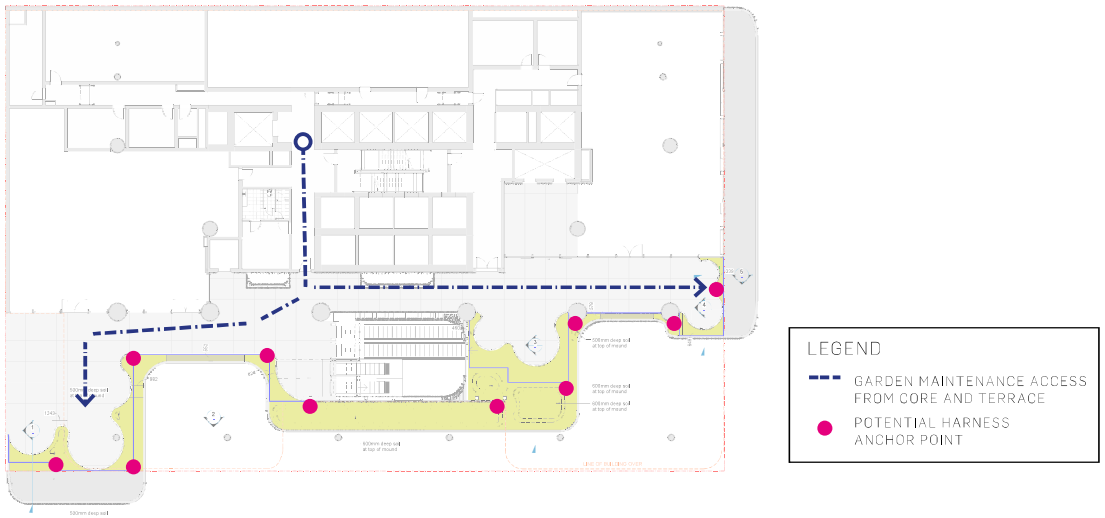
ACCESS & MAINTENANCE

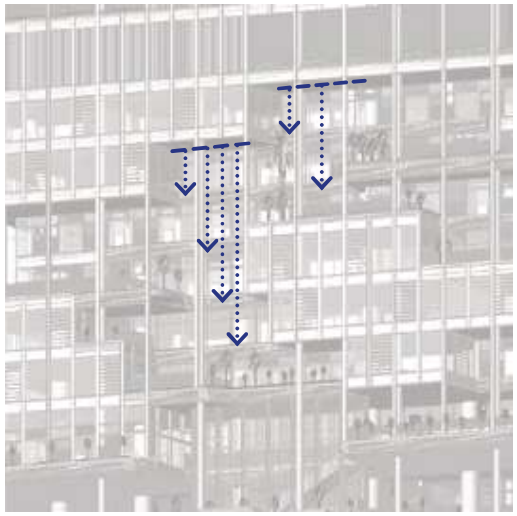
Access to all garden areas is critical to the ongoing success of the landscape. Workplace health and safety is paramount to ensure that maintenance staff are kept safe whilst working at heights and tending to worm hotels, soil adjustments, irrigation repair and plant maintenance.

At this stage of the design process access to podium gardens is generally provided from inside the terraces. Safety harness points and/or fall arrest systems will be coordinated with and designed by an accredited safety access consultant/manufactuer in the future phases.

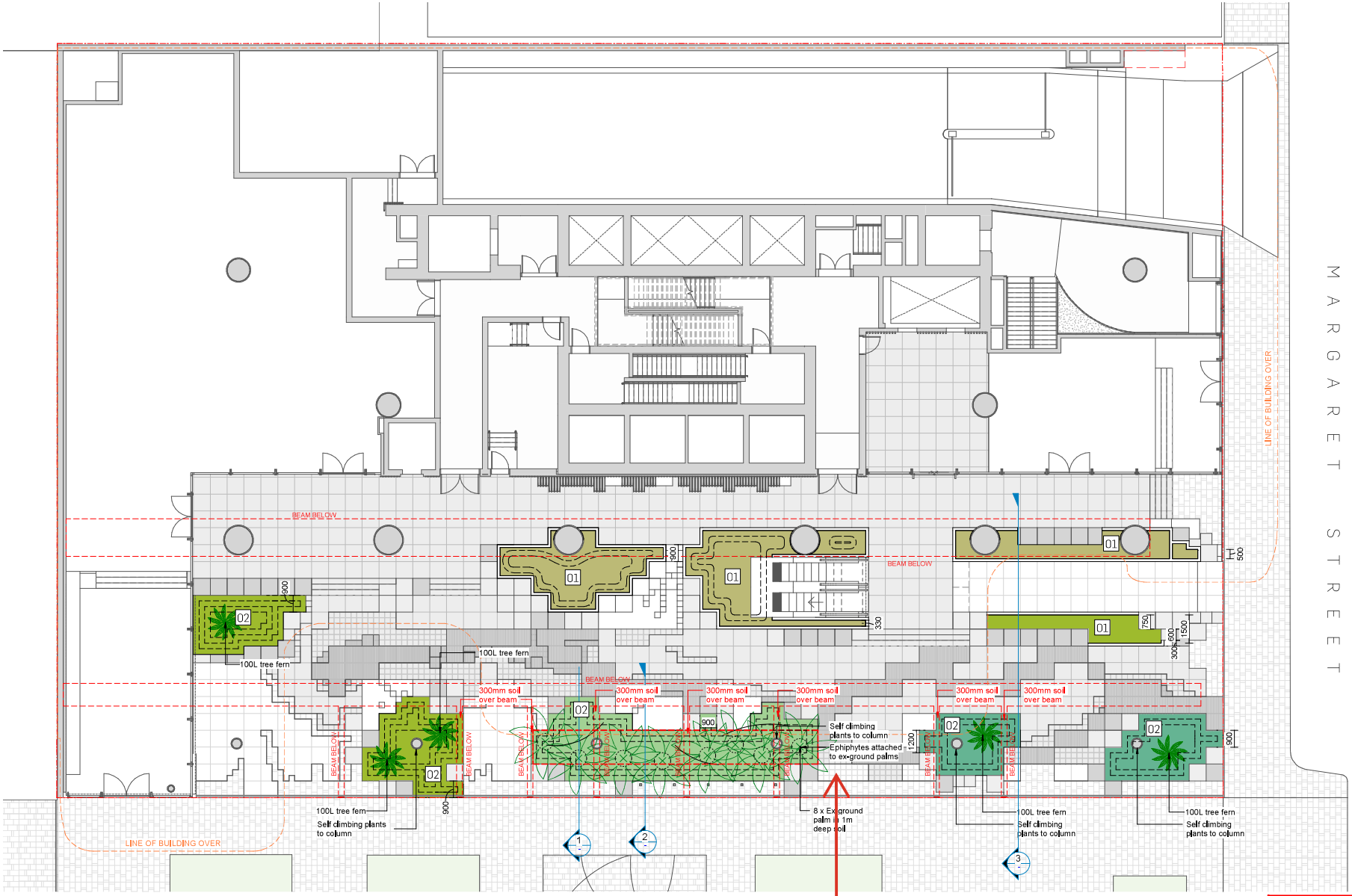
For hard to get to locations as shown to the right, a recessed raptor rail is a likely option to be explored.

Facade planter boxes above the eroded podium on the tower proper have been avoided due to access and maintenance concerns.





The above diagram illustrates potential raptor rail locations in the sofits of the eroded terrace gardens where there are a small number of gardens inaccessible from the adjacent terraces or office space. These planters have been kept to a minimum to reduce access and maintenance issues but are important in providing continuity of greenery from garden to garden on each level.



LEGEND - PLANT TYPE

- 01 Groundcovers and small shrubs.
- 02 Groundcovers, climbing plants, small - large shrubs. Palms as marked.

LEGEND - SOIL DEPTH

- Planting area with minimum 300mm soil depth, plus mounding where indicated.
- Planting area with minimum 400mm soil depth, plus mounding where indicated.
- Planting area with minimum 500mm soil depth, plus mounding where indicated.
- Planting area with minimum 600mm soil depth, plus mounding where indicated.
- Planting area with minimum 800mm soil depth, plus mounding where indicated.
- ----- Mounding +100mm per contour

NOTE: All planting areas on this level are accessible for maintenance without the need for specialised equipment.

See drawing number ALB-URB-DWG-LS-200-L00-00 for updated details. Plant typologies and soil depth details illustrated in this drawing remain unchanged.

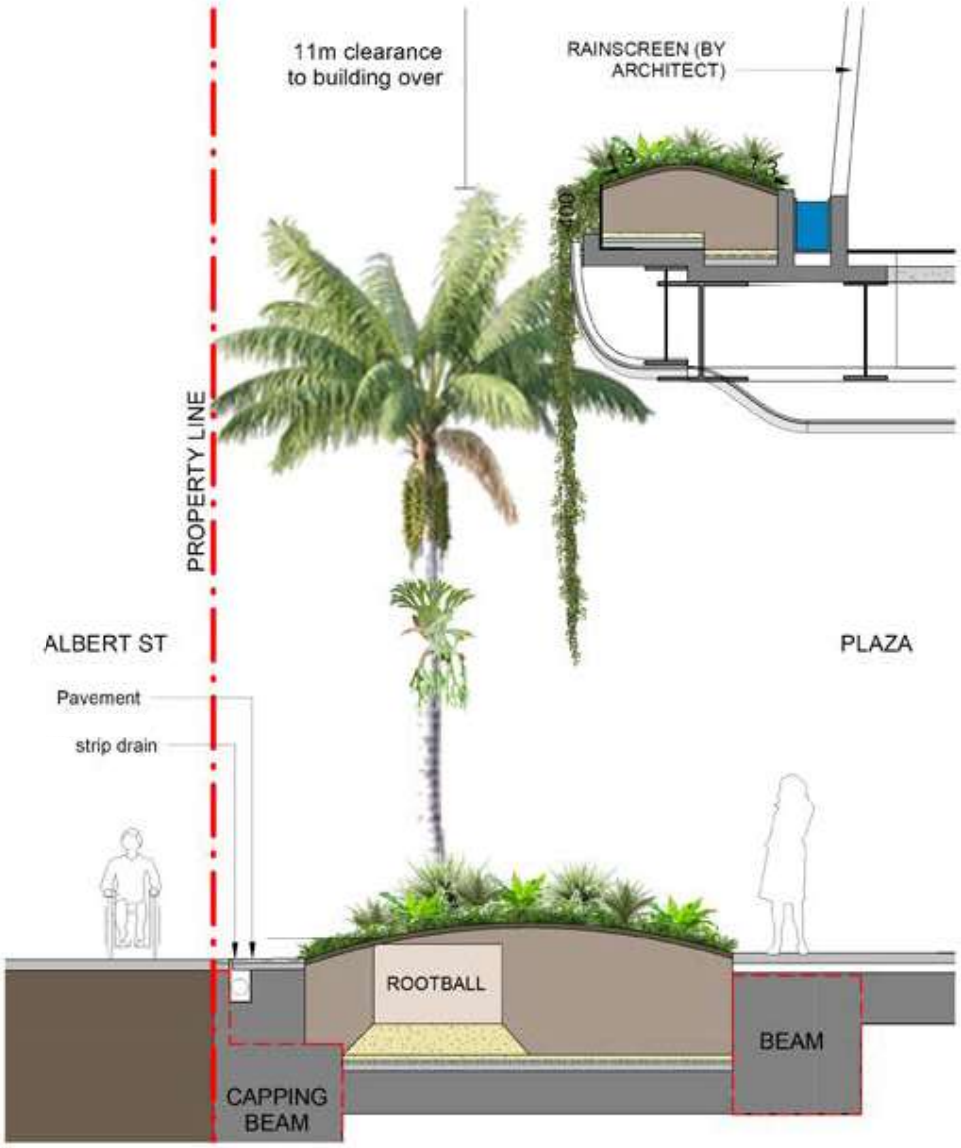
AMENDED IN RED
By: Essen Joseph
Date: 18-Jun-2025

Queensland Government

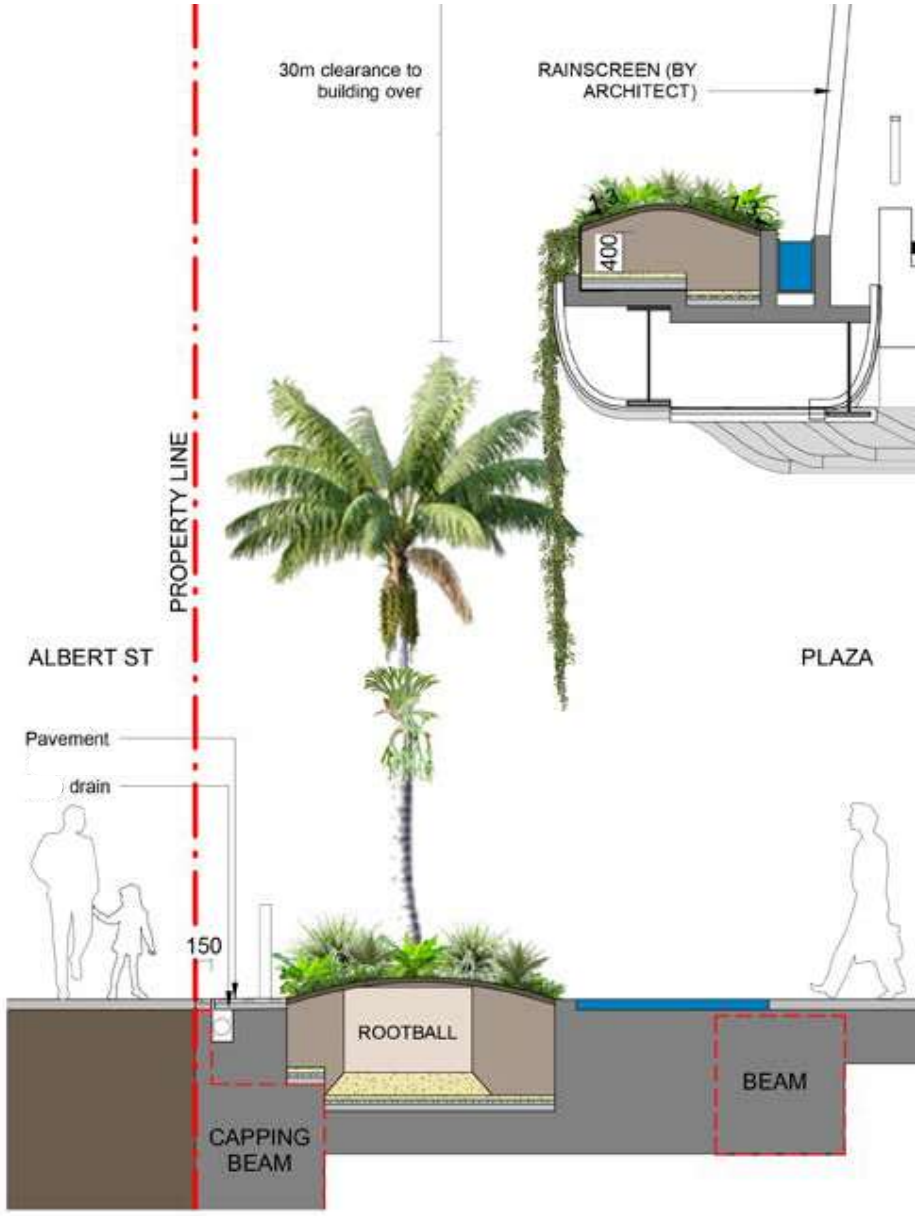
URBIS

GROUND FLOOR PLAN

1:200 @ A3



1 Central Planter Section 1
1 : 50

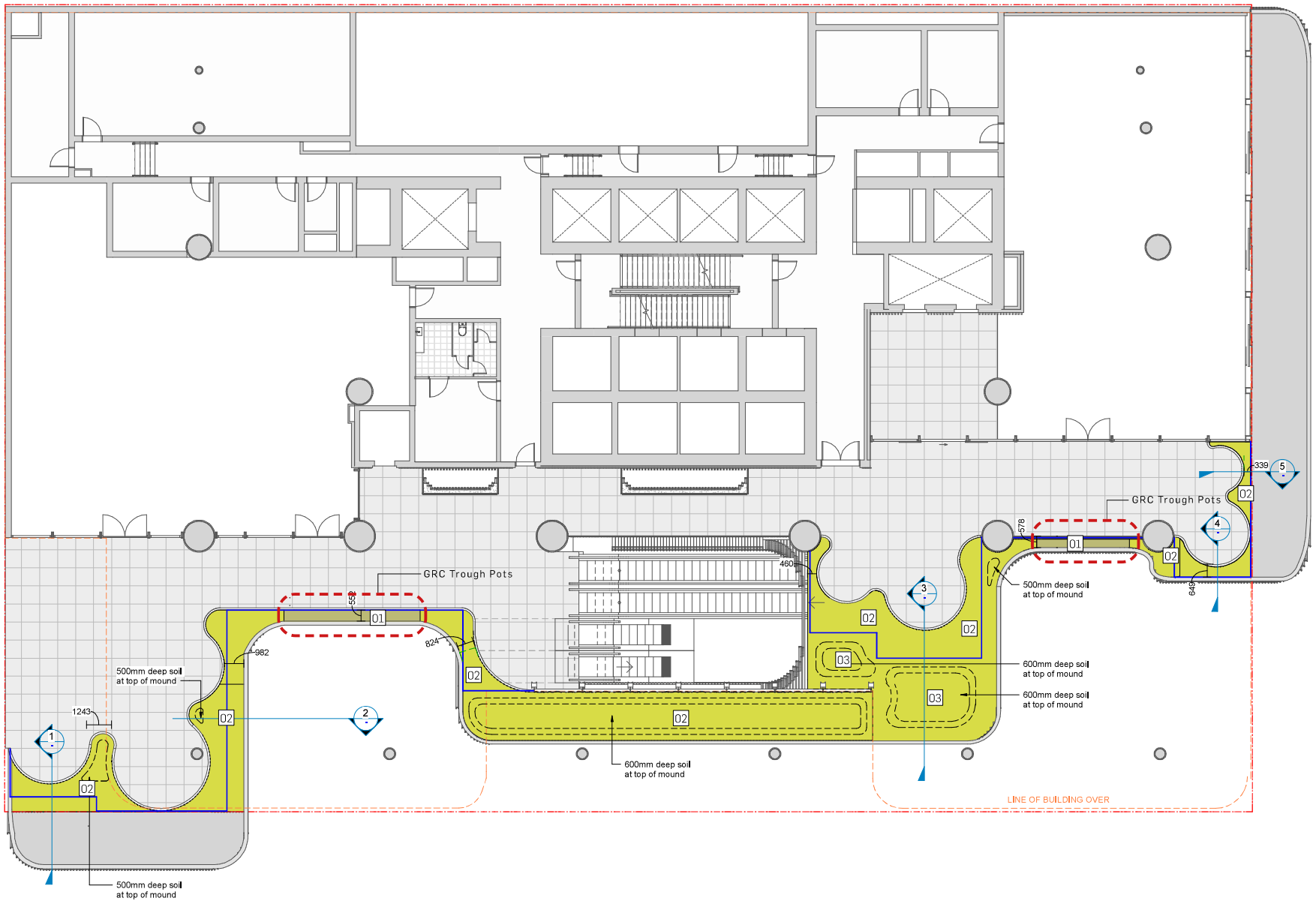


2 Central Planter Section 2
1 : 50

URBIS

GROUND FLOOR SECTIONS

3 - **Plaza Planter/Beam Coordination**
1 : 50



LEGEND - PLANT TYPE

- 01 Groundcovers and draping plants
- 02 Groundcovers, draping plants and small - medium shrubs.
- 03 Groundcovers, climbing plants and small - large shrubs.

LEGEND - SOIL DEPTH

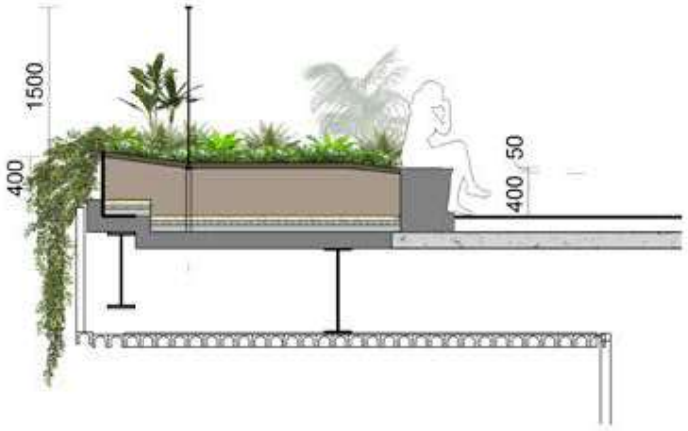
- Planting area with minimum 300mm soil depth
- Planting area with minimum 400mm soil depth, plus mounding where indicated.
- Planting area with minimum 500mm soil depth, plus mounding where indicated.
- Planting area with minimum 600mm soil depth, plus mounding where indicated.
- Planting area with minimum 800mm soil depth, plus mounding where indicated.
- Mounding +100mm per contour
- Balustrade

URBIS

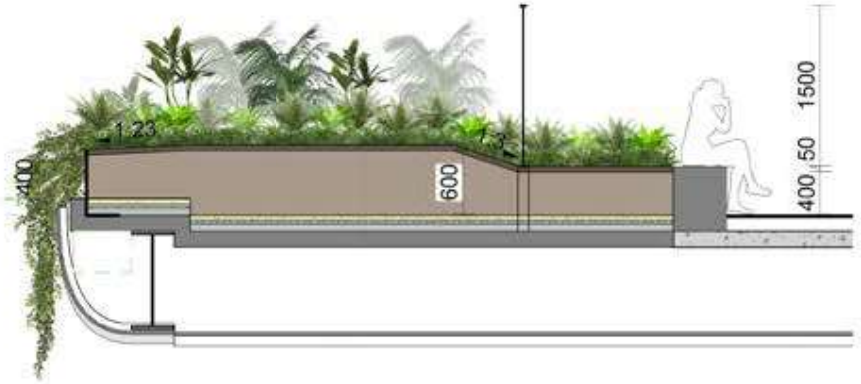
LEVEL 1 PLAN

1:200 @ A3

1 - Level 1 - Section 1
1 : 50

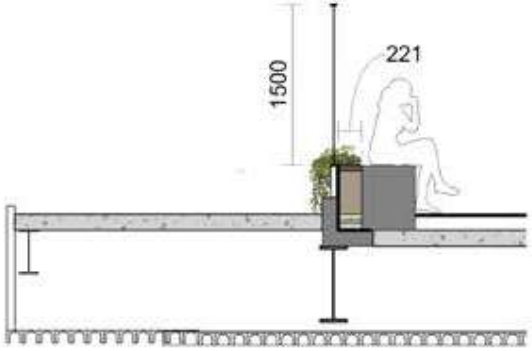


2 - Level 1 - Section 2
1 : 50



3 - Level 1 - Section 3
1 : 50

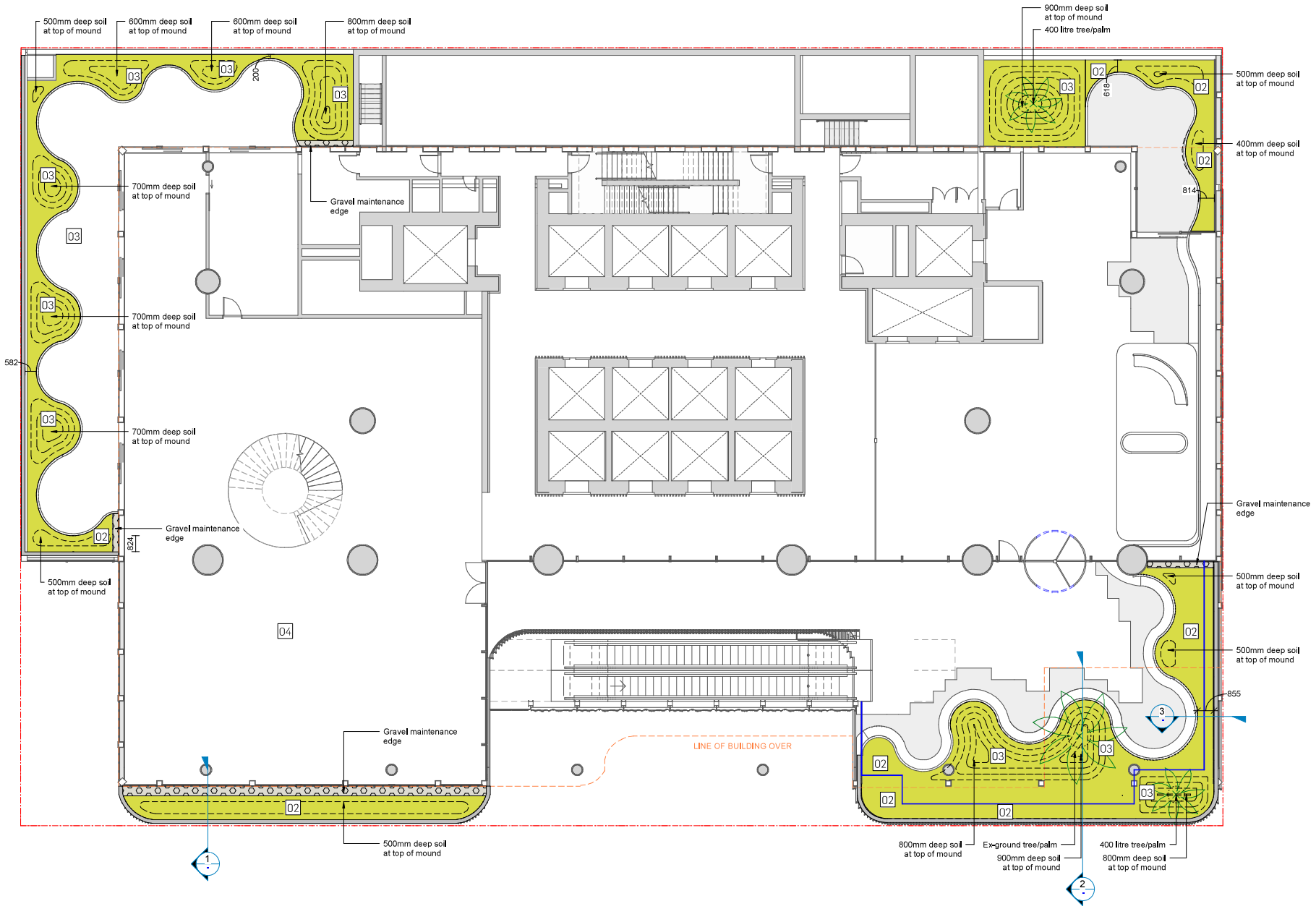
4 - Level 1 - Section 4
1 : 50



5 - Level 1 - Section 5
1 : 50

URBIS

LEVEL 1 - SECTIONS



LEGEND - PLANT TYPE

- 01 Groundcovers and draping plants
- 02 Groundcovers, draping plants and small - medium shrubs.
- 03 Groundcovers, climbing plants and small - large shrubs.
- 04 Groundcovers, draping plants, climbing plants, small - large shrubs. Internal rotational pot plant system.

LEGEND - SOIL DEPTH

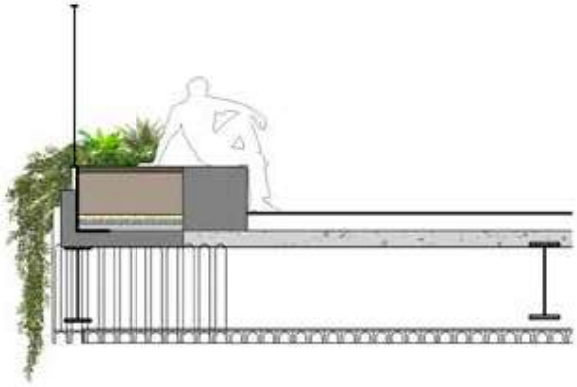
- Planting area with minimum 400mm soil depth, plus mounding where indicated.
- Mounding +100mm per contour
- Balustrade

LEVEL 2 PLAN

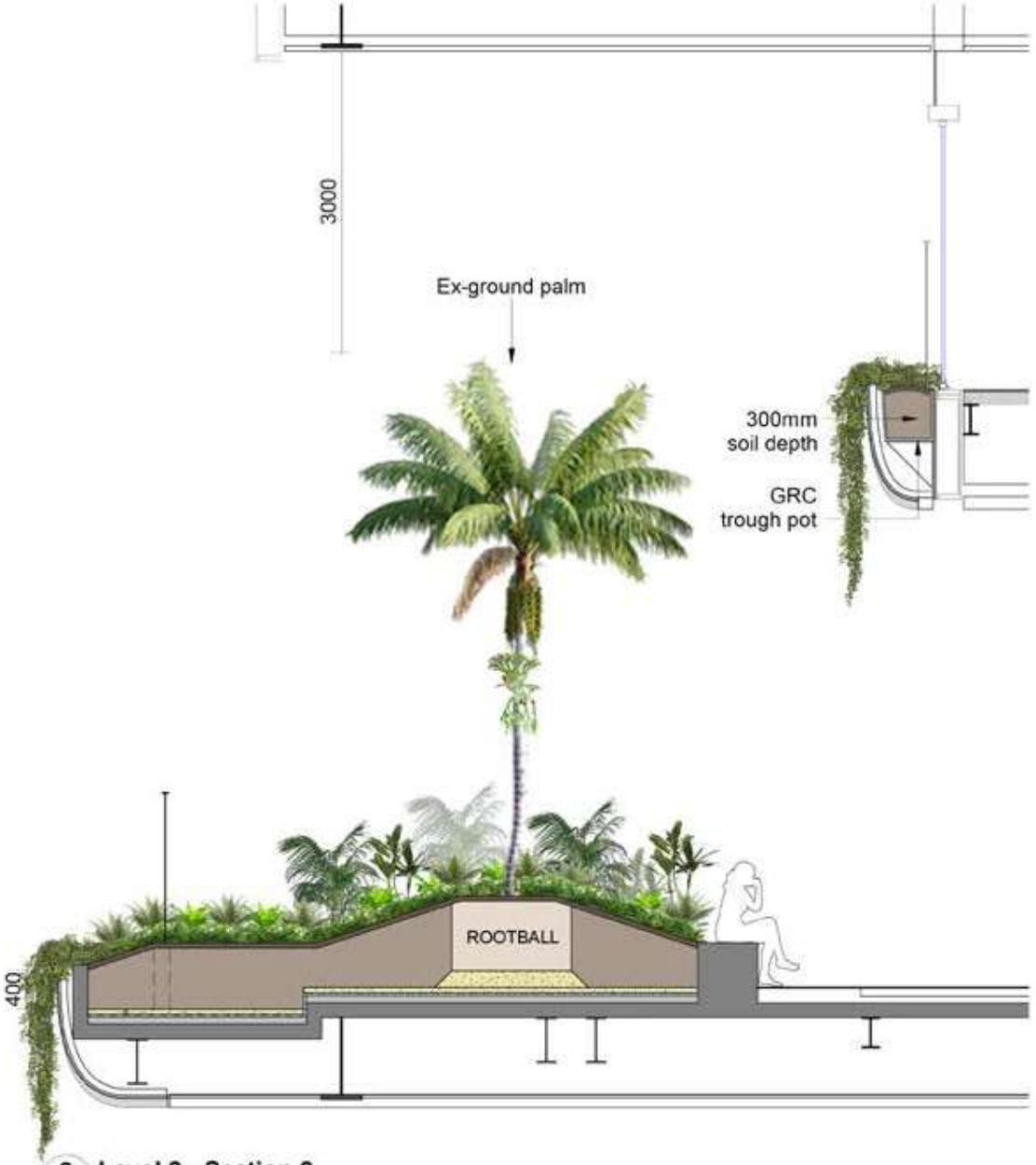
URBIS

1:200 @ A3

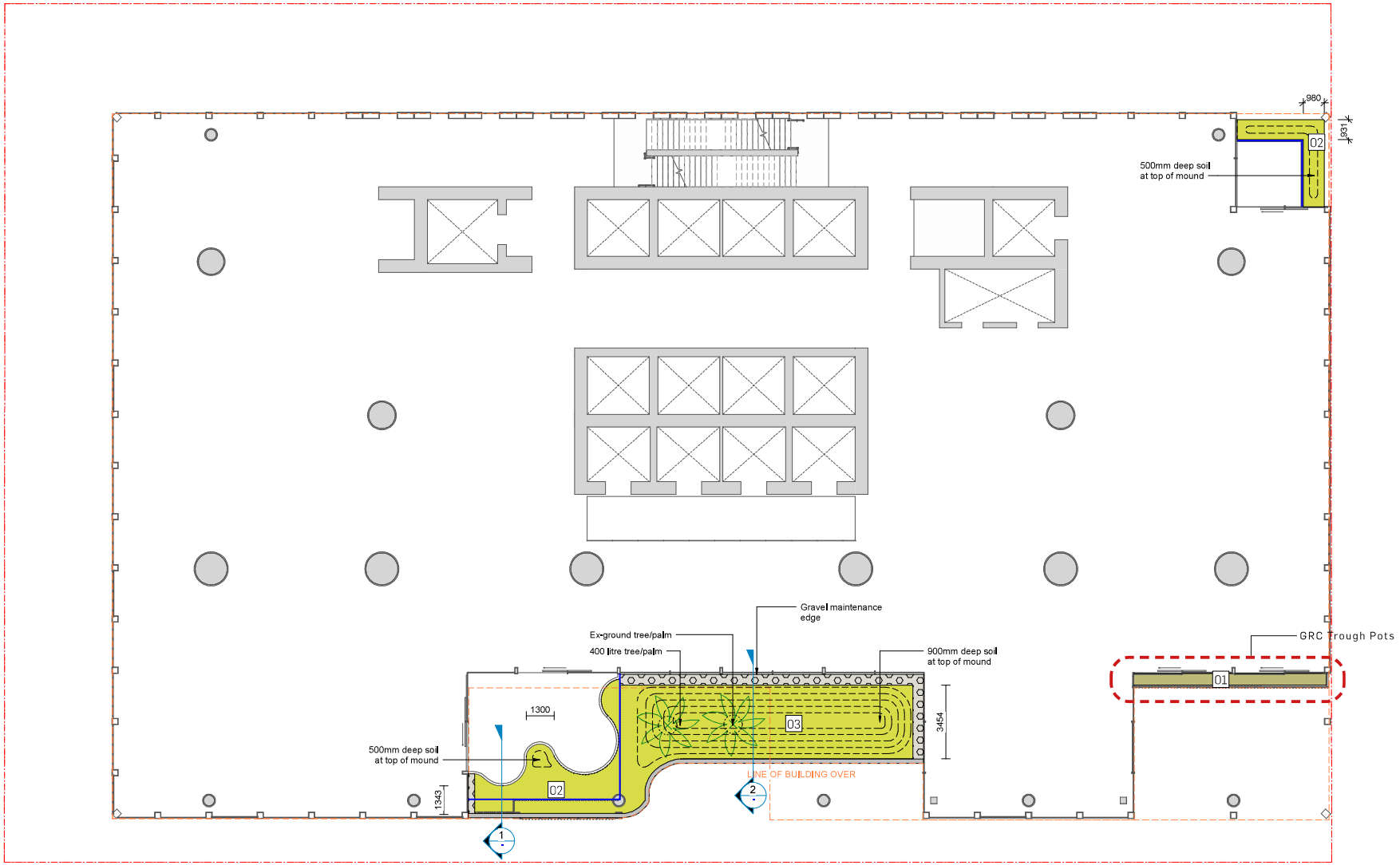
1 Level 2 - Section 1
1 : 50



3 Level 2 - Section 3
1 : 50



2 Level 2 - Section 2
1 : 50



LEGEND - PLANT TYPE

- 01 Groundcovers and draping plants
- 02 Groundcovers, draping plants and small - medium shrubs.
- 03 Groundcovers, climbing plants and small - large shrubs.

LEGEND - SOIL DEPTH

- Planting area with minimum 300mm soil depth
- Planting area with minimum 400mm soil depth, plus mounding where indicated.
- Mounding +100mm per contour
- Balustrade

URBIS

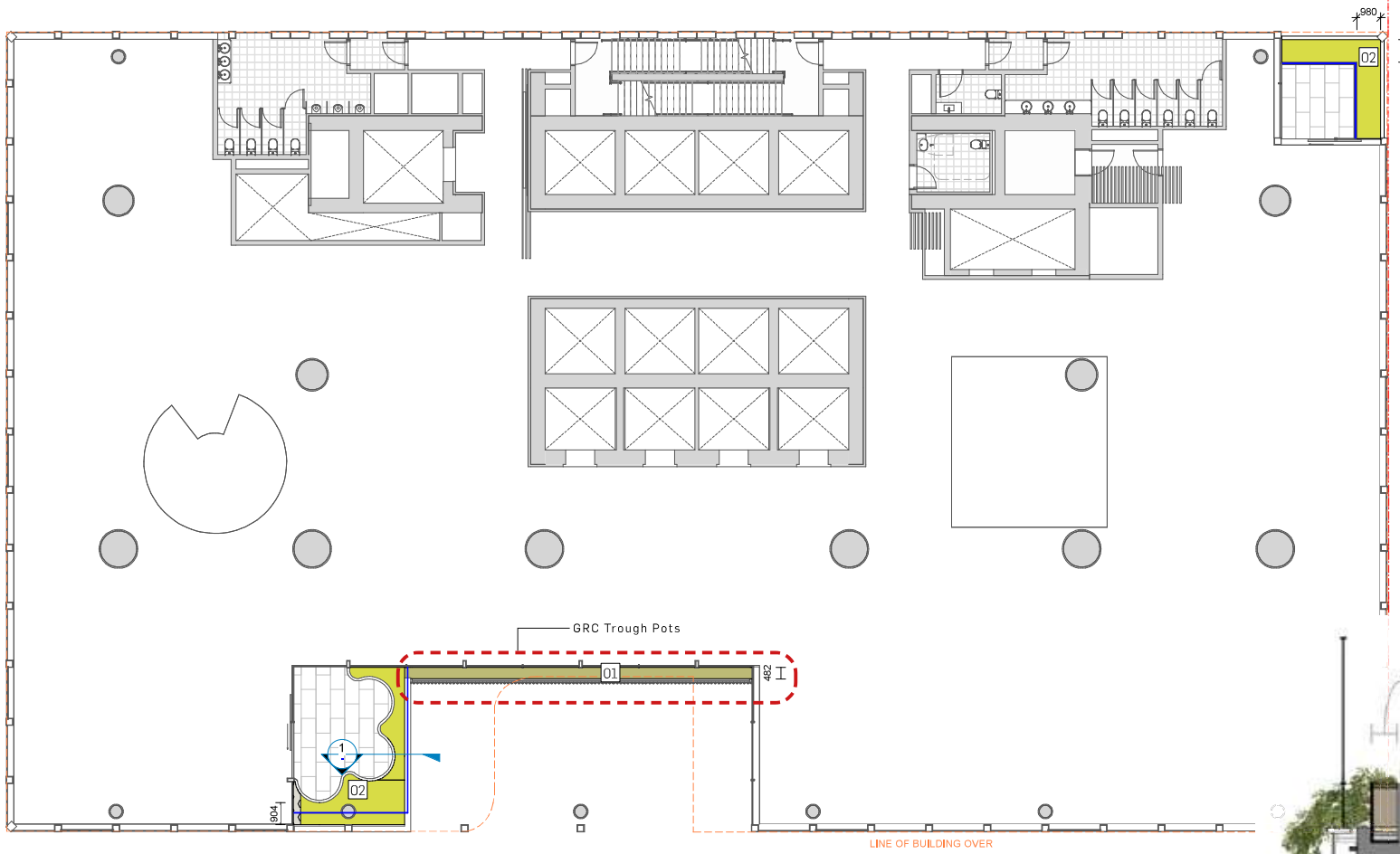
LEVEL 3 PLAN

1:200 @ A3

1 Level 3 Section 1
- 1 : 50

2 Level 3 Section 2
- 1 : 50

LEVEL 3 - SECTIONS



LEGEND - PLANT TYPE

01 Groundcovers and draping plants

02 Groundcovers, draping plants and small - medium shrubs.

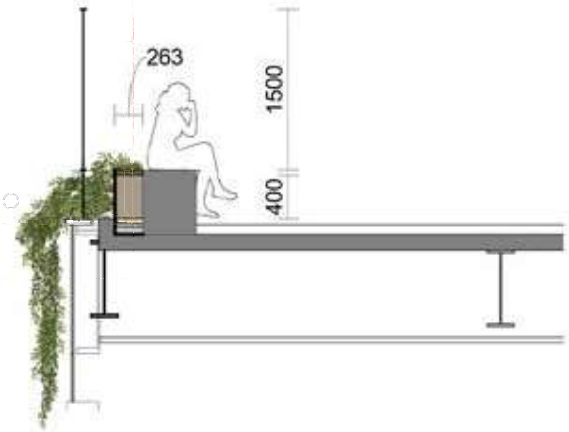
LEGEND - SOIL DEPTH

Planting area with minimum 300mm soil depth

Planting area with minimum 400mm soil depth, plus mounding where indicated.

Mounding +100mm per contour

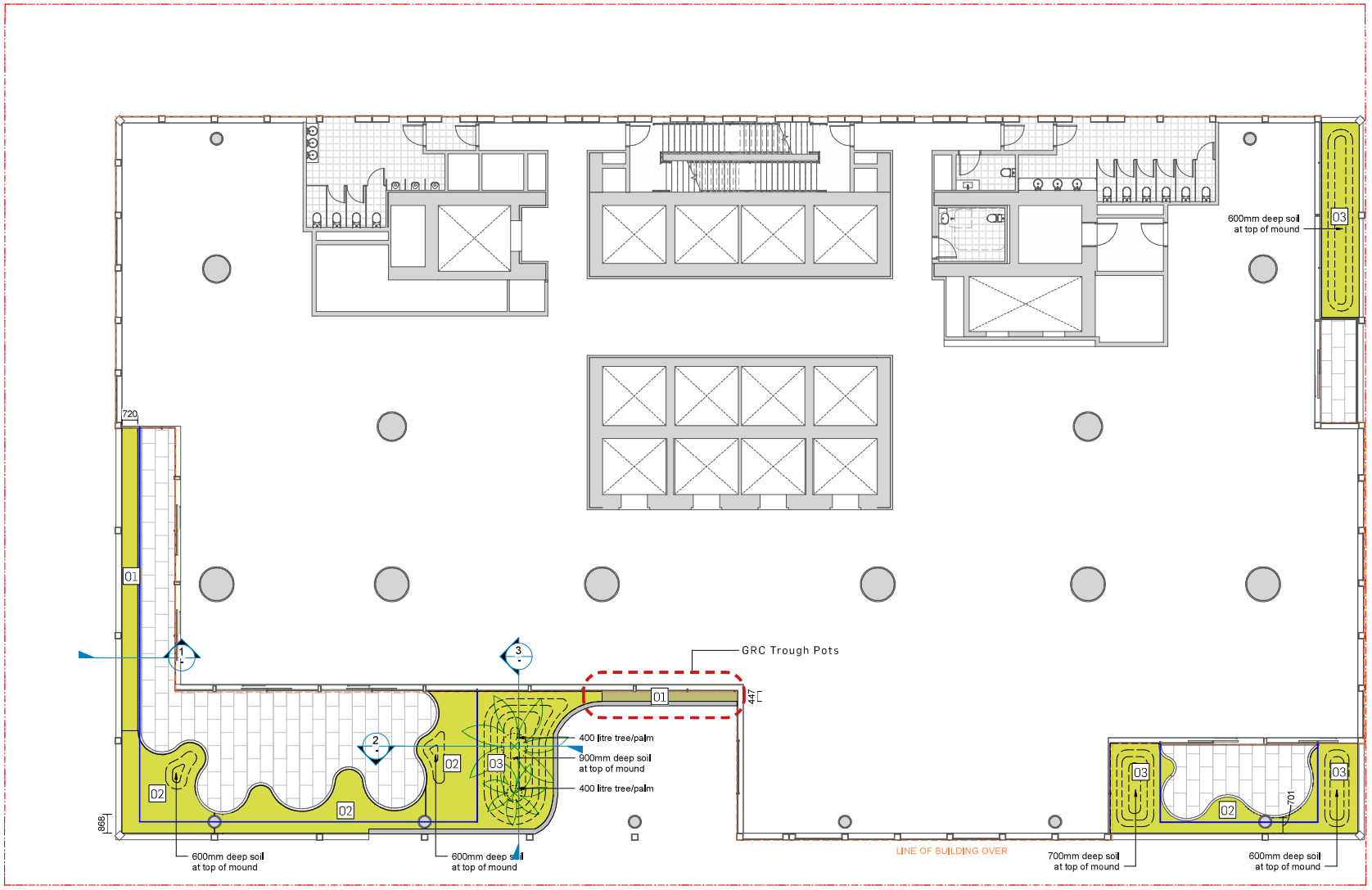
Balustrade



1 - Level 4 Section 1
1 : 50

LEVEL 4 PLAN & SECTION

PLAN 1:200 @ A3



LEGEND - PLANT TYPE

- 01 Groundcovers and draping plants
- 02 Groundcovers, draping plants and small - medium shrubs.
- 03 Groundcovers, climbing plants and small - large shrubs.

LEGEND - SOIL DEPTH

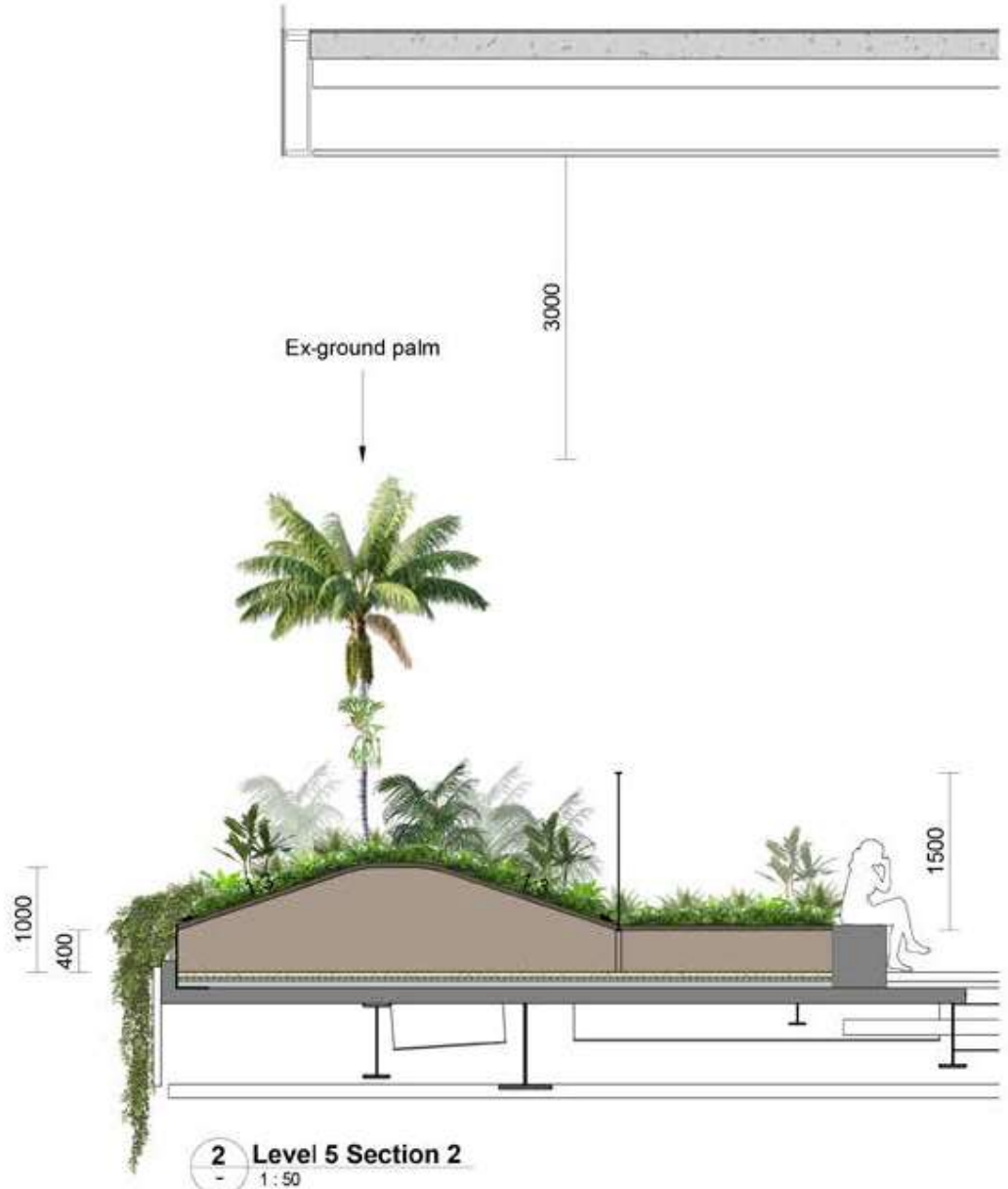
- Planting area with minimum 300mm soil depth
- Planting area with minimum 400mm soil depth, plus mounding where indicated.
- Mounding +100mm per contour
- Balustrade

URBIS

LEVEL 5 PLAN

1:200 @ A3

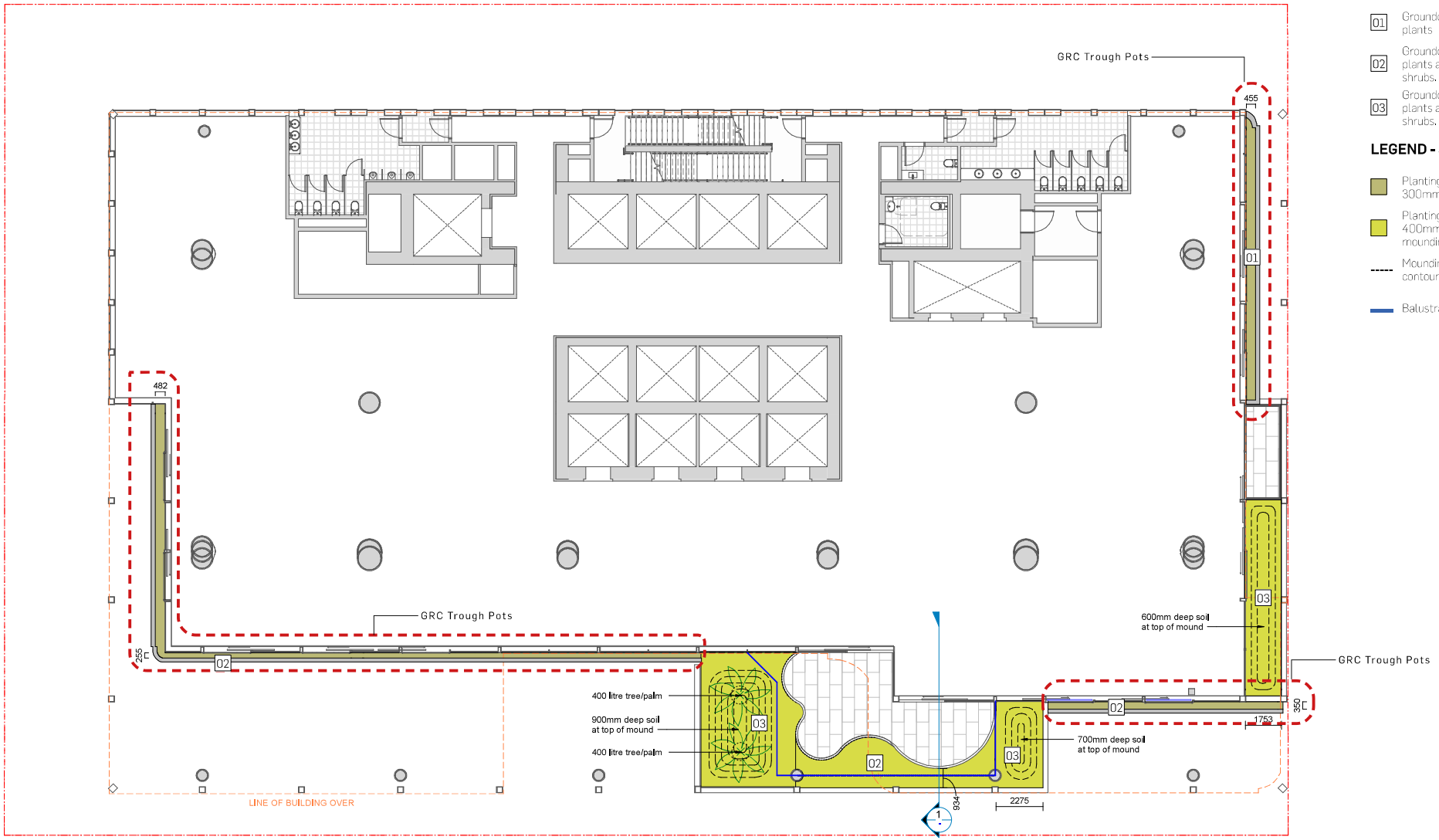
1 Level 5 Section 1
1 : 50



2 Level 5 Section 2
1 : 50

LEVEL 5 - SECTION 1 + 2

LEVEL 5 - SECTION 3



LEGEND - PLANT TYPE

- 01 Groundcovers and draping plants
- 02 Groundcovers, draping plants and small - medium shrubs.
- 03 Groundcovers, climbing plants and small - large shrubs.

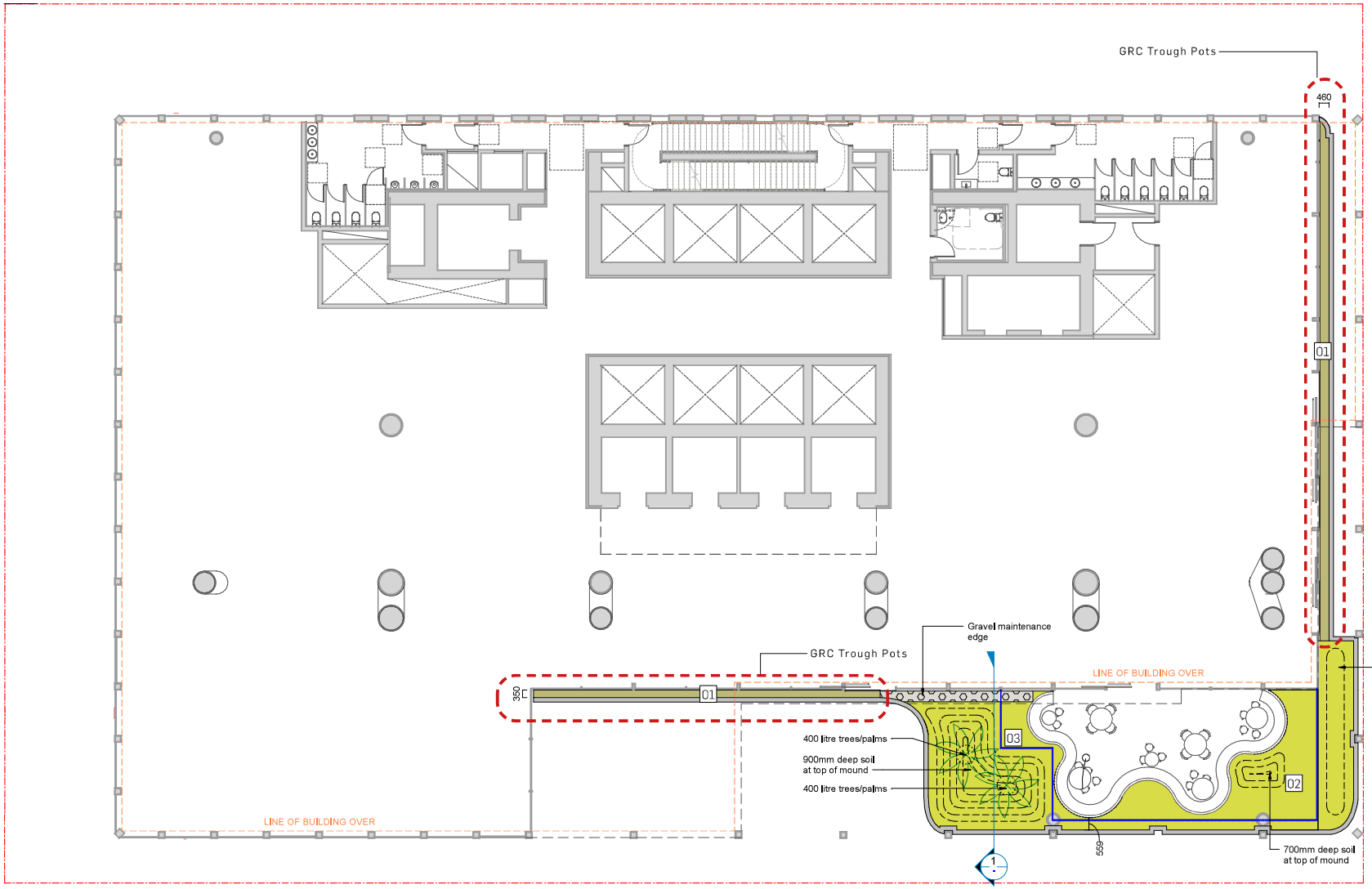
LEGEND - SOIL DEPTH

- Planting area with minimum 300mm soil depth
- Planting area with minimum 400mm soil depth, plus mounding where indicated.
- Mounding +100mm per contour
- Balustrade

URBIS

LEVEL 6 PLAN

1:200 @ A3



LEGEND - PLANT TYPE

- 01 Groundcovers and draping plants
- 02 Groundcovers, draping plants and small - medium shrubs.
- 03 Groundcovers, climbing plants and small - large shrubs.

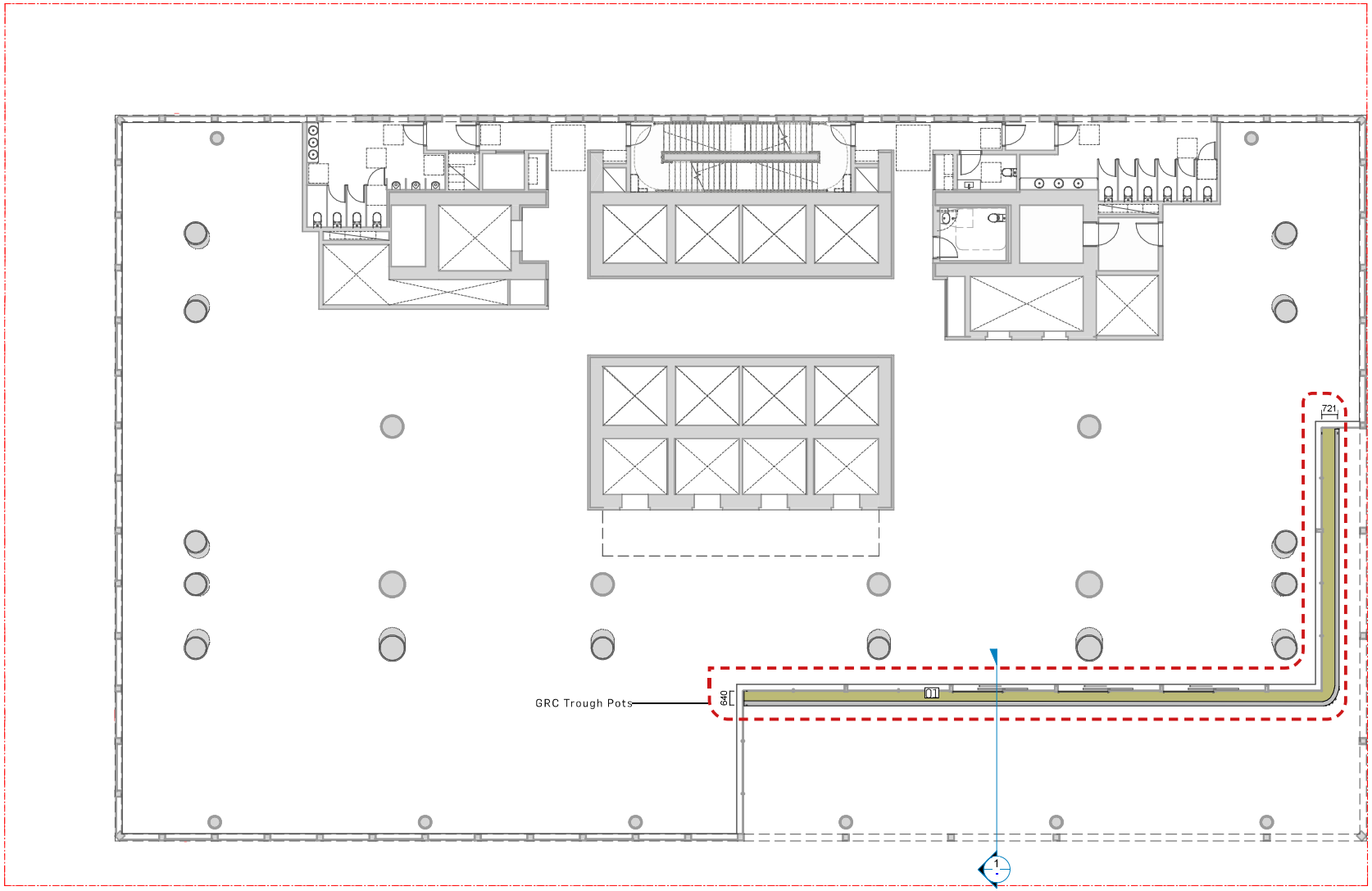
LEGEND - SOIL DEPTH

- Planting area with minimum 300mm soil depth
- Planting area with minimum 400mm soil depth, plus mounding where indicated.
- Mounding +100mm per contour
- Balustrade

URBIS

LEVEL 7 PLAN

1:200 @ A3



LEGEND - PLANT TYPE

- 01 Groundcovers and draping plants
- 02 Groundcovers, draping plants and small - medium shrubs.
- 03 Groundcovers, climbing plants and small - large shrubs.

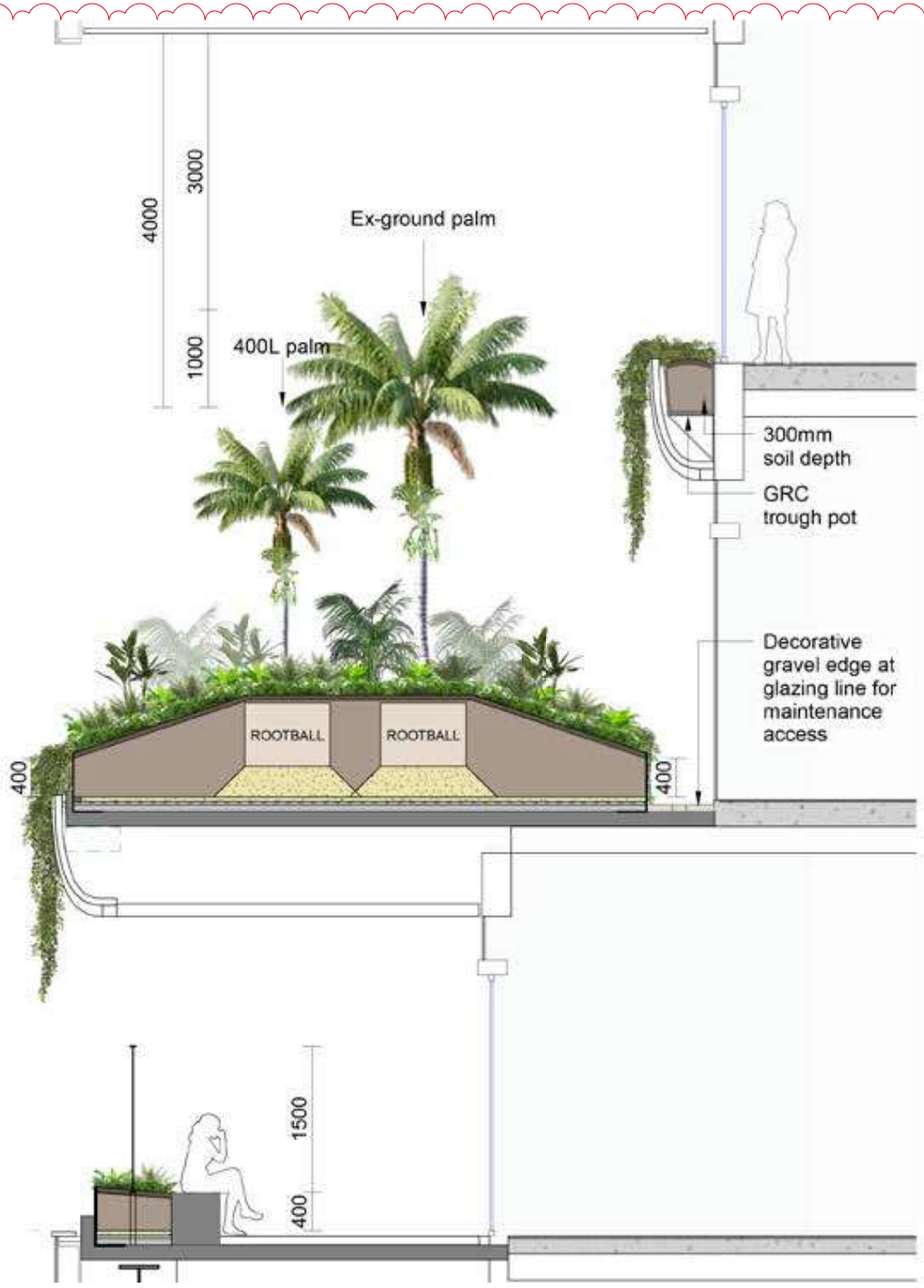
LEGEND - SOIL DEPTH

- Planting area with minimum 300mm soil depth
- Mounding +100mm per contour
- Balustrade

URBIS

LEVEL 8 PLAN

1:200 @ A3



1 - Level 6/7/8 - Section 1
1 : 50

LEVEL 6-8 SECTION

AMENDED IN RED

By: Essen Joseph

Date: 18-Jun-2025

Queensland Government

See drawing number ALB-URB-DWG-LS-200-L38-00 for updated details. Plant typologies and soil depth details illustrated in this drawing remain unchanged.

LEGEND - PLANT TYPE

01 Groundcovers and draping plants

02 Groundcovers, draping plants and small - medium shrubs.

03 Groundcovers, climbing plants and small - large shrubs.

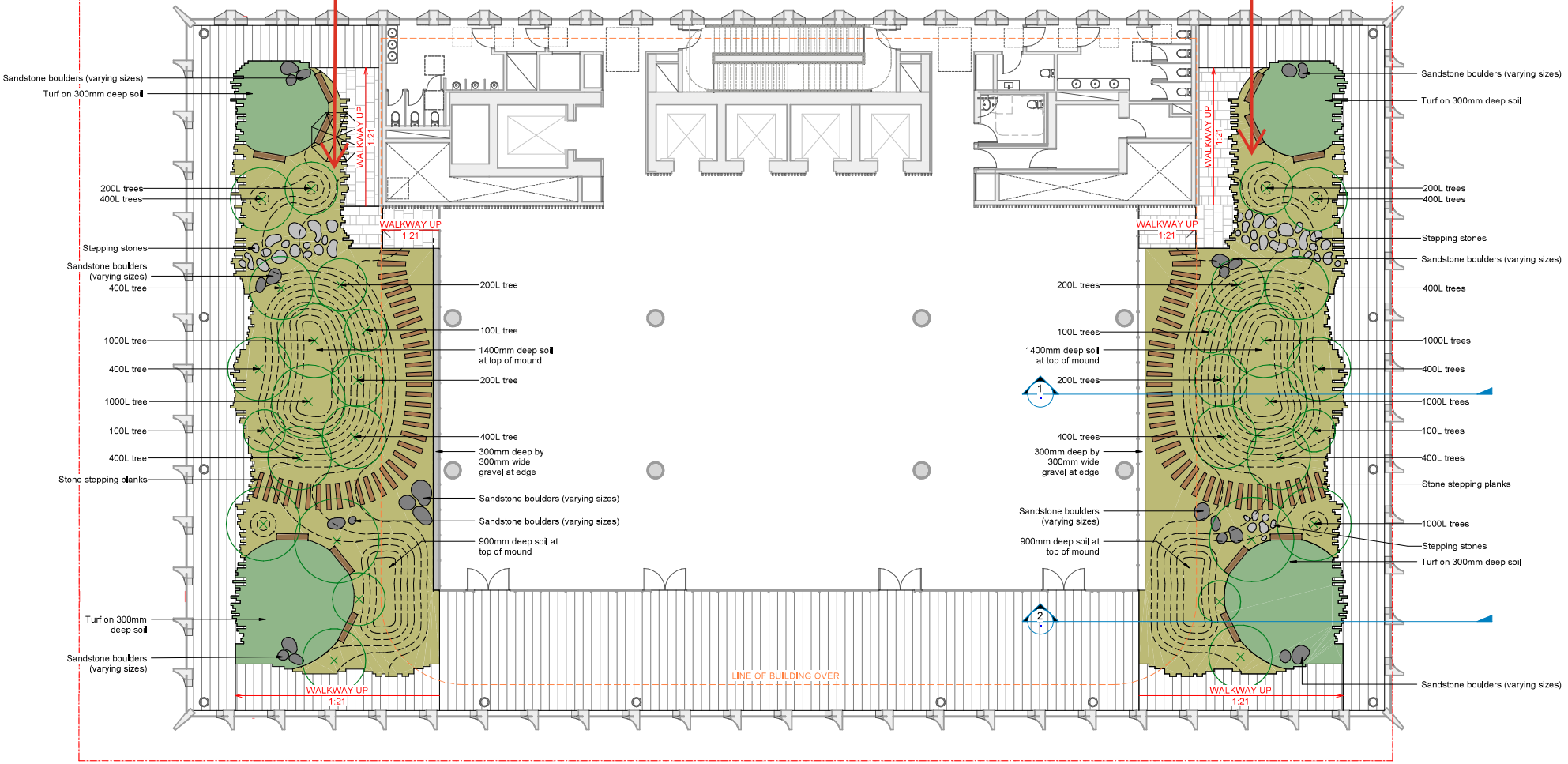
LEGEND - SOIL DEPTH

Planting area with minimum 300mm soil depth, plus mounding where indicated.

Mounding +100mm per contour

Balustrade

See drawing number ALB-URB-DWG-LS-200-L38-00 for updated details. Plant typologies and soil depth details illustrated in this drawing remain unchanged.



~~LEVEL 37 PLAN~~

Level 38 Plan

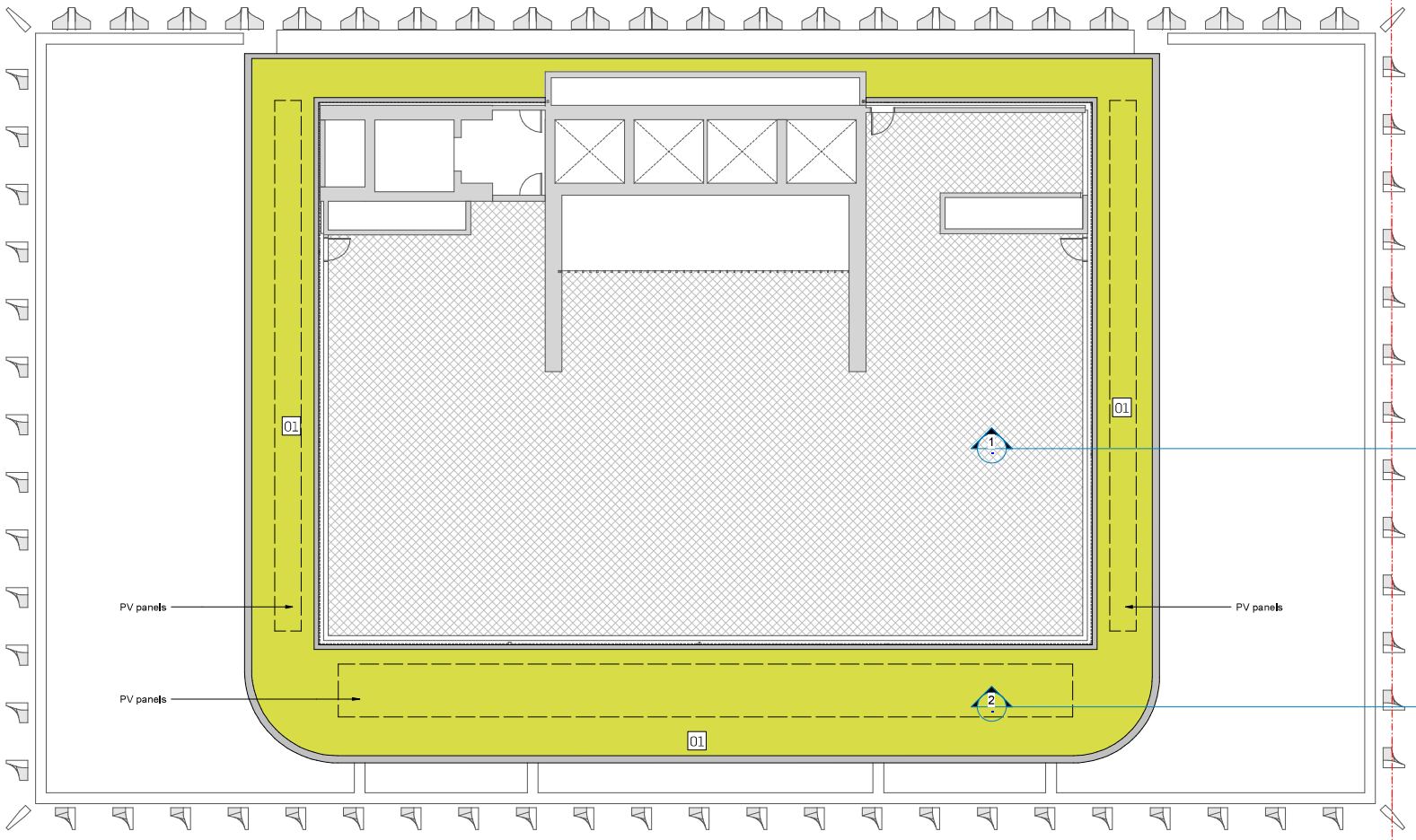
1:200 @ A3

LEGEND - PLANT TYPE

01 Groundcovers, climbers and draping plants

LEGEND - SOIL DEPTH

Planting area with minimum 400mm soil depth, plus mounding where indicated.



POTENTIAL SUITABLE SPECIES FOR MASS PLANTING TO COVER SCREEN TO MECH.


Pandorea jasminoides


ipomea horsfalliae


pyrostegia venusta

LEVEL 38 PLAN

1:200 @ A3

1 - Roof Section 1
1 : 50

LEVEL 37-38 SECTION

2 Roof Section 2
1 : 50

LEVEL 37-38 SECTION


URBIS