



ARCADIA  
LANDSCAPE ARCHITECTURE

88 CHRISTIE STREET ST LEONARDS  
JQZ | PTW  
LANDSCAPE \$4.55  
MAY 2020



SITE UNDERSTANDING

01\_ location

02\_ historical

03\_ natural setting

04\_ urbanisation

DESIGN THEORY

05\_ design approach

06\_ layering + processes

07\_ connections I to site + context

08\_ connections I to site + context

09\_ connections I to site + context

10\_ connections I to site + context

11\_ connection to site + community

DESIGN RESPONSE

12\_ principles

13\_ concept masterplan

14\_ communal open space

15\_ concept ground

16\_ concept ground

17\_ ground floor plaza

18\_ ground floor section

19\_ pedestrian connections

20\_ landscape sections

22\_ concept level 1

23\_ concept level 2

24\_ concept level 3

25\_ concept T3 level 7

26\_ concept T2 level 7

27\_ rooftop concept analysis

28\_ concept level 26

30\_ planting palette

31\_ garden trellis

32\_ green roof

SOFTWARES PLAN

300\_ Plant Schedule

301\_ Ground Floor

302\_ Level 1

303\_ Level 2

304\_ Level 3

305\_ T3 Level 7

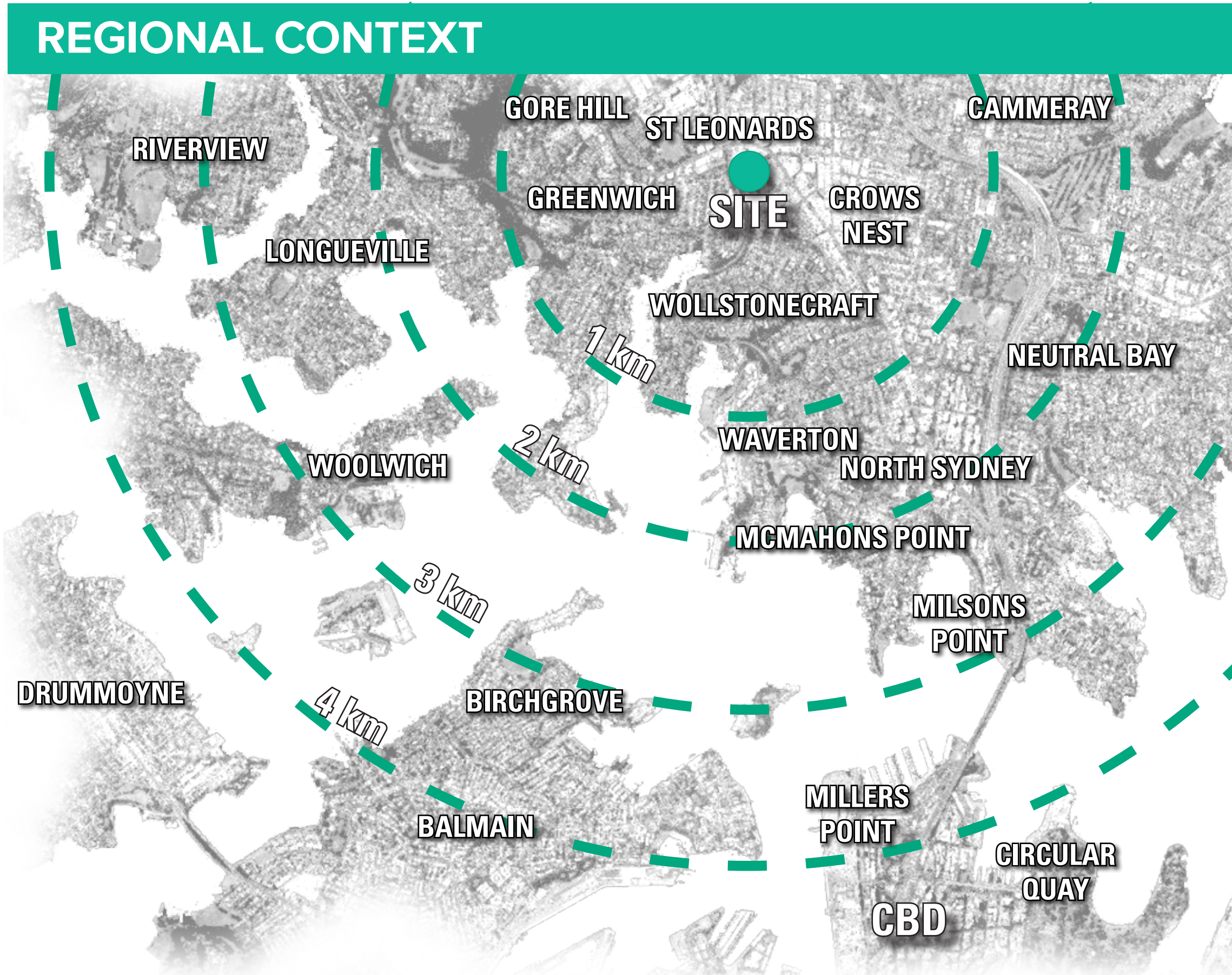
306\_ T2 Level 7

307\_ Level 26

500\_ Landscape Details

600\_ Landscape Specification

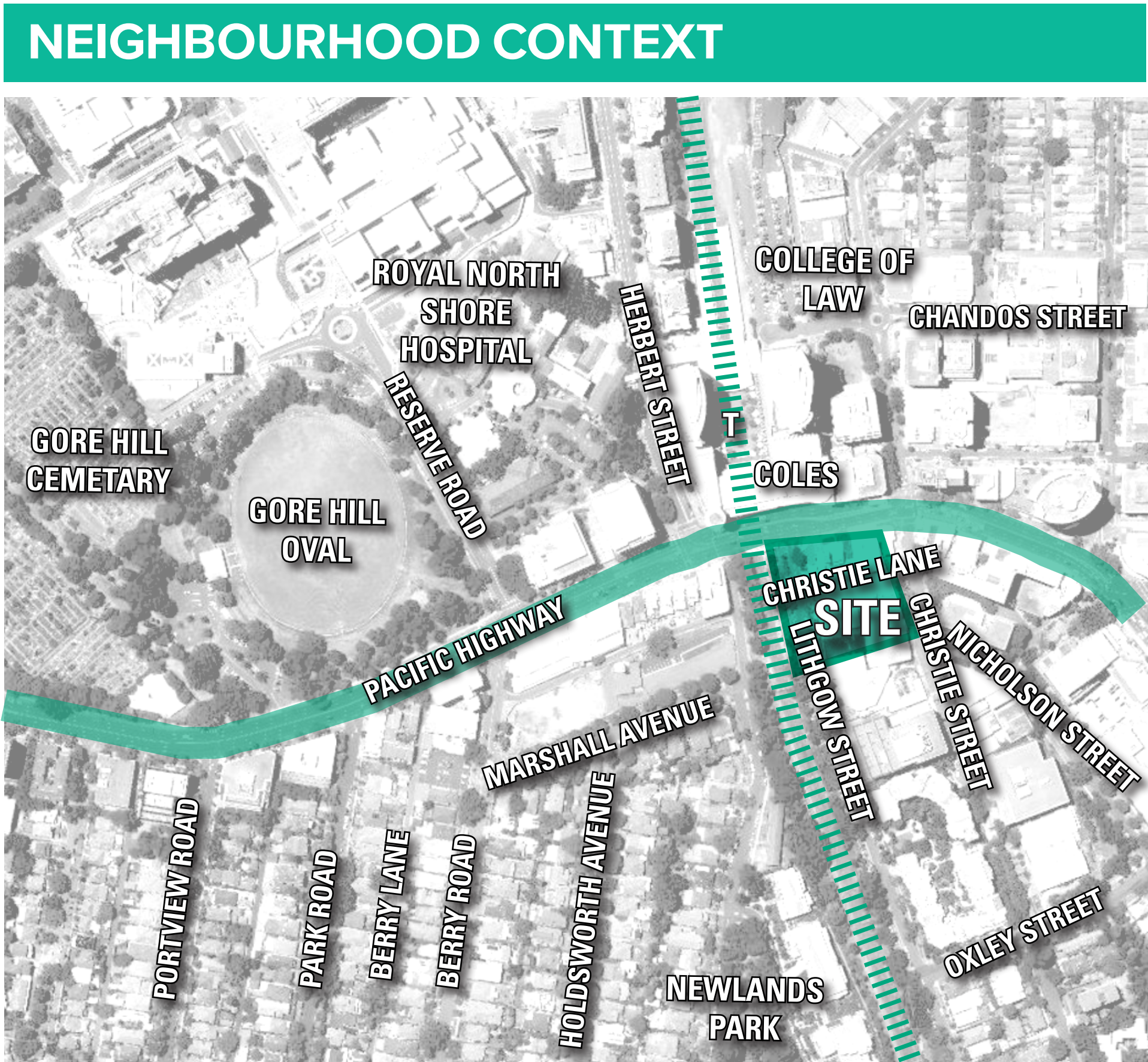




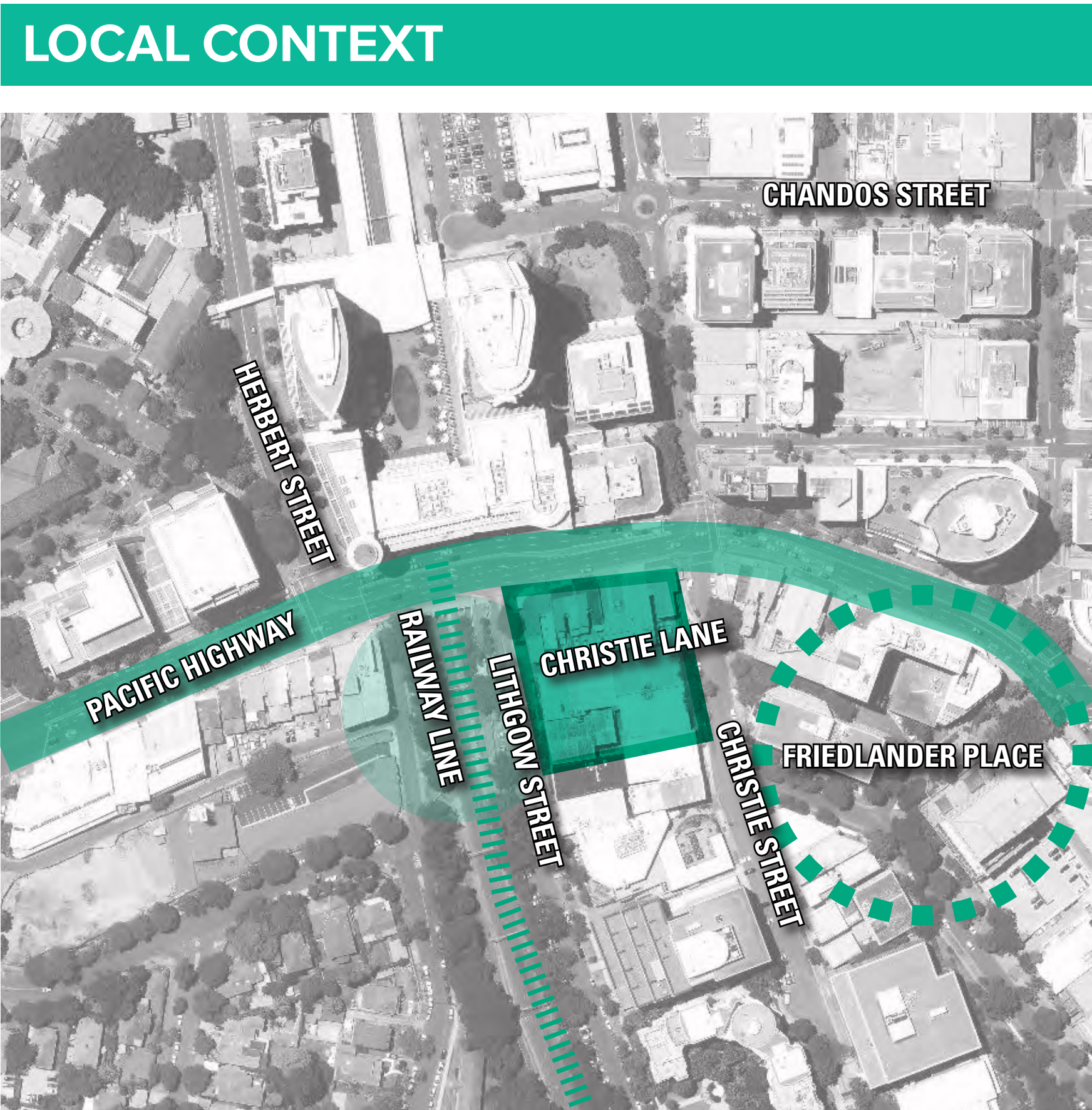
The site is located on the lower North Shore of Sydney and is 5km north-west of the Sydney Central Business District.

Positioned close to the commercial centre on Chandos Street, St Leonards contains one of Sydney's suburban skyscraper clusters, with the major offices for many large companies located nearby.

The site is located less than 2km from the waters edge and has extensive views to Sydney Harbour, Berry Island and Gore Cove.



Located directly beside the railway and directly across the road from St Leonards Railway Station, the development is well connected to the city by a range of transport modes.



The site provides opportunities for sub-terranean connections to St Leonards Railway Station to reduce pedestrian movement across Pacific Highway.

The volume of pedestrians moving in this direction is forecast to be in excess of 12, 000 people per day.



**HISTORIC PHOTOS**



\_From the earliest days of settlement, Lane Cove was an important source of timber for house and ship building, of grass for animal fodder, and of shells which were burnt to produce lime for building.

\_A stockade was erected in Woodford Bay , with a permanent garrison of soldiers to protect convict workers and settlers. Throughout the 19th century, farms and dairies were established.

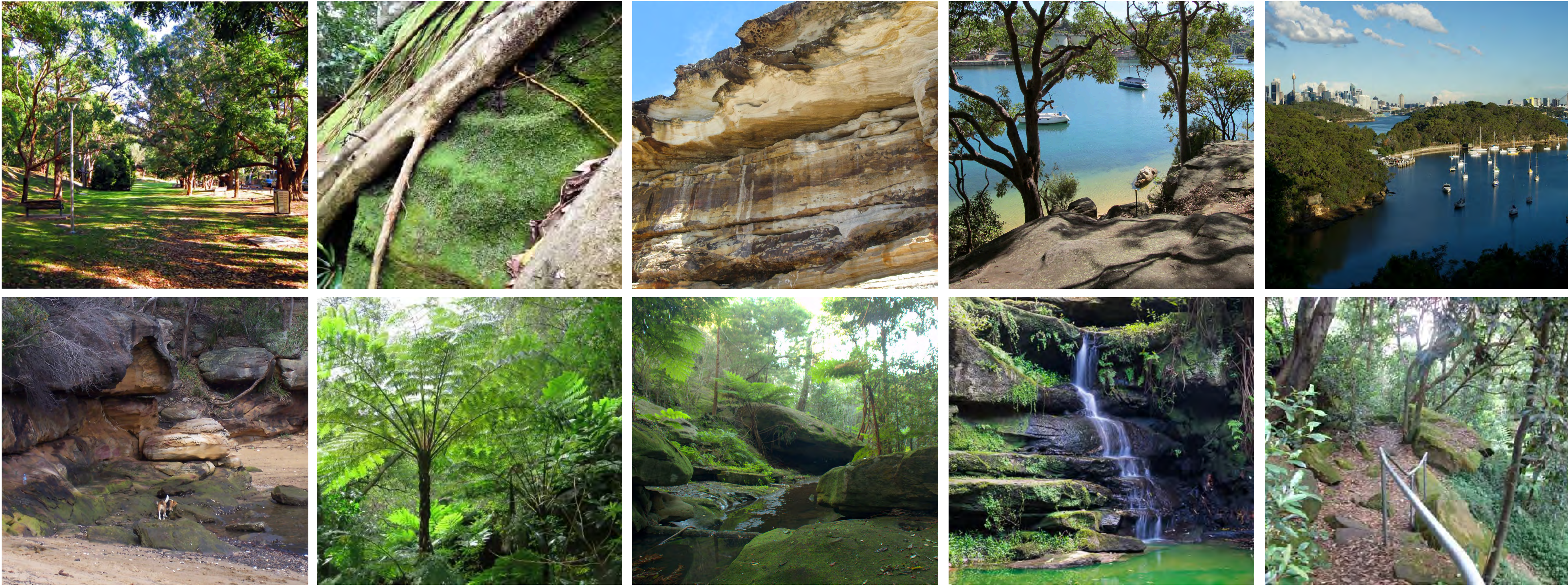


A photograph of the Parramatta River from a heavily timbered St Leonards. In the middle distance is Cockatoo Island with its dockyard.





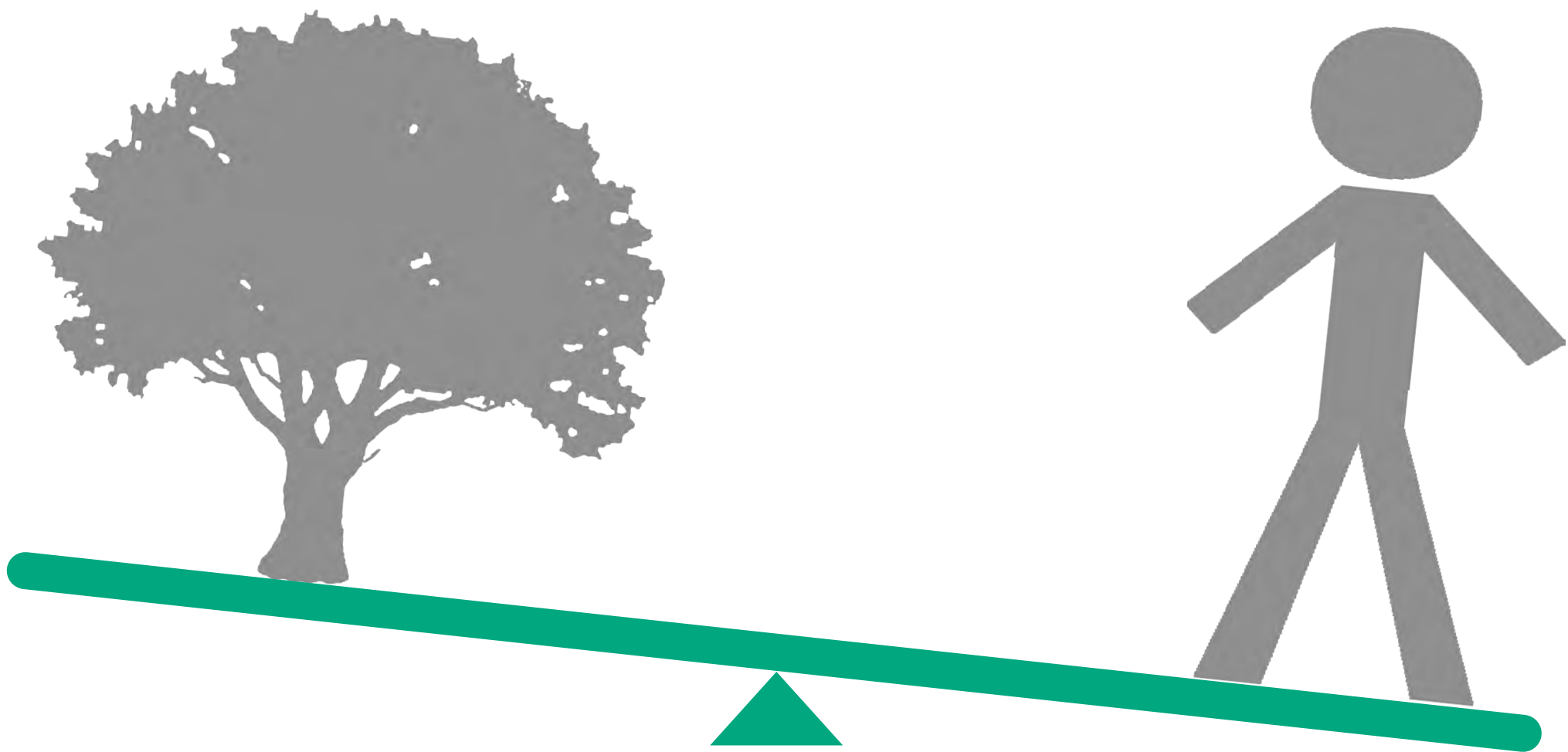
LOCAL IMAGERY



The surrounding landscapes express the ravages of **TIME**. From worn sandstone terraces and sandy beaches to moss covered boulders and vegetated strata...the effects of **TIME** are imprinted onto the landscape for all to read.



We can see from aerial imagery that urban development has been considerable and has affected the area significantly. This has come at the expense of established vegetation on the gently undulating rises of the St Leonards area. The concept that nature is in retreat is tangible and undeniable and is a concern that can be addressed through holistic design.



*The natural environment suffers as more space is required for the construction of houses and the development of industry. As ecosystems are disrupted and habitats are destroyed, neighbourhood expansion further reduces biodiversity of urban areas.*

NATURE IN RETREAT



RECONNECTING GREEN SPACE



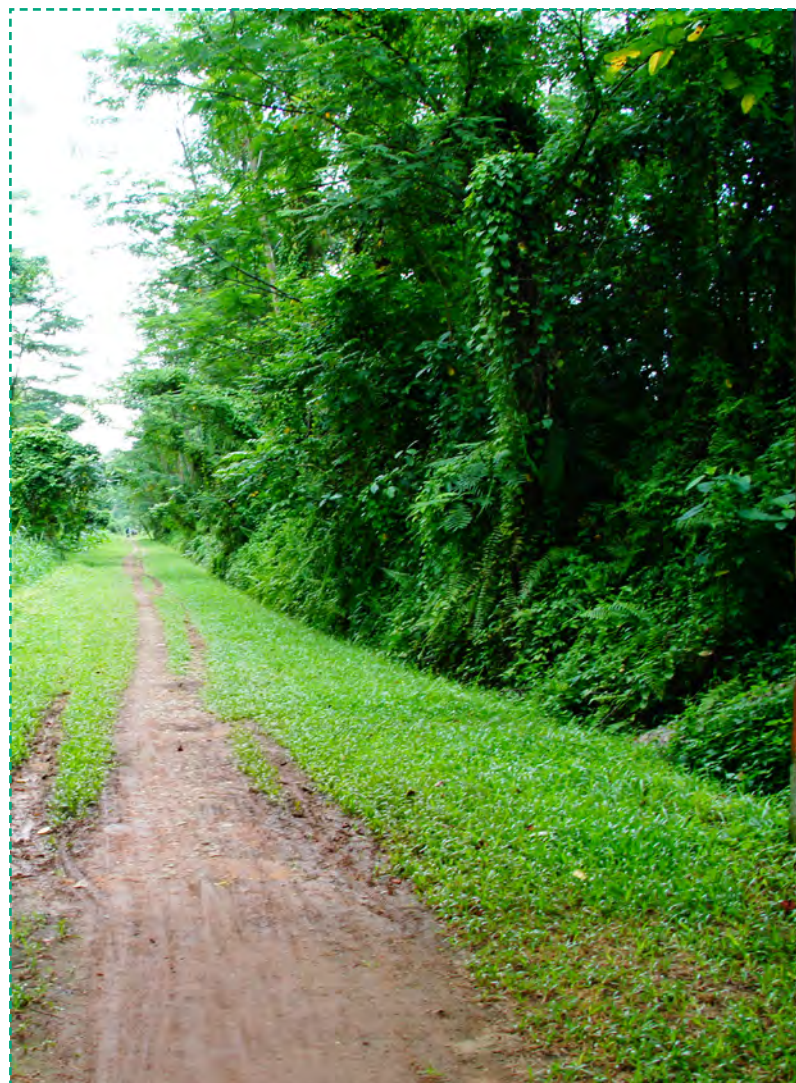
*"It is important to get these green spaces connected... we need to protect the green space we've got now, because it is really difficult to get any more."*  
Kim Ellis



Growing our green spaces & providing habitat



Creating green corridors





*Reading the landscape is like a collage, interweaving the patterns of ecology and the fragments of history with footprints of the personal journey. The journey in time as well as space, plays no small part.*  
GEOFF PARK, 1995

The landscape approach seeks to engage with **TIME** as a driver to interpret sense of place. The tenses: Past, Present + Future, allow us to explore site intricacies while effectively meeting key design principles.

VISION

*To create a responsive landscape that reflects the local climate, character, identity and sense of place while supporting a compact, accessible, active and healthy communities.*  
*We intend to draw upon the sites history, geology and biology to create an integrated, resilient landscape that is both engaging, healthy and in balance with its natural and cultural systems.*



01 Reflections of time and process



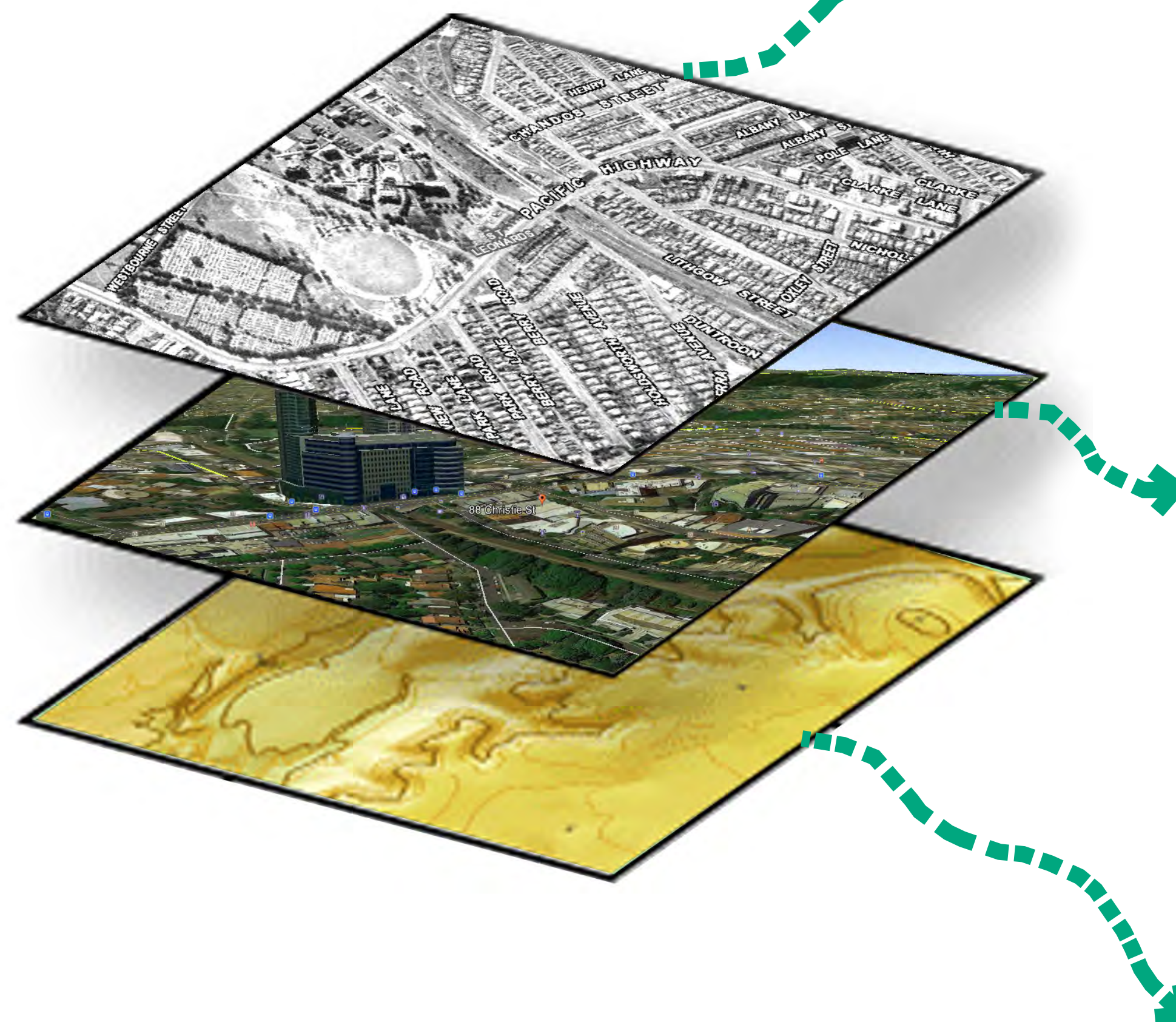
02 Connection to site + Context



03 Placemaking and activation. Creation of Place



## DEFINE THE CITY AS AN ORGANISM RATHER THAN A MACHINE

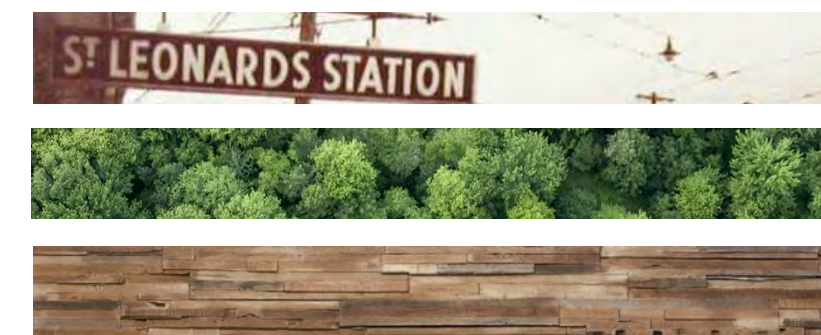


### EVOLUTION + STRATIFICATION

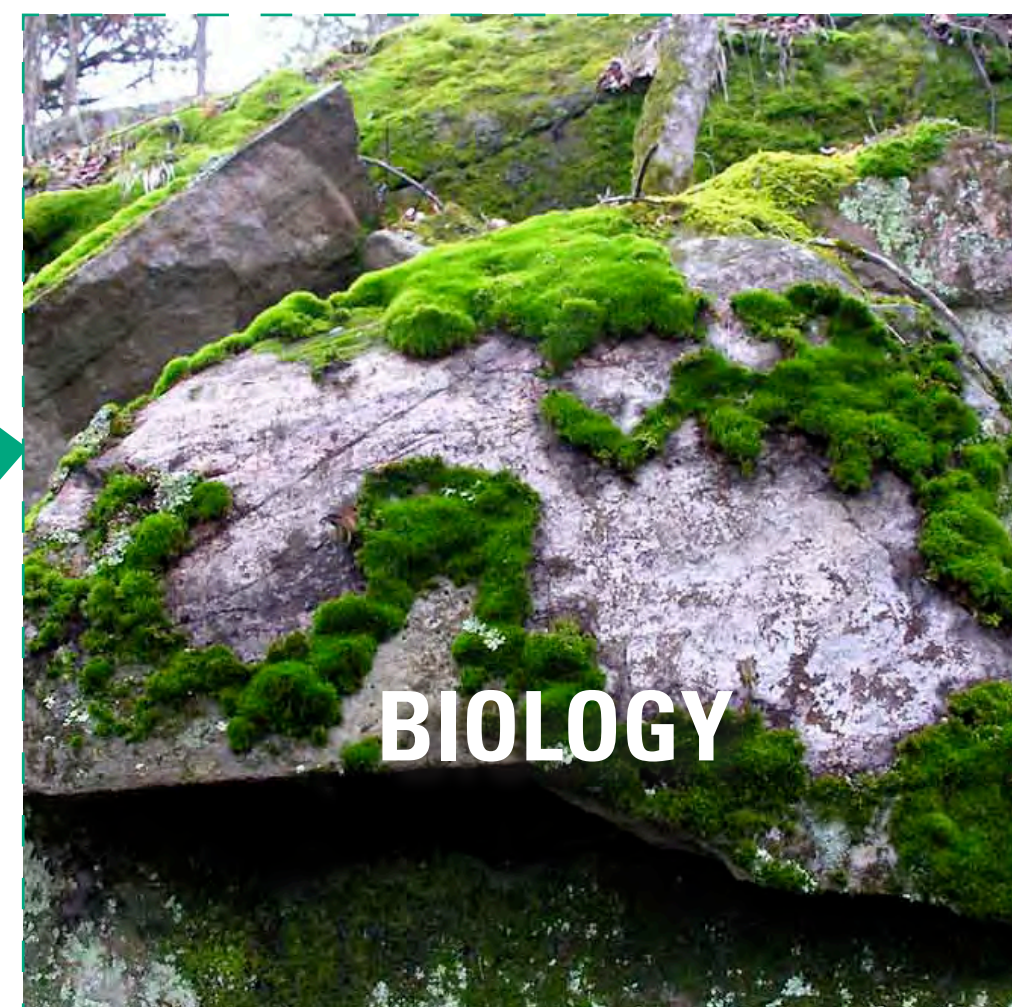
The concept of evolution and stratification refers to the vertical layering of history, habitat and rock stratas, reflecting both recent changes but also geological time + processes.



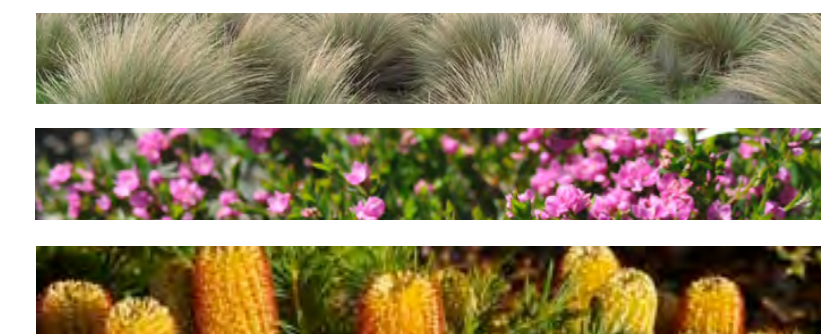
#### HISTORY



The site was harvested for timber and farmed intensively before urbanisation



#### BIOLOGY



The site is constantly adapting and evolving over time.



#### GEOLOGY



Rock layering in the Wianamatta Shale soil landscape existing below.

#### PHYSICAL OUTCOME:

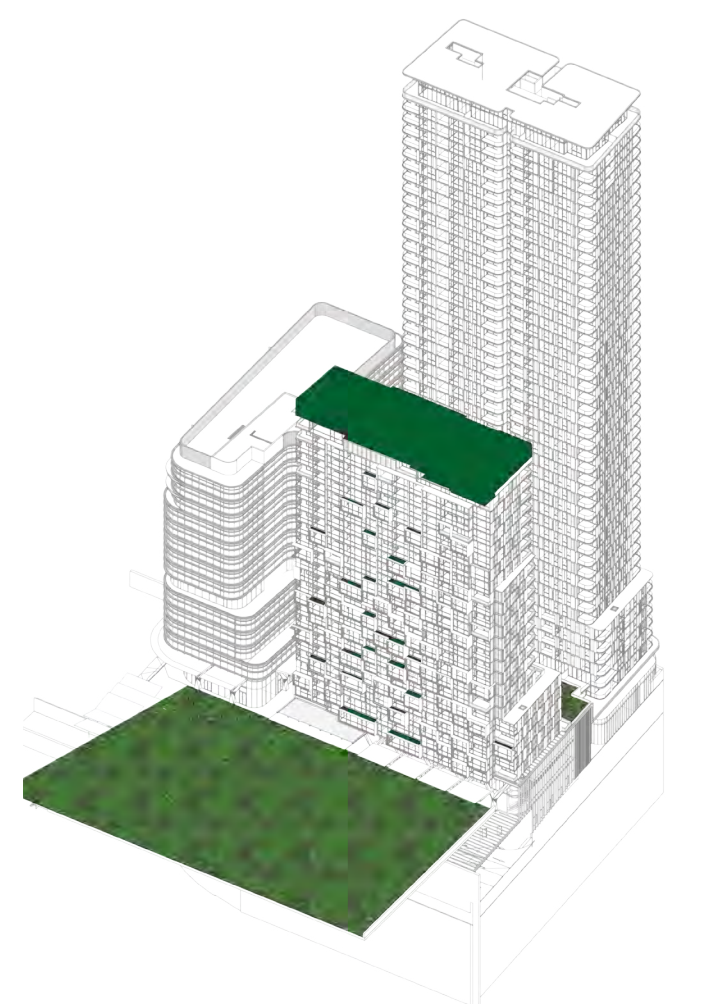
- \_Draw on the historical context to create a memorable landscape.
- \_Material connections e.g. use of timber
- \_Interpretation of the sites history can be introduced into public art

#### PHYSICAL OUTCOME:

- \_Local / Endemic Seed harvesting
- \_Plant species selection to replicate what was once there
- \_Create connections to nature whether they be views or physical links
- \_Recreate habitats and an environmentally rich urban landscape
- \_Illustrate seasonal change through landscape

#### PHYSICAL OUTCOME:

- \_Salvage materials onsite during excavation
- \_Varying colours and materials are extruded and reflected on each of the landscape strata levels of the building (park / podium / roof terrace / balcony / lookout / etc).

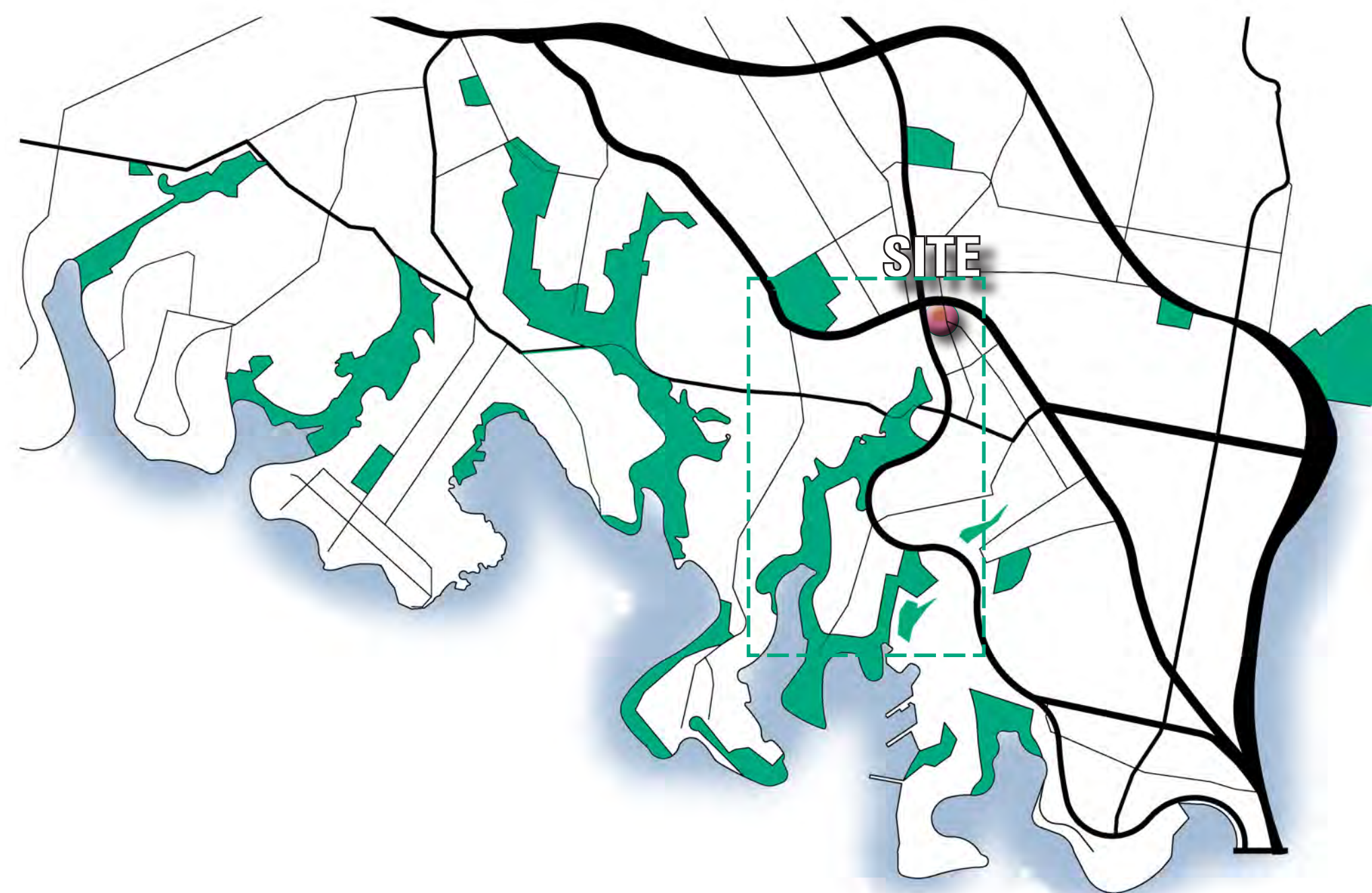


## 88 CHRISTIE STREET ST LEONARDS LANDSCAPE SECTION 4.55

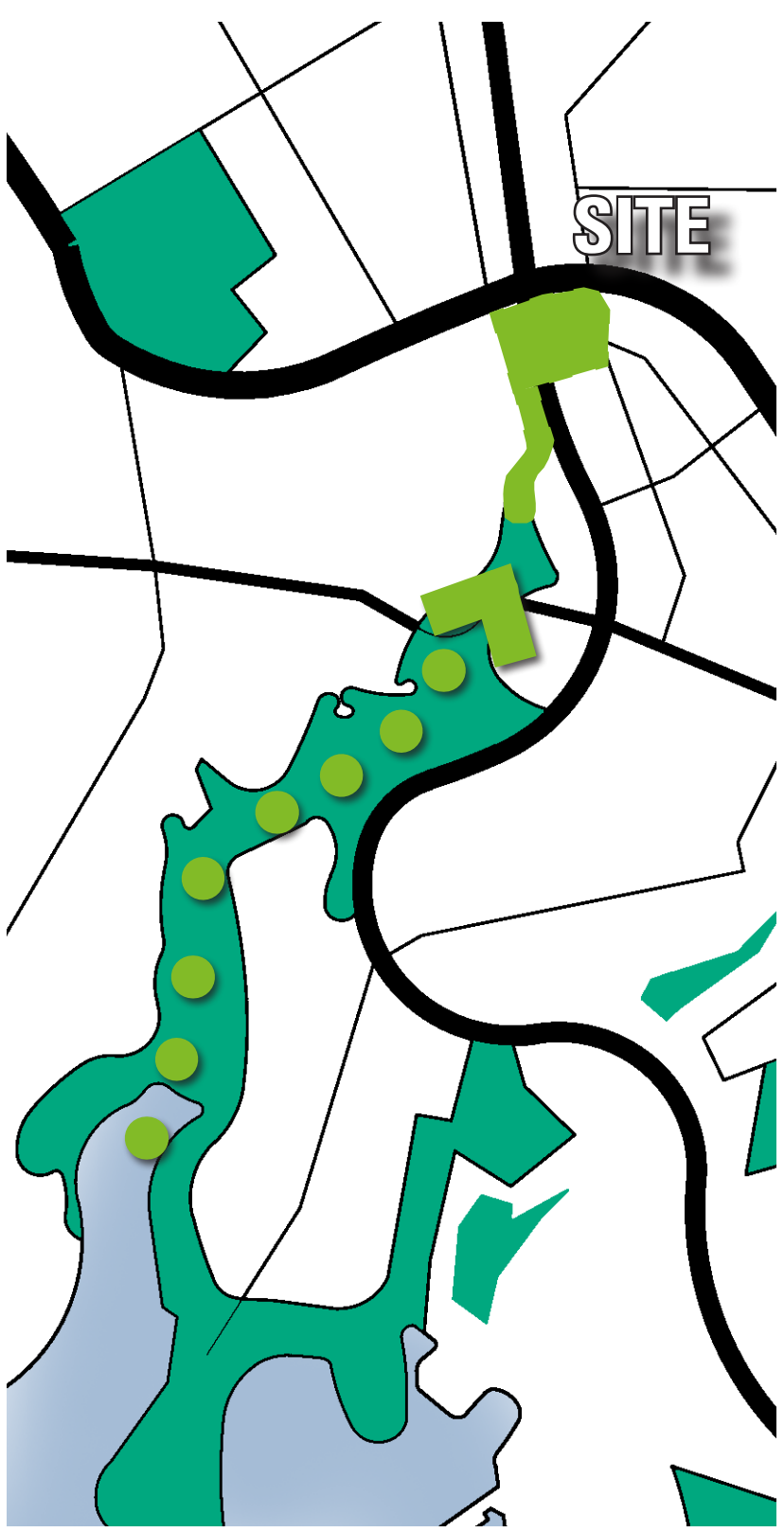


NATIVE BUSH CONNECTIONS

GREEN FINGERS



A series of bushland reserves connect the urban areas around St Leonards to Sydney Harbour. These are remnant and indicate the topographical low points, or gullies, that carry water falling on the catchment to the sea. These 'Green Fingers' are important ecological corridors that support an abundance of native flora and fauna.



**EXTEND THE 'GREEN FINGER'**  
From Gore Cove, a continuous green corridor extends through Greendale Park, Smoothey Park and Newlands Park to join with the Rail Corridor and 88 Christie Street.

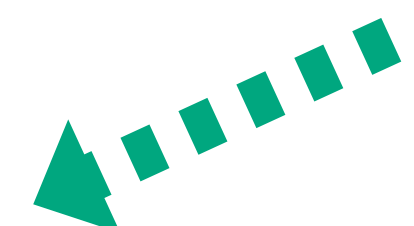
While enhancing biodiversity and increasing habitat the extension of the bushland also creates a human connection. This will be experienced visually, from the new residences, directing the eye to the waters edge. The connection is also physical, connecting community to the natural setting along a series of formal / informal trails, leading to the foreshore.

*"Joining smaller pieces of parkland to try and create something that is more than the sum of its parts."*

Kim Ellis

SITE

PROVIDING VISUAL CONNECTIONS



CREATING GREEN CONNECTIONS

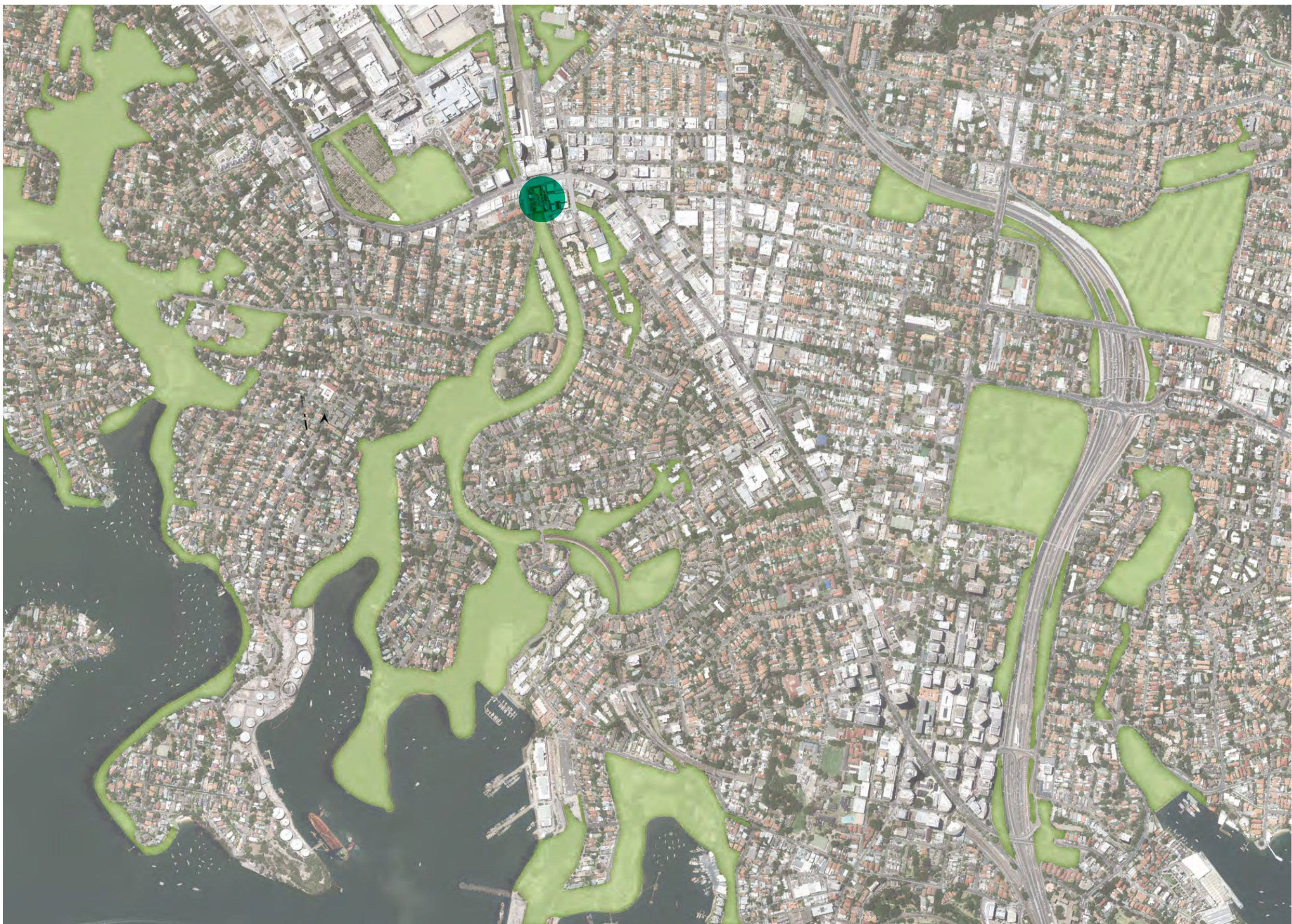


BRINGING THE HARBOUR CLOSER



SYDNEY HARBOUR CONNECTIONS





RESPONSE TO EXISTING TREES

The arborist report identifies 24 trees with a high retention value to be retained along the Sydney Trains boundary. However, these trees will be removed in order to construct the proposed plaza. Furthermore, the plaza will be extended over the existing train tracks once agreement is reached with Lane Cove Council and Sydney Trains. This extension will ultimately lead to the removal of these trees.

New planting proposed for the future plaza will compensate for the tree removals and further create green links to the surrounding context.



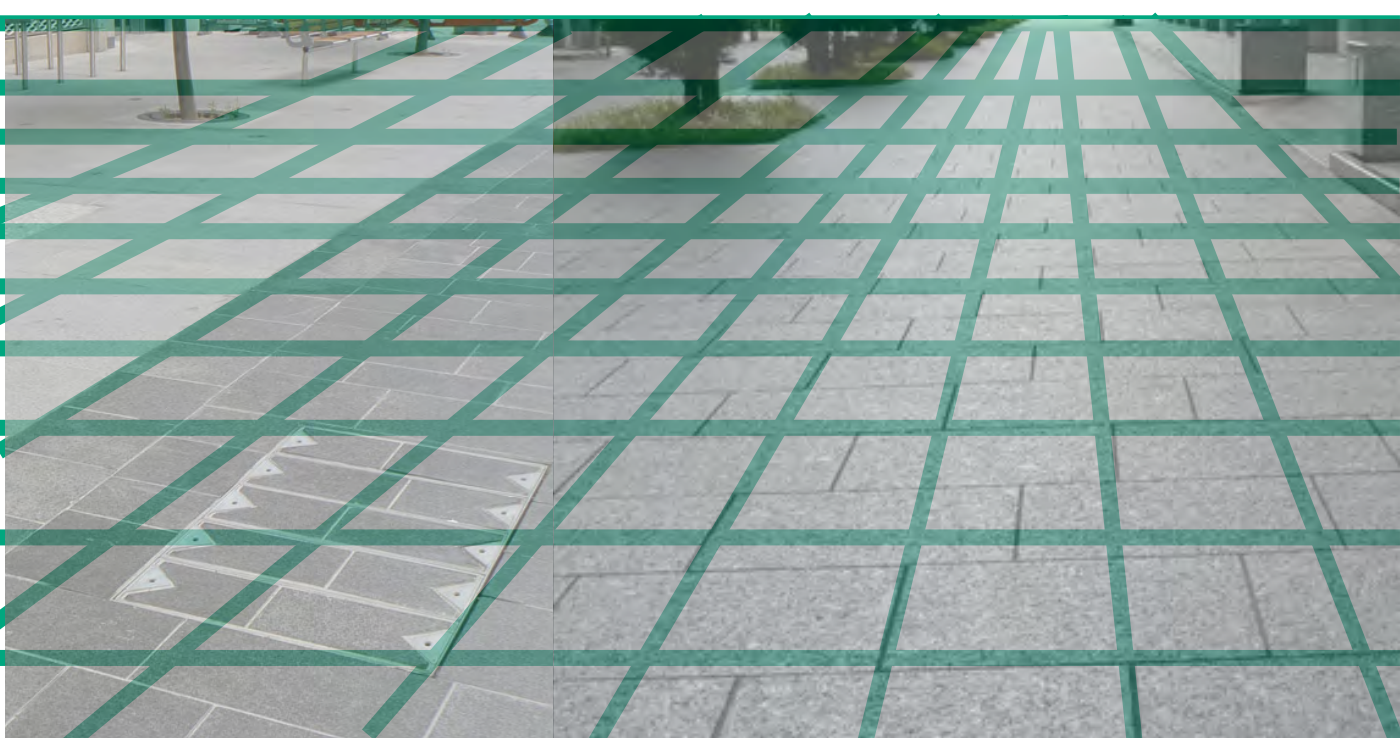
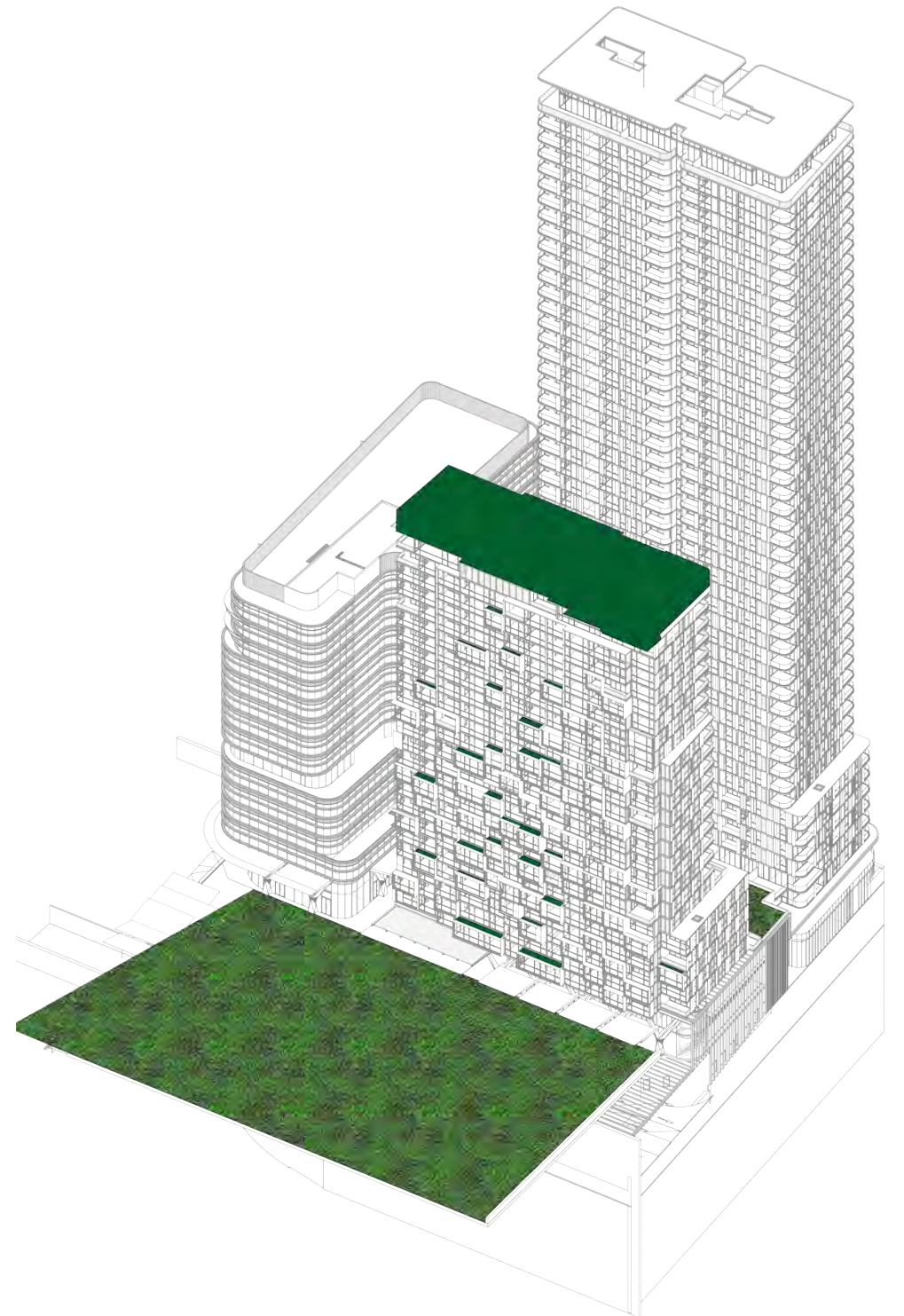
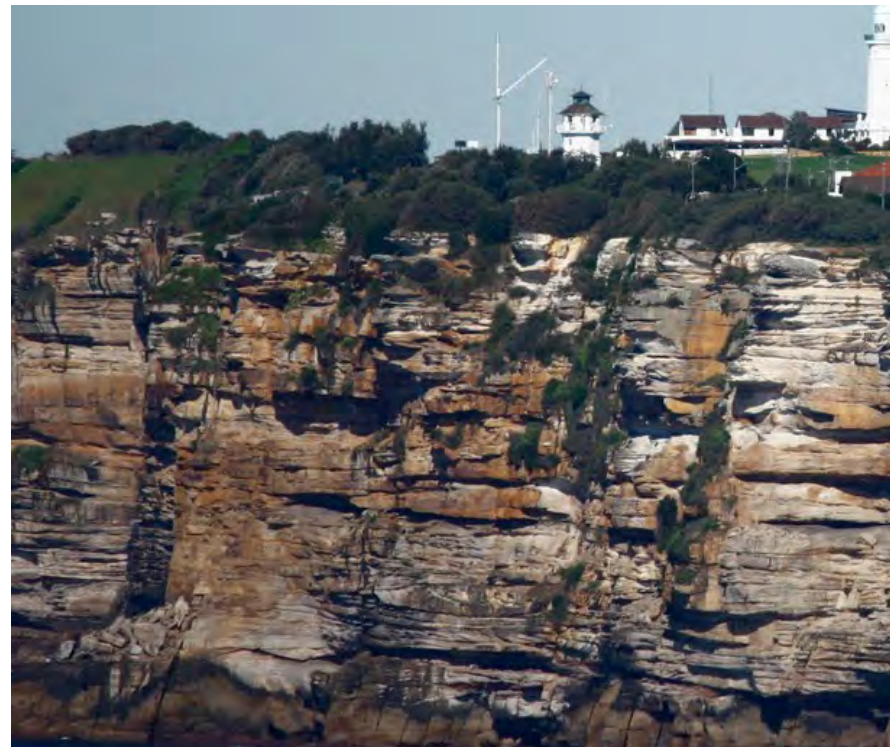


RESPONSE TO URBAN FABRIC

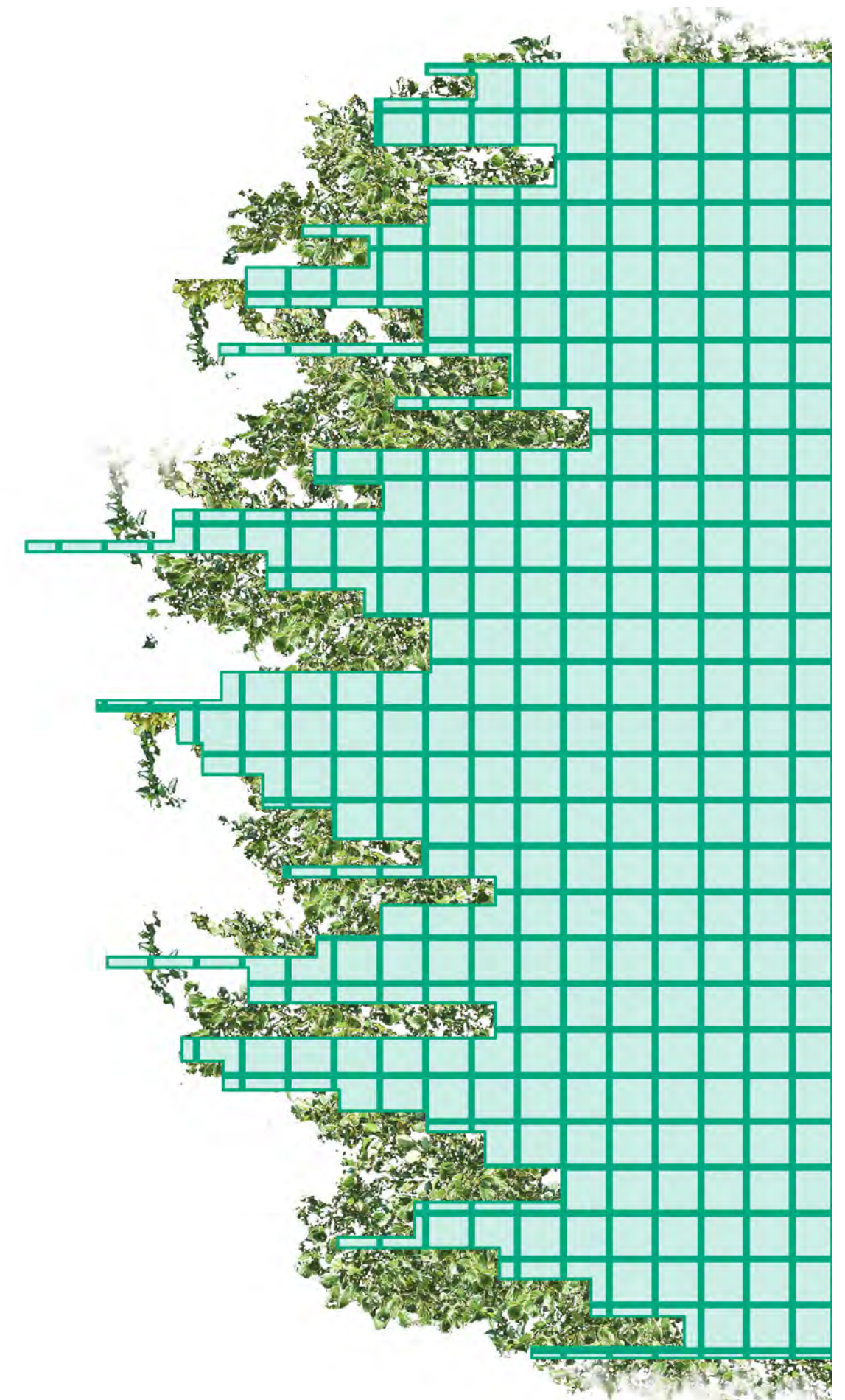
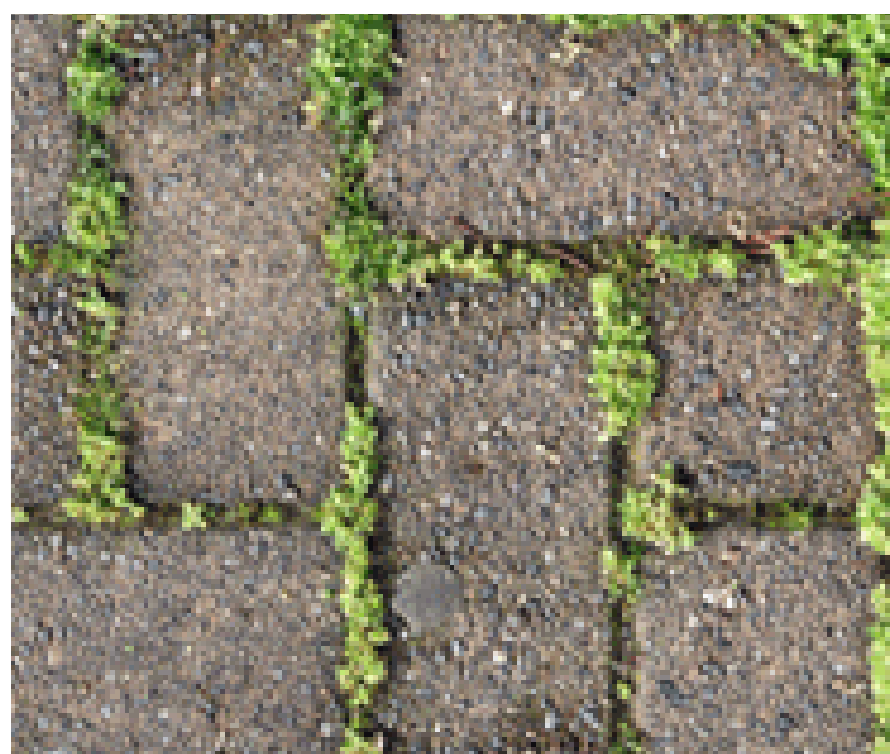
The rigid lines of the urban landscape are prevalent all around the site. While not wishing to fight their influence the disintegration of the grid is intended. This will occur through the reintroduction of nature, an expression of time with greenery encouraged to undertake the process of **COLONISATION**. We aim to create the opportunities for landscape to play its part in an undefined manner. We are searching for a symbiosis that will result in an undetermined but authentic outcome.



BREAKING DOWN THE VERTICAL GRID



BREAKING DOWN SURFACE REGULARITY

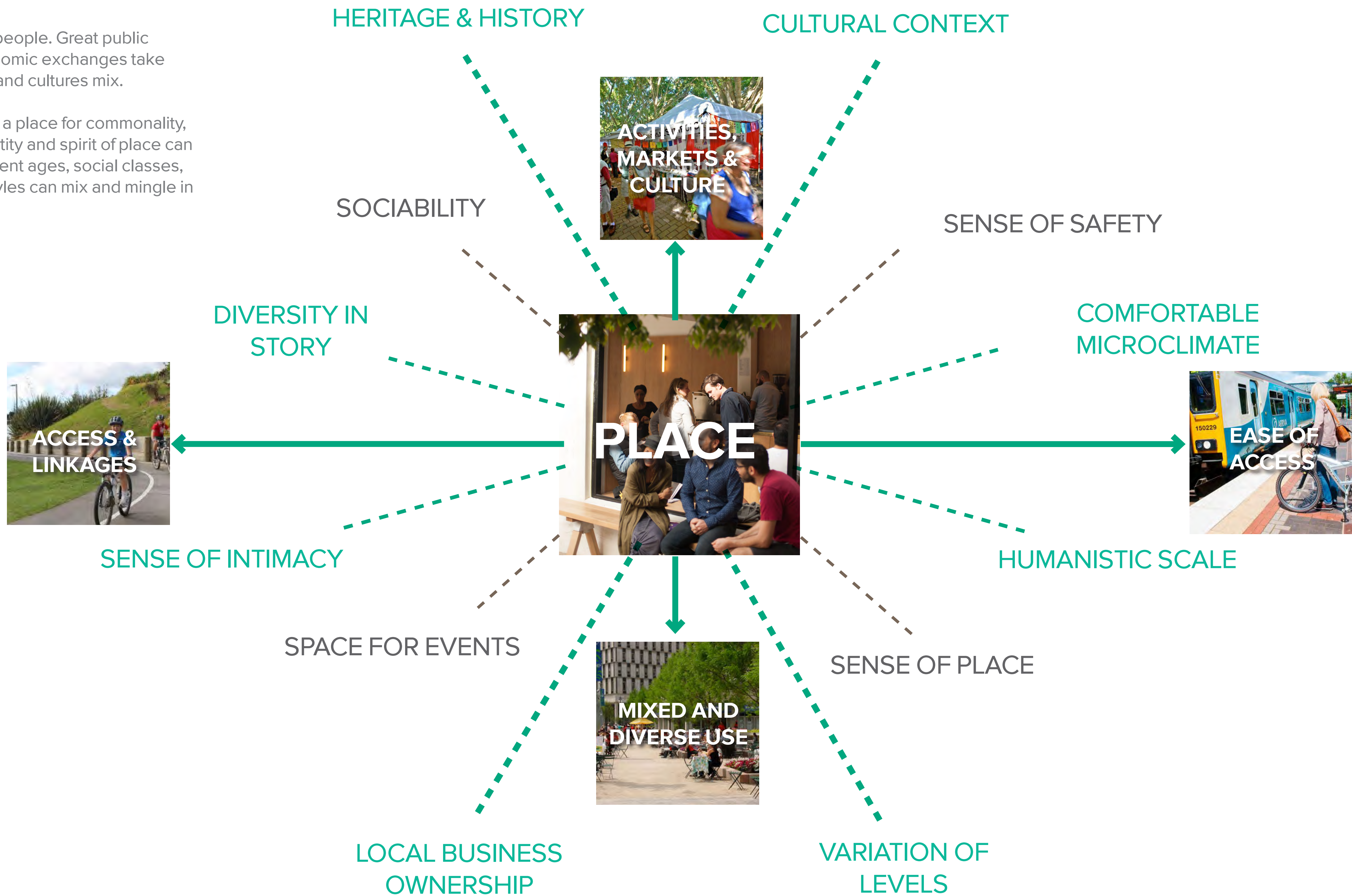




RESPONSE TO COMMUNITY + PLACE

The key to great public spaces is people. Great public spaces are where social and economic exchanges take place, friends run into each other and cultures mix.

The site public domain represents a place for commonality, where some form of common identity and spirit of place can be created, where people of different ages, social classes, ethnic and racial groups and lifestyles can mix and mingle in informal and unplanned ways.





RESPONSE TO PUBLIC REALM



12 STEPS TO GREAT PUBLIC SPACE

- 1/ Protection from traffic
- 2/ Protection from crime
- 3/ Protection from the elements
- 4/ A place to walk
- 5/ A place to stop and stand
- 6/ A place to sit
- 7/ Things to see
- 8/ Opportunities for conversations
- 9/ Opportunities for play
- 10/ Human-scale
- 11/ Opportunities to enjoy good weather
- 12/ Aesthetic quality

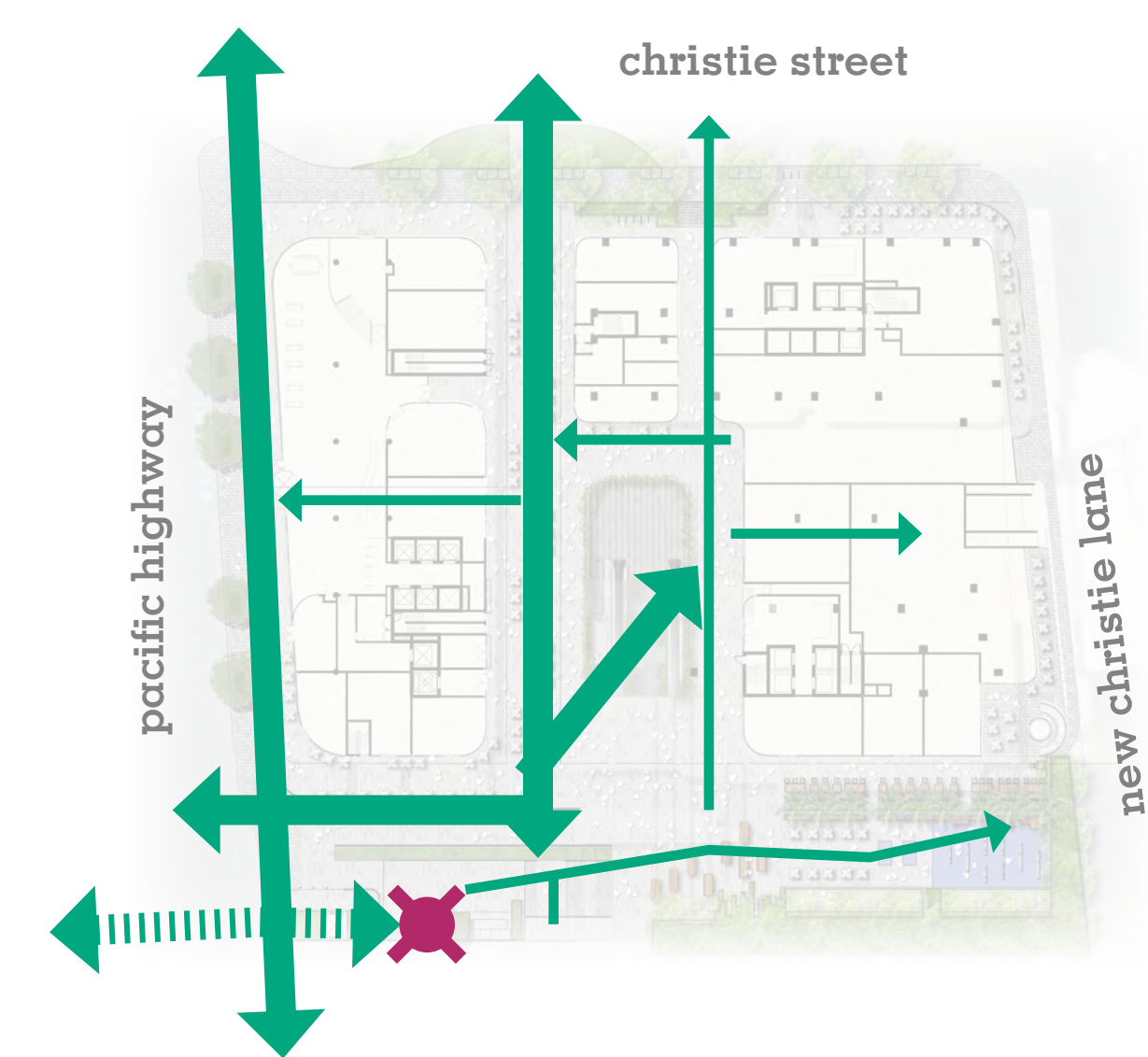
- JAN GEHL + LARS GEMZOE

KEY PUBLIC REALM PRINCIPLES

- / Activation - all day / all year
- / Adaptable / flexible space
- / Pedestrian scale - fine grain detail
- / Amenity for residents and visitors
- / Strong connections between spaces
- / Maximise solar access
- / Develop positive identity
- / Safe and accessible
- / Robust materiality
- / Greater social interaction & fun

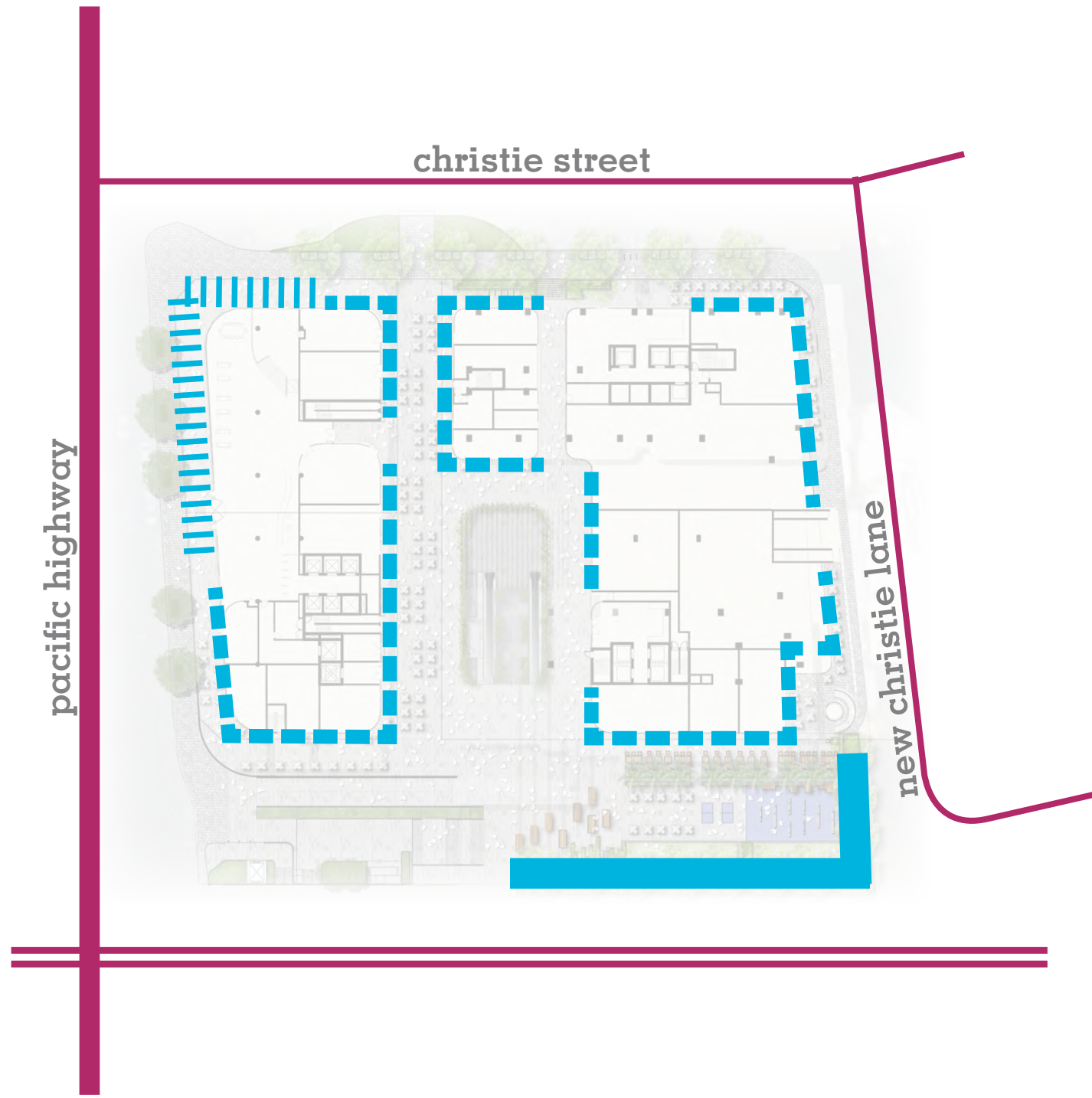


CIRCULATION



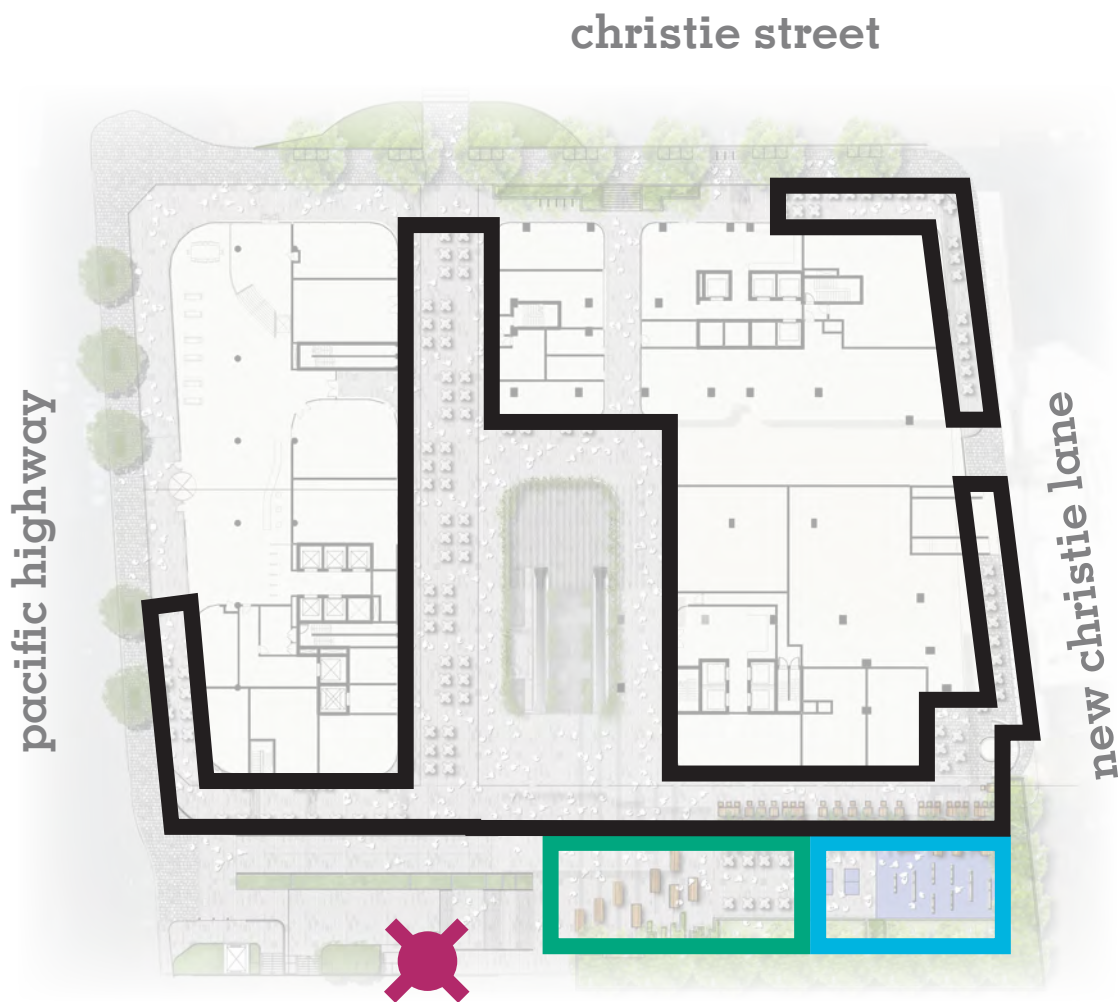
- major public realm circulation
- minor public realm circulation
- connection under Pacific Hwy
- connection point to train station

INTERFACES



- retail edges
- commercial edges
- planting buffer
- rail
- major road
- minor road

AMENITY



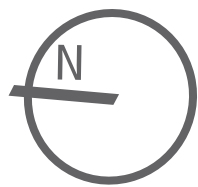
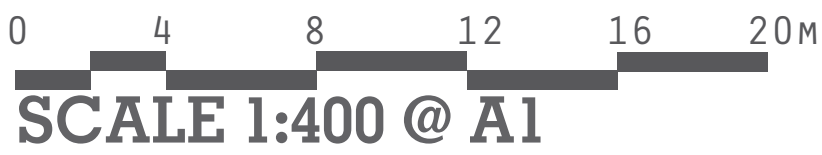
- alfresco dining
- play area
- community plaza
- connection point to train station





Note: Access arrangement  
to plaza and underpass  
as per Design Inc Drawing  
L01 - 100 'St Leonards Plaza  
Conceptual Masterplan'  
Dated 05/11/2019

- LEGEND**
- 01/ GROUND FLOOR PLAZA
  - 02/ LEVEL 1 PODIUM GARDEN
  - 03/ LEVEL 2 PODIUM GARDEN
  - 04/ LEVEL 26 ROOFTOP







LEVEL 01

Communal Open Space - 138m2

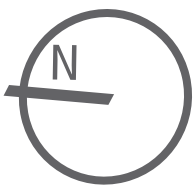
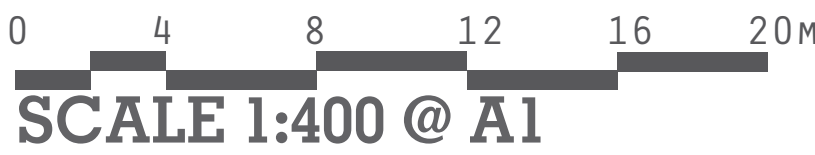
LEVEL 02

Communal Open Space - 334m2

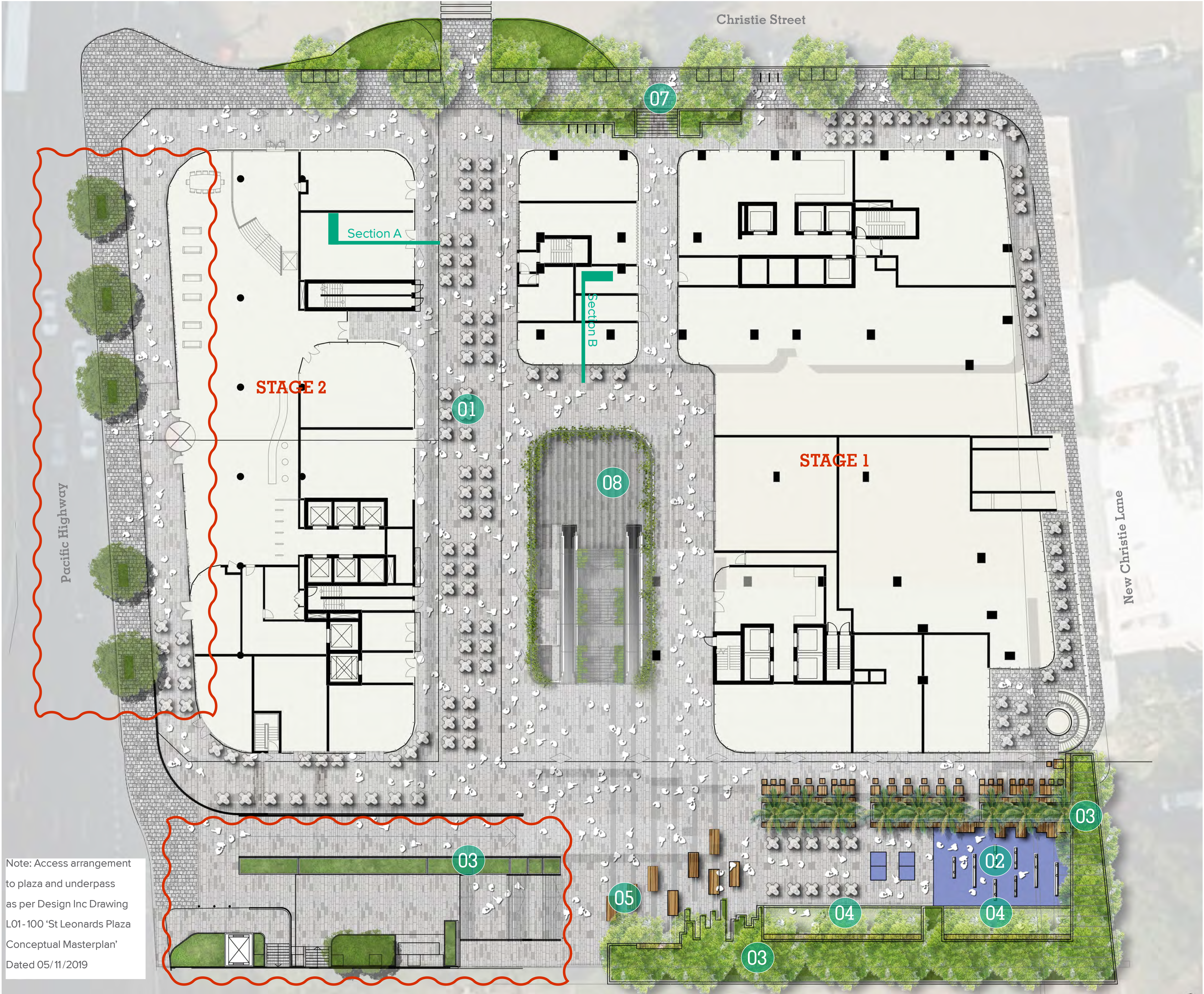
LEVEL 26

Communal Open Space- 625m2

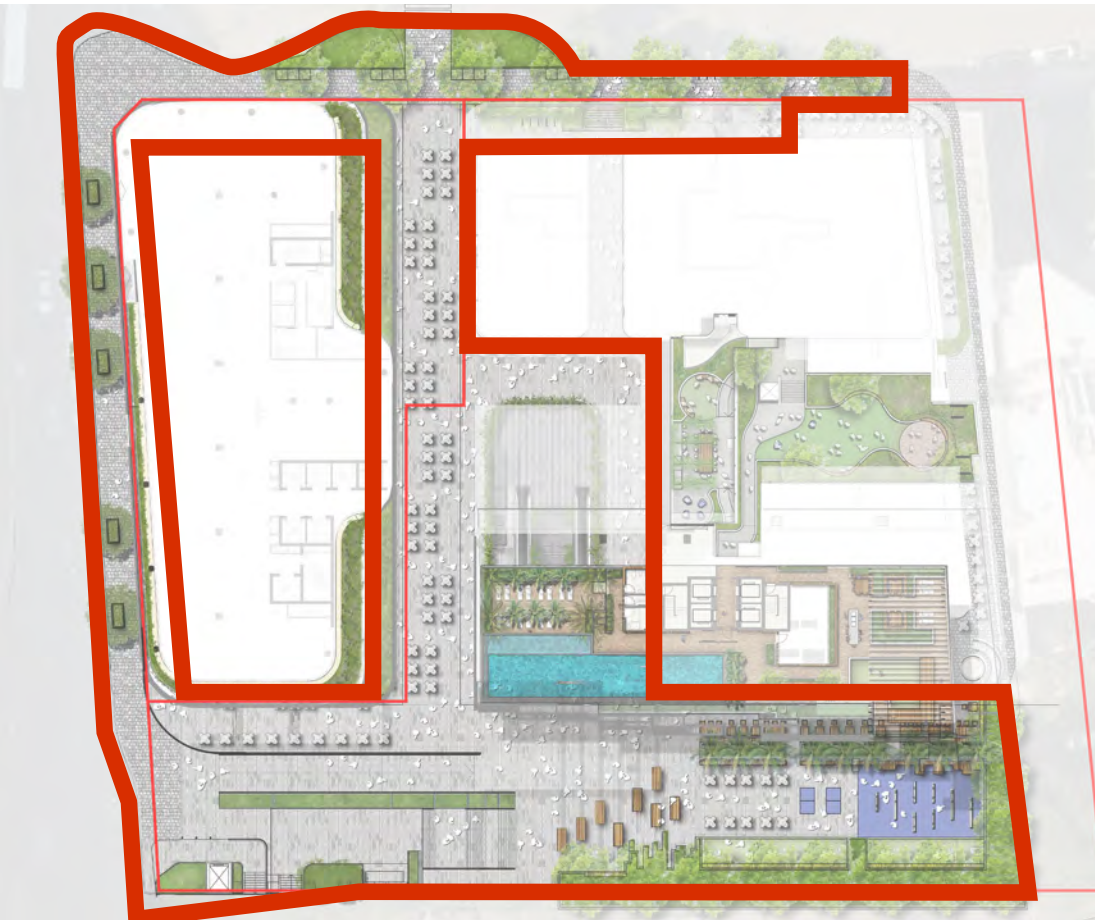
Total Site Area - 3191m2  
Total Communal Open Space - 1097m2  
Total Communal Open Space Percentage - 34%





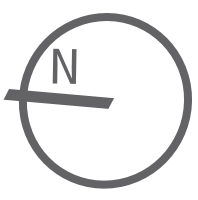
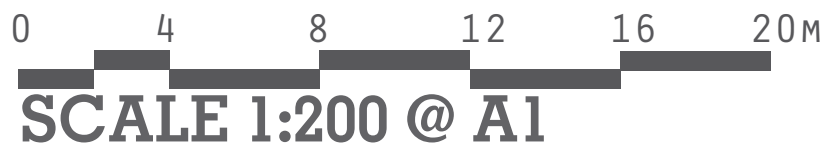


Note: Access arrangement  
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L01-100 'St Leonards Plaza  
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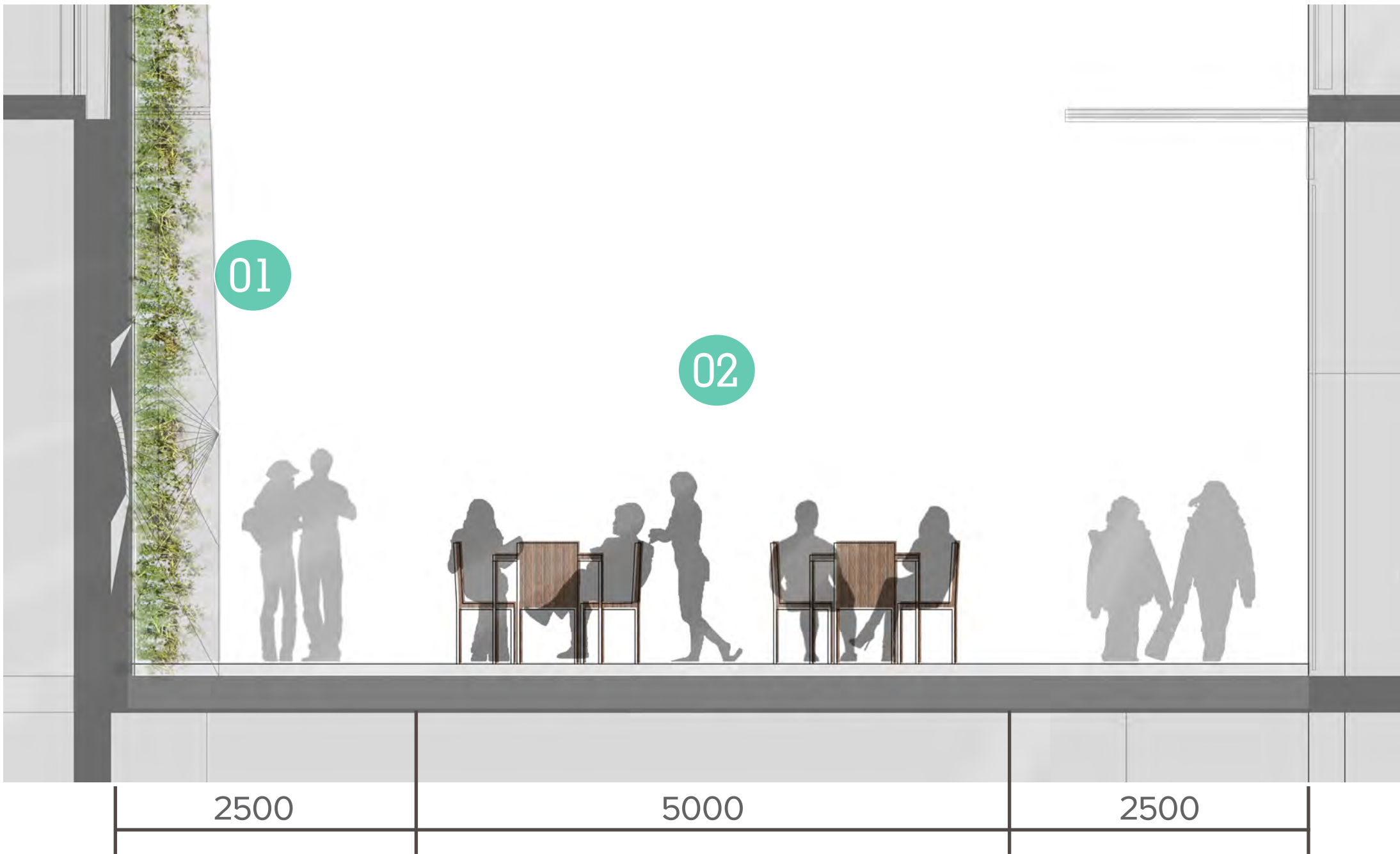
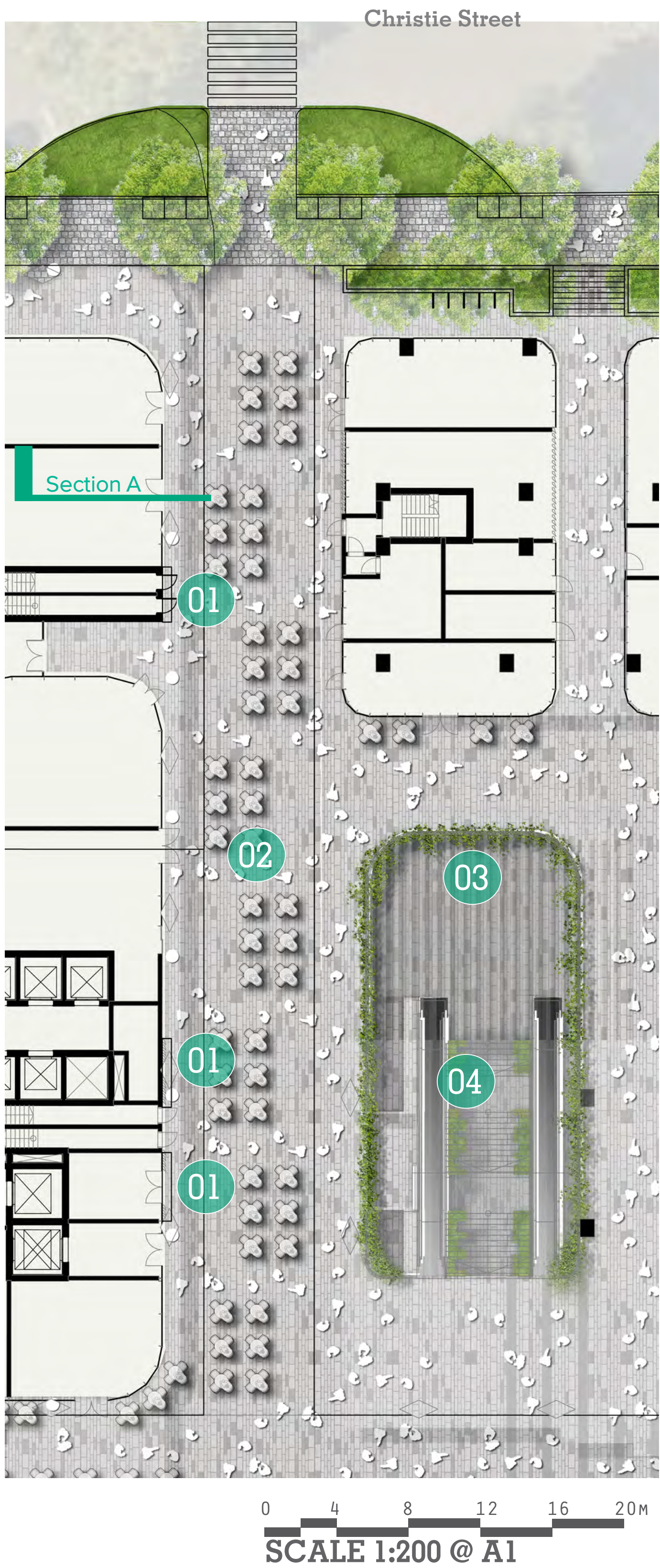


LEGEND

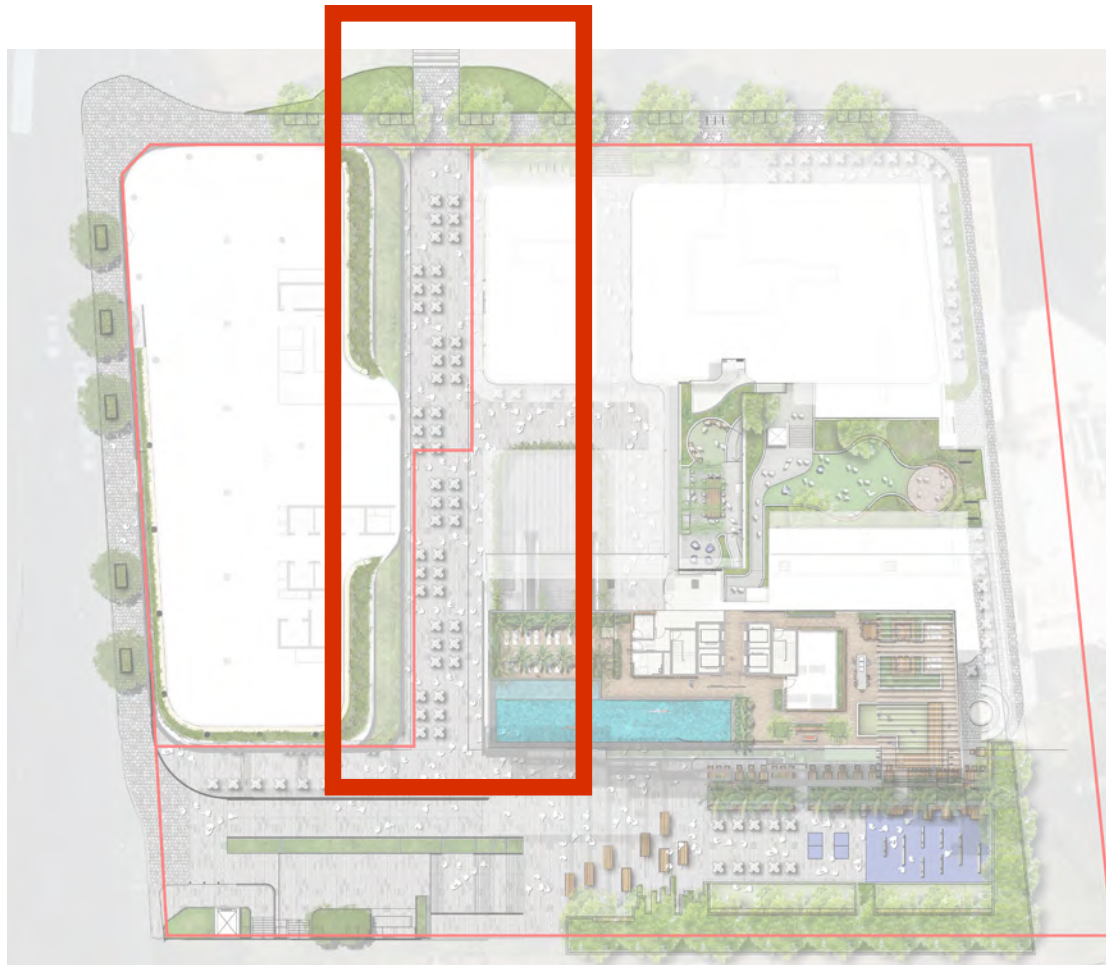
- 01/ LANEWAY ALFRESCO DINING
- 02/ CHILDRENS PLAY SPACE
- 03/ RAISED PLANTERS
- 04/ RAISED TURF
- 05/ TIMBER SEATS ON SLIDERS
- 06/ TERRACED LANDSCAPE TO STREETSCAPE





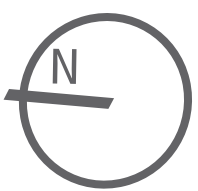


Section A 1:40@A1

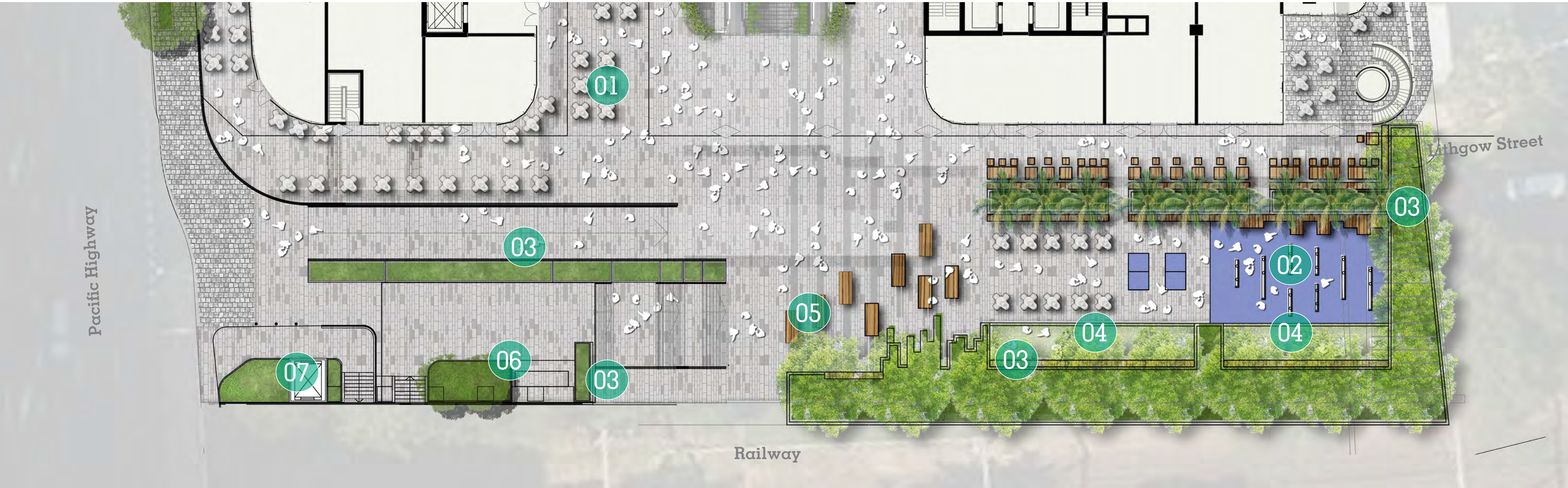
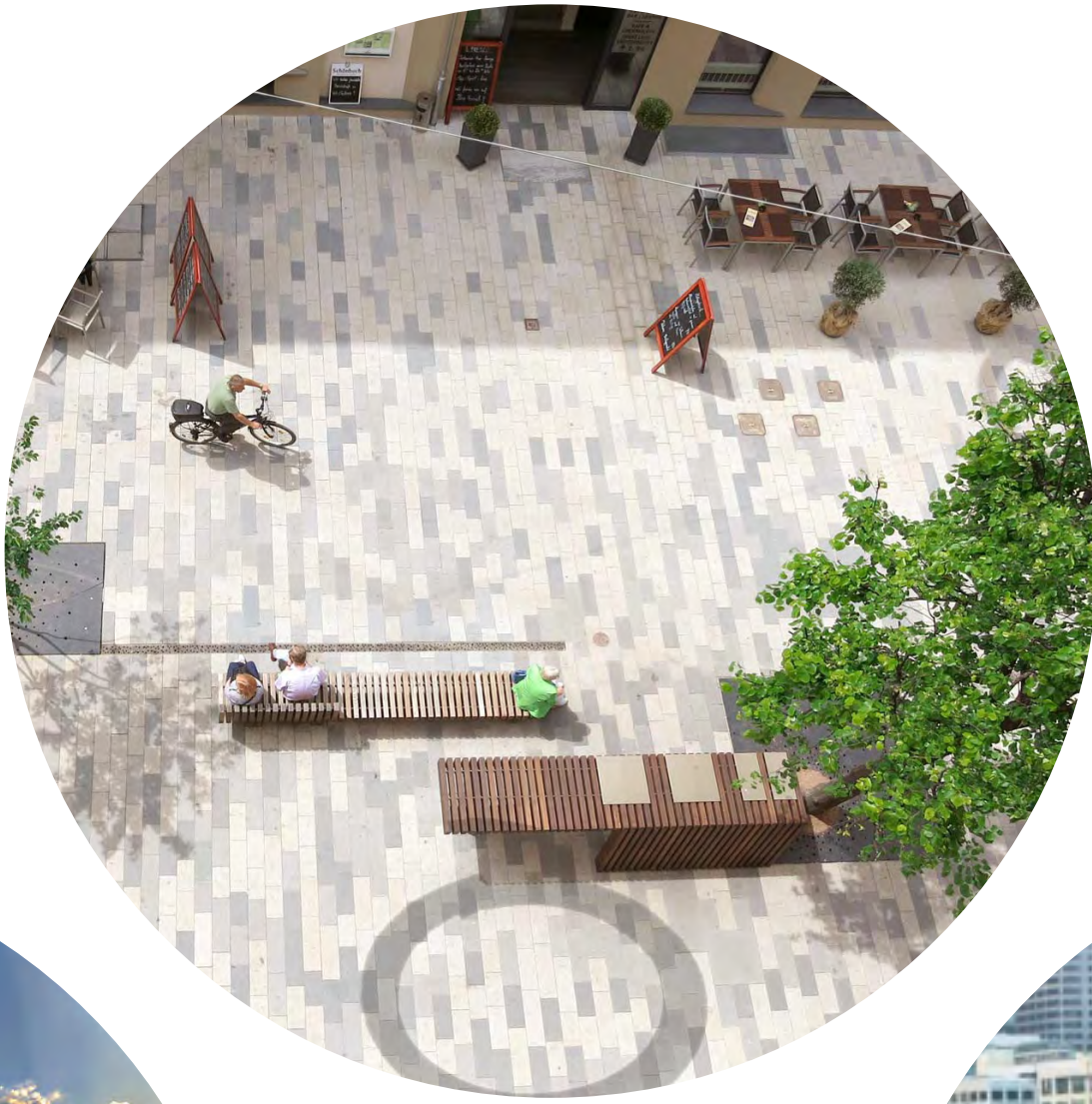


LEGEND

- 01/ GREEN WALL STRUCTURE
- 02/ LANEWAY ALFRESCO DINING
- 03/ HANGING PLANTS IN CUSTOM PLANTER BOXES AT STAIRCASE & ESCALATOR OPENING
- 04/ TERRACED PLANTERS



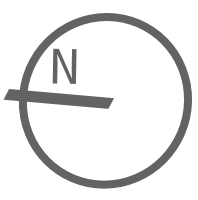




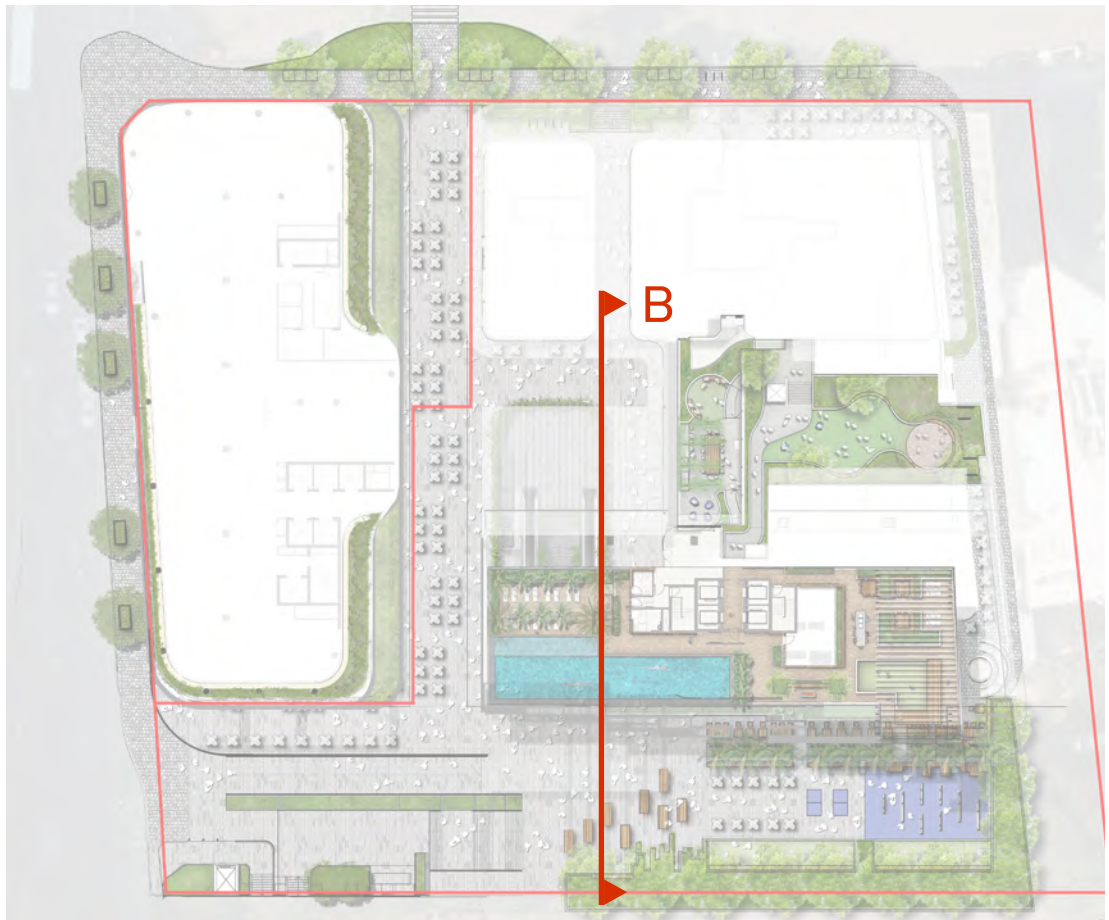
LEGEND

- 01/ LANEWAY ALFRESCO DINING
- 02/ CHILDRENS PLAY SPACE
- 03/ RAISED PLANTERS
- 04/ RAISED TURF
- 05/ TIMBER SEATS ON SLIDERS
- 06 TELSTRA SERVICE PIT
- 07 PROPOSED LIFT TO FUTURE PLAZA

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SCALE 1:200 @ A1

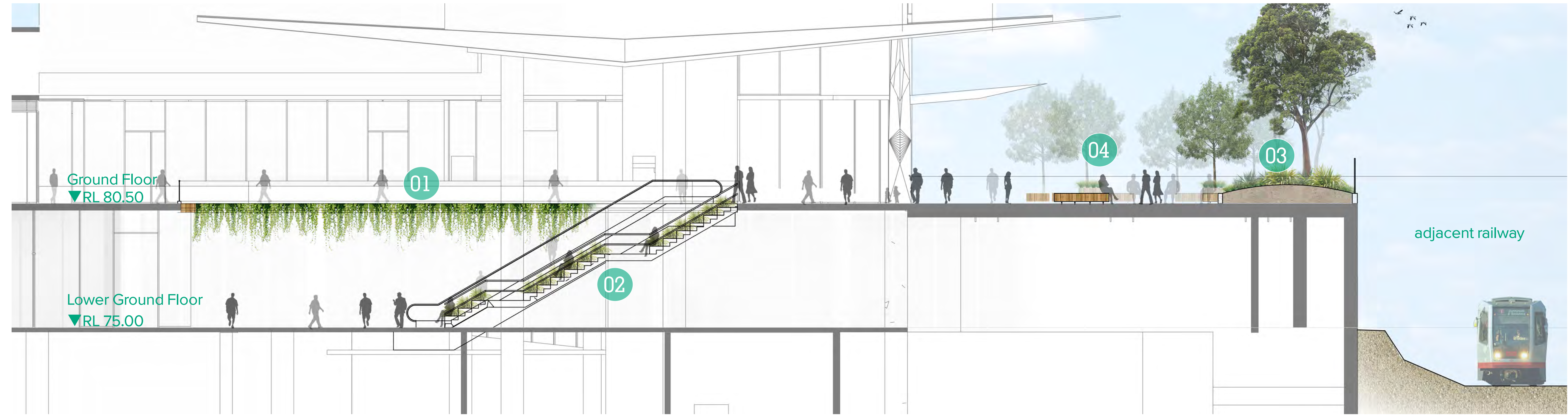






LEGEND

- 01/ HANGING PLANTS IN CUSTOM PLANTER BOXES AT STAIRCASE & ESCALATOR OPENING
- 02/ TERRACED PLANTING
- 03/ RAISED PLANTER
- 04/ TIMBER SEATS ON SLIDERS

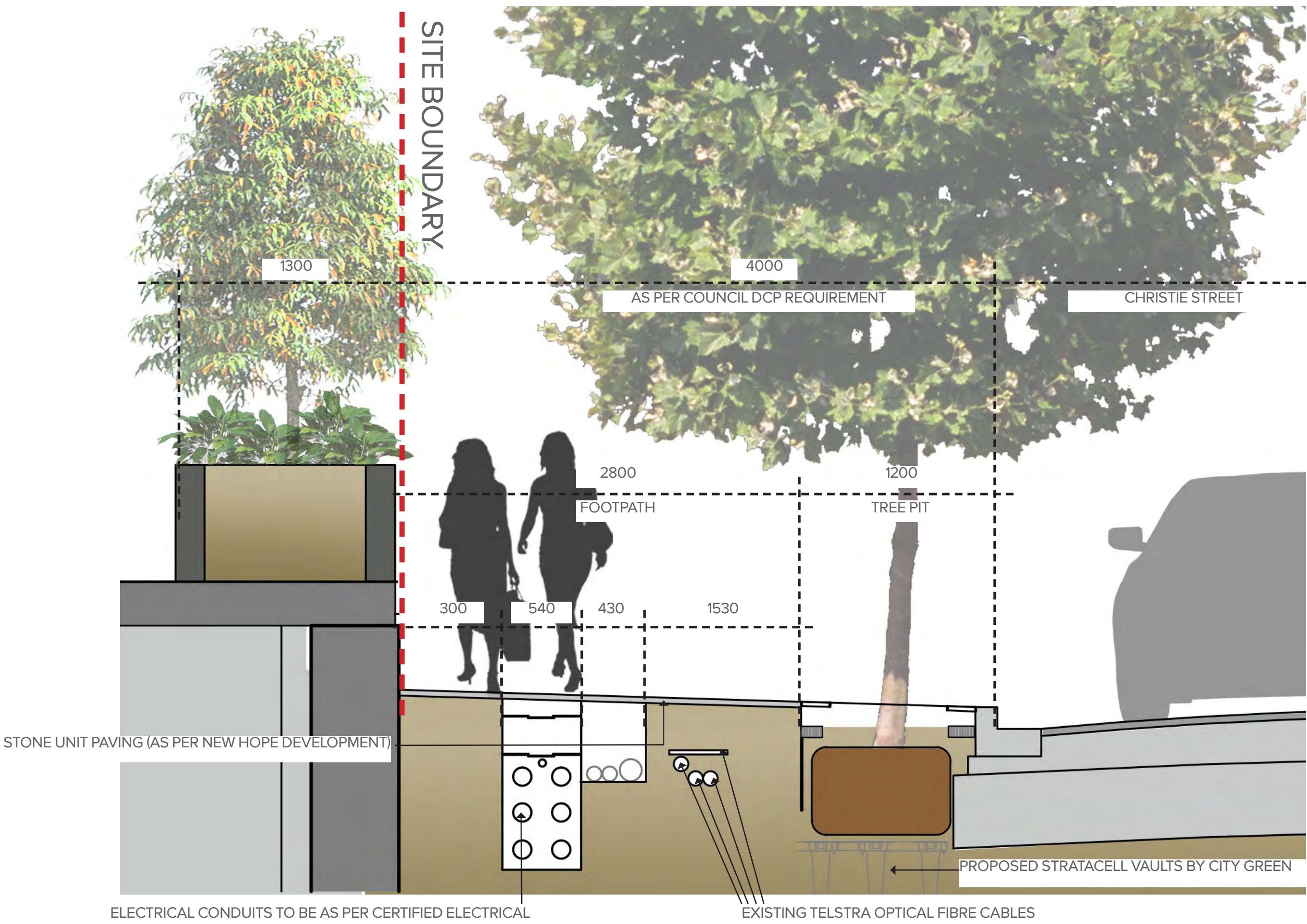


Section B 1:100@A1



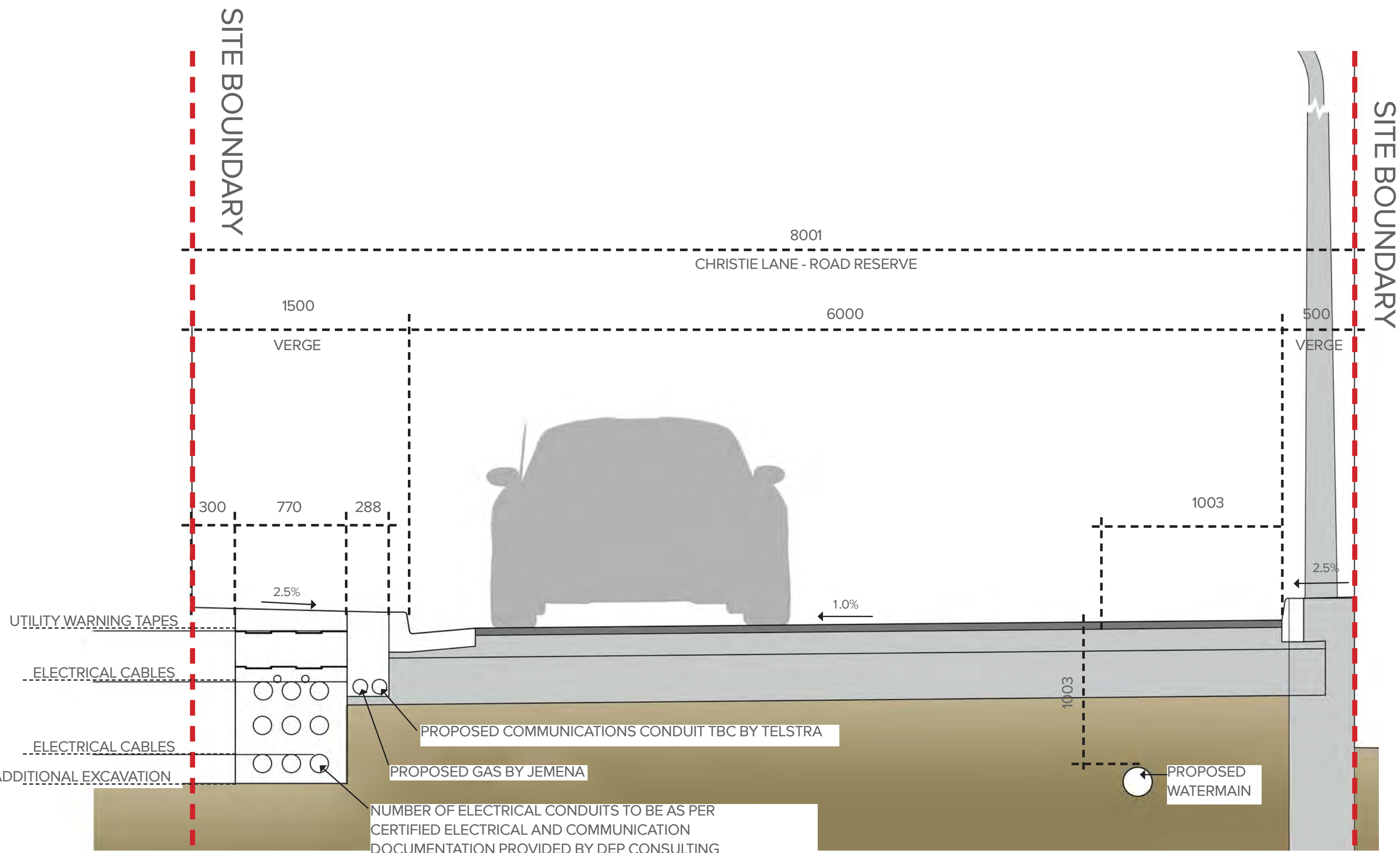


- DEDICATED CYCLE LANE
- CYCLE FRIENDLY ROADS
- PEDESTRIAN LINKS

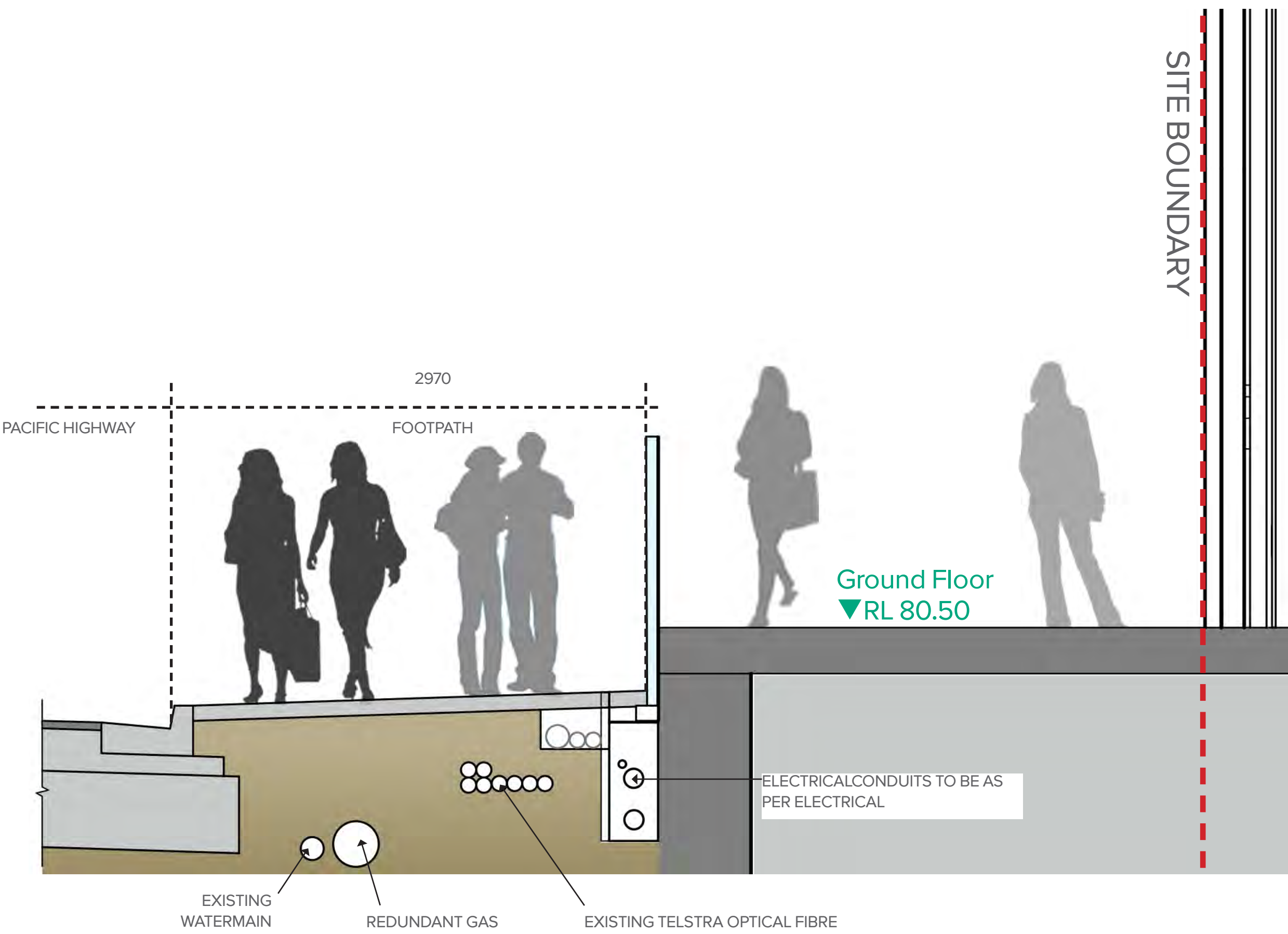


SECTION AA - CHRISTIE STREET - 1to25 @ A1



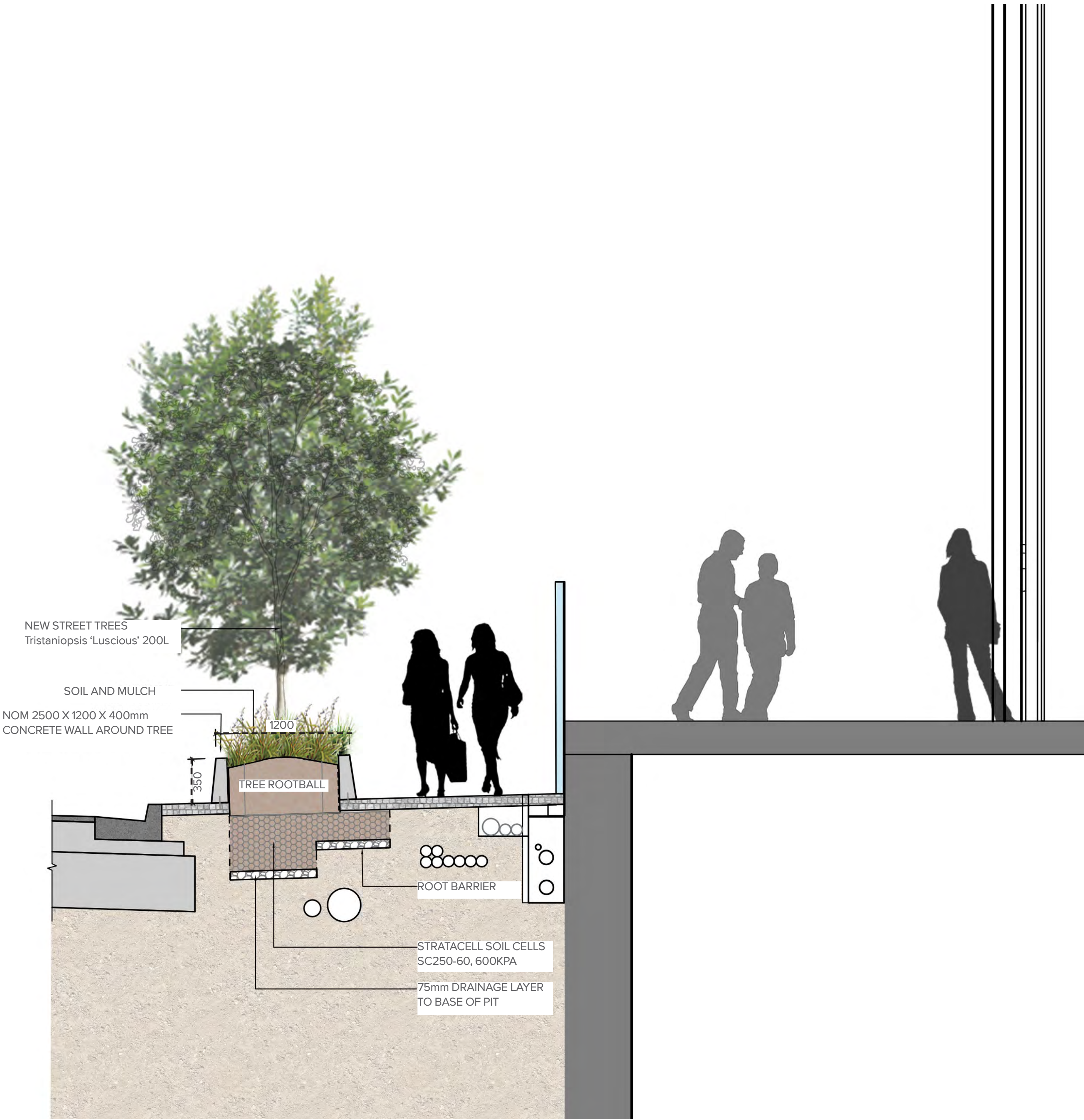


SECTION BB - NEW CHRISTIE LANE - 1to50 @ A1

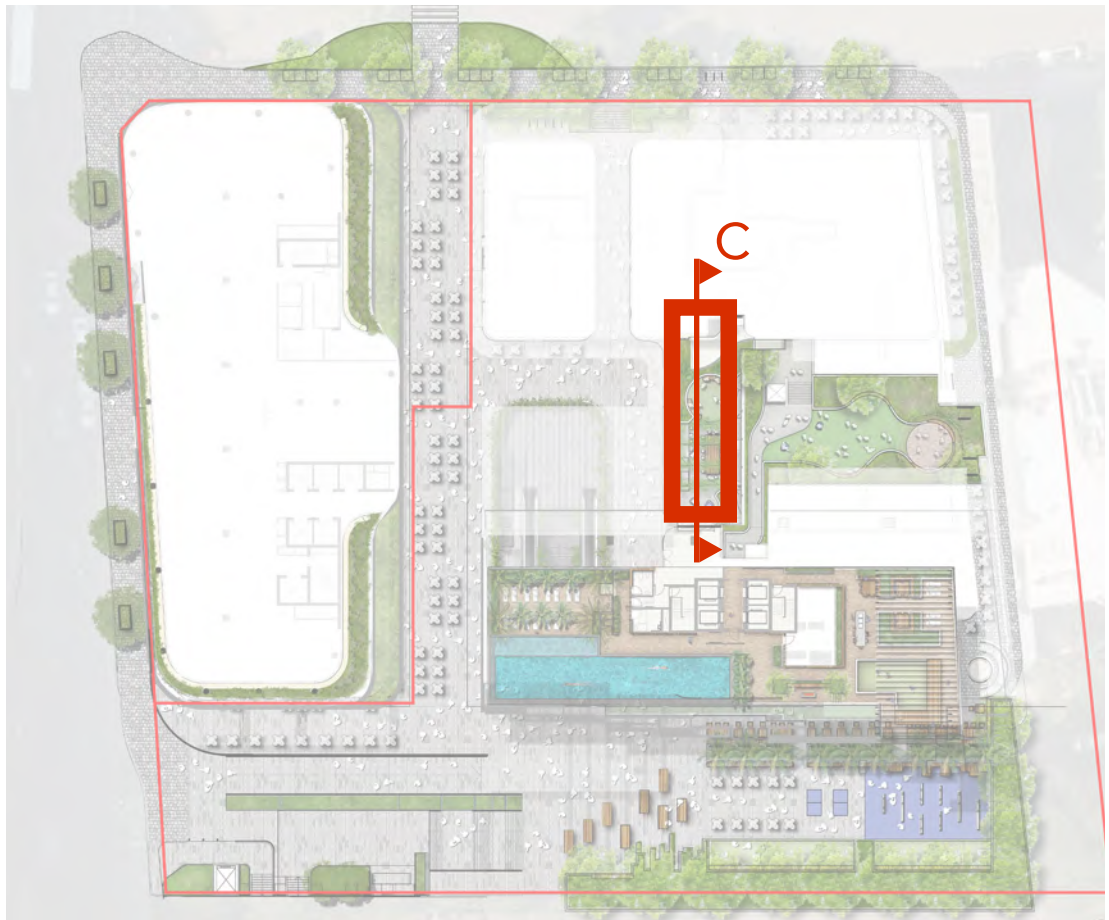
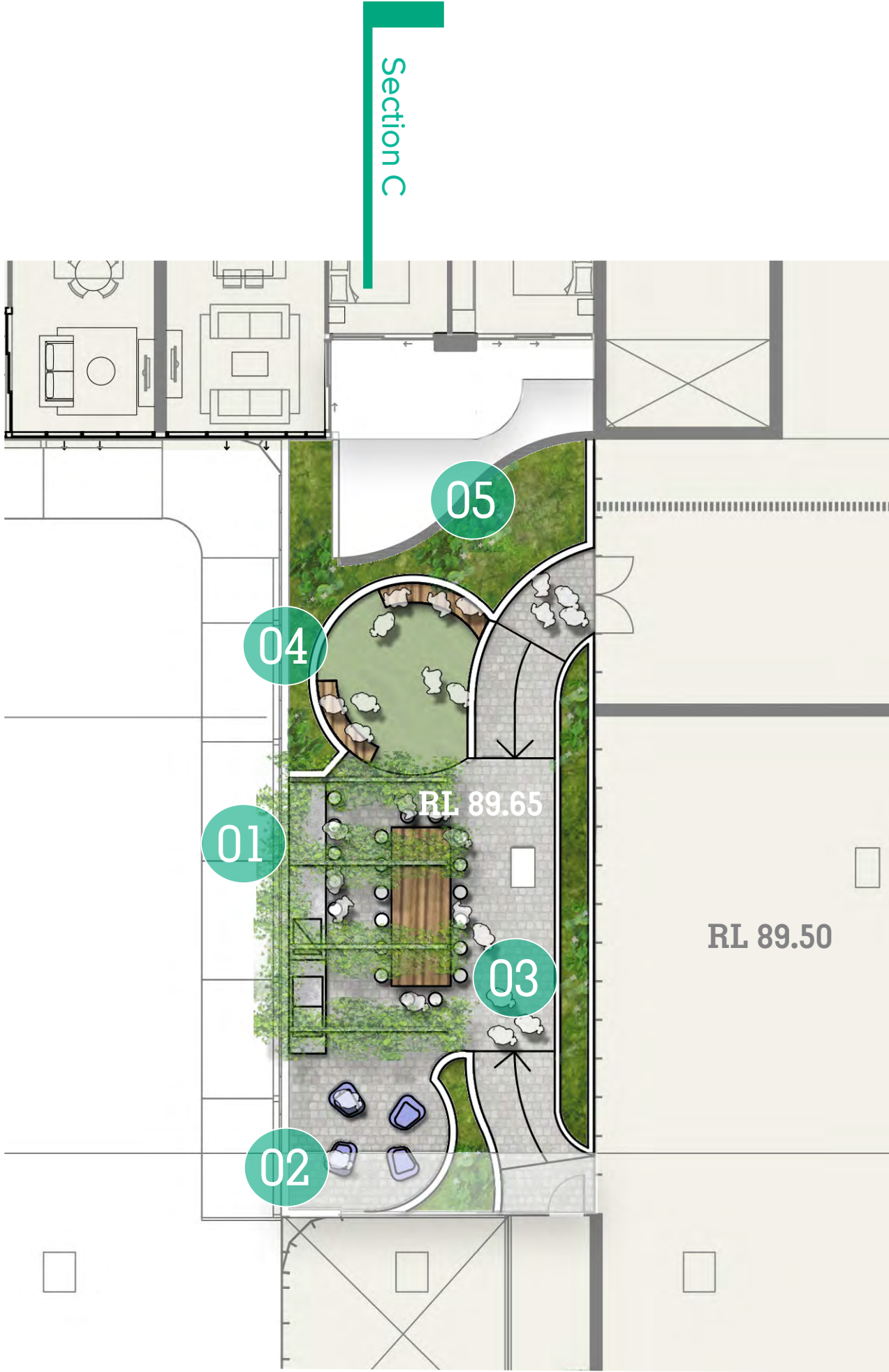


SECTION CC - PACIFIC HIGHWAY - 1to50 @ A1









Section C 1:25@A1

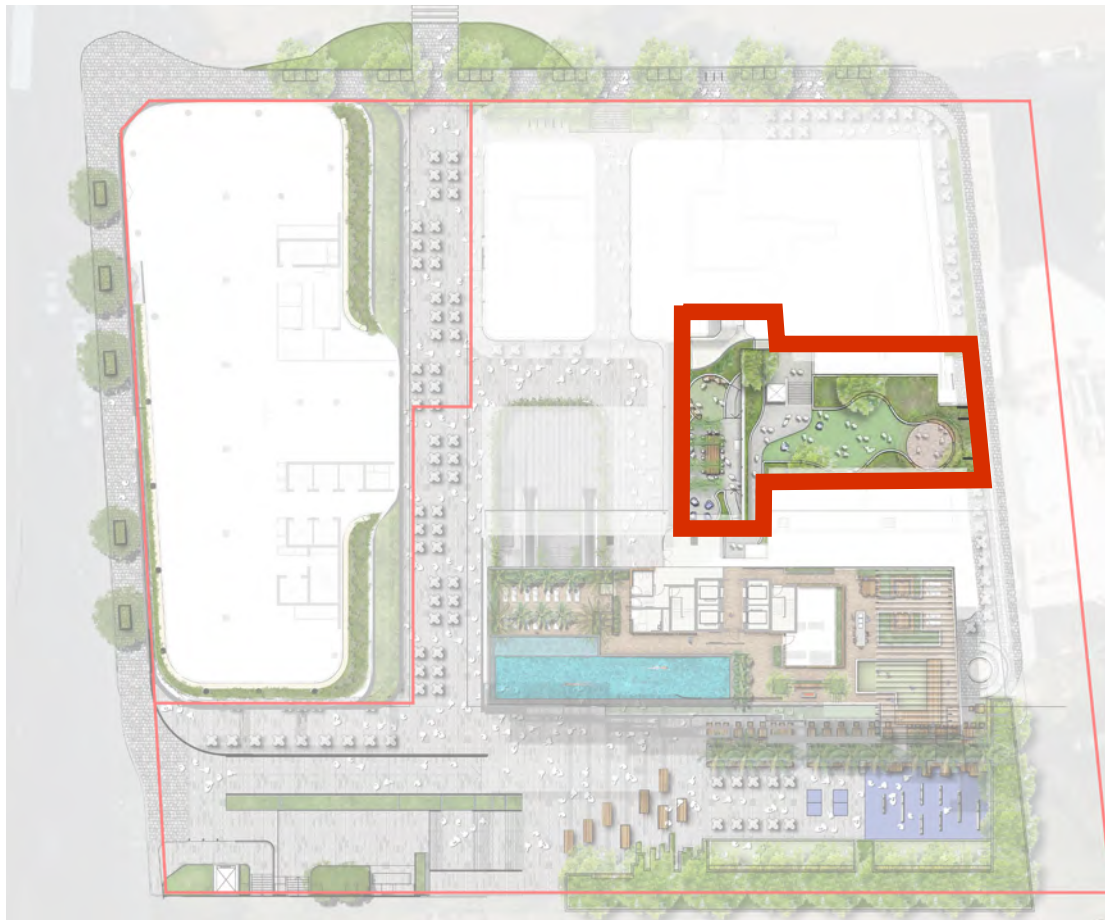
LEGEND

- 01/ OVERHEAD GREEN CANOPY STRUCTURE WITH PASSIONFRUIT VINE
- 02/ BEANBAG SEATING
- 03/ UNIT PAVING
- 04/ TIMBER SEATING
- 05/ RAISED GARDEN BEDS WITH MASS PLANTING

0 3 6 9 12 15M  
SCALE 1:150 @ A1

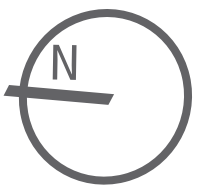
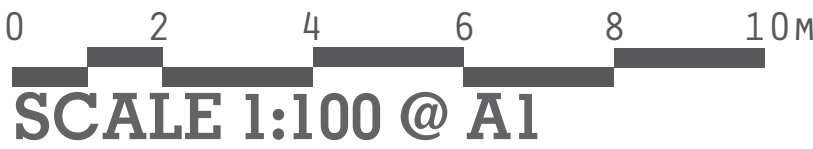




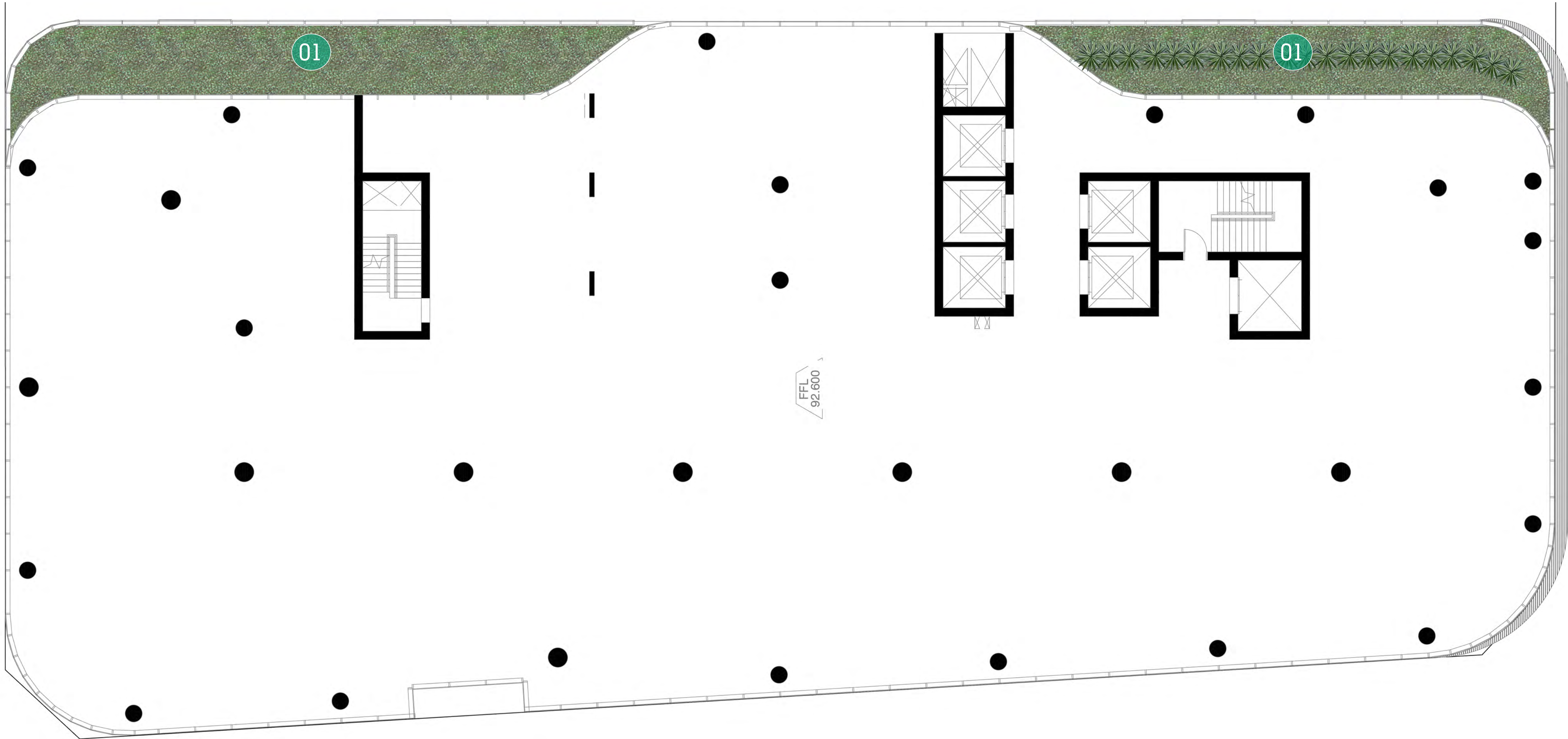
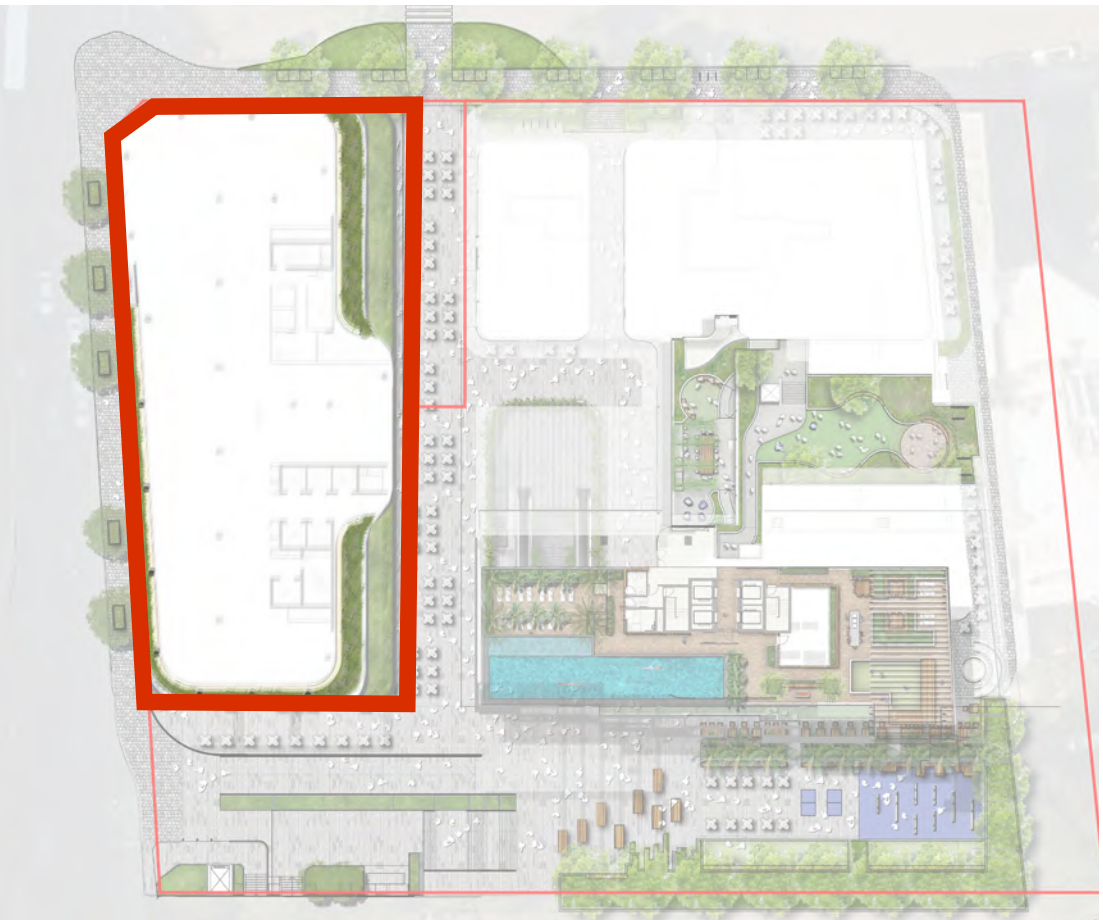


LEGEND

- 01/ RAISED GARDEN BEDS WITH NATIVE SCREENING & MASS PLANTING
- 02/ SYNTHETIC TURF PLAY SURFACE
- 03/ UNIT PAVING
- 04/ TIMBER SEATING
- 05/ PERGOLA STRUCTURE
- 06/ 2m HIGH IMPERMEABLE SCREEN
- 07/ FLEXIBLE COMMUNAL SEATING





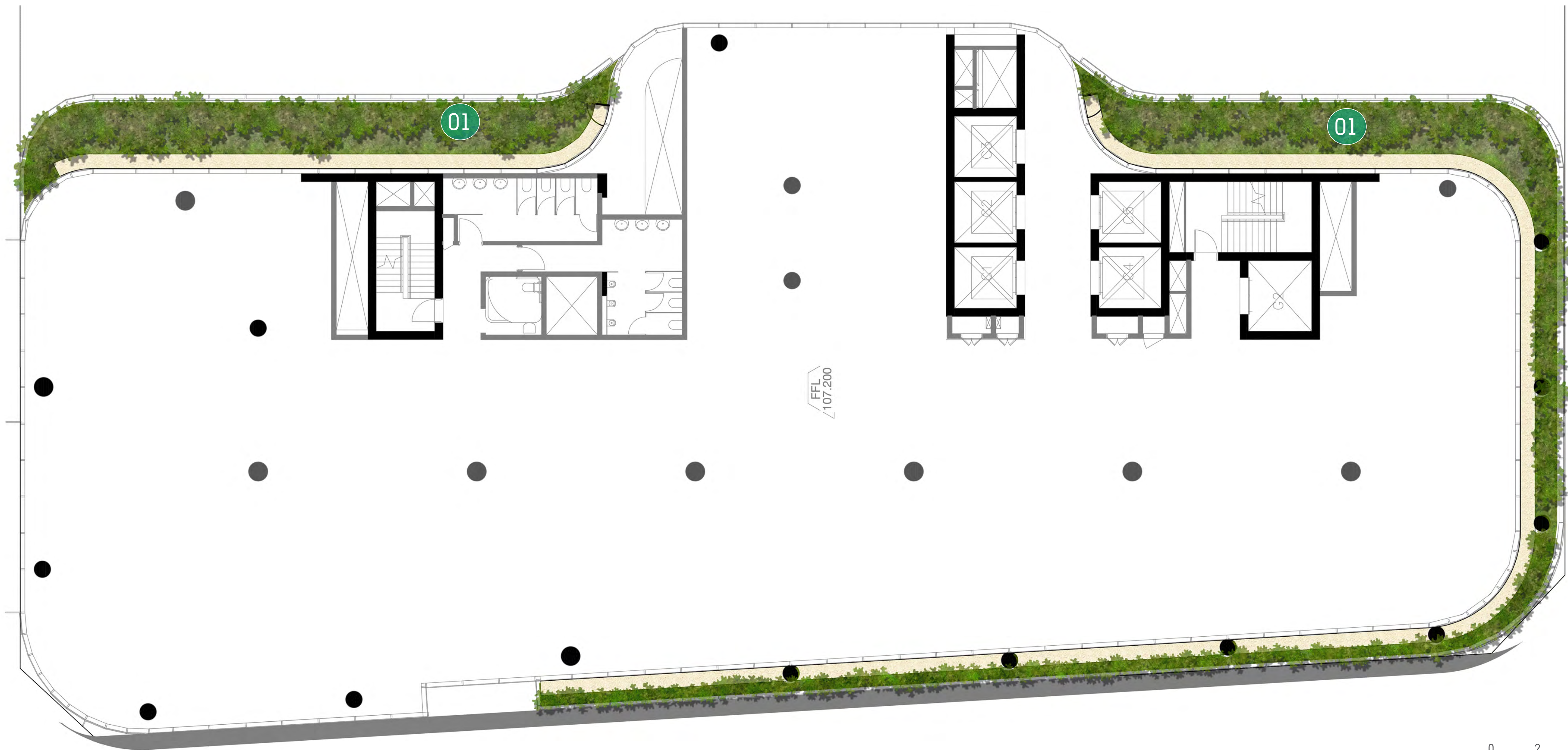
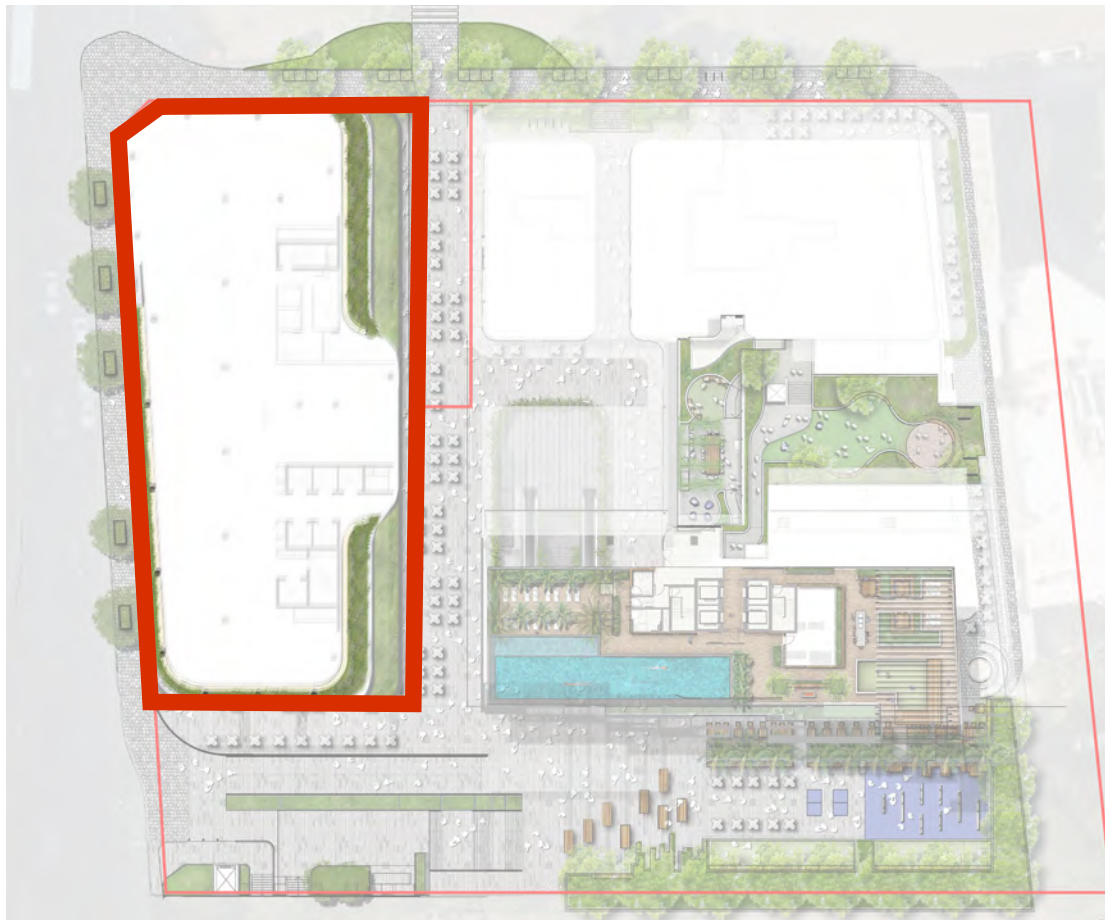


LEGEND

01/ Layered mix of accent and screening planting to building edge





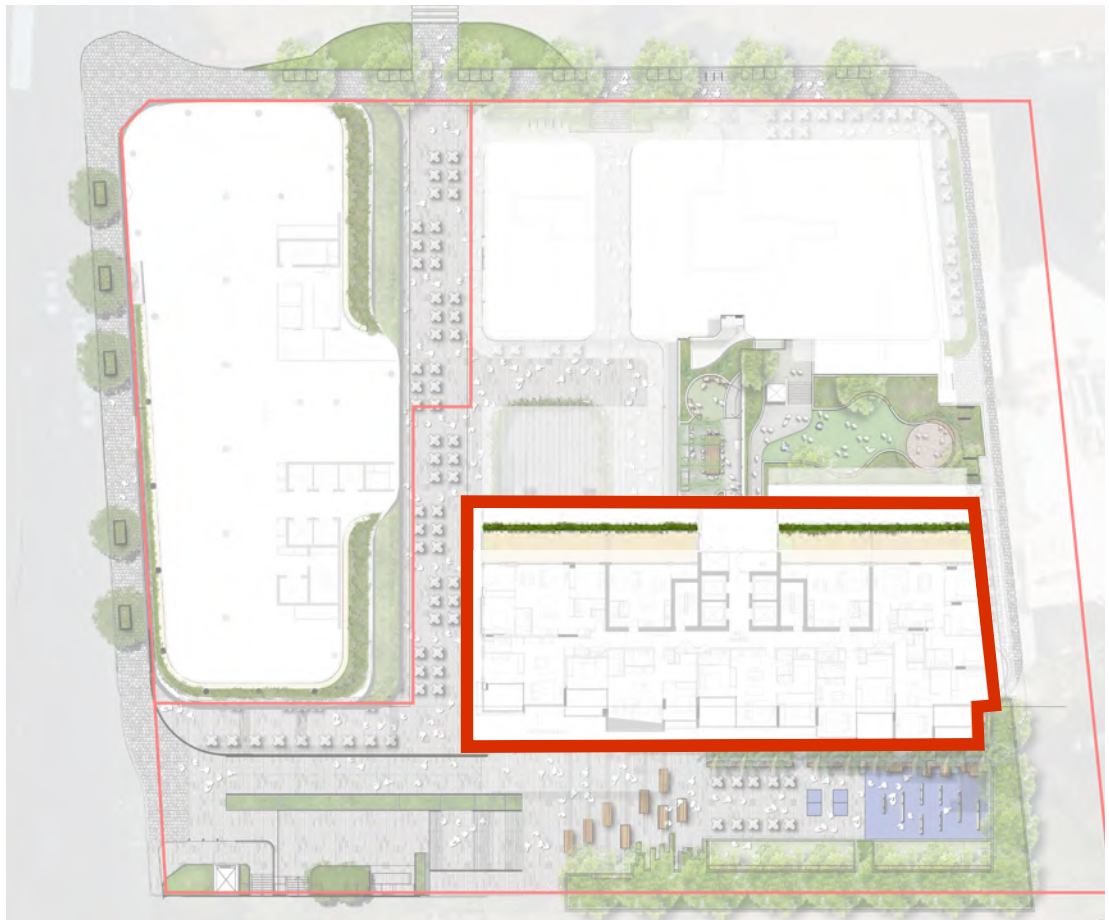


**LEGEND**  
01/ Layered mix of accent and screening planting to building edge

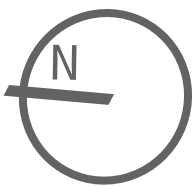
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SCALE 1:100 @ A1







0 2 4 6 8 10 M  
SCALE 1:100 @ A1



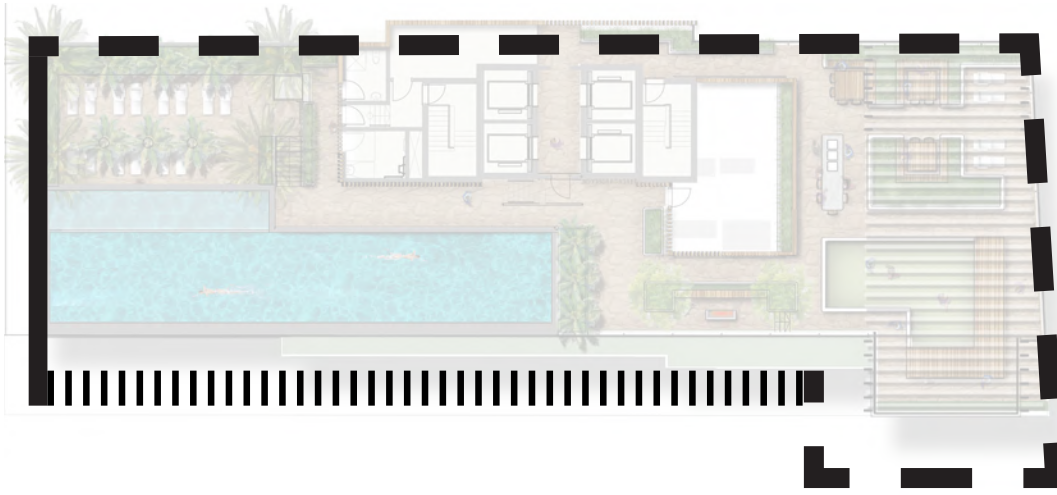


CONTEXT

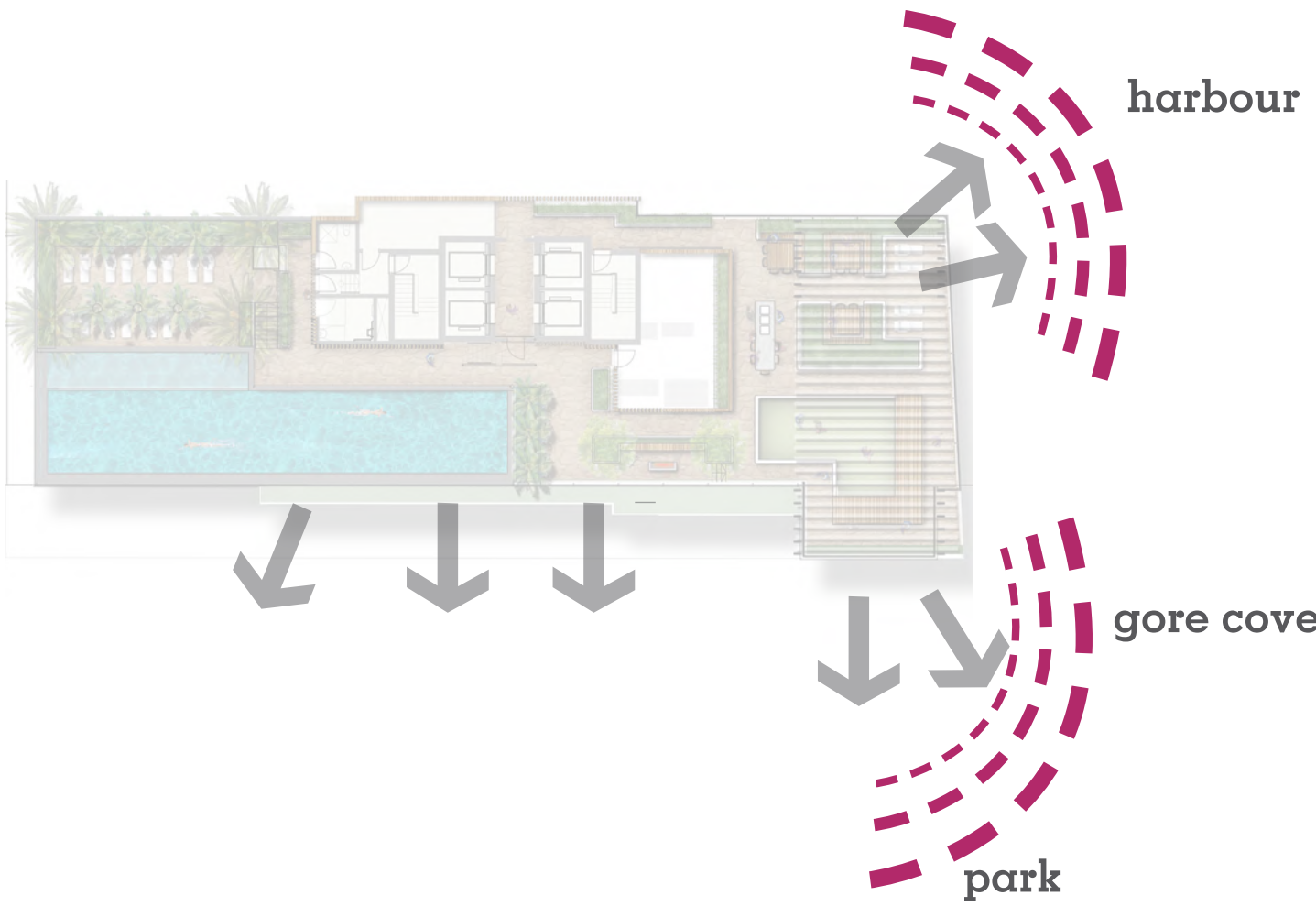


urban edge

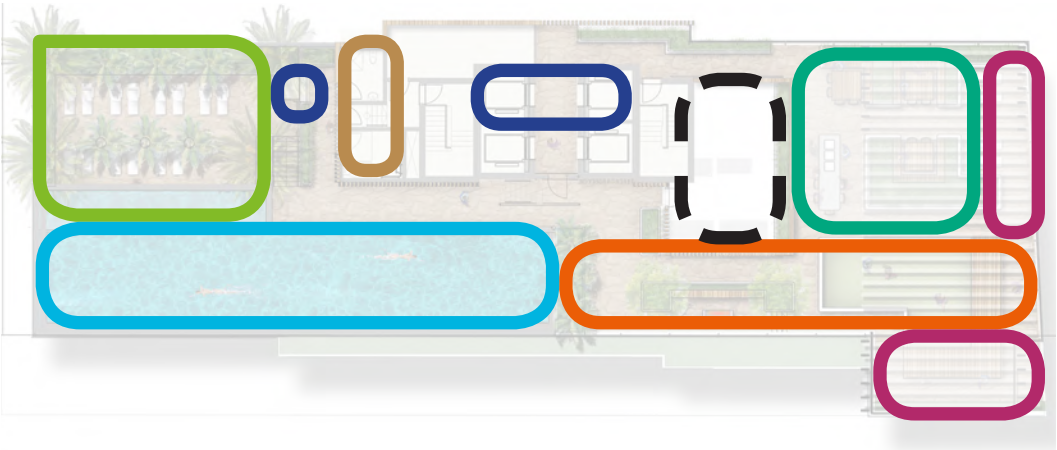
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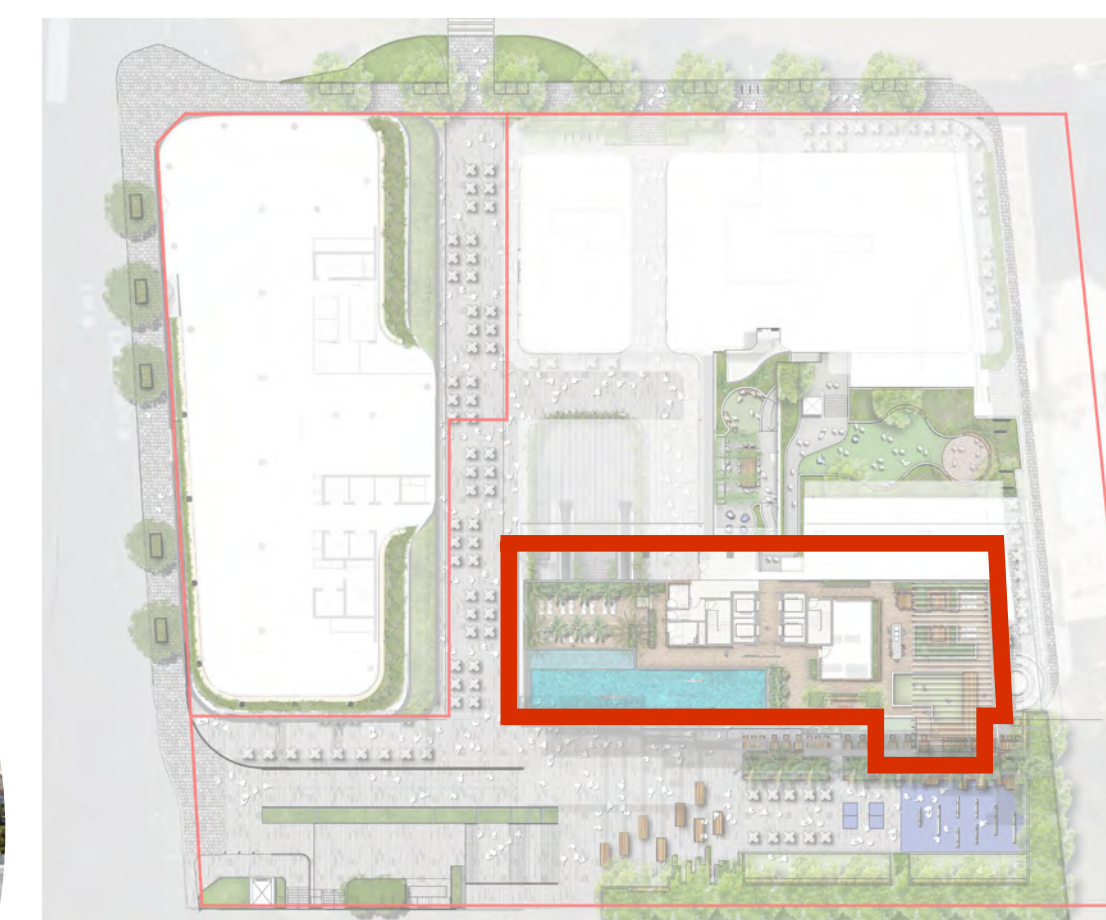
VIEWS



SPATIAL AMENITY



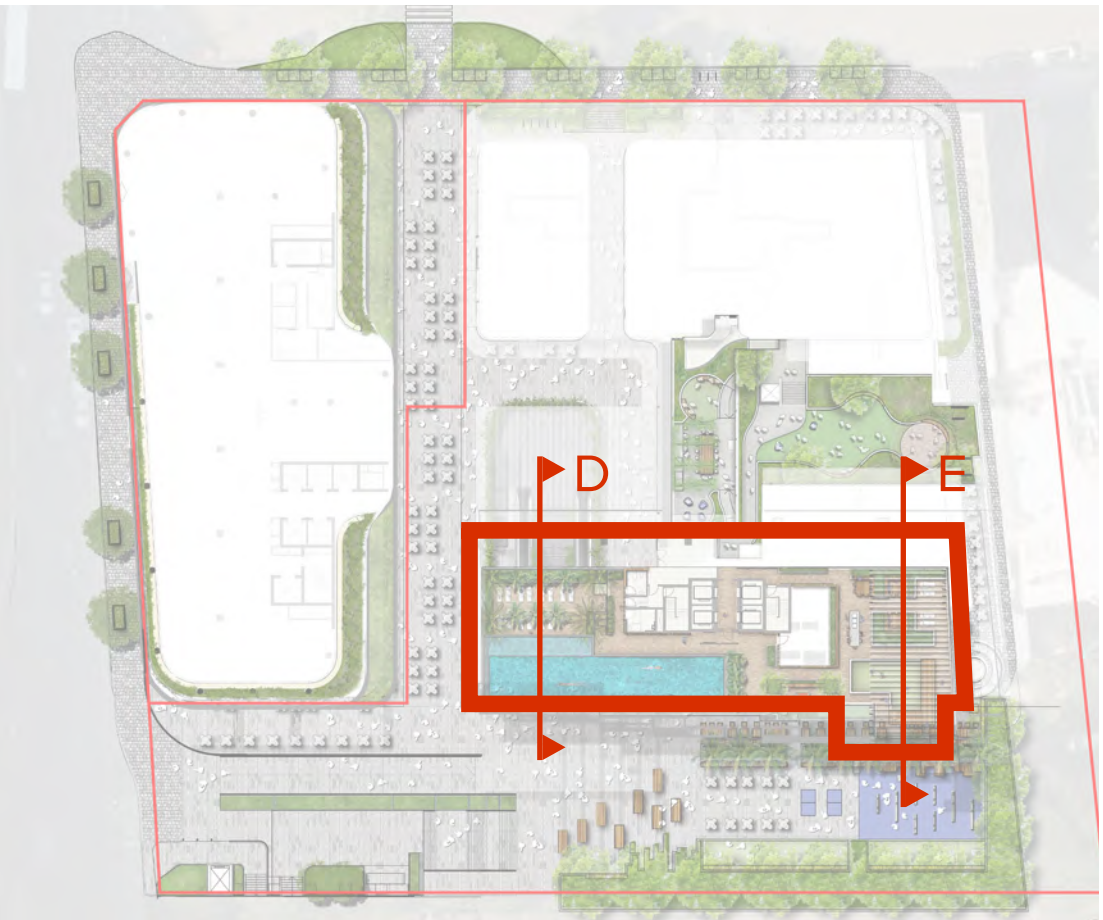
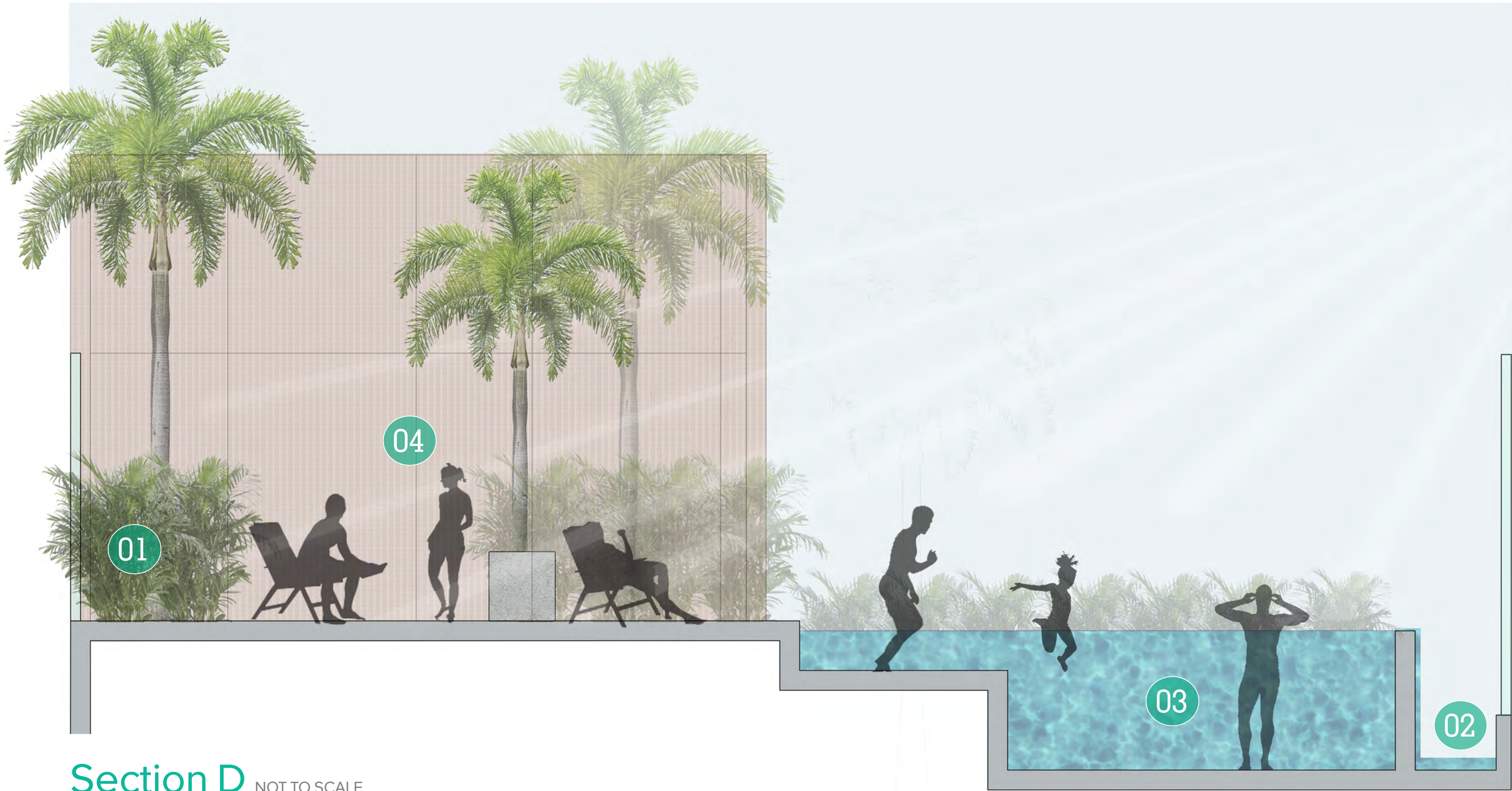




## LEGEND

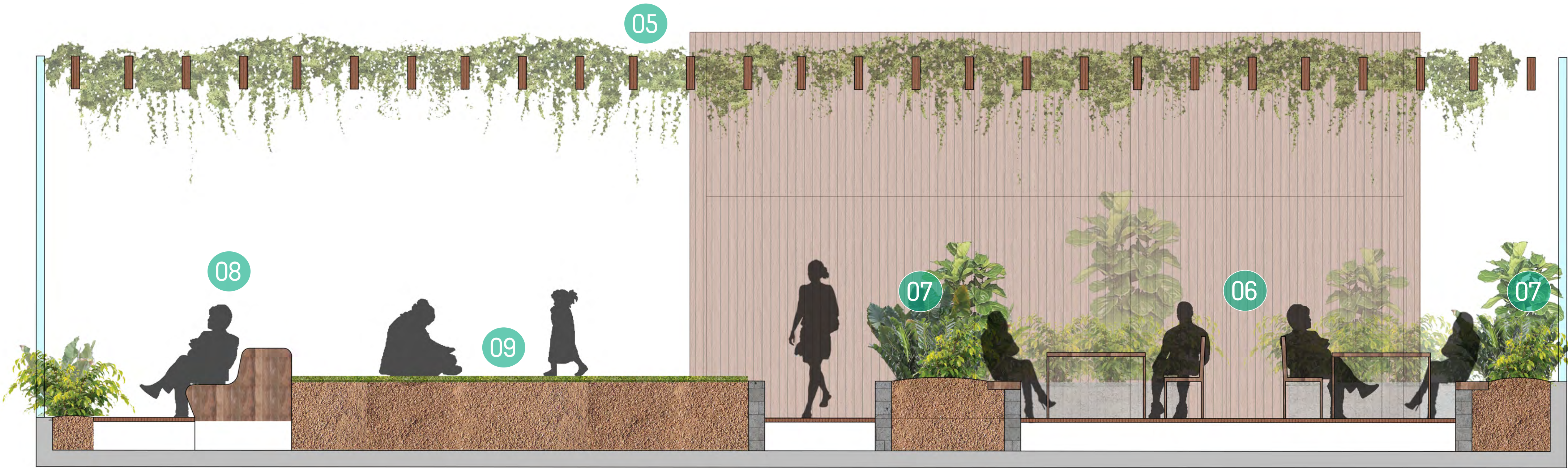
- 01/ OVERHEAD CANOPY STRUCTURE WITH CLIMBERS
- 02/ OUTDOOR COMMUNAL DINING SPACE
- 03/ SHALLOW POOL AREA WITH SUNBEDS
- 04/ WET EDGE
- 05/ LOUNGE AREA/CABANAS
- 06/ LAP POOL
- 07/ SEATING AMONG PLANTING
- 08/ BBQ AREA
- 09/ FIRE PIT





LEGEND

- 01/ TROPICAL PLANTING
- 02/ WET EDGE
- 03/ LAP POOL
- 04/ LOUNGE/SUNBATHING AREA
- 05/ CANOPY STRUCTURE WITH CLIMBERS
- 06/ OUTDOOR COMMUNAL DINING SPACE
- 07/ RAISED GARDEN BEDS WITH FEATURE PLANTING
- 08/ CUSTOM SEATING EDGE
- 09/ GRASS TERRACE



Section E NOT TO SCALE



TREES



SHRUBS



GROUNDCOVERS

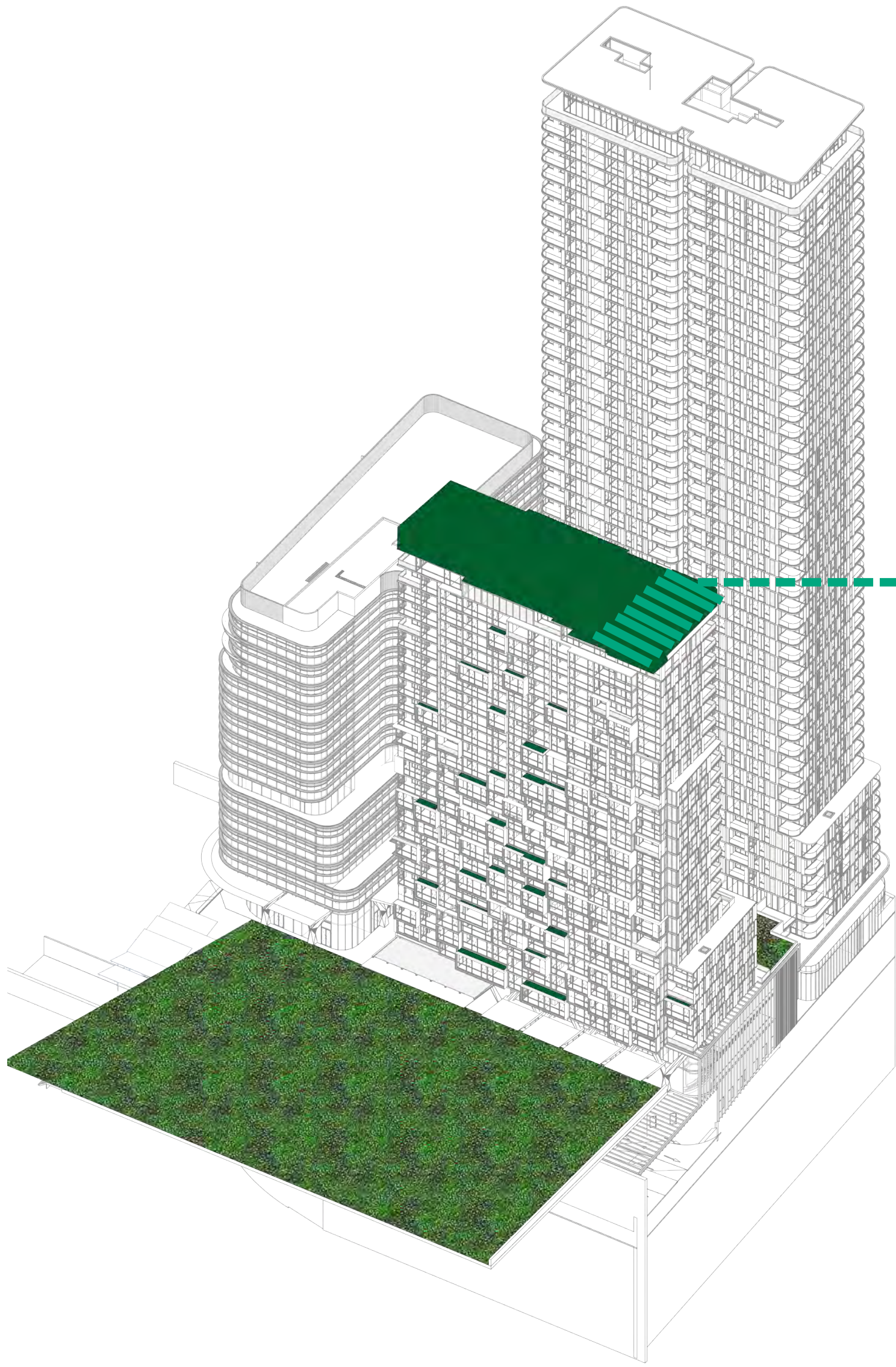


CLIMBERS





GARDEN TRELLIS



garden trellis\_level 26

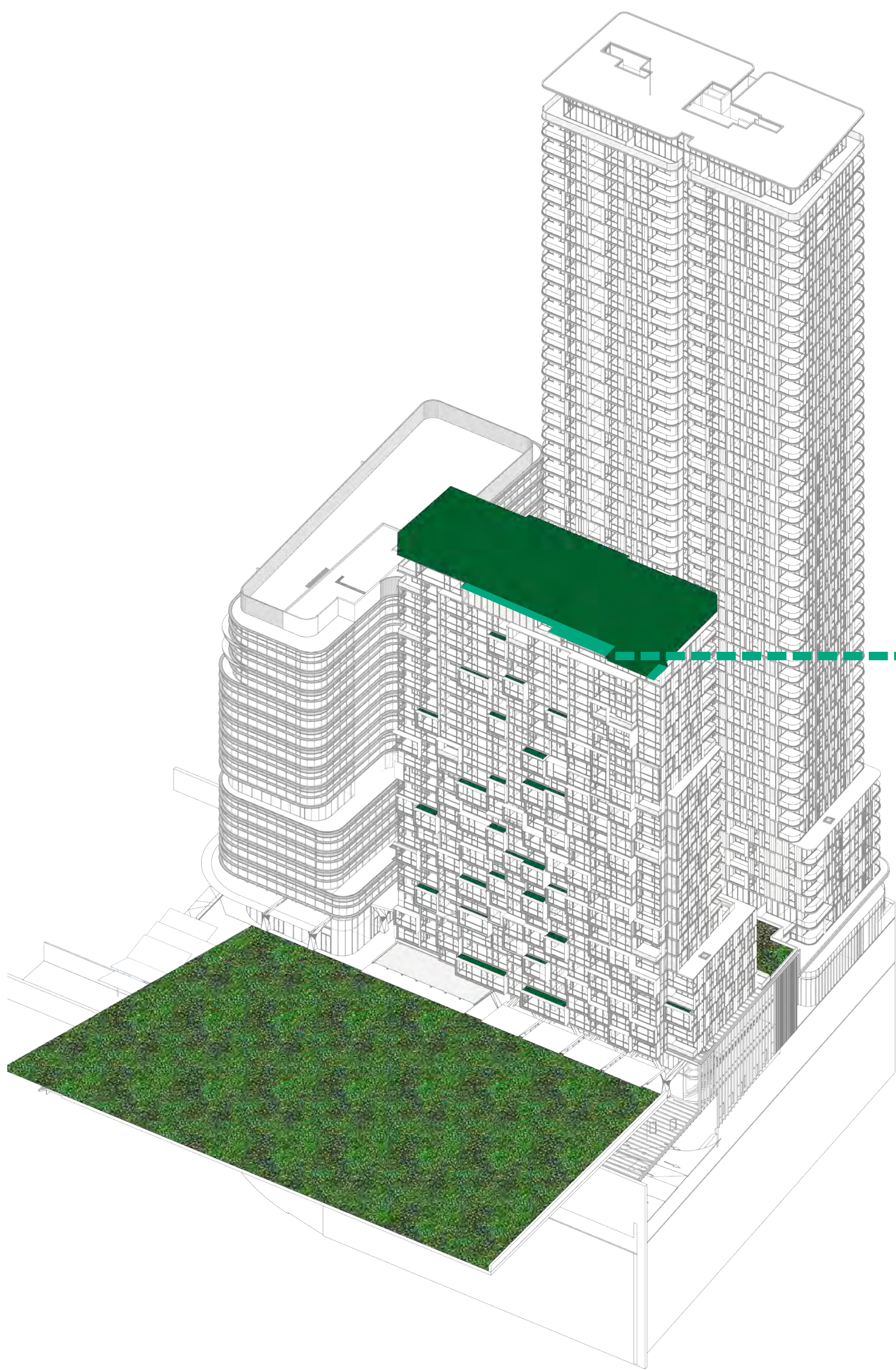


garden trellis extent

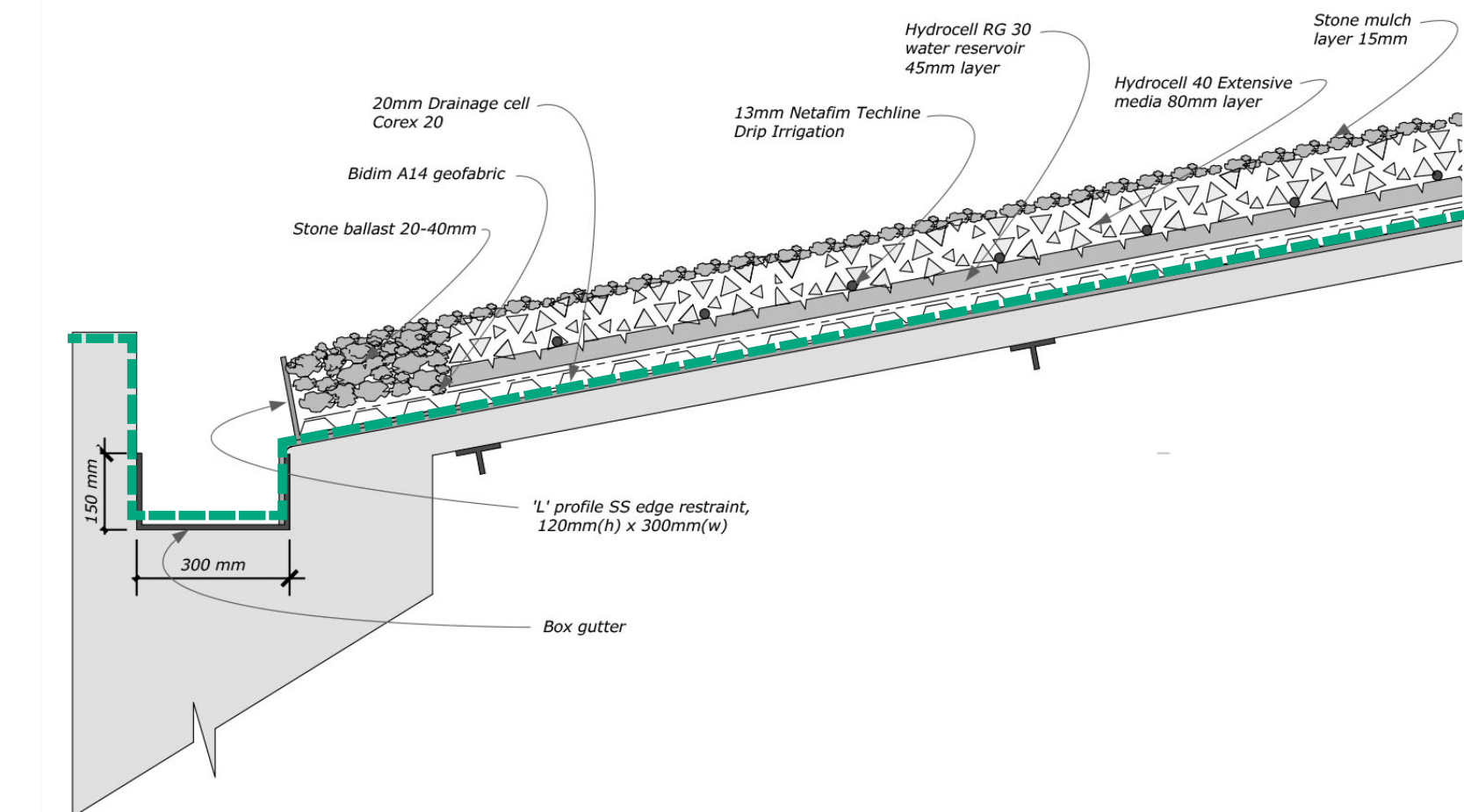




GREEN ROOF



green roof\_level 26



Indicative winter garden profile







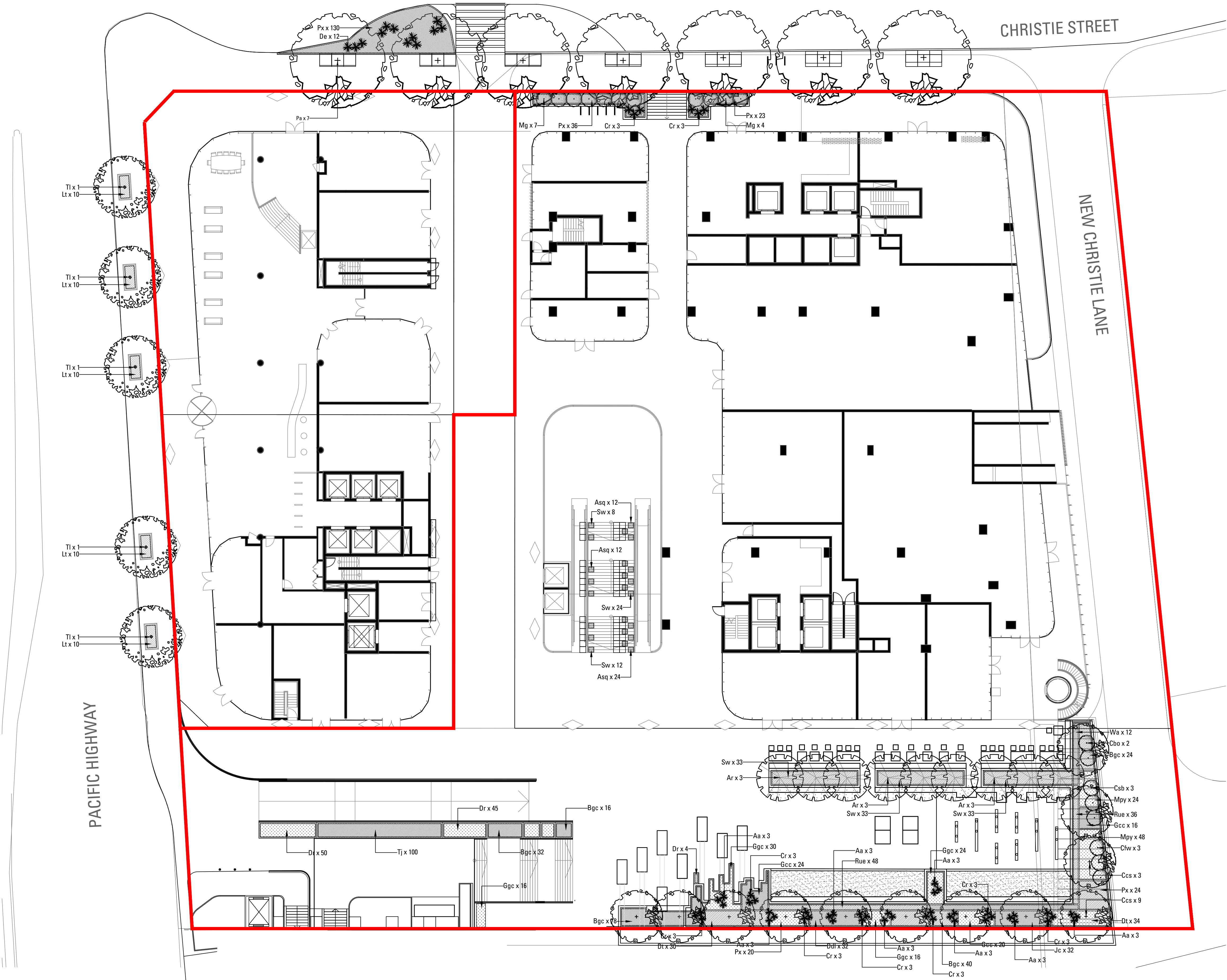
**88 CHRISTIE STREET ST LEONARDS**  
**JQZ | PTW**



17-480 88 CHRISTIE STREET PLANT SCHEDULE - S4.55					
CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w) (m)	PROPOSED POT SIZE	QUANTITY
GROUND FLOOR					
TREES					
Ar	<i>Arecastrum romanasifolium</i>	Queen Palm	15 x 5	100L	9
Cbo	<i>Corymbia 'Baby Orange'</i>	Flowering Gum	3 x 3	45L	2
Cc	<i>Corymbia citriodora 'Scentuous'</i>	Lemon Scented Gum	7 x 4.5	100L	60
Ccs	<i>Corymbia citriodora 'Scentuous'</i>	Lemon Scented Gum	7 x 4.5	400L - 4m Height Minimum	12
Csb	<i>Corymbia 'Summer Beauty'</i>	Flowering Gum	5 x 3	45L	3
Cfw	<i>Corymbia 'Wildfire'</i>	Flowering Gum	5 x 3	45L	3
Mg	<i>Magnolia grandiflora 'Teddy Bear'</i>	Dwarf Magnolia	4 x 3	75L	11
Pa	<i>Platanus x acerifolia</i>	London Plane Tree	20 x 10	400L	7
Tl	<i>Tristanopsis laurina 'Luscious'</i>	Luscious Water Gum	10 x 5	200L	5
SHRUBS & ACCENTS					
Aa	<i>Agave attenuata</i>	Century Plant	1 x 1	200mm	24
Cr	<i>Cycas revoluta</i>	Cycad	1.5 x 1	150mm	27
De	<i>Doryanthes excelsa</i>	Gynea Lily	3 x 1.5	200mm	12
GROUNDCOVERS & CLIMBERS					
Asq	<i>Aglaonema 'Silver Queen'</i>	Chinese Evergreen	0.5 x 0.5	150mm	48
Bgc	<i>Banksia spinulosa 'Giant Candles'</i>	Giant Candles Banksia	1.5 x 1	150mm	190
Ddl	<i>Danthonia longifolia</i>	Wallaby Grass	1 x 1	150mm	32
Dr	<i>Dichondra repens</i>	Kidney Weed	0.2 x spreading	150mm	99
Dt	<i>Dianella tasmanica 'Tas Red'</i>	Red Flax Lily	0.5 x 0.5	150mm	64
Gcc	<i>Grevillea 'Cherry Cluster'</i>	Cherry Cluster Grevillea	0.5 x 0.8	150mm	60
Ggc	<i>Grevillea 'Gaudichaudii'</i>	Prostrate Grevillea	0.1 x 3	150mm	86
Jc	<i>Juniperus conferta</i>	Shore Juniper	0.25 x 0.5	150mm	32
Li	<i>Lamandra 'Tanika'</i>	Mat Rush	0.6 x 0.6	150mm	50
Mpy	<i>Myoporum parvifolium 'Yareena'</i>	Yareena Myoporum	0.1 x 1	150mm	72
Px	<i>Philodendron 'Xanadu'</i>	Xanadu	1 x 1	150mm	233
Rue	<i>Russelia equisetiformis</i>	Horsetails	1 x 1	150mm	84
Sw	<i>Spathiphyllum wallisii</i>	Peace Lily	0.5 x 0.3	150mm	143
Tj	<i>Trachelospermum jasminoides</i>	Star Jasmine	0.25 x 1	150mm	100
LEVEL ONE					
TREES					
Hfo	<i>Howea forsteriana</i>	Kentia Palm	8 x 6	100L	1
Re	<i>Rhapis excelsa</i>	Lady Palm	3 x 3	300mm	26
SHRUBS & ACCENTS					
Ss	<i>Spathiphyllum 'Sensation'</i>	Giant Peace Lily	0.5 x 0.3	200mm	12
GROUNDCOVERS & CLIMBERS					

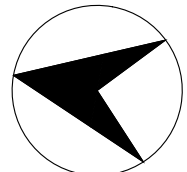
Sw	<i>Spathiphyllum wallisii</i>	Peace Lily	0.5 x 0.3	150mm	24
LEVEL TWO					
TREES					
Re	<i>Rhapis excelsa</i>	Lady Palm	3 x 3	300mm	15
Wf	<i>Waterhousia floribunda</i>	Weeping Lilly Pilly	10 x 5	75L	5
SHRUBS & ACCENTS					
Cw	<i>Calathea warscewiczii</i>	Prayer Plant	1 x 1	200mm	3
Dep	<i>Dianella caerulea 'Cassa Blue'</i>	Cassa Blue Flax Lily	0.5 x 0.5	150mm	10
GROUNDCOVERS & CLIMBERS					
Asq	<i>Aglaonema 'Silver Queen'</i>	Chinese Evergreen	0.5 x 0.5	150mm	14
Ca	<i>Calathea 'argentea'</i>	Zebra Plant	0.5 x 0.5	150mm	36
Ca	<i>Cissus antarctica</i>	Kangaroo Vine	n/a	200mm	8
Px	<i>Philodendron 'Xanadu'</i>	Xanadu	1 x 1	150mm	120
Sw	<i>Spathiphyllum wallisii</i>	Peace Lily	0.5 x 0.3	150mm	144
LEVEL THREE					
TREES					
Re	<i>Rhapis excelsa</i>	Lady Palm	3 x 3	300mm	29
SHRUBS & ACCENTS					
Dep	<i>Dianella caerulea 'Cassa Blue'</i>	Cassa Blue Flax Lily	0.5 x 0.5	150mm	49
GROUNDCOVERS & CLIMBERS					
Tj	<i>Trachelospermum jasminoides</i>	Star Jasmine	0.25 x 1	150mm	107
LEVEL SEVEN					
TREES					
Re	<i>Rhapis excelsa</i>	Lady Palm	3 x 3	300mm	38
SHRUBS & ACCENTS					
Dep	<i>Dianella caerulea 'Cassa Blue'</i>	Cassa Blue Flax Lily	0.5 x 0.5	150mm	82
Wj	<i>Westringia 'Jervis Gem'</i>	Coastal Rosemary	1 x 1	200mm	14
GROUNDCOVERS & CLIMBERS					
Tj	<i>Trachelospermum jasminoides</i>	Star Jasmine	0.25 x 1	150mm	259
LEVEL TWENTY SIX					
TREES					
Ar	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	20 x 3	100L	4
Fl	<i>Ficus lyrata</i>	Fiddle Leaf Fig	6 x 2	800mm	2
Hfo	<i>Howea forsteriana</i>	Kentia Palm	8 x 6	45L	6
SHRUBS & ACCENTS					
Al	<i>Alcantarea imperialis 'Purpurea'</i>	Giant Bromeliad	1 x 1	200mm	9
Pr	<i>Pittosporum revolutum</i>	Yellow Pittosporum	2 x 1	200mm	10
St	<i>Sansevieria trifasciata 'Laurentii'</i>	Snake Plant	1 x 0.5	200mm	69
Sr	<i>Strelitzia reginae</i>	Bird of Paradise	2 x 2	200mm	11
Wj	<i>Westringia 'Jervis Gem'</i>	Coastal Rosemary	1 x 1	200mm	13
GROUNDCOVERS & CLIMBERS					
Ggc	<i>Grevillea 'Gaudichaudii'</i>	Prostrate Grevillea	0.1 x 3	150mm	28
Mpy	<i>Myoporum parvifolium 'Yareena'</i>	Yareena Myoporum	0.1 x 1	150mm	34
Px	<i>Philodendron 'Xanadu'</i>	Xanadu	1 x 1	150mm	96





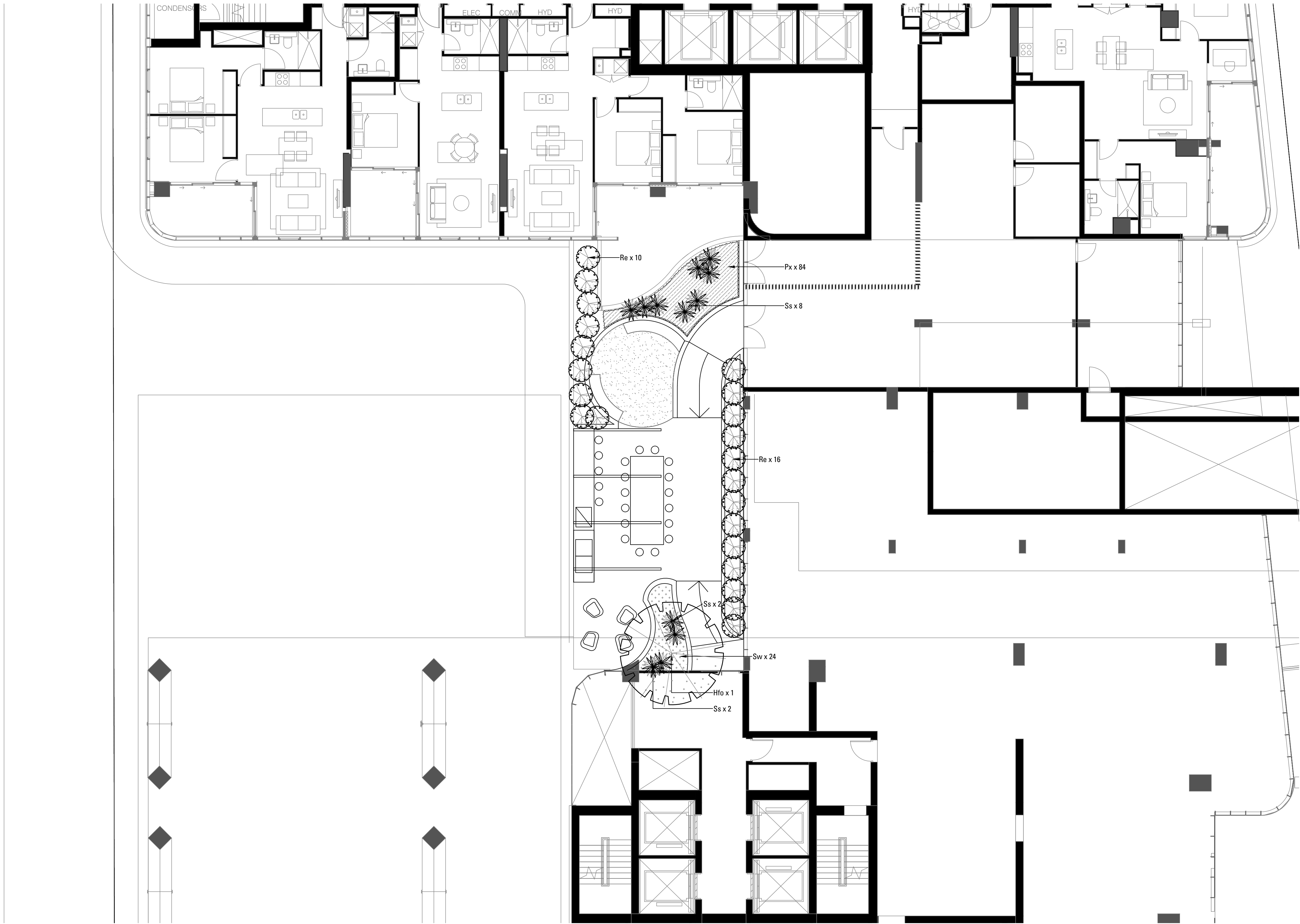
- LEGEND
- PROPOSED TREE PLANTING
  - PROPOSED PALM TREE PLANTING
  - PROPOSED SHRUB AND ACCENT PLANTING
  - PROPOSED GROUNDCOVER PLANTING
  - PROPOSED TURF

1:200 @ A1 0 1 2 4 6 10m





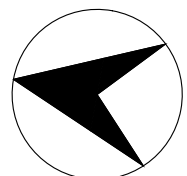
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  - PROPOSED TURF



1:100 @ A1



88 CHRISTIE STREET ST LEONARDS  
S4.55









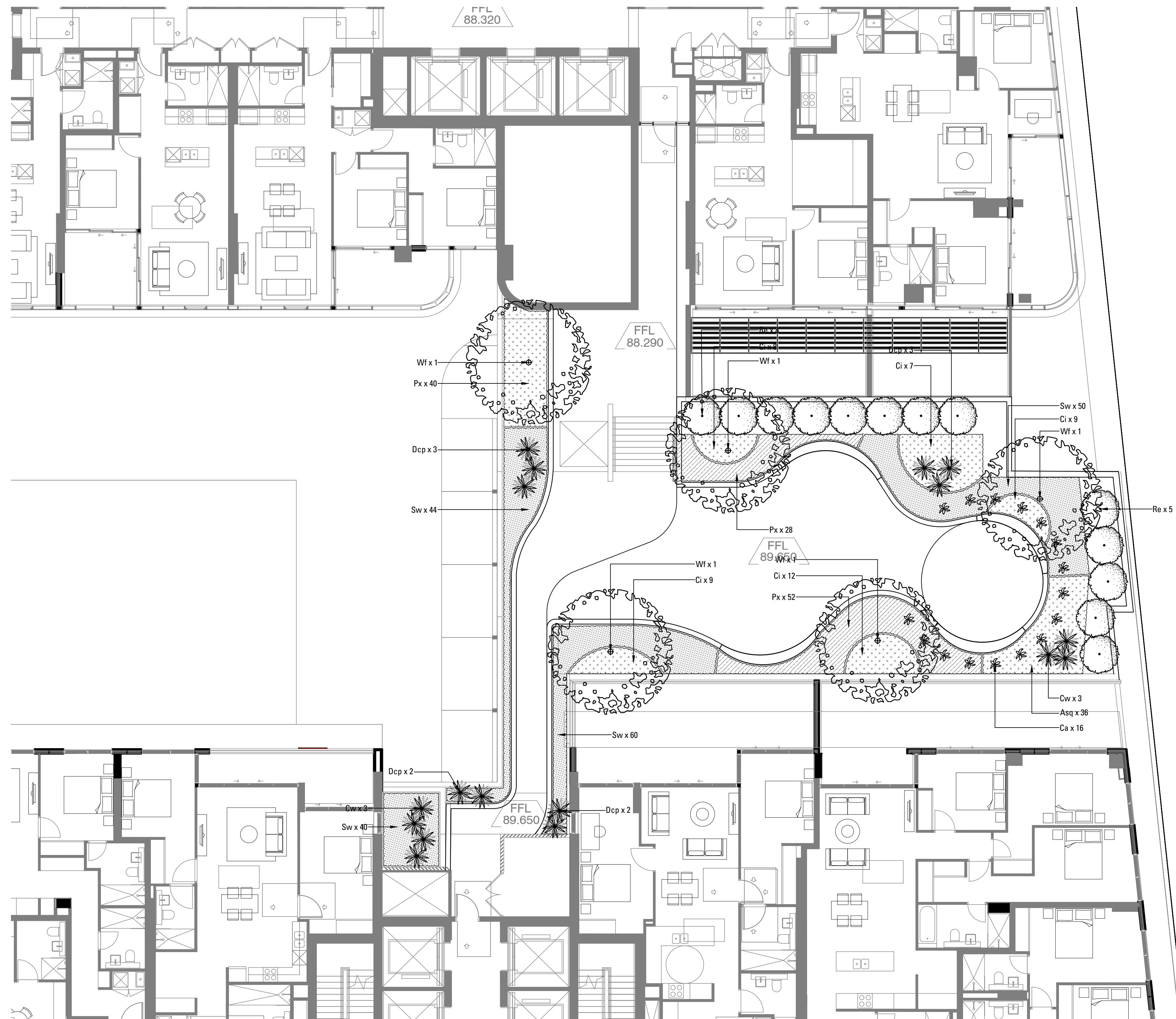
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CLIENT JQZ  
ARCHITECT PTW  
DATE May 2020  
SCALE 1:100 @ A1  
ISSUE 17

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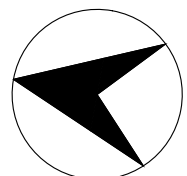


### LEGEND

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  -  PROPOSED PALM TREE PLANTING
  -  PROPOSED SHRUB AND ACCENT PLANTING
  -  PROPOSED GROUNDCOVER PLANTING
  -  PROPOSED CLIMBING PLANT
  -  PROPOSED TURF

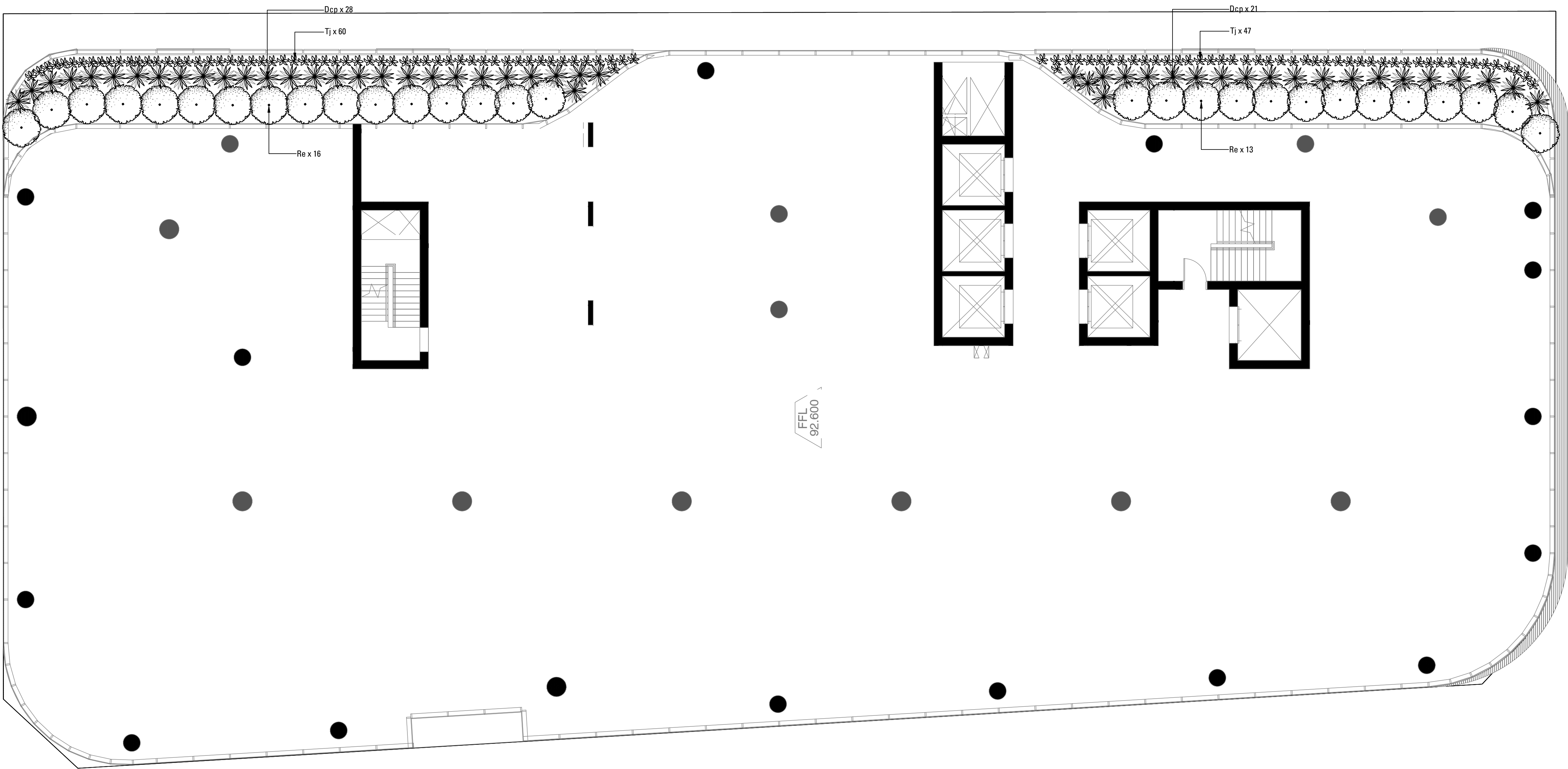


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- LEGEND
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  - PROPOSED CLIMBING PLANT
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88 CHRISTIE STREET ST LEONARDS  
S4.55



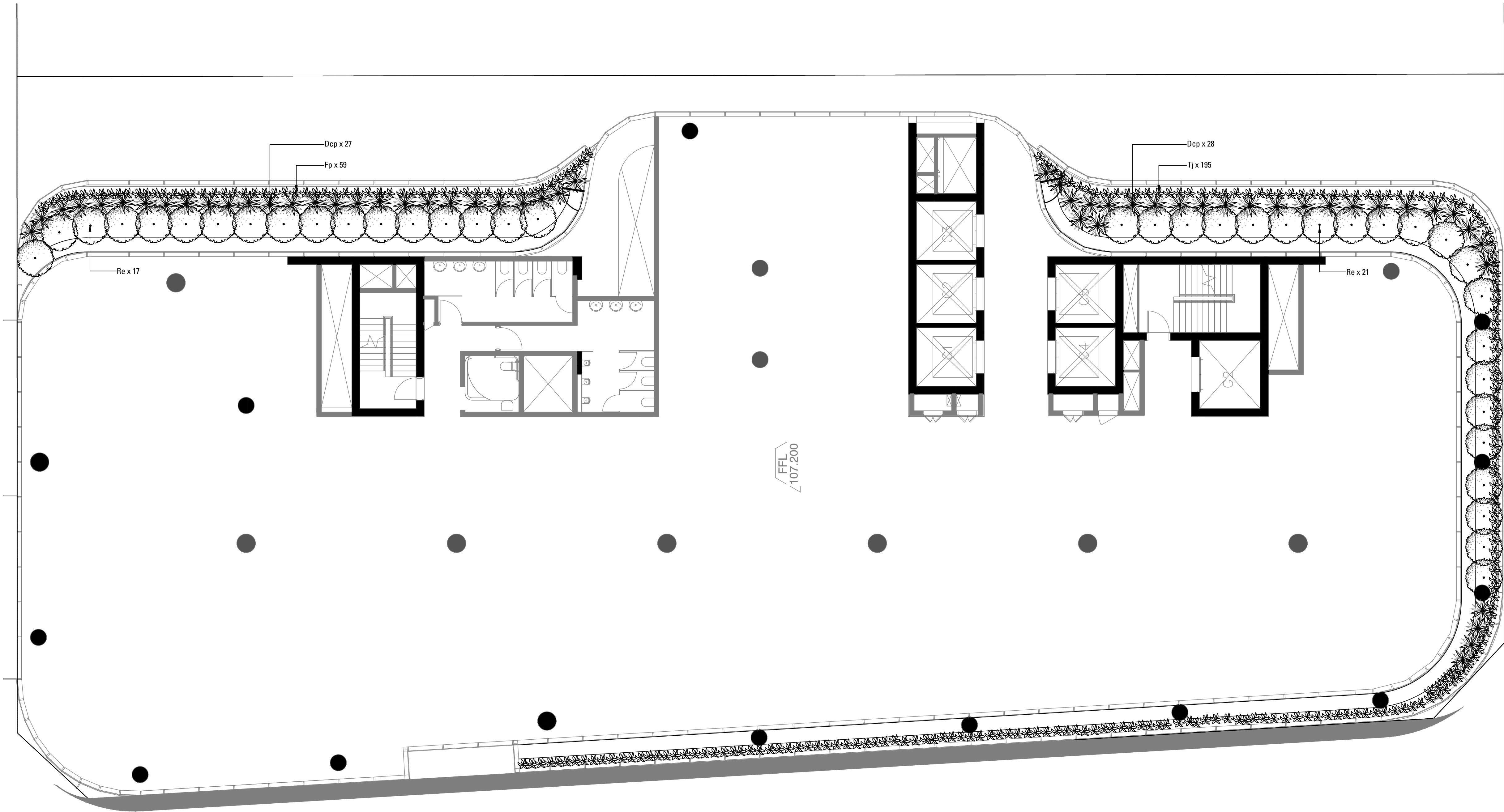
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1:100 @ A1 0 1 2 3 4 5m



- LEGEND
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  - PROPOSED CLIMBING PLANT
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1:100 @ A1



ARCADIA

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S4.55

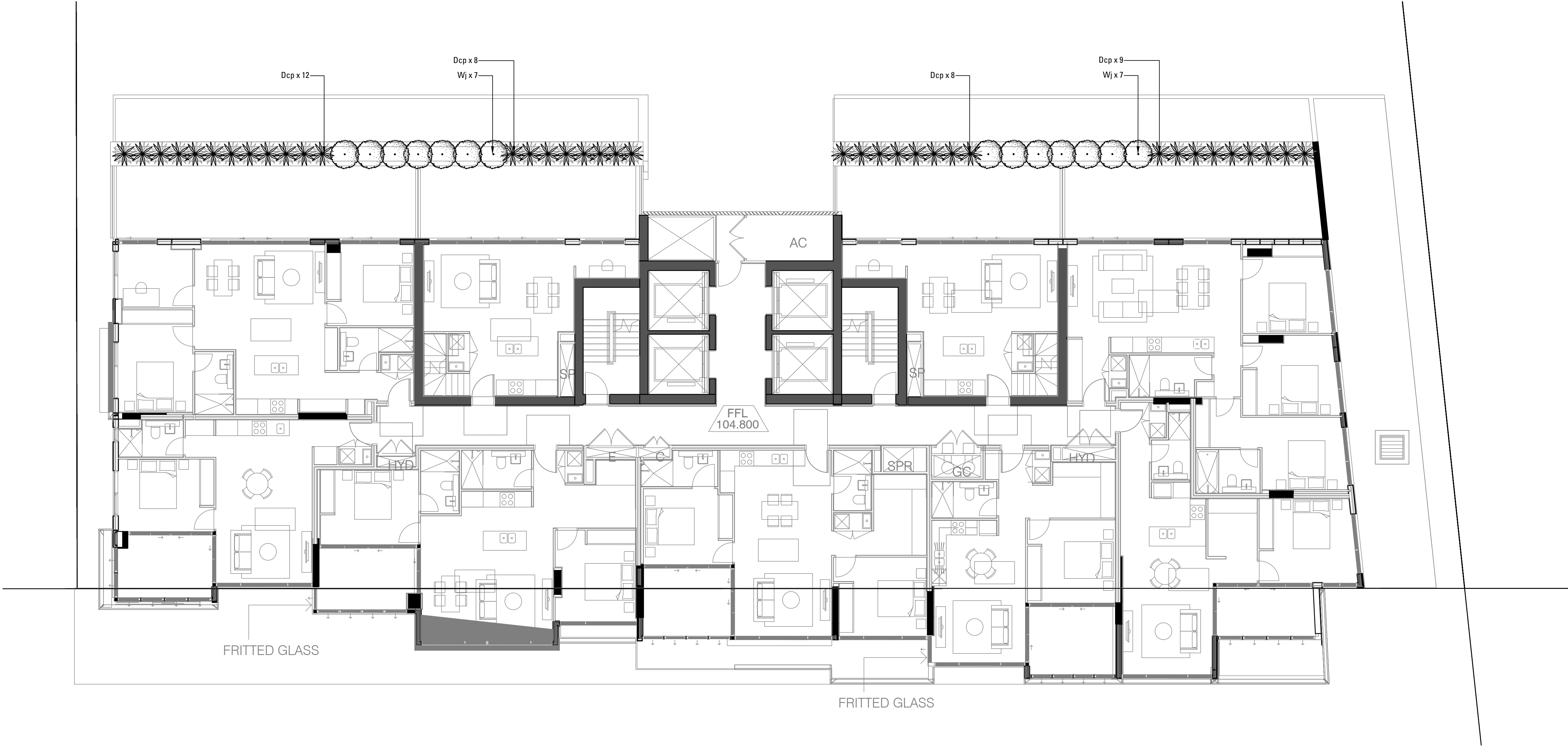


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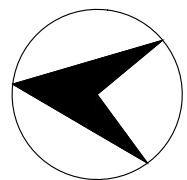
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1:100 @ A1



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S4.55



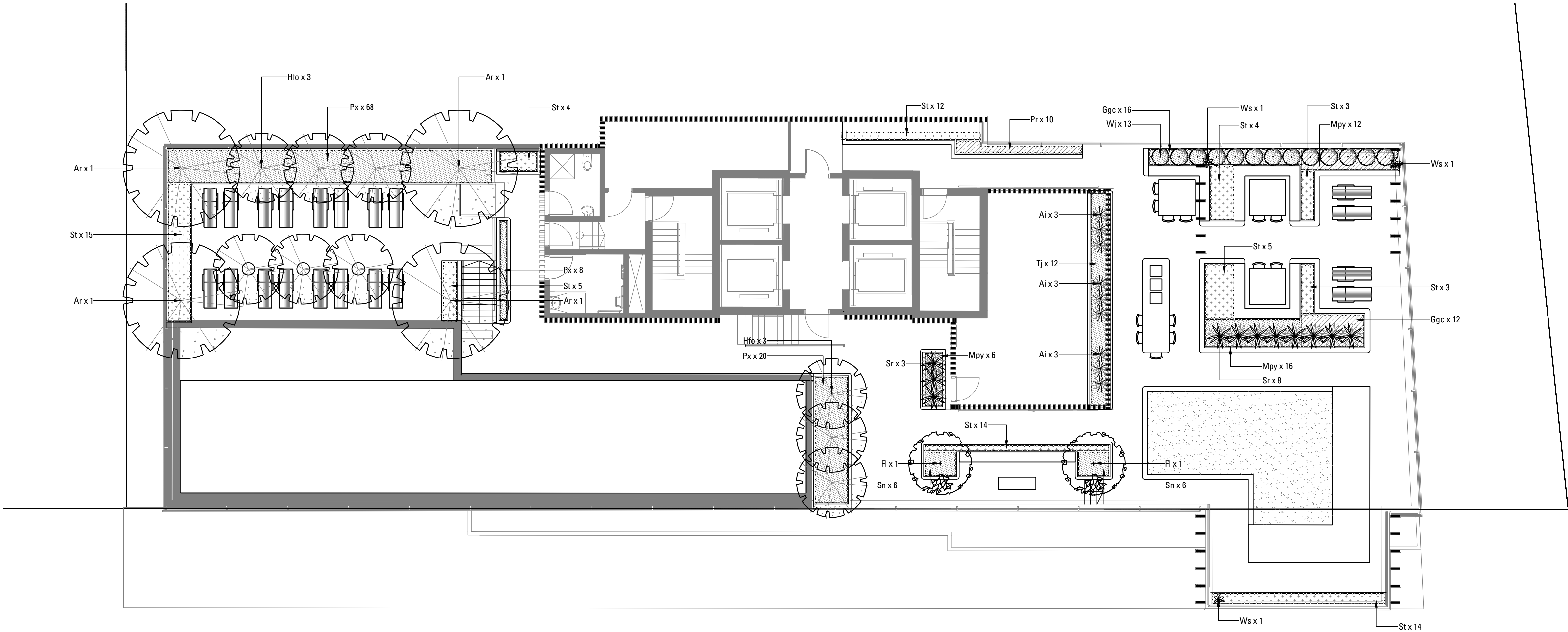
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LEGEND

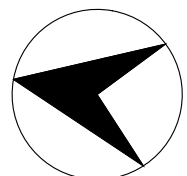
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1:100 @ A1



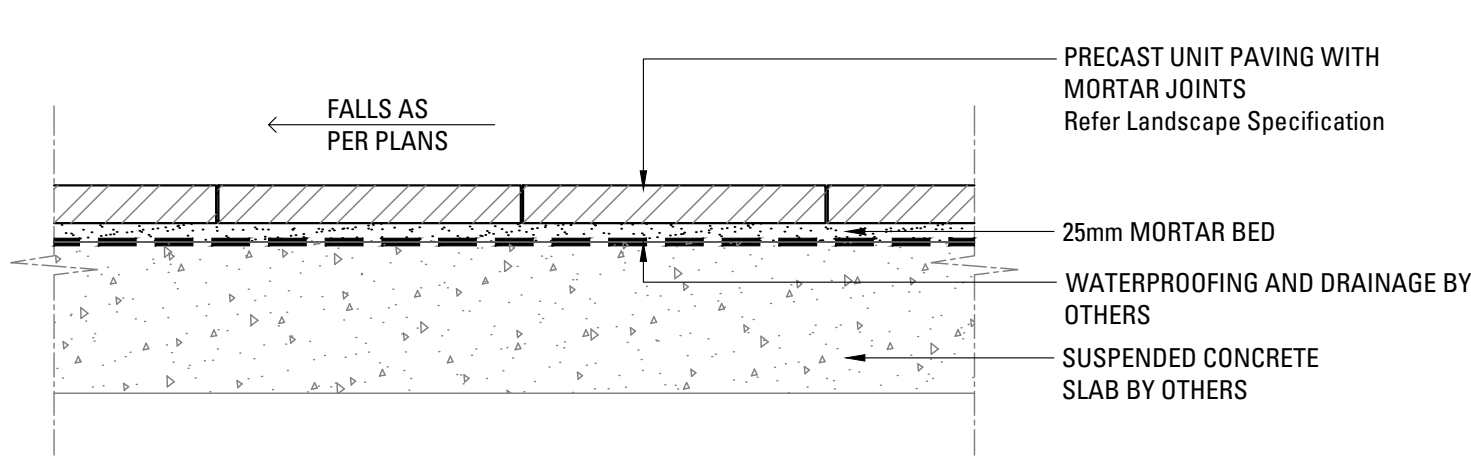
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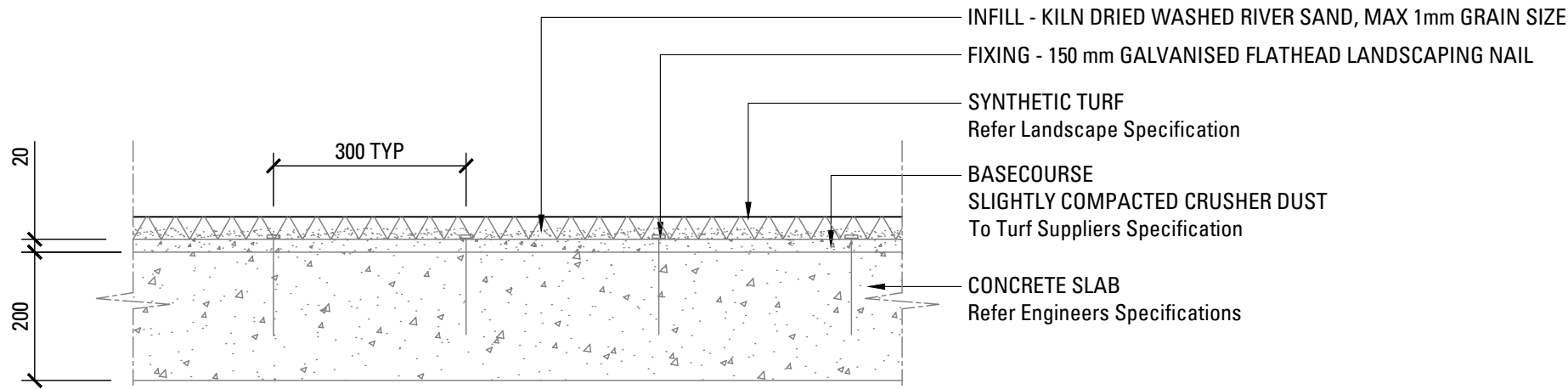
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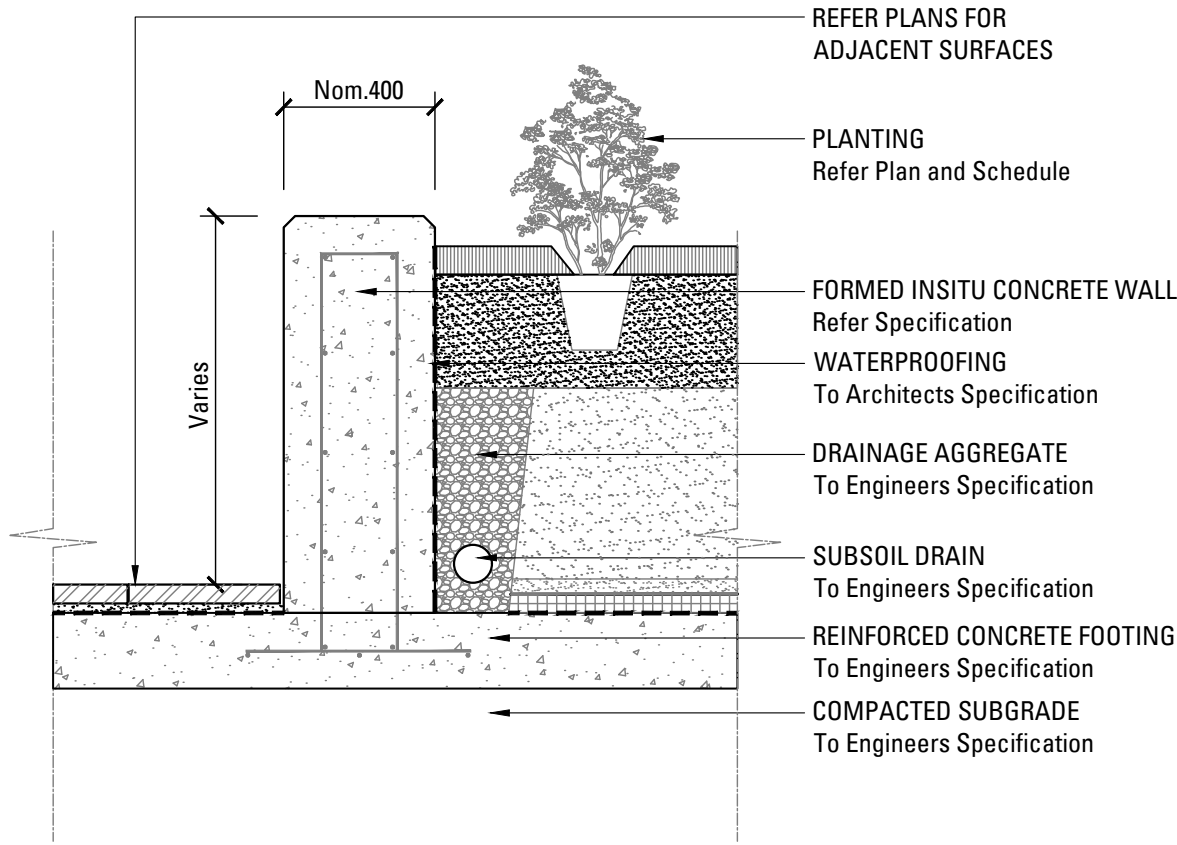




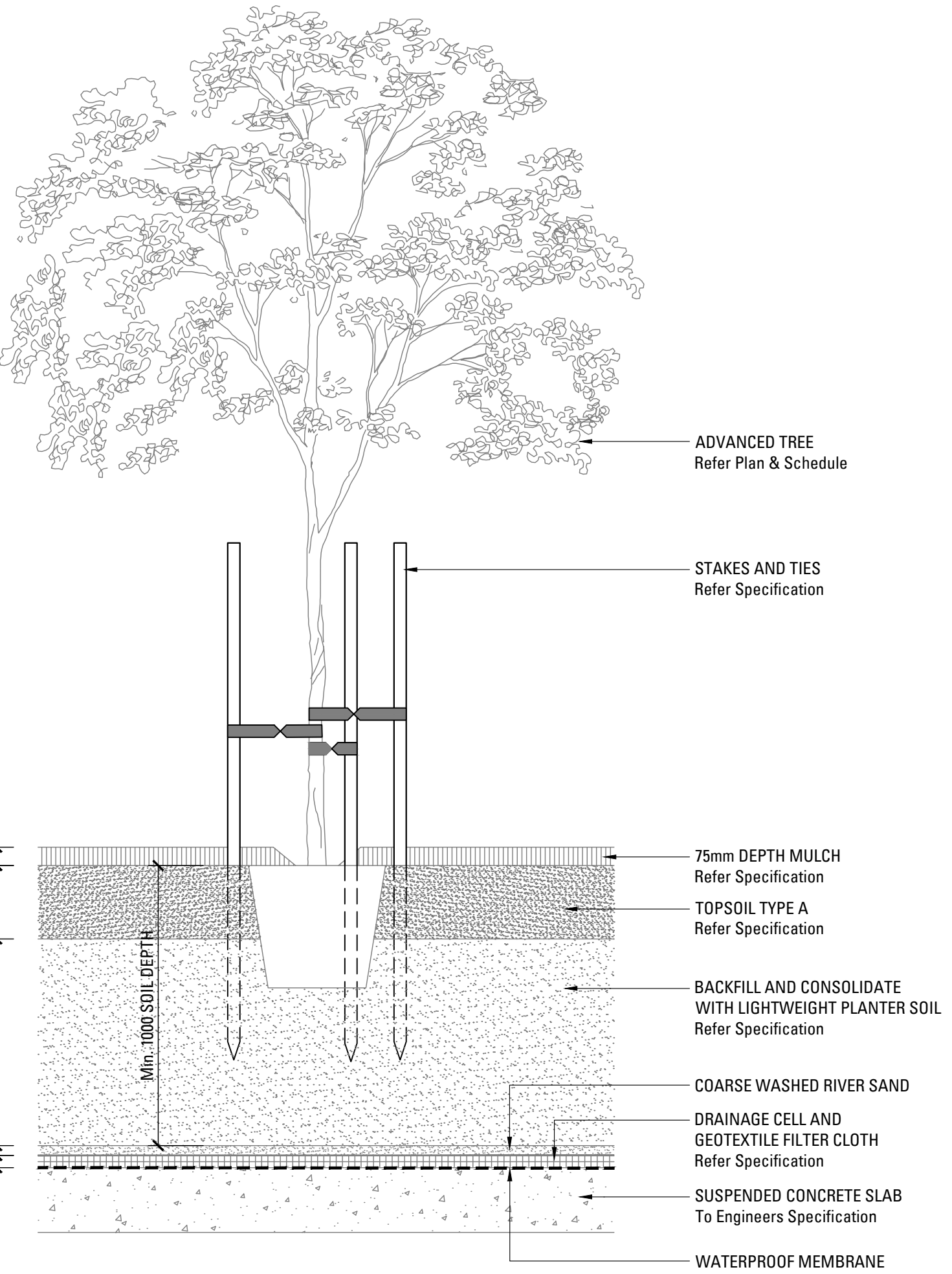
00 PRECAST UNIT PAVERS ON SUSPENDED SLAB  
SCALE 1:10



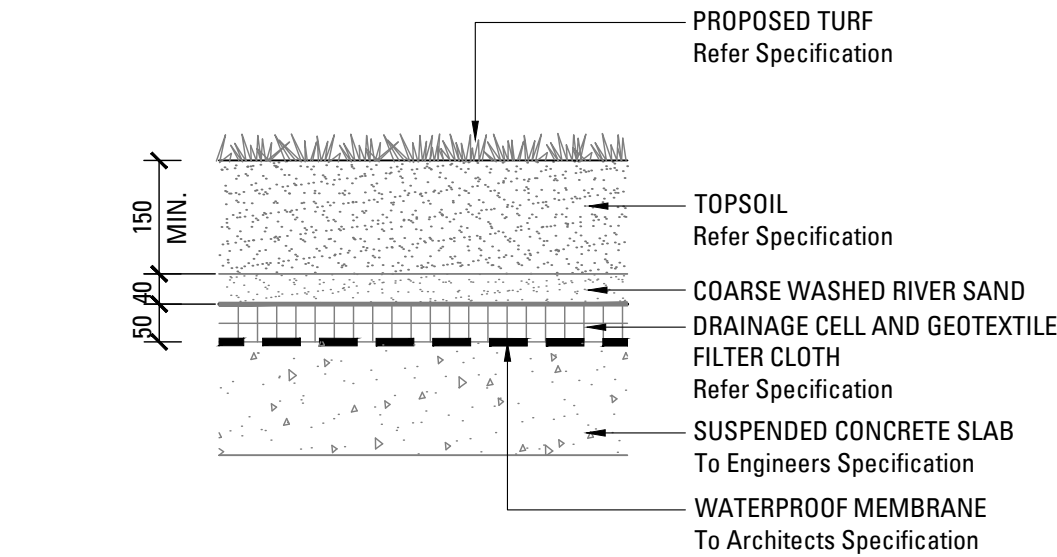
00 PAVING TYPE AT - SYNTHETIC TURF ON SLAB  
SCALE 1:10



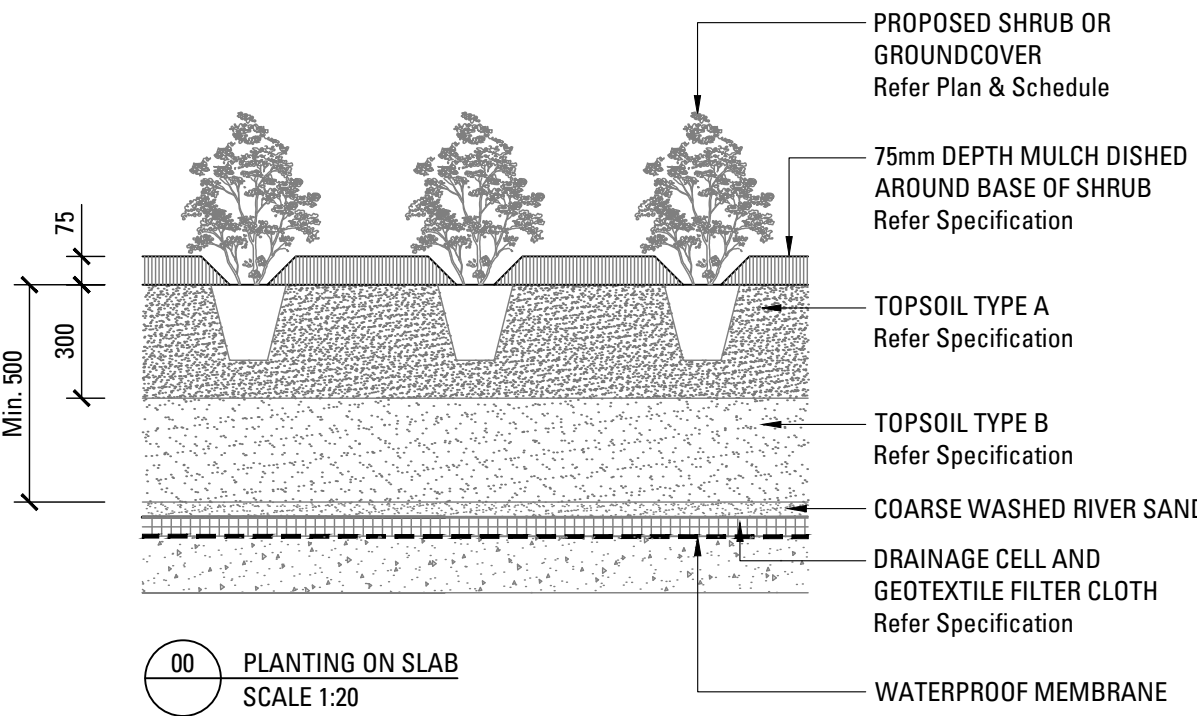
00 FORMED INSITU CONCRETE RETAINING WALL  
SCALE 1:20



00 TREE PLANTING ON SLAB 75-100L  
SCALE 1:20



00 TURF ON SLAB  
SCALE 1:10



00 PLANTING ON SLAB  
SCALE 1:20



LANDSCAPE SPECIFICATION NOTES

**SERVICES**  
BEFORE LANDSCAPE WORK IS COMMENCED THE LANDSCAPE CONTRACTOR IS TO ESTABLISH THE POSITION OF ALL SERVICE LINES AND ENSURE TREE PLANTING IS CARRIED OUT AT LEAST 3 METRES AWAY FROM THESE SERVICES. SERVICE LIDS, VENTS AND HYDRANTS SHALL BE LEFT EXPOSED AND NOT COVERED BY ANY LANDSCAPE FINISHES (TURFING, PAVING, GARDEN BEDS ETC.) FINISH ADJOINING SURFACES FLUSH WITH PIT LIDS.

**ABORIST MANAGEMENT OF TREE PROTECTION**  
A QUALIFIED AND APPROVED ABORIST IS TO BE CONTRACTED TO UNDERTAKE OR MANAGE THE INSTALLATION OF PROTECTIVE FENCING, AND TO UNDERTAKE SUCH MEASURES AS HE DEEMS APPROPRIATE TO PRESERVE THE SUBJECT TREES TO BE RETAINED. THE ARBORIST IS TO BE RETAINED FOR THE ENTIRE CONTRACT PERIOD TO UNDERTAKE ONGOING MANAGEMENT AND REVIEW OF THE TREES.

**DRAINAGE CELL AND FILTER FABRIC**  
FOR ON-SLAB AREAS INSTALL AN APPROVED 'DRAINAGE CELL' PRODUCT TO COMPREHENSIVELY COVER THE BOTTOM OF ALL PLANTERS. OVER DRAINAGE CELL TO ON-SLAB AREAS, A POLYFELT GEOTEXTILE LINING (AS SUPPLIED BY 'POLYFELT TS' OR APPROVED EQUIVALENT) IS TO BE INSTALLED TO COVER THE BOTTOM OF ALL PLANTERS, TURNED UP 300MM AND TAPED TO THE PLANTER SIDES TO ENSURE SOIL MIX DOES NOT ESCAPE INTO DRAINAGE OUTLETS/HOLES. INSTALL MIN. 50MM COARSE RIVER SAND OVER ALL GEOTEXTILE LINING PRIOR TO INSTALLATION OF SOIL MIX.

**PLANTING MIXTURE**  
SHALL BE HOMOGENOUS BLEND OF SOIL AND ADDITIVES IN THE FOLLOWING PROPORTIONS:  
EXISTING SITE SOIL IF SUITABLE OR  
IMPORTED TOPSOIL 50%  
COMPOST 30%  
D/W SAND 20%  
SOIL TESTING OF EXISTING SITE SOIL IS TO BE UNDERTAKEN TO ASSESS SUITABILITY OF USE AS PLANTING TOPSOIL AND COMPLIANCE WITH AUSTRALIAN STANDARDS.

**MULCH APPLICATION**  
PLACE MULCH TO THE REQUIRED DEPTH, (REFER TO DRAWINGS) CLEAR OF PLANT STEMS, AND RAKE TO AN EVEN SURFACE. FINISHING 25MM BELOW ADJOINING LEVELS. ENSURE MULCH IS WATERED IN AND TAMPED DOWN DURING INSTALLATION.

**MULCH TYPE**  
PINE BARK: FROM MATURE TREES, GRADED IN SIZE FROM 15MM TO 30MM, FREE FROM WOOD SLIVERS. DARK BROWN IN COLOUR AND TEXTURE.

**COMPOST**  
SHALL BE WELL ROTTED VEGETATIVE MATERIAL OR ANIMAL MANURE, OR OTHER APPROVED MATERIAL, FREE FROM HARMFUL CHEMICALS, GRASS AND WEED GROWTH AND WITH NEUTRAL PH. PROVIDE A CERTIFICATE OF PROOF OF PH UPON REQUEST.

**PLANT MATERIAL**  
ALL PLANTS SUPPLIED ARE TO CONFORM WITH THOSE SPECIES LISTED IN THE PLANT SCHEDULE ON THE DRAWINGS. GENERALLY PLANTS SHALL BE VIGOROUS, WELL ESTABLISHED, HARDENED OFF, OF GOOD FORM CONSISTENT WITH SPECIES OR VARIETY, NOT SOFT OR FORCED, FREE FROM DISEASE OR INSECT PESTS WITH LARGE HEALTHY ROOT SYSTEMS AND NO EVIDENCE OF HAVING BEEN RESTRICTED OR DAMAGED. TREES SHALL HAVE A LEADING SHOOT. IMMEDIATELY REJECT DRIED OUT, DAMAGED OR UNHEALTHY PLANT MATERIAL BEFORE PLANTING. ALL STOCK IS TO BE CONTAINER GROWN FOR A MINIMUM OF SIX (6) MONTHS PRIOR TO DELIVERY TO SITE

**FERTILISER MASS PLANTING AREAS:**  
FERTILISER SHALL BE 'NUTRICOTE' OR APPROVED EQUIVALENT IN GRANULE FORM INTENDED FOR SLOW RELEASE OF PLANT NUTRIENTS OVER A PERIOD OF APPROXIMATELY NINE MONTHS. THOROUGHLY MIX FERTILISER WITH PLANTING MIXTURE AT THE RECOMMENDED RATE, PRIOR TO INSTALLING PLANTS.

TURF  
SHALL BE SIR WALTER BUFFALO. SHIRLEYS NO. 17 OR APPROVED EQUAL LAWN FOOD SHALL BE THOROUGHLY MIXED INTO THE TOPSOIL PRIOR TO PLACING TURF.

TREES IN GRASS AND SUPER ADVANCED TREES:  
PELLETS SHALL BE IN THE FORM INTENDED TO UNIFORMLY RELEASE PLANT FOOD ELEMENTS FOR A PERIOD OF APPROXIMATELY NINE MONTHS EQUAL TO SHIRLEYS KOKEI PELLETS, ANALYSIS 6.3:1.8:2.9. KOKEI PELLETS SHALL BE PLACED AT THE TIME OF PLANTING TO THE BASE OF THE PLANT, 50MM MINIMUM FROM THE ROOT BALL AT A RATE OF TWO PELLETS PER 300MM OF TOP GROWTH TO A MAXIMUM OF 8 PELLETS PER TREE.

**STAKING AND TYING**  
STAKES SHALL BE STRAIGHT HARDWOOD, FREE FROM KNOTS AND TWISTS, POINTED AT ONE END AND

SIZED ACCORDING TO SIZE

OF PLANTS TO BE STAKED.  
A. 5-15 LITRE SIZE PLANT 1X(1200X25X25MM)  
B. 35-75 LITRE SIZE PLANT 2X(1500X38X38MM)  
C. 100-GREATER THAN 200LITRE 3X(1800X50X50MM)  
TIES SHALL BE 50MM WIDE HESSIAN WEBBING OR APPROVED EQUIVALENT NAILED OR STAPLED TO STAKE. DRIVE STAKES A MINIMUM ONE THIRD OF THEIR LENGTH, AVOIDING DAMAGE TO THE ROOT SYSTEM, ON THE WINDWARD SIDE OF THE PLANT.

**IRRIGATION SYSTEM**  
SUPPLY AN AUTOMATIC WATERING SYSTEM USING 'TORO IRRIGATION SYSTEM' OR SIMILAR APPROVED, WITH MICRO-JET SPRINKLER HEADS AND LOW DENSITY, RUBBER MODIFIED POLYPROPYLENE RETICULATION, TO INCLUDE FILTERS, BENDS JUNCTIONS, ENDS AND OTHER ANCILLARY EQUIPMENT. THE LANDSCAPER SHALL NOMINATE HIS SOURCE OF SUPPLY FOR THE WATERING SYSTEM AND OBTAIN APPROVAL FROM THE SUPERINTENDENT BEFORE PLACING ORDERS FOR EQUIPMENT OR SUPPLY.

A SCHEMATIC PLAN OF THE PROPOSED IRRIGATION SYSTEM IS TO BE PREPARED BY THE CONTRACTOR, SHOWING SOLENOIDS, PIPE DIAMETERS, AND ALL NOZZLE AND TRICKLE ATTACHMENT TYPES (INCLUDING SPRAY/HEAD ANGLE), FOR REVIEW BY THE SUPERINTENDENT PRIOR TO INSTALLATION

THE CONTRACTOR IS TO LIASE WITH THE HYDRAULIC ENGINEER AND COUNCIL AS NECESSARY, TO ENSURE THE THE IRRIGATION SYSTEM CONFORMS WITH ALL THE COUNCIL AND WATER BOARD CODES AND REQUIREMENTS.

PROVIDE AN AUTOMATIC CONTROLLER THAT PROVIDES FOR TWO WEEK SCHEDULING AND HOURLY MULTI-CYCLE OPERATION. THE CONTROLLER SHALL MANUAL OVERRIDE. PROGRAMMING SHALL BE UNDERTAKEN BY THE CONTRACTOR WHO SHALL ADVISE ON THE OPERATION OF THE SYSTEM.

PROVISION OF SECURE HOUSING FOR THE AUTOMATIC IRRIGATION CONTROLLER TO BE LOCATED IN ASSOCIATION WITH THE LANDSCAPE CONTRACTOR AND LOCATION CONFIRMED BY THE SUPERINTENDENT. WIRING TO CONNECT REMOTE SOLENOID LOCATIONS IS TO BE PROVIDED. THE CONTROLLER SHALL BE LOCATED IN A DRY PLACE, PROTECTED FROM THE WEATHER, AND ALL CABLE CONNECTIONS SHALL BE MADE WITH WATERPROOF CONNECTORS.

WATER SUPPLY POINTS TO BE SUPPLIED BY BUILDER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE AND GUARANTEE SATISFACTORY OPERATION OF THE IRRIGATION SYSTEM.

AFTER THE SYSTEM HAS BEEN INSTALLED TO THE SATISFACTION OF THE SUPERINTENDENT, THE INSTALLATION SHALL BE TESTED UNDER KNOWN WORKING CONDITIONS. ACCEPTANCE OF THE INSTALLED PLANT AND EQUIPMENT SHALL BE SUBJECT TO THESE BEING SATISFACTORY.

**TREATED PINE TIMBER EDGING**  
TIMBER EDGE: 100 X 25MM CCA TREATED RADIATA PINE TIMBER STAKES: 50 X 50 X 500MM CCA TREATED RADIATA PINE-SHARPENED AT ONE END. INSTALL IN LOCATIONS SHOWN ON THE DRAWINGS FLUSH TO FINISHED SURFACE LEVELS.

**TURF**  
TURF ALL LANDSCAPE AREAS AS SHOWN ON THE LANDSCAPE DRAWINGS. TURF IS TO HAVE AN EVEN THICKNESS OF NOT LESS THAN 25MM. OBTAIN TURF FROM AN APPROVED GROWER. FURNISH A WARRANTY FROM THE GROWER THAT THE TURF IS FREE FROM WEEDS AND OTHER FOREIGN MATTER. DELIVER TURF TO THE SITE WITHIN 24 HOURS OF BEING CUT, AND LAY IT WITHIN 24 HOURS OF BEING DELIVERED.

TO PREPARE GRADED AREAS TO RECEIVE TURF, EXCAVATE THE AREA AND CULTIVATE SO AS TO ALLOW FOR IMPORTING OF 100MM OF TURF UNDERLAY SOIL. REMOVE ALL STONES OVER 50MM Ø AND REMOVE ALL WEEDS AND FOREIGN MATTER. SPREAD SOIL MIX A.B.S TO A DEPTH OF 100MM AND GRADE TO APPROPRIATE LEVELS TO ACHIEVE GENERAL EVEN GRADES TO DRAINAGE OUTLETS INSTALLED BY OTHERS.

LAY THE TURF ALONG THE LAND CONTOURS WITH STAGGERED, CLOSE BUTTED JOINTS, SO THAT THE FINISHED TURF SURFACE IS FLUSH WITH ADJACENT FINISHED SURFACES OF PAVING AND THE LIKE. AS SOON AS PRACTICABLE AFTER LAYING, ROLL THE TURF WITH A ROLLER WEIGHING NOT MORE THAN 90KG PER METRE OF WIDTH FOR SANDY OR LIGHT SOILS.

WATER AS NECESSARY TO KEEP THE SOIL MOIST TO A DEPTH OF 100MM. PROTECT NEWLY TURFED AREAS AGAINST TRAFFIC UNTIL GRASS IS ESTABLISHED. FERTILISE TWO WEEKS AFTER LAYING FERTILISE A.B.S

'TOP DRESS' THE TURF WHEN IT IS ESTABLISHED TO A DEPTH OF 10MM WITH COARSE WASHED RIVER SAND. RUB THE DRESSING WELL INTO THE JOINTS AND CORRECT ANY UNEVENNESS IN THE TURF SURFACES.

LANDSCAPE MAINTENANCE PROGRAM

MAINTENANCE SHALL MEAN THE CARE AND MAINTENANCE OF THE LANDSCAPE WORKS BY ACCEPTED HORTICULTURAL PRACTICE AS RECTIFYING ANY DEFECTS THAT BECOME APPARENT IN THE LANDSCAPE WORKS UNDER NORMAL USE. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, WATERING, MOWING, FERTILISING, RESEEDING, RETURFING, WEEDING, PEST AND DISEASE CONTROL, STAKING AND TYING, REPLANTING, CULTIVATION, PRUNING, AERATING, RENOVATING, TOP DRESSING, MAINTAINING THE SITE IN A NEAT AND TIDY CONDITION AS FOLLOWS:-

**GENERAL**  
THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE LANDSCAPE WORKS FOR THE TERM OF THE MAINTENANCE (OR PLANT ESTABLISHMENT) PERIOD TO THE SATISFACTION OF THE COUNCIL. THE LANDSCAPE CONTRACTOR SHALL ATTEND TO THE SITE ON A WEEKLY BASIS. THE MAINTENANCE PERIOD SHALL COMMENCE AT PRACTICAL COMPLETION AND CONTINUE FOR A PERIOD OF TWENTY SIX (26) WEEKS.

**WATERING**  
GRASS, TREES AND GARDEN AREAS SHALL BE WATERED REGULARLY SO AS TO ENSURE CONTINUOUS HEALTHY GROWTH.

**RUBBISH REMOVAL**  
DURING THE TERM OF THE MAINTENANCE PERIOD THE LANDSCAPE CONTRACTOR SHALL REMOVE RUBBISH THAT MAY OCCUR AND REOCCUR THROUGHOUT THE MAINTENANCE PERIOD. THIS WORK SHALL BE CARRIED OUT REGULARLY SO THAT AT WEEKLY INTERVALS THE AREA MAY BE OBSERVED IN A COMPLETELY CLEAN AND TIDY CONDITION.

**REPLACEMENTS**  
THE LANDSCAPE CONTRACTOR SHALL REPLACE ALL PLANTS THAT ARE MISSING, UNHEALTHY OR DEAD AT THE LANDSCAPE CONTRACTOR'S COST. REPLACEMENTS SHALL BE OF THE SAME SIZE, QUALITY AND SPECIES AS THE PLANT THAT HAS FAILED UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. REPLACEMENTS SHALL BE MADE ON A CONTINUING BASIS NOT EXCEEDING TWO (2) WEEKS AFTER THE PLANT HAS DIED OR IS SEEN TO BE MISSING.

**STAKES AND TIES**  
THE LANDSCAPE CONTRACTOR SHALL REPLACE OR ADJUST PLANT STAKES, AND TREE GUARDS AS NECESSARY OR AS DIRECTED BY THE LANDSCAPE ARCHITECT. REMOVE STAKES AND TIES AT THE END OF THE MAINTENANCE PERIOD IF SO DIRECTED.

**PRUNING**  
TREES AND SHRUBS SHALL BE PRUNED AS DIRECTED BY THE LANDSCAPE ARCHITECT. PRUNING WILL BE DIRECTED AT THE MAINTENANCE OF THE DENSE FOLIAGE OR MISCELLANEOUS PRUNING AND BENEFICIAL TO THE CONDITION OF THE PLANTS. ANY DAMAGED GROWTH SHALL BE PRUNED. ALL PRUNED MATERIAL SHALL BE REMOVED FROM THE SITE.

**MULCHED SURFACES**  
ALL MULCHED SURFACES SHALL BE MAINTAINED IN A CLEAN AND TIDY CONDITION AND BE REINSTATED IF NECESSARY TO ENSURE THAT A DEPTH OF 75MM IS MAINTAINED. ENSURE MULCH IS KEPT CLEAR OF PLANT STEMS AT ALL TIMES.

**PEST AND DISEASED CONTROL**  
THE LANDSCAPE CONTRACTOR SHALL SPRAY AGAINST INSECT AND FUNGUS INFESTATION WITH ALL SPRAYING TO BE CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. REPORT ALL INSTANCES OF PESTS AND DISEASES (IMMEDIATELY THAT THEY ARE DETECTED) TO THE LANDSCAPE ARCHITECT.

**GRASS AND TURF AREAS**  
THE LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL GRASS AND TURF AREAS BY WATERING, WEEDING, DRESSING, ROLLING, MOWING, TRIMMING OR OTHER OPERATIONS AS NECESSARY. SEED AND TURF SPECIES SHALL BE THE SAME AS THE ORIGINAL SPECIFIED MIXTURE. GRASS AND TURF AREAS SHALL BE SPRAYED WITH APPROVED SELECTIVE HERBICIDE AGAINST BROAD LEAFED WEEDS AS REQUIRED BY THE LANDSCAPE ARCHITECT AND IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. GRASS AND TURF AREAS SHALL BE FERTILISED ONCE A YEAR IN AUTUMN WITH 'DYNAMIC LIFTER' FOR LAWNS AT A RATE OF 20KG PER 100M2. FERTILISER SHALL BE WATERED IN IMMEDIATELY AFTER APPLICATION. IRREGULARITIES IN THE GRASS AND TURF SHALL BE WATERED IN IMMEDIATELY AFTER APPLICATION. GRASS AND TURF AREAS SHALL BE KEPT MOWN TO MAINTAIN A HEALTHY AND VIGOROUS SWARD. MOWING HEIGHT: 30-50MM.

**WEED ERADICATION**  
ERADICATE WEEDS BY ENVIRONMENTALLY ACCEPTABLE METHODS USING A NON-RESIDUAL GLYPHOSATE HERBICIDE (EG. 'ROUNDUP') IN ANY OF ITS REGISTERED FORMULAE, AT THE RECOMMENDED MAXIMUM RATE. REGULARLY REMOVE BY HAND, WEED GROWTH THAT MAY OCCUR OR RECUR THROUGHOUT GRASSED, PLANTED AND MULCHED AREAS. REMOVE WEED GROWTH FROM AN AREA 750MM DIAMETER AROUND THE BASE OF TREES IN GRASSED AREAS. CONTINUE ERADICATION THROUGHOUT THE COURSE OF THE WORKS AND DURING THE MAINTENANCE PERIOD.

**SOIL SUBSIDENCE**  
ANY SOIL SUBSIDENCE OR EROSION WHICH MAY OCCUR AFTER THE SOIL FILLING AND PREPARATION OPERATIONS SHALL BE MADE GOOD BY THE LANDSCAPE CONTRACTOR AT NO COST TO THE CLIENT.