

THE STAR- MODIFICATION 13 LANDSCAPE DESIGN REPORT

PREPARED FOR THE STAR
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INTRODUCTION

This landscape design report has been prepared by Urbis for the proposed alterations and additions to The Star Casino Complex and New Ritz Carlton Hotel. The landscape design presented in this report incorporates public domain & streetscape interventions as well as a series of upper level podium and rooftop spaces.

The landscape proposal has been prepared in compliance with SEARs, Council's DCP, Landscape Guidelines and DA application checklist, as well as the draft Street Tree Master Plan.

In this report we have assessed the environmental impact of the landscape design proposal in qualitative and quantitative terms against the existing and approved conditions on the site. It is our view that the landscape design interventions across the site will have a limited environmental impact, and in most cases have a much improved outcome, relative to the existing landscape design as it was last assessed and approved.

EXISTING CONDITIONS

The existing conditions that are being modified as a part of this landscape report are primarily located on the street frontages and the upper outdoor podium levels including the currently approved Level 5 green roof. These modifications will enhance the existing conditions as previously assessed and approved.

The existing public domain finishes include an asphalt footpath around most of the site, which in areas is patchy and undulating from tree roots. Small unit granite paver's to the Pirrama Road frontage inside the lot boundary are in good condition and will be retained and extended as part of this proposal.

Existing street trees on Pirrama Road are in good health mostly but the existing palms provide little amenity to the public domain and have a minimal canopy coverage. The existing grove of Magnolias adjacent to the F&B outlet on Pirrama road is in good health and provides good amenity and a unique typology for dining on this site.

The existing pedestrian connection to the light rail stop is poor and visually obstructed by walls. There is also a taxi pick up area on the frontage of the site, which poses potential safety issues on the site. These issues are being resolved as part of this proposal.

The approved green roof on Level 5 will be modified as part of this proposal. The coverage of this area will be dispersed to multiple podium areas, and usability will be improved in this area.

The Jones Bay Road corner currently has very poor frontage and no activation on the ground floor. The addition of the proposed hotel will active the ground floor and give passive surveillance of the street, improving pedestrian safety.

The SELS Plaza is currently a frontage with poor amenity, sloped asphalt and flagpoles.



Existing Pyrmont Street footpath + water feature



Existing SELS retail frontage corner of Pyrmont Street and Jones Bay Road



Existing public domain on the corner of Pirrama Rd & Jones Bay Road



Existing Pirrama Rd arrival

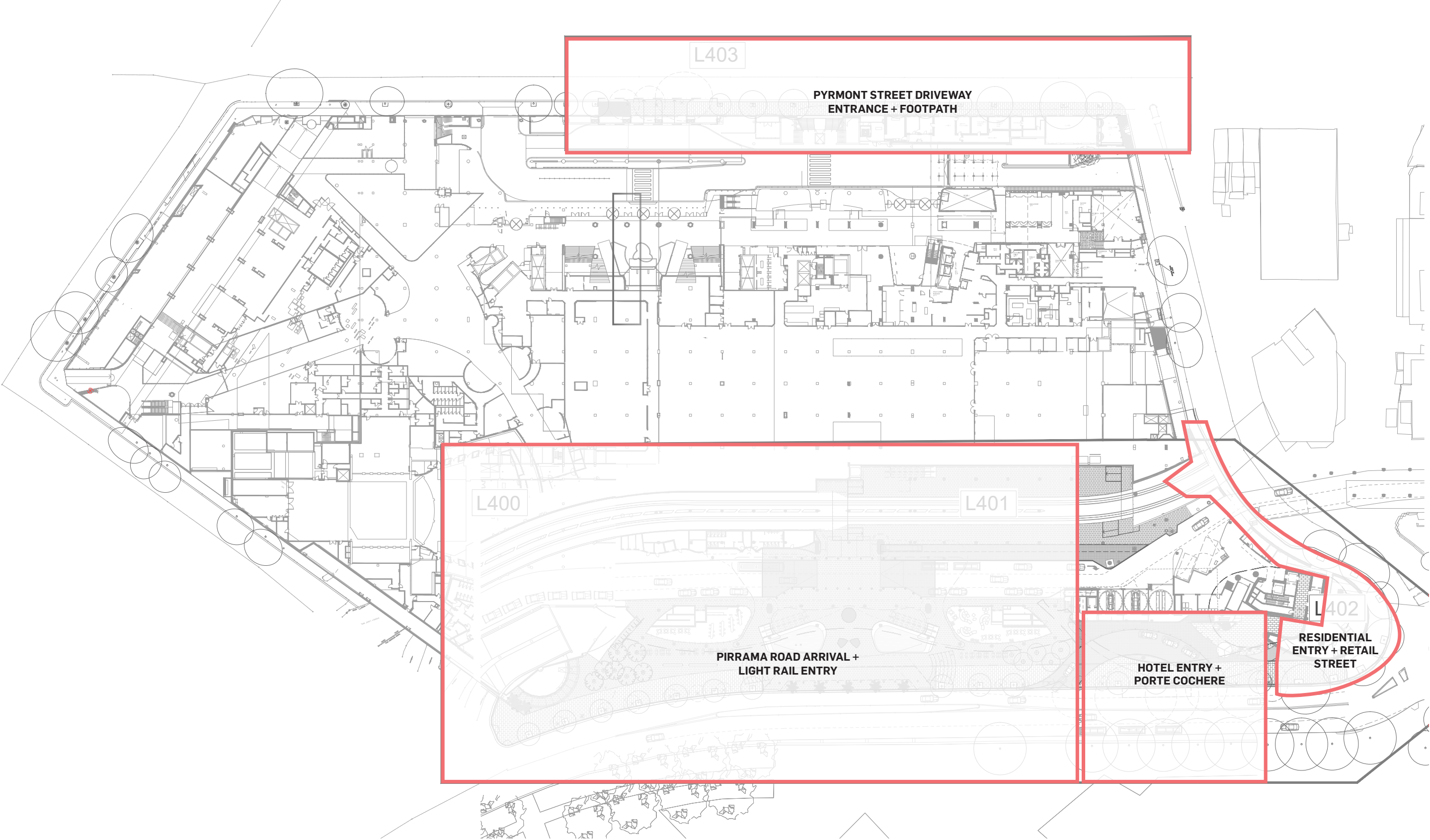


Existing Pirrama Road Arrival



Existing magnolia trees on Pirrama Road

GROUND FLOOR SITE PLAN



MOD 13 SCOPE OF WORKS

New Ritz-Carlton Hotel and Residential Tower

- Demolition of part of the existing building in the northern portion of the site, including part of the Pirrama Road façade and part of the Jones Bay Road façade.
- Construction of a new Tower, 237.0 metres AHD (approximate, 234 metres from Pirrama Road);
- Residential uses across 35 levels, comprising:
 - A residential vehicular drop off lobby on Level B2
 - A residential lobby on Level 00 to be accessed from Jones Bay Road;
 - Residential communal space on Level 07 to be accessed via Level 08; and
 - 204 residential apartments located from Levels 05 to 06 and from Levels 08 to 38, featuring one-bedroom, two-bedroom and three-bedroom unit types (Note – no Level 13)
- Hotel uses across 31 levels, comprising:
 - A hotel arrival lobby on Level B2 to be accessed from the new Ritz-Carlton porte-cochere along Pirrama Road;
 - A hotel Sky Lobby for guest check-in on Level 39 and 40, featuring a restaurant, bar and lounge;
 - 220 hotel rooms located from Level 42 to 58 and from Level 60 to 61
 - A hotel spa and gym on Level 07
 - A VIP link to the Sovereign Room on Level 04 and 04 Mezzanine
 - A Ritz-Carlton Club lounge and terrace on Level 59
 - Hotel staff end-of-trip facilities on Level B3
 - Hotel staff arrival point on Level 00
 - Hotel back-of-house and plant on Level B2, 02, 03, 05, 41 and 42
- A Neighbourhood Centre consisting of the following proposed uses including street level, library, learning / innovation hub, multipurpose function centre, practice rooms (functional use to be finalised in conjunction with a neighbourhood panel)
- A new car-parking stacker system below the new porte-cochere of the Ritz-Carlton Hotel, with a total capacity of 221 spaces, to serve the new hotel and apartments
- Vertical transport associated with the tower and podium; and
- A new drop-off / pick up area (short-term parking) on Jones Bay Road for the proposed apartments.

Level 07

- A 'Ribbon' at Level 07 connecting the new Hotel and Residential Tower to the existing building along Pirrama Road, comprising:
 - Two pools and associated pool decks (one for the new Hotel, one for The Star); and
 - Two food and beverage premises with associated store rooms and facilities;
- Lift access from the Level 05 Terrace to Level 07;
- Residential communal open space associated with the new residential apartments, comprising pool and landscaped terrace at the base of the Tower adjacent to Jones Bay Road;
- Gym and associated change rooms and facilities for the residents;
- Gym and associated change rooms and facilities for hotel guests; and
- Landscaping treatments.

Level 05 Sky Terrace

- Three food and beverage outlets with external areas;
- Completion of the Vertical Transportation drum to connect with Level 05 Sky Terrace;
- Designated event spaces on the Terrace; and
- Landscaping treatment.

Level 05 Astral Hotel Pool and Spa Recreational Facility Upgrade

- New pool deck, pool, spa, gym and amenities upgrade for Astral Hotel and Residences.

Tower to Sovereign Link by Escalator and Lift

- Link from the Tower (across Level 04 and Level 04 Mezzanine) to the Sovereign Resort and MUEF at Level 03, connected via Lift G4, Lift VIP 1 and escalators.
- Extension of the lift service to stop at Level 00, 01 and 05 in addition to Level 3, 4 and 4M.

Level 03 Sovereign Column Façade Treatment along Pirrama Road

- New glazed detail to enclose exposed Level 03 Sovereign columns along the Pirrama Road façade.

Various reconfiguration works around Vertical drum Level 00 to L5

- Revolving door at L00 main entrance landing Pirrama Road end
- Sliding door at L00 landing at stairs from Light Rail
- Reconfiguring of existing L1 and 2 void edge
- New escalators from L2 to L3 due to revised landing at Level 3
- Infill of L2 atrium void to main entrance at Pirrama Road

Façade Integration Works

- Upgrades to the Pirrama Road and Jones Bay Road façades to integrate the new Ritz Carlton Hotel and Residential Tower with the existing building.

Infrastructure Upgrades

- A new plant room located within the podium over Levels 03, 04, 05 and 06 of the proposed Hotel and Residential Tower;
- Relocation of the current Level 03 cooling towers (adjacent to the MUEF) to the Level 09 plant room above the Level 06 plantroom adjacent to the Astral Hotel;
- New capstone microturbine units and associated flues in the proposed plant room at Level 03 between the Darling Hotel and the Astral Residence Tower;
- New capstone microturbine units and associated flues in the new Level 03 plant room at the base of the Tower;
- Relocation of the existing main switch-room to the new plant room on Level 02, south of the demolition cut line;
- Relocation of the existing data recovery centre to the new plant room on Level B1 of the Darling Hotel;

- Relocation of diesel generator flues to the side of the new Level 09 plantroom, adjacent to Astral Hotel

Level B2 Transport Interchange

- Upgrades to the Event Centre Loading Dock;
- Entry into Basement car stacker for the Tower apartments and Ritz-Carlton Hotel;
- New commuter bike parking and hire bike system;
- Upgrade of finishes to light rail station surrounds (but not within Light Rail corridor) and removal of existing wall barrier to the Pirrama Road frontage;
- Upgraded taxi-rank arrangements;
- Designated Star coach parking along Service Road in front of Light Rail station; and
- Realignment of kerbs and line-marking.
- *Note – no works within the Light Rail corridor*

Transport Improvements – Other Locations

- Reconfiguration of existing median strips on Jones Bay Road and addition of new median strip on Pyrmont Street, with associated line-marking to enable a new right-hand turning lane into the Astral Hotel Porte-Cochere;
- New Pyrmont Street carpark entry and exit, associated line marking, changes to internal circulation, and reconstruction of the pedestrian footpath along Pyrmont Street; and
- Relocation of existing feeder taxi-rank from Jones Bay Road to the Level B2 transport interchange.

Site Wide Landscape and Public Domain Upgrades

- Upgrades to street frontages along Pirrama Road (for the Hotel Porte Cochere) and Jones Bay Road (for the residential entry);
- Upgrades to street frontage to Pyrmont Street, due to new car parking entry; and
- Upgrades to footpath along Pyrmont Steet

Level 00 - Restaurant Street

- Creation of a new destination Restaurant Street by:
 - Incorporating existing Balla & Black Food and Beverage premises on Level 00; and
 - Converting existing retail shops into new Food and Beverage tenancies

Pirrama Road and Jones Bay Road - Food and Beverage tenancies

- A revised food and beverage tenancy at the existing Pizzaperta outlet along Pirrama Road;
- A new food & beverage tenancy at the Marquee street entry; and
- A small café outlet adjacent to the residential lift lobby at Jones Bay Road.
- A new food & beverage tenancy accessed off existing walkway from Jones Bay Road

Food and Beverage – Other Locations

- Reconfiguration of Harvest Buffet, including new escalators from Level 00 Food Court to Level 01; and
- Refurbishment of Bistro 80 into the interim Century tenancy. (Note: The Century tenancy post construction is proposed to be at the Jones Bay end of L00 – Restaurant Street

Darling Hotel Corners

- Upgrade of the corner plaza at the Union/Edward Street property entry to accommodate:
 - A new food and Beverage premises on Level 01 and 02;
 - A new entry foyer leading to the Food Court;
 - A relocated awning enclosure at street level;
- Upgrade of the corner plaza at the Union/Pymont Street property entry to accommodate:
 - A new awning enclosure at for the existing café;
 - New revolving door at entry to Darling Hotel
 - Eight (8) luxury display cases at Darling Hotel car park entry; and
 - Two car display areas at Darling Hotel car park entry.

Site-Wide Acoustic Strategy

- A site-wide acoustic monitoring strategy applied to assess impact of potential noise generating sources in Mod13.

Site-Wide Lighting Strategy

- A site-wide lighting strategy integrating and improving the existing lighting across the precinct, with new lighting the proposed Tower, Podium and Ribbon, including:
 - Internal lighting of Hotel and Residential spaces;
 - Illuminated highlights at the Sky Lobby and Club Lounge levels;
 - Integrated lighting on the eastern and western vertical façade slots and angled roof profile;
 - Podium external illumination from awnings, and under retail and lobby colonnades;
 - Landscape lighting on Level 07 open terraces and pool decks;
 - Feature lighting accentuating the wing-like profile of the Ribbon and vertical element;
 - Internal and external lighting to Food and Beverage outlet at Union/Edward Street corner;
 - Façade LED lighting to the heritage SELS Building

Special Lighting Events

- Approval for fifty three (53) Special Lighting Event nights per year for the use of permanent installation of moving projector lights on the rooftop of the Astral Hotel

Signage Upgrades

- Consolidation of existing signage approvals and new signage, including:
 - Approved signs
 - Wayfinding signs;
 - Business identification (including for Food and Beverage outlets); and
 - Signage on the Tower and Podium.

Stormwater upgrades

- Stormwater upgrade works, including increased pit inlets and pipe capacities at the low points along Pymont Street and Edward Street.

DESIGN RESPONSE

METHODOLOGY

Public Domain + Streetscape

Pirrama Road Arrival + Light Rail Entry

The design for this primary arrival point is to give a sense of arrival to both The Star Casino and the light rail stop. The intent is to open up the visual access from the street to the light rail and proposed taxi rank by removing parts of the existing wall between the street and existing loading dock. This will improve pedestrian access and wayfinding into The Star and light rail stop.

Upgrades to the paving inside the property boundary will be extended across this frontage, as well as extend inside to the light rail stop. The existing asphalt footpath is proposed to be upgraded to a higher quality granite or concrete flagstone paver (pending City of Sydney approval). Existing palms are to be retained in the central part of the frontage, with a denser canopy tree to be provided on either side (refer plans). Existing grove of magnolias are to be retained and protected adjacent to the existing food and beverage outlet and mirrored with a new grove of magn

Pirrama Road + Jones Bay Road

The intent for the streetscape is to upgrade the asphalt footpath to a high quality granite or concrete flagstone paver (pending City of Sydney Approval). The Ritz Carlton porte cochere on Pirrama Road will be enhanced with replacement street trees and gardens on the boundary. Approximately 4 existing trees will be removed as part of the porte cochere addition. Two replacement street trees are proposed in their place.

Jones Bay road upgrades include retained street trees, and upgraded paving finishes to up to extent of existing loading dock entrance.

Pymont Street Driveway Entry + Streetscape

The proposal for this entry is to match existing driveway crossover materials around the site, which are granite flagstone paver's. Two trees will be removed as part of this addition. Replace asphalt footpath from the driveway to Jones Bay Road with high quality granite pavers. Existing trees to be retained.

Podium Landscapes

Level 4 Neighbourhood Terrace

The design intent for this space is to provide outdoor amenity to the adjacent internal community hub. The terrace will act as a 'winter garden' with canopy above to protect views from apartments above and soften any noise implications. A curvaceous planter to the perimeter of the terrace will soften the space while maintaining views over Jones Bay Road.

Level 3 VIP Link

Outdoor planter adjacent to VIP link from hotel to Sovereign gaming rooms.

Level 5 Private Balcony

We are providing additional private open space for two apartments above the Neighbourhood Terrace. A balcony planter will provide privacy for residents and to those on the terrace below.

Level 5 Sky Terrace

The design intent for this space is to provide a variety of informal lounge areas and dining spaces, broken up by planting and defined by feature trees and different ground finishes.

The proposed restaurant spaces are to be framed with planters and movable pots for large events.

Level 6 Sedum Roof

Green sedum and succulent roof planting will cover much of the light weigh roof structures over new additions to level 5 Sky Terrace and day spa facilities.

Level 7 Ribbon

A simple yet sophisticated design will compliment the expansive views of the harbour, frame the 2 pools and spa areas and provide high quality finishes to the surrounding pool

Level 7 Residential Pool + Gardens

A communal oasis for residents of the new tower. The north facing pool on at the edge of the podium will be framed by a tropical palette of plants to provide softness and privacy. A central lawn can be used for active and passive activity or an extension of the BBQ area and communal dining rooms.

Level 8 Sedum Roof

A green sedum & flowering grass roof will go on top of the residential break out rooms + kitchens, which will soften the visual impacts from above and create an additional ecosystem.

Green Spine

Vertical planting on wire trellis cable systems will create a green facade on the western edge of the Ritz Carlton Hotel tower. Occurring every 3rd floor from level 21 to the Club Lounge.

Club Lounge

The club lounge of the Ritz Carlton will accommodate member guests of the hotel and provide an informal communal space with bar, library and restaurant amenity.

The outdoor area will act as an extension of the interior lounge bar and feature an outdoor bar with tables and chairs; an artificial lawn with lounge chairs, integrated seating benches are incorporated into the planter walls. The area will be framed with low shrub planting with accent trees to frame views over the harbour. A 2 metre high glass balustrade wraps around the perimeter of the terrace.

PLANT ESTABLISHMENT + MAINTENANCE

Landscape Maintenance Strategy

General

- *Planting maintenance period:* the planting maintenance period will be 52 weeks and will commence from the date of practical completion. Of each phase of planting works (hereby specified to be a separable part of the works). It is anticipated that planting works will be undertaken in one phase
- *Planting maintenance program:* 2 weeks prior to practical completion, furnish a proposed planting establishment program, and amend it as required. Such proposal should contain details of the types and frequency of maintenance activities involved with the establishment of plants and grassed areas. Comply with the approved program.
- *Planting maintenance log book:* keep a log book recording when and what maintenance work has been done and what materials, including approved toxic materials, have been used. Log book must be signed off by the client's representative after each maintenance visit. Maintain log book in location nominated by superintendent. All entries are to be initialled by person nominated by superintendent. Log book to contain a copy of the approved planting establishment program.
- *Product warranty:* submit the supplier's written statement certifying that plants are true to the required species and type, and are free from diseases, pests and weeds.
- *Insurance:* the contractor is to ensure suitable insurance cover and / or bank guarantee is in place for the theft and / or damage of all works executed under this contract for the plant maintenance period.

Planting Maintenance

Protection of works: provide any fencing or barriers necessary to protect the planting from damage throughout the planting establishment period.

Recurrent works: throughout the planting maintenance period, continue to carry out recurrent works of a maintenance nature all to the extent required to ensure that the plants are in the best possible condition at the end of the planting maintenance period. These activities are including but not limited to:

- Weeding,
- Rubbish removal,
- Fertilizing,
- Pest and disease control,
- Adjust / replace stakes and ties

- Topping up mulch,
- Cultivating,
- Pruning,
- Keeping the site neat and tidy

Replacements: the contractor is responsible for the replacement of failed, damaged or stolen trees, shrubs and groundcovers throughout the planting establishment period.

Weeding

Generally: regularly remove, by hand, rubbish and weed growth that may occur or recur throughout turfed, planted and mulched areas. Continue eradication throughout the course of the works and during the planting establishment periods.

Weed eradication: the contractor must make allowance for a higher level of maintenance during establishment to ensure that weeds are controlled.

Herbicide use: re-application of herbicide such as Ronstar or equivalent if required.

Compliance

- *Requirement:* plant maintenance shall be deemed complete subject to the following compliance with the criteria:
- Repairs to planting media completed
- Ground surfaces are covered with the specified treatment to the specified depths
- Pests, disease, or nutrient deficiencies or toxicities are not evident.
- Organic and rock mulched surfaces have been maintained in a weed free and tidy condition and to the specified depth
- Vegetation is established and well formed
- Plants have healthy root systems that have penetrated into the surrounding, undisturbed ground and not able to be lifted out of its planting hole
- Vegetation is not restricting essential sight lines and signage
- Collection and removal of litter
- All non-conformance reports and defects notifications have been closed out.
- Plant maintenance compliance schedule:*as defined by the superintendent

Pruning

- *Generally:* tree plantings shall be left to grow in a form consistent with the growth habit of the species.
- *Pruning:* cut back tree canopies and groundcovers to road verges, and light poles and signs as required achieving clear sight lines when viewed along roadway.
- *Requirement:* pruning to be undertaken by a qualified tree surgeon / arborist

Fertilising

- Generally: the fertiliser regimes have been devised to provide sufficient long-term fertility for the vegetation type and it is anticipated that all except the very high status horticultural beds such as feature plantings (entry and courtyard planting) for colour and foliage will not need regular fertiliser regimes.
- Testing: additional nitrogen may be required due to draw down effects from composts and mulches and localised waterlogging. To compensate for this, soil testing is to be carried out after 12 months to ascertain nutrient requirements.

Completion

- Cleaning: remove temporary protective fences and tree stakes at the end of the planting maintenance period.

Drainage & Watering Strategy

Generally:

- If the watering regime is intended to be amended the contractor must seek written approval from the superintendent immediately prior to the deferment of watering.
- *Watering permits:* the contractor is responsible for obtaining the necessary watering permits required to carry out the watering as specified.
- Water sensitive urban design (wsud) principals have been realised into the landscape design in a way that celebrates a sustainable water cycle.
- All irrigation systems will comprise of subsurface drip systems and automatic timers with rainwater / soil moisture sensor controls;
- Where possible storm water runoff will be directed to the lawn and garden beds;
- Irrigation will be provided to all soft landscape areas and will be specified within the tender package;
- Low water demand shrub planting is proposed.

LIGHTING

- All external areas will be designed to meet relevant Australian Lighting Standards.



COUNCIL CONSULTATION

During the design process of the landscape design, City of Sydney council was consulted on multiple occasions which guided the public domain design outcomes in this report. These outcomes were:

- Upgraded footpath finishes to Pirrama Road and Jones Bay road would create a better pedestrian experience, and a visually improved outcome.
- Existing street trees on Pirrama road (*Livistona australis* & *Ficus* sp.) don't match councils Street Tree Master Plan (STMP) and can be replaced with species that match the STMP to provide equal/improved public amenity with the new species (*Angophora costata*).
- Council are comfortable that proposed upgraded public domain finishes don't match the current CoS council guidelines and that this precinct will undergo future planning with revised public domain guidelines which would have upgraded finishes as similar to Urbis' design.
- Council agree with the improved vehicular and pedestrian circulation on Pirrama road which creates a safer and more functional entrance to the light rail station.
- The landscape design team also liaised with City of Sydney on the plant species for the Green Roof for Mod 14, these species have been proposed on the Mod 13 green roofs to create habitat and biodiversity.

TREE RETENTION STRATEGY



-  Trees to be retained
-  Trees to be removed

Tree Retention strategy

Tree retention strategy is aligned with arborist report by Earthscape. Refer to Earthscape's report for detailed plans and assessments of trees.

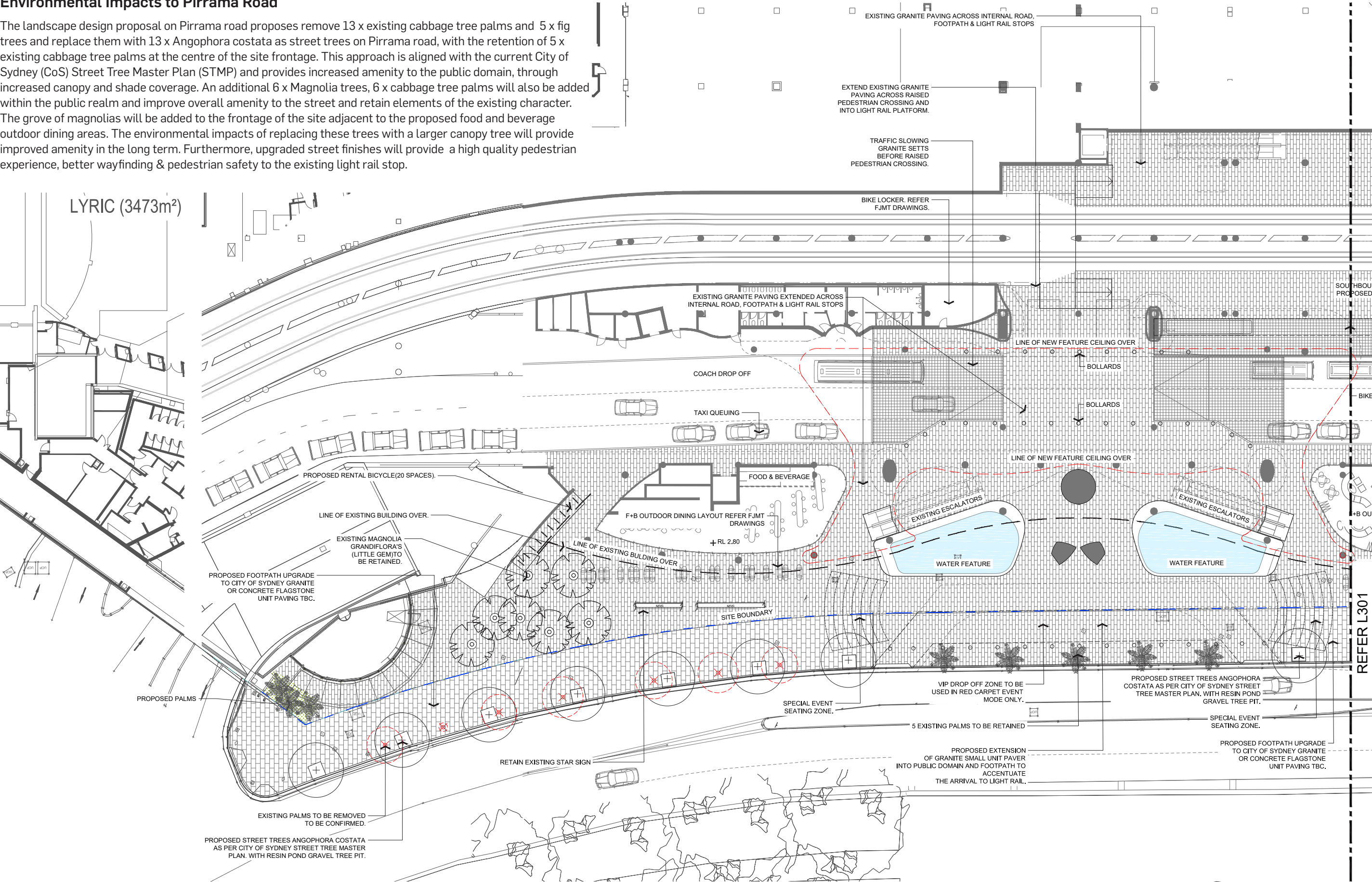
This strategy is based on the proposed development. New street trees are proposed to replace the trees being removed on Pirrama Road. The proposed street trees are aligned with the CoS Street Tree Master Plan and have been discussed with the council's public domain team.


NOT TO SCALE

LEVEL B2 - PIRRAMA ROAD ARRIVAL + LIGHT RAIL ENTRY

Environmental Impacts to Pirrama Road

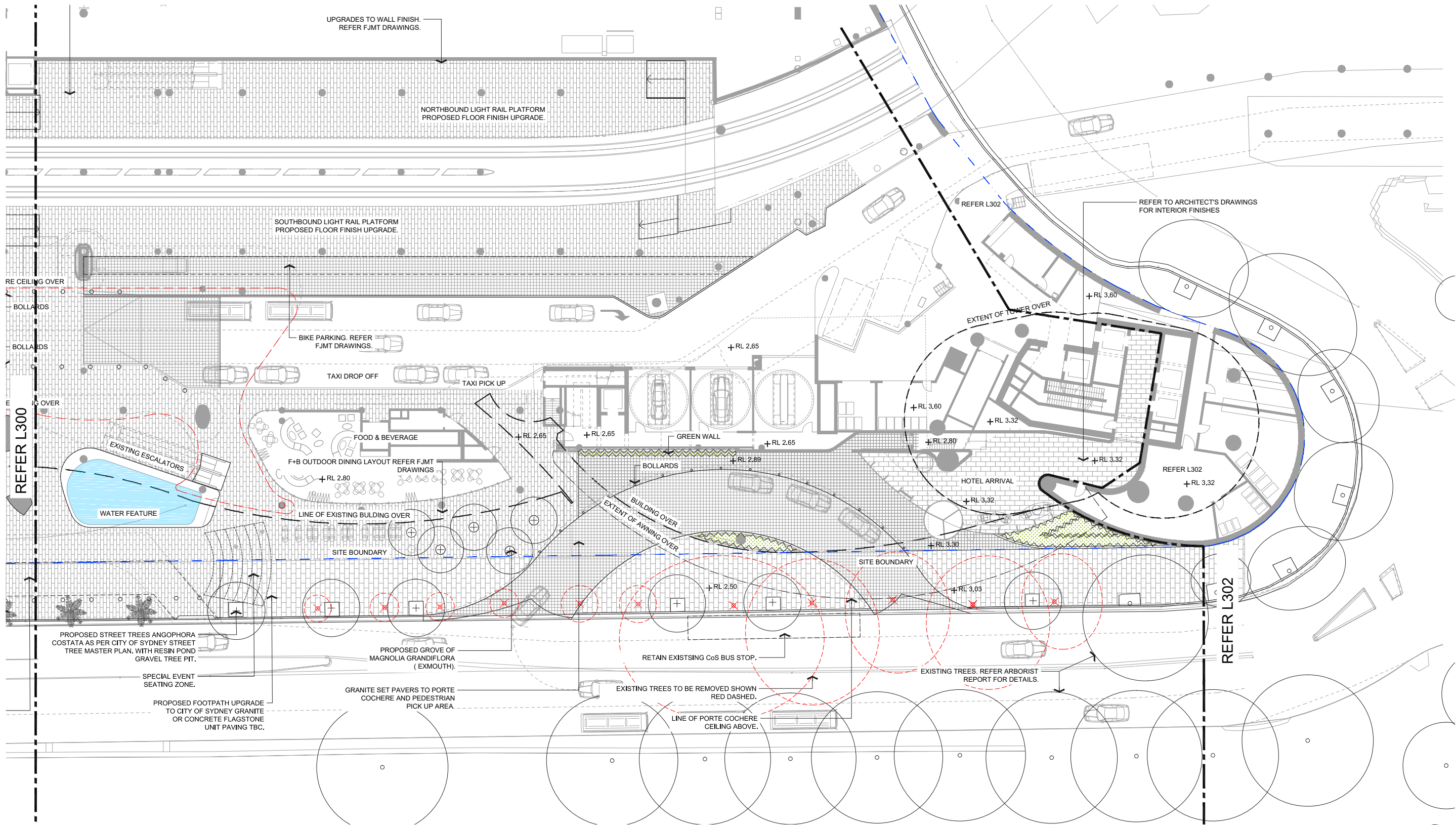
The landscape design proposal on Pirrama road proposes remove 13 x existing cabbage tree palms and 5 x fig trees and replace them with 13 x Angophora costata as street trees on Pirrama road, with the retention of 5 x existing cabbage tree palms at the centre of the site frontage. This approach is aligned with the current City of Sydney (CoS) Street Tree Master Plan (STMP) and provides increased amenity to the public domain, through increased canopy and shade coverage. An additional 6 x Magnolia trees, 6 x cabbage tree palms will also be added within the public realm and improve overall amenity to the street and retain elements of the existing character. The grove of magnolias will be added to the frontage of the site adjacent to the proposed food and beverage outdoor dining areas. The environmental impacts of replacing these trees with a larger canopy tree will provide improved amenity in the long term. Furthermore, upgraded street finishes will provide a high quality pedestrian experience, better wayfinding & pedestrian safety to the existing light rail stop.



LEVEL B2 - PIRRAMA ROAD ARRIVAL + PORTE COCHERE

Environmental Impacts to Pirrama Road + Porte Cochere

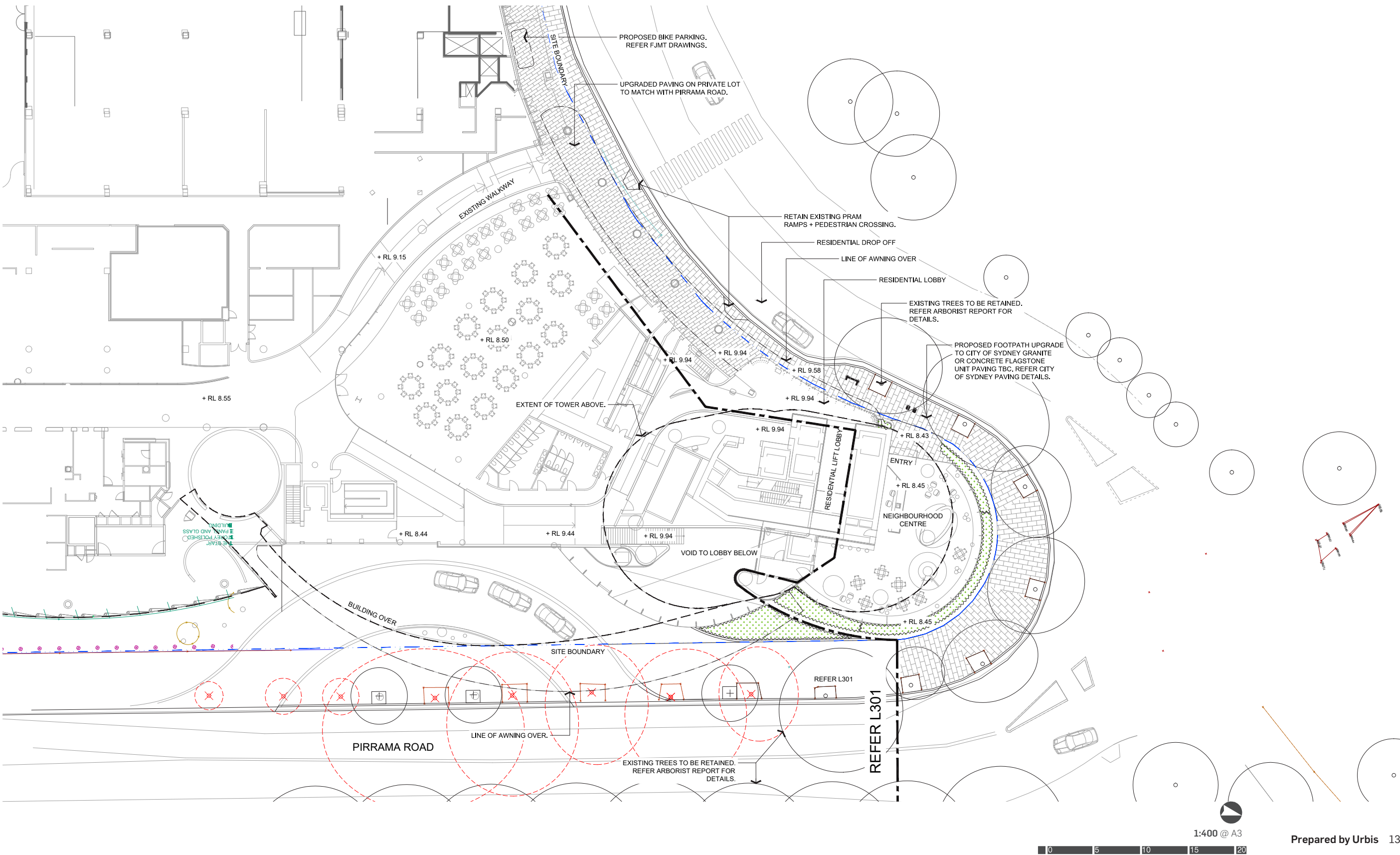
With the relocation of the existing taxi zone to the proposed new service road pedestrian safety and wayfinding is being improved with the proposed design. In addition to this, pedestrian connections across the proposed porte cochere will be clearly defined through material changes in the roadway. Safety bollards will protect pedestrians from vehicles dropping off and picking up guests from the proposed hotel. A new green wall + 2 raised planters adjacent to the porte cochere will provide greenery to the street frontage. 5 x existing figs will be removed to incorporate the new entrance and replaced with 3 new Angophora costata street trees and 3 new palms in raised planters within the lot boundary. The loss of these existing trees will impact the current street amenity from a shade + canopy perspective. However the replacement species will be of equivalent amenity in the long term and are also part of the long term street tree strategy of the City of Sydney.



L00 - PIRRAMA ROAD + JONES BAY ROAD LANDSCAPE PLAN

Environmental Impacts to Jones Bay Road

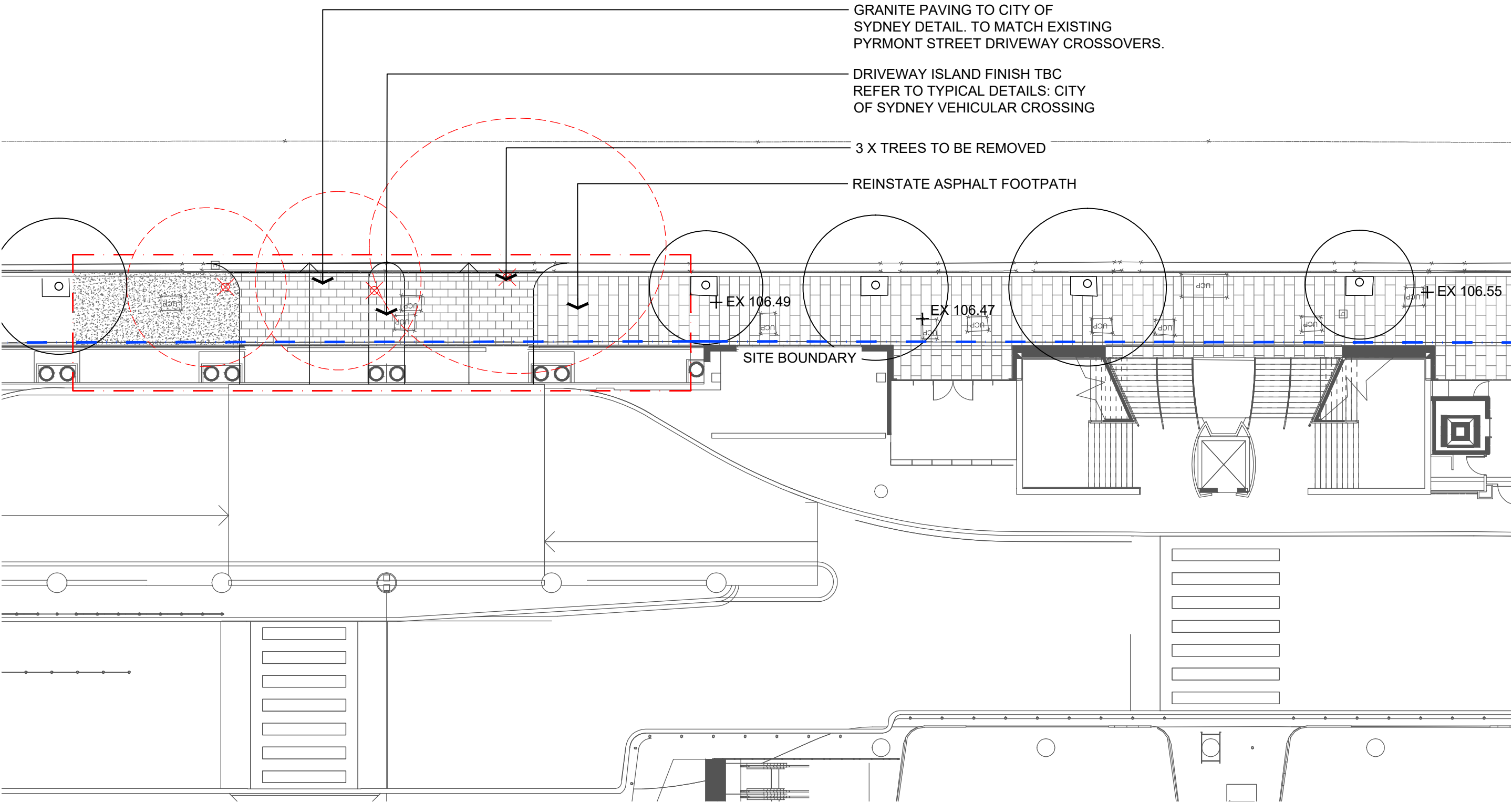
Proposed upgrades to the corner of Jones Bay Road and Pirrama road include upgraded streetscape surface finishes to the public domain and within the private lot to both existing and proposed entrances. Also 7 x existing fig trees will be retained and protected. There will also be 2 new raised planters within the private lot fronting the street, which will give an improved street frontage. These proposed landscape works will have a limited environmental impact on the street.

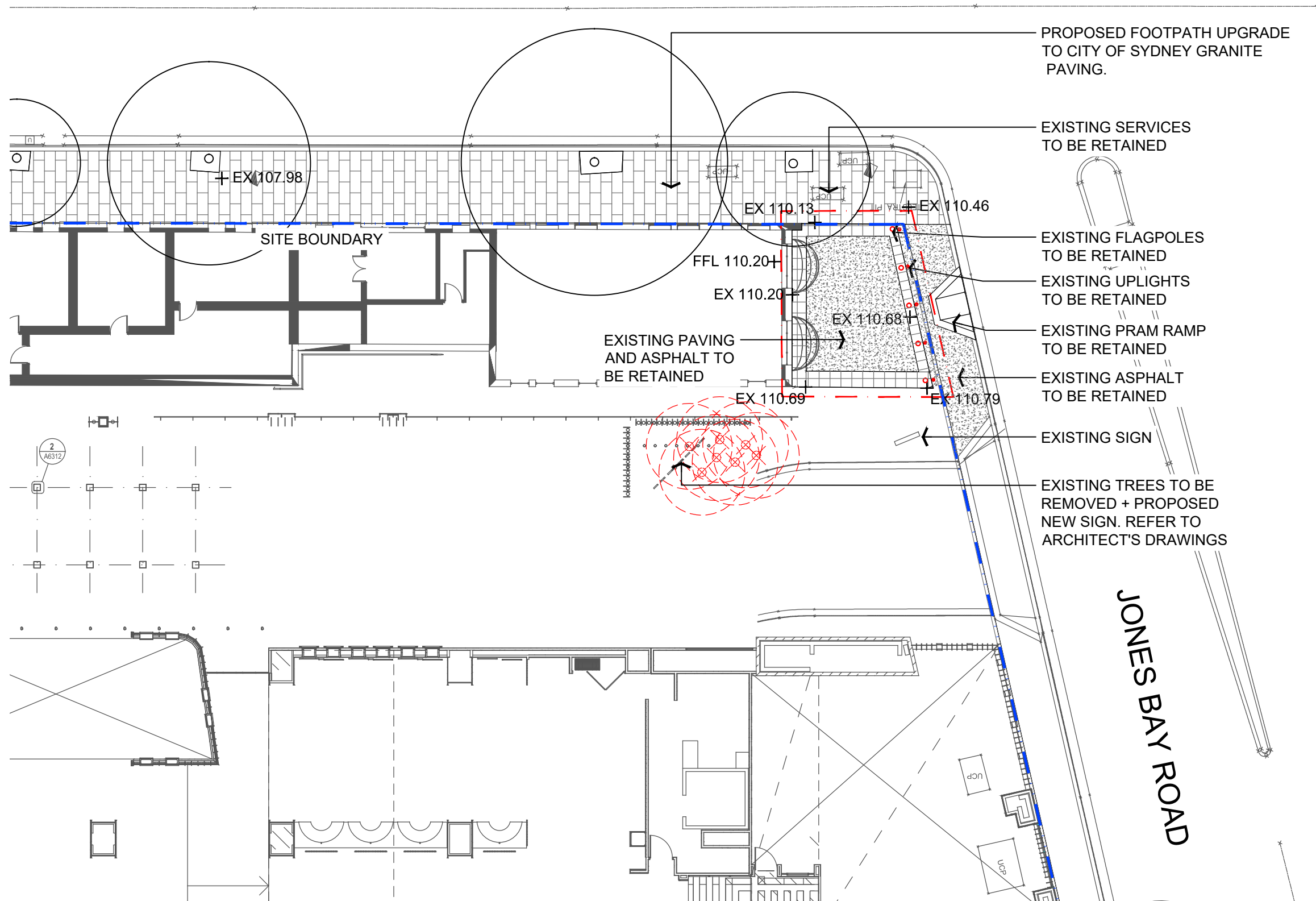


PYRMONT STREET DRIVEWAY ENTRY + FOOTPATH

Environmental Impacts to Pyrmont Street

Proposed works Pyrmont Street include make good works to any existing pavement finishes during construction. A new driveway crossover into proposed underground carpark. The finish to the driveway will comply with the City of Sydney Streets Code for materials and design. The proposed finish is to match other crossovers on the site which are large unit granite flagstone paver's. 3 x existing trees will be removed as part of these works (refer arborist report for details). The loss of amenity of these street trees is to be mitigated with replacement street and public realm trees and planting in other areas around the site. Upgrading footpath from the driveway to Jones Bay Road from asphalt to granite pavers as per City of Sydney standard detail.





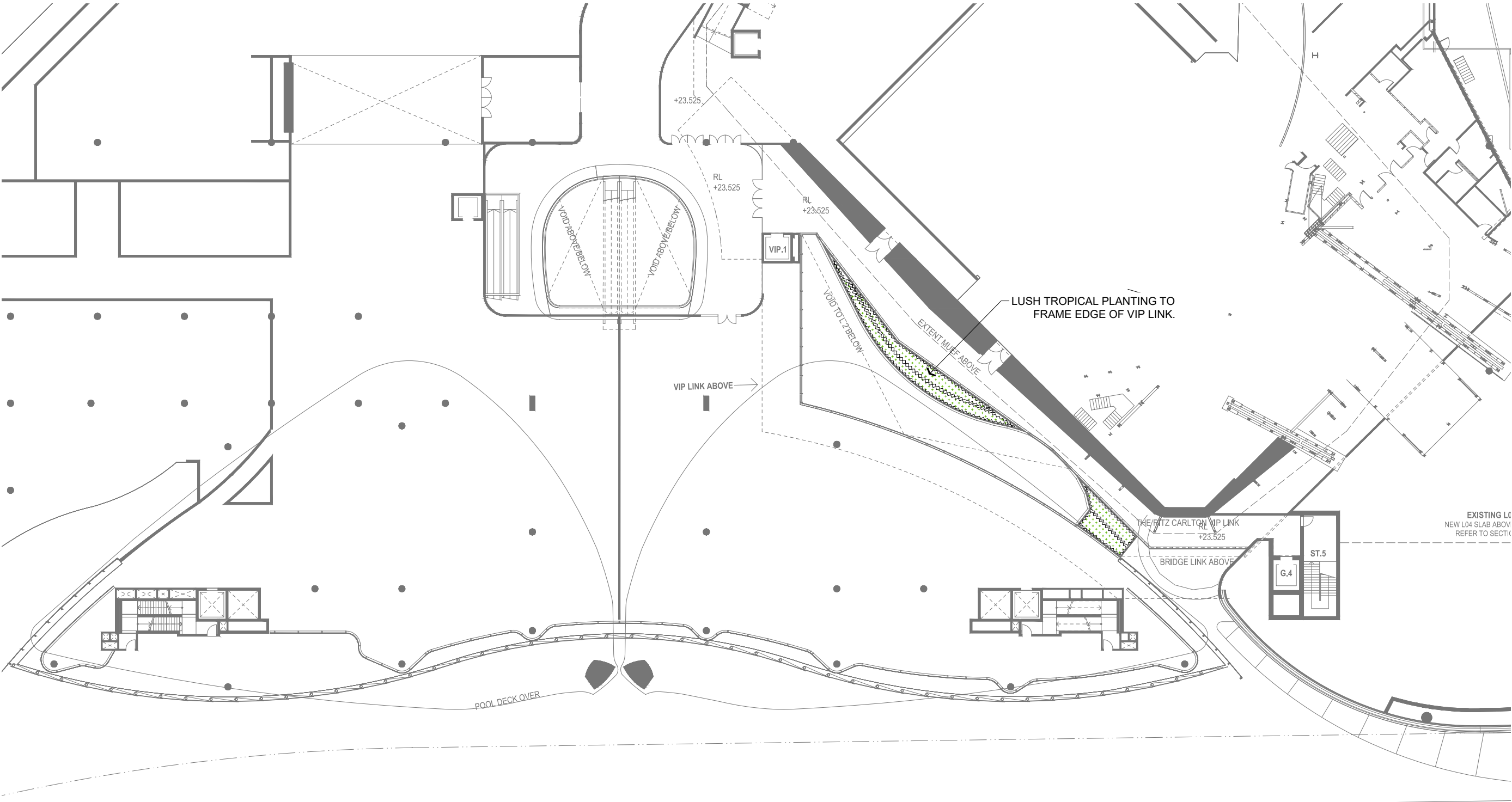
STREETSCAPE PRECEDENT IMAGES



LEVEL 3 - VIP LINK

Environmental Impacts to Pymont Street

Proposed works include external planters adjacent to the VIP link from the proposed hotel to the sovereign gaming rooms. The planters will have a mix of shrub planting to create visual interest along this walkway and improving overall greenery to this part of the development.



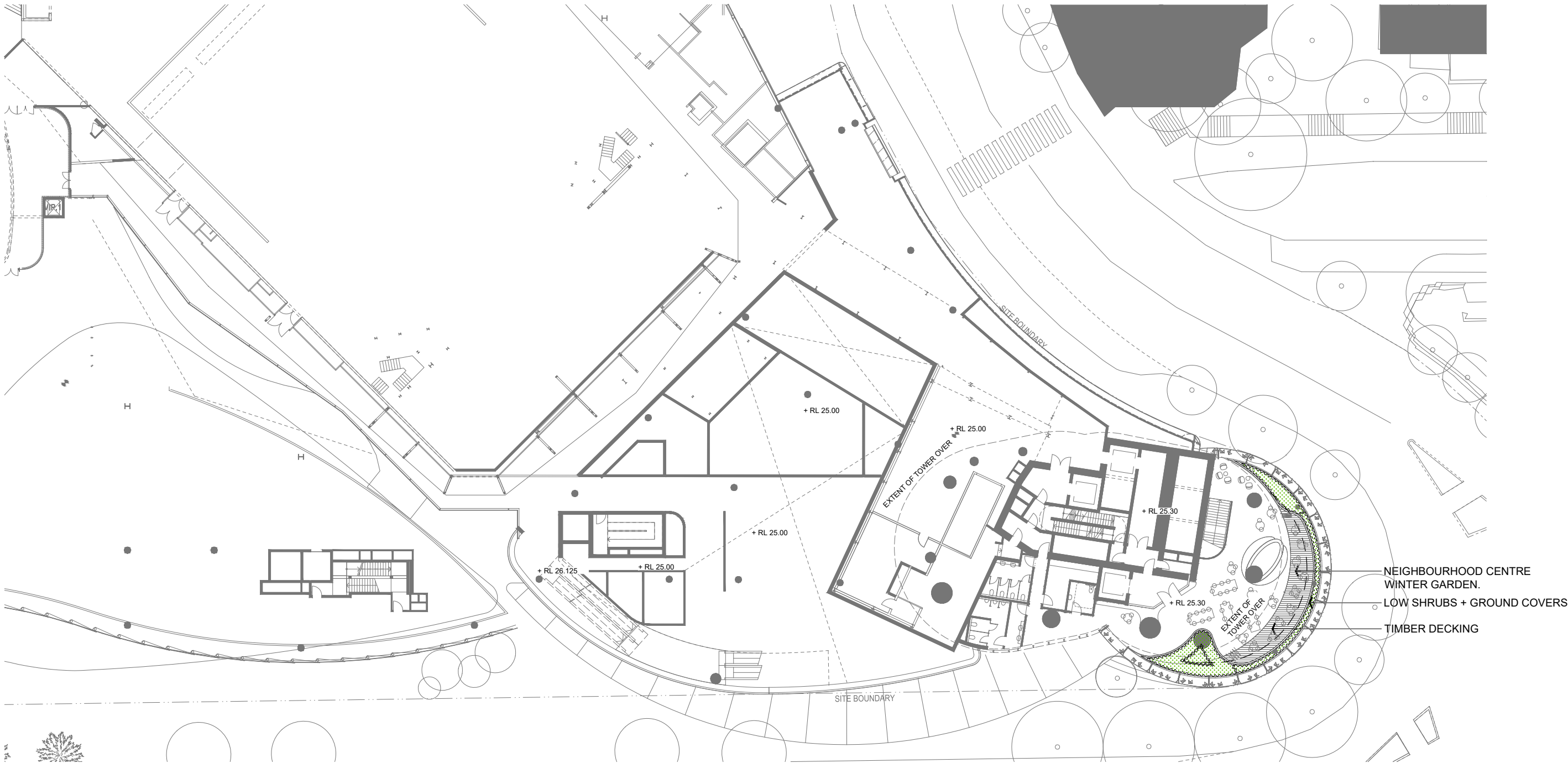
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LEVEL 4 - NEIGHBOURHOOD TERRACE

Environmental Impacts to Neighbourhood Terrace

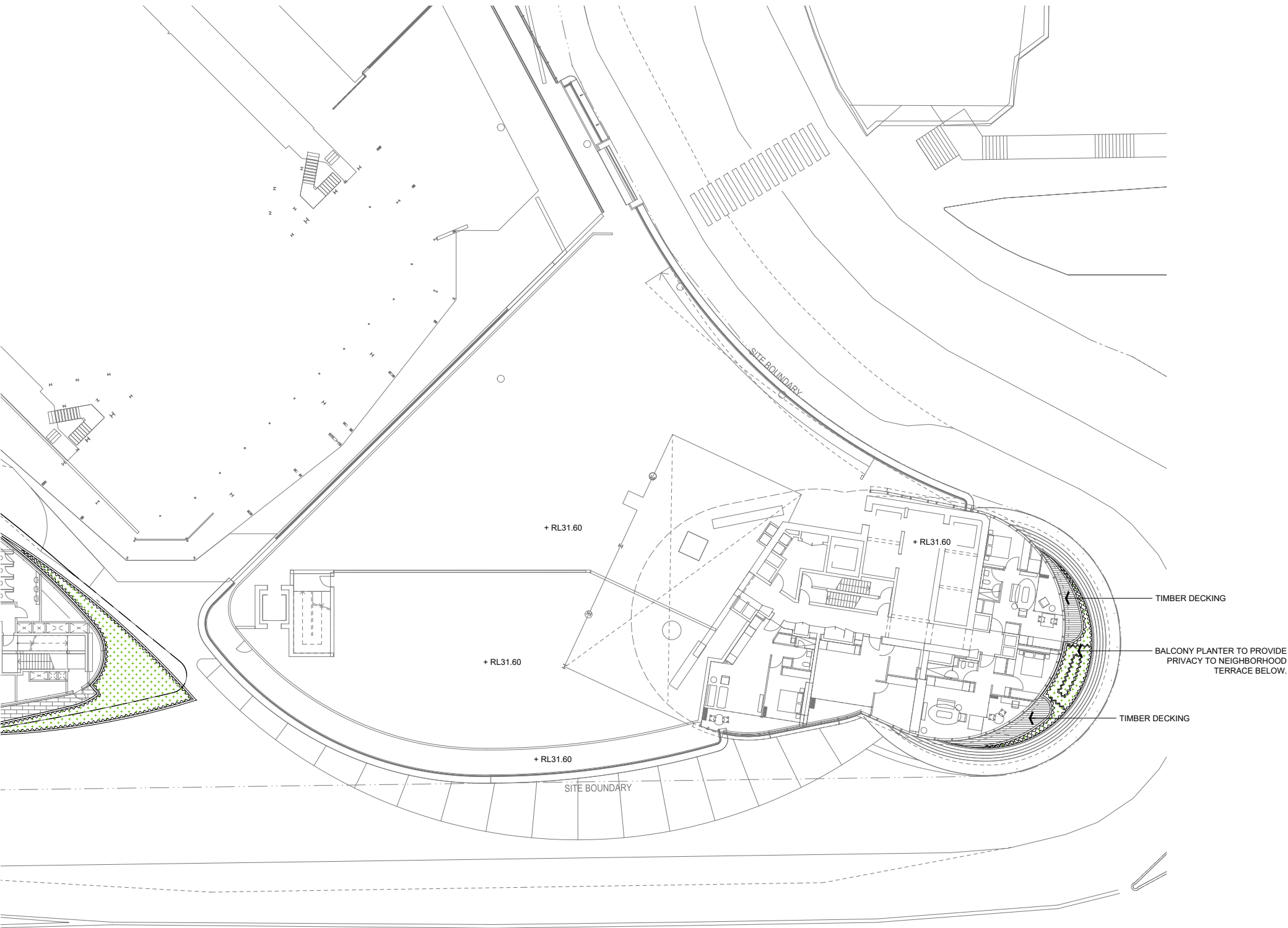
The neighbourhood terrace acts as a winter garden for the neighbourhood facilities adjacent. A balcony planter will wrap around the curved facade, softening views from the street and creating a green outdoor space for the users. The environmental impact of this treatment is minimal.



LEVEL 5 - PRIVATE BALCONY

Environmental Impacts to Pyrmont Street

Proposed works Pyrmont Street include make good works to any existing pavement finishes during construction. A new driveway crossover into proposed underground carpark. The finish to the driveway will comply with the City of Sydney Streets Code for materials and design. The proposed finish is to match other crossovers on the site which are large unit granite flagstone paver's. 3 x existing trees will be removed as part of these works (refer arborist report for details). The loss of amenity of these street trees is to be mitigated with replacement street and public realm trees and planting in other areas around the site.



1:400 @ A3

Environmental Impacts to level 5 Sky Terrace

TERRACE

RETRACTABLE SHADE ARBOUR OVER
OUTDOOR DAY SPA AREA. REFER FJMT
DRAWINGS.

TIMBER BATTEN SCREENING + BAMBOO
PLANTING GIVING PRIVACY TO DAY SPA
FACILITY.

TREE MOUNDS WITH SCREENING TREES
(CUPANIOPSIS ANACARDIODES)

SCREEN PLANTING TO GIVE
PRIVACY TO ADJACENT APARTMENTS.

LINE OF ROOF OVER

VOID TO LEVEL 3

+ RL 29.80

LINE OF ROOF OVER

TIMBER BATTEN SCREENING GIVING PRIVACY
TO POOL.

LINE OF ROOF OVER

SKYLIGHT TO LEVEL 3

SEATING PODS FRAMED BY SMALL
TREES + SHRUBS.

WARM GREY GRANITE
PAVING (LARGE FORMAT)

LEVEL 4 MUEF ACCESS

+ RL 29.80

F&B

BOH

BOH

LINE OF ROOF OVER

EVENT
TERRACE

BRIDGE OVER

LIFT 54

LINE OF ROOF OVER

ENCLOSED SKYLIGHT
TO LEVEL 3 BELOW

BOSQUE OF TREES (OLIVES
WITH ROSEMARY AND
DICHONDRA 'SILVER FALLS'

+ RL 29.80

WARM GREY GRANITE
PAVING (LARGE FORMAT)

RAISED PLANTER WITH
MAGNOLIA TREES

+ RL 29.80

FEATURE TREES, OLEA
EUROPEA

RESTAURANT

RESTAURANT

BALUSTRADE

LOW PLANTER WITH LOW
SHRUBS + GROUND COVERS

SED PLANTER WITH CASCADING
GROUND COVERS + SUCCULENTS

POOL DECK OVER

POOL DECK OVER

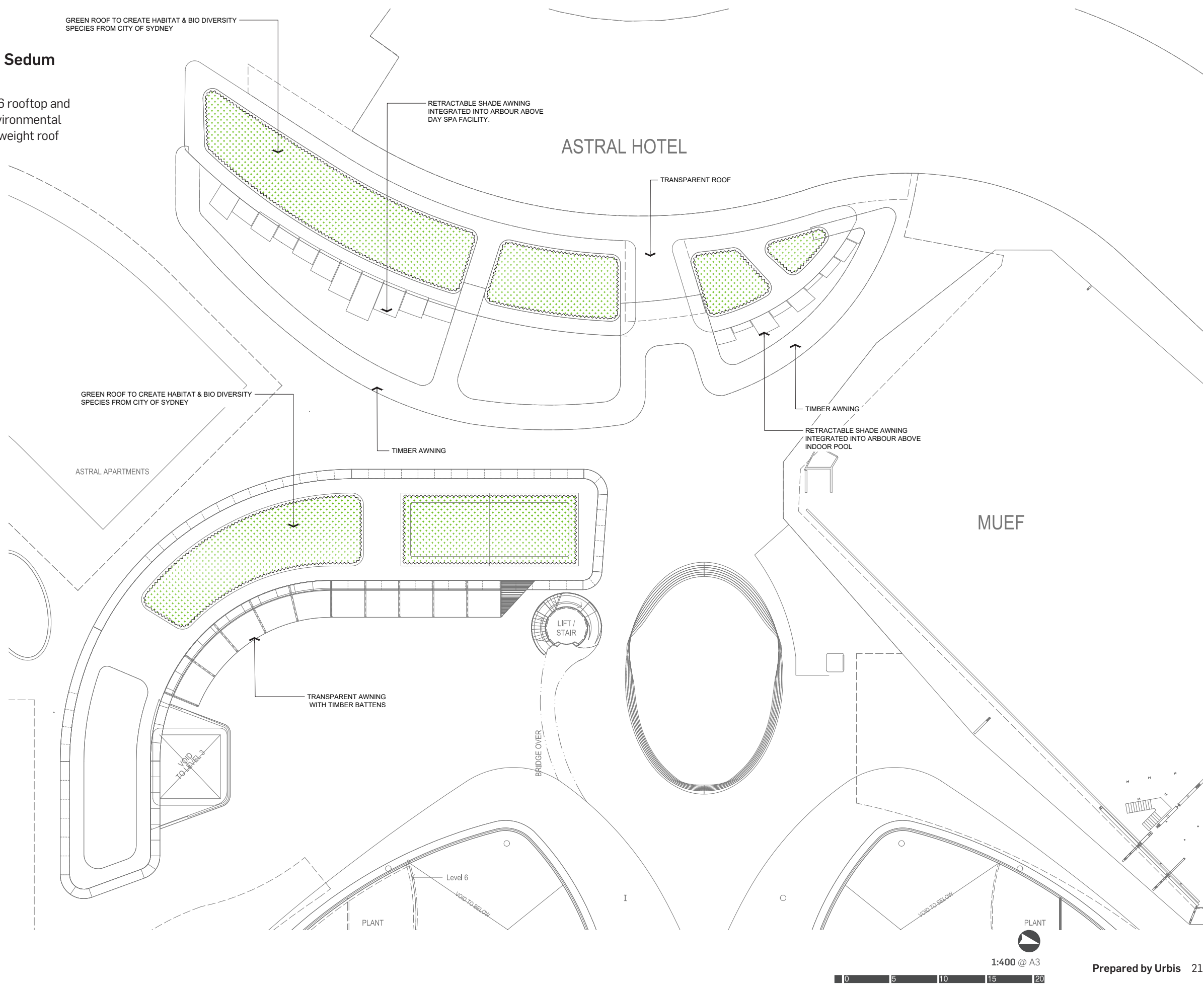
POOL DECK OVER

POOL DECK OVER

LEVEL 6 - NATIVE GREEN ROOF

Environmental Impacts to Level 6 Sedum Roof

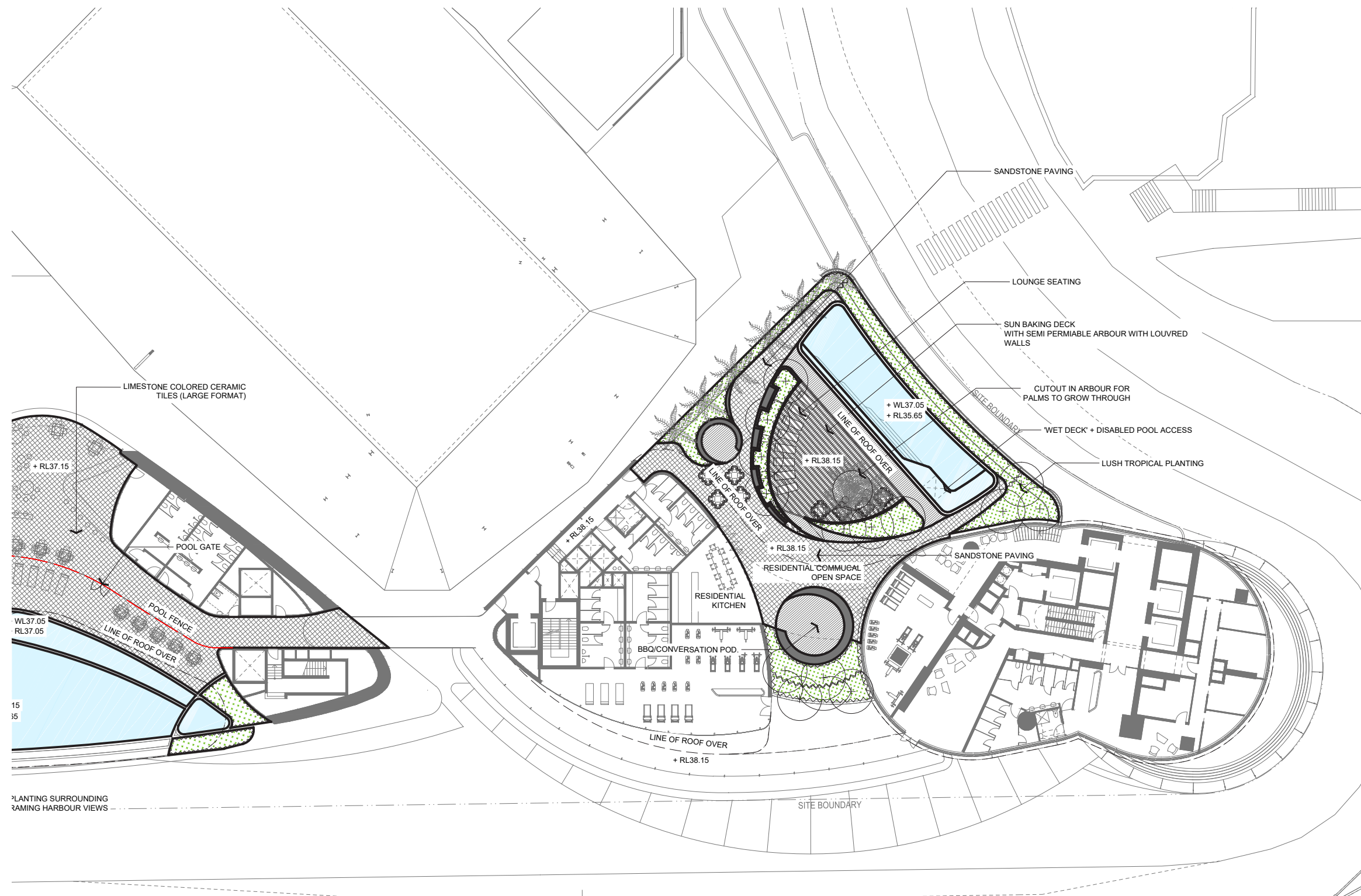
Currently there is no existing approved level 6 rooftop and this landscape works will be an improved environmental outcome by providing a softening to the lightweight roof structure.



LEVEL 7 - RESIDENTIAL POOL + GARDENS

Environmental Impacts to Level 7 Residential Pool + Gardens

Currently there is no existing or approved landscape in this space. The residential pool and gardens provides a functional use of space with pool, sun baking deck BBQ pods and a shared kitchen space for residents of the proposed tower. The space framed by lush planting areas including 9 x palms 13 x small canopy trees. The landscape environmental impact of this space will be minimal in comparison to the existing space.



LEVEL 8 - NATIVE GREEN ROOF

Environmental Impacts to Level 8 Sedum Roof

Currently there is no approved level 8 rooftop. The sedum roof species will soften the space visually from above as well as the general benefits of a green roof. These landscape works will be an improved environmental outcome.



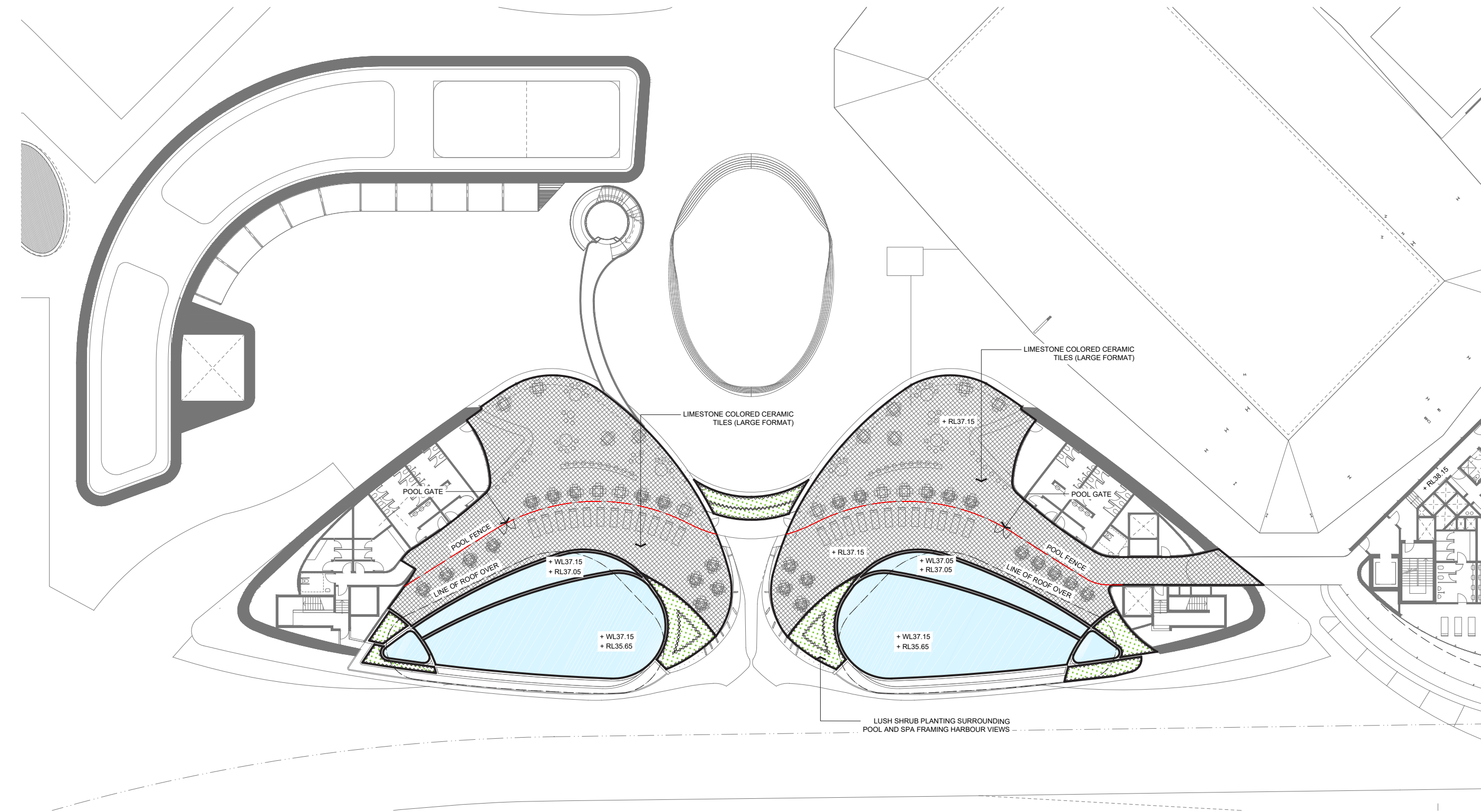
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LEVEL 7 - RIBBON

Environmental Impacts to level 7 Ribbon

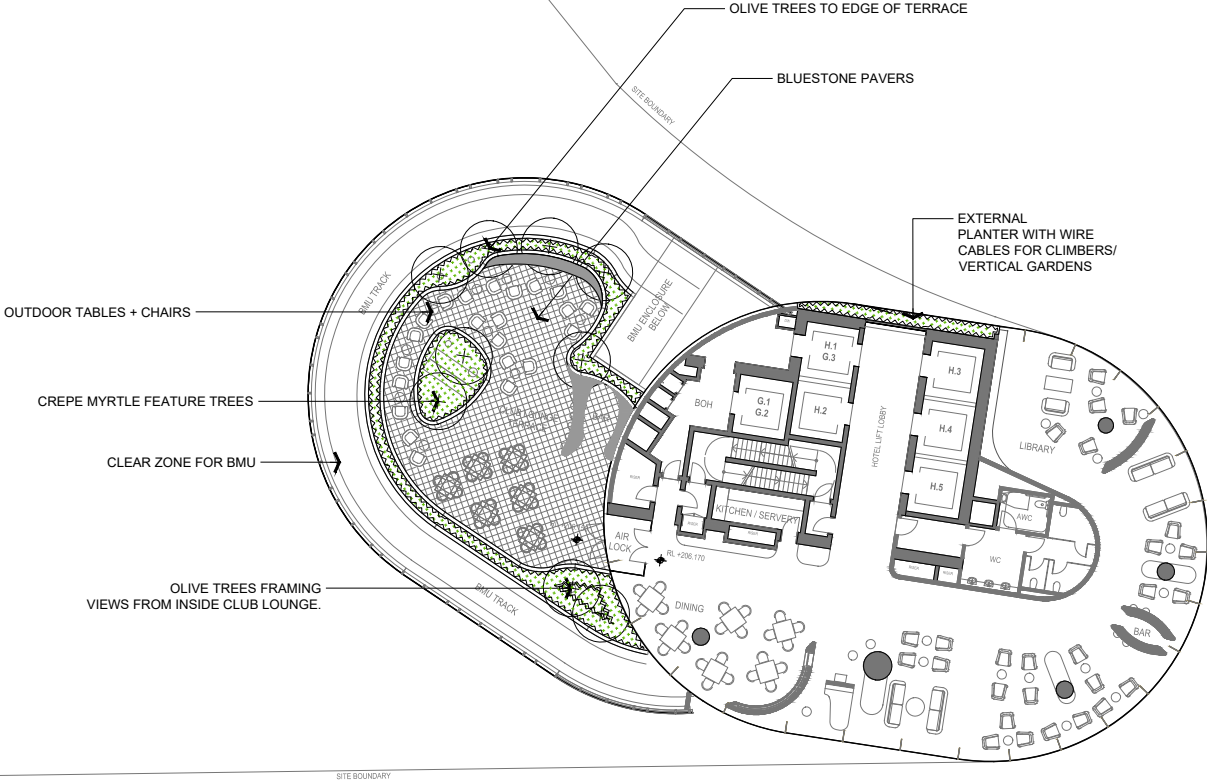
As this is a new addition to the site the landscape impacts are minimal. The 2 new pools surrounded by beds of lush planting allow for a diverse use of space which frames views of Darling Harbour.



ROOF TOP - CLUB LOUNGE

Environmental Impacts to Club Lounge

Currently there is no approved rooftop space, the rooftop will have minimal impacts environmentally. It provides users with a passive space to dine and take in elevated views over Darling Harbour. 9 x small trees in raised planter beds will soften the space visually and provide shade to the outdoor areas.



1:400 @ A3

0 5 10 15 20

GREEN SPINE - TYPICAL FLOOR PLAN

Environmental Impacts to Green Spine

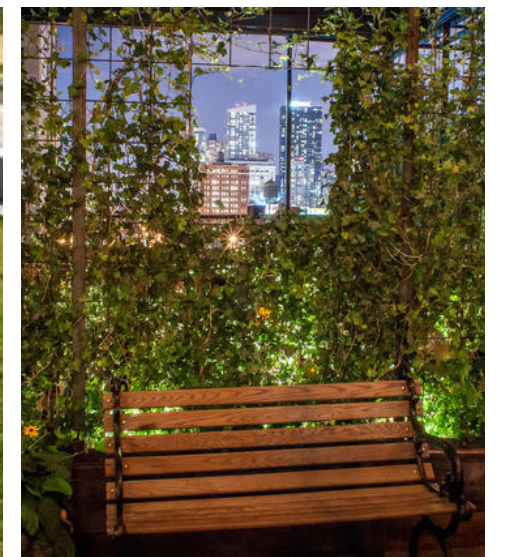
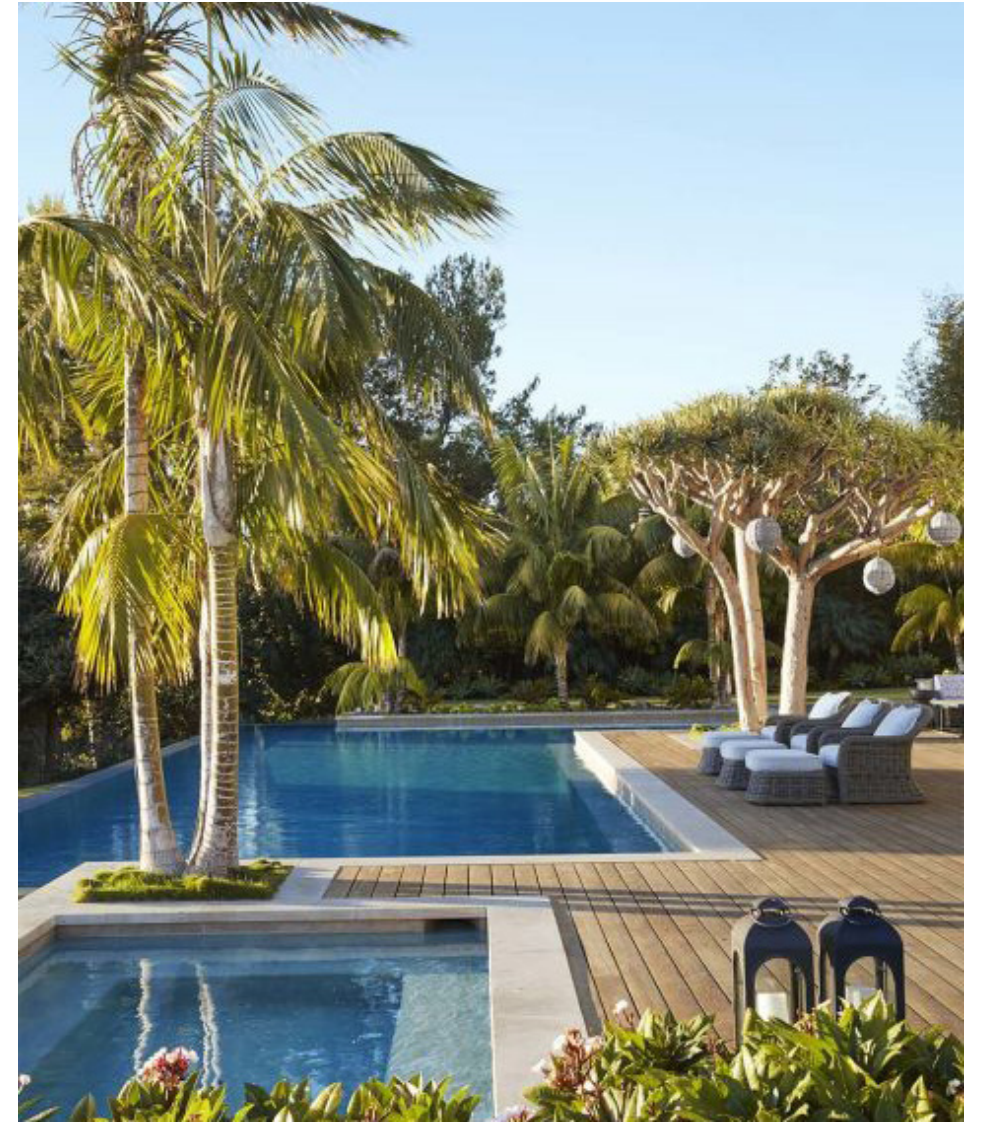
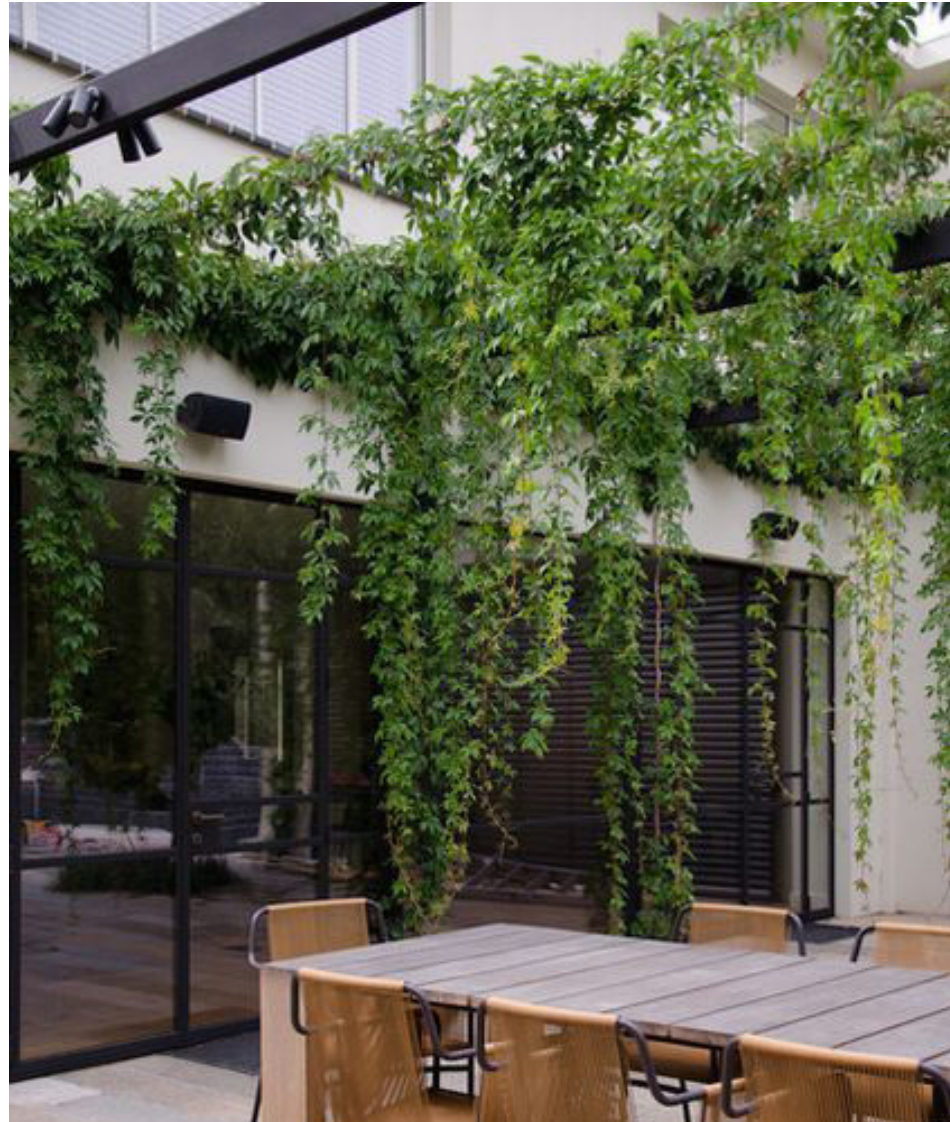
The green spine is a series of vertical gardens that extends from level 21 to 59 of the proposed tower. The gardens will consist of climbing species that will grow up tensile wires to create a 'spine' effect on the side of the tower. The benefits of this treatment allows natural insulation to the tower and a decreased carbon footprint. The environmental impacts of this are minimal.



PRECEDENT IMAGES



PRECEDENT IMAGES

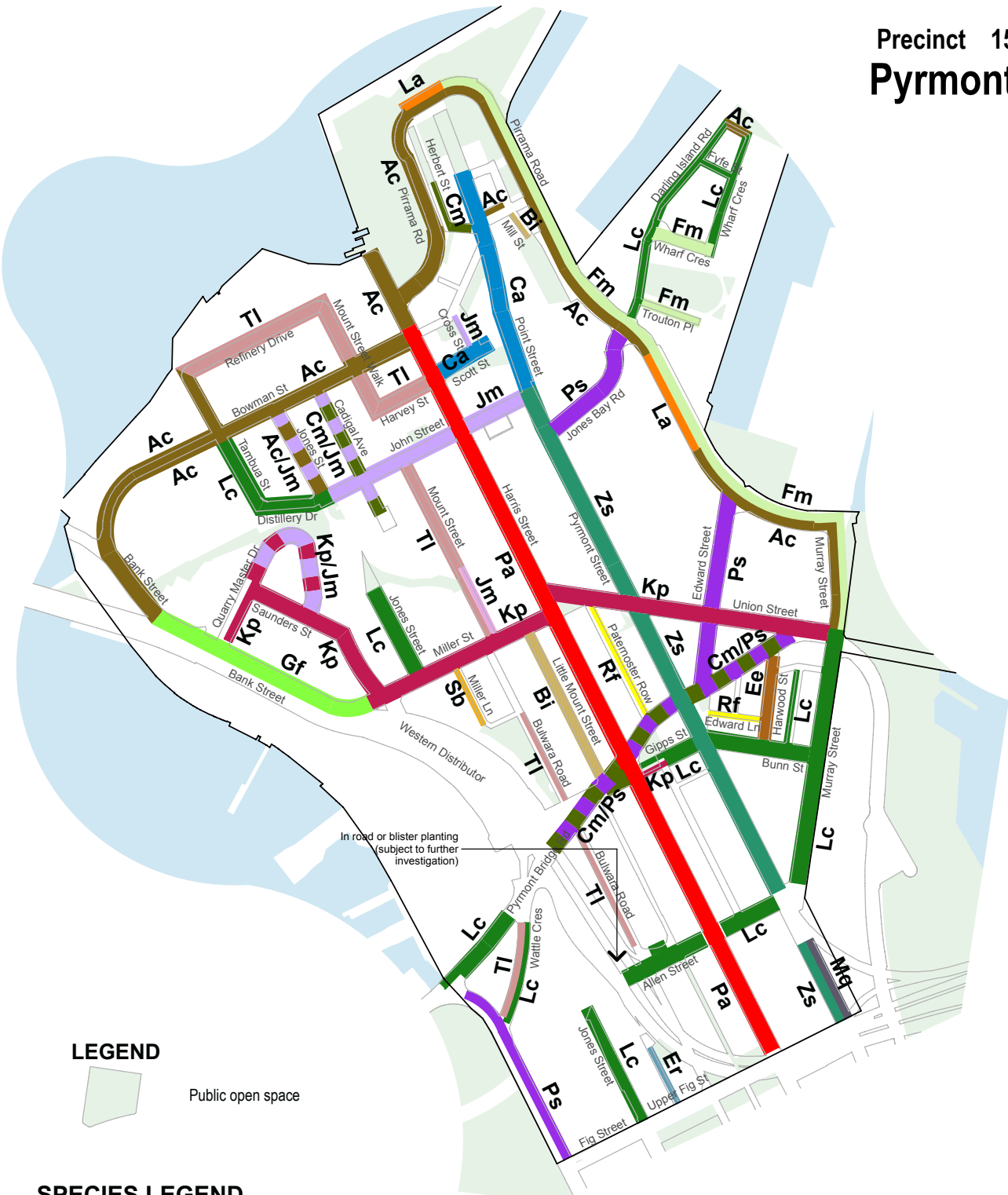


INDICATIVE PLANTING STRATEGY

- Plant species have been carefully chosen to form a rich pallet of size, form, colour and texture. The planting design compliments the architecture and the natural landscape. Planting will be design to define spaces; direct site lines; provide privacy and screening; shade during summer and light during the winter; and without compromise beautiful and interesting garden spaces.
- Street trees species have been chose based on CoS tree strategy.

Public Domain		
Street Trees	Common Name	Mature Height x Spread (m)
Angophora costata	Smooth Barked Apple	20 x 12m
Livistona australis	Cabbage Tree palm	8-10 x 3m
Private Gardens		
Trees	Common Name	Mature Height x Spread (m)
Cupaniopsis anacardiodes	Tuckeroo	8 x 5
Howea forsteriana	Kentia Palm	10 x 6
Olea europaea	Olive Tree	6 x 3
Plumeria species	Frangipani	8 x 5
Pyrus callyrana	Ornamental Pear	11 x 4
Ulmus parvidolia	Chinese elm	10 x 11
Magnolia grandiflora 'Little Gem'	Evergreen Magnolia	6 x 4
Washingtonia robusta	Washington palm	10 x 4
Shrubs		
Agave attenuata	Agave	2 x 1
Alocasia macrorrhizos	Elephants Ear	1.5 x 1.5
Doryanthes excelsa	Gynea lily	2 x 1.5
Hymenocallis littoralis	Spider lily	0.7 x 0.7
Muraya paniculata	Mock Orange	3x 1
Monstera deliciosa	Swiss Cheese Plant	3 x 3
Philodendron Xanadu	Xanadu	1 x 1
Phormium tenax	New Zealand Flax	1.5 x 1
Strelizia juncea	Bird of Paradise	6 x 3.5
Grasses + Groundcovers		
Agapanthus africanus	African Lily	0.6 x 0.6
Aspidistra elatior	Cast Iron Plant	0.4 x 0.6
Casurina 'cousin it'	Cousin it	0.3 x 1
Dianella longifolia	Blueberry Lily	1 x 0.5
Dichondra argenta	Silver falls	Ground cover
Dietes grandiflora	Pale Flax Lily	1.5 x 1
Pandorea jasminoides	Bower of beauty	Climber
Sedum species	Stonecrop	Ground Cover
Trachelospermum jasminoides	Chinese Star Jasmine	Ground Cover/climber
Corpobrotus rossii	Pig Face	Ground Cover
Zoyzia sp	No-mow grass	Ground Cover

Precinct 15
Pymont



LEGEND

Public open space

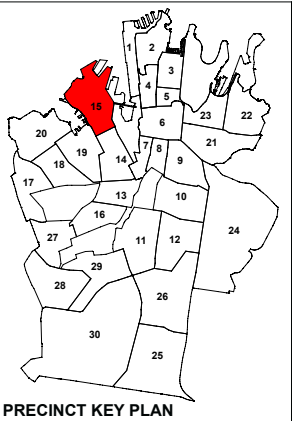
SPECIES LEGEND

Evergreen

Ac	Angophora costata (Smooth-barked Apple)
Bi	Banksia integrifolia (Coast Banksia)
Cm	Corymbia maculata (Spotted Gum)
Ee	Elaeocarpus eumundi (Eumundi Quondong)
Er	Elaeocarpus reticulatus (Blueberry Ash)
Fm	Ficus microcarpa var. hillii (Hill's Weeping Fig)
Gf	Glochidion ferdinandi (Cheese Tree)
Lc	Lophostemon confertus (Brush Box)
Mq	Melaleuca quinquenervia (Broad-Leaf Paperbark)
Ti	Tristanopsis laurina (Water Gum)

Deciduous

Ca	Celtis australis (Southern Hackberry)
Jm	Jacaranda mimosifolia (Jacaranda)
Kp	Koelreutaria paniculata (Golden Rain Tree)
Pa	Platanus acerifolia (London Plane)
Ps	Populus simonii (Simons Poplar)
Pc	Pyrus calleryana 'Chanticleer' (Callery Pear)
Rf	Robinia pseudoacacia 'Frisia' (Golden Robinia)
Sb	Sapium sebiferum (Chinese Tallow Tree)
Zs	Zelkova serrata 'Green Vase' (Japanese Zelkova)
Palms	Livistona australis / Washingtonia robusta (Cabbage Tree Palm/ Mexican Fan Palm)

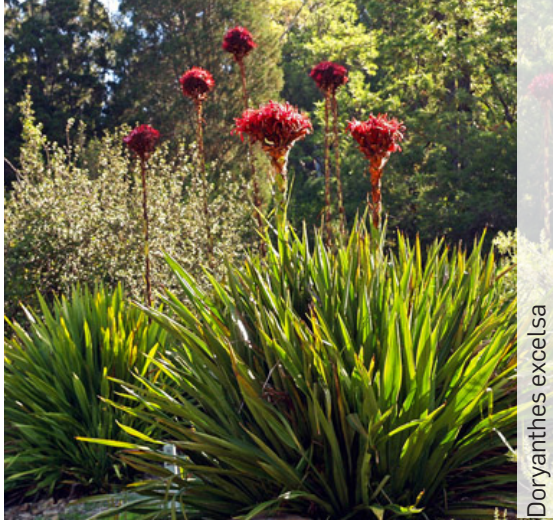
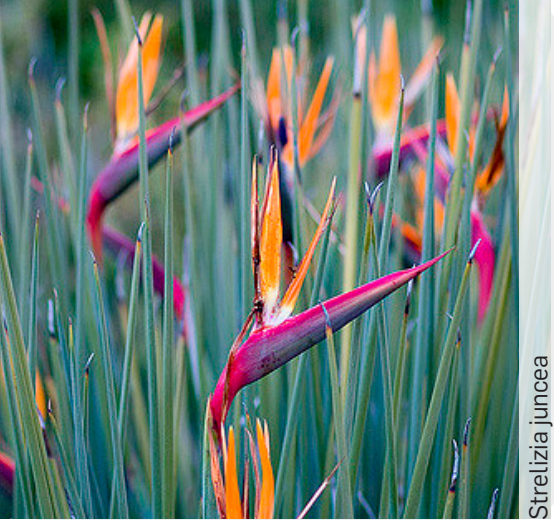


INDICATIVE PLANTING PALETTE

TREES



SHRUBS + GRASSES + GROUND COVERS



MATERIALS STRATEGY

All paving materials and street furniture would be subject to relevant Australian Standards and comply with Council's guidelines.

Paving will consist of contrasting finishes, textures and materials (concrete, stone and gravel). Paving sizes and textures will delineate public and private spaces and accentuate common entrance points and pedestrian linkages.

Street lighting will be provided as per Australian standards and CoS Council's requirements. Pedestrian lighting in common spaces will be designed to compliment the landscape design, direct pedestrian movement through spaces, and create bright and friendly night time spaces. Uplighting to feature trees will be provided where possible.

PAVING



Small linear paving to match existing on Pirrama Rd



Asphalt reinstated on Street frontage



Paving bands for proposed SELS plaza



Granite driveway crossovers + footpath upgrades

FURNITURE



Sculptural seating elements



Bike racks for private and communal use



Typical City of Sydney Street Furniture

LIGHTING



Uplighting to feature trees

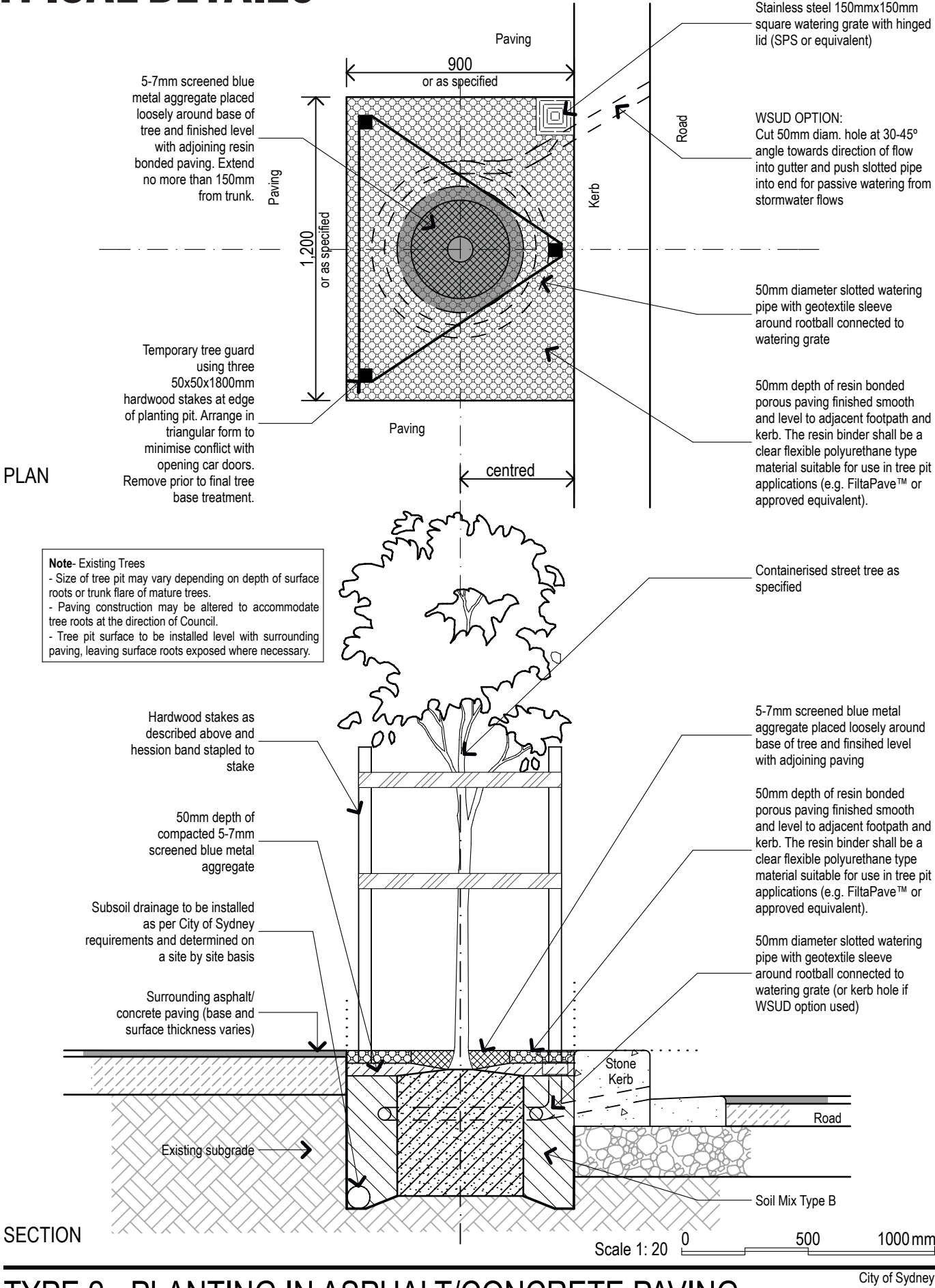


Integrated lighting elements in walls + furniture

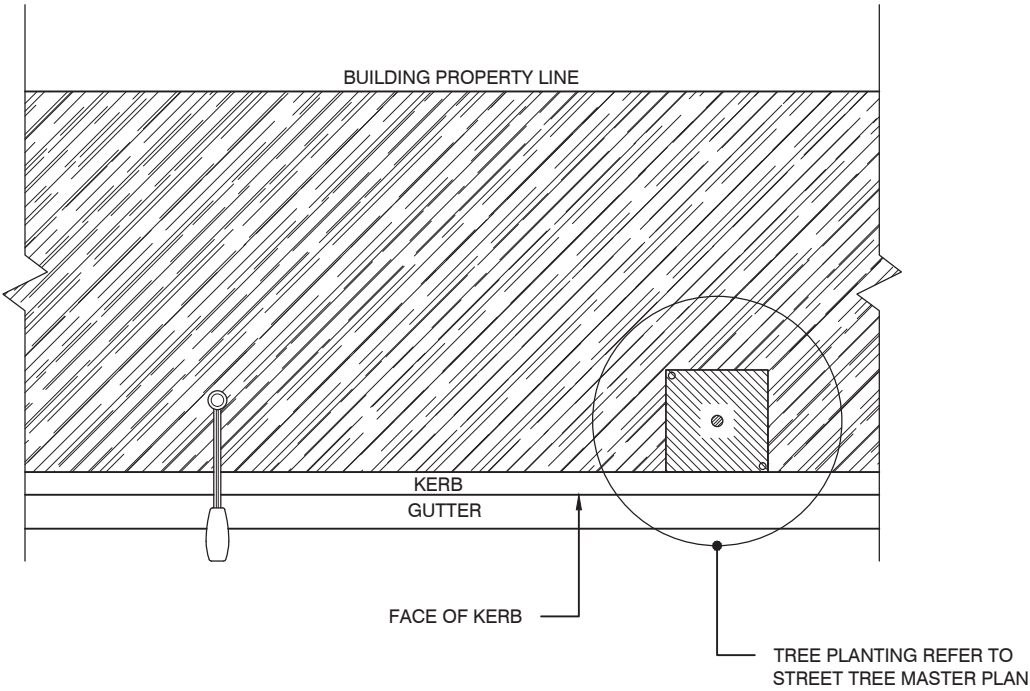


Overhead Catenary Lighting

TYPICAL DETAILS



TYPE 2 - PLANTING IN ASPHALT/CONCRETE PAVING



PLAN 1:100

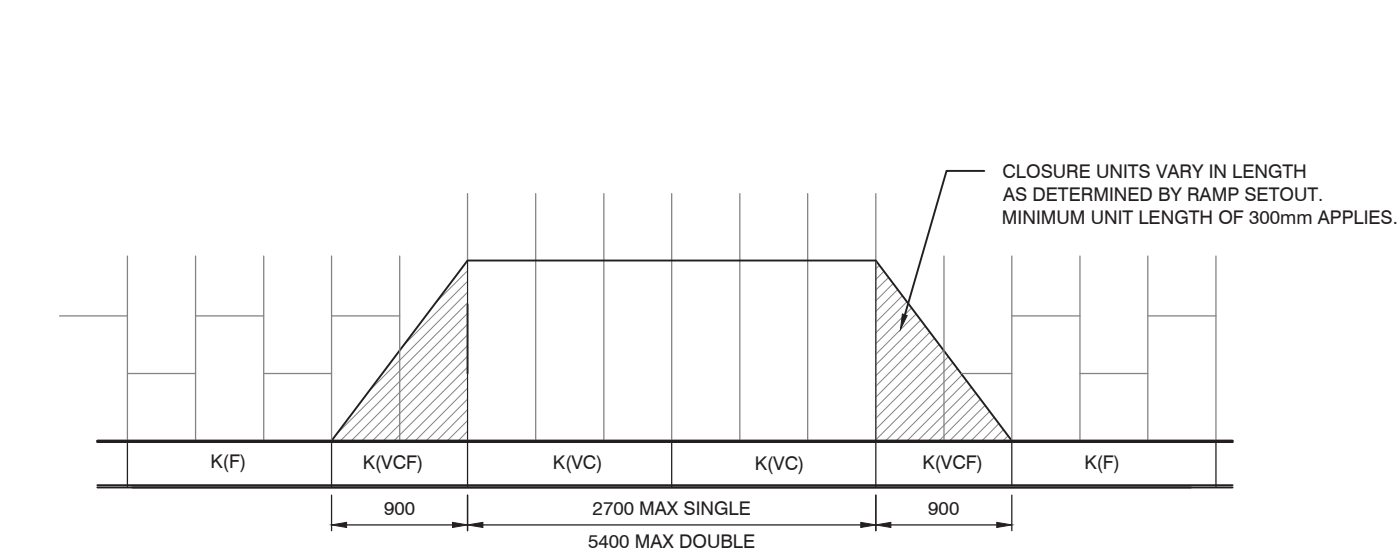
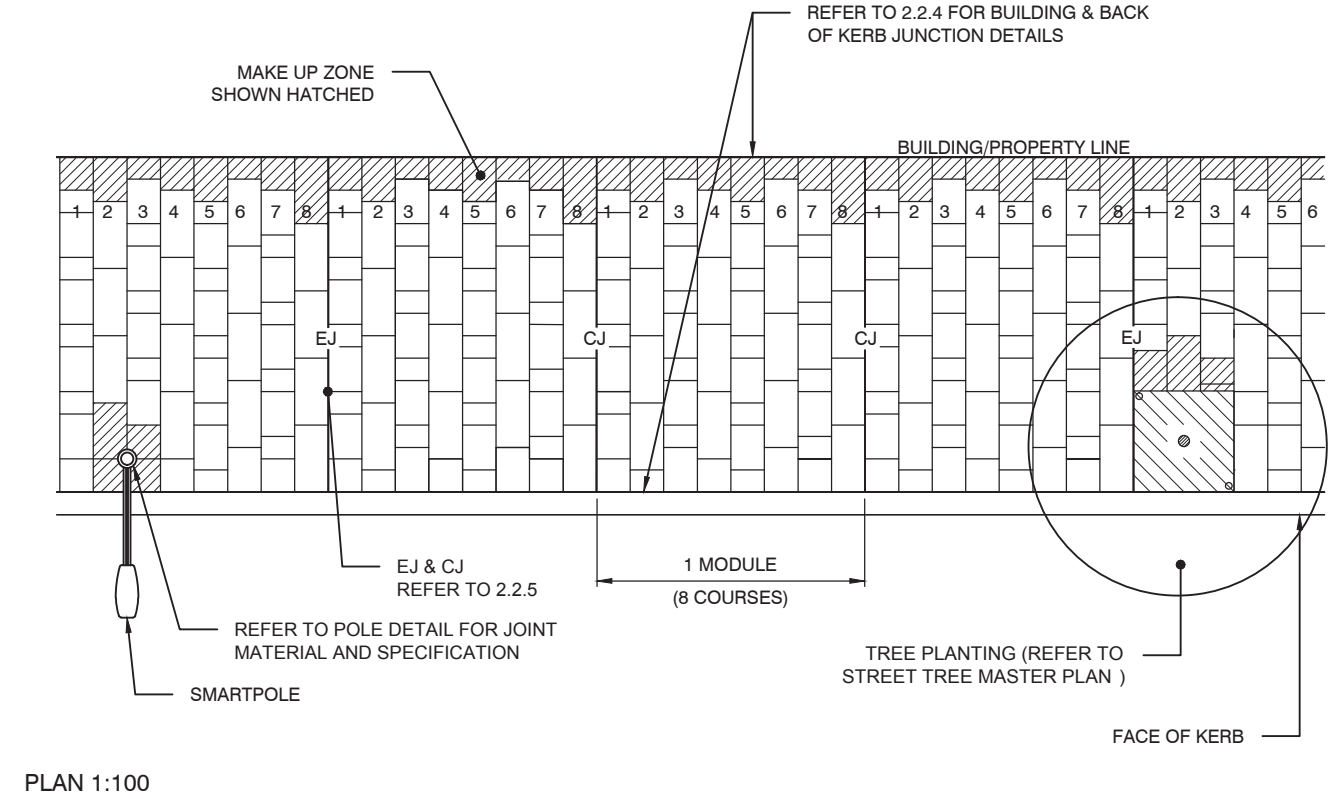
NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED



ASPHALT PAVING
GENERAL ARRANGEMENT PLAN

Rev		Dwg No.	
Date	B	22.03.13	
Approved	P S		2.5.1

TYPICAL DETAILS



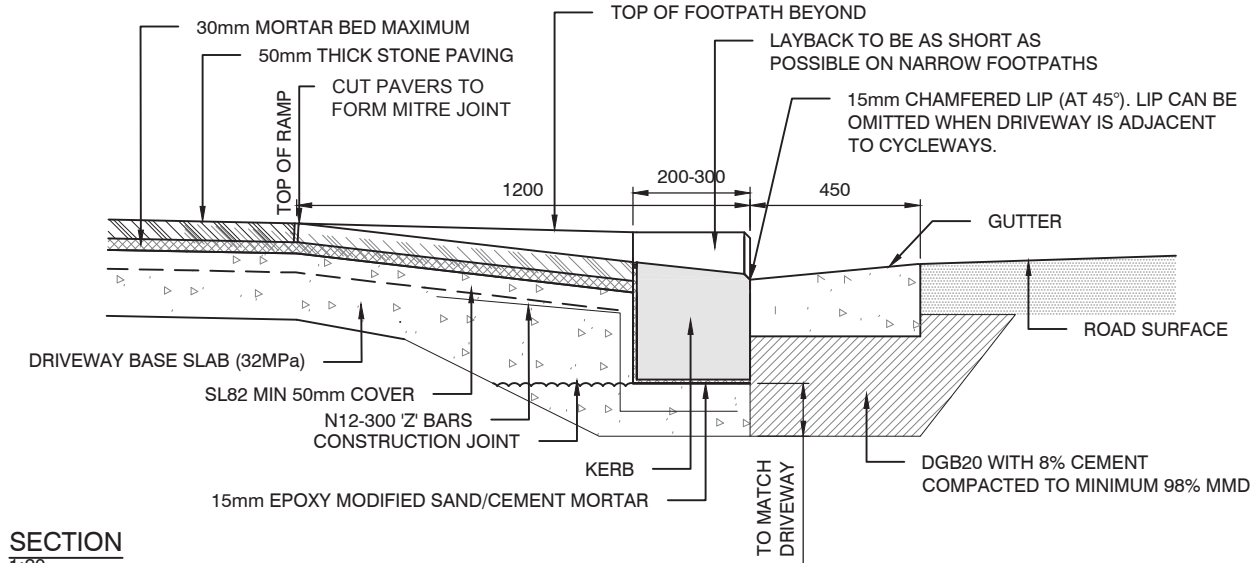
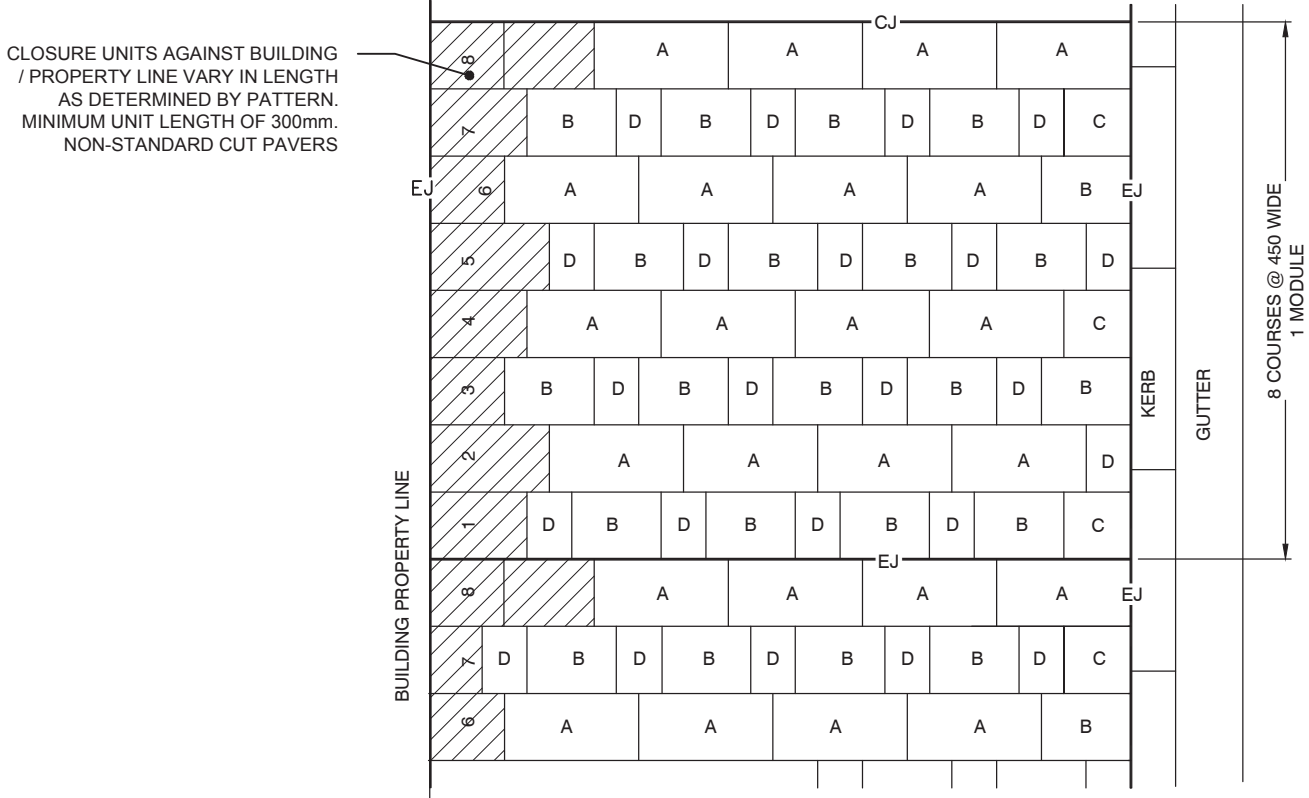
PLAN 1:50

NOTES:

- 1. ALIGN CENTRE OF DRIVEWAY WITH ENTRY.
- 2. DRIVEWAY TO BE GENERALLY PERPENDICULAR TO KERB LINE UNLESS APPROVED OTHERWISE.
- 3. FOR NARROW FOOTPATHS, LENGTH OF RAMP TO BE REDUCED TO 900mm.
- 4. VERTICAL AND HORIZONTAL CLEARANCE SHALL BE CHECKED BY THE DESIGNER IN ACCORDANCE WITH AS2890.1.

KERB PROFILES

- TYPE K(F): FULL HEIGHT
- TYPE K(VCF): VEHICULAR CHAMFERED TO FALL
- TYPE K(VC): VEHICULAR CROSSOVER



SECTION 1:20

DRIVEWAY SPECIFICATIONS			
DRIVEWAY USE	CONCRETE STRENGTH	THICKNESS	REINFORCEMENT
SINGLE RESIDENTIAL	32MPa	150mm	SL82
MULTI RESIDENTIAL	32MPa	200mm	SL82
COMMERCIAL/ INDUSTRIAL	32MPa	250mm	TWO LAYERS SL82

NOTE:

- 1. 60MM THICK PAVERS WILL BE REQUIRED IN DISTINCTIVE PLACES AS SPECIFIED (REFER TO FOOTWAYS SPECIFICATION FOR FURTHER DETAILS)

NOTE:

- 1. MAINTAIN PAVER BAND WIDTH OF 450mm EXCEPT WHERE REQUIRED TO ADJUST PAVERS TO SUIT SITE CONDITIONS, THEN MIN 400mm BAND WIDTH OVER MIN 5 COURSES IS ACCEPTABLE.
- 2. 1-3mm GAP REQUIRED BETWEEN PAVERS.
- 3. 60MM THICK PAVERS WILL BE REQUIRED IN DISTINCTIVE PLACES AS SPECIFIED (REFER TO FOOTWAYS SPECIFICATION FOR FURTHER DETAILS)

STONE SIZES:

- TYPE A: 900 x 450 x 50mm
- TYPE B: 600 x 450 x 50mm
- TYPE C: 450 x 450 x 50mm
- TYPE D: 300 x 450 x 50mm

- CJ: CONTRACTION JOINT
- EJ: EXPANSION JOINT

TYPICAL PAVING MODULE 1:50

NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

CONCLUSION

Environmental Impacts of the Landscape Design

The landscape design proposal for this modification will significantly improve the existing public domain appearance, pedestrian experiences, amenity, access arrangements and the public interface with The Star & light rail station. Overall, the proposed landscaping will provide high amenity to a mixture of users including hotel guests, residents, staff, patrons, commuters and the general public

Pedestrian experiences will be improved in the public and private domain relative to the current arrangements as previously assessed. Most notably to the Pirrama road and Jones Bay Road frontages, where sight lines, safety, wayfinding and surface finishes are being improved in the public realm and within the site to the existing light rail stop.

The existing and proposed upper level/podium landscape areas are being increased with this modification. The currently approved non accessible green roof will be replaced with a high use multi functional space, giving improved usability for a diverse mix of patrons. Green roofs and vertical gardens will be incorporated into this modification across the site for improved biodiversity, lower energy consumption and improved aesthetics.

There will be a number of immediate impacts within the public domain with the removal of street trees. However their replacement with species aligned with council's STMP will provide improved consistency and longevity in the area. They will also provide increased amenity to the public realm as many will be larger canopy trees than the existing condition as last assessed.

Overall, the proposed landscaping and public domain improvements will have a significant improvement of the amenity on site and surrounding the site. The environmental impact of modifying these spaces, with the addition of new spaces, will bring many benefits for the site and the local environment. Any environmental impacts relative to the existing conditions as previously assessed and approved will be limited.

APPENDIX A - URBIS' RESPONSE TO THE COS AND DPE SUBMISSIONS



01.11.18_RevD

The Star Modification 13 - Landscape Design

Response to Letter received from Alex Greenwich and the City of Sydney Submission

The updated report and additional drawings (Appendix A) have been prepared by Urbis on behalf of The Star Entertainment Group Limited in response to the City of Sydney Submission (items highlighted below).

Item 1: Re. Letter dated 10.09.18 from Alex Greenwich

P4. Tree Loss

The development would result in the loss of 24 trees including 16 of high retention value, to be replaced with 24 trees of various species. This represents the absolute bare minimum that could be done; no attempt has been made to increase the net number of trees, to ensure there is no loss of tree canopy or to replace trees with mature plants. This proposal shows contempt for community efforts to increase greenery and for NSW Government and City of Sydney plans to increase green cover to address increasing temperatures and heat sink effects.

Urbis Response

An arboricultural assessment of seventy-two (72) trees located in the vicinity of The Star Casino and Entertainment Complex, located at 80 Pyrmont Road, Pyrmont was prepared. The purpose of the report was to assess the potential impact of works proposed under the Modification 13 Application on existing trees surrounding the proposed development.

The proposed development will necessitate the removal of four (4) trees of low and very low retention value, four (4) of moderate retention value and sixteen (16) trees of high retention value. The trees of low and moderate value can be replaced with new tree planting in the short term (next 10 to 15 years). As such, there will be a relatively minor and temporary loss of amenity resulting from the removal of these trees to accommodate the proposed development.

The trees of high retention value have no special heritage or ecological significance, but they are mature specimens that make a positive contribution to the amenity of the site and streetscape areas. There are no feasible options that can be implemented that would permit the retention of these trees given the design intent. Replacement planting is proposed to compensate for loss of amenity in streetscape areas in accordance with the City of Sydney Council's Street Tree Master Plan. The sixteen (16) trees of high retention value that will be removed include twelve (12) Cabbage Tree Palms and four (4) Hill's Weeping Figs, all located on the Pirrama Road frontage. The proposed replacement trees *Angophora costata* are as per the City of Sydney Tree Master Plan they will increase the amenity to pedestrians using this area, in particular increased shade to paved areas. The replacement trees will be specified as mature plants.

Tree Protection Measures and a Tree Protection Plan will ensure the remaining trees surrounding The Star are retained and protected during construction.

Item 2: Re. Letter dated 09.10.18 from City of Sydney

2.2 - P.10 Landscaping/Drawing Coordination

The plans omit the level of detail expected at detailed application stage such as SSL, RL, TW levels to demonstrate the design and confirm soil depth, soil volume, edges, materials and planting design and details.

Urbis Response

Urbis have coordinated this detail with FJMT and confirm soil depth, soil volume, edges, materials and planting design and details in Appendix A. Soil depths are shown on the details to all planters.

Minimum soil depths are in accordance with both 'The City of Sydney Landscape Code Vol 2' and the 'Apartment Design Guide':

- Turf 200mm soil depth
- Ground Cover 300-450mm soil depth
- Shrubs 500-600mm soil depth
- Small Trees (6-8m high) 800mm soil depth
- Medium Trees (8-12m high) 1000mm soil depth
- Large Trees (12-18m high) 1200-1500mm soil depth

All volumes are subject to review against tree species, location, desired effect and current industry best practice standards. An arborist or soil scientist will provide specific advice about the volume of soil that planting required.

2.3 - P.10 Green Seam

There is a lack of detail provided to understand the proposed scheme.

Urbis Response

Refer to Junglify Report (Appendix B) and architect's drawings (FJMT, Façade Details, Western Seam planter details, SM13 AF8302).

2.4 - P.11 Green Roof

Again, there is insufficient detail provided to enable a full and proper assessment.

Urbis Response

Urbis have developed a planting design for the green roof to create habitat and biodiversity, the plant schedule and detail was developed with City of Sydney (and is consistent with the Mod 14 submission). Refer to Appendix A for plans and section details of the Green Roof.

2.5 - P.11 Green Wall – Hotel Port Cochere

An extensive green wall is proposed under the building and will be in complete shade **Urbis**

Response

Refer to Junglify Report (Appendix B) and architect's drawings

2.6 - P.11 Pool decks and Leisure Areas

No information has been provided on the pool design, levels, edges, materials, balustrades, pool fencing, consideration of design for safety etc

Urbis Response

Refer to 3D model images (by FJMT) and plans in Appendix A for pool design intent, levels, surface finishes, pool fence detail and location.

2.7 - P.11 Other landscaping comments:

•The Level 59 Club Lounge description does not match the plans. There is no wind study evidence to confirm that the landscaping proposed has been designed to withstand the western aspect and likely wind effects. Is the proposal achievable at upper levels of the tower?

Urbis Response

The description has been updated to match the latest design. The Wind Consultant has reviewed the landscape design and with the architects are proposing a 2m high glass balustrade to the perimeter of the terrace.

•Generally the plans provide a layout only or legend indicating areas of planting. There is no planting design and species selection provided.

Urbis Response

Refer to Appendix A for planting plans and schedule which highlight species, densities and size.

•The plant species nominated in the plant schedule is reliant on a very high percentage of exotic species. There is a very low percentage of native species.

Urbis Response

Refer to Appendix A for planting plans and schedule, additional native species have been added to create habitat and biodiversity.

•There are no levels for any of the works - SSL, FFL, RL, TW. Are planters raised or set down?

Urbis Response

Refer to Appendix A for planter details, all levels have been coordinated with the architects and added to the plans and planter details.

•No details have been provided to confirm the design of planters, soil depth and soil volume, design of all landscape features, lighting, furniture, structures, gates etc.

Urbis Response

Refer to Appendix A levels for details of all planters, confirming soil depth and volume. Minimum soil depths are in accordance with both 'The City of Sydney Landscape Code Vol 2' and the 'Apartment Design Guide' as described above.

Surface finishes are described on all the plans, the lighting, furniture, structures, gates etc design intent are captured in FJMT's 3D fly through, still images have been included in Appendix A.



- *The landscape maintenance is lacking detail. Detailed consideration of maintaining works above ground level and at upper levels should be provided.*

Urbis Response

Urbis has included a plant establishment & maintenance strategy in the report for public domain and podium planting, please refer to Junglefy Report (Appendix B) for an indicative maintenance strategy of green walls and spine.

Item 3.0: DPE Site Visit / Letter received 23.10.18

3.1 - 19. The Department notes the concerns raised by Council about the level of detail provided in support of the proposed landscaping and public domain works. In addition to addressing Council's concerns:

- a) provide additional information on the design of the proposed SELS forecourt on the corner of Jones Bay Road/Pymont Road, including confirmation of levels, the requirement for any railings/fencing, seating wall design and sections*

Urbis Response

Urbis has included sections in Appendix A, these confirm levels, seating wall design intent and property boundary.

- b) To improve the biodiversity value of the proposed green roofs, consider replacing or supplementing the planting of sedum with native species mix / biodiverse wildflower planting*

Urbis Response

Urbis has replaced the sedum rooftops with a native species mix / biodiverse wildflower planting as per Mod 14 (species co-ordinated with City of Sydney). Additional native plants have also been added to the plant schedule.

- c) confirm the reduction in green roof area between the approved (MOD14) and proposed.*

Urbis Response

The Mod 14 non-accessible level 5 green roof is proposed to be replaced with the accessible level 5 terrace which integrates external dining areas, leisure, event and circulation spaces within a garden setting. The reduction of green roof from Mod 14 is 4311m² to 794m² for Mod 13, which is made up of 637m² on level 6 and 300m² on Level 8 rooftop areas.

APPENDIX B - JUNGLEFY'S RESPONSE TO THE COS AND DPE SUBMISSIONS

26 October 2018

Star Casino – Ritz Carlton Tower – Green Spine

Dear Sean and Raymond,

Further to our initial assessment on the viability of the green spine proposed for the Ritz Carlton Tower we provide the following comments to ensure its long term success and architectural vision is realised.

Safe access and maintenance of the green spine

Access to the planter boxes of the green spine will require a multi-pronged approach. This will likely include; a Building Maintenance Unit, Ropes Access, as well as walkways at landing levels every three floors. The use of a Building Maintenance Unit (BMU) is limited to accessing exposed planter boxes of the Green Spine, as tolerances appear too narrow between the glass panels and the building façade.

However, a BMU may be utilised for major services or rectification works such planter box removal or soil replacement. Access to planter boxes behind the glass return would need to be via Ropes technicians. Access walkways at landing levels every three floors would improve efficiency and provide a means of access for transporting green waste, both laterally along walkways and then into the building via maintenance access doors.

An access strategy would entail a detailed description of systems and processes/methodology for access to all areas for BMU access, ropes access and access walkways. Access walkways integrated into the building on the outside of the planter boxes that include height access lifelines would increase the efficiency of maintenance, by both improving accessibility via ropes and utilising 'Working at Heights' trained façade maintenance technicians working in harnesses.

If a BMU were to be integrated into the building for façade maintenance, testing and commissioning of the BMU is critical to ensure it can safely and effectively access all areas proposed.

Removal of green waste.

The volume of green waste will increase with advancement of plant growth and it is essential that transport and removal of green waste is carefully considered.

Proposed options for green waste transport and removal are as follows:

- Access walkways and access doors every three floors to allow for transport of green waste from BMU or ropes teams into the building. Once green waste has been transported into the building, green waste would need to be transported to a basement level via a goods lift.
- Alternatively, a dedicated chute on various floors for transport of green waste to basement level could be installed. (Adequate aperture opening to avoid blockages essential- min. 700mm x700mm).
- Separate rigging apparatus (block and tackle type system to be integrated) to aid in transporting bags of green waste while working via ropes access.
- Sufficient space and weight restrictions to be designed into BMU's for transporting green waste and growing media in addition to tool stowage.
- Composting or bio-digester integrated into basement for disposal/recycling of green waste.

Recommendations for irrigation.

- Rainbird IQ as site control irrigation software/hardware with remote access.
- Automatic flow controlled (or Electrical Conductivity based) dosing pumps to be used in a fertigation system.
- Access to drainage water collection for measurement of EC run off, to ensure balanced fertilisation.

- Electronic pump controllers to be specified to minimise/mitigate 'hunting' of pressure (ie. pressure spiking). This would reduce strain on the irrigation network and minimise the likelihood of irrigation leaks.
- Electrofusion welds to be carried out to strict manufacturers specifications to avoid failure. All irrigation to be tested, commissioned and documented prior to handover.
- 13mm dripline with 300mm spacings to be used in planter boxes.
- All irrigation and drainage to be accessible for maintenance purposes.
- Drainage to be flood tested prior to handover.

Recommended plant species for a western façade.

Drawings and comments suggest there will be airflow behind glazing, as it sails past as a screen, rather than enclosing the space. However, concern remains regarding the elevated heat levels which may be present behind the glazing. If these concerns could be alleviated via heat modelling or assurances that radiant and reflective heat would not exceed acceptable levels, then the following species are recommended for use on a western façade:

- **Climbers:** *Pyrostegia venusta*, *Hibertia scandens*, *Mandevilla x amabilis* 'Alice du Pont', *Mandevilla x amabilis* 'Red Velvet', *Pandorea pandorana* 'Bower of Beauty', *Pandorea pandorana* 'Golden Showers', *Pandorea pandorana* 'Lady Di'.
- **Trailing/cascading:** *Convolvulus sabatius sub sp mauritanicus*, *Juniperus conferta* 'Blue Pacific', *Rosmarinus officinalis* 'prostratus' (Huntington's Carpet), *Myoporum parvifolium*.
- **Shrubs:** *Raphiolepis* 'Snow Maiden', *Westringia* 'Aussie Box', *Nandina domestica* 'Gulf Stream'.

Recommendations for planter boxes, soil/media, climbing wires.

- Rotomolded planter using V0 fire rated polyethylene (with the inclusion of accessible inspection points integrated into planter box for drainage inspection and maintenance).
- Planters could be clad in 3mm fire rated aluminium cladding (not composite cladding)
- Mineral based, free draining planter box media.
- Stainless steel climber cables.

Indicative maintenance strategy.


Allowance for ropes access at 4-6 weekly intervals, with major services 10-12 weekly intervals. Maintenance via BMU access could occur at similar intervals. Integration of access walkways into the building façade would allow for further flexibility of access. By employing the proposed mixed strategy, utilising BMU, ropes, and access walkways, reliance upon one system such as BMU is eliminated. As a result, continuity of maintenance of the building can be assured.

Green Wall in Porte Cochere

There is a green wall proposed for the Porte Cochere at the entrance to the building. We support the suitability of a green wall in this location on the proviso that it has LED grow lighting installed to ensure successful plant growth. We further propose the installation of a Junglefy Breathing Wall that would use fans to actively filter the exhaust fumes produced from the vehicles in the area, thereby creating a greatly improved air quality for patrons of the hotel. We have provided an indicative detail and specification for the Junglefy Breathing Wall and also provided a list of plant species that would be suitable for this outdoor shaded location.

We look forward to working with Star City, FJMT & Multiplex to further develop this concept and to realise their vision of introducing Living Infrastructure and biodiversity into the City of Sydney LGA.

Yours Sincerely,




















A handwritten signature in dark ink, appearing to be 'JG' followed by a long horizontal stroke.

Jock Gammon
(Managing Director)

Andrew Baxter
(Manager at One Central Park)






















Plant List

BREATHING WALL/GREEN WALL

		Indoor	Shade	Part Sun	Full Sun
	Alternanthera dentata Ruby Leaf Alternanthera				
	Begonia coccinea Angel Wing Begonia				
	Dianella caerulea Blue Flax Lily				
	Duranta repens Duranta				
	Epipremnum aureum Devil's Ivy				
	Eremophila glabra Emu Bush				
	Humata tyermannii Rabbit's Foot Fern				

Plant List

BREATHING WALL/GREEN WALL

		Indoor	Shade	Part Sun	Full Sun
	Lomandra longifolia 'Tanika' Tanika Lomandra				
	Murraya paniculata Orange Jasmine				
	Myoporum parvifolium Creeping Boobialla				
	Nandina domestica Sacred Bamboo				
	Neomarica gracilis Walking Iris				
	Nephrolepis spp. Boston Fern				
	Peperomia clusiifolia Baby Rubber Plant				






Plant List

BREATHING WALL/GREEN WALL










		Indoor	Shade	Part Sun	Full Sun
	Peperomia clusiifolia (pink edge) Baby Rubber Plant				
	Peperomia obtusifolia 'Alba' Baby Rubber Plant				
	Peperomia obtusifolia - Large Leaf Baby Rubber Plant				
	Philodendron 'Hope' Hope Philodendron				
	Philodendron xanadu Xanadu Philodendron				
	Philodendron scandens Heart-Leaf Philodendron				
	Schefflera arboricola Dwarf Umbrella Tree				

Plant List

BREATHING WALL/GREEN WALL

		Indoor	Shade	Part Sun	Full Sun
	Spathiphyllum wallisii Peace Lily				
	Westringia fruticosa Coastal Rosemary				

Examples of Mixed Modules

	Humata tyermannii Rabbit's Foot Fern Neomarica variegated Walking Iris Peperomia clusiifolia (pink) Baby Rubber Plant				
	Neomarica variegated Walking Iris Peperomia variegata 'Alba' Baby Rubber Plant				
	Humata tyermannii Rabbit's Foot Fern Neomarica gracilllis Walking Iris Plectranthus australis Swedish Ivy				

1 BREATHING WALL FRONT ELEVATION
1:30 @ A3

All dimensions and levels must be checked on site and not scaled from this drawing. This drawing is subject to copyright and must not be reproduced or used in any form without prior written permission from Junglefy Pty Ltd.

PROJECT

SPECIFICATIONS

REV	DATE	DESCRIPTION
A	23.09.2018	FOR COMMENT

DRAWING TITLE

BREATHING WALL SECTION

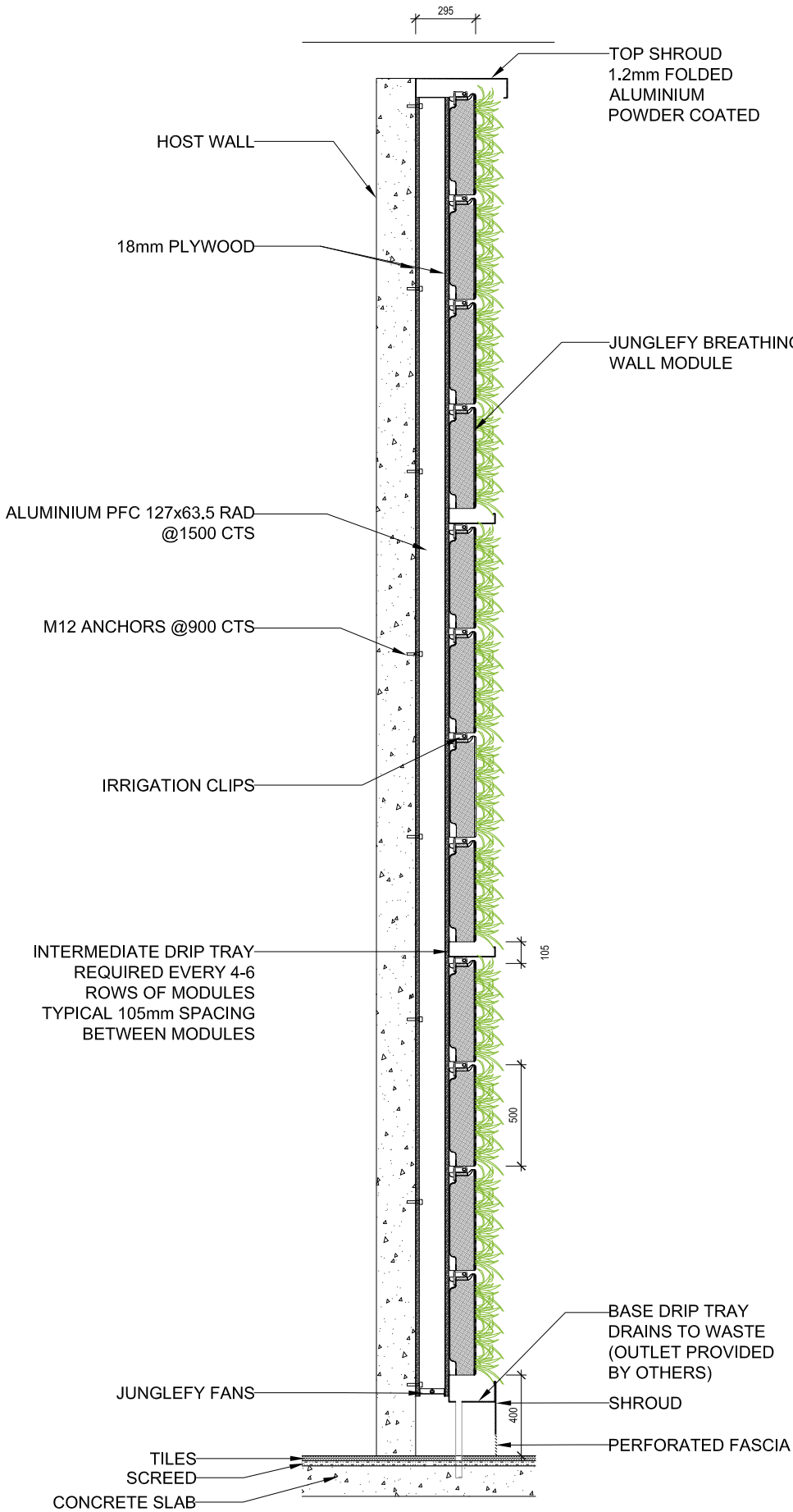
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1:30	HA	GC

DRAWING NUMBER

JS_BW_002

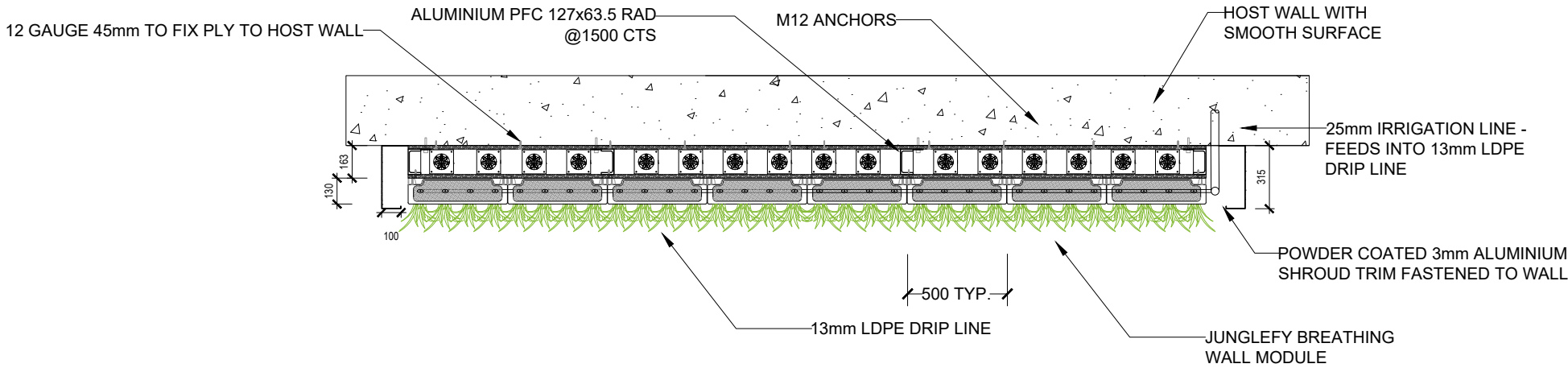
REVISION

A



1 BREATHING WALL SECTION
1:30 @ A3

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1 BREATHING WALL PLAN VIEW
1:30 @ A3

PROJECT

SPECIFICATIONS

REV	DATE	DESCRIPTION
A	23.09.2018	FOR COMMENT

DRAWING TITLE

BREATHING WALL
PLAN VIEW

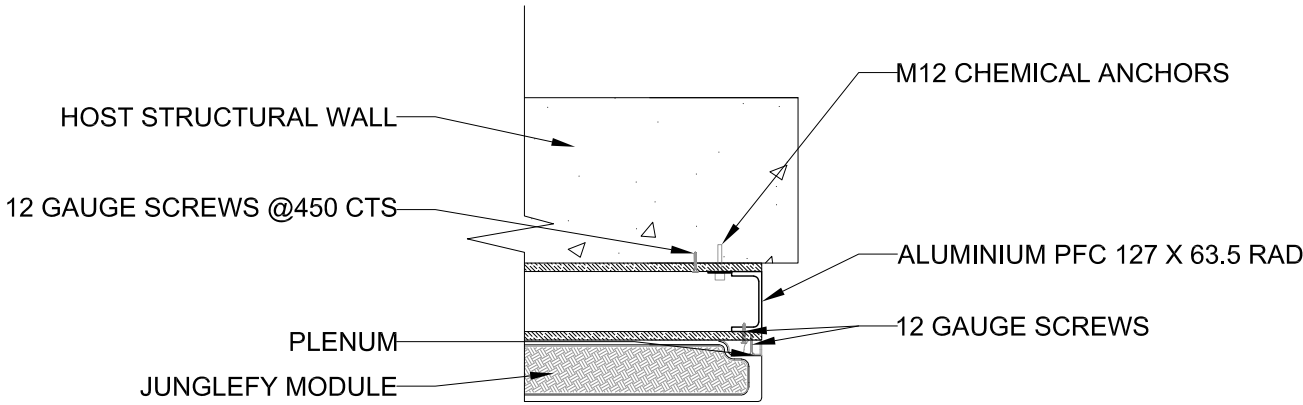
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DRAWING NUMBER

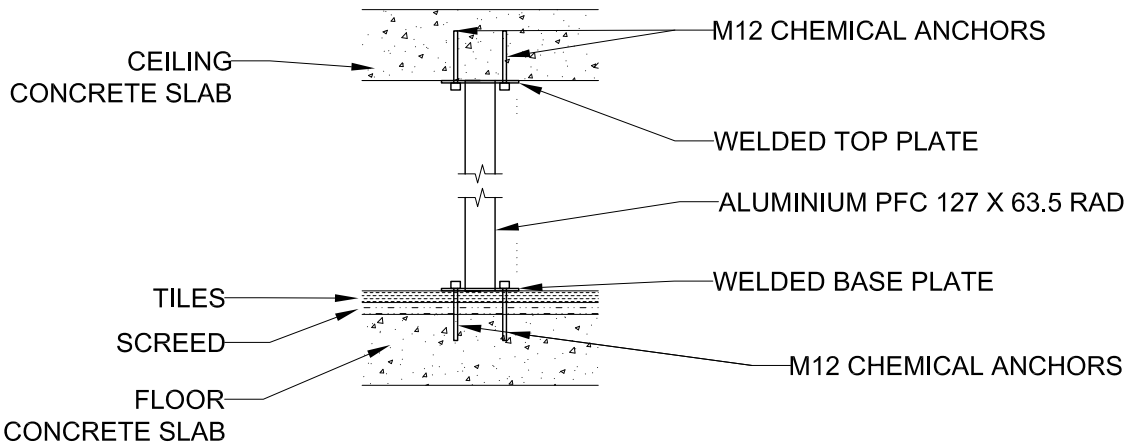
JS_BW_003

REVISION

A



1 BREATHING WALL FIXING DETAILS (PLAN)
1:16 @ A3



2 BREATHING WALL FREE STANDING FIXING DETAILS (ELEVATION)
1:16 @ A3

PROJECT

SPECIFICATIONS

REV	DATE	DESCRIPTION
A	23.09.2018	FOR COMMENT

DRAWING TITLE

BREATHING WALL
FIXING DETAILS

SCALE @ A3	DRAWN	CHECKED
1:16	HA	GC

DRAWING NUMBER

JS_BW_004

REVISION

A

APPENDIX C - LANDSCAPE MAINTENANCE PLAN

THE STAR MOD 13

LANDSCAPE MAINTENANCE PLAN

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE LANDSCAPE
DEVELOPMENT APPLICATION

30 JANUARY 2019
REV A
PREPARED FOR THE STAR

URBIS

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Mark Kuhne
Consultant	Jun Tan
Project Code	ND2038
Report Number	LMS-01

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1. LANDSCAPE MAINTENANCE REQUIREMENTS

1.1. GROUND LEVEL PUBLIC DOMAIN

Refer to Urbis Landscape Design Development Application Report for the extent of the publicly accessible landscape areas along Pyrmont Road, Jones Bay Road and Pirrama Road streetscapes and within The Star.

All planting, hardscape and furniture elements are to be maintained as per the Development Application (DA) report.

1.2. NEW RITZ-CARLTON HOTEL AND RESIDENTIAL TOWER

Refer to Urbis Landscape Design Development Application Report for the extent of the hotel neighbourhood terrace and residential private and communal landscape areas at ground level, level 3, 4, 5, 7, 8 and rooftop.

All planting, hardscape and furniture elements are to be maintained as per the Development Application (DA) report.

1.3. THE STAR

Refer to Urbis Landscape Design Development Application Report for the extent of The Star landscape areas at ground level, level 5, 6 and 7.

All planting, hardscape and furniture elements are to be maintained as per the Development Application (DA) report.

1.4. REPORT

In the last week of every second month the Landscape Contractor is to provide a report of those items within the scope area that, in their opinion, provide the Client with proactive suggestions to lift the appearance of the estate beyond the scope of contracted landscape maintenance works and additionally reduce any long term landscape maintenance costs

The report is to include:

- A list of the improvement items;
- Suggested method by which these items should be improved;
- A sketch plan highlighting the location of the improvement items; and
- A quote to achieve these works.

1.4.1. Quote

Each rectification/improvement item is to be presented as a separate line item with a separate item number that can be used in correspondence.

1.5. GARDEN BEDS AND GREEN ROOF

- Maintain green roofs and garden beds to ensure healthy and vigorous tree, shrub and groundcover growth. Maintain shrub and groundcover areas to encourage a mass planting effect and to be weed free.

1.5.1. Stakes and Ties

- Adjust/replace failed tree stakes and/or ties where required;
- Remove all stakes and ties from trees as soon as possible once plants are self-supporting;
- Ensure all ties are loose to allow free tree movement. Rectify if this is not the case;
- Any replacement ties to be hessian and fitted loosely to allow free tree movement and avoid ring barking.

1.5.2. Pruning

- Use appropriate horticultural techniques when pruning trees, shrubs and groundcovers within garden beds;
- Trees shall be pruned in accordance with AS4343-2007 "Pruning of Amenity Trees" and best horticultural practice;
- Prune plants to prevent overhang of adjacent paths and roads;
- Prune out dead or diseased leaves and branches when discovered;
- Use sharp and clean pruning equipment.

1.5.3. Weeding

- Weed garden areas both by hand and by spraying, monthly in winter and fortnightly in summer;
- Use appropriate herbicide and/or manual weeding methods to control weeds in garden bed areas;
- Apply herbicides as per the manufacturer's recommendations;
- Spray only in calm wind conditions;
- Do not allow herbicide spray to drift onto adjacent planting, or houses;
- Where landscape and revegetation treatments or existing turf, grasses and plants to be retained are poisoned due to overspray, they shall be replaced by the Contractor with plants of the same species, size and quality;
- Do not spray when rain is imminent;
- Immediately bag hand pulled weeds and remove from site.

1.5.4. Fertilising

- Apply fertilisers to garden areas to maintain healthy growth;
- Apply fertiliser to garden areas every 3 months or more frequently as needed;
- Determine the need for slow or rapid release fertiliser requirements based on inspection of garden areas and seasonal factors;
- Use appropriate fertiliser for site situation and plant species.

1.5.5. Mulching

- Maintain mulch to keep a consistent 100mm depth across all garden beds. Top up as necessary;

- Keep mulch 50mm away from tree and shrub stems at bases to minimise fungal infections;
- Provide a 50mm depth of mulch to all garden beds annually in May. Mulch type is to match what is already in the garden bed in question;
- Keep mulch within the boundaries of garden beds;
- Maintain a consistent and uniform mulch finished surface level across garden beds.

1.5.6. Replacement Planting

- Inform the Project Manager of any failed, damaged or stolen plants within one week;
- Replace failed, damaged or stolen plants as soon as practically possible (typically within two weeks);
- All replacement plants will be subject to a 12 week establishment period;
- All replacement planting is to match the specified type as listed on the drawings;
- Contact the Project Manager with a quote for replacement planting;
- All replacement planting is to incorporate the necessary ground preparation and protection required to ensure sound establishment and long term performance. For example; adequate herbicide treatment, tree guards, mulching, weeding etc.;
- A 100% success rate of all replacement plants is expected.
- The contractor is liable for any plant replacement due to herbicide overspray.

1.6. STREET TREES

All street trees shall be healthy, have a balanced canopy, have a well-established and healthy root system, actively growing and have a pleasing visual appearance;

1.6.1. Pruning

- Street trees shall be pruned in accordance with AS4343-2007 "Pruning of Amenity Trees" and best horticultural practice;
- Undertake an annual assessment in winter and prune all trees that require pruning. Maintain best practice pruning throughout the remainder of the maintenance period;
- Do not remove more than 10% of the trees live foliage without approval from the Project Manager;
- Prune out deadwood, dying braches, diseased branches, broken and split branches, atypical co-dominant stems, included forks and weak limb structures when discovered;
- Use sharp and clean pruning equipment;
- Maintain a clear trunk height of 1500-1800mm;
- Remove all epicormic shoots from the trunk base.

1.6.2. Fertilising

- Apply fertilisers to street trees to maintain healthy growth;
- Apply fertiliser to street trees every 3 months or more frequently as needed;

- Determine the need for slow or rapid release fertiliser requirements based on inspection of trees and seasonal factors;
- Use appropriate fertiliser for site situation and tree species.

1.6.3. Mulching

- Maintain mulch to keep a consistent 50mm depth and 1000mm diameter mulch ring to all street trees in turf;
- Keep mulch 50mm away from tree stem bases to minimise fungal infections;
- Provide a 50mm deep and 1000mm wide mulched ring of 25mm hoop pine mulch to the base of all street trees every six months;
- Keep mulch within the boundaries of the mulch ring;
- Remove any grass clippings or other deleterious matter from the base of street trees.

1.6.4. Weeding

- Use appropriate herbicide and/or manual weeding methods to control weeds at the base of street trees;
- Weed the base of street trees monthly in winter and fortnightly in summer (when weeding adjacent turf or garden areas);
- Apply herbicides as per the manufacturers recommendations;
- Spray only in calm wind conditions;
- Do not allow herbicide spray to drift onto adjacent planting;
- Where landscape and revegetation treatments or existing turf, grasses and plants to be retained are poisoned due to overspray, they shall be replaced by the Contractor with plants of the same species, size and quality;
- Do not spray when rain is imminent;
- Immediately bag hand pulled weeds and remove from site.

1.6.5. Replacement Street Trees

- Immediately inform the Project Manager of any failed, damaged or stolen street trees;
- Provide replacement street trees to the direction of the Project Manager.
- All replacement trees will be subject to a 12 week establishment period.

1.6.6. Stakes and Ties

- Adjust/replace failed tree stakes and/or ties where required;
- Remove all stakes and ties from trees as soon as possible once plants are self-supporting;
- Ensure all ties are loose to allow free tree movement. Rectify if this is not the case.
- Any replacement ties to be hessian and fitted loosely to allow free tree movement and avoid ring barking.

1.7. LITTER COLLECTION

Remove litter to maintain the site in a clean, litter free and presentable state at all times.

1.7.1. Litter Collection

- Undertake a litter inspection and removal of the entire scope area weekly;
- Inform the Project Manager of litter considered to be outside the scope of these works. E.g. builders rubbish.

1.8. REPLACEMENT PLANTING

- Replace failed, damaged or stolen plants within two weeks of discovery. Contact the Project Manager for direction and approval on plant species, sizes and quantities;
- Inform the Project Manager of any failed, damaged or stolen plants within one week;
- All replacement plants will be subject to a 12 week establishment period;
- All replacement planting is to match the specified type as listed on the drawings;
- Contact the Project Manager with a quote for replacement planting;

1.9. SAFETY

- Refer to future architect's drawings for location of safety railings and anchor points. Safety railings and anchor points will be installed along the level 00, 3, 4, 5, 6, 7, 8 and 59 planters for continual, full protection during maintenance.
- Report any potential hazards or solutions associated with plant maintenance at the upper levels areas to the Project Manager. E.g. anchor defects.

1.10. PAVING/HARDSTAND

1.10.1. Cleaning

- Clean all paths and hardstand areas within site as shown on landscape DA drawing with a high pressure water device once every 6 months.

1.10.2. Safety

- Report any potential hazards or solutions associated with paving or hardstand areas to the Project Manager. E.g. lifting of path causing trip hazard.

1.11. FURNITURE AND STRUCTURES

Ensure all site furniture, structures and fences/balustrades are to be well presented and maintained in good working order at all times.

1.11.1. Seats and Benches

- Ensure seats are firmly fixed in position and are free from "snags" which may cause injury;

- Oil all timber components of seats and benches within the scope area once every 6 months, as per the original construction specifications;
- Clean with a high pressure hose every 3 months.

1.11.2. Graffiti Removal

- Immediately remove any graffiti. Contact the Project Manager if removal cannot be achieved by manual cleaning methods only (e.g. requires re-surfacing). Do not use cleaning agents that will damage the surfaces.

1.12. EXISTING TREES TO STREETScape

Maintain all existing trees within parklands in a healthy, safe and presentable manner.

1.12.1. Inspections

- Have a suitably qualified arborist or horticulturalist conduct a 12 monthly check on the health and condition of remnant site trees. Notify the Project Manager of areas of concern with individual trees, especially in relation to safety, and recommendations and cost of rectification.

1.12.2. Deadwooding

- Have a qualified QAA member arborist carry out an annual inspection and deadwooding of remnant/existing site trees;
- Deadwooding of branches under 10mm diameter is not required;
- Other faults identified are to be communicated with the Project Manager, including costs to rectify. Wait for the Project Manager's instruction prior to proceeding;
- Pruning is to be compliant with AS4343-2007 "Pruning of Amenity Trees";
- All safety measures necessary to do the work safely are to be carried out by the landscape contractor.

1.12.3. Root Zone Protection

The following is prevented from occurring within the canopy zone of existing retained trees within parkland areas.

- Stockpiling soil;
- Parking of vehicles;
- Excavation;
- Washing paint brushes, wheel barrows, concrete slurry etc.;
- Cut of fill greater than 50mm deep.

1.13. LOG BOOK

- Keep a log book recording, according to weekly cycles, when and what maintenance work has been done and what materials, including toxic materials, have been used. The log book is to be submitted to the Project Manager monthly with invoices
- Upon the Project Manager's request, key dates during the year may be identified as a high importance for the Warner Lakes the Reserve site to be presented at its best. These dates must be identified as

early as possible by the Project Manager in order for the contractor to be able to adjust their program accordingly and keep record in their log book.

1.14. SITE MEETINGS

- On-site meetings are to be coordinated with the Project Manager and Contractor to ensure all works on site are progressing and to raise any new items or concerns.
- Site meetings are to be coordinated as required.

APPENDIX A PROGRAM OF LANDSCAPE MAINTENANCE WORKS

Landscape Maintenance Plan

25.01.19

The Star Mod 13

This Program of Works is to be implemented in accordance with the Landscape Development Application Report

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
PROACTIVE IMPROVEMENT REPORT AND QUOTE TO UNDERTAKE WORKS												
report												
GARDEN BEDS & GREEN ROOF												
stakes and ties												
pruning (ongoing as required)												
weeding												
fertilising												
top up mulch												
replacement planting												
STREET TREES												
pruning												
fertilising												
mulching												
weeding												
stakes and ties												
LITTER COLLECTION												
litter collection												
PAVING/HARDSTAND												
cleaning												
weeding												
FURNITURE AND STRUCTURES												
oil seats and benches												
clean seats and benches												

DISCLAIMER

This report is dated 9 January 2019 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of APP (**Instructing Party**) for the purpose of THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE LANDSCAPE DEVELOPMENT APPLICATION (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.



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