Sydney Metro

Pitt Street North Overstation Development

[I] Landscape design report

State Significant Development Application (SSD DA)

Prepared for : Pitt Street Developer North Pty LTD

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revision : C

issue : for submission to DPIE

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C	09.07.2020
B	19.05.2020
A	06.04.2020
P1	24.01.2020

Based on drawings prepared by;
Foster + Partners - SSDA Drawings - 200513
CPP - wind report

contents

This report contains supporting information to the SSDA drawing set.

1.0 executive summary

Landscape draws together aspirations of wellness, amenity and landscape performance within the Over Station Development North at levels 10 and 11. Contributing to design excellence through a nuanced response to context and the close integration of landscape and architecture. Premiating a landscape identity enlivened by the connection to Hyde Park and the city's parklands, one block away.

The podium level terraces provide an immersive landscape and choreographed scenography from the interior of the building that reduces glare, foregrounds views and screens neighbours. Conditioning the interior spaces while inviting people outside. The terraces providing flexible gathering spaces for large and more intimate connections. The articulation of spaces responding to aspect and elevation, while moderating winds. Making comfortable spaces that allow social connection and contact with nature.

The terrace designs reconciling use, comfort, flexibility, sustainability and a connection to urban nature, with building systems and design controls.

1.1 introduction

This report has been prepared to accompany a detailed State Significant Development (SSD) development application (DA) for a commercial mixed-use Over Station Development (OSD) above the new Sydney Metro Pitt Street North Station. The detailed SSD DA is consistent with the Concept Approval (SSD 17_8875) granted for the maximum building envelope on the site, as proposed to be modified.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (NSW DPIE) for assessment.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 25 October 2019.

The detailed SSD DA seeks development consent for:

- Construction of new commercial tower of approximately 38 storeys
- The tower includes maximum GFA, excluding floor space approved in the CSSI.
- Integration with the approved CSSI proposal including though not limited to:
  - Structures, mechanical and electronic systems, and services; and
  - Vertical transfers.
- Use of spaces within the CSSI 'metro box' building envelope for the purposes of:
  - Retail tenancies;
  - Commercial lobby and commercial amenities;
  - Car parking spaces within the podium for the purposes of the commercial premises; and
  - Loading and services access.
- Utilities and services provision.
- Stratum subdivision (staged).

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 28 October 2019.

Specifically, this report has been prepared to respond to SEARS requirement three 'Design Excellence and Built Form - Landscape Design' summarised in table below.

SEAR's requirement	description of requirement	section reference
SEARS 3 Design excellence and built form (Landscape Design)	e) Demonstrate how the landscape design will be integrated into the building design, contributing to design excellence, Ecologically Sustainable Development and building amenity, meeting the recreation needs of residents.	1.2

1.2 SEAR's requirement

e) Demonstrate how:

i) the landscape design will be integrated into the building design

Within the building the landscape offers a green outlook and choreographed scenography from the interior that also reduces glare, foregrounds views and screens neighbours. Conditioning the interior spaces while inviting people outside.

Externally the landscape offers a variety of break out spaces scaled for outdoor meetings, lunching and events. Each space responding to aspect and elevation. Drawing on the materiality and language of the architecture, addressing structure and reconciling building servicing and maintenance.

Materials and planting profiles have been designed for longevity and ease of maintenance, services are accessible and outdoor spaces are set level with the interior to seamlessly extend inside to out.

ii) contributing to design excellence

In the Over Station Development North design excellence is understood in four key parts:
- The podium terraces draw on the form and materiality of the architecture without imitation- landscape and architecture forming complementary companion spaces.
- Outdoor terraces are simultaneously garden terraces, matching habitable space and recreational amenity with substantial areas of planting.
- Wind amelioration and comfort has been addressed through the positioning of planter beds and the incorporation of trees to moderate channelling winds and building down drafts.
- Landscape elements have been designed for longevity, durability and sustainability.

iii) Ecologically Sustainable Development and building amenity

Building amenity and comfort has been improved by the addition of balustrades that locally mediate the effects of wind, while planting beds have been located to moderate down drafts and channelling winds.

The integration of planting beds with the building structure allows for substantial planting on levels 10 and 11, providing soil volumes that support tree growth and vigour, maximise the water holding capacity of this media and increase resilience of the landscape to urban climatic extremes. The collection and reuse of rainwater for irrigation contributing to both the viability of the planting and the green credentials of the building. The reduction in pavement areas and the reflected heat and glare from these surfaces, also contributing to a cooler city.

Importantly these landscape terraces also bring tenants in contact with nature. Making places of shared habitat and connection with natural phenomena.

iv) meeting the recreation needs of residents

The residents of this building will be the future tenants and the many people who will service the tower and its community.

Level 10
The terrace at level 10 is in two parts.

The eastern terrace holds a gathering space for approx 130 people at the open south-east corner of the podium with vistas to Hyde Park. The space is tempered from extreme north-easterly winds by planting on the east above Castlereagh Street, which also screens neighbouring rooftop services. Planting beds along the western edge locally mediating prevailing winds.

The western terrace is larger, accommodating approx 261 people at the open south-west corner overlooking Town Hall and the future square. This larger events space is supported by a series of smaller gathering areas. In the north-west, a barbeque has been provisioned for in an area away from air intakes which receives midday sun in winter, making this a favoured place for gathering. While above Park Street an undulating planting bed holds a protected space for more intimate gatherings with an adjoining balcony edge catching vistas to Hyde Park.

Moveable furniture will be installed by tenants allowing occupiers to curate this outdoor space.

Level 11
Like Level 10, this terrace has the capacity to hold groups of approx 120 people in cocktail mode. The open south-west corner of the terrace with its balcony edge offering vistas to Hyde Park that helps reinforce this city location. The remaining perimeter of the terrace is planted, with trees muting and screening the north-west boundary of the terrace from the Masonic Centre and rooftop services on the eastern side of Castlereagh Street. The trees tempering the prevailing north-east winds and building down drafts, to increase outdoor comfort and use.

A barbeque is provisioned for away from air intakes and moveable furniture will allow tenants to configure seating to suit the various gatherings anticipated on this terrace- from meetings and lunching to larger events.

1.3 the site

The site is located within the Sydney CBD. It has three separate street frontages, Pitt Street to the west, Park Street to the south and Castlereagh Street to the east. The area surrounding the site consists of predominantly commercial high-density buildings and some residential buildings, with finer grain and heritage buildings dispersed throughout.

The site has an approximate area of 3,150.1sqm and is legally described as follows:

- 252 Pitt Street (Lot 20 in DP1255509)

Location plan
source : Urbis

1.4 sydney metro

Sydney Metro is Australia's biggest public transport program. A new standalone railway, this 21st century network will revolutionise the way Sydney travels.

There are four core components:

- Sydney Metro Northwest (formerly the 36km North West Rail Link)

This project is now complete and passenger services commenced in May 2019 between Rouse Hill and Chatswood, with a metro train every four minutes in the peak. The project was delivered on time and $1 billion under budget.

- Sydney Metro City & Southwest

Sydney Metro City & Southwest project includes a new 30km metro line extending metro rail from the end of Metro Northwest at Chatswood, under Sydney Harbour, through new CBD stations and southwest to Bankstown. It is due to open in 2024 with the ultimate capacity to run a metro train every two minutes each way through the centre of Sydney. Sydney Metro City & Southwest will deliver new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new underground metro platforms at Central Station. In addition it will upgrade and convert all 11 stations between Sydenham and Bankstown to metro standards.
In 2024, customers will benefit from a new fully-air conditioned Sydney Metro train every four minutes in the peak in each direction with lifts, level platforms and platform screen doors for safety, accessibility and increased security.

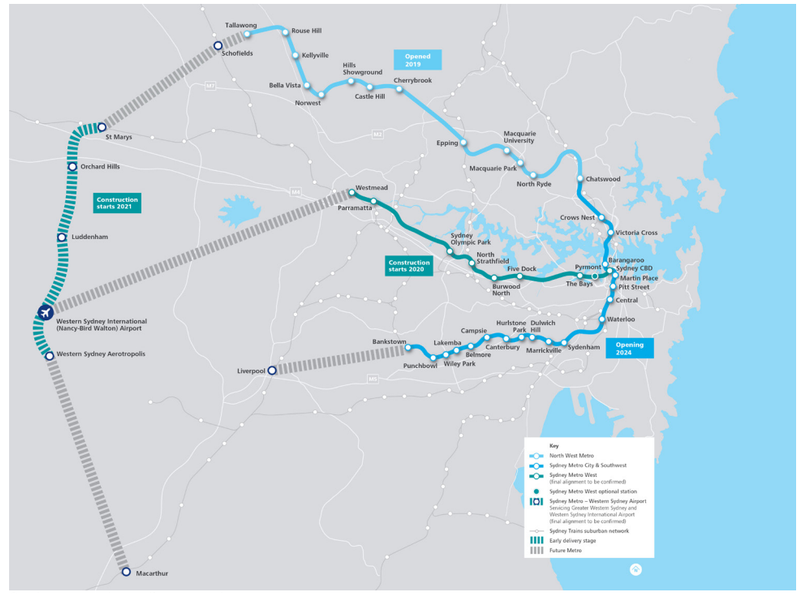
- Sydney Metro West

Sydney Metro West is a new underground railway connecting Greater Parramatta and the Sydney CBD. This once-in-a-century infrastructure investment will transform Sydney for generations to come, doubling rail capacity between these two areas, linking new communities to rail services and supporting employment growth and housing supply between the two CBDs.
The locations of seven proposed metro stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays.
The NSW Government is assessing an optional station at Pyrmont and further planning is underway to determine the location of a new metro station in the Sydney CBD.

- Sydney Metro – Western Sydney Airport

Metro rail will also service Greater Western Sydney and the new Western Sydney International (Nancy Bird Walton) Airport. The new railway line will become the transport spine for the Western Parkland City's growth for generations to come, connecting communities and travellers with the rest of Sydney's public transport system with a fast, safe and easy metro service. The Australian and NSW governments are equal partners in the delivery of this new railway.

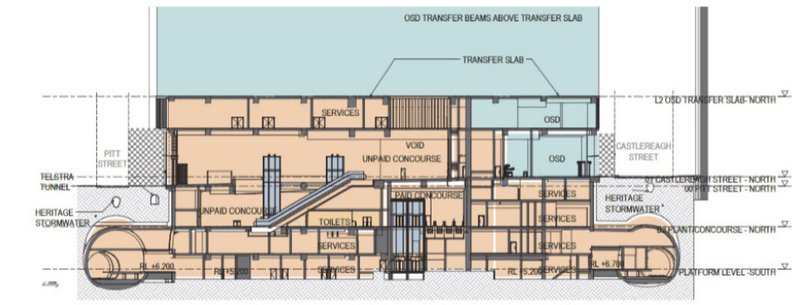
The Sydney Metro Project is illustrated in the Figure below.



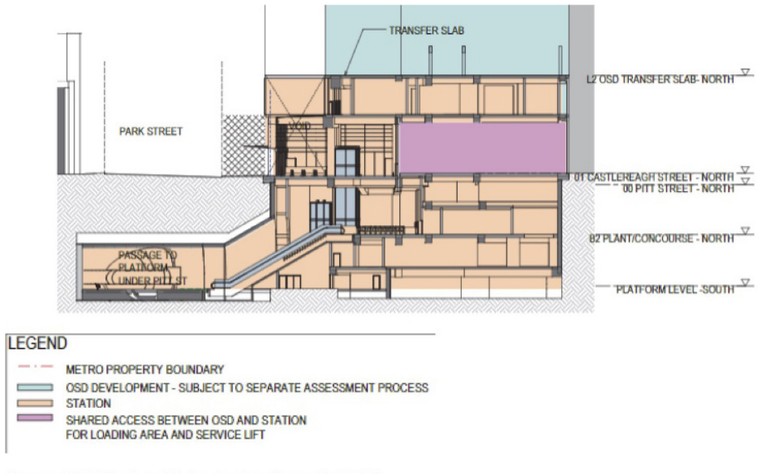
Sydney Metro Alignment Map
source : Sydney Metro

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a Critical State Significant Infrastructure project (reference SSI 15_7400) (CSSI Approval). The terms of the CSSI Approval includes all works required to construct the Sydney Metro Pitt Street Station, including the demolition of existing buildings and structures on both sites (north and south). The CSSI Approval also includes construction of below and above ground works within the metro station structure for appropriate integration with over station developments.

The CSSI Approval included Indicative Interface Drawings for the below and above ground works at Pitt Street North Metro Station site. The delineation between the approved Sydney Metro works, generally described as within the "metro box", and the Over Station Development (OSD) elements are illustrated below. The delineation line between the CSSI Approved works and the OSD envelope is generally described below or above the transfer slab level respectively.



Pitt Street Station - North (East-West Section)
source : CSSI Preferred Infrastructure Report (TfNSW)

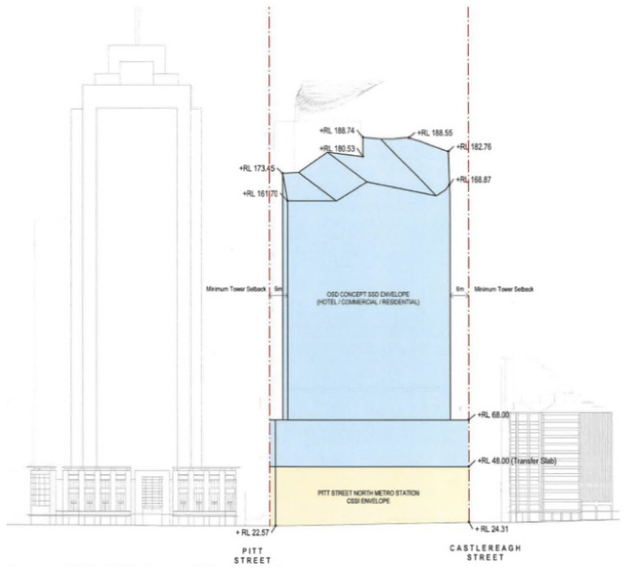


Pitt Street Station - North (North-South Section)
source : CSSI Preferred Infrastructure Report (TfNSW)

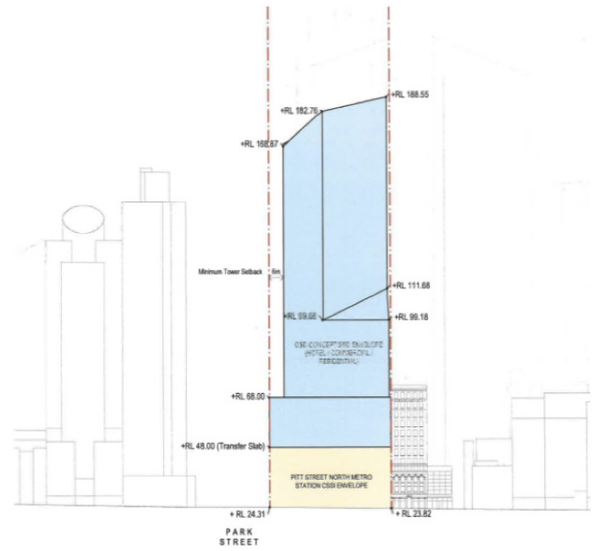
The Preferred Infrastructure Report (PIR) noted that the integration of the OSD elements and the metro station elements would be subject to the design resolution process, noting that the detailed design of the "metro box" may vary from the concept design assessed within the planning approval.
As such in summary:

- The CSSI Approval provides consent for the construction of all structures within the approved "metro box" envelope for Pitt Street North.
- The CSSI Approval provides consent for the fit out and use of all areas within the approved "metro box" envelope that relate to the ongoing use and operation of the Sydney Metro.
- The CSSI Approval provides consent for the embellishment of the public domain, and the architectural design of the "metro box" envelope as it relates to the approved Sydney Metro and the approved Pitt Street North Station Design & Precinct Plan.
- Separate development consent however is required to be issued by the NSW DPIE for the use and fit-out of space within the "metro box" envelope for areas related to the OSD, and notably the construction and use of the OSD itself.

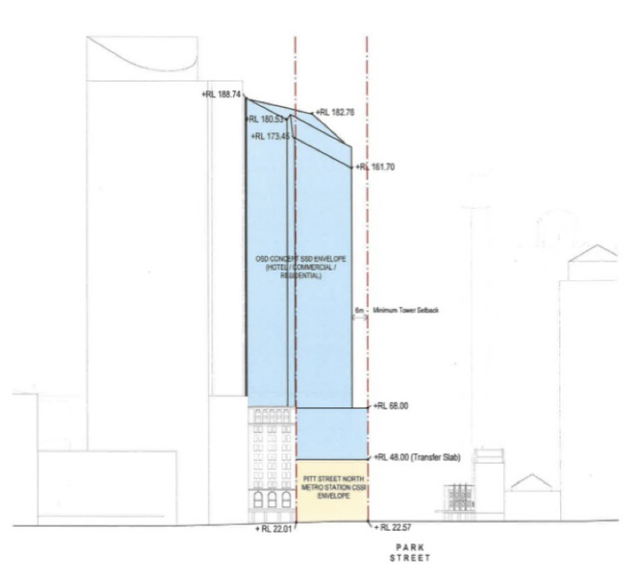
As per the requirements of clause 7.20 of the Sydney Local Environmental Plan 2012, as the OSD exceeds a height of 55 metres above ground level (among other triggers), development consent is first required to be issued in a Concept (formerly known as Stage 1) DA. This is described below.



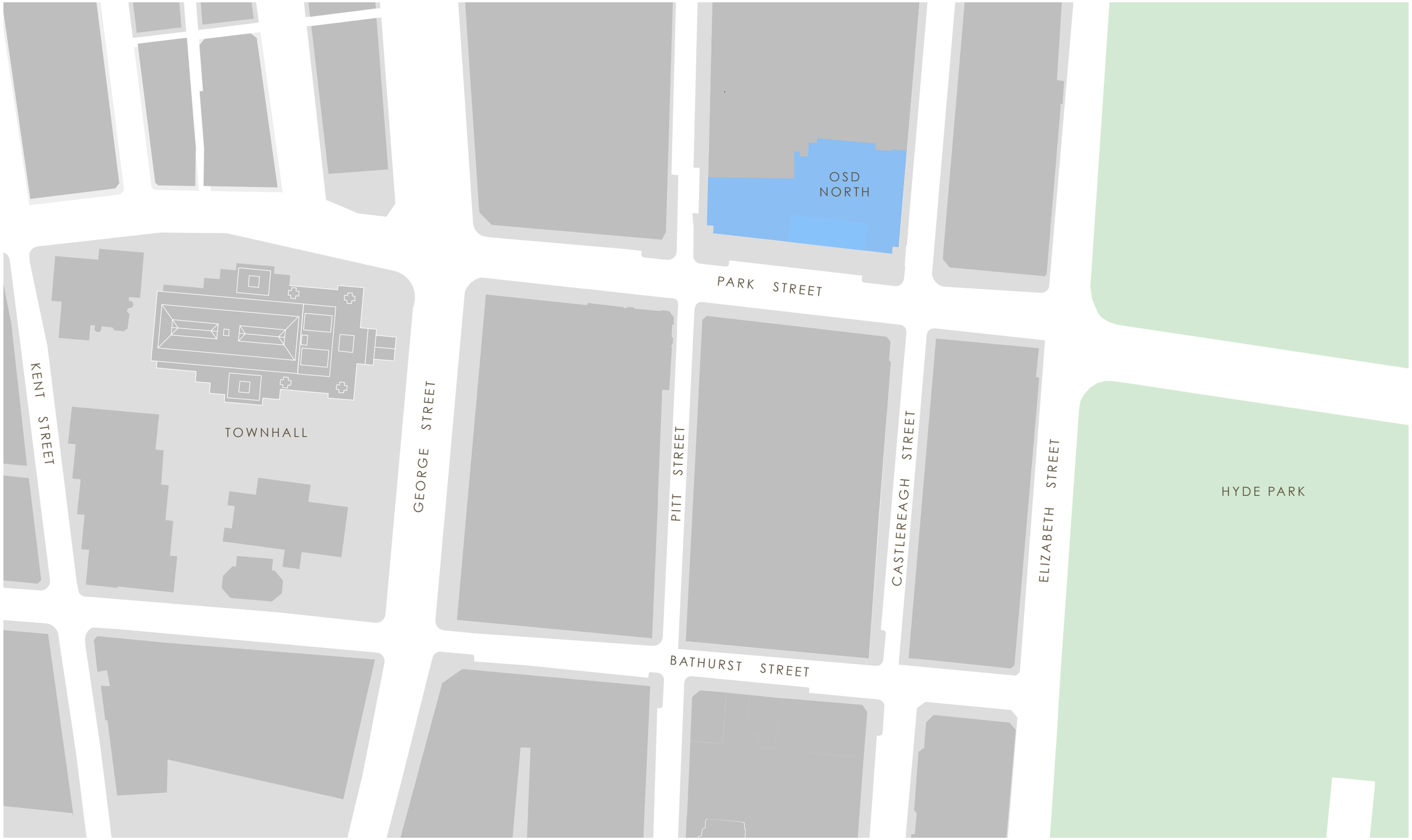
Pitt Street North Concept SSD DA - Envelope - South Section
source : SSD 8875 Concept Stamped Plans



Pitt Street North Concept SSD DA – Envelope – East Elevation
source : SSD 8875 Concept Stamped Plans



Pitt Street North Concept SSD DA – Envelope – East - West Elevation
source : SSD 8875 Concept Stamped Plans


OSD
NORTH
PARK STREET
KENT STREET
TOWNHALL
GEORGE STREET
PITT STREET
CASTLEREAGH STREET
ELIZABETH STREET
BATHURST STREET
HYDE PARK

2.0 landscape context

The siting of Pitt Street North Station on Park Street signals the pre-eminence of this cross-city connection and the potential of the street as future city boulevard. The immediate connection to the City's public spaces, its plazas, parklands and cultural institutions, gives the site deeper resonance and landscape significance.

The first order issue is to ensure the public domain is clear, legible, safe and comfortable for all. The equal and complementary move is to amplify the sense of landscape within the Over Station Development. Matching urban scale initiatives with smaller site-specific interventions that heighten the contribution of landscape to the life and performance of the building. Giving greater presence to the biotic, the sensate and the ecological within the tower.

2.1 landscape vision

The Pitt Street North building is an office tower with retail spaces activating the ground level of the building and commercial tenancies above. The elevated levels taking in fantastic views of the city- west to Town Hall and the future City Square and across Hyde Park to the harbour landscape.

Within the tower the landscape presence is concentrated at podium level where terrace gardens condition the interior as well as the experience of being outside within the city landscape.

Riffing on the shifting form of the façade and shading devices, the fluid form of the garden alludes to the harbour and its patterned landscape of points and coves. The concave forms making breakout spaces for workshops, meetings, lunch and office celebrations.

Glimpsed from the streets below, the gardens add to the future transformation of Park Street while amplifying the connection and relationship of this site to Hyde Park.

Architecturally the building is tuned to its city context with the materials palette for the tower drawing on the neighbouring heritage listed buildings. The sandstone façades and bronze detailing of the old architecture in turn informing the materials palette and planting selection.

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connects to the city landscape of midtown

the garden terraces provide a landscape foreground to the city

- in dialogue with the architecture of the building
- focussing views to city landmarks
- screening building services
- distancing unremarkable neighbouring buildings

supports sustainability and wellness

the garden terraces condition the interior of the building

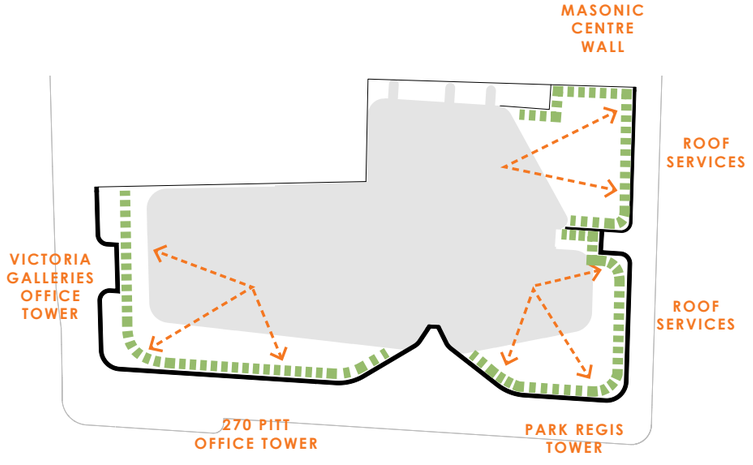
- providing connection to nature and urban habitat
- reducing pavement glared and radiant heat
- providing a soothing green backdrop for inside work and communal space

makes comfortable outdoor spaces

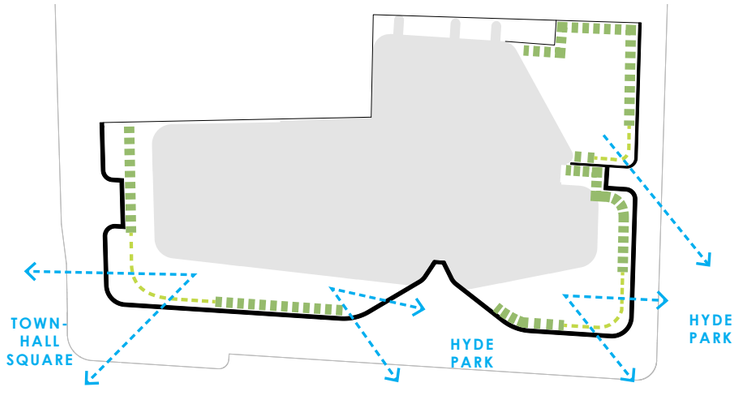
the garden terraces condition the exterior spaces making comfortable places to occupy

- framing spaces for both small and large gatherings in areas of winter sun and summer shade
- reducing down draft and wind with generous planting areas
- providing sufficient soil depth and volumes for trees
- providing balustrades to reduce wind flows and increase comfort

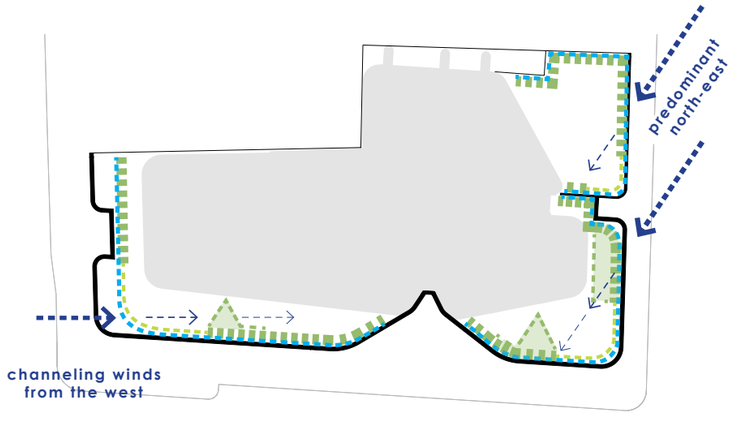
2.3 landscape moves



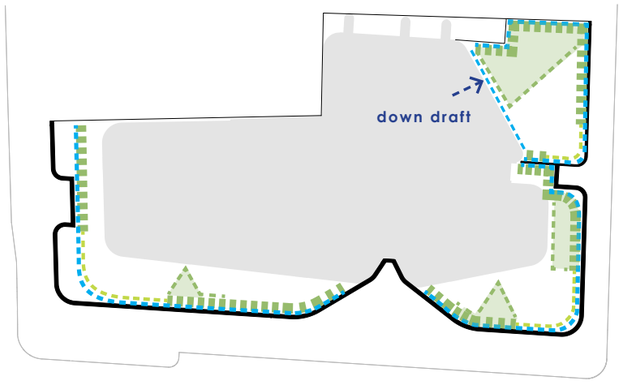
1. foreground internal views with a continuous green edge and screen services and non descript facades



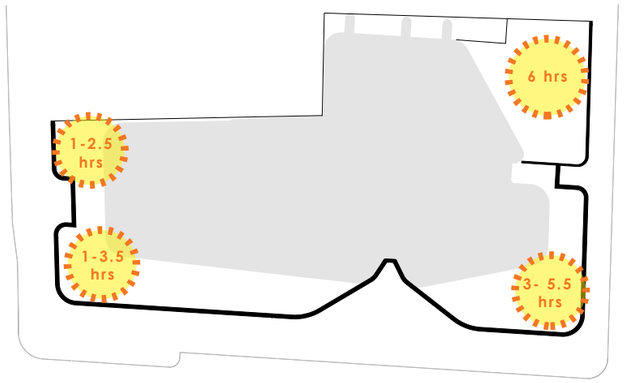
2. focus best views by reducing height of planters in key locations



3. protect outdoor terrace from high intensity winds with a balustrade and raised planter beds



4. reduce affect of down drafts with additonal tree planting



5. collect activity in areas the capture the sun in summer + winter

6. grow a sustainable landscape that is visable from both level 10 + 11 and from the surrounding buildings

3.0 **level 10 + 11** - concept

The landscape terrace wraps the base of the tower at the podium level, with a patterning of gardens along the building perimeter. Planting beds choreograph the terrace- shaping view lines, defining gathering spaces and mediating wind flows. Riffing on the shifting form of the façade and shading devices as well as the city beyond. The concave forms making intimate breakout spaces for workshops, meetings and lunches with the larger open areas for events and office celebrations.

The materials palette is simple and unifies both terraces. Pavements will reduce glare while planters will maximise soil volumes and speak to the materiality of the architecture.

Planting is offset from the perimeter of the podium to allow façade maintenance with trees glimpsed from the streets below. The raised planter beds offering a maximum of 800mm soil depth for small scale trees. A balustrade set along the perimeter of the roof assists in wind control and fall height compliance. The balustrade providing safe access for workers to maintain these gardens without the need for harnessing.

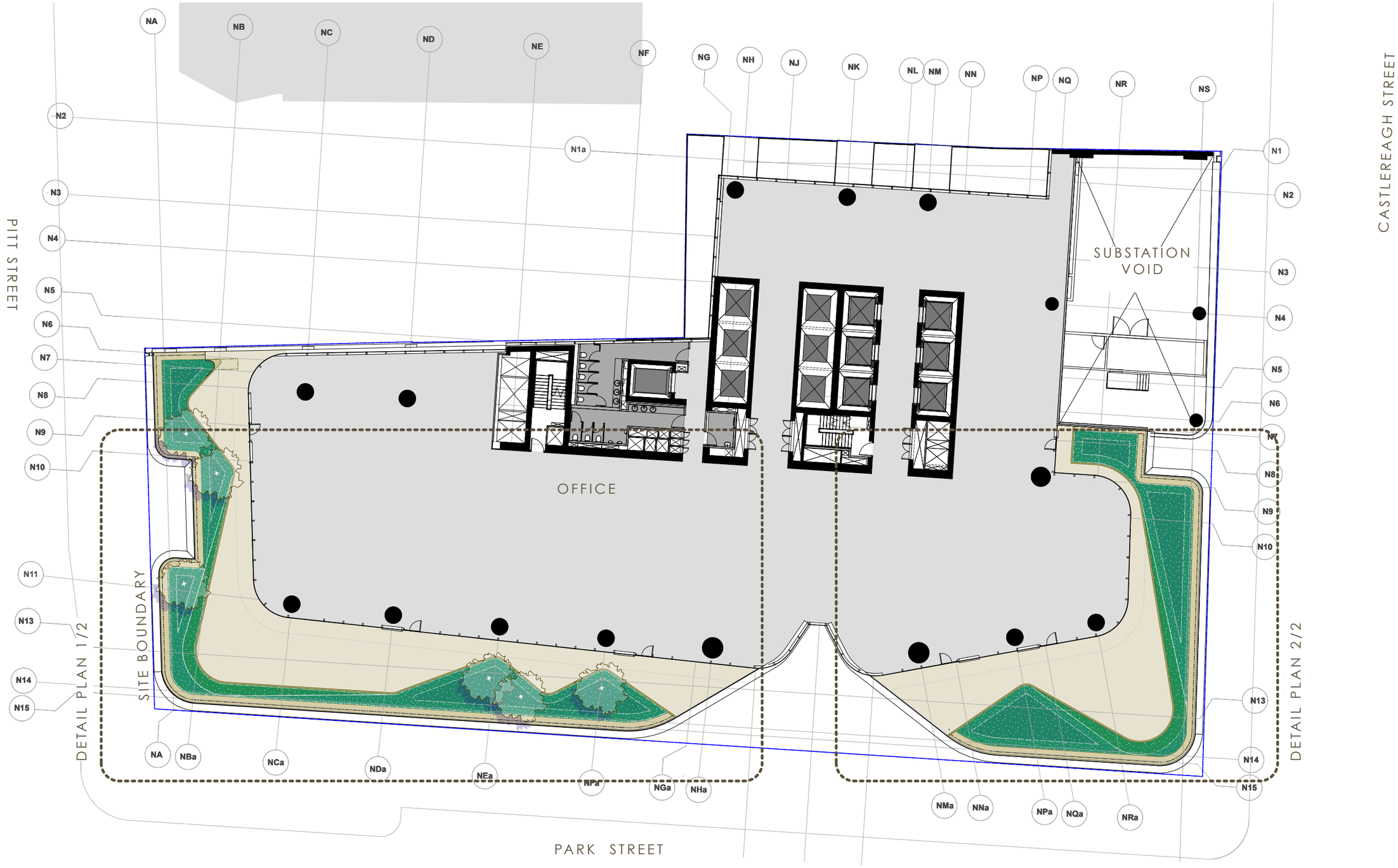
Planting will be irrigated and species suited to the elevation and exposure. The canopy tree is yet to be confirmed but will complement a soft understorey of local reeds and rushes, which pick up and complement the copper hues of the façade. Adding to the sense of movement implied in the composition.

The mix of reed and rush species will be patterned across the planter beds according to light conditions. Ferns add complexity to the planting design within areas of deep shade. Interspersed within this planting palette will be scented species with culinary herbs collocated with the barbeque.

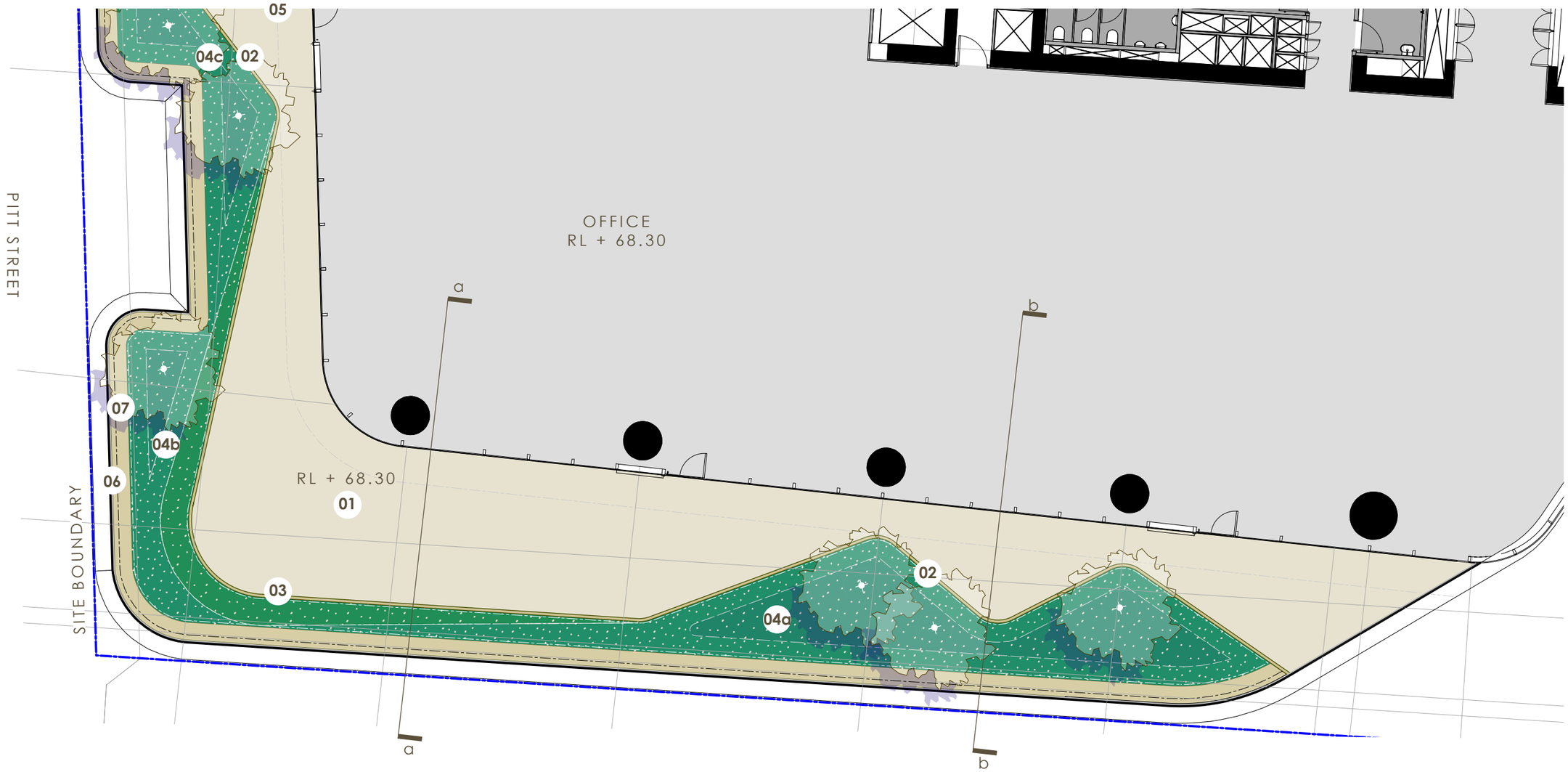
Preliminary Materials Selections

Paving- to future selection
Retaining wall- bronze or brass coloured finish
Planting- canopy tree to future selection
current selection, Water Gum, Tristainiopsis laurina
Planting- dominant understorey- shade tolerant reed, rushes & ferns with hints of brown and copper to match the façade

3.1 **level 10** - plan



3.2 **level 10** - detail plan - 1/2



legend

1 paved terrace
2 generally consistant raised edge to front and back of terrace to allow for 600mm soil depth with mass planting
3 locally lowered edge to focus views 300mm soil depth with grasses + groundcover
4 planter locally mounded for 800mm soil depth allowing for tree planting with understorey .
a three trees share ;
- 22m3 at 800mm depth
- 41m3 at varying 600-800mm depths for the total soil volume of the planter

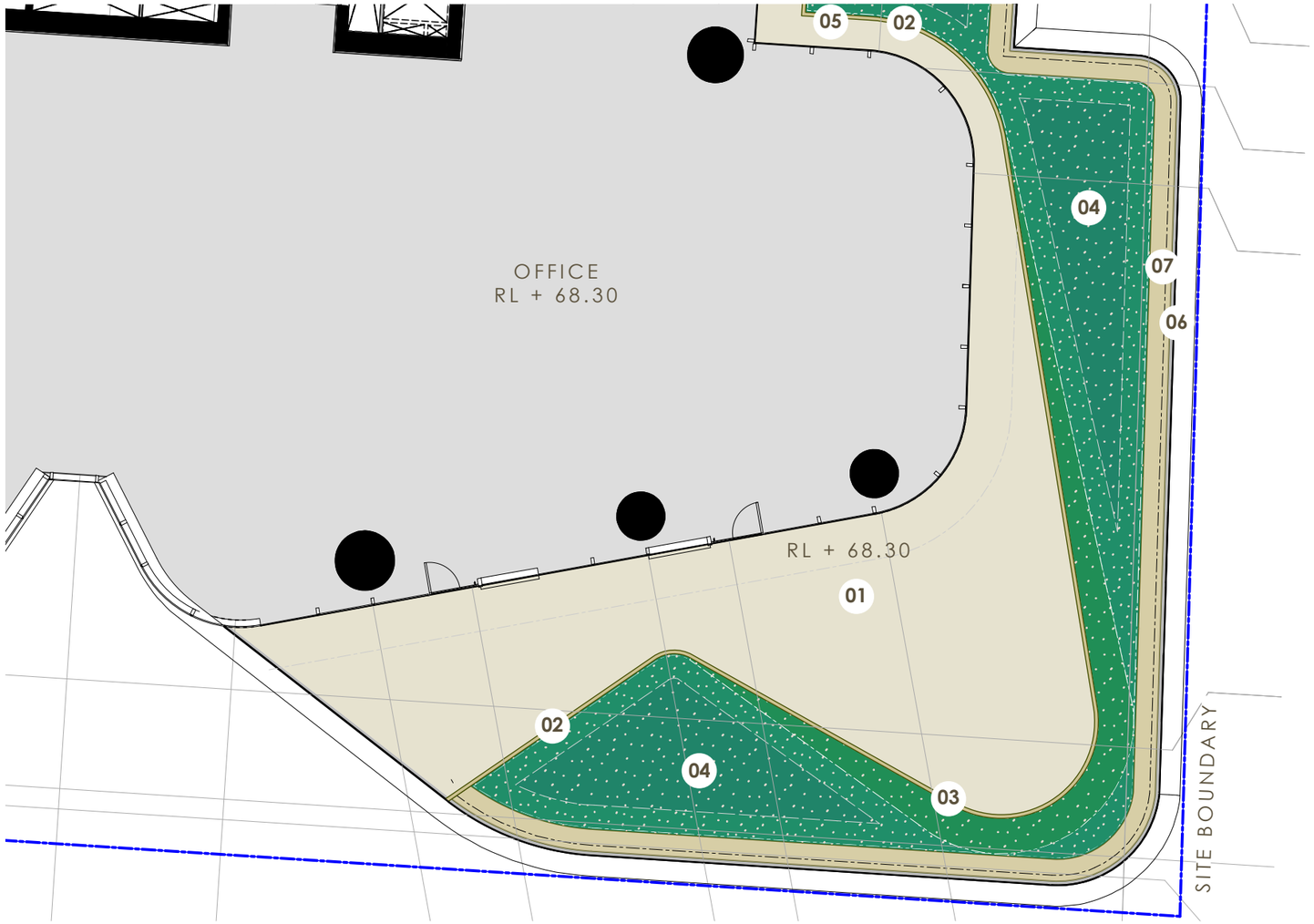
b one tree ;
- 24m3 at 800mm depth
- 10m3 at varying 600-800mm depths for the total soil volume of the planter

c two trees share ;
- 8.5m3 at 800mm depth
- 21m3 at varying 600-800mm depths for the total soil volume of the planter

5 provision for future bbq including water + gas
6 balustrade edge by architects
7 facade maintenance zone

note : soil depth varies 300-800mm.
The constructed soil profile achieves a maximum depth of 800mm, and the total soil volume surrounding the trees is considered well suited to the cultivation of small sized trees, like the ones selected

3.2 **level 10** - detail plan - 2/2



legend

1 paved terrace
2 generally consistant raised edge to front and back of terrace to allow for 600mm soil depth with mass planting
3 locally lowered edge to focus views 300mm soil depth with grasses + groundcover
4 planter locally mounded
5 cilmbers up substation wall
6 balustrade edge by architects
7 facade maintenance zone

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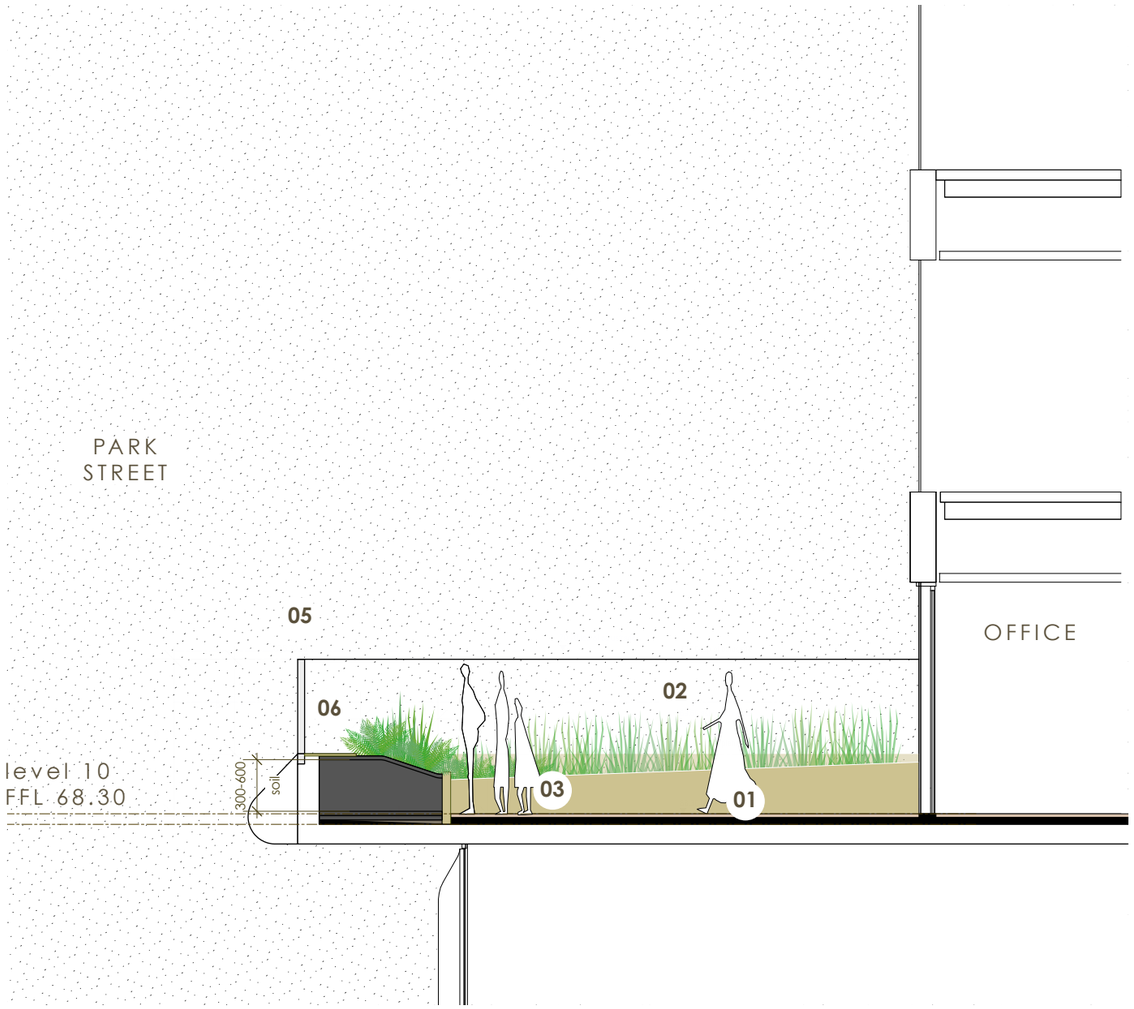
3.3 **level 10** - sections



section a-a

section b-b

legend

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4 planter locally mounded for 800mm soil depth allowing for tree planting with understorey .
5 balustrade edge by architects
6 facade maintenance zone

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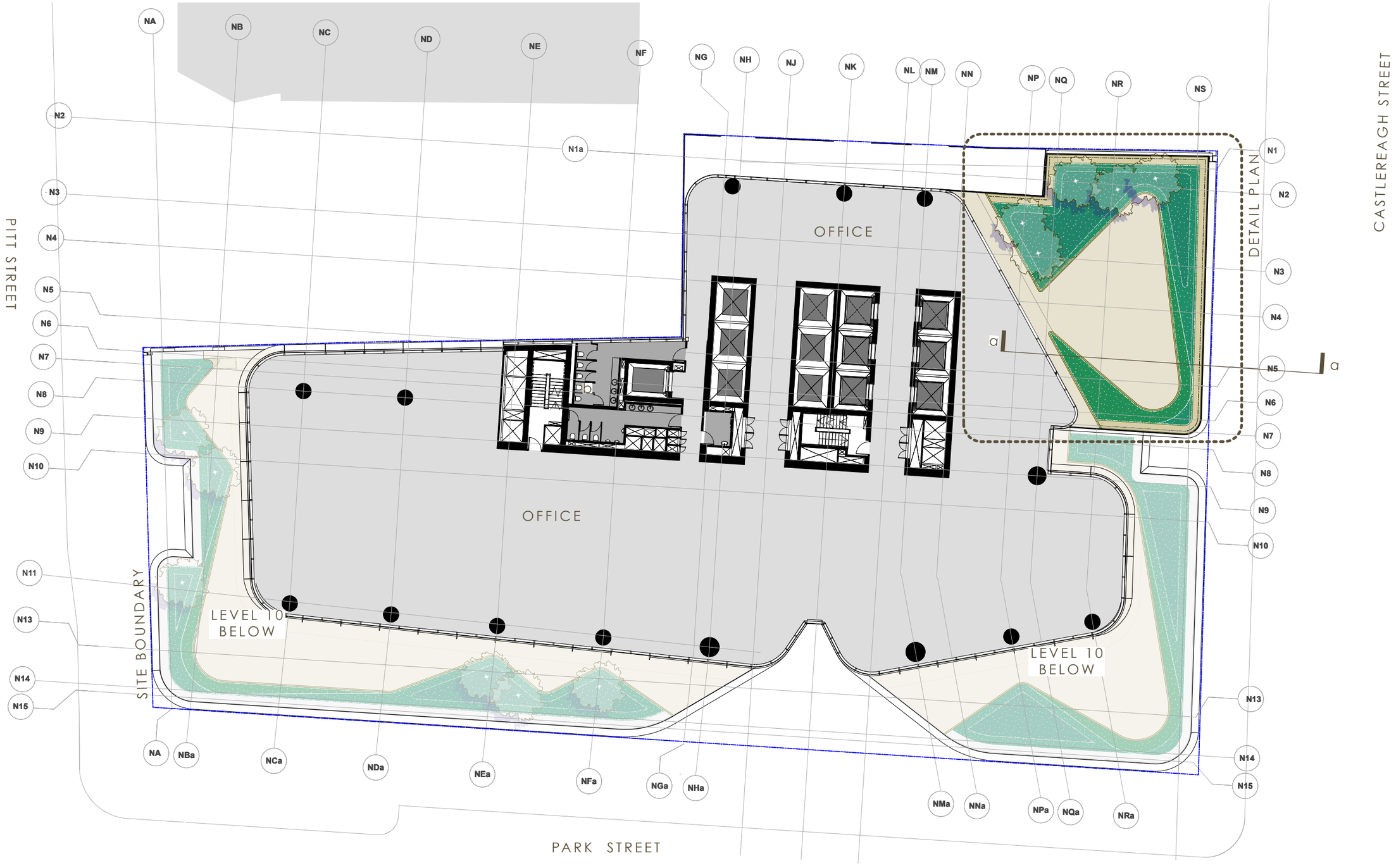
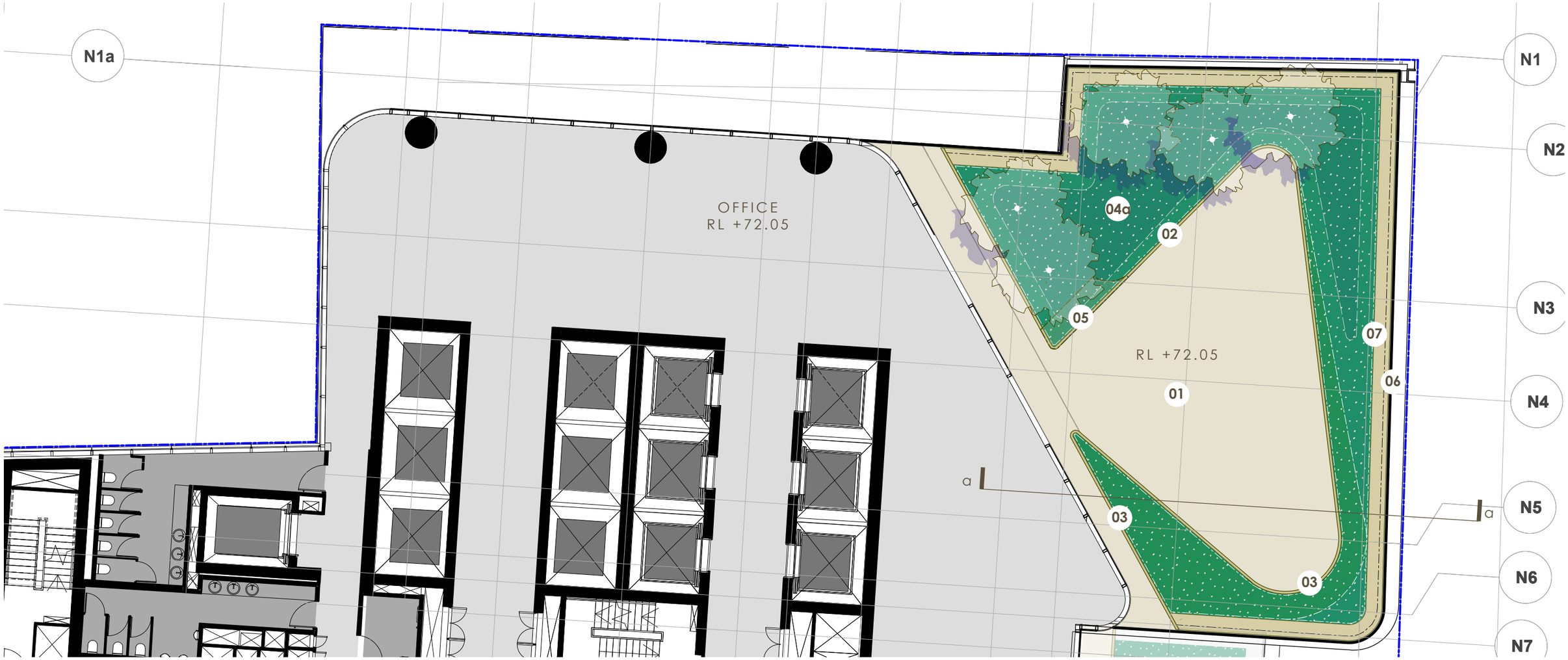
3.4 **level 11** - plan



3.5 **level 11** - detail plan



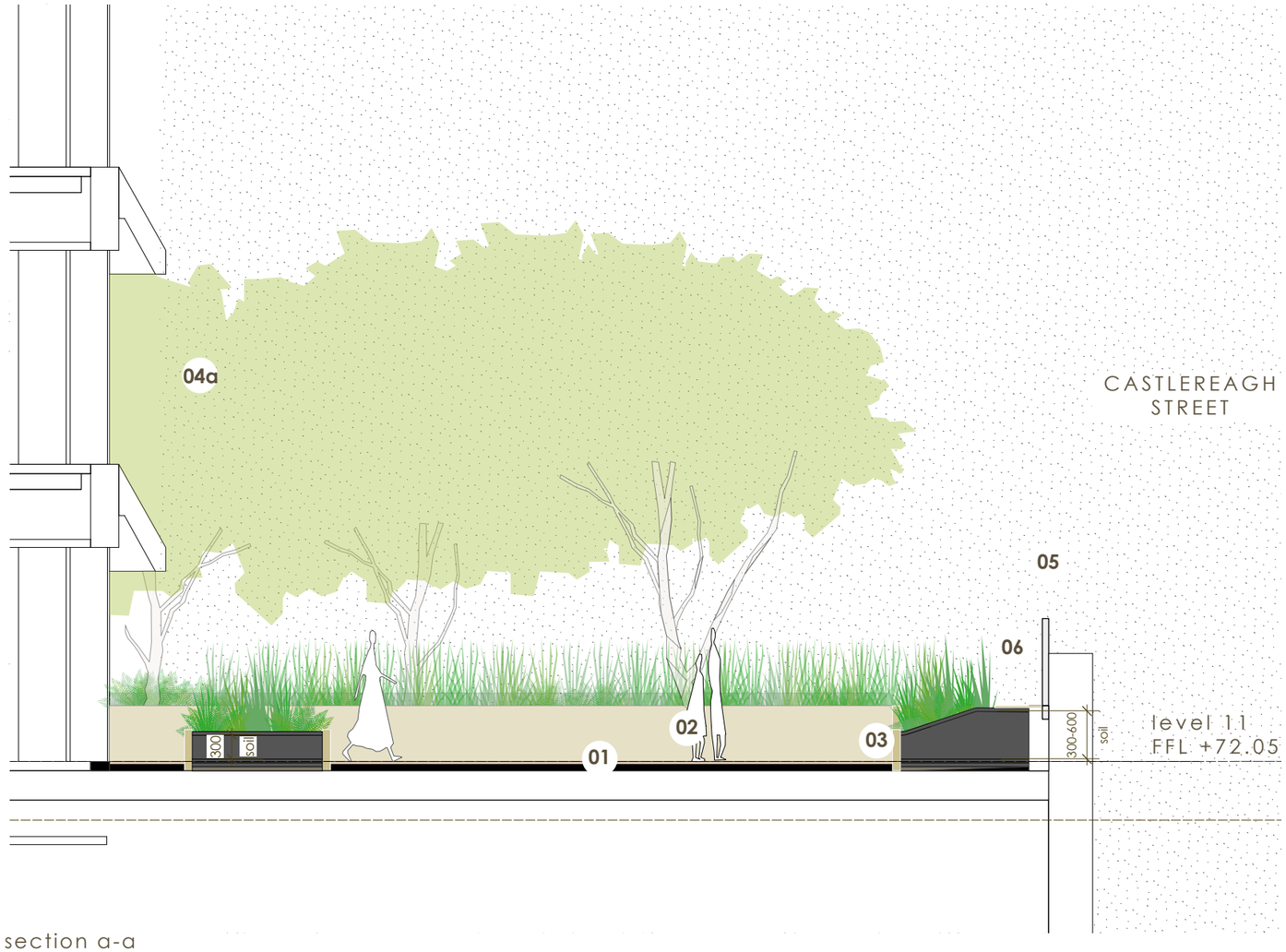
legend

1 paved terrace
2 generally consistant raised edge to front and back of terrace to allow for 600mm soil depth with mass planting
3 locally lowered edge to focus views with grasses + groundcover
4 planter locally mounded for 800mm soil depth allowing for tree planting with understorey
a five trees share ;
- 40m3 at 800mm depth
- 60m3 at varying 600-800mm depths for the total soil volume of the planter

5 provision for future bbq including water + gas
6 balustrade edge by architects
7 facade maintenance zone

note : soil depth varies 300-800mm.
The constructed soil profile achieves a maximum depth of 800mm, and the total soil volume surrounding the trees is considered well suited to the cultivation of small sized trees, like the ones selected

3.6 **level 11** - section



section a-a

legend

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- 60m3 at varying 600-800mm depths for the total soil volume of the planter

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note : soil depth varies 300-800mm.
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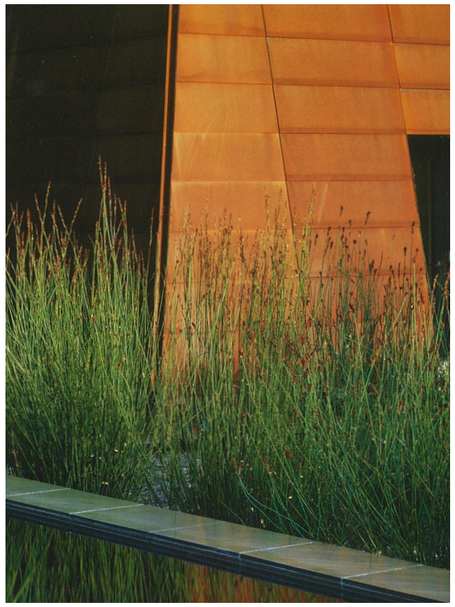
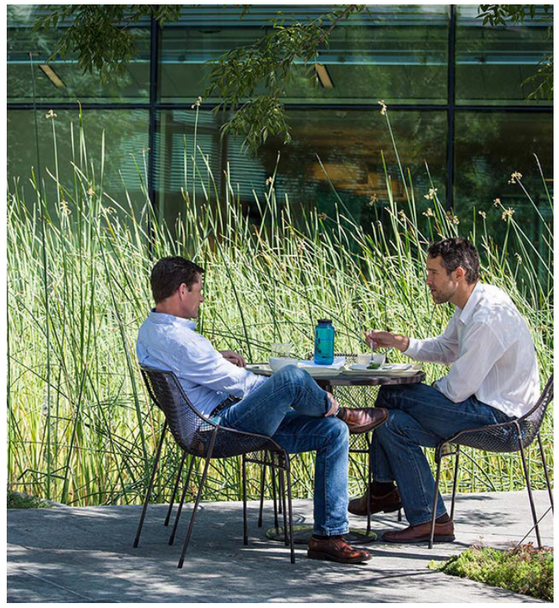
3.7 **level 10 + 11** - preliminary materials + precedents



architectural forms + brown hues connect
to the facade materiality
Private residence, Andrea Cochran

raised planting, simple materials
Holyrood North, Harrison Stevens



immersive garden where needed for screening
Bill + Melinda Gate foundation, Gustafson

3.8 **level 10 + 11** - preliminary planting selection - external is predominantly south facing, windy and in full shade, part sun