

Date: 14 September, 2021

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Architectural Design Report - Response to Submission

# UNSW Health Translation Hub

<b>Client:</b>	Project and report	UNSW Health Translation Hub	
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	This report is considered a draft unless signed by a Director or Principal	Approved by: Sacha Coles	

**Designers:**

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Indigenous Integration

ARUP  
Structure  
Services  
Vertical Transportation  
Wind  
Acoustics

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WTPartnership  
Quantity Surveyor

JMT Consulting  
Traffic

Warren Smith & Partners  
Civil

Atelier Ten  
ESD

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# Executive Summary

This report has been prepared on behalf of UNSW as an addendum to SSD 10822510 for the Health Translation Hub building.

The report has been compiled to respond to the design-related submissions received by the Department of Planning and Environment and Randwick City Council during the public exhibition of the UNSW HTH.

Please note the item numbers correspond with RfS schedule, and that all architectural drawings referred to are included in attachment A.



## Item 1. Provision of Outdoor Terraces

### DPIE Comment:

Further consideration should be given to the provision of outdoor roof terraces to provide amenity for occupants as well as opportunities for outdoor learning or breakout spaces. GANSW have advised that “no access to outdoor learning or breakout spaces is considered a poor outcome”.

## Item 34. Roof Top Terrace

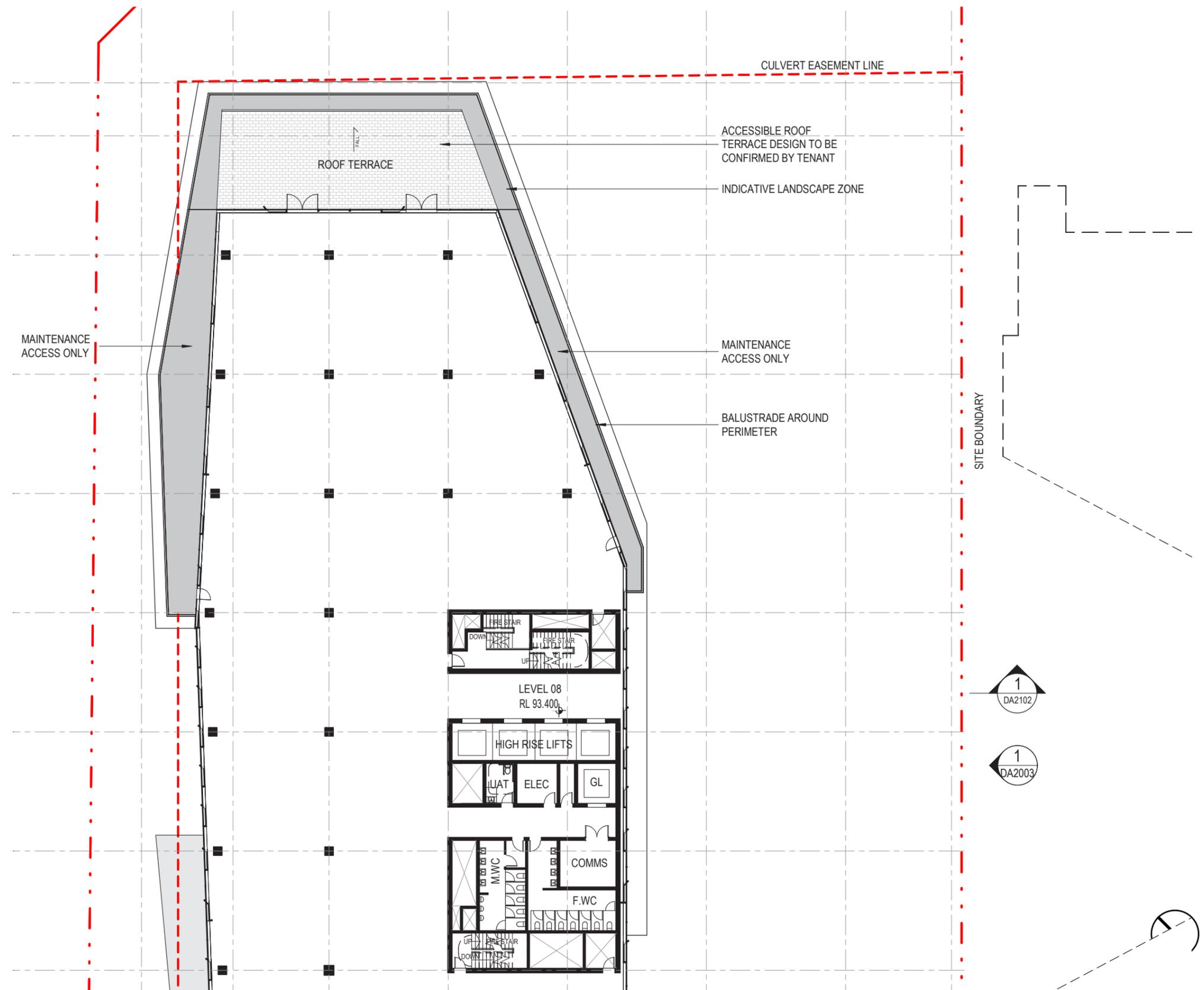
### RCC Comment:

Further landscape detail is required for the proposed roof level and upper level terraces. The podium roof areas should be utilised to provide outdoor landscaped terrace areas for workers and visitors where possible.

### Response:

The design team supports the recommendation to make the roof top terrace spaces accessible and include additional landscaping. The northern roof top that is accessible from level 8 has been selected as the most appropriate location due to its northern aspect, expansive views and advantageous weather/wind protection.

This has been reflected in the revised level 8 plan, that includes a mixture of accessible outdoor amenity to the north and maintenance zones to the east and west.



## Item 2. Canopy Cover and Landscape Plans

### DPIE Comment:

“Consideration should be given to improving tree canopy cover, noting the proposed 14 per cent coverage falls short of minimum 25 per cent recommended within the NSW Government Architect’s Draft Greener Places Design Guide. Any comparisons against the ‘existing’ canopy coverage to justify the proposed canopy cover should be based on an assessment of the canopy cover of the previous residential use of the site, prior to clearing of the site.”

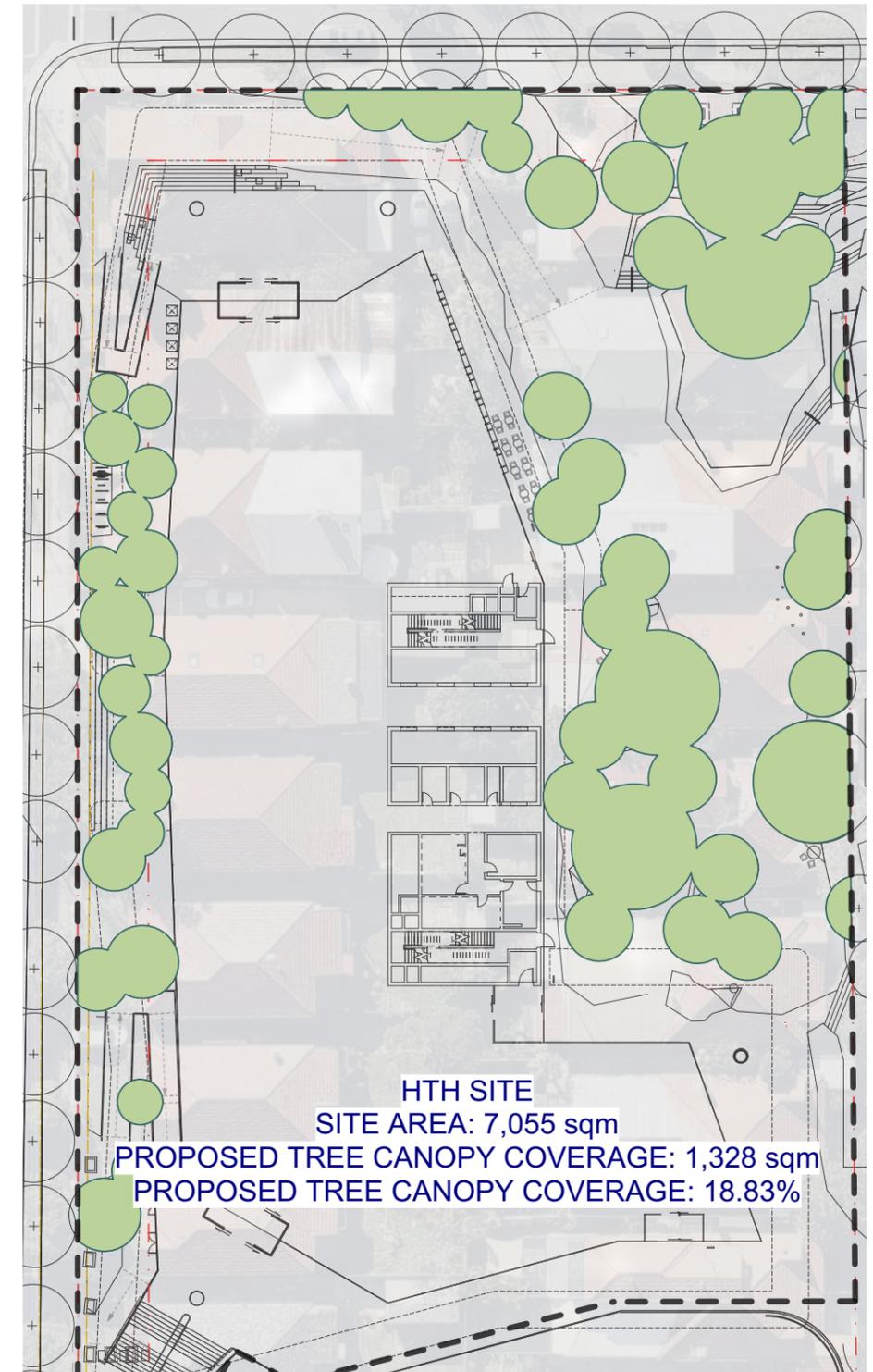
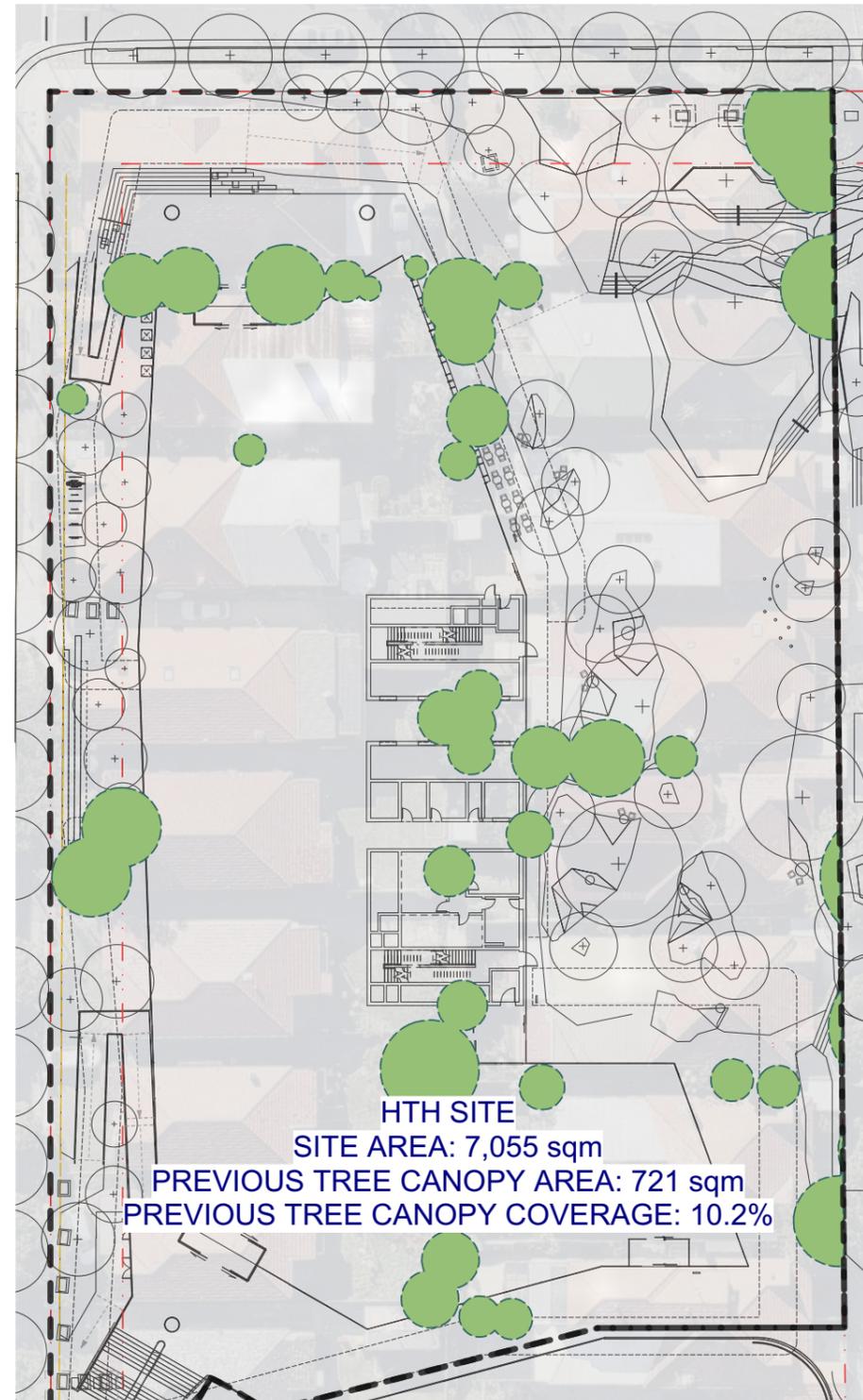
### Response:

Through a series of precinct-specific design moves, the public realm and landscape for the UNSW HTH creates a place that is safe, permeable and legible, culturally-significant, comfortable and engaging, and driven by the users of the place.

This has shaped a site-specific design response that prioritises people movement and user experiences with clear, legible and intuitive wayfinding into and through the site, and the surrounding health precinct. The design team also worked closely with the needs of the adjacent SCH1/CCCC and IASB design teams, particularly addressing pedestrian access and wayfinding to the new emergency departments from key transport nodes on High St and Randwick Town Centre. This approach of prioritising pedestrian movement and legible sight lines into and through the precinct, has delivered of a carefully considered arrangement of endemic trees and plants and coupled with places to sit and gather.

The revised tree canopy of 18.83% provides the maximum possible coverage capacity within the site whilst also balancing the key precinct principle of maintaining clear, open and intuitive wayfinding.

The site is currently devoid of vegetation, however the previous residential use of the site had a tree canopy coverage of 10.2%. We have located additional trees where soil depth is appropriate, particularly within the northern landscape embankment and the plaza planters. Tree planting within the stormwater culvert has been restricted to areas which allow for substantial mounding resulting in a greater soil volume.



### Item 3. Canopy Cover and Landscape Plans

**DPIE Comment:**

“Consideration should be given to opportunities to providing larger trees and more trees at the ground plane, particularly in the deep soil zones, but also through improved soil depth and volumes for on-structure plantings and through more detailed consideration of opportunities and limitations of plantings above and around the stormwater culvert.”.

**Response:**

We have located additional trees where soil depth is adequate to come to a revised canopy coverage calculation of 18.83%. Tree planting within the stormwater culvert has been restricted to areas which allow for substantial mounding resulting in a greater soil volume.



## Item 5. Canopy Cover and Landscape Plans

### DPIE Comment:

“The landscape plans are to be updated to:

- Identify the species of each proposed tree on the plans.
- Include a planting schedule that identifies species, pot size, mature height and width, and the number of each of the proposed trees to be planted.

### Response:

The design team supports this recommendation and have included the requested information adjacent.

We have selected local endemic species to allow for a large shaded tree canopy and variance in planting composition and heights.

- Provide sections clearly demonstrating soil depth and volume for all plantings on structures and over the stormwater culvert.

### Response:

The design team supports this recommendation and have included the requested information on the previous page and requested sections apart of *Item 33. Landscaping.*

- Clarify the provision and specifications of any permeable paving.

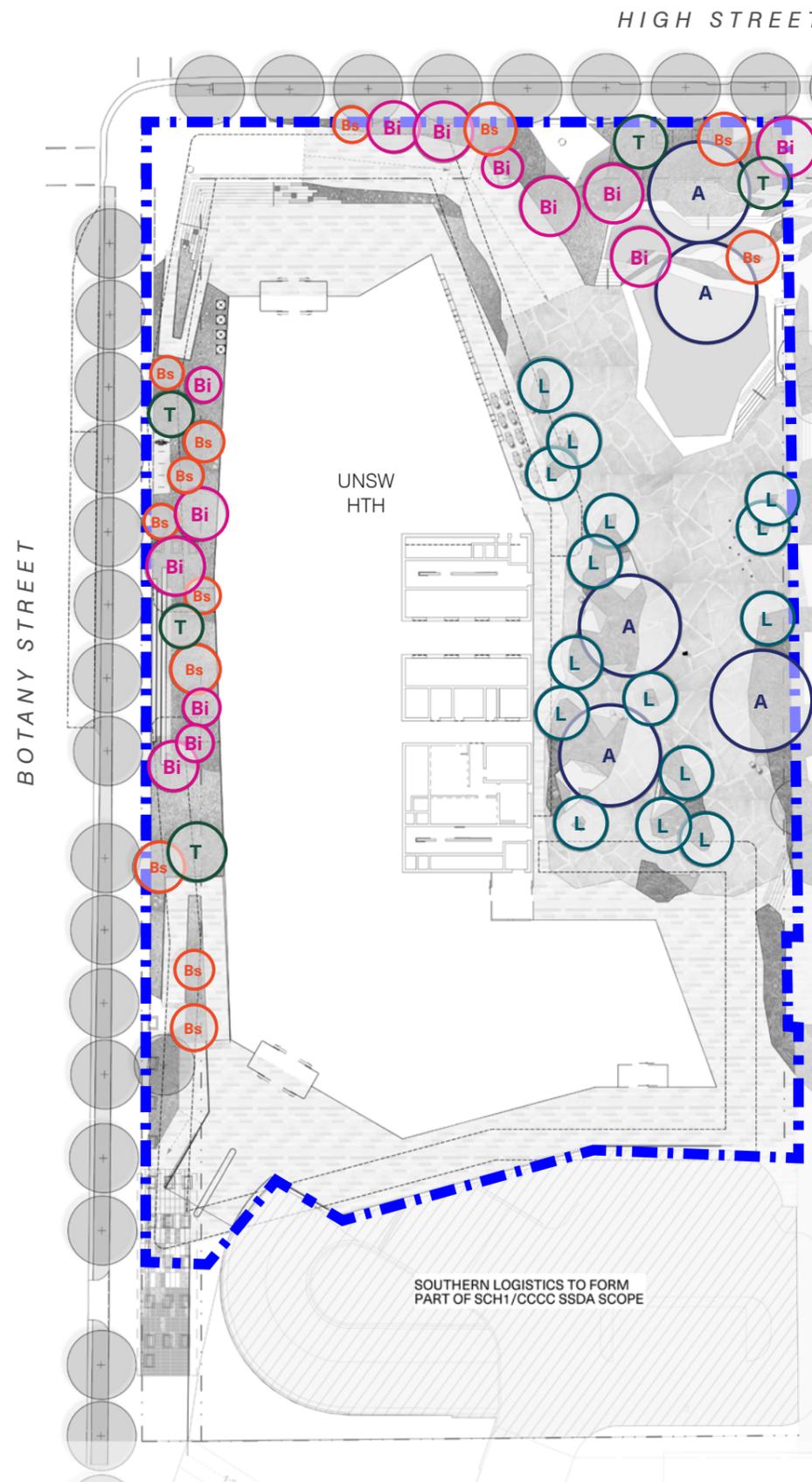
### Response:

There are very few permeable pavers that are appropriate for a high traffic, urban plaza environment. Proprietary interlocking pavers create issues for DDA compliance and risks of trips and falls with the gaps between them, and bonded aggregate types are more appropriate around tree pits and in low traffic movement zones due to longevity of the product. Further information on the provisions and specifications of permeable paving has been provided apart of *Item 32. Landscaping.*

- Include any proposed landscaping of terraces or podium roof levels.”

### Response:

The design team have indicated a landscape zone on the level 8 rooftop podium, it is designed as a simple space to allow for flexibility for any future tenancy requirements. Noting that there is not sufficient soil volume due to the space constraints to allow for trees within this area.



### TREE SCHEDULE

Key	Name	Mature Size	Origin	Pot Size	QTY
A	<i>Angophora costata</i> Smooth-barker Apple	20m H x 12m W	Native	400L	6
Bi	<i>Banksia integrifolia</i> Coast Banksia	15m H x 6m W	Native	400L	12
Bs	<i>Banksia serrata</i> Old Man Banksia	10m H x 5m W	Native	400L	15
T	<i>Tristaniopsis 'Luscious'</i> Water Gum	7-12m H x 5m W	Native	400L	7
L	<i>Livistona australis</i> Cabbage-tree Palm	20m H x 6m W	Native	400L	17

## Item 6. Bridge Connection to SCH

### DPIE Comment:

*Further consideration should be given to the design of the airbridge connection to the proposed SCH Stage 1 and CCCC building, having regard to previous advice from the State Design Review Panel on the proposal and the adjoining proposal.*

### Response:

The UNSW HTH design team has given further consideration to the design of the airbridge connection to the proposed SCH Stage 1 and CCCC, having regard to previous advice from the State Design Review Panel on the proposal and the adjoining proposal.

With reference to the most up-to-date façade design for the SCH Stage 1, the UNSW HTH design team proposes to remove the solar hoods - that previously extended along the airbridge connection - to provide an un-adorned elevation to the airbridge that is characterised by the transparency of its glazing. To reinforce the neutrality of the airbridge, the northern facade has been recessed to further separate the building facades and give emphasis to the airbridge's legibility and purpose as a linking element in the composition of building forms.

Architectus, as the architect for the UNSW HTH, confidently recommends this design refinement in response to submissions as the adjustment is consistent with the design intent for this precinct whereby each building expresses its unique identity with the airbridge having a more neutral character that allows this identity to be best represented.

This design refinement has been illustrated in the adjacent images and updated elevations in attachment A.

Solar hoods to be removed



SSD Design - View 1



RtS Design - View 1



SSD Design - View 2



RtS Design - View 2

## Item 7. Botany Street

### DPIE Comment:

Remove indented drop-off spaces on Botany Road and provide updated plans to reflect the removal.

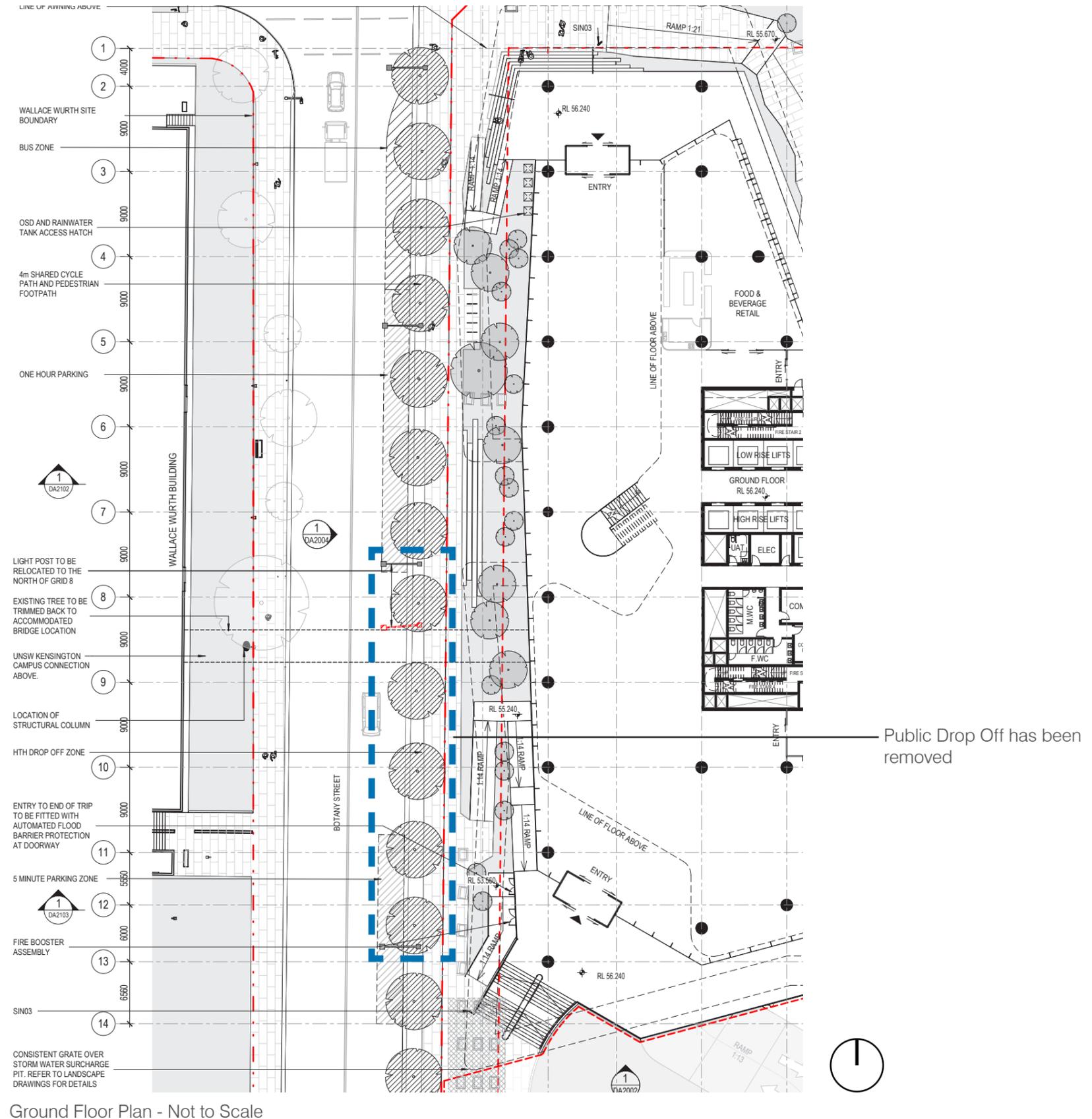
## Item 24. Public Drop Off

### RCC Comment:

The creation of an intended parking bay for the 'Pick Up/Drop Off' (PUDO) task along Botany Street is not supported. Along a 55m length of 1 hour parking, the creation of a PUDO bay affords no benefit. Indeed, the creation of the proposed PUDO actually reduces parking efficiency due to the required angled transition from the existing kerb line to the recessed kerb line. Council recommends simply signposting the PUDO area while maintaining the existing shared path and providing the opportunity to continue some low level Botany Street landscaping elements. This signposted area will accommodate the PUDO task and have the adjacent shared path maintained at full width. In addition, a 'signposting only' solution provides flexibility to increase (or decrease) the length of the PUDO zone in the future, depending on demand over time.

### Response:

The design team supports the recommendation to remove the public drop off zone. The street, kerb and shared footpath has been reinstated in the revised plans in Attachment A, and further information is provided in the Transport and Traffic Report.



## Item 15. High Street footpath

### RCC Comment:

The proposed pedestrian footpath along High Street is approximately 2.5m wide with a nature strip of approximately 1m to 1.2m. Council requires a minimum footpath width of 4m to 5m to provide for the increased density of new development and to cater for projected increased pedestrian and bike rider movements along High Street, including movements generated by the Light Rail station. It is understood that flooding constraints have informed the design of the footpath and landscaping along High Street, however widening of the footpath width in this location should be further investigated.

### Response:

The design team does not support the recommendation to increase the footpath width. The proposed footpath width is consistent with the existing surrounding footpaths and was considered appropriate as part of the light rail development, which took into account increased pedestrian movements generated by the light rail stations.

Further, the UNSW HTH development delivers open and generous internal pedestrian networks, including:

- A stronger east-west connection through the Randwick Hospital Campus allowing future connection from Avoca to Botany Street, along the southern edge of the UNSW HTH site, as defined within the GRUM principles, with inclusion of a generous 5m wide pedestrian pathway.
- Strong internal pedestrian pathways in and through the UNSW HTH site establishing an all-access path of travel through the public spaces.
- An above ground link to facilitate pedestrian movements between the UNSW Kensington Campus and the Randwick Hospital Campus.

The ability to increase the width of the footpath is significantly limited by the topography of the site and existing stormwater infrastructure. In summary the landscape setback to High Street has been designed to accommodate pedestrian connections from the UNSW light rail stop and UNSW Kensington campus into the UNSW Plaza and HTH Building, as well as to the main building entries to the SCH Stage 1 and CCCC and IASB projects, and the emergency department of the new SCH Stage 1 and CCCC.

Key to this approach is the ability to seamlessly integrate the level change between the UNSW Plaza and existing footpath, in order to provide compliant grades, whilst facilitating an equitable, inviting and

sympathetic landscape treatment. A wider footpath would increase the slope of the landscape embankment and would raise the height of the retaining wall adjacent to the High Street footpath.

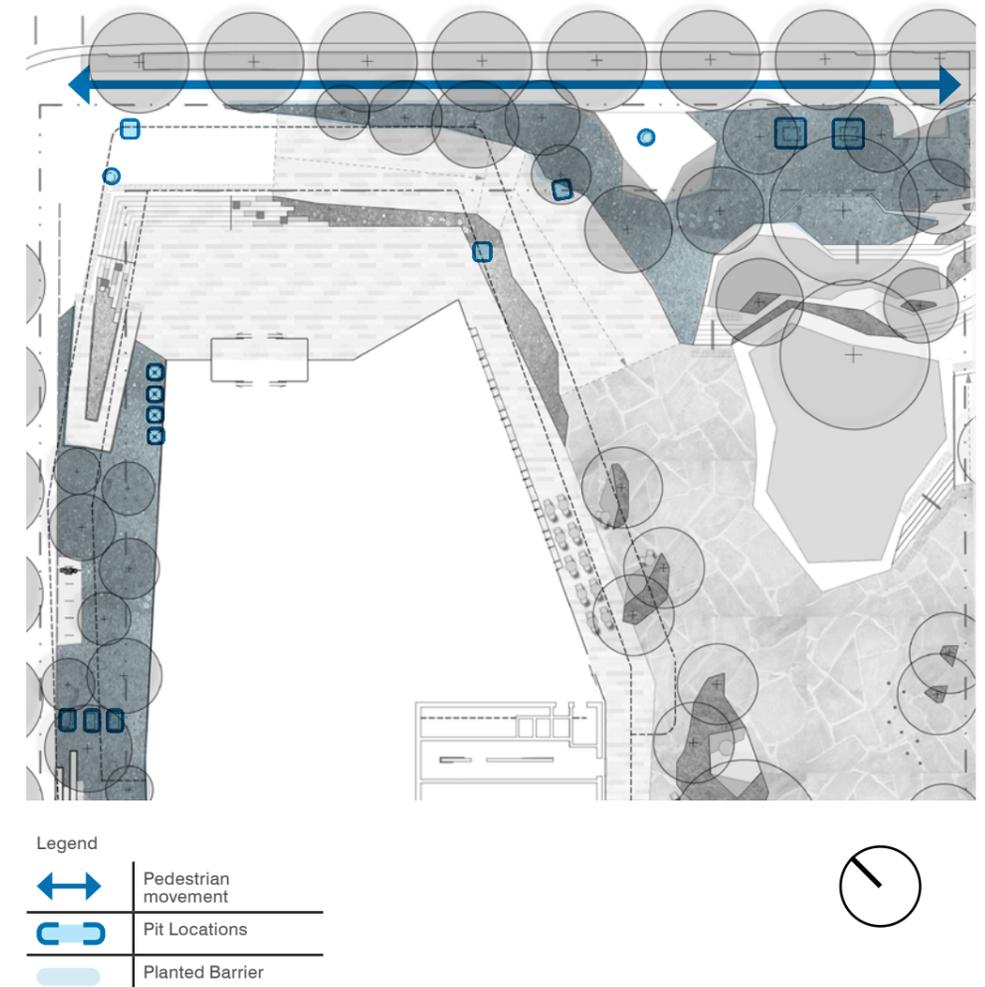
This raises the following issues, which would adversely impact public amenity:

- Increased gradient of the proposed 1:26 footpath, which would impact the seamless accessible transition between the existing footpath and UNSW Plaza.
- Introduction of a 650mm retaining wall to High Street, which would impact public amenity, connectivity and views into the UNSW Plaza. The avoidance of retaining walls as much as practical is an important project principle facilitating a pedestrian pathway that reduces boundary lines and promotes an inviting and equitable key entry.
- A reduction in potential for tree planting in the landscape zone.
- Increased potential for landscape erosion and plant failure on the embankment.

There needs to be physical separation between pedestrians and the stormwater infrastructure. The stormwater infrastructure requires the installation of pits, which present a safety hazard for pedestrians. As part of the current design, there is a small, planted buffer to reduce the risk of pedestrians slipping or falling. If the footpath width was increased, this buffer would be lost, leading to potential for injury.

In summary, it is not possible to extend the width of the footpath whilst maintaining the current design principles for the site and retaining a gradient slope into the UNSW Plaza along High Street. As currently designed, the landscape gradually steps up to the Plaza level, creating a series of transitions and allowing views into the Plaza from the street. The landscape design has been developed to address the natural topography and the site constraints – a strategy which has been supported by the NSW Government Architect State Design Review Panel.

If the High Street footpath was widened, it would affect the public amenity within and around the precinct, creating a steep landscape embankment and retaining wall adjacent to the High Street footpath, and affecting the 1:26 pathway into the UNSW Plaza. Further, the footpath cannot be widened without introducing potential safety conflicts with the stormwater infrastructure.



## Item 18. Shadow Diagrams

### RCC Comment:

The shadow diagrams provided are limited, addressing only the early morning, midday and late afternoon. Hourly shadow diagrams at the June 21 should be provided to assess solar access and amenity.

### Response:

Please find the additional shadow diagrams adjacent, and also included in Attachment A.



1 June 21 - 9am  
CD305 SCALE: 1:2000



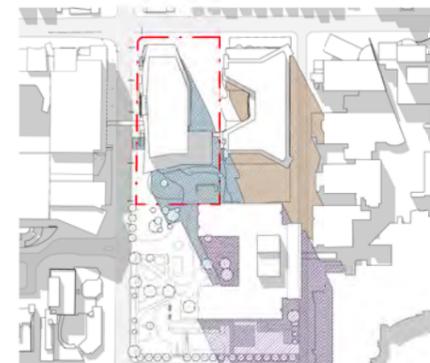
2 June 21 - 10am  
CD305 SCALE: 1:2000



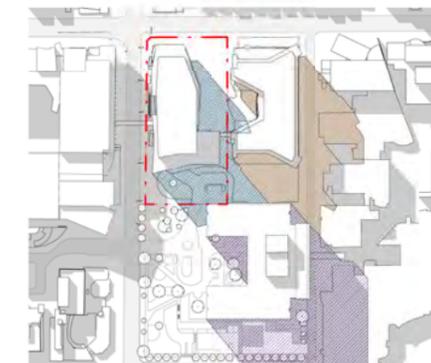
3 June 21 - 11am  
CD305 SCALE: 1:2000



4 June 21 - 12pm  
CD305 SCALE: 1:2000



5 June 21 - 1pm  
CD305 SCALE: 1:2000



6 June 21 - 2pm  
CD305 SCALE: 1:2000



7 June 21 - 3pm  
CD305 SCALE: 1:2000



8 June 21 - 4pm  
CD305 SCALE: 1:2000

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Nominated Architect  
Fay Brown, NOVEMBER 6359

Do not scale drawings. Verify all dimensions on site.

Issue	Amendment	Date
A	ISSUED FOR RITS	09.07.21

**GENERAL NOTES:**  
DO NOT SCALE FROM THE DRAWINGS. USE ONLY FIGURED DIMENSIONS.  
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.  
REDUCED LEVELS (RL) ARE TO AUSTRALIAN HEIGHT DATUM (AHD).  
COORDINATES ARE TO THE GRID AUSTRALIAN (GDA).  
THE ARCHITECTURAL DOCUMENTATION IS ONLY ALLOWED TO BE USED FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED. UNAUTHORISED USE OF THE DOCUMENTATION IS PROHIBITED.

**LEGEND**  
- SHADOWS CAST BY UNSW HTH BUILDING  
- SHADOWS CAST BY SCH STAGE 01 AND CCCC  
- SHADOWS CAST BY ASB



project  
UNSW Health Translation Hub

drawing

Shadow Analysis

scale As drawing no.  
drawn indicated@A1- TH DA9201  
checked JC issue  
project no 190551.00 A

16/07/2021 4:53:57 PM

## Item 21. Botany St Pedestrian Bridge

### RCC Comment:

*Council questions the reason for providing a central open-air section with glazed airlocks at each end of the bridge. A continuous glassy enclosure may provide better weather protection for people crossing the bridge and remove the need for two airlocks.*

### Response:

The UNSW campus bridge connection has been designed as a passively ventilated space with a fine mesh throw screen along its elevations to remove the need for mechanical services. This improves the internal ceiling heights by reducing the ceiling/roof depth to create a lightweight aesthetic, while also maintaining the appropriate weather protection.

The glazed airlocks at each end of the bridge provide buffers between the bridge and adjacent conditioned spaces for both buildings, allowing internal conditions and comfort to be maintained in these areas. Being glazed, the air locks should not be visible and impact the overall aesthetic of the bridge.

During the next stages of the project, detailed stakeholder engagement will be undertaken and should there be a requirement for the bridge to be full enclosed, there is an opportunity for the bridge to be completely glazed and conditioned .



Glazed air locks are not highly visible

Passive Ventilation

Minimal elegant design achieved by minimising service zones in floor and ceiling

## Item 32. Landscaping

### RCC Comment:

The ground level plaza and the overall landscape and planting themes are supported. Clarification is required as to the permeability of the paving within the central plaza and whether this will contribute to deep soil areas in a meaningful way. Permeable paving should be provided in this regard. Council also recommends additional trees be planted in the plaza to benefit from this large area of the proposed deep soil.

## Item 41. Sustainability and biodiversity

### RCC Comment:

Council suggests that the utilisation of Water Sensitive Urban Design (WSUD) features as committed to in the ESD Design Report could include a greater percentage of permeable surface in the public domain areas.

### Response:

As mentioned in response to *Item. 5 Canopy Cover and Landscape Plans*, the design team does not support this recommendation and have provided further information on the provisions and specifications below.

There are very few permeable pavers that are appropriate for a high traffic, urban plaza environment. Proprietary interlocking pavers create issues for DDA compliance and risks of trips and falls with the gaps between them, and bonded aggregate types are more appropriate around tree pits and in low traffic movement zones due to longevity of the product.

We intend to use planting between sandstone paving and timber decks adjacent to seating within the breakout zone as permeable paving solutions. We also note that we are working with the civil engineers to resolve the design intent of a WSUD and biofiltration system within the landscape embankment to High Street.

The use of a soil-vault system will be implemented underneath non-permeable paving areas to allow for oxygen and water to enter compacted soil. This ensures trees are able to reach maturity and good health. This also contributes to the overarching WSUD strategy in which water is captured within landscaped areas.

The additional tree planting is now proposed and tree canopy coverage now achieves 18.83%.



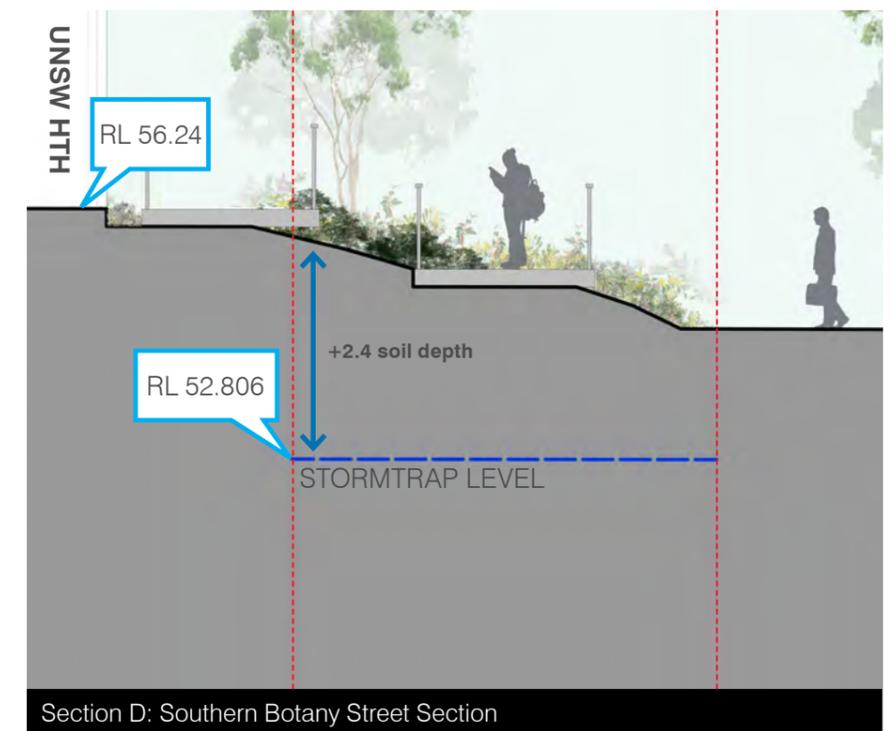
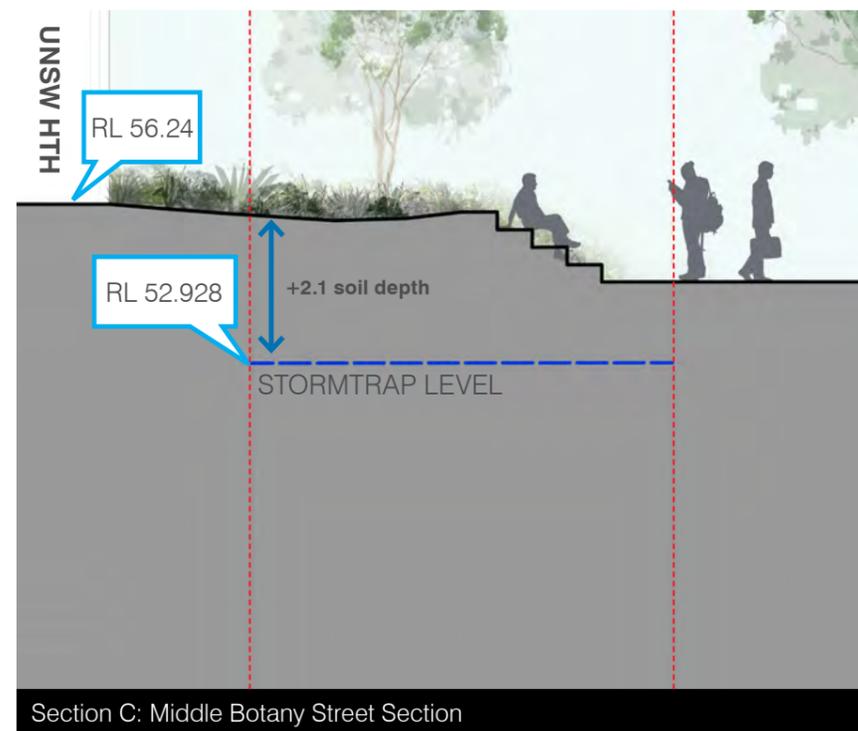
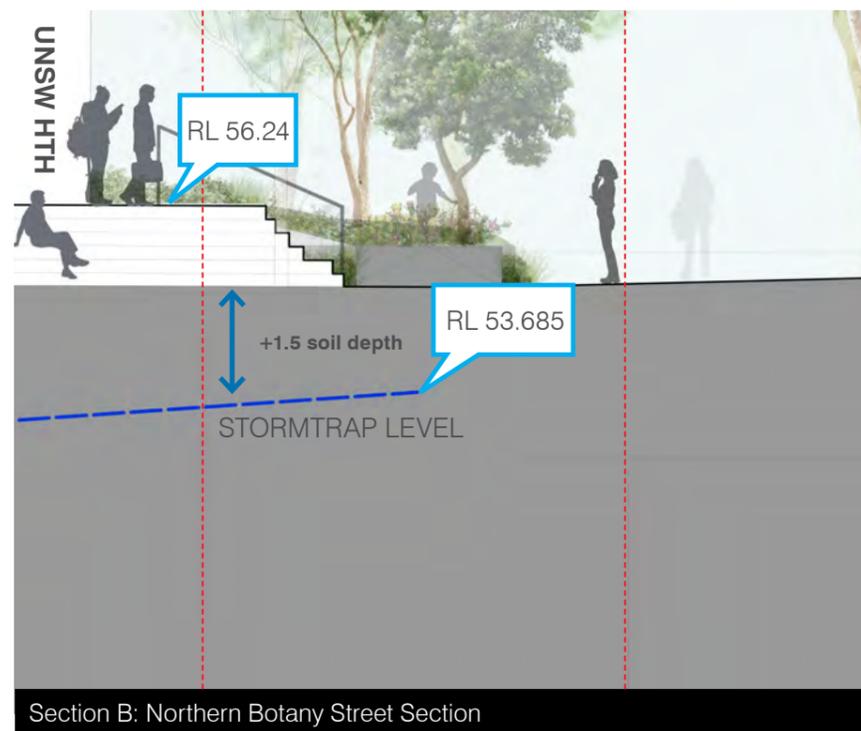
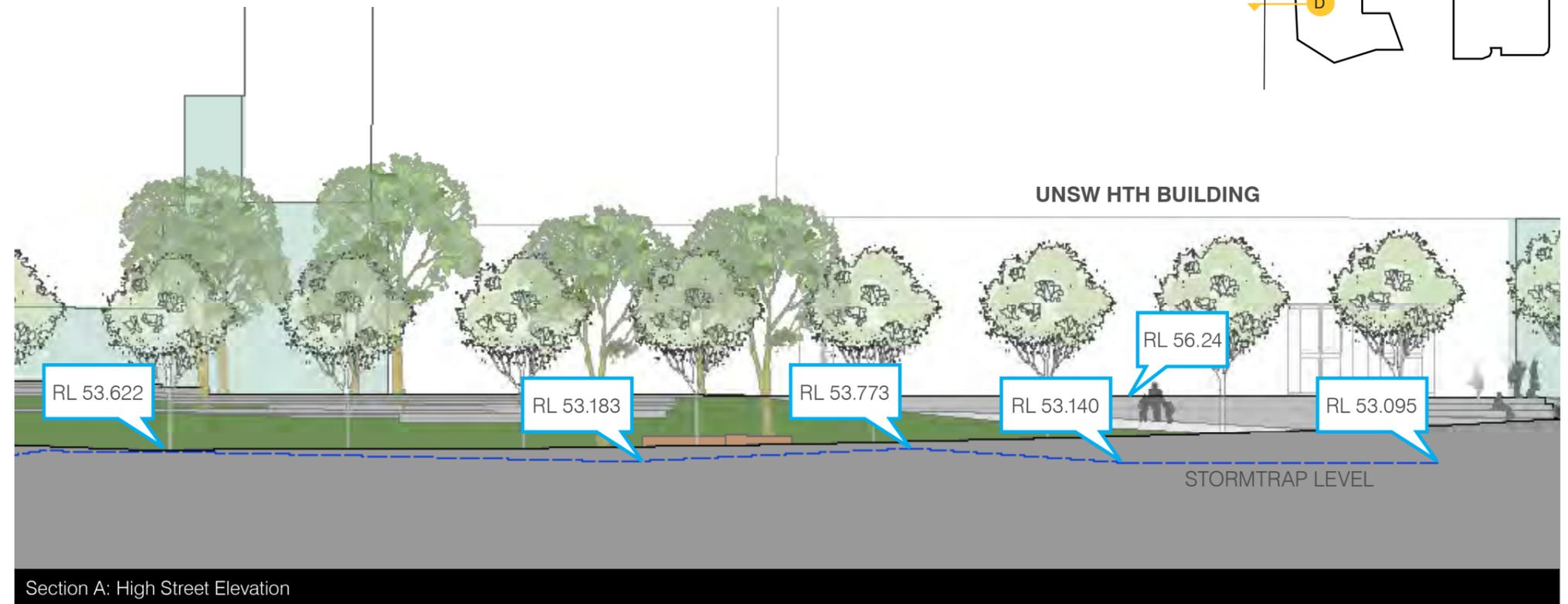
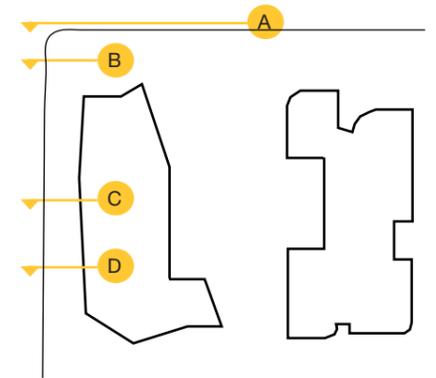
### Item 33. Landscaping

**RCC Comment:**

A 6m wide stormwater culvert easement of 6m applies along the UNSW HTH, High Street and Botany Street site boundaries. Concern is raised regarding the ability to plant trees above this service. Proposed landscaping should be reviewed to ensure adequate soil mass and depth is provided over the culvert structure.

**Response:**

The design team has investigated the soil mass and depth allowed for as result of the stormwater culvert. This varies in depth across Botany and High Streets as evident in the sections adjacent. To maximise mass planting and tree canopy coverage, we proposed landscaped embankments which allow for an increased soil depth. Planting and tree coverage are minimised in areas where the soil depth is inadequate.



## Item 35. Landscaping

### RCC Comment:

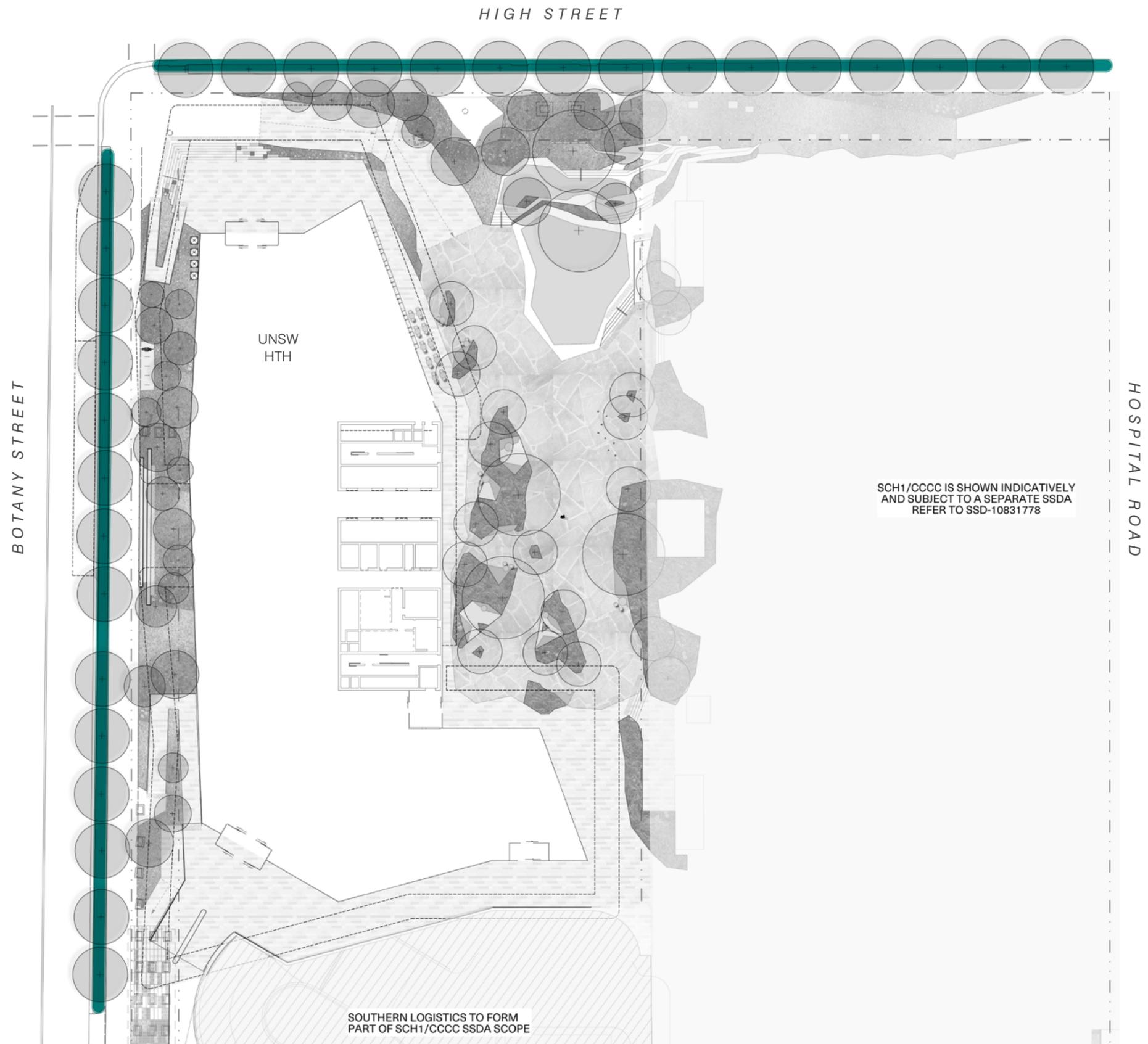
The indicative street trees and pavement level planting along the Botany Street and High Street frontages within Councils road reserve currently have a formal generic character. In contrast, the landscaping for the UNSW HTH site is inspired by the coastal dune system. A coordinated landscape outcome that picks up some of the sand dune planting themes along this section of the High Street streetscape would be beneficial. Council recommends coordination between Randwick City Council's public domain team and the proposals Landscape Architect moving forward.

### Response:

The design team supports the recommendation to coordinate with Randwick City Council's public domain team moving forward.

We recognise that there are existing street trees along High Street which are exotic species. We understand that the Botany Street works are yet to be undertaken by Lendlease as part of IASB works and include a native tree selection of *Lophostemon confertus*.

We have included a preliminary endemic planting palette which can be implemented into the Botany Street and High Street frontages within Council road reserves. This will be further developed with ongoing collaboration with Randwick City Council.



Item 35. Landscaping | High Street Endemic Planting Palette

Indicative Plant Schedule			
Botanical Name	Common Name	Pot	Origin
<b>Trees</b>			
<i>Acacia longifolia</i>	Sydney Golden Wattle	400L	Native
<i>Acacia suaveolens</i>	Sweet Wattle	400L	Native
<i>Banksia aemula</i>	Wallum Banksia	400L	Native
<i>Banksia integrifolia</i>	Coastal Banksia	400L	Native
<i>Corymbia gummifera</i>	Red Bloodwood	400L	Native
<b>Shrubs &amp; Groundcovers</b>			
<i>Actinotus helianthii</i>	Flannel Flower	200mm	Native
<i>Bauera rubioides</i>	Dog Rose	200mm	Native
<i>Bossiaea heterophylla</i>	Variable Bossiaea	200mm	Native
<i>Dillwynia retorta</i>	Healthy Parrot Pea	200mm	Native
<i>Epacris longiflora</i>	Fuchsia Heath	200mm	Native
<i>Eriostemon australasius</i>	Pink Wax Flower	200mm	Native
<i>Hardenbergia violacea</i>	Happy Wanderer	200mm	Native
<i>Kunzea ambigua</i>	White Kunzea	200mm	Native
<i>Lambertia formosa</i>	Mountain Devil	200mm	Native
<i>Leptospermum laevigatum</i>	Coast Tea Tree	200mm	Native
<i>Melaleuca nodosa</i>	Prickly-leaved Paperbark	200mm	Native
<i>Melaleuca squamea</i>	Swamp Honey-myrtle	200mm	Native
<i>Ricinocarpos pinifolius</i>	Wedding Bush	200mm	Native
<i>Styphelia viridis</i>	Green Five Corners	200mm	Native
<i>Xanthorrhoea resinifera</i>	Grass Tree	200mm	Native



*Hardenbergia violacea*



*Actinotus helianthii*



*Bossiaea heterophylla*



*Epacris longiflora*



*Eriostemon australasius*



*Bauera rubioides*

Item 35. Landscaping | Botany Street Endemic Planting Palette

Indicative Plant Schedule			
Botanical Name	Common Name	Pot Size	Origin
<b>Trees</b>			
<i>Acacia terminalis</i>	Sunshine Wattle	400L	Native
<i>Banksia ericifolia</i>	Heath-Leaved Banksia	400L	Native
<i>Banksia serrata</i>	Old Man Banksia	400L	Native
<b>Shrubs &amp; Groundcovers</b>			
<i>Correa alba</i>	White Correa	200mm	Native
<i>Cyathochaeta diandra</i>	Sheath Sedge	200mm	Native
<i>Dianella revoluta</i>	Blue Flax Lilly	200mm	Native
<i>Dichelachne crinita</i>	Longhair Plume Grass	200mm	Native
<i>Ficinia nodosa</i>	Knotted Club-rush	200mm	Native
<i>Lepidosperma laterale</i>	Variable Swordsedge	200mm	Native
<i>Leptocarpus tenax</i>	Slender Twine-rush	200mm	Native
<i>Lomandra longifolia</i>	Spiny-head Mat-rush	200mm	Native
<i>Microlaena stipoides</i>	Weeping Grass	200mm	Native
<i>Myoporum parvifolium</i>	Yareena	200mm	Native
<i>Pennisetum alopecuroides</i> 'Nafray'	Swamp Foxtail	200mm	Native
<i>Persoonia lanceolata</i>	Lance-leaf Geebung	200mm	Native
<i>Poa labillardieri</i>	Common Tussock Grass	200mm	Native
<i>Poa poiiformis</i>	Blue Tussock Grass	200mm	Native
<i>Rytidosperma</i>	Wallaby Grass	200mm	Native
<i>Themeda triandra</i>	Kangaroo Grass	200mm	Native
<i>Westringia fruticosa</i>	Coastal Rosemary	200mm	Native



*Banksia ericifolia*



*Lomandra longifolia*



*Correa alba*



*Banksia serrata*



*Persoonia lanceolata*



*Poa labillardieri*