

# APPENDIX C LANDSCAPE ARCHITECTURAL PLANS AND DESIGN REPORT

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LANDSCAPE ARCHITECTURE REPORT

# POWERHOUSE PARRAMATTA

STATE SIGNIFICANT DEVELOPMENT APPLICATION

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# 1.0 Introduction

1.0 Introduction

1.1 INTRODUCTION

This report supports a State Significant Development (SSD) Development Application (DA) for the development of the Powerhouse Parramatta at 34-54 & 30B Phillip Street and 338 Church Street, Parramatta. The Powerhouse Parramatta is a museum (information and education facility) that has a capital investment value in excess of \$30 million and as such the DA is submitted to the Minister for Planning pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Infrastructure NSW is the proponent of the DA.

1.2 BACKGROUND

The Powerhouse is Australia’s contemporary museum for excellence and innovation in applied arts and sciences. The museum was established in 1879 in the Garden Palace which emerged from a history of 19th Century grand exhibition halls, including the Grand Palais. It currently encompasses the Powerhouse in Ultimo, Sydney Observatory in The Rocks and the Museums Discovery Centre in Castle Hill. The Powerhouse has occupied the Ultimo site since 1988.

Parramatta, in the heart of Western Sydney, is entering a period of rapid growth. It was identified in 2014’s A Plan for Growing Sydney as the metropolis’ emerging second Central Business District, with the provision of supporting social and cultural infrastructure regarded as integral to its success. The strategic importance of Parramatta as an economic and social capital for Sydney has been subsequently reinforced and further emphasised through its designation as the metropolitan centre of the Central City under the Greater Sydney Region Plan.

Powerhouse Parramatta will be the first State cultural institution to be located in Western Sydney – the geographical heart of Sydney. In December 2019, the Government announced the winning design, by Moreau Kusunoki and Genton, for the Powerhouse Parramatta from an international design competition.

Powerhouse Parramatta will establish a new paradigm for museums through the creation of an institution that is innately flexible. It will become a national and international destination renowned for its distinctive programs driven by original research and inspired by its expansive collections. It will be a place of collaboration, a mirror of its communities forever embedded in the contemporary identity of Greater Sydney and NSW.



Figure 1.01 - Aerial photograph of the site and its context  
Source: Mark Merton Photography



### 1.3 SITE DESCRIPTION

The site is located at the northern edge of the Parramatta CBD on the southern bank of the Parramatta River. It occupies an area of approximately 2.5 hectares and has extensive frontages to Phillip Street, Wilde Avenue and the Parramatta River. A small portion of the site extends along the foreshore of the Parramatta River to the west, close to the Lennox Street Bridge on Church Street. The site boundary is identified in Figures 1.02. The site excludes the GE Office Building at 32 Phillip Street.

The site is currently occupied by a number of buildings and structures, including:

- Riverbank Car Park – a four-level public car park
- Willow Grove – a two-storey villa of Victorian Italianate style constructed in the 1870s.
- St George's Terrace – a two-storey terrace of seven houses fronting Phillip Street constructed in the 1880s.
- 36 Phillip Street – a two-storey building comprising retail and business premises
- 40 Phillip Street – a two-storey building comprising retail and business premises
- 42 Phillip Street – a substation building set back from the street

The immediate context of the site comprises a range of land uses including office premises, retail premises, hotel, serviced apartments and residential apartments. To the north is the Parramatta River and open space corridor, beyond which are predominately residential uses. The Riverside Theatre is located to the north-west across the Parramatta River.

### 1.4 OVERVIEW OF PROPOSED DEVELOPMENT

The Powerhouse was established in 1879, and Powerhouse Parramatta will radically return to its origins through the creation of seven presentation spaces of extraordinary scale that will enable the delivery of an ambitious, constantly changing program that provides new levels of access to Powerhouse Collection. The Powerhouse will set a new international benchmark in experiential learning through the creation of an immensely scaled 360-degree digital space, unique to Australia.

Powerhouse Parramatta will reflect the communities and cultures of one of Australia's fastest growing regions. It will hold First Nations culture at its core and set a new national benchmark in culturally diverse programming. The Powerhouse will be highly connected through multiple transport links, and integrate into the fine grain of the city.

Powerhouse Parramatta will be an active working precinct and include the Powerlab, which will enable researchers, scientists, artists and students from across regional NSW, Australia and around the world to collaborate and participate in Powerhouse programs. The Powerlab will feature digital studios to support music and screen industries alongside co-working spaces, life-long learning and community spaces. Integrated into the Powerlab will be a research kitchen and library that will support a NSW industry development program including archives and oral histories.

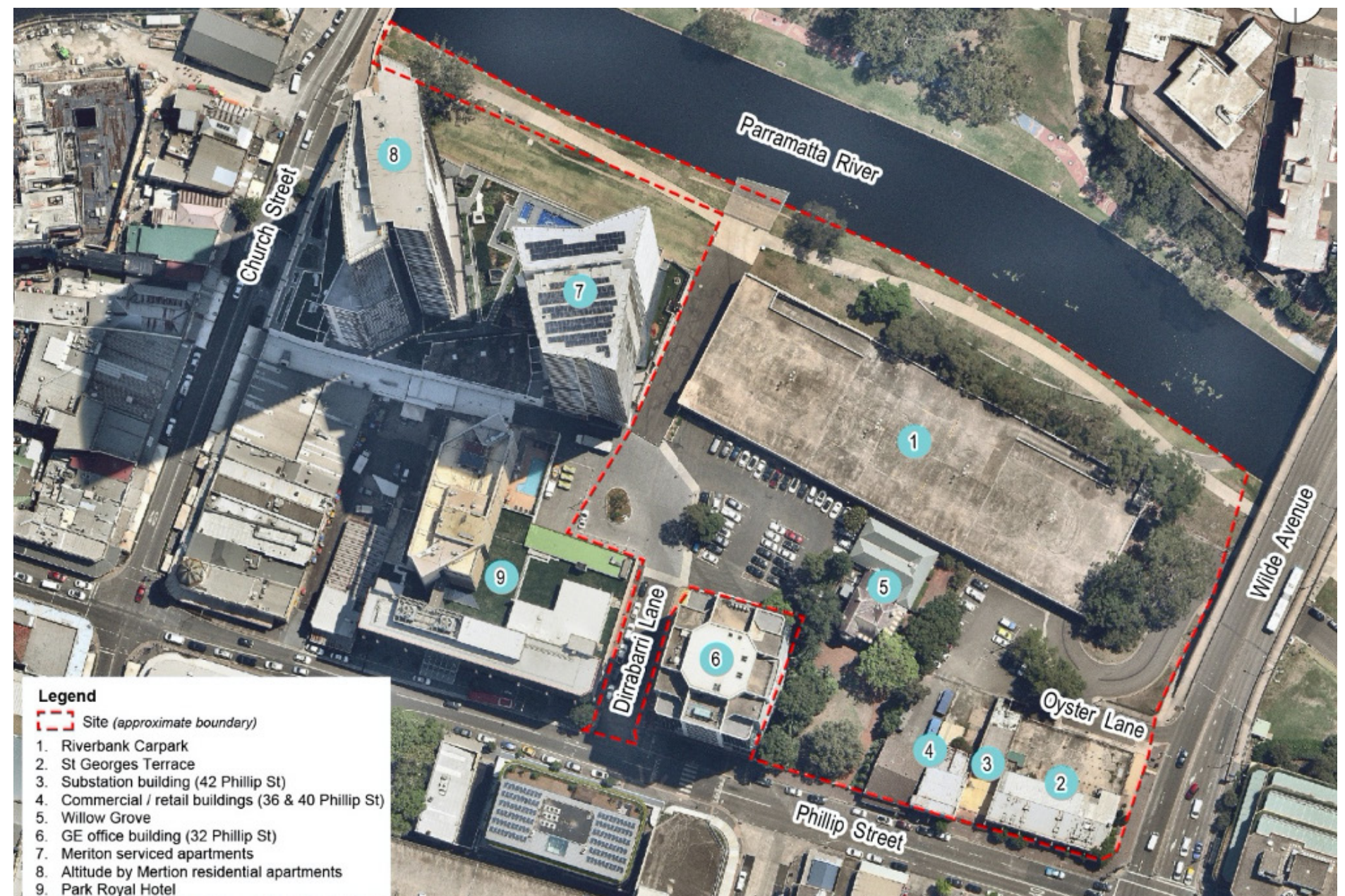


Figure 1.02 - Site boundary & key existing features  
Source: Ethos Urban



This application will deliver an iconic cultural institution for Parramatta in the heart of Sydney’s Central City. The SSD DA seeks consent for the delivery of the Powerhouse Parramatta as a single stage, comprising:

- site preparation works, including the termination or relocation of site services and infrastructure, tree removal and the erection of site protection hoardings and fencing;
- demolition of existing buildings including the existing Riverbank Car Park, ‘Willow Grove’, ‘St George’s Terrace’ and all other existing structures located on the site;
- construction of the Powerhouse Parramatta, including:
- seven major public presentation spaces for the exhibition of Powerhouse Collection;
- front and back-of-house spaces;
- studio, co-working and collaboration spaces comprising the ‘Powerlab’, supported by 40 residences (serviced apartments) for scientists, researchers, students and artists artists, students, researchers and scientists, and 60 dormitory beds for school students;
- education and community spaces for staff, researchers and the Powerlab residents, the community, and education and commercial hirers;
- commercial kitchen comprising the ‘Powerlab Kitchen’ used for cultural food programs, research, education and events;
- film, photography, and postproduction studios that will connect communities with industry and content that will interpret the Powerhouse Collection;
- public facing research library and archive for community, industry, students and researchers to access materials; and
- a mix of retail spaces including food and drink tenancies with outdoor dining.
- operation and use of the Powerhouse Parramatta including use of the public domain provided on the site to support programs and functions;
- maintenance of the existing vehicular access easement via Dirrabarri Lane, the removal of Oyster Lane and termination of George Khattar Lane, and the provision of a new vehicular access point to Wilde Avenue for loading;
- public domain within the site including new public open space areas, landscaping and tree planting across the site; and building identification signage
- The project does not seek consent for the carrying out of works outside of the site boundary, and in particular does not involve any alterations to the existing edge of the formed concrete edge of the Parramatta River or to the waterway itself.

The immediate context of the site comprises a range of land uses including office premises, retail premises, hotel, serviced apartments and residential apartments. To the north is the Parramatta River and open space corridor, beyond which are predominately residential uses. The Riverside Theatre is located to the north-west across the Parramatta River.

1.5 LANDSCAPE DRAWINGS

This report should be read in conjunction with the following Landscape Architectural drawings included with this State Significant Development Application:

- LD\_DA\_00-00-Masterplan
- LD\_DA\_00-02-Terrace Level
- LD\_DA\_00-03-Roof Garden Level
- LD\_DA\_20-01-Section AA and BB
- LD\_DA\_20-02-Section CC and DD
- LD\_DA\_30-03-Trees to be removed/retained
- LD\_DA\_30-04-Trees proposed

1.6 ASSESSMENT REQUIREMENTS

The Department of Planning, Industry and Environment have issued Secretary’s Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development. This report has been prepared having regard to the SEARs as follows:

SEAR	WHERE ADDRESSED
<b>3. Built form, heritage and urban design</b>	
The EIS shall: — give specific consideration to the overall site layout, open spaces, interface with the public domain (including River Square, Civic Link and River foreshore), through site links, laneways, street interfaces, facades, massing, setbacks, building articulation, solar access and overshadowing, materials, colours, signage or signage envelopes.	— See section 4.0 of this Report and the Architectural Design Report prepared by MKG.
<b>4. Integration with surrounding area</b>	
The EIS shall demonstrate how the proposal: — addresses amenity impacts, visual and view impacts, servicing and loading arrangements, pedestrian connectivity and activation of public spaces.	— See section 4.1, 4.2, 4.3 and 4.4 on pedestrian connectivity and activation of public spaces.
<b>5. Public Domain</b>	
The EIS shall: — identify how ground level (both the street and river frontage) uses are configured to provide safe and active street frontages and provide visual interest and activation to the public domain — identify improvements to the public domain, including clear definition of any private, semi private or public open space, pedestrian movement patterns, street trees and associated landscaping, street furniture, public amenities, lighting and linkages to other public domain spaces — address how the public domain responds and contributes to existing and planned future public spaces in Parramatta, including Civic Link, River foreshore and River Square and supports pedestrian and cycle movements in, around and through the site — address access and egress along the City River foreshore including pedestrian, cycle, events use, maintenance and interface with the existing footbridge crossing the river — address ongoing maintenance, management and operation of the public domain upon completion of the development, inclusive of emergency and event access to the river foreshore within the block — address how access to the site will be secured at various times of the day, including land ownership arrangements.	 — See section 4.2 and 4.3 of this report  — See section 4.0 of this report  — See section 4.1, 4.2, 4.3 and 4.4 of this report  — See section 4.1 of this report and the Transport Report prepared by Arup.  — See section 4.0 of this report in regards to future maintenance and the Stormwater and Flooding Report in relation to emergency access.  — See section 4.0 of this report in relation to securing of the site and the EIS in regards to land ownership

In addition to the SEARs, this report also addresses the following plans and documents.

PLAN OR DOCUMENT	WHERE ADDRESSED
— Landscape and public domain plans — Landscape sections including details of the built form interface — Landscape and public domain statement	— Refer to Section 4.0 Landscape Design.
— Solar access analysis report and diagrams	— Refer to Section 3.0 Landscape Analysis.

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## 2.0 Policies & Guidelines

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2.0 Policies & Guidelines

2.1 POLICY OR GUIDELINE REVIEW

POLICY OR GUIDELINE	WHERE ADDRESSED
<p><b>Parramatta Ways Walking Strategy</b></p> <p>The City of Parramatta Council has been working to develop the Parramatta Ways concept, a comprehensive program to improve the pedestrian environment across the City of Parramatta local government area. Parramatta Ways aims to create a walkable and liveable city through the delivery of a high quality walking network across the local government area.</p> <p>The strategy aims to make streets desirable and sustainable places and connect people to community facilities, neighbourhood centres, transport nodes, parks and open spaces as well as Parramatta’s iconic destinations. The project aims to reveal the natural and cultural treasures of the urban landscape and link places where people live, work and visit</p>	<ul style="list-style-type: none"><li>— The shared route along Parramatta River has been retained and enhanced to promote walking and cycling.</li><li>— The Riverfront is located alongside Parramatta River supporting a variety of community activities.</li><li>— The shared route along Parramatta River seamlessly links to the Civic Link and Dirrabarri Lane.</li><li>— All streets and laneways are supported by animated building edges to enhance the pedestrian experience.</li><li>— A rain garden is proposed to support urban cooling and soften the pedestrian walking experience.</li><li>— Trees are located along key walking routes where solar access is dominant providing natural shade and shelter.</li><li>— Resting spaces including benches and lawn spaces are located along the riverfront, podium level and Phillip Street.</li><li>— Refer to section 4.0 for more detail.</li></ul>
<p><b>City of Parramatta Interim Public Art Guidelines for Developers 2017</b></p> <p>City of Parramatta Interim Public Art Guidelines for Developers seeks to establish the basis on which enduring/permanent public art projects located in the public domain are commissioned or approved. It seeks to establish the key criteria for informed, transparent and high quality decision-making when approving or declining proposed public art projects which will form a long-term aspect of the City’s visitor experience, cultural enhancement and heritage.</p> <p>This Policy applies to all and any public art projects located, or proposed, in the public domain within the City of Parramatta Local Government Area. These may be stand-alone projects or proposals from within Council or from the community; embellishments to capital works or other proposals arising from time to time.</p>	<ul style="list-style-type: none"><li>— Events, arts and community activities are encouraged within the Riverfront and podium landscape.</li><li>— The Powerhouse Museum is designed to celebrate art and offer visitors an internal and external experience.</li><li>— Refer to section 4.0 for more detail.</li></ul>
<p><b>City of Parramatta Public Domain Guidelines (latest)</b></p> <p>A key feature of the Public Domain will be its practical usefulness through its ability to generate produce, provide comfort and engage communities with Indigenous and culturally diverse landscapes. It will have the capacity to seamlessly support a daily program of events that integrate across the Built Form and Public Domain.</p> <p>The Powerhouse Parramatta requires a dynamic approach to the interaction between visitors, architecture and the natural environment. It will support a variety of opportunities for visitors to interact with nature. The Built Form will be temporal in nature, intuitive and readily adaptable to take advantage of seasonal change. The design response will complement and support programming.</p>	<ul style="list-style-type: none"><li>— The Riverfront is designed to accommodate community activities.</li><li>— The podium is designed as an external event space for Parramatta Powerhouse.</li><li>— The public spaces are animated by events, community activities and spaces for resting.</li><li>— Service acces and emergency vehicle access is retained along Dirrabarri Lane.</li><li>— Bicycle storage is supported within the Riverfront.</li><li>— Phillip Street accommodates a coach drop off for the Powerhouse Museum visitors.</li><li>— Refer to section 4.0 for more detail.</li></ul>

POLICY OR GUIDELINE	WHERE ADDRESSED
<p><b>Parramatta City River Strategy 2015</b></p> <p>In 2015 the Parramatta City River Strategy was prepared to establish an integrated vision, coordinate activation along the river and deliver a implementation strategy. The City River Strategy positions Parramatta River at the front and centre of Parramatta City Centre as redevelopment occurs. The plan proposes a world class public domain and a high quality collection of new buildings that are seamlessly knitted together by a dense network of accessible and active spaces.</p> <p>A key unifying element within the river corridor is provided in the form of River Square which establishes a direct connection with Parramatta Square, the CBD’s major public space. River Square is complemented by Parramatta Quay, the city’s new improved ferry terminal. Linking these river spaces together are a series of active focal points that take the form of multifunctional terracing, event zones, a variety of land uses and new cultural landmarks.This is all framed by a re-profiled river corridor that naturalises the river edge, improves accessibility to the river and responds to the river corridors flood characteristics.</p>	<ul style="list-style-type: none"><li>— River Square has been raised to be located at FL7.5 allowing for a seamless public extension to the Powerhouse Museum.</li><li>— Flooding is managed through an Riverfront space located at FL3.5 and extending south towards the Powerhouse Museum.</li><li>— Connectivity between the city and Parramatta River is retained through the Civic Link.</li><li>— Pedestrian and cycle movement is retained and enhanced along the Parramatta River.</li><li>— The podium level supports a world class public space that is flexible in nature to accommodating events and resting space.</li><li>— The river edge has been retained rather than re-profiled to reference its more recent function.</li><li>— Refer to section 4.0 for more detail.</li></ul>
<p><b>Parramatta City Centre Lanes Policy 2011</b></p> <p>This Parramatta Lanes policy recognises the benefits of lanes, acknowledges the potential for improving Parramatta’s Lanes both as a network and as individual lanes and the intention of council to coordinate this at a strategic level to achieve an attractive, active and well functioning lanes network for Parramatta City Centre. The policy builds on 3 years of plans and documents undertaken by council, consultants and the Department of Planning including; the Parramatta City Centre DCP 2007; the Parramatta City Centre Lanes Inventory 2009 and The Parramatta City Centre Lanes Strategy and the Small Spaces and Laneways Study 2008</p>	<ul style="list-style-type: none"><li>— Dirrabarri Lane is retained and enhanced through animated building frontages, pedestrian and emergency vehicle access to the river and retained service vehicle access to the Meriton Building and Powerhouse Museum.</li><li>— The Civic Link is celebrated through the Powerhouse Museum’s animated building edge</li><li>— Refer to section 4.0 for more detail.</li></ul>
<p><b>Parramatta CBD Pedestrian Strategy 2017</b></p> <p>The Parramatta CBD Pedestrian Strategy aims to create walkable heart of a vibrant and healthy city. City streets will encourage all residents, workers, students, shoppers and visitors to make safe, accessible and simple pedestrian journeys to jobs, to schools, as well as to recreational, cultural, and retail districts. Pedestrians will be able enjoy the streets as public spaces to meet, wait, watch and play. Those on foot or using a mobility aid will be prioritised and therefore safer in the CBD, enjoying stronger community connections and opportunities to be healthy and active.</p> <p>The economy will benefit through increased numbers of pedestrians on the street choosing to shop and linger. The CBD is currently subject to significant public and private investment that is transforming the buildings, streets and very fabric of the city. This growth will be the catalyst to transform our streets into places that are safe, active, and accessible for people at all times of the day and week.</p>	<ul style="list-style-type: none"><li>— The shared route along Parramatta River has been retained and enhanced to promote walking and cycling.</li><li>— The Riverfront is located alongside Parramatta River supporting a variety of community activities.</li><li>— The shared route along Parramatta River seamlessly links to the Civic Link and Dirrabarri Lane.</li><li>— All streets and laneways are supported by animated building edges to enhance the pedestrian experience.</li><li>— A rain garden is proposed to support urban cooling and soften the pedestrian walking experience.</li><li>— Trees are located along key walking routes where solar access is dominant providing natural shade and shelter.</li><li>— Resting spaces including benches and lawn spaces are located along the riverfront, podium level and Phillip Street.</li><li>— Refer to section 4.0 for more detail.</li></ul>

POLICY OR GUIDELINE	WHERE ADDRESSED
<p><b>Parramatta Design Series (OS)</b></p> <p>Design Parramatta is an innovative project Run by City of Parramatta and NSW Government in Architect’s Office, that involved over 80 designers and artist in re-imaging Parramatta’s public domain to enhance the city’s image and competitiveness. The concepts created by the project have been incorporated into the city’s Public Domain Framework Plan.</p> <p>Currently much of Parramatta’s public domain lacks amenity and a memorable image. The Design Parramatta project addresses these issues by creating quality visions for key streets, parks and public spaces and then combining these visions into a citywide public domain framework plan</p>	<ul style="list-style-type: none"><li>— The Podium level accommodated for a large public space referred to as River Square.The square supports an urban character and has the capacity for everyday uses as well as major events.</li><li>— The Civic Link is continued through the site offering an extension to Horwood Place, connecting Parramatta’s two major public spaces, River Square and Parramatta Square .</li><li>— Refer to section 4.0 for more detail.</li></ul>
<p><b>Technical Standards (latest)</b></p> <p>Technical standard is focused on the design details of typical street elements including paving, kerb ramp, laneways, trees, and bus shelters, detailed design requirements for clear path of travel, and access facilities, footway gradients and levels.</p> <p>Footway design must adhere to Australian Standard requirements for equal access. These documents ensure that levels are consistent and structural elements such as buildings and street trees are arranged to facilitate the logical and safe flow of people.</p>	<ul style="list-style-type: none"><li>— Design Development will ensure the technical standards are appropriately implemented.</li><li>— Refer to section 4.0 for more detail.</li></ul>
<p><b>OEH (2015) Urban Green Cover in NSW Technical Guidelines</b></p> <p>Urban green cover is a broad range of relatively low cost strategies to integrate green, permeable and reflective surfaces into cities and towns to minimize local temperatures and encourage evaporation from soil and plants into the urban environment.</p> <p>Increasing green cover in urban environments can be achieved in a number of ways, from protecting local green spaces and designing eco-friendly buildings, through to creating a green space network which delivers a high performance landscape.</p>	<ul style="list-style-type: none"><li>— Retained and proposed lawns spaces characterise the public realm and river corridor.</li><li>— A dense tree canopy is proposed alongside the Podium level to provide shade and shelter.</li><li>— Native species are planned throughout the development.</li><li>— Refer to section 4.0 for more detail.</li></ul>



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## 3.0 Landscape Analysis

3.0 Landscape Analysis

3.1 HISTORICAL EVOLUTION

Aboriginal History

Parramatta’s name has its origin in Aboriginal language and is commonly translated as ‘the place where the eels lie down’ or ‘head of waters’. It is derived from the word Baramada or Burramatta [Burra meaning place, matta meaning eels]. The Aboriginal group that inhabited the land around present day Parramatta were the Darug People.

Evidence of Aboriginal occupation exists throughout the Parramatta Local Government area, with significant sites in Parramatta Park along the ridgeline of the Crescent and around Domain Creek. Several scarred trees and artefact scatters have also been discovered in this area (Old Government House And Domain, Parramatta Park Management Plan 2008).

European Settlement

Parramatta is the second oldest settlement in Australia and early settlers were attracted by the fertile soil of this area.

Modern Parramatta was founded in 1788, the same year as Sydney. The British Colony, which had arrived in January 1788 in the First Fleet at Sydney Cove, had only enough food to support itself for a short time. The soil around Sydney Cove proved too poor to grow the amount of food that required to support the settlers so after reconnaissance missions, Governor Arthur Phillip choose Parramatta as the most likely place for a successful large farm. Parramatta was the furthest navigable point inland on the Parramatta River and the point at which the river became freshwater and suitable for agriculture.

In the late 18th century more colonists lived in Parramatta than in Sydney. Records show 1,970 people in Parramatta in 1792 compared with 1,170 in Sydney. In about 1790 the first winding track linking the two settlements was cut through thick bush.

While connecting roads were built between the two settlements, the river remained the predominant mode of transport and important point of focus for the township of Parramatta until well into the 1800’s. Many of the City’s earliest and most significant civic buildings and public infrastructure were positioned in close proximity to the river or aligned to take advantage of the aspect it afforded.

With the construction of the rail-line, industrialisation arrived at Parramatta. This changed the nature of development and focus of the city. The natural beds of the river were channelised during the depression and in the 1950’s the city turned its back on its river frontage. The City retreated from the water’s edge and the river began to take on a ‘back of house’ character, aggravated in part by the corridors regular inundation by flooding.

Second CBD

Parramatta was nominated as the second CBD for Sydney in 1968 and has been one of the successes of Sydney’s centres policy. In 1970 Parramatta provided around 10,000 jobs, today around 40,000 people are employed in the Parramatta Local Government Area, with the CBD projected to grow substantially over the next decade. By 2021, an estimated 22,000 additional people will be working in Parramatta, totalling 186,000 (14 per cent growth).

The relocation of State and Federal Government jobs to Parramatta has been a catalyst for development. Recent commitments have been to locate the headquarters of NSW Police and Sydney Water to Parramatta and the development of the civic and justice precincts has contributed to the increased levels of high skilled employment with increased jobs in finance and business services supported by the knowledge based employment in the Westmead Hospital and University of Western Sydney.

In recent times the river has become a place both for daily recreation and large scale community and cultural gatherings. Special events such as fireworks on New Years Eve or the festival of Loy Krathong attract up to 25,000 people. However on a day to day basis the river corridor lacks any concentrated level of activation.

The plans, maps and images on the adjacent page show the growth and development of Parramatta over the past two hundred years. The alignment of the historic street grid is based on George Street and Market Street {later Phillip Street} There is a strong relationship between the river and the urban development with building lots extending down to the waters edge. The buildings were also set back presumably to prevent water ingress during flood events.

The Site

The Powerhouse Parramatta site features items of heritage significance including two items and three Archaeological Management Units (AMU). Lennox Bridge to the north-west of the site is also an item of heritage significance. Located centrally within the site at 34 Phillip Street, Willow Grove a heritage item with a local listing. The heritage item includes a two storey Victorian building with surrounding gardens and mature trees.

St George’s Terraces is located at the corner of Phillip Street and Wilde Avenue. This locally listed heritage item is an example of early Victorian period terraces. The three Archaeological Management Units (AMU) located across the site hold historic significance to the development of Parramatta, dating back to convict and colonial periods.



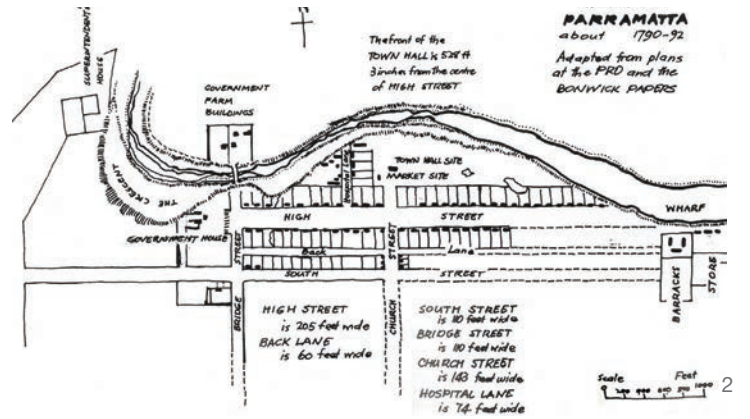


IMAGE 1. Government House 1791  
IMAGE 2. Plan of Parramatta 1790 - 1792  
IMAGE 3. View Along George Street 1796  
IMAGE 4. View across Parramatta River 1809  
IMAGE 5. Impression of Parramatta 1827  
IMAGE 6. Parramatta 1943  
IMAGE 7. Parramatta Today  
IMAGE 8. Powerhouse Parramatta



3.2 LANDSCAPE ANALYSIS

The landscape analysis section focuses on the existing conditions that characterise the Powerhouse Parramatta site.

On-Site Vehicle Movement

The site is bound by Wilde Avenue and Phillip Street with access via Dirrabarri Lane and George Khattar Lane. The site is located between two primary north-south streets, Church Street to the west and Wilde Avenue to the east, and is also serviced by a hierarchy of smaller roads. Key movement analyses to note are as follows:

- 1. Barry Wilde Bridge is located along the eastern edge of the site and provides a continuation of Wilde Avenue.
- 2. George Khattar Lane provides access to the multi-storey car park underneath the Barry Wilde Bridge.
- 3. Dirrabarri Lane services the site, Meriton Apartments and provides Emergency vehicle access to the river.
- 4. Phillip Street is a key historical street that bounds the southern edge of the site.
- 5. Oyster Lane supports vehicles exiting the car park.

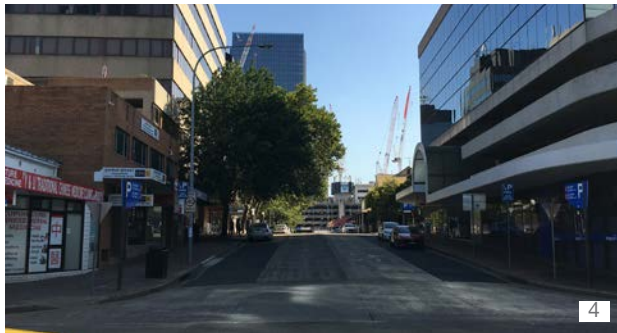
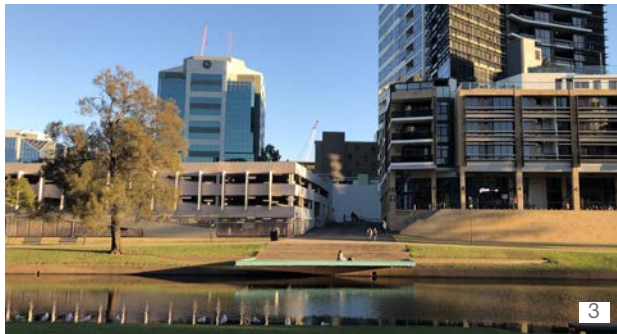
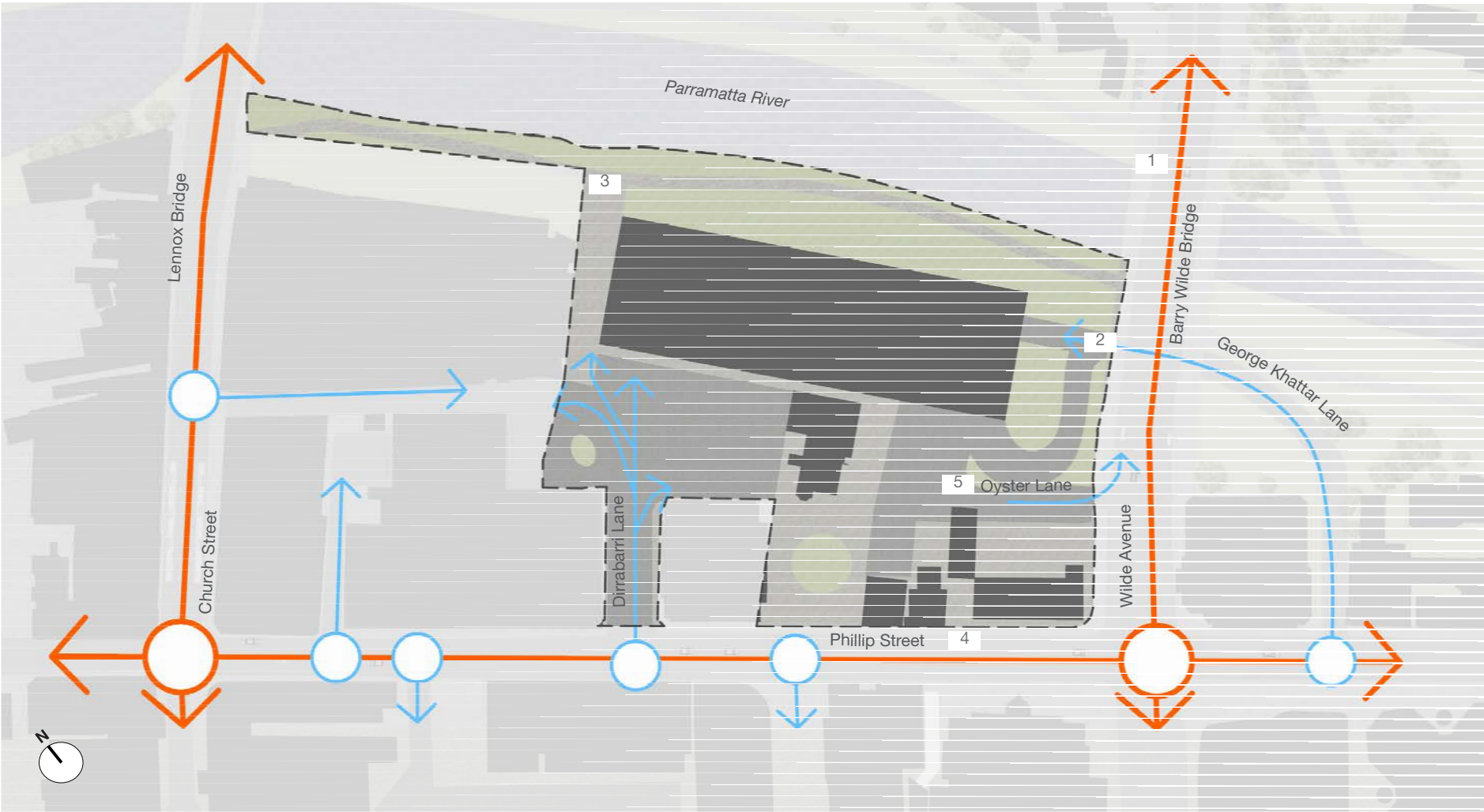


Figure 3.01 - On-site Vehicle Movement

- Precinct Boundary
- Street Local Main
- Access Route

IMAGE 1. View towards Barry Wilde Bridge  
IMAGE 2. View along George Khattar Lane  
IMAGE 3. View towards the Emergency vehicle access  
IMAGE 4. View along St Phillips Street



Access & Parking

The site contains a mixture of surface level car parking and a multi-storey car park with access via Dirrabarri Lane and George Khattar Lane. Key access and parking analyses to note are as follows:

- 1. The multi-storey car park is the centrally dominant building on the site.
- 2. George Khattar Lane is the primary access and exit to the multi-storey car park.
- 3. Oyster Lane is located alongside a raised surface level car park.
- 4. Dirrabarri Lane is the primary access route to the surface level car parking alongside the Multi-storey car park and for the Meriton Building.

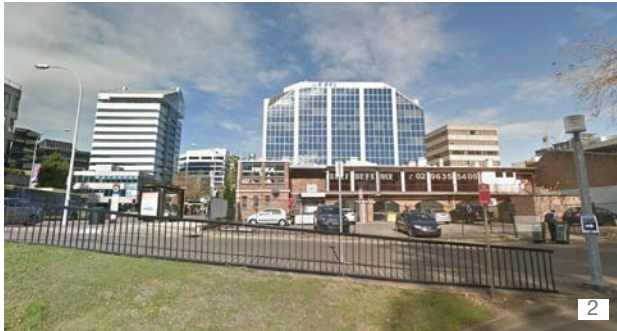
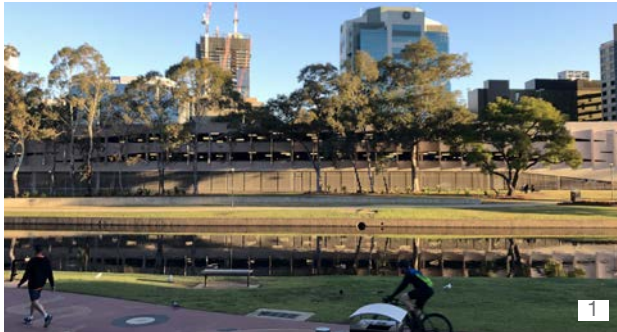
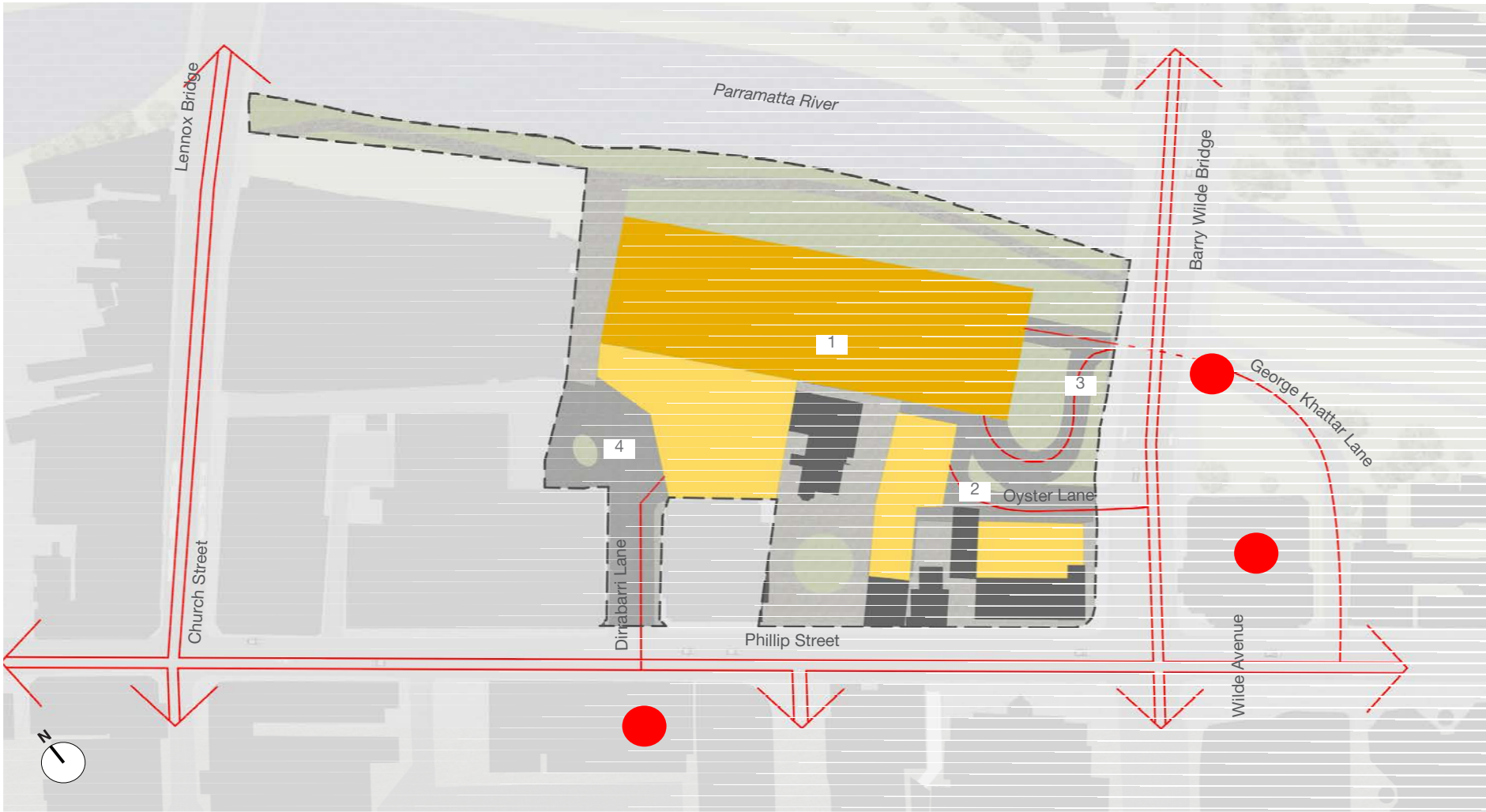


Figure 3.02 - Access & Parking

- Site Boundary
- Multi-storey Car Park
- At Grade Car Parking
- Vehicle Movement
- Car Park Access/ exit Point

IMAGE 1. View towards the multi-storey car park  
IMAGE 2. View from Oyster Lane towards surface level car park  
IMAGE 3. Access and exit towards multi-storey car park  
IMAGE 4. Dirrabarri Lane surface level car park



Riverside Movement

A recreational shared path runs along the banks of the Parramatta River and occupies a portion of the subject site. Key riverside movement analyses to note are as follows:

- 1. Riverside walk and cycle corridor that continues alongside the Meriton Building that integrates with the wider pedestrian and cycle network.
- 2. An existing floating pontoon alongside the Meriton building.
- 3. A river level shared path that is located along the northern edge of the site.
- 4. The path continues along the river corridor linking directly to the Parramatta Ferry Wharf.

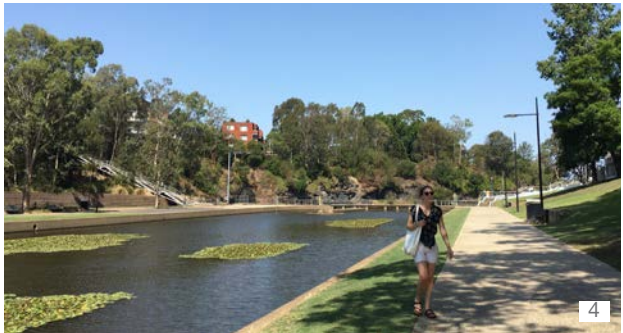
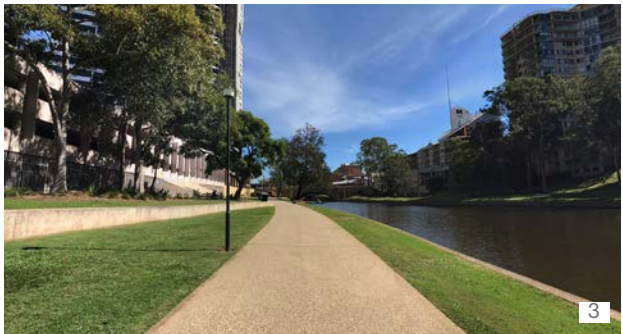
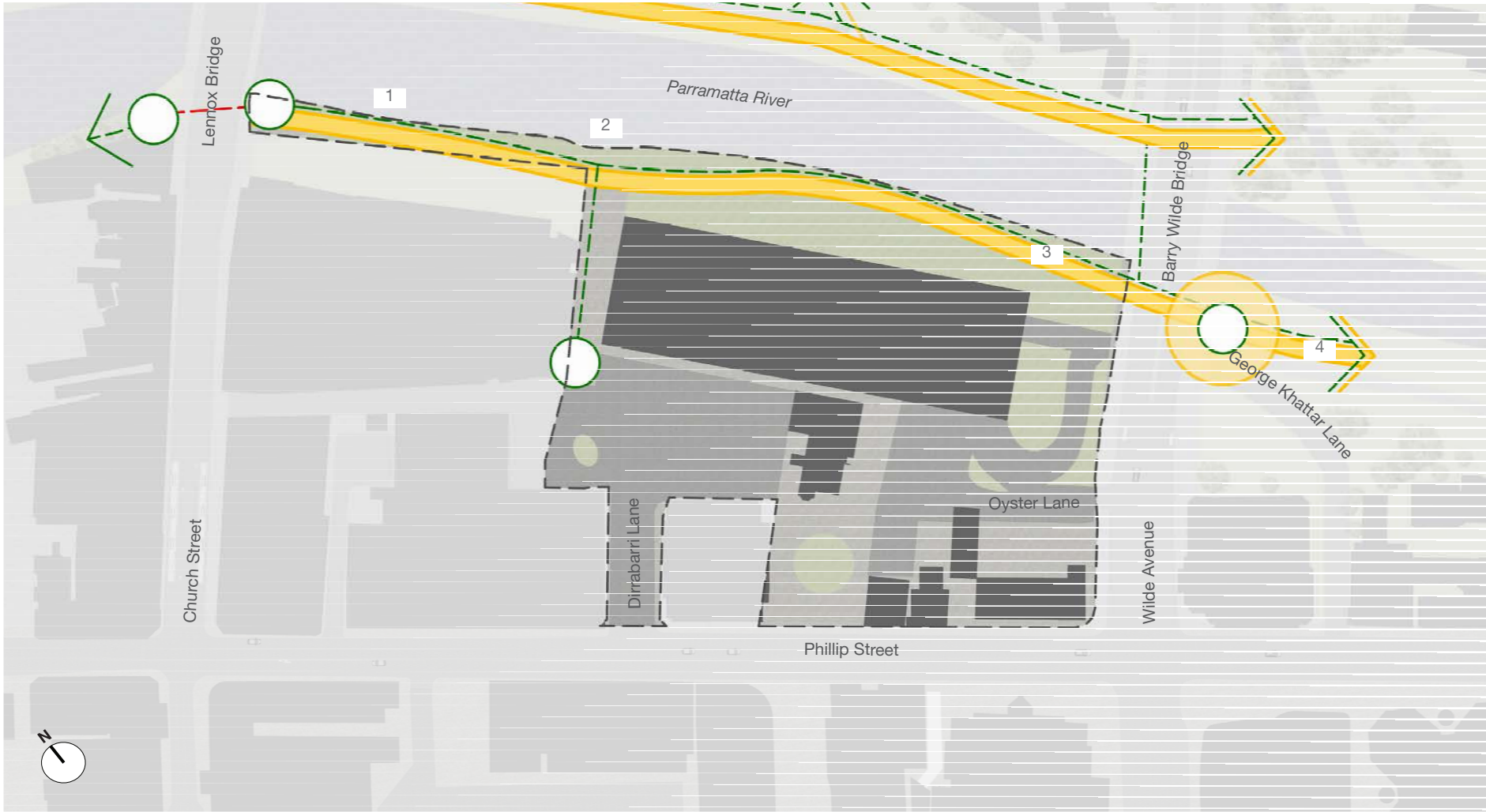


Figure 3.03 - Riverside Movement

- Site Boundary
- Cycle Route
- Pedestrian Link
- Cycle Access
- Pedestrian Access

IMAGE 1. View towards the Meriton Building movement route  
IMAGE 2. View from existing riverside pontoon  
IMAGE 3. View along the riverside path  
IMAGE 4. View towards Parramatta Ferry Wharf



Topography and Views

The southern portion of the site just north of Phillip Street is relatively is at RL 7.5m. Along the southern edge of the multi-storey car park the site begins to slope from RL 6.0m to RL 2.0m along Parramatta River. Views created by this topography comprise:

- 1. View from George Khattar Lane towards the multi-storey car park.
- 2. View through the access route between the Meriton Building and multi-storey car park.
- 3. View from Horwood Place towards Willow Grove.
- 4. View along Dirrabarri Lane towards the Multi-storey car park and Meriton building.

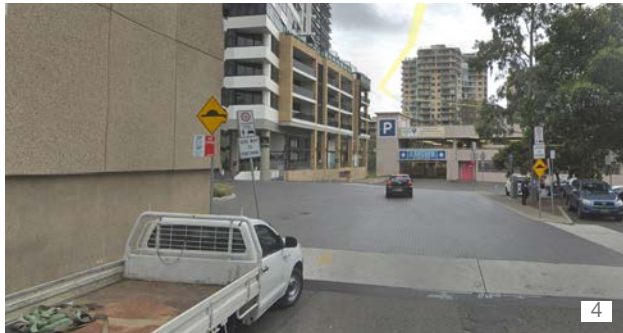
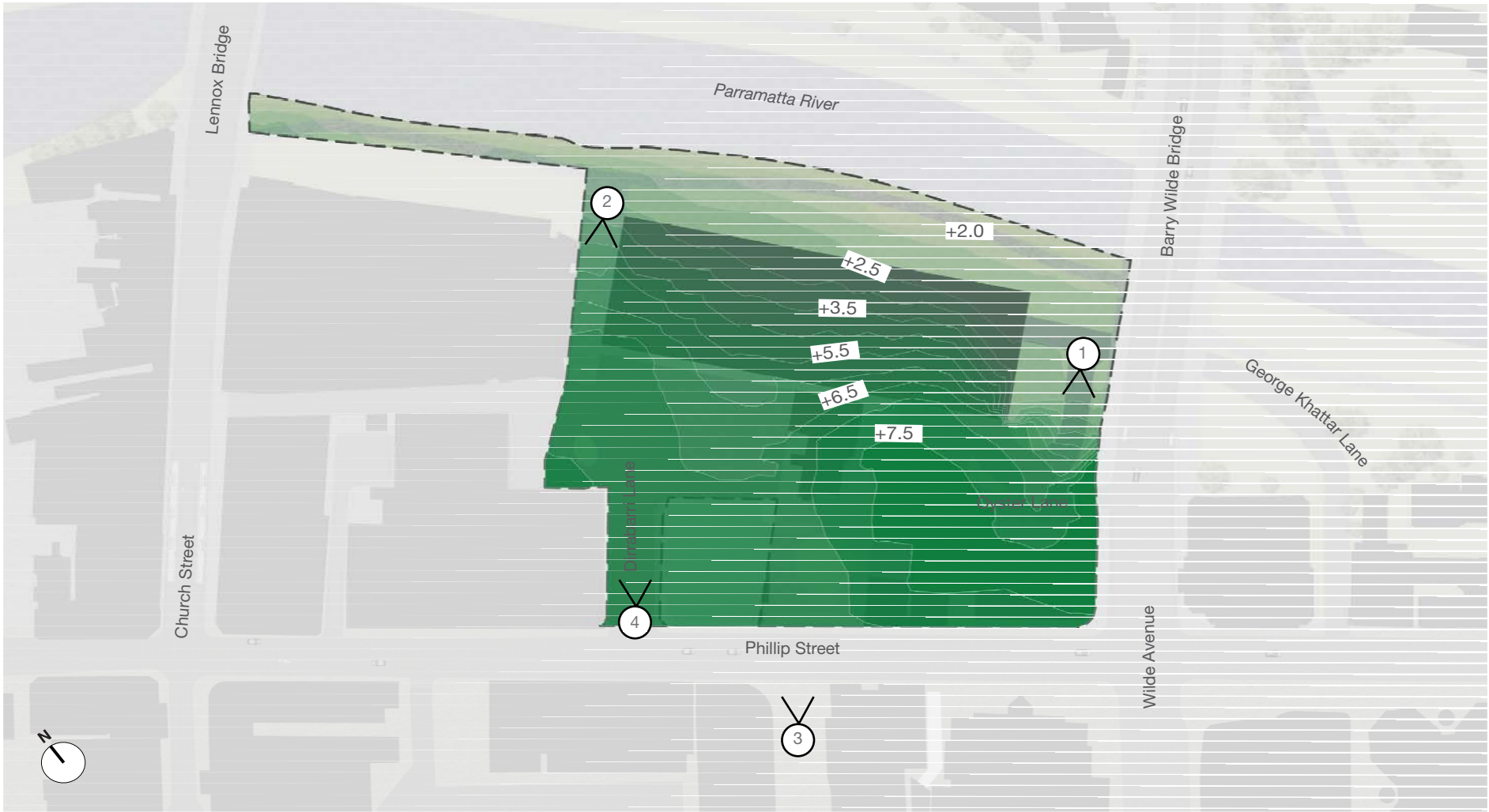


Figure 3.04 - Topography & Views

- Site Boundary
- Higher Slope
- Lower Slope

IMAGE 1. View along the Multi-storey car park access road  
IMAGE 2. View along the recently built Meriton building  
IMAGE 3. View along Horwood Place towards the river  
IMAGE 4. View along Dirrabarri Lane



Flooding

The site is located within the Parramatta River catchment and is subject to flooding from two different mechanisms: mainstream and overland. Mainstream flooding refers to the typical riverine flooding occurring when excess runoff breaks the river banks and inundates the adjacent floodplain.

Overland flooding occurs when rainfall runoff is unable to be conveyed via a pit/pipe stormwater network due to insufficient capacity resulting in streets inundated. Design flood levels have been derived using flood modelling information based on the Upper Parramatta River Catchment Trust (UPRCT, June 2011).

The existing multi-storey car park due to its permeable facade allows water to travel through the building helping increase the river profile and mitigate flood impact on the surrounding buildings.

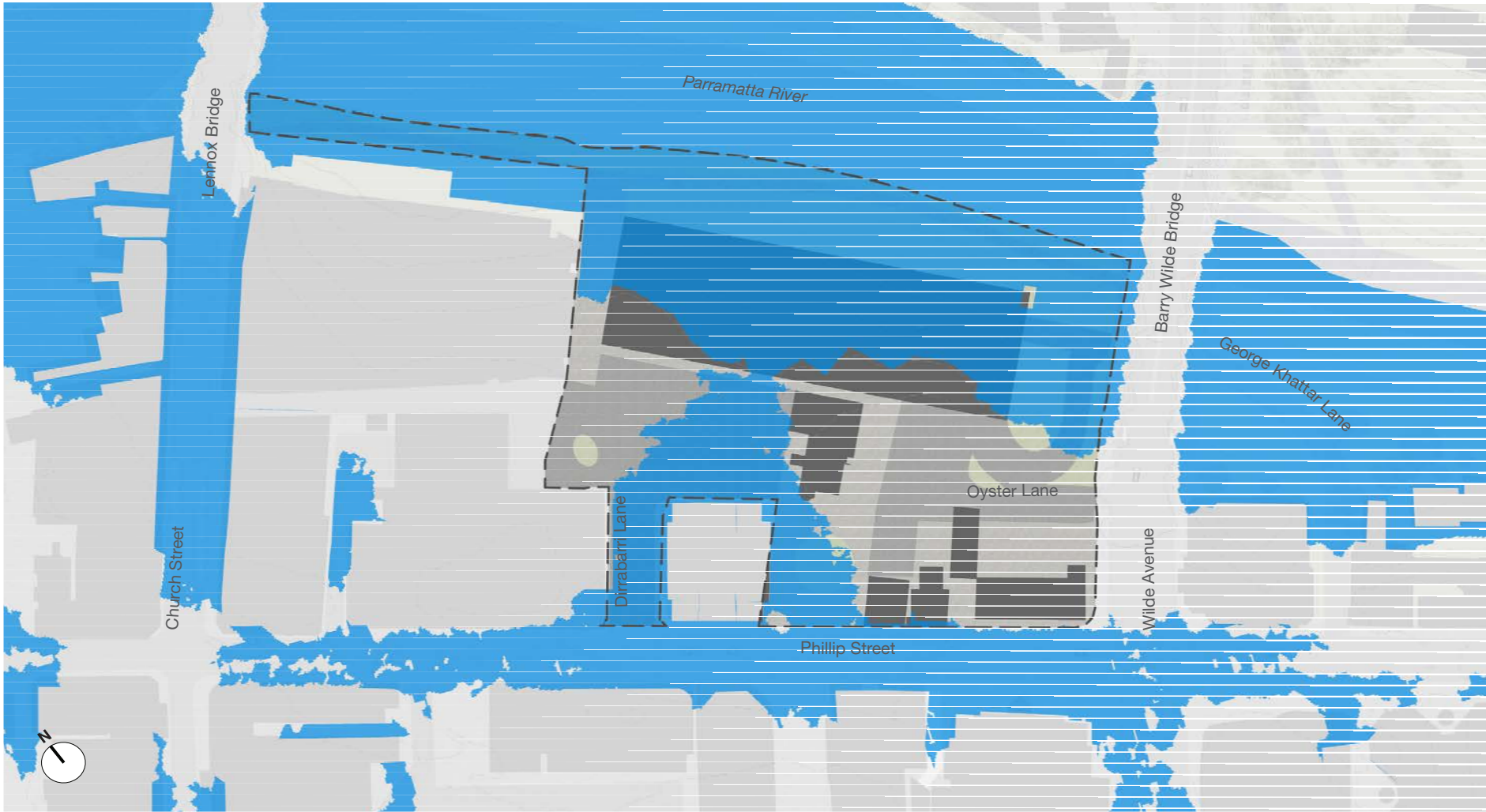


Figure 3.07 - 1 in 100 Year Flooding

--- Site Boundary  
■ Flood Zone

IMAGE 1. Lennox Bridge  
IMAGE 2. Flooding alongside the multi-storey car park  
IMAGE 3. Multi-storey car park flooding  
IMAGE 4. High frequency flooding



Landscape Character

The landscape character of the precinct varies, and is characterised by lawn and open space at the rivers edge, to car parking, buildings and operational areas in the remaining portions of the site Key landscape characteristics to note are as follows:

- 1. The riverside is characterised by a meandering river path and lawn with a collection of trees located north of the car park.
- 2. Dirrabarri Lane is characterised by hard paving that accommodates vehicles in and out of the car park as well as servicing for the Meriton Building.
- 3. The western edge of the site is adjacent to a large blank retaining wall alongside the Meriton Building, with one existing tree and stepped access to Lennox Bridge .
- 4. A lawn, trees and planted garden characterises the Willow Grove curtilage from Phillip Street.

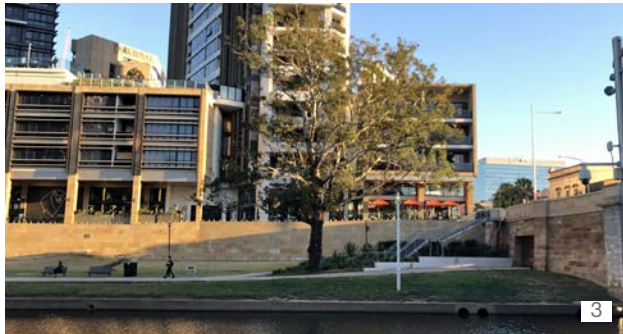
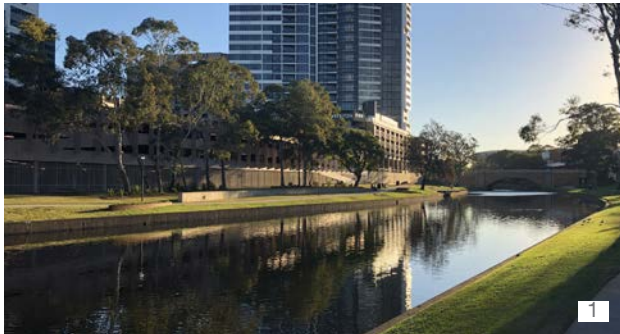
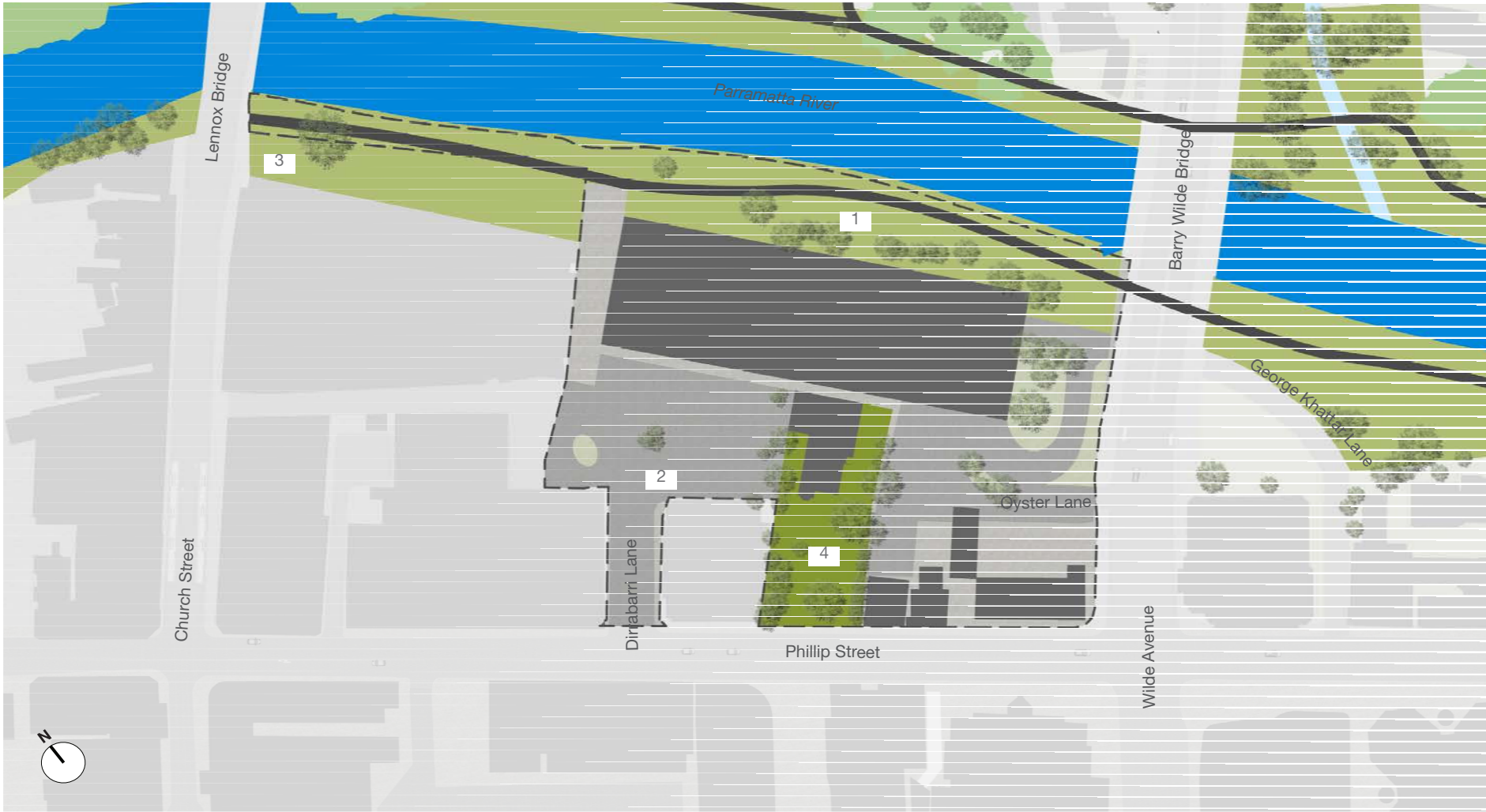


Figure 3.08 - Landscape Character

- Site Boundary
- Foreshore Parkland
- Parramatta River
- Public Walkway
- Existing Tree

IMAGE 1. View along Parramatta River  
IMAGE 2. Access space along Dirrabarri Lane  
IMAGE 3. Meriton Building edge condition  
IMAGE 4. Willow Grove garden



Existing Vegetation

Fifty-eight (58) trees (and tree groups) were assessed using the Visual Tree Assessment4 (VTA) criteria and notes, and comprise of a mix of locally Indigenous, Australian native and exotic species. Twenty-seven (27) species are represented.

Trees 1-19 are located on the southern riverbank, Trees 20-24 and 53-55 are located adjacent to the multi-storey carpark, Trees 25-31 and 33-35 are located within the at-grade carpark and Tree 32 is located to the rear of the multi-storey commercial building (32 Phillip Street). Trees 36-39 are street trees located within the northern road reserve of Phillip Street and Trees 40-58 surrounding Willow Grove. The trees have been allocated one of the following Retention Values:

- Priority for Retention
- Consider for Retention
- Consider for Removal
- Priority for Removal

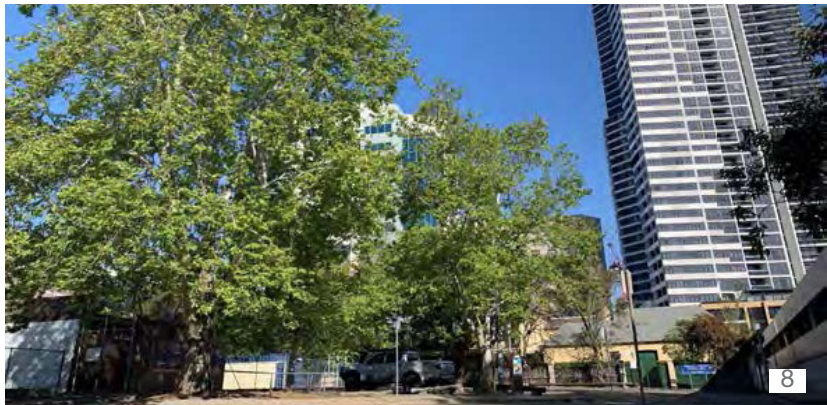
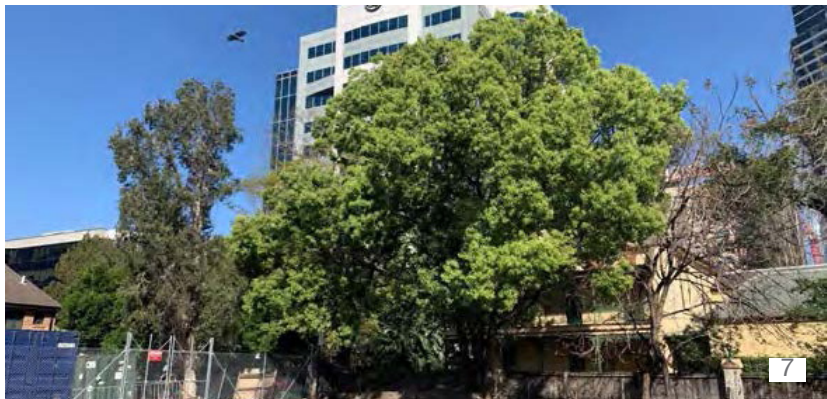
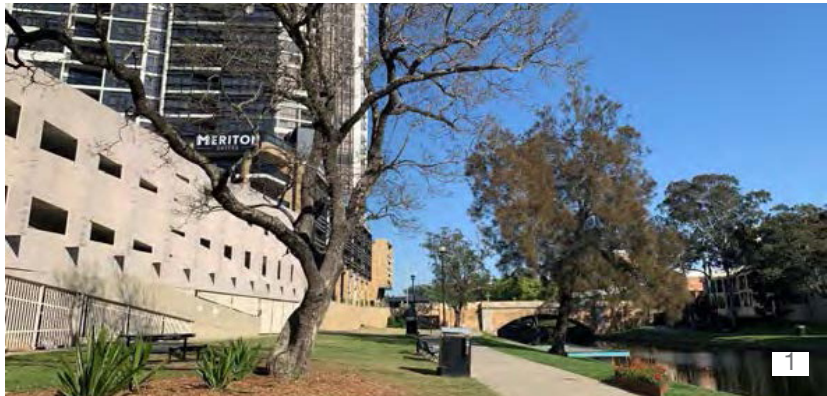
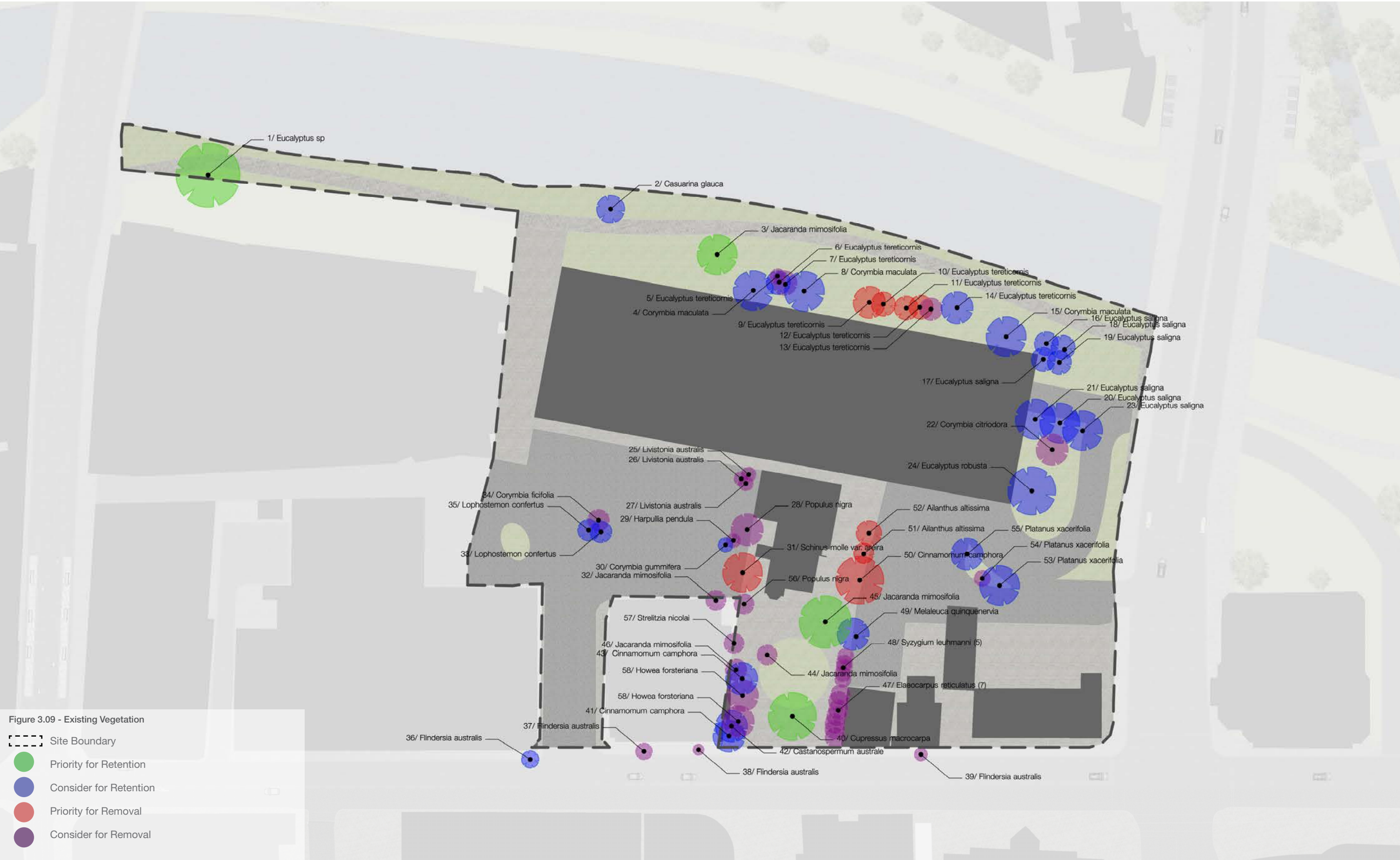


IMAGE 1. Showing Tree 2 (r) and Tree 3 (l)  
IMAGE 2. Showing Trees 5-14  
IMAGE 3. Showing Tree 40  
IMAGE 4. Showing Trees 25-35 & Tree Group 58  
IMAGE 5. Showing Tree 41-46  
IMAGE 6. Showing Trees 49-52  
IMAGE 7. Showing Trees 53-55







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# 4.0 Landscape Design

4.0 Landscape Design

4.1 A CONNECTED LANDSCAPE

The Parramatta Powerhouse landscape design supports a well connected network of routes and public spaces that seamlessly link the Powerhouse Precinct to its existing and emerging context. Retained movement along the river foreshore connects Parramatta Ferry Wharf, Parramatta Powerhouse and Church Street. Whilst the Civic Link and Dirrabarri Lane form key north to south routes connecting the city's Parramatta Square to the river. Existing access to the Barry Wilde Bridge is retained, whilst access to Church Street is retained via Dirrabarri Lane. The landscape design also supports a positive relationship with the Meriton Building through a new bridge.

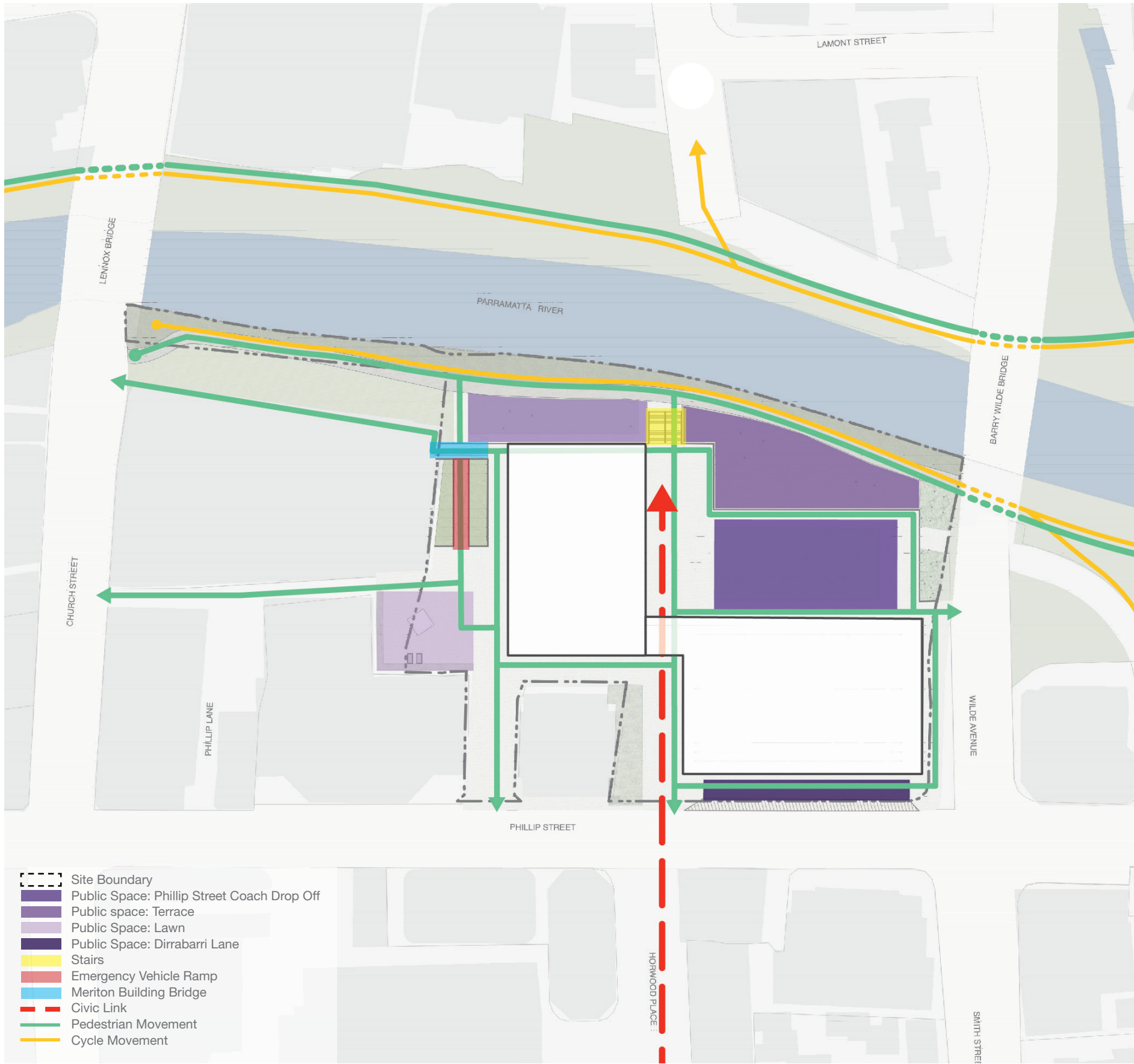


Figure 4.01 - Access & Egress Diagram

4.2 LANDSCAPE PRINCIPLES

Following on from the site analysis, a series of interrelated landscape principles have been developed to improve on the existing conditions within the landscape, while creating a contemporary environment to allow for integration between space and landscape.

The landscape design has been developed in conjunction with the plans for the Powerhouse Parramatta buildings and works to support the functions of the museum while creating a welcoming landscape for the community and Powerhouse visitors.

A comprehensive open space approach has been developed. This integrates built form, landscape, heritage, modernity and public habitation with natural environments. This will be achieved by creating a network for internal and external spaces with varying degrees of openness and accessibility and a range of experiential activities.

The site's landscape approach is divided into three main character areas which will be explored further in the following sections comprising of the River Walk and Riverfront, the Terrace and the Roof Top Garden.





Figure 4.02 - Site Masterplan

4.3 THE TERRACE & RIVER WALK

The terrace level located above the Riverfront, directly interfaces with the ground level of the Parramatta Powerhouse. It is an open public space that has the capability to accommodate outdoor events and contrasts with the community function of the Riverfront. It is connected via the Civil Link, Dirrabarri Lane and the Phillip Street arrival zone, which direct visitors to a series of public spaces that respond to their adjacent ground floor uses. A hard landscape is contrasted with tree-lined corridors and a central lawn space that forms a focal point for interaction on the site.

The river level landscape maintains its natural character through a maintained riverside lawn, reinstated footpath and retained riverwall edging with some minor changes to accommodate access to the podium level. Key to the access will be an Emergency Vehicle Access Ramp and a single staircase allowing a seamless transition between the terrace and river. Intersecting the reinstated footpath is a sloping lawn that leads to an Riverfront space accommodating a multitude of uses. Key areas of note are as follows:

1. **Coach Drop Off Zone** - A coach drop off for Powerhouse Museum visitors is located along Phillip Street.
2. **All Weather Structure** - An all weather structure is located alongside the coach drop off zone providing shade and protection from the weather.
3. **Removable Bench Seating** - Benches that offer rest space can be removed when required allowing for servicing access to the Powerhouse Museum.
4. **Loading Area for PS2** - A loading zone for servicing is located along Phillip Street allowing hoisting from the south into PS2.
5. **Substation** - Located within Dirrabarri Lane and alongside Wilde Avenue is a substation that services the Powerhouse Museum.
6. **Civic Link** - The linear pedestrian route is defined by the adjacent Powerhouse Museum and its ground floor uses.
7. **Seating Shaded Area** - Trees are located alongside the lawn and part of the Civic Link providing naturally shaded space for seating.
8. **Light Wells** - Light wells are strategically located to allow natural light into the Riverfront space as well as supporting a visual connection between the podium and river level.
9. **Flexible Event Space** - A flexible lawn space accommodates outdoor resting space for people to enjoy and outdoor events space for the Powerhouse Museum to utilise.
10. **Lift** - A lift is located within the north western edge of the site allow the mobility impaired access between the podium and river level.
11. **Dirrabarri Lane** - A flexible space and service zone that connects Dirrabarri Lane to the Meriton Building and riverfront.
12. **River Path** - The existing path is reinstated with some minor changes to accommodate access to the podium level.
13. **Existing Lawn Retained** - The existing lawn located towards the north of the reinstated footpath is maintained to support resting and closer public interaction with the river.
14. **Lawn** - A proposed lawn is designed to support accessible and additional resting space alongside the river corridor.
15. **Emergency Vehicle Access Ramp** - An accessible ramp is located west of the site to support pedestrian and emergency vehicle access to the river.
16. **Rain Garden** - A river level rain garden provides water retention and urban cooling alongside the Meriton Building.



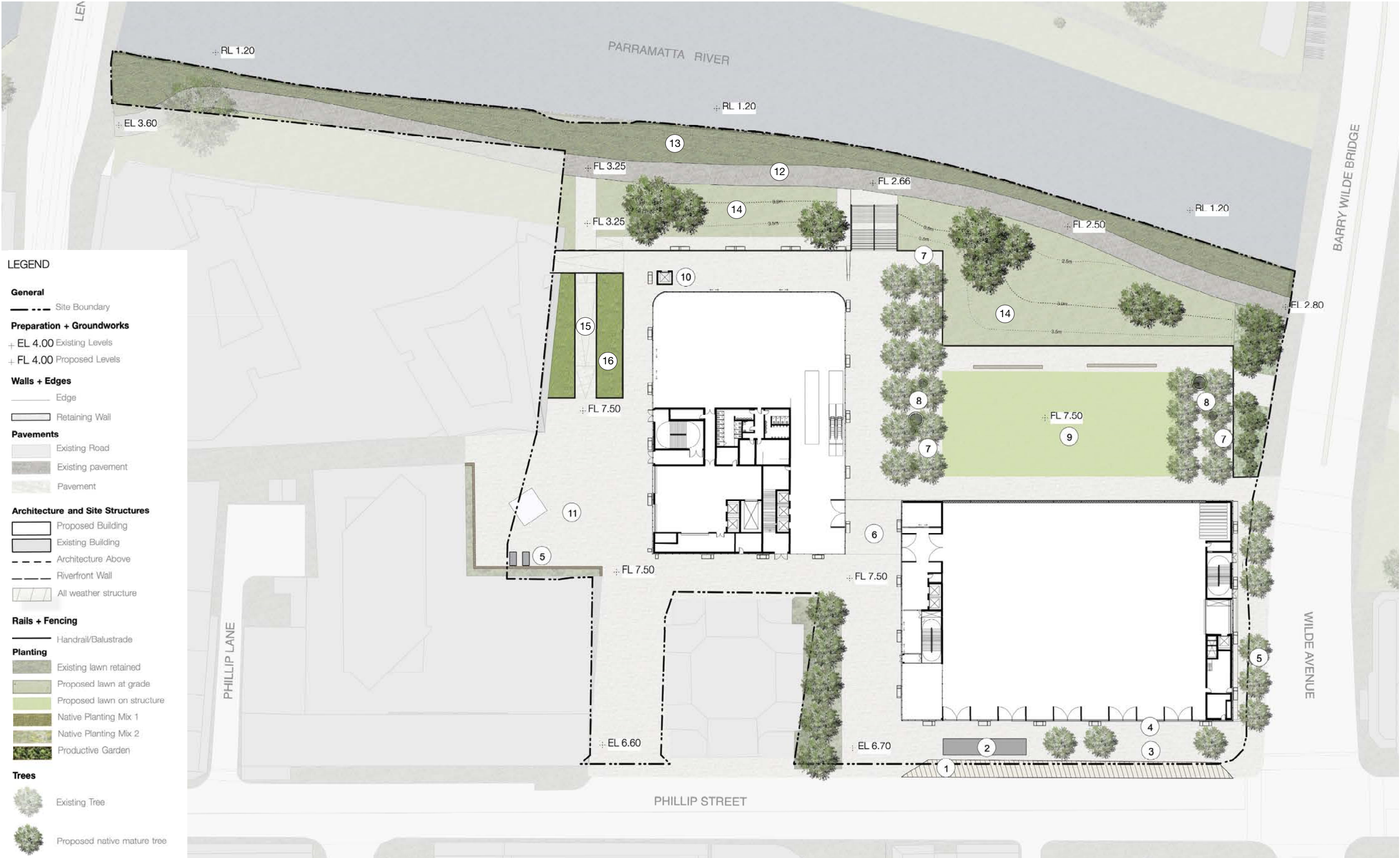


Figure 4.03 - Terrace Level & River Plan



4.4 ROOF TOP GARDEN

The Roof Top Garden provides an area of respite for passive and active recreation for Museum visitors. It will contribute to Powerhouse programs that engage communities with Indigenous and agricultural science, climate change, and food production. Key areas of note are as follows:

- 1. **All-Weather Structure** - The structure is proposed to provide shade and shelter for any rooftop programs or events.
- 2. **Productive Trees for Harvesting** - The rooftop garden defined by a tree nursery that support the growth of trees on site.
- 3. **Productive Garden/ Agriculture** - A collection of planters containing edible plants that cater for the Powerlab Kitchen. The productive gardens will also facilitate education and community programs.
- 4. **Indigenous Produce Garden** - Collaboration with Indigenous and First Nations communities to support Indigenous planting, cultural practice, and connection to the Museum’s Indigenous and First Nations programming.
- 5. **Pergola and Productive Spaces** - A pergola structure that is characterised by vines, providing natural shade and shelter from the weather.



Figure 4.04 - Roof Top Garden Plan



Roof Garden Character Images

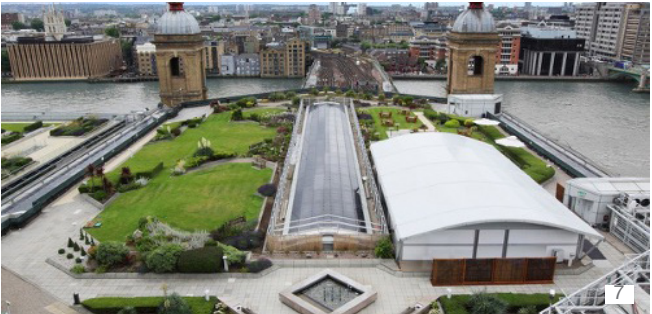
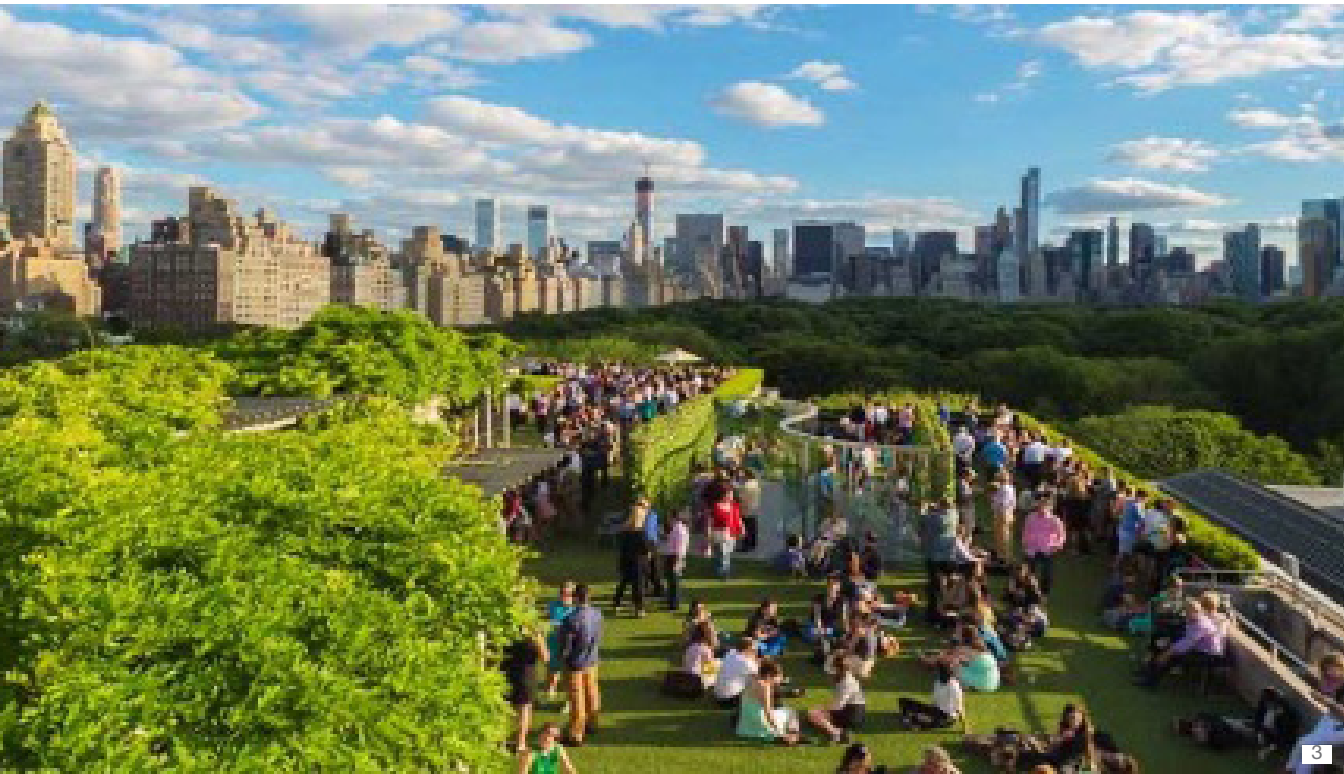
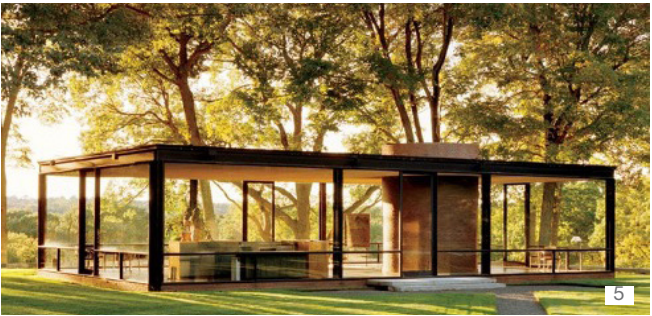


IMAGE 1. Yerrabingin Rooftop Farm South Eveleigh  
IMAGE 2. The Cantor Roof Garden Bar – The Met – NYC  
IMAGE 3. The Cantor Roof Garden Bar – The Met – NYC  
IMAGE 4. KUBE Installation at K11 Museum – Hong Kong  
IMAGE 5. Glasshouse Philip Johnson  
IMAGE 6. Harvest Pavilion – Vector Architects  
IMAGE 7. Cannon Bridge Rooftop Garden London  
IMAGE 8. Contour Roof Top Garden – The Met – New York  
IMAGE 9. Shop & trade office building, Athens  
IMAGE 10. Hudson River Education Centre



4.5 CROSS SECTIONS

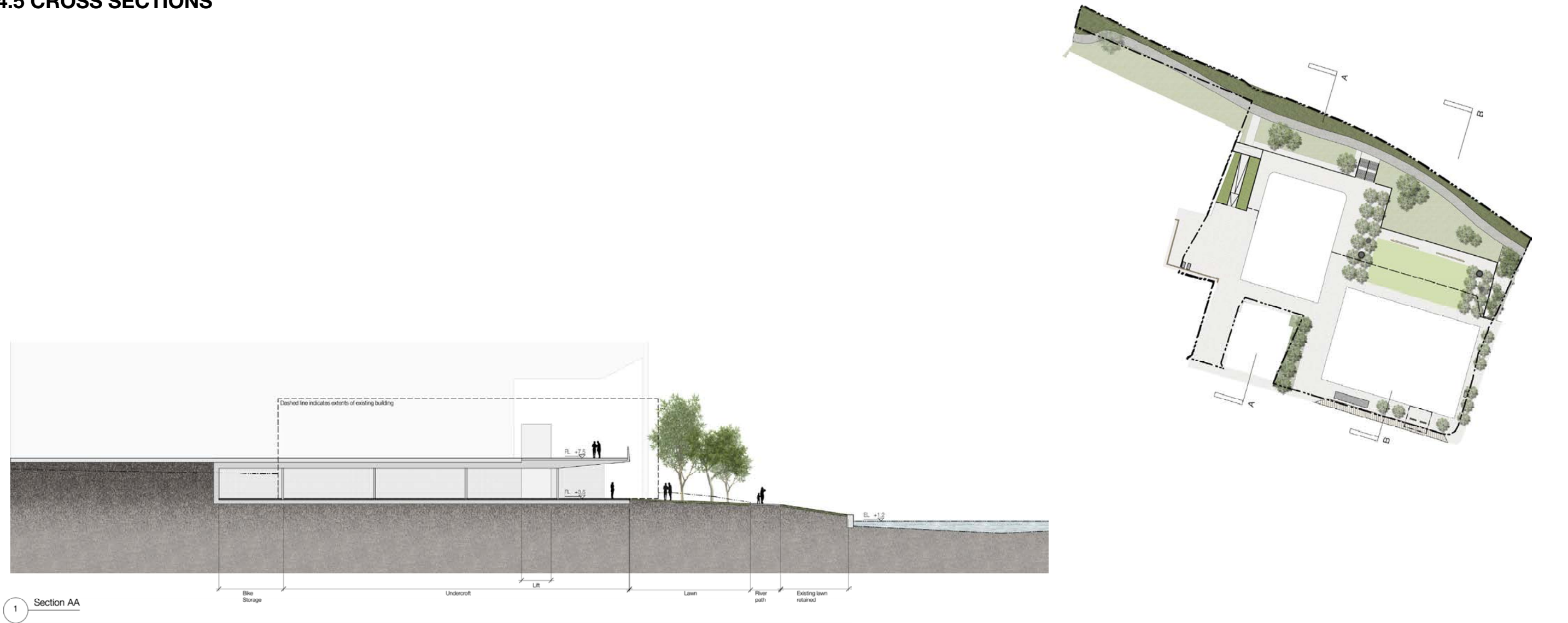


Figure 4.05 - Section AA

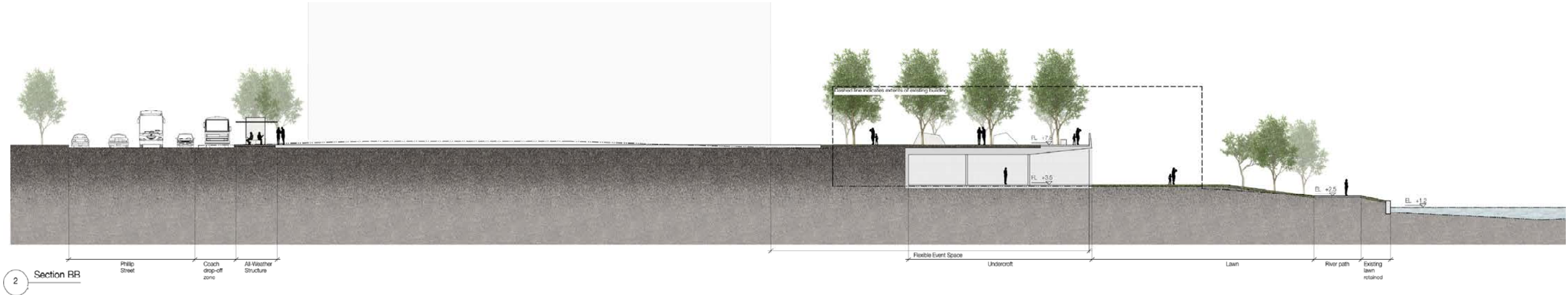


Figure 4.06 - Section BB

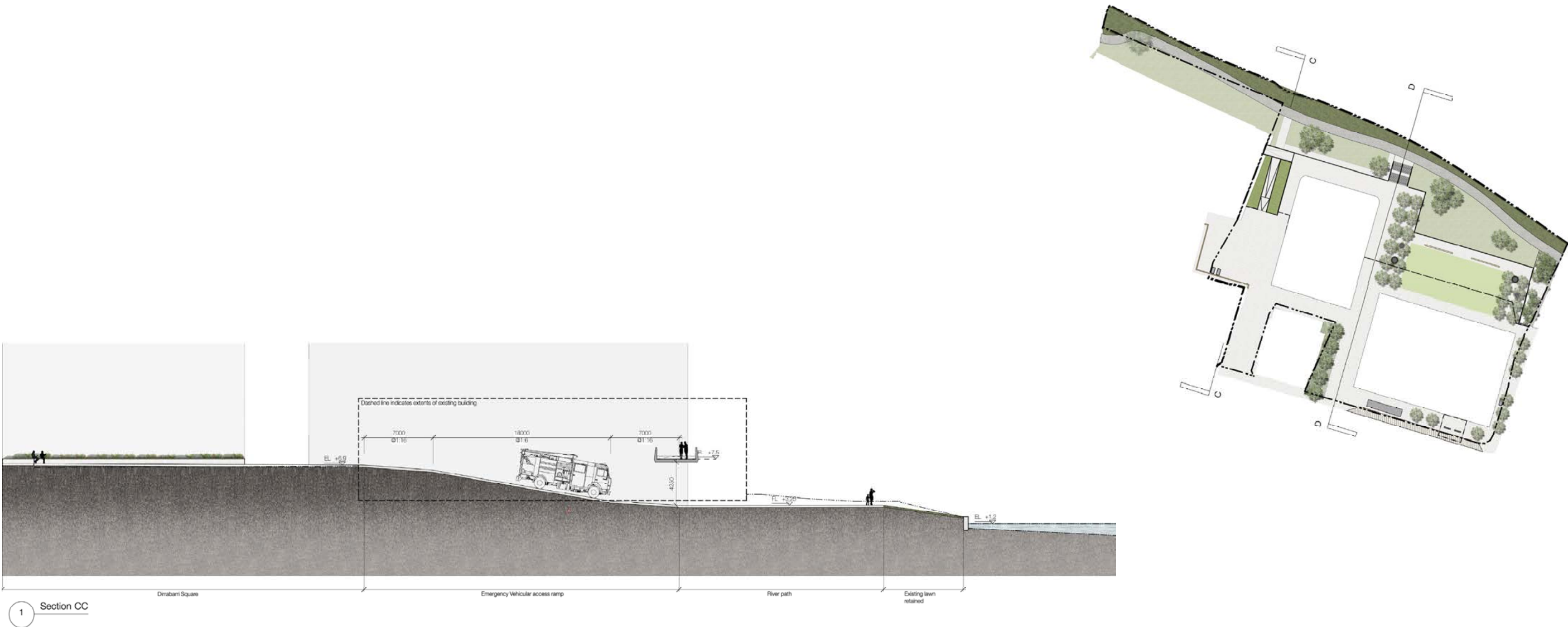


Figure 4.07 - Section CC

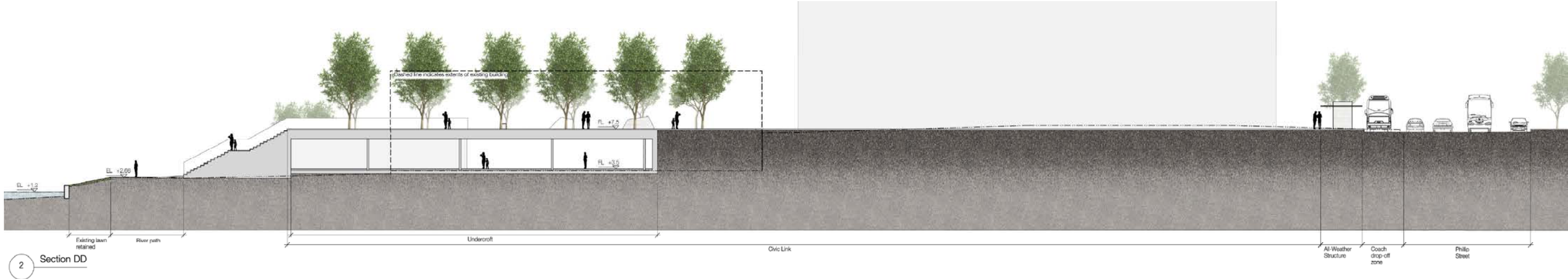


Figure 4.08 - Section DD



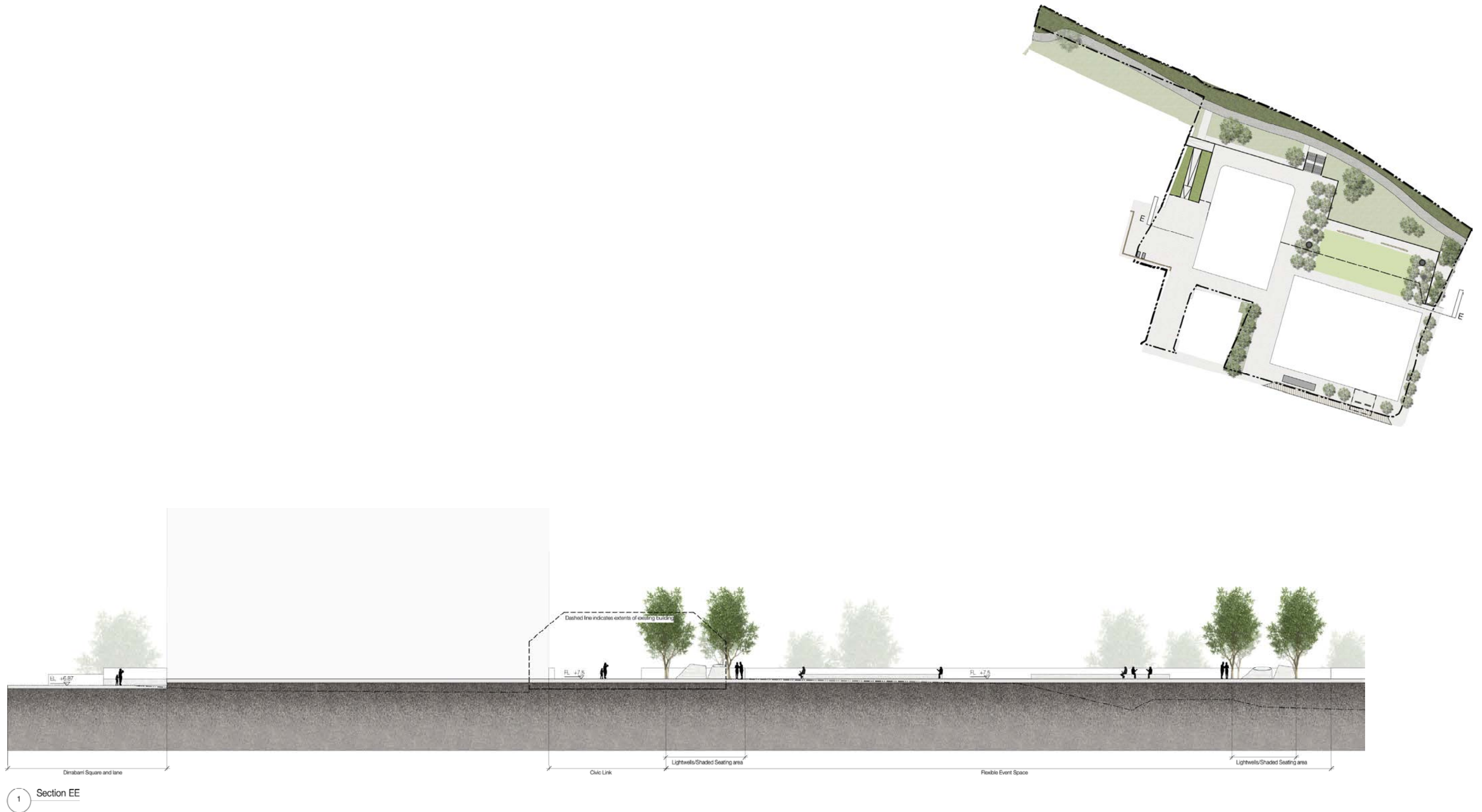


Figure 4.09 - Section EE



4.6 PLANTING STRATEGY

Tree Retained and Removed Plan

The majority of trees around the Willow Grove will be required to be removed to accommodate the built form of Powerhouse Parramatta. Trees not impacted by the Powerhouse Parramatta that are adjacent to the GE building are all exotic species. As part of the strategy for a ‘welcome to country gateway’ the landscape concept proposes the use of indigenous species in place of exotic. Tree 40 which is a Monterey Cypress whilst not directly impacted by the building footprint will obstruct construction of the building and also the Civic Link axis through the site.

The existing trees along the river edge are proposed to be removed to accommodate levelling of the area for flood storage.



Figure 4.10 - Trees Retained and Removed



Proposed Tree Plan



Figure 4.11 - Proposed Tree Plan
































Planting Palette





























































































































































The following pages set out the planting palette to be considered for the site. The planting used will comprise of native endemic species.

























































































Name	SPRING			SUMMER			AUTUMN			WINTER			Fauna/ feature
	early	mid	late	early	mid	late	early	mid	late	early	mid	late	
Tree													
Acacia decurrens													
Early Black Wattle, Sydney Green Wattle													
Height 10 - 15m													
Spread 3.5 - 6m													
Acacia implexa													
Lightwood, Weertjellon, Hickory, Hockory wattle													
Height 5 - 10m													
Spread 3.5 - 6m													
Angophora floribunda													
Roughbarked Apple													
Height 10 - 15m													
Spread 6 - 10m													
Backhousia citriodora													
Lemon Scented Myrtle													
Height 10 - 15m													
Spread 6 - 10m													
Casuarina cunninghamiana													
River Sheoak													
Height 15 - 20m													
Spread 6 - 10m													
Casuarina glauca													
Grey(Swamp)Sheoak													
Height 10 - 15m													
Spread 3.5 - 6m													
Elaeocarpus eumundii													
Smoothed leaved Quandong													
Height 5 - 10m													
Spread 2.0 - 3.5m													
Eucalyptus amplifolia													
Cabbage Gum													
Height 25 - 30m													
Spread 3.5 - 6m													
Eucalyptus crebra													
Narrow leaved Ironbark													
Height over 30m													
Spread 6 - 10m													
Eucalyptus eugenioides													
Thinleaved Stringybark													
Height 25 - 30m													
Spread 6 - 10m													
Eucalyptus fibrosa													
Broadleaved Ironbark, Red Ironbark													
Height over 30m													
Spread 6 - 10m													
Eucalyptus moluccana													
Grey Box													
Height 15 - 20m													
Spread 6 - 10m													
Eucalyptus tereticornis													
Forest Red Gum, Burringoe													
Height over 30m													
Spread 6 - 10m													
Livistona australis													
Cabbage Tree Palm/Fan Palm													
Height 25 - 30m													
Spread 3.5 - 6m													

Name	SPRING			SUMMER			AUTUMN			WINTER			Fauna/ feature
	early	mid	late	early	mid	late	early	mid	late	early	mid	late	
Melaleuca decora													
White Feather Honeymyrtle													
Height 10 - 15m													
Spread 6 - 10m													
Melaleuca linariifolia													
Flax-leaved Paperbark, Budjir (Gadigal), Snowinsummer													
Height 5 - 10m													
Spread 6 - 10m													
Melaleuca styphelioides													
Prickly-leaved Tea Tree													
Height 10 - 15m													
Spread 2.0 - 3.5m													
Tristaniopsis laurina													
Kanooka, Water Gum													
Height 5 - 10m													
Spread 3.5 - 6m													
Waterhousea floribunda													
Weeping Lilly Pilly													
Height 5 - 10m													
Spread 3.5 - 6m													
Shrub													
Bossiaea cinerea													
Showy Bossiaea													
Height 0.75 -													
Spread 0.9 - 1.2m													
Breynia oblongifolia													
Coffee Bush, Oblong-leaved Breynia													
Height 1.50 - 3m													
Spread >60-90cm													
Bursaria spinosa													
Blackthorn, Boxthorn, Sweet Bursaria													
Height 3 - 5m													
Spread 0.3 - 0.6m													
Callistemon linearis													
Narrow-leaved Bottlebrush													
Height 1.50 - 3m													
Spread 0.6 - 0.9m													
Chrysocephalum apiculatum													
Common Everlasting daisy													
Height 0.0 - 0.30m													
Spread 0.3 - 0.6m													
Daviesia ulicifolia													
Gorse Bitter Pea													
Height 0.90 -													
Spread 0.3 - 0.6m													
Dianella longifolia													
Blueberry Lily, Blue Flax Lily													
Height 0.75 - 0.9m													
Spread 0.0 - 0.3m													
Dillwynia sieberi													
Prickly Panot Pea, Juniper Pea Bush													
Height 0.90 -													
Spread 0.3 - 0.6m													
Einadia hastata Syn. Rhagodia hastata													
Berry Saltbush, Saloop													
Height 0.45 -													
Spread 0.9 - 1.2m													



Name	SPRING			SUMMER			AUTUMN			WINTER			Fauna/ feature
	early	mid	late	early	mid	late	early	mid	late	early	mid	late	
<b>Hibbertia diffusa</b> Wedge Guinea Flower <div><div>Height 0.0 - 0.30m</div><div>Spread 0.3 - 0.6m</div></div>													
<b>Indigofera australis</b> Australian Indigo, Austral Indigo <div><div>Height 1.50 - 3m</div><div>Spread 1.2 - 2.0m</div></div>													
<b>Leptospermum polygalifolium</b> Tansoon, Lemon-Scented Tea Tree <div><div>Height 1.50 - 3m</div><div>Spread 3.5 - 6m</div></div>													
<b>Lissanthe strigosa</b> Peach heath <div><div>Height 0.75 -</div><div>Spread 0.6 - 0.9m</div></div>													
<b>Pultenaea microphylla</b> Spreading Bushpea <div><div>Height 0.30 -</div><div>Spread 0.6 - 0.9m</div></div>													
<b>Rubus parvifolius</b> Native Raspberry, Small-leaf Bramble <div><div>Height 0.45 - 0.6m</div><div>Spread 1.2 - 2.0m</div></div>													
...													
...													
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Name	SPRING			SUMMER			AUTUMN			WINTER			Fauna/ feature
	early	mid	late	early	mid	late	early	mid	late	early	mid	late	
<b>Entolasia marginata</b> Sprawling Panic, Bordered Panic Height 0.75 - 0.9m Spread 0.3 - 0.6m													
<b>Eragrostis brownii</b> Brown's Love Grass Height 0.3 - 0.45m Spread -													
<b>Gahnia sieberiana</b> Redfruit Saw Sedge Height 0.9 - 1.5m Spread 1.2 - 2.0m													
<b>Imperata cylindrica</b> Blady Grass Height 0.9 - 1.5m Spread 0.3 - 0.6m													
<b>Isolepis inundata</b> Swamp Clus-sedge Height 0.45 - Spread 0.3 - 0.6m													
<b>Juncus articulatus</b> Jointed rush Height 0.45 - Spread 0.3 - 0.6m													
<b>Lomandra filiformis</b> Wattle Matrush Height 0.45 - Spread 0.0 - 0.3m													
<b>Lomandra longifolia</b> Spiny-headed MatRush Height 0.60 - Spread 0.9 - 1.2m													
<b>Lomandra multiflora</b> Many-flowered Matrush Height 0.30 - Spread 0.0 - 0.3m													
<b>Microlaena stipoides</b> Weeping Grass, Meadow Rice Grass Height 0.45 - Spread 0.6 - 0.9m													
<b>Opismenus aemulus</b> Basket Grass Height 0.0 - 0.30m Spread 0.0 - 0.3m													
<b>Themeda australis/triandra</b> Kangaroo Grass Height 0.45 - Spread 0.3 - 0.6m													

Name	SPRING			SUMMER			AUTUMN			WINTER			Fauna/ feature
	early	mid	late	early	mid	late	early	mid	late	early	mid	late	
<hr/>													
<b>Climber</b>													
<b>Cissus antarctica</b> Kangaroo Vine, Water Vine Height 3 - 5m Spread 2.0 - 3.5m													
<b>Clematis aristata</b> Old Man's Beard Height 5 - 10m Spread 0.6 - 0.9m													
<b>Clematis glycinoides</b> Forest Clematis Old Mans Beard, Height 1.5 - 3m Spread 1.2 - 2.0m													
<b>Glycine clandestina</b> Lovers Twine, Love Creeper Height 1.5 - 3.0m Spread 0.0 - 0.3m													
<b>Glycine tabacina</b> Native Soybean Height 0.90 - Spread 0.6 - 0.9m													
<b>Hardenbergia violacea</b> Purple Twiningpea, False Sansaparilla Height 0.90 - Spread 2.0 - 3.5m													
<b>Hibbertia scandens</b> Golden Guinea Flower, Snake Vine Height 0.0 - 0.30m Spread 3.5 - 6m													



4.7 MAINTENANCE

All maintenance will be undertaken by Powerhouse including;

- Tree pits;
- Public realm materials;
- Lighting;
- Lawn;
- Planting;
- Rain garden;
- Coach drop off;
- Furniture;
- Handrails;
- Bike storage;
- Riverfront.

4.8 SECURITY

Further design development of the Riverfront will resolve the operation of the area during night time hours and follow the principles outlined in the CPTED report.

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# Appendix A: Operations

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Appendix A: Operations

RIVERFRONT

Powerhouse Parramatta Riverfront will be designed and developed in accordance with the Design Principles outlined within the Powerhouse Parramatta Stage 3 Design Brief. The Riverfront sits adjacent to the Parramatta River and will support Powerhouse Programs, community recreation and civic events.

Forming the physical and metaphorical foundation of Powerhouse Parramatta, the Riverfront will be defined by its resilience, its accessibility, its visual immediacy and its innate functional qualities. It will make explicit an interplay between the interior of Powerhouse Parramatta and its exterior public spaces – the meeting point of the Collection and the social and cultural urban dynamics that frame it. It will borrow from ‘underground’, ‘sub cultural’ and ‘street’ cultures through its contemporary visual form. The Riverfront will support the development of new audiences and the creation of partnerships with local community groups and networks. It will:

- create new audiences and links to diverse local communities by providing an exciting space for formal and non-formal gatherings;
- present a flexible and programmable spaces for Powerhouse and community uses
- provide shade and shelter and respite during summer months
- be an inclusive, safe and accessible place for visitors and local communities
- promote excellence and courage in landscape architecture
- incorporate structures that are austere, minimal in detailing and singular in materiality
- include a series of different zones that cater to a wide variety of users from different sub-groups, ages and uses – every activity or resource should contribute to a diverse and multifaceted audience. No single group should be given priority.
- Include built features for drainage that could be repurposed for skateboarding, scooting, gymnasium and sports
- Provide power and water that can support the delivery of food and culturally specific community markets
- Provide distributed seating for passive recreation with appropriate views
- offer 24hr access
- support culturally specific recreational requirements
- capacity to integrate movable infrastructure (projectors, walls, screens etc.)
- integrate cutting edge and innovative lighting design.

To inform the design process, the Powerhouse has developed the following utilisation guide.

Recreation

- Passive – walking, sitting, reading, meeting friends, picnic, eating.
- Cultural – cultural celebrations, religious gatherings, social events
- Sporting – Skateboarding (multi-age, appeal to various skill levels), exercise, scooting, basketball/netball and other games with line markings, play space for children

Events

- Delivery of small and large scale civic and community events including weekly food markets, Paramasala, Eid Festival, Chinese New Year festival, outdoor cinema and music events.
- Delivery of event elements that incorporated into whole of precinct events.

Education and Community Programs

- Delivery of programs including student workshops, masterclasses, programmed talks, craft and creative industry programs.
- Science and agricultural programs that engage communities with environmental protection and climate change programs with partners including Parramatta River Catchment Group, Landcare and Rivercare.

Cultural Activities

- Delivery of small scale community performances, food events, culturally specific art markets, craft and making activities that utilise plant material including Pacific Community weaving program.

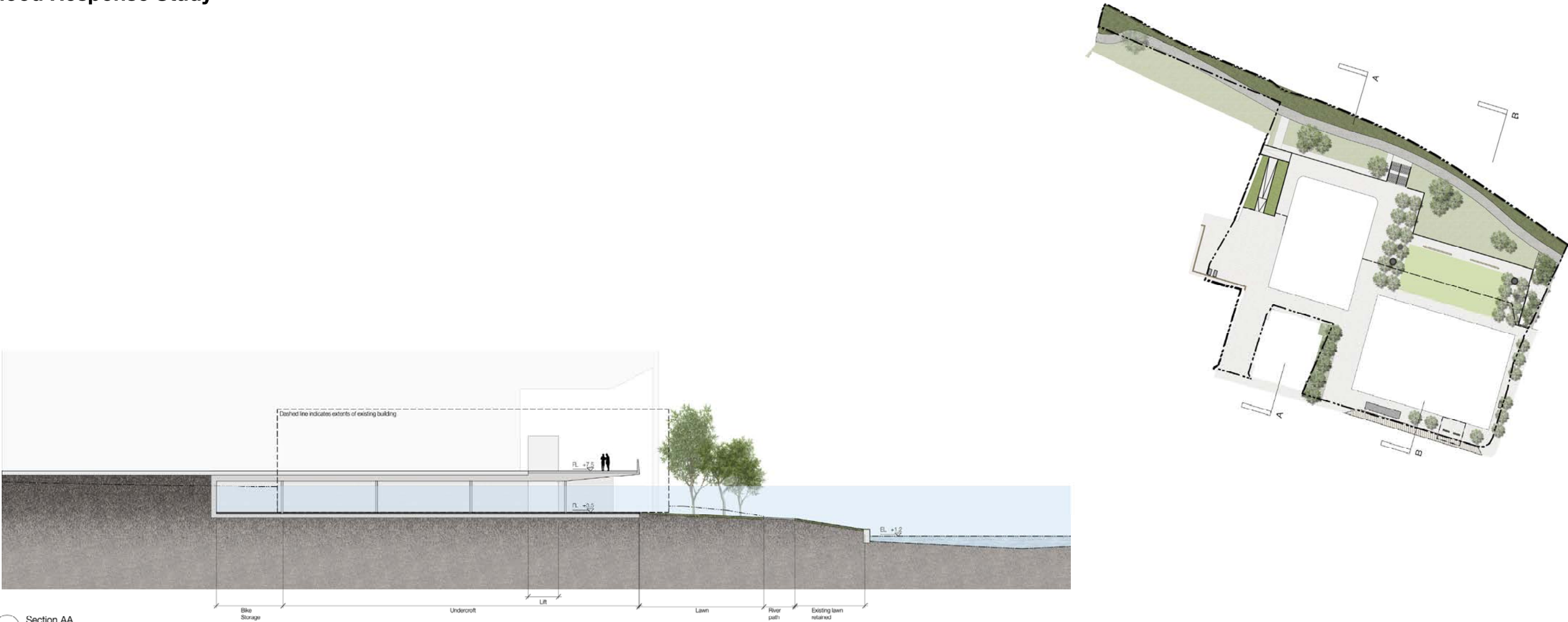
Meeting Place

- A place for the community to meet after work, during lunch, over the weekend and on special holidays.

Performances

- Delivery of temporary, small scale performances including writers talks, community dance and music.

Flood Response Study



1 Section AA  
Appendix A - Section AA



2 Section BB  
Appendix A - Section BB



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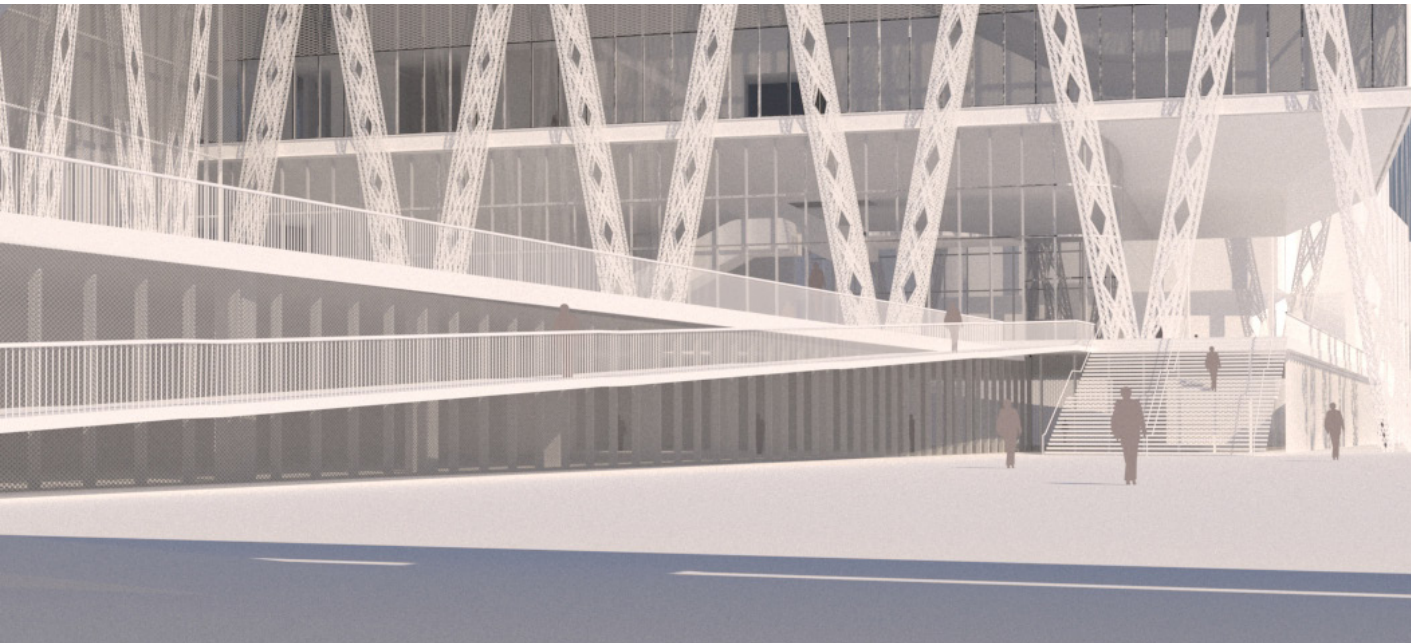
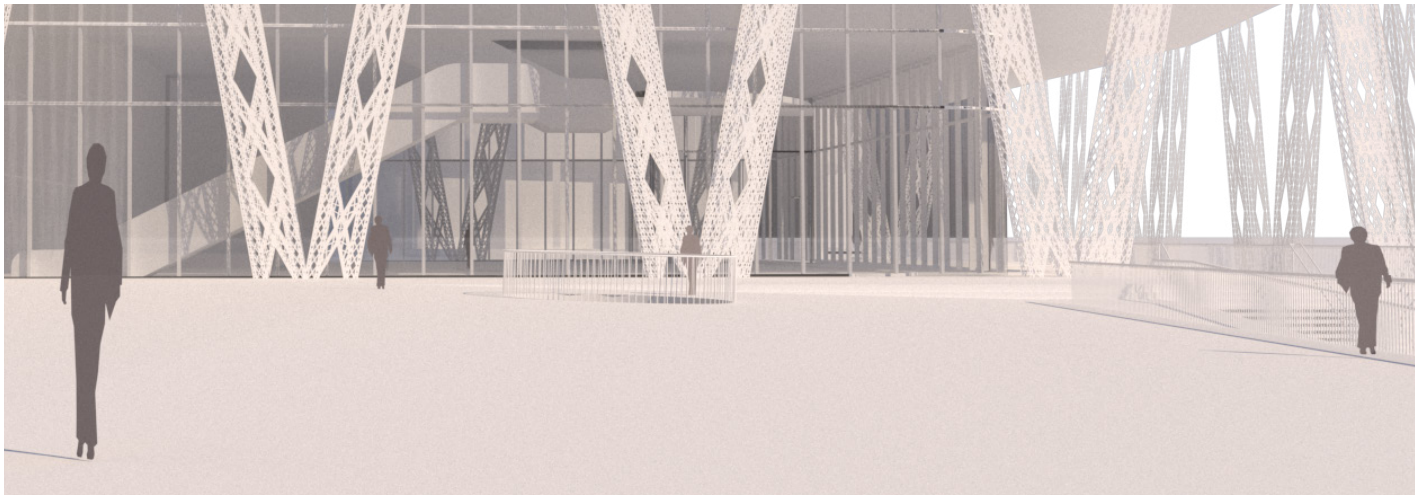
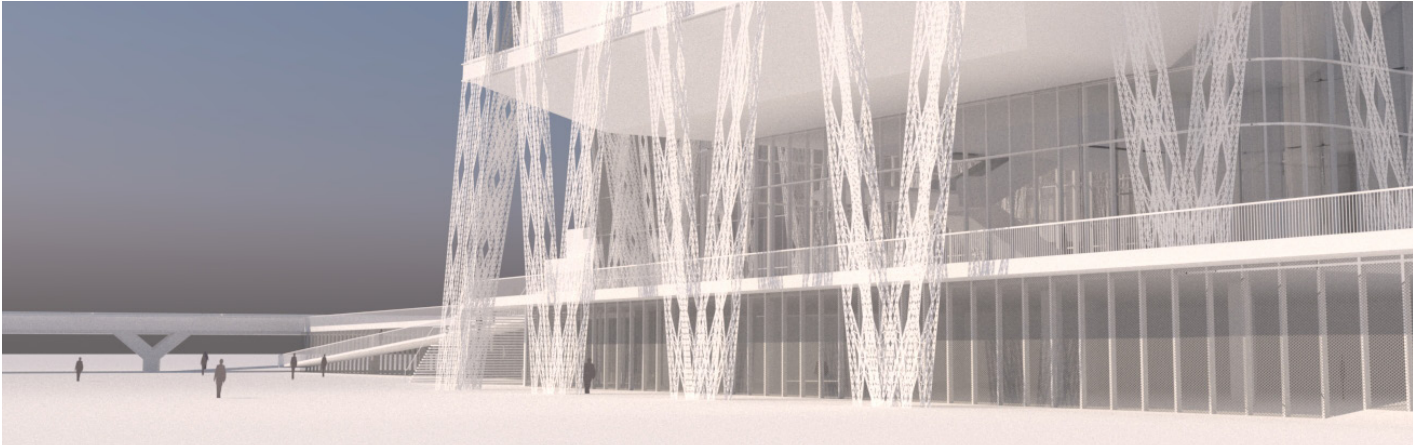
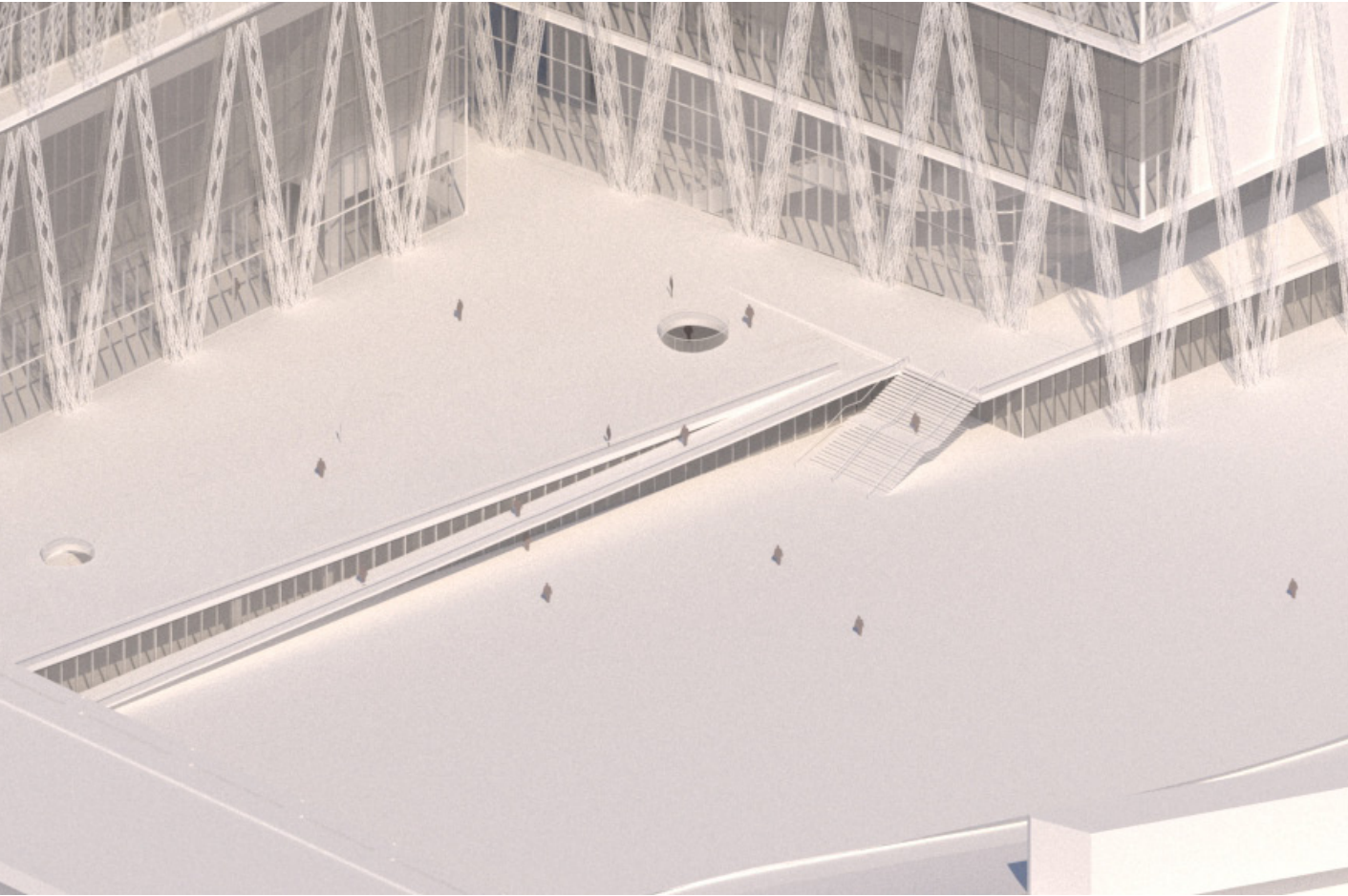
# Appendix B: Design Development



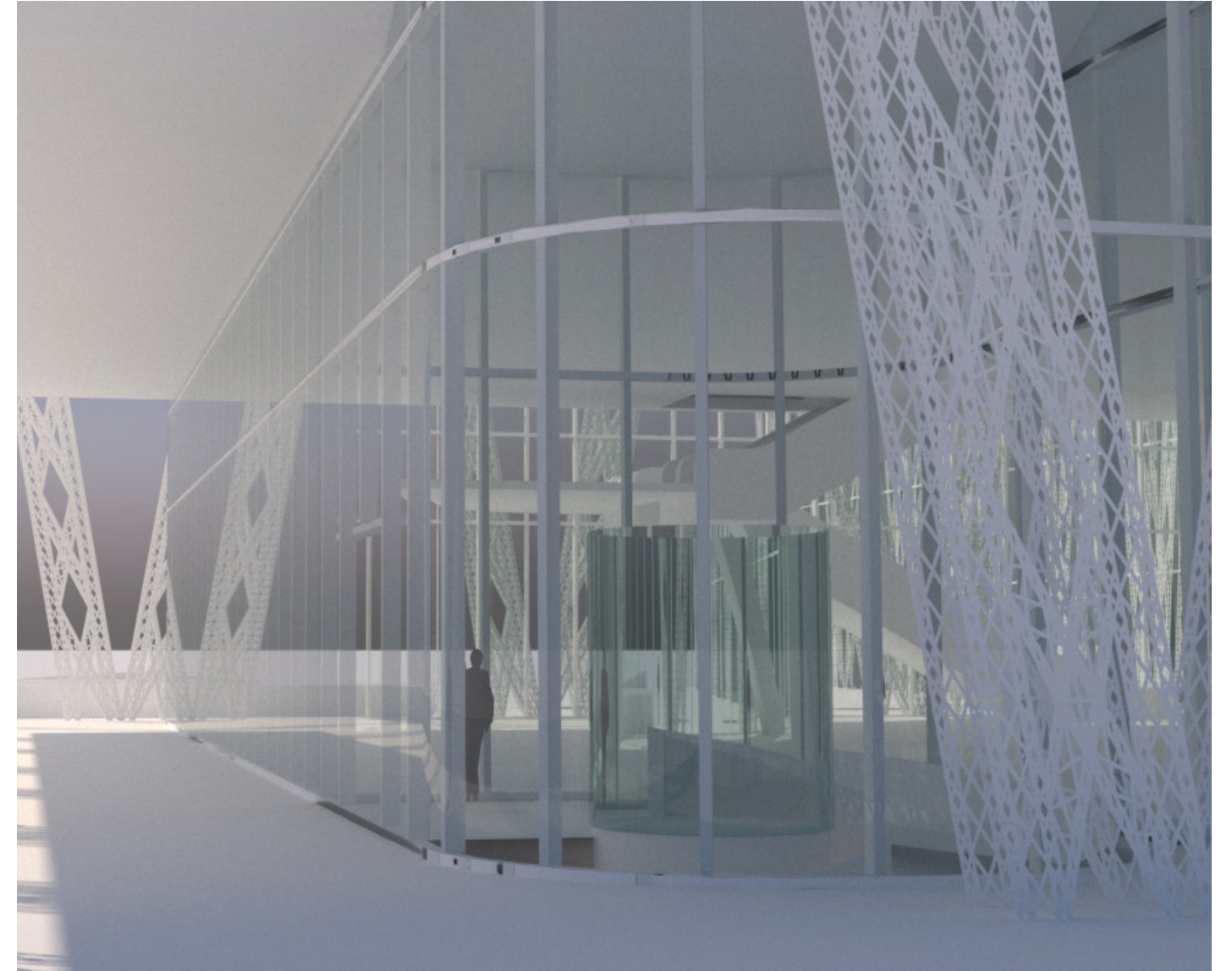
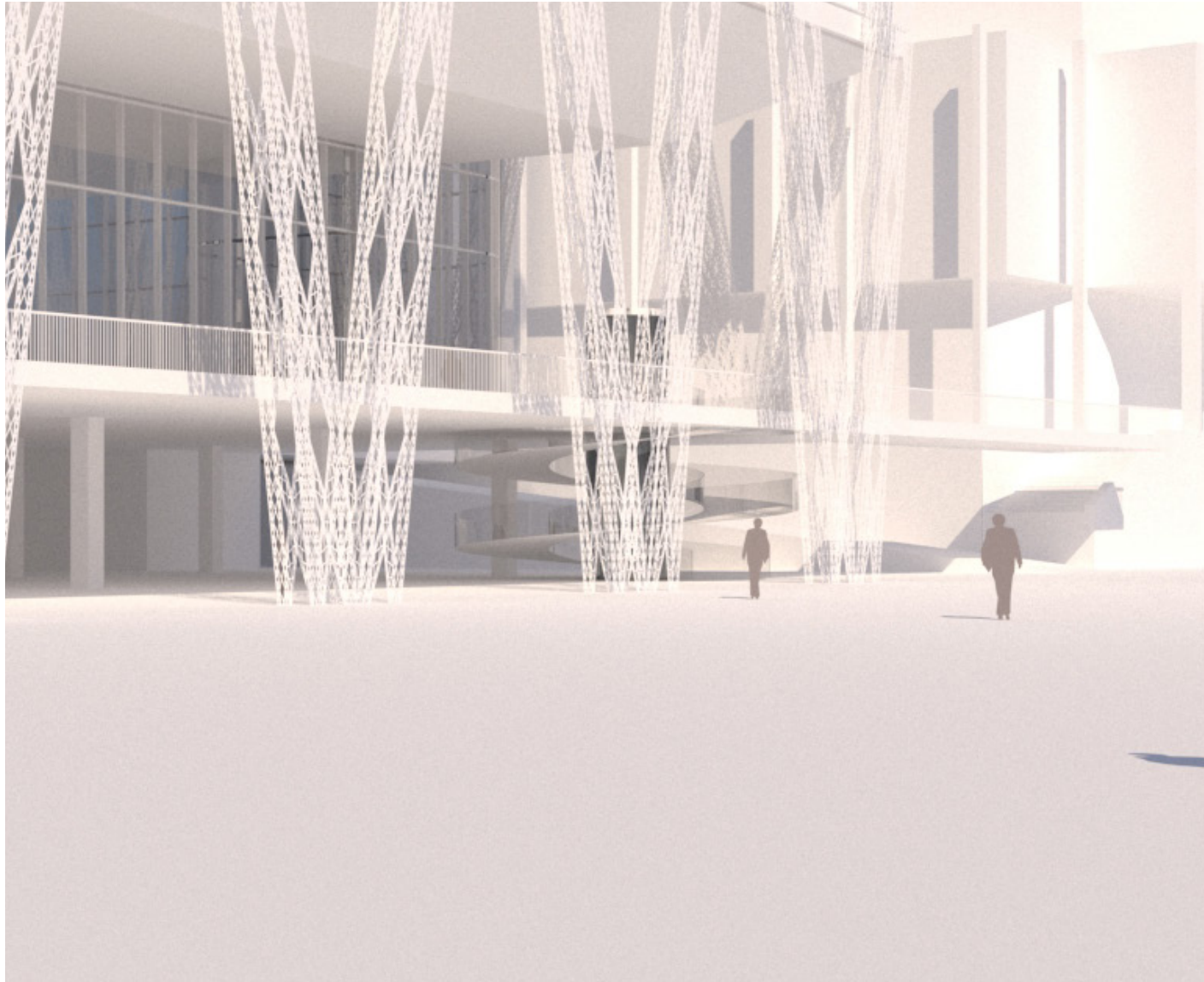
Appendix B: Design Development

DDA RAMP ACCESS

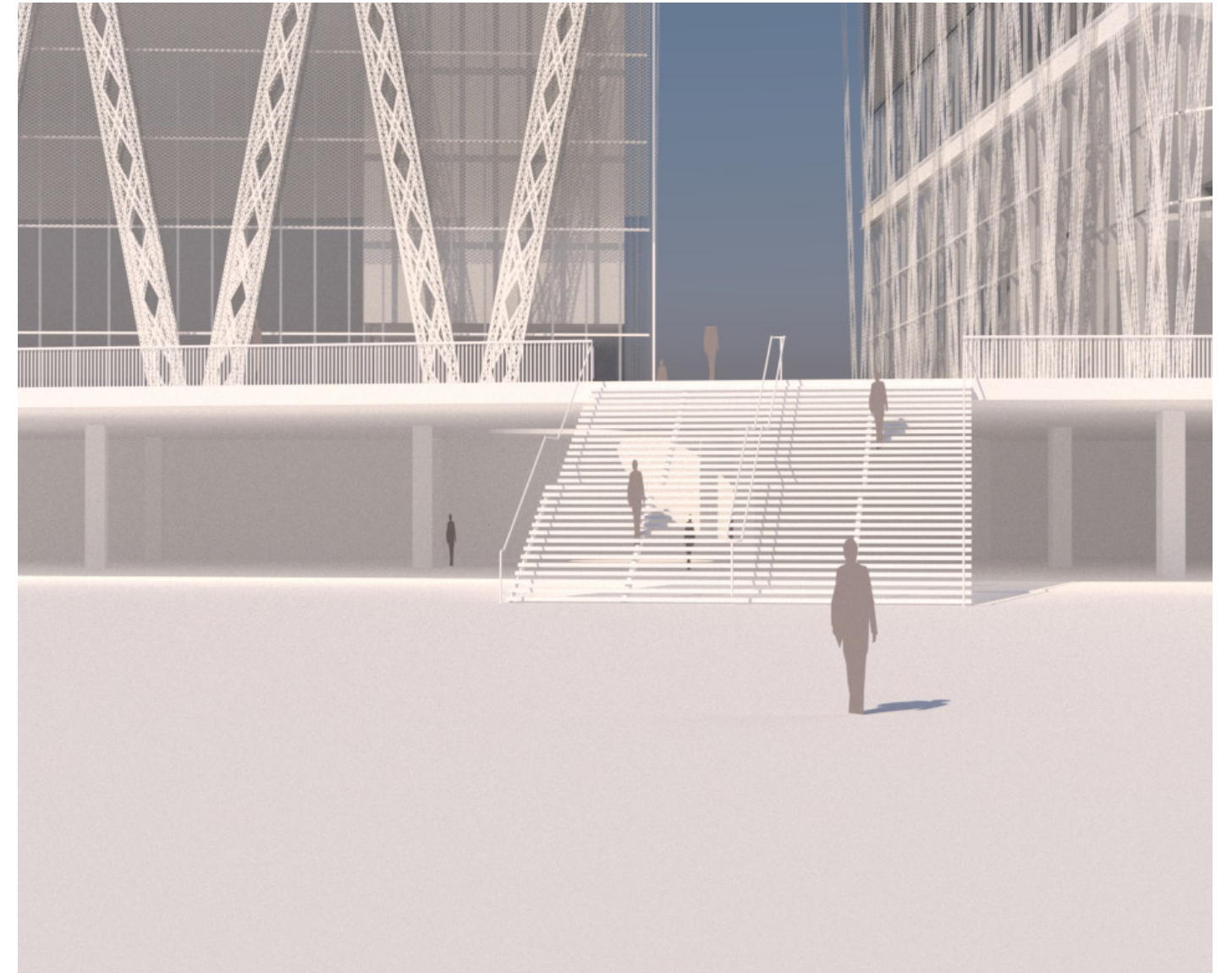
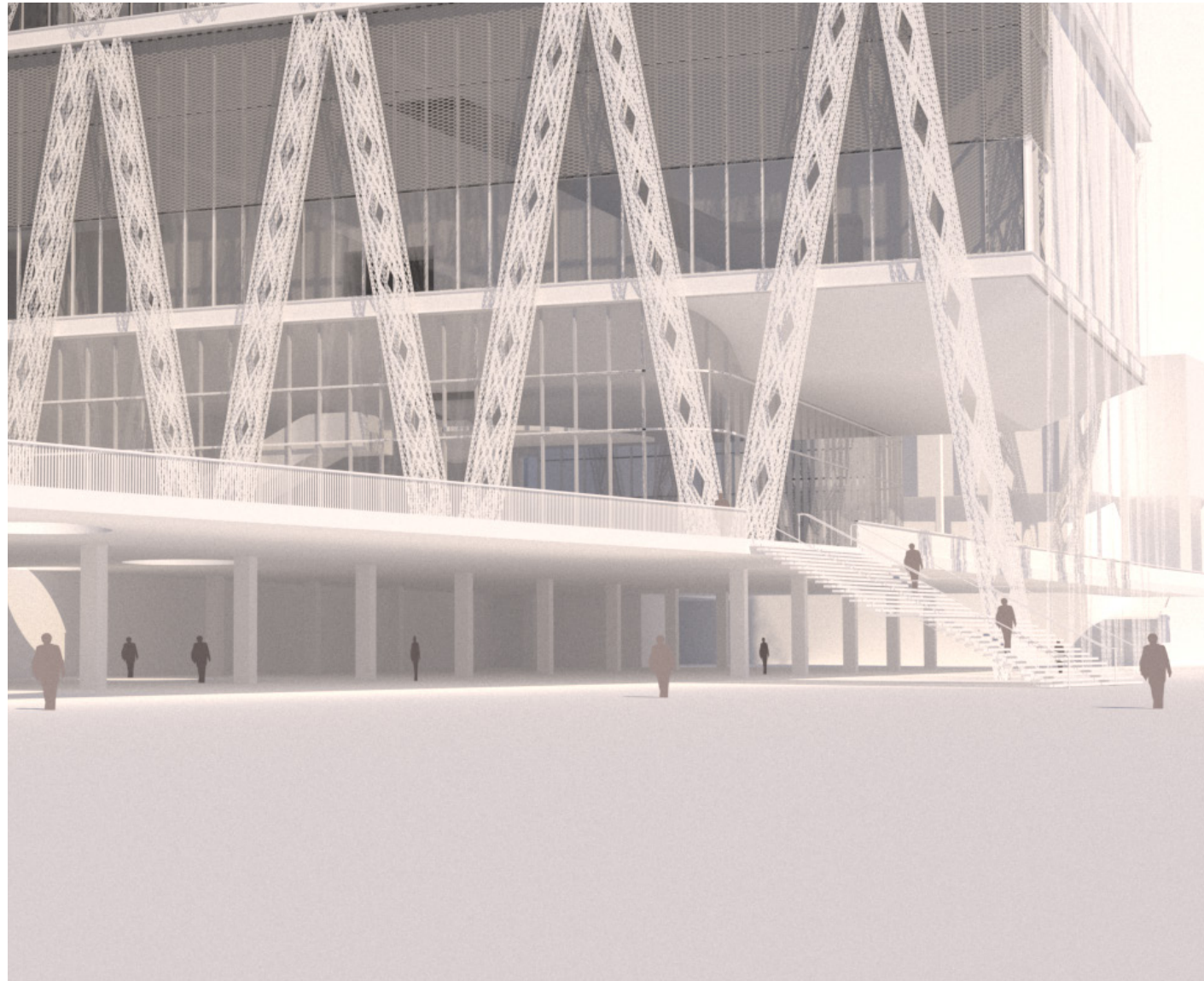
Option 1: Single 1:20 Walkway



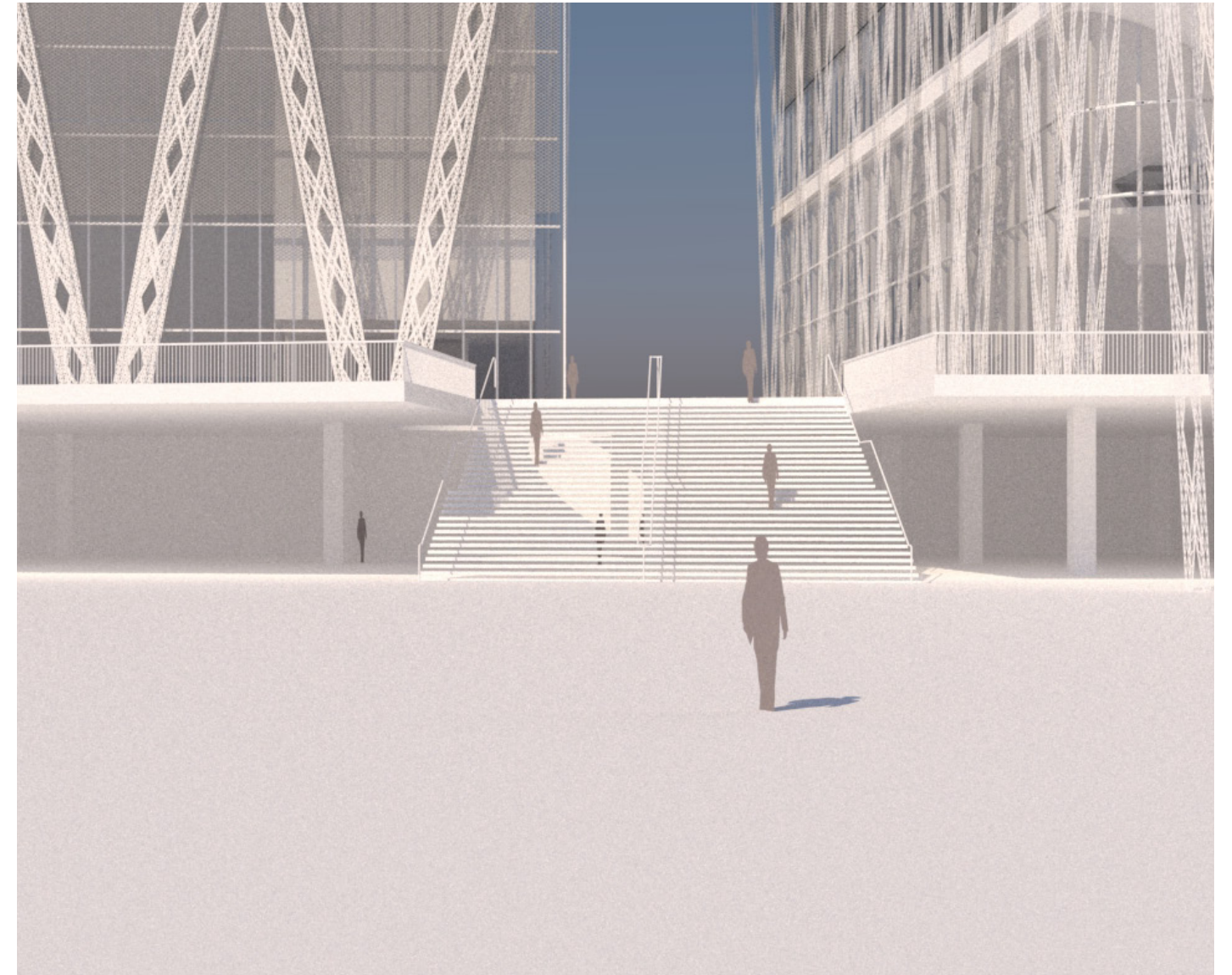
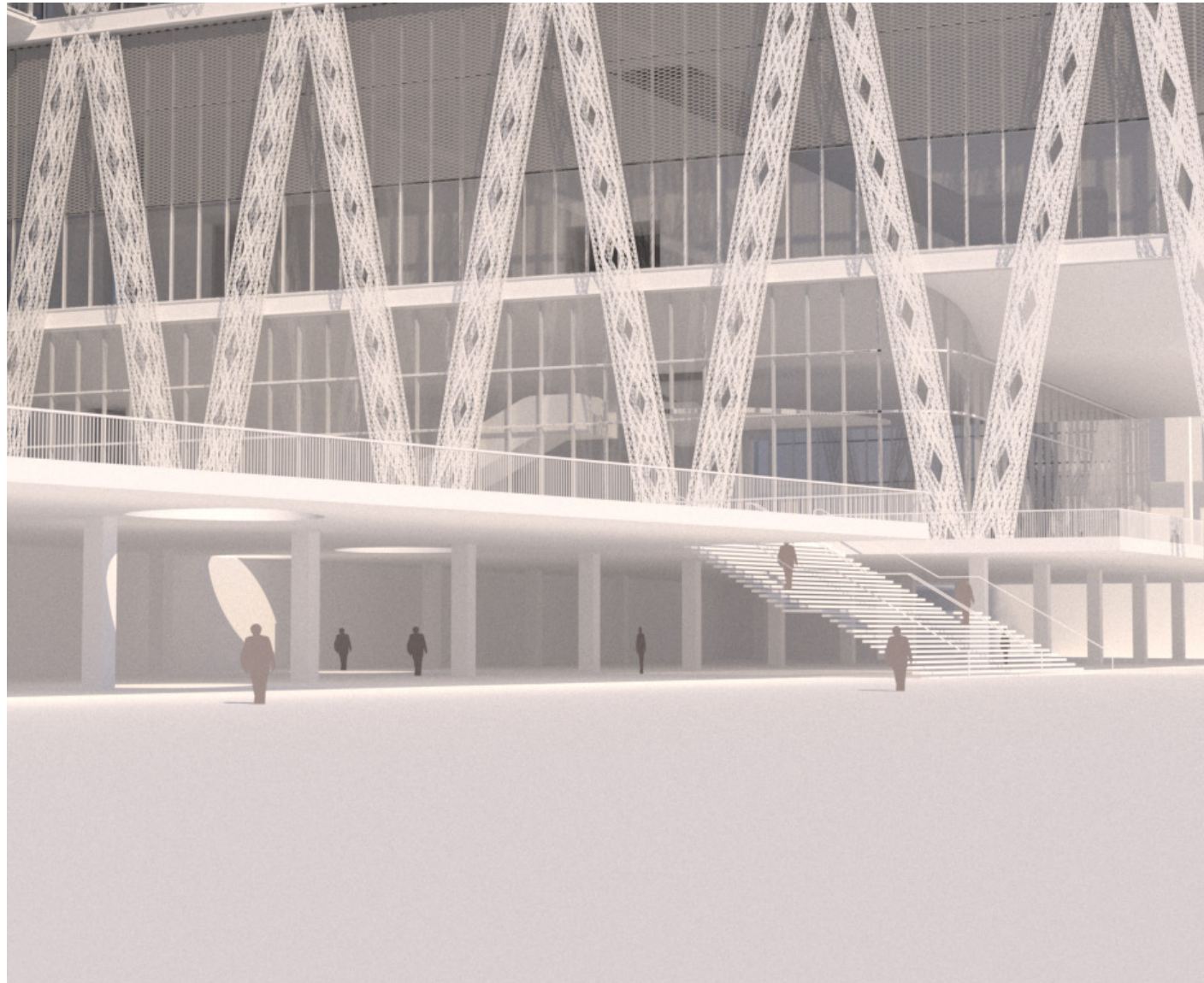


**DDA STAIR & LIFT ACCESS OPTIONS****Option 1: Single 1:20 Walkway**

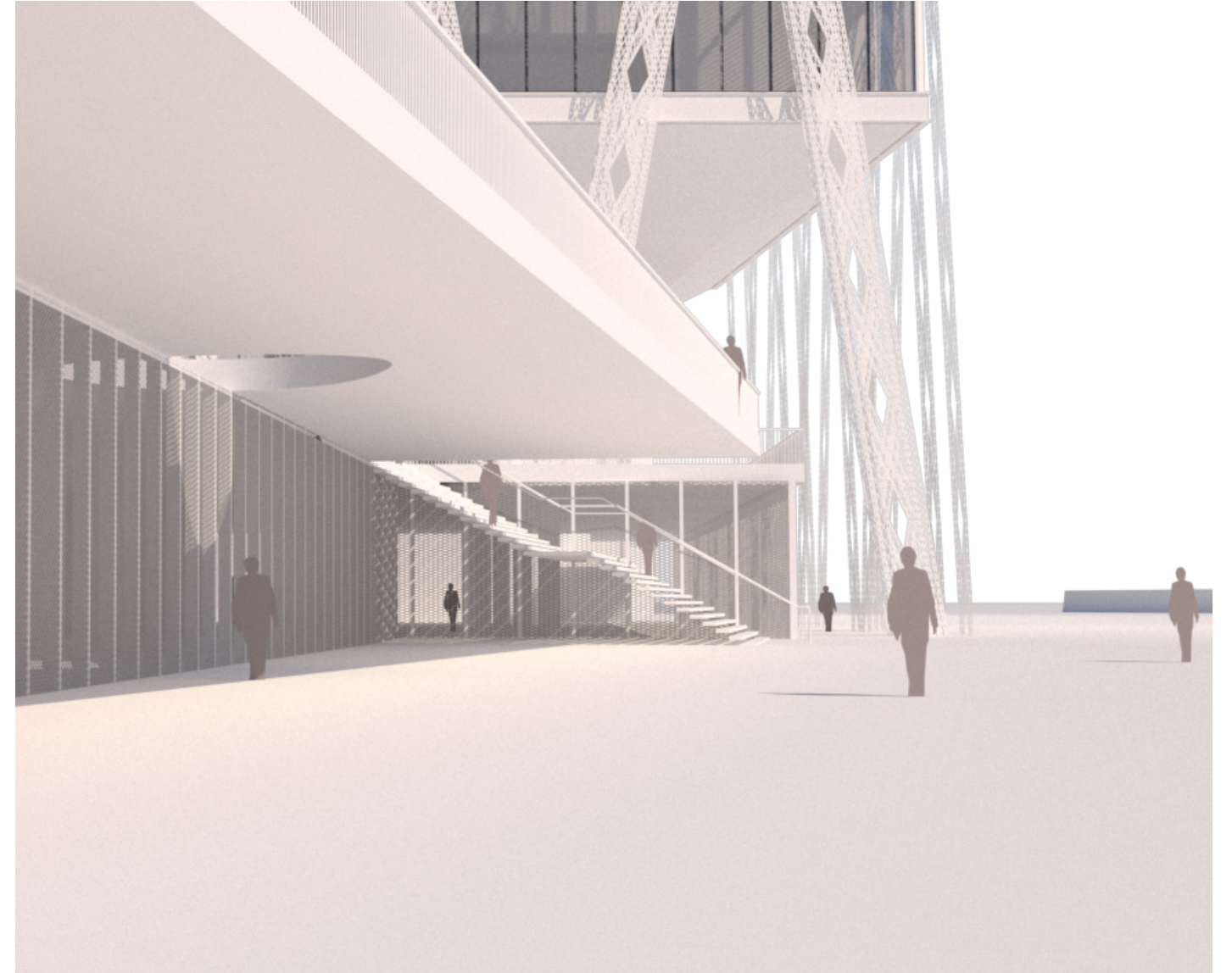


**Option 2: Continuous Podium - Protruding Stair**

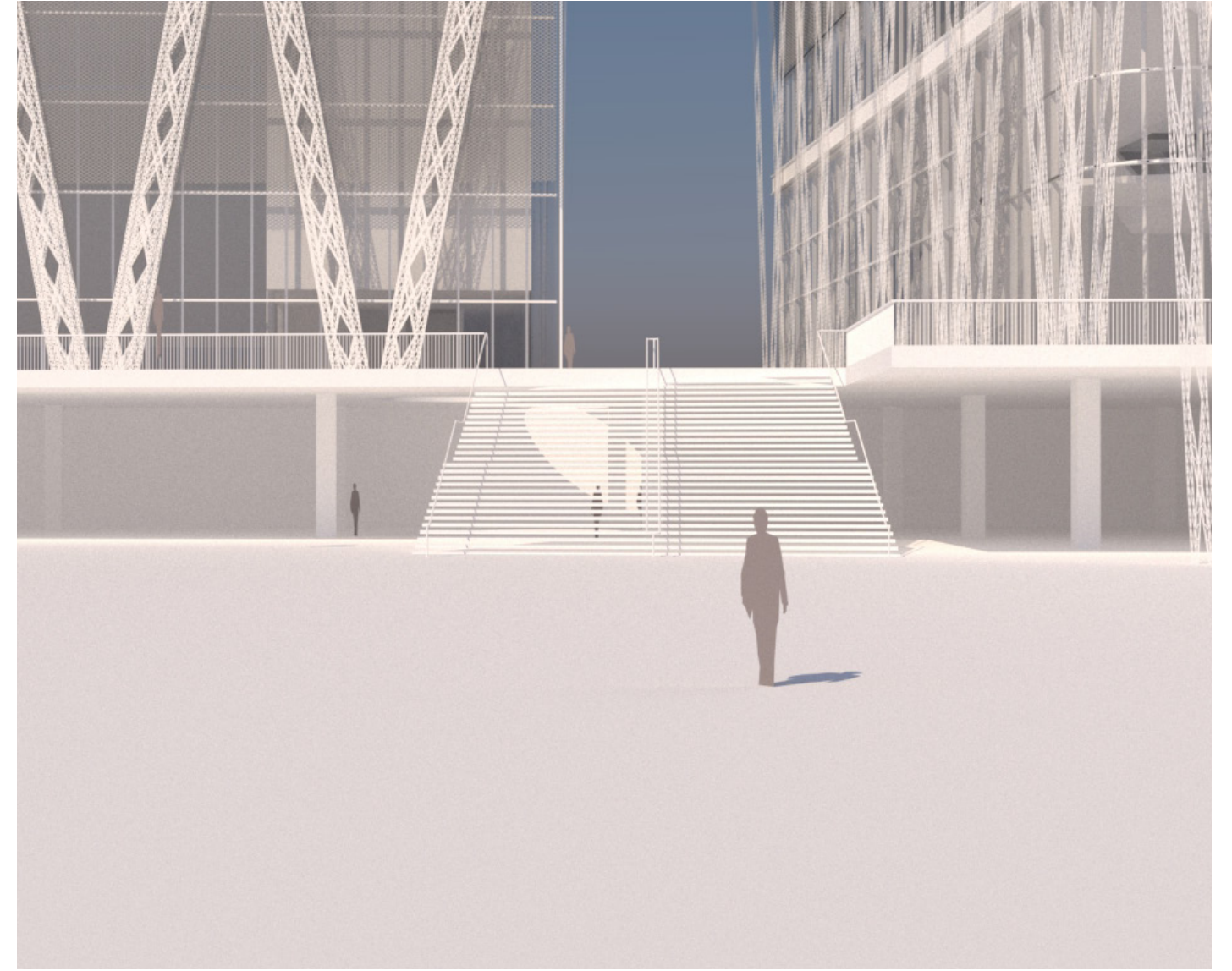
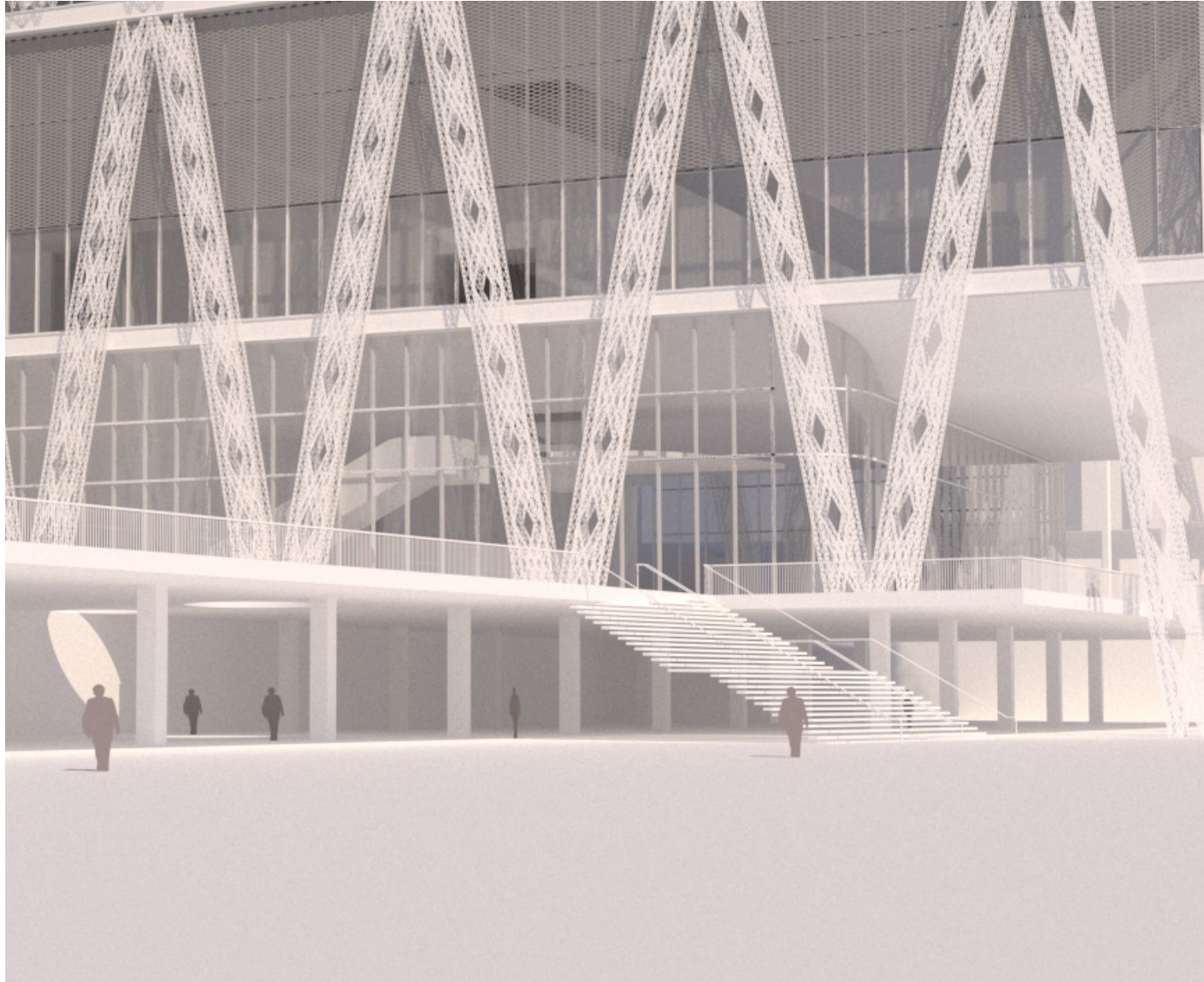


**Option 3: Continuous Podium - Integrated Stair**

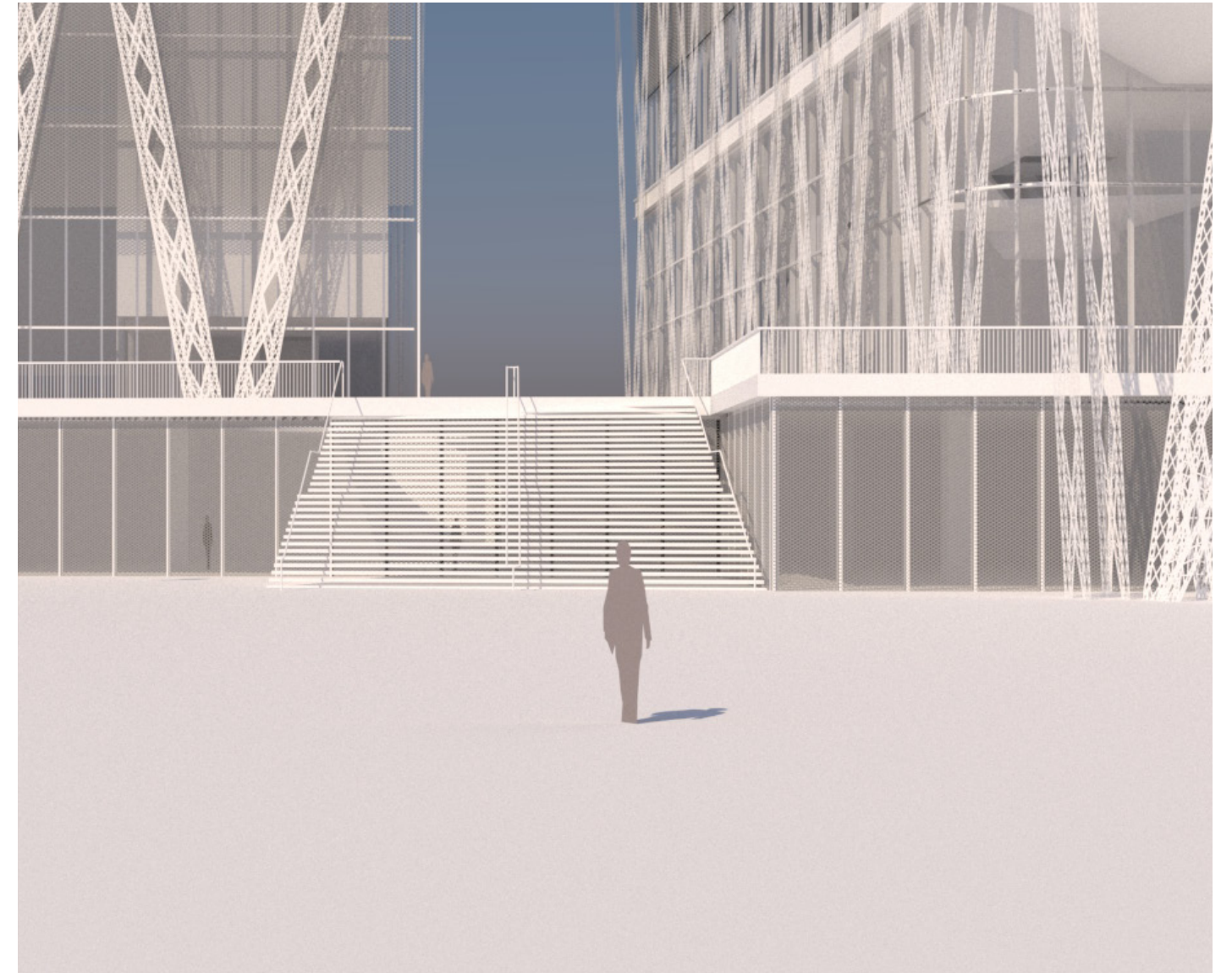
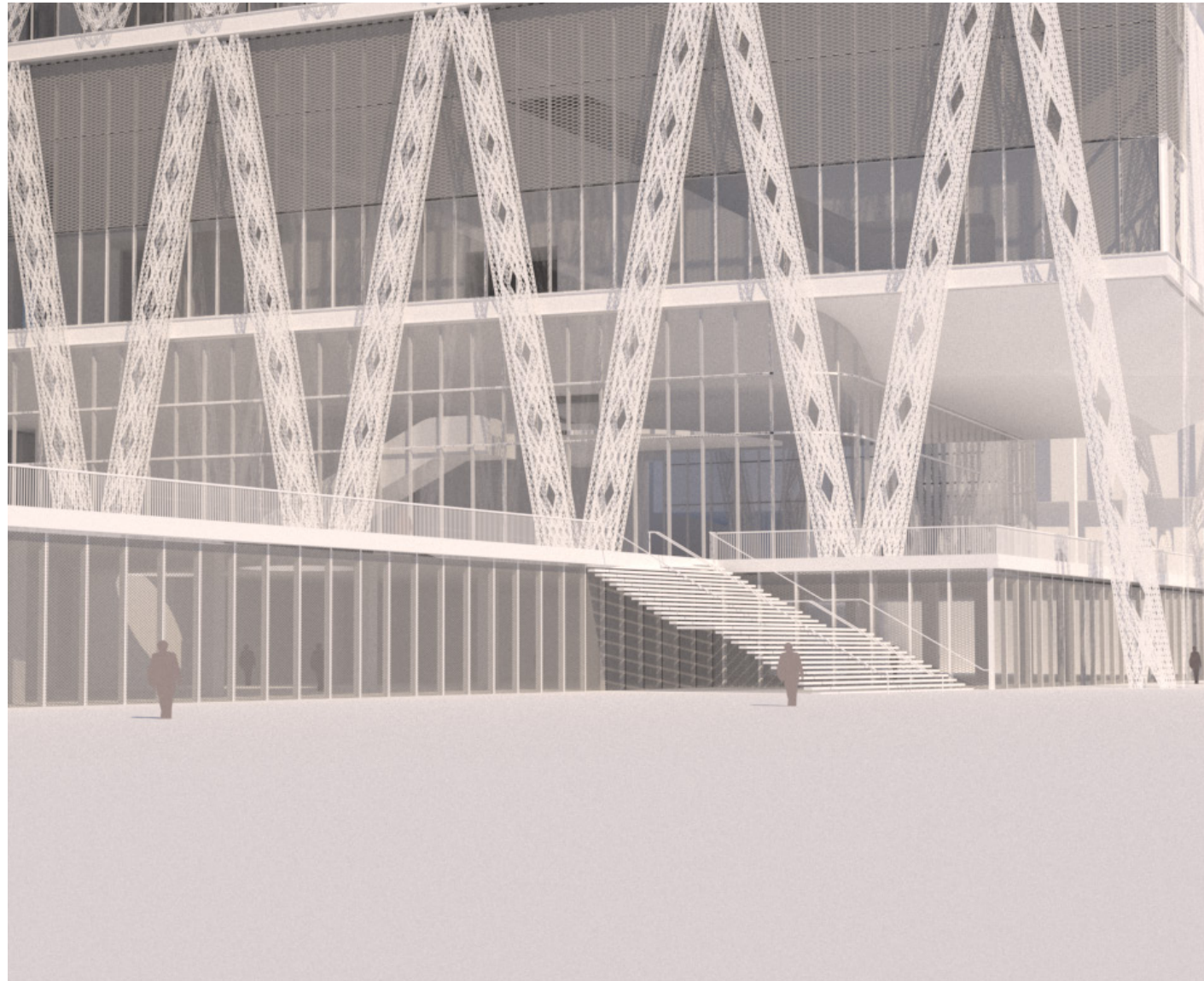


**Option 4: Continuous Podium - Integrated Stair 2**



**Option 5: Staggered Podium - Integrated Stair**

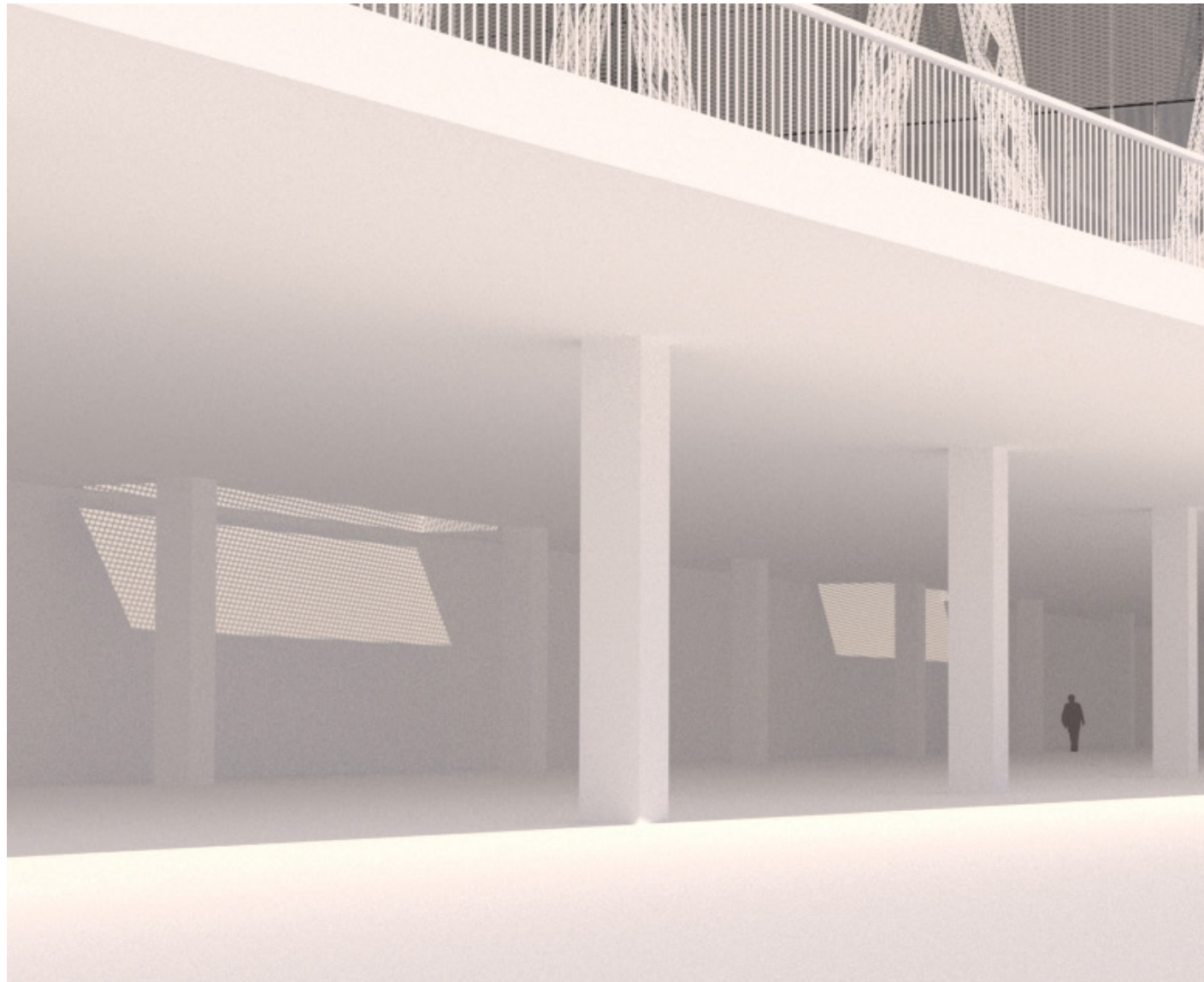


**Option 6: Staggered Podium - Integrated Stair 2**

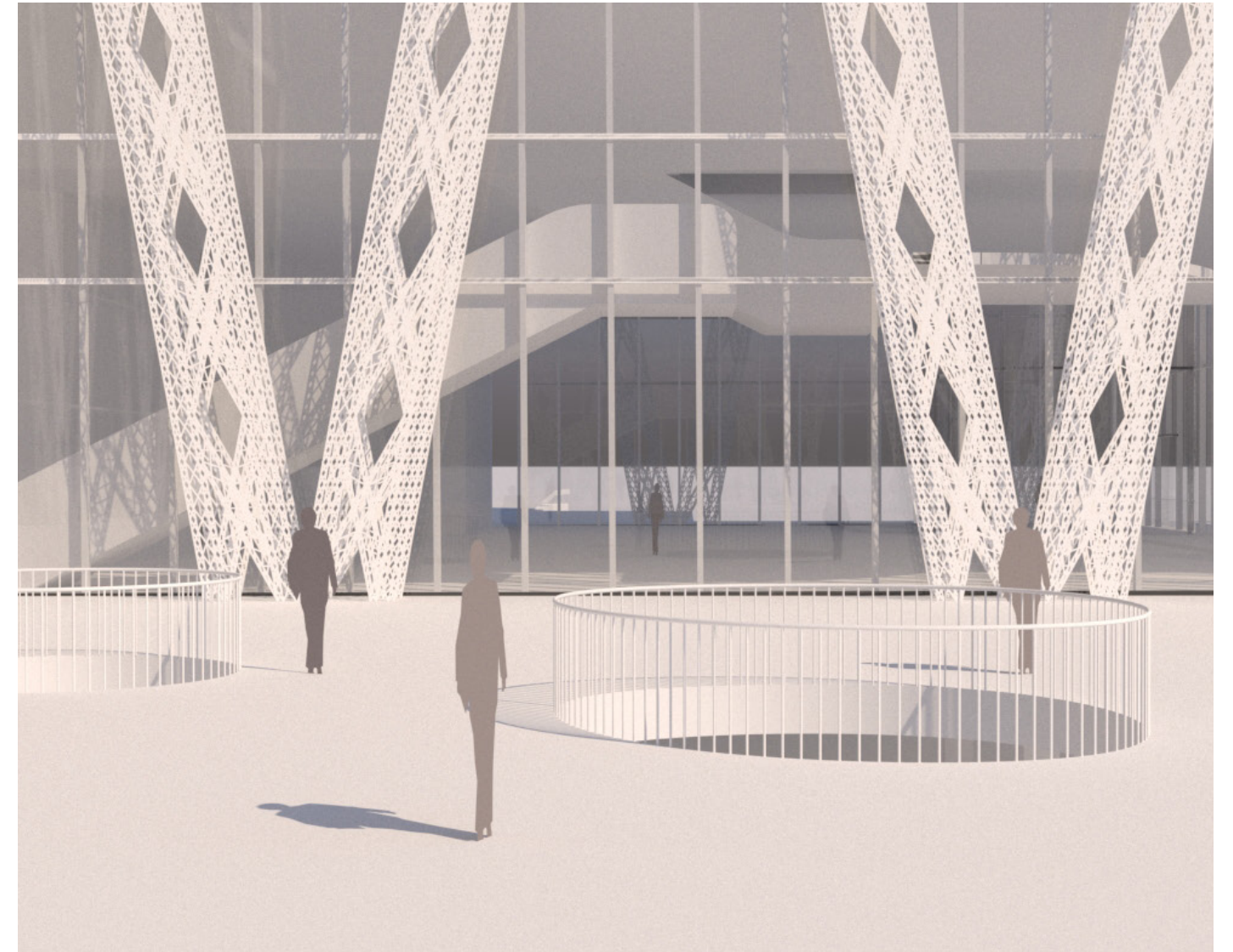


## Lightwells Options

### Option 1: Grating Along Backwall





**Option 2: Circular Form Lightwells**



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# Appendix C : Precedent Studies

Appendix C: Precedent Studies

RIVERFRONT INTERFACE

Exploration of the podium and Riverfront interface with the ground plane.

Long Museum West Bund, Shanghai, 2014. Architect: Atelier Deshaus. Image: Su Shengliang



Exploration of the podium and Riverfront interface with the ground plane.

Long Museum West Bund, Shanghai, 2014. Architect: Atelier Deshaus. Image: Su Shengliang





Exploration of level access via a staircase and lift .

*Long Museum West Bund, Shanghai, 2014. Architect: Atelier Deshaus. Image: Su Shengliang*



RIVERFRONT STRUCTURE

V-shaped columns that respond to the architecture.

Tate Modern Blavatnik Building, London, UK, 2016. Architect: Herzog & de Meuron. Image: Alex Upton.



Concrete structure integrating access and columns.

Tate Modern Blavatnik Building, London, UK, 2016. Architect: Herzog & de Meuron. Image: Alex Upton.





Symmetrical architectural structures drawing users into a space.

*Unite d'habitation, Marseille, France, 1952. Architect: Le Corbusier. Image: Catrina Beevor*



Symmetrical architectural structures drawing users into a space.

*Hill of the Buddha, Sapporo, Japan, 2015. Architect: Tadao Ando. Image: Vincent Wu.*





## SPIRAL STAIR & PLATFORM LIFT

Concrete spiral staircase connecting the lower and upper levels.

*Tate Modern , HdM ,London*



Concrete spiral staircase and integrated lift connecting the lower and upper levels.

*Louvre Museum , I.M.Pei , Paris*





## LIGHTWELLS

Lightwells permeating the podium level creating an ambience within the Riverfront.

*Igualda Chapel , Enric Miralles + Carme Pinos , Barcelona*



Lightwell portals that visually connect the podium and Riverfront.

*Rolex Learning Centre , Sanaa , Lausanne*



## TEMPORARY EXHIBITION SPACE

Temporary Riverfront rooms to support exhibition space.

*M+ Museum , HdM , Hong Kong*





EVENT SPACE

Undecroft theatre to activate the space.  
*FLY OVER Theatre , Assemble , London*



Undecroft theatre to activate the space.  
*FLY OVER Theatre , Assemble , London*





## RECREATION

Large sporting pitch to utilise large Riverfront spaces.

*FSB Cologne 2019*



Arts and craft space.

*Bing Ding Wood Kiln Factory, Qiancheng village, China. Image: He Zhenhuan*





Large skate park to utilise large Riverfront spaces.

*Burnside Skatepark, Portland, Oregon*



Large skate park to utilise large Riverfront spaces.

*San Jose skate park, USA*



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