#### POWERHOUSE PARRAMATTA RESPONSE TO SUBMISSIONS REPORT

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# APPENDIX C REVISED LANDSCAPE PLANS AND DESIGN REPORT

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# LANDSCAPE ARCHITECTURE ADDENDUM REPORT

# POWERHOUSE PARRAMATTA STATE SIGNIFICANT DEVELOPMENT APPLICATION

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# 1.0 Introduction

This report has been prepared for Infrastructure NSW as an addendum to the Landscape Architecture Design Report for the Powerhouse Parramatta State Significant Development Application (SSDA). It provides a response to the key landscape architectural design issues raised in the submissions received.

In response to the submissions, a series of design changes have been implemented which are detailed throughout this report.

This report has been structured as follows:

- Introduction
- Design Amendments
- Public Domain Requirements and Guidelines
- Conclusion

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This report has been prepared by McGregor Coxall, the landscape architects for the project, in consultation with the lead designers Moreau Kusunoki and the local architect Genton.



# 2.0 Design Amendments

## **Design Amendments**

The design of the Powerhouse Parramatta has undergone a series of iterative amendments to address and satisfy the submissions recieved during the exhibition phase of the State Significant Development Application. A further round of minor adjustments were also implemented to reflect optimisations to the brief and operational requirements of the Powerhouse.

Further design development of the Civic Link and Terrace level has enhanced the public domain as an integrated arrival experience to the Powerhouse and gateway to the Parramatta River beyond.

Detailed studies of the Parramatta River have informed and guided an urban response that embraces the natural river flows to provide a riverside design of improved public benefit to the City of Parramatta.

# Summary of Design Changes

A summary of the proposed changes to the development is outlined in the list below:

- 1. Improved connection between Terrace and River Walk environment
- 2. Improved generosity to Phillip Street plaza
- 3. Clarified connection between Civic Link and River Walk
- 4. Optimised relationship between undercroft and public domain
- 5. Other adjustments associated with design development
- 6. Retention of St George's Terrace







Figure 034. - Final Design Masterplan



## Key components of the landscape design

Key areas of the public domain are as follows:

## PS1 Terrace and River Foreshore

1. PS1 Terrace - The lawn accommodates outdoor resting space for visitors to enjoy while also performing as an outdoor programs space. It has a direct relationship with PS1 catering for internal/external programs.

2. Shaded Seating - Trees are located alongside the central lawn providing natural shade space with seats for visitors to gather.

3. Light Wells - Light wells are strategically located to allow natural light into the undercroft as well as supporting a visual connection between the Terrace and River levels.

4. Lawn Embankment - A sloped lawn provides a semi-shaded informal seating and rest area overlooking the river.

5. River Lawn - This lawn is designed to support accessible and additional resting space alongside the river corridor.

6. River Walk - The existing path is reinstated with some minor changes to accommodate access to the Civic Link level.

7. Public Lift - A lift is located within the north eastern edge of the building allowing all abilities access between the River and Terrace levels.

8. Riparian Planting - The existing lawn along the riverfront is replaced with riparian planting to soften the edge and filter stormwater runoff.

#### Phillip Street Plaza

9. Coach Drop Off Zone - The coach drop off has been reduced from 3 to 2 coach spaces and is located along the existing kerbside of Phillip Street. This enhances the ability to activate the Phillip Street Plaza whilst maintaining a consistent streetscape.

10. Shelter - An all weather shelter is located alongside the coach drop off zone providing shade, protection and a meeting point.

**11. Temporary Activation** - A program of temporary and evolving installations whithin the Phillip Street plaza provide activation whilst allowing for service access.

**12. Bosque Tree Planting -** A bosque of trees, including a retained Cupressus macrocarpa from the Willow Grove landscape is located adjacent to retail areas of the museum, providing shade for this important meeting and gathering space.

13. St George's Terrace - Retention of St George's Terrace for adaptive reuse as part of Powerhouse Parramatta.

#### Civic Link

14. Civic Link - The clarity of the pedestrian axis is reinforced through the landscape between the museum buildings, connecting the city with the Terrace and River levels.

**15. River Steps** - A series of seating steps adjacent to the River Walk connecting people to the river as the final destination of the Civic Link.

#### Undercroft

16. Undercroft - The undercroft is a crucial performance element of the design which is necessitated by the flooding requirements of the site.

#### Other Areas

17. Roof Top Garden - The Roof Top Garden will contribute to Powerhouse programs that engage communities with Indigenous and agricultural science, climate change, and food production.

18. The Powerline - The Powerline is a major east west link, connecting Church Street to the Powerhouse Precinct. It provides vast views over the foreshore and a premium outdoor seating experience.

**19. Dirrabarri Lane** - A shared zone providing service access to the museum and other buildings as well as pedestrian access between Phillip Street and the river foreshore.

point to point transport.

20. Emergency Vehicle Access Ramp - A ramp is located west of the site to support pedestrian and emergency vehicle access to the river level.

21. Rain Garden - A river level rain garden provides water retention and urban cooling between the Powerhouse and Meriton buildings.

22. George Khattar Lane Drop Off - Revised termination to George Khattar Lane that incorporates accessible parking and drop off spaces for



# 2.1. Terrace & River Walk

The landscape design for the Terrace and River Walk has been further optimised to address the concerns raised in the submissions.

Enhanced physical and visual connections between the two levels integrates both public domains into a cohesive, symbiotic landscape with a diverse array of spaces to support a broad range of programmed and unprogrammed uses. This ensures a richness of activation throughout the precinct.

Greater connectivity, permeability and accessibility between the Terrace and River Levels, as well as the broader precinct, is achieved through a generous and reorientated pedestrian stair at the end of the Civic Link and an accessible lift.

Summary of additions below:

#### **PS1** Terrace & Lawn Embankment

- A generous lawn embankment connects the PS1 Terrace with the River level, enhancing the connectivity between the river, terrace and building, and aligning the design further with the competition winning entry.
- Tree seating, benches and light well locations within the PS1 Terrace have been adjusted to frame the lawn and provide a series of more intimate seating areas.
- A scalloped seating edge to the lawn has been added to delineate between the more active PS1 Terrace and the more passive recreation areas along the river foreshore.

### **River Walk**

- The river foreshore path has been realigned to enhance adjacent open spaces and promote clearer pedestrian and bicycle circulation.
- River steps provide additional seating space and encourage interaction with Parramatta River.
- Riparian planting along the River Walk provides a soft edge to the foreshore.

following components:

1. Sloped Planting - Planting on either side of the lawn embankment softens the edges framing different spaces.

the river.

embankment.

4. Light Wells - Light wells are strategically located to allow natural light into the undercroft as well as supporting a visual connection between the Terrace and River levels.

5. Shaded Seating Area - Trees are located adjacent to the lawn at the edge of the Civic Link, providing a place for respite.

programs.

stormwater runoff.



Figure 036. - Sea Organ, Zadar, Croatia



Figure 037. - Domino Park, Brooklyn, NY

The landscape design of the PS1 Terrace and River Walk is comprised of the

2. Lawn Embankment - A sloping lawn creates connection between the Terrace and River level whilst providing shaded informal seating overlooking

3. Seating Step - A scalloped step provides additional accessible seating overlooking the river and reduces the gradient of the lawn

6. PS1 Terrace - The lawn can accommodate passive outdoor recreation whilst also providing a platform for a range of museum

7. Riparian Edge - Riparian planting softens the river edge, filtering

8. River Lawn - The proposed lawn is designed to support accessible and additional resting spaces alongside the river corridor.

9. River Steps - A series of seating steps adjacent to the River Path connect people to the river as the final destination from the Civic Link.

10. River Walk - The existing path is reinstated with some minor changes to accommodate access to the Terrace level.







Figure 039. - Prince Alfred Park, Sydney, Australia

Figure 040. - South Bank River, Brisbane, Australia

Figure 041. - MCA Circular Quay, Sydney, Australia

## Accessibility

To achieve streamlined pedestrian movement and equitable access between the river foreshore and the terrace level, a large pedestrian stair at the centre of the site is provided at the end of the Civic Link, facing the water. A pedestrian lift is located within the eastern building to provide access to both the Powerhouse Parramatta and broader public domain along the river foreshore.

A ramp between the two levels was not possible given the site constraints and severely compromised the public domain experience. The cumulative path of travel, vertically and horizontally of more than 100m, created an unpleasant journey to its users. Therefore, a public lift is identified to be a far superior solution to increase accessibility between the Terrace and River level.

In addition to the lift, an accessible carpark and drop off are provided at the end of George Khattar Lane.







Figure 043. - Accessible Ramp Study - +100m Length required

Figure 044. - Urban Elevator, Errenteria, Spain

The landscape design of Goerge Khattar Drop Off is comprised of the following components:

1. Drop-off & Disabled Car Parking - The termination of George Khattar Lane acts as a pick-up/drop off area and provides numerous disabled parking spaces for direct access to the Powerhouse Parramatta and river foreshore.

2. East Steps- The stairs located on the eastern side of the site, increase connectivity between the Terrace and River levels. They also perform as a continuation of The Powerline, through a continuous link between Church Street, Meriton colonnade, Powerhouse Parramatta, River Walk and the Parramatta Wharf.

3. Bench Seating - Strategically placed linear bench seats offer moments of rest.

4. Lift - Lift provides equal access from the Terrace to the River level with direct connections to the George Khattar Lane drop off and disabled parking area.



Figure 045. - Paddington Reservoir Gardens, Sydney, Australia



# 2.2. Phillip Street Plaza

The Philip Street plaza has been increased in size and clarified through a reconfiguration of the coach drop off zone and a simplification of the vehicular path for service loading. This creates a more legible and generous public domain at the city facing frontage of the Powerhouse to enable improved public use and activation.

This is further supported by the landscape design through additional seating and shade which has been provided to create a plaza along Phillip Street, taking advantage of the increased building setback.

The landscape design of the Phillip Street Plaza is comprised of the following components:

1. Civic Link Entry- Main entry to the Powerhouse Precinct.

2. Outdoor Retail Seating - Retail activates the corner of the Powerhouse and draws people into the site.

3. Shaded Seating - A bosque of trees are located adjacent to retail as a meeting area to the precinct.

4. Shelter - An all weather shelter is located alongside the coach drop off zone providing shade, protection and a meeting point.

5. Coach Drop Off Zone - A coach drop off for Powerhouse Museum visitors is located along Phillip Street.

6. Temporary Activation - A program of temporary and evolving installations within the Phillip Street plaza provide activation whilst allowing for service access to the museum.

7. St George's Terrace - Retention of St George's Terrace for adaptive reuse as part of Powerhouse Parramatta..





Figure 047. - St George's Terrace, Parramatta, Australia



Figure 048. - Barangaroo, Sydney, Australia

# 2.3. Civic Link

The landscape articulation of the Civic Link has been optimised to improve its legibility, relationship to adjacent spaces and to streamline north-south connectivity to the river foreshore environment.

The following changes have been implemented:

- A Cupressus macrocarpa from the Willow Grove landscape has been retained and features as a focal point at the entrance to the precinct along Civic Link.
- The entrance to the precinct has been defined by an accessible ramp to the Civic Link level, with adjacent stairs that hold a retail and gathering space at the corner of the eastern building.
- The connecting stairs between the Civic Link and river foreshore levels has been cut into the landscape, enhancing east-west connectivity whilst framing the views towards the river.
- The termination of Civic Link is provided through a series of seating steps connecting people to the river as the final destination.

The landscape design of the Civic Link is comprised of the following components:

**1. Precinct Entry** -The entry to the precinct is defined by a ramped path as a continuation of the Civic Link with an elevated corner to the eastern building that holds the Phillip Street plaza and provides retail activation upon entry.

2. Indigenous Planting - Planting along the eastern facade of 32 Phillip Street provides a shaded entry experience, referencing the local indigenous palette.

3. Existing Tree - A mature Cupressus macrocarpa from the Willow Grove landscape is retained, giving reference to the history and heritage of the site whilst acting as a striking entry marker to the Powerhouse Precinct.

4. River Link Stairs - Stairs connect the end of the Civic Link with the River Level.





# 2.4. Undercroft

In response to the submissions, the visual presence of the undercroft in the public domain, has been mitigated through the reintroduction of a sloped embankment to enclose it from the north. This brings the landscape design closer in alignment with the original competition winning scheme and vastly improves the visual and physical connection between the terrace and river levels.

The ingress zones on the western and eastern ends of the undercroft have been landscaped to be discrete and visually integrated with the surrounding public domain. Operable security screens also limit public access to the space outside of programmed events and are also designed to open during a flood event.

The landscape design for the undercroft is comprised of the following components:

1. Retractable Screen - The screen will remain closed at all times except when the space is being used for museum programs or in the event of a flood.

2. River Steps - The main staircase draws people from the River and Terrace levels through a lens which frames views from both ends, providing a more dramatic transition between the Terrace and River level.

3. Shaded Walkway - The terrace edge, creates a permanent shaded walkway.





Figure 052. - Teshima Art Musuem, Teshima, Japan

Figure 053. - Faculty of Architecture & Urbanism, São Paulo, Brazil





Figure 054. - Pedestrian Walkway, Munich, Germany

# 2.5. Other Areas

# **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.

An enhanced pavilion is complemented by a productive garden, and shaded spaces for programs, events and passive recreation.

The landscape design for the Roof Top Gardens is comprised of the following components:

1. The Pavilion - A flexible program space for education, community and commercial programs.

2. Pavilion Deck- An outdoor space to support the pavilion program with a series of steps transitioning to the rooftop garden.

3. Indigenous and Produce Garden - A series of garden spaces which will include productive planting which contribute to Powerhouse programs focusing on Indigenous and agricultural science, climate change and food production.





Figure 056. - Paley Park, NYC

Figure 057. - Getty Salad Garden, The Getty Center, Los Angeles Figure 058. - Produce Garden





# The Powerline

An elevated walkway continues to connect the Civic Link level to the existing Meriton building, activating the northern edge of the western building through the inclusion of outdoor retail seating.

The path of travel is enhanced through a more gentle connection to the north of the PS1 terrace.

The landscape design for The Powerline is comprised of the following components:

1. Meriton Colonnade - The existing Meriton colonnade will be connected to the precinct, providing access between Church Street and Wilde Avenue.

2. Elevated Walkway - An elevated walkway connects the Terrace level to the existing Meriton building.

3. Outdoor Retail Seating - Outdoor retail seating activates the northern edge of the western building, providing a unique vantage point overlooking the Parramatta River.





Figure 060. - High Line, NYC



Figure 061. - Domino Park, Brooklyn, NY

## **Dirrabarri Lane & Emergency Vehicle River Access**

Enhanced connectivity to the river level has been provided through more defined planting and paving arrangements that encourage pedestrian connectivity east-west.

A laneway experience is created through defined planting areas, taking pedestrians from the urban environment between the Powerhouse and Meriton to the recreational areas of the foreshore

The landscape design for the Dirrabarri Lane & EVA is comprised of the following components:

1. Rain Gardens - A series of rain gardens provide water retention and urban cooling whilst softening the hardscape of Dirrabarri Lane.

2. Dirrabarri Lane - The existing levels of Dirribarri Lane are retained to provide vehicular loading access and pedestrian connection from Phillip Street to the river level.

**3.** Ramp - A ramp is located between the Powerhouse and Meriton buildings to provide both pedestrian and emergency vehicle access to the river foreshore.

4. Dirrabarri River Stairs - Additional stairs enhance connectivity between Dirrabarri Lane and river level and acts as emergency access from the undercroft to the level above.





Figure 064. - Xuhui Runway Park

Figure 062. - Paddington Reservoir Gardens, Sydney

# 3.0 Public Domain Requirements and Guidelines

# Parramatta River Strategy

An summary of the Powerhouse Parramatta project consistency with the principles of the Parramatta River Strategy, City of Parramatta, 2015, is as follows:

OBJECTIVES	WHERE ADDRESSED
Parramatta River Strategy	
<ul> <li>To further enhance the Parramatta River foreshore as a valued public domain and environmental asset with appropriate new development.</li> </ul>	The development of Powerhouse Parramatta at the northern extent of Civic Link is ratified in a number of Council strategies and guidelines. The site is considered appropriate for a new cultural institution within Sydney's Central River City. The proposal for Powerhouse Parramatta includes a unique architectural and public domain proposal that was subject to an international design competition which includes jury membership from City of Parramatta Council.
<ul> <li>To reinforce and activate the river foreshore.</li> </ul>	Powerhouse Parramatta is anticipated to increase visitation to the Parramatta CBD through its program of events and exhibitions. This will include utilisation of the public domain to create a lively and active precinct along the foreshore of Parramatta River.
- To enhance views to the river foreshore.	The amended design for Powerhouse Parramatta better resolves the issues surrounding the site in terms of flooding, access and public domain design. The concept includes a landscaped connection between the upper and lower levels of the public domain that is supported by a distinctive architectural form of the museum buildings. Together these components are considered to enhance views along the river foreshore.
	Furthermore, the incorporation of Civic Link as a key urban design element through the site allows for views to terminate at the river.
<ul> <li>To improve connections to and along the river foreshore; – To enhance safety and amenity along the riverfront.</li> </ul>	The Powerhouse Parramatta concept includes a number of primary, secondary and tertiary connections that have been designed to tie in with existing or allow for future connections. Access north south is defined by the extension of Civic Link through the site, terminating at the river foreshore. The river foreshore walk is enhanced through new paving and continuity of connection along this major recreational route.
<ul> <li>To ensure historic linkages between the City and the river are retained, enhanced and interpreted for general public.</li> </ul>	A Heritage Interpretation Strategy has been developed for Powerhouse Parramatta that is included within the Response to Submissions.

## Public Domain Guidelines

The City of Parramatta Council *Public Domain Guidelines* detail requirements in relation to streetscape public domain elements for the city. The Powerhouse Parramatta project will be consistent with the Guidelines along both the Phillip Street and Wilde Avenue street frontages. All details required including street trees, furniture and pavement details will be developed prior to construction.

An overview of the Powerhouse Parramatta consistency with the principles of the Guidelines is as follows:

OBJECTIVES	WHERE ADDRESSED
Public Domain Guidelines	
Lively & Functional	
<ul> <li>Streets that offer a high quality setting for active public life and activity.</li> <li>Street settings that are durable and timeless in design.</li> <li>Well-balanced street geometry and element settings that create memorable experiences to all street users.</li> </ul>	The main street interfaces for Powerhouse Parramatta are Phillip Street and Wilde Avenue. The Phillip Street Plaza will provide a green gathering and meeting space for the museum and celebrate the unique architecture of the cultural institution at the northern extent of Civic Link.
	A consistent built form edge will be maintained along Wilde Avenue. The façade will maintain a consistency including for all service access areas.
	The existing street alignments of both Phillip Street and Wilde Avenue will be maintained.
Attractive & Distinctive	
<ul> <li>Consistent palettes for paving materials, street furniture, signage, wayfinding and other elements that create a coherent public domain image.</li> </ul>	In response to feedback from the exhibition of the EIS, St George's Terrace will be retained on site and adaptively resused as part of Powerhouse Parramatta.
<ul> <li>Local distinctiveness and character are respected by retaining heritage items and including special elements.</li> </ul>	The paving materials and street furniture will be unique to Powerhouse Parramatta within internal areas and blend with the remaining elements of the Parramatta CBD at the edges. The details of street furniture and paving will be further developed as part of the detailed design.
Universally Accessible	
<ul> <li>Footpath the provide access for people with all abilities, and ages.</li> <li>A clear path of travel zone along the building façade gives continuous and unobstructed pathways and sightlines</li> <li>Pedestrian and cycle network facilitates safe, accessible and convenient connections to destinations.</li> </ul>	Powerhouse Parramatta has been designed to enable access for people of all abilities. Dedicated paths and access between the two dominant public domain levels have been provided with both stair and lift solutions. The design maintains and provided connections to all existing and proposed connections to and through the site.
<ul> <li>Providing good access and comfort furniture to major destinations.</li> </ul>	
Safety for Everyone	
<ul> <li>Balance the needs of all street users including pedestrian and cyclists.</li> <li>Raised pedestrian crossings that provide safe access for pedestrians.</li> <li>Kerb ramps that are aligned and provide smooth transitions.</li> <li>Pavements that have complying non- slip surfaces.</li> <li>High quality lighting that addresses all users needs.</li> </ul>	The public domain of Powerhouse Parramatta does not include any road crossings, however it does provide connection to existing and proposed crossing points. A CPTED review has been undertaken that determines all elements of the public domain can maintain adequate levels of safety for all users.
Protected and Comfortable	
<ul> <li>Awnings the give shelter from rain and sun in the busiest pedestrian areas.</li> <li>Seating options that cater to all requirements.</li> <li>Trees and landscape treatments that provide shade and amenity.</li> </ul>	Shade and shelter have been incorporated into the Powerhouse Parramatta design. Approximately 84 new tree plantings are proposed that will provide much needed shade in hotter months as well as assistance with reducing the urban heat island effect.
Sustainability	
<ul> <li>Tree-lined streets with increased tree canopy coverages that provides biodiversity, comfortable micro- climatic conditions and contribute to energy saving.</li> <li>WSUD solutions that are integrated with streetscape.</li> <li>Robust and enduring street materials and elements that require low maintenance, and suit city's long-term operational capacity.</li> </ul>	An additional 28 new trees within the Powerhouse Parramatta public domain will assist in improving biodiversity and micro climatic conditions on the site. WSUD elements have been incorporated into the public domain design to assist in filtering runoff prior to entering the river.



# 4.0 Conclusion

The public domain design for Powerhouse Parramatta has been amended in response to comments received from the public exhibition of the State Significant Development Application as well as design development.

The changes are consistent with the winning competition design and will result in an improvement to the public domain of both the site and Parramatta CBD.

