CITY OF PARRAMATTA

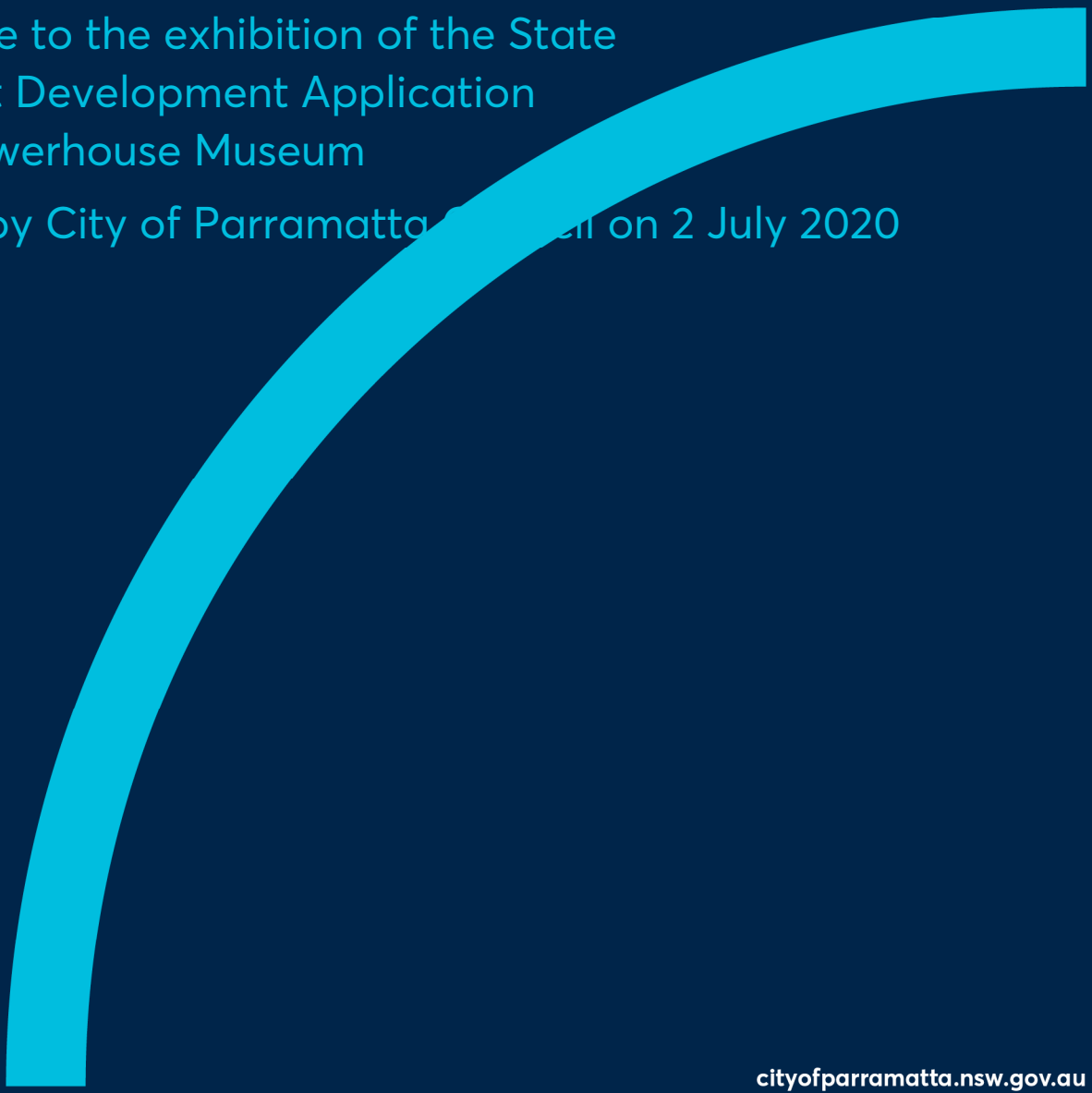
SUBMISSION

To the Department of Planning, Industry and Environment

In response to the exhibition of the State Significant Development Application for the Powerhouse Museum

Resolved by City of Parramatta Council on 2 July 2020

2 July 2020



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1. Executive Summary

1.1 Introduction

City of Parramatta Council (**Council**) is pleased to provide comment on the Environmental Impact Statement (**EIS**) for the Powerhouse Parramatta, dated 2 June 2020. Council supports the Powerhouse Parramatta and asks that it work collaboratively with the NSW Government to resolve the issues identified in this submission.

Council aspires to realise world class cultural facilities, exceptional design and superior outcomes in Sydney's Central River City, that achieve thriving social and cultural infrastructure to support the significant and rapid growth of Greater Sydney, and which impart an extraordinary legacy reflective of the unique qualities and landscape of Parramatta. This includes recognition of the richness of Aboriginal cultural heritage at the heart of the City's identity and the significant European heritage which is one of the most significant in the nation.

Council's detailed response to the Powerhouse Parramatta EIS is contained in Section 2 to 7 below.

Appendix A – *Embracing the River City* - forms an integral part of Council's response, providing a summary document that reflects upon opportunities for this major new cultural destination to successfully integrate with its setting. Council believes these opportunities should be further explored in the design development stage.

1.2 Position of City of Parramatta (CoP)

Council is tremendously supportive of investment in the cultural and social infrastructure of the City to support the needs of residents, workers and to sustain the visitor and night time economies. Recognising the historical lack of investment for the arts and culture in Western Sydney, the opportunity for the Powerhouse Museum as a catalyst to begin rebalancing the social and cultural infrastructure within the Greater Sydney Area is strongly supported. Parramatta's culturally and linguistically diverse population will be benefitted by investment in local, accessible community facilities, arts and cultural centres, likely to also see an increased demand for jobs (2,300 jobs during construction and 3,000 ongoing), services, education and recreation.

We support the NSW Government to continue with the current scheme for the Powerhouse Museum as detailed in the EIS, with greater collaboration between the NSW Government and Council in resolution of the design of the museum and requests that the NSW Government consider further the matters detailed in this submission.

Recognising the world class aspirations for the museum and its architecture, Council believes that the proposal also commands an unequivocal response in the way that it considers the site's heritage, archaeological significance and public domain.

The matters discussed in this submission relate broadly to:

- The further consideration of heritage as a fundamental element of the design;
- The connectivity of the museum building with the public domain;
- The consideration of and design for flooding impacts and the need for a superior flood responsive design;
- The design's contextual response to Civic Link and the fabric of Parramatta to meet objectives

for this key pedestrian spine;

- The design of the undercroft; and,
- Other matters.

1.3 City of Parramatta Council support for significant investment in Arts & Culture

In 2015, Deloitte[1] found that Western Sydney represents 1 in 10 Australians yet attracts only 1% of Commonwealth arts program funding, and 5.5 % of the State's Cultural Arts, heritage and events funding. Between 2011/12 and 2014/15 over $360 million was invested in the state's Cultural Arts infrastructure. Approximately **6% of this was invested in Western Sydney**, with the majority of this being at the Castle Hill facility of the Powerhouse Museum.

Deloitte demonstrated that **arts spending in Western Sydney produces a significantly better return on investment on a per attendee basis**: $100 invested in cultural arts institutions in Western Sydney subsidises 6.5 attendees, compared to 1.6 attendees in Eastern Sydney.

Parramatta's current population, let alone the new residents who will call Parramatta home in the coming two decades (growing to 470,000 people), is significantly under-served by the available cultural facilities in 2020. Western Sydney University[2] research shows that **compared with the City of Sydney LGA, Parramatta LGA has very few cultural venues and spaces, both in absolute numbers (less than 10 per cent) and per capita**. While reflecting the largely suburban nature of the LGA as a whole, it also indicates the relative lack of cultural spaces in the Parramatta CBD.

Many young Parramatta residents regularly travel to the Inner West and the Sydney CBD for entertainment, representing a loss of income and potential investment in Parramatta. The report estimates that dampened spending on local cultural goods and services means approximately **$86 million annually in income foregone** — a value that will also increase with population over time. This eastward flow is also evident among Parramatta residents working in the 'arts and recreation services' sector, **over 40 per cent of whom have to travel to eastern Sydney for their employment**.

These statistics reinforce Council's support of investment in the cultural and social infrastructure of the City to address the current inequity in accessibility to social capital within Parramatta and Western Sydney. The proposal for a world class museum represents a catalyst project to begin rebalancing the social and cultural infrastructure within the Greater Sydney Area in support of the significant and rapid growth of Western Sydney.

[1] Deloitte, Building Western Sydney's Cultural Arts Economy – a key to Sydney's success, 2015

[2] Western Sydney University has been engaged by City of Parramatta to develop a 20-year Cultural Infrastructure Strategy. Presented here are high levels findings from the initial research report which is unpublished and confidential.

1.3 Summary of Key Issues

Council has reviewed the EIS and has grouped a number of key issues under broad headings for further consideration. These include:

Heritage

- Council is of the view that the application as submitted and the design do not adequately consideration of heritage and significant archaeology on the site, including the Parramatta Sand Body (PSB).
- The application needs to respond with a robust strategy for Heritage Interpretation.
- Council seeks further clarification on whether options such as relocation of the heritage items, including Indigenous heritage, have been explored.

Public Domain

- The design of the museum is suboptimal with the public domain interfaces. The way the building and its public domain responds to both the river and the City's character, would be benefitted by further design refinement including the way the building addresses the Phillip Street and Wilde Avenue frontages, its response to the objectives for Civic Link, including visual and physical permeability, resolution of the undercroft and the missed opportunities for the river foreshore and the building's integration with the landscape.
- The design of the undercroft, which is different from the landscape design identified in the winning competition scheme results in reduced engagement between the museum and the river foreshore which had indicated a singular consolidated space that sloped gently between river and museum. The tiering of the design, with a 4m level change, segregates the museum from the river. The remaining public domain and foreshore space is treated as left over space.

Undercroft

- The proposed undercroft results in a poor resolution along the river foreshore and public domain interface and raises concerns for safety and amenity. The abrupt level change created by the undercroft divides the landscape, creates dark, underground voids and lacks seamless integration with the surrounding public domain.
- We appreciate further design detail will be provided around the substation and the prominence of loading areas.
- We appreciate further detail and design refinement is to be provided regarding the superstructure and how it interacts with the ground plane to adequately address flood concerns.

Flooding

- The flood strategy with the Powerhouse Museum and Riverbank area should consider flood conveyance around the site and occupant safety for all proposed areas.
- Flood mitigation should be seamlessly integrated into the landscape design.
- Overland flow floodwaters are not to be directed through the centre of the site and the overland flow routes from Phillip Street must only be provided along the eastern and western perimeters of the site and be properly formed and designed for conveyance and safety.
- Adequate consideration of, and design for flooding impacts and the need for a superior flood responsive design.

Other Matters

- **Powerhouse Museum Name:** Acknowledging the historic relationship between the name 'Powerhouse Museum' and its current occupation of a redundant power station in Ultimo, including the synergies between the industrial character of the building and its use i.e. to exhibit the latest industrial, construction and design innovations, further consideration should be given to the appropriateness of the name Powerhouse Parramatta.
- **Property Matters, Ownership and Maintenance of the Public Domain:** clarification around future ownership and maintenance of the foreshore land is required and whether easements will be necessary.
- **Sustainability and Reflectivity:** The ESD report should consider Council's request to provide a more appropriate commitment to meeting sustainable design objectives, in particular relating to flood resilience.
- **Traffic parking and Loading**: Detailed engineering plans of all traffic movement with confirmation that these works are to be completed as part of this project.
- **Design Excellence Report:** Update of the design excellence report would be appreciated to document and support improvements on the design winning competition scheme and to ensure support by the Design Integrity Panel. Council also seeks to work collaboratively with the Design Integrity Panel during refinement of the scheme.

2. Heritage and Archaeology

2.1. Introduction

The museum can make culture more visible in the public domain and gift the city with greater cultural vibrancy and authenticity. Distinction and confidence on a world stage will also be achieved by recognising through art and interpretation that Parramatta and its river has always been an important meeting place for Aboriginal peoples, and the significance of this area for all peoples as a site of early colonial contact. The application and the design fail to demonstrate adequate consideration of heritage and significant archaeology on the site, including the Parramatta Sand Body (PSB). The application also fails to demonstrate a robust strategy for Heritage Interpretation.

2.2. Aboriginal cultural heritage

The Aboriginal Cultural Heritage Assessment Report (ACHAR) notes that the site is likely to have "high social and spiritual significance" (Curio, ACHAR, p10) to the Darug community, which is consistent with CoP consultation with the local community on cultural values associated with the City River corridor (and noted in the Parramatta City River Strategy). The design proposal (architectural or landscape design) currently fails to respond to this context in any meaningful way.

The ACHAR notes "should the PSB [Parramatta Sand Body] be present within the study area, and contain a remnant Aboriginal archaeological deposit, the study area may have high scientific significance for its ability to contribute knowledge to the archaeological record about Aboriginal occupation of this area of Parramatta and across the PSB itself" (Curio, ACHAR, p10). Based on consultant advice received by CoP, there is a high likelihood of the Parramatta Sand Body being present on this site at shallow depths, which is consistent with Curio's statement that the PSB has generally been found at 0.8-2m below current ground level (Curio, ACHAR, p49). Given the significance of the site, further consideration is required of design options that conserve the PSB insitu as a first priority.

The City of Parramatta's First Nations history is one of the most significant in the nation, and the richness of Aboriginal cultural heritage is the heart of the City's identity. The City River foreshore and Powerhouse Museum site should continue to acknowledge First Nations as custodians of the land, and support Aboriginal culture to shape the story and identity of our City. The City River foreshore will be a key precinct for the location of the First Nations Walk, a curated journey through the CBD comprising physical artworks and digital content that will acknowledge Aboriginal people in a meaningful way, including their ongoing relationship with Country.

2.3. Recommendations

1. **That the application and the design demonstrate adequate consideration of heritage and significant archaeology on the site, including the Parramatta Sand Body (PSB).**
2. **That a robust Heritage Interpretation Strategy with clear commitments be developed and submitted for consideration.**
3. **Further design development is required to ensure the architectural and landscape design responds to the consultant's evaluation of the site as having strong likelihood of high social,**

spiritual and scientific significance to Aboriginal people.

3. Public Domain

3.1. Introduction

The opportunity for the Powerhouse Parramatta is not only the realisation of a world class museum and building, but a once in a generation opportunity to realise the ambitions for a world class cultural precinct and public domain.

Powerhouse Parramatta, with Riverside Theatres, will sit at the heart of a newly imagined cultural precinct. Integral to the success of this precinct will be the way in which the building sensitively engages with the public domain and its context. Council sees the opportunity for further resolution of the interaction of the building and its public domain interface to unify a series of clear and legible connections to the major public domain spaces at the City River Foreshore, Church Street, Parramatta Square and the Civic Link.

Recognising that the Powerhouse Parramatta will become the main northern 'bookend' or 'anchor' to Civic Link, connecting the Parramatta Railway Station to the River foreshore, Council believes that the current design could respond more appropriately to the objectives and aspirations for Civic Link, especially recognising the critical role of this site at the terminating view of the key pedestrian spine.

The landscape proposal has changed from visualisations of the Design Competition winning scheme, and no longer meets the objectives of the Civic Link Framework Plan or the Parramatta River Strategy to provide a continuous transition and accessible link from Parramatta Square to the River. It is unclear whether landscape changes have been endorsed by the Design Integrity Panel or have been a result of previous comments and/or recommendations.

A key priority for Council is to ensure the Powerhouse Parramatta design integrates seamlessly into the natural landscape and River foreshore and the opportunities to unify public domain and consider the site's heritage, archaeological significance, all the while incorporating flood resilient design, is paramount.

3.2. Building address and interface with the Civic Link

Visualisations provided from Horwood Place illustrate a narrowing of the Civic Link through the Museum site. Given the proposed removal of 'Willow Grove' as part of the design, every endeavour should be made within the architectural and landscape design to maintain a clear vista from Horwood Place through the building and achieve a minimum 20m Civic Link, consistent throughout all blocks in the City Centre.

Further design development is required to address the way the Civic Link terminates or concludes at the River. The following are key considerations to guide this design development.

- Physically and visually extend Civic Link from Phillip Street to the River, responding to the consistent corridor alignment of 20m wide.
- Ensure that Civic Link is publically-accessible 24/7.
- Ensure a legible and generous universally accessible walkway (1:20, preferred) or ramp (1:14) is provided connecting the Civic Link and the lower foreshore.
- Facilitate shared cyclist and pedestrian use for the entire Civic Link, from the lower foreshore

path to Phillip Street.

- Ensure Civic Link functions as an evacuation route in both overland and river flooding events.
- Retain the visual and sensory setting of Willow Grove Garden through conservation of significant trees and interpretation of its historic landscape into the Civic Link public domain.
- Allow for structural loading and temporary access points to accommodate event and emergency vehicles along the Civic Link.
- Equitable public access is needed that cater to all users.

3.3. Building address and interface with the River Foreshore

Council's vision is for the Civic Link to extend to the river and integrate seamlessly with the lower and upper river foreshore. The dimensions and lightweight character of the stairs on the interface of the river foreshore do not create a legible or 'grand,' accessible connection between the city and the river.

Council's aspiration for a River Square does not need to conflict with the Powerhouse Parramatta's desire for a central lawn. Design development should ensure an integrated design concept addresses the whole of the space between the museum and the river, accommodates the site levels and provides a safe, equitable, publicly accessible and programmable space along the river foreshore.

The following are key considerations for a redesign of this space.

- The DCP 2011 and draft Civic Link DCP requirement of a 25m building setback along the River foreshore.
- Design level changes between city and river through a tiered landscape and architectural approach in order to: unite the two spaces into a cohesive whole; address the river foreshore at a human scale; seamlessly integrate universal access ramps into the landscape; and create opportunities for informal seating and passive recreation. This would also assist in providing multiple, universally-accessible evacuation routes out of the lower foreshore that allow for high volumes of people connecting to levels up to and including the PMF (Probable Maximum Flood).
- Design programmable public domain spaces that facilitate high quality events and exhibitions by locating service and utility access points above the FPL (Flood Planning Level), providing generous ceiling heights that fit with the scale of the P (min. 5m), integrating with public amenities, and connecting with landscape views.
- Design foreshore public domain facilities that promote everyday activation, including a boat launch and storage, generous shade, pause points, seating for groups, and spaces for outdoor classrooms.
- Design treatments that soften the river's edge and invite water engagement.

3.4. Building address and interface with Wilde Avenue

The Substation, as noted on the footpath, limits pedestrian circulation space and is in a visually prominent location. Loading access to Powerhouse Parramatta on Wilde Avenue will be visually prominent and needs to be carefully detailed. The design needs to address physical and visual prominence of the substation, loading areas and any other mechanical structures from Wilde Avenue.

3.5. Response to CoP Public Domain Requirements and Guidelines

Further detail and explanation is needed to outline how the public domain design has responded to

CoP Public Domain Requirements and Guidelines. To ensure the proposed site integrates seamlessly with its surrounding context.

3.6. Public Art and Interpretation

Public art and interpretation will acknowledge the City's important archaeology and cultural heritage assets identified in the Civic Link Framework Plan and the City River Strategy. A range of art and interpretation typologies have been identified that include iconic works on high profile sites, and a series of functional and interpretive markers that contribute to legibility, wayfinding and an overall coherent and connected understanding of the Civic Link with the City River and Parramatta Square. Proposed public art and heritage interpretation works along City River and Civic Link are also planned for the development of First Nations Walk, which will deliver projects that acknowledge Aboriginal heritage and connection with Country.

3.7. Recognition of First Nations Walk

There is a tremendous opportunity to recognise the ongoing significance of Parramatta and the Parramatta River to First Nations people. This should be further considered as part of the design proposal.

3.8. General Reliance on Future Connections

There appears to be a reliance on connections by others to achieve key public domain linkages. It is unclear how these connections will be realised and signage/wayfinding coordinated. Clarification should be provided regarding consultation with the landowner and the feasibility of realising connections to 330 Church Street. Council is concerned with the dependence on others to deliver the following which should be considered as part of this application:

- Future laneway at El Phoenician site (328 Church St)
- Barry Wilde Footbridge connection across the river
- Access and right of way via 330 Church St (Meriton Site)
- Pedestrian ramp from river foreshore up to Lennox Bridge.

3.9. Recommendations

1. **Design development should ensure the architectural and landscape design maintain a clear vista from Horwood Place through the building and achieve a minimum 20m-wide Civic Link.**
2. **Further design detail be provided around the substation and the prominence of loading areas.**
3. **Further design resolution of the interface of the building and foreshore public domain, particularly the removal of the undercroft should be undertaken to remove the segregation created in the current scheme and provide for a more sensitive landscape solution along the River Foreshore.**
4. **Further design detail is required relating to Art and Interpretation, in particular how the proposal recognises First Nations people.**

4. Built Form

4.1. Introduction

The importance of an exceptional built form is essential for Powerhouse Parramatta in its delivery of a building that imparts a successful legacy on the City of Parramatta which is unique to its context and landscape. A key priority for Council is to ensure the museum design integrates seamlessly into the city on all its edges as well as its natural landscape.

Council feels that the building currently focusses much of its attention to the river foreshore on the north and that there are missed opportunities to better engage with the existing built form of the city to the south on Phillip Street and east on Wilde Avenue.

A significant concern for the current design scheme is its addition to the award winning design of an undercroft. This is considered a poor outcome and raises concerns for amenity, safety and security, flood and is a poor visual outcome. Council requests that this be reconsidered.

4.2. The Undercroft

The design competition drawing shows a green space sloping up to meet the ground floor of the museum. The revised design has removed the landscape gesture and replaced it with an undercroft space with a floor to floor height of 4m and a depth ranging from 25m to 40m. The space is enclosed on three sides and only open to the river foreshore where it is partially concealed by an expanded metal operable panel façade along the full frontage of the northern façade.

The proposed powder coated white 'expanded metal operable panel' for the façade along the river should be further considered. The material and the operability of the panels appear unable to withstand damage from repeated flood events and the mesh is also likely to capture silt and debris.

Design options for sky lights appear to be desired to introduce daylight into the depth of the undercroft space, but it is not clear what uses are being catered for in the undercroft and if the skylights are adequate

Specific uses have not been nominated for this space except bicycle storage in the deeply recessed south-west corner. Notwithstanding the proposed height and depth of this space is not aligned with the suggested proposed uses and public nature of the space.

The landscape architect's package accompanying the SSD application illustrates possible uses for the undercroft space such as basketball courts, temporary exhibition spaces, outdoor theatre seating and skate park. These suggested uses require significantly taller ceiling heights than proposed, for example an indoor basketball court is typically 7m. Similarly, the sculptural concrete forms and ceilings shown, require much more generous space to achieve.

4.2.1 Undercroft Space and Flooding

The design of the undercroft space is largely driven as a response to deal with flood levels and flood storage requirements with sections showing that the space is largely inundated in a 1 in 100 flood event. Location of large, habitable spaces within a high hydraulic flood zone also presents a signification threat to life and is unlikely to be permitted.

The depth and enclosure of the undercroft raises significant concerns with evacuation of the public

during flood events. Currently the only route of escape is towards the flood zone and via a lift, which will have limited capacity, and is unlikely to be operating during a flood event.

Supporting infrastructure, such as lighting, electricity points, mechanical systems will also need to be provided above the flood planning level. All future fit outs, including utility connections, exhibitions, equipment, staging etc, will be limited to sacrificial elements only.

These constraints are likely to result in serious limitations on event capacity, low-quality programming and few permanent uses of the space.

4.3. Architectural Expression

The architectural package includes a simple palette of materials, but the architecture relies on the successful design and delivery of the superstructure. No details are provided to demonstrate the tectonics of the superstructure. It is necessary to confirm that the superstructure can meet the ground without requirements for bollards and balustrades to protect pedestrians (see Macquarie Bank in King Street Wharf, UTS Library) and ensure safety in relation to restricting access and climbing on the facade.

The undercroft space does not align with the architectural expression of the building. The superstructure expressed on the façade ends at the ground plan level and at a thin slab to the undercroft. A separate column structure for the undercroft and a thin slab edge to its roof are conceptually and spatially segregated from the more successful architectural expression of the building. The undercroft appears to be squashed by the weight of the building.

4.4. CPTED and Safety Issues

In addition to the significant safety issues associated with the risk of flooding addressed in section 5, there are several concerns with the quality, use and safety of the proposed undercroft as previously noted. Antisocial behaviour and occupation of the undercroft at night is a concern. The structural qualities of the undercroft create poor sightlines into a deep area, resulting in no passive surveillance. Potential for mitigation of anti-social behaviour through programming is significantly restrained by flood issues. It is unclear how CPTED can be managed in the undercroft whilst also supporting the Powerhouse Parramatta's strategy to create a vibrant precinct that supports the night economy. The proposed undercroft space is not supported from a CPTED and safety perspective.

4.5. Recommendations

1. **The Powerhouse Parramatta undercroft space should be removed and the design further developed to improve the built form interface with the River Square & Foreshore.**
2. **Further detail and design refinement is to be provided regarding the superstructure and how it interacts with the ground plane.**

5. Flooding and overland flow

5.1. Introduction

The site is subject to river flooding from Parramatta River, which flows across some of the site in fairly moderate floods. The site is also subject to overland flow flash flooding from the urban catchment above the site to the south. The applicant's specialist consultant report prepared by Arup, advises that the overland flow that they have modelled results in higher flood levels than the Parramatta River flood levels. There are high hazard conditions across the site from both kinds of flooding.

However, at present, the Council believes that further design development is required to manage the flood constraints of the site to deliver the interconnected, accessible, legible precinct that are envisaged in Council's strategies.

Arup have increased the flood planning level well above the 1% AEP (100 year) flood level by increasing the freeboard from 0.5m to 1 – 1.5m. This is appropriate for a museum. The highest value (irreplaceable) items in Powerhouse Parramatta should be kept/stored above the PMF.

However, the current approach to managing flood and overland flow cannot be supported and the design needs to be modified to address the serious concerns relating to the undercroft area.

5.2. Flooding

The key strategy for managing flood impacts includes on site flood storage, replicating the predevelopment conditions which includes a low level car park that regularly floods. Arup's aim is to recreate the 18,500 m^3 storage that this provides by way of a large undercroft. Arup (the applicant's consultants) believe that such storage will reduce the likelihood of increased flood levels elsewhere (downstream) and will not affect warning times, evacuation plans etc. on other sites.

If a flood river flow of 1000 m3 /second is assumed, the storage would be filled in a matter of seconds and then the river would simply bypass it. As such, it is Council's view that the provision of flood storage is unnecessary and achieves very little flood mitigation at the expense of creating severe hazards and risks for site occupants and preventing implementation of a better ground level design as discussed at Section 4.

Future occupants of the undercroft and Riverbank spaces are proposed to be protected with the use of an alarm system based on rainfall predictions for the overland flow flash flooding. For river flooding events with slightly more warning time, this rainfall prediction alarm system would be augmented by river level monitoring. Council now has a sophisticated flood warning system for the Parramatta River, but not for flash flooding from overland flow.

Safety of site occupants should not be reliant on high technology flood warning systems that in any event cannot predict flash flooding from local rainfall. Safety must be provided for in the first instance by careful design of open spaces flood containment in well-defined conveyance areas and including evacuation routes and pathways to refuges.

5.3. Overland flow

Arup's approach to overland flow is reliant on substantial underground piped flow to alleviate overland flow flooding in certain areas of or near the site, at least for the less intense rainfall events.

Given their propensity to become blocked, reliance on piped networks to reduce flooding is unsound and unsafe in this high intensity use area.

An additional overland flow path is also proposed through the middle of the site from Phillip St between the buildings. This is a departure from the natural flow regime and could potentially place occupants of that central part of the site at risk.

5.4. Flood risk, shelter and evacuation

A strategy is to be developed to manage Parramatta Powerhouse according to risks and consequences of flooding from both Parramatta River and from overland flow. This management strategy shall acknowledge the following:

- The presence of high hazard flood conditions across the site.
- No habitable rooms shall be located below the relevant flood planning level.
- A freeboard higher than 500mm above the 1% AEP is desirable.
- External areas below the Flood Planning Level which are to form part of the MAAS useable spaces must be designed and operated in accordance with the flooding regime and flood risk minimisation principles. Design and operation of such spaces must ensure minimal risk to people and property while optimising use and opportunity.
- Recognition that a Shelter in Place strategy and its design response presents less risk from flooding than an evacuation strategy and should be integral to the development design and operations. It must accommodate residents and visitors to the Powerhouse Museum in a safe environment above the PMF for an adequate time, and include access by those in the surrounding public domain. Provision must be made for access to the Powerhouse Museum by emergency services and when feasible public evacuation that is consistent with the Parramatta City River Strategy.

5.5. Drainage, WSUD & Water Quality

Further information and design detail should be provided regarding a precinct wide water treatment, catchment and drainage strategy, particularly regarding future and proposed connections into the site and impacts on the overall drainage and water quality performance of the site.

5.6. Recommendations

1. **Provided flood conveyance is not significantly obstructed, the flood storage area, or undercroft, should be deleted and the Powerhouse Parramatta and river bank area redesigned to protect both flood conveyance and occupant safety.**
2. **The eastern and western overland flow routes must be properly formed and designed for conveyance and safety, while the central area of the site must be raised or reformed to avoid this function. The redesign of the landform must not rely on pipes and culverts to convey the floodwaters to any significant degree. These should only be used for 'nuisance' flooding as part of the WSUD system.**
3. **Further information should be provided to demonstrate how the design and use of proposed spaces have appropriately responded to the risks and consequences of site flooding.**
4. **Construction stage flooding must be addressed.**
5. **Provision of further design detail on precinct wide water treatment, catchment and drainage to be provided.**

6. Other Matters

The following section of the submission details other matters including recommendations for conditions should the development proceed.

6.1. Powerhouse Museum Name

Acknowledging the historic relationship between the name 'Powerhouse Museum' and its current occupation of a redundant power station in Ultimo, including the synergies between the industrial character of the building and its use i.e. to exhibit the latest industrial, construction and design innovations, further consideration should be given to the appropriateness of the name Powerhouse Parramatta.

6.1.1 Recommendation

Council recommends further consideration be given to the name of the museum that is more reflective of Parramatta and its history.

6.2. Property Matters, Ownership and Maintenance of Public Domain

The development appears to be contained within land owned by the State Government with no apparent proposed encroachments onto Council owned land. However, if it is proposed to undertake excavation adjacent to Council road reserves a rock anchor licence from Council may be required before construction commences.

If the State Government proposes to dedicate any land to Council at the completion of the project, this land should be restricted to the river foreshore land only, which does not contain any part of the proposed building structure including the stairs leading from the foreshore reserve to the complex. This may require the subdivision of the current foreshore lot.

Depending on the proposed ownership arrangements, easements may be required to secure public access along the foreshore.

The river foreshore comprises part of a wider public open space corridor that experiences high levels of use and requires a consistent approach to ongoing management and maintenance. Further clarity is required on the future management and maintenance of the river foreshore to ensure seamless integration with adjoining open space under Council ownership and management.

6.2.1 Recommendation

Further clarity to be provided in relation to any proposed dedication of land and future maintenance obligations.

6.3. Environmental Management

The methodologies used and conclusions reached in relation to Noise and Vibration Impact Assessment appear to be satisfactory, however of particular concern is the expected Noise Management Level (NML) exceedances anticipated for residential receivers along the northern bank of the Parramatta River and also at nearby hotel/residential suites. This will require the development of a detailed community consultation plan with appropriate notification and respite options provided to these effected receivers.

The recommendation for an Operational Noise Management Plan with an initial 12-month trial period with performance measurements taken to ensure that the projected noise goals with regard to operational noise levels are complied with or mitigation strategies/devices are adjusted accordingly to ensure acoustic impact during operation is minimised is supported.

In relation to Site Contamination, the Detailed Site Investigation and Remedial Action Plan have been developed in accordance with the requirements of SEPP55 and the CLM Act. It is noted that further detailed plans will be required prior to any remediation works commencing i.e. an Asbestos Management Plan and more broadly a Remediation Environmental Management Plan to ensure that all remediation works (including asbestos fines removal) are conducted in a safe and environmentally satisfactory manner.

With respect to air quality, the methodologies used and conclusions reached appear to be satisfactory and suitable mitigation measures for potential odour from kitchen exhaust and dust impacts from the construction stage are identified. It is expected that further details of dust mitigation measures will be provided in the Construction Environmental Management Plan.

6.3.1 Recommendations

1. **That further detail of acoustic impacts and mitigation measures for the construction phase be provided by the selected construction contractor in a Construction Noise and Vibration Management Plan.**
2. **A Validation Report be required to be developed and submitted for review prior to an OC being issued for commencement of activity on the site in order to demonstrate that the remediation objectives have been met so as to render the site suitable for the proposed use. An EPA accredited Site Auditor may be engaged at this point to provide a further level of certainty and oversight of the remediation process however given the proposed remediation strategy of complete removal and/or lack of exposure pathway to any remaining contaminated material the risk profile of this site is considered low so this requirement may not be considered necessary.**

6.4. Biodiversity

Whilst the majority of trees within the site are mature landscape plantings, the removal of 50+ trees (predominantly consisting native or locally indigenous species) is considered a significant vegetation loss. The Biodiversity Development Assessment Report (BDAR) waiver does not adequately capture the full extent of proposed tree removals as it only assesses the removal of up to 30 trees based upon a 'preliminary' arborist report. It also fails to assign the best matching Plant Community Type (PCT) based on the local species present, as is best-practice where the vegetation is a mix of local and non-local planted species in recognition of potential biodiversity value and function. Furthermore, the BDAR waiver states that 'Functional connectivity exists for flying animals such as birds and bats that use the airspace above the development site to move between habitats and the planted vegetation is likely used as a foraging or perching resource as part of daily movements'. The proposed removal of 50+

trees is therefore not negligible, particularly given the lack of native vegetation present along this portion of the river, and a BDAR should be provided in accordance with the precautionary principle to ensure 'no net loss of biodiversity'.

The BDAR waiver does not addresses the potential presence of the Southern Myotis, which in addition to trees, are known to frequently roost in caves, storm water channels, buildings and under bridges. Whilst it states that 'a number of tight spaces were identified including cracks and crevices, holes and joins these were mostly shallow and did not offer suitable microclimate conditions suitable for permanent roosting or maternity roosts', this indicates that not all potential habitat features are shallow and is not considered to provide sufficient evidence demonstrating that the potential roost habitat would not offer a suitable microclimate for this threatened species.

The BDAR waiver identifies the presence of two likely remnant trees (Trees 1 and 2) that are not impacted by the proposed built form and are recommended for retention. However, with the exception of Tree 1, the development proposes the removal of all other existing trees along the river foreshore. These trees provide both ecological and environmental benefits, particularly shade and mitigation of the urban heat island effect, and their wholesale removal is not adequately justified. The design of the built form and public domain needs to maximise the retention of existing mature trees along the river foreshore, particularly the likely remnant (Tree 2) and those with high retention values.

6.5. Sustainability and Reflectivity

A 5 Green Star rating is proposed as the only framework to guide sustainable design and the outcome that can be confirmed to be delivered post development approval. This falls short of the SEARs requirements, the Greater Sydney Regional Plan objectives and the objectives of the Parramatta DCP. The ESD report confirms that there is no improvement to energy efficiency provisions over minimum regulated requirements of the current NCC 2019 BCA.

Concern is also raised that the responsibility to deliver renewable energy is proposed to be transferred to the building operator through a requirement to purchase off site renewables. Any approval should not rely on a future operator obligation to reduce the extent of renewable energy provided on-site in the proposed development.

In relation to reflectivity, the reflectivity report applies a robust technical methodology and adequately covers the risk of disability glare to drivers of cars. The analysis of risk to ferry operators shows that disability glare will be experienced when a ferry is turning at the end of journey. The risk is said to be avoidable through the ferry operator looking away from the glare. It is suggested that DPIE confirm with the Ferry Operator that this risk is acceptable.

6.5.1 Recommendations

1. **The ESD report be updated to address the following:**
    - **Solar photovoltaic generation is be installed on site to an equivalent area of not less than 50% of the building roof area.**
    - **A dual reticulation (dual pipe) system is to be installed, with the dual reticulation system being of sufficient size to supply all non-drinking water uses of the building, including cooling towers, and suitable for future connection to a recycled water main.**
    - **The building is to capture rainwater and provide sufficient storage for reuse of no less than 95% of the typical annual rainfall falling on the building's roof for non-drinking water uses through the dual reticulation system.**

- **The use of PVC must be limited with minimum replacement of 60% (by cost) compared to standard practice**
- **95% of all timber is used on the project is to be FSC Certified under the Forest Stewardship Council certification system.**
- **Water efficient fixtures and fittings must be used throughout. Minimum WELS rating of 4 star for toilets, 6 star for urinals, 6 Star for tapware and 3 star (less than 7.5 l/min) for showers are required**

2. DPIE confirm with the ferry operator that the risk of reflectivity is acceptable.

6.6. Traffic, Parking and Loading

Traffic

The Traffic Impact Assessment (TIA) (prepared by JMT Consulting dated 22 April 2020) states that traffic modelling has been undertaken at the Smith Street / Phillip Street / Wilde Avenue intersection to understand potential traffic impacts during a high utilisation scenario. The traffic modelling demonstrates that, even under a worst-case high utilisation scenario adopting conservative assumptions, the adjacent road network performance will perform at a similar level to that currently forecast. The TIA also indicates that the overall degree of saturation of the intersection remains unchanged, with a minor increase in average vehicle delay of six seconds – equivalent to an 8% increase. The report concludes that given the conservative assumptions adopted and the infrequency of this scenario occurring, particularly during the busiest hour of the day, this impact is considered to be acceptable.

Parking

The TIA report in support of the proposed development states that the Powerhouse Parramatta does not propose any on-site car parking for staff, residents or visitors, with public transport to be promoted as the primary mode of access to the site. The report also indicates that no parking is proposed on site to maximise the amount of publicly accessible open space and minimise the traffic impacts arising from the development – particularly given the strong public transport links to the Parramatta CBD. This approach is supported.

The TIA indicates that bicycle parking and an end of trip facility is proposed for staff, residents and visitors of the site in order to encourage access by bicycle to the Powerhouse Parramatta. This is supported and should be secured through condition. The bicycle storage/racks are to comply with AS 2890.3-2015.

Loading

Two permanent on-site loading docks are proposed within the site. Both loading docks will be accessed via Dirrabarri Lane. The northernmost dock will accommodate deliveries of Powerhouse collection / exhibition items and can accommodate either a 19m articulated vehicle or two 12.5m heavy rigid vehicles (HRVs) simultaneously. The southernmost dock will service the retail, catering and waste collection requirements of the building and can accommodate a 10m medium rigid vehicle (MRV). This proposed loading/unloading provision is considered adequate for the proposed development. However, the use of the loading docks within the site may create safety issues due to the potential conflicts with pedestrian movements accessing the foreshore. The applicant is to be required to submit a Loading Dock Management Plan to the satisfaction of Council's Traffic and Transport Manager. The Plan must address delivery requirements and service schedules, operational aspects on how to use

facilities and management duties and responsibilities.

Two other areas have also been proposed to accommodate loading and servicing through the day, particularly for smaller vans and utes. These areas include the western side of Dirrabarri Lane, at the location of the existing short term parking spaces (3 spaces) and within the proposed coach drop off / pick up layby zone on the northern side of Phillip Street, between the hours of 6am-9am when this area is not required for coaches (up to 10 spaces). The applicant is to submit a separate application for the proposed coach drop off / pick up layby zone on the northern side of Phillip Street and the associated parking restriction to Council's Traffic and Transport Services for consideration by the Parramatta Traffic Committee under Delegated Authority and Council's approval. The construction of the approved treatment (including the realignment of the footpath) is to be carried out by the applicant and all costs associated with the supply and construction of the traffic facility and appropriate signage are to be paid for by the applicant at no cost to Council. The layover and the realigned footpath are required to be dedicated to Council.

Coach drop off

The proposed development also proposes a 60m long coach pick up / drop off area on the northern side of Phillip Street, adjacent to the central access way through the site, which can accommodate up to three coaches parked at any one time. Coach parking is proposed to be provided in this space between 9.30am – 4.00pm. This area will also be utilised as loading area between the hours of 6am-9am when this area is not required for coaches. In terms of off-site parking for coaches, Grand Avenue within the Camellia precinct and Market Street (which has designated coach parking between 8am – 6pm on weekdays and weekends) are proposed as suitable locations for off-site coach parking, given the limited opportunities within the Parramatta CBD. The proposed coach layover on Market Street is not acceptable due to the busy environment of Market Street. Coach layover within the CBD is not accepted during business hours on weekdays. The applicant is to submit a Coach Layover Management Plan including consideration for layover to be outside the CBD on weekdays.

The TIA states that formal existing pick up / drop off locations within 2-3 minute walk of the site entry point include Phillip Street (full taxi zone), George Khattar Lane (set down / pick up area) and Smith Street (night time taxi zone). However, the submitted architectural plans are not clear on how George Khattar Lane can be accessed as the existing vehicle site egress point at Oyster Lane is proposed to be closed and the architectural plans do not show any access to George Khattar Lane. It is Council's opinion that George Khattar Lane can not only provide access to the foreshore but also can be used as pick up / drop off area for taxis, Uber, etc. The applicant is required to submit a detailed engineering plan of George Khattar Lane turnaround facility The construction of the George Khattar Lane turnaround facility is to be carried out by the applicant and all costs associated with the supply and construction of the facility are to be paid for by the applicant.

6.6.1 Recommendations

1. **Detailed engineering plans of a turnaround facility at George Khattar lane are to be provided by the applicant with confirmation that these works are to be completed as part of this project**
2. **Further details be provided in relation to loading management and the proposed coach and bus drop off on Phillip Street.**
3. **A number of conditions will be required in relation to the submission of a Construction and Pedestrian Traffic Management Plan (CPTMP), proposed work zones, road occupancy permits and oversize vehicle permits.**

6.7. Design Excellence Report

Whilst the Design Excellence report is focussed on the international design competition winning scheme, there is no detailed discussion on any alternative proposals considered. Given that the alternate designs are now in the public realm the Design Excellence Report should be update accordingly.

The application plans submitted differ from the visualisations of the design competition winning scheme, especially in relation to the undercroft and landscaped public domain. It is unclear if these changes have been considered as part of the Design Excellence Process prior to submission or if they will be reviewed by the Design Integrity Panel.

7. Conclusion

The opportunity for the Powerhouse Museum to contribute to the realisation of an exceptional, world-class cultural and arts facility that nurtures a thriving social and cultural precinct for the City of Parramatta at the heart of Central Sydney, is a once-in-a-generation opportunity.

The transformation and renewal of this key site at the head of the Parramatta River and the northern anchor of Parramatta's Civic Link, commands a design that is second to none and which imparts an outstanding legacy for the site and the City.

Council recognises the aspirations and commitment of the NSW Government to strive for a world-class museum and cultural facility demonstrated through the International Design Competition held during 2019. While the proposed scheme has many positive elements that will deliver a successful museum there remain a number of key outstanding issues requiring resolution.

Council feels that there are opportunities to improve the current design to ensure the museum development also commands an unequivocal response in the way that it considers the holistic nature of the site's unique heritage, archaeological significance and its public domain. Council is keen to work collaboratively with the NSW State Government and the Design Integrity Panel to further refine the proposed museum design to have further consideration of:

- **Heritage** and the demonstration of adequate consideration of the local heritage items, significant archaeology and Indigenous culture on the site, including a robust strategy for Heritage Interpretation.
- **Public Domain** of the museum building that inadequately resolves some of its interfaces, in particular the undercroft. Council also feels that a better contextual fit should be realised through further design of the way the building integrates with the landscape and meets the river foreshore, responds to the objectives for Civic Link, and addresses Wilde Avenue and Phillip Street.
- The **Civic Link** portal and its lack of consideration of Council's objectives for Civic Link especially for visual and physical permeability and the opportunity to open up views to the River foreshore.
- **Flooding** and the adequacy of the flood strategy and its resolution for flood conveyance and safety for all areas, in particular the **undercroft**. Council also seeks a superior flood responsive design and enhanced solutions for flood mitigation, including overland flow, that seamlessly integrate into the landscape design and which demonstrate world class flood resilient design.
- Acknowledging the historic relationship between **name of the Powerhouse Parramatta** and the museum at Ultimo and its occupation of a redundant Power Station, there is an obvious disconnect in the Parramatta context. Council believes that a name that is more symbolic and relevant to its Parramatta setting should be considered.
- Issues relating to ongoing **maintenance and ownership of foreshore land**.
- Matters relating to **biodiversity** addressing tree loss and impact on fauna including the potential presence of the Southern Myotis.
- Commitment to meeting **enhanced sustainable design objectives**, in particular relating to flood resilience.

- Further detail regarding engineering of a **turnaround facility** at George Khattar lane.
- **Update of Design Excellence Report** to reflect and support departures from the design winning competition scheme.
- The opportunity for Council to **work collaboratively** with the Design Integrity Panel to further resolve the design.