ETHOS URBAN

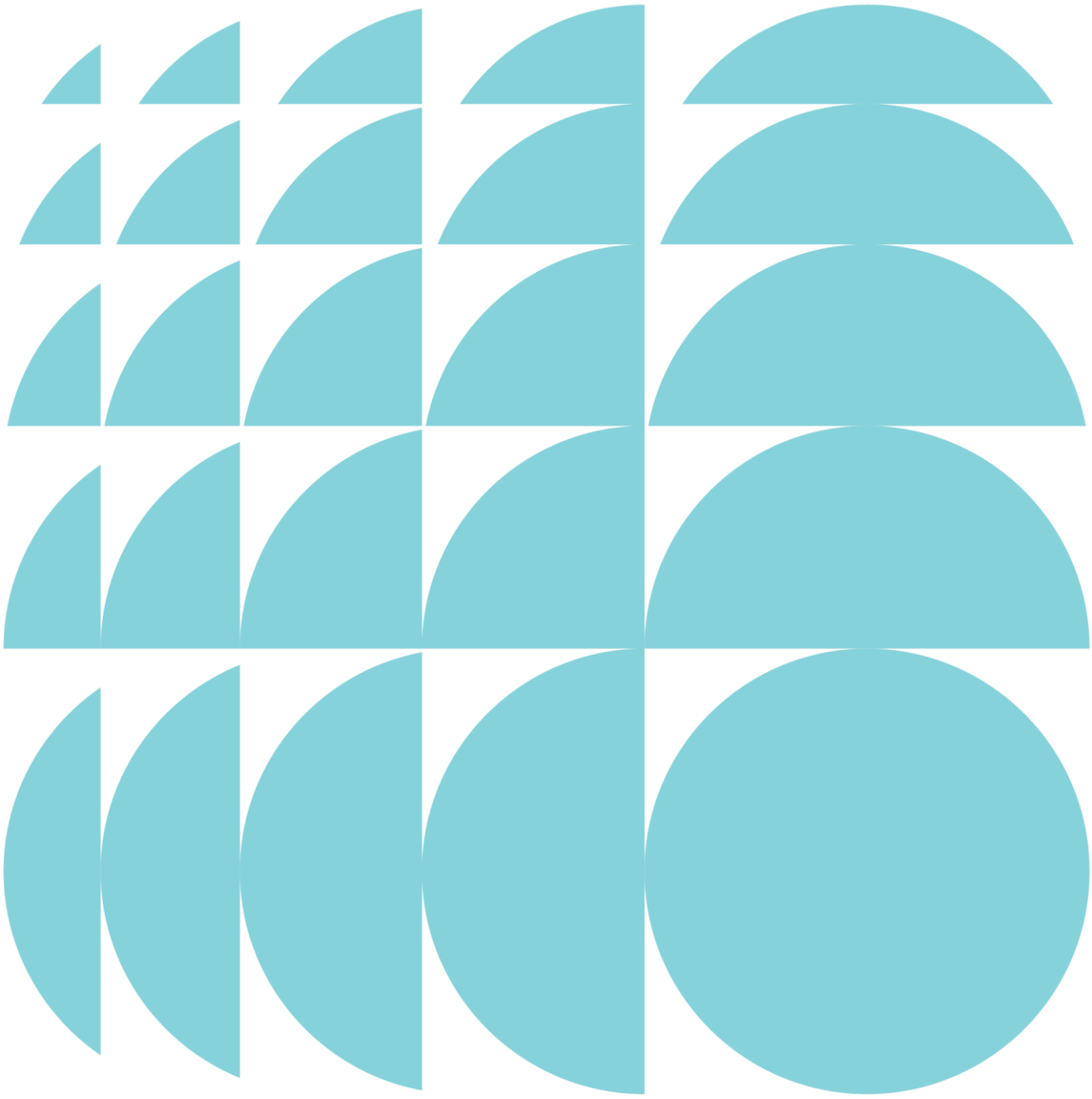
Response to Submissions and Amended Proposal

Stadium Australia Renewal
15 Edwin Flack Avenue, Sydney Olympic Park
SSD DA 10342

Submitted to Department of Planning, Industry and Environment

On behalf of Infrastructure NSW

20 December 2019 | 2190435



CONTACT

Michael Oliver Associate Director moliver@ethosurban.com (02) 9956 6962

This document has been prepared by:

Anna Nowland 20/12/2019

This document has been reviewed by:

Michael Oliver 20/12/2019

Ethos Urban Pty Ltd
ABN 13 615 087 931.
www.ethosurban.com
173 Sussex Street, Sydney
NSW 2000 t 61 2 9956 6952

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1.0 Introduction

An Environmental Impact Statement (EIS) was prepared on behalf of Infrastructure NSW in support of a detailed State Significant Development (SSD) Development Application (DA) for the refurbishment of Stadium Australia (also known as ANZ Stadium) at 15 Edwin Flack Avenue, Sydney Olympic Park. The statutory public exhibition process for the SSD DA was from 25 September to 23 October 2019, however, this period was extended by 3 weeks until 15 November 2019 by the Department of Planning, Industry and Environment (the DPIE).

Public exhibition occurred in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act). 26 submissions were received in response to the public exhibition of the EIS. These included submissions made by State and Local government agencies and authorities, organisations, and from the general public. DPIE also issued Infrastructure NSW a letter requesting that a Response to Submissions be prepared, including clarification of certain matters arising from the exhibition period and the EIS.

Infrastructure NSW and its consultant team have considered all issues raised in the submissions and prepared a detailed response in this report and the accompanying documents, in accordance with Clause 85A of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). A considered and detailed response to all submissions made has been provided in the accompanying documentation, including the response table at **Appendix A**.

In responding to and addressing the range of matters raised by State and Local government agencies and authorities, and as a result of further detailed design development, Infrastructure NSW has sought to refine the detailed design of the proposal to further demonstrate how the development can respond to those matters raised in the submissions and to further refine the design outcome. These design changes include:

- Reconfiguration and re-planning of internal circulation, food and beverage facilities, corporate suites, office and administration areas and member facilities.
- Minor alterations to the northern and southern façades.
- Minor reconfiguration of the proposed additional roof structure, and reduction in extent of works to existing roof.
- Introduction of a new digital screen and event information signage to the eastern elevation.

Section 2 provides a summary of the outcomes of the statutory exhibition process, and **Sections 3** and **4** of this Report and the accompanying appendices provide an analysis and assessment of the proposed changes and the refined project more broadly. Final measures to mitigate the impacts associated with the refined proposal are detailed in **Section 5**. The mitigation measures have been updated and revised to respond to a number of matters raised in submissions.

In summary, the proposed development is considered appropriate and will ensure the continued operation and competitiveness of Stadium Australia as a Tier 1 stadium and the largest rectangular stadium in Australia. The proposed refurbishment works align with the objectives of the NSW Stadia Strategy 2012 to prioritise investment to achieve the optimal mix of venues to meet community needs and to ensure a vibrant sports and event environment in NSW that delivers social, cultural and economic benefits to the state.

2.0 Public exhibition and submissions

This chapter addresses the submissions received during the public exhibition process both from the general public and organisations, and from State and Local government authorities and agencies. Any amendments to the proposed development resulting from those submissions received has been detailed in **Section 1.0** and further addressed in **Section 2.1** below, as well as the updated Mitigation Measures at **Section 1.0**.

Approach to general public submissions

Each submission from a member of the general public, including local residents, local or special interest groups, and other interested persons has been summarised. Because a large number of submissions raise similar issues, rather than addressing each submission individually the issues raised in the submissions have been summarised into Issue Categories. A description of these 'Issue Categories' is provided in the analysis below.

Analysis of public submissions

The number of times a particular issue was raised in a submission received from the general public and organisations has been identified. This analysis has been completed to determine potentially recurring themes/concerns and is not intended to discount issues raised less frequently or in a fewer number of submissions. A total of 19 submissions from the general public, including local residents, other interested persons, and special interest groups such as the Football Federation of Australia, Western Sydney Business Chamber, Rugby Australia, and two submissions from the Royal Agricultural Society. Of these, 5 were objections (26%), 5 were in support (26%), and 9 were comments on the application (47%) (see **Figure 1**).

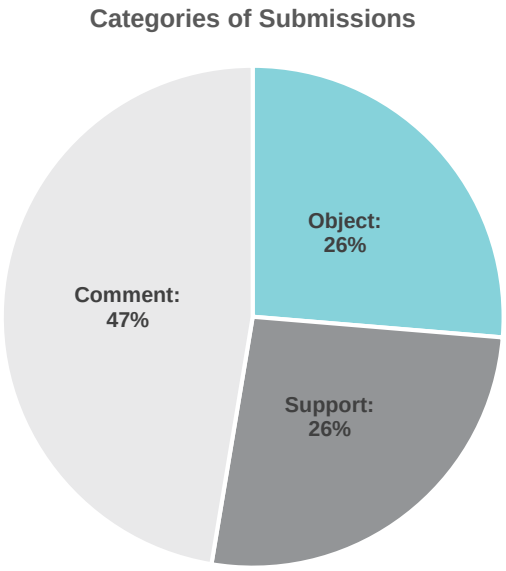

Figure 1 Breakdown of the percentage and categories of public submissions

Analysis of issues raised

Figure 2 below provides a summary of the issues raised in the public submissions and those from key organisations and local interest groups received during the public exhibition period [1]. For each Issue Category that has been identified, **Table 1** provides a high-level description of the matters raised in the submissions, a summary of the response, and a reference to where these issues have been covered in the detailed documentation as required.

The identified issues have been discussed further in **Section 4.0** of this Report which provides additional information and/or an assessment where it is warranted.

[1] Ie: it includes a tally of the frequency of an issue raised – a single submission could discuss a number of the identified key issues

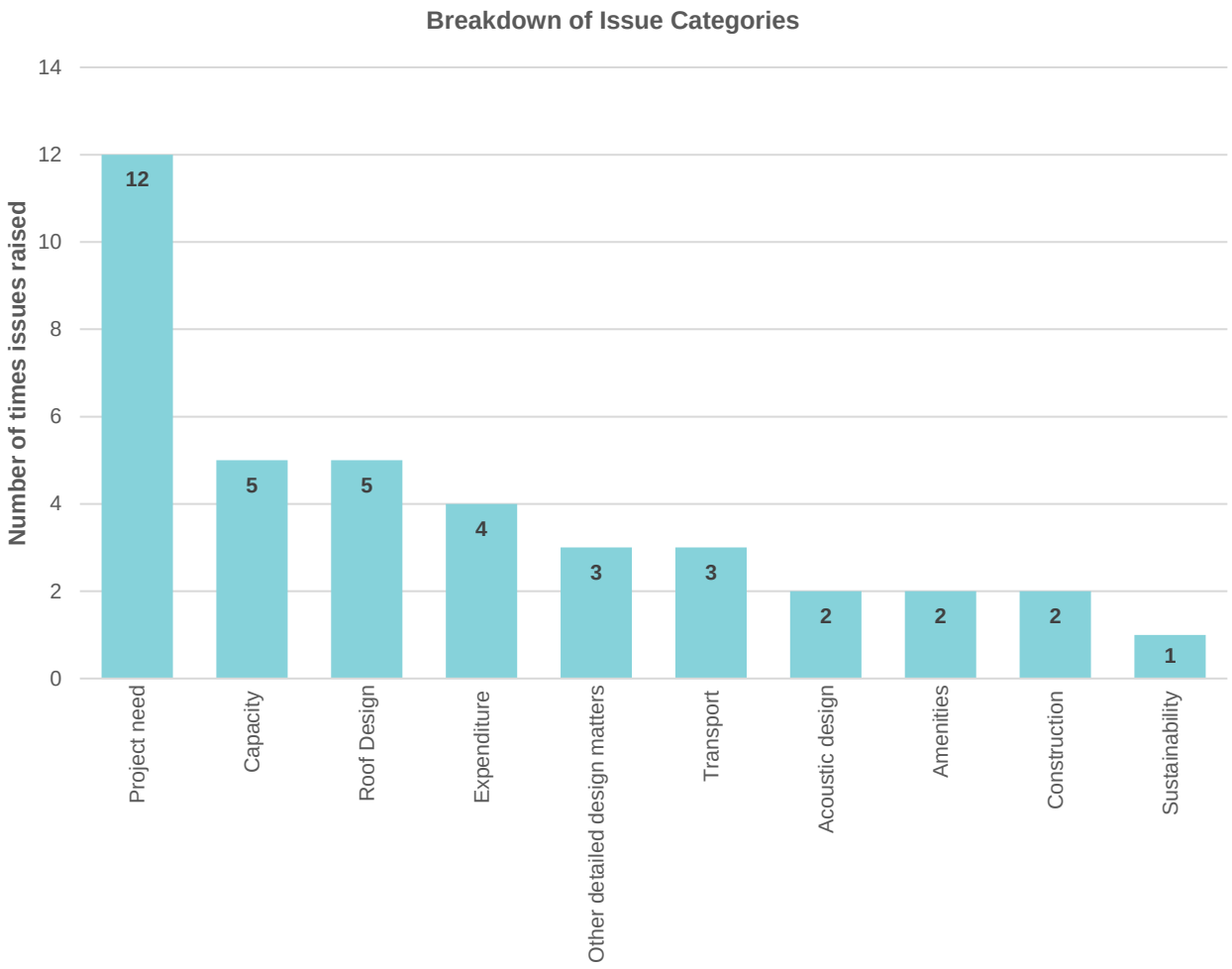

Figure 2 Summary of key issues identified in public submissions

NOTE: Figures are inclusive of objections, support and comments

Table 1 Summary of public and organisation submissions by issue raised

Issue Category	Number of Times Raised [2]	Description	Response
Project need / justification of the development	12	Submissions identified both positive and negative responses with regard to the need for the project, and the justification provided. These included: • The stadium requires a complete knock-down and rebuild, rather than the proposed refurbishment option.	The potential demolition and reconstruction of the stadium was investigated as part of the initial options analysed for the project as outlined in the Business Case Summary. It was determined that whilst this outcome would provide the greatest flexibility in design and improved spectator and hirer experiences, it would also require larger investment from the NSW Government and result in losing a part of Sydney's Olympic and Paralympic Games legacy. In light of this, it was determined that Stadium Australia would be refurbished, which would cost approximately $500 million less than reconstruction and would enable the stadium to commence operating 2 years earlier. The proposed refurbishment represents the greatest potential return on investment for the NSW Government.
		• A new stadium should be constructed adjacent to or nearby the existing stadium, and the current Stadium Australia retained in-situ.	The proposed refurbishment of Stadium Australia will rectify the identified shortcomings and retain the Tier 1 status of the venue without requiring the complete redevelopment of the site. This enables the stadium to remain competitive both in Australia and internationally, providing the best return on investment. Retaining the current stadium as it is now would undermine its ability to attract and host major events; would require increased capital costs as the stadium ages; and would negatively impact on the social and cultural legacy of the Sydney Olympic Park Precinct. The proposal seeks to enhance existing infrastructure.
		• The rectangular field does not address the growing popularity of AFL.	Since 2009 out of 511 events the existing Stadium Australia has only hosted 54 oval configuration events (28 AFL matched and 26 cricket matches). The oval configuration of the existing stadium fails to meet the International Cricket Council standards or AFL standards for a Category 1 venue, which require a larger field size and runoff areas. This means the stadium cannot capitalise on its existing 'flexible' seating configuration. AFL and T20 is typically hosted at other stadia, including the Tier 1 Sydney Cricket Ground and the Sydney Showground, and as such the proposed refurbishment will not displace or disadvantage oval-based sports codes.
		• The NSW Government does not need to invest in three stadia.	The NSW Stadia Strategy covers seven Government-owned or leased stadia and provides a vision for the future of stadia within NSW, prioritising investment to achieve the optimal mix of venues that meet community needs and ensure a vibrant sports and event environment. Stadium Australia is identified as being one of only three stadia within NSW designated to operate as a Tier 1 stadia, with the others being Sydney Football Stadium (SFS) and the Sydney Cricket Ground (SCG) at Moore Park. Following the release of the NSW Stadia Strategy, the NSW Government committed to enacting the outcomes of the Strategy including refurbishing Stadium Australia to retain its status as a premier venue within a network of stadia and events infrastructure in NSW.
		• Sydney as a growing city will benefit greatly from the proposed project.	There is a strategic need to rectify the identified deficiencies of the stadium and ensure the ongoing success and longevity of the stadium, with associated broader social and economic benefits.
Capacity	5	Submissions identified the proposed reduction in the capacity of the stadium as being an issue, but also identified that the stadium is only full during major	The proposed capacity of Stadium Australia fits within the framework for NSW Government investment under the NSW Stadia Strategy that aims to achieve an optimal mix of major rectangular venues in Sydney (Western Sydney Stadium – 30,000 seated capacity; Sydney Football Stadium –

[2] Ie: it includes a tally of the frequency of an issue raised – a single submission could discuss a number of the identified key issues.

Issue Category	Number of Times Raised [2]	Description	Response
		sporting events. One submission considered that the reduced capacity will impact the competitiveness of the stadium, particularly with regard to bids for international tournaments such as the soccer and rugby World Cups.	up to 45,000 seats; Stadium Australia – approximately 70,000 seats) to meet community needs and to ensure a vibrant sports and event environment in NSW. Since 2009 the existing Stadium Australia has only held capacity crowds 36 times out of 511 events. The refurbished Stadium Australia will remain a Tier 1 stadium and the largest rectangular stadium in the country. The refurbishment benefits the ability to attract and host major international events by modernising the stadium and providing for better fan experiences and improved commercial opportunities for hirers.
Roof design	5	Submissions identified that a retractable roof should form part of the redevelopment scheme.	The proposed amendments to the Stadium Australia roof provide 100% drip line coverage to all permanent seating. The potential for a retractable roof was investigated as part of the Business Case, however, it was determined that this feature was not within the committed budget for the project and that it would not produce benefits greater than the associated costs.
Expenditure	4	Submissions identified that the project is a waste of taxpayer money, and that the expenditure associated with the project should be used on other infrastructure such as schools, hospitals and public transport.	The project expenditure decision is a matter for the NSW Government, and is not relevant to the planning assessment process. The objectives and strategic need of the project has been outlined in Section 1 of the Environmental Impact Statement.
Transport	3	Submissions identified issues with accessing the stadium, including that the stadium is difficult to get to and that the proposal should be accompanied by a plan to improve public transport generally.	Stadium Australia benefits from a range of existing and planned transport options, being located in an area designed to be highly accessible for the Sydney Olympic and Paralympics Games. Vehicular, bicycle, public transport, point-to-point, loading and servicing and pedestrian access arrangements will be maintained or improved by the new stadium, recognising that the project involves refurbishing an existing stadium with an overall reduced capacity, and as such does not require further works to support the maximum attendance.
Acoustics	2	Submissions identified that the stadium does not improve or otherwise seek to significantly change the acoustics for when the stadium is used as a music/concert venue.	The refurbishment works will improve sightlines, renew and expand amenities and facilities, and provide new members and corporate facilities to enhance the overall viewer experiences for both sporting and entertainment events. This will create an overall improved environment for concerts, which make up a small proportion of the events hosted at the stadium each year.
Construction	2	Submissions identified specific impacts associated with the construction phase, including the impact of construction on the Royal Easter Show and the temporary closure having economic impacts on surrounding businesses.	The construction works enabled under this proposal will be carefully planned and managed to ensure they do not impact on events including the Royal Easter Show. A detailed Construction Environmental Management Plan will be developed prior to the commencement of works on the site, detailing the processes for managing and mitigating the impacts of temporary construction works on the site. As part of the CEMP, the appointed contractor will be required to consult with SOPA and the Royal Agricultural Society to maintain access, including emergency and evacuation plans, when an event is programmed in proximity of the site. It is further noted that the proposed temporary construction compound has been designed to not impact existing pedestrian and cycle routes, including movements to/from Qudos Bank Arena, the Royal Easter Show and more generally along Olympic Boulevard. No vehicles will use Olympic Boulevard during construction, ensuring the Plaza and Aquatic bus terminals can remain open and unaffected during the Royal Easter Show and other events. Only one construction vehicle route may be impacted by road closures to support the Royal Easter Show, being those vehicles arriving from the north and travelling along Kevin Coombs Avenue, in which case a temporary construction route

Issue Category	Number of Times Raised [2]	Description	Response
			would be implemented so that vehicles will use Australia Avenue and Sarah Durack Avenue to access the construction site. Refer to the discussion in **Section 4.2.2** below. The Social Impact Assessment provided at Appendix AA of the EIS identifies that there is expected to be short-term negative impact on local businesses during the construction process as a result of a reduction in attendees to the precinct. This will be somewhat offset by worker spending during the construction process, and the positive wider spending during the construction phase recognising that the development cost of $810 million consists of construction spending and ancillary development costs. It is also noted that events in the greater precinct will continue to attract visitors and workers to Sydney Olympic Park, and support local businesses. Regular construction updates will be provided on the project website, to ensure the community and businesses are kept informed of the construction phases and any potential disruptions/changes to the surrounding environment.
Amenities	2	Submission identified support for improving facilities within the stadium such as bathrooms, food and beverage options, players facilities etc, and identified that there needs to be more investment in the surrounds in terms of restaurants, cafes, licensed premises and other forms of entertainment to make attendance more pleasurable and give people something to do before and after their event.	The proposed refurbishment includes a range of improvements to the food and beverage offerings, members and corporate facilities, and other amenities that all play a significant role in the overall fan and hirer experience and the stadium's ability to attract and retain fans and events. No works are currently proposed for areas outside of immediate Stadium and surrounds, which would be at the discretion of SOPA and other landowners and require consideration of the broader precinct. It is understood that SOPA is separately planning future development in the areas around Stadium Australia.
Other detailed design matters	2	Various submissions identified matters for discussion regarding the detailed design and scope of the proposal including that the pitch should be sunk instead of being at level with the seats and that screens should be considered to reduce the seating tiers and create a more 'intimate' seating mode.	Lowering the existing pitch would require substantial excavation and redesign with regard to its interface with the basement and services, and as such was not considered as part of the proposed refurbishment works. It is intended that the majority of seats will be closed during standard events, to reduce the capacity of the stadium to align with demand and provide a more intimate and active spectator experience.
Sustainability	1	A submission identified that sustainability measures should be designed into the stadium.	The EIS is accompanied by an Environmentally Sustainable Development Strategy prepared by Aurecon (Appendix H), which details how the proposal will enhance the overall sustainable design and operation of the stadium. The works are targeted to achieve a 5 star Green Star rating through implementing a range of sustainability measures.

2.1 Submissions by agencies

Submissions were received from 7 public agencies during the exhibition of the EIS, including:

- Transport for NSW (including RMS);
- NSW Environmental Protection Agency;
- Heritage Council;
- DPIE's Environment, Energy and Science Group;
- Sydney Olympic Park Authority; and
- City of Parramatta Council.

None of the agencies objected to the SSD DA, and the Sydney Olympic Park Authority registered their submission in support. A detailed response to each of the issues raised in these submissions is provided at **Appendix A**. An assessment of the key issues and of the proposed design changes is also included in **Section 4.0**.

3.0 Amendments to the application

Whilst there is no proposed change to the overall project description, a number of detailed design changes have occurred since the submissions of the EIS and are proposed in accordance with Section 55 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). These changes have occurred in response to further detailed design development and are illustrated in the updated Architectural Plans provided at **Appendix B**. These design changes are summarised in **Table 2** below and largely relate to minor internal replanning and clarification or reconfiguration of external design elements. Where relevant, assessed in **Section 4.0** of this report and the accompanying technical studies.

Table 2 Summary of amendments to the application

Location	Description
Level 0	• Minor internal reconfiguration of circulation
Level 1	• Re-planning of F&B facilities • Reconfiguration of internal circulation arrangements
Level 2	• Relocation of the new Level 3 north and south concourses to Level 2 • Re-planning of F&B tenancies • Reconfiguration of internal circulation • Reconfiguration of media and broadcasting facilities • Relocation of corporate suites • Reduction in extent of new slab
Level 3	• Relocation of the north and south concourses to Level 2 • Replanning of internal back-of-house facilities • Reconfiguration of internal office and administrative facilities
Level 4	• Minor changes to internal circulation • Minor reconfiguration of member facilities
Level 5	• Reconfiguration of hospitality suites and creation of new internal ‘suite terrace’ • Minor internal changes to broadcasting facilities
Level 6	• Minor internal re-planning
Level 7	• Minor internal re-planning
Roof	• Reconfiguration of proposed roof addition, including reduction in extent of works to existing roof (maintains 100% drip-line coverage to all seated areas)
East Elevation	• New digital screen and event information board (relocated from northern elevation) • Retention of existing building identification/naming sign • New glazing to south-east and north-eastern corners
North Elevation	• New glazing to lower levels and entrances/exits • New northern roof structure • Relocation of digital screen and event information board to the eastern elevation
West Elevation	• New digital screen and event information board • Retention of existing building identification/naming sign • New glazing to south-east and north-eastern corners
South Elevation	• New glazing to lower levels and entrances/exits • New northern roof structure

4.0 Clarification, additional information and further assessment

The following section should be read in conjunction with **Appendix A** and the relevant appendices of this report, which provides more detailed responses to matters raised by public agencies and the DPIE from the information and assessment provided in the EIS. The following sections address key aspects of those responses where additional information and/or assessment has been provided in support of that lodged with the EIS, including of the proposed design changes.

4.1 Design excellence

Stadium Australia is recognised as being a significant architectural feature of Sydney Olympic Park, and as the main legacy venue of Sydney's Olympic and Paralympic Games. A key objective of the proposed renewal of the stadium is to achieve a high standard of design and reinforce the stadium's status and identity within the NSW stadia network, and more broadly, nationally and internationally. In view of this, a Design Excellence Strategy was developed and submitted with Appendix A of the EIS to inform the design of the refurbished stadium and any ongoing design development post-approval to ensure the integrity of the final approved design demonstrates design excellence.

The Design Excellence Strategy proposes undertaking regular and iterative meetings with SOPA's Design Review Panel (DRP) as part of the design integrity and excellence process. It is noted that while SOPA is supportive of these regular discussions, they have requested that the design milestones and hold points be clarified in the Strategy to ensure that the DRP can provide a targeted review and efficiently and effectively add value to the design process. The revised Strategy is provided at **Appendix D**, which confirms the agreed design review milestones with the SOPA DRP as being:

- post determination of the development application, should any conditions of consent amend aspects of the design; and
- prior the Crown Building Works Certificate, or each Crown Building Works Certificate if the works are staged.

The revised Design Excellence Strategy also details the comments provided by the SOPA DRP when a second design development meeting was held on 9 December 2019 in relation to the amended design discussed in **Section 3.0** above (see **Appendix E**). The following comments were noted in the meeting:

- The Panel supports the achievement of a 5 star Green Star rating for the stadium.
- The solar management of the façade (northern façade in particular) should be developed and provided to the DRP. This will form the baseline for façade treatment for thermal comfort and the DRP will utilise this information to review design development against.
- Further details regarding lighting should be presented to the DRP when they are developed.
- The DRP encourages the applicant to work with SOPA and their plans for the public domain.

The amended design for the proposed development is considered to still achieve the design excellence provisions contained in Clause 30(2) of Schedule 3 of the *State Environmental Planning Policy (State Significant Precincts) 2005* (SEPP SSP). The proposed development has been designed and assessed in accordance with the relevant legislation and policies, and has been subject to review by SOPA's Design Excellence Panel. The resultant proposal is, therefore, considered to demonstrate design excellence.

4.2 Transport

4.2.1 Bicycle parking

DPIE has requested that further information be provided on the design, and demand for, bicycle parking and end of trip facilities noting that the event day staff numbers are up to 3,500.

Bicycle parking for staff is currently informally provided in a storage area within the stadium basement. The proposed development seeks to formalise on-site bicycle parking for use by staff through bicycle racks providing 80 spaces, with staff able to access the approximately 1,000 staff lockers and 10-12 showers and change rooms within the basement (Level 00). This new bicycle parking, and the associated end of trip facilities, are to accommodate for 5% of the 200 permanent staff and 2% of temporary event-day staff at Stadium Australia.

This represents an increase and improvement when compared to the current situation, and aligns with the existing mode share of bicycles used to access the site in the Transport Impact Assessment submitted as Appendix S of the EIS. It is emphasised that less than 2% of workers use bicycles in their current journey to work to the stadium, with public transport and private vehicles the most utilised transport options.

4.2.2 Construction management

DPIE and SOPA have sought to clarify how the proposed temporary construction compound will impact on pedestrian movements to and from the Royal Easter Show and how vehicle construction routes may be impacted during the Royal Easter Show when special road closures are in effect.

The EIS was accompanied by a Transport Impact Assessment prepared by JMT (Appendix S of the EIS) and a preliminary Construction Management Plan prepared by Aver (Appendix J of the EIS). These outline how construction may be carried out on the site without adversely impacting and in coordination with the ongoing use of the precinct, including for events. The assessments are to inform the preparation of a detailed Construction Environmental Management Plan prior to the commencement of works on the site, which is to include provisions for consulting with TfNSW (Sydney Coordination Office), Parramatta City Council and SOPA at regular intervals where construction works overlap with other construction projects in the precinct, and consulting with SOPA and the Royal Agricultural Society when an event is programmed in proximity of the site, to maintain access, including emergency and evacuation plans. These commitments are included in the final Mitigation Measures at **Section 5.0** (CM-TA1 to CM-TA4).

The following is also noted:

- No works are identified in the surrounding road network or footpaths, or that would extend beyond the nominated construction compound. The proposed temporary construction compound is entirely within the public domain surrounding the stadium and does not extend onto the surrounding footpath or road frontage. As such, the proposed construction works will not impact existing pedestrian and cycle routes, including movements to/from Qudos Bank Arena, the Royal Easter Show and more generally along Olympic Boulevard.
- Pedestrian movements will be maintained through a mixture of construction site fencing and hoarding along the perimeter of the site, and traffic controllers with appropriate accreditation to hold construction vehicles at cross-over points and allow pedestrians to cross work areas. When an event is programmed within proximity of the site, such as the Royal Easter Show, the appointed contractor will be required to consult with SOPA and the Royal Agricultural Society to maintain access, including emergency and evacuation plans.
- During the Royal Easter Show only one construction vehicle route will be impacted from road closures, being vehicles arriving from the north and travelling along Kevin Coombs Avenue. In this instance, a temporary construction route will be imposed so that vehicles use Australia Avenue and Sarah Durack Avenue to access the construction site (see **Figure 3**). Importantly, no vehicles will use Olympic Boulevard during the construction process, ensuring the Plaza and Aquatic bus terminals can remain open and unaffected during the Royal Easter Show and other events.

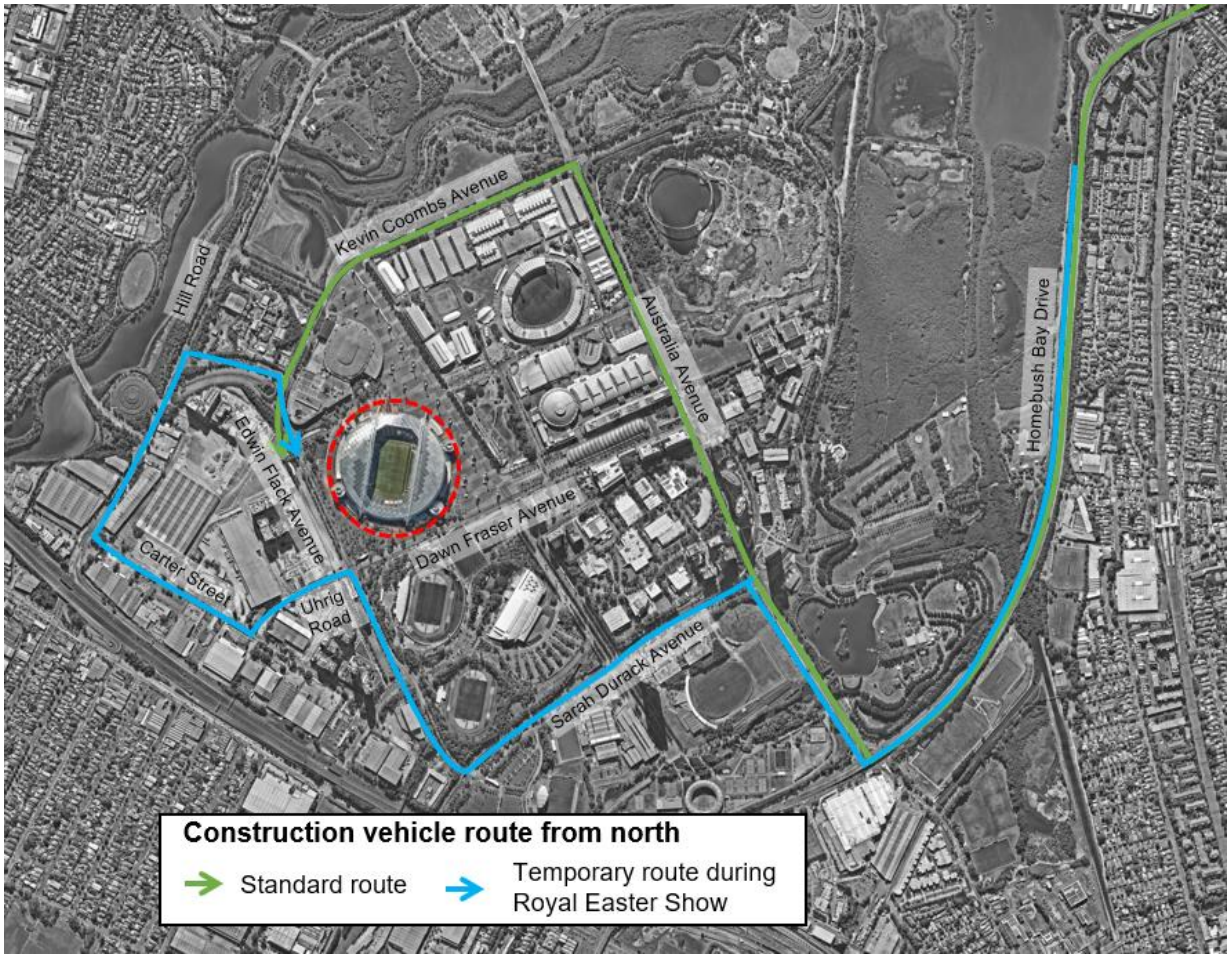

Figure 3 Revised temporary construction vehicle route during the Royal Easter Show

Source: JMT Consulting

4.3 Acoustic impacts

DPIE has requested a revised Noise and Vibration Assessment (Revised NVIA) clarifying a number of detailed modelling and assessment requirements nominated by the NSW EPA. The revised Assessment has been prepared by Arup and submitted at **Appendix C** of this report, and discussed in detail in the responses at **Appendix A**.

Non-event operational noise

As outlined in the Revised NVIA, no changes to the everyday operation of the stadium, including external mechanical plant, vehicle access, parking and loading and servicing are proposed. Accordingly, no additional acoustic treatment for non-event operational noise is recommended in the Revised NVIA as part of the redevelopment works.

Construction noise assessment

Noise generated from the demolition and construction phases of stadium redevelopment works have been predicted at surrounding noise sensitive receivers. The most significant noise impacts are predicted during stadium demolition works, where the use of equipment such as the hammers and cranes are predicted to generate noise impacts above construction noise management levels. No residential receivers are predicted be 'highly affected' during proposed works. No significant construction traffic noise impacts are predicted to occur. The Revised NVIA makes specific recommendations for mitigation of construction noise, which will be implemented through the preparation of a detailed Construction Noise and Vibration Management Sub-Plan to the Construction Environmental Management Plan which is noted as a Mitigation Measure in **Section 5**.

Event noise management

As there is no change to the type, scale or frequency of events to take place at Stadium Australia and no significant modifications to the existing façade of the stadium, no significant increase in event noise is predicted. Minor reductions in overall noise emissions from concert events and sporting events are predicted for most operational scenarios at most receivers as a result of higher-tiered seating, resulting in more shielding from event noise within the stadium, and an overall reduction in seating capacity. This is illustrated in **Figure 4**, which notes that the greatest benefits in terms of noise reduction would occur to receivers located along the north-south axis of the existing stadium as a result of the increased seating tiers.

It is noted the Carter Street DCP and SOPA Master Plan include specific planning requirements for new residential and other sensitive receivers to ensure that buildings are designed to mitigate against the effects of event noise and to ensure that property owners and residents are aware of the potential for noise generation associated with events. Although these receivers do not qualify for consideration against the numerical noise criteria from the venue, the results of the modelling does show that noise levels at these receivers will generally decrease as a result of the proposed upgrade.

Having regard to the assessment in the Revised NVIA provided at **Appendix C**, it is considered that no further mitigation measures are required in relation to operational noise.

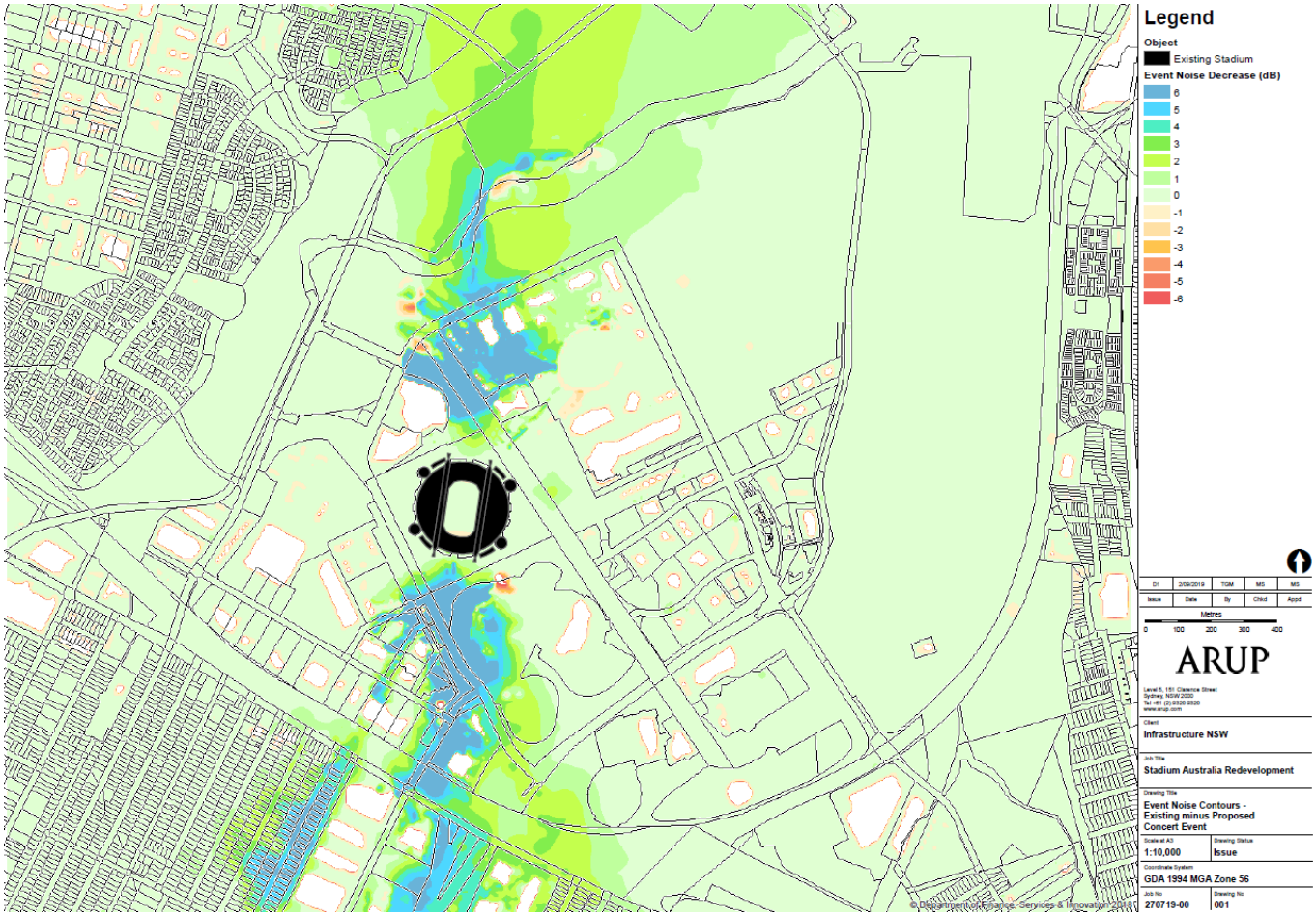

Figure 4 Event noise contours illustrating concert noise decreases compared to existing Stadium Australia

Source: Arup

4.4 Water sensitive urban design and water quality

SOPA confirm that the stormwater concept plans developed for the proposed refurbishment works are generally satisfactory, however, request additional information regarding the water quality of stormwater leaving the site. Specifically, SOPA request that all run-off from the playing surface, either from stormwater or irrigation systems, be captured and treated on-site.

The current stadium does not implement Water Sensitive Urban Design or Stormwater Quality Improvement Devices other than those utilised in the existing rainwater tanks on site, and externally via the Gross Pollutant Trap in Edwin Flack Avenue used by stormwater runoff leaving the site before discharging into the wetlands. Wetlands are a natural purification system and has been shown to be very good at treating wastewater with hydrocarbons and other compounds. Accordingly, it was confirmed by Aurecon in the Stormwater Management Plan submitted at Appendix M of the EIS that the quality of stormwater discharged from the site using this treatment chain would comply with the criteria in SOPA's *Stormwater Management and Water Sensitive Urban Design Policy*.

It is emphasised that the proposed development represents a refurbishment of the existing stadium, and not a knock-down-rebuild. Accordingly, no change is proposed to this water quality treatment system and in this instance the quality of water leaving the site would remain the same as existing.

4.5 Signage

The amendments to the proposal outlined in **Section 3** and **Appendix C** include the retention of the existing building identification/naming signs and incorporation of a new digital event information screen to the eastern elevation. This digital screen will include information and activation related to events hosted at the stadium and is consistent with the scale of the stadium and the character of the locality as a major events precinct. An assessment of the digital signage against the assessment criteria contained in Schedule 1 of SEPP 64 is detailed in **Table 3** below.

Table 3 Assessment criteria under Schedule 1 of SEPP 64

Assessment Criteria	Comments	Compliant
1. Character of the area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed new digital event information screen is compatible with the existing and desired character of the area as it comprises signage associated with the existing stadium and will reinforce the broader entertainment and sporting character of Sydney Olympic Park.	✓
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	Currently, there is no particular theme for signage in the surrounding area. Notwithstanding, the screen has been designed to integrate into the new façade and the overall architectural design.	✓
2. Special areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The proposed signage responds to the character of the stadium as a destination for major events. It will not detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas.	✓
3. Views and vistas		
Does the proposal obscure or compromise important views?	The proposed signage is located on the existing building elevation and, therefore, does not obscure or compromise important views.	✓
Does the proposal dominate the skyline and reduce the quality of vistas?	The proposed signage is located within the envelope and elevation of the existing building and does not impact on the skyline.	✓
Does the proposal respect the viewing rights of other advertisers?	The proposed signage is confined to the eastern façade of the stadium and is not expected to impede on any surrounding signage or advertising.	✓
4. Streetscape, setting or landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	The scale, proportion and form of the proposed signage is appropriate in the context of Stadium Australia, being the largest rectangular stadium in Australia, which is located within a major events precinct of a metropolitan scale.	✓
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?	The detailed design of the signage will seek to contribute to the quality and interest of the streetscape and not detract from the setting of surrounding heritage items.	✓

Assessment Criteria	Comments	Compliant
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	Consideration of the proposed digital event information screen in addition to existing and proposed signage will ensure it is integrated into the design of the building and considered at this early design phase, removing the potential for adhoc visual clutter if facade signage were considered after the detailed design and construction of the stadium.	✓
Does the proposal screen unsightliness?	The proposed signage does not screen unsightliness, but rather has been designed to integrate with and complement the refurbished northern and southern facades.	N/A
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The proposed signage on the façade of the stadium will protrude above the tree canopies in areas. However, it will achieve a high-quality design with consideration of the architectural features of the stadium and the context of the site. It will not detract from the desired amenity and visual character of the surrounding area as a major sporting and events precinct.	✓
Does the proposal require ongoing vegetation management?	The proposed signage will not require ongoing vegetation management.	N/A
5. Site and building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	The scale of the stadium necessitates larger than usual signage. For this reason, the proposed signage is considered to be compatible with the stadium and the nature of this precinct as a major events destination.	✓
Does the proposal respect important features of the site or building, or both?	The proposed signage has been designed to respect important architectural features of the stadium.	✓
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The proposed signage will be fully integrated with the design of the stadium. This will ensure a consistent theme and approach to signage will be implemented across the stadium, creating a holistic experience for visitors.	✓
6. Associated devices and logos with advertisements and advertising structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	Future signage on the digital screen may incorporate logos, lighting devices and safety features. These will be designed to read as an integral part of the event information signage and the stadium façade.	✓
7. Illumination		
Would illumination result in unacceptable glare?	Illumination arising from the digital screen will be developed with respect to the relevant Australian Standards and best-practice measures for building identification signage. It will be confirmed at the relevant stage that the proposed signage does not result in unacceptable glare or light spill, or impact the safety of pedestrians, vehicles or aircraft.	✓
Would illumination affect safety for pedestrians, vehicles or aircraft?		
Would illumination detract from the amenity of any residence or other form of accommodation?		
Can the intensity of the illumination be adjusted, if necessary?	The proposed intensity of the digital screen will be adjustable, as required.	✓
Is the illumination subject to a curfew?	There is no curfew proposed for the signage.	N/A
8. Safety		
Would the proposal reduce the safety for any public road?	As discussed above, the intensity of illumination of the signage will be developed with regard to the relevant Australian Standards and best-practice measures to ensure it does not reduce the safety for any public road. The location of the proposed signage elevated on the eastern façade of the stadium would not be expected to reduce the safety of any public road surrounding the stadium.	✓
Would the proposal reduce the safety for pedestrians or bicyclists?	Due to the proposed signage being elevated on the eastern façade of the stadium, it is not expected that building identification signage will obscure sightlines from public areas or reduce safety for pedestrians or cyclists.	✓

5.0 Final Mitigation Measures

The final list of measures required to mitigate the impacts associated the proposed development are detailed in **Table 4** below. These mitigation measures are based upon those previously identified in the Section 8.0 of the EIS, with revised and additional mitigation measures included to reflect the additional information, clarification or response to submissions contained in this report and the accompanying technical studies. These measures represent the final and full series of mitigation measures proposed for the project pursuant to clause 7(d)(iv) of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*.

Table 4 Final Mitigation Measures

Ref No.	Mitigation Measure
Design and Operation	
D/O-BF	**Built Form**
D/O-BF1	Prior to works commencing on the site the proponent is to issue the author/s or person representing the author/s of the original Stadium Australia architectural design with written notice stating the intention to alter Stadium Australia. The author/s or persons representing the author/s are to be provided with access to make a record of the works and/or consult in good faith about the change.
D/O-BF2	Design development and the assessment of design integrity shall occur in accordance with the process outlined in the Design Excellence Strategy prepared by Infrastructure NSW dated December 2019.
D/O-BF3	Detailed design of the new stadium entrances is to be coordinated with the levels and finishes of the existing public domain. In the event that the Sydney Olympic Park Authority progresses changes, the proposal is to coordinate with the levels and finishes of the new public domain as appropriate.
D/O-BF4	The detailed design of food and drink premises are to comply with the relevant Australian Standards and the Food Act 2003.
D/O-LR	**Lighting and Reflectivity**
D/O-LR1	All applicable outdoor lighting will be design, installed, and operated in accordance with the relevant Australian Standards; AS4282 and/or AS/NZS 1158.3.1.
D/O-LR2	All external materials and finishes that are visible from a public road and footpath are to have a spectral reflectivity of less than 20%.
D/O-TA	**Transport and Accessibility**
D/O-TA1	A detailed Travel Demand Strategy is to be prepared outlining practical measures and initiatives to ensure that the refurbished stadium supports and works towards the greater use of sustainable modes of transport to reduce car dependency. The Strategy is to include a two-yearly review system to assess travel demand and make refinements to the initiatives.
D/O-WA	**Waste**
D/O-WA1	Incorporate operational waste management strategies into the staff training and induction process for the refurbished stadium including the following: • roles and responsibilities for all key stakeholders that will manage waste on-site; • staff responsibilities including what materials are appropriate for each stream, the procedures involved in sorting, recommendations on how to minimise waste generation, and instructions on how to operate machinery safely; • data collection and the recycling and performance targets; • an annual review of on-site contamination rates by on-site staff, and disposal facilities through independent audits as necessary; and • appropriate communication channels for all stakeholders.
D/O-WD	**Water and Drainage**
D/O-WD1	Maintain existing connection(s) to alternative water supplied to the stadium in the form of reclaimed water and rainwater collected from roof.
D/O-WD2	All upgraded amenities to install efficient fixtures in accordance with the WELS Green Star requirements.
D/O-WD3	Install separate metering for distinct uses for all new water supplies to ensure water consumption can be understood and managed by the Operator
D/O-WD4	Roof drainage is to be designed for 100-year ARI in accordance with AS3500
D/O-WD5	Ensure pipe network drainage is designed for 20-year ARI in accordance with AR&S 2019 that is capable of receiving 100-year ARI roof drainage

Ref No.	Mitigation Measure
D/O-ESD	**Sustainability**
D/O-ESD1	The detailed design of the stadium is to achieve a minimum 5 Star Green Star rating (Design & As Built v1.3), with consideration of the initiatives identified in the Environmentally Sustainable Development Strategy prepared by Aurecon (27 August 2019).
D/O-SEC	**Safety and Security**
D/O-SEC1	A CCTV network for the site is to be designed and installed with consideration of any existing networks and in consultation with a suitably qualified security consultant with a Class 2A licence under the *Security Industry Act 1997* to monitor the site. Signage is to be installed at site entries advising visitors that CCTV is in operation throughout the precinct.
D/O-SEC2	A lighting strategy is to be designed and implemented in consultation with a suitably qualified lighting expert to ensure that the CCTV network is effective, and the building will be lit during the night.
D/O-SEC3	The final detailed construction drawings are to have consideration of the recommendations in Section 8 of the CPTED Report prepared by Ethos Urban (September 2019) as applicable.
D/O-SEC4	Complete a detailed Security Risk Assessment to identify, assess, manage and minimise the risks associated with terrorism and other security risks, which is to be used to inform the security design process. The SRA shall consider event and non-event modes.
D/O-SEC5	Develop a security brief to establish the performance requirements of all necessary security improvements, as defined by the Security Risk Assessment
D/O-SEC6	Participate in ongoing consultation with the Sydney Olympic Park Authority regarding the future development of the surrounding public domain and its potential to influence security responses on the site.
D/O-SEC7	Prepare an Event Management Plan following the detailed design and construction of the stadium.. The Event Management Plan will cover: • Event typologies and venue capacity for each event • Event scheduling • Hours of operation • Access arrangements including ticketing, public transport and parking • Alcohol management • Working with stakeholders during events including SOPA, teams and players, emergency services and transport authorities.
D/O-HW	**Health and Workplace**
D/O-HW1	A certificate or statement must be obtained from a suitably qualified and experienced Food Safety Consultant, which confirms that the design and construction of any food business will satisfy the relevant requirements of the *Food Act 2003*, Food Standards Code and AS 4674-2004 - Design, construction and fit-out of food premises, prior to a construction certificate being issued for the 'fit-out' of the food business, to the satisfaction of the Principal Certifying Authority.
Construction Management	
CM-1	Prepare a detailed Construction Environmental Management Plan prior to the commencement of works on the site including all required technical management plans and with consideration of other nominated mitigation measures.
CM-1	The CEMP is to include a Dust Management Plan with consideration of the recommendations in Section 6 of the Air Quality Impact Assessment prepared by Wilkinson Murray (August 2019).
CM-TA	**Transport & Accessibility**
CM-TA1	A detailed Construction Pedestrian and Traffic Management Plan will be developed with the appointment contractor confirming the detailed construction methodology and specific measures for safely managing construction traffic in the surrounding area. The Plan is to include information of site compound locations, driver facility areas, vehicle turning paths within the site, and traffic control plans.
CM-TA2	The appointed contractor will consult with TfNSW (Sydney Coordination Office), Parramatta City Council and the Sydney Olympic Park Authority at regular intervals where construction works overlap with other construction projects in the precinct.
CM-TA3	The appointed contractor will consult with the Sydney Olympic Park Authority and Royal Agricultural Society to maintain access, including emergency and evacuation plans, when an event is programmed in proximity of the site.
CM-TA4	No roads or footpaths are to be obstructed as part of the proposed works. If temporary road closures are required, the appropriate permission is to be obtained separately through the normal approvals process.

Ref No.	Mitigation Measure
CM-NV	**Noise and Vibration**
CM-NV1	A Construction Noise and Vibration Management Sub-Plan shall be prepared prior to issue of the relevant construction certificate. The Plan will reference the recommendations in Table 4.1 of the revised Noise and Vibration Impact Assessment prepared by Arup (December 2019).
CM-NV2	High noise activities will be programmed to occur during the daytime hours wherever possible. In the event that these works are approved to occur out-of-hours, noisy activities should be scheduled early in the night to minimise the impact on adjacent residents. Limit the number of consecutive nights receivers are impacted.
CM-NV3	The contractor will adhere to the minimum working distances in Table 23 of the Noise and Vibration Impact Assessment prepared by Arup (December 2019).
CM-SE	**Social and Economic**
CM-SE1	The proponent is to provide regular construction updates on the project website, to ensure the community, members and sports codes are kept informed of the construction phases and any potential disruptions/changes to the surrounding environment.
CM-BIO	**Biodiversity and Trees**
CM-BIO1	A Tree Protection Plan is to be prepared by the Project Arborist which assesses the degree of impact to any Tree Protection Zones and provides strategies and mitigation measures for how to minimise or mitigate these impacts. Consideration should be afforded to the recommendations in the Arboricultural Impact Assessment prepared by Tree IQ (21 August 2019).
CM-BIO2	Following the conclusion of the refurbishment of the stadium, the removed trees will be replaced with advance-sized specimens in accordance with *Australian Standard 2303: Tree Stock for Landscape Use (2015),* whether on or off-site in consultation with and as determined by the Sydney Olympic Park Authority.
CM-GEO	**Groundwater and Geotechnical**
CM-GEO1	Detailed testing of subsurface conditions is to be completed following demolition of the structures and to inform the detailed design stage including testing of foundation depths, loads, and performance, groundwater conditions, and soil and groundwater aggressivity.
CM-CON	**Contamination**
CM-CON1	An unexpected finds protocol is to be developed, and implemented throughout the construction process, with regard to contaminated soil, asbestos or soil potentially containing contamination or asbestos outside identified impacted zones.
CM-CON2	Any waste transported off-site is waste classified in line with EPA guidelines and taken to an appropriately licensed facility.
CM-CON3	No works are to occur in areas subject to the Maintenance of Remediation Notice no. 28040.

6.0 Conclusion

The Applicant has reviewed each of the submissions made by members of the general public, community organisations, and State and Local government agencies. In response to issues raised in these submissions, as well as matters identified by DPIE, the Applicant has undertaken further environmental assessment and provided clarification regarding the scope of the proposed development that is the subject of this planning application.

The proposed refurbishment works will ensure the continued operation and competitiveness of Stadium Australia as a Tier 1 stadium and the largest rectangular stadium in Australia. It will bring new life to the stadium and in doing so deliver significant benefits to the NSW community, including through direct and indirect economic activity and employment. The proposal aligns with the objectives of the *NSW Stadia Strategy 2012* to prioritise investment to achieve the optimal mix of venues to meet community needs and to ensure a vibrant sports and event environment in NSW.

The SSD DA for the refurbishment of Stadium Australia, as supplemented by this Response to Submissions, addresses each of the matters identified by the Secretary's Environmental Assessment Requirements and those matters identified in the *Environmental Planning and Assessment Regulation 2000*. The environmental assessment concludes that, subject to the implementation of final mitigation measures outlined in **Section 5.0** of this report, the proposed development would not result in any unacceptable impacts and will generate a number of significant social and economic benefits for Sydney and NSW. Accordingly, DPIE is requested to complete its assessment of the project and recommend the project be approved by the Minister for Planning and Public Spaces.