



Office of  
Environment  
& Heritage

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SSD 8175

Mr Peter McManus  
Specialist Planning Officer  
NSW Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Dear Mr McManus

**Notice of Exhibition - Western Sydney Stadium Stage 2 Design and Construction (SSD 8175)**

I refer to your letter received 7 March 2017 by the Office of Environment and Heritage (OEH) regarding the exhibition of the Western Sydney Stadium Stage 2 Design and Construction.

OEH has reviewed the documentation provided and provides detailed comments on biodiversity, flooding and Aboriginal cultural heritage at Attachment 1.

OEH remains concerned about the potential impacts of the proposal on the Grey-headed Flying-fox (GHFF) camp adjacent to the site and reiterates our previous request for a meeting to discuss avenues for augmenting habitat for GHFF as a contingency for dispersal.

If you have any queries regarding this matter, please contact Marnie Stewart on 9995 6868 or [marnie.stewart@environment.nsw.gov.au](mailto:marnie.stewart@environment.nsw.gov.au).

Yours sincerely

*S. Harrison 04/04/17*

**SUSAN HARRISON**  
**Senior Team Leader Planning**  
**Regional Operations**

## **ATTACHMENT 1 – Office of Environment and Heritage comments on Western Sydney Stadium Stage 2 Design and Construction (SSD 8175)**

### **1. Background**

The Office of Environment and Heritage (OEH) understands that SSD 8175 includes the detailed design and construction of the Western Sydney Stadium (WSS), as well as the operation of the stadium once complete. OEH has previously provided advice on the Stage 1 Concept Plan and demolition (SSD 7534), Response to Submissions Report (RTS) and MOD 1 to SSD 7534.

OEH has reviewed the Environmental Impact Statement (EIS) for the Stage 2 Design and Construction proposal prepared by JBA and dated March 2017, as well as other supporting documents. OEH's comments on the proposal are provided below.

### **2. Biodiversity**

OEH has reviewed the Biodiversity Impact Assessment (Appendix Q) (BIA) prepared by AMBS Ecology and Heritage (February 2017), and provides the following comments:

- OEH supports the implementation of all Recommended Mitigation Measures in Section 4.6 of the BIA, and recommends this additional measure:
  - The mitigation measures include stop work triggers if roost distress or a decrease in animal health is observed. Also, noise levels are not to be exceeded if dependent young are present. OEH considers that these measures could only be adequately implemented by a suitably qualified and experienced ecologist. OEH strongly recommends that the construction works are overseen by an ecologist, available on an as needs basis.
- There appears to be no provision for covers over the car park. OEH recommended covers over the car park to prevent faecal matter damaging cars, in our submission on the Concept Plan (19 August 2016) and reiterated the recommendation in comments on the RTS report (6 October 2016). To reduce future conflicts, OEH again recommends that such covers are provided, at least in the northern car park.
- OEH notes the Concept plan for the proposal stated that deterrents, such as sonic disturbance, olfactory signals and physical obstruction could be used if camp shifts. Our response on the Concept Plan in October 2016 stated that we may not support such a proposal. The RTS report said such deterrents will be part of Stage 2 of the project, if required. OEH notes the use of such deterrents is not mentioned in the BIA.
- The BIA states that excavation may be required to secure a discharge pipe, and this may have impacts on the endangered ecological community, River-flat Eucalypt Forest. OEH notes that the BIA states that such an impact will require further assessment and potentially offsetting.
- From the information provided in the BIA, OEH understands that lighting to be used during construction and operation are to be directed away from the camp and the Parramatta River.
- The BIA states that the impact of most concern is noise, during construction and operation, and OEH supports this assessment. The report states that noise generated during some music concerts and events will potentially be higher and/or more frequent than currently experienced by the Grey-headed Flying-fox (GHFF) roost. Noise levels will be higher than background levels for longer periods of time and sudden spikes may occur more frequently during works on the project area. The report concludes that there is a risk these altered periods of elevated noise will have an impact on the GHFF roost. The BIA concludes that these impacts can be managed effectively through Noise Management Plans etc., but OEH still considers there is a high risk that the construction and operation of the stadium will lead to the dispersal of the camp. In comments on the Concept Plan, OEH recommended that to

reduce this risk, nearby GHFF habitat should be augmented. The RTS report stated that 'further discussions would be undertaken with OEH during design development', but there is no mention of augmentation of habitat in the BIA. Therefore, OEH reiterates the request for a meeting to discuss this proposed contingency measure further.

### 3. Floodplain risk management

OEH has reviewed the Western Sydney Stadium Stormwater Management Plan (Appendix Y) (SMP) prepared by Aurecon dated 3 March 2017 and notes that the SMP has undertaken a regional 100 year ARI flood model.

Aurecon (2017, p15) states "the Parramatta River flood levels do not overlap the post-development Site for the 100yr ARI flood event...Therefore, the 100 year ARI Parramatta River flood levels will not impact the new stadium and the development is subsequently unlikely to have any impact on the flood risk of adjoining properties." This simple assessment does not adequately address requirement 21. Drainage and Flooding of the Secretary's Environmental Assessment Requirements (SEARs) dated 17 January 2017 in relation to assessing all flood and evacuation impacts up to the Probable Maximum Flood (PMF).

The March 2017 SMP report is a far simpler and less detailed report than the Flooding Working Paper (AECOM, July 2016) provided during the Concept Plan Exhibition with the following inconsistencies:

- AECOM (2016) states that the new stadium will include mitigation works to prevent this inflow into the site during extreme runoff events whereas Aurecon 2017 concludes that on-site detention (OSD) is unsuitable for a flood mitigation system.
- AECOM (2016) identifies an evacuation route to Victoria Road is available during the PMF or alternatively, the stands within the stadium are elevated and would provide separation from the PMF water level whereas Aurecon 2017 does not address flood evacuation.
- Aurecon (2017) in Table 3 has modelled post development discharge from the stadium to the Parramatta River which is lower than AECOM (2016) modelled discharges without explaining the difference (see table below).

1% AEP Flood Event			
Storm Duration	AECOM (2016) Pre Development Discharge (m3/s) Table 4	AECOM (2016) Post Development Discharge (m3/s) - Unmitigated	Aurecon (2017) Post Development Discharge (m3/s) - Unmitigated Table 3
5 minutes	1.1	1.31	0.494
10 minutes	1.35	1.59	0.981
15 minutes	1.38	1.7	0.494
20 minutes	1.42	1.85	0.981
25 minutes	1.4	1.75	1.305
30 minutes	1.37	1.71	1.303
1 hour	1.27	1.67	1.368
3 hours	0.98	1.49	1.411

Therefore, OEH considers that the SMP report (Aurecon, 2017) does not adequately address the SEARs (17 January 2017) and that there is inadequate detail provided to determine the flood risk from this proposal.

### 4. Aboriginal cultural heritage

OEH has reviewed the Aboriginal Cultural Heritage Assessment and Management Plan (ACHA) prepared by Comber Consulting dated March 2017. OEH's comments in relation to Aboriginal cultural heritage management are as follows:

- Appropriate Aboriginal heritage management is required prior to SSD 7534 MOD 1 works commencing and should cover the area to be impacted by any ground disturbance works proposed under MOD 1, Stage 2 and any future stages.
- The impact assessment within the ACHA does not assess the impacts to Aboriginal heritage through the placement of fill. Such impacts can include removal of topsoil to provide stable bedding for fill in addition to compression. These soil impacts can affect Aboriginal archaeological deposits and also make them inaccessible. This should be considered and the impact assessment and Archaeological Research Design revised to account for these impacts and provide suitable mitigation.
- The mitigation measures listed in Section 5.11.2 of the EIS duplicate each other and as such do not provide a clear process going forward. OEH recommends the mitigation measures be amended to the following:
  - 1) An Aboriginal Archaeological Management Plan has been developed to guide ongoing management of the study area's significance in relation to Aboriginal archaeology and cultural heritage.
  - 2) An Archaeological Research Design has been prepared providing the methodology for test and salvage excavation appropriate to the study area.
  - 3) Consultation with the project Registered Aboriginal Parties (RAPs) should be ongoing and the opportunity provided for RAPs to comment on the Archaeological Research Design and Aboriginal Archaeological Management Plan.
  - 4) Briefing of all contract workers on the nature and location of archaeological sensitive areas, the unanticipated finds protocol and their obligations to notify the OEH of any Aboriginal objects that may be uncovered.
  - 5) Aboriginal archaeological testing and salvage excavation in accordance with the Archaeological Research Design must be undertaken prior to the commencement of excavation, piling or other earthworks within the study area.
  - 6) An interpretation plan should be prepared and implemented for conveying the Aboriginal history and use of the study area, the story of Aboriginal archaeological deposits and their significance to the Aboriginal and wider community. This should be undertaken in consultation with the project RAPs and Parramatta City Council.
  - 7) Maintaining unexpected finds protocol and stop works procedures as detailed in the Aboriginal Archaeological Management Plan.
- A mechanism for prevention of ground/trench collapse which may injure workers during archaeological investigation (test and salvage excavation) has not been provided in the methodology. As archaeological deposits are likely to be at some depth from the surface, even post removal of fill, an appropriate mechanism needs to be applied in accordance with the *Safe Work Australia, Excavation work code of practice* (July 2015).
- Long term management of Aboriginal objects recovered from the study area should be planned for in consultation with RAPs and a suitable strategy put in place post salvage excavation.

(END OF SUBMISSION)