

AMBS Ref: 16219

3 February 2017



Angus Morten
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Barangaroo NSW 2000

Dear Angus,

Western Sydney Stadium – S96 Development Consent Modification

Introduction

This report supports an application made under section 96(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to modify Development Consent, SSD 16_7534 relating to the Stage 1 concept proposal and demolition works approval for the redevelopment of the Western Sydney Stadium.

Development Consent SSD 16_7534 was granted on 7 December 2016 by the Minister for Planning for the following components of the development:

- **Concept Proposal** for the Western Sydney Stadium, including building envelopes, a new 30,000 seat stadium, 500 surface car parking spaces, access, ancillary infrastructure and landscaping; and
- **Detailed works** for staged demolition and removal of the existing stadium and associated infrastructure and the Parramatta Swimming Centre.

This section 96 application (the Modification Application) constitutes the first modification to the consent.

Overview of Proposed Modifications

The modification application seeks to expand the approved range of site preparation works to include piling and remediation, as outlined below:

- Remediation works comprising the excavation and storage of contaminated materials and bulk excavation. Contaminated materials will be stored on site and capped below ground in accordance with the recommendations outlined in the Remedial Action Plan.
- Piling works which will comprise the driving and drilling of concrete piles to establish foundations for the construction of a stadium located within the Stage 1 building envelope.

It is understood the preparation works associated with the Modification Application would be restricted to the footprint of the stadium (i.e. blue outline, Figure 1), and no vegetation would be impacted in addition to the what was assessed in the Stage 1 Environmental Impact Statement (EIS) (AECOM 2016). This report considers the potential impacts of the proposed modification on terrestrial flora and fauna.

Site Description

The Western Sydney Stadium is located at 11-13 O’Connell Street, within the Parramatta Park on the north-western edge of the Parramatta CBD. It is bound to the south and west by the Parramatta Park and the Parramatta River, the Parramatta Rugby Leagues Club to the north and O’Connell Street to the east. The Site is located within the City of Parramatta local government area (LGA).

A locational context plan and location plan are provided at Figure 1 below.

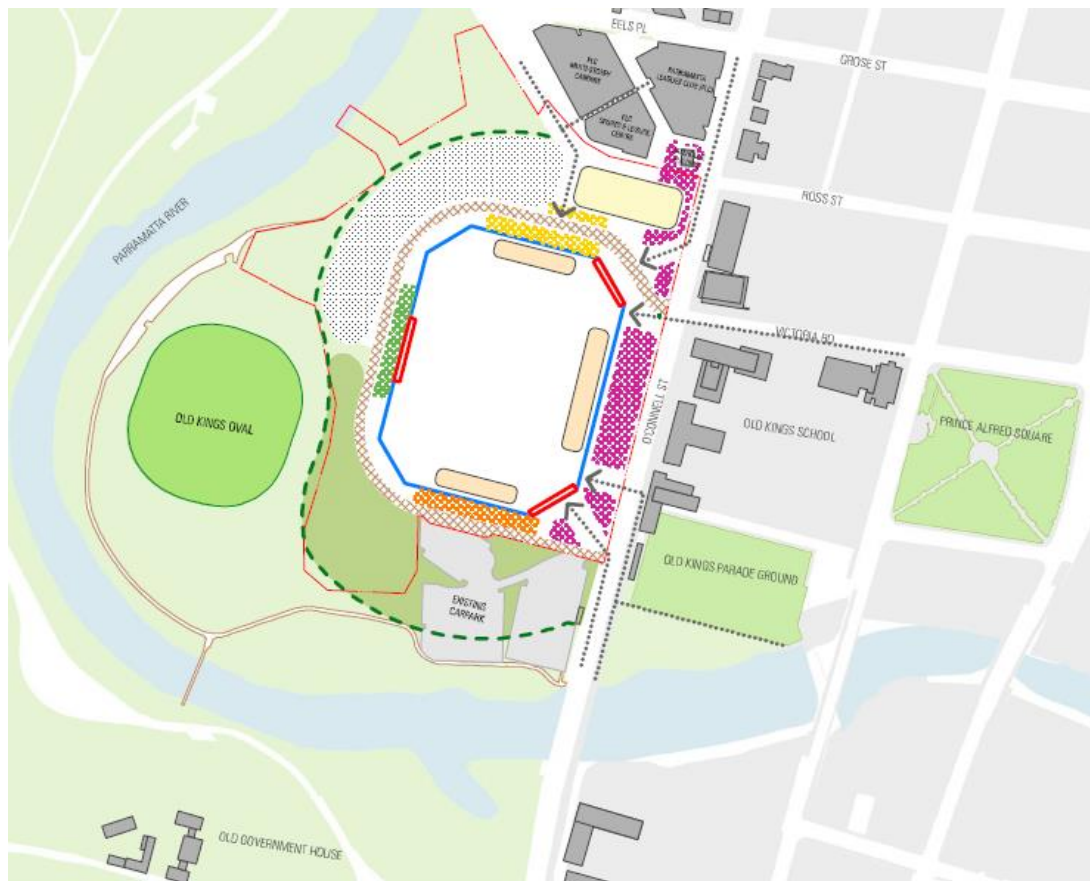


Figure 1 Western Sydney Stadium location and plan

Likely Impacts

The ‘footprint’ of the proposed Modification works is entirely within the footprint of the existing stadium, which will be demolished under the existing approval. No additional vegetation will be cleared for the Modification. There are unlikely to be any impacts on flora and fauna within the footprint as a result of the modification that have not previously been assessed.

The proposed Modification may have impacts on flora and fauna in the surrounding area through increased noise and lights. The potential impacts of increased lighting during construction were considered in the EIS and it is considered that, provided that the lighting and mitigation measures for lighting are the same as that proposed for the Stage 1 demolition, there will be no impacts from lighting that have not previously been assessed.

Noise has the potential to affect a ‘camp’ occupied by the Grey-headed Flying-fox, which is located to the north of the existing stadium.

Grey-headed Flying-fox (Pteropus poliocephalus)

The southern extent of the Parramatta River Grey-headed Flying-fox camp is located approximately 150 m from the existing stadium (ELA 2013). An acoustic assessment undertaken by AECOM (2016) for the Stage 1 EIS predicted construction and demolition noise levels reaching the camp would be between 52-57 dB(A), with periodic elevated noise levels during events of between 52-73 dB(A).

Acoustic Logic (2017) has recently undertaken an assessment of the likely noise levels during demolition, excavation and construction, as well as vibration levels. The report contains predicted noise levels at a number of locations and distances from the existing stadium, for the various types of equipment and processes that would be undertaken during demolition, excavation and construction works. We understand the equipment and/or processes that would be utilised for the Modification to include Excavator / Bulldozer, Piling Rig, Concrete Pump, Concrete Truck, Angle Grinder and Site Crane. This equipment along with their predicted noise levels at locations a similar distance to the Grey-headed Flying-fox camp, are shown in Table 1 for comparison.

Table 1 Predicted noise levels (Acoustic Logic 2017)

Equipment/Process	Parramatta Park	St Patrick’s Cathedral
Excavator / Bulldozer #	57	61
Concrete Crusher	57	61
Bobcat	48	52
Hydraulic Hammer on 20-60t Excavator	68	72
Hydraulic Hammer on 5t Excavator	63	67
Rock/Masonry Saw on Excavator	53	57
Piling Rig #	58	62
Rock Anchor Drill Rig	53	57
Pneumatic Hammer	58	62
Electric Hammer	48	52
Concrete Pump #	53	57
Concrete Truck #	53	57
Truck	51	55
Forklifts	43	47
Angle Grinder #	56	60
Electric Saw	54	58
Drilling	37	41
Hammering	63	67
Site Crane #	48	52
Impact drill	48	52
Remediation Plant	58	62
Air compressor	29	33
Concrete Float/Vibrators	48	52

equipment most likely to be utilised during the Modification works (A. Morten pers. comm.).

St Patricks Cathedral is approximately 190 m from the disturbance, while Parramatta Park varies but at its closest would be approximately 135 m. These predicted noise levels assume the activity will be occurring continuously with no screening between the source and the receiver (Acoustic Logic 2017). Acoustic Logic (2017) considered these noise levels are an upper limit, and would generally only be reached for limited periods and represent an absolute worst case.

Assessment of Potential Impacts

The main potential impacts to the Grey-headed Flying-fox camp from the Modification works would be noise disturbance (i.e. excavation and piling activities). The Biodiversity Assessment for Stage 1 (ELA 2013) predicted construction and demolition noise levels reaching the camp would be between 52-57 dB(A), with periodic elevated noise levels during events of between 52-73 dB(A). The recent Noise Assessment (Acoustic Logic 2017) predicts the noise levels without mitigation are likely to be between 48-61 dB(A), based on the most likely equipment that would be utilised for the works. The range is marginally higher than what was previously assessed, and if the use of equipment such as Hydraulic Hammers or Hammering is required, the upper range would increase this further (i.e. potentially 63-72dB(A)). However, it is noted periodic noise levels were expected to reach 73 dB(A) during events.

Based on the data collected by Acoustic Logic (2017), the majority of the noise levels reaching the Grey-headed Flying-fox camp as a result of the Modification works are not likely to be greater than the levels which were assessed in the EIS. However, there is potential for certain equipment or processes to exceed levels predicted in the EIS on a more frequent basis. The EIS assumed levels would reach 73 dB(A) during events held at Parramatta Stadium. Regular use of equipment such as Hydraulic Hammers may be inconsistent with this if the equipment is being used for long-periods during the day. Acoustic Logic (2017) cautioned the data were considered worst case, and outlined a range of activities to manage excess noise.

Recommendations

One or more noise sensors should be installed in the vicinity of the Grey-headed Flying-fox camp and regularly monitored. During demolition and works associated with the Modification, noise levels reaching the camp should not exceed 52-57 dB(A). The mitigation measures outlined in the noise assessment report (Acoustic Logic 2017) should be implemented to ensure noise emissions are limited.

Conclusion

Provided the recommendations are adopted, and appropriate mitigation measures are adhered to, it is considered that the impacts of the Modification would be similar to that expected from the Stage 1 demolition works. Potential impacts of the Stage 1 demolition works have previously been assessed.

Should you require any additional information or if I can be of assistance in any way please contact me on (02) 9518 4489 or email mark@ambs.com.au.

Yours sincerely,

Mark Semeniuk
Director Fauna
AMBS Ecology & Heritage