Planning, Industry & Environment

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Ms Belinda Scott

Planning and Assessment Group
Department of Planning, Industry and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Scott

Subject: EES comments on Environmental Impact Statement for Sydney Gateway Project – SSI-9737 – St Peters interchange to Sydney Airport

Thank you for your email of 19 November 2019 requesting advice on the Environmental Impact Statement (EIS) for this project.

The Environment, Energy and Science Group (EES) has reviewed the EIS and relevant technical working papers and provides its recommendations and comments at Attachment A.

Please note that EES has not provided comments on Aboriginal cultural heritage. EES recommends that the mitigation measures included in Technical Working Paper 10 – Aboriginal Cultural Assessment Report (artefact November 2019) be included as conditions of consent.

If you have any queries regarding this matter, please do not hesitate to contact Janne Grose, Senior Conservation Planning Officer on 02 8837 6017 or at janne.grose@environment.nsw.gov.au.

Yours sincerely

S. Harrison 20/12/19

Susan Harrison

Senior Team Leader Planning
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Attachment A

Subject: EES comments on Environmental Impact Statement for Sydney Gateway Project – SSI-9737 – St Peters interchange to Sydney Airport

The Environment, Energy and Science Group (EES) has reviewed the Environmental Impact Statement (EIS) and relevant technical working papers and provides the following comments.

Flooding

It should be noted that in the next phase (detailed design) the Flood Management Strategy should include all range of management measures, especially for evacuation as the roads are inundated in a 10% AEP flood event.

Biodiversity

Avoid/minimise the clearing of native vegetation

The EIS indicates the project would result in some unavoidable residual impacts including the removal or modification of 0.91 ha of native vegetation and the removal of 0.04 ha of mangrove forest (section 22.6.3, page 22.25). While the native vegetation in the project area is recorded as low condition/poor condition and is generally regrowth (Table 22.2, page 22.5 of EIS), it provides potential foraging habitat for the Grey-headed Flying-fox, Eastern Bent-wing Bat and other threatened fauna species (page 22.19).

The SEARs (2)(1)(j) require a demonstration of how the proposal design has been developed to avoid or minimise likely adverse impacts. The inclusion of mitigation measures BD1 and BD2 for avoiding impacts on biodiversity are noted, that "detailed design will avoid or minimise the need to remove and/or disturb native vegetation and fauna habitat..." and that "vegetation clearing will be limited to the minimum necessary to construct the project..." (Table 27.13, page 27.24). Consistent with the mitigation measures recommended in Table 27.13 of the EIS, EES recommends that disturbance of native vegetation, or planted native species is limited to the minimum extent necessary, and where possible this includes that the development footprint is modified to achieve this.

Microbats

The EIS notes a number of existing buildings and structures need to be fully or partially removed to facilitate construction (section 8.2.3, page 8.9). It lists the fauna habitats within the project area, but it does not list the existing buildings that are to be demolished (see Table 22.3, pages 22.14 - 22.15). The biodiversity development assessment report (BDAR) indicates the fauna surveys included an inspection of the footbridge for guano and dusk observation of the footbridge over Alexandra Canal for emerging microbats (section 3.3.2, pages 24-25 and Table 6.9), but it does not indicate any inspection or other consideration was made of the existing buildings to be demolished as potential habitat for microbat species. The BDAR identifies that the Eastern Bent-wing Bat (*Miniopterus schreibersii oceanensis*) was recorded as foraging during this assessment and that, although it was not recorded during this assessment, the Eastern Freetail Bat (*Mormopterus norfolkensis*) may also forage in these habitats (see sections 6.3.1, 8.5.2 and Tables 6.4 and 6.6). Both of these species, as well as the Large-footed Myotis (*Myotis macropus*), are capable of roosting in built structures, so it is possible that they might utilise the built features, other than the bridge, on this site.

The BDAR/EIS should consider the possible value of such structures as potential habitat for these microbats, and it is recommended the Response to Submissions report (RTS) addresses this issue and that searches to confirm the presence or absence of roosting habitat in any bridges or buildings be undertaken prior to approving the project and/or as part of the pre-clearance procedures recommended as a mitigation measure in the BDAR (section 11.2, page 105).

Any searches for evidence of microbat roosts should be undertaken using appropriate methods, such as those described on page 9 of the 'Species credit' threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method (OEH 2018). Attention should be given to inspecting cracks or seams in the roofs and a handheld bat detector of ultrasonic calls can assist in alerting the searcher to the presence of bats. Searches must be undertaken by someone with appropriate experience, as described on page 5 of that guide. If bats or signs of bats are observed, the bats may need to be captured to identify species and breeding status using traps, nets or other methods. The information provided should include photographs of any holes, cracks or crevices that were searched; any associated observations about bats and/or signs of bats; and any results from a bat call detector.

Mill Stream

The BDAR indicates that the downstream sections of the Botany Wetlands include Mill Stream and that the Botany Wetlands are listed in the Directory of Important Wetlands in Australia and are known to provide occasional habitat for threatened and migratory waders (section 7.6.1, page 78).

The EIS notes both Alexandra Canal and Mill Stream may potentially receive discharge from the project either directly from surface runoff or discharge through the drainage network (section 16.2.4, page 16.12). The RTS needs to clarify if extracted groundwater will be discharged to Mill Stream as this is not clear, for example:

- Section 16.3.3 of the EIS indicates it does not anticipate discharging extracted groundwater to Mill Stream during construction, but it does not definitely rule this out (page 16.18)
- Section 16.6.1 states "a new monitoring station would be required on the lower estuarine reach of Mill Stream if groundwater discharge to that watercourse is proposed" (page 16.25).

While the reach of Mill Stream that will receive discharge from the project area is a concrete lined channel and is classified as 'highly disturbed' (section 3.4.2.2 of SWR, page 27), if discharge of extracted groundwater to Mill Stream is proposed, the RTS should assess the potential impact of this, given that Mill Stream flows to Botany Bay.

Watercourse crossings

The EIS indicates four new bridge are proposed over Alexandra Canal

- Terminal 1 Connection bridge (page 7.14, Figure 7.3)
- Qantas Drive bridge (pages 7.19-7.20, Figure 7.4)
- Terminal link bridge (page 7.23, Figure 7.4)
- Freight Terminal bridge (page 7.28, Figure 7.3).

Comparing Figures 7.3 and 7.4 with Figure 22.2 indicates that the footprint of the Terminal 1 Connection bridge, the Freight Terminal bridge and Qantas Drive bridge would result in the clearing of Swamp Oak Floodplain forest. The RTS needs to clarify why it is not possible to move and/or design these bridges to avoid clearing the Swamp Oak Floodplain forest.

EES recommends the bridge design maintains and improves riparian/terrestrial connectivity along Alexandra Canal and includes the following:

- bridges are elevated and span the full width of the riparian land to avoid or reduce the need to clear and/or disturb native vegetation
- the design maximises light and moisture penetration under the structure to encourage native plant growth.

Urban Tree Canopy

Key issue 4 (place making and urban design) in the SEARs requires the proponent to estimate the number of trees to be cleared by the proposal that will not be covered by a biodiversity offset strategy and for those trees to be cleared for the EIS to describe how the proposal will achieve a net increase in tree canopy within or adjacent to the construction footprint. The EIS estimates that about half of the existing trees or 1300 trees need to be removed during construction (see section

21.3.3, page 21.18 of EIS and page 43 of Urban Design Landscape Character and Visual Impact Assessment (UDLCVIA).

The EIS states the final number of trees impacted would be confirmed during detailed design and final construction planning (page 21.18) but the UDLCVIA indicates the total number of trees removed for the project may increase (page 46). It is unclear how many additional trees may be removed by the project. The proponent should provide the possible maximum total number of trees that could be removed.

The UDLCVIA indicates the trees proposed for removal include 728 native species and 460 non-indigenous native species (page 43). EES recommends that where possible the development footprint is modified to avoid removing existing native trees.

The EIS and UDLCVIA provide differing information on the number of replacement trees and the net loss of trees across the project site, for example:

- the EIS notes the project currently provides for a total of 551 replacement trees representing a net loss of 749 trees across the project site (section 21.3.3, page 21.18)
- the UDLCVIA states the project design currently provides for a total of 416 replacement trees representing a net loss of 884 trees across the whole project site including a net loss of 377 trees on Commonwealth land and 507 trees within the remainder of the construction footprint (page 7). It also indicates the final number of trees installed may vary and might be higher than currently estimated (page 133).

The RTS needs to clarify the number of replacement trees and the net loss of trees.

The EIS states "trees that would be removed by the project would be replaced to ensure there is a net increase in tree canopy" and that a tree management strategy would be prepared to identify how a net increase in tree canopy can be achieved (see Sections 21.3.3 and 21.6.2, pages 21.18 and 21.35). The inclusion of the mitigation measure to prepare a tree management strategy at the detailed design stage defers the SEARs requirement for the EIS to describe how the proposal will achieve a net increase in tree canopy within or adjacent to the construction footprint (table 27.13, Page 27.23). If details are not provided until the detailed design stage, it is recommended a condition of consent is included which requires the tree management strategy to be prepared at the detailed design stage.

It is noted locations outside the project footprint are to be investigated for compensatory plantings and the final locations for replacement trees would be confirmed in consultation with the Inner West Council and the Sydney Airport Corporation (UDLCVIA pages 8 and 132). It is unclear where these planting sites are to be located and whether replacement trees are proposed to be planted along the Alexandra Canal riparian corridor. The RTS needs to provide details on this.

To assist mitigate the urban heat island effect, improve urban tree canopy and local biodiversity the project should

- first avoid removing existing native trees where ever possible. The loss of the existing trees and the many benefits that mature trees provide takes years for a juvenile tree to grow and replace
- replace any removed trees at a ratio greater than 1:1
- replace the removed trees with local native provenance species from the vegetation community that once occurred in this locality rather than plant exotic or non-local natives
- use advanced trees, preferably with a plant container pot size of 100-200 litres, or greater
- provide enough area/space to allow the trees to grow to maturity.

Landscaping

The EIS notes the majority of vegetation in the project site comprises exotic or planted native species with small patches of remnant or regrowth native vegetation (section 22.2.2, page 22.5).

The project provides an opportunity to improve local biodiversity by using local provenance plant species in the landscape areas.

The EIS indicates landscaping would consist of a range of elements and vegetation and would be confirmed during detailed design. It notes the landscaping would be provided in two main areas:

- open space areas at Tempe Lands and the former Tempe landfill, including the emplacement mounds
- roadside landscaping (see Section 7.10.4, page 7.31).

Landscaping/revegetation should also be undertaken is along the Alexandria Canal riparian corridor to mitigate the impacts of the project on riparian land.

The UDLCVIA indicates the planting approach for the project is based generally on endemic species, over laid with cultural plantings and it also includes a broader range of native vegetation and select exotic species (page 131). As a design principle for this SSI is to increase appropriate biodiversity through revegetation and habitat creation in accordance with airport operational and safety constraints (page 88 of UDLCVIA), EES recommends:

- the open space areas at Tempe Lands and the former Tempe landfill (including the mounds), the roadside areas, and riparian corridor etc are planted with a diversity of appropriate local native provenance species (grasses, trees, shrubs and groundcover) from the relevant local native vegetation community or communities that once occurred in this locality (rather than plant exotic or non-local natives)

- the proponent commences sourcing local native provenance plant species particularly trees and/or growing local provenance trees as soon as possible, so the trees to be planted are advanced in size to assist improve the urban tree canopy and local biodiversity

- the project includes an additional mitigation measure to salvage and use the native trees that are required to be removed including tree trunks (greater than approximately 25-30cm in diameter and 3m in length) and these are placed along the riparian corridor and in the open space areas to enhance habitat, particularly as the BDAR states the project site contains very little fallen timber and dead trees (Table 8.4, page 93 of BDAR).

The BDAR includes a mitigation measure to develop weed management actions to manage weeds during construction (page 105). A mitigation measure should also be included for post construction for ongoing weed management and maintenance (watering etc) of the landscape areas to ensure the recently planted native plants survive.

Riparian Corridor

The EIS indicates the main habitat corridor within the project site is associated with Alexandra Canal and there is a vegetated link between the canal and Tempe Wetlands (Table 22.1, page 22.4). To improve the corridor link, it is recommended the area of riparian land along the canal that is impacted by the project is rehabilitated with fully structured native vegetation that emulates the relevant local native vegetation community (or communities) that once occurred in this locality, particularly as the EIS states that key areas of ecological importance include Alexandra Canal and its riparian and shore bank zone (page 28.7)

It is recommended a Vegetated Management Plan (VMP) which includes scaled plans is prepared and implemented as part of this project and the VMP includes details on:

- the riparian corridor width proposed to be established along the canal
- the footprint of the proposed development
- the area of riparian land/riparian vegetation that is proposed to be temporarily disturbed or permanently removed by the project

- the area of riparian land that is proposed to be revegetated with fully structured native vegetation
- the local native vegetation community that once occurred in this location
- a list of local provenance plant species from the local native vegetation community that are proposed to be planted in the riparian corridor along the canal.

Recommended Conditions

If the SSI is approved EES recommends the following are included as conditions of consent:

1) a Vegetation Management Plan shall be prepared to protect and restore riparian land that is impacted by the SSI along Alexandra Canal. The plan should include:
    - a scaled plan which locates the canal; existing native vegetation along the canal; the riparian corridor width proposed along the canal; the development footprint
    - details on the local native provenance plant species (grasses, trees, shrubs and groundcovers) to be planted
    - details on the location and number of trees and other plants that are proposed to be planted
    - specify that plants are to be propagated from locally sourced seeds to ensure genetic integrity.

2) Trees removed by the SSI shall be replaced at a ratio greater than 1:1 and that a tree management strategy shall be prepared at the detailed design stage to identify how a net increase in tree canopy for this SSI can be achieved.

3) The Landscape Plan shall include details on:
    - the native vegetation community (or communities) that once occurred in the locality
    - a list of local provenance tree, shrub and groundcovers to be used in the landscaping
    - the quantity and location of plantings
    - the pot size of the local native trees to be planted
    - the area/space required to allow the planted trees to grow to maturity.

4) Native trees to be removed are salvaged and used in the riparian corridor to enhance habitat including tree hollows and tree trunks (greater than approximately 25-30cm in diameter and 3m in length).

5) The landscaping shall use advanced and established trees preferably with a plant container pot size of 100 -200 litres, or greater to increase urban tree canopy cover.

End of Submission