



Our ref: DOC20/408216

Your ref: SSD-10388

Ms Megan Fu
Planning and Assessment Group
Department of Planning, Industry & Environment
Level 17, 4 Parramatta Square
12 Darcy Street
PARRAMATTA NSW 2150

Dear Ms Fu

Subject: EES comments on Environmental Impact Statement for Liverpool Hospital Multi-storey car park Project – SSD-10388

Thank you for your email of 25 May 2020 requesting comments on the Environmental Impact Statement (IS) for this State Significant Development.

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

Please note that EES has not provided comments on Aboriginal cultural heritage matters. This does not represent EES support for the development and this matter may still need to be considered by the consent authority.

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

A handwritten signature in black ink that reads 'S. Harrison'.

22/06/20

Susan Harrison

**Senior Team Leader Planning
Greater Sydney Branch
Environment, Energy and Science**

Attachment A

Subject: EES comments on Environmental Impact Statement for Liverpool Hospital Multi-storey car park– SSI-10388

The Environment, Energy and Science Group (EES) has reviewed the following documents:

- Environmental Impact Statement (EIS)
- Biodiversity Development Assessment Report (BDAR)
- Flooding and Stormwater SSDA Report – 3 Mar 2020
- Landscape Design Report (LDR)
- Landscape plans

and provides the following comments.

Conservation of biological diversity

The EIS and BDAR include differing information in relation to vegetation that is proposed to be removed as part of this proposal, for example:

- The BDAR states “The subject land contains vegetation in the form of established native and exotic gardens, and mowed lawn areas. Such areas of vegetation within the Subject Land have been previously assessed for removal in the Review of Environmental Factors prepared by Ethos Urban for the Civil Infrastructure Works at Liverpool Hospital” (section 1.3, page 8).
- The BDAR states “no vegetation is to be removed under this proposal” (Table 6, page 33).
- The BDAR states “All native vegetation within the Subject Land has been approved for removal under the Review of Environmental Factors prepared by Ethos Urban for the Civil Infrastructure Works at Liverpool Hospital (NSW Health Infrastructure 2019)” (section 6.1.1, page 35).
- The EIS notes existing vegetation primarily comprises scattered native and exotic trees, and low-lying gardens and lawn areas. It is noted that vegetation removal has occurred as part of separate Infrastructure works occurring across the Hospital (section 3.3.3, page 26).
- The EIS notes the proposal does not require the removal of any trees (section 4.10, page 37).
- The EIS states “the proposed development is expected to result in the removal of 0.26ha of planted native vegetation” (section 6.21, page 71).

The RTS needs to clarify if this SSD will result in the removal of 0.26ha of planted native vegetation.

The EIS indicates various mitigation measures are proposed to minimise any potential impacts of the SSD on local biodiversity values, including assigning a Project Ecologist during the clearing of any vegetation (page 71). The Mitigation Measures in Table 16 of the EIS, however do not include any biodiversity related mitigation measures (pages 76-77). If vegetation is to be cleared as part of this SSD, it is recommended:

- details are provided on the proposed mitigation measures that are referred to in the EIS on page 71 to minimise any potential impacts on local biodiversity values and Table 16 in the EIS is amended
- the proposed mitigation measure to assign a Project Ecologist during the clearing of any vegetation is included as condition of consent and it requires
 - a pre-clearance survey to be undertaken by a suitably qualified ecologist for native fauna immediately prior to any clearing of vegetation commencing
 - any resident native fauna found during the pre-clearance survey should be appropriately captured by a licensed wildlife carer prior to any clearing commencing and relocated in a

sensitive manner to appropriate habitat locations under the supervision of a qualified ecologist/licensed wildlife handler.

Site Landscaping

The SEARS for this SSD (dated 27 November 2019) state the EIS must include all relevant plans and architectural drawings, including landscape architectural drawings which include:

- details on the native vegetation community (or communities) and native plant species that once occurred in this location
- specification that any landscaping will use a diversity of local native species (trees, shrubs and groundcovers) from the native vegetation community or communities that once occurred in this location to improve biodiversity.

The LDR notes it can be assumed that the Cumberland Shale Plains Woodland (CSPW) likely extended across the site (page 13 of LDR).

EES notes the SSD application includes landscape works. The Indicative Planting Palette in the LDR states the planting palette incorporates native plant species from the CSPW and other Australian native species (page 15). To be consistent with the SEARs for this SSD, EES recommends:

- the landscaping of the site uses a diversity of appropriate local native species (grasses, trees, shrubs and groundcover) that have been propagated from locally sourced seeds from the relevant native vegetation community that once occurred in this locality (rather than plant non-local natives or exotic species) to ensure genetic integrity and the LDR/Planting Palette is amended to demonstrate this
- 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
- a mitigation measure is included for post construction for ongoing maintenance (e.g. watering) of the landscape areas to ensure the recently planted native plants survive.

The LDR indicates artificial synthetic turf is proposed to be used on site where shading is an issue with the car park (page 9). It is recommended the RTS considers whether there are any other more natural alternatives rather than use synthetic turf. The Planning and Assessment Group (PAG) should consider potential issues associated with using synthetic turf as opposed to using natural non-invasive grass including:

- natural grass provides a cooler surface than artificial turf surfaces which get much hotter and absorb radiant heat (sunlight) and potentially add to the urban heat island effect by radiating the heat back into the air
- natural grass surfaces (as opposed to synthetic grass) provide some habitat value for certain native fauna.

Tree Protection

The LDR notes there are several trees that will be retained and protected during construction including two *Gleditsia triacanthos* (page 14). The PAG's attention is drawn to the NSW Department of Primary Industries website (DPI NSW Weedwise) which indicates *Gleditsia triacanthos* is an invasive exotic tree species which spreads rapidly from seed. It is capable of out-competing and replacing native vegetation and it can form dense thickets particularly along waterways as it spreads by the seed being washed downstream and the sharp thorns can also injure wildlife - see DPI Weedwise link: <https://weeds.dpi.nsw.gov.au/Weeds/HoneyLocust>

The Greater Sydney Regional Strategic Weed Management Plan 2017 – 2022 published by Greater Sydney Local Land Services and developed in partnership with the Greater Sydney Regional Weed Committee lists *Gleditsia triacanthos* under Appendix 2 (other weeds of regional concern) and it notes that one of the assets/values at risk with this species is the environment.

The potential for seed from these trees to spread from the site is a concern, particularly as the George River is located approximately 200m from the subject land (section 6.3.3 of BDAR), and the BDAR indicates remnant Cumberland Riverflat Forest occurs along the River (see pages 19 - 21).

The proponent needs to clarify if seed from *Gleditsia triacanthos* could potentially spread to the Georges River via the stormwater system. If this is likely, it has the potential to degrade remnant native vegetation along the River and EES recommends:

- *Gleditsia triacanthos* is removed from the site - unless it can be demonstrated that these trees are a non-invasive variety and are not capable of producing large thorns or seed pods which if they germinate have the potential to revert to the 'normal' parent physiology and be invasive.
- any resident fauna potentially impacted by the removal of these trees should be relocated in a sensitive manner under the supervision of a qualified ecologist/licensed wildlife handler
- the landscape documentation is amended to remove the invasive trees from the site and not retain them
- *Gleditsia triacanthos* is replaced with local native provenance tree species.

Urban heat island effect

The EIS indicates no trees are proposed to be removed as part of this SSD, as the trees impacted by the construction of the new multi-storey car park (MSCP) have already been removed as part of separate infrastructure works occurring across the hospital site and that following these works, the MSCP site will not contain any trees (see sections 2.2.2 and 3.3.3). EES notes that where practical trees will be replaced in new locations on the site, which includes nine trees to be planted within the MSCP courtyard (page 14 of LDR). The EIS states the proposal will include the planting of 25 new trees (section 4.10). It is unclear how many trees were previously removed from the MSCP site as part of the separate Infrastructure works. It is recommended details are provided on this to ensure a net increase in the number of trees is achieved on site.

EES recommends that to assist mitigate the urban heat island effect, improve the urban tree canopy and local biodiversity the SSD should:

- replace any removed trees at a ratio greater than 1:1 and details are provided on this in the RTS
- replace the removed trees with local native species from the vegetation community that once occurred in this locality rather than plant exotic species or non-local natives
- use advanced trees, preferably with a minimum plant container pot size of 75 litres, or greater to increase urban tree canopy cover
- the Indicative Planting Palette in the LDR is amended to include details on:
 - the use of local tree species from the CSPW (rather than non-local native species)
 - the pot size of trees to be planted
 - the area/space required to allow the planted trees to grow to maturity.

Flood

The development site is outside the 1% AEP flood limit (i.e. low flood risk area), but within the PMF extent which covers most of the site except the western portion. The drainage improvement works proposed in the western portion of the site (i.e. along Goulburn and Campbell Streets) is expected to alleviate the overland flooding impacts along the road reserve for events larger than 1% AEP. The flooding due to climate change scenarios (represented by 0.5% AEP and 0.2% AEP as proxies to rainfall increase) is expected to be insignificant or nil.

The Flooding and Stormwater report confirms that the land use of the development site falls under the critical uses and facilities and the development should be considered under the concessional category provided the proposed development will reduce the flood risk to properties and people of the site. The report also confirms that the site will be redeveloped based on the requirements for concessional development categories including the evacuation requirements based on an effective warning time. The report indicates that factors relevant to the concessional development categories will be considered by the proponent (which includes evacuation requirements, car parking and driveways, flooding impacts, floor levels, building components, structural soundness, management and design, and fencing), if the SSD is approved.

EES notes from the Flooding and Stormwater report (page 10, evacuation) that the critical duration of 48 hours for mainstream flooding has been considered as the time available for evacuation. The report indicates that, the time available for evacuation is to be based on flood warning from the emergency management agencies which is less than the critical duration for mainstream flooding in the Georges River Catchment. The current lead time for evacuation in the Georges River Catchment is approximately 9 hours which is based on the triggering water levels from nominated water level monitors.

EES also notes from the Flooding and Stormwater report (page 10, evacuation) that the shelter-in-place options using the upper levels of the MSCP have been proposed as an alternative to evacuation from the site. The inundation duration is expected to be in the order of 48-72 hours or longer under the PMF event when the essential services are likely to be interrupted. The shelter-in-place options are likely to pose considerable risks to stranded people in the MSCP. The proponent will need to develop an evacuation plan in consultation with the NSW State Emergency Service (SES) and Liverpool City Council by considering the potential scenarios of the occupancy of the MSCP, lead time for evacuation, and the capacity and capability of the adjacent road networks.

End of Submission