



Our ref: DOC19/950259
Senders ref: SSD-8699

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

Dear Ms Fu

Subject: EES comments on Response to Submissions for redevelopment of Greenwich Hospital (concept) – SSD-8699 – 97-115 River Road, Greenwich

Thank you for your email of 22 October 2019 requesting advice on the Response for Submissions (RTS) for this State significant development (SSD).

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

Please note that EES has decided not to provide comments on Aboriginal cultural heritage matters at this time. This does not represent EES support for the proposal 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' followed by the date '21/11/19'.

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

Subject: EES comments on the Response to Submissions for redevelopment of Greenwich Hospital (concept) – SSD-8699 – 97-115 River Road, Greenwich

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

- Response to Submissions (RTS) – 18 September 2019
- Appendix A – Architectural drawings
- Appendix F – revised Arboricultural Impact Assessment (AIA) - 5 August 2019
- Appendix G - Bushfire response– 13 September 2019
- Appendix L - Landscape Concept proposal – 13 September 2019
- Appendix M - Biodiversity Development Assessment Report (BDAR) – 23 September 2019
- Appendix N - Revised Architectural Design Statement – September 2019
- Appendix Q – Overland Flow Assessment – 14 May 2019

and provides the following comments.

Biodiversity

EES has assessed the revised BDAR and considers the BDAR to be adequate and that all the biodiversity related comments in the previous OEH submission have been adequately addressed.

Landscaping

The previous AIA indicated 131 trees were nominated for removal. The OEH submission on the Environmental Impact Statement (EIS) encouraged Greenwich Hospital to increase the urban tree canopy cover. In response, the RTS indicates amendments to the proposed development include increased tree retention and planting of additional vegetation to achieve a net increase in tree canopy cover (page 7). It is noted the revised AIA recommends removal of 86 trees and the RTS states an additional 48 trees are being retained and protected and that at least 60 new trees will be planted resulting in a net increase of at least 5 trees at ground level (pages 5 and 14).

EES notes the AIA proposes to retain invasive exotic trees at the site including:

- 6 x Camphor Laurel (*Cinnamomum camphora*) – (see Table 1, tree numbers 1, 60, 61, 67, 68, 252)
- 2 x Chinese Tallowwood (*Triadica sebifera*) - (see Table 1, tree numbers 158, 201).

It is unclear why the AIA proposes to retain some invasive tree species and it also proposes to remove the same species, for example, six Camphor Laurels are proposed to be removed (see Table 1, tree numbers 8, 32, 146, 191, 192, 248 in AIA) and six are proposed to be retained.

Prior to approving the AIA, Architectural drawings (Appendix A) and Landscape Concept Proposal for the site, it is suggested the Department considers information that is available relating to the exotic trees which are proposed to be retained. For example, the NSW Department of Primary Industries website (DPI NSW Weedwise) indicates:

- Camphor Laurel is a highly invasive exotic species. It has prolific seed production, birds and other fauna readily eat the fruit and disperse the seeds and it has a tendency to form single species communities and exclude most other tree species, including native vegetation - see DPI Weedwise link: <https://weeds.dpi.nsw.gov.au/Weeds/CamphorLaurel>
- Chinese Tallowood or Chinese tallow tree (*Triadica sebifera*) is fast becoming an invasive environmental weed of watercourses and native vegetation areas. Each tree produces thousands of seeds that can remain dormant for many years. It is also able to alter the chemical composition of the soil, enhancing conditions for further seed germination and rapid plant growth. This allows it to replace native species in a relatively short period of time – see DPI Weedwise link : <https://weeds.dpi.nsw.gov.au/Weeds/ChineseTallowTree>

The AIA also proposes to retain other exotic trees such as Hackberry (*Celtis*) (see table 1, tree numbers 112, 147B) and Hawthorn (*Rhaphiolepis* sp.) (see table 1, tree number 239).

The proponent needs to clarify if Hackberry (*Celtis*.) is *Celtis sinensis* and if Hawthorn (*Rhaphiolepis* sp.) is Indian Hawthorn (*Rhaphiolepis Indica*) as the BDAR records *Celtis sinensis* and Indian Hawthorn as occurring by plot (see Table 30, Appendix B, pages 64 and 66).

The DPI NSW Weedwise link indicates:

- *Celtis sinensis* is a large, invasive tree that has become an environmental weed, and that it rapidly colonises disturbed bushland, forms dense thickets, replaces native shrubs and trees and dominates riparian vegetation. *Celtis sinensis* has been recognised and listed as a serious environmental weed by bush regeneration groups – see DPI Weedwise link : <https://weeds.dpi.nsw.gov.au/Weeds/ChineseCeltis>
- Indian hawthorn is regarded as an environmental weed in NSW and it is mainly a problem in remnant bushland in the Sydney region. The fruit of this plant is highly desirable to birds and can be easily dispersed into the environment and can also be spread by water – see DPI Weedwise link : <https://weeds.dpi.nsw.gov.au/Weeds/IndianHawthorn>

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 Camphor Laurel, Chinese tallow, *Celtis sinensis* and *Rhaphiolepis Indica* as weeds of regional concern.

The spread of seed from these invasive trees from the site is a concern, particularly as the site adjoins Gore Hill Reserve to the south west, which contains a densely vegetated area of bushland and includes the riparian corridor of Gore Creek. It is recommended:

- invasive exotic species are removed from the site and replaced by local native provenance species and a condition of consent is included to this effect. As recommended in Table 21 of the BDAR, any resident fauna should be relocated in a sensitive manner under the supervision of a qualified ecologist/licensed wildlife handler
- the proponent provides the Department with a revised total number of trees that are proposed to be removed from the site and clarifies if the proposed planting on the site still exceeds tree removal.

OEH recommended the landscaping at the site uses a diversity of native trees, shrubs and groundcover species from the relevant local native vegetation communities (local provenance material) that occur or once occurred in this location to improve biodiversity rather than use exotic species and non-local native species. The RTS indicates the proposed landscape character feature indigenous native mature planting to the boundary zones (section 2.6.2, page 22) and it is noted the BDAR includes a mitigation measure that landscaping in the development site is to use locality derived native species and those found within the Plant Community Type (PCT) present (page 45).

Where cultural planting is not required at the site for heritage reasons, it is recommended a condition of consent is included which requires local native provenance species to be planted from the relevant PCTs which occur or once occurred on the site.

Asset Protection Zone

The RTS clarifies that there is no requirement for almost the entire site to be maintained as an Inner Protection Area (IPA) and that the RFS has excluded the rainforest vegetation in the southwest corner of the site which adjoins Gore Hill Reserve from the requirement to be maintained as an IPA.

Recommended conditions of consent

EES recommends that if the SSD is approved the following conditions are included:

1. All mitigation measures listed in Table 21 of the BDAR must be implemented.
2. Invasive exotic species are to be removed from the site and replaced by local native provenance species.
3. Trees removed by the development shall be replaced by a diversity of local native provenance species at a ratio greater than 1:1.
4. Enough area/space is provided on site to allow the trees to grow to maturity.
5. Tree planting at the site shall use advanced and established local native provenance trees with a minimum plant container pot size of 75-100 litres, or greater for local native tree species which are commercially available. Other local native tree species which are not commercially available may be sourced as juvenile sized trees or pre-grown from provenance seed.
6. Where cultural planting is not required on the site for heritage reasons, the landscaping at the site shall use a diversity of local native provenance trees, shrubs and groundcover species (rather than exotic species or non-local native species) from the relevant Plant Community Types which occur or once occurred on the site.
7. The Landscape Plan shall include details on:
 - a) the Plant Community Types that occur or once occurred on the site
 - b) a list of local provenance tree, shrub and groundcovers to be used in the landscaping
 - c) the quantity and location of plantings
 - d) the pot size of the local native trees to be planted
 - e) the area/space required to allow the planted trees to grow to maturity
 - f) Plant maintenance. The planted vegetation should be regularly maintained and watered for 12 months following planting. Should any plant loss occur during the maintenance period the plants should be replaced by the same plant species.
8. Habitat features such as nest boxes shall be installed at the site to improve biodiversity.
9. Tree trunks (greater than approximately 25-30cm in diameter and 3 m in length) from native trees to be removed shall where possible be salvaged and used in the landscaped areas on the site.

End of Submission