Our ref: DOC21/781602
Senders ref: SSD-11070211

Ms Lauren Saunders
Planning and Assessment Group
Department of Planning, Industry and Environment
4 Parramatta Square, 12 Darcy Street
PARRAMATTA NSW 2150

Dear Ms Saunders

Subject: EES comments on Environmental Impact Statement for New Public School in Mulgoa Rise – 1-23 Forestwood Drive, Glenmore Park – SSD-110702211

Thank you for your email of 1 September 2021 requesting advice on the Environmental Impact Statement (EIS) 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.

EES requests that it not be assigned a role in the conditions of consent unless it has been agreed to by EES.

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

01/10/21

Susan Harrison

Senior Team Leader Planning
Greater Sydney Branch
Biodiversity and Conservation

Attachment A

Subject: EES comments on Environmental Impact Statement for New Public School in Mulgoa Rise – 1-23 Forestwood Drive, Glenmore Park – SSD-110702211

The Environment, Energy and Science Group (EES) has reviewed the following reports for this SSD:

- Environmental Impact Statement – 23 August 2021
- Appendix E – Arboricultural Impact Assessment Report (AIAR) – 18 Aug 2021
- Appendix G – Landscape Design Report - 24 August 2021

and provides the following comments.

Site Landscaping /Habitat Improvement

Use of local native provenance species

The Landscape Design Report notes the proposed design aims to encourage a reinstated native landscape environment to provide habitat for native flora and fauna. Along the streets, adjacent to the site, native trees (medium to large sized) and shrubs are proposed. EES recommends the site and street planting uses a diversity of local provenance native species from the relevant native vegetation community (or communities) that once occurred on the site/locality, rather than use exotic species or non-local native species.

This is included as a recommended condition of consent (see below), particularly as the site is located near the Mulgoa Nature Reserve and Surveyors Creek Nature Reserve, both of which are mapped as containing biodiversity values (section 2.5, page 30, EIS). The EIS notes Mulgoa Nature Reserve contains good quality Cumberland Plain Woodland, which is listed as a critically endangered ecological community under the *Biodiversity Conservation Act 2016* (BC Act), while Surveyor's Creek Reserve contains River Flat Eucalypt Forest, which is an endangered ecological community (Section 7.10.2).

The EIS also notes endemic species will be used to contribute to healing the country and restoring the Cumberland Plain Landscape (Table 2, page 52). There is educational value and numerous benefits in using a diversity of local native plants at the school site including:

- preservation of the biodiversity values of the local area
- provision of the most suitable food and habitat for local native fauna including nectar for pollinators (moths, butterflies, bees etc) which provide a food source for local native birds
- a steppingstone for more mobile native fauna to move across the landscape and
- once established local provenance vegetation would require less maintenance/watering than exotic plants. The use of local native vegetation also has added benefits in reducing the need for fertiliser application which reduces fertiliser laden runoff entering the local waterways and will assist to improve instream health, water quality, reduce algal blooms etc

The Response to Submissions and Landscape Design Report should identify the native vegetation community that once occurred on the site or in the locality. The Landscape Design Report should provide a list of local native species from the relevant vegetation community to be planted and demonstrate that the plant species to be used are of local provenance. EES recommends the Planting Palette and Planting Schedule in the Landscape Design Drawings are amended to use local native provenance species and identifies which species are local native provenance species and any non-local native or exotic species.

The EIS indicates that the road reserve surrounding the proposed development footprint currently consists of two different species of newly planted exotic street trees (Chinese Elm and Manchurian Pear) (sections 7.2.2 and 7.2.3 of EIS). Chinese Elm (*Ulmus parvifolia)* is listed as a weed in Appendix 2 of the Greater Sydney Local Land Services (2017) Greater Sydney Regional Strategic Weed Management Plan 2017-2022 as it poses a potential risk to the environment. If there is any potential for this species to spread from the road reserve to nearby Mulgoa Nature Reserve or

Surveyors Creek, it is recommended this species is removed and replaced by a mix of local native tree species.

The Landscape Site Plan appears to show no tree planting is proposed within the staff carpark. The EIS notes for the carpark that vegetation utilised comprises low shrubs and high canopy planting (Table 9). EES recommends the carpark also incorporates planting of local native trees and groundcover species (Figure 14 in EIS).

Installation of Habitat Features

In addition to planting local native species to enhance habitat at the site, it is recommended the school installs habitat features such as logs, a range of artificial nest boxes which are suitable for native fauna likely to utilise the site such as mobile birds and bats and bee hotels. It is suggested the nest boxes are monitored on an ongoing basis to determine if they are being used by native fauna. The installation of habitat features such as the nest boxes and the monitoring of them provides a great educational opportunity for the primary school.

Urban Heat Island Effect

EES recommends new developments incorporate green roofs and/or a cool roof and green walls into the design. The benefits of Green Roofs, Cool Roofs and Green Walls are outlined in the OEH (2015) Urban Green Cover in NSW Technical Guidelines which can be found at the following link:

http://climatechange.environment.nsw.gov.au//Adapting-to-climate-change/Green-Cover

The EIS and the Landscape Design Report indicates the design will include a light-coloured roof. EES supports the school using light coloured roofing to reduce the building's absorption of solar radiation and increase re-radiation of urban heat and minimise the urban heat island effect and recommends that a condition of consent is included to this effect:

Flooding

EES comments on the Flood assessment are generally confined to the methodology used for the assessment as discussed in the Mulgoa Rise Public School Overland Flow Flood Study (grc, April 2021) in Appendix A of the Flood Impact Assessment.

The flood assessment prepared by grc Hydro has addressed overland flow flooding at the site for existing and developed conditions. The assessment is considered reasonable subject to the points of clarification indicated below:

(1) Review of flood level contours provided in Figures 06 and 09 as the contours' levels are not consistent with the flood depths shown in the maps and not consistent with the discussion in the report.

- Figure 06 shows flood level contours at the 90s in the PMF existing condition which is approximately 30m above the site ground level while the flood depth is shown up to 0.3m.
- Similarly, Figure 09 shows flood level contours at the 80s in the 1% AEP developed condition which is approximately 20m above the site ground level while the flood depth is shown up to 0.1m.

(2) Figure 08 shows some of the access roads to the school are subject to H3 and H4 hazard categories in the PMF event. It is preferred that safety measures are set in place to ensure the safety of the school community accessing the school in extreme flood events.

Recommended Conditions

EES recommends the following conditions of consent are included:

- ***Any planting/ landscaping on the site or street associated with the SSD shall use a diversity of local provenance native trees, shrubs and groundcover species (rather than exotic species or non-local native species) from the relevant native vegetation community that once occurred in this locality.***

- ***Tree planting shall use advanced and established local native trees with a minimum plant container pot size of 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.***

- ***A Landscape Plan is to be prepared and implemented by an appropriately qualified bush regenerator and include details on:***
  a. ***the type, species, size, quantity and location of trees***
  b. ***the species, quantity and location of shrubs and groundcover plantings***
  c. ***a list of local provenance species to be used***
  d. ***the quantity and location of plantings***
  e. ***the pot size of the trees to be planted***
  f. ***the area/space required to allow the planted trees to grow to maturity***
  g. ***plant maintenance regime. The planted vegetation must 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.***

- ***Habitat features shall be installed at the site to improve biodiversity such as logs, bee hotels and a range of artificial nest boxes suitable for native fauna likely to use the site***

- ***The development shall incorporate cool roofs into the design.***

End of Submission