NSW GOVERNMENT | Office of Environment & Heritage

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SSD-9274

Mr Andrew Beattie
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Mr Jason Maslen

Dear Mr ~~Beattie~~ Andrew

Samuel Gilbert Public School redevelopment – Corner Ridgecrop Drive and Gilbert Road Castle Hill (SSD 9274) – Environmental Impact Statement

Thank you for your letter of 19 November 2018 received by the Office of Environment and Heritage (OEH) requesting comments on the Environmental Impact Statement (EIS) for the above State Significant Development.

OEH has reviewed the relevant documents and provides recommendations and comment in Attachment A.

If you have any queries regarding this matter, please contact Janne Grose on 8837 6017 or janne.grose@environment.nsw.gov.au

Yours sincerely

S. Harrison 18/12/18

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Attachment A

Samuel Gilbert Public School redevelopment – Corner Ridgecrop Drive and Gilbert Road Castle Hill (SSD 9274) – Environmental Impact Statement

Office of Environment and Heritage (OEH) has reviewed the following documents:

- Environmental Impact Statement (EIS) – 14 November 2018
- Biodiversity Development Assessment Report (BDAR) - November 2018
- Arboricultural Impact Assessment (AIA) – November 2018
- Landscape DA documentation – 12 November 2018
- Bushfire Protection Assessment (BPA) – 8 October 2018
- Aboriginal Cultural Heritage Assessment (ACHA) – October 2018
- Flood Statement – 13 September 2018

and provides the following comments.

Aboriginal Cultural Heritage

If the project is approved, OEH suggests Recommendations (2) (3) and (4) from the ACHA are included as conditions of consent.

Conditions of consent should also include the need for protocols if an Aboriginal object (or suspected object) is discovered during construction and also for on-site employees and/or contractors to be made aware of the statutory obligations that apply to the discovery of Aboriginal objects (see recommended conditions of consent below).

Biodiversity

Native Vegetation

OEH notes the native vegetation extent on site has been ground-truthed (see section 3.1.1 of BDAR, page 23) and Figure 1.3 in the BDAR shows 'verified native vegetation' on the site. Comparing Figure 1.3 with Figure 1.2b (site plan showing the location of the proposed works), there appears to be additional native vegetation in the area where buildings N and P are proposed that has not been mapped which will be affected by the development (see pages 8 and 9). The proponent needs to clarify if native vegetation that has not been mapped as 'verified native vegetation' occurs in this area.

The BDAR indicates that areas such as this that aren't mapped as vegetation are 'cleared or managed lands which contain limited local native species due to previous clearance(s) and ongoing management'. OEH is aware that these areas may be managed as an asset protection zone (APZ), but managed areas will still contain some biodiversity values which would be lost through clearing. If these areas do contain native vegetation, OEH considers the level of impact may be underestimated.

Also, the Executive Summary states that areas of clearing have been calculated for the buildings only and do not include areas that will need to be managed as APZs. It is unclear why APZs have not been included. This also suggests the area considered for impact assessment is an underestimate.

Avoid and minimise impact on biodiversity values

Some dot points have been provided in Section 5.2 of the BDAR on how the project has avoided or minimised impacts, but these are brief. These dot points include how the location of the project has avoided impacts, but there is no detail on this. More detail should be provided, with reference to section 8.1.1 of the BAM. Also, there is no information on how the project has been designed to avoid impacts (section 8.1.2 of the BAM).

Other comments on the BDAR include:

- There is some consideration of indirect impacts provided in section 5.1, but more detail should have been provided, with reference to 9.1.4.1-9.1.4.3 of the BAM
- There is no mention of prescribed impacts. Although there may be none, the BDAR should at least include a statement that this is the case

- More detail should be provided on the measures to mitigate and manage impacts, with reference to sections 9.3.2 and 9.3.3 of the BAM
- Recommendations related to the displacement of resident fauna should be made with reference to recommendations in section 9.3.2.2 of the BAM
- No adaptive management strategy provided, as per section 9.4 of the BAM
- Some recommended mitigation measures are provided in Section 5.4 but there are no details on outcomes, timing or responsibility
- No sensitivity class and no biodiversity risk weighting information has been provided.

Sydney Turpentine Ironbark Forest (STIF)
The BDAR notes the impact on STIF is estimated at 0.01ha (see Figure 3.1 and section 4.3.1, page 41) and that the impacts are not considered to be serious or irreversible as the loss of STIF vegetation will be mitigated through native landscaping and replaced at a minimum 2:1 ratio (see section 4.1.1, page 40). The proponent needs to provide details on the proposed location of the area(s) to be revegetated with STIF. The area(s) should be contiguous with the existing STIF.

The BPA notes the school site is managed as an Inner APZ except for the two remnant areas of STIF and this will continue in the future (see Figure 9 and section 4.7, page 20). The proponent needs to clarify if the revegetated area(s) of STIF will be managed as an Inner APZ, as the BDAR recommends revegetating native understorey commensurate with STIF to achieve a maximum of 15% cover for APZ compliance (Section 5.4, page 58). If the revegetated STIF is proposed to be managed as an APZ, the proposed removal of STIF will not be adequately mitigated. If the development is approved OEH recommends the following Condition of Consent is included:

- the existing areas of STIF and revegetated areas of STIF must not be managed as an APZ.

OEH agrees with the BDAR recommendation that the existing area of STIF needs to be delineated on the ground to ensure it is protected from construction impacts and ongoing APZ management (see Section 5.4, page 57). The replanted STIF should also be delineated.

Tree removal
The AIA notes that the definitive number of trees requiring removal is difficult to determine at this stage (section 5, page 9). It also indicates 77 trees within Building Envelope (including 3 metres beyond the platform) are proposed for removal (page 10) while Appendix E2 indicates 87 trees are to be removed. The proponent needs to clarify the number of trees likely to be removed by the project.

The Tree Location Plan in Appendix 1 of the AIA is blurred and difficult to read. It is recommended this plan is replaced by a legible plan.

Fire Mitigation Management
The AIA indicates regeneration of the understorey and mid-storey layers is being adversely impacted by bushfire mitigation measures and this is likely to lead to gradual tree decline (page 20). The AIA highlights the importance of understory trees to the overall health of the larger trees.

The AIA found several large trees had been removed and that many trees have been removed since the initial arboricultural assessment (Appendix B3, pages 37 and 38). OEH agrees with the AIA that:

- there is a need to meet fire mitigation measures while limiting the loss of beneficial trees and understorey
- decisions regarding which trees are removed requires greater consideration and discussion between specialists (see Appendix B3, page 37)
- tree tagging is undertaken as part of this SSD project for tree location, data collection and referencing.

Site Landscaping
OEH in its submission on the SEARs recommended the site landscaping use a diversity of native trees, shrubs and groundcover species from the relevant native vegetation community. The Indicative Plant Palette indicates trees to be planted at the site include exotic species such as:

- Chinese Weeping Elm (*Ulmus parvifolia*) which is native to southern China.

- *Fraxinus* 'Raywoodii' which is a deciduous tree.
- Acer 'Autumn Blaze which is a deciduous tree

and Australian natives which are not local native species such as:

- Weeping Lilly Pilly (*Waterhousea floribunda)* which is a rainforest tree of eastern Australia and grows along streams from near Dungog in NSW to Mackay in central eastern Queensland.

The Department should note *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 biodiversity. It is recommended *Ulmus parvifolia* is removed from the Indicative Plant Palette if there is potential for this species to spread both on and off the site.

The OEH recommendation to use local native plant species is consistent with the BDAR and EIS for this SSD. It is recommended the Indicative Plant Palette is amended to be consistent with the BDAR and EIS and it uses a diversity of local native provenance trees, shrubs and groundcovers from the relevant local native vegetation community (or communities) rather than exotic species and non-local native species, particularly as:

- the BDAR includes the following recommendation: "landscaping within the property is to use locally occurring (endemic) native species commensurate with STIF" (see Section 5.4, page 58)
- the EIS indicates the Recommendations of the BDAR will be incorporated into the development (see Sections 6.1.3 and 6.20, page 46 and 92)
- the EIS includes a Mitigation Measure to implement and comply with the Mitigation and Amelioration of Impacts in Section 5.4 of the BDAR (see Section 7, page 98)
- The BDAR concludes the impacts are not considered to be serious or irreversible on the basis that the loss of STIF vegetation is mitigated through native landscaping and that STIF is to be replaced at a minimum 2:1 ratio (see section 4.1.1, page 40).

There are numerous benefits and educational value in landscaping the school site with a diversity of local native plants 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 stepping stone 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.

OEH recommends advanced and established local native tree species are planted to improve habitat, as the removal of the existing trees and the benefits they provide, can take decades for a juvenile tree to replace. A minimum tree height of 2-2.5 metres and/or plant container pot size of 50-75 litres or greater is preferable.

Habitat Improvement

The BDAR notes small and medium hollows were observed in low density on site and that nest boxes have been installed (page 18). OEH suggests the nest boxes are monitored on an ongoing basis to determine if they are being used by native fauna. The installation of the nest boxes and the monitoring of them provides a great educational opportunity for the school. Should ongoing monitoring of the nest boxes find the nest boxes are being utilised by native fauna, consideration should be given to installing some additional nest-boxes.

OEH suggests the following additional mitigation measure is included to salvage tree trunks from the trees to be removed and locate these in the remnant vegetation to improve habitat:

- any trees to be removed are salvaged and used in the remnant vegetation on site to enhance habitat including tree hollows and tree trunks (greater than approximately 25-30cm in diameter and 3 m in length)

Floodplain risk management

OEH's advice provided in May 2018 recommended the use of The Hills Shire Council's flood study titled 'The Hills Urban Overland Flow Study' as the basis for the flood investigation, because the site is more likely to be affected by overland flooding than mainstream flooding.

The Flood Statement discusses mainstream flooding and concludes that the site is not affected by mainstream flooding as it is 27m higher than the creek. The Flood Statement has not considered overland flow flooding and accordingly, OEH's previous comments remain relevant.

Sustainability and Building Design

OEH usually recommends SSD 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

As the school site is managed as an Inner APZ (except for the two remnant areas of STIF), green roofs may not be appropriate. The OEH guidelines recommend that where green roofs are not possible, white or cool coloured roofs are used to reduce the building's absorption of solar radiation and increase re-radiation of urban heat. OEH recommends consideration is given to whether there is potential to incorporate cools roofs into the design to assist in reducing the urban heat island effect and minimise local temperature impacts.

Recommended Conditions of Consent

If the development is approved OEH recommends the following are included as conditions of consent:

Aboriginal Cultural Heritage

1) A protocol should be in place to deal with any unexpected Aboriginal objects that may be located during the construction phase. This should be included in the construction management plan or equivalent documentation.

2) On-site employees or contractors involved in ground surface disturbance must be made aware of the statutory obligations that apply to the discovery of Aboriginal objects prior to the commencement of any works.

3) If an Aboriginal object (or a suspected object) is discovered during construction, works must cease in the vicinity of the find and a fully qualified archaeologist must inspect the site to assess the object. If it is confirmed that it is an Aboriginal object and further material or in situ deposit could be present an appropriate management strategy should be prepared. This can include conservation in situ or salvage excavation if warranted. The management strategy must be designed in consultation with the Registered Aboriginal Parties. If the item is found to not be an Aboriginal object, works may continue.

4) If human remains are found all work must cease, the site must be secured and the NSW Police and the NSW Coroner's Office must be notified. If the remains are found to be Aboriginal, OEH and the Local Aboriginal Land Council must be contacted to assist in determining appropriate management.

5) Further archaeological assessment is required if the proposal activity extends beyond the area of the current investigation. This would include consultation with the Registered Aboriginal Parties for the project and may include further field survey.

6) Continued consultation with the Registered Aboriginal Parties for the project must be undertaken if there are any major changes in project design or scope, further investigations or finds.

Biodiversity and Habitat Improvement

The proponent is required in future to provide a Table of credit class and matching credit profile as required by Table 26 of the BAM. As such the following conditions are to be imposed on any forthcoming development consent:

1. Like for like ecosystem credit retirement condition

1.1 Prior to carrying out development that will impact on biodiversity values, the class and number of ecosystem credits in Table 1 must be retired to offset the residual biodiversity impacts of the development.

1.2 The requirement to retire credits in condition 1.1 may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the class and number of ecosystem credits, as calculated by the Biodiversity Offsets Payment Calculator[1].

1.3 Evidence of the retirement of credits or payment to the Biodiversity Conservation Fund in satisfaction of condition 1.1 must be provided to the Secretary of the Department of Planning and Environment for approval prior to carrying out development that will impact on biodiversity values.

Table 1 Ecosystem credits required to be retired – like for like

Any PCT with the below TEC	Like for like options	Trading groups	Number of credits	Containing Hollow bearing trees	In the below IBRA subregions
1081 – Red Bloodwood – Grey Gum Woodland on the edges of the Cumberland Plain, Sydney Basin Bioregion	Sydney Hinterland Dry Sclerophyll Forests (including PCTs 612, 621, 624, 1080, 1081, 1086, 1159, 1246, 1255, 1327, 1328, 1614, 1622, 1628, 1631, 1634, 1640, 1664, 1666, 1667, 1789, 1790, 1912)	Sydney Hinterland Dry Sclerophyll Forests - <50% cleared group (including Tier 7 or higher).	4	Yes	Cumberland, Burragorang, Pittwater, Sydney Cataract, Wollemi and Yengo Or Any IBRA subregion that is within 100 km of the outer edge of the impacted site
1281 – Turpentine – Grey Ironbark Open Forest on shale in the lower Blue Mountains, Sydney Basin Bioregion	Sydney Turpentine-Ironbark Forest (including PCT's 1183, 1281, 1284)	-	1	No	Cumberland, Burragorang, Pittwater, Sydney Cataract, Wollemi and Yengo Or Any IBRA subregion that is within 100 km of the outer edge of the impacted site

[1] Note that prices of credits in the Biodiversity Offsets Payment Calculator are subject to change. The amount payable to discharge an offset obligation will be determined at the time of payment.

DPE should confirm compliance with the above condition as outlined below.

- **Retirement of credits**: proponent provides evidence to DPE in form of a credit retirement report issued by OEH confirming credit transactions. DPE confirms credit transaction corresponds to a like for like credit of the appropriate number from an appropriate location.

- **Payment to the Biodiversity Conservation Fund**: proponent provides evidence to DPE in form of a section 6.33 Statement Confirming Payment into the Biodiversity Conservation Fund issued by the Biodiversity Conservation Trust. The statement will indicate the number and class of credits that the payment corresponds to and any related development application reference. DPE confirms the payment transaction corresponds to the appropriate class and number of credits.

The following additional conditions must also be included in accordance with the BDAR:

1) Should any injured fauna species be found during the construction period, construction must stop immediately so that the injured animal can be taken to a vet or wildlife carer. All handling of fauna species should be conducted by a qualified ecologist or wildlife carer

2) During vegetation clearing, animals that are injured or displaced are to be captured and relocated (by a qualified ecologist or wildlife carer) to nearby bushland (subject to landowner approval), or trees containing wildlife shall be sectioned and dismantled before relocating the animals; and

3) Nocturnal fauna species, such as gliders and possums, if captured and rescued during vegetation clearing, are to be secured in suitable enclosures and kept in a quiet, dark and cool environment until they can be released into suitable habitat after dark

4) The revegetated area(s) of STIF must be contiguous with the areas of existing STIF and be fully structured with a diversity of local native tree, shrub and groundcover species.

5) The existing STIF and revegetated areas of STIF must not be managed as an APZ.

6) The existing STIF must be delineated on the ground prior to any works commencing.

7) Trees to be removed are salvaged and used in the remnant vegetation on site to enhance habitat including tree hollows and tree trunks (greater than approximately 25-30cm in diameter and 3 m in length).

Landscaping

1) The site landscaping shall use a diversity of local provenance species (trees, shrubs and groundcovers) from the native vegetation community (or communities) that once occurred on the site to improve biodiversity (rather than use exotic plant species or non-endemic native species). The Landscape Plan shall include details on:
    - the native vegetation community (or communities) that once occurred on the site
    - a list of local provenance tree, shrub and groundcovers to be used in the landscaping, the quantity and location
    - the pot size of the local native trees to be planted
    - the relocation of any existing juvenile native tree or shrub species that occur within the development footprint.

2) Tree planting at the site shall use advanced and established local native trees preferably with a minimum plant container pot size of 50-75 litres, or greater

Green Roofs and Cool Roofs:

1) The development where possible incorporates green roofs, green facades and/or cool roofs into the design.

(END OF SUBMISSION)