NSW GOVERNMENT | Office of Environment & Heritage

Our Ref: DOC16/630370
Your Ref: SSD 7742

Mr David Gibson
Team Leader Social and Infrastructure Assessments
Department of Planning & Environment
GPO Box 39
Sydney NSW 2001

Attention: Michelle Niles

Dear Mr Gibson

Re: State Significant Development (SSD 7742) –Proposed Ballina High School Redevelopment.

Thank you for your email dated 13 December 2016 about the Ballina High School Redevelopment SSD and seeking comments from the Office of Environment and Heritage (OEH). I appreciate the opportunity to provide comment.

The OEH advises that the Environmental Impact Statement (EIS) was reviewed in regards to Aboriginal cultural heritage, biodiversity, acid sulfate soils, flooding, stormwater and coastal erosion. It is noted that comments relating to historic heritage will be provided independently by the Heritage Division of OEH.

In response the following comments are provided in relation to Aboriginal cultural heritage, biodiversity and acid sulfate soils.

Aboriginal cultural heritage

The OEH has reviewed the Aboriginal cultural heritage assessment (ACHA) information provided in the *Statement of Heritage Impact A New School for Ballina 39 - 42 Swift Street, Ballina* NSW prepared by EJE Heritage (September 2016) and the *Ballina High School Archaeological Risk Assessment* prepared by Umwelt (October 2015) and provides the following comments for consideration.

The OEH notes the ACHA acknowledges the local Aboriginal traditional custodians' connection with the site, prior to and inclusive of, it's past and current uses as a location of Ballina infrastructure. Although the ACHA concluded that no further archaeological assessment was necessary, recommendations for the management of Aboriginal cultural heritage unexpected finds were made for inclusion into the conditions of consent for the project. The OEH supports that inclusion. The OEH recommends, that the following be conditioned as part of the consent.

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1. The management of unexpected Aboriginal cultural heritage is consistent with the 'Conclusions' section of Umwelt's letter (dated 22 October 2015).

Biodiversity

The OEH acknowledges that the Ballina High School Project Site represents a highly modified environment, the only comments provided on biodiversity values relate to the presence of hollow bearing trees. As a number of hollow bearing trees were identified during the OEHs site inspection and the trees were occupied by a number of native birds and possibly used by arboreal mammals. The OEH notes that a majority of hollow bearing trees observed will be removed as part of the schools re-development.

Therefore, the OEH recommends the following procedure be conditioned as part of the Construction Environmental Management Plan (CEMP):

2. A fauna protection procedure is to be drafted to manage the removal of hollow-bearing tree and native wildlife.

   The procedure is be drafted by a suitably qualified person, and:
   - identify all hollow-bearing trees to be removed,
   - advise on appropriate timing of works,
   - apply tree felling techniques to reduce the likelihood of injury or death to native wildlife, and
   - require the presence of an ecologist or licence wildlife handler on site during hollow-bearing tree removal.

Acid sulfate soils (ASS)

The OEH has considered the *Ballina High School Redevelopment Burnet Street, Ballina NSW - Acid Sulfate Soil Management Plan*, prepared by Regional Geotechnical Solutions, dated 5 December 2016, included in the EIS as Appendix L2. In addition to *EJE Architecture Ballina High School Redevelopment Burnet Street Ballina NSW Geotechnical Report Report No. RGS30738.1 - AB,* prepared by Regional Geotechnical Solutions, dated 16 February 2016, included in the EIS as Appendix K, in the drafting of this response.

The OEH concerns are summarised below:

a) The Geotechnical Report states that "12 acid sulfate soil screening tests and 3 acid sulfate soils chromium reducible sulfur (CRS) tests were undertaken" and the Certificate of Analysis shows that all were above the Action Criteria, and produced positive lime requirements.

   The OEH advises that the *Assessment Guidelines of the NSW Acid Sulfate Soils Manual 1998* requires 10 holes for a site of this size (approximately 5 ha), with samples taken for every 0.5 m. The sampling and testing regime presented for this site is well below known standards.

b) The report also notes that "The testing indicates the soils are naturally acidic, with pH levels of around 3". A pH of 3 strongly suggests sulfidic acidity. However, "The acid sulfate soil analysis indicates the soils encountered below the water table from depths of below about 1.5m are weak acid sulfate soils". Given that only three samples were tested, it is not clear how the threshold depth of 1.5 m was arrived at. There is no explanation offered for the 1.5 m depth in the Geotechnical report, and the threshold is not mentioned in the acid sulfate soils management plan (ASSMP).

c) As the report supplies no clarity, it is presumed the division between ASS and non-ASS material is taken to be the water table. The water table depth at the three boreholes tested is at approximately 1.2, 1.2 and 1.6 m. However, it is likely that actual ASS occur above the water table. The report states that an "ASSMP should be prepared if excavations, below the water table are expected that will impact the ASS".

   However, it is unknown due to the lack of information whether materials above 2.5 m depth are ASS or not, as there is no evidence of testing at that level, or the pH range through the profile.

The OEH acknowledges that it will be localised excavations of the order of 1.2m which are problematic, this is anticipated for service trenches and therefore ASS is most likely to be disturbed in linear trenching works. Due to the paucity of testing, the inconclusive information and the potential for ASS at the project site.

The OEH recommends, that the following be conditioned as part of the consent.

3. Prior to bulk earthworks, removal of material below a depth of 1.2 m soil testing must be conducted to verify the presence of acid sulfate soils in accordance with the *Laboratory Methods 2004*, and the ASSMP must be reviewed.
4. Validation testing be carried out on a lineal basis, one per 100 m, in accordance with the *Queensland Acid Sulfate Soil Technical Manual Soil Management Guidelines v4.0 procedure (p. 42).*
5. ASS materials excavated during trenching operations should be stockpiled according to the guidelines in section 11.1 of the *Queensland Acid Sulfate Soil Technical Manual Soil Management Guidelines* v4.0.

   Treatment pads should be designed and operated according to the guidelines in section 8.4 of the *Queensland Acid Sulfate Soil Technical Manual Soil Management Guidelines v4.0.*

If you have any further questions about this issue, Ms Rachel Binskin, Regional Operations Officer, Regional Operations, OEH, can be contacted on 6659 8247 or at rachel.binskin@environment.nsw.gov.au.

Yours sincerely

25/1/2017

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