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Senders ref: DA315-7-2003 MOD 5

Mr Nagindar Singh
Planning and Assessment Group
Department of Planning, Industry and Environment
4 Parramatta Square, 12 Darcy Street
PARRAMATTA NSW 2150

Dear Mr Singh

**Subject: EES comments on Modification application for Luddenham Shale and Clay Quarry
– 275 Adams Road, Luddenham - DA315-7-2003 MOD 5**

Thank you for your email of 19 August 2020 requesting advice on the Modification application (MOD 5) for this State significant development (SSD).

The Environment, Energy and Science group (EES) appreciates the Planning and Assessment Group providing it with an extension in which to provide its comments. EES has reviewed the MOD 5 application and provides its recommendations and comments in Attachment A.

Please note that from 1 July 2020, Aboriginal cultural heritage (ACH) regulation, including advice on major projects, is now managed by the Heritage NSW. The new contact for the ACH regulation team is heritagemailbox@environment.nsw.gov.au.

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'.

08/09/20

Susan Harrison

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

**Subject: EES comments on Modification Application for Luddenham Shale and Clay Quarry
– 275 Adams Road, Luddenham - DA315-7-2003 MOD 5**

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

- Modification (MOD 5) report
- Modification Application
- Appendix B – DPIE letter – Matters for Consideration – 5 May 2020
- Appendix C – Update Project Description
- Appendix D – Updated Mitigation Measures
- Appendix G – Surface Water Assessment
- Appendix K - BDAR Waiver Application – August 2020
- Final Land Use report (FLUR)

and provides the following comments.

BDAR Waiver Request

The modification application includes a request to waive the requirements for a Biodiversity Development Assessment Report (BDAR). Please be advised there is no capacity under the *Biodiversity Conservation Act 2016* (BC Act) to waive the requirement to prepare a BDAR for a modification to a development application.

Section 7.17 of the BC Act requires that a further BDAR is required to be submitted with an application for modification of state significant development unless the authority or person determining the application for modification (or determining the environmental assessment requirements for the application) is satisfied that the modification will not increase the impact on biodiversity values.

While it is the Department's Planning and Assessment Group (P&A) role to determine whether the modification proposal is likely to increase the impact on biodiversity values, and whether a BDAR is required, EES considers a BDAR should be required because:

- important details which relate to this modification, and which may have a bearing on the level of direct and indirect impacts on biodiversity values, are lacking from the documents accompanying the proposal
- insufficient consideration and assessment of potential impacts on the vulnerable Southern Myotis, endangered Green and Golden Bell Frog (GGBF) and endangered Cumberland Plain Land Snail have been made.

The proposed Final Land Use would appear to result in additional direct and indirect impacts on biodiversity values. EES has also reviewed the Final Land Use report including the concept masterplan. It is noted the Final Land Use report was required to be submitted but not as part of the Modification Report. It is important that potential impacts on biodiversity values associated with the final land use are avoided. Avoidance of these impacts, a primary objective of the BC Act in relation to assessment of development, does not appear to have been considered in the proposed concept plan for the final land use. EES considers that avoidance of impacts is feasible, and the proposed concept masterplan needs to be amended (see comments below).

Southern Myotis

The BDAR waiver report notes Southern Myotis were detected feeding over the two large dams in the north east of the site and roosting in low numbers under a concrete bridge at the southeast boundary of the site (page 5). Clarification is required as to whether the waterbody in the quarry pit also provides feeding habitat for Southern Myotis and whether the proposed dewatering of the pit will remove habitat. Further details are required on this, particularly as Table 3.1 in the MOD 5 report states "recommencement of quarrying operations will deter use of the quarry void by birds and other wildlife" (page 34).

Also, the modification report states “Sediment Dam 1 has not been actively maintained for around 2 years while the quarry has been inactive and is overgrown with vegetation, impeding the capacity of the dam. It is proposed to decommission this dam” (page 70). The potential impacts of this to Southern Myotis have not been considered.

The Mod 5 report states “the currently approved access for the quarrying operations is from Elizabeth Drive, across the formally leased Commonwealth land” (section 2.2, page 26) and the Commonwealth land is located on the eastern side of Oak Creek. It notes this access is no longer available for use by the quarry (section 2.2, page 26). As access is no longer available clarification is required as to whether the concrete bridge in the south east corner of the site (see Figure 1.2 in the BDAR waiver application) is now proposed to be removed. Further details are required on the roosting habitat provided under the bridge and if the bridge is to be removed details are required on the potential impact on Southern Myotis.

The MOD 5 report notes an existing disused farm shed will be demolished to accommodate the equipment laydown area and demountable site shed (section 2.4.2, page 26). It states the shed is not suitable microchiropteran bat habitat and it is unlikely that any future demolition activities would significantly impact Southern Myotis (Section 6.8.4, page 96). The BDAR waiver request also notes the tin shed is not considered to be suitable microchiropteran bat habitat (page 6) but neither of the reports provide any further details, photographs etc on why the shed is not suitable habitat. Additional information is required to justify why the shed is not suitable habitat.

Green and Golden Bell Frog

The BDAR for the related proposal SSD 10446 contains inconsistent information relating to targeted surveys for GGBF. While Table 5.12 states “egg mass were detected during the nocturnal searches listed above”, Table 5.16 states “Not recorded during targeted surveys.” EES notes that Bionet contains a recent record for this species from 2019, approximately 2.7km northwest from the site near The Northern Road.

The BDAR waiver request states “The modification does not include changes to existing water bodies. As such no impacts greater than that currently approved are proposed. Therefore, it is unlikely that any threatened species utilising the water in or near the site will be impacted by the modification” (Table 2, page 7). However, potential impacts to GGBF have not been considered in terms of the quarry void and associated water (see comments below) and this is important because “Quarries, brickpits, mining sites, STPs, bunded or otherwise ‘retained’ areas, detention basins, drains, scrapes, depressions and farm dams along with the more natural coastal or floodplain wetland features ... are all candidate sites for occupation by this species ... Such sites are occupied and used mainly as breeding habitat” (from the EIA guidelines at <https://www.environment.nsw.gov.au/resources/nature/GAndGbellfrogEia0703.pdf>).

Furthermore, the BDAR waiver request states “The proposed modification does not require any changes to non-natural water bodies. Therefore, it is unlikely that there will be any impact to threatened species on the site.” (Table 2, page 7) but, as noted above, the modification report refers to decommissioning of Sediment Dam 1 and the potential impacts of this to GGBF have not been considered.

The BDAR waiver request states “The desktop assessment and site visits did not identify any non-native vegetation on site with potential to provide habitat for any potential threatened species” (Table 2, page 6). However, the EIA guidelines for GGBF state “Foraging habitat requirements include tall, dense, grassy vegetation and tussock forming vegetation is known to be used for foraging and shelter ... Over-wintering sites are another important habitat component that requires consideration in any site assessment. ... Such sites include the bases of dense vegetation tussocks, beneath rocks, timber, within logs or beneath ground debris including human refuse such as sheet iron etc.” and examples of these types of habitat are found across the subject property. For example, the BDAR for SSD 10446 states (page 18) “Most of the subject property is dominated by open grasslands of varying condition and quality” and in relation to PCT 849 it states (page 23) “the area is littered with rubbish and the large grass tussocks appear to be choking out the smaller

species” while for PCT 1800 it notes (Appendix A) “Exotic grass. Rubbish partially visible in tall dense vegetation” and “Scattered rubbish”.

As such, the site does contain non-native vegetation and human-made structures (rubbish) that could provide habitat for this species but neither the modification report, nor the BDAR waiver request adequately address this.

Non-natural water bodies

The MOD 5 report indicates the quarrying operations ceased under the previous owners/operators approximately 2 years ago. The BDAR waiver request states “the proposed modification does not require any changes to non-natural water bodies” on the site (Table 2, page 7) but the MOD 5 report notes the quarry pit will be dewatered (Section 4.3.6 , page 46) and Sediment Dam 1 is proposed to be decommissioned (page 70).

The MOD 5 report states Sediment Dam 1 has not been actively maintained for around 2 years while the quarry has been inactive and is overgrown with vegetation (MOD 5 report, page 70). It is unclear if decommissioning of Sediment Dam 1 is proposed as part of the MOD 5 proposal, or as part of the separate development application (SSD 10446) for a new advanced resource recovery centre facility to be co-located on the quarry site to the north of the quarry void. This needs to be clarified. In relation to this, EES notes that Sediment Dam 1 (Figure 6.3 of the MOD 5 report) equates to Pond 4 (Figure 5.2 of the BDAR for SSD 10446) which equates to OSD (onsite detention, Figure 1.2 BDAR SSD 10446). EES in its submission for SSD 10446 advised: “Regarding the onsite detention (OSD) storage, the surface water assessment (EMM 17 July 2020) states (page ES.2) “Discharges are predicted to occur from the onsite detention storage into Oak Creek. Scour protection and energy dissipation will be constructed at the discharge location and at the confluence with Oak Creek to reduce erosion potential associated with the increased flow rates from the immediate site.” It is not stated in the BDAR or in the surface water assessment how the water will be delivered to Oak Creek but the final drawing of the surface water assessment shows a structure for this (see the drawing titled ‘Stormwater Catchment Plan’, drawing no. 030, AMDT D). Figure 1.2 of the BDAR shows no such structure and its impacts have not been considered. The full impacts of the OSD storage needs to be assessed in the BDAR. It appears Sediment Dam 1 is to be decommissioned to construct the OSD at this location as part of SSD 10446 but this needs to be clarified.

As Sediment Dam 1 has not been used for two years and it appears neither the quarry pit nor the Water Management Dam have been used during this time, the waterbodies may now provide habitat for native fauna.

In order to assess the potential impacts of the MOD 5 proposal on the non-natural water bodies and the habitat they potentially provide further details are required on the non-natural waterbodies on site, including:

- provision of additional photographs of the existing condition of the quarry pit waterbody, Sediment Dam 1 and the Water Management Dam
- the environmental assets currently provided by the non-natural waterbodies
- native fauna known to occur or potentially inhabit/use the waterbodies and/or the area surrounding the waterbodies
- the environmental impacts of dewatering the quarry pit on native fauna (including any water dependent species) and include details on:
 - the existing size, volume and depth of the quarry pit waterbody
 - the volume of water that is proposed to be dewatered from the quarry pit to the Water Management Dam to allow quarry operations to recommence
 - the proposed time frame for dewatering the quarry pit (e.g. the duration and the time of year the dewatering is proposed)
 - ongoing dewatering over the longer term throughout the life of the quarry
- the environmental impacts of decommissioning Sediment Dam 1 on native fauna (including any water dependent species)

- mitigation measures to protect and manage native fauna potentially impacted by the dewatering /decommissioning.

Threatened ecological communities

The BDAR waiver request notes the site visit identified two threatened ecological communities (TECs) comprising Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions and Cumberland Plain Woodland (CPW) in the Sydney Basin Bioregion (pages 5).

While the BDAR waiver request states the proposed modification will not result in direct impacts to native vegetation on the site, comparing Figure 2.2 (indicative concept masterplan) in the Final Land Use report with Figure 1.2 in the BDAR waiver request shows CPW and Swamp Oak Floodplain Forest are proposed to be removed and replaced with warehouses and hardstand areas as part of the final land use.

Swamp Oak Floodplain Forest is endangered and CPW is a critically endangered ecological community which means it is facing an extremely high risk of extinction in New South Wales in the immediate future.

It is recommended the proposed concept masterplan is amended to avoid in impacts on CPW and Swamp Oak Floodplain Forest.

Tree removal

The MOD 5 report notes no disturbance is proposed to native vegetation as part of this proposal apart from that currently approved (Section 6.8.4, page 96). It also states in Section 2.9.3 on page 30 "There are two native trees that are within the approved disturbance footprint. These may need to be cleared. No other clearing of native vegetation is required (see Section 6.8)". However, the locations of these trees are not made clear in this waiver application or in the modification report. The BDAR waiver report also notes the potential impact on these trees has been approved by an existing consent. If the two trees are immediately adjacent to the "tin shed" then:

- the applicant may want to remove them for the construction of the new workshop and equipment laydown area (Figure 1.1 of the waiver request) and
- the two trees have been mapped as PCT 1800 (which is the endangered Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions) (Figure 1.2 of the waiver request).

It is not clear from the documents provided, if the existing consent for DA315-7-2003 covers the removal of this vegetation i.e. compare Figures 1.1 and 1.2 of the BDAR waiver request, with Figures 1.3 and 2.1 of the modification report. Furthermore, the environmental assessment for the original DA has not been uploaded onto the major projects register (there is only a copy of the Department's assessment report and the Final Instrument of Consent) so EES has been unable to check this against the original DA documentation.

It is not clear if the removal of the two trees has already been assessed and EES notes that the "two trees" have likely been mapped as part of a TEC (probably PCT 1800). If this is the case, it follows that their proposed removal needs to be assessed for this MOD application.

In addition to the two trees potentially needing to be assessed as part of the MOD 5 application, if the two trees are to be removed it is recommended the following additional mitigation measures are added to those included in Section 6.8.5 of the MOD 5 report:

- seed from the two native trees to be removed shall be collected and used in the rehabilitation of the site in areas where the relevant PCT occurs or once occurred
- the native trees required to be cleared from the site shall be salvaged (for example tree hollows and tree trunks which are greater than approximately 25-30cm in diameter and 3m in length) and placed in the riparian corridor to enhance habitat.

Impacts to native vegetation and associated threatened species habitat

The BDAR waiver request states “The proposed modification will not result in direct impacts to native vegetation on the site.” (Table 2, page 5). However, the modification report states, “The surface water management system for the quarry has been revised as part of the proposed modification (refer to Section 6.4 and Appendix G) and will include an oil and water and sediment trap immediately upstream of the Water Management Dam” (page 39). This report also shows “piped drainage” into the Water Management Dam in Figure 6.6. The impacts of this infrastructure on the vegetation (PCT 1800) adjacent to the Water Management Dam and Sediment Dam 1, and associated threatened species habitat, have not been discussed or assessed. This vegetation may provide habitat for the Green and Golden Bell Frog and, as discussed in the recent (dated 13/08/20) EES comments for SSD 10446, and the Cumberland Plain Land Snail.

Vegetation Management Plan

The existing Development Consent for DA No. 315-7-2003 as modified (MOD 1-3) includes Condition 34 that a Vegetation Management Plan (VMP) shall include revegetation of the riparian zone of Oaky Creek.

The Final Land Use report accompanying the MOD 5 proposal states the ‘rehabilitation of the Oaky Creek riparian zone was completed by the previous site operators and no further rehabilitation activities are required or proposed’ and the VMP will be updated to reflect this rehabilitation status and to indicate that future works will be limited to maintenance programs only (Section 2.1.3, page 3).

The updated mitigation measures for the MOD 5 proposal include a measure to revise the VMP under the existing quarry consent prior to the recommencement of operations and include measures to maintain the Oaky Creek Riparian corridor (section 3.5.2, page 39).

The updated VMP should address the ongoing protection and maintenance of the riparian corridor along Oaky Creek and provide details on the rehabilitated corridor.

The Final Land Use report includes an Indicative Commercial Concept Masterplan for the site (see Figure 2.2, page 6). The Concept Masterplan appears to show the top of bank located immediately adjacent to the development footprint which means the associated riparian corridor would be located in the development footprint. The EIS for the MOD 3 proposal indicates a mitigation measure to be implemented on the site includes the maintenance of a riparian corridor of over 40m in width along Oaky Creek (section 6.2.3, page 64).

The existing Development Consent defines the riparian corridor as “a 40 metre-wide strip of land adjacent to a local watercourse, measured horizontally from the top of the bank of the watercourse” (see Schedule 2 of development consent), so it is not clear why the top of bank appears to be located immediately adjacent to the proposed concept development footprint. Further details need to be provided on this.

The updated VMP should include but not be limited to the following:

- a scaled plan which clearly locates:
 - Oaky Creek
 - top of bank
 - the riparian corridor width (measured from top of bank)
 - existing remnant native vegetation along the creek
 - rehabilitated areas along the creek
 - the boundary of the site and development footprint
 - Asset Protection Zone
- details on the rehabilitation that has been undertaken to date in the riparian corridor, including the location of plantings; plant species; species type; number of species etc

- details on any further proposed planting in the riparian corridor, including the location; species; species type; number of species - the plant species should consist of a diversity of local native provenance plant species (trees, shrubs and groundcovers) from the relevant native vegetation community that occurs along the creek at this location to ensure genetic integrity
- a series of photographs of the rehabilitated riparian corridor in an Appendix to the VMP, and include details of the photo point location, direction of photo; the date of photo etc.

Final Land Use

The final land use report indicates the quarry void will be infilled developed for commercial or light industrial uses (page 34).

The Final Land Use report notes the key difference to the final land use of the site to that presented in the 2003 EIS is the change from rural pastoral to commercial /industrial for all disturbed areas apart from the riparian zone along Oaky Creek (section 2.2). As noted above, comparing Figure 1.2 in the BDAR waiver request with Figure 2.2 in the Final Land Use report shows the proposed future indicative commercial development would impact two threatened ecological communities on the site:

- Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin, South East Corner bioregions
- Cumberland Plain Woodland (CPW) in the Sydney Region.

The MOD 5 report indicates part of the site along the eastern boundary associated with the Oaky Creek riparian zone is intended to be zoned Environment and Recreation under the proposed SEPP (page 49) but Figure 2.2 of the Final Land Use report appears to show the Environment and Recreation zone and the riparian corridor along Oaky Creek would be impacted by the proposed concept development footprint.

A scaled figure which overlays and locates:

- the threatened ecological communities (TECs)/remnant native vegetation on the site,
- Oaky Creek
- top of bank
- the 40 m wide riparian corridor (measured from top of bank),
- APZ and
- the Environment and Recreation zone

with the commercial concept masterplan needs to be provided so the proposed impact of the future development is clear.

In relation to APZ requirements, EES in its submission on the related SSD10466, advised the following: "The BDAR does not address asset protection zones (APZs) but the environmental impact statement (EMM 22 July 2020) states (page 18) "All areas of the ARRC site external to the ARRC warehouse will be hardstand with the exception of small landscaped areas near the ARRC site office and along the site access road (see Appendix T). Hardstand areas will accommodate internal access roads, parking and required bushfire asset protection zones (APZs)" and (page 26) "There will be 7–12 m-wide APZs maintained between the riparian corridor of Oaky Creek and the eastern wall of the ARRC warehouse (refer to Section 6.4.1). Fire and Rescue NSW will be consulted further during the detailed design of the fire protection strategy and complete the design accordingly."

The final land use needs to include details on the proposed location of APZs and any potential impacts of the APZs. The APZs should be located within the development footprint of any proposed final land use.

Avoidance of impacts on biodiversity - a primary objective of the BC Act in relation to assessment of development, does not appear to have been considered for the proposed commercial concept masterplan development. EES recommends the development footprint as shown on the concept

plan is amended so that the future development will not increase the impact on biodiversity values. The concept plan should avoid the need to clear threatened ecological communities.

The EIS for the MOD 3 proposal (dated 18 November 2014) recommends that when extraction ceases and the area is decommissioned, the ecological improvement of the site should form part of the remediation strategy. Species selection for any future plantings on the site should be based on the proposed location (Riparian corridor or shale plain) and the ecological communities associated with them (Cumberland Plain Riparian Woodland or shale plain woodland) (section 7.2.4, page 80). EES considers the recommendation made in the MOD 3 EIS for decommissioning the site should apply to the current proposed concept plan. That is, ecological improvement of the site should form part of the remediation strategy. Also, the species selection for any future plantings on the site should comprise local native provenance species from the relevant vegetation community that occurs or once occurred on the site.

End of Submission