

5 May 2023

Department of Planning, Industry and Environment  
Contact: Melissa Dunlop

**Council Reference: REQ05657/2023**  
**Dunmore Quarry Pit Extension (Modification 13)- DA470-11-2003-Mod-13**  
**Lots 3 DP 1030504, Lot 4 DP 227046, Lot 1 DP 1002951, Lot 2 DP 224597, Lot 1 DP 224597, Tabbitta Road, DUNMORE**

Dear Sir/Madam

I refer to the above State Significant Development Application (DA) currently being assessed by your department and thank you for the opportunity to comment. Council officers have undertaken a review of the DA and supporting information. This letter provides feedback on the DA for your consideration. Matters considered of importance as part of this proposal are biodiversity, Aboriginal Heritage.

*Of note, as the submission deadline concludes on Monday 8 May 2023, this submission has not been reported to the elected Council for formal consideration and endorsement.*

## **1. Environmental Impacts**

### 2.1 Noise & Vibration

No mitigation measures have been proposed, monitoring of noise in accordance with the noise management plan and monitoring of blast overpressure and vibration in accordance with the quarry's Blast Management Plan will continue under Modification 13.

The modification 9 operational noise model has been used to determine noise impacts from the quarry and has been amended for the purposes of assessing Modification 13.

The determining authority needs to be satisfied that noise from the extension will still comply with all necessary operational noise limits provided in DA 470-11-2003.

### 2.2 Air Quality

No mitigation measures are proposed, the quarry's existing air quality monitoring regime will continue under Modification 13.

The Air Quality Impact Assessment has concluded that the quarry operations in the RIC pit would reduce particulate matter emissions relative to those quantified for Croome West pit operations that were assessed under Mod 9 AQIA.

The modification has addressed the increase in exposed land area for potential wind erosion emission generation and the reduction in haul route distance between the in-pit loading point and the processing hopper for the RIC Pit extension will have a greater reducing influence in quantified annual emissions.

Whilst the above has been addressed, the determining authority needs to be satisfied that air quality from the pit extension will not result in adverse air quality impacts to the surrounding environment.

### 2.3 Surface Water

The modification states that a construction water management plan (WMP) will be prepared for the RIC Pit extension. It also states that the existing WMP will be updated to include all the proposed changes to the water management system however because no changes are being made to the water management infrastructure, discharge locations or water take methods, the monitoring and management measures proposed in the existing WMP are not proposed to be revised.

Council would recommend that an updated water management plan be assessed at modification stage or prior to commencement of works to be satisfied that the pit extension is managing surface water impacts appropriately.

### 2.4 Ground water

The proposed measures suggest that the Water Management Plan (EMM 2020) will be revised to incorporate modelling that is associated with Modification 13. They also suggest that the WMP establishes contingencies that will be implemented if monitoring indicates an impact.

As above Council would recommend a revised WMP be completed at modification stage or prior to the commencement of works to capture modelling associated with Modification 13 as well as include any contingencies that need to be implemented if the monitoring does indicate any impacts.

## **2. Biodiversity**

### 3.1 Impacts

Impacts to biodiversity will result from the clearing occurring as part of the Dunmore Hard Road Quarry *Modification 13*. A Biodiversity Development Assessment Report (BDAR) has been prepared to assess the biodiversity impacts. A range of targeted survey was conducted by the proponents' representative ecological consultants. Of note, the project will remove 7.7 ha of native vegetation and indirectly impact 0.98 ha. Specifically, it will:

- Remove 7.7 ha of the Critically Endangered (State BC Act and Commonwealth EPBC Act) *Melaleuca armillaris Tall Shrubland* – in the form of PCT 720 – Bracelet Honey-myrtle – Australian Indigo dry shrubland on volcanics, southern Sydney Basin Bioregion, as well as indirect impacts on 0.98 ha of this PCT/CEEC.
- Remove indirectly 0.05 ha of the Endangered *Illawarra Subtropical Rainforest* (State BC Act) – in the form of PCT 1300 – Whalebone Tree – Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion.

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- Remove 0.15 ha of *Cynanchum elegans* (White-flowered Wax Plant) habitat including 1 individual.
- Remove 1,381 mature individuals of *Zieria granulata* (Illawarra Zieria)

Remove habitat for numerous threatened fauna species:

- impacts on 0.05 ha of habitat for the Gang-gang Cockatoo;
- impacts on 0.11 ha of habitat for the White-flowered Wax Plant;
- impacts on 8.68 ha of habitat for the Little Eagle;
- impacts on 0.73 ha of habitat for the Illawarra Irene;
- impacts on 8.68 ha of habitat for the Square-tailed Kite;
- impacts on 0.05 ha of habitat for the Barking Owl;
- impacts on 0.05 ha of habitat for the Powerful Owl;
- impacts on 0.05 ha of habitat for the Masked Owl.

### 3.2 Credit Liability

The vegetation to be impacted is in varying condition due to current and historic disturbances. Offsets have been calculated for the above entities in accordance with the BAM.

- PCT 1300 – Illawarra Subtropical Rainforest – 1 credits
- PCT 720 - *Melaleuca armillaris* Tall Shrubland – 111 credits
- *Cynanchum elegans* (White-flowered Wax Plant) – 1 credits
- *Zieria granulata* (Illawarra Zieria) – 2,762 credits
- Little Eagle – 68 Credits
- Square-tailed Kite – 68 credits
- Illawarra Irene – 8 credits
- Barking Owl – 1 credit
- Gang-gang Cockatoo – 1 credit
- Masked Owl – 1 credit
- Powerful Owl – 1 credit

Boral anticipates that it will compensate for these residual impacts through payment into the Biodiversity Conservation Fund.

### 3.3 Mitigation Measures Proposed

The ongoing operation of the quarry processes could have further potential biodiversity impacts unless properly managed. Mitigation measures to be implemented are summarised below:

- Fencing off areas of native vegetation
- Stockpiling topsoil for use in rehabilitation
- Dust management and monitoring
- Staff awareness training for environmental features
- Preparation and implementation of a Vegetation Management Plan (VMP) for areas within a 100m radius of the project area boundary.
- Sediment and erosion control
- Pre-clearance inspections of hollow bearing trees and felling supervision to ensure a sensitive approach to managing risks to any residing fauna

- Preparation or update to a Flora and Fauna Management Plan summarising the above and providing procedures for monitoring and reporting rehabilitation outcomes.
- Establishment of an ecological corridor within Boral land holdings. Establishment of a Biodiversity Stewardship Agreement across protected areas should be strongly considered.

### 3.4 General Considerations

The proportional impacts are considerable. Up to 4.66% of the current known extent of the CEEC *Melaleuca armillaris* Tall Shrubland is proposed to be removed by this single approval.

The cumulative impacts, with consideration to the nearby Cleary Brothers recent proposal, are extensive. The Dunmore Quarry is proposing to directly impact 1,381 Illawarra Ziera, while the Cleary Brothers proposal directly impacts 2,170 individuals. The cumulative total is 3,551 individuals proposed for impact via both quarry operations.

The 2005 *Z. granulata* recovery plan stated that it was estimated there were only 8,000 mature individuals at the time. Therefore impacting 3,551 is a considerable portion, nearing 50%, of the total known population from the 2005 study. However, the BDAR report states that records of more than 40,000 individuals exist across the Dunmore and Cleary Brothers owned land. Regardless, the impact is still considerable, in the order of 5-10% of the species. The vast majority of *Z. granulata* plants occur on freehold land that is zoned for extractive industry or rural land uses. The conservation of *Z. granulata* populations within these areas is highly important for the conservation of the species as a whole. Furthermore, at least 73% of plants are situated on private land. This demonstrates the need to protect *Z. granulata* populations on private land in order to conserve the species. The Dunmore Quarry land holdings may contain one of the largest populations of the species within a single landholding.

*Z. granulata* suffer from low levels of genetic diversity. The removal of a large portion of a population could have a downstream effect on surrounding populations/communities. Species in fragmented communities are more likely to experience reduced gene flow, when compared with populations inhabiting intact communities, and therefore, may be more likely to produce non-viable seed.

The abundance of individuals across the Dunmore Quarry land indicates the population is successfully reproducing here – further highlighting its importance. Seed set is highly variable for *Z. granulata*; if the population at the Dunmore Quarry Site is readily setting seed and successfully reproducing this would suggest this population is in good condition and may be an important population for the species.

Concerns exist regarding the offset ability for *Z. granulata*. It is currently understood that the BCT is already looking to source 2940 credits via their credit offer portal. The addition of another 2761 credits to be sourced will result in 5701 credits required for the species (not including current nearby quarry impacts – i.e. Cleary Brothers Quarry). It is a real risk that these credits may never be created. It is requested that the proponent either:

- Establishes a Stewardship Site within their land to provide at least some of the required credits
- Facilitates the establishment of a Stewardship Site elsewhere that contains *Z. granulata*.

The method of paying to the Biodiversity Conservation Fund is concerning as there is no way to be confident that any credits for *Z. granulata* will ever be generated. Unless the BCT can provide evidence that real credits are available, the two above options are recommended. The staging of the proposal allows for suitable lead time to ensure credits exist and this evidence should be made clear prior to impacts occurring.

It is noted that part of the Mod 9 Assessment Report outlined:

*“To offset the removal of 162 individual Illawarra Zieria, Boral has proposed to replant the species in an appropriate area at an agreed ratio with OEH. In consultation with OEH, Boral calculated the required offsets using a simulated species credit calculation under the Framework for Biodiversity Assessment (FBA). This derived a value of 2,268 species credits which equates to planting of 324 Illawarra Zieria (2:1 ratio of planted to removed individuals). Although Boral has previously achieved a high success rate with planting Illawarra Zieria within the rehabilitated area, it proposed to use a more conservative 3:1 ratio to account for potential mortality. The exact location of the offset location(s) would be identified post determination of MOD 9.”*

The Department of Planning should require information from the applicant demonstrating that this planting has occurred and the replacement planting remains in good condition. Replanting to contribute towards the offset of the further loss of *Z. Granulata* may be located nearby the areas of replanting required by the expansion approved by Mod 9 (Croome West Pit).

### 3.5 Mitigation Commentary

Boral proposes to translocate topsoil and *Illawarra zieria* propagules onto land to the west of the Croome West pit into a proposed Dunmore Quarry habitat corridor. This would be coupled with attempts to revegetate the land as *Melaleuca armillaris* Tall Shrub land and establishing an ecological corridor connection between the north and the south of the quarry. The corridor totals 34.38 ha in size. A monitoring strategy will be implemented to track the success of plant growth and continued management such as weed control. BAM plots will be included in the monitoring to allow for a clear scoring of the vegetation.

There appears to be more potential for improving the ecological corridor. See below. It is recommended that the corridor is increased to connect to the areas immediately south of the quarry and close out the currently cleared land – see yellow polygon below.



### 3.6 Additional Matters

The Department should consider requiring the proponent to establish Biodiversity Stewardship Agreement across land in the south of Boral Land Holdings which include possibly the most important population of Illawarra Zieria as well as *Melaleuca armillaris* Tall Shrubland and Illawarra Subtropical Rainforest.

An update of the quarry's existing Flora and Fauna Management Plan (FFMP) is to include consideration to Square-tailed kite, White-bellied Sea-eagle, Powerful Owl, Olive Whistler, Rufous Fantail, Black-faced Monarch, including pre-clearance survey and assigning a project ecologist to ensure the most sensitive approach to habitat removal is undertaken. The FFMP should also include translocation for all threatened flora species to be directly impacted.

### **3. Flooding**

Council has reviewed the Water Management Plan that accompanied this modification. Apart from minor impacts to flow rates and volumes within the Boral Quarry Lands, there are negligible offsite flood impacts as a result of the extension.

### **4. Heritage**

#### 5.1 Aboriginal Heritage

The submitted Aboriginal Cultural Heritage Assessment submitted with Modification 13 has a number of recommendations. The recommendations include updating the existing Aboriginal Cultural Heritage Management Plan to provide post-approval framework for managing aboriginal consultation, unexpected finds, and other heritage related matters throughout Modification 13.

Council would recommend the Aboriginal Cultural Heritage Management Plan be updated prior to approval or conditioned prior to the commencement of works to provide instruction on the

procedures to follow if unexpected finds are made during construction/ operation of the quarry extension.

### 5.2 European Heritage

It appears the proposal will not generate any additional impact on any items of Heritage Significance.

## **5. Visual Impact**

The proposed measures to reduce visual impacts of Modification 13 include vegetation at the disturbance area and/or vegetation at the receptor location. It has also recommended that appropriate measures to mitigate visual impacts at the three sensitive receptors (R07, R20 and C01 as per figure 6.8 of the Visual Impact Assessment) will be implemented by Boral in consultation with owners or residents.

Council recommends that delivery time of landscaped amenity barriers for the three sensitive receptors and maintenance as conditions of consent if the extension is supported.

## **6. Traffic & Transport**

Modification 13 proposes no changes to the current approved quarry truck volumes or dispatch times therefore there will be minimal impact to the existing access arrangements.

## **7. Waste**

As a quarry it is noted that minimal waste is generated from extraction of rock material from the site. Top soil is being translocated to the area west of the Croome West Pit to assist in rehabilitation as a biodiversity corridor. Any waste rock will be stored within the quarry pit and used for future rehabilitation activities.

## **8. Bushfire**

The Project Area is within land mapped as Bushfire Prone Land. As State Significant Development, a bushfire assessment is not required nor is concurrence required from the NSW Rural Fire Service. Notwithstanding, in considering bushfire risk, the determining authority need to be satisfied that the proposal will not:

- increase risk of bushfire attack to the site
- hinder emergency egress from the site, or emergency access to the site
- affect water supply for purposes of bushfire fighting, noting supply being available from the water sumps at the base of each pit

## **10. Social Impact Assessment**

In table 2.1 Major projects with potential cumulative impacts- The inclusion of the new Shellharbour Hospital should be considered.

Information on the visual impacts from key areas further from the site should be considered such as the Shellharbour Anglican School, new hospital, highway etc.

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## **11. Economic Impacts**

The proposal will continue to support local employment opportunities for a large number of residents, providing benefits to these families in the Shellharbour Local Government Area.

## **12. Rehabilitation**

Council recommends the current Rehabilitation Management Plan be updated prior to approval and/or prior to the commencement of works to include Modification 13 and the proposed final landform.

Should you have any enquiries in relation to this matter, please do not hesitate to contact the undersigned on (02) 4221 6111.

Yours sincerely

**Zoe Madaschi**  
**Senior Development Assessment Officer**