Attachment A

Detailed request for information

Amendment for land included in the application

Cleary Bros must amend the application form to remove the land not included in the project. The only avenue to modify the application form is via a formal amendment. Cleary Bros must trigger the amendment process in the portal. If needed, the department can assist.

Any other project components proposed for amendment should also be incorporated into an amended application and associated Amendment Report. For example, amendments due to further avoidance of impacts on biodiversity or other assessment aspects (see the section on visual below).

Quarry design and final landform

Project Life

The total resource available for extraction from the Stage 7 extension would require a 45-year quarry life. The operational plans and final landform presented in the EIS assume a 45-year quarry life. The typical timeframe for development consents ranges from 21 to 30 years.

The additional information must consider a quarry progression plan and final landform achieved within a maximum 30-year timeframe. Other proposed amendments to minimise the impacts of the project should also be considered (eg. biodiversity and visual – see further comments below).

The department requires additional information, including:

- operational plans for extraction with operations ceasing at 30 years;
- timing of relevant stages throughout the proposed quarry life; and
- rehabilitation and final landform design for operations ceasing at 30 years.

In particular, Figure 3.7 of the EIS shows the quarry extraction progression, including from the commencement of Stage 7d and to end Stage 7d. These figures show the retention of the eastern rim. These figures show that there would be extraction within both Stages 7c and 7d. The Department requests information on the quarry life to achieve the landform identified in Figure 3.7 – sub figure titled “commencement of Stage 7d”. Table 3.3 of the EIS does not appear to reflect the extraction sequence shown in Figure 3.7 and should be updated to reflect the sequencing in Figure 3.7.

The additional information must also consider the potential impact of the existing development consent DA614/2006 ceasing in 2036. If Shellharbour City Council refused the extension to DA614/2006, Cleary Bros would not be able to access the Stage 7 extension.

The department requires an assessment of:

- the risks associated with the potential loss of access potential;

- mitigation measures to manage the identified risks; and
- a snapshot of proposed operations in 2036.

Water management

The completion of stage 7d would leave a 192,500 m^2 catchment with an annual average runoff of 147.69 mega litres (ML). The EIS states *"Runoff in the north-eastern section of Stage 7 would report to the Central Sump, and from there to the Southern Sump."*

The water collected in the central and southern sumps does not have a discharge point to allow excessive water volumes to be discharged from the final void until the water levels reach 60mAHD and spill into the western sump.

The department considers there is a reasonable risk the proposed final void would result in a substantial water storage.

The department requires an assessment of:

- the final void water storages, particularly the central and southern sumps;
- a final landform water balance; and
- proposed mitigation measures for groundwater and surface water inflows in dry and wet years.

Proposed bench landform and revegetation

The EIS proposes the construction of a benched landform on the exposed quarry faces. The proposed landform would include 75-90 walls ranging from 7 to 14 meters high with benches ranging from 3 to 5 meters wide. The rehabilitation plan proposes vegetation on the benches to screen the exposed walls.

The department considers there is limited justification/ evidence provided to support the conclusion that vegetation would be effectively established and maintained in the long term to provide visual screening of the exposed walls.

The department considers the risk of the rehabilitation failing to be high due to:

- inadequate rooting depth for vegetation with a canopy height of 7 to 14 metres;
- insufficient nutrient fixation and cycling;
- impacts of runoff and soil erosion;
- lack of deep drainage;
- difficult maintenance environment; and
- likely weed infestation

The department requires further assessment of alternative pit designs and final landform design(s) that would:

- increase the viability of the proposed rehabilitation during operations but also post-closure; and

- avoid the extensive exposure of the western quarry face to the visual receptors to the east and southeast of the proposed project area (see further comments below).

This analysis should also consider the comments above on a 30-year mine plan.

Rehabilitation Strategy

The Secretary's Environmental Assessment Requirements (SEARs) required the preparation of a proposed rehabilitation strategy for the site having regard to the key principles in the *Strategic Framework for Mine Closure.*

The department considers further information is required to inform the rehabilitation strategy.

The department requires the following additional information:

- identification of stakeholders who should be included in the quarry closure process and proposed consultation strategy throughout the proposed quarry life for the relevant stakeholders
- identification of the risks considered in the development of the rehabilitation strategy and how these have influenced the proposed rehabilitation strategy, demonstrating the management of cost and uncertainty
- an adaptive management approach which:
  - links the final land use with the rehabilitation objectives
  - applies completion criteria to satisfy the objectives and reflect the environmental, social, and economic circumstances of the site
  - provides performance indicators against each completion criteria
  - includes monitoring of the performance indicators as a means of determining rehabilitation progress and success against the original objectives
  - a process of adapting the rehabilitation strategy if monitoring identifies difficulties in achieving the original objectives
- adequate consideration of receivers R1, R2 and R3 in the proposed rehabilitation strategy and the management of post-closure impacts
- identification of any on-going management/monitoring post-closure
- an assessment of the cost of closure, including different closure scenarios
- a strategy to develop the post-closure land use as strategic planning in the Dunmore area progresses

Visual impact assessment

Visual impact assessment

The proposed extension has the potential to result in significant visual impacts both during and after operations. The department considers that further information is required on visual impacts given the risk and consequences of the potential impact.

The proposal has the potential to generate views of up to 65 metres of exposed quarry face up to 800 metres long. The department considers the precinct scale view would have a significant impact on the local and regional viewshed. The proposal relies on successful rehabilitation to mitigate the potential impact, however as outlined above, the department considers there is insufficient information to support a conclusion that rehabilitation would successfully mitigate these visual impacts.

The visual impact assessment does not consider the potential impact of the ridgeline reduction and shape change on the views of surrounding residences.

The department requires additional visual impact assessment including:

- assessment of alternative quarry designs which would limit the exposure of the quarry face to the east, including at a minimum consideration of a 30-year mine plan as discussed above (see comments above particularly in relation to the mine sequence identified in Figure 3.7 up to "commencement of Stage 7d"
- visual impact montages of the exposed quarry face and the assessment of the potential impact if rehabilitation was not successful, or partially successful
- assessment of the permanent visual impact of landform changes and exposed quarry faces. The assessment should consider the impact of the ridgeline height reduction and shape change and the views from receivers with views of the landform change from low lying areas. The assessment should include visual montages and transects.
- detailed assessment of the potential visual impact for road users that quantifies the visual impact of potential landform changes, exposed quarry faces, operational activities, and the final landform on road users travelling on the Princes Highway.
- assessment of regional views of the proposed extension

Landscape character impact

The EIS does not consider the potential impact of the proposal on the local and regional landscape character and whether the proposed mitigation measures are feasible and/or adequate.

The department notes that the social impact assessment includes an assessment of the social impact of visual amenity changes for limited residences surrounding the proposed extension. However, additional visual impact assessment is required and pending the conclusions of the assessment, the social impact assessment may also need revision.

The department requires a landscape character impact assessment. The assessment of landscape character is distinct from the visual impact of the exposed quarry faces and should consider the overall impact of the proposal on an area's character and sense of place.

The *Transport for NSW 2020 Guideline for landscape character and visual impact assessment* (EIA-NO4) should be used as a guide for the methodology and assessment process.

Blasting

The blasting impact assessment details the potential impact for receivers R1, R2 and R3 and assumes no impact/compliance with the relevant criteria to other receivers based on the distance from the proposed quarry pit. The department considers additional information is required to support this conclusion.

The blasting impact assessment must consider:

- model and demonstrate ground vibration and airblast overpressure for all potential receivers surrounding the project area;
- differing blast positions in a variety of proposed operational stages including different vertical positions within the pit and different locations distributed north to south length of the proposed pit;
- the influence of topography on airblast overpressure for receivers located to the south and south east of the proposed pit;
- varying maximum instantaneous charge (MIC) that would apply to blasts in different locations to achieve compliance with the relevant criteria;
- how compliance with the relevant criteria would be demonstrated at all receivers during various operational stages of the proposed project; and
- confirm whether the negotiated agreement with the landowners of receivers R1, R2 and R3 allows for exceedances of the ground vibration and airblast overpressure criteria