



Haerses Road Quarry Modification 5

Infrastructure Area Relocation and Extraction Method
Amendment
State Significant Development Modification Assessment
(DA 165-7-2005 MOD 5)

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Executive Summary

Dixon Sand (Penrith) Pty Limited (Dixon Sand) owns and operates the Haerses Road Quarry (the Quarry) which is located in Maroota within The Hills Shire local government area.

On 6 January 2022, Dixon Sand submitted an application to modify the Quarry's consent under section 4.55(1A) of the *Environmental Planning and Assessment Act 1979*. The proposal seeks to construct approved and new site infrastructure and administration buildings further south from the currently approved location and to introduce a new resource extraction method for cutting friable sandstone within the approved Sandstone Extraction Areas.

The application was not exhibited, however the Department made the Modification Report publicly available on its website from 20 January 2022 and sought comments from The Hills Shire Council (Council) and the Environment Protection Authority (EPA). Council did not object to the application.

The EPA raised concerns on the potential noise, vibration and air quality impacts from the proposed extraction method and the processing of the extracted sandstone. It considered the predictive noise and air quality modelling undertaken previously may not be sufficient to understand the noise and air quality impacts of the proposed modification. The Department required Dixon Sand to provide assessments of noise, vibration and air quality impacts from the proposed hydraulic saw sandstone cutting compared to the approved dozer ripping sandstone extraction methods.

The Department considers that the additional assessments adequately address the EPA's concerns and demonstrate that significant noise, dust and vibration impacts are unlikely. Dixon Sand has committed to implementing additional mitigation measures in the operations of plant and equipment to ensure the Quarry would meet the consent criteria for noise and air quality. The Department has imposed additional conditions requiring at-source mitigation in the sandstone cutting shed and operational mitigation measures within the noise and air quality management plans to ensure the modification's impacts are effectively managed.

The Department is satisfied the modification would not result in any significant additional impacts greater than those previously assessed and approved, and that any residual and unforeseen impacts from the proposed modification would be appropriately managed through required management plans. The modification affords Dixon Sand flexibility and efficiency in its operations to allow it to continue to supply speciality sand products to the construction and landscaping markets.

The Department considers that, on balance, the modification is of public interest and approvable.

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1 Introduction

1.1 Background

The Haerses Road Sand Quarry (the Quarry) is an established quarry located off Wisemans Ferry Road in Maroota within the Hills Shire local government area (**Figure 1**). The Quarry is owned and operated by Dixon Sand (Penrith) Pty Ltd (Dixon Sand) and supplies speciality sand and sandstone products to the Sydney Metropolitan construction and landscaping markets.

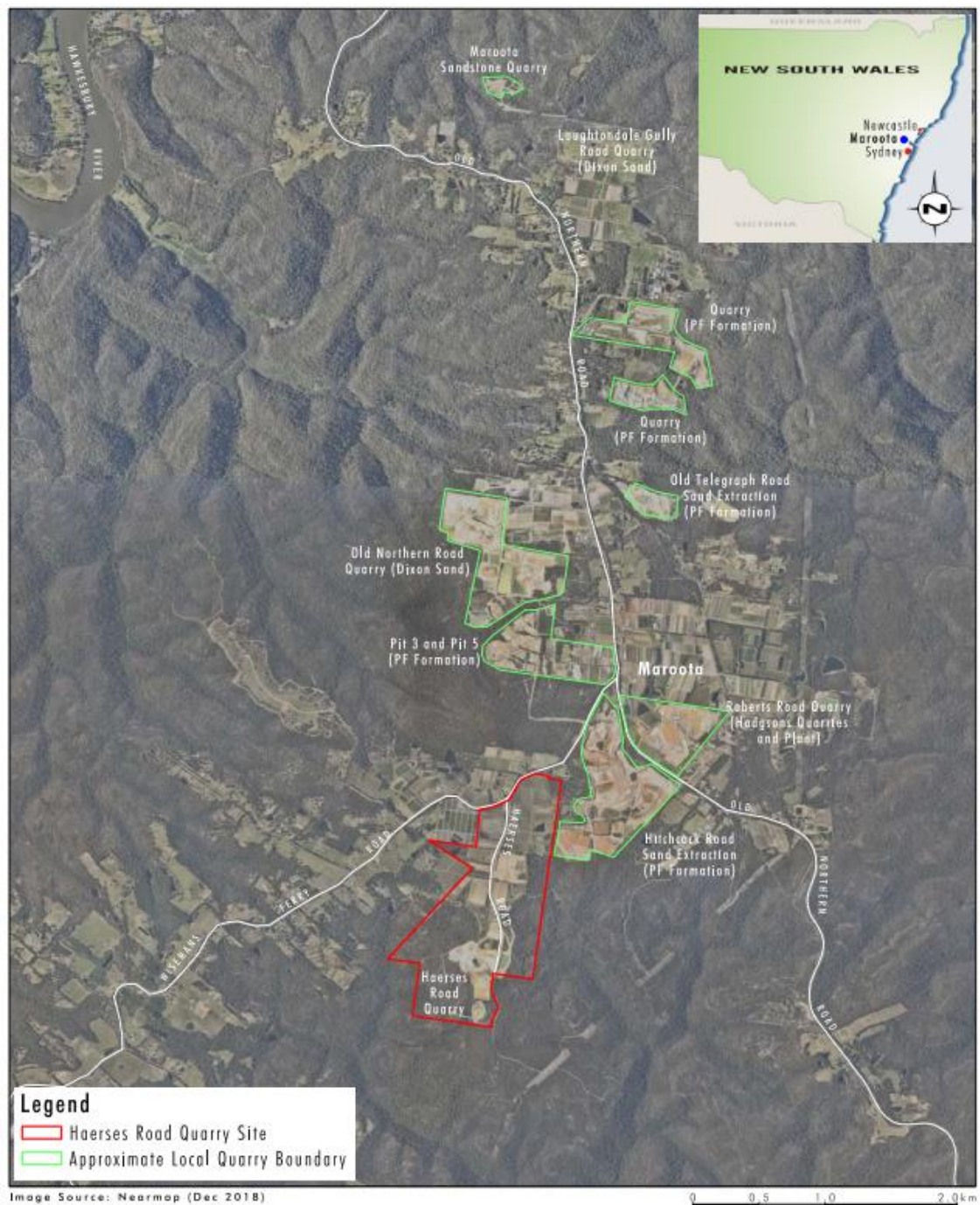


Figure 1 | Regional Context Map

Dixon Sand also owns and operates the Old Northern Road Quarry and Laughtondale Gully Road Quarry, both located to the north of the Quarry. There are ten sand and sandstone quarries in the general Maroota extractive industries area (**Figure 1**).

1.2 Approval History

Extraction activities at the Quarry are permitted under development consent DA 165-7-2005, which was granted in February 2006 by the then Minister for Planning under Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). The original consent has been modified on four occasions under section 75W and 4.55 provisions of the EP&A Act.

The modified development's consent allows extraction and processing of up to 495,000 tonnes per annum of sand products until 2046.

A consolidated project description is provided in **Appendix A**.

2 Proposed modification

On 6 January 2022, Dixon Sand submitted a modification application and the supporting Modification Report (**Appendix A**) under section 4.55(1A) of the EP&A Act.

The proposed modification seeks approval to:

- relocate the approved site office, workshop and weighbridge to a new site infrastructure location within the Tertiary Sand Extraction Area Stage 2 south of the current approved location at the corner of Wisemans Ferry Road and Haerses Road (**Figure 2**);
- construct additional buildings (first aid room, lunchroom, weighbridge office, sandstone cutting shed), associated hardstand areas and carparking area within the site infrastructure envelope;
- introduce a new extraction method within the Sandstone Extraction Areas A and B involving sandstone cutting using an excavator fitted with a hydraulic circular saw attachment (enclosed or hollow drum saw) to produce large blocks of sandstone to supplement the approved dozer ripping extraction method in these extraction areas; and
- undertake the final cutting of the large blocks of the extracted sandstone using additional stone cutting saws within a new dedicated sandstone cutting shed using wet cutting techniques;
- increase the footprint of the site infrastructure envelope than previously approved to accommodate the new buildings and infrastructure proposed in the modification; and
- update the following figures in the consent:
 - Porters Road Biodiversity Area (Appendix 4, Figure 2) to accurately reflect the offset area boundary finalised in the BioBanking Agreement dated November 2017 for the Quarry and exclude an existing bushfire access road and potential future building envelope (subject to separate approvals); and
 - Conceptual Final Landform (Appendix 6) to remove an outdated inset which related to the final landform prior to the determination of Modification 3.

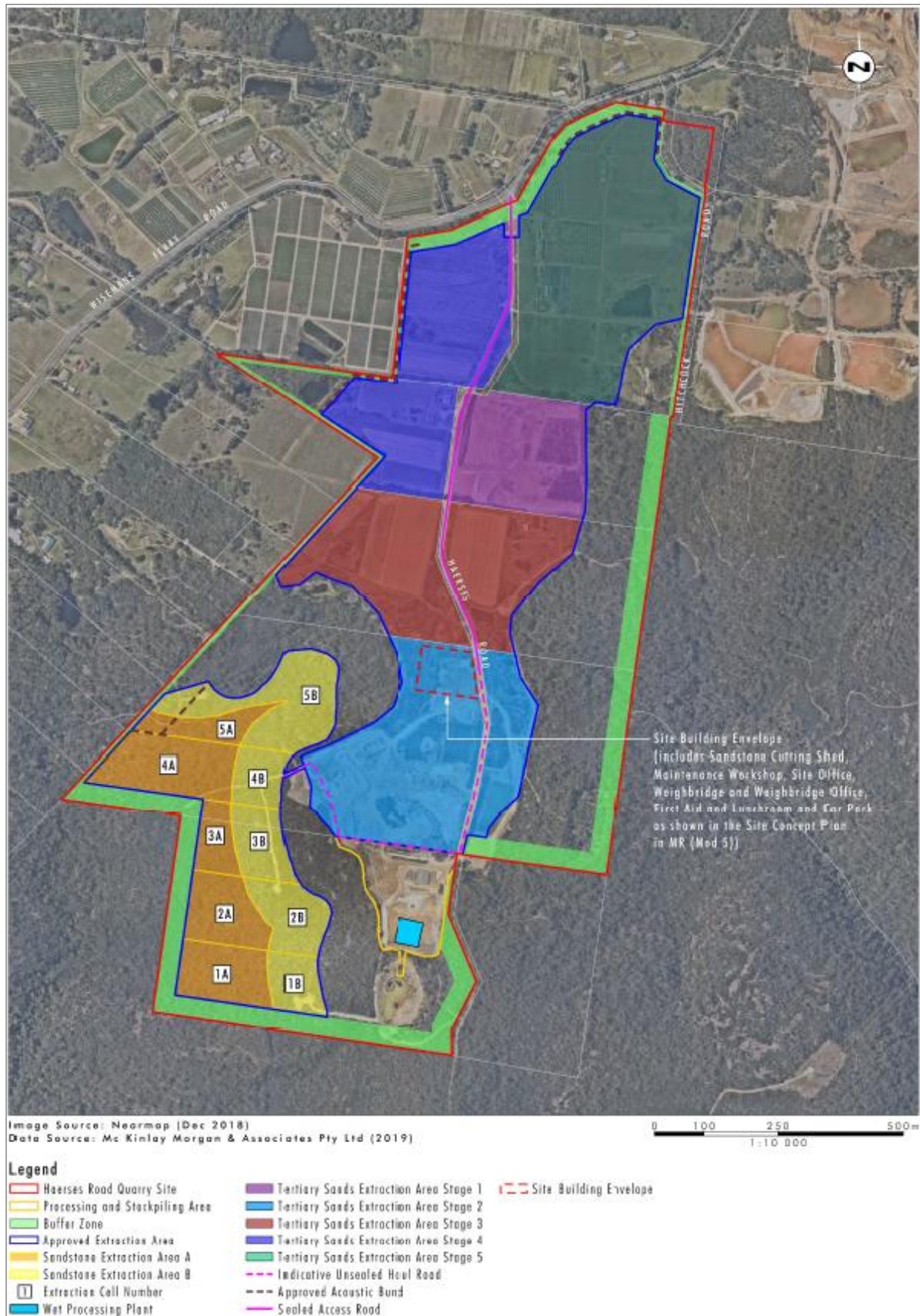


Figure 2 | Location of the Proposed Site Infrastructure

The construction of the infrastructure at the new location would occur after the extraction of sand resource from the Tertiary Sand Extraction Area Stage 2 has been completed and the area has been back-filled and compacted to meet geotechnical engineering specifications. A concept site infrastructure layout is shown in **Figure 3**.

3.2 Consent authority

The Minister for Planning (the Minister) is the consent authority for the application under Section 4.5(a) of the EP&A Act. However, the Minister's delegation dated 09 March 2022, the Director – Resource Assessments may determine the application because there were no objections from the community, The Hills District Council (Council) did not object to the proposal and Dixon Sand has not made any reportable political donation.

3.3 Mandatory matters for consideration

The Department has considered the relevant matters for the modification application under sections 4.15(1) and 4.55(3) of the EP&A Act and summarised the findings in **Sections 5** and **6** of this report.

3.4 Objects of the EP&A Act

The Department has assessed the proposed modification against the objects set out in section 1.3 of the EP&A Act and this assessment is provided in **Appendix B**.

3.5 Commonwealth Approval

On 6 August 2018, a delegate of the then Commonwealth Minister for the Department of Environment and Energy approved the original project (EPBC 215/7608) under the *Environmental Protection Biodiversity Conservation Act 1999* (EPBC Act) following an assessment of its potential impacts on Matters of National Environmental Significance (MNES), specifically listed threatened species and communities (sections 18 & 18A of the EPBC Act). As the proposed modification would not affect the approved disturbance area, the Department has no further consideration to MNES.

3.6 Other Approvals

The Quarry's activities are regulated under Environment Protection Licence 12513, granted under the *Protection of the Environment Operations Act 1997*, which will require amendment. Dixon Sand also holds two Water Access Licences (WAL) associated with surface water use. The proposed modification would not require variation or amendment to these WALs.

A section 138 approval from Council as the road authority under the *Roads Act 1993* would be required for the construction of the vehicular access points off Haerses Road within the road reserve for access to and egress from the proposed site infrastructure area.

An approval under section 68 of the *Local Government Act 1993* from Council would be required for the construction and operation of the onsite sewage management system at the new infrastructure location.

4 Engagement

4.1 Department's Engagement

Exhibition or notification of an application to modify a consent under section 4.55(1A) is not required by the EP&A Act. The Department made the Modification Report publicly available on its website from 20 January 2022 and, requested and received, comments on it from Council and the Environment Protection Authority (EPA) (**Appendix A**).

4.2 Agency Advice

The **EPA** expressed concerns on the noise, vibration and air quality impacts and consistency with the previously approved modelling predictions. Dixon Sand provided additional assessments and committed to implementing mitigation measures to minimise potential impacts. These are discussed in **Section 5**.

Council did not object to the proposal, however expressed concerns on the introduction of the sandstone cutting method using a hydraulic saw, which it considered would not be substantially the same development as the original application (as modified).

The Department notes that the definition of 'extractive industry' in *The Hills Local Environmental Plan 2019* includes 'sawing' as an acceptable method for winning or removing extractive materials. As discussed in **Section 3.1**, the development as modified does not result in a change in the existing land use and would be essentially or materially or substantially the same development that was last modified.

4.3 Additional Information

Dixon Sand provided additional information on:

- 17 March 2022 that addressed issues raised by the EPA and Council (**Section 4.2**) and included a table of consolidated and updated mitigation measures for minimising potential noise and air quality impacts; and
- 19 May 2022 that included an updated consolidated project description for the development and a set of updated figures, discussed in **Section 3** and **Table 1**.

5 Assessment

The Department considers the key issues for assessment are noise and air quality impacts. An assessment of these issues is included in **Table 1**, along with other issues relevant to the modification.

Table 1 | Assessment of Issues

| Issue | Assessment | Recommendation |
|----------------------------|---|--|
| Noise and Vibration | <ul style="list-style-type: none"> The modification has the potential to alter the noise emissions profile of the Quarry. The comparative assessment of noise emissions from the approved method of a dozer ripping sandstone blocks versus cutting with an excavator attached with a hydraulic saw demonstrated that compliance with the consent noise criteria could be achieved. Compliance could also be achieved with the concurrent operation of the dozer and the excavator. Regardless, the comparative assessment recommended: <ul style="list-style-type: none"> avoidance of concurrent operations of the dozer and the excavator when using the enclosed drum saw under noise-enhancing conditions or while operating in exposed locations such as at ground level or in direct line of sight of receptors; and the use of the enclosed drum saw attachment with the excavator for sandstone cutting as it is quieter than the hollow drum saw attachment. Dixon Sand has committed to adopting these recommendations in its operations to minimise noise emissions. To mitigate the impact of the subsequent processing of the large blocks of the extracted sandstone within the sandstone cutting shed, Dixon Sand has committed to designing and constructing this shed with sufficient noise attenuation features to maintain compliance with the consent noise criteria at receptors. The assessment of vibration impacts concluded that the proposed sandstone extraction method would not result in any vibration impacts. The Department considers that the additional technical information provided by the Applicant and the noise mitigation measures addresses EPA's concerns on the noise and vibration impacts of the modification. The Department is satisfied that the modification would not result in any adverse or unacceptable noise and vibration impacts, and that the noise impacts can be appropriately managed by an updated Noise Management Plan. | <p>The Department recommends:</p> <ul style="list-style-type: none"> a new consent condition that ensures the sandstone cutting shed would be designed and constructed with adequate noise attenuation measures to achieve compliance with the noise criteria; and the existing consent condition relating to the Noise Management Plan be updated to include the additional noise mitigation measures committed to by Dixon Sand. |
| Air Quality | <ul style="list-style-type: none"> Zephyr Environmental completed a semi-quantitative assessment of the potential air quality impacts, concentrating on the change in PM₁₀ concentration emissions. The assessment demonstrated that using the excavator with the saw attachment, instead of using dozer ripping, for | <p>The Department recommends that the Air Quality Management Plan is updated to include the additional air quality mitigation measures committed to by Dixon Sand.</p> |

| Issue | Assessment | Recommendation |
|--|--|--|
| | <p>the extraction of the sandstone may result in a minor (~3.5%) increase in site PM₁₀ particulate emissions.</p> <ul style="list-style-type: none"> It was concluded that this increase would unlikely result in measurable change to offsite concentrations of air quality parameters previously assessed and approved. Dixon Sand has committed to mitigation measures to reduce emissions of particulate matter as follows: <ul style="list-style-type: none"> avoidance of concurrent operations of sandstone extraction in the Sandstone Extraction Areas A and B and the: <ul style="list-style-type: none"> excavator loading of the extracted sandstone for transfer to the processing area; and operations of haulage trucks on unsealed roads between the extraction area and the processing area; and utilisation of only wet processing methods during final cutting of the extracted sandstone into smaller blocks. The Department considers that, with the adoption of the mitigation measures, air quality impacts from the modification can be managed appropriately by an updated Air Quality Management Plan. | |
| Water | <ul style="list-style-type: none"> The additional process water required for the wet cutting of sandstone blocks would be sourced from rainwater, collected from the larger roof areas of the proposed buildings, and by recycling and reuse. Volumes of water for drinking and ablutions would not increase as the Quarry workforce is not proposed to increase. The proposed onsite sewage management (treatment and disposal) would be installed in accordance with Council's requirements and approvals (Section 3.6). The Department notes that the erosion and sediment controls for construction works are already included in the approved Water Management Plan. | No change to existing conditions is recommended. |
| Traffic and Transport | <ul style="list-style-type: none"> The proposed modification does not increase traffic movements. The proposed vehicular access points off Haerses Road for access to and exit from the new infrastructure area would be established in accordance with Council's section 138 approvals (Section 3.6). | No change to existing conditions is recommended. |
| Biodiversity, Heritage and Visual | <ul style="list-style-type: none"> The new infrastructure area would be constructed within the development's approved disturbance footprint and accordingly impacts to biodiversity or heritage are unlikely. The new infrastructure location, further to the south from the approved site entrance location means that visual impacts to receptors near the site entrance would be reduced. | No change to existing conditions is recommended. |
| Rehabilitation | <ul style="list-style-type: none"> The proposal to construct the new infrastructure in the Tertiary Sandstone Extraction Area Stage 2 after the extraction void has been back-filled and compacted to the ground level would be consistent with the concept final landform approved in Modification 3. All constructed infrastructure would be removed as required by the existing conditions of consent and management plans. | No change to existing conditions is recommended. |

| Issue | Assessment | Recommendation |
|--|--|--|
| Increased Site Infrastructure Footprint and Updated Figures | <ul style="list-style-type: none"> • The proposal to construct additional buildings and infrastructure would increase the site infrastructure envelope footprint compared to the approved footprint. • However, construction works would occur wholly within an already disturbed area and would not increase the Quarry's approved disturbance footprint. • The figures in the consolidated project description have been updated to: <ul style="list-style-type: none"> ○ reflect the larger site infrastructure footprint; ○ include higher resolution aerial satellite imagery as base maps for better site details; ○ align the boundary of the Porters Road Biodiversity Area with that finalised in the BioBanking Agreement for the Quarry; and ○ correct an error in the Concept Final Landform figure. | <p>No additional conditions are recommended.</p> <p>The Department recommends figures in Appendices 1 (Figure 1), 2, 3, 4 (Figure 2), 5 (Figure 1) and 6 be replaced with updated figures.</p> |
| Socio-economic | <ul style="list-style-type: none"> • The Quarry would continue to provide economic benefits through employment to up to 16 full-time equivalent staff and the supply of specialist sand and sandstone products to the construction and landscaping markets. | <p>No additional conditions are recommended.</p> |

6 Evaluation

The Quarry is an existing development that has been operating since 2006 and provides speciality sand and sandstone products to the local construction and landscaping markets. It employs up to 16 full time equivalent employees.

The modification would result in site infrastructure located away from Wiseman's Ferry Road into a more central location within the development site which would improve the efficiency of Quarry operations as extraction progresses to the south. The introduction of a new extraction method for sandstone extraction in the Sandstone Extraction Areas A and B and the subsequent final cutting of the larger blocks of the extracted sandstone would enhance the Quarry's ability to supply specialty sandstone products for the commercial and residential construction industry.

The Department has assessed the merits of the proposed modification in accordance with the requirements of the EP&A Act and in consultation with the relevant stakeholders. Council did not object to the proposed modification. The EPA raised concerns on the potential noise, vibration, and air quality impacts from the modification. Dixon Sand provided additional noise, vibration and air quality impact assessments that have adequately addressed EPA's concerns and show that changes to local amenity are unlikely.

The Department considers that the new conditions of consent requiring the design and construction of the sandstone cutting shed to meet the existing noise criteria as well as the additional operational mitigation measures within the noise and air quality management plans would ensure any residual risks are appropriately managed.

On balance, the Department considers the proposed modification can be undertaken without any significant additional impacts to the environment or surrounding community when compared to the approved development.

The Department is therefore satisfied the modification is in the public interest and is approvable.

The Department has drafted a Notice of Modification (**Appendix C**) and a consolidated version of the Quarry's development consent (**Appendix D**), as proposed to be modified. Dixon Sand has reviewed these documents and accepts the new conditions.

7 Recommendation

It is recommended that the Director, Resource Assessments, as delegate of the Minister for Planning:

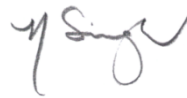
- **considers** the findings and recommendations of this report
- **determines** that the application DA 165-7-2005 Modification 5 falls within the scope of section 4.55(1A) of the EP&A Act
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to approve the modification
- **modifies** the development consent DA 165-7-2005
- **signs** the attached approval of the modification (**Appendix C**).

Recommended by:



Lincoln de Haas
Environmental Assessment Officer
Resource Assessments

Recommended by:



Nagindar Singh
Senior Environmental Assessment Officer
Resource Assessments

8 Determination

The recommendation is **Adopted** by:



29/06/2022

Jessie Evans
Director Resource Assessments
Planning and Assessment
as delegate of the Minister for Planning

Appendices

Appendix A – Key Documents

Appendix A1 – Modification Application and Modification Report

<https://www.planningportal.nsw.gov.au/major-projects/project/43496>

Appendix A2 – Agency Advice

<https://www.planningportal.nsw.gov.au/major-projects/project/43496>

Appendix A3 – Additional information

<https://www.planningportal.nsw.gov.au/major-projects/project/43496>

Appendix B – Objects of the EP&A Act

The Minister or delegate must consider the objects of the EP&A Act when making decisions under the Act. The Department has assessed the proposed modification against the objects set out in section 1.3 of the Act. The objects of most relevance to the proposed modification are:

- (a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources
- (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment
- (c) to promote the orderly and economic use and development of land
- (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats
- (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State
- (j) to provide increased opportunity for community participation in environmental planning and assessment.

The Department considers that the development encourages the proper management and development of resources (Object (a)) and promotion of the orderly and economic use of land (Object (c)). The Department has considered the principles of ecologically sustainable development (ESD, Object (b)) in its assessment of the proposed modification. The Department considers the proposal can be carried out in a manner that is consistent with the principles of ESD. The Department's assessment has sought to integrate all significant environmental, social and economic considerations. Consideration of the protection of the environment (Object (e)) is provided in **Section 5** of this report. The Department considers the proposal minimises and mitigates potential environmental impacts.

The Department considers that consultation undertaken with key stakeholders satisfies the objectives to share responsibility between different levels of government (Object (i)), while making the application publicly available on its Major Projects website satisfies the objectives of Object (j).

Appendix C – Notice of Modification

<https://www.planningportal.nsw.gov.au/major-projects/project/43496>

Appendix D – Consolidated Consent

<https://www.planningportal.nsw.gov.au/major-projects/project/43496>