Haerses Road Quarry Modification 3

Production Increase
State Significant Development Modification Assessment
(DA 165-7-2005 MOD 3)

July 2021

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Title: Haerses Road Quarry

Subtitle: Modification 3 – Production Increase

1 Introduction

The Haerses Road Sand Quarry (the Quarry) is a sand and sandstone quarry located at Maroota within the Hills Shire local government area (see **Figure 1**). The Quarry is owned and operated by Dixon Sand (Penrith) Pty Ltd (Dixon Sand) and operates in conjunction with Dixon Sand's Old Northern Road Quarry, located approximately 2 kilometres (km) north of the site. The Quarry produces a range of sand and gravel products that supply the local Sydney construction and landscaping market.

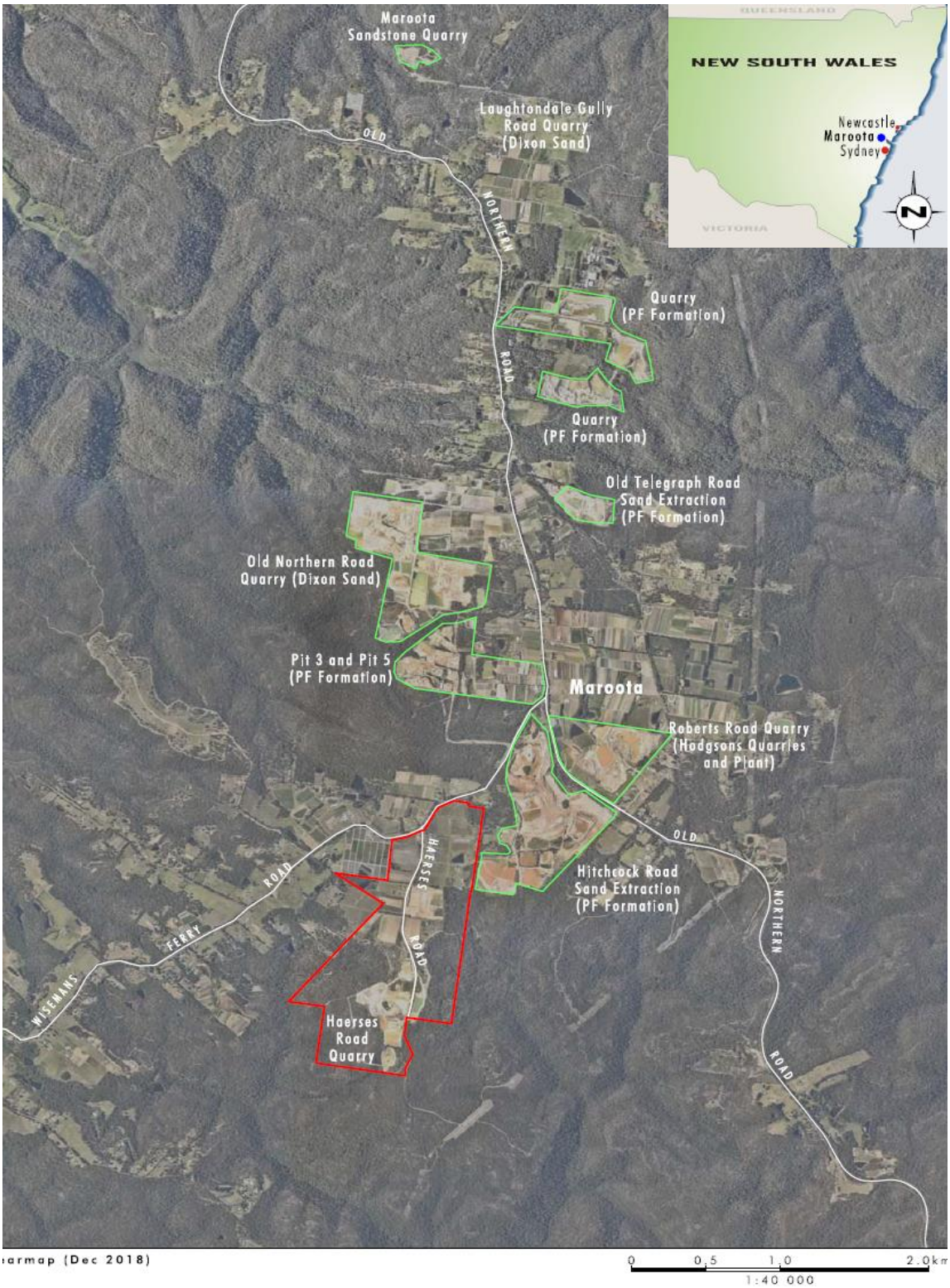

Figure 1 | Regional Context Map

The quarry is located in a rural setting and directly adjoins a sandstone quarry (owned and operated by PF Formation) to the immediate east and with heavily vegetated land that is owned by the Deerubbin Local Aboriginal Land Council and Crown Land to the south east, south and south west. The Maroota area contains seven other sand and sandstone quarries, within the general locality of Haerses Road Quarry (see **Figure 1)**.

Other surrounding land uses include rural-residential properties and agricultural activities comprising fruit orchards, market gardens and livestock production. Maroota Public School is also located approximately 1.6km to the north of the Quarry, on Old Northern Road.

1.1 Approval History

Extraction activities at the Quarry are permitted under 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) which allows for the:

- staged extraction of the five original extraction cells (Stage 1-5) comprising 7 million tonnes of friable sandstone at a rate of up to 250,000 tonnes per annum (tpa) over a 25-year period until February 2031;
- processing operations (crushing, screening and washing) of quarry products on-site;
- transport of up to 190,000 tpa of quarry products (screened sand) to the Old Northern Road Quarry for further processing and washing; and
- transport of up to 250,000 tpa of quarry product directly to local and regional markets.

The Development Consent has been modified on three occasions. Modification 1 was approved in January 2018 by the then Minister for Planning under section 75W of the EP&A Act. This modification permitted the:

- expansion of the approved extraction area (Stages 1A-5B) by 18.89 hectares (ha), allowing the availability of an additional 15 million tonnes of friable sandstone (subject to the sequential retirement of biodiversity offset credits and the approval of a 2-year Groundwater Monitoring Program, demonstrating groundwater would not be intercepted within the friable sandstone zones);
- extending the life of the Quarry by a further 15 years until 2046;
- allowing use of mobile crushers and a mobile wet plant;
- converting a dwelling to a site office;
- constructing a weighbridge, workshop, car park, internal haul roads, water management structures and acoustic bunds;
- permitting all quarry products to be transported directly to market;
- allowing trucks to travel to the site from either the northeast or south-west; and
- importing up to 100,000 tpa of virgin excavated natural material (VENM) and excavated natural material (ENM) for the purpose of progressive rehabilitation to Class 4 Agricultural Land or native vegetation.

Modification 2 was approved in January 2019 by the Minister for Planning under section 4.55(1) of the EP&A Act. This modification corrected an administrative error relating to the establishment of buffer zones around the project site boundary.

Modification 4 was approved in June 2021 by a delegate of the Minister for Planning and Public Spaces under section 4.55(1A) of the EP&A Act. This modification permitted a change in the sequence of extraction within the Friable Hawkesbury Sandstone Extraction Area, allowing cell 2A to be extracted prior to the extraction of cell 1B.

The Quarry, as modified, consists of two primary extraction areas which contain variable resource qualities:

- the Maroota Tertiary Sand Extraction Area, which is separated into 5 large stages and targets alluvial sand deposits; and

- the Friable Hawkesbury Sandstone Extraction Area, which comprises 10 extraction cells, divided into extraction areas 1A-5B. The extraction sequence within the Friable Hawkesbury Sandstone extraction area is approved to sequentially progress through stages 1A, 2A, 1B, 2B, 3A, 3B, 4A, 4B, 5A and 5B.

The approved site layout and extraction staging plan is provided in **Figure 2.**

1.2 Integrated Operations

In addition to the Haerses Road Sand Quarry, Dixon Sand also owns and operates the Old Northern Road Quarry, located approximately 2 kilometres (km) north of the site (see Figure 1). While the Old Northern Road Quarry operates under a separate ministerial consent (DA 250-09-01), the two quarries are interlinked and function as part of an integrated business operation. This integrated operation is evidenced by the two sites sharing a Community Consultative Committee and some post-approval reporting requirements.

Under DA 165-7-2005 for the Haerses Road Sand Quarry, Dixon Sand is permitted to transport up to 190,000 tonnes of quarry products per year to the Old Northern Road Quarry for processing, provided that this transport occurs within the total road haulage limits that apply to each site.

In addition to the conditions imposed on the Haerses Road Sand Quarry, DA 250-09-01 for the Old Northern Road Quarry requires Dixon Sand to comply with overall annual production and traffic limits for the two sites. These limits allow the Old Northern Road Quarry to:

- produce up to 495,000 tpa of quarry products (including material sourced from the Haerses Road Sand Quarry and processed at the Old Northern Road Quarry) until 24 May 2042;
- continue to receive and process extractive material from the Haerses Road Sand Quarry, and dispatch quarry products from the site, until 14 February 2046; and
- transport product by road, within road haulage limits for inbound and outbound truck movements, including a maximum of up to 180 truck movements per day and a sublimit of up to 40 truck movements per day between the hours of 5.45 am and 7.00 am.

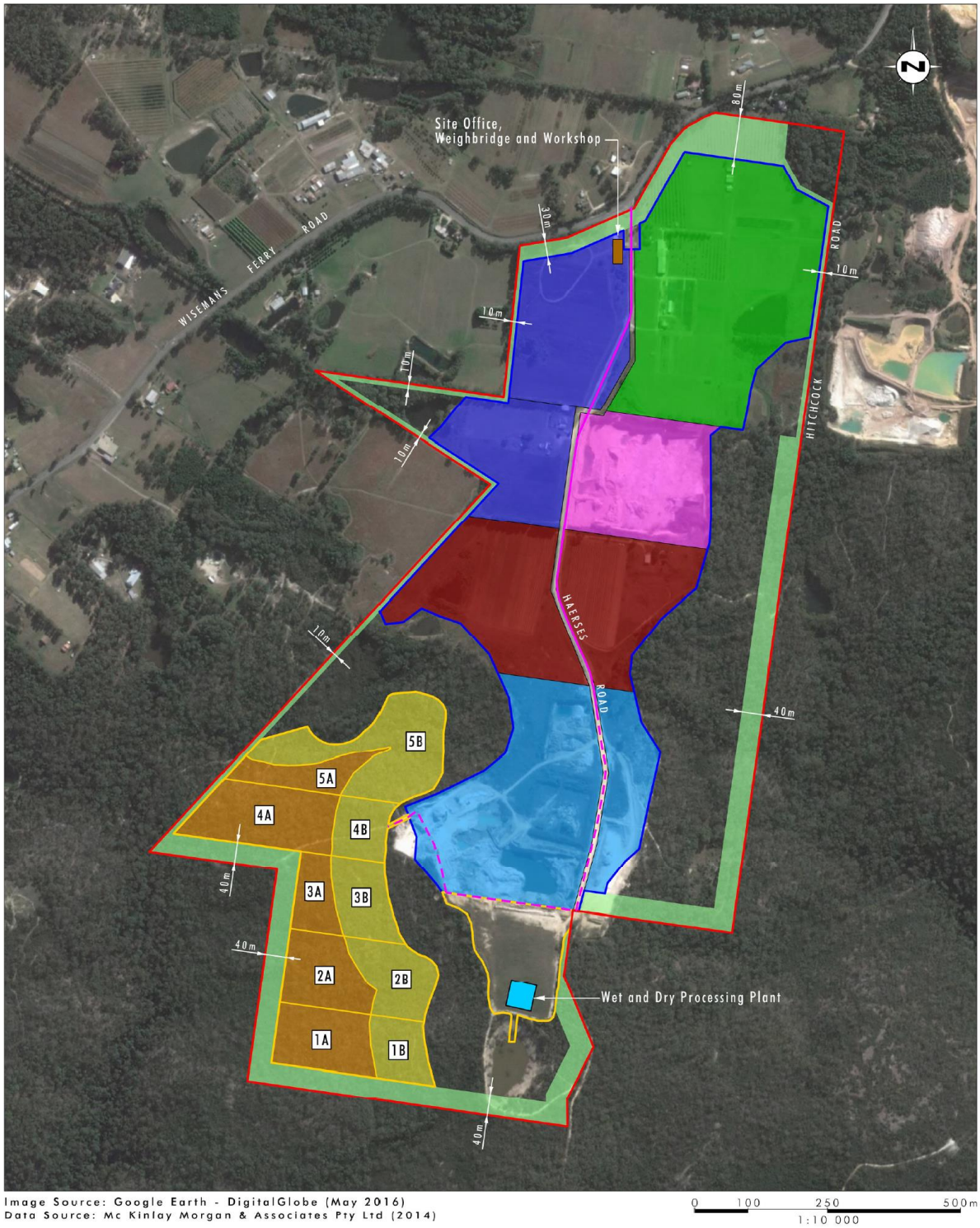

Figure 2 | The approved staging map of the Haerses Road Quarry site

2 Proposed Modification

In January 2020, Dixon Sand submitted a modification application (DA 165-7-2005 MOD 3) under section 4.55(2) of the EP&A Act. The proposal involves:

- increasing the extraction rate from 250,000 tpa to 495,000 tpa;
- increasing overall truck movements from 56 movements to 180 movements per day;
- expanding the disturbance footprint by 1 hectare in Stage 5 and accessing an additional 250,000 tonnes of resource;
- increasing the maximum rate of VENM/ENM importation from 100,000 tpa to 250,000 tpa, for the purposes of site rehabilitation and reprocessing to produce a blended products;
- changing some site plant and equipment, including increasing the size of the two onsite trucks from 30-tonne to 40-tonne, 3 new front-end loaders and an additional excavator; and
- increasing the number of full-time employees from 8 to 16.

The modification does not involve changes to the quarry life, staging of extraction, hours of operations, extraction methods or processing activities, site infrastructure, existing biodiversity offset areas and processing arrangements between the Quarry and Dixon Sand's associated Old Northern Road Quarry.

The main elements of the proposal are described further below, and are detailed in the Modification Report (see **Appendix A**). A comparison between the approved development (as last modified under section 75W) and the proposed modification is provided in **Table 1**.

Table 1 | Approved vs Proposed Quarry Components

Component	Existing	Proposed
Quarry Life	2046	No change
Approved Resource	20.8 million tonnes	21.05 million tonnes
Production Limit	250,000 tpa	495,000 tpa
Road Transport Product Limits	Combined 250,000 tpa, comprising: • up to 190,000 tpa to Old Northern Road Quarry; and • up to 60,000 tpa direct to market	Combined 495,000 tpa, comprising: • up to 190,000 tpa to Old Northern Road Quarry; and • up to 495,000 tpa direct to market
Truck Movements	Up to 56 truck movements per day (combined total inbound and outbound)	Up to 180 truck movements per day (combined total inbound and outbound)
	Up to 20 vehicle movements between 6:00am and 7:00am	No change to vehicle movements between 6:00am and 7:00am
Total Disturbance Footprint	Approximately 74.5 ha	Approximately 75.5 ha
Importation of Material	Receival of up 100,000 tpa of VENM/ENM Reprocessing of clean recycled sand component of VENM/ENM for sale	Receival of up to 250,000 tpa of VENM/ENM for landform construction, reprocessing or sale
Infrastructure	Site office, weighbridges, workshop, car park	No change
Plant and Equipment	• Front end loader • 40 tonne excavator • 30 tonne trucks • water cart (1)	• 2 new 40 tonne trucks to replace existing 30 tonne trucks • 1 new additional excavator • 3 new additional front-end loaders

	• mobile dry screen • dozer • grader • service vehicle	
Employment	8 people full time	16 people full time

Extraction Rate Increase

The proposal seeks to increase the maximum extraction rate at the site from 250,000 tpa to 495,000 tpa (ie commensurate with the extraction limits that apply to Dixon Sand's separate Old Northern Road Quarry). The proposed increase in extraction rate follows the determination of Modification 1 in January 2018, which increased the approved extractable sand resources within the Quarry site from 5.8 to 20.8 million tonnes. Modification 3 would allow Dixon Sand to optimise the recovery of these valuable sand resources and meet heightened market demand for construction materials in the Greater Sydney region.

Imported VENM and ENM Increase

The proposal involves increasing the maximum allowable importation of VENM and ENM from 100,000 tpa to 250,000 tpa for the purpose of backfilling the extraction area at an increased rate and reprocessing into a blended product. The VENM and ENM would be sourced from infrastructure projects within the Greater Sydney area and accepted on site under a proposed protocol which would ensure compliance with the *Protection of the Environment Operations Act 1997* (POEO Act) and the *POEO (Waste) Regulations*.

Trucking Limits Increase

The proposal seeks to increase the number of heavy vehicle movements (combined inbound and outbound) of the quarry from 56 trucks per day to 180 trucks per day. The increase in truck movements would be commensurate with the transportation limits that currently apply to Dixon Sand's separate Old Northern Road Quarry (which has an equivalent production limit as that being proposed under the modification) and would capture the proposed dispatch of product from the Quarry to market, as well as the importation of clean fill to the site for the purpose of rehabilitation and reprocessing.

The proposal would not involve any change to the:

- approved ability to transport up to 190,000 tpa of quarry product to Old Northern Road Quarry;
- operating hours of the quarry;
- existing quarry access arrangements; and
- existing sublimit of 20 truck movements per day between 6 am and 7 am.

Increased Extraction Area – Stage 5

The proposal seeks to extend the Stage 5 sand extraction area on the northern boundary on the quarry. This extension would comprise approximately 1 ha of additional surface disturbance and the extraction depth would be maintained at 10 m, at least 2 m above the wet weather groundwater table. This would increase the available resource by approximately 100,000 m^3 allowing the recovery of approximately 200,000 - 250,000 tonnes of additional material.

This proposed extension is situated in an area of the existing buffer lands that occurs within the approved project boundary, but separates the current quarry pit from surrounding properties, roads and other features. The proposal seeks to reduce the existing northern buffer to a minimum of 30 m from Wisemans Ferry Road, the boundary of Lot 3 DP111886 and 10 m from Hitchcock Road, as occurs elsewhere at the Quarry.

The extraction of this additional area would also require shifting a planned 5 m high acoustic bund, which was approved for construction along the northern boundary of Stage 5, to incorporate the extension area (see **Figures 3** and **4**). The proposal includes a modified conceptual final landform, shown in **Figure 5**.

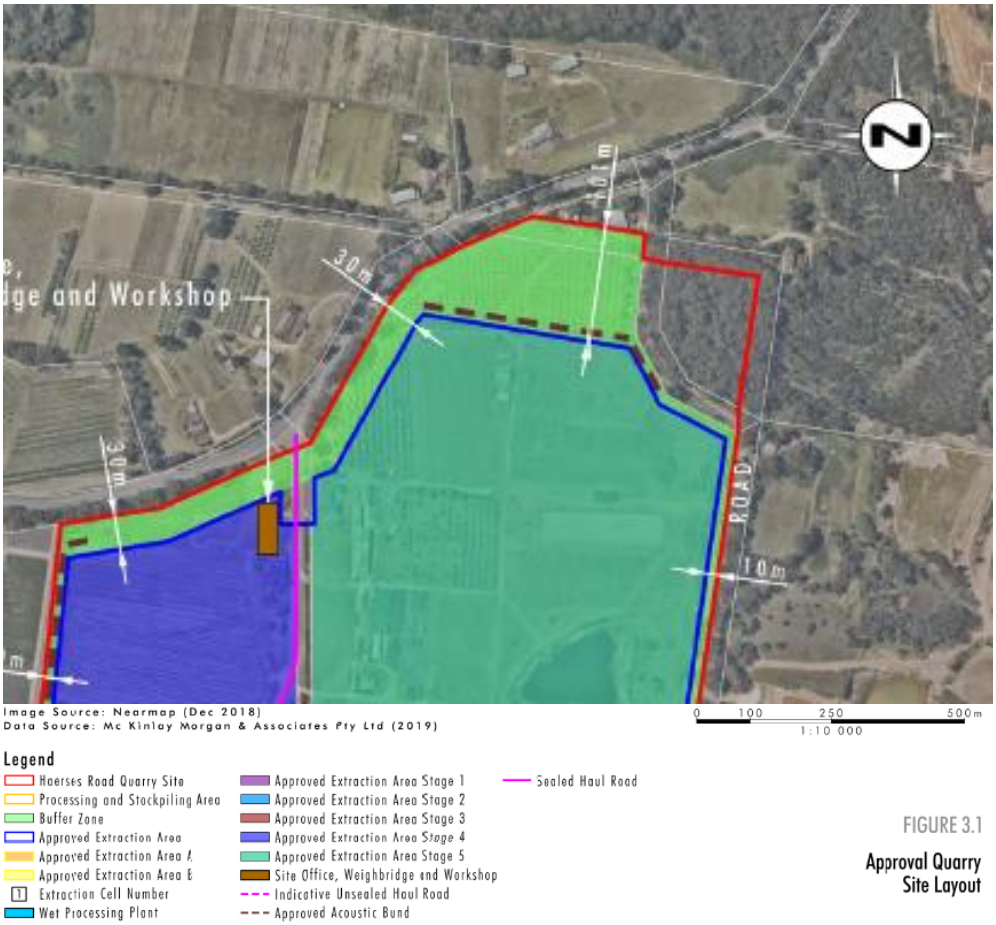

Figure 3 | Approved Site Layout

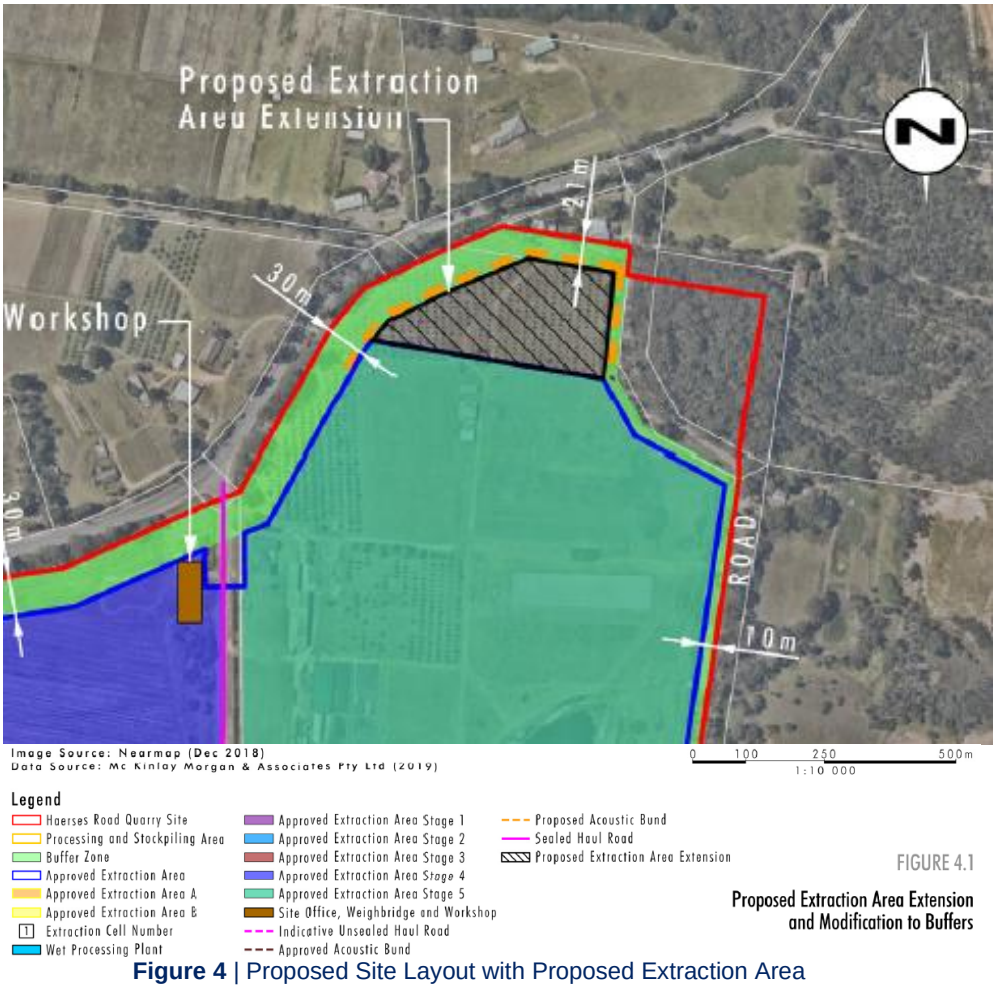

Figure 4 | Proposed Site Layout with Proposed Extraction Area

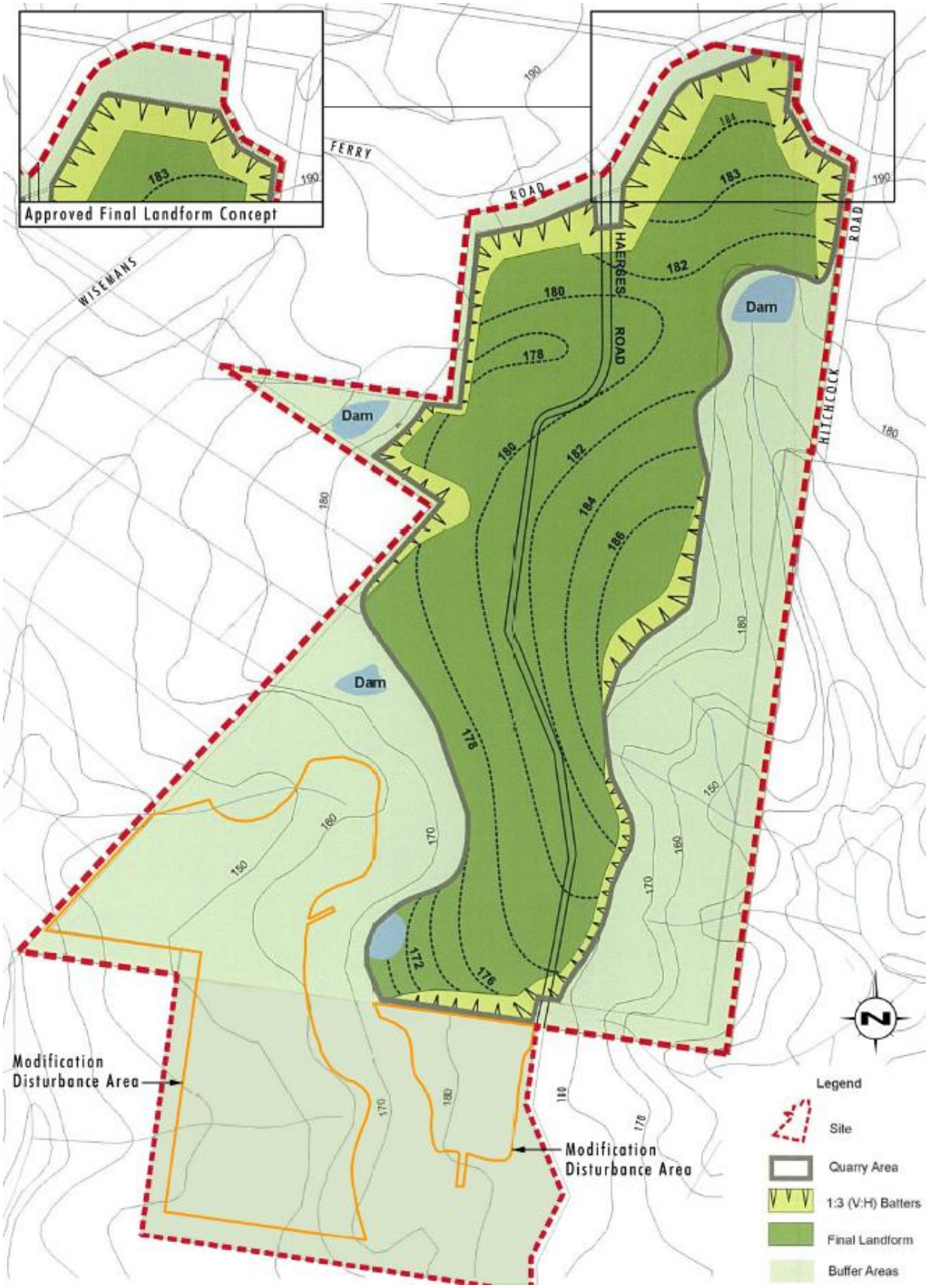

Figure 5 | Proposed Final Landform

3 Statutory Context

3.1 Scope of Modifications

The modification application and Modification Report were lodged under section 4.55(2) of the EP&A Act. The Department has reviewed the scope of the modification and considers that it:

- would not significantly increase the environmental impacts of the project as approved (see Section 5);
- is substantially the same development;
- would not change the key approved elements of the original development; and
- would only involve a minor amount of additional disturbance outside of the already approved disturbance areas for the project.

The Department is therefore satisfied that the proposed modification is within the scope of section 4.55(2) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined under section 4.55(2) of the EP&A Act.

The Department has also:

- considered advice provided by public authorities and submissions made on the proposed modification (see Section 4); and
- considered the relevant matters in section 4.15(1) of the EP&A Act, including;
    - the provisions of relevant environmental planning instruments;
    - the likely impacts of the proposed modification, including environmental impacts on both the natural and built environmental, social and economic impacts in the locality;
    - the public interest, including any relevant objects of the EP&A Act; and
    - the reasons given by the approval authority for the grant of the original approval.

3.2 Substantially the Same Development

Under section 4.55(2)(a) of the EP&A Act, DA 165-7-2005 cannot be modified unless the consent authority is satisfied that the modified proposal is substantially the same as the development for which consent was originally granted and as last modified under section 75W.

The Department is satisfied that the project as modified would be substantially the same development as approved and last modified under section 75W, and that the proposal should be characterised as a modification to the existing development consent for the following reasons:

- while the modification would accelerate the rate of resource recovery at the site, it would not materially change the total tonnage to be extracted from the site and associated disturbance footprint;
- the modification would not change any of the key approved elements of the original development (as last modified under section 75W), including the hours of operation, quarry life, production and transportation limits or extraction methods; and
- the impacts of the development as modified would be similar to the impacts of the project as last modified under section 75W (see Section 5).

3.3 Consent Authority

The Minister for Planning and Public Spaces (the Minister) is the consent authority for the application under Section 4.5(a) of the EP&A Act. However, the Director Resource Assessments may determine the application under the Minister's delegation of 26 April 2021 as:

- The Hills Shire Council did not object to the proposal;
- Dixon Sand did not report any political donations; and
- Less than 15 public submissions in the form of an objection were received.

3.4 Mandatory Matters for Consideration

The Department conducted a comprehensive assessment of the project against the mandatory matters for consideration as part of the original assessment of DA 165-7-2005. The Department considers this modification application does not result in significant changes that would alter the mandatory matters for consideration under section 4.15 of the EP&A Act and conclusions made as part of the original assessment, as last modified under section 75W.

3.5 Environmental Planning Instruments

In undertaking its assessment, the Department has considered the objects of the EP&A Act and the provisions of relevant environmental planning instruments, including:

- *State Environmental Planning Policy (Mining, Petroleum and Extractive Industries) 2007;*
- *State Environmental Planning Policy (State and Regional Development) 2011;*
- *State Environmental Planning Policy No.55 – Remediation of Land;*
- *Sydney Regional Environmental Plan No.9 – Extractive Industry (SREP 9); and*
- *The Hills Local Environmental Plan 2019 (The Hills LEP).*

3.6 Other Approvals

The Quarry's activities are regulated under Environment Protection Licence (EPL) 12513, granted under the *Protection of the Environment Operations Act 1997* (POEO Act). The Environment Protection Authority (EPA) has advised that Dixon Sand would require a variation to the EPL to reflect the proposed modification.

Dixon Sand currently holds two Water Access Licences (WALs) associated with the use of surface water. These WALs are outlined in **Table 2** and together provide sufficient water to supply the operation.

Table 2 | Current Water Access Licences

WAL	Land Holding	Extraction Limit (ML/year)
25956	Lot 170 DP 664767	132
25941	Lot B DP 407341	50

As the existing conditions already require that extractive operations occur at least 2 metres above the groundwater table for the two regional aquifers in the area, the modification would not be expected to impacts on groundwater or require Dixon Sand to obtain any groundwater licences.

On 6 August 2018, a delegate of the Commonwealth Minister for the 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 involves a minor extension of operations into an area comprising a common olive plantation with exotic pasture groundcover, it would not be expected to impact Matters of National Environmental Significance or require any changes to the existing biodiversity offsetting obligations.

3.7 Reasons for Granting the Original Consent

In determining the original Haerses Road Sand Project, the Minister concluded that the project's benefits outweighed the residual environmental impacts and imposed a range of strict conditions to appropriately manage impacts. The Department has considered the proposed modification against the reasons the Minister gave for determining the project and is satisfied the proposed modification does not affect that previous decision. The proposed modification would allow similar benefits to be realised at local, regional and State levels.

4 Engagement

4.1 Department's Engagement

The Department publicly exhibited the modification application and Modification Report (see **Appendix A**) from 29 January 2020 until 26 February 2020. The documents were made available on the Department's website and at the offices of the Department, Council and the Nature Conservation Council.

The Department advertised the exhibition in the *Hills Shire Times* on 21 January 2020. The Department also notified previous submitters and special interest groups, who previously made submissions regarding the original project application and previous modifications. The Department notified community members within a 2km radius of the project site, including the Deerubbin Local Aboriginal Land Council.

4.2 Summary of Submissions

The Department received 19 submissions in response to the exhibition (see **Appendix B**), including:

- 11 Government agency submissions;
- 1 Council submission; and
- 7 public submissions in objection to the proposal.

4.3 Agency Advice

The Hills Shire Council (Council) did not object to the proposal, but did express concerns related to the scope of the modification and questioned whether the nature of the proposed increase in production warranted consideration as part of a new development application. Council also noted that any reduction in the existing buffers and setbacks from residences to the north would need to be appropriately considered and any visual and noise impacts appropriately managed. As outlined in Section 3 above, the Department has carefully considered the assessment pathway for this proposal and is satisfied that it can be determine under section 4.55(2) of the EP&A Act. The Department has also considered the potential amenity impacts of the proposed extension area in Sections 5.2 and 5.3 below.

Transport for NSW (TfNSW) identified that it had no objections to the proposal, subject to the incorporation of a condition requiring the applicant to monitor truck queueing in the right turn bay on Wisemans Ferry Road, and that if this monitoring indicates there is queueing out of the right turn bay onto Wisemans Ferry Road through lane, the right turn bay is to be extended by the applicant at no cost to TfNSW. The Department has reflected this requests in its recommended conditions.

The **Water Group** within the Department**,** comprising **DPIE Water** and the **Natural Resource Access Regulator (NRAR)** did not raise any issues with the modification, but noted that Dixon Sand must hold appropriate Water Access Licenses for the project and would need to obtain additional licences if the project exceeds its current limits.

The **Environment, Energy and Science Group (EES)** within the Department noted that it is available to the decision maker to waive the requirement for a Biodiversity Development Assessment Report (BDAR) if

they consider that the proposal would not increase impacts on biodiversity values. EES also recommended that the existing mitigation measures to address edge effects, noise, dust, light spill and other indirect impacts to the biodiversity values of adjacent areas, should be applied to the extended extraction area.

The **Environmental Protection Agency (EPA)** provided advice outlining general satisfaction with the methodology and outcomes of the water and noise assessment and noting an EPL variation would be required. The EPA provided recommended conditions relating to the noise and water impacts of the proposal and requested the existing site water balance be updated following determination of the modification to reflect the approved operation and reiterate that the project would be a nil discharge site.

The response also noted that while the existing EPL already permitted extraction, crushing, grinding and separation at a rate up to 500,000 tpa as well as receipt and processing of limited VENM and ENM products, the proposed increase in VENM and ENM imported to the site would require an EPL variation.

With regard to air quality, the EPA noted that the modelling results include large increments at varying receptors in the vicinity of the project boundary and raised concerns with the methodology of the air quality assessment. The EPA further noted that the emissions inventory of the modelled worst-case scenario did not account for the operation of the maximum 180 truck movements per day and identified discrepancies between 24-hr PM_{10} and $PM_{2.5}$ modelling results. The EPA requested a revised assessment including:

- modelling under a worst-case operational scenario which includes the maximum proposed number of truck movements per day;
- cumulative concentrations at each receptor for 24-hour PM_{10} and $PM_{2.5}$;
- clarification of the discrepancies in the results, as well as revised results and contour plots for all pollutants and averaging periods to confirm predicted impacts; and
- a contemporaneous assessment for the three most impacted receptors.

Following provision of a revised air quality assessment, revised air emissions inventory, additional mitigation measures, and considerable additional consultation between the applicant and the EPA, in June 2020 the EPA provided a final response which recommended conditions for air, water and noise impacts.

The **Resources Regulator** and **Division of Resources and Geoscience** within the Department of Regional NSW**, Heritage Council, Department of Industry – Agriculture, Department of Industry - Crown Lands** and **NSW Health** did not raise any issues with the proposed modification.

4.4 Public Submissions

In response to the exhibition, the Department received 7 objections from the general public. The most frequent concerns related to the increase of trucks at the quarry and impacts on the condition of local roads and general road safety concerns regarding school traffic, pedestrians and wildlife.

Other issues raised in submissions included the loss of amenity, impacts on property value, noise, dust and the change of operating hours, the reduction in existing buffer zones and that increased quarrying activity in the area is at odds with increases in residential development in the area.

The Department's consideration of these issues is included in Section 5.

4.5 Submissions Report

On 9 April 2020, Dixon Sand provided a Submissions Report (see **Appendix C**). The report was made publicly available on the Department's website and provided to the Government agencies for comment.

The Department notes that the Submissions Report identifies that 18 submissions were received on the proposal. The Department notes that this discrepancy is accounted for by the late advice from NSW Health, indicating that it would not be providing a formal response on the modification. Given this advice was received in May 2020 (following the conclusion of the exhibition period in February 2020) and did not contain any comments on the proposal, the Department is satisfied that no further response was required.

5 Assessment

The Department has assessed the merits of the proposed modification in accordance with the relevant objects and requirements of the EP&A Act. In assessing these merits, the Department has considered the:

- Environmental Impact Statement (EIS) for the original development application;
- existing conditions of approval, as modified;
- modification application and accompanying Modification Report, Submissions Report and additional information provided by Dixon Sand;
- advice from government agencies and community submissions; and
- relevant EPIs, policies and guidelines.

5.1 Traffic and Transport

Under the current approval, truck movements at the quarry and between the site and the Old Northern Road Quarry are limited to a maximum of 56 truck movements per day (inclusive of both arrival or dispatch), with a maximum of 20 truck movements permitted to occur between 6:00 am and 7:00 am.

These trucks currently travel along Wisemans Ferry Road and Old Northern Road in both directions, in order to which are currently approved to deliver product to market, deliver product to the Old Northern Road Quarry and import up to 100,000 tonnes of VENM/ENM per annum. Both of these roads are classified as part of the State road network and are approved to accommodate B-Double trucks. The road network is shown on **Figure 1**.

As part of Dixon's Sands integrated operations, limited trucks from Haerses Road are permitted to travel north from the site to Old Northern Road Quarry to deliver 190,000 tonnes of product per annum for further processing, washing and sale. These truck movements are regulated under complementary conditions under both existing approvals. Additional to this, Dixon Sand has recently completed a major upgrade to the intersection of Haerses Road and Wisemans Ferry Road to provide a channelised right turn (CHR) treatment to accommodate trucks entering and leaving the site.

The Modification Report included a Traffic Impact Assessment (TIA), prepared by SECA Solution Pty Ltd, which assessed the impacts associated with the proposed increase in maximum daily truck movements from 56 to 180 trucks (ie 90 inbound and 90 outbound). To manage the impacts of its trucks on the operation of the road network, Dixon Sand has indicated that these truck movements would be split across two transport routes, with around half the trucks travelling along Wisemans Ferry Road and the other half travelling along Old Northern Road. Further to this, as the modified quarry would employ an additional 8 staff, the modification would also involve an additional 16 light vehicle movements a day.

The Maroota Public School and the village of Maroota are situated approximately 500 m to the north of the intersection of Wisemans Ferry Road and Old Northern Road. The modification does not involve increasing haulage volumes from the Haerses Road Quarry to the nearby Old Northern Road Quarry, therefore there would be no increase in truck movements passing Maroota Public School.

The TIA considered the impacts of the proposal on road safety as well as the overall performance of the road and intersection network. The TIA included baseline traffic surveys (conducted in May 2019), which measured average daily flows on Wisemans Ferry Road at 2,284 vehicles per day (both ways), as well as average daily flows on Old Northern Road being 2,260 vehicles per day (both ways).

The traffic counts identified three distinct peaks in traffic volumes throughout the day. Two of these were in the morning, including an early peak associated with cumulative quarrying traffic at 6:00 am - 7:00 am and a subsequent morning peak associated with a mix of background and quarry traffic at 8:00 am - 9:00 am. An afternoon peak was also measured between 3:00pm - 4:00pm.

It was determined that approximately 20% of daytime traffic on Wisemans Ferry Road and Old Northern Road were heavy vehicles associated with quarrying in the local area, along with several school bus services. In accordance with *RMS Guide to Traffic Generating Developments*, the baseline observations concluded that the local road network currently operates at an overall Level of Service B, with low delays and low congestion due to low traffic volumes.

The proposed increase in truck movements under the modification would result in an increase of approximately 62 truck movements (both ways) per day on each of the Wisemans Ferry Road and Old Northern Road transport routes. When compared to the baseline traffic study, this represents an increase of 2.7% of the existing average daily traffic flows along each of these transport routes.

In total, the quarry would be expected to generate an average of around 14-15 heavy vehicle movements per hour throughout the day (averaged from 7:00 am to 6:00 pm) an dup to 16 light vehicle trips per day. The TIA concluded that under these conditions the existing road network would continue to operate well within its existing capacity, with an unchanged Level of Service B.

The TIA used a SIDRA analysis to assess the capacity of the intersection of Wisemans Ferry Road and Haerses Road and the intersection of Wisemans Ferry Road and Old Northern Road to support background growth rates together with additional truck movements generated by the proposal. The SIDRA analysis considered the baseline 2019 traffic volumes as well as a conceptual 2028 traffic volume based on an approximated 40% traffic growth of Wisemans Ferry Road (assuming 4% growth per annum), which was consistent with the measured growth of 4% between 2016 and 2019. The SIDRA modelling demonstrated that under both existing and projected modelling scenarios, both intersections would operate with minimal delays and queuing and would maintain a Level of Service A.

The TIA also included an assessment of traffic safety, including a review of crash data, which revealed there have been 6 crashes over a five-year period between October 2013 and September 2018, none of which were associated with quarrying activities in the area. An assessment of sight distances for vehicles entering and leaving the quarry concluded that the current sight distances are adequate for the current road alignment and vehicle speeds.

In addition to acknowledging the modelled capacity of the road network to accommodate the additional trucks, to provide greater certainty TfNSW recommended that Dixon Sand be required to monitor trucks queuing in the right turn bay on Wisemans Ferry Road and, if trucks are shown to be queueing out of the right turn bay onto the Wisemans Ferry Road through lane, that the right turn bay is extended by the Dixon Sand at its expense. The Department has reflected this requirement in its recommended conditions.

Overall, the Department is satisfied that the relevant intersections would continue to operate at acceptable Levels of Service under the modification and that the road network has adequate capacity to accommodate the proposed increase in heavy and light vehicle movements.

Additionally, while the modification would not be expected to significantly impact the road network, the existing Quarry has an approved Traffic Management Plan which incorporates a Drivers' Code of Conduct and specific measures to minimise the impact of heavy vehicles, including restrictions on routes and times in relation to peak hours, holiday periods and times immediately before and after school hours. The Department notes that this traffic management Plan would need to be updated to reflect the modification and is satisfied that with the approved and recommended conditions in place, the potential impacts of trucking associated with the Quarry can be adequately managed.

5.2 Noise

The Modification Report included a Noise Impact Assessment (NIA), prepared by Umwelt, in accordance with the *NSW Noise Policy for Industry* (NPfI) and the *NSW Road Noise Policy*. This NIA included updated background noise monitoring and modelling to assess the operational, sleep disturbance and traffic noise associated with the revised quarry.

The quarry is located in a rural environment which is generally subjected to low background noise levels from sources such as local road traffic, agricultural activities and the cumulative impact of quarrying in the area. The modification has the potential to increase noise impacts at nearby receivers due to the increase in production rates and trucking, changes in machinery used on site and closer proximity of the expanded Stage 5 extraction area to residential receivers to the north of the site.

The NIA identified 21 sensitive receivers in the surrounding area (see **Figure 6**). One of these receivers (D1) is owned by Dixon Sand and three receivers to the east are associated with Hitchcock Road Quarry and are owned by PF Formation (PF 1,2,3). These receivers currently hold a noise agreement with Dixon Sand to waiver any potential noise impacts. Dixon Sand has also entered into noise agreements with the owners of receiver R02 and R12, which allows exceedances of the noise criteria.

Operational Noise

Under the existing consent, Dixon Sand is only permitted to undertaking quarrying operations during the day-time period as defined under the NPfI (ie. 7.00 am to 6.00 pm, Monday to Saturday) and must operate all truck arrivals, loading and dispatch between the hours of 6.00 am and 6.00 pm Monday to Saturday (ie the daytime operational period and plus a morning shoulder period of 6.00 am to 7.00 am). Limited maintenance activities are allowed outside these times, provided that these activities are not audible at any privately-owned residence outside of permissible hours for quarrying operations.

Noise modelling undertaken as part of the NIA identified that in the absence of reasonable and feasible mitigation measures, the Quarry had the potential to result in exceedances of the noise criteria in the existing consent and relevant project noise trigger levels (PNTLs) established under the NPfI, at a number of surrounding receivers during the later years of the operation.

Nevertheless, the NIA identifies that with the incorporation of existing mitigation measures at the quarry (including 5 metre high noise bunds) and the application of additional noise treatments and attenuation of the new 40 tonne dump trucks prior to the commencement of Stages 4 and 5 (ie including the Stage 5 extension area), the potential noise impacts of Quarry could be materially reduced by up to 6 dBA.

With the incorporation of these mitigation measures the predicted noise impacts of the Quarry as proposed to be modified would comply with the relevant PNTLs under the NPfI at all nearby residences, except for R02 who is already subject to a negotiated agreement with Dixon Sand.

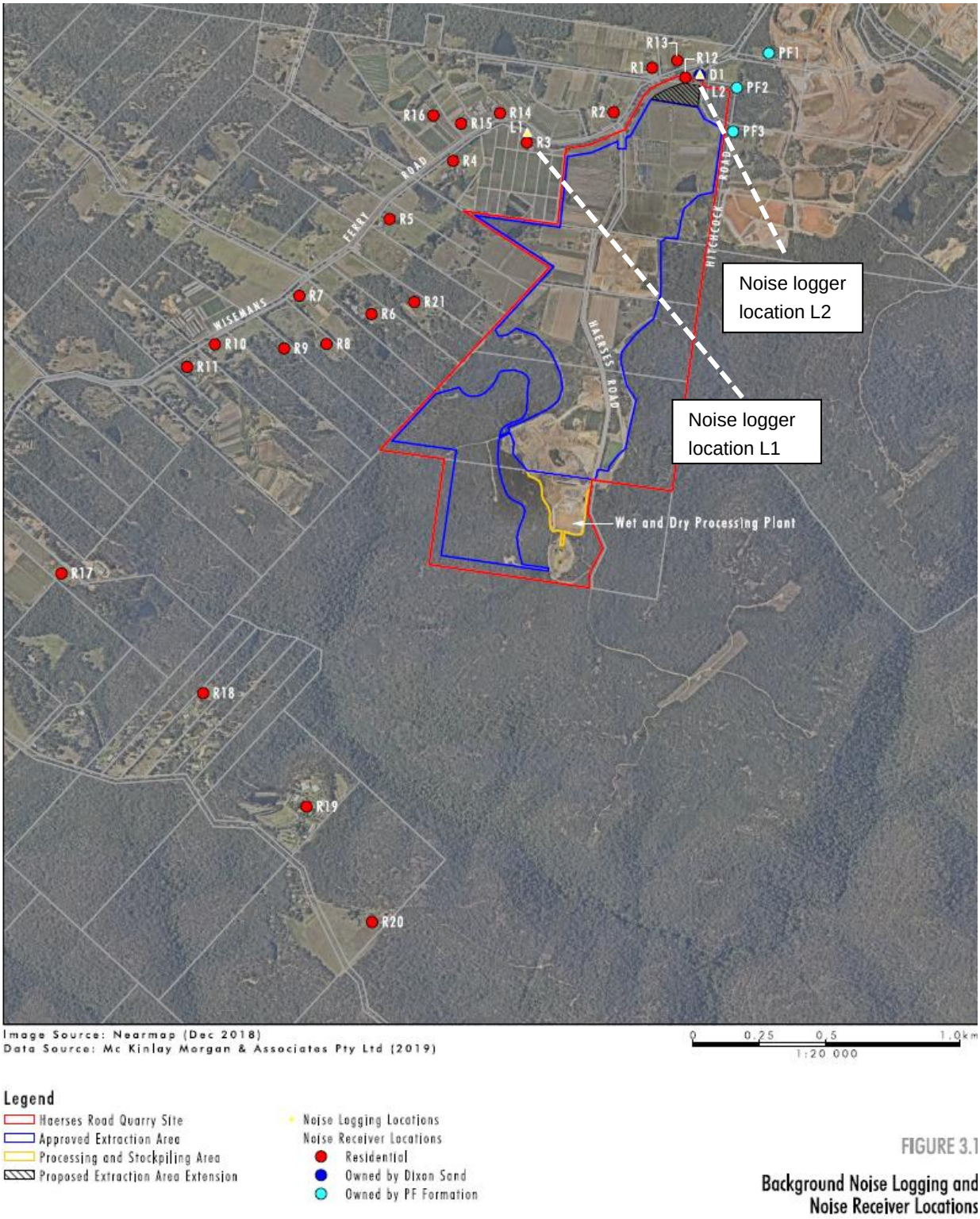

Figure 6 | Noise Receivers

As illustrated in **Table 3**, the Department recognises that the predicted noise impacts represent an increase in the existing noise criteria contained in the current consent. However, the Department notes that the absolute noise levels are relatively low for all receivers except Receiver R02, with a maximum prediction of 41 dBA during the day-time at two receivers and 37 dBA at one receiver during the morning shoulder.

Table 3 | Predicted Operational Noise Levels, dB $L_{Aeq(15min)}$ (exceedances of PNTLs shown in red)

Receiver	Existing Consent Criteria		PNTL		Predicted Worst Case Noise Level	
	Day	Morning Shoulder	Day	Morning Shoulder	Day	Morning Shoulder
R01	37	37	40	38	38	33
R02[1]	40	40	40	38	47	45
R03	38	38	41	38	39	37
R04	37	37	41	38	37	34
R05	35	35	41	38	41	32
R06	37	35	41	38	41	27
R07	36	35	41	38	37	31
R08	36	35	41	38	40	33
R09	35	35	41	38	39	31
R10	35	35	41	38	35	28
R11	35	35	41	38	34	28
R12[1]	35	35	40	38	39	28
R13	35	35	40	38	40	36
R14	35	35	41	38	37	36
R15	35	35	41	38	39	35
R16	35	35	41	38	33	26
R21	35	35	41	38	37	22

1 Receivers R02 and R12 have existing noise agreements with Dixon Sand

A noise level of 40 dBA is equivalent to the noise level inside a quiet room and is the lowest day-time PNTL that can be set under the contemporary provisions of the NPfI. Under the *NSW Voluntary Land Acquisition and Mitigation Policy* (VLAMP), an exceedance of 1 dBA above the PNTL is characterised as a negligible impacts and would not be discernible by the average listener. Accordingly, and noting that Receiver 02 is already subject to a negotiated noise agreement, no further treatments are required in relation to the predicted noise impacts.

The NIA outlined that until quarry operations progress to Stage 4, no change to the existing management and monitoring measures would be required and the quarry could continue to operate under the measures outlined in its approved Noise Management Plan (including establishing noise bunds). Prior to the commencement of extraction in Stage 4, Dixon Sand would review the predicted noise levels and apply relevant treatments to the dump trucks to reduce noise emissions and implement alternative noise mitigation measures or enter negotiated agreements to ensure compliance with the relevant consent criteria.

The NIA also included an assessment of sleep disturbance, noting that the only noise emissions during the night-time (morning shoulder) period are related to the arrival, loading and departure of trucks via the site access. As depicted in **Table 3**, the predicted noise levels under worst-case noise-enhancing conditions would be less than 37 dBA $L_{Aeq\ (15minute)}$ at all receivers expect for Receiver 02. Given these levels remain below the minimum applicable criteria for sleep disturbance, no further treatments would be required.

Overall, the Department and the EPA are satisfied that the operational noise emissions from the amended quarry are unlikely to result in any significant noise impacts (except for Receiver R02 which is subject to a negotiated noise agreement) and can be effectively managed. The Department also notes that under the existing conditions, Dixon Sand will also be required to update its existing Noise Management Plan to reflect the modification.

Road Traffic Noise

The NIA included a road traffic noise assessment in accordance with the *NSW Road Noise Policy* (RNP), which assessed the increase in truck movements associated with the proposal. This assessment identifies that both Wisemans Ferry Road and Old Northern Road are classified as arterial/sub-arterial roads, and that existing traffic noise levels already exceed the relevant noise impact assessment criteria for some receivers along these roads, particularly where residences have been built within 20 metres of the roads.

As a result of the increase in trucking associated with the proposal, road traffic noise levels are estimated to increase by up to 1 dBA during the day-time when compared to the existing road noise levels. Traffic noise levels during the night-time period would remain unchanged, due to limits on the hours of operation.

In considering the criteria for arterial/sub-arterial roads, the RNP recognises that while any increase in total traffic noises due to traffic-generating development must be considered, in assessing potential options for feasible and reasonable mitigation measures, an increase of up to 2 dB represents a minor impact that is considered barely perceptible to the average person. For existing residences and other sensitive land uses affected by additional traffic on existing roads generated by land use developments, the RNP identifies that any increase in the total traffic noise level should be limited to 2 dB.

Overall, the Department is satisfied that an increase of 1 dBA in road noise represents a negligible impact and would not be discernible by the average listener at receiver locations. The Department is satisfied that the road noise impacts can be managed under existing conditions and an updated Noise Management Plan.

5.3 Air Quality

The Modification Report included an Air Quality Impact Assessment (AQIA) undertaken by ERM generally in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (Approved Methods)* (EPA 2016). Following EPA's comments on the Modification Report, additional documents were provided to accompany the AQIA, in order to clarify and validate the assumptions made in the AQIA, with an addendum provided as part of the Submissions Report.

The AQIA established background air quality parameters based on data collected from a TEOM air quality monitor located at Maroota Public School (3 km north of the site). Local meteorological data was also collected from a data source at Maroota Public School. The AQIA assessed the modelled air quality results against the NSW *Impact Assessment Criteria for Key Emissions (*EPA) pollutant values, which are consistent with the air quality values continued in the VLAMP.

Table 4 | NSW Impact Assessment Criteria for Key Emissions (EPA)

Pollutant	Criteria	Averaging Period	Source
TSP	90 µg/m^3	Annual	NSW EPA (2016)

Pollutant	Criteria	Averaging Period	Source
PM_{10}	50 µg/m^3	24-hour	NSW EPA (2016)
	25 µg/m^3	Annual	
$PM_{2.5}$	25 µg/m^3	24-hour	NSW EPA (2016)
	8 µg/m^3	Annual	
Deposited Dust (insoluble solids)	2 g/m^2/month	Annual (Maximum increase)	NSW EPA (2016)
	4 g/m^2/month	Annual (Maximum total)	

The addendum AQIA predicted cumulative results for all sensitive receivers identified in **Figure 7** and identified that the applicable air quality criteria would not be exceeded at any sensitive receivers.

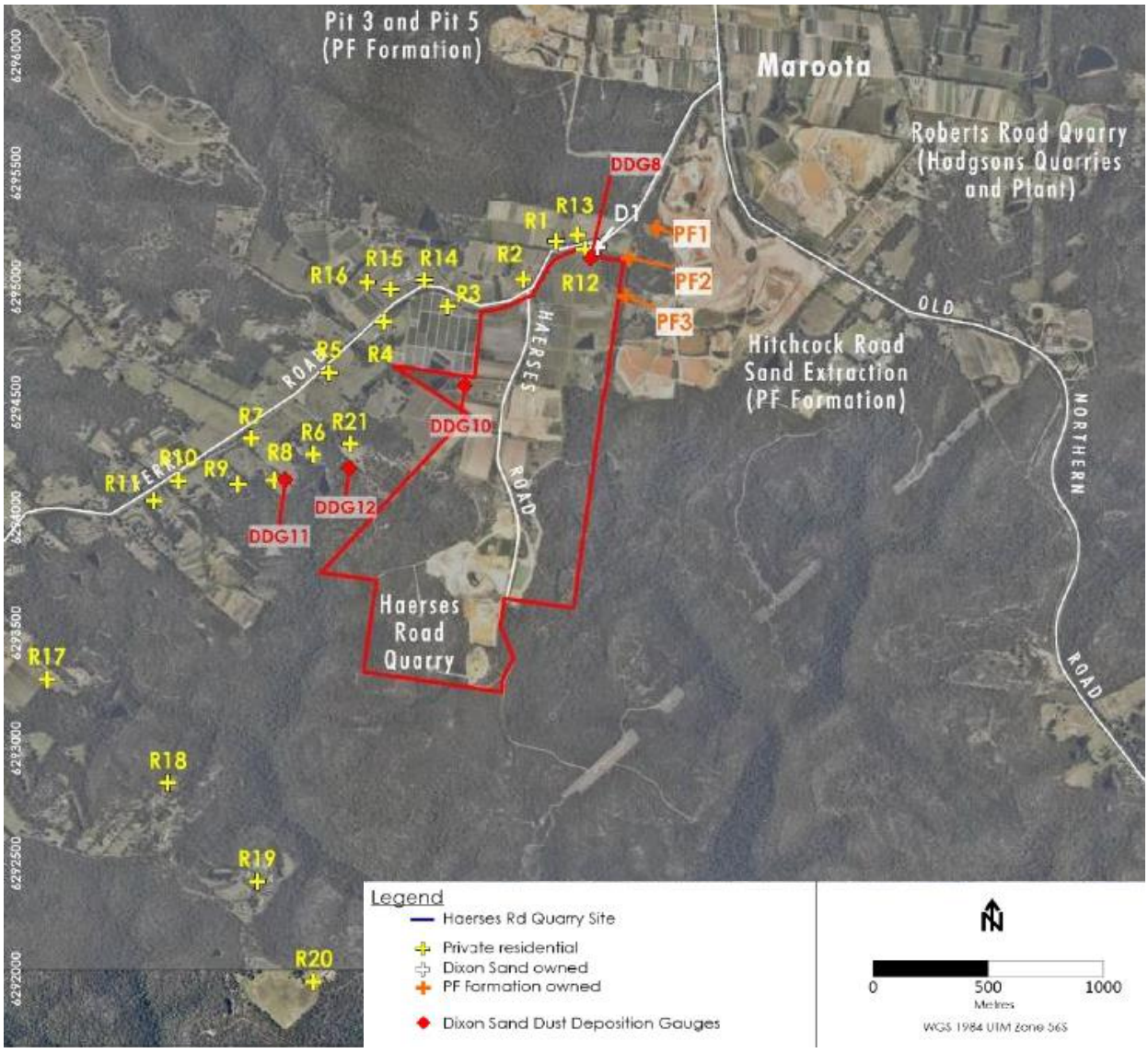

Figure 7 | Location of Receivers and Dust Gauges

Following the EPA's request for a revised air quality model, incorporating a realistic worst-case operational scenario and an updated emissions inventory, Dixon Sand provided three updated operational models, which were representative of peak daily material processing and extraction predicted at Receiver R21 (the most affected receiver location). The modelling scenarios assumed implementation of the following controls:

- level 2 watering for all unsealed roads;
- sealing the roads between the quarry entrance to the processing plant and from the processing plant to the VENM/ENM emplacement area;
- application of water at all transfer points from crusher to screen;
- application of water at all transfer points between the processing plant to product stockpile; and
- vegetative cover at rehabilitated areas, and construction and maintenance of bunds located along the perimeter of the tertiary and friable extraction areas.

For each of the three modelled scenarios, the predicted combined background and quarry increment particulate levels remained below the 50 µg/m^3 criteria for 24-hour average PM_{10} at Receiver R21. As Receiver 21 represents the most affected resident, these results indicate that all other receivers would also comply with the relevant air quality criteria.

Following the provision of this additional information, the EPA confirmed that it was satisfied with the information presented in response to the submissions, including the revised modelling methodology and emissions inventory.

Overall, the Department considers that, with the implementation of the proposed mitigation measures, the air quality impacts from the modified quarry would likely remain below the assessment criteria at all receivers. The Department has recommended conditions requiring Dixon Sand to implement the additional mitigation measures, and to update the Air Quality Management Plan for the quarry.

The Department is also satisfied that the existing air quality monitoring system, comprising 4 deposited dust gauges (shown in **Figure 7**) and the real-time air quality monitor at Maroota Public School (alarmed set at 42ug/m^3) is sufficient to monitor the proposed air quality impacts and trigger any exceedances.

Greenhouse Gas

The Modification Report included a Greenhouse Gas (GHG) and Energy Assessment, prepared by Umwelt, in accordance with the *National Greenhouse Accounts (NGA) Factors* (DoEE) 2018).

The assessment considered the potential Scope 1, 2 and 3 emissions associated with the proposal, and compared these to the existing approved quarry. A summary of the GHG emissions is provided in the following table.

Table 5 | Greenhouse Gas Emissions

Energy Type	Approved Development (t CO2-e)	Proposed Modification (t CO2-e)	Additional Emissions (t CO2-e)
On-site fuel use (Scope 1)	16,827	17,705	878
Grid electricity use (Scope 2)	189	23,448	23,259

Energy Type	Approved Development (t CO2-e)	Proposed Modification (t CO2-e)	Additional Emissions (t CO2-e)
Emissions associated with production of diesel and electricity (Scope 3)	891	3,788	2,897
Total	17,907	44,941	27,034

As indicated in the table, the proposed modification would generate approximately 24,000 tonnes of additional Scope 1 and 2 GHG emissions over the life of the quarry.

Although the proposed modification would not significantly increase the amount of Scope 1 emissions, the Scope 2 emissions (associated with grid electricity usage) would significantly increase. These Scope 2 emissions are largely attributed to energy used for product processing and are reflective of a shift in the type of energy consumption used at the site from diesel to electric energy generation. The proposal would also see a minor increase in Scope 3 emissions.

The Department acknowledges that Dixon Sand has proposed to minimise GHG emissions by regularly maintaining mobile and fixed equipment to minimise exhaust and emissions as well as reviewing opportunities for improvement in diesel use and energy efficiency when purchasing or replacing equipment at the quarry. The Department is satisfied that, in the context of the existing predicted emissions, the modification would not result in an unacceptable increase in greenhouse gas emissions. The existing consent requires Dixon Sand to implement all reasonable and feasible measures to minimise GHG emissions from the development.

5.4 Waste Management

The proposal involves increasing the maximum allowable amount of VENM/ENM to be imported to the site from 100,000 to 250,000 tpa. The VENM/ENM, which is classified as a waste product under the *Protection of the Environment Operations Act 1997* (POEO Act), would be used for the purpose of site rehabilitation as well as for reprocessing of select materials into a blended saleable product. The Modification Report notes that the VENM/ENM would be sourced from a variety of large infrastructure projects in the Greater Sydney area over the life of the quarry. This proposed approach is consistent with the EPA's waste management hierarchy, which places waste re-use as its first preference.

Dixon Sand has also committed to implementing a protocol to ensure deliveries of VENM/ENM to the site are not contaminated with foreign material. The protocol would include a NATA-accredited lab analysis of the material and validation certificates, as well as recording the tracking, transport, and stockpiling of fill material and placement. The EPA noted that Dixon Sand would need to seek an EPL variation to update the limits of the receipt and processing of VENM and ENM and recommended that the maximum VENM/ENM imported to the site not exceed 1,200 tonnes per day.

The Department is satisfied that Dixon Sand should be able to appropriately manage the increased imported VENM/ENM to avoid potential contamination/biosecurity impacts. However, the Department notes that VENM and ENM sourced from major construction projects often require the materials to be received in campaigns over a short duration of time. Accordingly, the Department does not consider it necessary to impose a specific sublimit on the tonnage of VENM/ENM that Dixon Sand can receive each day. Instead, the Department considers that these importation activities can be appropriately managed by enforcing the existing recommended daily truck limits for combined VENM/ENM importation and product dispatch.

Notwithstanding this, the Department recognises that the EPA may seek to impose additional importation limits of a maximum of 1,200 tonnes a day on its EPL for the site. Importantly, the Department notes that the existing conditions already require Dixon Sand to maintain accurate records of all VENM/ENM received at the site, include this data in its Annual Reviews and manage all waste receival, storage, transportation, processing and disposal in accordance with the EPL.

5.5 Groundwater

The proposed modification involves a minor extension to the Stage 5 extraction area, which overlays an area of the regionally significant Maroota Tertiary Sands Groundwater Source (MTSGS).

The Groundwater Assessment accompanying the Modification Report identifies that 18 existing groundwater bores occur within a 1 km radius of the quarry. Seven of these bores target the shallower MTSGS, with the closest bore situated approximately 250 m north of proposed Stage 5 extraction area. The remaining 11 bores target the deeper Sydney Central Basin Groundwater Source (SCBGS).

Under the current consent, Dixon Sand must not intercept or contaminate any regional groundwater sources including both the MTSGS and SCBGS. The quarry currently operates a groundwater monitoring network, comprising 20 monitoring bores across the site, which has recorded baseline water level, quality and flow data since 2005. To prevent groundwater interception of the MTSGS, the quarry maintains a 2 m vertical buffer with the wet weather boundary of the groundwater source, as determined by the active groundwater monitoring program. Dixon Sand proposes to maintain this 2 m vertical buffer when extracting sand from the Stage 5 extraction area to prevent groundwater interception.

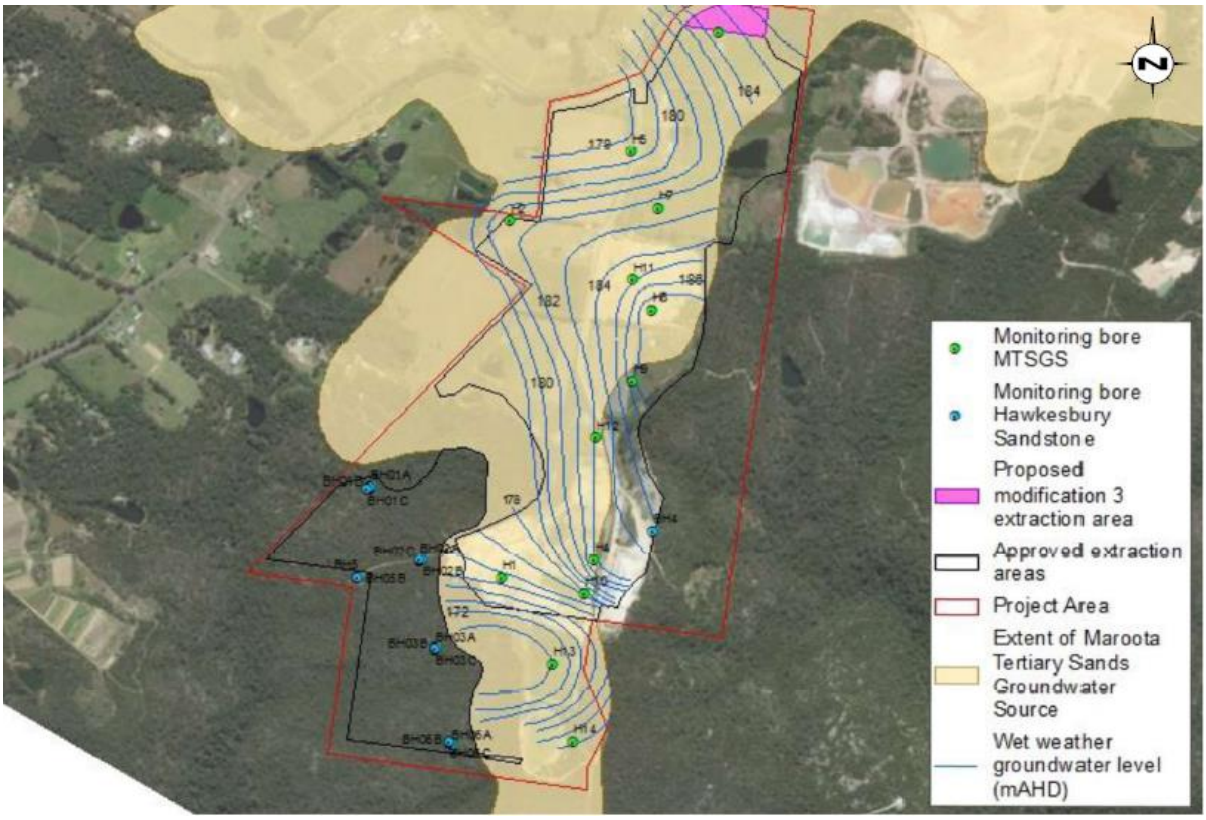

Figure 8 | Location of monitoring bores, groundwater source and the wet weather groundwater table

The Department is satisfied that continuation of the existing management strategies and groundwater monitoring program is adequate to prevent groundwater interception of the MTSGS. The Department further notes that the expansion of the Stage 5 extraction area would not result in increased impacts on adjacent bore users or any groundwater dependent ecosystems.

Given the minor nature of the proposed extension in relation to the existing approved pit, the Department considers that potential impacts to groundwater quality would be unlikely. Nevertheless, the Department is satisfied that the existing groundwater monitoring network would be capable of detecting any unforeseen impacts to groundwater and that these impacts could be managed or made good in accordance with the requirements of the existing Soil and Water Management Plan. Finally, the Department notes that the existing management plan would need to be reviewed and updated to reflect the modification.

5.6 Other Issues

Other issues associated with the modification include rehabilitation, visual impacts, biodiversity, surface water, Aboriginal cultural heritage, historic heritage and socio-economic impacts. The Department's assessment of these issues is summarised in **Table 6** below.

Table 6 | Summary of Other Issues

Issue	Findings	Recommendations
Rehabilitation	The proposal would result in the disturbance of an additional 1 hectare of land, associated with the expansion of the Stage 5 extraction area. While the extension would require adjustments to size of the final void and shape of the final batters, it would not require any changes to the intended final land uses of the site, being agricultural lands and native vegetation. Further, this amended final landform can be achieved without any changes to the existing rehabilitation objectives or performance and completion criteria. The Department is satisfied that the proposed modification would not result in any significant change to the rehabilitation or final landform of the site. Under the existing conditions, Dixon Sand would be required to update the approved Biodiversity and Rehabilitation Management Plan, and review the rehabilitation bond, to reflect the proposed modification.	Update existing Biodiversity an Rehabilitation Management Plan and review rehabilitation bond to reflect the proposal. No additional conditions required to manage rehabilitation.
Visual	The Modification Report included a visual impact assessment associated with the extension to the Stage 5 extraction area. The extension of the Stage 5 extraction area would involve moving operations closer to some residences including those at 1700, 1710, 1725 and 1728 Wisemans Ferry Road. Currently, views from these residences towards the quarry are partially screened by existing vegetation. To mitigate visual impacts from the Stage 5 extraction area extension, Dixon Sand proposes to relocate the approved 5m high, vegetated noise and visual bund 75m closer to Wisemans Ferry Road. The visual assessment notes that this bund would be vegetated with a tree screen and remain out of the line of sight of nearby receivers. Further to this, Dixon Sands would continue to apply additional visual mitigation measures, including progressive rehabilitation, dust suppression and directing lighting away from residences. With respect to the visual bund, some community members raised concerns about the loss of long-term views associated with the visual bund. Dixon Sand noted that the bund would only be retained for as long as required to maintain amenity outcomes, with the final	No additional conditions required to manage visual impacts

Issue	Findings	Recommendations
	landform plan indicating that the bund would be removed at the end of the project. The Department is satisfied that the visual impacts of the proposal would be minor, relative to the existing operations, and could continue to be effectively managed by the proposed mitigation strategies.	
Biodiversity	The Modification Report included consideration of the biodiversity impacts of the proposed Stage 5 expansion area. This assessment identifies that the expansion area is highly modified due to previous agricultural land use and currently comprises a common olive plantation with exotic pasture groundcover. Accordingly, the potential for impacts on existing biodiversity values is extremely low. Following consultation with EES, the Department determined that the proposal would not increase impacts to biodiversity values, provided that potential indirect impacts to the biodiversity values of the adjacent areas are appropriately managed. EES advised that the mitigation measures in the existing conditions of consent aimed at addressing edge effects, noise, dust, light spill and other indirect impacts to the biodiversity values of the adjacent areas remain adequate for the proposal. The Department is therefore satisfied that a Biodiversity Development Assessment Report is not required for the proposal, in accordance with Clause 7.17(2)(c) of the *Biodiversity Conservation Act* 2016. Overall, the Department is satisfied that the Stage 5 extraction area would not create any unacceptable biodiversity impacts, subject to continued management of direct and indirect impacts in accordance with the Biodiversity and Rehabilitation Management Plan for the project, which would be required to be updated to reflect the proposed modification.	No additional conditions required to manage biodiversity impacts
Surface Water	The proposal would have a negligible impact on the quarry water management system as the minor extension to the Stage 5 extraction area is already contained within the catchment area of the existing surface water management system. The proposal would not involve any change to the: • quarry catchment; • water consumption associated with processing; • water inputs or outputs (the quarry operates on a nil discharge basis); or • Water Access Licences. The Department considers the approved water management system for the quarry would remain sufficient to manage any unforeseen impacts associated with surface water. Under the existing conditions, Dixon Sand would be required to review and update the approved Soil and Water Management Plan to reflect the modification,	No additional conditions required to manage surface water impacts

Issue	Findings	Recommendations
	including the Site Water Balance, Surface Water Management Plan and Groundwater Management Plan. The Department notes that should Dixon Sand seek to discharge water, a variation to the EPL would be required and that additional Water Access Licences must be obtained should the project exceed its current limits.	
Aboriginal Cultural Heritage	The Modification Report included an Archaeological Due Diligence Assessment, undertaken in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (2010)*. The assessment included a desktop study and a visual inspection of the proposed Stage 5 expansion area. The assessment did not identify any Aboriginal sites or objects in the expansion area, noting that the potential for extant sites is unlikely given that the area is highly disturbed as a result of previous agricultural practices. The existing consent already includes an unexpected finds protocol in the event of uncovering a suspected object or place of Aboriginal heritage significance. The Department is satisfied that the proposal is unlikely to result in any impacts to Aboriginal heritage, and that any unforeseen impacts could be managed in accordance with the unexpected finds protocol.	No additional conditions required to manage Aboriginal cultural heritage impacts
Historic Heritage	A desktop study of local and state historic heritage was undertaken, which involved a search of the *Hills LEP 2012* for any heritage items. The search did not find any historical listings within the proposed Stage 5 expansion area, with the closest heritage item over 800m to the north east. No potential items of significance were identified during visual site inspections of the expansion area. The Department is satisfied that it is unlikely that the proposal would impact any historic heritage items due to the highly disturbed nature of the land associated with previous agricultural land use.	No additional conditions required to manage historic heritage impacts
Social and Economic	The key issues for the local community are largely related to amenity including the increase to truck movements, noise, air and visual impacts. These issues have been considered in detail in this report, and the Department is satisfied that the issues can be effectively managed to an acceptable standard under the existing and recommended conditions. The proposal would provide 8 additional operational jobs at the quarry, and enable the continued long-term supply of construction materials to the Greater Sydney region.	No additional conditions required to manage residual social or economic factors

6 Evaluation

The Department has assessed the merits of the proposed modification in accordance with the requirements of the EP&A Act. The proposed modification involves a minor expansion to the Stage 5 extraction area, an increase in truck movements and production limits, increase in employee numbers and the increased importation of VENM/ENM to site.

The project would facilitate the ongoing and increased supply of sand to the Greater Sydney Region construction market. It would also provide employment for an additional 8 full-time employees at the quarry, as well as continued employment for the existing 8 employees.

The proposal would result in relatively minor increases to noise and dust emissions and truck movements at the site, however these emissions would either comply with relevant criteria or are unlikely to significantly impact the amenity of the locality. The Department is satisfied the proposal would result in minimal impacts to biodiversity, groundwater, surface water or heritage.

The Department is satisfied that the proposed modification would not increase the environmental impacts of the project beyond an unacceptable standard and that any residual or unforeseen impacts could be appropriately managed under the existing and proposed conditions and detailed management plans.

The Department has led a comprehensive whole-of-government assessment of the merits of the proposed modification and notes that no State Government agencies objected to the proposal. While some agencies expressed initial concerns with the information provided, all agencies considered that the impacts could be appropriately managed through strict conditions of consent and, where appropriate, made recommendations for the inclusion of additional conditions as appropriate.

On balance, the Department considers that the positive social and economic impacts created by the proposal would outweigh any negative environmental and social impacts, which are not predicted to be significant. The Department is therefore satisfied that the modification is in the public interest and should be approved, subject to conditions.

The Department has drafted a Notice of Modification (see **Appendix D**) and a consolidated version of the development consent (see **Appendix E**), as proposed to be modified. Dixon Sand has reviewed the proposed conditions and has not objected to their imposition.

7 Recommendation

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

- **considers** the findings and recommendations of this report;
- **determines** that the application DA 165-7-2005 MOD 3 falls within the scope of section 4.55(2) 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 consent DA 165-7-2005; and
- **signs** the attached approval of the modification (**Appendix D**).

Recommended by:

Joel Herbert
Environmental Assessment Officer
Resource Assessments

8 Determination

The recommendation is **Adopted** by:

Matthew Sprott
Director
Resource Assessments

as delegate of the Minister for Planning and Public Spaces

Appendices

Appendix A – Modification Report

See the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/project/25606

Appendix B – Submissions

See the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/project/25606

Appendix C – Submissions Report and Additional Information

See the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/project/25606

Appendix D – Notice of Modification

See the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/project/25606

Appendix E – Consolidated Consent

See the Department's website at:

https://www.planningportal.nsw.gov.au/major-projects/project/25606