

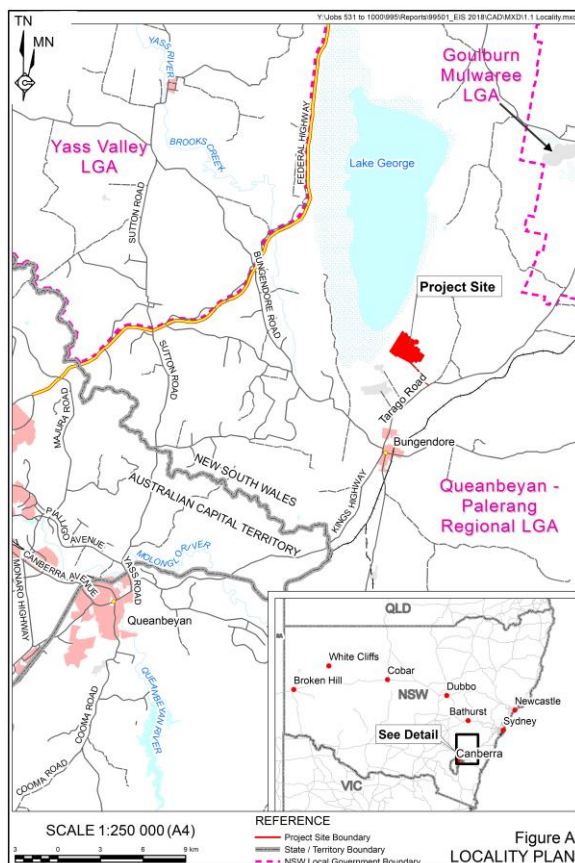


Executive Summary

Introduction

This *Environmental Impact Statement* (EIS) has been prepared by R.W. Corkery & Co. Pty Limited (RWC) on behalf of Grantham Park Holdings Pty Limited (the Applicant). This document has been prepared to accompany a development application for the continuation and expansion of operations at the Bungendore Sands Quarry (the Proposal) (**Figure A**). The Quarry is operated by Tobiway Crushing Pty Limited (the Operator) under a commercial arrangement with the Applicant.

- processing of that material to produce up to 400 000tpa of washed sand products;
- transportation of products from the Project Site to the Operator's customers;
- placement of reject material within completed sections of the existing and proposed Extraction Area; and
- ancillary activities, including use of the existing Quarry Access Road, Processing Area, and Stockpiling Area.



The Proposal is classified as:

- “Designated Development” as it would exceed a number of the criteria identified by Clause 19 of Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*;
- “Regional Development” under Clause 7(a) of Schedule 7 of the State Environment Planning Policy (State and Regional Development) 2011; and
- “Integrated Development: under Section 4.46 of the Environmental Planning and Assessment Act 1979.

This EIS has been prepared to support the application for development consent.

The Queanbeyan – Palerang Regional Council (Council) is to accept, exhibit and assess the application, with the Southern Regional Planning Panel (SRPP) to determine the application.

The Proposal would comprise:

- continued extraction of sand and related material for a period of approximately 20 years from an extended Extraction Area;

The Applicant and Operator

The Applicant, Grantham Park Holdings Pty Ltd, is the Trustee for the HPG Osborne Family Unit Trust which was established by



Mr and Mrs Osborne. Mr Osborne commenced sand extraction in 1975 and eventually sold the land containing the Project Site to the Operator, Tobiway Crushing Pty Ltd, who is currently continuing extraction and processing operations on the Project Site in accordance with Development Approval D52/74.

The Operator, Tobiway Crushing Pty Limited, is a wholly owned subsidiary of Canberra Sand and Gravel Pty Limited (CSG). CSG has operated in the area surrounding Queanbeyan and Canberra since 1963. It is the largest landscape supplier in the region, providing products to commercial and retail customers throughout the Queanbeyan Palerang LGA and the ACT.

Objectives of the Proposal

The Applicant and Operator's objectives for the Proposal are to:

- To continue to provide a source of high-quality sand products to meet the needs of housing and construction markets in NSW and the ACT.
- To maximise the recovery of identified sand resources within the Approved and Proposed Extraction Areas.
- To consolidate and update the existing development approval to one that is consistent with current standards and community expectations.
- To develop and operate the Quarry in a manner that is environmentally responsible and complies with all statutory requirements.
- To create a final landform that is safe, stable, non-polluting and provides for a final land use of nature conservation and agriculture.

- Achieve the above objectives in a cost-effective manner to ensure the Proposal is viable.

Description of the Proposal

Overview

The Proposal would include the following activities (**Figure B**).

- Ongoing extraction of sand and limited volumes of overburden and interburden (clay and silt) within the remainder of the Approved Extraction Area and a 77ha proposed Extraction Area, producing up to 400,000t of sand products per year for a period of 20 years.
- Continued on-site screening, classifying and stockpiling of extracted material to produce a range of sand products using the existing Sand Classification Plant.
- Continued transportation of sand products to the Operator's customers using a combination of rigid vehicles and truck and dog combinations and existing Quarry Access Road and public transportation routes.
- Continued management and settlement of fines and process water using the existing and proposed Fines Settling Cells and Process Water Ponds.
- Establishment of ancillary infrastructure, including bunds and water management structures.
- Construction and rehabilitation of a final landform that would be safe, stable, non-polluting, and suitable for a future land use of nature conservation and agriculture.



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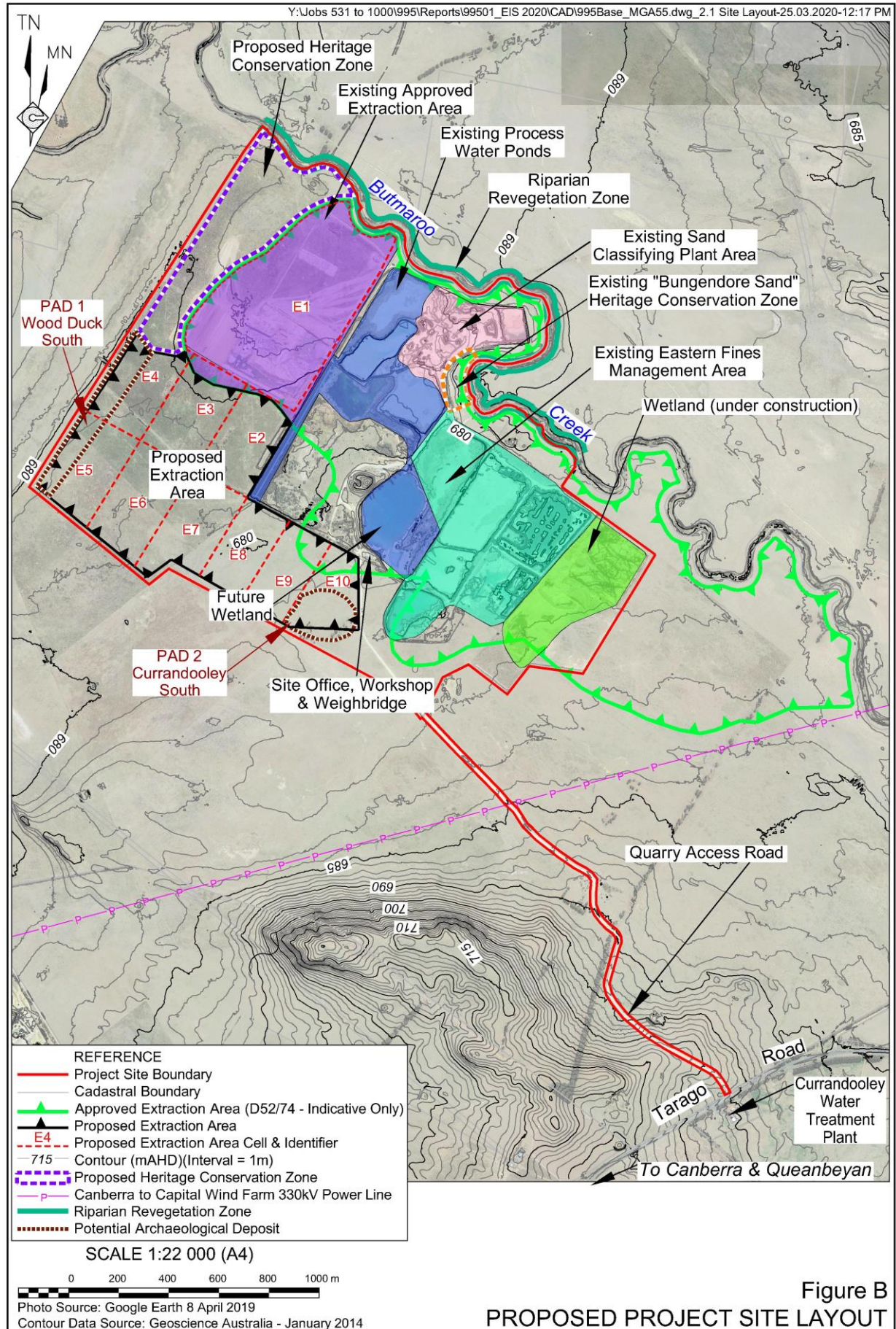


Figure B
PROPOSED PROJECT SITE LAYOUT



Site Establishment

The Project Site has well established infrastructure including access and haul roads, Site Office, Workshop, Refuelling Bay, Processing Plant and water management structures. The Operator would commence the following minor site establishment activities following receipt of development consent and other necessary approvals and licences.

- The marking out of all component areas to be disturbed with highly visible permanent markers.
- Progressive vegetation clearing and soil removal within the areas approved for disturbance.

Extraction Operations

Extraction operations would be undertaken in a similar manner to existing operations using scrapers, front-end loaders or excavators and haul trucks. Operational face heights of up to 10m and an operational face angle of 70° would be adopted.

Extraction operations within the existing, approved Extraction Area would continue within Extraction Cell E1, with extraction proceeding from southwest to northeast (**Figure B**).

Following commencement of extraction operations within the proposed Extraction Area, extraction would progress generally in numerical order from Extraction Cell E2 to Extraction Cell E10. Typically, two Extraction Cells would operate concurrently, with one Cell nearing the end of its extraction life and the subsequent Cell at an early stage in its extraction life.

The anticipated extraction rate would be up to 600 000tpa to enable up to 400 000tpa of washed sand products to be produced. The total resource extracted over the life of the Proposal would be approximately 3.6Mt of sand.

Processing and Stockpiling Operations

Processing operations would be undertaken in a similar manner to existing operations, namely material would be stockpiled within the Raw Feed Stockpile Area and selectively blended and fed into the Sand Classifying Plant. The resulting sand and gravel products would be stockpiled within the Product Stockpile Area until transported from the Project Site.

Oversize material would be separated and transferred to the coarse reject stockpile. This material would be transported back to the Extraction Area for use in final landform construction.

Undersize material would be transferred to a classifying tank where the material would be agitated with water. This would separate the sand, silt and clay particles which would be allowed to settle progressively as the material moves through the tank. As a result, coarser material would settle closer to the inlet point and finer material would travel further through the tank towards the outlet. By varying the points along the tank where material is extracted, the Operator is able to produce a range of washed sand products. Sand material removed from the tank is dewatered using one of two screw dewatering units and stockpiled using one of two radial conveyors.

Material that is too fine to settle within the classifying tank would continue to be permitted to flow to a series of underground pipes and channels and would then be transferred to the Fines Management Area.

Transportation Operations

All product would be transported via the Site Access Road prior to travelling either south via the Kings Highway or north via Tarago and Braidwood roads. A combination of semi-trailers, rigid trucks and “truck and dog” and other vehicles would be used for transportation. A maximum of 400 000tpa of products would be transported from the Project Site.



Hours of Operation

Site establishment, extraction operations, processing and stockpiling activities, loading and transportation operations, and rehabilitation operations would be undertaken between 6:00am and 5:00pm, Monday to Friday and between 6:00am and 2:00pm Saturday. Operations on Sunday would be restricted to rehabilitation and maintenance activities between 7:00am and 6:00pm.

Life of the Proposal

The Operator anticipates that the proposed extraction activities would take approximately 20 years, plus 2 years for rehabilitation activities post extraction.

Employment and Economic Contribution

The Proposal would require approximately 10 to 12 personnel on a full-time basis, plus additional personnel for the delivery of products from the Project Site.

The Operator anticipates that at the maximum rate of extraction, the Proposal would generate approximately \$7 million per year to the local and regional economy through the payment of employee wages and the purchase of goods and services.

Rehabilitation and Final Landform

Rehabilitation would occur progressively as extraction cells are completed over the life of the Proposal. The proposed final landform would include the following.

- Areas of wetland, including habitat elements such as islands suitable for breeding habitat for birds and other threatened species.
- Areas of grassland and open woodland habitat suitable for foraging habitat for threatened species.

- A reshaped Sand Classifying Plant area revegetated to a grassland or open woodland

Planning Context

Planning Instruments

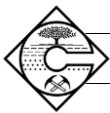
The Project Site is situated within land zoned as Zone RU1 – Primary Production and Zone E3 – Environmental Management under the *Palerang Local Environmental Plan 2014* (Palerang LEP).

Extractive industries are permissible with consent within zone RU1. Industries are generally prohibited within zone E3, however, as agriculture is permissible with consent in this zone, the Proposal is also permissible with consent under Part 2, Clause 7(3)(a) of the *State Environmental Planning Policy (Mining, Petroleum and Extractive Industries) 2007*.

The Proposal would be developed and operated in accordance with the following State planning instruments.

- *State Environmental Planning Policy (State and Regional Development) 2011*.
- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.
- *State Environmental Planning Policy (Infrastructure) 2007*.
- *State Environmental Planning Policy 33 – Hazardous and Offensive Developments*.
- *State Environmental Planning Policy No. 44 – Koala Habitat Protection*.
- *State Environmental Planning Policy No. 55 – Remediation of Land*.

The EIS addresses each of the above documents together with the Palerang LEP.



Approvals Required

In addition to development consent, the Applicant anticipates the following licence, permit and approval would be required.

- An Environment Protection Licence under the *Protection of the Environment Operations Act 1997*.
- An Aboriginal Heritage Impact Permit under the *National Parks and Wildlife Act 1974*.
- A Section 138 Permit under the *Roads Act 1993*.

Assessment and Management of Key Environmental Issues

The components and features of the existing environment within and surrounding the Project Site have been studied in detail and the Proposal has been designed to avoid or to minimise impacts on that environment. A brief overview of the main components of the surrounding environment, the proposed safeguards and the assessed level of impact are set out in the following sections.

Aboriginal Heritage

The Project Site is located in an area with approximately 150mm of post European settlement deposited material with no Aboriginal objects visible at the surface. Based on previous extensive test pitting and heritage assessments, two potential archaeological deposits (PADs), namely PAD1 – Woodduck South and PAD2 – Currandooley South were identified within the proposed Extraction Area (**Figure B**). The Proposal would disturb both of these PADs. In addition, a previously identified PAD, namely the Wood Duck PAD, exists within a section of the Project Site that would not be disturbed.

The Applicant, in consultation with the Aboriginal community, has determined to:

- establish a Heritage Conservation Zone to protect the Wood Duck PAD in perpetuity;
- undertake a test pitting and salvage program for both PAD1 – Wood Duck South and PAD2 – Currandooley South prior to disturbance; and
- apply for an Aboriginal Heritage Impact Permit.

In light of these commitments and with the concurrence of the Aboriginal community, it is assessed that the proposed disturbance of Aboriginal heritage would not be significant.

Transportation and Traffic

The Proposal would not increase the volume of traffic originating from the Quarry and therefore would not adversely impact existing road network and intersection performance, road safety, school and public transport services or pedestrians and cyclists along the proposed transport routes. Additionally, a SIDRA analysis of the Kings Highway intersection (i.e. the intersection of Molonglo Street and Malbon Street) undertaken by Constructive Solutions (2020) indicates that the intersection would operate at a Level of Service A level during peak hour traffic conditions at both background (2019) and forecast (2029) traffic volumes.

The Operator would develop a Driver's Code of Conduct and undertake shoulder widening at the site entrance on Tarago Road. Consequently, there would be no significant adverse impacts on traffic conditions or road safety associated with the Proposal.

Biodiversity

A total of 76.4ha of vegetation, representing pasture vegetation communities dominated by exotic species, would be disturbed. The *Biodiversity Development Assessment*



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Report concluded that this clearing would not trigger entry into the NSW Biodiversity Offsets Scheme and would not significantly impact threatened species. As the proposed activities would be consistent with activities already undertaken within the Project Site, indirect impacts including noise, dust and edge effects are unlikely to have significant adverse impacts on adjacent vegetation and fauna habitat.

The Operator would progressively rehabilitate disturbed sections of the Project Site to create a mixture of wetlands and grassland and would undertake revegetation of that section of the Butmaroo Creek riparian zone adjacent to the Project Site. As a result, the Proposal would likely enhance biodiversity values within and adjacent to the Project Site.

Surface Water Resources

The operational water requirements for the Proposal would be met through the extraction of up to 3ML per year from Butmaroo Creek under existing WAL 33014 and the use of water stored in artificial wetlands and ponds which form part of the existing operational water management system. The Operator has committed to the adoption of a range of design controls and the implementation of water management structures which would ensure that clean water flows would be diverted around the Project Site and potentially sediment-laden water would not be discharged from the Project Site. Additionally, the Applicant and/or Operator would revegetate the section of Butmaroo Creek adjacent to the Project Site. As a result, it is not anticipated that the Proposal would result in significant adverse surface water impacts.

Groundwater

The aquifer within the Project Site may be characterised by thin and laterally discontinuous bands of permeable, saturated sand-rich material and impermeable silt and clay-rich material. When intersected the

permeable sandy bands drain but flows quickly cease because the transmissivity of the aquifer, or its ability to transmit water, is limited due to the impermeable clay material. The Operator estimates that seepage into the existing Extraction Area is approximately 1.4ML per year.

Given the limited ability of the aquifer to transmit groundwater and the distance to surrounding groundwater users and Butmaroo Creek, it is assessed that the Proposal would not have significant groundwater-related impacts.

Noise

Noise modelling indicated that operational noise levels are not anticipated to exceed the relevant Project Noise Trigger Levels at any residence. Additionally, that modelling indicated that the anticipated road noise levels associated with Proposal-related traffic would remain well below the relevant criteria for receivers located in close proximity to local roads. As a result, the Proposal would not result in significant adverse noise-related impacts.

Air Quality

The Operator would implement a range of management and mitigation measures targeting air quality impacts, including active dust suppression, progressive rehabilitation, and operational responses to air-quality related complaints. Air quality modelling determined that dust levels generated by the Proposal would not result in air quality-related impacts at surrounding residences that would exceed the relevant assessment criteria.

Visibility

The Proposal would not result in the intensification of existing extractive operations disturbed areas would be progressively rehabilitated to support agricultural (cropping and/or grazing) and nature conservation (wetland and grassland) land uses.



Observers located in close proximity to the Project Site would be unlikely to notice any change in the visual character of the area because there is insufficient elevation to be able to see into the active sections of the Project Site. Observers at residences and publicly accessible vantage points along the Lake George Range may notice a gradual expansion of the Extraction Area. However, this would be offset by progressive rehabilitation and would be unlikely to be noticeable as these vantage points are a minimum of 5km from the Project Site.

Other Impacts

Impacts on historic heritage, land resources and capability and hazards associated with the Proposal would be negligible.

Evaluation and Justification of the Proposal

The Bungendore Sands Quarry has been evaluated and justified through consideration of its potential impacts on the environment and potential benefits to the local and wider community.

The evaluation of the Proposal is undertaken by firstly the relevant biophysical and socio-economic considerations applicable to the proposed activities. The Proposal has also been evaluated against the principles of Ecologically Sustainable Development (ESD) in order to provide further guidance as to the acceptability of the Proposal.

This evaluation has found that, with the implementation of the proposed operational controls, safeguards and/or mitigation measures, the Proposal has addressed each of the sustainable development principles, and on balance, it is concluded that the Proposal achieves a sustainable outcome for the local and broader environment.

The Proposal and associated activities have been assessed in terms of a wide range of biophysical, social and economic issues. Potential residual impacts can be justified in terms of the positive economic and social benefits to surrounding towns, regional centres and the Queanbeyan-Palerang and surrounding Local Government Areas.

Conclusion

The proposed Bungendore Sand Quarry has, to the extent feasible, been designed to address the issues of concern identified by the relevant levels of government and legislation.

- The Proposal provides for the extraction, processing and transportation of sand products whilst minimising the residual impacts on the biophysical environment.
- The produced products, principally washed sand for use in construction, landscaping, and concrete manufacture applications, would supply infrastructure and construction projects in the wider area surrounding the Quarry Site.
- Given the maintenance of local employment and the contribution of expenditure to the regional economy, the socio-economic impacts of the Proposal are considered to be positive.
- The post-mining landform would integrate the re-establishment of vegetation conducive to a land use consistent with surrounding land use, namely intermittent grazing and nature conservation.

In light of the conclusions included throughout the *Environmental Impact Statement*, it is assessed that the Proposal could be constructed and operated in a manner that would satisfy all relevant statutory goals and criteria, environmental objectives and reasonable community expectations.