



planning consultants

Preliminary Environmental Assessment

Proposed Sand Extraction

Lot 1 DP 1167699 (and continued use of Lot 31 DP 634213)

587-589 Tarago Road, Lake George

Prepared for: Grantham Park Holdings Pty Limited
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Abbreviations

AHD	Australian Height Datum
AHIP	Aboriginal Heritage Impact Permit
ASS	acid sulfate soils
Council	Queanbeyan Palerang Regional Council
DA	development application
DCP	development control plan
DFP	DFP Planning Pty Limited
DPE	NSW Department of Planning and Environment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPI	environmental planning instrument
ESCP	erosion and sedimentation control plan
ESD	ecologically sustainable development
FPL	flood planning level
LEP	local environmental plan
LGA	local government area
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPWS	NSW National Parks and Wildlife Service
OEH	NSW Office of Environment and Heritage
PAD	potential archaeological deposit
REP	regional environmental plan
RFI Act	<i>Rivers and Foreshore Improvement Act 1948</i>
RFS	NSW Rural Fire Service
RF Act	<i>Rural Fires Act 1997</i>
RL	reduced level
RMS	NSW Roads and Maritime Services
SCI	site contamination investigation
SEPP	state environmental planning policy
SIS	species impact statement
TSC Act	<i>Threatened Species Conservation Act 1995</i>
WM Act	<i>Water Management Act 2000</i>
WSUD	water sensitive urban design

1 Introduction

1.1 Commission

DFP has been commissioned by Grantham Park Holdings to prepare a Preliminary Environmental Assessment (PEA) for the purposes of applying for the Secretary's Environmental Assessment Requirements (SEARs) for a proposed sand extraction at 587 Tarago Road, Lake George, which is legally described as Lot 1 DP 1167699 (the site).

The application is an extension of an existing sand extraction operation being undertaken on Lot 31 DP634213.

Clause 3 of Schedule 2 of the Environmental Planning and Assessment Regulations 2000 (EP&A Regulations) requires a written application to be made to the Department of Planning and Environment to obtain the Secretary's Environmental Assessment Requirements (SEARs). The purpose of this Preliminary Environmental Assessment is to request SEARs be issued to DFP and to provide necessary information for the Secretary to make an appropriate response to this request.

2 The Site

2.1 Location

The site is located on the western side of Tarago Road approximately 6km north of Bungendore (see **Figure 1**).

The site is located approximately 31km north east of Queanbeyan and 45km north east of Canberra CBD. Goulburn is located approximately 63km to the north via Tarago Road, Bungendore Road and Braidwood Road.

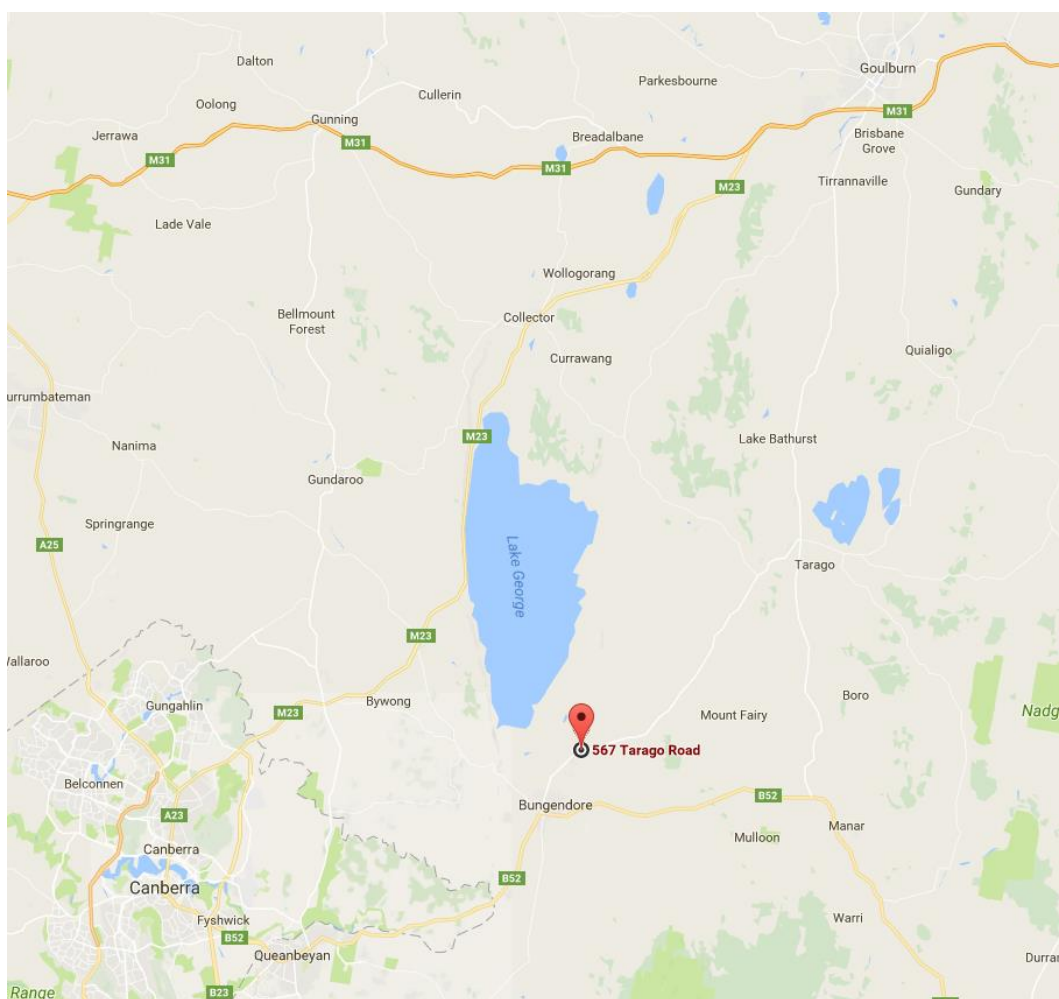


Figure 1 Site Location

2.2 Site Description

The site to which the application relates includes the following properties:

- Lot 1 DP 1167699 (see **Figure 2**) which is the site of the proposed sand extraction and is known as 567 Tarago Road.
- Lot 31 DP 634213 which is the location of the existing sand extraction and includes the processing plant, administration and weigh bridge all of which will continue to be used as part of the expansion into Lot 1 DP 1167699.
- Lot 2 DP 1167699 which is the access route to the above land, and subject to a right of way providing legal access to Lot 1 DP 1167699.

For the purposes of this PEA, the 'site' is a reference to Lot 1 DP 1167699 as this is the land for the proposed sand extraction, however, the project will also relate to Lot 31 DP 634213 in relation to existing processing plant.

The street address is known at 567 Tarago Road.

2 The Site

A copy of the Deposited Plan and Certificate of Title are attached at **Appendix 1**.

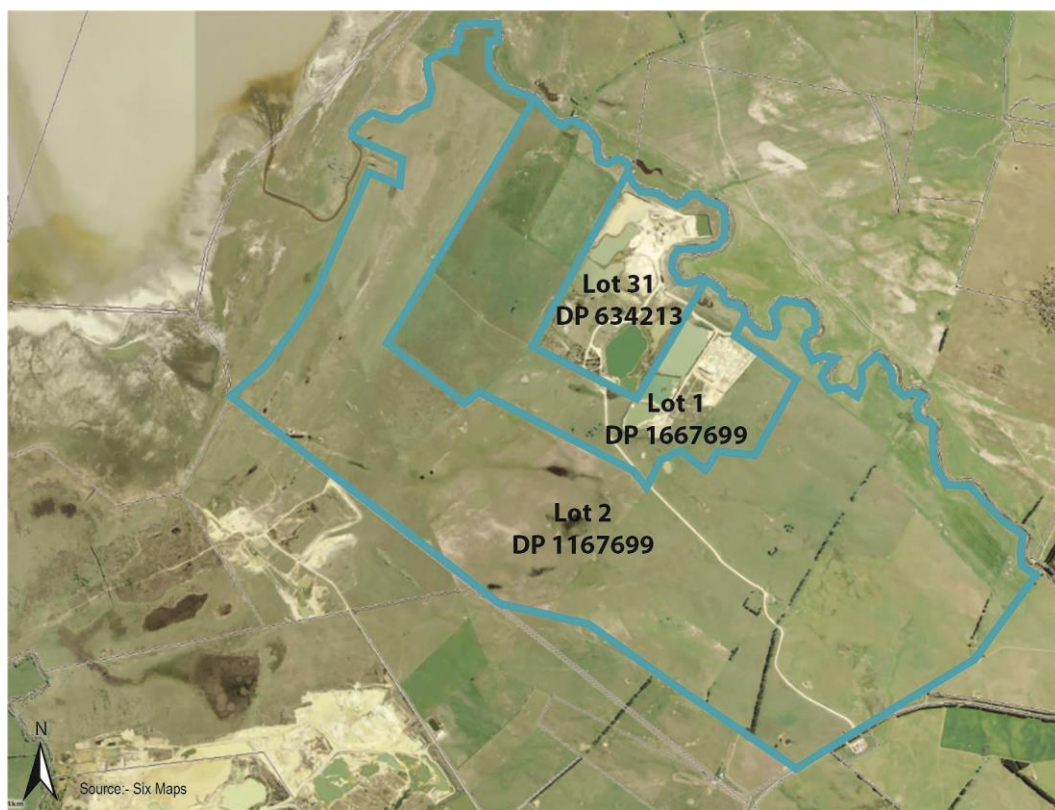


Figure 2 Site Context

Table 1 below provides a summary of the site for the new sand extraction and its attributes.

Table 1 Site Description	
Legal Property Description and ownership	Lot 1 DP 1167699 - Owner: Henry E Osborne Lot 31 DP 634213 - Owner: Tobirway Crushing Pty Ltd
Site Area	Lot 1 DP 1167699 = 226.40ha (by title)
Road Access	Via gravel driveway over Lots 1 & 2 DP1167699 (part of 587 Tarago Road)
Current Use	Sand extraction in the northern part of the site under Development Consent 52/74. Settling pond on the eastern part of the site Pasture and grazing
Topography	The site is relatively flat and drains to the north
Natural features	Butmaroo Creek (also known as Deep Creek) forms part of the northern boundary of the site.
Vegetation	As illustrated in Figure 2 there is very little vegetation on the site.
Improvements	There are no buildings on the site. The only improvements relate to fencing and a gravel driveway that provides access to the site from Tarago Road (across Lot 2 DP 1167699). The driveway then continues into Lot 31 DP 634213 providing access to the existing sand extraction and processing plant.
Easement	A right of carriageway 20.115m wide relates to the gravel driveway. The right of carriageway burdens Lot 2 DP 1167699 for the benefit of Lot 1 DP 1167699 and burdens Lot 1 DP 1167699 for the benefit of Lot 31 DP 634213.

2 The Site

Photographs of the site are illustrated in **Figures 3 to 6**.



Figure 3 Site looking southwest towards other sand extraction operations and the Bungendore Escarpment



Figure 4 Site looking west towards Lake George and the escarpment beside the Federal Highway

2 The Site



Figure 5 Existing driveway in the site



Figure 6 Existing driveway entry/exit to Tarago Road

2 The Site

2.3 Surrounding Development

Surrounding development is illustrated in the aerial photograph at **Figure 7**. The key surrounding land uses and features are:

- Tobiway Crushing Pty Ltd (also known as Bungendore Sands Pty Ltd) sand extraction operation on Lot 31 DP634213 adjoins the site;
- To the north is Butmaroo Creek which forms part of the northern boundary of the site;
- Further north is agricultural land and a vegetated ridge line which contains many wind turbines which are visible from the site and region;
- Approximately 1.3km west is the edge of Lake George;
- East of Tarago Road is agricultural land and a water purification plant opposite the driveway entrance to the site. The water purification plant supplies potable water to Bungendore. The location of the well from which the water is drawn is identified in **Figure 7**;
- South east of the site are rural-residential properties that are satellite suburbs of Bungendore. The closest of these is approximately 1km from the driveway entrance off Tarago Road and another (Buckingham Estate) is 1km further south towards Bungendore;
- To the south are two other sand extraction operations (labelled as 2 and 3 in **Figure 7**); and
- Further to the south is Turallo Creek and the land rises to a ridge line which contains many rural-residential and hobby farms.

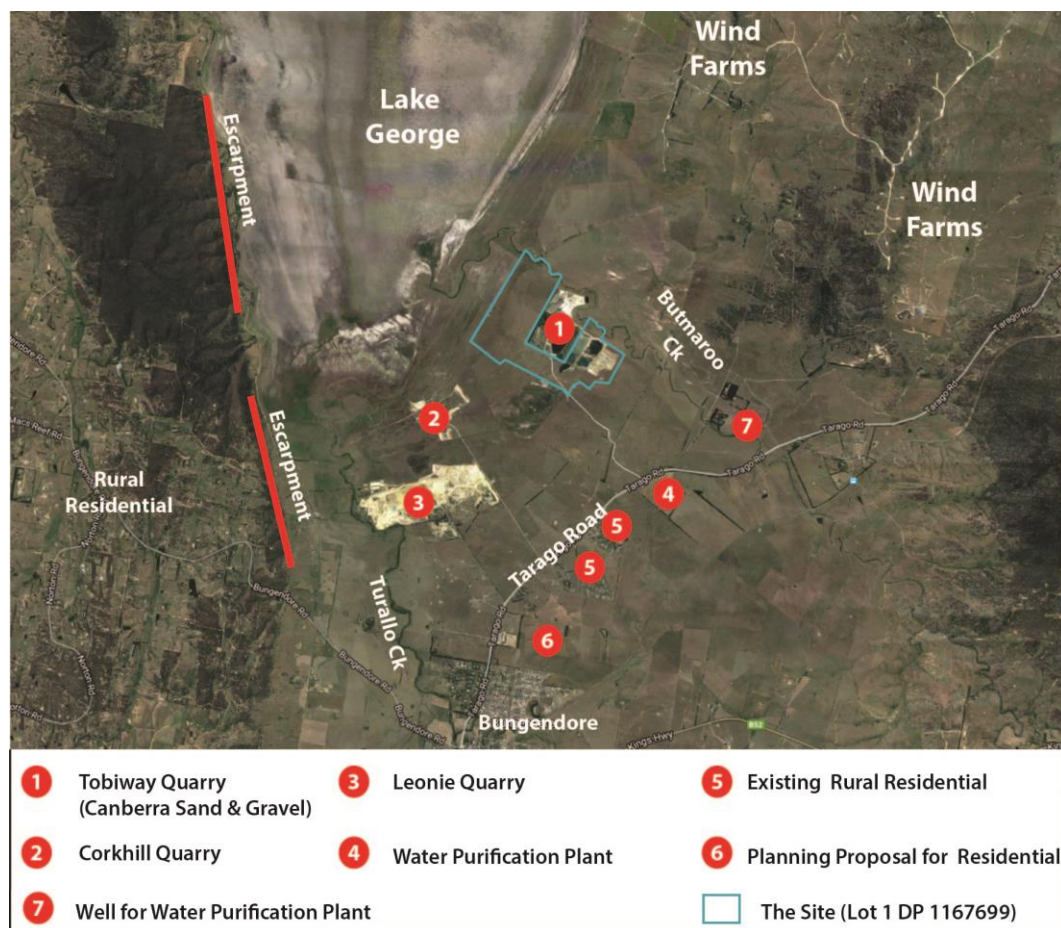


Figure 7 Surrounding Development

3 Current Development Consent

3.1 Existing Sand Extraction

Tobiway Crushing Pty Limited trading as Bungendore Sands has been operating a sand extraction activity from Lot 31 DP 634213 and part of Lot 1 DP 1167699 since November 2001. Tobiway Crushing Pty Limited holds Licence No: 9 under section 55 of the Protection of the Environment Operations Act 1997. Since commencement of activities, the operator has met all reporting requirements under the PoEO Act and have not been cited for any non-compliance issues. The company completed a compliance audit (number 1513885) in 2013 and were found to be compliant in making the Pollution Incident Response Management Plan (PIRMP) publicly available upon request.

The current sand extraction is carried out under development consent D52/74 issued by the then Yarrowlumla Shire Council on 1 November 1974. A copy of the development consent is attached at **Appendix 2**. The development consent also related to sand extraction further south of the site (referred to as Grantham Park and Leonie).

Figure 8 illustrates the location of the approved sand extraction relative to the site.

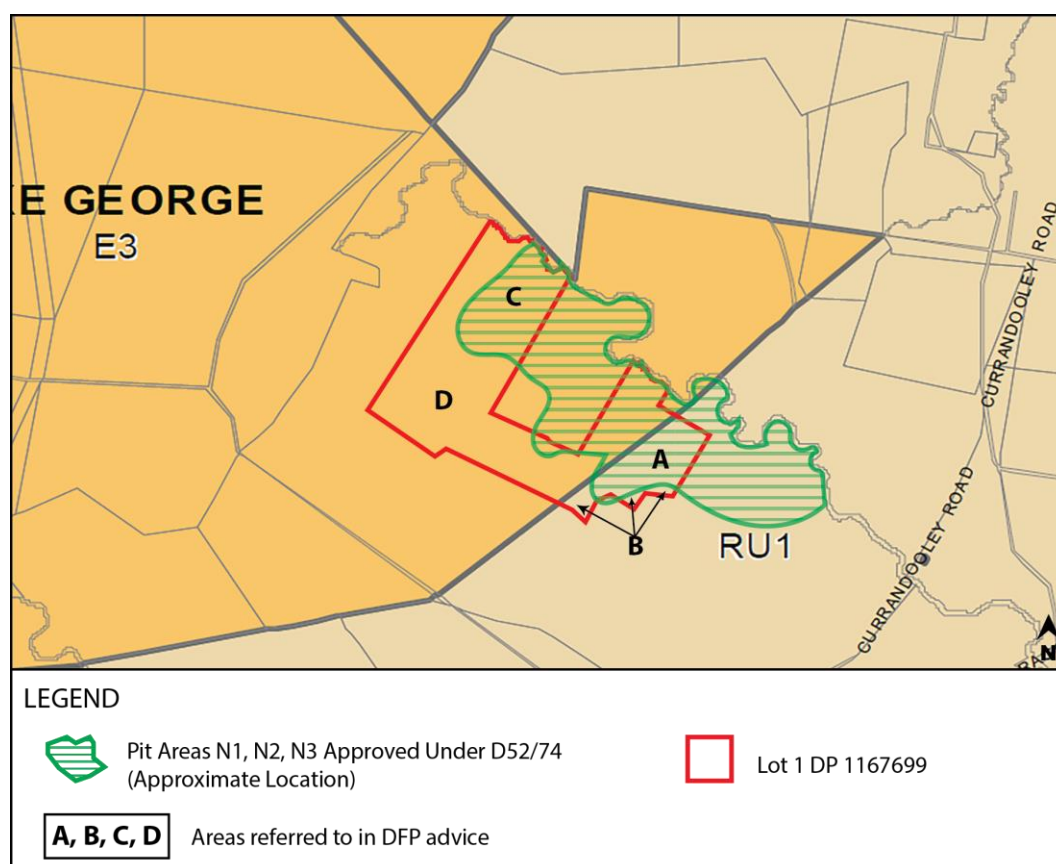


Figure 8 Extent of the development consent D52/74

4 The Proposal

4.1 Sand Resource

Douglas Partners has conducted a geotechnical investigation to understand the quantum of the sand resource available. A copy of their Report on Geotechnical Investigation is provided at **Appendix 3**. This report builds on a previous investigation conducted by Douglas Partners in December 2006 (also attached at **Appendix 3**) which focussed on the land to the west and east of the existing sand extraction operations. The area to the west is relevant to this PEA.

The December 2006 investigation established that *“the main source of construction sand is associated with strandline deposits, which are paleo-beach deposits that developed as sand spits along the shoreline and relate to the receding shore of the lake.”* **Figure 9** is an extract from the December 2006 investigation illustrating the location of the strandlines and annotated to show the existing and general location of the proposed sand extraction.

- To the west of the existing operation, the geology is (Qa) being gravel, sand, silty clay and black organic clay: alluvium
- To the south of the existing operation, the geology is (Qbs) being coarse sand and gravel: strandline.

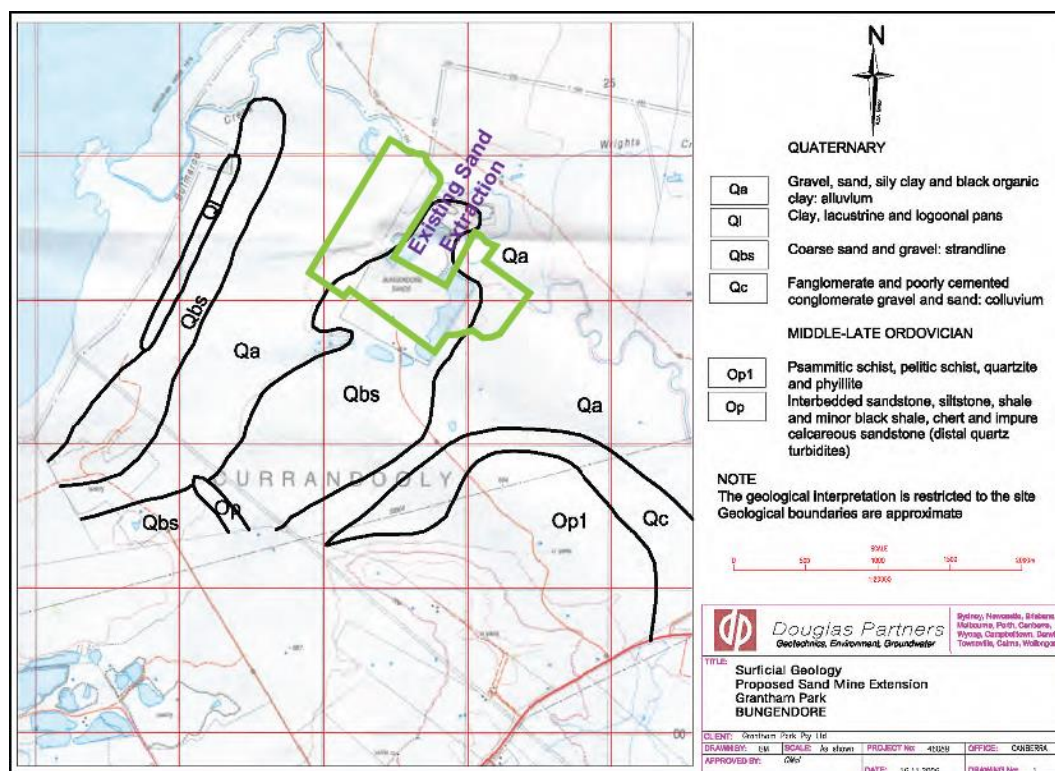


Figure 9 Extract from Douglas Partners report on Geotechnical Investigation, December 2006

The further investigations undertaken by Douglas Partners involved test pits to understand geology. These were extended to a depth of 7m. The findings of their investigations are that:

- The area to the south/south west will most likely prove to be higher yielding with an approximate thickness of around 4 – 4.5 m within the investigated 7 m depth. This aligns with the strandlines observed in their 2006 Investigation.
- The areas to the north west and west will contain interbedded alluvial soils where the sand is expected to be between 2.5 – 3 m in total thickness within the investigated depth of 7 m. The difference in the sand layer thickness across the site correlates with the geological mapping of the area in the 2006 Investigation.

Douglas Partners has estimated the volume of the sand resource by dividing the site into 4 areas to reflect sand thickness, geological mapping and the test pit information to date. **Figure**

4 The Proposal

10 is an extract from the 2017 Investigation. The black line indicates the area of the site used to calculate the resource. The 'cut out' to the west of the existing sand extraction represents the footprint of the approved sand extraction operating under development consent D52/74. The approved extraction area has been excluded for the purposes of calculating the sand resource.



Figure 10 Extract from Douglas Partners 2017 Investigation showing test pits.

To estimate the sand resource, Douglas Partners has multiplied the site area of Areas A to D by the average interpreted sand thickness to obtain an approximate cubic metre volume in each area. The total is 3.8 million m³.

A density value of 1.6 tonne per m³ was adopted to convert the cubic metres to tonnes (being the unit of measure used in Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD)).

The total volume has been estimated to be over 6 million tonnes.

Douglas Partners also note that it is highly likely that additional sand deposits are located below the 7m depth of their investigations, particularly in the south-western portions of the study area which is within the strandlines, and as such increase the estimate to over 6 million tonnes.

The total resource available within the site (excluded already approved sand extraction) meets the criterion for an extractive industry as per Schedule 1 of SEPP SRD, as the total resource to be the subject to the development application will exceed more than 5 million tonnes.

There will be a staged extraction of the resource with approximately three (3) hectares to disturbed at any one time.

4.2 Methods of extraction

There will be two methods of resource extraction available:

- Use of an excavator to extract and load the material into dump trucks and cart the material to the stockpiling area at the processing and washing plant; and/or

4 The Proposal

- Dredging the material with a cutter/ suction dredge which would pump the material along a pipeline directly into the processing plant.

4.3 Processing

The material will be processed through the sand classifying and washing plant that is already located on the adjoining Lot 31 DP 634213. The raw product will be fed into the plant where it will be washed and graded. The processed sand will then be loaded into specific sand stockpiling bays at the processing plant, which have an approximate holding capacity of 30,000 tonnes.

Fine sand and other materials will be stockpiled for processing adjacent to the plant. All overburden such as silt and clay will be used in the rehabilitation of the pit. The processing of sand does not produce any hazardous bi-products.

The management of water on site is a closed-circuit system. The excavation of the raw product creates a series of settling ponds, which are situated below natural ground level thereby preventing run-off. Sediment filled water from the processing plant will flow from one pond to another through a weir system, allowing the silt and sediment to settle into the ponds and creating a supply of clean water. This clean water will flow back to the processing plant for the sand washing process.

The existing plant and weighbridge on Lot 31 DP 63213 will continue and there are no alterations, additions or modifications proposed for the processing plant.

4.4 Hours

The hours of operation will be 6am to 5pm Monday-Friday, and 6am to 2pm on Saturday.

4.5 Traffic and access

There will be between 8-10 employees on site during working hours and so an equivalent number of traffic movements is expected at the beginning and end of each day. In addition, there will be approximately 35 truck movements each day.

New internal access roads will need to be constructed from the excavation face to the processing plant to allow for the movement of the extracted resource.

4.6 Vegetation removal

The land has previously been cleared and is mostly pasture. There are a few isolated stands of trees and a row of trees planted several years ago adjacent to a narrow settling pond. These trees would be removed when pits are excavated in those locations.

5 Strategic Framework

This section considers relevant elements within the strategic planning documents that affect development in the Bungendore area, particularly in relation to extractive industries.

5.1 South East and Tablelands Regional Plan

The South East and Tablelands Regional Plan 2036 (the Plan) was adopted in July 2017 and is an overarching framework that guides the NSW Government's land use planning priorities and decisions in the region over the next 20 years. The first goal of the Plan is a connected and prosperous economy and Direction 13 speaks to managing and protecting the ongoing use of mineral resources in the region with particular mention of the extractive sand resources around Bungendore and Lake George that supply the Canberra construction industry.

Direction 23 of the Plan relates to heritage protection and discusses cultural and historic activities and landscapes that are important to the region's local identity,

"The landscape of the South East and Tablelands also creates an important cultural identity for its community, including the Lake George sand deposits."

Sand mining has long been an important economic driver for the local region.

5.2 Sydney-Canberra Regional Strategy 2006-2031

The Sydney-Canberra Regional Strategy 2006-2031 (the Regional Strategy) represents an agreed NSW Government position on the future of the Corridor. Although the Regional Strategy was adopted in 2008, it was released as a "25 year blueprint to guide growth, improve housing affordability and protect valuable natural resources along the regional corridor between Sydney and Canberra".

The economic importance of sand and coarse aggregate resources in the Palerang area and Bungendore region near the southern margin of Lake George (as illustrated in **Figure 11**) is discussed in section 4 of the Regional Strategy:

"These resources are important for supplies to the Canberra and smaller local markets. Extractive resources are important to the economy of the Region with enough potential to supply these markets for many years into the future."

5 Strategic Framework

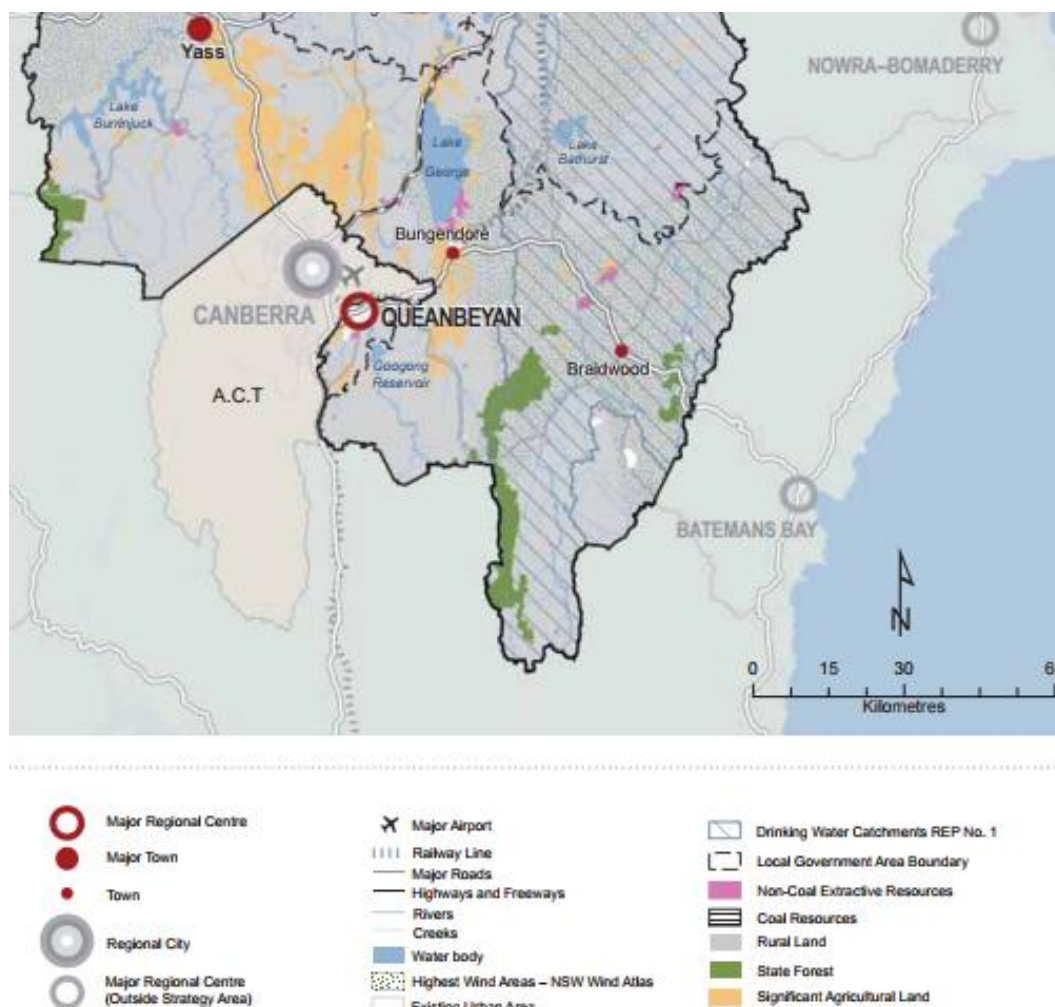


Figure 11 Natural Resources Map highlighting sand resources.

5.3 Bungendore Land Use Strategy and Structure Plan

The Bungendore Land Use Strategy and Structure Plan 2008 (Bungendore Strategy) was adopted by Council at its meeting of 5 August 2010. The strategy was endorsed by the Director General of the Department of Planning on 30 November 2011. The aim of the Bungendore Strategy is to map out the key directions for the locality over the next 25 years. Again, the importance of mineral resources in the region is highlighted as is the community's wish to protect these industries.

"The sand and coarse aggregate resources in the Bungendore area have regional significance and have a significant role in the supply of sands and aggregates for the regional construction industry...[there is] higher community priority that lands be retained for agriculture and/or mineral resources associated purposes [than be used for rural residential development]"

Figure 12 below indicates the location of current extractive industries including Grantham Park adjacent to the Site, which is the subject of this preliminary environmental investigation. It is a goal of the Bungendore Strategy to "minimise the fragmentation and alienation of prime agricultural and valuable mineral resources lands, providing certainty and security for investment and enterprise" and it is a recommended policy to retain "land indicated by DPI as existing extraction, potential mineral resources or buffer zones, as RU1 Primary Production Zone". While the land in and around the site is clearly identified as existing extraction and potential mineral resources by the DPI, a significant part of the site containing mineral resources has been zoned E3 Environmental Conservation and not RU1.

5 Strategic Framework

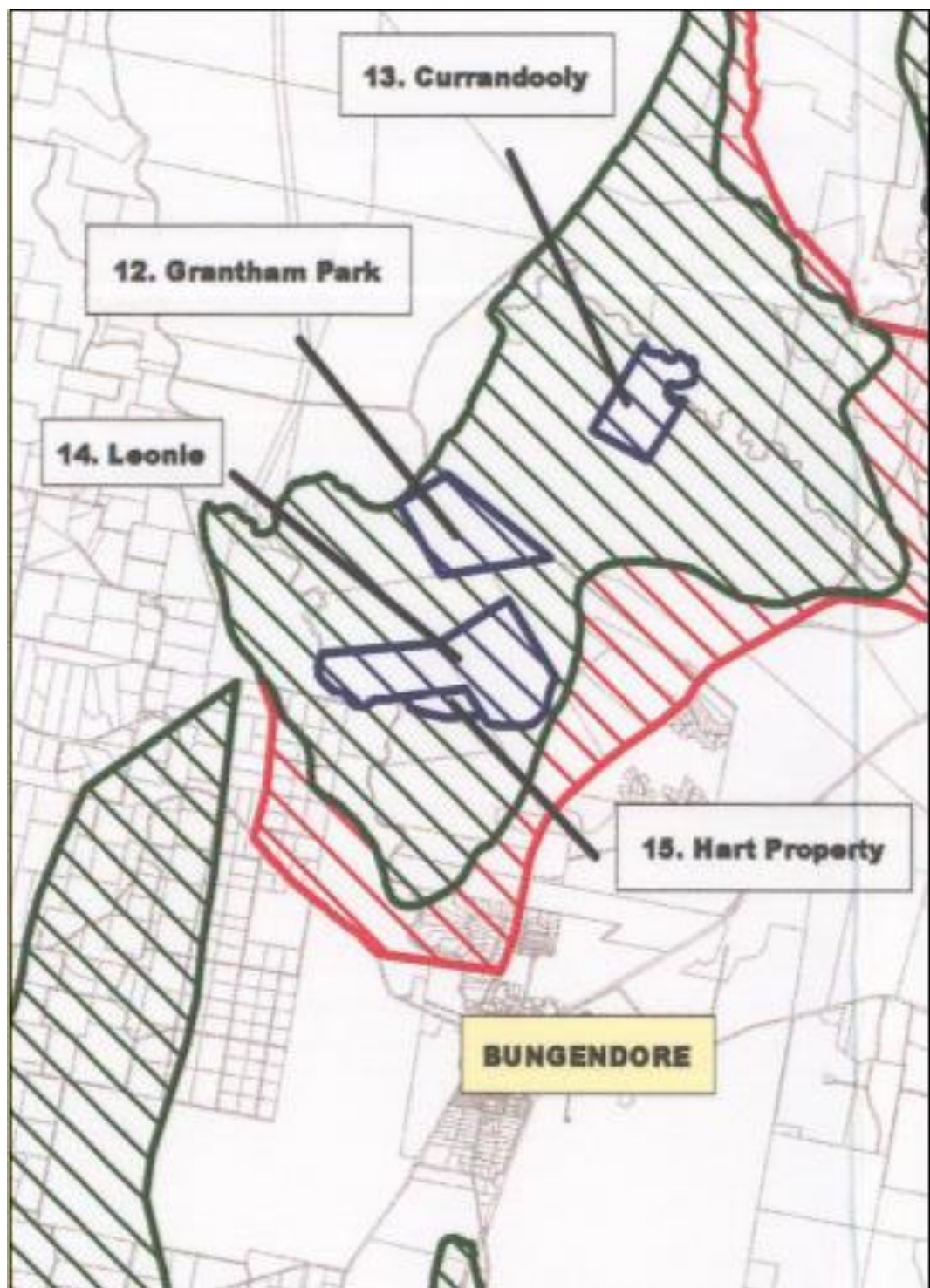


Figure 12 Reproduction of DPI Mineral Resources and Buffer Map in Bungendore Area. Blue = existing extraction; Green = potential mineral resources; Red = buffer zones.

The Bungendore Strategy also highlights the importance of increasing local employment opportunities, including value-added industrial development associated with mineral resources, to reduce the need for residents to undertake long commutes.

“Preparedness for opportunistic industrial development related to local competitive advantage. The most obvious is that of vertical integration opportunities from local mining of mineral sand deposits and/ or in relation to rail line infrastructure. Council could deliberately position itself to respond to a site specific spot rezoning should the opportunity arise.”

5 Strategic Framework

5.4 Palerang Rural Lands Study, 2015

The Rural Lands Strategy was adopted by Queanbeyan Palerang Regional Council on 22 February 2017. It sets a 20-year strategic direction for rural, rural residential and environmental land in the former Palerang local government area.

The Strategy was informed by:

- Palerang Rural Lands Study Report, June 2015 prepared by Garret Barry Planning Services Pty Ltd for Palerang Council
- A Discussion Paper to Guide the Rural Lands Strategy, April 2016 prepared by Garret Barry Planning Services Pty Ltd for Palerang Council
- Commercial Agriculture Report in Palerang LGA, dated February 2015 prepared by Garret Barry Planning Services Pty Ltd and Roland Brekwoldt for Palerang Council

One of the objectives of the Palerang Rural Lands Study is to set strategies to protect extractive resource areas within the Palerang local government area. The Study goes on to identify the economic advantages that extractive industries present to the region based on the proximity of sand resources to the large population centres of Queanbeyan and Canberra. To this end, the Study recognises that extractive resources need protection from rural residential encroachment and proposes *“using the 117 Directions map [to] make an extractive industries buffer map for inclusion in the DCP”*.

6 Planning Framework

6.1 Definition of proposed activity

Defining whether the proposed activity is termed *mining* or an *extractive industry* is important in addressing the planning framework for this proposal. The definition of an *extractive material* includes sand, but does not include minerals within the meaning of the Mining Act, 1992. The Mining Act defines a mineral to mean “*any substance prescribed by the regulations as a mineral for the purposes of this definition, and includes coal and oil shale, but does not include petroleum.*” Schedule 1 of the Mining Regulation 2016 sets out what is a mineral. Sand is not identified as a mineral in Schedule 1. Therefore, a *mine* or *mining* relates to the mining of any mineral. Because sand is not identified as a *mineral* then the winning of sand from land is not a mine or mining. Sand is therefore an *extractive material* and the activity is an *extractive industry*, as per the definitions contained in the Palerang LEP 2014 set out below.

extractive industry means the winning or removal of extractive materials (otherwise than from a mine) by methods such as excavating, dredging, tunnelling or quarrying, including the storing, stockpiling or processing of extractive materials by methods such as recycling, washing, crushing, sawing or separating, but does not include turf farming.

Note. Extractive industries are not a type of industry—see the definition of that term in this Dictionary.

extractive material means sand, soil, gravel, rock or similar substances that are not minerals within the meaning of the Mining Act 1992.

6.2 Environmental Planning and Assessment Act, 1979

Division 4.1 in Part 4 of the EP&A Act deals with State significant development. Clause 89C defines development that is State significant and the fact that a SEPP may declare any development, or class or description of development, to be State significant development.

Clause 7 to Schedule 1 of SEPP (State and Regional Development) 2011 sets out the thresholds for extractive industries to be considered State significant development:

7. Extractive Industry

(1) Development for the purposes of extractive industry that:

(a) extracts more than 500,000 tonnes of extractive materials per year, or

(b) extracts from a total resource (the subject of the development application) of more than 5 million tonnes, or

(c) extracts from an environmentally sensitive area of State significance.

Pursuant to Clause 89C of the EP&A Act, the proposed development is considered State significant development as the total resource exceeds 5 million tonnes. Therefore, the development application will be State significant development.

6.3 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (SEPP MPPEI)

6.3.1 Permissible development

SEPP MPPEI 2007 applies to the site and has the following aims.

(a) to provide for the proper management and development of mineral, petroleum and **extractive material** resources for the purpose of promoting the social and economic welfare of the State, and

(b) to facilitate the orderly and economic use and development of land containing mineral, petroleum and **extractive material** resources, and

(b1) to promote the development of significant mineral resources, and

(c) to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and **extractive material** resources, and

6 Planning Framework

It is evident that SEPP MPPEI's aims relative to extractive material has the same meaning as the definitions set out in **Section 6.1** of this Preliminary Assessment. Clause 7(3) states that development for the purposes of an extractive industry may be carried out with consent “*on land where development for the purposes of agriculture or industry may be carried out (with or without development consent)*”.

Figure 15 illustrates that a proportion of the Site is zoned RU1 – Primary Production, in which extractive industries are permissible with consent. The other proportion of the site is zoned E3 – Environmental Conservation in which extractive industries are prohibited but agriculture is permitted. SEPP MPPEI prevails over the Palerang LEP 2014 to the extent of the inconsistency. Therefore, pursuant to Clause 7(3) of the SEPP MPPEI extractive industry (including the extraction of sand) is permissible with development consent in the E3 zone.

6.4 Native Vegetation Act 2003 (repealed)

6.4.1 Part 4 Property Vegetation Plans

On 30 July 2007, an incentive property vegetation plan (PVP) under the Native Vegetation Act 2003 was granted for former Lot 32 DP 634213. The Section 149 Planning Certificate for Lot 1 DP 1167699 notes that a PVP applies to the land. The PVP refers to the protection of a riparian corridor along a section of Butmaroo Creek to the east of the site as illustrated in **Figure 13**.



Figure 13 Location of PVP to the east of the site

Subsequent to the granting of the PVP, Lot 32 was subdivided to create Lot 1 (the site) and Lot 2 in DP 1167699. The area that is subject to the PVP is located on Lot 2 and the reference to the PVP on the s149 Planning Certificate is a historical carry over from before the subdivision. **Figure 13** confirms that no PVP is applicable to any land within the subject site.

6.5 Water Management Act 2000 & Water Management (General) Regulation 2011

Figure 14 is an extract of the Watercourse Map from Palerang LEP 2015. The mapped ‘watercourse’ on the site relate to settling ponds associated with the existing sand extraction operation. The nearest watercourses are Butmaroo Creek and Lake George.

6 Planning Framework

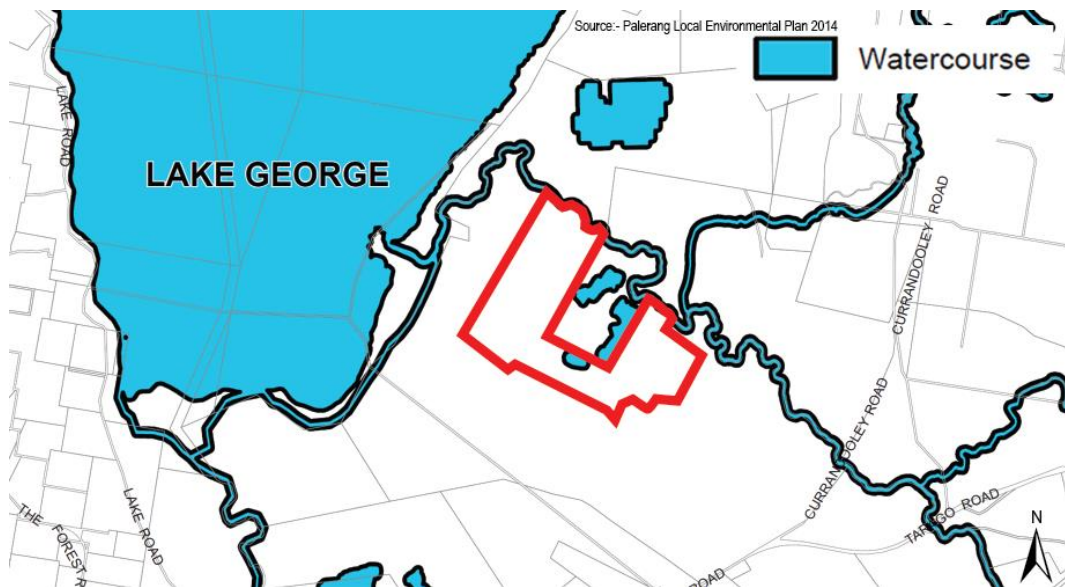


Figure 14 Watercourse Map extract from Palerang LEP 2015

Lake George is located approximately 1km from the western property boundary of the site and therefore not 'waterfront land' under the Water Management Act.

Butmaroo Creek is located adjacent to the northern boundary of the site and the northern part of the site would be within 40m of the creek and therefore 'waterfront land' under the Water Management Act.

Douglas Partners Geotechnical Investigation of 2017 also recorded the location of groundwater at a depth of between 3.7m to 4.8m. Douglas Partners note that most of the sand resource is below the groundwater table.

Under section 91(2) of the Water Management Act, 2000 an activity approval would be required for sand extraction that might take place on 'waterfront land'. Whether sand is extracted within 40m of the creek is yet to be determined as this part of the site has less of the sand resource. Based on the current sand extraction operations, the extent of the excavations varies between 50 to 100m from the creek.

Under clause 22 of the Water Management (General) Regulation 2011 the extraction of sand is prescribed for the purposes of an aquifer interference activity. Therefore, under section 91(3) of the Water Management Act, 2000 an aquifer interference approval would be required for sand extraction that extends below the groundwater table.

Tobiway Crushing Pty Ltd has advised that the existing extraction occurs to a depth of up to 18 metres, with an average depth of 10-12 metres. The proposed excavation will be for an average depth of 10 metres. Tobiway Crushing Pty Ltd has also advised that they have encountered water at a depth of 5 metres in some areas and in other areas they have not encountered water at a depth of 10 metres. Geotechnical investigations and assessments would need to be carried out to establish the depth of the water table and whether the water that has been encountered at 5 metres is a perched water table sitting above the layers of clay.

The Water Management Act and Regulation will be considered as part of the Environmental Impact Assessment.

6.6 Protection of the Environment Operations Act 1997 (POEO Act)

The POEO Act requires a licence for certain activities including the extraction, processing or storage of sand. Schedule 1 of the POEO Act prescribes the volumes of material that trigger the requirement for a licence, which are reproduced below.

6 Planning Framework

16 Crushing, grinding or separating

(1) This clause applies to crushing, grinding or separating, meaning the processing of materials (including sand, gravel, rock or minerals, but not including waste of any description) by crushing, grinding or separating them into different sizes.

(2) The activity to which this clause applies is declared to be a scheduled activity if it has a capacity to process more than 150 tonnes of materials per day or 30,000 tonnes of materials per year.

Based on the records of Tobaway Crushing Pty Ltd the current pits (on Lot 31 DP 634213) have been producing between 285,000 tonnes to 335,000 tonnes per calendar year. The existing resource and plant therefore has the capacity to process more than 30,000 tonnes of sand per year.

Based on previous records, it is anticipated that the proposed activity will be a scheduled activity pursuant to Schedule 1 (19) of the POEO Act as it is a land based extractive activity that will involve the extraction, processing or storage of more than 30,000 tonnes per year of extractive materials.

If development consent is granted, then a separate licence will be required.

6.7 Palerang Local Environmental Plan 2015

6.7.1 Zoning

The Site has two zonings, RU1 – Rural Production and E3 – Environmental Conservation, as illustrated in **Figure 15**.

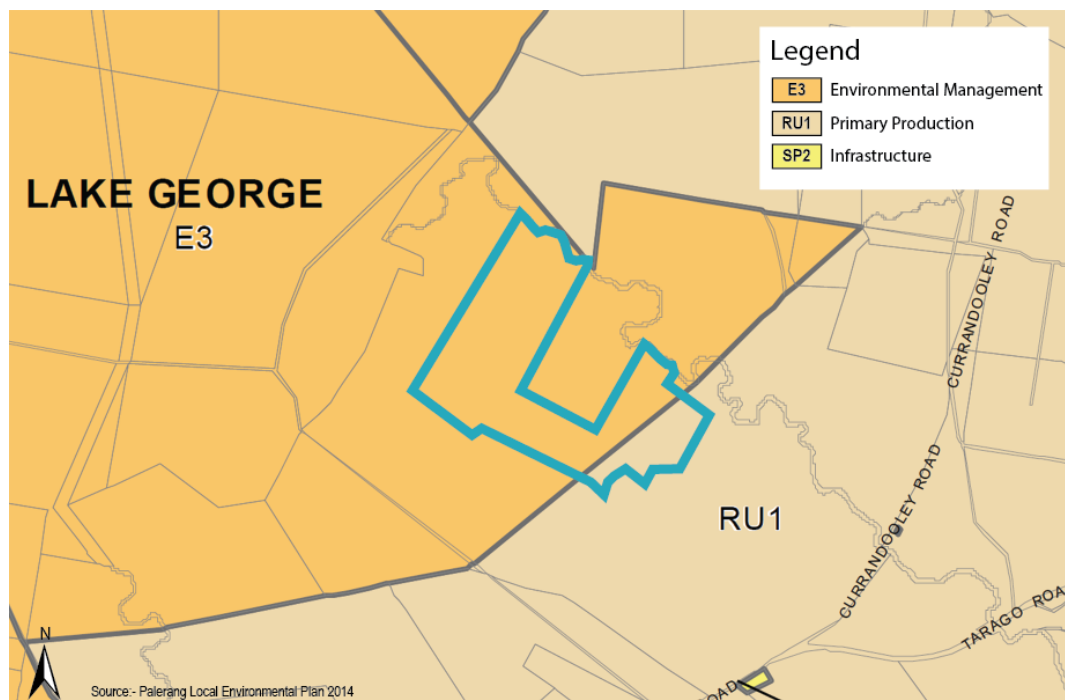


Figure 15 Extract from Palerang LEP 2015 Zoning Map

Extractive industries are permissible with consent within the RU1 Zone and the relevant objectives of the Zone to this proposal are:

To encourage diversity in primary industry enterprise systems appropriate for the area;

To minimise fragmentation and alienation of resource lands

To minimise the impact of any development on the natural environment

As discussed in **section 6.3.1**, the proposed use is not permissible within the E3 Zone, however, permissibility is established under SEPP (MPPEI).

6 Planning Framework

6.8 Palerang Development Control Plan 2015

The Palerang DCP does not contain provisions in relation to sand mining or extractive industrial. The relevant controls within the Palerang DCP relate to sediment and erosion control which can be addressed as part of the EIS.

7 Planning and Environmental Considerations

7.1 Economic Impacts

As outlined in section 5 above, there are strong economic drivers for this project. The investment and industry in the Lake George region will maintain up to 10 local jobs and expand the existing extractive industry in the area to bring positive cumulative economic benefits and raise industry confidence.

In addition to economic benefits for the local community, the sand extracted from the Lake George region supplies a significant proportion of the construction industry in Canberra. Given that the supply of resource covered by DA52/74 is forecast to be exhausted within the next 5 to 6 years. Expanding operations to neighbouring resource will be critical for the ongoing viability and expansion of the region's construction industry.

7.2 E3 Environmental Management Zone

This section considers the history of zoning over the portion of the site zoned E3 Environmental Management.

Yarrowlumla LEP 1993

The site was zoned 7(e) (Environmental Protection Scenic) under Yarrowlumla LEP 1993. The extent of the zone matches that of the current E3 Environmental Management zone.

Yarrowlumla LEP (YLEP) 2002

Yarrowlumla LEP (YLEP) 2002 applied to the site before Palerang LEP 2015 was made. The site was zoned part 7(e) Environmental Protection and part 1(a) Rural under YLEP 2002. The extent of the 7(e) zone under YLEP 2002 matched the 7(e) zone under the YLEP 1993.

Figure 16 illustrates the zoning under former YLEP 2002.

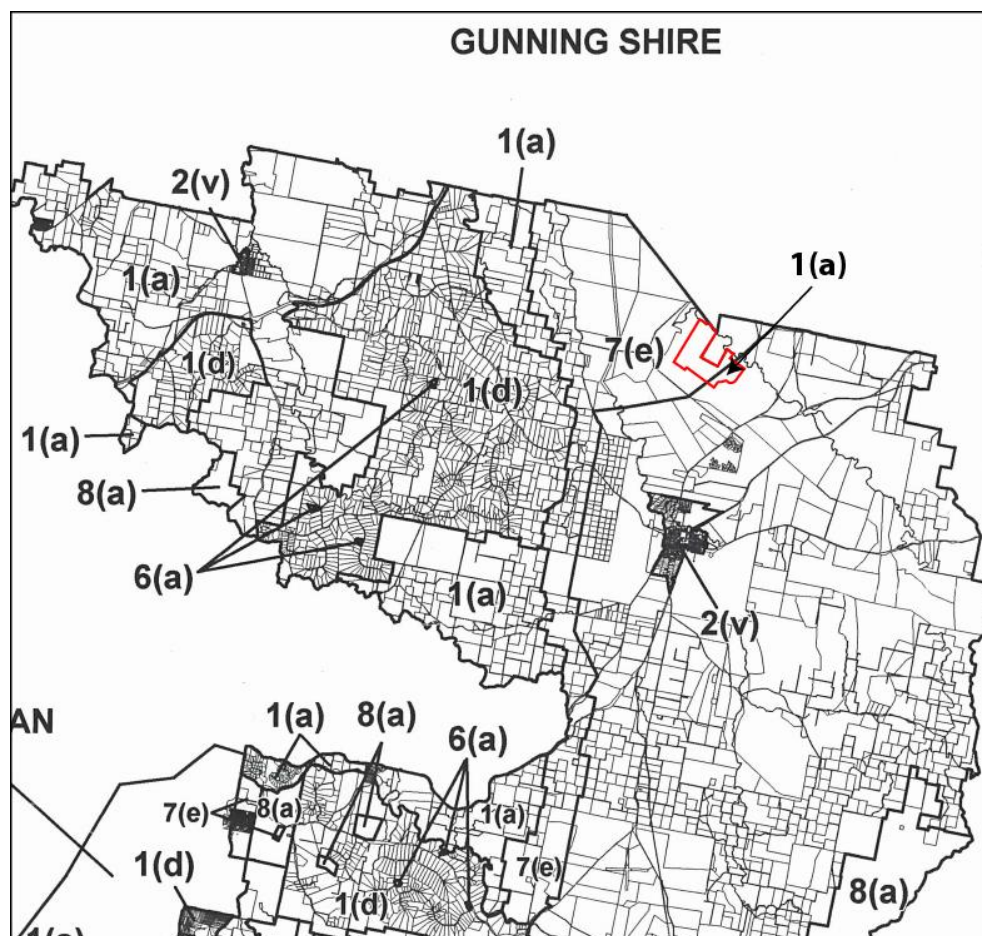


Figure 16 Previous zoning under YLEP 2002

7 Planning and Environmental Considerations

The reason for the extent of the 7(e) zone is not clear and is likely to have been a continuation of the 7(e) (Environmental Protection Scenic) zone which applied under YLEP 1993. The 7(e) zone under YLEP 2002 reflects the location of Lake George and the escarpment west of Lake George and beyond (to the south), however extends beyond Lake George to capture part of the site and other adjoining properties.

The objectives of this zone are as follows:

- (a) to protect various localities which are environmentally sensitive and which enhance the visual amenity of the local government area of Yarrawluma,
- (b) to protect various localities which are of scientific or social significance.

Rural Discussion Paper 2008

Council commenced a Rural Discussion Paper in 2008 which was to inform the preparation of a Standard Instrument LEP. The Rural Discussion Paper included draft zonings, an extract of which is provided in **Figure 17**.

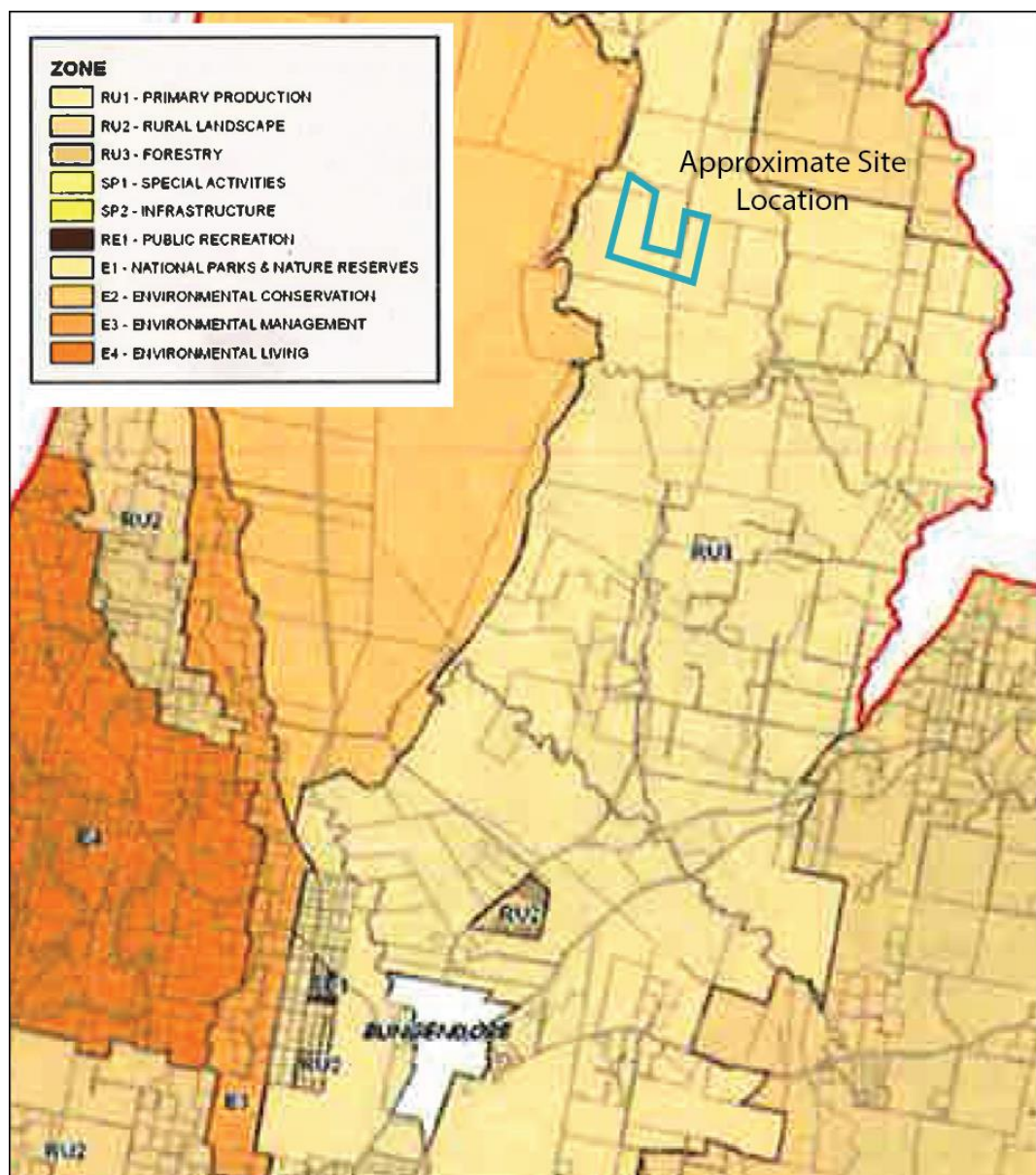


Figure 17 Zonings proposed in the Rural Discussion Paper 2008

7 Planning and Environmental Considerations

Figure 17 illustrates that the whole of the site was proposed to be zoned RU1 Primary Production. To the west of the site an E2 Environmental Conservation zone was proposed which related to Lake George. DFP made a submission on behalf of the land owner (Grantham Park) supporting the proposed RU1 zone which permitted extractive industry. The submission also noted that extractive industries were prohibited in the then 7(e) zone and the proposed RU1 zone would reflect the current sand extraction being undertaken.

When the draft Palerang LEP 2013 was publicly exhibited the site was proposed to be zoned part E3 Environmental Management and part RU1 Primary Production. DFP prepared a submission to Council supporting the proposed RU1 zone. A review of Council's report following the public exhibition of the Rural Discussion Paper does not explain why the proposed RU1 Zone was changed to E3 Environmental Management. The extent of the E3 zone reflects the extent of the former 7(e) zone under YLEP 2002. This zoning was ultimately reflected in the current Palerang LEP 2015.

The extent of the various environmental zones appears to reflect the historical environmental zonings applying to the land.

In summary, the history of the environmental zone has been varied:

- 1993 - Environmental Protection Scenic
- 2002 - Environmental Protection
- 2015 - Environmental Management

The zoning history suggests that the environmental zone began its origins as a scenic zone, and the scenic attributes were best captured in the Environmental zone category available at that time. Subsequent LEPs did not have a scenic subcategory of the Environmental Zone and hence other Environmental zone classes available in the respective LEPs have been used. If the original reasoning was scenic then that reasoning is not apparent in the subsequent zones names, although scenic or aesthetic attributes are contained in the zone objectives as well as other environmental attributes. Whilst the land has maintained different environmental zones over time, the most recent E3 zone is environmental management which reflects an approach of managing land whilst allowing other land uses.

7.3 Aboriginal Cultural Heritage

The land in the locality of the subject site has been the subject of aboriginal heritage assessments since as early as 1992 with more recent research carried out in 2015 by Amy Way, a PhD student of Sydney University under the supervision of Professor Peter Hiscock, Professor of Australian Archaeology, Head of Department, Department of Archaeology, School of Philosophical and Historical Inquiry, Faculty of Arts and Social Sciences, The University of Sydney.

This work has studied Lake George and the land upon which the existing sand extraction is taking place. The results of the assessments have found that the wider basin is an important location in prehistoric times. Many rich stone artefact assemblages survive in this area.

As part of the research by Amy Way, an Aboriginal Heritage Impact Permit (AHIP) was obtained (AHIP No. 3652) in October 2015 on land relating to the existing sand extraction (Lot 31 DP 634213). The outcome of the excavation associated with the AHIP was the finding of a small undisturbed area including an intact hearth with charcoal deposits, which is useful knowledge to understand other archaeology in the region. This area has been fenced and protected and does not relate to the land the subject of the proposed sand extraction.

The EIS will be accompanied by further Aboriginal cultural heritage assessment to be undertaken in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage* in consultation with OEH regional officers. Depending on the

7 Planning and Environmental Considerations

outcomes of the assessment, the EIS can identify how impacts can be avoided, conservation outcomes or where impacts are unavoidable, the measures proposed to mitigate impacts.

7.4 Water Quality

An assessment of the impacts of the sand extraction on the water resources will form part of the EIS. The following matters are likely to be required to be addressed:

- Potential impacts on the water table and ground water including reference to *the NSW Aquifer Interference Policy* including groundwater monitoring and modelling plans (if required).
- Potential impacts on surface water flows.
- Potential impacts on water quality and quantity to Butmaroo Creek and Lake George.
- Licensing requirements under the Water Management Act, 2000.
- Explanation of how water usage is managed and the mitigations measures to address potential impacts.

7.5 Scenic Quality / Visual Impacts

The location of the existing sand extraction is not visible from Tarago Road. The main opportunities for viewing the sand extraction is from elevated areas in the surrounds including land to the north and south. Very distant views are possible from the lookouts / rest stops along the Federal Highway.

An assessment of the visual impacts will be addressed in the EIS including viewing points and their distance from the sand extraction operation and measures to be implemented to mitigate potential impacts.

7.6 Traffic

There are up to ten employees who will travel to and from site each day. In addition, there are approximately 35 truck movements per day.

By way of comparison the existing sand extraction involves a total of 10 employees and 35 truck movements.

The number of movements is small and no different to the current sand extraction.

A traffic report can be conducted by a suitably qualified consultant to address vehicle movements to and from the site and impacts on the road network.

7.7 Air Quality Impacts

The generation of dust is the primary potential air quality impacts. An assessment of potential impacts will be undertaken as part of the EIS including measure to monitor and mitigate potential dust impacts.

The impacts from machinery and traffic movements are considered to be negligible as the existing infrastructure will be utilised and truck movements will be similar to the current operations. It not considered necessary to assess these existing aspects of the sand extraction.

7.8 Noise Impacts

The nearest residential area is over 1km to the south. However, given the rural nature of the surrounding area, the sound might travel. A noise impact assessment in accordance with the *NSW Noise Policy for Industry* can be undertaken as part of the EIS, including the identification of any measures to mitigate impacts.

7 Planning and Environmental Considerations

The noise assessment could also consider road noise impacts, but as noted above, the truck movements are not proposed to be different to those already taking place.

7.9 Rehabilitation

A plan for the rehabilitation of the site will accompany the EIS addressing the relevant provisions of the *Strategic Framework for Mine Closure*.

8 Conclusion

This preliminary environmental assessment is a written request for the Secretary's Environmental Assessment Requirements pursuant to Clause 3 of Schedule 2 of the EP&A Regulations for the proposed extractive activities at 587 Tarago Road, Lake George.

Preliminary geotechnical investigations have revealed that the quantum of sand resource exceeds 6 million tonnes, which means that the project is State Significant development pursuant to Schedule 1 of SEPP SRD. A portion of the site is zoned E3 Environmental Conservation under the Palarang LEP, which prohibits extractive industries. However, Clause 7(3) of SEPP MPPEI permits extractive industries on this site subject to consent, and prevails over the Palarang LEP. Accordingly, we request the Secretary for the DPE issue SEARs for the project to guide the assessments that will inform the EIS and lodgement of the SSD application.