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Re: Gunlake Quarry Extension Project – Request for Director-General's Requirements: supporting documentation

# 1 Introduction

Gunlake Quarry is a hard rock quarry operated by Gunlake Quarries Pty Limited (Gunlake). It is located approximately 7 kilometres (km) north-west of Marulan in the Goulburn Mulwaree local government area (Figure 1). Gunlake Quarry has been operating since 2009 and Gunlake is proposing to expand these operations.

Gunlake is seeking Director-General's environmental assessment requirements (DGRs) for the development application and accompanying environmental impact statement (EIS) for the proposed expansion.

## 1.1 Background

Gunlake Quarry currently operates under project approval 07-0074 issued by the Minister for Planning in September 2008 under Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The project approval has been modified on three occasions.

The Gunlake Quarry extension (the proposal) seeks to enable an increased rate of extraction at Gunlake Quarry to assist to meet the identified demand for construction materials, including quarried aggregate, for the local area and Sydney. The Department of Planning and Environment (DPE) has determined that Marulan is a suitable area for the future supply of heavy construction materials for Sydney. The proposal layout is shown in Figure 2.

It is believed that the proposal will be State significant development under the State Environmental Planning Policy (State and Regional Development) 2011 and an application will need to be lodged under Division 4.1 of Part 4 of the EP&A Act.

This letter has been prepared to brief DPE, local and state government agencies, and the community on the details of the proposal.

# 2 The applicant

Gunlake Quarry produce material suitable for use in a wide range of applications, including concrete and sealing aggregates, rail ballast, manufactured sand and road base. These products are used in its own operations in Sydney as well as for other markets. Gunlake is in the process of establishing concrete plants in the Sydney Region with three plants in operation.

# 3 Approvals history

Project approval 07-0074 was originally granted under Part 3A of the EP&A Act in 2008. This included approval for truck movements equivalent to about 500,000 tonnes per annum of saleable product until 2038.

Three modifications have been approved:

- Modification 1 – Stage 2 southbound access;
- Modification 2 – Quarry expansion; and
- Modification 3 – Truck movements.

Modifications 1 and 3 were minor modifications to alter transport routes and truck numbers related to the quarry. Modification 2 included expansion of the quarry pit and overburden emplacement, an increase to truck movements equivalent to 750,000 tonnes per annum and alteration of the approved hours of operation.

# 4 Land ownership

The proposed extension area is entirely within Lot 13 DP1123374, which is owned by Gunlake, and also contains Crown roads that would be impacted by the proposal (shown on Figure 2). Based on advice received from Crown Lands, Gunlake submitted an application to close these Crown roads on 3 March 2015. If this process is not completed before the new application is made, consent from Crown Lands will be sought for the development of these areas as part of the application.

# 5 Existing operations

## 5.1 Resource

The rock resource is within the Bindook Volcanic Complex of the Devonian Age. The Complex comprises a north-northeast trending series of volcanic units located north of the intrusive Marulan Granite. Gunlake Quarry is located on a proven rock resource of approximately 180 Mt of tuffaceous rhyodacite. The igneous rock deposit continues well over 100 m below the surface.

The hard rock is suitable for uses in a range of quarry products including concrete and sealing aggregates, rail ballast, manufactured sand and road bases.

To date, only a small proportion (0.9 Mt) of the 180 Mt of hard rock identified on the site has been quarried at Gunlake Quarry.

## 5.2 Quarry components

Gunlake Quarry has been supplying the local region and the greater Sydney Metropolitan area with hard rock supplies. The quarry has approval for approximately 750,000 tonnes of saleable product and is a significant supplier of heavy construction materials for the New South Wales (NSW) construction industry.

Key components of the existing quarry include:

- a quarry pit providing hard rock resources;
- overburden and excess product emplacement areas;

- drilling and blasting to release the rock material;
- crushing and screening of the quarried rock;
- truck loading and transport of hard rock; and
- ancillary infrastructure to support operations including offices, amenity buildings and other minor infrastructure.

## 5.3 Quarrying

### 5.3.1 Soil stockpiling

Topsoil and subsoil within the quarry is stripped and replaced directly onto completed sections of the final landform. Where this is impractical and stockpiling is necessary, topsoil and subsoil is stockpiled separately.

### 5.3.2 Soil and overburden removal

Overburden is removed by an excavator loading to 50-tonne dump trucks. In the quarry pit, overburden is removed progressively in front of the quarry bench. This occurs about two months in advance of the drilling in preparation for rock production blasting.

### 5.3.3 Overburden emplacement bund

An overburden emplacement bund has been constructed to provide a permanent location for the overburden material. The overburden for the bund was obtained from the processing and quarry pit development to date. It will be extended to the north and south.

The overburden emplacement bund has been located to maximise its acoustic and visual screening properties.

#### i Rock extraction

Following the removal of overburden, conventional drill and blast techniques are used to quarry the rock faces that are up to approximately 13 m high. Quarrying started at the northern end of the quarry and is proceeding south.

Drilling in preparation for blasting is undertaken using a hydraulic drill and approximately 30,000 tonnes of hard rock is prepared for each blast. Blasting occurs approximately once a fortnight.

#### ii Rock processing

Following extraction, quarried rock is transported north-east of the quarry pit to the rock processing area via haul roads. The rock processing area contains the following components:

- primary crusher;
- secondary crushers and screens;
- tertiary crushers and screens;
- main screen;
- interconnecting conveyors; and
- product stockpiles.

The processing area has a prepared hard surface of crushed rock material. It is used for stockpiling various products and for load out by a front end loader into road haul trucks for delivery to markets.

The processing plant contains atomised water dust suppression systems at all discharge points.

### 5.3.4 Site infrastructure and equipment

The existing site infrastructure includes the following:

- site office;
- toilet and ablution facilities;
- weighbridge;
- truck wash;
- crib hut;
- hardstand and truck parking area;
- light vehicle parking area;
- bunded fuel bay;
- maintenance workshop and wash bay; and
- light vehicle parking facilities.

Gunlake Quarry operates the following equipment:

- face loader (Cat 988);
- two 50-tonne dump trucks (Cat 773);
- front end loader (Cat 980);
- front end loader (Cat 988);
- drilling rig (Atlas Copco Hydraulic rig);
- excavator (Caterpillar 345BL);
- grader (Caterpillar 12H);
- tip truck;
- maintenance trucks; and
- water truck.

### 5.3.5 Quarry products

Rock extracted at Gunlake Quarry is processed by crushing and screening within the processing area to form saleable products. The material produced at Gunlake quarry is suitable for use in the following products:

- concrete and sealing aggregates;
- rail ballast;
- manufactured sand; and
- road base.

Typical finished products from the processing plant include aggregates with diameters less than 20 mm, 14 mm, 10 mm and 7 mm.

### 5.3.6 Current economic benefits of the quarry

The quantifiable economic benefits of the modification include the provision of jobs at the quarry and as truck drivers; the generation of 'flow-on' employment; monetary contributions to local, NSW and Australian government; and expenditure in the local and regional economy.

The quarry currently employs 50 staff, including truck drivers. Assuming an average annual salary of $50,000, this represents total salaries of $2.5 million per year. Assuming that employee 'on costs' are 30% of salaries, this is an annual economic benefit of about $3.25 million.

A range of non-quantifiable economic benefits arise from the supply of competitively priced quarry products to ongoing growth in Sydney and the local area.

The provision of housing and infrastructure in NSW will require an increase in the supply of heavy construction materials such as concrete and its constituents. Sydney currently uses almost 20 million tonnes of quarried aggregates every year. Historically, most of this aggregate has been extracted relatively close to Sydney. As these reserves are depleted, aggregate will have to be sourced further afield from quarries such as those at Marulan.

Gunlake quarry's operations bring the economic benefits of growth:

- where construction materials are sourced, in this case Goulburn Mulwaree Council local government area; and
- where they are used locally and in Sydney.

# 6 The Extension Project proposal

Gunlake seeks a new development consent that allows:

- 2 million tonnes per annum (Mtpa) of saleable products to be produced;
- an increase in truck movements to an average of 440 movements per day;
- extension of the quarry pit footprint by 150 percent to approximately 63 ha (Figure 2);
- 24 hour per day primary crushing;

- additional overburden emplacement to accommodate the increase in production; and
- blasting twice weekly.

In addition, Gunlake seeks to maintain the approval for all aspects of the existing operations for Gunlake Quarry under Project Approval 07-0074. The proposed extension area is shown in Figure 2.

A summary of the Extension Project is provided in Table 5.1.

**Table 1 Project description**

| Project element | Currently approved | Proposed |
|---|---|---|
| Quarrying method | Hard rock quarrying by open cut methods. | No change. |
| Resource | Approximately 180 million tonnes. | No change. |
| Disturbance area | As shown in Figure 2. | Extension of pit footprint to approximately 63 ha (shown in Figure 2). |
| Saleable product | 750,000 tonnes per annum. | Increase to 2 Mtpa. |
| Quarry life | 30 years. | 30 years from approval. There is sufficient resource (180 Mt) for quarrying to continue at 2 Mtpa for 90 years. |
| Beneficiation | Onsite crushing and stockpiling of quarried rock. | No change. |
| Infrastructure | As outlined in Section 4.3.4. | Upgrade infrastructure as required to produce 2 Mtpa of products. |
| Product transport | An average of 164 truck movements per day. | Increase truck movements to an average of 440 movements per day. |
| Operational workforce | 25 on-site employees and 25 to 38 truck drivers (full-time equivalent). | Increase of approximately 27 on-site employees and truck drivers. |
| Hours of operation | 6:00 am Monday to 6:00 pm Saturday, including crushing between 7:00 am and 6:00 pm, Monday to Saturday and maintenance at any time, Monday to Saturday. | Modify existing hours of operation to allow crushing 24 hours a day (except Sundays and public holidays) and maintenance anytime (including Sundays and public holidays). |
| Capital investment value | - | $3.2 million |

# 7 State significant development

The proposal seeks approval to increase production of an existing quarry to 2 Mtpa. *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), defines certain development as State significant development (SSD). Clause 8 of the SRD SEPP states:

> (1) Development is declared to be State significant development for the purposes of the Act [Environmental Planning and Assessment Act 1979 (EP&A Act)] if:
>
> (a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and
>
> (b) the development is specified in Schedule 1 or 2.

Schedule 1 of the SRD SEPP defines a range of general SSDs, including extractive industries. Clause 7 (Extractive Industries) of Schedule 1 states:

> (1) Development for the purpose 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.

The proposal meets both the requirements of clause 8 of the SRD SEPP and is development specified in Schedule 1. Therefore, the proposal should be declared SSD for the purposes of the EP&A Act and development consent will be sought from the Minister for Planning.

# 8 Stakeholder engagement

Gunlake recognises that engagement and consultation with stakeholders is integral to the operation of the facility. Accordingly, stakeholder engagement will form a key component of the approval process.

Key stakeholders that will be consulted during the approval process include:

- DPE;
- Environment Protection Authority (EPA);
- Roads and Maritime Service (RMS);
- Office of Environment and Heritage (OEH);
- NSW Office of Water (NOW);
- Goulburn Mulwaree Council; and
- near neighbours.

Stakeholder engagement will continue throughout the environmental assessment process.

# 9 Environmental matters

## 9.1 Introduction

A high-level review of the environmental matters associated with the proposed development has been undertaken to inform the design of the proposed Extension Project and to identify issues to be addressed in the EIS. These design considerations described in the following sections, and are shown in Figure 3.

## 9.2 Ecology

### 9.2.1 Currently approved operations

The site is in a rural area, where the predominant land uses are grazing, agriculture, forestry and quarrying. The primary ecological issue is the presence of Box Gum Woodland Endangered Ecological Community (EEC). The flora and fauna assessment (Biosis 2014) accompanying the Modification 2 EA concluded that, with appropriate controls, all potential impacts of the new approved operations to threatened species and ecological communities will be successfully mitigated or appropriate compensation will be provided in the form of biodiversity offsets.

### 9.2.2 Proposed pit layout

Open cut quarrying cannot readily avoid impacts where resources are beneath flora and fauna habitats. However, potential impacts of the Extension Project have been avoided where possible as part of the quarry design process.

It is proposed that the currently approved pit footprint is extended to the south (Figure 3). This extension will result in the clearance of an area of approximately 11 ha of Box Gum Woodland EEC, comprising 6.5 ha of woodland vegetation and 4.5 ha of derived native grassland. Avoiding this area of Box Gum Woodland EEC by adopting a dual pit layout for the southern extension area was considered during the design process and was discounted for the following reasons:

- a dual pit layout with batter heights of approximately 13 m would result in considerably reduced bench areas and, as a result, the sterilisation of approximately 39 Mt of hard rock resource; and
- it is unlikely that the remaining 'finger' of vegetation between the two pits would be ecologically viable as water in the soils would flow away from vegetation and into the dual pits.

Therefore, a single pit extension is proposed.

### 9.2.3 Proposed overburden emplacement

The proposed extension will result in an increase in overburden material that needs to be stored. Unlike the location of the resource which is fixed, the location of overburden emplacements has greater flexibility. The approved overburden emplacement bund will not be able to accommodate all of the overburden from the extended pit area because it is already at its maximum height and there is vegetation to the north and the south. Further, it will be uneconomic to haul overburden from the south of the quarry to the emplacement north of the pits. Overburden emplacement to the south-west of the current pit was considered and will not increase noise and dust emissions as the area is predominantly pasture. Access to this area would be by a corridor, of the minimum required width, through existing vegetation.

### 9.2.4 Proposed assessment

The adoption of these design elements during the design process will avoid or minimise potential impacts on threatened flora and fauna species and communities.

However, additional biodiversity offsets will be required to compensate for unavoidable impacts. These will need to be determined based on the OEH draft *Framework for Biodiversity Assessment.* This framework further increases assessment requirements and restricts offsetting options.

A detailed ecological assessment of impacted areas and proposed biodiversity offsets will be undertaken in accordance with the DGRs and contemporary government policies and guidelines as part of the EIS.

## 9.3 Traffic and transport

### 9.3.1 Current approved operations

The quarry is located on Brayton Road, north-west of Marulan. Brayton Road is part of the transport route linking the quarry to the Hume Highway. Products for markets north of the quarry are transported along Brayton Road and a purpose built Bypass Road that connects Brayton Road to Red Hills Road and then the highway. For transport of quarry materials to customers south of the quarry, trucks travel along Brayton Road, through the northern edge of Marulan and access the Hume Highway via the Brayton Road southbound ramp. All traffic returning to the quarry use Red Hills Road, the Bypass Road and Brayton Road.

The Modification 2 EA traffic impact assessment (Transport and Urban Planning 2014) used traffic counts to establish traffic volumes using the road network surrounding the quarry. There was a five day average of 676 total vehicle movements on Brayton Road. Heavy vehicles accounted for 42.6% of these traffic movements. On Red Hills Road, there was a five day average of 195 total vehicle movements. Heavy vehicles accounted for 61.5% of these traffic movements. Results from the monitoring suggest there are other heavy vehicles using the Bypass Road, including vehicles from the Holcim Johnniefelds quarry.

Traffic modelling of the intersection of Red Hills Road and the Hume Highway found the existing length of the left turn deceleration lane from the highway into Red Hills Road meets Austroad requirements and is satisfactory to accommodate the existing and future left turn volumes. At this intersection, vehicles turning left onto the highway from Red Hills Road are required to give way to northbound traffic on Hume Highway. Currently, left turn volumes out of Red Hills Road are very low and delays to the left turn vehicles are relatively low.

### 9.3.2 Rail transport

The use of rail to transport material from the quarry has been explored. However, Gunlake does not have direct access to the Main Southern Railway and does not have rail redistribution facilities that would allow products transported to Sydney by rail to be transferred to trucks for delivery within Sydney. Therefore, transport of quarry products by rail is not a feasible alternative to road transport.

### 9.3.3 Proposed truck movements

Currently, an average of 164 truck movements per day are approved. The development proposes to increase the number of truck movements to 440 movements per day. The additional traffic volumes associated with the proposal are likely to result in altered traffic conditions on the local road network.

### 9.3.4 Proposed assessment

A traffic and transport impact assessment will assess potential impacts associated with traffic generation from the site. The assessment will be in accordance with the DGRs and contemporary government policy, including RMS's *Guide to Traffic Generating Developments* (RTA 2002).

## 9.4 Noise and vibration

### 9.4.1 Currently approved operations

Noise generating activities in the vicinity of the site include the Holcim Johnniefelds Quarry, the Hume Highway and local roads. The closest sensitive receivers are four houses (two owned by Gunlake Quarries and two privately-owned), which are located along the eastern boundary of the site and the north-west of the quarry (Figure 3).

Noise monitoring in 2014 characterised the existing acoustic environment around the quarry. Long- and short-term noise measurements were completed at two locations, R3 (now Gunlake-owned) to the east of the quarry and R4 to the north-west of the quarry. The results showed that the quarry complies with the noise limits in the Project Approval. The placement of the processing plant and associated infrastructure to the west of the overburden emplacement bund provides additional screening from potential noise impacts for near neighbours to the east of the quarry.

Meteorological features of the site were also determined using data from the site's automatic weather station. Prevailing winds at the site are from the north-east, east north-east and east during summer and from the west south-west for the remaining time.

The Modification 2 EA noise assessment (Pacific Environment Limited 2014) found operational noise of the Quarry would not exceed the daytime, evening or night time $LA_{eq\ (15\ minute)}$ noise limits approved in the

Project Approval despite increased production. In addition, no low frequency noise or cumulative noise impacts were anticipated. The assessment also found that the Road Noise Policy criteria for day or night time periods would not be exceeded as a result of road traffic.

Compliance monitoring has been undertaken since 2010 in accordance with the noise and blast monitoring plan for Gunlake Quarry. Noise monitoring results in the 2013 – 2014 Annual Environmental Management Report show compliance with noise and vibration assessment criteria at the quarry.

### 9.4.2 Proposed assessment

The pit extension has been located to be further from the two private residences (R2 and R4) than the approved pit (Figure 3). However, increased extraction and processing rates may increase noise emissions. These will be considered in the noise assessment undertaken as part of the EIS, in accordance with the DGRs and contemporary government policy.

## 9.5 Air quality

### 9.5.1 Currently approved operations

Sources of particulate matter within the vicinity of the quarry include traffic movements on unsealed roads, local building and construction activities, animal grazing activities and the Johnniefelds and Lynwood quarries.

A monitoring network is established for the quarry and includes the measurement of dust deposition at three locations in the vicinity of the quarry. Data from this network show dust deposition levels have remained below the Project Approval criteria of 4 $g/m^2$/month since monitoring began.

The Modification 2 air quality assessment (Pacific Environment Limited 2014) concluded that the EPA air quality impact assessment criteria would not be exceeded at nearby residences due to quarry operations or cumulative impacts. However, there is potential for the cumulative 24-hour average $PM_{10}$ assessment criterion to be exceeded on one day in the year at the nearest sensitive receptor (R1, Gunlake-owned). The maximum 24-hour $PM_{10}$ concentration 50 $\mu g/m^3$ isopleth (EPA criterion) extends south of the site boundary. With the southerly extension and increased production, increased air quality impacts are most likely to occur south of the quarry, where there are no sensitive receivers.

### 9.5.2 Proposed assessment

The pit extension has been located to be further from the two private residences (R2 and R4) than the approved pit (Figure 3). However, increased extraction and processing rates may increase dust emissions. These will be considered in the air quality and greenhouse gas assessment that will be undertaken in accordance with the DGRs and contemporary government policy, including the EPAs *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC 2005).

## 9.6 Aboriginal heritage

### 9.6.1 Currently approved operations

The Modification 2 cultural heritage assessment (Cultural Heritage Management Australia (CHMA) 2014) did not identify any heritage areas, objects or places within the quarry site. Therefore, the site was assessed as being of very low archaeological potential and heritage value.

### 9.6.2 Proposed assessment

Additional field surveys will determine if there are Aboriginal objects and areas of potential archaeological deposits (PADs) in impact areas that have not been previously surveyed in detail. Updated background research, including updated database searches, will also be undertaken. The information gathered from field survey and updated information will expand upon the information provided in the previous assessments (Aboriginal Archaeological Survey Consultants (AASC) 2007 and CHMA 2014) and be included in a new Aboriginal Cultural Heritage Assessment (ACHA). The ACHA will be prepared in accordance with the DGRs and contemporary government policy. Aboriginal stakeholders will be consulted in accordance with the requirements of the best practice guideline, *Aboriginal Heritage Consultation Requirements for Proponents* (DECCW 2010).

## 9.7 Groundwater

### 9.7.1 Currently approved operations

Two types of water-bearing zones are recognised within the quarry site. The first is an alluvial aquifer associated with alluvial deposits in the creek system in the site. The second is a hard rock aquifer associated with mainly sub-vertical geological discontinuities, such as joints, fractures and faults, which have dissected the porphyry.

The Modification 2 EA water assessment (Cardno 2014) reviewed the groundwater impact assessment accompanying the EA for the original application (OEC 2008) to determine the impacts of the quarry on groundwater. The groundwater inflow into the quarry was predicted to be a maximum of 3.5 ML in year 30 of the quarry operation. The Modification 2 (2014) water assessment concluded that the predicted groundwater infiltration rate would not significantly increase due to the low rock permeability in the site area. The assessment also found there was low potential for impacts on any other water users in the vicinity of the project site due to the distance between the quarry and the nearest groundwater bores. The 2014 water assessment also concluded that the risk of any impact to springs adjacent to the pit was low to moderate and the potential for the generation of acid leachate from quarrying operations was very low. There were no predicted cumulative impacts to groundwater.

### 9.7.2 Proposed assessment

At present, there are no material groundwater issues as a result of the quarry. A groundwater assessment for the site will be undertaken, in accordance with the DGRs and contemporary government policy, as part of the EIS. This will include consideration of the Aquifer Interference Policy.

## 9.8 Surface water

### 9.8.1 Currently approved operations

There are two creeks systems in the quarry site. These are separated by the quarry extraction and processing areas. The first is a third order stream known as Chapmans Creek. The second is an unnamed tributary of Chapmans Creek which is largely a second order stream.

All operational water at the quarry is obtained from surface water runoff that is captured on site.

The Modification 2 water assessment (Cardno 2014) concluded that the original water balance model overestimated the stormwater that would be captured by the site and the parameters were adjusted. With production increased to 750,000 tonnes per annum, the 2014 water assessment found there would be increased water demand for processing and dust suppression. This water will be drawn from Water Quality Control Pond 1 which was found to be able to provide the required processing water for the site 99% of the

time. All excess flows that are not utilised by the site will be discharged via agricultural irrigation, totalling about 30 ML per annum.

### 9.8.2 Proposed assessment

A surface water assessment will be undertaken as part of the EIS, in accordance with the DGRs and contemporary government policy. Important elements of the assessment will include the site water balance and potential impacts to other users. It is anticipated that the existing Soils and Water Management Plan will require updating to account for the Extension Project.

## 9.9 Social and economics

### 9.9.1 Currently approved operations

The socio-economic assessment undertaken as part of the Modification 2 EA (OEC 2014) anticipated that the quarry will create additional employment opportunities, provide training opportunities for local people and provide stimulus to local businesses. The modification will employ an additional 23 staff (5 at the quarry and 13 truck drivers). Assuming an average annual salary of $50,000, this represents total salaries of $900,000 per year. Assuming that employee 'on costs' are 30% of salaries, this is an annual economic benefit of about $1.2 million. In addition, it is anticipated that the modification will result in additional jobs in the wider community, and increase Gunlake's Section 94 contributions, as well as taxes paid to both the State and Commonwealth government.

However, the assessment also identified a number of potentially adverse social impacts as a result of quarry operations including a marginal increase in noise levels surrounding the quarry, an increase in truck movements and a partial cessation of agricultural activities on the project site. The assessment concluded these will be small.

### 9.9.2 Proposed assessment

It is anticipated that the socio-economic benefits as a result of quarry operations will increase due to the Extension Project. Potentially adverse social impacts are also likely to increase marginally. However, due to the low number of near neighbours (two residences), significant adverse amenity impacts are unlikely. Traffic impacts are likely to increase and will continue to be of community concern. Potential traffic impacts will be assessed in detail in the traffic and transport study that will be prepared as part of the EIS.

Social and economic impacts will also be considered as part of the EIS. However, a detailed assessment is not considered to be warranted.

## 9.10 Other matters

The EIS will also consider historic heritage, soil and rehabilitation, and visual impacts but these impacts will be less significant than those described above.

### 9.10.1 Historic heritage

The Modification 2 archaeological assessment of the site (CHMA 2014) identified the site as highly disturbed and unlikely to contain archaeological deposits. The assessment did not identify any historic heritage items as occurring in the vicinity of the work site. In addition, Schedule 5 of the Goulburn Mulwaree Local Environmental Plan 2009 does not identify any heritage items as occurring within the quarry site. Therefore, it is unlikely that any items of non-Indigenous heritage will be affected by the quarry.

Historic heritage will be considered as part of the EIS.

### 9.10.2 Visual

Gunlake Quarry is generally not visible from the local road network or from adjacent property residences due to existing vegetation and the topography of the local area. Brayton Road to the north and Carrick Road to the west have some views of the quarry. However, vehicles on these roads only have transient views of the site.

Permanent lighting has been installed at the quarry processing area. This lighting is directed downwards and away from the nearest non-project related residences and public roads.

The proposal will not significantly alter the visual characteristics of the facility, however, visual impacts will be considered in the EIS.

### 9.10.3 Soils and rehabilitation

The Extension Project will continue soil management and rehabilitation measures currently implemented at the quarry. The impacts of the Extension Project on soils and rehabilitation will be considered as part of the EIS.

## 9.11 Priority assessments for EIS

Based on the high-level review of the environmental matters associated with the development application, the levels of priority of assessment were assigned to each environmental matter:

- High – ecology, traffic and transport, noise and air quality;
- Medium – Aboriginal cultural heritage, surface water and groundwater; and
- Low – economics, social, soils and rehabilitation, historic heritage and visual.

# 10 Conclusion

Gunlake's existing operations are appropriately managed and are generally accepted by the community as demonstrated by the small number of objections received in regard to the Modification 2 EA public exhibition in October and November 2014.

Design of the proposed Extension Project layout considered the extensive understanding of the environment of the site and surrounding areas. This has been developed during the preparation of the original EA (OEC 2008), the Modification 2 EA (OEC 2014) and ongoing environmental management at the site (2009 – present). We believe that the proposed design appropriately avoids or minimises potential impacts while allowing the quarry to commercially operate, providing wider social and economic benefits.

An EIS with requisite technical assessments will be prepared to accompany the development application for the Extension Project that will assess in detail the proposed design and determine whether any changes to the design are warranted.

Gunlake and EMM request a meeting with DPE to discuss the project prior to the issue of the DGRs.

Gunlake and EMM look forward to receiving DGRs for the project and working with DPE, regulating agencies, neighbours and other stakeholders in preparing an EIS that considers all relevant matters and presents appropriate mitigation measures through project design and environmental management.

Yours sincerely

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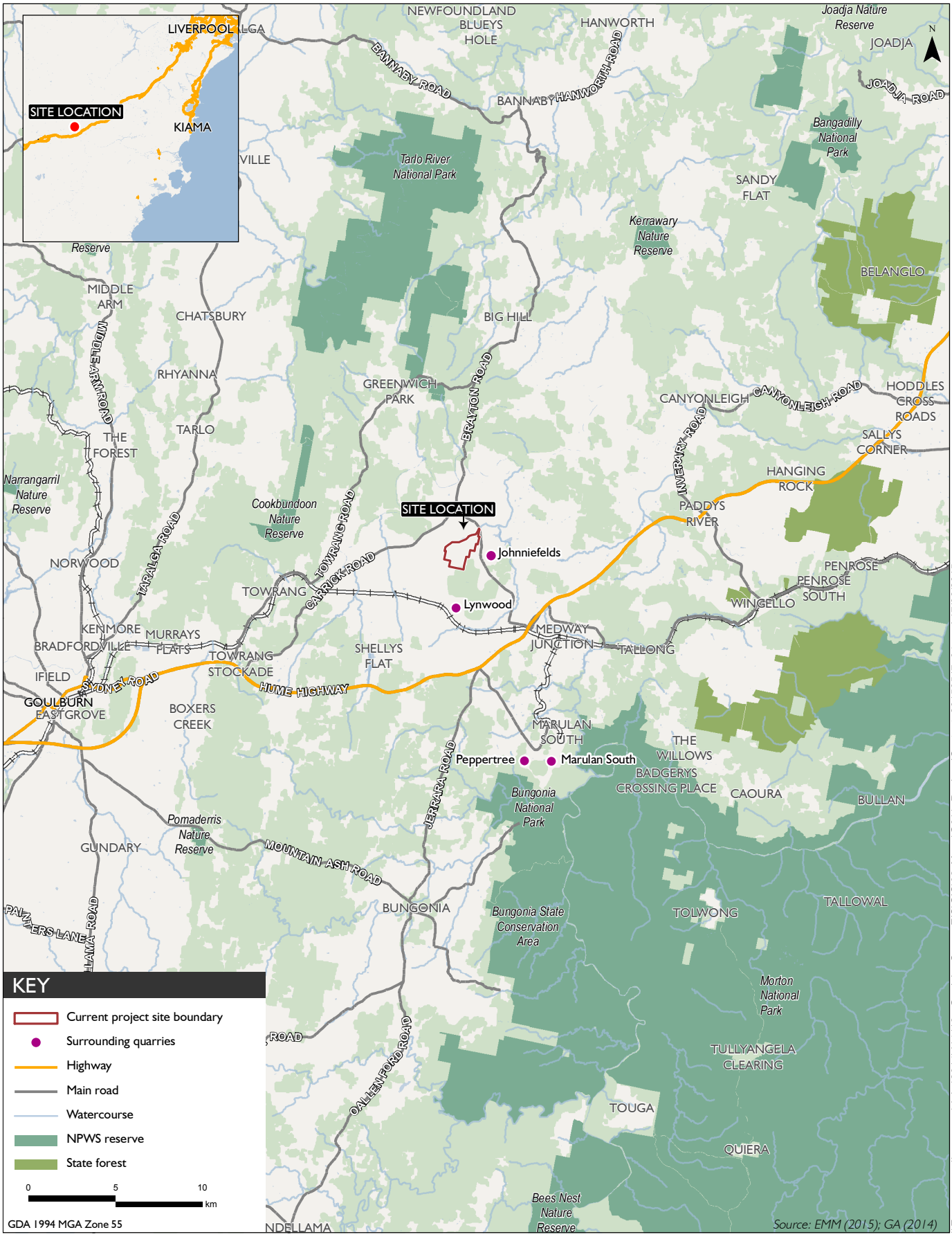


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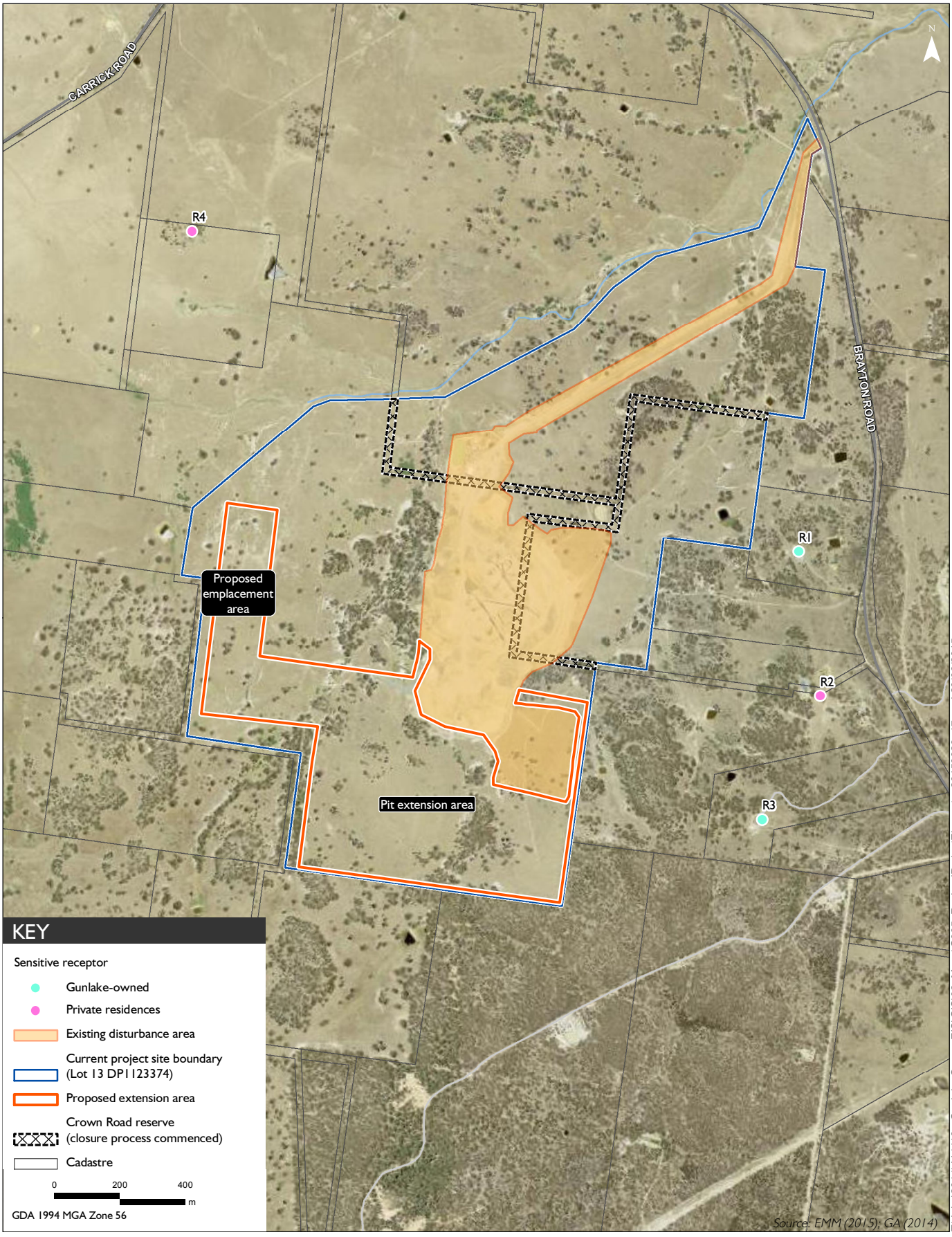
**Site location plan**

Gunlake Quarry

Figure 1

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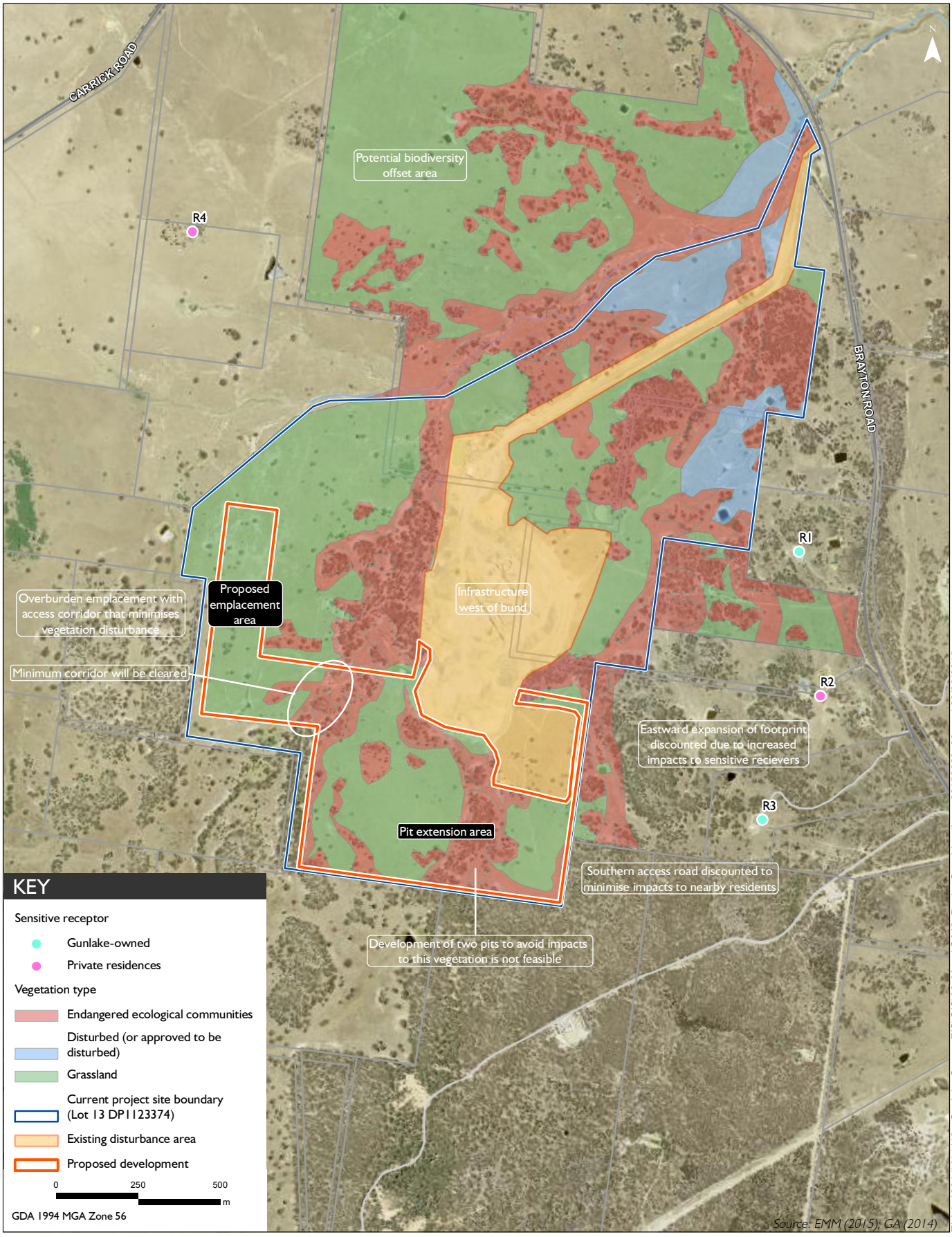
**Project elements**
Gunlake Quarry State Significant Development
Figure 2

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**Design considerations**

Gunlake Quarry State Significant Development

Figure 3