

## COUNCIL ASSESSMENT REPORT

<b>Panel Reference</b>	PPSSTH-90
<b>DA Number</b>	DA2021/0133
<b>LGA</b>	Hilltops Council
<b>Proposed Development</b>	Extractive Industry - quarry expansion and associated infrastructure, earthworks and tree removal.
<b>Street Address</b>	Lot 9 DP439146, Lot 7002 DP1031310, Crown Reserve, Lot 148 DP753592 and Lot 11 DP133540, 5423 Hume Highway, Berremangra.
<b>Applicant/Owner</b>	Applicant: Bald Hill Quarry Pty Ltd  Owners: Bald Hill Quarry Pty Ltd, T.A. Field Estates Pty Ltd, Crown Lands, NSW Aboriginal Land Council and Young Local Aboriginal Land Council (consent provided 22 May 2022).
<b>Date of DA lodgement</b>	9 June 2021
<b>Total number of Submissions</b> <b>Number of Unique Objections</b>	7 submissions from public authorities.  1 objection from Crown Lands (landowners consent and land claim).
<b>Recommendation</b>	Approval
<b>Regional Development Criteria (Schedule 7 of the SEPP (State and Regional Development) 2011</b>	Development for the purpose of an extractive industry, which is designated development under the <i>Environmental Planning and Assessment Act 1979</i> .
<b>List of all relevant s4.15(1)(a) matters</b>	<ul style="list-style-type: none"> <li>• State Environmental Planning Policy (State and Regional Development) 2011</li> <li>• State Environmental Planning Policy Mining, Petroleum Production and Extractive Industries 2007</li> <li>• State Environmental Planning Policy Infrastructure 2007</li> <li>• State Environmental Planning Policy 33 – Hazardous and Offensive Development</li> <li>• State Environmental Planning Policy 55 – Remediation of Land</li> <li>• State Environmental Planning Policy – Koala Habitat Protection 2021</li> <li>• Harden Local Environmental Plan 2011</li> <li>• Draft Hilltops Local Environmental Plan 2021</li> </ul>

<b>List all documents submitted with this report for the Panel's consideration</b>	<ul style="list-style-type: none"> <li>• Attachment 1 – draft consent conditions</li> <li>• Attachment 2 – NSW EPA General Terms of Approval</li> <li>• Attachment 3 – Environmental Impact Statement</li> <li>• Attachment 4 – Acoustic Report</li> <li>• Attachment 5 – Submissions</li> <li>• Attachment 6 – Response to Submissions</li> <li>• Attachment 7 – Further information from the Applicant</li> <li>• Attachment 8 – Revised Biodiversity Development Assessment Report</li> </ul>
<b>Summary of key submissions</b>	<ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Bushfire protection measures</li> <li>• Traffic safety</li> <li>• Noise</li> </ul>
<b>Report prepared by</b>	Team Leader Statutory Land Use Planning, Andrew Raines
<b>Report date</b>	22 November 2022

#### **Summary of s4.15 matters**

Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report?

**Yes**

#### **Legislative clauses requiring consent authority satisfaction**

Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarized, in the Executive Summary of the assessment report?  
e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP

**Yes**

#### **Clause 4.6 Exceptions to development standards**

If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report?

**N/A**

#### **Special Infrastructure Contributions**

Does the DA require Special Infrastructure Contributions conditions (S7.24)?

**No**

#### **Conditions**

Have draft conditions been provided to the applicant for comment?

**Yes**

## **Executive summary**

Development consent is sought by the Development Application for the expansion of Bald Hill Quarry, including construction of a new extraction site at Mt Bundarbo (Mt Bundarbo Quarry) and haul road and ongoing use of existing quarry processing plant and transportation infrastructure at Lot 9 DP439146, Lot 7002 DP1031310, Crown Reserve, Lot 148 DP753592 and Lot 11 DP133540, 5423 Hume Highway, Berremangra.

The existing quarry, known as North Ridge Quarry, is located 8kms east of Jugiong and was the second extraction site by Bald Hill Quarry. The original Bald Hill Quarry and associated processing infrastructure is north of North Ridge Quarry. The site for the proposed Mt Bundarbo Quarry is zoned RU1 Primary Production by the Harden Local Environmental Plan 2011 and is 500m south of North Ridge Quarry.

The proposal is Designated Development under the Environmental Planning and Assessment Regulation 2000, as more than 30,000m<sup>3</sup> of material is to be extracted and processed annually and land disturbance exceeds 2ha. The proposal is also Integrated Development, requiring the General Terms of Approval from NSW Environment Protection Authority for an environmental protection licence, under section 4.46 of the Environmental Planning and Assessment Act 1979 (the Act).

Under Schedule 7 of State Environmental Planning Policy (State and Regional Development) 2011, the proposal is Regionally Significant Development for which the Southern Regional Planning Panel is authorised to exercise the Consent Authority functions of Hilltops Council.

The proposal was publicly exhibited and notified to surrounding landowners from 17 June 2021 to 16 July 2021 and approval bodies in accordance with the Hilltops Council Community Participation Plan and the Act. As a result of the public exhibition, submissions were received from the following public authorities:

- Department of Planning Industry and Environment – Crown Lands
- Transport for NSW
- NSW Rural Fire Service
- NSW Department of Primary Industries – Agriculture
- Geological Survey of NSW – Mining, Exploration & Geoscience
- Essential Energy
- Department of Planning Industry and Environment – Biodiversity Conservation Division (BCD)

The Applicant was provided an opportunity to respond to the submissions and has addressed the concerns raised with additional proposed measures as part of the development and obtained landowners consent for the development from Department of Planning Industry and Environment - Crown Lands, NSW Aboriginal Land Council and Young Local Aboriginal Land Council.

A revised Biodiversity Development Assessment Report with additional justification and proposed measures to mitigate impacts on the critically endangered Box-Gum Woodland was prepared by the Applicant in response to the BCD submission. The revised report was reviewed by BCD who supported the mitigation measures and requested the biodiversity plans be prepared in consultation with BCD. These matters have been addressed by conditions.

This report recommends the application be approved subject to the draft conditions set out in **Attachment 1** of this report.

### **Site and surrounds**

The site is located 8km east of Jugiong, 3km south of the Hume Highway, and comprises Lot 9 DP439146, Lot 7002 DP1031310, Lot 148 DP 753592, Crown Reserve and Lot 11DP133540, 5423 Hume Highway, Berremangra. The land contains a haul road, a decommissioned trig station, significant remnant native vegetation, rocky outcrops and natural drainage lines. Access to the site is from the Hume Highway via the Old Hume Highway and haul roads servicing the Bald Hill Quarry Waste Facility and North Ridge Quarry, which is owned by the Applicant.

The Bald Hill Quarry Waste Facility to the north of the site is accommodated in a disused quarry void (quarried from 1984 to 2000 by the Applicant) and has development consent to receive up to 40,000 tonnes of general solid waste per annum from surrounding local government areas, including Hilltops, and commercial waste contractors.

North Ridge Quarry is also to the north of the site and quarrying activities are to cease by 2024 (quarried since 1999 by the Applicant). The quarry utilises the quarry crushing and processing infrastructure, haul roads, weighbridge, office and amenities established by the original Bald Hill Quarry. A proposal to use North Ridge Quarry, when the rock resource has expired, as a landfill subject to a future Development Application is listed in the quarry closure plan. The existing operation has an approved extraction and quarry product dispatch of 450,000 tonnes per annum.

Surrounding uses not associated with Bald Hill Quarry Waste Facility and North Ridge Quarry are predominately rural in nature consisting of extensive agriculture (grazing of livestock). There are two sand quarries 6km to the west of the site along the Murrumbidgee River and several dwellings to the north, east and south of the site. See figures below for an aerial view of the locality and the proposed location and property ownership.



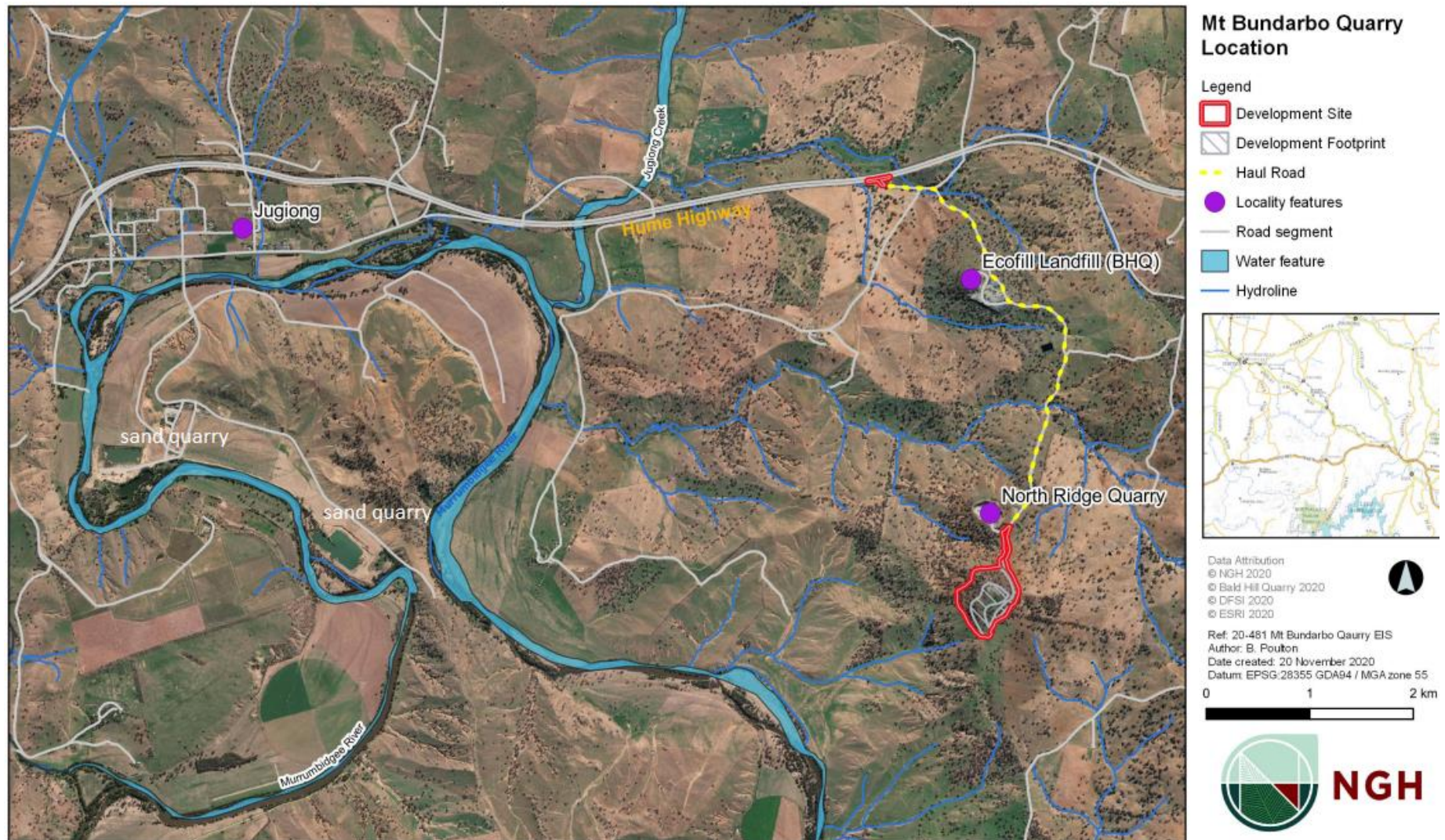


Figure: Locality plan showing Bald Hill Landfill and Quarry, sand quarries and the proposed quarry expansion (reproduced from EIS).



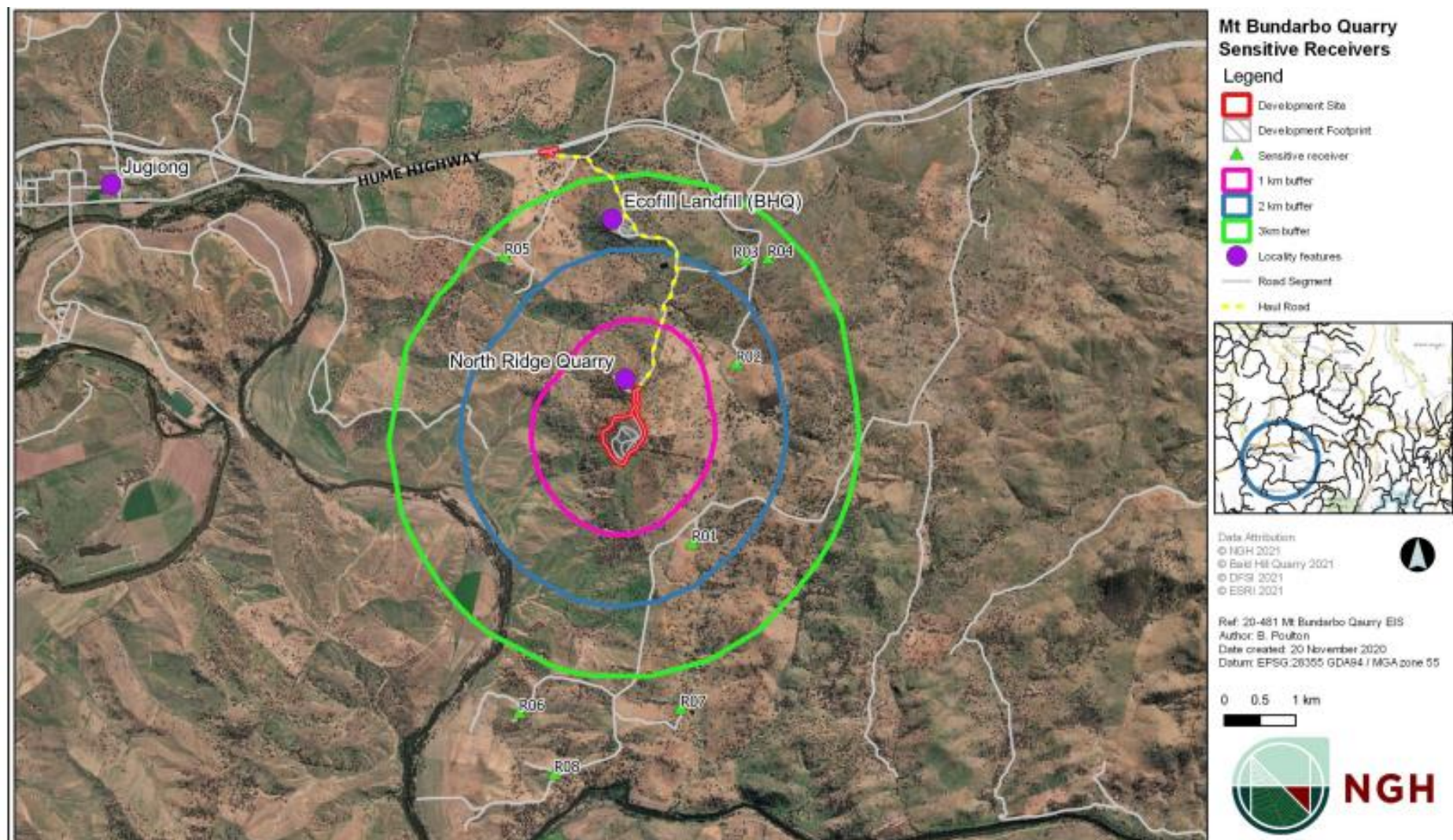
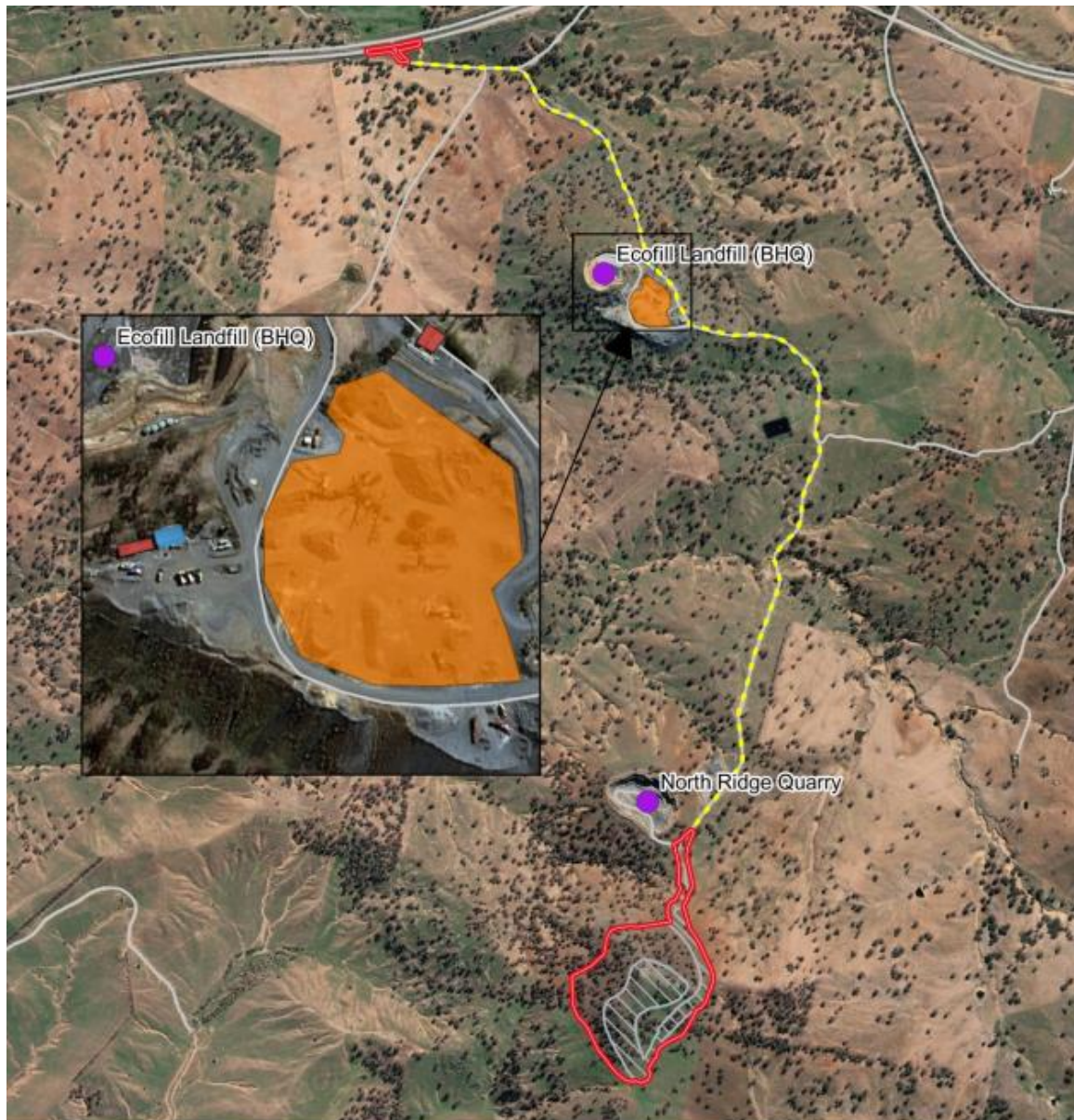


Figure: Locality plan showing sensitive receptors and the proposed quarry expansion (reproduced from EIS).





#### Existing infrastructure supporting the BHQ North Ridge Quarry operation

##### Legend

Processing Plant	Development Footprint
Workshop	Development Site
Staff Office and Staff Amenities	Haul Road
Locality features	

*Figure: Site aerial showing existing quarry infrastructure (haul roads, quarry processing plant, workshop, office, amenities and weighbridge) at Bald Hill Quarry and the proposed quarry expansion and haul road (reproduced from EIS).*

### The proposal

The application seeks to establish and operate a new quarry expansion (Mt Bundarbo Quarry) for Bald Hill Quarry at 5423 Hume Highway, Berremangra.

The new quarry would utilise the existing quarry crushing and processing infrastructure, haul road, weighbridge, office and amenities established by the Bald Hill Quarry.

Mt Bundarbo Quarry is to have a maximum extraction of 4 million tonnes over 20 years. The quarry would operate at the same extraction and processing volumes approved for North Ridge Quarry, being 150,000 tonnes per annum, with peak periods of 450,000 tonnes per annum over 20 years. Quarry product dispatch from the site is to remain the same as no changes are proposed to existing quarry crushing and processing infrastructure, which can only produce 2,000 tonnes per day.

Specifically, the proposal involves:

#### Construction:

- Construction of an 800m haul road extension from North Ridge Quarry to Mt Bundarbo Quarry as shown in the figures below.
- Construction of Mt Bundarbo Quarry over several stages with a total footprint of 8ha as shown in the figures below.
- Upgrades to the Hume Highway and Old Hume Highway intersection, including shoulder sealing, line marking and signage as shown in the figures below.

#### Operations:

- 5 staff retained from existing quarry operations.
- Quarry operations restricted to weekdays 6:00am to 6:00pm and weekends 7:00am to 6:00pm.
- Drill and blasting up to 10 times a year (no blasting on Sundays).
- Haulage of extracted rock via the new and existing haul roads to the existing on-site rock processing plant at the Bald Hill Quarry.
- Use of the existing on-site rock processing plant, stockpile areas and weighbridge at the Bald Hill Quarry.
- Transportation of quarry material from Bald Hill Quarry using truck and dog combinations (19m vehicle length). Daily heavy vehicle movements from the site would be 50 laden trucks, with a maximum of 16 laden trucks in any hour to cater for peak demand periods.

#### Rehabilitation:

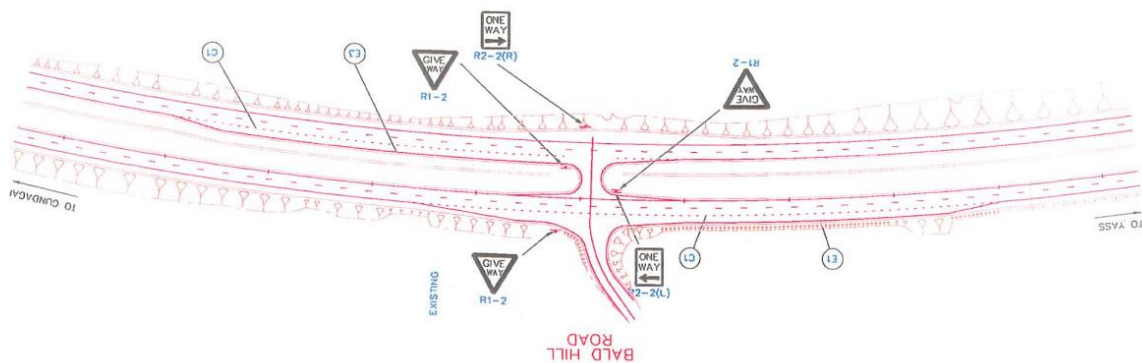
Mt Bundarbo Quarry is proposed to be left as an open cut pit with 10m high batters separated by 5m wide berms as shown in the figures below. These areas are to be progressively rehabilitated as follows:

- All areas backfilled with overburden will be revegetated (pasture seeded and self-sown trees) and returned to pasture.
- Existing surface water system retained all runoff collected within the quarry perimeter and directed to the internal reservoir sump. Potential for stock watering and firefighting use to be explored during the life of the quarry.



- Final bench drilled with 5-10 degree sweep back to eliminate potential overhang.
- Berms retain 5m width with rock and log covering to prevent all vehicle access.
- Placement of rocks and logs to limit vehicle access to no closer than 5m to any rock face.
- Minimum 2m high security fence installed around pit void to prevent animal access and unauthorized unintentional personal access.
- All surface infrastructure that does not have a potential future use associated with post mining land use will be removed.

A copy of the submitted plans and environmental impact statement, including addendums and expert reports, is provided in **Attachments 3 to 8** of this report.



*Figures: Hume Highway intersection upgrade plans showing the proposed road upgrades, including sealing, line marking and signage (reproduced from TIA).*

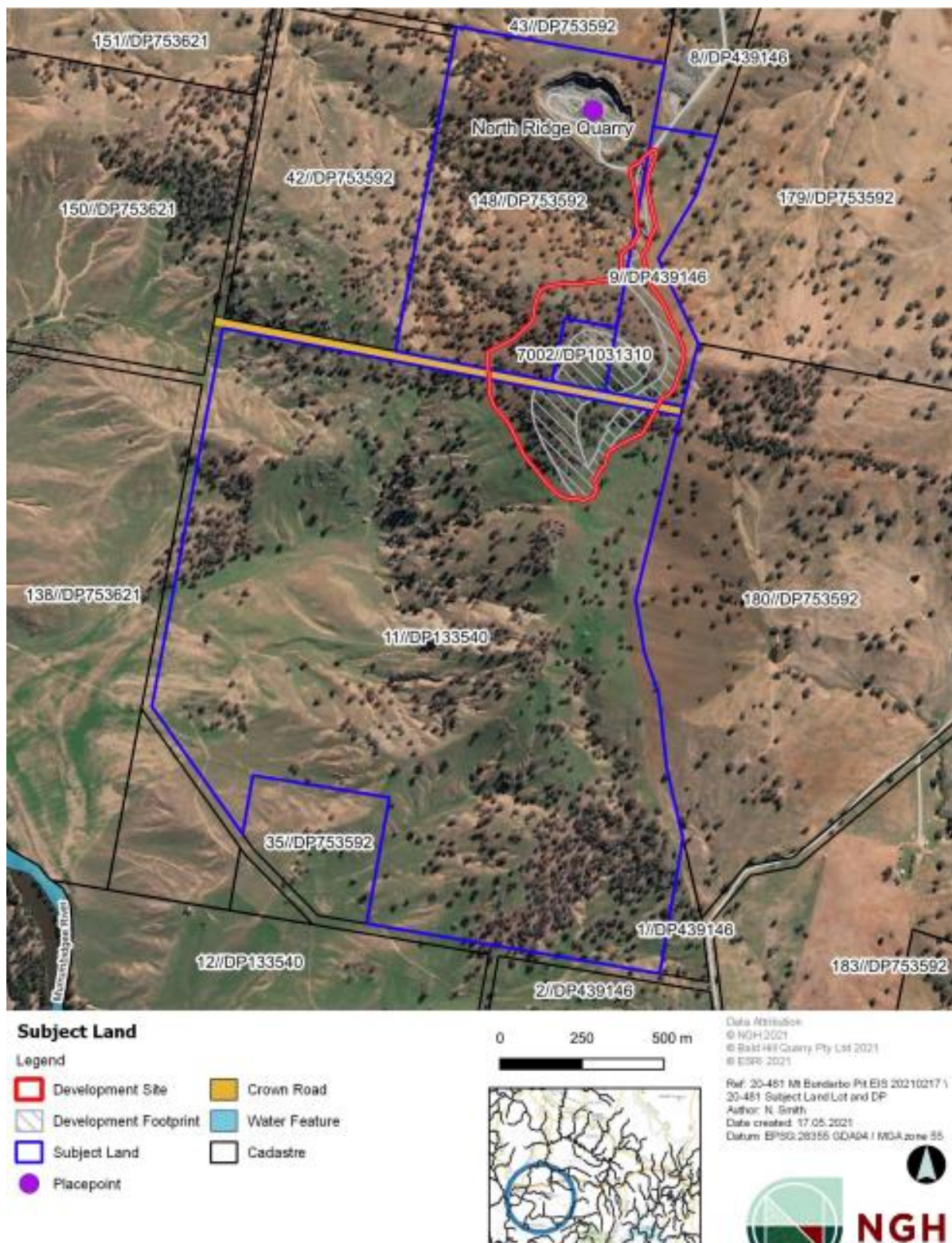


Figure: Site Plan showing the proposed quarry expansion and haul road extension and property ownership (reproduced from EIS). The proposed development is on land owned by two landowners (highlighted blue) and Crown Lands. The existing quarry processing plant and infrastructure to the north is on land owned by the Applicant.



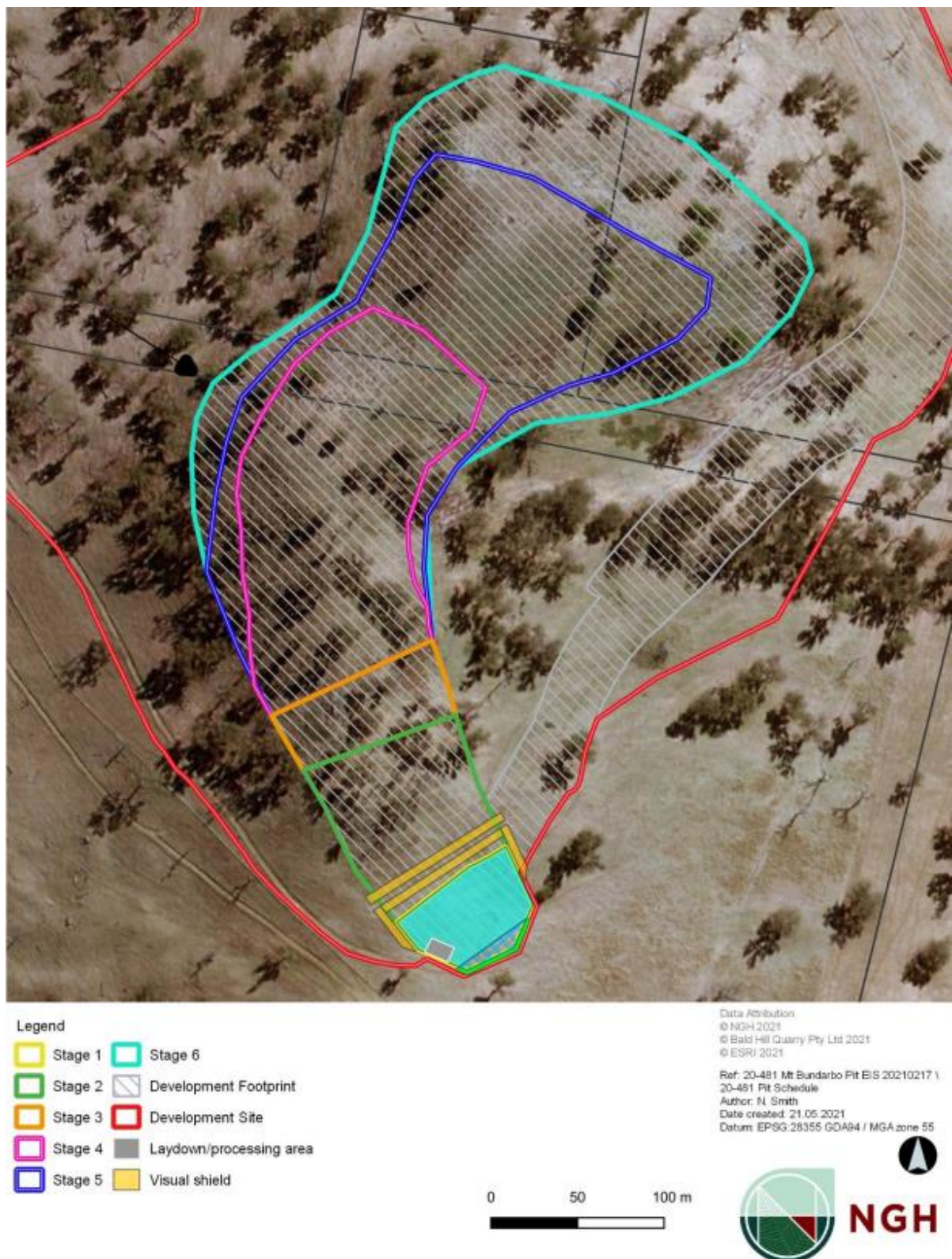
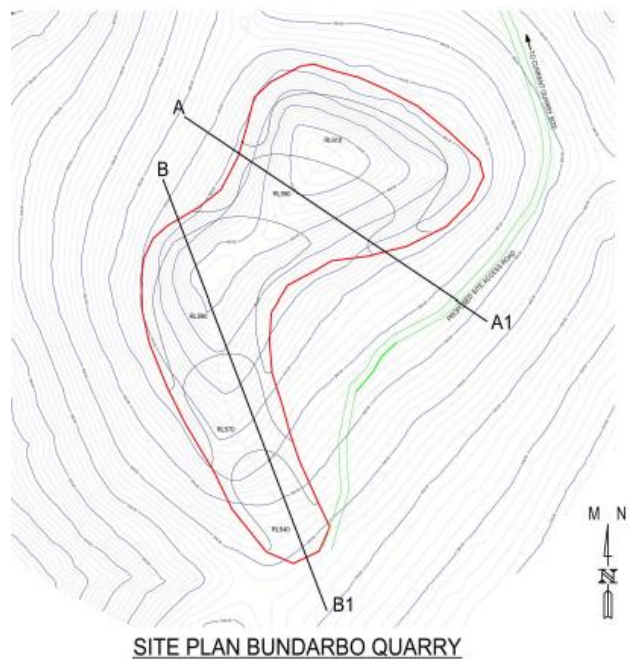
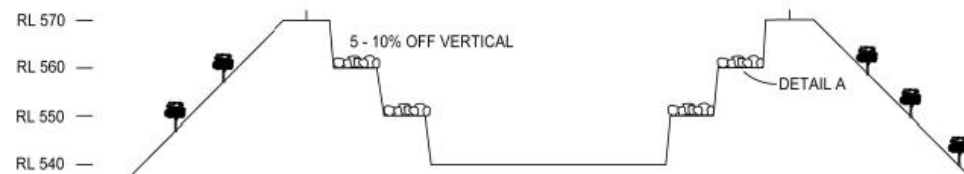
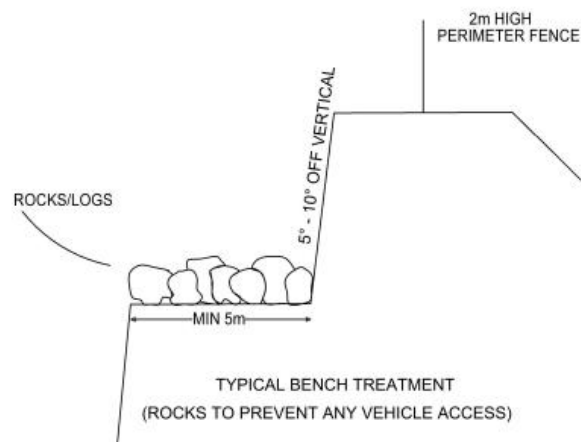


Figure: Plan showing the staging of the proposed quarry expansion and typical layout for stage 1 (reproduced from EIS).

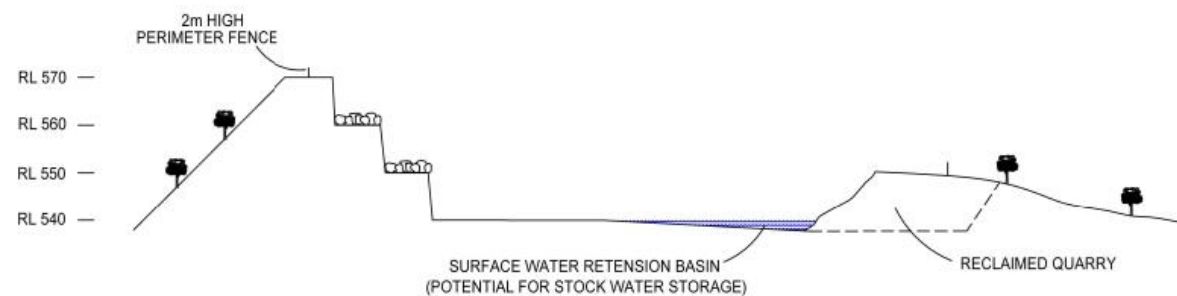




**SITE PLAN BUNDARBO QUARRY**



**CROSS SECTION A-A1**



**CROSS SECTION B-B1**

**FINAL LAND FORM TREATMENT**  
NOT TO SCALE

Figure: Quarry rehabilitation plan showing the proposed final landform and treatments reflecting the quarry expansion staging plan above (reproduced from the Applicant's further information).

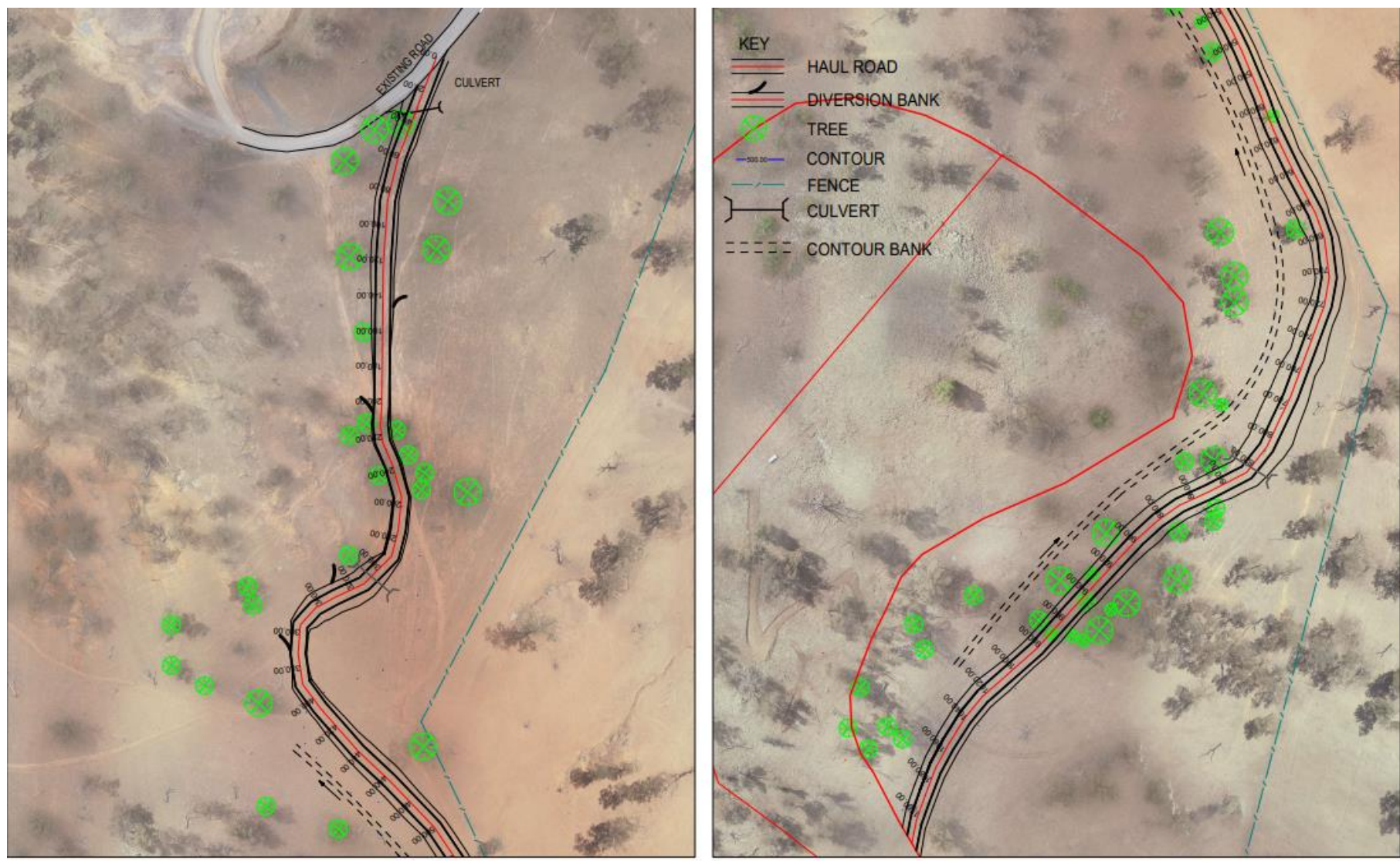


Figure: Proposed 800m Haul Road Extension (reproduced from EIS).

## **Environmental Assessment**

In determining this application, the Consent Authority must take into consideration the matters below as listed under Section 4.15 of the *Environmental Planning and Assessment Act, 1979* (the Act) which are of relevance to the development:

### Designated Development

The proposal is Designated Development. In accordance with Clause 4.16(9)(b) of the Act, the submissions received as part of the exhibition period were forwarded to the Planning Secretary on 6 August 2021 and the Consent Authority may determine the application.

As the proposal is designated development, the application is supported by an Environmental Impact Statement (EIS), prepared by NGH Pty Ltd, in the form prescribed by the Act and addresses the Secretary's Environmental Assessment Requirements (SEARs). The EIS contains a signed statement by the responsible person that it complies with the environmental assessment requirements.

### Integrated Development

The proposal is also Integrated Development under Section 4.46 of the Act because it requires an approval under the Protection of the Environment Operations Act, 1997. Accordingly, NSW Environment Protection Authority's General Terms of Approval have been provided (**Attachment 2**) and are included in the recommended consent conditions (**Attachment 1**).

### Biodiversity Conservation Act 2016

Section 1.7 of the Act and Part 7 of the Biodiversity Conservation Act 2016 (the 'BC Act') applies as the proposal involves clearing of native vegetation that exceeds the clearing threshold and test of significance. Accordingly, a Biodiversity Development Assessment Report (BDAR), prepared by an Accredited Assessor, supports the application.

Section 7.13 of the BC Act requires the Consent Authority to take into consideration the likely impact of development on biodiversity values as assessed in the BDAR supporting the application (**Attachment 8**). The Consent Authority may (but is not required to) further consider under the Act the likely impact of the development on biodiversity values. Concurrence from the Environment Agency Head is not required for this application as no reduction in biodiversity credits is sought by the BDAR.

Section 7.16(2) of the BC Act requires the Consent Authority to refuse consent if it is of the opinion that there are likely to be serious and irreversible impacts on biodiversity values, as determined by Section 6.5 of the BC Act, that would remain after the measures proposed to be taken to avoid or minimise the impact on biodiversity values of the proposed development. Section 6.5 states:

*6.5 Serious and irreversible impacts on biodiversity values*



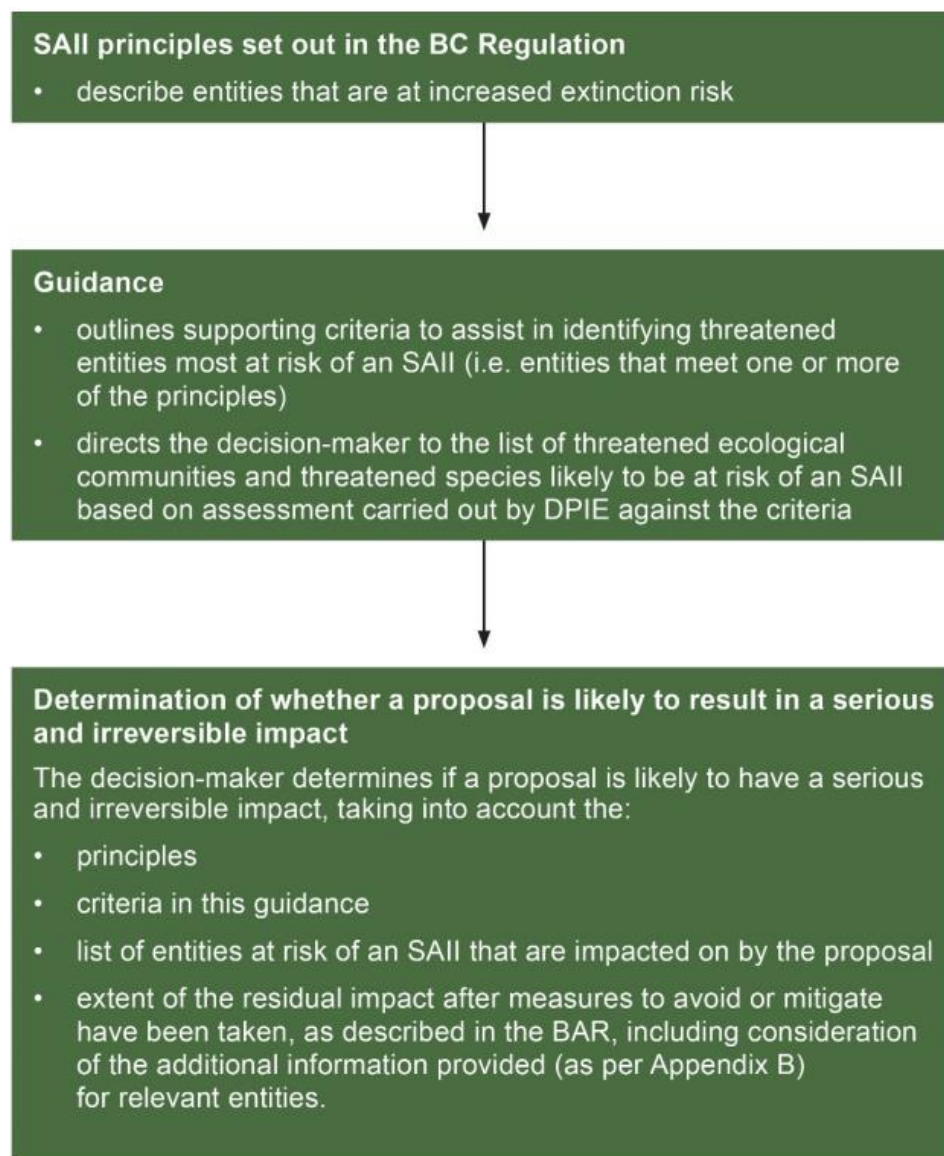
- (1) The determination of serious and irreversible impacts on biodiversity values for the purposes of the biodiversity offsets scheme is to be made in accordance with principles prescribed by the regulations.*
- (2) The Environment Agency Head may provide guidance on the determination of any such serious and irreversible impacts, and for that purpose may publish, from time to time, criteria to assist in the application of those principles and lists of potential serious and irreversible impacts.*

The following principles are prescribed by the Regulations for determining serious and irreversible impacts on biodiversity values:

*6.7 Principles applicable to determination of “serious and irreversible impacts on biodiversity values” (section 6.5(1))*

- (1) This clause applies for the purposes of determining whether an impact on diversity values is a serious and irreversible impact for the purposes of the biodiversity offsets scheme.*
- (2) An impact is to be regarded as serious and irreversible if it is likely to contribute significantly to the risk of a threatened species or ecological community becoming extinct because—*
  - (a) it will cause a further decline of the species or ecological community that is currently observed, estimated, inferred or reasonably suspected to be in a rapid rate of decline, or*
  - (b) it will further reduce the population size of the species or ecological community that is currently observed, estimated, inferred or reasonably suspected to have a very small population size, or*
  - (c) it is an impact on the habitat of the species or ecological community that is currently observed, estimated, inferred or reasonably suspected to have a very limited geographic distribution, or*
  - (d) the impacted species or ecological community is unlikely to respond to measures to improve its habitat and vegetation integrity and therefore its members are not replaceable.*
- (3) For the purpose of this clause, a decline of a species or ecological community is a continuing or projected decline in—*
  - (a) an index of abundance appropriate to the taxon, or*
  - (b) the geographic distribution and habitat quality of the species or ecological community.*
- (4) If the guidance published by the Environment Agency Head under section 6.5(2) of the Act is changed, a biodiversity assessment report may, during the period of 90 days after the guidance was changed, be prepared on the basis of the guidance in force before the change, but only if the report states that it has been prepared on that basis.*

The Department of Planning, Industry and Environment has published the document “Guidance to assist a decision-maker to determine a Serious and Irreversible Impact” (2019). The BDAR supporting the application has been prepared in accordance with the BC Act and the guidance published by the Environment Agency Head (SAIL Guidelines). The SAIL Guidelines requires the Consent Authority to consider the following to determine if a serious and irreversible impact exists.



*Figure: Decision-making hierarchy for determining if an impact is serious and irreversible (SAIL Guidelines)*

The BDAR identifies the following species and ecological communities at risk of a serious and irreversible impact that are likely to be affected by the proposal:

### **Threatened species**

No threatened species are at risk of a serious and irreversible impact according to the BDAR, which states:

*“There are no candidate species that would be impacted by the development. One mammal species Large-eared Pied Bat (Chalinolobus dwyeri) was assumed present in a small low condition section of PCT 277 along the Hume Highway. However, there are no impacts to the native vegetation for this PCT 277, therefore all impacts to the Large-eared Pied Bat have been avoided and no further serious and irreversible impact assessment [of threatened species] is required”.*

### **Threatened ecological communities**

White Box - Yellow Box - Blakely's Red Gum Grassy Woodland (Box-Gum Woodland) is identified by the BDAR at risk of a serious and irreversible impact by the proposal. The BDAR states:

*“PCT 266 [White Box grassy woodland] and PCT 277 [Blakely's Red Gum - Yellow Box grassy tall woodland] associated threatened ecological community is White Box - Yellow Box - Blakely's Red Gum Grassy Woodland. However, PCT 277 will not be impacted by this proposal and therefore does not require further assessment as a serious and irreversible impact assessment. PCT 266 will be impacted and is addressed in Section 9.2 [reproduced below].*

*The Box-Gum Woodland threatened ecological community is potentially at risk of a serious and irreversible impact according to Principles 1 and 2:*

- 1. The impact will cause a further decline of the species or ecological community that is currently observed, estimated, inferred, or reasonably suspected to be in a rapid rate of decline.*
- 2. The impact will further reduce the population size of the species or ecological community that is currently observed, estimated, inferred, or reasonably suspected to have a very small population size”.*

In accordance with SALL Guidelines, the criteria for applying Principles 1 and 2 includes critically endangered ecological communities listed by the BC Act. Box-Gum Woodland is listed as critically endangered by the Act due to its rapid decline and small population. The BDAR provides the following expert assessment of potential impacts on the Box-Gum Woodland to assist in determining if a serious and irreversible impact exists:

#### Current status of the Box-Gum Woodland

*“Principle 1, clause 6.7(2)(a) BC Regulation states ‘It will cause a further decline of the species or ecological community that is currently observed, estimated, inferred or reasonably suspected to be in a rapid rate of decline..’*

*The Final Determination by the NSW Threatened Species Scientific Committee (2020) when considering the listing for Box Gum Woodland, the*



committee decided the distribution of this TEC is not restricted. The extent of occurrence of the TEC is estimated at 702,800 square km based on a minimum convex polygon enclosing known occurrences of the community using the method of assessment recommended by IUCN (NSW Threatened Species Scientific Committee, 2020). The TEC is listed as Critically Endangered.

Box-Gum Woodland geographical distribution in NSW extends from the Queensland border (west of the Great Dividing Range) to the Victorian border in the south. Box-Gum Woodland extends from the far south east coast of NSW to Balranald in the west of NSW. The IBRA regions in NSW include the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina. The reduction in geographic distribution is defined as greater than or equal to 80% in ten years or three generations (NSW Department of Planning and Environment, 2020). The estimated reduction in geographic extent of the TEC since 1970 is not defined in the TBDC. The Box-Gum Woodland community has undergone a large decline in geographic distribution due to widespread clearing and degradation throughout its range which has left remnants typically fragmented, isolated and often with understories highly modified (Threatened Species Scientific Committee, 2006). Approximately three quarters of the distribution of Box-Gum Woodland occurs in NSW (Threatened Species Scientific Committee, 2006). The following losses were attributed during the 2009-2018 periods (NSW Threatened Species Scientific Committee, 2020):

- Clearing of Grassy Woodlands from Agriculture:
  - 2009 – 2016 an average of 395ha annually
  - 2016 -2017 an average of 654 ha annually
  - 2017 -2018 an average of 1,344 ha annually
- Clearing of Grassy Woodlands from Infrastructure:
  - 2009 -2016 an average of 155 ha annually
  - 2016 -2017 an average of 216 ha annually
  - 2017 -2018 an average of 589 ha annually

The percent reduction in extent of PCT 266 is estimated at 94% (NSW DPE, 2021). Data listed in the PCT description gives an estimated 800,000ha occurring pre-European times and 50 000 ha as the current extent (NSW Department of Planning and Environment, 2021). According to the current information, PCT 266 has been cleared mainly for agriculture (NSW DPE, 2021). For example, previous surveys conducted by Prober & Thiele (1993) estimate only 0.01% of White Box woodland south of Molong remains relatively unmodified.

The current threats to further clearance of Box-Gum Woodland include clearing, timber harvesting, firewood cutting, grazing, weed invasion, fire, soil disturbance and increased nutrient loads, soil acidification, salinity, and loss

of connectivity with other vegetated areas (DECC 2007). This SAI entity does not have any listed thresholds, therefore, any impact to this entity could be considered a SAI by the decision maker...

Principle 2 (b) states 'it will further reduce the population size of the species or ecological community that is currently observed, estimated, inferred or reasonably suspected to have a very small population size...'

There is 23.2 ha of Box-Gum Woodland within the Development Site, consisting of 20.03ha Zone 1 (PCT 266 woodland Exotic understorey), 3.00 ha of Zone 2 (PCT 266\_Derived Grassland) and 0.05ha Zone 4 (PCT 277 Exotic understorey). Previous land clearing and land management in the development site has reduced the community structure and species composition. All vegetation within the development footprint of Zone 1 and Zone 2 would be removed, hence 8.91 ha (38.65 % of the Development Site) of the current community structure and species composition of the TEC would be lost. All canopy species (*Eucalyptus albens*) would be removed in the development footprint of Zone 1 reducing seed sources of local genetic provenance. Zone 2 Derived grassland is comprised of common disturbance tolerant understorey species and no significant species would be lost to the retained areas of TEC. 13.2ha of Zone 1 PCT 266 and 0.05ha of Zone 4 PCT 277 woodland would remain in the Development Site (67.66%) (see Figure below).

There is potential for ecological process disruptions in the retained TEC vegetation to occur given the 8.91ha area of TEC loss and creation of edge effects. However, the TEC currently undergoes ecological process disruption from agricultural activities. Grazing of native vegetation and modified pastures has occurred at the Development Site. Grazing is associated with ground compaction, erosion, and ground enrichment of the topsoil, leading to degradation of the lower stratum. This has led to structural and compositional degradation and partial failure of the native lower stratum to regenerate.

There is potential for weed invasion and establishment and degradation of habitat in the remaining TEC area due to the creation of edge effects and increased disturbance. The Box-Gum Woodland in the development site is currently considered highly modified due to the presence of exotic groundcover and low native flora diversity and abundance. The removal of native ground cover species and the introduction and establishment of exotic species has led to the degradation and fragmentation of habitat in this locality. These changes have been occurring since European settlement and the introduction of agriculture, rather than from the proposed development.

Connectivity of the TEC would be maintained within the Development Site and surrounding areas given the design of the Development Footprint and no areas of retained TEC would become isolated...

#### The impact on the geographic extent of the Box-Gum Woodland

8.91 ha of Box-Gum Woodland would be directly impacted by the proposal through clearing for the open cut basalt quarry. This is comprised of 6.83ha Zone 1 (PCT 266 Exotic understory) and 2.08ha Zone 2 (266 Derived Grassland.)

NSW Threatened Species Scientific Committee (2020) estimates the area of occupancy (AOO) of Box-Gum Woodland remaining in the NSW South Western Slopes IBRA Region is 151,100km<sup>2</sup>. Approximately 8.91ha is proposed to be removed in the Development Footprint which is less than 0.0001% of the estimated extent remaining.

To estimate the remaining presence of Box-gum Woodland, NSW State Vegetation mapping, VIS\_4469 (Department of Planning, Industry and Environment, 2015) was used. A 500m buffer of the Development Footprint using associated PCTS, found approximately 185.45ha of Box-Gum Woodland TEC. Of this 8.91ha of TEC would be removed, which equates to approximately 4.8% within 500m of the Development Footprint (see Figure above). Box-Gum Woodland does not have a limited geographical distribution. The extent of occurrence of Box-Gum Woodland in NSW extends from Queensland to Victoria. The population in NSW is scattered and fragmented throughout NSW in its known distribution.

The remaining areas of Box-Gum Woodland within 500m (see Figure above) shows reasonable connectivity with no isolation of Box-Gum Woodland being caused from the proposed vegetation removal. The Box-Gum Woodland present in the development site and surrounding 500m is fragmented within the region, being highly modified from past agricultural disturbances. Eucalypts have low seed dispersal distances, usually similar to the height of the tree (Booth, 2017). The proposal would impact seed dispersal through the clearing of 6.83ha of woodland.





Figure: BDAR SAI Box-Gum Woodland threatened ecological community in development site (reproduced from BDAR)



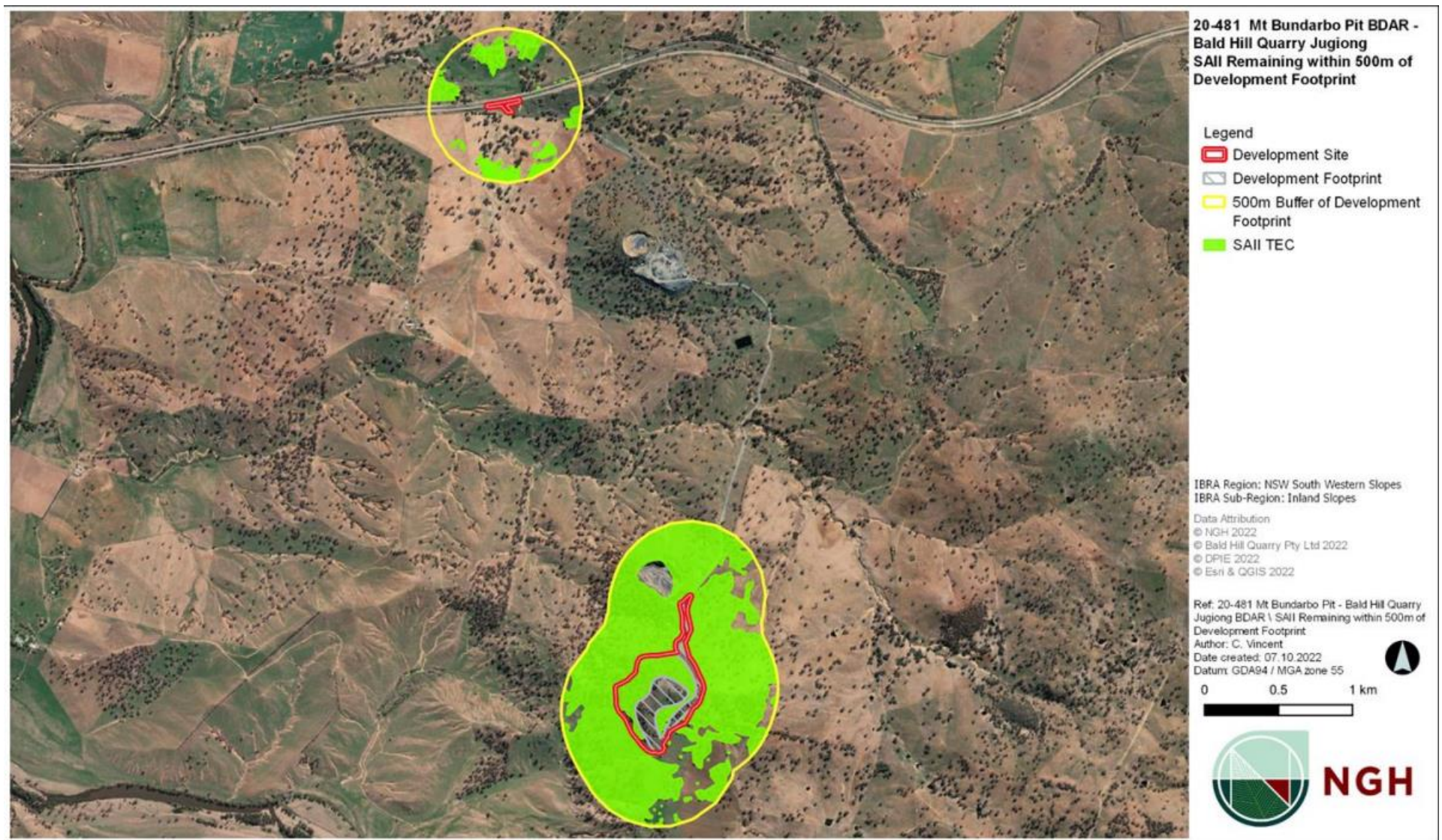


Figure: BDAR SAI Box-Gum Woodland threatened ecological community to be retained (reproduced from BDAR)



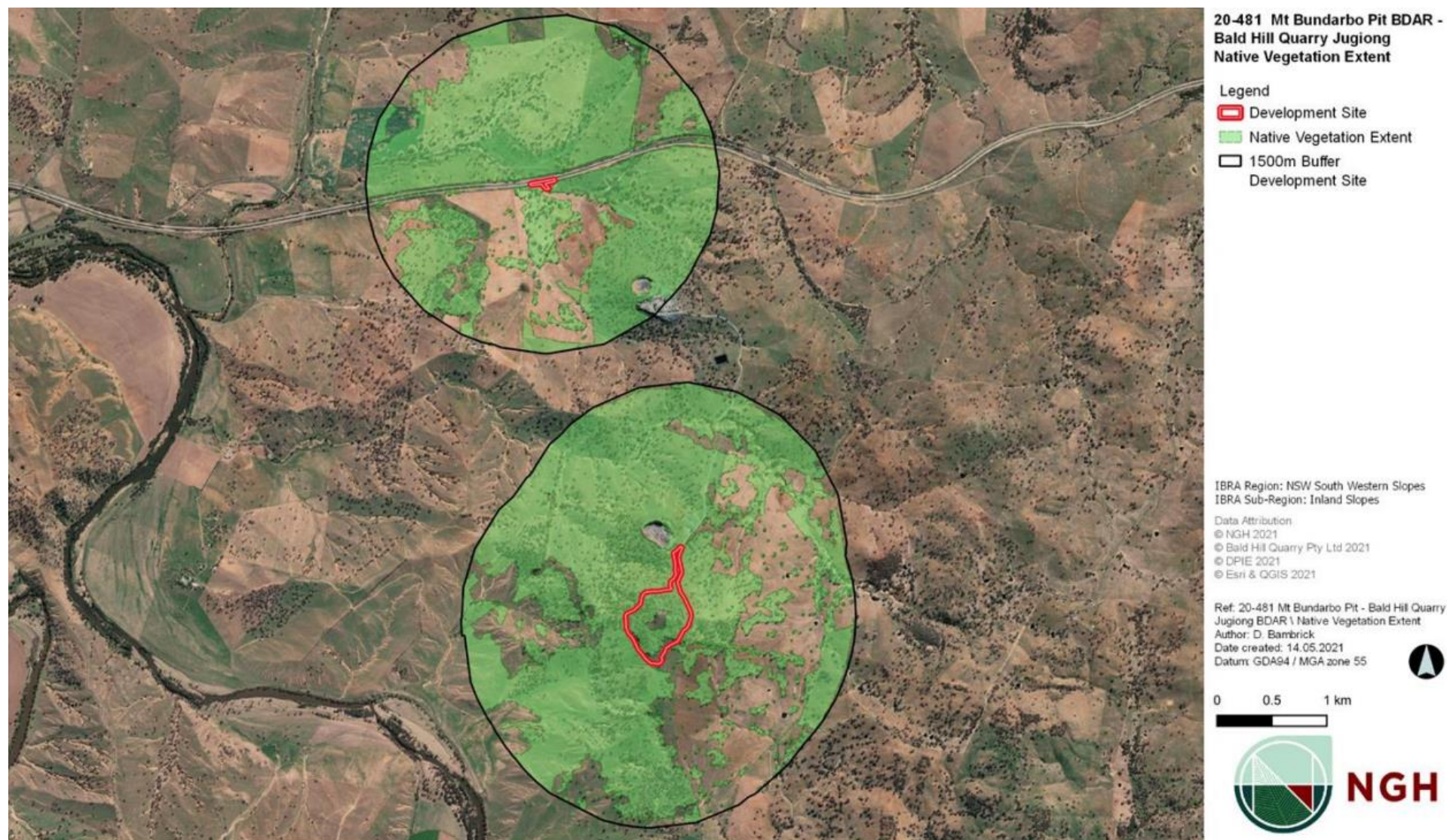


Figure: BDAR Extent of Native Vegetation within 1.5km (reproduced from BDAR)



There are no isolated areas of the TEC within the Development Site. There is exotic vegetation at the southern edge, on part of the western and eastern edge, and in the middle of the widest section of the Development Site (4 patches).

The proposal involves the removal of a roughly formed 680m long strip of Vegetation Zone 1 & 2, ranging in widths of between 20m and 50m, in the north and north-east section of the Development Footprint. According to SVM (VIS\_4469), (as mentioned above), this area is surrounded by Box-Gum Woodland.

There are patches of Box-Gum Woodland from Zone 1 in the remaining section of the Development Footprint in odd shapes and varying sizes to be cleared including:

- a strip with approximate length of 160m and average width of approximately 50m,
- a broad strip with approximate length of 246m and approximate width of 147m,
- a patch with approximate length of 63m and width of 45m,
- a rough strip with a bend with approximate length of 270m and average width of approximately 30m,
- a patch with approximate length 140m and average width of approximately 100m.

There is some exotic vegetation adjacent to these patches of Box-Gum Woodland, however these patches are predominantly surrounded by TEC. The TEC would remain connected in a 'U' shape fashion around the Development Footprint.

#### The condition of the Box-Gum Woodland

Table 9.1 shows the vegetation integrity scores including the composition, structure and function condition scores for vegetation zones 1 and 2 for PCT 266 that will be impacted by the development.

Vegetation Zone 2 (Derived Grassland) has low native species diversity and an absence of canopy trees and shrubs representing a vegetation zone in low condition. The vegetation integrity score of <15 reflects the low diversity in this vegetation zones composition, structure and function. This vegetation integrity score is categorically too low to generate offsets.

Vegetation Zone 1 (Woodland) has a vegetation integrity score of 20.4. This is low due to the absence of native shrubs and understory species, however it is high enough to generate ecosystem credits. 70 credits were generated for impacts to this zone.

**Table 9-1 Vegetation integrity scores**

Zone ID	PCT/Zone	TEC	Area impacted (ha) Development Footprint	Composition	Structure	Function	Current Vegetation Integrity Score	Future vegetation integrity score
1	266_Exotic understory	BC Act	6.83	7.7	16.8	65.6	<b>20.4</b>	0
2	266_Derived_Grassland	BC Act	2.08	34.8	17.5	0	<b>1.3</b>	0

Actions and measures taken to avoid the direct and indirect impact on the Box-Gum Woodland at risk of an SAI

### **Direct Impacts**

Box-Gum Woodland occurs within the development site as PCT 266 and PCT 277.

PCT 266 occurs within the development site for the proposed quarry. It occurs in two conditions states, a modified woodland condition (Vegetation zone 1: 20ha) and derived grassland condition (Vegetation Zone 2: 3ha). PCT 266 cover 23 ha of the development site.

PCT 277 occurs along the roadside of the Hume Highway intersection and includes modified woodland (Vegetation zone 4: 0.05ha) with one canopy species identified to be Yellow Box and predominantly exotic understorey.

Direct impacts to the TEC have been avoided where possible. During the design phase there have been a number of footprint iterations. Based on NGHs PCT mapping, the impacts to higher quality TEC was reduced. Impacts to PCT 266 Woodland was reduced from 9.22ha to 6.83ha and PCT 277 was excluded from the development footprint. The footprint incorporated the areas of exotic vegetation as far as practicable. The proposed development footprint covers an area of 12.91 ha, which includes 4ha of exotic vegetation. The total amount of TEC to be impacted is 8.91ha, which consists of 6.83ha of Zone 1 (PCT 266 exotic understorey) and 2.08ha of Zone 2 (PCT 266 derived grassland). This equates to 38.65% of the TEC in the defined Development Site. The large majority, approximately 14.14ha (61.35%) of TEC within the development site would be retained. The areas impacted are modified and have been subject to historic clearing and grazing for agriculture. Where Box-Gum Woodland would be directly impacted, ecosystem credits have been generated...

### **Indirect Impacts**

To prevent indirect impacts to the retained Box-Gum Woodland, the following would occur:

- Complete a Construction Environmental Management Plan (CEMP), to include:
  - Ensure construction site has permanent exclusion fencing to ensure no accidental vegetation removal occurs in the adjacent Box-Gum woodland.
  - Ensure no stockpiling or storage of equipment, soil or rubbish occurs in the adjacent Box-Gum woodland.
  - As part of a site induction, inform construction staff these areas are exclusion zones and therefore not to be disturbed.
  - Place logs from trees that are to be removed in the development site in the Woodland areas to be retained.
- Complete a Rehabilitation Plan including a Vegetation Management Plan (VMP) for the Woodland areas to manage:
  - Weed control.
  - Replanting or regeneration
  - Location of hollows from tree removal
  - Location of nest boxes
  - Location of log
  - Permanent fencing to protect remaining areas of Box-Gum Woodland with management objectives and actions to improve natural regeneration and increase diversity of native shrubs and understory.
  - Site selection could consider separate areas that are not currently actively managed but provide habitat connection to the surrounding landscape as well as areas already managed or protected that contain remnant Box-Gum Woodland
  - Consider protection of these areas in perpetuity".

The BDAR was referred to the NSW Department of Planning Industry and Environment – Biodiversity Conservation Division (BCD) who provided the following advice:

*"The submitted BDAR still contained inconsistencies that were raised previously in the Departments last correspondence (dated September 2022). These comments are detailed in Attachment 1 for reference. We note that this application is proposing to impact on the critically endangered ecological community (CEEC) White Box - Yellow Box – Blakely's Red Gum Woodland (Box-gum Woodland) which is a serious and irreversible impact (SAIL) entity. Council should consider this when determining this application and if further avoidance and mitigation measures are satisfactory for this community. More detailed comments are within Attachment 1.*

We note that the BDAR's SAIL evaluation has been updated after the site inspection. These updates include new additional management measures to address impacts to the SAIL entity. These additional



measures are explored within Attachment 1 along with more detailed comments regarding the BDAR and the SAll evaluation.

#### Attachment 1 – Further information regarding the BDAR and SAll entity Way forward for SAll determination

The BDAR proposes that a Biodiversity Management Plan (BMP) and a Rehabilitation Management Plan (RMP) be prepared and that they include management measures to mitigate the impact to 6.83 ha of the CEEC Box-gum woodland SAll entity & 105 hollow bearing trees. The report, however, does not provide any details on the quantity, location or timeframes for when these measures will be proposed that would provide assurance into the mitigation and management of the community. We support the basis of the proposals within the report (i.e. weed management, fencing exclusions, replanting's) but suggest that Council gain some more substantial guarantees in the form of a s88b with definitive details on the land to be managed.

The Department also recommends that we are written into any conditions of consent regarding the BMP and RMP for review and approval, and that the conditions of consent include provisions to ensure the BMP and RMP are prepared and approved prior to the commencement of the quarry expansion.

We note that the following inconsistencies previously raised by the Department have not been addressed, these should be considered by Council as the determining authority, if they are satisfied with the report.

1. We note that 315 hollow bearing trees (HBT) are recorded to be within the development site with 105 of these to be directly impacted and removed. No tree inventory was found within the report and no reference to how many trees other than those that contain hollows was stated. This should be supplied.
2. We note the justification for the assumption of the Brush-tailed Phascogale, however, reiterate the Departments position is that we don't support the assumption of species, especially when surveys can be completed. The Brush-tailed Phascogale has been assumed and we would have preferred that this species have been surveyed and adequately assessed.
3. With reference to the rocks, which are a prescribed impact, there is no map to indicate where the rocks are on site and no map to indicate where the rock rolling surveys were completed. See Figure 4-1 Survey effort and targeted survey locations, Mt Bundarbo only refers to diurnal avifaunal survey plots and call

*playback points, with transects for flora & fauna diurnal and spotlighting. More information and maps would be beneficial to the decision maker".*

In response to the BCD advice, the requested conditions are included in the recommendation requiring the BMP and RMP to be prepared in consultation with BCD and approved prior to the commencement of the new quarry. The revised BDAR contains a tree inventory with the location of hollow bearing trees and a tracklog over the survey period for rock turning. The revised BDAR confirms the number of hollow bearing trees required to be removed has been reduced from 105 to 97. The BDAR, including survey methods, was prepared by an Accredited Assessor under the BC Act and includes justification from a species expert for the assumed presence of the Brush-tailed Phascogale.

In consideration of the SAI Guidelines and BC Act, the EIS has demonstrated the proposal has been designed to avoid remnant Box-Gum Woodland with intact groundcover to the greatest extent possible and allow the resource to be quarried. The land to be cleared for the proposal represents 0.0001% of the established extent of the Box-Gum Woodland remaining in the NSW South Western Slopes IBRA Region. In the immediate area, the extent is 185.45ha and 8.91ha (4.8%) is to be cleared. The BDAR identifies the proposal would impact seed dispersal and hollow bearing trees and sets out mitigation measures, including relocation of hollows, replanting, regeneration, fencing native vegetation and establishing habitat connections. The residual impacts of the proposal are to be off set with like for like biodiversity credits. The proposal is not expected to have a serious and irreversible impact on biodiversity values for the following reasons:

1. The Box-Gum Woodland in NSW and NSW South Western Slopes IBRA Region has a vast geographic range and is not restricted to the site or locality.
2. The intact Box-Gum Woodland remnants in the locality would not be isolated as a result of the proposal.
3. The Box-Gum Woodland impacted by the proposal is of poor condition, absent of native shrubs and understory species and has a low vegetation integrity score under the BDAR.
4. The proposed mitigation measures and management plans by the BDAR would improve the condition of the intact Box-Gum Woodland remnants in the locality.
5. The management activities proposed would assist with recovery of the Box-Gum Woodland in the locality with fencing, weed management, replanting and regeneration.
6. The residual impacts of the proposal on the Box-Gum Woodland that cannot be avoided or mitigated are to be off set with like for like biodiversity credits.

Part of the site to the south is mapped as 'bushfire prone land' on the bushfire prone land map signed by the NSW Rural Fire Service commissioner. In accordance with Section 4.14(1) of the Act, the Consent Authority must not grant consent for development on such land unless:

- a) It is satisfied the development conforms to the requirements of the NSW Rural Fire Service Planning for Bush Fire Protection Guidelines, dated November 2019 (PBP 2019); or
- b) A suitability qualified person in bushfire risk assessment has certified the development complies with PBP 2019, or
- c) Council has consulted with the NSW RFS for any development that results in noncompliance with PBP 2019.

The EIS provides an assessment of the development against PBP 2019 and lists a bushfire management plan to be prepared as a mitigation commitment. NSW Rural Fire Service (RFS) reviewed the application in accordance with section 4.14(1)(c) of the Act and advised the application is supported the following conditions to comply with PBP 2019:

1. *A draft Fire Management Plan (FMP) shall be prepared for the proposed development and provided to the local NSW RFS District Office for comment. Any return comment from the District shall be adopted into an amended FMP. As a minimum, the FMP shall include:*
  - *24-hour emergency contact details including alternative telephone contact;*
  - *Site infrastructure plan;*
  - *Fire fighting water supply plan;*
  - *Site access and internal road plan;*
  - *Construction of asset protection zones and their continued maintenance;*
  - *Location of hazards (physical, chemical, and electrical) that will impact on the fire fighting operations and procedures to manage identified hazards during the fire fighting operations;*
  - *Mitigation measures designed to prevent a fire occurring within the site, and prevent a fire escaping the site and developing into a bush/grass fire risk to the surrounding area; and*
  - *Such additional matters as required by the NSW RFS District Office.*
2. *All internal roads shall comply with the design and construction specifications for property access outlined in Appendix 3 of Planning for Bush Fire Protection 2019.*
3. *To allow emergency service personnel to undertake property protection activities, a minimum 10-metre defendable space, managed as an asset protection zone, shall be provided around all*



*buildings and built assets and the outside perimeter of the development footprint.*

4. *A minimum 20,000-litre water supply (tank) fitted with a 65mm Storz fitting shall be located adjoining the internal access road within the required asset protection zone.*

The Applicant's response to submissions identifies no buildings or built assets requiring an asset protection zone are proposed, a 100,000-litre water supply for firefighting purposes is established along the haul road near the existing quarry processing area and an asset protection zone is maintained around the quarry processing plant. The response confirms a defensible space around the footprint of the quarry and additional firefighting water supply is not required by RFS. The recommended conditions by RFS in the response are included in the draft conditions to ensure compliance with Section 4.14 of the Act.

#### **Section 4.15(1)(a)(i) - The provisions of any environmental planning instrument**

The application was lodged prior to commencement the consolidation of State Environmental Planning Policies which came into effect on 1 March 2022. Accordingly, this report refers to the former Policies.

##### State Environmental Planning Policy (State and Regional Development) 2011

The proposal comprises a class of development included within Schedule 7 of SEPP State and Regional Development, being an extractive industry, which meets the requirements for designated development under the Act. Under the SEPP, the proposal is referred to the Southern Regional Planning Panel for determination.

##### State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

SEPP Extractive Industries addresses permissibility for quarries on any land and provides that such developments are permissible where 'agriculture' is permitted with or without consent by a Local Environmental Plan. The site is zoned RU1 Primary Production by the Harden Local Environmental Plan 2011 and both agriculture and extractive industries within this zone are permitted uses with consent.

Part 3 of SEPP Extractive Industries lists the following matters for consideration that the Consent Authority must take into account when determining a development application for a new quarry.

#### **Clause 12 Compatibility of proposed mine, petroleum production or extractive industry with other land uses**

*Before determining an application for consent for an extractive industry, the Consent Authority must:*

- (a) consider:*
  - (i) the existing uses and approved uses of land in the vicinity of the development, and*
  - (ii) whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development, and*
  - (iii) any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses, and*
- (b) evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a)(i) and (ii), and*
- (c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii).*

**Comment:** The EIS provides an assessment of existing and approved uses in the locality (landfill, quarries, extensive agriculture and dwellings) and the land use conflict risk assessment proposes the following measures to avoid potential land use conflicts with existing and approved developments in the locality:

- Community and Stakeholder Engagement Plan
- Soil and Water Management Plan
- Erosion and Sediment Control Plan
- Construction Environmental Management Plan
- Operational Environmental Management Plan
- Biodiversity Management Plan
- Rehabilitation Management Plan
- Pest and Weed Management Plan
- Waste Management Plan
- Quarry Closure Plan

The acoustic report supporting the EIS provides an expert assessment of the expected noise impacts (construction, operations and cumulative) in the locality. The report finds noise associated with the proposed expansion of the quarry operations to Mt Bundarbo, in conjunction with the existing quarrying and landfill activities operating, would comply with the NSW EPA Noise Policy for Industry with the measures proposed. See figure below for an aerial view of the locality showing sensitive receptors within 3km of the proposal.

The EIS demonstrates the proposed quarry expansion would have minimal impact to surrounding land uses with the proposed measures being implemented during the construction, operational and rehabilitation phases of the development. Further to this, the NSW Environment Protection Authority has granted General Terms of Approval for the proposal with conditions to minimise impacts in the locality (blasting, noise, dust emissions etc.). The

proposed quarry is not incompatible with the existing, approved or preferred land uses in the locality.

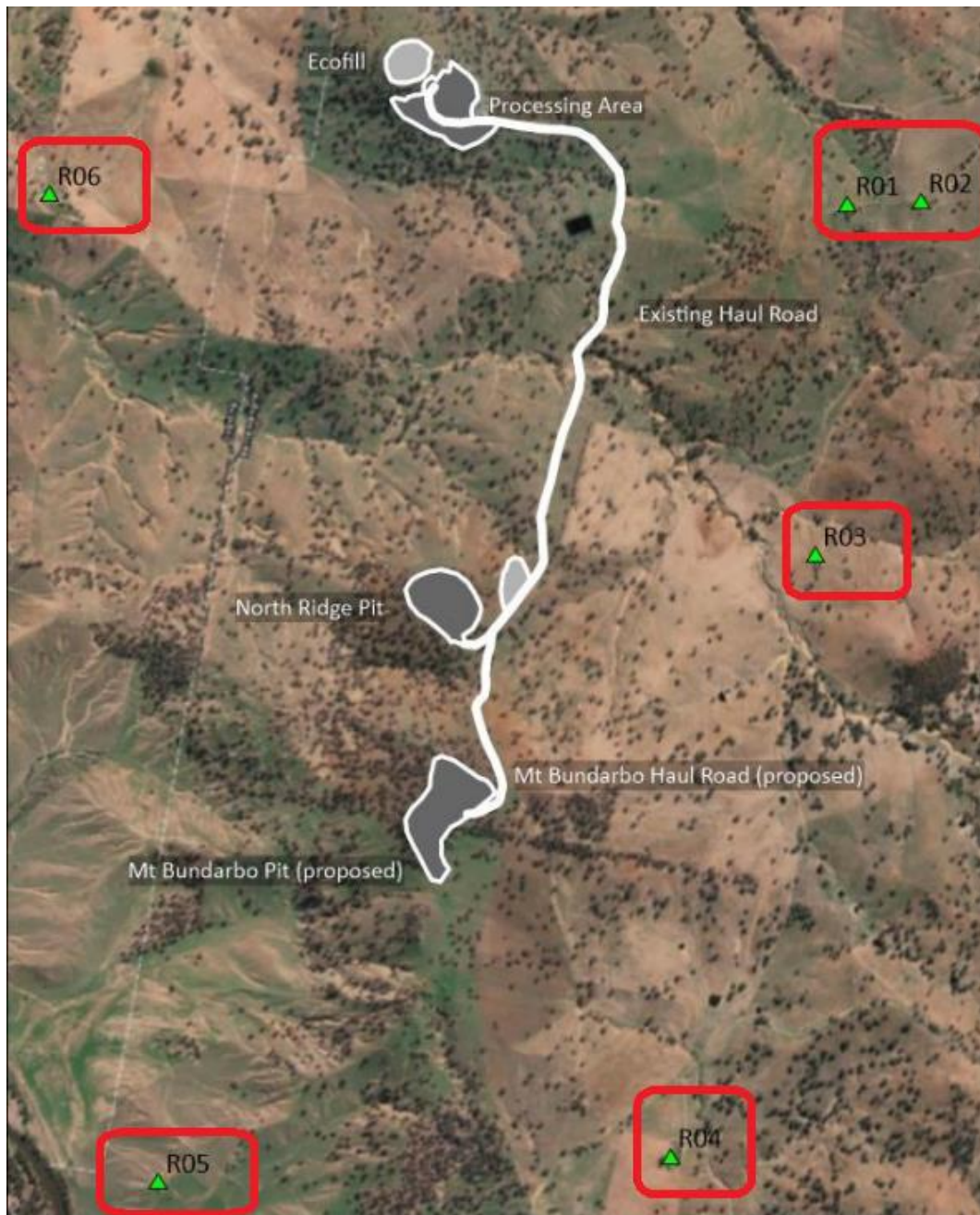


Figure: locality plan showing existing dwellings in the area (reproduced from acoustic report).

### **Clause 13 Compatibility of proposed development with mining, petroleum production or extractive industry**

Before determining an application for consent for an extractive industry, the Consent Authority must:

(a) consider:

- (i) the existing uses and approved uses of land in the vicinity of the development, and



- (ii) whether or not the development is likely to have a significant impact on current or future extraction or recovery of minerals, petroleum or extractive materials (including by limiting access to, or impeding assessment of, those resources), and
  - (iii) any ways in which the development may be incompatible with any of those existing or approved uses or that current or future extraction or recovery, and
- (b) evaluate and compare the respective public benefits of the development and the uses, extraction and recovery referred to in paragraph (a)(i) and (ii), and
- (c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a)(iii).

**Comment:** The proposed quarry would be located 500m south of the North Ridge Quarry (end of life expected 2024) operated by the Applicant and 6kms east of sand quarries operated by others. No other mining, petroleum production or extractive industry uses are approved in the area. The proposal is within proximity of a quarry operated by the Applicant and the EIS states the new quarry is to be operated once resources at North Ridge Quarry are exhausted. The proposal is not incompatible with surrounding uses and is not expected to impact on extraction of extractive materials from existing quarries with the proposed measures by the EIS.



Figure: Locality map showing existing quarries and distance from the proposed quarry expansion.

#### **Clause 14 Natural resource management and environmental management**

- (1) Before granting consent for development for an extractive industry, the Consent Authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure the following:

*(a) that impacts on significant water resources, including surface and groundwater resources, are avoided, or are minimised to the greatest extent practicable,*

**Comment:** The EIS provides an assessment of the impacts on significant water resources in the locality and commits to soil and water quality plans being prepared and implemented in accordance with the Landcom quarry guidelines and limits on the depth of quarrying to avoid impacts on water resources.

The EIS predicts the quarry requires up to 40,000L of water during the construction phase of the development and up to 10ML annually for peak quarry operations.

The EIS site water balance assessment finds 5.53ML would be captured annually from surface runoff (63.2% chance of happening in any year) to meet the expected water demands of the quarry operations. If water shortfalls occur (drought etc.), the EIS has proposed mitigation measures that would be put in place, including, carting water to the site by tanker from North Ridge Quarry (similar sized catchment) or a 10ML licensed bore associated with the Bald Hill Quarry. Water NSW reviewed the EIS and raised no concerns with these water supply arrangements or groundwater resources. Nevertheless, a condition is included in the draft conditions for the operations to match its available water supply.



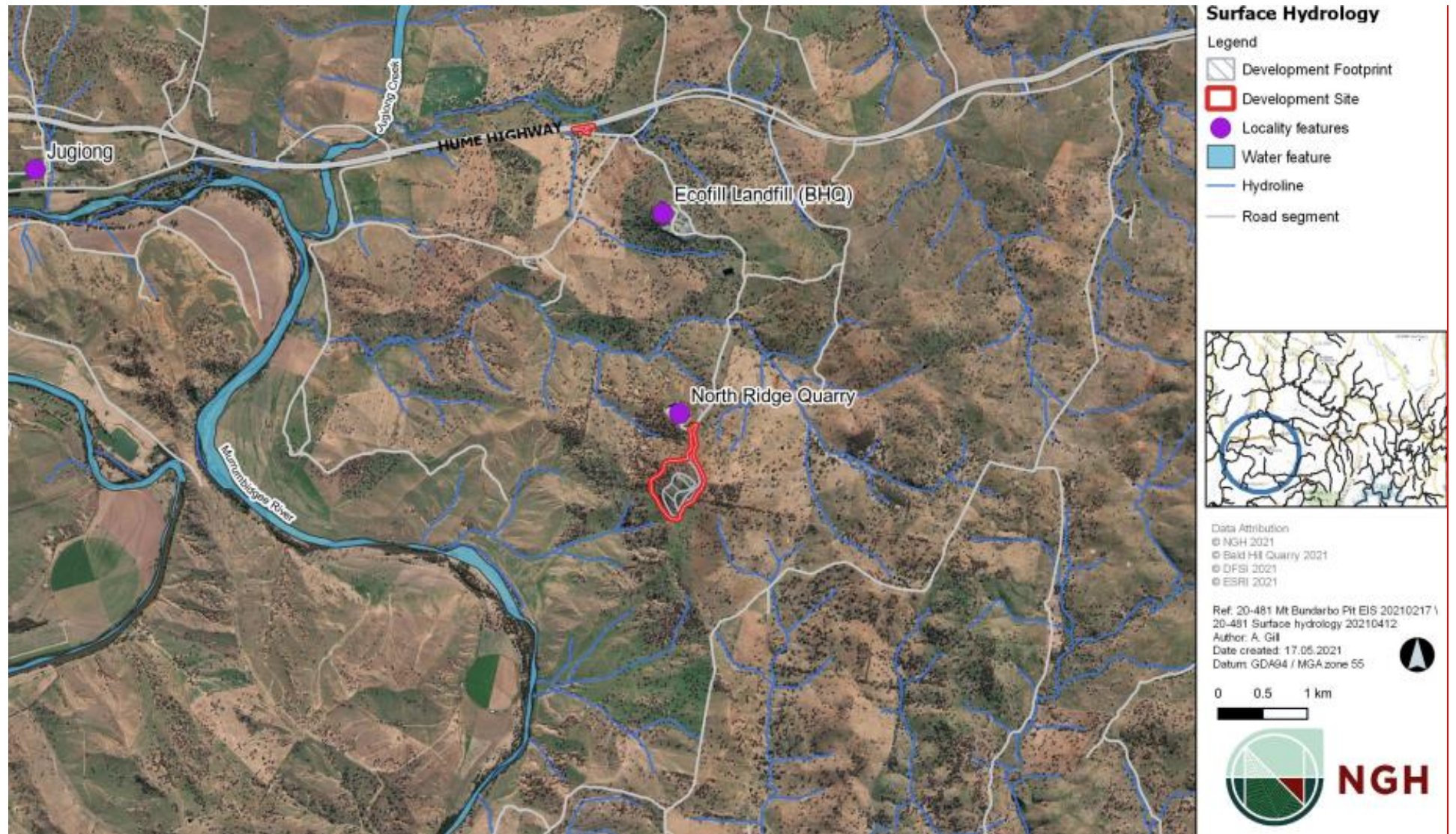


Figure: surface water hydrology in the locality (reproduced from EIS).

- (b) *that impacts on threatened species and biodiversity, are avoided, or are minimised to the greatest extent practicable,*

**Comment:** The BDAR supporting the EIS provides an assessment of the impacts on threatened species and biodiversity. The BDAR finds the proposal would not impact on threatened species and potential impacts on the vulnerable Large-eared Pied Bat have been avoided by retaining the Blakeslys Red Gum - Yellow Box grassy tall woodland community.

The BDAR states the impact to the White Box grassy woodland community has been reduced from 9.22ha to 6.83ha in the design of the proposed quarry expansion with adjustments to the haul road alignment and quarry pit layout. The residual impacts of the proposal that cannot be avoided as the hard rock resource is located at Mt Bundarbo are to be fully offset (70 ecosystem credits and 70 species credits) in accordance with the Biodiversity Conservation Act 2016 with additional mitigation and management measures as previously discussed in this report. The analysis of the BDAR found the proposal would have no serious and irreversible impacts on biodiversity values. On this basis, it is considered that the proposal has been designed to avoid and minimise biodiversity impacts.

- (c) *that greenhouse gas emissions are minimised to the greatest extent practicable.*

**Comment:** The EIS provides an assessment of the greenhouse gas emissions from the proposal and indicates there would be no increase in such gases at the site as the quarry activities would remain the same as North Ridge Quarry with no changes to the existing quarry processing facilities and transportation arrangements by this application.

It is likely emissions from quarry plant and machinery will generate greenhouse gases. However, the proposed quarry expansion has potential to reduce significant heavy haulage (and carbon emissions) of quarry materials from outside the Hilltops LGA for local, regional and major projects or processing at Bald Hill Quarry. Conditions are included in the recommendation to ensure plant and machinery is regularly serviced and maintained. It is not necessary to impose other conditions in relation to greenhouse gas emissions.



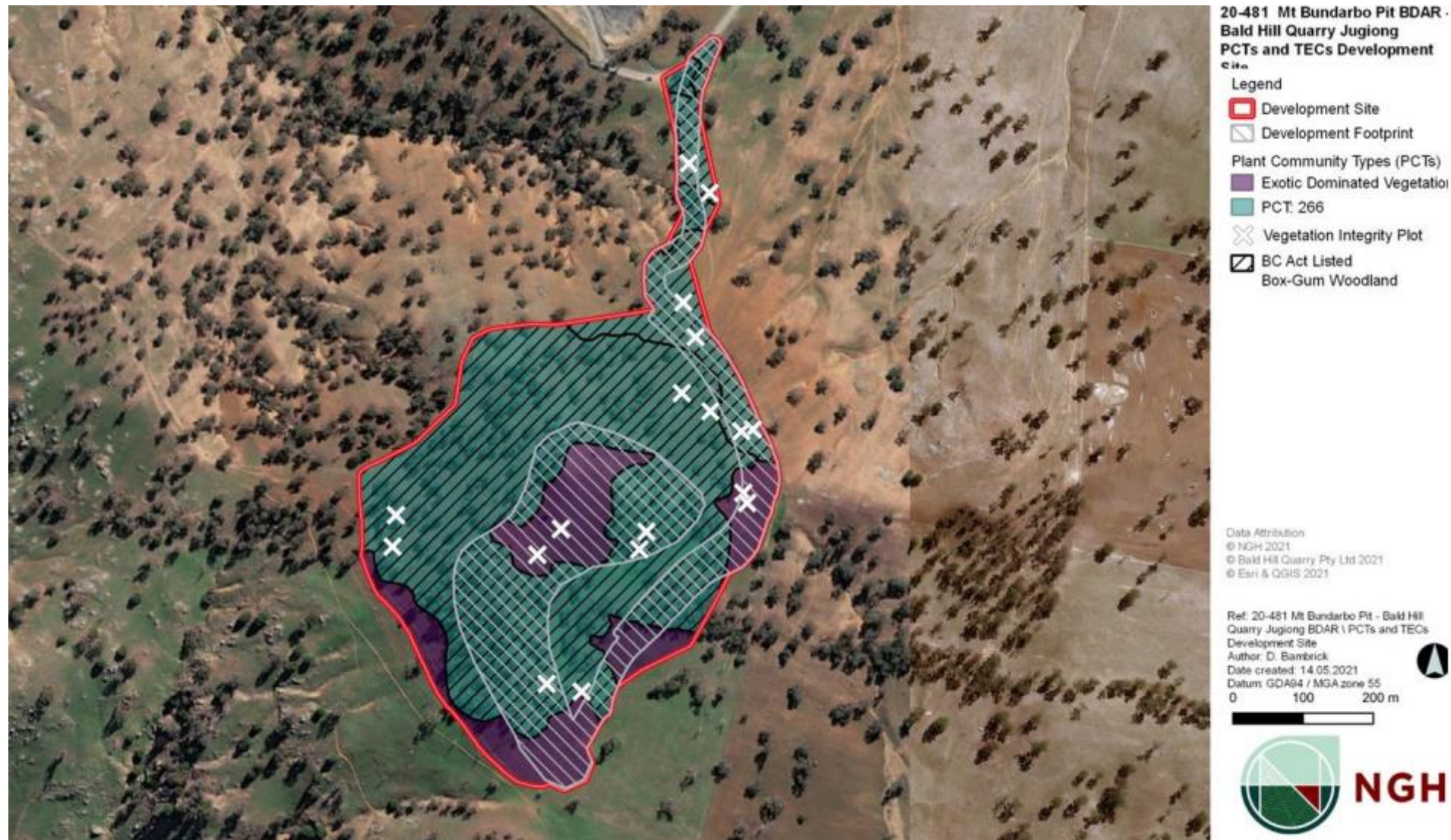
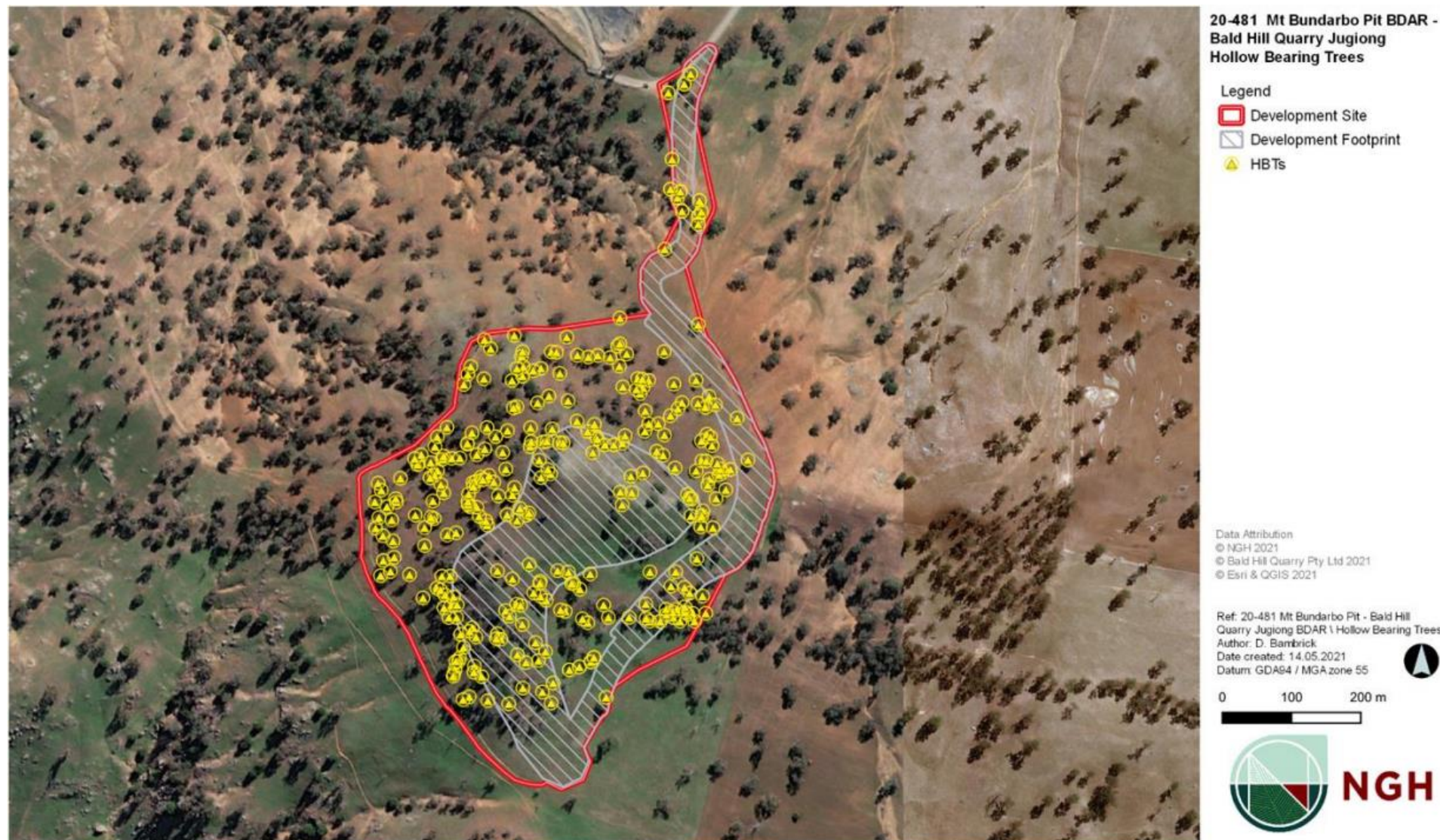


Figure: BDAR PCTs and threatened ecological communities in the development site (reproduced from BDAR).





BDAR hollow bearing trees in the development site (reproduced from BDAR).

## **Clause 15 Resource recovery**

- (1) Before granting consent for development for an extractive industry, the Consent Authority must consider the efficiency or otherwise of the development in terms of resource recovery.*
- (2) Before granting consent for the development, the Consent Authority must consider whether or not the consent should be issued subject to conditions aimed at optimising the efficiency of resource recovery and the reuse or recycling of material.*
- (3) The Consent Authority may refuse to grant consent to development if it is not satisfied that the development will be carried out in such a way as to optimise the efficiency of recovery of minerals, petroleum or extractive materials and to minimise the creation of waste in association with the extraction, recovery or processing of minerals, petroleum or extractive materials.*

**Comment:** The proposed quarry operations would result in minimal quantities of waste being generated. No conditions are required to address resource recovery as the proposed measures in the EIS (reuse, reprocessing, covered loads, use of blended spoil for landfill cover material and rehabilitation, environmental management plan etc.) would minimise the creation of waste from the quarry. Conditions are included in the recommendation to ensure the measures proposed in the EIS are implemented by the Applicant as part of the development.

## **Clause 16 Transport**

- (1) Before granting consent for development for the purposes of mining or extractive industry that involves the transport of materials, the Consent Authority must consider whether or not the consent should be issued subject to conditions that do any one or more of the following:*
  - (a) require that some or all of the transport of materials in connection with the development is not to be by public road,*
  - (b) limit or preclude truck movements, in connection with the development, that occur on roads in residential areas or on roads near to schools,*
  - (c) require the preparation and implementation, in relation to the development, of a code of conduct relating to the transport of materials on public roads.*
- (2) If the Consent Authority considers that the development involves the transport of materials on a public road, Council must, within 7 days after receiving the application, provide a copy of the application to each roads authority for the road, and the Roads and Traffic Authority (if it is not a roads authority for the road).*

**Comment:** The EIS states the proposed quarry would use the transport routes established by the North Ridge Quarry, being the Hume Highway, Jugiong Road, Burley Griffin Way and Olympic Highway, for quarry product dispatch from 7am to 10pm on any day. These roads are classified roads and Transport for NSW and Hilltops Council are the appropriate road authorities for these roads.

Quarry product would be dispatched from the site via the Hume Highway at a maximum peak rate of 16 laden trucks per hour according to the EIS and Traffic Impact Assessment. There are no schools or residential areas along the Hume Highway to warrant restrictions. The Jugiong Road (near Harden) is in a residential area and the Murrumburrah Public School is located along the Burley Griffin Way. These busy roads have no time restrictions imposed by the road authorities. Trucks exceeding 50 tonnes are permitted to use Jugiong Road with a permit from the National Heavy Vehicle Regulator. The EIS and Traffic Impact Assessment was referred to Transport for NSW for comment who supported the proposal with conditions requiring the intersection to be upgraded and the implementation of the Transport Management Plan recommended by the Traffic Impact Assessment. These matters are addressed in the recommended conditions.

## **Clause 17 Rehabilitation**

- (1) Before granting consent for development for an extractive industry, the Consent Authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring the rehabilitation of land that will be affected by the development.*
- (2) In particular, the Consent Authority must consider whether conditions of the consent should—*
  - (a) require the preparation of a plan that identifies the proposed end use and landform of the land once rehabilitated, or*
  - (b) require waste generated by the development or the rehabilitation to be dealt with appropriately, or*
  - (c) require any soil contaminated as a result of the development to be remediated in accordance with relevant guidelines (including guidelines under clause 3 of Schedule 6 to the Act and the Contaminated Land Management Act 1997), or*
  - (d) require steps to be taken to ensure that the state of the land, while being rehabilitated and at the completion of the rehabilitation, does not jeopardize public safety.*

**Comment:** Rehabilitation works are described in the EIS supporting the application and are to occur progressively and at the end of the life of the quarry (20 years). A concept final landform plan has been submitted with the EIS and shows:

- All areas backfilled with over burden will be revegetated (pasture seeded and self sown trees) and returned to pasture.



- Existing surface water system retained. All runoff collected within the quarry perimeter and directed to the internal reservoir sump. Potential for stock watering and fire fighting use to be explored during the life of the quarry.
- Final bench drilled with 5-10 degree sweep back to eliminate potential overhang.
- Berms retain 5m width with rock and log covering to prevent all vehicle access.
- Placement of rocks and logs to limit vehicle access to no closer than 5m to any rock face.
- Minimum 2m high security fence installed around pit void to prevent animal access and unauthorized unintentional personal access.

In addition, the EIS states a Quarry Closure Plan would be prepared 3 years prior to cessation of quarrying activities, a Waste Management Plan prior to operations and any contaminated soils would be remediated during works and operations. The Applicant would be responsible for rehabilitating the site in accordance with the EIS.

A security has been offered by the Applicant for rehabilitation works with contributions deposited in a bond account. To ensure rehabilitation works are funded and implemented, a condition is included in the recommendation for establishment of a bond account, where \$0.05 per tonne of product sold is reserved for rehabilitation purposes. This would be \$200,000.00 over the life of the quarry.

#### State Environmental Planning Policy – Infrastructure 2007

SEPP Infrastructure aims to facilitate the effective delivery of infrastructure by facilitating consultation with public authorities about certain types of development.

Clause 45 of SEPP Infrastructure requires the Consent Authority to consider any development carried out:

- a) Within or immediately adjacent to an easement for electricity purposes,
- b) Immediately adjacent to an electricity substation,
- c) Within 5m of an overhead power line,
- d) Includes installation of a swimming pool any part of which is: within 30m of a structure supporting an overhead electricity transmission line and/or within 5m of an overhead electricity power line, or
- e) Placement of power lines underground.

The quarry expansion and new haul road is not within or adjacent to any of the above infrastructure; as such, these aspects of the development satisfy the SEPP. However, the development utilises an existing haul road servicing North Ridge Quarry where overhead powerlines cross the haul road as shown in the figures below. The application was referred to Essential Energy who

requested a plan be provided showing such infrastructure and vertical clearance.

The Applicant's Response to Submissions Report provided the requested plan and states no works are proposed near or under electrical infrastructure and no changes are proposed to existing quarry operations (machinery, plant or equipment) by the EIS. The existing haul road servicing North Ridge Quarry was approved by Development Consent No. T98/027 and there is adequate vertical clearance for movement of machinery, plant and equipment associated with the quarry operations. Warning signs stating the maximum vertical height permitted are also installed along the haul road. Further, the site traffic movement plan (reproduced below) identifies the hazard and forms part of the Transport Management Plan. In accordance with the SEPP, the electrical safety risks have been considered and the Consent Authority may determine the application.

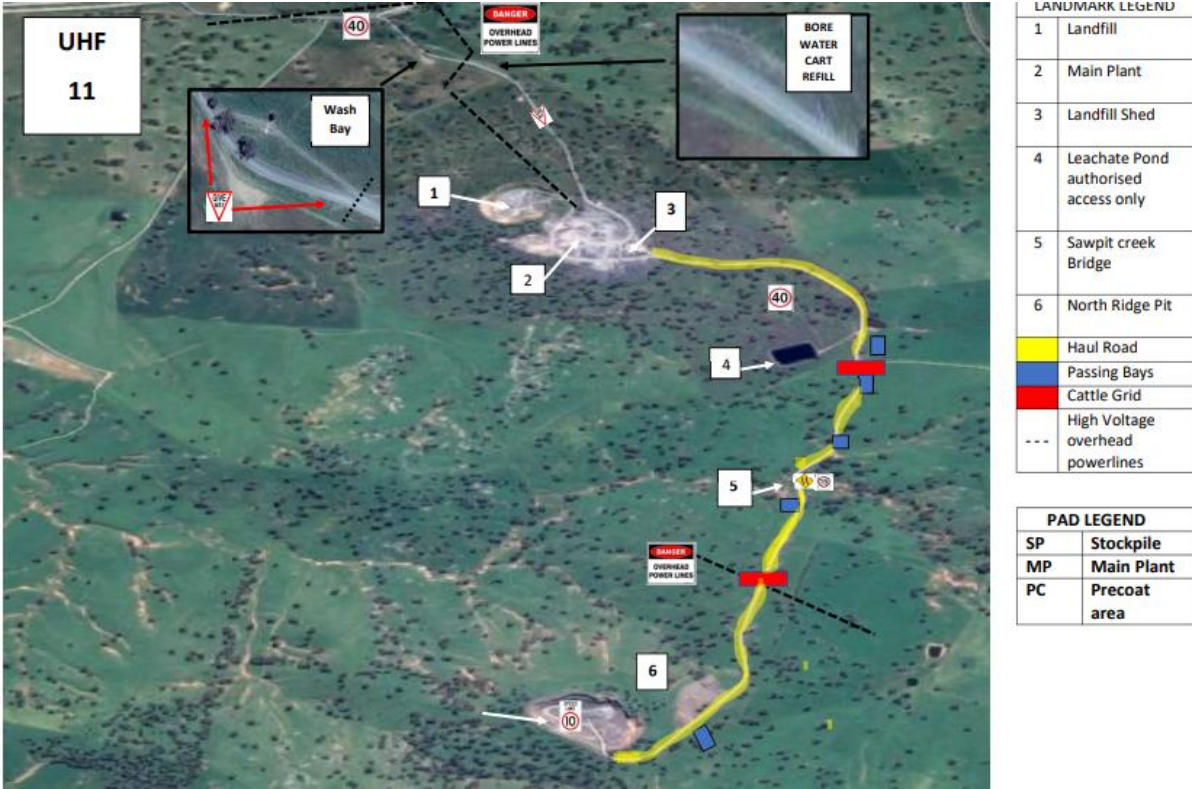


Figure: Site traffic movement plan (reproduced from TIA)

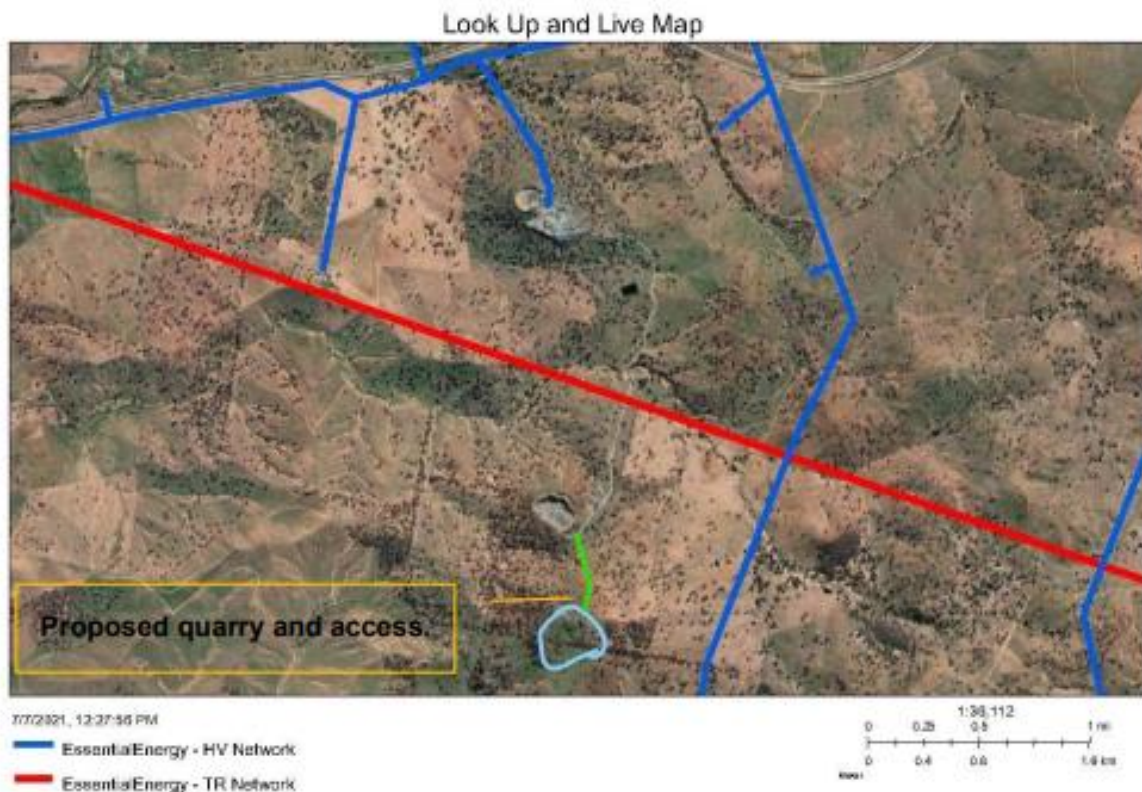


Figure: Plan of electrical infrastructure showing the proposed quarry expansion and haul road extension (reproduced from RTS).

The Hume Highway is a State Road (classified road) and intersection upgrade works are proposed by the EIS. Clause 101(2) of SEPP Infrastructure 2007 states:

*the Consent Authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that:*

- (a) where practicable and safe, vehicular access to the land is provided by a road other than the classified road, and*
- (b) the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of:*
  - i. the design of the vehicular access to the land, or*
  - ii. the emission of smoke or dust from the development, or*
  - iii. the nature, volume or frequency of vehicles using the classified road to gain access to the land.*

The proposed quarry expansion is over several land parcels that do not have practical access to a road other than the Hume Highway. Other public roads in the area are unsealed rural roads that are unable to cater for heavy haulage vehicles associated with the development. The road authority for the Hume Highway is Transport for NSW.

The EIS is supported by a Traffic Impact Assessment and Road Safety Audit that recommends the intersection of the Hume Highway and Old Hume Highway be upgrade with shoulder sealing, linemarking and signposting to

maintain road safety and safeguard the ongoing operation of the classified road. Accordingly, the application was referred to the road authority who supported the proposal with conditions requiring the intersection to be upgraded in accordance with the Road Safety Audit and implementation of the Transport Management Plan. These conditions are included in the draft consent conditions.

The proposal is not traffic generating development under clause 104 of the SEPP as 'extractive industries' are not a type of industry under Schedule 3 of the SEPP and the car parking thresholds are not exceeded by the proposed development.

#### State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

SEPP 33 applies to any development which is defined as a hazardous industry or an offensive industry. A potentially hazardous industry is one which when all location, technical, operational and organisational safeguards are employed continues to pose a significant risk. Similarly, a potentially offensive industry is an industry which without safeguards emits a polluting discharge in a manner that would have a significant adverse impact in the locality.

The EIS provides an assessment of the quarry expansion against the Applying SEPP 33 Guidelines and finds the proposal is not a hazardous industry as no changes are proposed to storage quantities or arrangements for fuels for machinery at Bald Hill Quarry. Further, the proposal is not an offensive industry as the NSW Environment Protection Authority has issued General Terms of Approval with conditions to avoid significant environmental harm in the locality (blasting, noise, emissions etc.).

As the proposal only involves extraction of materials and does not involve the processing of hazardous materials (only crushing of rocks and aggregates via existing Bald Hill Quarry processing plant), it is considered the proposal is not a hazardous industry.

#### State Environmental Planning Policy No. 55 – Remediation of Land

Pursuant to Clause 7 of SEPP 55, a Consent Authority is unable to grant consent unless it has considered whether the land is contaminated and, if so, whether it is satisfied the land is suitable in its contaminated state, or can be remediated to be made suitable for the purposes for which the development is proposed to be carried out.

The EIS contains a preliminary site investigation that identifies the site of the proposed quarry expansion and haul road has been used for grazing of livestock and no potentially contaminating activities have been identified on site. A review of Council records, including historical imagery, reaffirms the site has not been used for potentially contaminating activities listed by Table 1 of the SEPP55 Guidelines. Inspection of the site did not reveal any visual evidence of contamination (vegetation discolouration, staining etc.) at the site of the proposal, which features steep slopes with remnant native



vegetation and areas of surface rock. Accordingly, it is considered that the site is suitable for the development.

#### SEPP Koala Habitat Protection 2021

SEPP Koala Habitat Protection applies to all land that has an area of more than 1 ha in the Hilltops LGA. Before the Consent Authority can grant consent to development on such land, it must satisfy itself whether or not the land is a core koala habitat.

The SEPP defines a core koala habitat as an area of land where koalas are present, or an area of land which has been assessed by a suitably qualified and experienced person in accordance with the Koala Habitat Protection Guideline as being highly suitable koala habitat, and where koalas have been recorded as being present in the previous 18 years.

The EIS is supported by a Biodiversity Development Assessment Report (BDAR), prepared by a suitably qualified person, that identified potential koala habitat on the site and confirms there are no records of koalas on site or within the locality. The BDAR finds historical records from the 1970s indicate koalas may be present in the north-east of the Hilltops LGA (Wyangala Dam). On this basis, the Consent Authority can be satisfied that the land is not a core koala habitat given the absence of recorded koala sightings in the locality over many decades.

#### Harden Local Environmental Plan 2011

##### **Permissibility**

The site is zoned RU1 Primary Production by the Harden Local Environmental Plan 2011 (LEP). The proposal is for an extractive industry (quarry) and the Land Use Table for this zone permits such development with consent.

***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”.

The relevant zone objectives are:

- a) To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- b) To encourage diversity in primary industry enterprises and systems appropriate for the area.
- c) To minimise the fragmentation and alienation of resource lands.
- d) To minimise conflict between land uses within this zone and land uses within adjoining zones.

- e) To encourage the development of non-agricultural land uses that are compatible with the character of the zone.

In accordance with Clause 2.3 of the LEP, the proposal is consistent with the objectives of the RU1 Primary Production zone as it is a permissible land use and is compatible with the Bald Hill Quarry and Landfill to the north of the site and suitable buffers are provided to surrounding dwellings to minimise land use conflicts.

## Heritage

Clause 5.10 of the LEP addresses heritage conservation. The proposal does not involve a heritage item nor is the development within the vicinity of any items of environmental heritage listed under the LEP.

The proposal is located on rural land used for grazing of livestock and consists of disturbed and undisturbed native vegetation. A search of the Aboriginal Heritage Information Management System (AHIMS) has revealed sites/places of aboriginal heritage in the broader locality; however, none of these sites are within the vicinity of the site of the proposed quarry expansion and haul road.

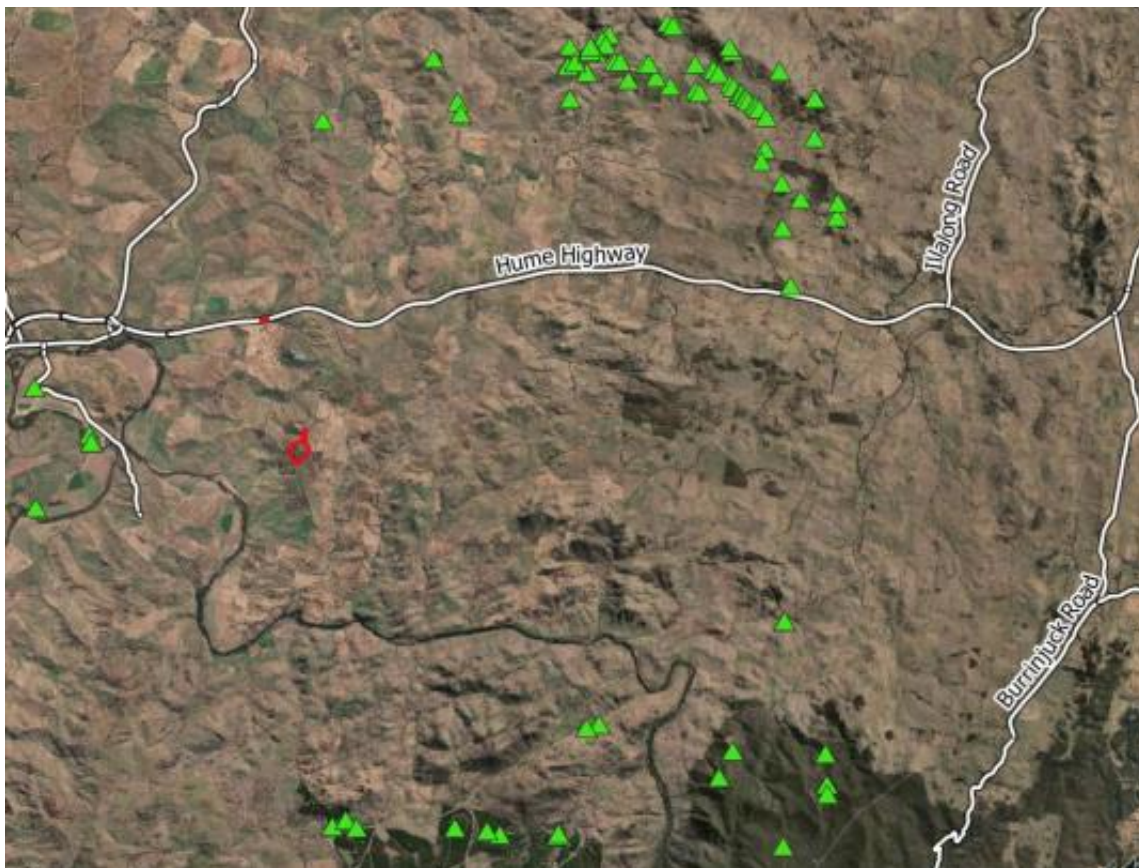


Figure: AHIMS sites in the locality with site highlighted (reproduced from Due Diligence Assessment)

A field survey of the quarry expansion and haul road was carried out as part of the Aboriginal Due Diligence Assessment supporting the EIS. The survey was

undertaken by archaeologists and representatives from the Young Local Aboriginal Land Council and found:

*"The proposed development footprint for the new haul road followed a lower gradient slope (15 to 25o) in a southward direction from the existing haul road towards Mt Bundarbo along a portion of an existing track which then trailed around the lower slopes of the eastern side of Mt Bundarbo. The exposures and cuts along the existing track generally indicated that the haul road area and lower slopes within the Proposal Area for the proposed new quarry and haul road have a very shallow soil red clay rich deposit overlying basalt bedrock. The proposed haul road and lower gradient slope landforms within the Proposal Area for the proposed new quarry and haul road were deemed to have a shallow soil profile and to have low archaeological potential for Aboriginal objects. No surface Aboriginal objects were recorded in these landforms in the Proposal Area.*

*The upper slopes of Mt Bundarbo which lead up to crests and saddle features were relatively steep ranging from 25- 65o with very steep slopes on the western and northern sides of the Proposal Area for the proposed new quarry and haul road. Steep slopes are considered to have relatively low archaeological potential to contain in situ subsurface deposits and the steep gradient of the slope is not conducive for camping or other activities by Aboriginal people*

*A number of exposed rocky outcrops were scattered across the Proposal Area for the proposed new quarry and haul road, in particular on the slopes and crest of Mt Bundarbo. The outcroppings were visually inspected by the survey team however no evidence of quarrying or Aboriginal objects were identified. The quality of the weathered outcropping within the Proposal Area for the proposed new quarry and haul road was noted by the Young LALC representatives onsite to be a poor source material.*

*The landscape features that make up the top of Mt Bundarbo consists of two crests separated by a saddle with an uninterrupted view of the Murrumbidgee River and the surrounding area. Several arrangements of stone were noted on the crest and saddle of Mt Bundarbo. These were not considered to be Aboriginal in origin by the archaeologist or the two representatives from the Young LALC. No Aboriginal cultural significance or concerns that these may have been Aboriginal in origin were noted by the Young LALC representatives for any of the stone arrangements inspected within the Proposal Area for the proposed new quarry and haul road. The stone arrangements were all considered to be historic European and/or modern in origin. It was noted that one arrangement marked a Trigonometric Station location at the highest point on the north-western side of the crest of Mt Bundarbo, which was demarked by a concrete pillar with metal disk*



and a historic rock cairn. Several lines of arranged stones were also noted to mark out the Crown Land (Lot 7002 DP 1031310) boundary. This was very noticeable along the southern boundary of the Crown Land lot.

While visibility on the crests and saddle was generally poor, covered in thick grasses and weeds, a number of exposures were present that showed a skeletal soil structure with a very thin brownish red humic layer overlaying decomposing bedrock indicating that the crest and saddle features of Mt Bundarbo have low archaeological potential to contain *in situ* subsurface deposits. While Mt Bundarbo is a prominent feature in the landscape it was also noted by the two representatives from the Young LALC that the Proposal Area for the proposed new quarry and haul road had low potential for Aboriginal objects given its distance from the Murrumbidgee River and the steep slopes which would have to be climbed to reach the crest and saddle. No surface Aboriginal objects were recorded on the crest and saddle landforms within the Proposal Area for the proposed new quarry and haul road.

The trees within the Proposal Area for the proposed new quarry and haul road were predominantly native species. All old growth native trees within the Proposal Area, in particular the *Brachychiton populneus*, commonly known as the kurrajong, which is known for its Aboriginal cultural uses, were examined for the presence of Aboriginal cultural modification. For a tree to have been a mature specimen suitable for bark extraction at the time before European settlement interrupted Aboriginal people practicing traditional ways, the tree would have to be a native species and over 100 years old. While a number of trees within the Proposal Area for the proposed new quarry and haul road have scarring none were considered to conform in any way to the standard scarring morphology accepted for Aboriginal modification (cf. Long 2005).

No Aboriginal objects were recorded within the Proposal Area for the proposed new quarry and haul road as part of this Due Diligence Assessment. The landforms present within the Proposal Area for the proposed new quarry and haul road, originally determined during the desktop assessment to have increased archaeological sensitivity, were subsequently determined to have low archaeological potential and low potential for *in situ* subsurface deposits due the shallow rocky soil profile and presence of outcropping bedrock. Consequently, no landscapes or areas with archaeological potential were identified within the Proposal Area for the proposed new quarry and haul road".

The Due Diligence report concludes the works can proceed with caution and recommends unexpected find protocols during works. A submission on the application identified a potential ring tree at Mt Bundarbo Quarry. The

Applicant reviewed the tree in question and provided the following clarification:

*"The two NGH archaeologists who undertook the visually inspection of this tree during the site inspection for the Aboriginal heritage Due Diligence for this project have extensive experience and the two Aboriginal community representatives from the Young LALC, one male and one female, are both experienced Aboriginal site officers. All members of the field team were present during the entirety of the visual inspection of the proposed work areas as detailed in the Aboriginal heritage Due Diligence assessment and all observations, conclusions and the recommendations presented in the report were discussed in detail during the fieldwork by the team. The Aboriginal heritage Due Diligence report was subsequently submitted to the Young LALC as a draft for review and comment with no concerns raised by the Aboriginal community during this process.*

*While we appreciate that BCD have noted the possible presence of a culturally modified tree/ possible ring tree at the top of the hill in the development site, NGH stands by the assessment made by the archaeologists and Young LALC representative present during the Aboriginal heritage Due Diligence site inspection for this project which determined that this tree is not an Aboriginal object/site and that the "ring feature" is not cultural in origin and does not conform in any way to the standard accepted Aboriginal cultural modification morphology. As such it is NGH's position that the proposed project works can proceed with caution in accordance with the recommendations of the Aboriginal heritage Due Diligence report undertaken for this project".*



Plate 1. Image of the tree noted by BCD to be a possible ring tree the top of the hill in the development site (as provided to NGH by Bald Hill Quarry Pty Ltd).



Plate 2. Image of the tree in question (shown in red circle) and its context taken during the field inspection for the Aboriginal Heritage Due Diligence.

Council's Heritage Advisor also reviewed the EIS and advised that the studies done to date indicate the requirements of the SEARs have been met and supported the recommendations in the Due Diligence report. These conditions have included in the draft conditions.

## **Flood planning**

Clause 5.21 of the LEP requires Council to minimise flood risks on land that is at or below the Flood Planning Level (1:100 ARI flood plus 0.5m freeboard). The proposal is not within the flood planning area identified by the LEP or Jugiong Flood Study. Accordingly, no flood planning controls apply.

## **Earthworks**

Clause 6.1 of the LEP states that consent is required for earthworks and before grant consent for such works, the Consent Authority is to consider the impacts of the works on adjoining properties, drainage patterns and soil stability of the locality. Subject to the recommended conditions in attachment 1 of this report, the earthworks proposed as part of the construction and rehabilitation phases of the quarry are not expected to have a detrimental impact on environmental functions and processes, surrounding land uses, cultural or heritage items or significant features of the surrounding land as discussed throughout this report.

## **Biodiversity**

Part of the site is mapped as 'significant vegetation' by the LEP Natural Resources Biodiversity Map. Under clause 6.2(3) of the LEP, the consent authority must consider the following matters for development on land mapped with biodiversity values:

- (a) any potential adverse impacts from the proposed development on the following:*
  - (i) the condition and significance of the vegetation on the land and whether it should be substantially retained,*
  - (ii) the importance of the vegetation in that particular location to native fauna,*
  - (iii) any potential to fragment, disturb or diminish the biodiversity values of the land,*
  - (iv) the condition and role of the vegetation as a habitat corridor, and*
- (b) any proposed measures to minimise or mitigate those impacts.*

The objective of clause 6.2 of the LEP is "to maintain terrestrial biodiversity, including the following:

- a) protecting native fauna and flora,*
- b) protecting the ecological processes necessary for their continued existence, and*
- c) encouraging the recovery of native fauna and flora and their habitats".*

The EIS and BDAR provides information on biodiversity impacts and identifies management and mitigation measures. The analysis of the BDAR in this report found the proposal would not have a serious and irreversible impacts on biodiversity values.



## **Groundwater**

Part of the site is mapped as 'groundwater vulnerable' by the LEP Natural Resources Water Map. The proposed quarry and haul road is located on land that is not mapped as groundwater vulnerable. Clause 6.4(3) of the LEP requires the Consent Authority to consider the following matters for development on land mapped as groundwater vulnerable:

- (a) any potential adverse impacts the proposed development may have on the characteristics of the groundwater present in the area, and*
- (b) any risk of groundwater contamination from the proposed development, including from on-site storage or disposal of solid or liquid waste and chemicals, and*
- (c) any cumulative impacts the proposed development may have on groundwater, including impacts on nearby groundwater extraction for a potable water supply or stock water supply, and*
- (d) any adverse effect on groundwater dependent ecosystems.*

The objective of clause 6.4 of the LEP is *"to maintain the hydrological functions of key groundwater systems and to protect vulnerable groundwater resources from depletion and contamination as a result of inappropriate development"*.

In consideration, the proposal has been designed to avoid disturbance of land that is mapped as groundwater vulnerable by the LEP. The resource to be quarried is an impervious material (granite) that would prevent potential interaction with groundwater resources. The EIS provides an assessment of groundwater impacts and potential impacts on groundwater dependant ecosystems (Sawpit Creek, Kyleys Creek and the Murrumbidgee River) and finds the proposal is unlikely to impact on groundwater resources or groundwater dependant ecosystems. The EIS identifies the quarry operations require a 10ML water supply and such water would be from captured surface stormwater in the sediment basin and an existing commercial bore licensed for 10ML allocation by Water NSW (WAL 28736) for the Bald Hill Quarry operations.

The EIS finds groundwater resources are likely to be encountered 100m below ground level and proposes to restrict quarrying activities to 540m AHD to avoid potential interactions with groundwater resources by maintaining an impervious material at the base of the quarry during works and for the final landform for the rehabilitation phase of the development. This excavation limit is included in the recommended consent conditions to protect groundwater resources.

## **Erodible soils**

Part of the site is mapped as 'High Soil Erodibility' by the LEP Natural Resources Land Map. Clause 6.7 of the LEP requires the Consent Authority to consider the following matters before granting consent to development on such land:

- a) whether or not the proposed development is likely to have an impact on soil erosion processes, and
- b) whether or not soil erosion processes are likely to have an impact on the proposed development, and
- c) appropriate measures that can be taken to avoid or reduce any undesirable effects that may result from the impacts referred to in paragraphs (a) and (b).

The objective of clause 6.7 of the LEP is “to provide for the appropriate management of land that has highly erodible soils or has the potential to be affected by the process of soil erosion”.

The development has been designed to mostly avoid land mapped as high soil erodibility by the LEP with exception of a small section of the haul road extension. The hillslopes of Mt Bundarbo on its northern and eastern aspects are high soil erodibility due to their steep slopes. These slopes are retained in the final landform and would form the northern and eastern boundary of the quarry pit. The EIS addresses land degradation processes and proposes suitable mitigation measures to prevent soil erosion on and off site, including the preparation and implementation of best practice soil and erosion control measures by the Landcom guidelines for quarries, collection of stormwater flows from disturbed areas to prevent potential soil and water quality impacts both on and off-site.

#### **Section 4.15(1)(a)(ii) - Any draft environmental planning instrument**

There are no relevant draft state environmental planning instruments that apply to the development.

The draft Hilltops Local Environmental Plan 2021 (which was on exhibition from 15 March to 26 April 2021), is presently with the Department of Planning, Industry and Environment, for referral to Parliamentary Counsel. The draft LEP proposes the site would retain the same zoning (RU1 Primary Production) and the same mapping (biodiversity, high soil erodibility and groundwater) as the Harden Local Environmental Plan 2011. The proposal remains permitted with consent under the draft LEP, and therefore is consistent with the draft LEP.

#### **Section 4.15(1)(a)(iii) - Development control plan**

There are no development control plans that apply to the development.

#### **Section 4.15(1)(a)(iiia) - Any planning agreements**

The Applicant has not entered into any planning agreement, nor offered to enter into any agreement.

#### **Section 4.15(1)(a)(iv) - The regulations**

The Environmental Planning and Assessment Regulation 2000 specifies additional matters that must be taken into consideration by Council, specifically:

- Clause 92(1)(b) requires Council to consider the provisions of Australian Standard AS 2601-1991: The Demolition of Structures. Not applicable.
- Clause 92(1)(c) requires Council to consider if the land is subject to a Subdivision Order under Schedule 7 of the Act. No such order is relevant to this application.
- Clause 92(1)(d) - The development is not located within the local government area of Coonamble, City of Dubbo, Gilgandra or Warrumbungle (to which the Dark Sky Planning Guideline applies).
- Clause 92(1)(e) The proposed development is not for the purpose of a manor house or multi dwelling housing (terraces), as such this clause does not apply.
- Clause 92(1)(f) – The development is not on land in the Penrith City Centre and as a result, this clause does not apply.

#### ***Section 4.15(1)(b) - The likely impacts of the development in the locality***

- **Context and Setting** – The site, known as Mt Bundarbo, is 8km east of Jugiong, 3km south of the Hume Highway. The land contains an existing quarry (North Ridge Quarry), haul road, a trig station, significant remnant native vegetation, rocky outcrops and drainage lines. Mt Bundarbo is a significant landform in the locality being the highest peak (615m AHD) with views of surrounding rural lands and watercourses. Surrounding land uses not associated with the quarrying activities are rural in nature consisting of extensive agriculture (grazing of livestock). There are established dwellings on rural holdings to north, east and south of the site.

The EIS provides a visual impact assessment of the proposed quarry from surrounding dwellings and public roads and finds the proposal would be largely invisible in the locality. The EIS commits to dust control measures and planting vegetation screening along the eastern boundary of the quarry to maintain views and visual amenity in the locality. These measures are appropriate to ensure the views of the woodlands and undulating rural lands are retained in the locality. The proposal is not considered to be incompatible with surrounding developments given the measures proposed.

- **Access and Traffic** – Vehicular access to the site is by a private road, over several land parcels, connecting with the Hume Highway by the old Hume Highway. The EIS proposes upgrades to the intersection of these roads and such works are supported by a road safety audit and the road authority (Transport for NSW) with conditions. No changes are proposed by the EIS to the Bald Hill Quarry processing and transportation arrangements and the road authority has recommended conditions to limit production and truck movements to 16 laden trucks per hour to ensure compliance. These conditions are included in the recommendation.



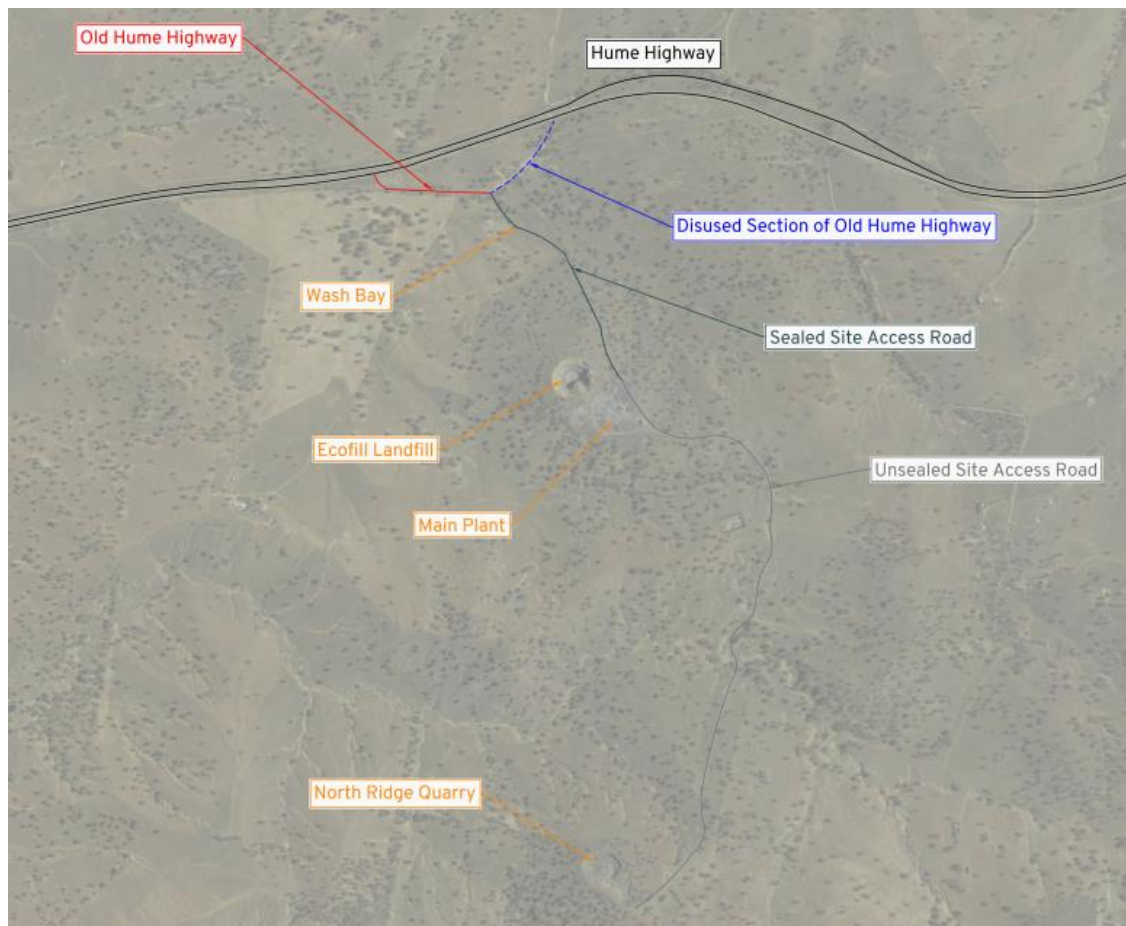


Figure: Access Arrangements (reproduced from TIA)

The new quarry would deliver material to the Bald Hill Quarry processing area by an existing all-weather private haul road that services North Ridge Quarry. An 800m extension to this road to the new quarry is proposed to be constructed to the same standard and maintained by the quarry operator. To ensure a legal access is provided for the quarry, a condition is included in the recommendation for a right of way to be created over the road for the benefit of Lot 9 DP439146, Lot 7002 DP1031310, Lot 148 DP753592 and Lot 11 DP133540, which form the quarry. The EIS includes a similar measure and states a right of way is to be created for the owners of Lot 7002 DP1031310.

- **Public Domain** – The proposal involves works (shoulder sealing, linemarking and signposting) within the road reserve of the Hume Highway and conditions recommended by the road authority (Transport for NSW) are included in the draft conditions. No other works are proposed or required by the development in the public domain.
- **Utilities** – There are no public services or utilities that are required to service the development. Water for the quarry operations would be sourced from the quarry pits and if required from the existing 10ML commercial bore servicing Bald Hill Quarry. The established amenities at Bald Hill Quarry would support the development.

- **Other land resources** – The NSW Department of Primary Industries (DPI) has reviewed the EIS, including the land use conflict risk assessment, and its potential impact on agricultural land, and raised no objections to the application. The site and its geological resources are suitable for quarrying activities given the quality of the hard rock resource and the land has limited agricultural value due to its natural features (steep slopes, rocky outcrops and significant woodlands). The proposal is compatible with the established surrounding extractive industries and agricultural uses in the locality.
- **Water** – The EIS predicts the quarry requires up to 40,000L of water during the construction phase of the development and up to 10ML annually for peak quarry operations. The quarry is located at the crest of Mt Bundarbo and has a limited area to capture surface water runoff from the upstream catchment (12ha). Runoff within disturbance areas would to be collected in the in-pit basin constructed in the first stage of development and used for dust suppression on roads and quarry operations, with excess water discharged in accordance with NSW Environment Protection Authority's requirements.

The EIS site water balance assessment finds 5.53ML would be captured annually from surface runoff (63.2% chance of happening in any year) to meet the expected water demands of the quarry operations. If water shortfalls occur (drought etc.), the EIS has proposed mitigation measures that would be put in place, including, carting water to the site by tanker from North Ridge Quarry (similar sized catchment) or a 10ML licensed bore associated with the Bald Hill Quarry. Water NSW reviewed the EIS and raised no concerns with these water supply arrangements. Nevertheless, a condition is included in the draft conditions for the operations to match its available water supply.

**Air & Microclimate** – The Air Quality Impact Assessment supporting the EIS found dust and particulate matter would be the main air emission from the proposal with potential for dust emission in the locality. The site is in a rural area with several dwellings located within 3km of the quarry. The assessment of dust impacts on surrounding dwellings concludes the predicted maximum incremental and cumulative concentration at these sensitive receptors is negligible compared to background emissions in the locality (tables reproduced below). In addition, NSW Environment Protection Authority have issued their GTAs with conditions to manage and address any unexpected air quality in the locality.

**Table 31 Predicted Incremental and Cumulative Annual Average PM<sub>10</sub> Concentrations: Proposed Operations**

Receptor ID	Annual Average PM <sub>2.5</sub> Concentrations (µg/m <sup>3</sup> )		
	Regional Background	Incremental Concentration	Cumulative Concentration
R1	8.1	0.052	8.2
R2	8.1	0.045	8.2
R3	8.1	0.10	8.2
R4	8.1	0.038	8.2
R5	8.1	0.067	8.2
R6	8.1	0.093	8.2
<b>Criterion</b>			<b>8.0</b>

Concentrations reported to two significant figures.

**Table 33 Predicted Incremental and Cumulative Annual Average TSP Concentrations: Proposed Operations**

Receptor ID	Annual Average TSP Concentrations (µg/m <sup>3</sup> )		
	Regional Background	Incremental Concentration	Cumulative Concentration
R1	42	0.70	42
R2	42	0.55	42
R3	42	0.80	42
R4	42	0.26	42
R5	42	0.47	42
R6	42	0.66	42
<b>Criterion</b>			<b>90</b>

Concentrations reported to two significant figures.

**Table 34 Predicted Annual Average Dust Deposition Rates: Existing Operations**

Receptor ID	Annual Average Dust Deposition Rate (g/m <sup>2</sup> /month)		
	Regional Background	Incremental Concentration	Cumulative Concentration
R1	2.0	0.11	2.1
R2	2.0	0.079	2.1
R3	2.0	0.10	2.1
R4	2.0	0.025	2.0
R5	2.0	0.038	2.0
R6	2.0	0.067	2.1
<b>Criterion</b>			<b>4</b>

Deposition rates reported to two significant figures.

- **Noise and Vibration** – The EIS assesses the impacts of the proposal on noise and vibration in the locality, including the cumulative impact of noise of the proposal operating together with the established landfill and bald hill quarry processing and transportation activities.

The Noise Assessment supporting the EIS finds the worst-case cumulative noise levels would be below 40dB(A) at surrounding dwellings, which complies with daytime amenity criteria under the NSW Noise Policy for Industry 2017. The expert report provides an assessment of the quarry product dispatch operations and demonstrates noise levels received at surrounding dwellings would be below 35dB(A), which complies with



evening amenity criteria under the Policy. No changes are proposed by the EIS to the existing Bald Hill Quarry processing and transportation arrangements. The cumulative noise levels of the quarry and landfill operations are reproduced below from the report. The NSW Environment Protection Authority have issued their GTAs, which address noise, blasting and vibration impacts in the locality.

**Table 14 Predicted Noise Levels – All Operations (Daytime)**

Receptor	NPfI PNTL dBA LAeq(15min)	Predicted Noise Level, dBA LAeq(15minute)						
		Quarrying	Processing <sup>1</sup>	Haulage	Maintenance	Product Dispatch	Landfill	Total
R01	40	29	37	25	23	31	22	39
R02	40	27	34	21	21	28	17	36
R03	40	35	36	28	30	27	14	40
R04	40	34	35	19	30	<15	<15	38
R05	40	33	33	<15	<15	<15	<15	36
R06	40	28	36	21	18	31	19	38

1. Activity does not occur during the 6am – 7am period.

**Table 15 Predicted Noise Levels – Product Dispatch Operations (Evening Period)**

Receptor	NPfI PNTL, dBA LAeq(15minute)	Predicted Noise Level, dBA LAeq(15minute)
R01	35	35
R02	35	31
R03	35	23
R04	35	<15
R05	35	<15
R06	35	23

- **Hazards** - The site is not subject to hazards including flooding, subsidence, slip, mass movement or contamination. The southern part of the site is mapped as bushfire prone land and the proposal has been designed to avoid this area. The EIS commits to implementation of bushfire protection measures, which are supported by NSW Rural Fire Service, as part of the development. An assessment of the proposal against SEPP 33 Guidelines is provided in the EIS which concludes the development is not hazardous for the following reasons:
  - There is no proposed change to the management of explosives at the site as they are not kept on site.
  - There are no proposed changes to the transportation threshold or methods, or existing storage quantities or storage arrangements for fuels for machinery used at the quarry.

Conditions are included in the recommendation to ensure plant and equipment is maintained, fuel and the like is appropriately stored and used to prevent spills.

- **Safety Security and Crime Prevention** – It is not considered that the proposed development will impact on the security and safety of adjoining properties. Access to the quarry would be controlled by a single access

from the Hume Highway with the quarry fenced to prevent unauthorised access. Quarrying activities are limited to daylight hours and no external lighting is required. The proposal is unlikely to give rise of a crime risk in the locality.

- **Economic and Social Impact in the Locality** – The proposal is unlikely to have a detrimental economic or social impact in the locality with the proposed measures in the EIS, which includes payment of contributions for road maintenance.

The development would provide socio-economic benefits to the local community, including local employment opportunities over the life of the quarry, and ensures the existing quarry processing operation at Bald Hill Quarry continues to meet the ongoing demands for supply of local quarry products in the locality for local, regional and major projects. The proposal ensures the quarry processing activities at Bald Hill Quarry can continue to be supplied with a hard rock resource after the closure of the North Ridge Quarry in 2024. Should an alternative resource not be secured, the Ball Hill Quarry operations may cease and reduce employment opportunities in Jugiong.

- **Construction** - The likely impacts associated with the construction phase can be effectively managed through the imposition of conditions, including the preparation of a construction environmental management plan, biodiversity management plan and site surveys to ensure native vegetation is protected. The operational phase of the development is likely to generate waste rock and suitable measures are committed in the EIS to reuse these materials (daily cover etc.) at the waste management facility operated by the Applicant.
- **Site Design and Internal Design** – The proposal has been suitably designed to respond to site features, hazards and maximises the use of established quarry infrastructure (haul roads, quarry processing plant, amenities, water supply and weighbridge) to reduce the amount of clearing for the quarry expansion.

The EIS and BDAR has demonstrated the final design of the quarry pit and haul road extension avoids the box-gum woodlands as far as practical and the biodiversity impacts would be mitigated by managing the woodlands (weed control, animal/stock control, fencing, regeneration etc.), establishing new habitat connections with replanting of woodlands on site and offsetting the unavoidable impacts with like for like biodiversity credits.

The EIS commits to the rehabilitation of the final quarry void and indicates its future use may be a farm dam to support extensive agriculture activities on the land or an expansion of the waste management facility (subject to a separate application). The EIS demonstrates that the site and its soils may cater for these land uses.

- **Cumulative Impacts** – The proposal is consistent with the Harden Local Environmental Plan 2011 and draft Hilltops Local Environmental Plan 2021. The site is zoned for primary production purposes by these environmental planning instruments and quarries are permitted on rural land where agriculture is permitted by a planning instrument. Adequate measures are proposed by the EIS to avoid, mitigate and manage biodiversity, heritage, noise, dust, traffic, stormwater, erosion and the like. These measures are supported by the NSW Environment Protection Authority's GTAs and Transport for NSW conditions.

The biodiversity impacts are described in the BDAR. However, it is acknowledged land clearing for past and current quarry activities in the locality over many decades together with the proposed clearing for Mt Bundarbo Quarry (6.83ha) over the next two decades is close in time and location and may have a cumulative impact in the locality. In this instance, the EIS and BDAR has demonstrated these biodiversity impacts have been avoided to the greatest extent possible with suitable mitigation measures and offsets (like for like credits) to address the residual impacts from the development as required by the Biodiversity Conservation Act 2016.

#### **Section 4.15(1)(c) - The suitability of the site for the development**

- Does the proposal fit in the locality?

The proposal is within the vicinity of established quarries (North Ridge Quarry and Bald Hill Quarry) and a waste management facility operated by the Applicant. Surrounding land uses in the boarder locality are mainly extensive agriculture due to the undulating topography and natural features of the locality limiting the use of lands for other purposes. There are dwellings surrounding the site and the EIS has demonstrated the development can exist in harmony with these sensitive uses with the proposed mitigation measures. The development proposal would utilise existing road and quarry infrastructure established by the Bald Hill Quarry and North Ridge Quarry. The proposal is consistent with the Harden Local Environmental Plan 2011.

- Are the site attributes conducive to development?

The site is not subject to hazards including flooding, subsidence, slip, mass movement or contamination. The southern part of the site is mapped as bushfire prone land and the proposal has been designed to avoid these areas with bushfire mitigation measures, recommended by the NSW Rural Fire Service, will be implemented as part of the development to address the bushfire risk.

The development would use water from the proposed quarry's sediment basin and a basin established at North Ridge Quarry, for dust suppression along internal haulage roads and during the crushing and screen activities. As a contingency measure, an existing bore licenced for 10ML extraction at the Bald Hill Quarry would supply water for quarrying

activities. The soil characteristics are appropriate for the development being a hard rock resource suitable for quarrying.

There is a critically endangered ecological community (box-gum woodlands) on site impacted by the proposed clearing of 6.83ha of vegetation, including hollow bearing trees, which has been assessed by the BDAR in accordance with the *Biodiversity Conservation Act 2016* and found to be satisfactory, subject to conditions, as discussed throughout this report.

#### **Section 4.15(1)(d) - Any submissions made**

The Development Application was advertised and notified for 29 days in accordance with Council's Community Participation Plan and the relevant regulations for integrated and designated development. As a result of the exhibition, several submissions were received from public authorities. The following is a summary of submissions received and a copy is in **Attachment 5** of this report.

##### Department of Planning Industry and Environment – Biodiversity Conservation Division

The NSW Department of Planning Industry and Environment – Biodiversity Conservation Division (BCD) reviewed the original and revised BDAR and provided comments on the proposal, including recommended conditions as discussed in this report. These conditions have been included in the draft consent conditions.

The first version of the BDAR was reviewed by BCD and several shortfalls and inconsistencies were identified which have been addressed in the revised BDAR (**Attachment 8**). The recommended biodiversity and rehabilitation management plans by the BDAR are to be prepared in consultation with BCD.

##### Department of Planning Industry and Environment – Crown Lands

The NSW Department of Planning, Industry and Environment – Crown Lands reviewed the EIS and objected to the development on grounds that landowners consent for the development had not been obtained from the Minister of Crown Lands and an aboriginal land claim on Lot 7002 DP1031310 (decommissioned trig station) was unresolved.

The Applicant has since obtained documentary evidence of landowners consent from Crown Lands, NSW Aboriginal Land Council and Young Local Aboriginal Land Council for the Development Application and a copy is provided in **Attachment 7** of this report. The aboriginal land claim has also been resolved in favour of the NSW Aboriginal Land Council and Young Local Aboriginal Land Council who have provided landowners consent for the application.



In accordance with Act, any notice of the determination will be given to the New South Wales Aboriginal Land Council as it relates to land owned by a Local Aboriginal Land Council.

#### Environment Protection Authority

The NSW Environment Protection Authority (EPA) requested investigations to assess the cumulative noise impact in the locality and the noise assessment (**Attachment 4**) demonstrates noise emissions in the locality are acceptable. Accordingly, the EPA has provided their General Terms of Approval for an environmental protection licence. The conditions by the approval body have been included in the recommended consent conditions.

#### Transport for New South Wales

Transport for New South Wales (TfNSW) provided comments on the proposal and recommended conditions to upgrade the Hume Highway intersection with the Old Hume Highway and limits on heavy vehicle movements from the quarry operations at the site as previously discussed. The conditions by the road authority (TfNSW) have been included in the recommended consent conditions to address traffic safety concerns.

#### NSW Rural Fire Service

NSW Rural Fire Service (RFS) reviewed the application in accordance with Section 4.14 of the Act as part of the property to the south is mapped as bushfire prone land. RFS has advised that the application is supported the conditions to comply with the NSW Planning for Bushfire Protection 2019 Guidelines as discussed in this report. These conditions are included in the recommendation.

#### Geological Survey of NSW – Mining, Exploration & Geoscience

Geological Survey of NSW - Mining, Exploration & Geoscience (MEG) did not raise any issues with the development proposal, but requested a condition be imposed requiring the quarry production data to be reported annually to MEG. This reporting requirement is included in the recommended consent conditions.

#### Essential Energy

Essential Energy raised concerns with the use of an existing haul road servicing North Ridge Quarry by the proposal and requested a site plan showing the electrical infrastructure and vertical clearance. The Applicant has responded to these concerns with a site plan showing the proposed quarry and new haul road extension would be well clear of electrical infrastructure. The concerns raised are addressed by existing maximum vehicle height warning signs at the crossing and the site traffic movement plan in the Traffic Impact Assessment and Transport Management Plan identifies the hazard for vehicle and plant operators. These mitigation measures adequately address the electrical safety concerns raised by the submission.

#### Heritage NSW

Heritage NSW did not raise any issues with the development proposal and advised no approvals are under required under the Heritage Act, 1977 or National Parks and Wildlife Act, 1974.

#### Water NSW

Water NSW did not raise any issues with the development proposal and advised no approvals are under required under the Water Management, Act 2000.

#### NSW Natural Resources Access Regulator

NSW Natural Resources Access Regulator did not raise any issues with the development proposal as the development was not located on or within waterfront land under the Water Management Act, 2000.

#### NSW Department of Primary Industries – Agriculture

NSW Department of Primary Industries (agriculture) did not raise any issues with the development proposal.

#### NSW Department of Primary Industries – Fisheries

NSW Department of Primary Industries (fisheries) did not raise any issues with the development proposal.

In addition, the Applicant was provided an opportunity to respond to the submissions and a copy of the response is provided in **Attachment 6**. The response to submissions report confirms the conditions and measures requested by public authorities (intersection upgrades, bushfire protection measures, annual reporting, biodiversity plans etc.) would be implemented as part of the development.

### **Section 4.15(1)(e) - The public interest**

The application is not considered to be prejudicial to the public interest. Staff are not aware of any other policy statements from either Federal or State Government that are relevant to this proposal, nor any other planning studies or strategies. Also, there are no covenants, easements, or agreements that affect the proposal.

### **Development Contributions**

Council's Section 7.11 Harden Contributions Plan for Heavy Haulage Development applies in the assessment of the application. The EIS states that quarry products are to be transported over public roads using the transport routes established by North Ridge Quarry, being the Hume Highway, Jugiong Road, Burley Griffin Way and Olympic Highway.

Local and regional roads are identified by the Plan where 'heavy haulage developments' such as quarries are required to make contributions for road maintenance. The nominated transport routes require contributions to be paid quarterly to Hilltops Council for heavy haulage traffic generated over

Jugiong Road, Riverside Drive and Wombat Road. In addition, the Plan requires the following conditions to be imposed:

- a) A traffic classifier to be installed (at the applicant's cost) at a suitable location to classify and count the number of loaded heavy vehicles that enter or exit the development site over a set period. The classifier will be used to determine the number of Equivalent Standard Axles that leave the development and are subject to contributions.
- b) Responsibility for keeping the traffic classifier in good working order throughout the life of the development will rest with the operator of the heavy haulage development. Council officers are to be provided access to the traffic classifier data on a regular (i.e. at least quarterly) basis. In the event of the traffic data being corrupted, then the Council at its discretion may determine the levy for the preceding period.

The above conditions together with a condition requiring contributions to be paid to Hilltops Council in accordance with the Plan are included in the draft conditions.

## **RECOMMENDATION**

Consent be granted subject to condition(s) detailed in **Attachment 1** of this report.