Shire of
Gunnedah
Land of Opportunity

PLANNING ASSESSMENT REPORT

JRPP Ref No	2013NTH009
DA No	2012/185
Proposed Development	Expansion of Blue Metal Quarry (Marys Mount)
Property Description	Lot 161 DP 755508, 'Burleith' 334 Pownall Road, Mullaley Lot 2 DP 865898, 'Beulah' 259 Barker Road, Marys Mount
Applicant	Stewart Surveys Pty Ltd
Recommendation	Approval with Conditions
Report by	Carolyn Hunt Manager Development & Planning Gunnedah Shire Council

Assessment Report and Recommendation

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1 EXECUTIVE SUMMARY

1.1 ***Reason for Consideration by Joint Regional Planning Panel:***

The development application has been referred to the Joint Regional Planning Panel pursuant to Clause 8, Schedule 4A of the *Environmental Planning and Assessment Act, 1979* as the development is classified as an Extractive Industry and Designated Development pursuant to Clause 19, Schedule 3 of the *Environmental Planning and Assessment Regulation, 2000*.

1.2 Brief Description of Proposed development:

The development application seeks consent for the expansion of an existing quarry. The expansion involves the:

- Increase in annual extraction from 30,000m^3 (50,000 tonnes) to 360,000 tonnes, for a 38 year period
- Increase in total project area from 2 hectares to 23.15 hectares

A Voluntary Planning Agreement has also been submitted with the application.

1.3 Recent Development History of the Site:

The Marys Mount Blue Metal Quarry has been in operation since February 2011. The quarry currently operates under an existing consent (DA507167) to extract up to 30,000m^3 per year, under the following parameters:

- A disturbance area of not more than 2 hectares
- A forty (40) metre buffer between the development and a water body

A Modification of Development Consent application was submitted to amend the current approval. However, this application has been withdrawn.

1.4 Compliance with Planning Controls:

The subject site is zoned RU1 Primary Production pursuant to the Gunnedah Local Environmental Plan, 2012. The proposed development is seeking development consent to

increase the scale of the extractive operations within the site. The use is defined as an *'Extractive Industry',* which is permissible with development consent within the RU1 zone.

1.5 Integrated Development:

The proposed development is integrated development pursuant to Section 91(1) of the *Environmental Planning and Assessment Act, 1979*, as the existing Environmental Protection Licence, as required by Schedule 1 of the *Protection of the Environmental Operations Act, 1997*, will need to be amended by the Environment Protection Authority (EPA). The General Terms of Approval issued by the EPA are contained in Annexure 4.

1.6 Designated Development:

The proposed development is also identified as designated developer pursuant to Section 77A of the *Environmental Planning and Assessment Act, 1979*, and Clause 19, Schedule 3 of the *Environmental Planning and Assessment Regulation, 2000*.

1.7 Consultation:

The development application was exhibited and notified in accordance with the relevant provisions of the *Environmental Planning and Assessment Regulation, 2000* for designated development applications. 65 submissions of objection and 18 submissions of support were received by Council. Copies of the submissions are contained within Annexure 1 and are discussed in greater detail later in the report.

1.8 Recommendation:

It is recommended that development application DA2012/185 be approved, subject to the conditions of consent contained in Annexure 3.

1.9 Annexures:

Annexure 1	Submissions (Confidential)
Annexure 2	Voluntary Planning Agreement
Annexure 3	Draft Conditions of Consent
Annexure 4	General Terms of Approval - Environment Protection Authority (EPA)
Annexure 5	BioBanking Statement

2 EVALUATION OF DEVELOPMENT APPLICATION

2.1 Proposed development

The development application seeks consent for the expansion of the existing Marys Mount Blue Metal Quarry. The application is seeking approval for the following:

- Increase in annual extraction rate for the quarry to 360,000 tonnes (120,00 bank cubic metres), in three main stages
- Operation Period of 38 years, which includes an extraction period of 37 years and 1 year for final rehabilitation of the site
- Quarry footprint of 17.21 hectares, with a total project boundary of 23.15 hectares (which includes 1.15 hectares for rehabilitation, which is currently utilised for material stockpile following processing)
- Processing of the material will occur within the proposed quarry footprint, with material stockpiling to occur within the quarry footprint and current stockpile area (north of the pit)
- Method of extraction – drill and blast extraction

- Haulage route –
  - Estimated 75% of traffic - Barker Road to Goolhi Road to Kamilaroi Highway at Emerald Hill and
  - Estimated 25% of traffic - Barker Road to Goolhi Road to Oxley Highway at Gunnedah
- Bio banking Statement
- Voluntary Planning Agreement has been submitted

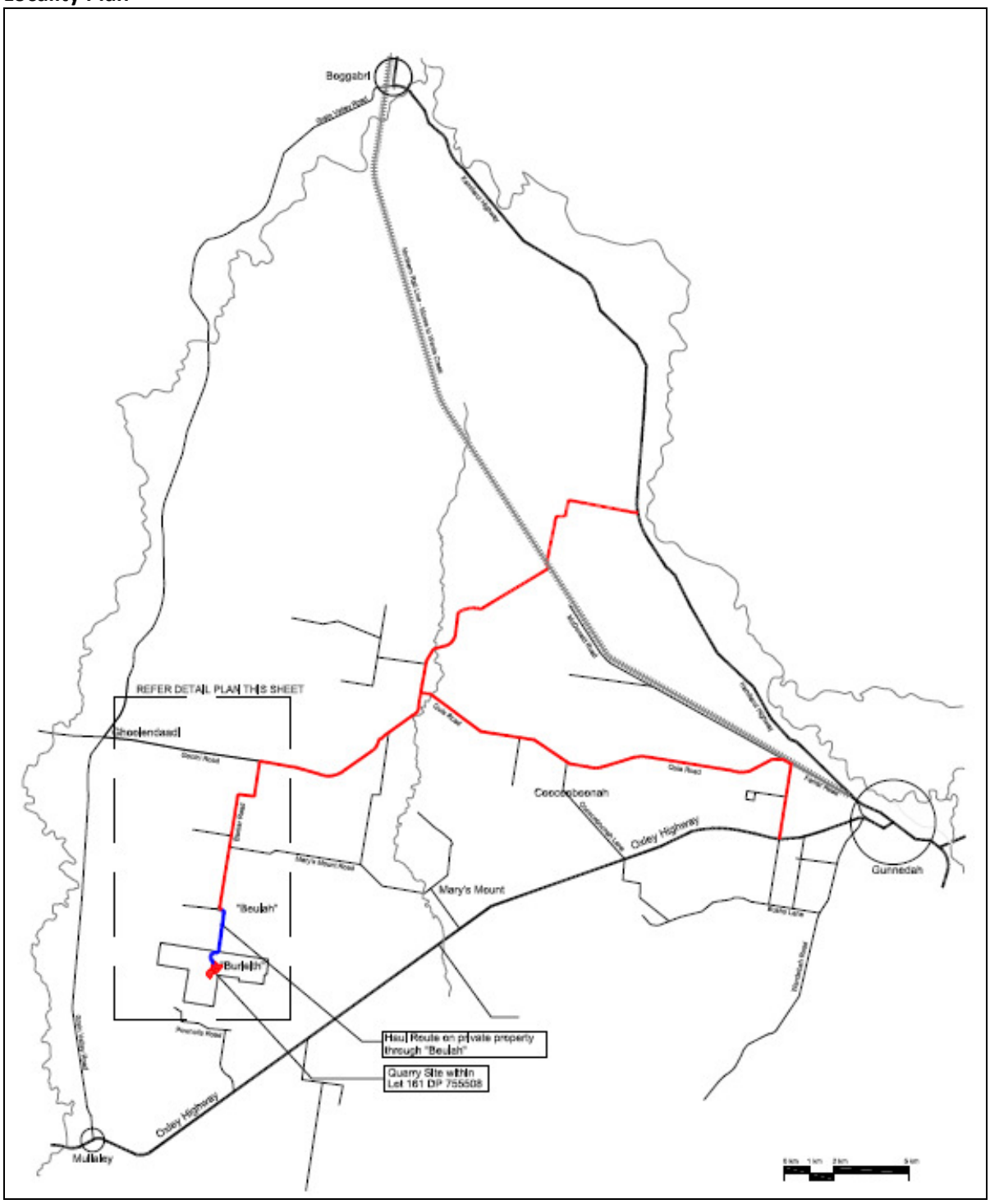
2.2 Site Description

The development site is identified as Lot 161 DP 755508, 'Burleith', 334 Pownall Road, Mullaley (quarry site) and Lot 2 DP 865898, 'Beulah', 259 Barker Road, Marys Mount (internal haul road). The quarry is accessed from Barker Road, via the internal haul road to the quarry site.

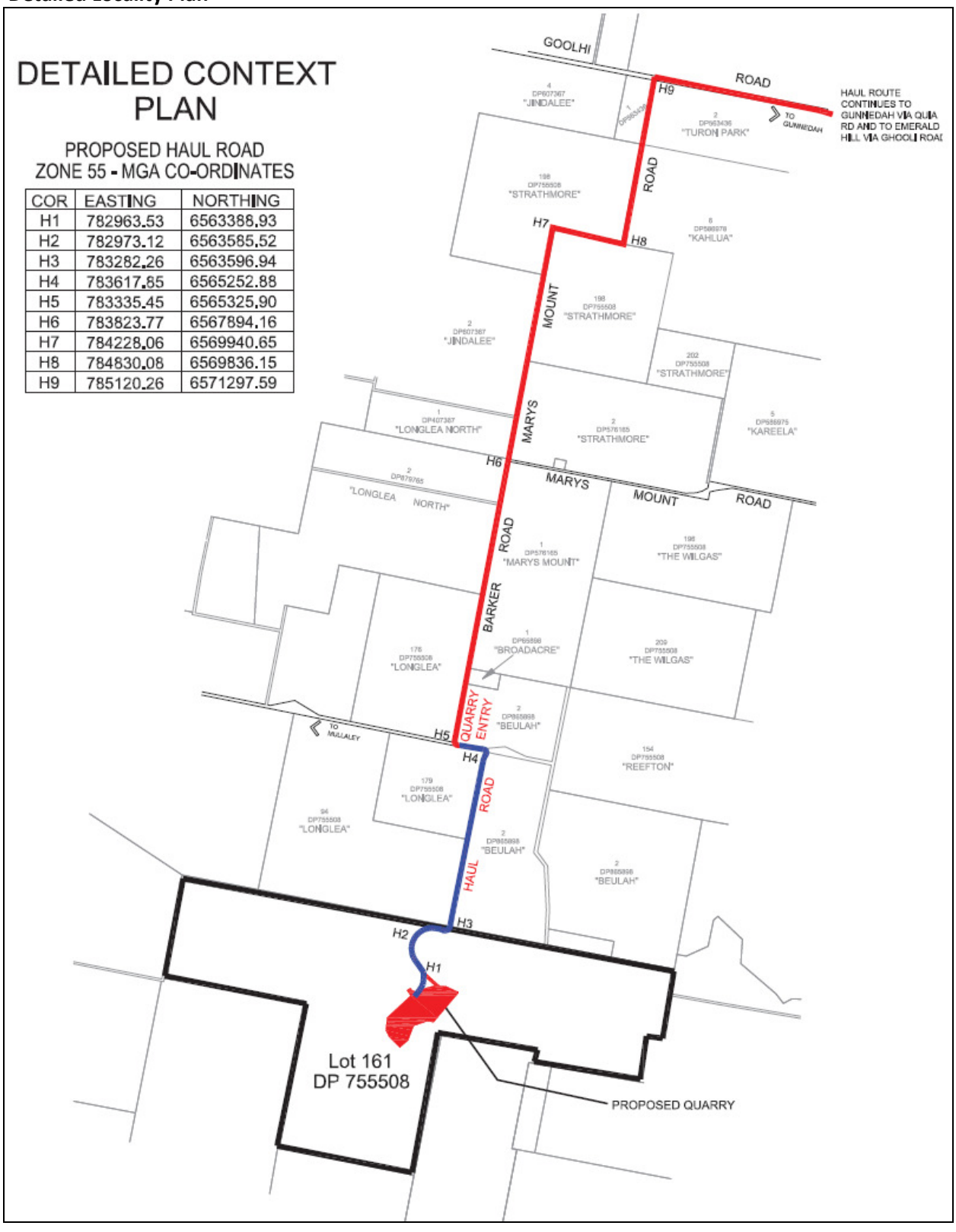
The proposed quarry is located on the side of Melville Hill, surrounded by dense vegetation along the slopes of the mountain. The foot slopes of the hill are predominantly utilised for agricultural pursuits (both cropping and grazing).

The remaining land of the development site will continue to be used for agriculture, containing a residential dwelling and associated infrastructure. The existing dwelling will continue to be accessed from Pownall Road.

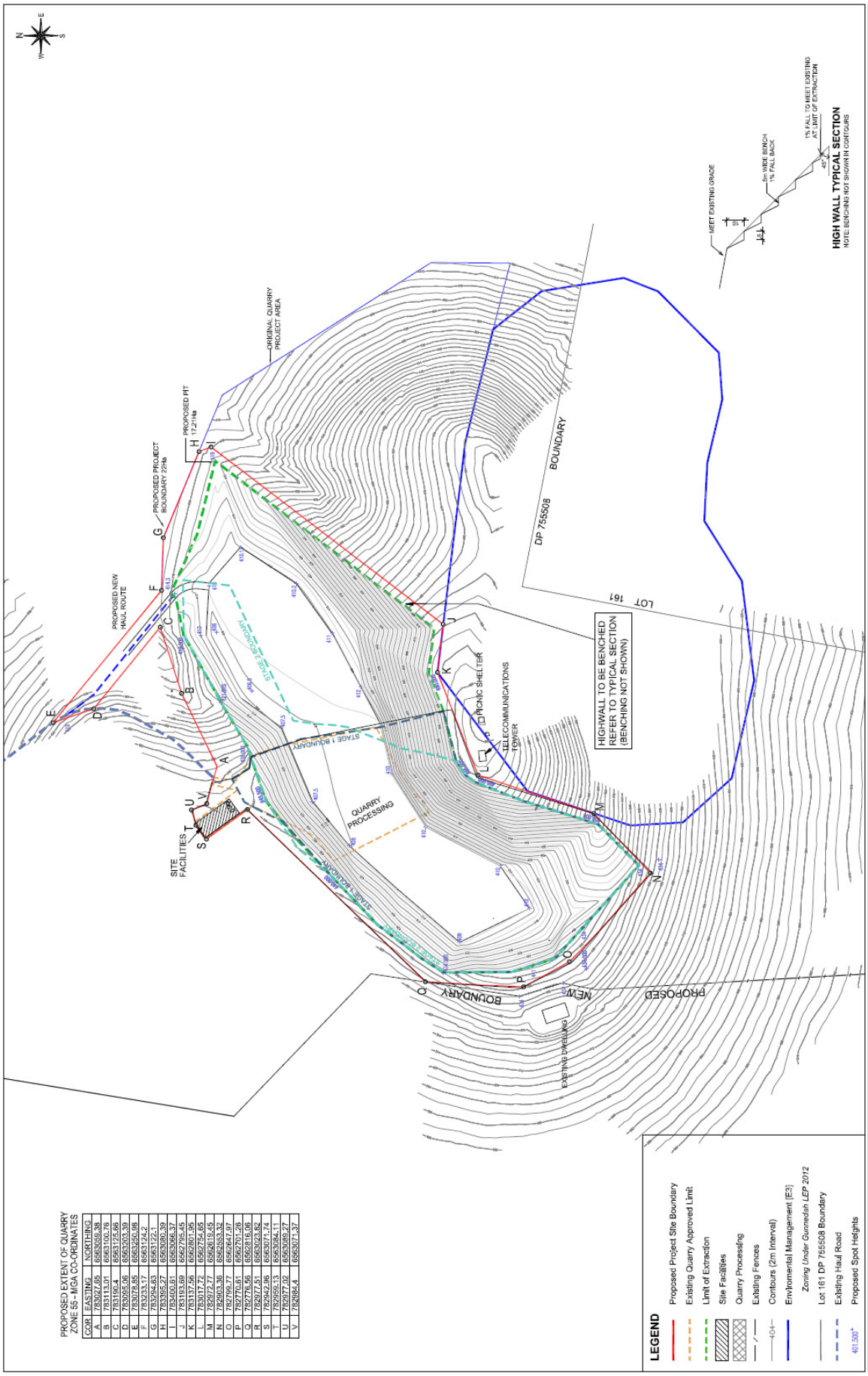
Locality Plan



Detailed Locality Plan



Site Plan


PROPOSED EXTENT OF QUARRY
ZONE 55 - MGA CO-ORDINATES
COR | EASTING | NORTHING
A | 783027.85 | 6963059.38
B | 783113.01 | 6963100.76
C | 783190.4 | 6963125.66
D | 783065.06 | 6963203.39
E | 783078.86 | 6963280.06
F | 783233.17 | 6963124.2
G | 783264.43 | 6963077.1
H | 783295.27 | 6963060.39
I | 783400.61 | 6963066.37
J | 783193.69 | 6962795.45
K | 783137.56 | 6962861.95
L | 783017.72 | 6962754.85
M | 782972.77 | 6962619.45
N | 782903.36 | 6962553.32
O | 782799.77 | 6962647.97
P | 782770.61 | 6962710.26
Q | 782779.55 | 6962816.66
R | 782977.51 | 6963023.82
S | 782944.96 | 6963071.74
T | 782959.13 | 6963084.11
U | 782977.02 | 6963089.27
V | 782984.4 | 6963071.37
PROPOSED PIT 17.2Ha
PROPOSED PROJECT BOUNDARY 22Ha
ORIGINAL QUARRY PROJECT AREA
PROPOSED NEW HAUL ROUTE
DP 755508
BOUNDARY
LOT 161
HIGHWALL TO BE BENCHED REFER TO TYPICAL SECTION (BENCHING NOT SHOWN)
TELECOMMUNICATIONS TOWER
ELECTRIC SHELTER
QUARRY PROCESSING
SITE FACILITIES
STAGE 1 BOUNDARY
STAGE 2 BOUNDARY
EXISTING DWELLING
PROPOSED NEW BOUNDARY
HIGH WALL TYPICAL SECTION
NOTE: BENCHING NOT SHOWN IN CONTOURS
MEET EXISTING GRADE
5m WIDE BENCH 1% FALL BACK
1% FALL TO MEET EXISTING AT LIMIT OF EXTRACTION
45°
LEGEND
Proposed Project Site Boundary
Existing Quarry Approved Limit
Limit of Extraction
Site Facilities
Quarry Processing
Existing Fences
Contours (2m Interval)
Environmental Management [E3] Zoning Under Gunnedah LEP 2012
Lot 161 DP 755508 Boundary
Existing Haul Road
Proposed Spot Heights

2.3 Referrals

The development application was referred to the EPA on 4 January 2013. Additional information was requested by Council on 31 January 2013.

The EPA requested additional information on 06 February 2013. The additional information was provided by the applicant on 31 July 2013. Council received General Terms of Approval (GTA) from the EPA on 12 September 2013, a copy of which is included as Annexure 2. A copy of the submissions was referred to the EPA on 18 September 2013. The EPA did not amend the GTA's in response to submissions, as the submissions did not raise any additional issues concerning proposed impacts associated with the expansion that are not covered by the Environment Protection Licence (EPL).

The application was also referred to the following for information:

- Office of Environment and Heritage
- Roads and Maritime Services
- Namoi Catchment Management Authority

2.4 Environmental Planning & Assessment Act 1979

S79C(1)(a)(i) Any Environmental Planning Instrument

State Environmental Planning Policies

- *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP33)*

  It is concluded that SEPP33 does not apply to the proposed development as the development is not defined as 'potentially hazardous industry' or 'potentially offensive industry' or the 'industry' definition contained within the Gunnedah Local Environmental Plan, 2012. The application notes that the locality in which the project is proposed, is low density rural agricultural land where it unlikely for future housing to be sited within the immediate vicinity of the development. In addition, pollution from the development site is not significant and not likely to adversely impact on the greater locality.

- *State Environmental Planning Policy No. 44 – Koala Habitat Protection (SEPP44)*

  SEPP44 Clause 6 applies to the proposed development, as the development site has an area of more than one (1) hectare. A Biodiversity Inventory Report (prepared by Niche Environment and Heritage) identified the development site as 'core koala habitat'. Consequently, a Koala Plan of Management (KPoM) (prepared by Niche Environment and Heritage – updated in December 2013) has been submitted to accompany the development application.

  The KPoM has been prepared with reference to the aims of Circular B35 (NSW Department of Planning) and the Director General's Guiding Principles for the preparation of the plan.

  The KPoM identified a number of key principal threats to the Koala that are active within the study area. The proposed development involves the staged removal of 11.43 hectares of preferred Koala habitat, which is made up of 7.62 hectares of White Box shrubby woodland and 3.81 hectares of Tumbledown Red Gum open woodland. The KPoM estimated that the proposed development would locally reduce Koala habitat for up to seven individuals, with the most intense impact periods in years 5-12 and years 23-26.

  The KPoM identified the following ameliorative measures to management the habitat loss from within the Project area and to address relevant threats:

- Revegetation works to increase the area of preferred Koala habitat
  The KPoM identifies a staged revegetation strategy for the development site, to be commenced at the inception of the development, which would result in the establishment of 45 hectares of supplementary eucalypt plantings. The proposed revegetation aims to improve connectivity with native forest and woodland on adjacent properties to the north and east in addition to increasing patch size.

- Maintaining and Managing retained preferred Koala habitat
  The proposed maintenance and management of retained preferred Koala habitat includes the exclusion of livestock, use of appropriate fire regimes and weed management. The proposed management actions would reduce the need for replanting in certain areas, as natural regeneration would occur.

- Avoid/Minimising Koala injury and death
  The potential for vehicle strike through vehicle-Koala interaction is identified as being mostly avoided on the basis of typical Koala movement behaviour (ie. the Koala largely being a nocturnal species and the proposed daylight operation hours of the quarry). Speed limiting site vehicles and the use of a code of conduct, have been recommended as appropriate management methods.

  Additional management of key principal threats includes the installation of a suitable fence along the quarry high wall (to protect Koalas from accidental injury or death from fails into the quarry area) and weed management of tiger pear (to prevent spine stick injury).

  As part of the development, the local road network is to be upgraded, which includes the removal of two (2) Koala feed trees. It was recommended that a fauna clearance procedure should be implemented prior to tree felling and the provision of compensatory tree plantings within the nearby roadside reserve.

In accordance with SEPP 44 Clause 13, Gunnedah Shire Council and the NSW Planning and Infrastructure have approved the KPoM. The NSW Planning and Infrastructure have granted approval, subject to the inclusion of the following conditions:

1. Section 5.2.3 Revegetation Specification
   A comprehensive vegetation management plan (VMP) shall be prepared for the site by a suitability qualified person and submitted to Gunnedah Shire Council for approval prior to the commencement of works. A copy of the approved plan is to be submitted to the Department of Planning and Infrastructure for information.

   The VMP will include a detailed works program for all revegetation and rehabilitation works that addresses:
   - Timing, budget and bonding of works;
   - Aims, key performance indicators, deliverables and allocated responsibilities;
   - Contingency plans for issues such as lack of local seed stock, drought, plague, fire stock grazing, feral animal grazing;
   - Tree loss and replanting; and
   - Method of tree planting and source of seed stock.

2. Section 5.4.1 Habitat Clearance
   Target surveys for koalas (by an experienced ecologist) are to be undertaken within the 24 hours immediately prior to tree clearing.

3. Section 6 Monitoring and Reporting
   A monitoring and reporting plan shall be prepared by a suitability qualified person and submitted to the Gunnedah Shire Council for approval prior to the commencement of works. The plan must cover the entire development timeframe for revegetation works and address koala activity and mortality issues. A copy of the approved plan is to be submitted to the Department of Planning and Infrastructure for information. An annual report shall also be submitted to Council (with a copy to the department) for the first 10 years of the project, then every three years after that and/or at the end of a stage, that addresses revegetation work outcomes, ameliorative measures undertaken, koala activity and koala mortality.

4. Section 5.4.2 Vehicle Strike
   A traffic management plan detailing the proposed signage and speed limits for the internal haul route and proposed code of conduct for employees and truck operators, shall be prepared by a suitability qualified person and submitted to Gunnedah Shire Council for approval prior to the commencement of works. A copy of the approved plan is to be submitted to the Department of Planning and Infrastructure.

It is highlighted that an impact assessment of the koala (listed as vulnerable on the *NSW Threatened Species Conservation Act, 1995*) has been undertaken in accordance with Part 7A of the *Threatened Species Conservation Act, 1995* (Biodiversity Banking and Offsets Scheme). A Bio-banking Statement has been issued by the Office of Environment and Heritage for the development site.

In addition, the proposed development has also been deemed a 'controlled action' under Section 75 and Section 87 of the *Environment Protection and Biodiversity Conservation Act 1999*. An impact assessment for the Koala has been undertaken to satisfy the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities' assessment requirements specified in the controlled action. The KPoM would integrate with the mitigation and monitoring recommended in that assessment.

- *State Environmental Planning Policy No. 55 – Remediation of Land (SEPP55)*

SEPP55 Clause 7 requires Council to consider whether or not the land is contaminated, and if it is, whether the proposed land use is compatible with the contaminated state, or if the site will be suitable for that use after remediation.

The development site is currently being utilised for agricultural (cropping and grazing) purposes and gravel quarrying. The development site is located on the side of a steep hill where agricultural opportunities are limited by the terrain. Consequently, the development site is considered have limited previous operations that would have lead to any contamination of the site. In addition, the proposed development does not intend to change the current use of the land, with the land considered to be suitable for the proposed use.

To ensure that, at the conclusion of the development, contamination of the land is not remaining as a result of the proposed development, a condition of consent has been proposed, which will require a final contamination assessment to be undertaken by a suitably qualified person. The assessment would establish the contaminated status of the land and to implement a remediation action plan, if required.

- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*
  Clause 7 of the SEPP identifies the proposed development as permissible development.

  Council has, in accordance with the SEPP, given consideration to the following matters:

  1. Compatibility of proposed mine, petroleum production or extractive industry with other land uses
     a. The development site consists of two land uses, being the existing extractive industry and low intensity agricultural pursuits (grazing and cropping activities). Adjoining and adjacent lands around the quarry site are dominated by low intensity agricultural activities (also grazing and cropping activities). The proposed quarry operation does not impact on the productivity of the nearby agricultural activities, given its location on the side of a steep hill where agricultural opportunities are limited by the terrain.

        Being an agricultural locality, the residential occupation is very sparse with the nearest dwelling house located on the development site (approximately 40 metres from the project site boundary and approximately 50 metres from the extraction boundary. The next closest residence is 1490 metres from the project boundary, located south of the development site.

     b. The proposed expansion will result in a number of economic benefits, including direct financial benefits to the land owner, who receives a mineral royalty and land owners on the internal haul route. There are wider economic benefits through employment and access to local blue metal rather than sourcing the product from greater distances.

     c. The proposed development, subject to the implementation of the proposed mitigation measures, is not considered to be incompatible with the existing or potential future land uses within the locality.

  2. Natural resource management and environmental management
     a. Through the implementation of appropriate conditions of consent, the Environment Protection Licence and compliance with the relevant Commonwealth and State legislation, the operation of the proposed development should be carried out in an appropriate manner.

     b. The application has identified two listings under the *Threatened Species Conservation Act, 1995*, being the endangered ecological community (White Box, Yellow Box, and Blakey's Red Gum Woodland) and the Koala. The impacts on these species have been minimised to the quarry footprint and the proposed mitigation measures.

     c. Greenhouse gas emissions from the proposed development have been addressed in the submitted documentation. The operation of relatively new machinery will ensure that the environmental performance criteria are met.

        Consultation with existing gas drilling companies (who are drilling in the area) has indicated that coal seam gas is located at a depth between 200 and 1000 metres. The proposed development will be extracting to a

maximum depth of 60 metres (85 metres from the high wall and 32 metres high along the northern pit wall). Hence, the leaching of coal seam gas (which contributes to greenhouse gas emissions) is unlikely.

3. Resource Recovery

The submitted documentation outlines the proposed method of removing non-production waste (general domestic-type waste, routine maintenance consumables, fencing materials, oils and grease and sewerage), which includes disposal to the Gunnedah Waste Management Facility, recycling and on-site reuse and removal by licensed contractors.

All topsoil will be scrapped and stockpiled on the site for the re-use during the rehabilitation stage of the project, with organic waste (chipped trees) to also be utilised in the rehabilitation stage of the project. Consequently, there will be no waste raw materials resulting from the development.

4. Transport

The quarry material is proposed to be hauled along an internal haulage road to Council's public road system. It is proposed to upgrade certain sections of the public road system, which was determined in consultation with Council (as the local roads authority). This includes works to be undertaken within the village of Emerald Hill.

As required by Clause 16(1)(c) of the SEPP, a Code of Conduct relating to the transport of materials on public roads shall be prepared and implemented.

The application was also referred to the Roads and Maritime Services (RMS). The RMS noted that the existing layout of the Oxley Highway/Blackjack Road intersection is an adequate layout to accommodate safe turn movements for haulage vehicles. As the Kamilaroi Highway/Goolhi Road intersection is not adequate, the RMS supports the implementation of the proposed road works prior to the commencement of the haulage operations associated with the proposed development or within the first year, whichever occurs first.

In addition to the proposed channelised right turn treatment (CHR) at the Kamilaroi/Goolhi Road intersection, consideration should be given to requiring the provision of auxiliary left acceleration lanes (AUL) to enable haulage vehicles to safely enter the classified road. It is recommended that these road works be conditioned to occur prior to the increase in haulage operations.

In addition, the RMS noted that consideration should be given to minimising the impact of haulage operations upon school zones within the quarry catchment. The submitted Traffic Impact Assessment notes the following haulage operations along school bus routes:

- It was originally proposed for haulage operations to cease while school buses are using the haul route. However, this has been amended to enable haulage operations to continue during school bus times, with a 'School Bus Operating Procedure' being submitted. The Procedure has been prepared in consultation with two school bus operators, who are responsible for the school bus operations in the area.

- Truck drivers shall be made aware (via Tool Box meetings and/or site induction) of the existing school bus routes along Goolhi and Quia Roads, bus stop locations and timetables.
- The developer shall confirm school bus timetables and routes with the bus companies at the beginning of each school year, and adjust the haulage schedule as required. File notes shall be retained to confirm the dialogue with the bus companies.
- A driver 'Code of Conduct' for haulage operators shall be prepared. All sub-contractors shall be made aware of this code.
- A bus pick-up/set-down area on Goolhi Road, west of Marys Mount Road intersection, will be constructed prior to commencement of the expanded operations.

5. Rehabilitation

   The submitted documentation outlines the proposed progressive rehabilitation, through minimizing the clearing and vegetation disturbance to only the area required for operational requirements. The operations will be staged and quarried in blocks, with rehabilitation occurring following completion of each block. The site will be classed as completely altered, therefore rehabilitation will be by means of revegetation.

   The final landform will consist of a benched high wall, which is to be undertaken in accordance with the Hannan precedent. The proposed benching at the quarry will be 5 metres wide at 10 metre vertical intervals, which will be constructed with in-fall drainage and a longitudinal grade of 1%. The terrace width will provide an opportunity to revegetate the terraces with native trees and shrubs, reducing the visual impact of the final void from the surrounding area. The final landform design has been reviewed by Council's Infrastructure Services department and is considered satisfactory.

Regional Environmental Plans

➢ There are no regional environmental plans that apply to the land.

Local Environmental Plans

➢ *Gunnedah Local Environmental Plan, 2012 (GLEP)*

The subject land is zoned RU1 Primary Production and E3 Environmental Protection under the provisions of the GLEP. The development site is located within the RU1 Primary Production zone. The proposed development is defined as an 'extractive industry' and is permissible with development consent within the RU1 Primary Production zone.

*An **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 objectives of the RU1 zone are:

- *To minimise the fragmentation and alienation of resource lands*

  The development site is restricted to the side of a steep hill where agricultural opportunities are limited by the terrain. The foot slopes and area surrounding the proposed quarry, provide prime agricultural land used currently for cropping and grazing. The proposed development allows for an industry, based on the natural

resources of the area, which would operate in conjunction with nearby agricultural land uses.

- *To minimise conflict between land uses within this zone and land uses within adjoining zones*
  Adjacent to the development site is the E3 Environmental Management zone, where a ten (10) metre wide buffer is proposed, to safeguard the land from the effects of the quarry.

- *To conserve and enhance the quality of valuable environmental assets, including waterways, riparian land, wetlands and other surface and groundwater resources, remnant native vegetation and fauna movement corridors as part of all new development and land use*
  The proposed development will result in the disturbance of environmental assets, which would include the quarry footprint of 17.63 hectares. Impacts to the semi-evergreen vine thicket and Koala habitat will be significant in the short term, resulting in a direct loss of habitat. As a consequence, the original quarry design was amended to minimise impacts and avoid much of the semi-evergreen vine thicket on the site, establishment of a bio-banking proposal and implementation of mitigating measures (such as establishment of compensatory planting prior to vegetation removal), the proposed development aims to ensure restored and improved flora and fauna diversity on the site.

Clause 5.10 Heritage Conservation
The local Aboriginal communities were notified by Council (in writing) of the development application, as a submission requested further consultation with the local Aboriginal communities. However, it is highlighted that the development site is not identified as an Aboriginal place of heritage significance, as the land is not identified in an Aboriginal heritage study adopted by the Council after public exhibition. No submissions were received.

S79C(1)(a)(ii) Any proposed instrument that is or has been placed on public exhibition

There are no draft environmental planning instruments applicable to the proposed development.

S79C(1)(a)(iii) Any development control plan

- *Gunnedah Development Control Plan, 2012 (GDCP)*
  The application was advertised and notified in accordance with provisions of the GDCP and the *Environmental Planning and Assessment Regulation, 2000*. Adjoining property owners were directly notified in writing. Two exhibition periods were undertaken, as significant additional information was received following the close of the initial exhibition period. During the first exhibition period, 18 submissions were received and 3 government agency submissions. The second exhibition period resulted in 65 submissions being received (18 of these submissions were in support of the application) and 3 government agency submissions were also received. The issues raised in the submissions are addressed later in this report.

  6.2 Parking Requirements
  An assessment of the on-site parking requirements has been undertaken in accordance with AS2890.1 Parking Facilities. With 15 employees, 8 on-site car parking spaces are required (based on the requirement of 1 space per 2 employees). It is also noted in the

Traffic Impact Study (prepared by Ardill Payne & Partners), that adequate area is available on site for the parking of fuel delivery vehicles and plant service vehicles. It is recommended that designated and marked parking areas are provided on-site.

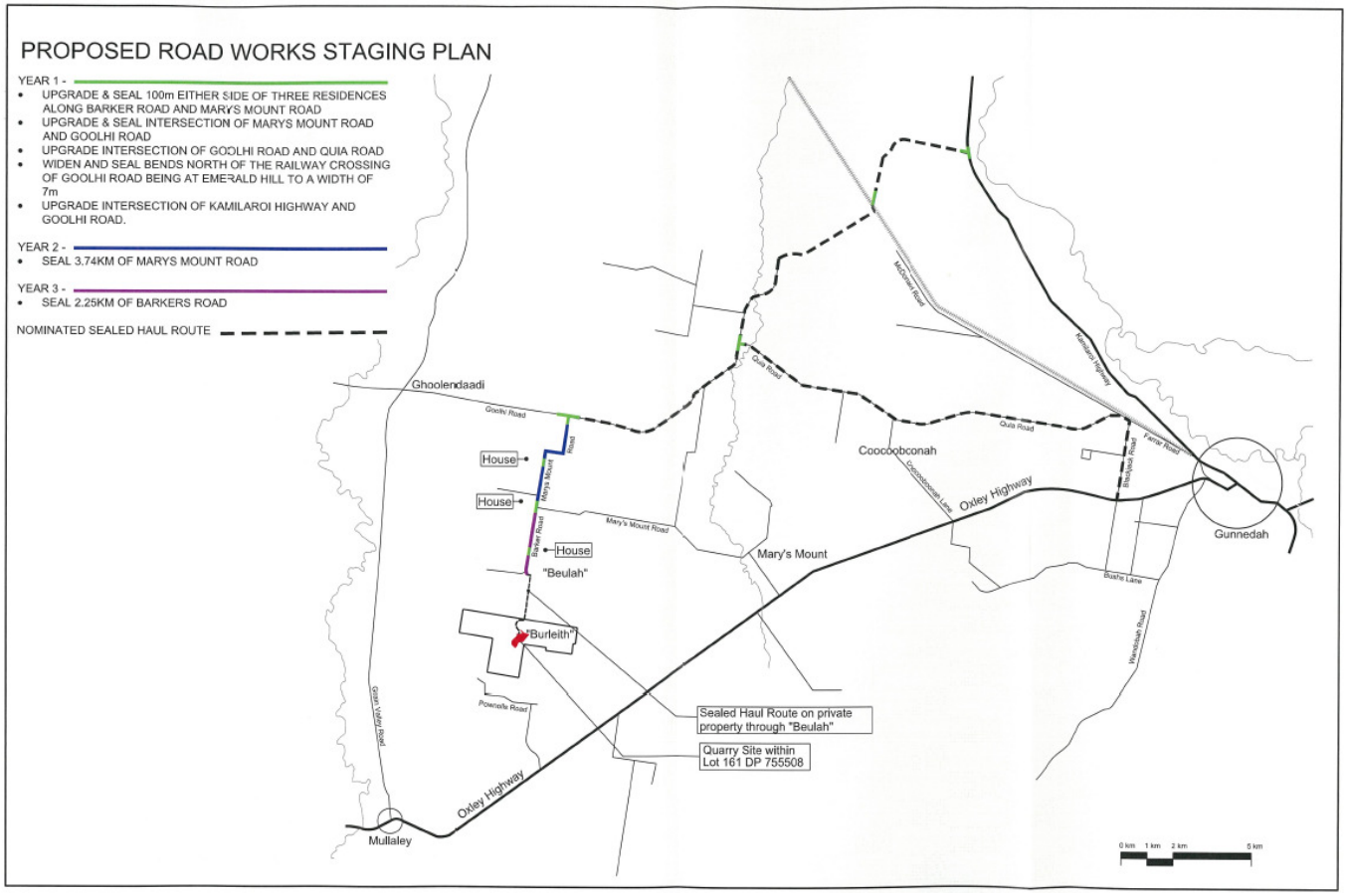
S79C(1)(a)(iiia) Any planning agreement

The developer has lodged a Voluntary Planning Agreement with regard to proposed road works and annual contribution for maintenance and upgrade of nominated haulage route.

The upgrading works are proposed to be undertaken on a staged basis during Year 1, 2 and 3 from

- Year 1 –
  - upgrade and seal 100m either side of the three residences marked as '*House*' on the plan in Schedule 2 along Barker Road and Marys Mount Road and upgrade the intersection of Marys Mount Road with Goolhi Road (BAL standard) including sealing 200m of Marys Mount Road from that intersection
  - widen the seal of the bends to the north of the railway crossing of Goolhi Road at Emerald Hill to a width of 7m for a minimum of 150m (final length subject to survey and design)
  - upgrade the intersection of Kamilaroi Highway with Goolhi Road (CHR standard)
  - upgrade the intersection of Goolhi Road with Quia Road (AUR standard).
- Year 2 – seal 3.74km of Marys Mount Road (7m wide bitumen seal)
- Year 3 – seal 2.25km of Barkers Road (7m wide bitumen seal)

Proposed Road Works Staging Plan



In addition to the proposed works, the developer is to make a monetary contribution to Council of $0.40 per tonne of material extracted from the Quarry. This figure is to be adjusted on an annual basis in line with movements in the Transport Group CPI published by the Australian Bureau of Statistics.

Council staff has assessed the proposed VPA and associated works. It is consider that the proposal is beneficial to Council in regard to level of development. The works detailed in the VPA are consistent with the required works identified in the Traffic Impact Assessment. It is noted that additional intersection works (auxiliary left acceleration lands (AUL)) were recommended by the RMS at the Goolhi Road/Kamilaroi Highway intersection. Council is supportive of these additional works prior to the commencement of the expansion operation.

It is noted that the VPA noted that the proposed intersection works at the Goolhi Road/Kamilaroi Highway intersection, were to be undertaken within the first 12 months of operation. A condition of consent will be imposed to ensure that the Goolhi Road/ Kamilaroi Highway intersection is upgraded prior to the commencement of the additional heavy vehicle movements.

The proposed timing of all the other identified works is supported by Council staff.

S79C(1)(a)(iv) The regulations (to the extent that they prescribe matters for the purpose of this paragraph)

There are no matters applicable to this application.

S79C(1)(a)(v) Any coastal zone management plan (within the meaning of the *Coastal Protection Act, 1979*) that apply to the land to which the development application relates

There are no matters applicable to this application.

S79C(1)(b) The likely impacts of development including environmental impacts on both natural and built environments and social/economic impacts in the locality

Context and Setting
The total project boundary is 23.15 hectares, with a quarry footprint of 17.21 hectares. An extractive industry is currently operating on the development site. The development site is located on the side of a steep hill (Melville Hill), with agricultural land (utilised for cropping and grazing) located at the foot slopes and surrounding areas.

The proposed quarry will change the existing landscape, resulting in a void with a maximum depth of 85 metres from the high wall, or 32 metres high along the northern pit wall. The final void has been designed to fall in the northern direction to the base of the northern pit wall, where it falls at a grade of approximately 1 in 200 metres.

The resulting visual impact will be prominent during the operation of the quarry. The impacts on the visual amenity of the area will be short term, with the impact being reduced by the proposed staging of the works and rehabilitation.

Access, Transport and Traffic
Existing Development Consent
The existing development approval (DA507167) enables the extraction of 30,000m^3 (50,000 tonnes) per annum. The traffic movements were identified as 16 movements per day (8 loaded truck movements), with 3 employees.

A monetary contribution towards the construction and maintenance costs associated with Barker Road (being an un-sealed rural road) is currently being made, in accordance with Council's Contributions and Development Services Plan, 2001.

Proposed Development
A Traffic Impact Assessment (prepared by Ardill Payne) has been submitted to address the existing and projected traffic impacts resulting from the proposed quarry operations along the proposed haulage route. It is proposed that the extracted gravel will be transported in two directions:

- Barker Road, via Marys Mount Road and Goolhi Road to Kamilaroi Highway at Emerald Hill; or
- Barker Road, via Marys Mount Road and Goolhi Road to Quia Road to Oxley Highway at Gunnedah.

It is estimated that 75% of the traffic from the development will travel from the development site to the Kamilaroi Highway at Emerald Hill, with the remaining 25% of the traffic to travel to the Oxley Highway, at Gunnedah.

The proposed development will generate an average of 44 load truck movements per day for 5 ½ days per week. With the developer extracting and processing the gravel, it was highlighted that there will be peak traffic generation periods, when there is sufficient material stockpiled. It is estimated that during these peak days, there could be up to 120 truck movements per day.

The material extracted from the quarry is proposed to be transported onto trucks with an average carrying capacity of approximately 32 tonnes. Approximately 75% of haulage is with truck and dog (capacity of 32 tonnes), 20% with single semi-trailers (capacity of 27 tonnes) and 5% with B-doubles (capacity of 38 tonnes). In addition to the heavy vehicle movements, there will also be fifteen staff (plant operators and site supervisors) employed at the site, generating 30 vehicle movements per day. Additional personnel may also be required on a limited basis, and during peak extraction periods, which is estimated at no more than 144 vehicles per year (less than 1 vehicle per day).

Current Status of Haulage Route

The existing haulage route consists of a variety of road constructions, pavement widths (sealed and unsealed) and pavement condition. The following summary of the existing conditions is drawn from the comments provided within the submitted Traffic Impact Assessment of the existing conditions is provided:

- Internal Site Haulage and Access Roads – (private road) all-weather gravel construction and sufficient to cater for traffic within the quarry.
- Barker Road – unsealed rural road from the quarry site entrance to the intersection with Marys Mount Road. The 2.6km road has an 8m wide gravel formation, with a speed limit of 100kph. Sight distance is 250m+ in both directions at the site entrance. The road is generally flat and straight. Pavement condition is generally good. Gunnedah Quarry Products voluntarily grade Barker Road to maintain good road conditions.
- Marys Mount Road – unsealed rural road from the end of Barker Road to Goolhi Road. The 4.2km haulage route section has an 8m wide gravel formation, with a speed limit of 100kph. Sight distance is 250m+ in both directions at the intersection with Barker Road. There are two right-angle bends in the road with a radii of approximately 20-25m that must be negotiated at low speed. The road is generally flat and the pavement condition is generally good. Gunnedah Quarry Products voluntarily grade Barker Road to maintain good road conditions.
- Goolhi Road – sealed rural road from the Marys Mount Road intersection to the Kamilaroi Highway.
    - From Marys Mount Road to the Quia road, the 8.3km haulage route section has an 8m wide gravel formation, with a speed limit of 100kph. Sight distance is 250m+ in both directions at the intersection with Marys Mount Road. Two large gum trees are located at the intersection. In some locations along the road, trucks drop their wheels over the edge of the bitumen seal to negotiate the bends. The road verges also drop away steeply in places.
    - From Quia Road to the Kamilaroi Highway, via Emerald Hill, the 13.3km length haulage route section generally has a 6m wide bitumen seal on an 8m wide gravel formation. Sight distance is 250m+ in both directions at the intersection with Quia Road.
    - At Emerald Hill, Goolhi Road crosses the Werris Creek-Mungindi Railway line. The crossing has active protection measures in place (flashing lights and boom gates).

Through Emerald Hill, the bitumen width narrows to approximately 5m. The road is generally flat, with gentle bends and grades. There is generally no line marking. The pavement narrows with some bends through Emerald Hill. Pavement and surface condition is generally good, but too narrow for safe two-way heavy vehicle traffic flow.

- Quia Road – sealed rural road from Goolhi Road intersection to the Black Road intersection. The 16.2km haulage route section has a 6-7m wide bitumen seal on an 8-9m wide gravel formation. The speed limit is 100 kph, reducing to 80kph near the Waste Management Facility. The road is generally flat, with gentle bends and grades. Pavement and surface condition is generally good.
- Blackjack Road – sealed road between Quia Road and the Oxley Highway. The 3km haulage route section has a 6m wide bitumen seal on an 8m wide gravel formation, and is centre line marked. The speed limit is 100kph, reducing to 80kph approximately 1.4 south of the Quia Road roundabout. The road is generally straight and the pavement condition is generally good.
- Kamilaroi Highway – RMS classified State Highway. It is a 2 lane, 2 way rural highway standard with an 8m wide bitumen seal, edge and centre line marked, and 2 x 3.5m wide lines. Bitumen sealed shoulders are approximately 0.5m in width. The road is in good condition and has a 100kph speed limit in its rural state and 50kph in built up areas. The haulage route joins the Kamilaroi Highway approximately 8.2km from the Gunnedah Post Office. The intersection provides a deceleration and acceleration lane for traffic turning left in or left out of the Goolhi Road. Sight distances at the intersection are approximately 250m+ in all directions.
- Oxley Highway - RMS classified State Highway. It is a 2 lane, 2 way rural highway standard with an 8m wide bitumen seal, edge and centre line marked, and 2 x 3.5m wide lines. Bitumen sealed shoulders are approximately 0.5m in width. The road is in good condition and has a 100kph speed limit in its rural state and 50kph in built up areas. The haulage route joins the Oxley Highway approximately 5km from the Gunnedah Post Office. The intersection provides deceleration and acceleration lanes in both directions. Sight distances at the intersection are approximately 250m+ in all directions.

Impacts of Proposed Development

The existing gravel roads (Barker Road and Marys Mount Road) that form part of the haulage route, generally have an 8m wide formation. The remaining section of the haulage route is existing sealed roads with a 6m wide bitumen seal on an 8m wide formation. Some sections of Quia Road have recently been upgraded to a 7m wide bitumen seal on a 9m wide formation.

The Austroads "Guide to Road Design Part 3: Geometric Design" 2010, as amended by the RMS Supplement, specifies minimum design standards for rural roads. The AADT for the sealed roads varies and is influenced by seasonal variations. Based on the annual average daily traffic (AADT) for the local gravel roads, the current width of these roads is considered adequate to meet the minimum Austroads design standard.

The Traffic Impact Assessment recommends the following works to be undertaken by the developer as part of the development:

- Upgrade the pavement and provide a 7m wide bitumen seal for both Barker Road and Marys Mount Road (from the quarry entrance to the Goolhi Road intersection).
- The right angle bends in Marys Mount Road shall be realigned to suit a design speed of 80kph. Warning signs and advisory signs shall be provided in the approaches to the bends.

- Upgrade the Goolhi Road/Marys Mount Road intersection to meet minimum BAL standards required by the Austroads guidelines for vehicles turning left into Marys Mount Road.
- Upgrade the Goolhi Road/Quia Road intersection to meet the minimum AUR standards required by the Austroads guidelines for vehicles turning right into Quia Road.
- Widen the narrow winding section of Goolhi Road through Emerald Hill to provide a 7m wide bitumen seal. The length requiring upgrade is approximately 150m – the length of reconstruction will be subject to survey and engineering design. Widening to consider existing cadastral boundaries and services. It is further recommended that the speed limit through Emerald Hill be reduced, or warning signs be erected in the approaches to advise motorists to reduce speed.
- Upgrade the Kamilaroi Highway/Goolhi Road intersection to meet the minimum CHR standards required by the Austroads guidelines for vehicles turning right into Goolhi Road.
- Upgrade the pavement and bitumen seal the internal haul road from the stockpile area to the quarry entrance.
- Erect signs in the vicinity of the quarry, as required, to advise motorists of additional truck movements in the area.
- Sweep and remove the build-up of loose gravel in the Goolhi Road/Quia Road intersection to remove the hazard.
- Cease haulage operations while school buses are using the haul route.
- Inform truck drivers (via Tool box meetings and/or site inductions) of the existing school bus routes along Goolhi and Quia Roads, bus stop locations, school zones and timetables.
- Confirm school bus timetables and routes with the bus companies at the beginning of each school year, and adjust the haulage schedule as required. Retain file notes to confirm the dialogue with the bus companies.
- Prepare a 'Code of Conduct' for haulage operators. Inform all sub-contractors of the requirements of this code. The code shall inform drivers of all known safety considerations along the haul routes, including school bus routes and timetables, school zones, concealed driveways, seasonal haulage operations, wet weather safety, and any other known local hazards.
- Restrict haulage on Blackjack Road on the three primary days of Ag-Quip.

The Traffic Impact Assessment notes that the first 6 points above, will be completed within a 3 year period from the beginning of the expanded operation. It is highlighted that haulage operations will occur during school bus operations, as per the submitted School Bus Operating Procedures.

Council's Infrastructure Services department have reviewed the proposed development and in particular, the Traffic Impact Assessment and the recommendations. The proposed schedule of works is considered to be adequate and will ensure that the local road network can adequately support the additional traffic generated by the development.

It is highlighted that a Voluntary Planning Agreement has been submitted for the agreed road works and payment of a maintenance contribution for its impact on the local road network.

Public Domain
Not applicable to the development.

Utilities
Not applicable to the development.

Heritage
There are no identified items of heritage significance, as listed in the Gunnedah Local Environmental Plan 2012, that are located on the development site.

An Archaeological Survey of the development site was undertaken by Mr Patrick Gaynor, with a representative of both the Gunida Gunya Aboriginal Corporation and the Red Chief Local Aboriginal Land Council. The report included a site survey and an Aboriginal Heritage Information System (AHIMS) search for registered Aboriginal relics.

The survey was undertaken in three (3) sections, with effective visibility being calculated at 8% overall. No sign of any pre-mechanical quarry was observed and no stone artefacts of any material were found. One (1) box tree with an elongated scar measuring 2.25 metres in length and thought to be of Aboriginal origin, was discovered on the lower northern slope. The tree is located 20 metres north of the quarry project site and 43 metres north of the limit of extraction. As recommended in the survey, a condition the development consent be imposed to ensure that a fence is erected around the tree and a twenty (20) metre buffer from the drip line of the tree's canopy to the project site, be provided, to ensure its protection.

The Office of Environment and Heritage considered that the submitted survey was adequate and did not note any major issues with regard to the report's findings, recommendations and how the assessed was conducted.

Other Land Resources
Not applicable to the development.

Water
With the removal of vegetation and disturbance of soil, surface water runoff management is required for the development site. The applicant has provided a Surface Water Study and updated Sediment and Surface Water Management report, prepared by Northwest Project Pty Ltd.

It is proposed to capture all surface runoff from the quarry site and direct the runoff to an existing water storage dam (Dam A – which would be increased to 8 mega litre capacity) on the northern side of the quarry, via a sediment basin. The sediment basin is to be designed to capture all sedimentation from the active quarry site and act as a quarry drainage sump. Treated runoff water from Dam A and general water supply is to be stored in the proposed operating storage Dam B (approximately 1 mega litre). It is highlighted that Dam B will require compliance with the Harvestable Rights Dam Policy. In addition, the capacity of Dam A will be required to have adequate capacity to cater for the 1% Annual Exceedance Probability (AEP) event, to prevent any earthwork failures and erosion damage.

The report also notes the following sediment controls:

- The erosion and sediment control components are to be inspected regularly and after all rainfall events with any re-instatement works to be undertaken.
- The sediment basin is to be maintained to minimum available capacity.

Conditions of consent are recommended, requiring the full implementation and compliance with the updated Surface Water Study and Sediment and Surface Water Management report. The quarry operator will be required to maintain a register of the completed inspections. A condition of consent is proposed to state that no discharge of waters from the site shall be permitted to occur at any time.

Given that the development site is located on the side of Melville Hill, it is not anticipated that the development will impact on groundwater. However, a condition has been imposed, which requires the quarry operator to undertake bi-annual water testing of open water storages to ensure that groundwater penetration does not occur. In addition, a condition has been imposed should groundwater be intercepted at any stage, which requires all works to cease immediately, and Council and the Office of Water be notified. Written authorisation from the Office of Water is required prior to recommencement of works.

Soils

With the extraction of material, soil instability and/or mass movement is a potential risk. The high wall design includes benching every 10 metres vertical for a width of 5 metres, which will be staged works to minimise the operation area exposed at anytime. In addition, the proposed final landform design includes free drainage of surfaces (to enable water absorption into the fractured rock below or controlled runoff) and topsoil replacement.

As noted previously in the report, it is recommended that a final contamination assessment to be undertaken by a suitably qualified person, to establish the contaminated status of the land and to implement a remediation action plan, if required.

Air & Microclimate

An Air Quality Assessment, prepared by Pacific Environment Limited, has been conducted in accordance with the Approved Methods (Department of Environment and Conservation, 2005). Dispersion modelling was utilised to predict ground level concentrations (glcs) of key pollutants associated with the project for a worst case scenario, based on dust emissions from Stage 1.5/2.1 (as this has the largest quarry area exposed) and Stage 3.1 (as some drilling and blasting may be required in this stage).

During operations, the proposed development will result in the emissions of particulate matter, primarily from material handling and hauling in the extraction area and screening, crushing and stockpile loading in the processing area. During Stage 3, there will be additional emissions from drilling and blasting operations, with a maximum of seven anticipated blasts per year.

The results of the modelling indicate that the predicted incremental total suspended particulate (TSP) at the closest residential receivers are all below the impact assessment criteria. PM_{10} and dust deposition was predicted to be above the assessment criteria at "Burleith" residence (R1), which is located within 100m of the project boundary and on the development site. The application documentation has indicated that the developer has entered into a private agreement with the residents of "Burleith" (R1) for noise, blast and dust impacts. No exceedances were predicated at any other of the nearby residences.

A cumulative assessment, incorporating background levels, indicates that the proposed development is unlikely to result in any additional exceedance of relevant impact assessment criteria at the neighbouring receivers (other than R1).

The EPA has recommended licensing conditions for the mitigation of dust emissions and, as the licensing authority, is satisfied that appropriate measures can be implemented by the proposed development.

Flora & Fauna

Niche Environment and Heritage have prepared a Bio-Banking Assessment, Biodiversity Inventory Report and Koala Plan of Management (and Addendum), for the proposed development. These reports have been prepared in accordance with the following legislation:

- NSW *Threatened Species Conservation Act, 1995*
- NSW *State Environmental Planning Policy No. 44 – Koala Habitat Protection*
- Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999*

The Office of Environment and Heritage have issued a Bio-Banking statement for the development site - "Burleith" (Lot 161 DP 755508). The statement has been issued on the basis that the development, combined with the conditions relating to credit retirement and on-site measures, will improve or maintain biodiversity values. The issuing of the of the statement confirms that the requirements of the *Threatened Species Conservation Act, 1995* have been satisfied and Council is not required to take into consideration the likely impact of the development on biodiversity values.

The assessment of the application against SEPP 44 – Koala Habitat Protection has been addressed previously in this report.

Waste
Non-production waste (general domestic-type waste, routine maintenance consumables, fencing materials, oils and grease and sewerage) is proposed to be disposed of at the Gunnedah Waste Management Facility, recycled and reused on-site reuse or removed by licensed contractors. Production waste (topsoil and organic waste) will be utilised during the rehabilitation stage of the development. The proposed waste disposal is considered to be satisfactory.

Energy
Not applicable to the development.

Noise & Vibration
A Noise and Blasting Impact Assessment has been prepared by Spectrum Acoustics. The report addresses the impacts of noise and vibration along the proposed haul route and at the Burleith residence (located in the development site within 100m of the project boundary).

It is noted that the hours of operation of the quarry are:
- Monday to Friday – 7.00am to 6.00pm (daylight savings time)
- Monday to Friday – 7.00am to 5.00pm (non-daylight savings time)
- Saturday – 8.00am to 3.00 pm
- Sundays and Public Holidays - closed

For construction of the new section(s) of the haul route (to be undertaken during day time), the construction noise level of 40 dB(A),$L_{eq(15minute)}$ was utilised in the assessment (in accordance with the EPA's Interim Construction Noise Guidelines). The project specific noise level for all receivers recommended the use of the intrusiveness criterion of 35 dB(A),$L_{eq(15minute)}$(in accordance with the NSW Industrial Noise Policy, 2000). Sleep disturbance was not addressed, given the proposed hours of operation. Noise from vehicle movements was also assessed against the project specific noise criterion and the NSW Road Noise Policy.

The assessment concluded that there is no predicated noise or blasting criterion exceedances at residential receivers, with the exception of the Burleith residence (which a private agreement has been entered into). Noise and blasting impacts at the Burleith residence are predicated to exceed the relevant criteria at all times. It was also concluded that there is no predicted exceedance of off-site or along the internal haul route traffic noise criteria at any receiver.

It is highlighted that the assessment notes that the calculations have been based on the extraction and processing at the quarry, not occurring simultaneously. However, should the extraction and processing occur at the same time, the assessment concluded that the noise impact would still remain at or below the noise criterion.

The assessment noted that a Noise Monitoring Program is recommended on a quarterly for the first year of the operations, which could then be reduced to annual monitoring (or even discontinued) if noise is not a significant issue. The EPA has issued specific conditions with the General Terms of Approval, which specifically address noise and vibration impacts (including those associated with blasting activities), with the exception of the Burleith residence. The General Terms of Approval are included in Annexure 3.

Natural Hazards
The development site is not identified as being subject to flooding.

Part of the development site (located to the south-east of the quarry) is identified as bushfire prone land. The management measures proposed includes:

- Management of grasslands – creating a 30 metre bushfire vegetation buffer, with a reduced canopy cover of 30 percent with canopies maintained and active management of fuel loads. Grasslands to be annually slashed within the 30 metre buffer, during September to prepare for the fire season
- Management of site operations – maintenance of equipment, portable fire extinguishers in site office, minimal storage of fuel in a clearly labelled and maintained designated area
- Emergency access routes, designed in accordance with the NSW Rural Fire Service and Department of Planning document - *Planning for bush fire protection: A guide for Council, Planners, Fire Authorities and Developers (2006)*
- Installation of water storage tanks (total onsite storage of 45,000 litres) fitted with 65mm storz outlet with gate or ball valve
- Staff fire fighting training

It is proposed that a condition of consent be imposed for a Bushfire Management Plan to be prepared prior to operation.

Technological Hazards
Not applicable to the development.

Safety, Security and Crime Prevention
Not applicable to the development.

Social Impact in the Locality
The proposed development, if undertaken without any mitigation requirements or controls, would the potential to generate significant negative social impacts within the locality. These impacts would include those associated with the capacity of the local road network to safely cater for the increase in heavy vehicle movements, noise and dust generated by quarrying and haulage activities, vibration impacts on surrounding properties and environmental degradation from either loss of critical habitat or water contamination.

The potential impacts have been discussed in detail previously in the report and with the implementation of the various recommendations in the expert reports provided within the submitted documentation, and the various controls, restrictions and requirements which have already been discussed, the proposed development should not result in a significant negative impact on the local or wider community.

As discussed further in the report, there is significant social concern relating to the adequacy of the road network to cater for the proposed traffic levels associated with the development. The Voluntary Planning Agreement outlines the developer's undertaking to complete significant road works to improve public safety along the haulage route. These works are in addition to Council's works program in the locality. The proposed works and ongoing maintenance of the haulage route is considered to be adequate to support the proposed traffic levels.

Economic Impact in the Locality
The proposed development will create additional employment opportunities for up to 15 full time employees and approximately 10 contract truck companies. It is also likely to provide for additional employment in other sectors in the area through the provision of services, including workshop and mechanical services.

In addition to the direct economic impact, the proposed development economically impacts on other development within the region. The proposed development is dependent on market demand for the blue metal products, which has increase over the past 12 months and expected into the future. The client base includes the Boggabri and Maules Creek mines, with the subject quarry being the only quarry within a 100km radius of these operations.

Site Design and Internal Design
Not applicable to the development.

Construction
Not applicable to the development. The proposed site office and amenities are portable facilities.

Cumulative Impacts
The development application and supporting documentation outlines the assessment of the impacts the proposed development. It is noted that all impacts are able to successfully mitigated to an acceptable limit.

In addition, the General Terms of Approval, issued by the EPA, require the applicant to establish a community environment liaison committee, comprising of representatives of the community and the applicant. This committee will enable any issues that are raised by the community, that are resulting from the development, to be adequately dealt with.

Hence, it is considered that there are no cumulative impacts that require further consideration.

S79C(1)(c) The Suitability of Site for the Development
The site is occupied by an existing quarry operation. The impacts of the proposed expansion of the extractive area, have been identified in the application and it is considered that the proposed mitigation measures in relation to noise, dust, traffic and biodiversity, ensure that there will be no significant environmental impact resulting from the development. The site is considered to be suitable for the proposed development.

S79C(1)(d) Any Submissions Made in Accordance with the Act or Regulations
The application was advertised and notified in accordance with the *Environmental Planning and Assessment Regulation, 2000*. Adjoining property owners were directly notified in writing. Two exhibition periods were undertaken, as significant additional information was received following the close of the initial exhibition period. During the first exhibition period, 18 submissions were received and 3 government agency submissions. The second exhibition period resulted in 65

submissions being received (18 of these submissions were in support of the application) and 3 government agency submissions were also received.

A summary of the submissions and a planning response to those issues not addressed elsewhere in the report is provided below. However, it is noted that the initial submissions highlighted the impacts of development haulage route along Grain Valley Road and insufficient information within the submitted EIS. As the development haulage route was amended and additional information was received, the impacts that have been addressed with the additional information have not been assessed below.

- Traffic
  - Increase in vehicle movements will result in increased dust (Barker Road) and death of koalas on the road
    Comment: It is noted that Barker Road will be sealed (100m either side of the entrance of the three dwellings) within the first year of the commencement of the development. It is also proposed to seal 2.2.5km of Barker Road in the third year following commencement. Until the road is sealed, the developer will be required to regularly water the road, to prevent dust nuisance.

    As noted previously in the report, it is highlighted that the majority of koala movements will be undertaken outside the proposed hours of operation. Therefore, it was concluded in the addendum to the KPoM, that vehicle-Koala interaction on the haulage route will be mostly avoided by restricting quarry operations to the daylight period.

  - Current road formation and intersections require upgrading to cater for increase movements
    Comment: The Voluntary Planning Agreement, listing the proposed works and monetary contribution, has been reviewed by Council's Infrastructure Services department. The proposed sealing, widening and upgrading of identified roads and intersections it considered adequate for the proposed development.

  - Impact on school bus and bus stops
    Comment: It is proposed to implement a School Bus Operating Procedure, where heavy vehicle drivers will be required reduce speed to 60km/hr when a school bus is approaching. If the school bus is already stationary when the heavy vehicle is approaching, the heavy vehicle will be required to reduce its speed to 40km/hr. At the Marys Mount/Goolhi Road intersection, if the school bus is stationery, the heavy vehicles will stop at a safe distance from the intersection and wait until the school bus and private vehicles associated with the bus stop have moved off, before moving.

    In addition, heavy vehicle drivers will be made aware of the existing school bus routes along Goolhi and Quia Roads, bus stop locations and timetables. The drivers will be required to announce their presence over the UHF radio and reduce speed to 80km/hr, when travelling through the two forested sections of Goolhi Road. A bus pick-up/set-down area on Goolhi Road, west of Marys Mount Road intersection, will be constructed prior to commencement of the expanded operations.

  - Speed restrictions should be required for heavy vehicles from the development along the haulage route
    Comment: Council is unable to restrict the speed of certain registered vehicles along a public road. As noted previously in the report, the road formation and

intersections are proposed to be upgraded to improve road safety and cater for the sign posted speed limit.

- Adequacy of proposed contribution and additional works required for the development to be funded by ratepayers
  Comment: The Voluntary Planning Agreement provides a monetary contribution for works along the public road network for the life of the development. This contribution will be utilised for additional works, required as a result of the increased impact of the development and is in conjunction with road works to be undertaken by the developer within the first three years of the development. Council will be undertaking maintenance works along the haulage route. However, these works have been identified in Council's Long Term Strategic Plan, which would have been required irrespective of the proposed development.

- Traffic Impact Assessment is flawed as it is not based on accurate up-to-date monitoring
  Comment: Council's Infrastructure Services department have advised that the submitted Traffic Impact Assessment is adequate. The information utilised in the assessment is considered to be a correct indication of the impact of the proposed development.

- Noise
  Increase noise from additional traffic movements and extraction operations
  Comment: The Noise Impact Assessment has concluded that the anticipated noise from the increase traffic movements and extraction operations is compliant with the NSW Industrial Noise Policy, 2000 and NSW Road Noise Policy. In addition, the EPA have issued specific conditions within the General Terms of Approval for the Environment Protection Licence (EPL), which specifically address noise and vibration impacts (including those associated with blasting activities), with the exception of the Burleith residence (where a private agreement has been undertaken with the residents).

- Air Quality
  Details of complaints procedure and monitoring
  Comment: The EPA has recommended licensing conditions for the mitigation and monitoring of air quality and, as the licensing authority, is satisfied that appropriate measures can be implemented by the proposed development. A community liaison committee is also required under the EPL conditions.

- Visual impact of quarry
  Comment: The submitted documentation notes that the development will have an estimated visual impact of up to 9 kilometres to the north-west. The visual assessment of the impacts from the quarry, are identified for several viewpoints, with the impacts varying due to the main factors of distance, vegetation and topography. It is highlighted that the proposed staging of the quarry operations, vegetation removal and rehabilitation will lower the significance of any impacts to the visual amenity of the area. It is expected that following full rehabilitation of all stages of the project and plants are given time to establish, that the quarry will have a low long term visual impact.

- Cumulative Impacts with other mining and extractive industries in the locality
  Comment: The submitted documentation notes that all impacts are able to be successfully mitigated to an acceptable level. It is also noted that the EPL issued by the EPA requires

monitoring of the development and the formation of a community liaison committee (comprising of representatives of the community). This committee will enable any issues that are raised by the community, that are resulting from the development, to be adequately dealt with.

- Environmental Assessments undertaken as "desk top studies" only without comprehensive ground truthing.
  Comment: The environmental assessment of the proposed development has been undertaken by numerous consultants, who are experts in their field. The assessment included site surveys, not just "desk top studies".

- Water resources – anticipated water resources for the development (is the existing bore on Burleith adequate for dust suppression etc)
  The developer will be required to reduce dust emissions from the proposed development and will be responsible for ensuring that adequate water resources are available. It is noted in the Surface Water Study, that the onsite storage dams and existing bore (potential for 50,000 litres/hour) will be utilised for dust suppression on haulage roads, crusher and employee amenities. The current site water usage is calculated as 12,000 litres/day. Consequently, it is considered that adequate water resources are available.

- Monitoring of groundwater supplies – no detail provided
  The existing stock and domestic bore licence is to be amended to enable use of water for the quarry. The NSW Office of Water, who is responsible for the issuing of the licence, monitors groundwater level and quality through its network of groundwater observation bores. A condition has been imposed, for the developer to contact the Office of Water, regarding the licence conditions.

- Request a 100m wide corridor of trees to be planted on common boundary with Verona, to be planted at approval time and not 16-20 years later
  Comment: The quarry project boundary is proposed to be located more than 100m from the common boundary with the property Verona. This area is currently zoned E3 Environmental Management and contains significant areas of vegetation. The proposed tree corridor is not considered to be necessary, given the existing vegetation.

- Proposed development will result in environmental damage, with rehabilitation impossible with proposed size of quarry
  Comment: The rehabilitation plan identifies progressive rehabilitation of the quarry site. It is acknowledged that the final landform will be altered from the existing. However, the proposed rehabilitation plan is considered satisfactory.

- Impact on natural waterways that flow off hill
  Comment: It is acknowledged that the proposed development will impact on the existing natural waterways that flow off the hill, as the existing landscape will be modified. The Surface Water Study, submitted as part of the application, has identified the existing water course locations and the proposed runoff control measures. In addition, a plan of Sediment and Surface Water Management has also been submitted to outline the Quarry Environmental Management Plan. With the modification of the landscape, it is highlighted that surface water will still be directed to the existing Dam A (which will be reconstructed to a capacity of 8 ML). A second dam (Dam B) is also proposed below Dam A for management of onsite effluent and reuse.

- In-adequate consultation with local Aboriginal communities
  Comment: An Archaeological Survey, submitted with the application, involved a survey of the site, with a representative from the Red Chief Local Aboriginal Land Council and Gunida Gunyah Aboriginal Corporation. In addition to the public exhibition periods, local Aboriginal communities were also notified of the application by Council, with no submissions being received.

- Adequacy of consultants preparing Archaeology assessment
  Comment: The author of submitted Archaeological Assessment is an experienced archaeologist, who has significant experience in his field. In addition, the author was accompanied by local representatives of two Aboriginal communities. The assessment is considered to consistent with the requirements for archaeological assessments.

- Decrease in property values
  Comment: A reduction in property values cannot be directly attributed to the proposed development and is not a matter for consideration pursuant to Section 79C.

- Consultation by the developer with landholders and local residents
  Comment: The submitted Environmental Impact Statement notes that the developer has had consultation and project update discussions with the landholders immediately surrounding the quarry, who are directly impacted by the operations. It is also highlighted that Council undertake notification in accordance with the legislative requirements.

- Location of relocated electricity line to along adjoining boundary – request consultation regarding location and no removal of trees
  Comment: It is noted that the electricity line is proposed to be relocated to the eastern boundary of the site. A condition of consent will be imposed to ensure consultation with adjoining property owner is undertaken prior to relocation of the service.

- Location of maintenance tracks along adjoining property boundaries
  Comment: The subject maps do identify an "existing track" through the adjoining property. Council will advise the developer that consent from the landowner is required, prior to any access to adjoining land.

- Contribution to Catchment Action Plan targets (increased groundcover and perpetuity of Koala offsets), Namoi CMA Extractive Industries Policy, Biodiversity Offsets Policy, 2011
  Comments: The proposed development complies with all the Catchment Action Plan targets, with the exception of increased groundcover. The proposed development incorporates progressive rehabilitation. Hence, at the conclusion of the development, the site will have been rehabilitated. The development also includes the planting of koala habitat. Given the location of the habitat in terms of future land use opportunities, it is anticipated that the habitat would be maintained, unless approval is obtained to remove it. It is highlighted that Council is not required to implement the Catchment Action Plan requirements.

- High wall design of 10m remains a safety issue and trees and shrubs planted on rock benches are unlikely to reach 10m in height to reduce visual impact.
  Comment: The final landform design has been based on the precedent developed by Hannan, 1995. The proposed rehabilitation includes the revegetation of the area with local tree species, which have a height of over 10 metres. It is considered that the proposed tree species should reduce the visual impact of the quarry, once completed and

the trees established. Following completion of the quarry, a fence will be constructed along the top of the high wall to provide a barrier for wildlife and people in this higher area.

- Namoi Catchment Management Authority request a soil management plan to includes availability and suitability of top soil and subsoil, a soil balance for rehabilitation purposes and stock piling location and management plan.
  Comment: A condition of consent will be imposed to ensure that a Soil Management Plan be prepared and approved by Council, which includes the availability and suitability of top soil and subsoil, a soil balance for rehabilitation purposes and stock piling location and management plan.

- Management of unsuitable vegetation waste details required
  Comment: The supporting documentation notes that there will be no waste raw materials resulting from the development. All topsoil will be scrapped and stockpiled on the site for the re-use during the rehabilitation stage of the project, with organic waste (chipped trees) to also be utilised in the rehabilitation stage of the project.

- Rehabilitation Management Plan to be prepared in consultation with Namoi CMA within 6 months of approval and include details of erosion and sediment control and final void management
  Comment: It is recommended that the details of erosion and sediment control and final void management be incorporated into the Soil Management Plan for approval by Council.

S79C(1)(e) The Public Interest

Submissions made by the public and public authorities have been assessed and considered throughout this report. The public interest has been considered and it is concluded that the approval of the application will not be contrary to the public interest, subject to the implementation of the recommended conditions of consent.

3 CONCLUSION

The development application seeks development consent to increase the approved annual rate of extraction of the quarry operation from 30,000m^3 to 360,000 tonnes (120,000 bank cubic metres) per annum for a period of 38 years.

The application has been assessed pursuant to the requirements of the *Environmental Planning and Assessment Act 1979* and *Environmental Planning and Assessment Regulation 2000*. The evaluation of the application has demonstrated that the proposed development is satisfactory in terms of the matters for consideration as identified by the legislation.

It is recommended that, in relation to Development Application No. 2012/185 for the Expansion of the Blue Metal Quarry (Marys Mount) located at Lot 161 DP 755508, 'Burleith' 334 Pownall Road, Mullaley and Lot 2 DP 865898, 'Beulah' 259 Barker Road, Marys Mount, be approved subject to the Conditions of Consent in Annexure 3.

Annexure 1	Submissions (Confidential)
Annexure 2	Voluntary Planning Agreement
Annexure 3	Draft Conditions of Consent
Annexure 4	General Terms of Approval - Environment Protection Authority (EPA)
Annexure 5	BioBanking Statement