COUNCIL ASSESSMENT REPORT
NORTHERN REGIONAL PLANNING PANEL

PANEL REFERENCE & DA NUMBER	PPSNTH-123 – DA 34/2021
PROPOSAL	Extractive Industry – 490,000 tonnes per year for a period of five (5) years to service the Inland Rail Project and associated road upgrade projects and then a maximum of 150,000 tonnes per year for a further period of ten (10) years to service general market in the local area
ADDRESS	Lot 7 DP 755984 & Part Lot 1 DP 1227212 - 427 Minilya Road, North Star NSW 2408 [Address on application was 5535 North Star Road, North Star]
APPLICANT	Groundwork Plus
OWNER	Doolin Minilya Pty Ltd
DA LODGEMENT DATE	6 September 2021
APPLICATION TYPE	Designated and Integrated Development
REGIONALLY SIGNIFICANT CRITERIA	Clause (1)(a), Schedule 6 of the SEPP (Planning System) 2021 (formerly Clause 20, Schedule 7 of the SRD SEPP): Particular designated development – Extractive Industry being designated development under clause 26 of Schedule 3 of the Environmental Planning and Assessment Regulation 2021
CIV	$181,702.00 (excluding GST)
CLAUSE 4.6 REQUESTS	N/A
KEY SEPP/LEP	State Environmental Planning Policy (Planning Systems) 2021 State Environmental Planning Policy (Biodiversity & Conservation) 2021 State Environmental Planning Policy (Primary Production) 2021 State Environmental Planning Policy (Resilience & Hazards) 2021 State Environmental Planning Policy (Resources & Energy) 2021 State Environmental Planning Policy (Transport & Infrastructure) 2021 Gwydir Local Environmental Plan 2013
TOTAL & UNIQUE SUBMISSIONS - KEY ISSUES IN SUBMISSIONS	Nil

DOCUMENTS SUBMITTED FOR CONSIDERATION	- Draft Schedule of Conditions - North Star Quarry Environmental Impact Statement, including 13 Appendices, prepared by Groundwork Plus for Regional Quarries Australia Pty Ltd, July 2021 (File Ref:2542.DA1.005) - Groundwork Plus – Response to request for additional information from TfNSW - Groundwork Plus – Response to request for additional information from EPA - Groundwork Plus – Response to request for additional information from BCS and amended BDAR - EPA General Terms of Approval - Simple Blast Management Plan - Moree Plains Shire Council general terms of approval
SPECIAL INFRASTRUCTURE CONTRIBUTIONS (S7.24)	N/A
RECOMMENDATION	Approval with conditions
DRAFT CONDITIONS TO APPLICANT	Yes
SCHEDULED MEETING DATE	19 July 2022
PLAN VERSION	- North Star Quarry – Site Location Plan (Drawing No. 2542.DRG.001), dated 3 September 2020 - North Star Quarry – Site and Surrounds (Drawing No. 2542.DRG.002), dated 3 September 2020 - North Star Quarry – Conceptual Site Layout Plan (Drawing No. 2542.DRG.003) Revision 1, dated 18 May 2021 - North Star Quarry - Conceptual Quarry Development Plan (Drawing No. 2542.DRG.004) Revision 2, dated 26 April 2022 - North Star Quarry – Conceptual Final Landform (Drawing No. 2542.DRG.005) Revision 2, dated 26 April 2022 - North Star Quarry – Conceptual Final Landform (Cross Sections) (Drawing No. 2542.DRG.005A) Revision 2, dated 26 April 2022 - North Star Quarry – Surrounding Landholder Map (Drawing No. 2542.DRG.006) Revision 1, dated 18 May 2022 - North Star Quarry – Rehabilitation Management Plan (Drawing No. 2542.DRG.007) Revision 2, dated 26 April 2022 - North Star Quarry – Surface Water Management Plan (Drawing No. 2542.DRG.009) Revision 3, dated 26 April 2022 - North Star Quarry – Conceptual Quarry Development Visualisation (Drawing No. 2542.DRG.010) Revision 1, dated 18 May 2021
PREPARED BY	Patsy Cox – Planning Officer
DATE OF REPORT	11 July 2022

EXECUTIVE SUMMARY

The development application (DA 34/2021) seeks consent for the construction and operation of 490,000 tonne per year extractive industry for an initial period of five (5) years and then the operation of a 150,000 tonne per year extractive industry for a further period of ten (10) years.

The development shall include the following:

- A maximum extraction floor depth of RL 323m AHD with terminal benches with a height of 10m;
- Conventional drill and blast techniques to extract the hard road resources;
- Mobile plant to crush and screen the extracted material to produce a range of quarry products, including aggregates, railway ballast, road base and general fill;
- Processing and stockpiling of quarry products;
- Loading and transportation of quarry products via the internal access road to the local road network via Minilya Road and Croppa Creek Road;
- Surface water management measures including two (2) sediment basins, diversions bunds and drains;
- Ancillary infrastructure, including temporary demountable site office and amenities;
- Progressive rehabilitation of the site to achieve a post extraction landform suitable for rural activities including but not limited to cattle grazing.
- Proposed hours of operation are:
    - Extraction and processing, 6am to 6pm Monday to Friday and 7am to 1pm Saturdays;
    - Truck loading and dispatching, 6am to 6pm Monday to Friday and 7am to 1pm Saturdays;
    - Blasting, 9am to 3pm Monday to Friday;
    - No operations on Sundays or Public Holidays
- Traffic generation on a "busy day" (when quarry is extracting 490,000 tonnes per year) are predicted to be:
    - 20 light vehicle trips per day;
    - 264 heavy vehicle trips per day (maximum 24 heavy vehicle trips per hour).
- Traffic generation on at average expected operations (when quarry is extracting 490,000 tonnes per year) are predicted to be:
    - 20 light vehicle trips per day;
    - 92 heavy vehicle trips per day (maximum 8-9 heavy vehicle trips per hour).
- Traffic generation on at average expected operations (when quarry is extracting 150,000 tonnes per year) are predicted to be:
    - 10 light vehicle trips per day;
    - 28 heavy vehicle trips per day (maximum 2-3 heavy vehicle trips per hour).
- Initial reconstruction of and ongoing maintenance of internal access road (being an existing farm road) to a two-laned road to meet operationally requirements;
- Upgrade works in accordance with Council's requirements to that part of Minilya Road, from the North Star Quarry access west to its intersection with Croppa Creek Road;
- The clearing of 2.04 hectares of partially cleared and of low-medium quality native vegetation, identified as Plant Community Type (PCT) 445 *Brigalow viney scrub open forest on loamy soil in low hill landscapes of the northern Brigalow Belt south Bioregion.*
- Development of stockpile areas for the placement of topsoil and overburden to be used in rehabilitation works;

- Development of loading and heavy vehicle turn around area;
- Development of onsite employee parking area;
- Development of a hazardous material storage area and equipment maintenance area;
- Possible extraction from and utilisation of existing quarried area for stockpiling, loading and processing;
- Installation of a clean water dam with a volume of 3ML

The subject site is located on Lot 7 DP 755984 and Lot 1 DP 1227212 ('the site'), known as "Minilya" 427 Minilya Road, North Star NSW 2408. The property covers a total area of 1611.6 hectares which is used for broad acre cropping and small-scale livestock grazing. The property is located approximately 6km south of the village of North Star and has direct access to the Council maintained minor road known as Minilya Road.

A 20,000m^3 extractive industry exists at the development site which was approved by the Gwydir Shire Council on 1 July 2012 (DA 1527/2010). This existing approval has an approved lifespan of 20 years and is currently operational at the development site.

The site is located in an area saturated with broad acre cropping enterprises interspersed with smaller scale grazing operations, extractive industries and feedlots. The population density for the area is considered very low, with the nearest sensitive receivers not assoiciated with the quarry development located more than 3 kilometres away from the development site.

The site is located in the RU1 Primary Production land use zone pursuant to Clause 2.2 of the *Gwydir Local Environmental Plan 2013*(GLEP). Extractive Industries are permissible within the RU1 zone with consent.

The principle planning controls relevant to the proposal include:

- State Environmental Planning Policy (Planning System) 2021 (SEPP PS)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021 (SEPP BC)
- State Environmental Planning Policy (Primary Production) 2021 (SEPP PP)
- State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP RH)
- State Environmental Planning Policy (Resources and Energy) 2021 (SEPP RE)
- State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI)

The proposal is not considered inconsistent with the provisions of any planning controls.

It should be noted that the proposal is considered to be Integrated Development (s4.46), Designated Development (s4.10) and requires concurrence/referral under s4.13.

The proposed development was referred to the following agencies for concurrence and comment:

- Environment Protection Agency (EPA);
- Transport for NSW (TfNSW);
- NSW Department of Planning Industry & Environment – Biodiversity, Conservation and Science Directorate (DPIE-BSC);
- Department of Primary Industry – Agricultural (DPI-Ag)

- Water NSW (WNSW)
- National Parks and Wildlife Service (NPWS)
- Moree Plains Shire Council (MPSC)

The application was placed on public exhibition from 20 September 2021 to 18 October 2021, no public submissions were received.

The application is referred to the Northern Regional Planning Panel ('the Panel') as the development is '*regionally significant development*', under clause 2.19(1), pursuant to Clause 7(a) of Schedule 6 of *State Environmental Planning Policy (Planning Systems) 2021* as the proposal is an extractive industry facilities that meet the requirements for designated development under the *Environmental Planning and Assessment Regulation 2021*, Schedule 3, section 26.

A briefing was held with the Panel on Wednesday, 23 March 2022 where key issues were discussed, including proximity of sensitive receptors, Bushfire assessment requirements, distance to natural waterways, TfNSW request for addition information, traffic volumes on local road, consultation with Moree Plains Shire Council, internal consultation with Council's engineers, road safety and dust control, the requirement for a Blast Management Plan, the quarries close proximity to the neighbouring property, cumulative impacts and the requirements for a rehabilitation plan.

The key issues associated with the proposal included:

1. Vegetation Removal – Additional information requested for BDAR
2. Quarry Proximity to lot boundary – buffer required, particularly to the east
3. Traffic generation and cumulative impacts
4. TfNSW – addition information to be requested regarding the haulage route intersections design, capacity and any required upgrades
5. Dust Suppression & Water Source availability for dust suppression
6. Blasting & proximity to the property boundary – assessment report to include consideration of fly rock. A Blast Management Plan is required to set out procedures for safety, including consideration of the adjoining Lot 11 and its possible inclusion if appropriate measures are unable to be provided.

Following a detailed assessment of the proposal, pursuant to Section 4.16(1)(b) of the *EP&A Act*, DA 34/2021 is recommended for approval subject to the conditions contained at **Attachment A** of this report.

1. THE SITE AND LOCALITY

1.1 The Site

The proposed development is located on the property "Minilya", 427 Minilya Road, North Star, which is made up of two allotments being:

- Lot 7 DP 755984 – Area: 1615.6Ha – Site of existing and proposed quarry as well as the "Minilya" agricultural buildings; and
- Lot 1 DP 1227212 – Area: 7.585Ha – Former crown road reserve, now closed and converted to freehold. The lot is broken into three long rectangular sections located along the eastern boundary of 7 DP 755948.

There is very little slope across most of the property which is used to for irrigated and dryland cropping. However, along the eastern side of the property the terrain lifts into low undulating ridge lines running eastwards with slopes of 1-2°. The proposed quarry is located towards the western point of a ridge line known as Booraba Ridge.

Mungle Creek runs through the property beginning in the low ridges in the southeast corner of the property and leaves the property approximately halfway along its western boundary. Mungle Creek is a second and third order ephemeral stream which receives surface water from at least three unnamed smaller water drains originating within the property to the west and south. Mungle Creek is located approximately 900mm to the southwest of the proposed quarry site, assuming the natural flow of surface water drains from the northeast to southwest across the proposed quarry site towards Mungle Creek.

Minilya Road provides primary road access to the Minilya property and is a Council maintained unsealed minor rural road, running east/west for a length of 5.9km between Croppa Creek and North Star Roads. The proposed quarry access will be located approx 3.9km from the Croppa Creek intersection in the west and approximately 2km from the North Star Road intersection in the east along Minilya Road.

The proposed quarry site is heavily cleared of large vegetation and partially cropped and grazed. Additionally, part of the site is the location of a previously approved 20,000m^3/yr gravel quarry (DA 1527/2010 issued 1/7/2012), the former gravel quarry site is totally cleared of vegetation due to past excavations. A search of The Central Resource of Sharing and Enabling Environmental Data in NSW (SEED) mapping tool identifies the plant community types (PCT) located at the proposed quarry site as being PCT 0 – No Native & PCT 1 – Candidate Native Grasslands. The proposed quarry site is somewhat modified as part of past quarrying and agricultural activities.

A search of Aboriginal Heritage Information Management System (AHIMS) failed to identify any known indigenous heritage within Lot 7 DP 755984 or Lot 1 DP 1227212 or within 200m from the lot boundaries. A search of State and Local Heritage records also failed to identify any heritage items, places, or sites of significance at the proposed quarry site.

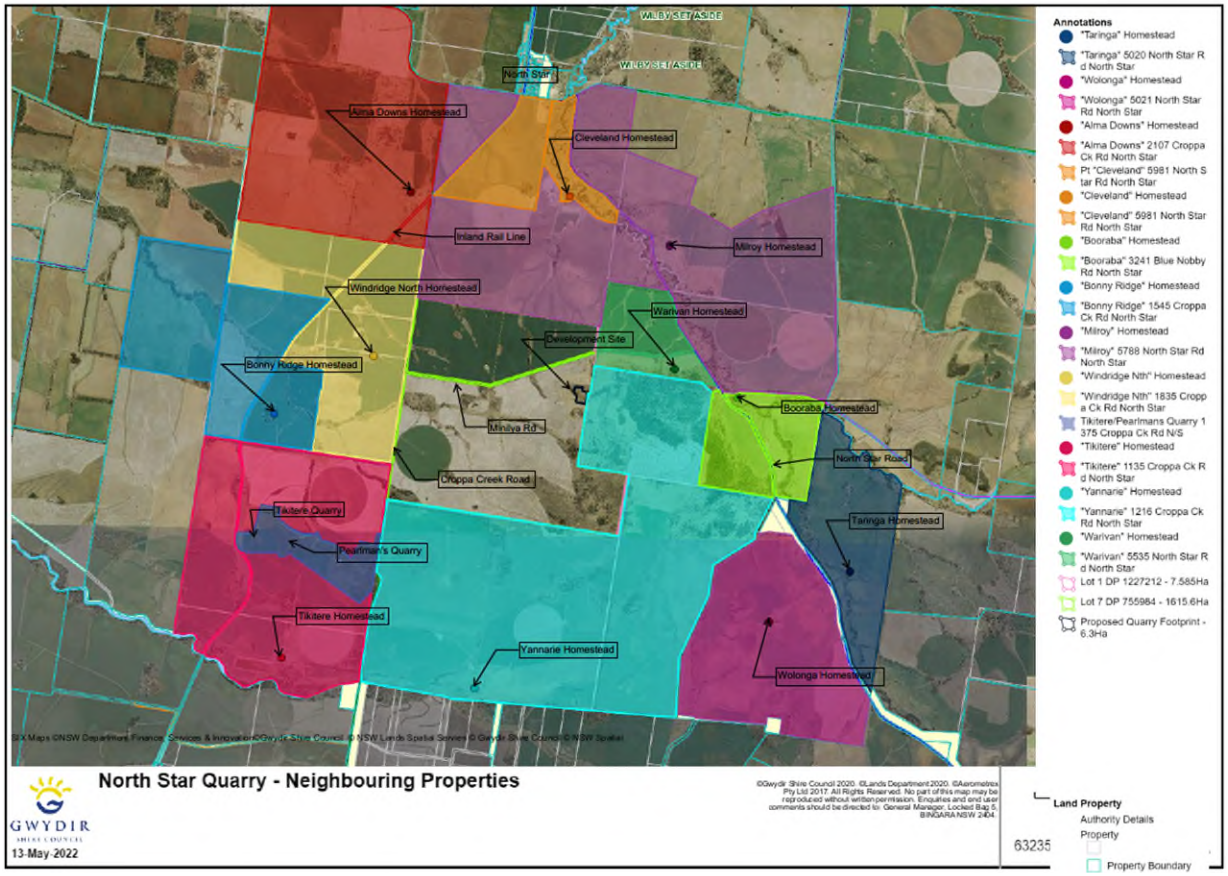
The proposed quarry site is not identified as being flood prone or the location of Acid Sulphate Soils, nor impacted by any geotechnical or seismic issues. However, the proposed quarry is identified as being located within a Bushfire Prone Area under Council's current Bushfire Prone Area mapping.

1.2 The Locality

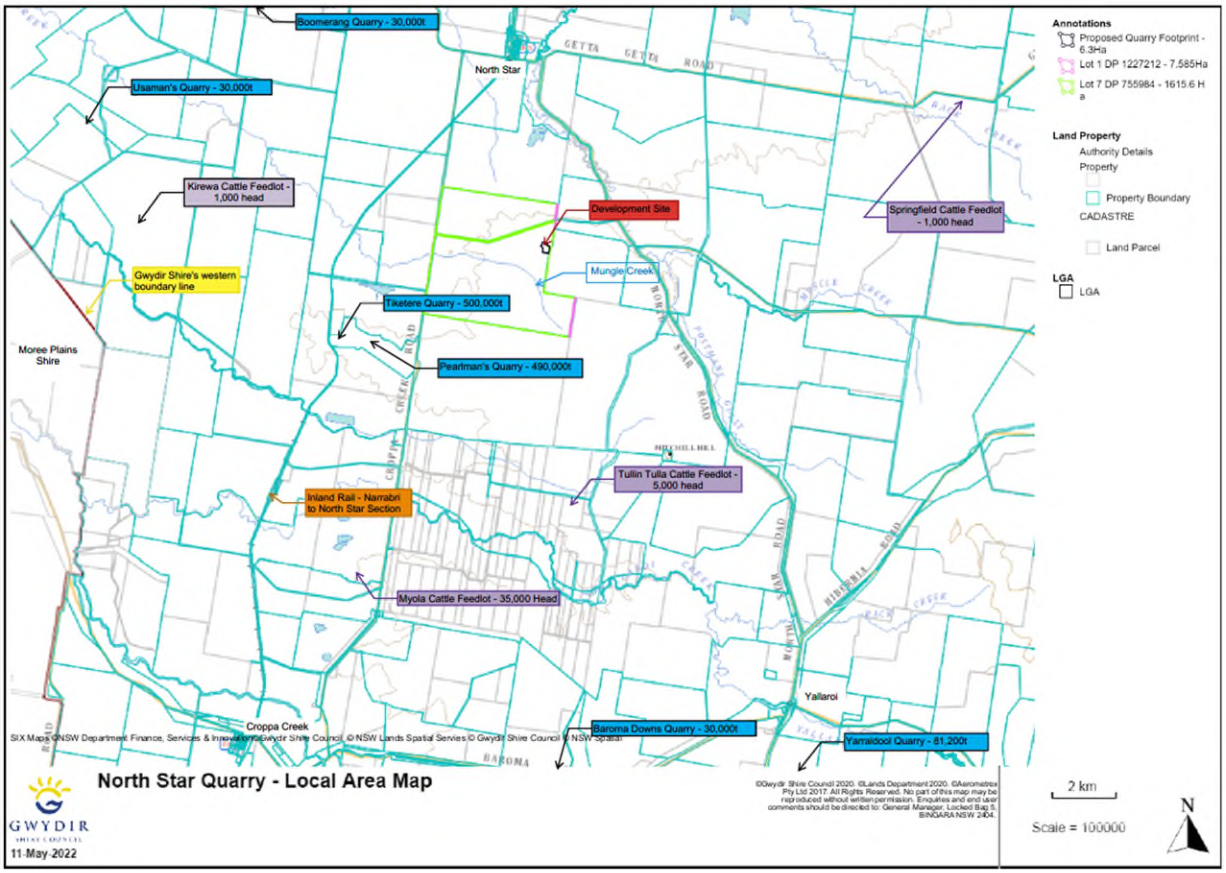
North Star is located within the extensive cropping area known as the “Golden Triangle”. The Golden Triangle encloses the area between Goondiwindi, Warialda, Tamworth, Gunnedah, Dubbo, Moree and back to Goondiwindi.

North Star is located in the northern point of the triangle and is typified by low undulating to flat landforms, interrupted by basalt outcrops and ridgelines sparsely covered in remnant native vegetation. North Star, the village, stands out from the horizon due to its massive grain silos built along the railway line in the 1950’s. The village of North Star supports the greater region of farming enterprising by providing basic amenities including a public school, a shop and service station, churches, agricultural supplies, a sporting club, and a community hall.

The proposed development is located approximately 5.7 kilometres south of the North Star village. The adjoining and surrounding properties undertaken broadacre cropping as their dominant agricultural activity. However, these properties also supplement cropping activities with the grazing of livestock, in particular cattle. Map 1 below depicts provides a visual assessment of the extent of the adjoining and surrounding properties compared to the proposed development site and its location. Further, Map 2 (also below) depicts the location of existing extractive industries and feedlots within close proximity to the proposed development site.



Map 2 – Neighbour Properties and location of homestead surrounding the proposed North Star Quarry



Map 3 – Local Area Map showing location of existing extractive industries and feedlots in the North Star area

As can be seen from Map 1 above the proposed North Star Quarry development is not located in close proximity to any areas considered to be residentially dense and is at least 5.5km away from the North Star village, (which is the nearest residential density area to the proposed development with a population of approximately 80 people).

Also depicted in the maps above is the availability and proximity of the existing infrastructure necessary for the operation of the proposed development. Namely, the local and regional road networks. Is should also be noted that existing rail corridor where the Inland Rail Project (northern section) is to be undertaken is relatively close to the proposed development for the delivery of materials, which reduces travel of heavy vehicles and there minimise in part the proposed developments greenhouse emissions. Other services and infrastructure required for the proposed development shall be portable and will be installed and removed from site as required (such as generators, portable water supplies, amenities, processing plant and machinery).

2. THE PROPOSAL AND BACKGROUND

2.1 The Proposal

The following description of the proposal is offered by the proponent in the Environmental Impact Statement (EIS) (see s2.2 of North Star Quarry Environmental Impact Statement prepared by Groundwork Plus for Regional Quarries Australia Pty Ltd, dated July 2021):

- Extraction of a maximum of 490,000t/yr for a period of 5 years, and then extraction of a maximum of 150,000t/y for a period of 10 years;
- A maximum extraction floor depth of RL 323m AHD with terminal benches with a height of 10m;
- Conventional drill and blast techniques to extract the hard road resources;
- Mobile plant to crush and screen the extracted material to produce a range of quarry products, including aggregates, railway ballast, road base and general fill;
- Processing and stockpiling of quarry products;
- Loading and transportation of quarry products via the internal access road to the local road network via Minilya Road and Croppa Creek Road;
- Surface water management measures including two (2) sediment basins, diversions bunds and drains;
- Ancillary infrastructure, including temporary demountable site office and amenities;
- Progressive rehabilitation of the site to achieve a post extraction landform suitable for rural activities including but not limited to cattle grazing.
- Proposed hours of operation are:
    - Extraction and processing, 6am to 6pm Monday to Friday and 7am to 1pm Saturdays;
    - Truck loading and dispatching, 6am to 6pm Monday to Friday and 7am to 1pm Saturdays;
    - Blasting, 9am to 3pm Monday to Friday;
    - No operations on Sundays or Public Holidays
- Traffic generation on a “busy day” (when quarry is extracting 490,000 tonnes per year) are predicted to be:
    - 20 light vehicle trips per day;
    - 264 heavy vehicle trips per day (maximum 24 heavy vehicle trips per hour).
- Traffic generation on at average expected operations (when quarry is extracting 490,000 tonnes per year) are predicted to be:
    - 20 light vehicle trips per day;
    - 92 heavy vehicle trips per day (maximum 8-9 heavy vehicle trips per hour).
- Traffic generation on at average expected operations (when quarry is extracting 150,000 tonnes per year) are predicted to be:
    - 10 light vehicle trips per day;
    - 28 heavy vehicle trips per day (maximum 2-3 heavy vehicle trips per hour).

To provide a complete description of the proposal the following is also added to the proponents list above:

- Initial reconstruction of and ongoing maintenance of internal access road (being an existing farm road) to a two-laned road to meet operationally requirements;

- Upgrade works in accordance with Council's requirements to that part of Minilya Road, from the North Star Quarry access west to its intersection with Croppa Creek Road;
- The clearing of 2.04 hectares of partially cleared and of low-medium quality native vegetation, identified as Plant Community Type (PCT) 445 *Brigalow viney scrub open forest on loamy soil in low hill landscapes of the northern Brigalow Belt south Bioregion.*
- Development of stockpile areas for the placement of topsoil and overburden to be used in rehabilitation works;
- Development of loading and heavy vehicle turn around area;
- Development of onsite employee parking area;
- Development of a hazardous material storage area and equipment maintenance area;
- Possible extraction from and utilisation of existing quarried area for stockpiling, loading and processing;
- Installation of a clean water dam with a volume of 3ML

A quick reference Development data Table is provided below (Table 1) which provides the key development data for the proposed quarry development.

Table 1: Development Data

Control	Proposal
Minilya Property area (being total area of Lot 7 DP 755984 & Lot 1 DP 1227212)	1611.6 ha
Total Quarry Footprint including access road	6.45 ha
Existing Quarried/disturbed Area	4.18 ha
Quarry Extraction area	4.45 ha
Maximum Pit Depth	RL 323m AHD
Proposing and Stockpile area (including parking, site office and amenities	1.76 ha RL 332m AHD
Sediment Basin 1 (SB1) to service pit located within extraction area	Total Volume = 2.00ML Upper Settling = 1.15ML Depth = 4.0m
Sediment Basin 2 (SB2) to service processing & stockpile area located outside of the processing and stockpile area	Total Volume = 1.00ML Upper Settling = 0.40ML Depth = 2.0m
Clearwater Dam (SD1)	Total Volume = 3.0ML
Internal Access Road	0.51 ha
Quarry footprint setbacks from nearest property boundary points	530m from northern boundary (approx) 2513m from southern boundary (approx) 20m from eastern boundary (buffer zone) 3243m from western boundary (approx)

All current plan versions used during this assessment are provided in Attachment F of this report. However, the most relevant plans (current version) are provided in the below list:

- North Star Quarry - Conceptual Quarry Development Plan (Drawing No. 2542.DRG.004) Revision 2, dated 26 April 2022
- North Star Quarry – Conceptual Final Landform (Drawing No. 2542.DRG.005) Revision 2, dated 26 April 2022
- North Star Quarry – Conceptual Final Landform (Cross Sections) (Drawing No. 2542.DRG.005A) Revision 2, dated 26 April 2022
- North Star Quarry – Surrounding Landholder Map (Drawing No. 2542.DRG.006) Revision 1, dated 18 May 2022
- North Star Quarry – Rehabilitation Management Plan (Drawing No. 2542.DRG.007) Revision 2, dated 26 April 2022
- North Star Quarry – Surface Water Management Plan (Drawing No. 2542.DRG.009) Revision 3, dated 26 April 2022

2.2 Background

The development application was lodged on Select Date. A chronology of the development application since lodgement is outlined below including the Panel's involvement (briefings, deferrals etc) with the application:

Table 2: Chronology of the DA

Date	Event
31 August 2021	DA submitted on Planning Portal
6 September 2021	DA lodged
20 September 2021 to 18 October 2021	Exhibition of the application
10 September 2021	DA referred to external agencies
31 August 2021	Request for Information from Council to applicant – request for a schedule itemising the capital investment value for the development
2 September 2021	Request for Information from Council to applicant – request payment of application fees
19 October 2021	Request for Information from Council to applicant – request to address concerns raised by Transport for NSW and the EPA's request of addition information
22 February 2022	Request for Information from Council to applicant – request to amend Biodiversity Development Assessment Report to correct errors indicated by DPIE - EES
23 March 2022	Panel briefing

28 April 2022	Amended plans lodged – Amended Biodiversity Development Assessment Report lodged to address additional information request dated 22 February 2022 accepted by Council under Cl 55 of the Regulation on 28 April 2022.

2.3 Site History

The site of the proposed development has been the subject of a previous development proposal and approval. On the 13 December 2010 Council received a development application accompanied by a Statement of Environmental Effects for a 20,000m^3 per year basalt quarry. This application was approved by delegated authority on the 2 July 2012 and was given an approval life span of 20 years. As such, a condition needs to be included in the "Draft Schedule of Conditions" (see Attachment A to the report) that requires the proponent to surrender this approval.

No further development approvals could be found in the Gwydir Shire Council records regarding the proposed development site.

However, a search of Gwydir Shire Council records did locate two recent development approvals for extractive industries on an adjoining property the proposed development site. The details of these approvals are listed below:

DA No.	Site of DA	DA Proposed	Date of Application	Date of Approval	Consent Authority	RPP No
5/2018	"Tikitere" 1135 Croppa Creek Road North Star – Lot 5 DP 755984 (now Lot 2 DP 1256597)	Tikitere Quarry being 500,000 tonne/yr Hard Rock & White Rock Quarry. Lifespan of 5 years	21/02/2018	20/09/2018	Northern Regional Planning Panel	2018NTH004
5/2018	"Tikitere" 1135 Croppa Creek Road North Star – Lot 5 DP 755984 (now Lot 2 DP 1256597)	S96(1) – Correction of type errors in Schedule of conditions - Tikitere Quarry being 500,000 tonne/yr Hard Rock & White Rock Quarry. Lifespan of 5 years	10/10/2018	22/10/2018	Gwydir Shire Council	-
5/2018	"Tikitere" 1135 Croppa Creek Road North Star – Lot 5 DP 755984 (now Lot 2 DP 1256597)	S96(1A) – Include haulage on Council Roads – Tikitere Quarry being 500,000 tonne/yr Hard Rock & White Rock Quarry. Lifespan of 5 years	29/11/2018	04/03/2019	Gwydir Shire Council	-
29/2019	"Tikitere"	Pearlman's Quarry being 490,000	05/09/2019	18/03/2020	Northern Regional	PPSNTH-9

	1135 Croppa Creek Road North Star – Lot 5 DP 755984 (now Lot 2 DP 1256597)	tonne/yr Quarry. Lifespan of 10 years			Planning Panel	

3. STATUTORY CONSIDERATIONS

When determining a development application, the consent authority must take into consideration the matters outlined in Section 4.15(1) of the Environmental Planning and Assessment Act 1979 ('EP&A Act'). These matters as are of relevance to the development application include the following:

(a) the provisions of any environmental planning instrument, proposed instrument, development control plan, planning agreement and the regulations
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,
(c) the suitability of the site for the development,
(d) any submissions made in accordance with this Act or the regulations,
(e) the public interest.

These matters are further considered below.

It is noted that the proposal is considered to be (which are considered further in this report):

- Integrated Development (s4.46)
- Designated Development (s4.10)
- Requiring concurrence/referral (s4.13)

3.1 Section 4.15(1)(a)(i) - Provisions of Environmental Planning Instruments

The following Environmental Planning Instruments are relevant to this application:

- **State Environmental Planning Policy (Planning System) 2021 (SEPP PS)** – includes requirements formerly included in repealed State Environmental Policy (State and Regional Development) 2011, State Environmental Planning Policy (Aboriginal Lands) 2019 and State Environmental Planning Policy (Concurrences and Consents) 2018.
- **State Environmental Planning Policy (Biodiversity and Conservation) 2021 (SEPP BC)–** includes requirements formerly included within the repealed State Environmental Planning Policy (Koala Habitat Protection) 2020, State Environmental Planning Policy (Koala Habitat Protection) 2021, State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017, Murray Regional Environmental Plan No 2 – Riverine Land, State Environmental Planning Policy No 19 – Bushland in Urban Areas and No 20 – Canal Estate Development, State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011, Sydney Regional Environmental Plan No 20 – Hawkesbury – Nepean River (No 2-1997), Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005, Greater Metropolitan Regional

Environmental Plan No 2 – Georges River Catchment and Willandra Lakes Regional Environmental Plan No 1 – World Heritage Property.

- **State Environmental Planning Policy (Primary Production) 2021 (SEPP PP)** – includes requirements formerly included within the repealed State Environmental Planning Policy (Primary Production and Rural Development) 2019 and Sydney Regional Environmental Plan No 8 (Central Coast Plateau Areas).
- **State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP RH)** – includes requirements formerly included within the repealed State Environmental Planning Policy 33 - Hazardous and Offensive Development, State Environmental Planning Policy 55 – Remediation of Land and State Environmental Planning Policy (Coastal Management) 2018.
- **State Environmental Planning Policy (Resources and Energy) 2021 (SEPP RE)** – includes requirements formerly included within the repealed State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 and Sydney Regional Environmental Plan No 9 – Extractive Industries (No 2-1995).
- **State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI)** – includes requirements formerly included within the repealed State Environmental Planning Policy (Infrastructure) 2007, State Environmental Planning Policy (Educational Establishments and Childcare Facilities) 2017, State Environmental Planning Policy (Major Infrastructure Corridors) 2020 and State Environmental Planning Policy (Three Ports) 2013.
- **Gwydir Local Environmental Plan 2013 (GLEP)**.

A summary of the key matters for consideration arising from these State Environmental Planning Policies are outlined in Table 3 and considered in more detail below.

Table 3: Summary of Applicable State Environmental Planning Policies

EPI	Matters for Consideration	Comply (Y/N)
SEPP PS	• **Clause 2.19(1)** declares the proposal as regionally significant development pursuant to Clause 7(1)(a) of Schedule 6.	Y
SEPP BC	• **Clause 3.3** declares that the RU1 Primary Production land use zone within a local government area specified in Schedule 2, of which Gwydir Shire is listed, is land to which Chapter 3 Koala habitat protection 2020 applies. • **Clause 3.5** declares where a proposed development needs to assess any and all impacts to land that is considered core koala habitat or areas of potential koala habitat. As well as providing guidance on the assessment process to be followed	Y Y
SEPP PP	• **Clause 2.1** declares the aims of the SEPP which seek to reduce sterilisation of rural land by balancing sustainable agriculture, residential development, economic development and the protection of native vegetation, biodiversity and water resource. As well as the identification of and protection of State significant agricultural lands.	N/A

	• The proposed development does not impact any identified State significant agricultural lands, nor does it trigger any other requirements within this SEPP.	
SEPP RH	• **Clause 3.2** defines what is considered a potentially hazardous industry and a potentially offensive industry where if the development were to operation without the employment of any measures to reduce or minimise its impacts would pose a significant risk to human health, life or property, or to the biophysical environment of that locality. • **Clause 3.3** defines what is a hazardous industry, a hazardous storage establishment, an offensive industry and/or an offensive storage establishment. • **Clause 3.12** provides matters that the consent authorities need to consider when assessing the proposed development as a potentially hazardous or potentially offensive development • **Clause 4.6** requires the consent authority to consider whether land is contaminated and if so, is the consent authority satisfied that the land is suitable for the development in its contaminated state or if the land requires remediation to be made suitable for the purpose of the development. Additionally, the consent authority is to consider a preliminary investigation report on land where the proposed development is for a change of use and where the land is located within an investigation area, is on land which development for a purpose referred to in Table 1 of the contaminated land planning guidelines is being or has been known to have been carried out and where the proposed change of use is for residential, educational, recreational, child care purposes or for the purpose of a hospital.	Y N/A Y Y
SEPP RE	• **Clause 2.9(3)(a)** declares extractive industry may be carried out with development consent on land on which development for the purpose of agriculture or industry may be carried out (with or with development consent). • **Clause 2.17** provides the consent authority with matters for consideration prior to determination of developments for the purpose of mining, petroleum production or extractive industries.	Y Y/N
SEPP TI	• **Clause 2.121(1) Traffic-generating development** applies to development specified in Column 1 of the Table to Schedule 3 of the SEPP TI • **Schedule 3 Traffic-generating development to be referred to Transport for NSW** – extractive industry is not	N/A N/A

	development specified in Column 1 of the Table under Schedule 3 of the SEPP TI	

State Environmental Planning Policy (Planning System) 2021 (SEPP PS)

SEPP PS commenced on the 1 March 2022 and replaced the repealed State Environmental Planning Policy (State and Regional Development) 2011, State Environmental Planning Policy (Aboriginal Lands) 2019 and State Environmental Planning Policy (Concurrences and Consents) 2018. The EIS provided information in relation to State Environmental Planning Policy (State and Regional Development) 2011.

State Environmental Planning Policy (Planning System) 2021 (SEPP PS) applies to the proposal as it identifies if development is regionally significant development. In this case, pursuant to Clause 2.19(1) of SEPP PS, the proposal is a regionally significant development as it satisfies the criteria in Clause 7(1)(a) of Schedule 6 of the SEPP PS, being a proposed development for the expansion of an extractive industry facility that meet the requirements for designated development under the Environmental Planning and Assessment Regulations 2021, Schedule 3, clause 26. Accordingly, the Northern Regional Planning Panel is the consent authority for the application. The proposal is consistent with this Policy.

State Environmental Planning Policy (Biodiversity and Conservation) 2021 (SEPP BC)

SEPP BC commenced on the 1 March 2022 and replaced the repealed State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017, State Environmental Planning Policy (Koala Habitat Protection) 2020, State Environmental Planning Policy (Koala Habitat Protection) 2021, Murray Regional Environmental Plan No 2 – Riverine Land, State Environmental Planning Policy No 19 – Bushland in Urban Areas and No 20 – Canal Estate Development, State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011, Sydney Regional Environmental Plan No 20 – Hawkesbury – Nepean River (No 2-1997), Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005, Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment and Willandra Lakes Regional Environmental Plan No 1 – World Heritage Property. The EIS provided information in relation to State Environmental Planning Policy (Koala Habitat Protection) 2020.

State Environmental Planning Policy (Biodiversity and Conservation) 2021 (SEPP BC), Chapter 3, clauses 3.1 to 3.9 applies to the proposal and were considered in the assessment. The proposed development is located within the RU1 Primary Production land use zone under the Gwydir Local Environmental Plan 2013 (GLEP) and is located within a local government area that is listed in Schedule 2 of this SEPP as an area within the Northwest Slopes Koala management area. Further the land on which the proposed development is sited has an area of more than 1 hectare. The applicant provided an evaluation of the potential koala habitat for the proposed development site and is conducted as part of the ecological impact assessment which forms part of the Biodiversity Development Assessment Report prepared by OzArk Environment & Heritage, v3.0 dated August 2021 and the amended report dated April 2021. The following is an extract from the evaluation:

"The preference of the Koala is to inhabit woodland and forest areas including riparian corridors with suitable feed trees. The subject land is not considered to be core koala habitat because it is largely cleared with few feed trees. None of the feed tree species listed in Schedule 2 of the Koala SEPP 2020 are present on the site."

There are five records for Koala within 10km of the subject land, from 2006 to 2019. All of the records have minimal location and sighting notes, so it is not possible to determine exactly where the records were made. The location descriptions for the records are provided as 'Suburb only, North Star'". (Pg 16, paragraph 2, Biodiversity Development Assessment Report, North Star Quarry, prepared by OzArk Environment & Heritage, dated April 2021).

Please note that Schedule 2 of the Koala SEPP 2020 is now Schedule 1 of the SEPP (Biodiversity and Conservation) 2021.

Council is satisfied that the site of the development does not constitute potential koala habitat, nor as a result, does it constitute core koala habitat. The proposal is consistent with this Policy.

State Environmental Planning Policy (Primary Production) 2021 (SEPP PP)

SEPP PP commenced on the 1 March 2022 and replaced the repealed State Environmental Planning Policy (Primary Production and Rural Development) 2019 and Sydney Regional Environmental Plan No 8 (Central Coast Plateau Areas). The EIS provided information in relation to State Environmental Planning Policy (Primary Production and Rural Development) 2019.

The aims of this SEPP are to:

- identify and protect State significant agricultural lands and to determine whether development of such lands are compatible with agriculture uses and would result in a public benefit.
- Allow for circumstances under which emergency livestock activities can occur.
- Regulate sustainable aquaculture

The applicant considered the development proposal with respect to these aims, which is shown below:

"The land that would be affected by the proposal has not been identified as State or regionally significant agricultural land by Schedule 1 of the Primary Production and Rural Lands SEPP. The proposal would not impact on any additional land currently managed for agriculture. As demonstrated at numerous other quarry sites where agricultural activities are undertaken concurrently within extractive industry, the proposal would not be incompatible with continued agricultural land use of the site. The protection of the land that is the subject of the proposal would not provide any public benefit. In fact, the employment and local economic stimulus that would be generated by the proposal is considered to be of wider public benefit." (Pg 24, paragraph 2, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021). Please note that Schedule 1 of the Primary Production and Rural Lands SEPP 2019 is now Schedule 1 of the SEPP (Primary Production) 2021.

Council is satisfied that the site of the development does not constitute State significant agricultural land, that the operation of the quarry will not limit or inhibit any existing or future agricultural operations on the adjacent lands and will not deny any significant public benefit in consenting to the proposed development. The proposed development does not constitute an emergency livestock activity or sustainable aquacultural use. The proposal is considered consistent with this Policy.

State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP RH)

SEPP RH commenced on the 1 March 2022 and replaced the repealed State Environmental Planning Policy 33 – Hazardous and Offensive Development, State Environmental Planning Policy 55 – Remediation of Land and State Environmental Planning Policy (Coastal Management) 2018. The EIS provided information in relation to State Environmental Planning Policy 33 – Hazardous and Offensive Development and State Environmental Planning Policy 55 – Remediation of Land.

The provisions of SEPP RH have been considered in the assessment of the development application. The document "Hazardous and Offensive Development Application Guidelines – Applying SEPP 33" produced by the NSW Department of Planning in January 2011 steps applicants through the identification and assessment of potentially Hazardous or Offensive Industries. The first step is to identify if the proposed development falls within the definition of "industry" and/or a "storage establishment" as adopted by the planning instrument. The following definitions are offered from the Gwydir Local Environmental Plan 2013 (based on the Standard Instrument):

> ***industry*** means any of the following—
> (a) general industry,
> (b) heavy industry,
> (c) light industry,
>
> but does not include—
> (d) rural industry, or
> **(e) extractive industry, or**
> (f) mining.

The proposed development is defined as an extractive industry, see below definition under the Gwydir Local Environmental Plan 2013:

> ***extractive industry*** means the winning or removal of extractive materials (otherwise than from a mine) by methods such as excavating, dredging, tunnelling or quarrying, including the storing, stockpiling or processing of extractive materials by methods such as recycling, washing, crushing, sawing or separating, but does not include turf farming.
> **Note—**
> Extractive industries are not a type of industry—see the definition of that term in this Dictionary.

Therefore, the proposed development is not a type of "industry" nor is it a type of "heavy industry" under which "Hazardous Industry" and "Offensive Industry" are located within the planning instrument.

Further a storage establishment is defined as the following under the Gwydir Local Environmental Plan 2013:

> ***hazardous storage establishment*** means a building or place that is used for the storage of goods, materials or products and that would, when in operation and when all measures proposed to reduce or minimise its impact on the locality have

been employed (including, for example, measures to isolate the building or place from existing or likely future development on other land in the locality), pose a significant risk in the locality—
(a) to human health, life or property, or
(b) to the biophysical environment.

offensive storage establishment means a building or place that is used for the storage of goods, materials or products and that would, when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the building or place from existing or likely future development on other land in the locality), emit a polluting discharge (including, for example, noise) in a manner that would have a significant adverse impact in the locality or on existing or likely future development on other land in the locality.
Note—Offensive storage establishments are a type of ***heavy industrial storage establishment***—see the definition of that term in this Dictionary.

The EIS states that no goods, materials or products that are in nature hazardous or offensive or shall emit hazardous or offensive pollution will be stored at the site neither in a dedicated open containment area nor within a structure or building. Although may be use on site as part of the operation of the extractive industry.

The applicant's consideration of this SEPP is below:

"Hazardous and offensive industries, and potentially hazardous and offensive industries, relate to industries that, without the implementation of appropriate impact minimisation measures, would, or potentially would, pose a significant risk in relation to the locality, to human health, life or property, or to the biophysical environment.
The hazardous substances and dangerous goods to be held or used within the site are required to be identified and classified in accordance with the risk screening method contained within the document entitled Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (DP&I, 2011). Hazardous materials are defined within DP&I (2011) as substances falling within the classification of the Australian code for Transportation of Dangerous Goods by Road and Rail (Dangerous Goods Code), (National Transport Commission, 2011). The substances relevant to this policy are primarily diesel and ammonium nitrate.
The proposal would involve the use of diesel fuel, a Class 3 C1 combustible liquid, and small amounts of other hydrocarbons including lubricating oils and combustible liquids. As the diesel fuel and lubricating oils and greases would not be stored permanently on site, SEPP 33 does not require these to be considered further.
Ammonium nitrate would not be stored on site, rather it would be transported to the site on the day of the blast by the blasting contractor under their relevant licences and authorities.
Because no hazardous materials would be stored on the site, no further consideration of SEPP 33 is required."

Clause 4.6 of SEPP RH requires consent authorities to consider whether the land is contaminated, and if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out.

It is considered that the requirements of Clause 4.6(1) of the SEPP RH do not apply to the proposed development, as the site where the proposed development is to be carried out is not considered to be contaminated land, nor does it need or have previously remediated.

In addition, Clause 4.6(2) requires that the consent authority consider preliminary investigation reports on land where a change in use is proposed as listed in subsection (4) of Clause 4.6, which includes land located within an investigation area; land on which a use, identified in Table 1 of the 'Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land' 1998 is or has be carried out on the land; and where the proposed development is for residential, educational, recreational, child care or hospital purposes.

The proposed development site is not located within an investigation area nor is the proposed development for a residential, educational, recreational, child or health care purposes. However, the site has been and partially continues to be the location of agricultural activities. Being predominantly grazing and to a lesser extent some dryland cropping continues to be carried out on the site. The site of the proposed development has also been the site of a previously approved extractive industry. Both agricultural and extractive industries are listed in Table 1 of 'Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of land" 1998 as previous uses that may trigger a preliminary investigation.

A site visit was undertaken by a Gwydir Council staff member and a Councilor on 14 April 2022. Visual inspection did not detect any area of discoloured soil or patches of dead vegetation that may indicate a contamination issue at the site. Nor was there evidence of the storage of chemicals or contamination causing vapours, liquids or solids that may cause an contamination incident.

The applicant's consideration of this Chapter of the SEPP is below:

"SEPP 55 requires consideration of whether there have been activities carried out on the land in the past that may have resulted in contamination. If contamination may be present, the proponent is required to undertaken suitable investigation and, if necessary, remediation works. A search of the NSW contaminated land register was undertaken. The site is not considered as contaminated land as it has not historically been subjected to any contaminating activities. Upon the cessation of resource extraction, the proposal will involve full rehabilitation of the site including removal of infrastructure", (Pg 24, paragraph 4, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Although the applicant's consideration of Chapter 4 of the SEPP RH is minimalistic, it is considered that the likelihood of contamination being uncovered during the operation of the proposed development is very low. The same opinion is provided for the likelihood of the operation of the proposed development causing contaminants to penetrate the soil and into groundwater or via surface water flow to surrounding natural waterway.

It is considered that the requirements of Chapter 3 'Hazardous and offensive development' of the SEPP RH do not apply to the proposed development, as the extractive industry does not meet the definition of an 'industry' or 'storage establishment' under the planning instrument.

It is considered that the requirements of Chapter 4 'Remediation of Land' of the SEPP RH do not apply to the proposed development and the issue of contaminated land or the contamination of land needs no further consideration.

State Environmental Planning Policy (Resources and Energy) 2021 (SEPP RE)

SEPP RE commenced on the 1 March 2022 and replaced the repealed State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 and Sydney Regional Environmental Plan No 9 – Extractive Industries (No 2-1995). The EIS provided information in relation to State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

The requirements of Chapter 2 - Mining, petroleum production and extractive industries of SEPP RE is applied to the proposed development and aims to provide for the proper management and development of resources for the purpose of promoting the social and economic welfare of the state, and to facilitate the orderly and economic use of land where resources are located, and the promotion of development of significant mineral resources and establish appropriate planning controls to encourage ecologically sustainable development. This chapter also establishes a gateway process particular mining and petroleum (oil and gas) developments.

Clause 2.9 – Development permissible with consent, clause (3) – Extractive Industry, subclause (a) applies to the land as the extractive industry on land on which development for the purpose of agriculture or industry may be carried out with or without consent. The proposed development is located within the RU1 Primary Production land use zone under the Gwydir Local Environmental Plan 2013 under which extensive and intensive plant agriculture are permissible without consent and where aquaculture, intensive livestock agriculture and extractive industries are permissible with consent.

Clause 2.17 requires the consent authority to consider whether or not the proposed extractive industry is compatibility with other land uses in the vicinity of the proposed development site.

The applicant's consideration of this clause of the SEPP is below:

"Section 5 of this EIS provides assessment of the potential environmental impacts of the proposal and outlines the measures that will be implemented to minimise those potential environmental impacts. Section 5.7 specially addresses the matter of land use conflict. Section 5.10 evaluates and compares the public benefit of the development. This EIS concludes that the proposal is compatible with the rural setting of the site and the surrounding rural land uses." (Pg 21, paragraph 2, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

and

"The potential impacts of land sue conflicts with sensitive receptors are typically caused by environmental nuisance in the form of dust, noise, odour and visual impacts. These aspects have been assessed by the EIS and it is considered that the proposal will not detrimentally impact the amenity of nearby sensitive receptors. Furthermore, the proposal achieves the minimum buffer distances recommended by the Department of Primary Industries of 1000m. The nearest sensitive receptor is over 1km away from the proposal. As such a suitable and safe buffer is provided between the proposal and the surrounding sensitive receptors.

The proposal is considered permissible within the current zoning and complies with all recommended separation distances. With the implementation of the proposed mitigation and management measures, the proposed development will not introduce any new impacts, to such an extent as to unacceptably reduce the amenity of surrounding sensitive land uses and rural residents. The proposal is therefore considered to be compatible with surrounding land uses." (Pg94-95, Section 5.7.4, par 3-4, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

and

"Management and mitigation measures for each of the elements comprising a potential social impact (eg. Noise, traffic, visual amenity and air quality) have been addressed in their relevant sections of the EIS". (Pg 99, Section 5.10.3, par 1, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Clause 2.18 requires the consent authority to consider any applicable provisions of the voluntary land acquisition and mitigation policy prior to the determination of an application for consent for State significant mining, petroleum production or extractive industry.

The applicant's consideration of this clause of the SEPP is below:

"Consideration of voluntary land acquisition and mitigation policy is not applicable in this instance as the proposal in not State Significant Development." (Pg 21, par 3, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Clause 2.19 applies to development applications for development on land that, immediately before the application determination, in the vicinity of an existing mine, petroleum production facility or extractive industry or identified as being the location of State or Regionally significant resources of minerals, petroleum or extractive materials or identified by an environmental planning instrument as being the location of significant resources of minerals, petroleum or extractive materials.

The applicant's consideration of this clause of the SEPP is below:

"Compatibility of proposed development with mining, petroleum production or extractive industry is not applicable because the proposal is not for development adjacent to mining, petroleum production or extractive industry." (Pg 21, par 4, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Clause 2.20 requires the consent authority to 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 impacts on surface and groundwater resources, impacts on threatened species and biodiversity and the minimisation of greenhouse gases.

The applicant's consideration of this clause of the SEPP is below:

"Section 5.5 addresses how potential surface water impacts are minimised to the greatest extent practicable and how potential groundwater impacts are avoided b not intercepting groundwater and

not relying on groundwater for operational water for the proposal. Section 5.2 addresses how potential impacts to threatened species and biodiversity are minimised to the greatest extent practicable and where there is a significant residual impact how it will be offset in accordance with the relevant State legislative requirements. Section 5.3 addresses how greenhouse gas emissions will be minimised to the greatest extent practicable by the proposal." (Pg 21, par 6, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Clause 2.21 requires the consent authority to consider the efficiency of the development in terms of resource recovery and whether or not the consent should be issued subject to conditions aimed at optimizing the efficiency of resource recovery and the reuse or recycling of material. This clause also allows the consent authority to refuse to give consent if it is not satisfied that the development will be carried out in such a way as to optimize the efficient recovery of extractive materials and to minimise the creation of waste in association with the extraction process.

The applicant's consideration of this clause of the SEPP is below:

"Section 5.9 addresses the waste anticipated to be generated by the proposal. The resource assessment identifies that there is minimal overburden. On that basis, large overburden stockpiles are unlikely to be required and any surplus overburden materials will be reused onsite for construction safety bunds and erosion and sediment controls, internal roads. Overburden and topsoil materials will also be reused in the rehabilitation of the site at the end of life of the proposal. On that basis, the proposal will recover the extractive materials in an efficient manner and will minimise the creation of waste." (Pg 22, par 2, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

and

"<u>Groundwater</u>
……Data collected during the GIA indicates that groundwater will not be encountered by the proposal. AS groundwater will not be encountered, groundwater dependent ecosystems are unlikely to be impacted. The proposal is not an aquifer interference activity. The proposal will not penetrate an aquifer, will not interfere with water in an aquifer, will not obstruct the flow of water and will not require dewatering of an aquifer. The proposal does not propose to use groundwater as part of the water supply. The proposal involves blasting, crushing and screening of rock therefore the proposal has little if any potential to add contaminants that could adversely impact groundwater quality.

<u>Surface water</u>
It is proposed to manage the disturbed quarry area by diverting all surface water to a sediment basin within each stage of quarry development as shown in Figure 25 – Stormwater Management Plan which is Figure 1 of the SWA. In order to meet the requirements of the EIS, the sediment basins are proposed to be designed, constructed and operated to retain the disturbed area runoff at the site in accordance with DECC (2008) Managing Urban Stormwater – Soils and Construction (Volume 2E)…… The quarry proposes to harvest surface water for reuse in operations through construction of the sediment basins. The sediment basins are proposed to be used for the treatment of surface water and also for reuse into quarry operations." (Pg 85, par 5, Pg 86, par 1 & 3, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Clause 2.22 requires the consent authority to consider whether or not the consent should be issued subject to conditions that require that some or all of the transport of materials in connection with the development is not to be by public roads, that limits or preclude truck movements that occur on roads in residential areas or near schools and that a code of conduct relating to transport of materials on public roads be prepared and implemented. This clause also requires the consent authority to advise, within 7 days receiving the development application, of an application each of the road authorities for those public roads used to transport materials from the development site and the Roads and Traffic Authority. The determination of an application by the consent authority cannot be undertaken until submissions from any road authority, received within 21 days after provision and the road authority is to be provided a copy of the determination.

The applicant's consideration of this clause of the SEPP is below:

"Section 5.1 addresses traffic and access impacts for the proposal including interactions with school buses." (Pg 22, par 4, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Clause 2.23 requires the consent authority to consider whether or not the consent should be issued subject to conditions to ensure rehabilitation of land. In particular, whether conditions that require the preparation of a rehabilitation plan, that ensure waste generated at the site is dealt with appropriately, that require any soil contamination resulting from the development be remediated in accordance with the relevant guidelines and to require steps to be taken to ensure that the state of the land during rehabilitation and at the completion of rehabilitation, is not jeopardizing public safety.

The applicant's consideration of this clause of the SEPP is below:

"The EIS sets outs that the proposal will be rehabilitated to a suitable landform for continuing rural activities" (Pg 23, par 2, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

and

"2.13 Rehabilitation

The objective of rehabilitation of the proposal are to a post extraction landform suitable for rural activities including but not limited to cattle grazing. As outlined on the rehabilitation management plan, the following measures are proposed:

Progressive Rehabilitation:
Rehabilitation is to commence in an area when:

1. *The terminal benches and the final pit floor are reached; and*
2. *The area is no longer required for operational or ancillary purposes; and*
3. *There is a minimum 100 metres of separation to the active working area(s).*

Terminal Benches:

- *Overburden and/or topsoil is to be respread over terminal benches;*
- *Rehabilitation is to be via natural regeneration of ecosystems;*
- *If revegetation is required, seeding or planting of species is to align with the pre-development ecosystem species.*

Final pit floor, hardstand and stockpile areas (and other low slope areas):

- *Slopes to be graded to fall to the sediment basin;*
- *Topsoil to be respread to a minimum depth of 100mm;*
- *Post extraction land use to comprise of rural activities consisting of pasture grasses or cropping.*

Waterbodies:

- *Sediment basin is to be retained as a clean water storage structure;*
- *Sediment is to be removed to convert the dam to a clean waste storage structure.*

Infrastructures:

- *Utilities and services will be retained;*
- *Access tracks and roads will be retained;*
- *Sediment basins will be retained as clean water storage structures;*
- *Plant, equipment and buildings (including demountable and mobile equipment) will be removed.*

As the site approaches the end of its lifecycle, topsoil resources, earth moving equipment and labour will already be available on the site and can be utilised for rehabilitation. Therefore, the rehabilitation costs reflected will mainly related to the purchase of seed and fertiliser for the reestablishment of grasses suitable to the continuation of rural uses of the site." (pg 16-17, Section 2.13, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

An assessment of the requirements of Chapter 2 of the SEPP RE have been considered and the following opinion is offered in relation to each of the clauses:

- Clause 2.17 – The proposed development is located in an area that has more than adequately separated from all surrounding sensitive receptors. There is only 1 sensitive receptor not associated with the development within a 2,000 metre radius of the development site and of the 5 sensitive receptors within a 5,000 metre radius of the development site, only 2 sensitive receptors are independently owned and have no associations with owners the proposed development is sited. It is considered that there will be very little significant impact on surrounding sensitive receptors caused by the proposed developments operations.
  The land surrounding the proposed development is predominantly used for irrigated and dryland cropping activities and to a lesser extent livestock grazing. The proposed development is in an elevated area of the landscape which has been previously use for quarrying and grazing. The operation of the proposed development is generally not considered incompatible with the continuation of cropping and grazing activities on the surrounding and adjoining lands. However, due to the possible use of blasting as part of the proposed developments operations and the proximity of the proposed development site to the eastern boundary of the property, there are concerns regarding rock fall within the neighbouring property to the east known as "Yannarie" (Lot 11 DP 755984). The applicant has provided a "Draft Blast Management Plan" (see Attachment 3 to this report), which states as a part of its management strategies the notification of the owner of Lot 11 DP 755984, 24 hours prior to a blast. It would appear that Lot 11 DP 755984 is used for both dryland cropping and grazing activities. There is a concern that 24 hours' notice is not enough time for the owner/s of the property to move machinery and in particular stock from within the possible rock fall area with the allotment. It is preferred that this time period be extended to 3-4 days and at the very least 2 days. This will give time for stock to be mustered and machinery to removed.

Alternatively, the possible rock fall area could be fenced off which would effectively sterilised a piece of agricultural land on an adjoining property.

- Clause 2.18 – No assessment of this clause is necessary as the proposed development site does not form part of any applicable provisions of a voluntary land acquisition and mitigation policy.

- Clause 2.19 – The proposed development site has not been identified on a map approved and signed by the Minister as being the location of State or regionally significant resources of minerals, petroleum or extractive materials. Nor is the site identified by an environmental planning instrument as being the location of significant resources of minerals, petroleum or extractive materials.

  In considering the proposed development a review of any existing approved extractive industries in the vicinity was undertaken. Two similar sized extractive industries are located approximately 5.5 kilometres to the southwest. These quarries are known as "Tiketere" and "Pearlmans". Although, these quarries are not located adjacent or in close proximity to the proposed development they also use Croppa Creek Road as their main haulage route. The existence of these quarries may not be considered incompatible with the proposed development, but the approval of the proposed development will place additional heavy traffic loads on the Croppa Creek Road. It is considered that a 'Driver Code of Conduct' and 'Traffic Management Plan' for the proposed development will need to address the existing heavy vehicle traffic on the proposed developments nominated haulage routes.

- Clause 2.20 – The proposed development EIS takes into consideration the treatment of surface water within the development site and around the development site by the construction of a controlled drainage area and adequate sediment basins. The depth of quarry floor has been established at a depth that will not directly intersect with groundwater resources, nor will the proposed development's water supply requirements be reliant on groundwater resources. The quarry footprint has been altered to avoid the disturbance/destruction of plant communities in modest habitat condition located along the north-western corner of the proposed footprint. No Threatened Species have been identified as residing within the quarry footprint. The quarry footprint has been positioned so that the areas impacted consist of very degraded/disturbed and partially cleared and grazed grasslands and previously excavated sites on the land. It is considered that the applicant has satisfied this clause's requirements to avoid and minimise impacts to threatened species and biodiversity.
  The proposal will result in greenhouse gas emissions due to the nature of the operation and the need for over land transportation of materials. The EIS states that emission controls will be employed at the site, including the procurement of energy efficient machinery and equipment for use on site, the encouragement of correct and efficient vehicle operations and maintenance, the reduction of vehicular movements within the site by the thoughtful positioning of stockpiles, overburden and topsoil, as well the reduction of vehicular movements offsite by employing teleconferencing and video links to facilitate meetings etc. This is considered satisfactory considering the nature and location of the development.

- Clause 2.21 – Overburden and topsoil shall be stockpiled at the site to be reused in the rehabilitation of the site. Other waste generated at the site shall be conditioned to be disposed of responsibly and in a way that maximise recycling potential. The efficiency of the

proposed developments operations shall fall to the thoughtful placement or layout of the site so as to minimise unnecessary machinery movements, however, due to the location of the proposed development there are no alternatives other the use of heavy vehicles and public roads for the haulage of material. There are some savings in the fact that the location of the proposed quarry will be within 50 kilometres or less of the material's final destinations in most circumstances.

- Clause 2.22 – As state above, due to the location of the proposed quarry, the operator as no alternative but to transport quarried materials over public roads. However, the location also provides for reasonably short haulage distances to the materials final destinations which will generally be to the Inland Rail Project - North Star to the QLD Border section and RMS infrastructure upgrades which are all within a 50-kilometre radius of the proposed development site. It is considered that this clause has been reasonably satisfied.

- Clause 2.23 – The EIS provides a limited rehabilitation plan, which is considered to need further development. The rehabilitation plan provided relies on the quarry operator being still in custody of the quarry site at the time of cessation of works or exhaustion of materials. This may or may not be the case. A Rehabilitation plan needs to be developed that does not wholly rely on the existence onsite resources such as machinery and manpower being readily available, and that monetary consideration be reserved so that rehabilitation of the site can still be undertaken no matter what circumstances are prevalent at the termination of quarry operations.

State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI)

SEPP TI commenced on the 1 March 2022 and replaced the repealed State Environmental Planning Policy (Infrastructure) 2007, State Environmental Planning Policy (Educational Establishments and Childcare Facilities) 2017, State Environmental Planning Policy (Major Infrastructure Corridors) 2020 and State Environmental Planning Policy (Three Ports) 2013. The EIS provided information in relation to State Environmental Planning Policy (Infrastructure) 2007.

Chapter 2 - Infrastructure of the SEPP TI is considered in relation to the proposed extractive industry. The remainder of SEPP TI does not apply to the proposed development. Chapter 2 aims to facilitate the effective delivery of state infrastructure and applies generally to the whole of the state. The proposed development was considered in relation to Subdivision 2 of Division 17 - Roads and Traffic Development under Part 2.3 - Development Controls as development in or adjacent to road corridors and road reservations and that is considered a Traffic-generating Development.

The applicant's consideration of this clause of the SEPP is below:

"The infrastructure SEPP provides a consistent planning regime for infrastructure and the provision of services and public works across NSW, along with providing for consultation with relevant public authorities during the assessment process. The proposed development is not identified in Schedule 3 of the SEPP as traffic generating development to be referred to the Roads and Maritime Services. The proposed development is therefore taken to be 'Any other purpose' under Schedule 3 and will not generate 200 or more motor vehicle movements per hour." (pg 24, par 5, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

Clause 2.121 applies to traffic generating development specified in Column 1 of the Table in Schedule 3 of the SEPP TI (formerly known as Schedule 3 of SEPP Infrastructure). An inspection of Schedule 3 failed to find Extractive Industries specifically listed. However, the schedule does provide for "Any other purpose" which is limited by the requirements in Column 2 – Size & capacity – site with access to a road (generally) and Column 3 Size or Capacity – site with access to classified road or to road that connects to classified road. The proposed development will have direct site access to a public road, being Minilya Road, so the requirements of Column 2 are now applied. These requirements read "200 or more motor vehicles per hour".

It is highly unlikely that the proposed development will involve the movement of 200 or more motor vehicles per hour, due to the time needed to load heavy vehicles with material and the limited amount of workforce on site at any one time. This view is supported by the applicants 'Traffic Impact Assessment' (TIA) (Appendix 7 of North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021). The TIA provides details of the expected light vehicle and heavy vehicle movements when the proposed quarry is operating at full capacity. The site is expected to have 10 full time employees who will provide for 5 light vehicle movements per day. The initial period of extraction, being the production of 490,000 tonnes per year for a period of 5 years. It is expected that this may generate an average of 46 heavy vehicle movements per day or at a rate of 4 trucks per hour. The applicant has indicated that even on an extremely busy day heavy vehicle numbers may consist of up to 24 movements per hour.

After the initial 5 years of productions at 490,000 tonnes per year, the extraction limit shall drop to 150,000 tonnes per year for a further 10 years. The applicant expects that heavy vehicle movements will reduce to 14 per day or 1-2 truck movements per hour.

The expected traffic generated by the proposed development shall be well short of the required 200 vehicle movements per hour. The requirements of SEPP TI is considered to be satisfied and no further assessment under this SEPP is required. It should be noted that regardless of the requirements of this SEPP the proposed development was referred to Transport for NSW, Moree Plains Shire Council and Gwydir Shire Council's Engineering Services team for comment and consideration of conditions of any consent, if given. Responses were received from all referrals are detailed in Section 4 of this report.

Gwydir Local Environmental Plan 2013 (GLEP)

The relevant local environmental plan applying to the site is the Gwydir Local Environmental Plan 2013 ('GLEP'). The aims of the GLEP include:

(aa) to protect and promote the use and development of land for arts and cultural activity, including music and other performance arts,

(a) to encourage the proper management, development and conservation of environmental, economic and social resources in Gwydir,

(b) to facilitate economic growth and development consistent with the aim specified in paragraph (a) and that—

(i) minimises the cost to the community of fragmented and isolated development, and

(ii) facilitates the efficient and effective delivery of amenities and services, and

(iii) facilitates stimulation of demand for a range of residential, enterprise and employment opportunities and promotes agricultural diversity, and

(iv) utilises, where feasible, existing infrastructure and roads when considering new development and future potential development,

(c) to facilitate development in accordance with flood management planning,

(d) to facilitate development that is compatible with adjoining and nearby uses,

(e) to facilitate development that is appropriate in scale and type to the characteristics of the zone,

(f) to identify, protect and conserve places of European heritage significance and Aboriginal heritage and cultural significance,

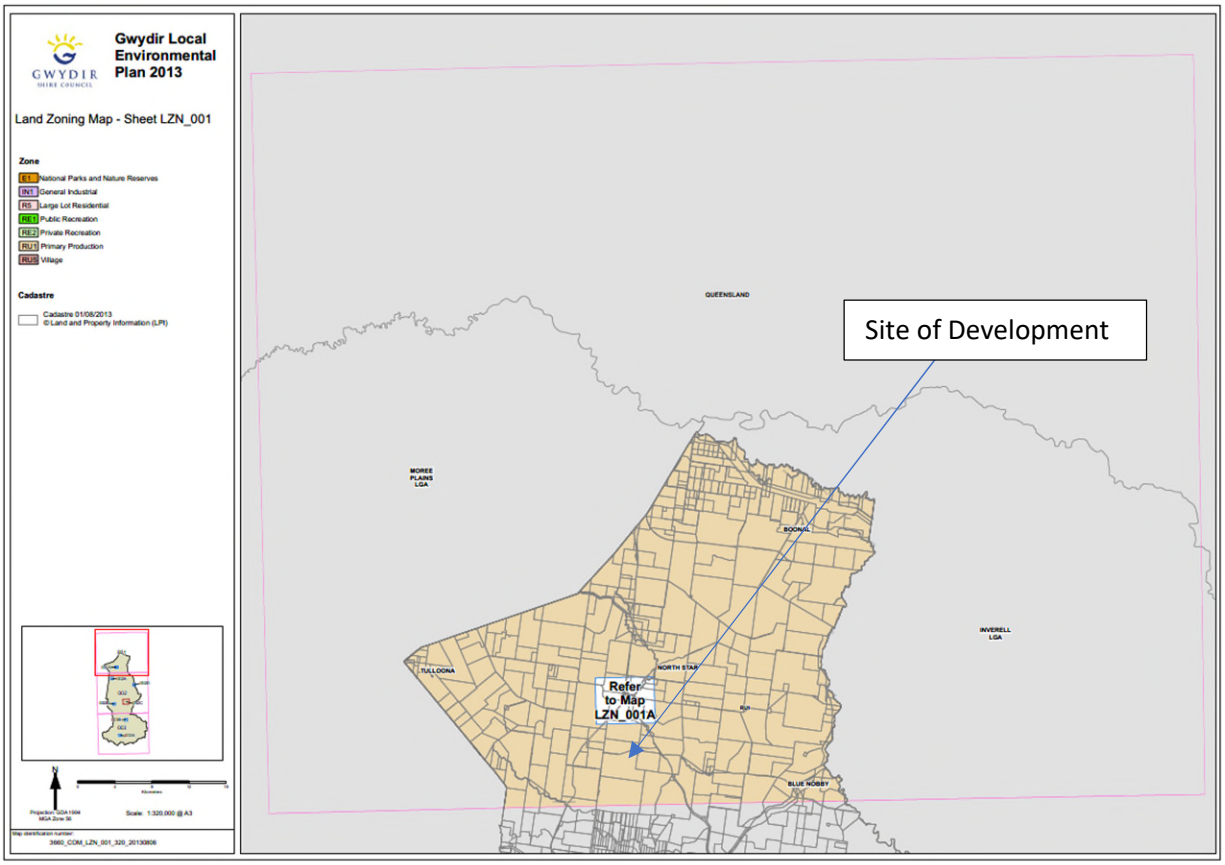
(g) to identify, protect, conserve and enhance natural assets.

The proposal is not considered inconsistent with these aims as the proposal:

- does not impact or limit the protection or promotion of land for arts and cultural activities;
- supports the proper management, development and conservation of environmental, economic and social resources within Gwydir;
- facilitates economic growth that minimises fragmentation and isolation of lands, does not impact the efficient and effective delivery of amenities and services, promotes agricultural diversity and utilises existing infrastructure and roads.
- Is located in area of elevated terrain and is unlikely to impact or increase any flooding in the landscape;
- Is considered compatible with adjoining and nearby land uses which predominantly consist of cropping and grazing activities;
- Is of an appropriate scale and type and is not unlike other similar development in the land use zone;
- Is not the site of any known Aboriginal or Non-aboriginal heritage or items of culturally significance; and
- Avoids, minimises and mitigates any impact on the areas natural assets.

Zoning and Permissibility (Part 2)

The site is located within the RU1 Primary Production Zone pursuant to Clause 2.2 of the GLEP.



According to the definitions in Clause 4 (contained in the Dictionary), the proposal satisfies the definition of an extractive industry (see definition below) which is a permissible use with consent in the Land Use Table in Clause 2.3.

> ***"extractive industry*** means the winning or removal of extractive materials (otherwise than from a mine) by methods such as excavating, dredging, tunnelling or quarrying, including the storing, stockpiling or processing of extractive materials by methods such as recycling, washing, crushing, sawing or separating, but does not include turf farming.
> **Note—** Extractive industries are not a type of ***industry***—see the definition of that term in this Dictionary."

The zone objectives include the following (pursuant to the Land Use Table in Clause 2.3):

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

The proposal is considered to be consistent with these zone objectives for the following reasons:

- The proposed development shall not impact the continuation of primary production or inhibit the implementation of sustainable primary production by maintaining and enhancing the natural resource base.
- The proposed development is a form primary industry enterprise diversification providing supplementary income to the areas predominant agricultural activities.
- The proposed development shall be located within an area underutilised for agricultural operations and shall not impede or restrict the continued agricultural activities in the immediate surrounding and adjacent lands and involves the utilisation of untapped resources in the land.
- The proposed development site is not located in the vicinity of or adjoining or adjacent to a land use zone other than the RU1 Primary Production land use zone and is therefore unlikely cause any conflicts between land uses in a different zone.

The applicant's consideration of this clause of the SEPP is below:

"The proposed development is for extractive industry, which is permissible, with development consent, within the RU1 Primary Production zone. The protection of natural resources and places has been considered by the proposal. The proposed use of the land for extractive industry provides productive use of these natural resources. The site would be returned to rural and agricultural uses at the end of life of the proposal with no significant change in land capability. The continued utilisation of the balance of the site for rural and agricultural uses will minimise potential fragmentation and alienation of agricultural land. The proposal is not considered to conflict with the adjoining land uses based on the assessments undertaken as part of this EIS. The proposed development is therefore considered to be both compatible and consistent with the surrounding land uses and meets the objectives of the RU1 Primary Production zone." (pg 25, par 1, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

General Controls and Development Standards (Part 2, 4, 5 and 6)

The LEP also contains controls relating to development standards, miscellaneous provisions and local provisions. The controls relevant to the proposal are considered in Table 4 below.

Table 1: Consideration of the LEP Controls

Control	Requirement	Proposal	Comply
Land acquisition (Cl 5.1)	Acquisition of land reserved for public purposes under Division 3 of Part 2 of the Land Acquisition (Just Terms Compensation) Act 1991	The proposed development site is not identified as land earmarked for acquisition for public purposes	Yes
Heritage (Cl 5.10)	This clause aims to conserve all types of heritage whether they be archaeological sites, Aboriginal objects or	The proposed development shall not demolish, disturb or alter any known aboriginal or non-aboriginal items of heritage, objects, building,	Yes

	places, non-aboriginal items or areas of significance or environmental heritage	work, relic or tree within a heritage conservation area	
Earthworks (Cl 6.1)	Development consent is required for earthworks unless those earthworks are exempt under a SEPP or are ancillary to development that is permitted without consent or has development consent	The proposed development by its very nature, involves earthworks. Consent is applied for by the lodgement of this development application for an extractive industry	Yes
Sensitive Lands (Cl 6.3)	This clause applies to land identified as "Sensitive" on the Sensitive Lands Map.	The site of the proposed development is not identified on the Sensitive Lands Map as "Sensitive" land.	Yes

The proposal is considered to be generally consistent with the GLEP.

3.2 Section 4.15 (1)(a)(ii) - Provisions of any Proposed Instruments

It is believed that there are no proposed instruments which have been the subject of public consultation under the EP&A Act, and which may be relevant to the proposal.

3.3 Section 4.15(1)(a)(iii) - Provisions of any Development Control Plan

There is no Development Control Plan that is relevant to this application

The following contributions plans are relevant pursuant to Section 7.18 of the EP&A Act and have been considered in the recommended conditions (notwithstanding Contributions plans are not DCPs they are required to be considered):

- Traffic Generating Development - S7.11 Development Contributions Plan 2011

This plan was adopted in April 2011 and was developed to ensure the operation of Traffic Generating Development does not adversely impact on local roads and allow Council to assess the demand for road maintenance, repair and reconstruction arising from Traffic Generating Development.

The purpose of the plan is to:

i. Provide an administrative framework under which specific public facilities strategies may be implemented and coordinated;

ii. To ensure the operation of Traffic Generating Development does not adversely impact on local roads. Assess the demand for road maintenance, repair and reconstruction arising from traffic generating development;
iii. To authorise the Council to impose conditions under section 94 of the Environmental Planning and Assessment Act 1979 when granting consent to development on land to which this plan applies;
iv. Provide a comprehensive strategy for the assessment, collection, expenditure accounting and review of development contributions on an equitable basis;
v. To minimise any adverse environmental and social impacts in terms of noise and dust to residences, road users and other development in the vicinity;
vi. Enable Council to be both publicly and financially accountable in its assessment and administration of this plan;
vii. To ensure that the existing community is not burdened by the costs of road works resulting from damage caused by heavy vehicles associated with the Traffic Generating Development;
viii. Demonstrate that the contributions have been set after due assessment for the likely needs and demands of the Traffic Generating Development in terms of access roads and their on-going maintenance;
ix. Justify the application of a levy for road works for each tonne of extracted/processed/produced material.

This plan applies to all Traffic Generating development and related operations that:-

- Require the use of road haulage vehicles to support the operation of the enterprise;
- Generate additional traffic movements above levels of traditional agricultural activities;
- Development which includes the following enterprises:-

  - Wool Scouring Plants
  - Abattoirs
  - Rendering Plants
  - Saleyards
  - Wood or timber milling or processing works including wood preservation works
  - Wineries or associated works
  - Warehouses
  - Light industry
  - Intensive Agricultural Enterprises
  - feedlots
  - poultry farms
  - piggeries
  - dairies
  - Composting Works
  - Transport Terminals
  - Grain Storage Complex
  - Feed mills
  - **Extractive Industries**
  - Mine
  - Rural Industry

The proposed development being an extractive industry triggers its consideration under this Contributions Plan and appropriate conditions have been included in the draft consent conditions. Please note that the proposed development was referred to Moree Plain Shire Council and Gwydir Shire Council's Engineering Team for comment and consideration of conditions to be included with any consent. Response to these referrals is covered in greater detain in Section 4 of this report.

The applicant's consideration of this clause of the SEPP is below:

"The development is subject to both the Gwydir Shire Council 'Section 94 Development Contributions Plan No 1 – Traffic Generating Development' (April 2011) (DCP) and the Moree Plains Shire Council 'Section 94 Development Contributions Plan – Traffic Generating Development' (April 2016. The contribution plans allow the Council's to levy contributions from traffic generating developments under Section 7.11 (previously Section 94) of the Environmental Planning and Assessment Act 1979. These contributions are typically utilised to cover the costs of maintenance, repair and reconstruction of roads as a result of damage caused by heavy vehicles generated by the development.

The payment of contribution fees is therefore considered essential to compensate the Council's for any impacts on existing road conditions as a result of the proposed development. Council does not collect such contributions from local road users such as farming operations where no development consent is present, being the planning instrument, which triggers the opportunity for Council to secure contributions for specific operations. Landholders pay rates to Council in lieu of road contributions." (Pg 41, par 8, and pg 42, par 1, North Star Quarry Environmental Impact Statement, prepared by Regional Quarries Australia Pty Ltd, dated July 2021).

3.4 Section 4.15(1)(a)(iiia) – Planning agreements under Section 7.4 of the EP&A Act

There have been no planning agreements entered into and there are no draft planning agreements being proposed for the site.

3.5 Section 4.15(1)(a)(iv) - Provisions of Regulations

Clause 61 of the Regulation contains additional matters that must be taken into consideration by a consent authority in determining a development application, comprising the following:

1. If demolition of a building proposed - provisions of AS 2601-2001;
2. If on land subject to subdivision order under Schedule 7, provisions of that order and any development plan;
3. Dark Sky Planning Guideline if applicable;
4. Low Rise Housing Diversity Design Guide for Development Applications (July 2020) if for manor house or multi dwelling housing (terraces).
5. Adequate assessment 4. where no development control plan adequately addresses the development
6. Consideration of Development Assessment Guidelines: An Adaptive Response to Flood Risk Management for Residential Development in the Penrith City Centre
7. Consideration of the Wagga Wagga Special Activation Precinct Master Plan.
8. Consideration of the Moree Plains Special Activation Precinct Master Plan.

These provisions have been considered and addressed in the draft conditions (where necessary).

3.6 Section 4.15(1)(b) - Likely Impacts of Development

The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality must be considered. In this regard, potential impacts related to the proposal have been considered in response to SEPPs and LEP controls outlined above and the Key Issues section below.

The consideration of impacts on the natural, social, economical and built environments includes the following:

Context and setting

North Star is a small village with a population of approximately 80 and is located within the extensive cropping area known as the "Golden Triangle". The Golden Triangle encloses the area between Goondiwindi, Warialda, Tamworth, Gunnedah, Dubbo, Moree and back to Goondiwindi.

North Star is located in the northern point of the triangle and is typified by low undulating to flat landforms, interrupted by basalt outcrops and ridgelines sparsely covered in remnant native vegetation. North Star stands out from the horizon due to its massive grain silos built along the railway line in the 1950's. North Star supports a greater region of farming enterprising by providing basic amenities including a public school, a shop and service station, churches, agricultural supplies, a sporting club, and a community hall.

The proposed development is located approximately 5.7 kilometres south of the North Star village. When assessing a development in relation to this existing rural setting and extensive cropping context of the area, an extractive industry such as proposed by this application would be found on the face of things, out of place. However, the greater area surrounding the proposed development and within the North Star region supports several extractive industries of similar sizes and several smaller ones along with other complimentary forms of agri-business, such as feedlotting.

The rocky basalt outcrops and ridges, although not considered valuable cropping land, have proven to be a great source of extractive material and allows for landowners to economically diversify and mobilise further land resources. The proposed development is located on low lying ridgeline surrounded by farmed lands on three sides and used of grazing on the fourth. The area surrounding the proposed development is also the location of scattered homesteads and other essential agricultural infrastructure which also need to be considered when assessing the impacts of the proposed development. A measurement of separation distanced from the proposed quarry site and the surrounding homesteads has concluded that the nearest residential building not associated with the proposed development is located approximately 1.5 kilometres to the east of the proposed development site. It is considered that any felt impacts at this residence will be minor due to this more than satisfactory separation distance.

The proposed development is located over the site of a previous quarry used by the owner for on farm road maintenance and establishment of agricultural infrastructure. The material extracted from this existing quarry as also been used by the Gwydir Shire Council from time to time for the maintenance of local roads. The main catalyst for the existing approved 20,000 m^3/yr quarry to be increase in size has been (along with the other quarries of a similar size in the area) the need for materials to support

the northern section of the Inland Rail Project, which covers the upgrade/re-establishment and construction of the railway line from North Star to the Queensland border (this is also the case for the need for other quarries of a similar size in the area). Additionally, the Newell highway upgrade will be supplied by material for the proposed development.

It is considered that the proposed development, although not classified as agricultural in nature, is acceptable to the area. The existing site having been the location of a past quarry operation and the expected lack of interference the increased quarry operation with have on the continuation of existing cropping and other farming practices in the area, indicates that the proposed development will not face any undue resistance or cause any undue interference to the established agricultural setting as long as any impacts are mitigated appropriately through conditioning any consent.

Access and traffic

The proposed developments haulage routes have been split into two sections according to the proposed developments main extractive material supply to two significant projects, being the Inland Rail Project (Northern Section) and the Newell Highway Project.

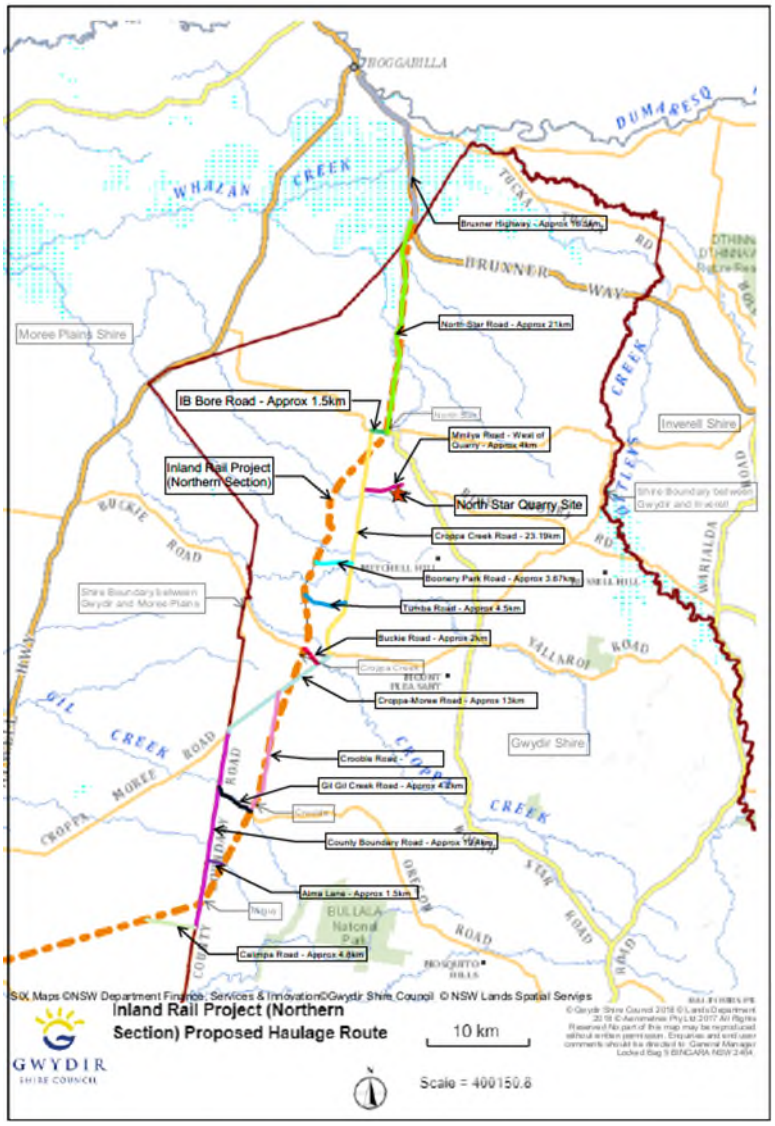
Haulage Routes proposed for the Inland Rail Project (Northern Section) includes (Also mapped below):

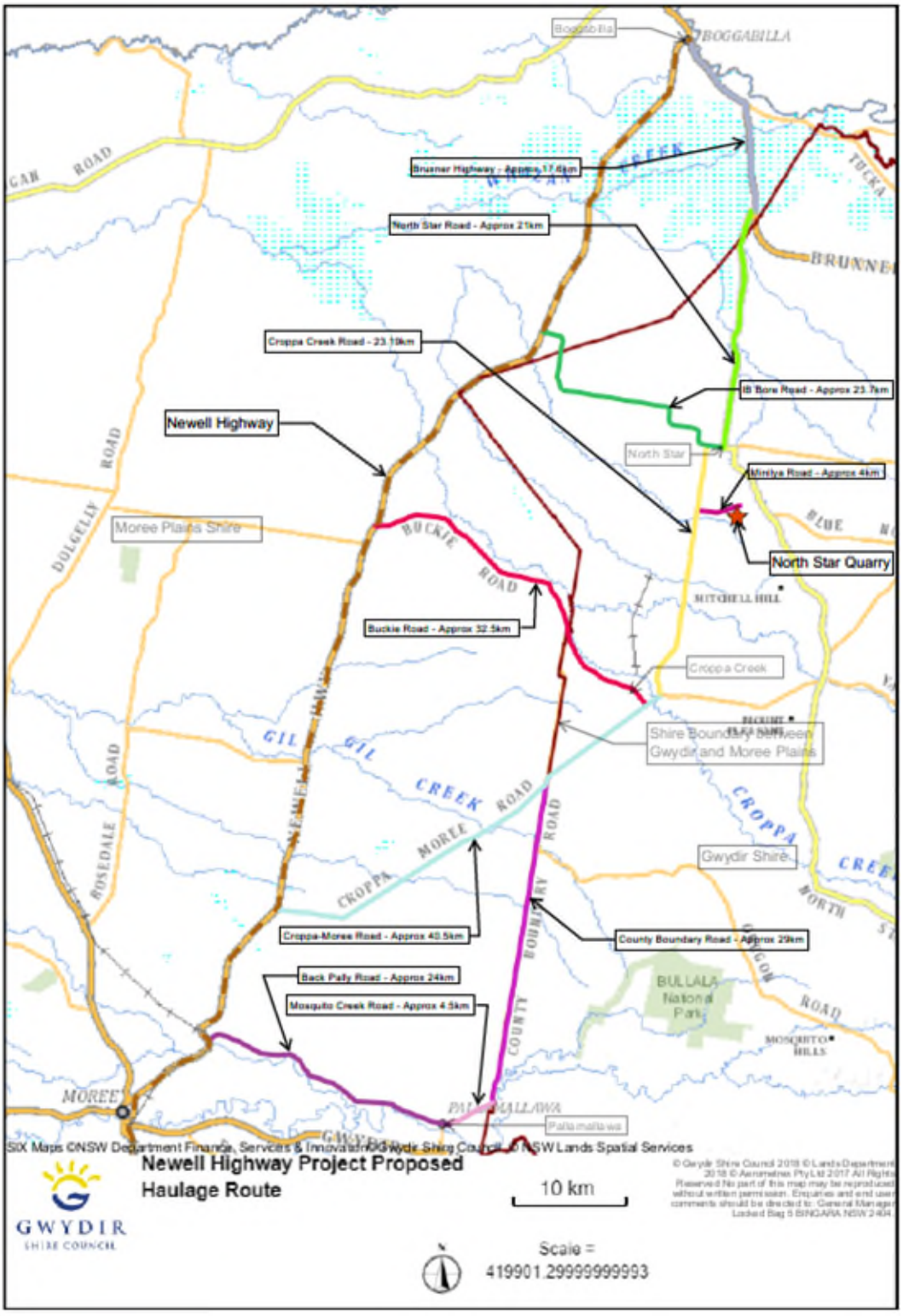
Road Name	Approximately proposed haulage distance on each road (metres)
Minilya Road	4,000
Croppa Creek Road (Traffic Impact Assessment identifies this road as the Croppa Creek-North Star Road)	23,200
North Star Road (Traffic Impact Assessment identifies this road as the North Star-Boggabilla Road)	21,000
Bruxner Way	16,500
County Boundary Road	19,400
IB Bore Road	1,500
Boonery Park Road	3,700
Tumba Road	4,500
Croppa-Moree Road	13,000
Buckie Road	2,000
Crooble Road	12,340
Gil Gil Creek Road	4,200
Alma Lane	7,100
Plevna Lane (Private Road)	2,200
Calimpa Road	4,800

Haulage Routes proposed for the Newel Highway Project includes (Also mapped below):

Road Name	Approximately proposed haulage distance on each road (metres)
Minilya Road	4,000
Croppa Creek Road	23,200

(Traffic Impact Assessment identifies this road as the Croppa Creek-North Star Rd)	
North Star Road (Traffic Impact Assessment identifies this road as the North Star-Boggabilla Rd)	21,000
Bruxner Way	17,600
County Boundary Road	29,000
IB Bore Road	23,700
Croppa-Moree Road	40,500
Buckie Road	32,500
Back Pally Road	24,000
Mosquito Creek Road	4,500




Brusner Highway - Approx 17.6km
North Star Road - Approx 21km
Croppa Creek Road - 23.10km
IB Bore Road - Approx 23.7km
Newell Highway
Mirelya Road - Approx 4km
North Star Quarry
Moree Plains Shire
Buckie Road - Approx 32.5km
Croppa Creek
Shire Boundary between Gwydir and Moree Plains
Gwydir Shire
Croppa-Moree Road - Approx 40.5km
County Boundary Road - Approx 29km
Back Pally Road - Approx 24km
Mosquito Creek Road - Approx 4.5km
BOGGABILLA
MOREE
Pallamallawa
BULLALA National Park
MOSQUITO HILLS
MITCHELL HILL
BUCKIE ROAD
GIL GIL CREEK ROAD
CROPPA MOREE ROAD
COUNTY BOUNDARY ROAD
ROSEDALE ROAD
DOLGELLY ROAD
GWYDIR HIGHWAY
CROPPA CREEK
Six Maps ©NSW Department Finance, Services & Innovation ©Gwydir Shire Council ©NSW Lands Spatial Services
Newell Highway Project Proposed
Haulage Route
10 km
Scale =
419901.29999999993
GWYDIR SHIRE COUNCIL

Villages impacted by the above haulage routes include:

- North Star - Edward Street
- Pallamallawa – Centre Street and Pallamellowa Street
- Croppa Creek – Buckie Road
- Crooble – Railway Street
- Boggabilla – North Street and Merriwa Street

Summary of Roads proposed for haulage routes:

Road Name	Shire	Length Impacted (Approx)	Road Status	Surface	Average Width	Safety issues	All weather accessible
Minilya Road	GSC	4km	Minor Shire Road (SH201)	Unsealed	Single Lane	- Unsealed surface - Narrow gravel pavement	No – Not usable during rain events or other extreme weather events
Croppa Creek Road (TIA refers to this as the North Star Road or Croppa Creek - North Star Road)	GSC	24km	Arterial Shire Road (SH007)	Sealed	6.3m	- School Bus Route - Pavement Damage -	Yes (except in extreme weather events)
North Star Road – North of Buckie Road (TIA refers to this as the North Star-Boggabilla Road)	GSC MPSC	19.1km (this includes 770m being Edward Street North Star) 2.75km	Regional Road (RR 7705)	Sealed	7m	- School Bus Route - Contains a 40km/hr School zone at North Star - Heavy vehicles will need to drive through Edward Street North Star - Pavement Damage - Potholes - Movement through North Star Village via Edward Street which runs past a North Star Public School	Yes (except in extreme weather events)
County Boundary Road	Both GSC & MPSC	Winds in and out of each shire and is maintained by each shire in their various sections.	Arterial Shire Road (SH041)	Both unsealed and sealed (Sealed in southern section of road maintained by MPSC for approx 10-15km north from	5.5m unsealed 6.5-7m sealed	- School Bus Route - Pavement Damage - Potholes - Sections of narrow unsealed pavement	Yes (although, unsealed sections can be closed during wet weather especially to heavy vehicles and the entire road maybe

				Mosquito Creek Road intersection)			closed during extreme flooding events)
Croppa-Moree Road	GSC MPSC	12.57km 27-28km	Arterial Shire Road (SH005)	Sealed	6-7m	- School Bus Route - Pavement Damage mainly in GSC maintained section - Severe causeway where road pavement narrows also in GSC maintained section - Potholes - "S" bend where Croppa-Moree Road crosses County Boundary Road at shire boundary	Yes (except in extreme weather events)
IB Bore Road	GSC MPSC	21.5km 2.188km	Arterial Shire Road (SR009)	Sealed for 1.54km of length the rest is Unsealed but is in the pipeline to be upgraded and sealed	5.5-6m unsealed	- School Bus Route - No line marking - Several significant sharp bends	No – Not usable during rain events or other extreme weather events until such time as the upgrade and sealing works are complete
Buckie Road	GSC MPSC	7.88km 24.62km	Collector Shire Road (SR043)	Sealed for 0.21km of the length within GSC from western side of Croppa Creek to the Croppa-Moree Road. The remainder is unsealed until approximately 14.5km from its western end of the road which is sealed and maintained by the MPSC	5.5-6.8m	- School Bus Route - Contains a 40km/hr School zone at Croppa Creek - Heavy vehicles will drive through northern outskirts of Croppa Creek - Pavement deformation - No line marking	Yes (except in extreme weather events)
Bruxner Way / Bruxner Highway	MPSC	17.6km	Regional Road (MR 462)	Sealed	7-8m	- School Bus Route - Heavy Vehicles will need to drive through	Yes (except in extreme weather events)

						Boggabilla to get to Newell Highway - Pavement deformation - Limited line marking	
Crooble Road	GSC	12.34km	Local Shire Road (SH255)	Unsealed for most of its length accept for 0.12km which is sealed	5.5-6m unsealed	- Dry weather access only - Heavy Vehicles will drive through Crooble via Railway Street	No – Not usable during rain events or other extreme weather events
Gil Gil Creek Road	GSC	4.2km	Collector Shire Road (SR063)	Unsealed	5.5-6m unsealed	- Dry weather access only - Unsealed surface - Narrow gravel pavement	No – Not usable during rain events or other extreme weather events
Boonery Park Road	GSC	3.7km	Local Shire Road (SH077)	Unsealed	5.5-6m unsealed	- Dry weather access only - Unsealed surface - Narrow gravel pavement	No – Not usable during rain events or other extreme weather events
Tumba Road	GSC	4.5km	Minor Shire Road (SH272)	Unsealed	5.5m unsealed	- Dry weather access only - Unsealed surface - Narrow gravel pavement	No – Not usable during rain events or other extreme weather events
Plevna Lane	GSC	2.2km	Privately owned Road	Unsealed	5.5m unsealed	- Dry weather access only - Unsealed surface - Narrow gravel pavement	No – Not usable during rain events or other extreme weather events
Alma Lane	GSC	7.1km	Minor Shire Road (SH258)	Unsealed	5.5m unsealed	- Dry weather access only - Unsealed surface - Narrow gravel pavement	No – Not usable during rain events or other extreme weather events
Calimpa Lane	MPSC		Not Known	Unsealed	7.5-8m	- Dry weather access only - Unsealed surface	No – Not usable during rain events or other extreme weather events
Mosquito Creek Road	MPSC	4.5km	Arterial Shire Road	Sealed	7.5-8m	- School Bus Route - Heavy Vehicles will need to drive through Pallamallawa via Centre Street and Pallamellowa Street to get to Back Pally Road	Yes (except in extreme flood events)

						- Pavement deformation - No line marking	
Back Pally Road / Mosquito Creek Road – Road from Pallamallawa to Newell Highway	MPSC	24km	SR106	Sealed	7.5-8m	- School Bus Route - Heavy Vehicles will need to drive through Pallamallawa via Centre Street and Pallamellowa Street to get to Back Pally Road - Pavement deformation - No line marking	Yes (except in extreme flood events)

Traffic data is only available for Croppa Creek Road, I B Bore Road, North Star Road, Bruxner Way, Croppa-Moree Road and the Newell Highway. The most recent counts for each are tabled below:

Road	Date of Count	Total Average Daily Traffic	No Heavy Vehicle per day	% Heavy Vehicle Traffic per day
Croppa Creek	Dec/Jan 2017	138.0	28.0	20.3%
I B Bore	March 2017	18	2.43	13.5%
North Star	March 2017	297	55.69	55.69%
Bruxner Way	June/July 2013	190.57	23.49	23.49%
Croppa-Moree	March/April 2017	106	21.10	21.10%
Newell Highway	2018	3822	1299.48	34%

Please note that the over traffic counts do not take into account the heavy vehicles being deployed from the two (2) 490,000-500,000 tonne/year quarries known as “Pearlman’s” and “Tikitere” located on the property “Tikitere”, 1375 Croppa Creek Road North Star, that commenced operations in 2018-2020. These two quarries’ also use Croppa-Moree Road, Croppa Creek Road, North Star Road, Bruxner Way, Buckie Road, Boonery Park Road, Crooble Road, Tumba Road, I B Bore Road and the Newell Highway as haulage routes. Pearlman’s Quarry’s heavy vehicle impact was predicted to be an additional 39 heavy vehicle movements per day when operating at full capacity and Tikitere Quarry’s predicted additional heavy vehicle movement was 94 movement per day (Please note that a movement is one-way ie. A truck entering and leaving is considered two movements). This would increase of the above number of Heavy vehicles per day using the primary haulage routes of Croppa Creek Road, North Star Road, Croppa-Moree Road, Bruxner Way, I B Bore Road and the Newell Highway by 133 heavy vehicle movements per day or 66.2 trucks per day (when the Pearlman’s and Tikitere Quarries are operating at full capacity). The below table factors in the cumulative impact of Pearlman’s and Tikitere Quarries haulage into the above traffic average daily traffic counts.

Road	Date of Count	Total Average Daily Traffic	No Heavy Vehicles per day	Predicted Heavy Vehicles per day when “Tikitere” & “Pearlman’s” Quarries are	Cumulative Total of Heavy Vehicles per day adjusted to include	Cumulative % Heavy Vehicles per day

				operating at full capacity. Operations commenced in 2018-2020	movements from 'Tikitere' & 'Pearlman's' quarries	
Croppa Creek	Dec/Jan 2017	138.0	28.0	66.2	94.2	68.26%
I B Bore	March 2017	18	2.43	66.2	68.63	381.27%
North Star	March 2017	297	55.69	66.2	121.89	41.04%
Bruxner Way	June/July 2013	190.57	23.49	66.2	89.69	47.06%
Croppa-Moree	March/April 2017	106	21.10	66.2	88.3	83.30%
Newell Highway	2018	3822	1299.48	66.2	1365.68	35.73%

The proposed North Star Quarry's Traffic Impact Assessment predicts that up to 92 heavy vehicles will use the above primary haulage routes per day, being an additional 184 heavy vehicle movements per day when being operated at full capacity. The below table factors in the North Star Quarry's haulage of material into the above cumulative daily traffic averages.

Road	No Heavy Vehicles per day	Average Heavy Vehicles per day from "Tikitere" & "Pearlman's" Quarries which commenced in 2018-2020	Cumulative Total of Heavy Vehicles per day adjusted to include movements from 'Tikitere' & 'Pearlman's' quarries	Proposed North Star Quarry Heavy Vehicle per day	Total predicted Heavy Vehicle per day	**Predicted % Increase in Heavy Vehicle per day when North Star Quarry is full operational**
Croppa Creek	28.0	66.2	94.2	92	186.2	**97.66%**
I B Bore	2.43	66.2	68.63	92	160.63	**134.05%**
North Star	55.69	66.2	121.89	92	213.89	**75.47%**
Bruxner Way	23.49	66.2	89.69	92	181.69	**102.57%**
Croppa-Moree	21.10	66.2	88.3	92	180.3	**104.19%**
Newell Highway	1299.48	66.2	1365.68	92	1457.68	**6.74%**

The increase in heavy vehicle traffic on the primary haulage routes when all three quarries are operating at peak capacity is considered significant and would potentially create issues relating to road safety, dust on unsealed roads and pavement wear and tear. Additionally, most if not all these

primary haulage routes are School Bus routes, and some haulage of materials will be undertaken through small urban areas with School zones. These are considered key issues for the proposed development to address.

The proposed development is subject to both the Gwydir Shire Council "Section 94 Development Contribution Plan No. 1 – Traffic Generating Development" (April 2011) (DCP) and the Moree Plains Shire Council "Section 94 Development Contribution Plan – Traffic Generating Development" (April 2016). These plans allow Council to levy contributions for various traffic generating development under section 7.11 (previously Section 94) of the Environmental Planning and Assessment Act 1979. Due to the significant increase in heavy vehicle traffic proposed by the North Star Quarry these contribution fees are considered essential to compensate the Gwydir Shire Council and the Moree Plains Shire Council for any impacts on existing road conditions resulting from the proposed North Star Quarry.

The proponent advises in the Traffic Impact Assessment (Attachment 7 of the Environmental Impact Statement) that the following key components will form part of the Drivers Code of Conduct and Induction procedures:

- Speed Limits are to be adhered to. The limits of speed through village areas, along gravel roads, adjacent to homesteads (located within 100m of a gravel road) and importantly school bus hour operating times;
- Use only approved haulage routes;
- Abide by Drug and Alcohol Policy under North Star Quarry HSE Policy;
- Adhere to site operating conditions for traffic management of noise and dust emissions;
- Adhere to approved operating hours;
- Report all incidents and complaints to Quarry management;
- Ensure there is no loading over registered mass;
- Use of appropriate cover and secure loads before leaving the quarry and check for loose material on trailers before leaving delivery sites;
- Always drive in a manner that is in accordance with road conditions;
- Reduce engine brake noise to respect community;
- In the event of an environmental incident, make sure every endeavour is taken to contain and minimise environmental harm;
- Adhere to professional and appropriate sue of two-way and maintain communication with other road users via two-way when required;
- Acknowledge courteous acts by others;
- Designated School Bus Routes and operating times shall form part of all operator inductions when engaged by the quarry.

The proponent proposes the following dust management measures:

- Enforce a maximum speed of 40km/hr on internal roads;
- Keep trafficable areas as clean as possible;
- Maintain road surfaces in good condition;
- Use water sprays on trafficable areas.
- Ensure loads are appropriately contained and covered prior to leaving quarry site;

- Remove spillages form side rails, tailgates and draw bars of trucks (following loading and tipping);
- Securely fix tailgates of all material transport vehicles prior to loading to prevent material spillage or loss.
- Alternative dust management strategy on gravel road would involve watering or the use of dust stabilisation fluids.

The proponent also proposes the following noise management measures;

- Heavy vehicle traffic being limited to the hours of operations in accordance with the conditions of consent;
- Enforce a maximum speed of 40km/hr on internal roads;
- Operate well-maintained plant, vehicles and equipment, and ensure all plant, vehicles and equipment are serviced in accordance with, or more frequently than, manufacturers' specifications;
- Avoid unnecessary revving of engines;
- Ensure that any extraneous noises are rectified;
- Avoid the use of compression braking on product delivery trucks in residential areas;
- Selective approach to trailer bodies to limit noise generation from empty trailers on all pavements.

The proponent has also advise as a part of the Environmental Impact Statement that upgrades to the site access and internal roads within Minilya will require upgrades to be suitable for the potential peak traffic movements, including the construction of an appropriate intersection into the quarry site from Minilya Road and well as the widening of Minilya Road to either a 2 lane haul road or installation of "Whale berms" to allow empty truck to wait on the side of the road for loaded trucks to pass prior to entering the site load. The proponent also advise that upgrade works will also be required the Minilya Road – Croppa Creek Road (call North Star Road in the EIS) intersection to provide safe entry and exit for trucks. Work will include extending the bitumen seal on Minilya Road for approximately 30m and re-alignment of the intersection to meet Austroad standards. Additionally Quarry management will need to continue an active program of avoiding unsealed roads during and immediately after extreme weather events.

The proposed development was referred to Gwydir Shire Council's Technical Services Team and the Moree Plains Shire Council for general terms/conditions that will be included in the "Draft Schedule of Conditions" (Appendix A). These conditions will state the s94 (s7.11) contribution rate/fee required to be paid for the haulage of materials over Council roads or require the proponent to enter negotiations with Council to establish an appropriate s94 (s7.11) contribution fee. Other conditions shall be included in the "Draft Schedule of Conditions" relating to the development of a Traffic Management Plan and Driver Code of Conduct, as well limitations on the use of unsealed roads during extreme weather conditions/events, the upgrade of intersection where required, upgrade works required to haulage routes where needed, minimum dust control measures, limitation on hours of operation, minimum noise control measure and the safe handling of heavy vehicles in school zones and along school bus routes.

The proponent "Regional Quarries Australia" would commit to:

- The payment of heavy haulage contribution fee within 30 days for the end of the month
- Continued liaison with the community along the haulage routes

- The construction of a new intersection from Minilya Road and upgrading the Minilya Road to accommodate heavy vehicles in accordance with the Austroad specifications and bitumen sealed for a minimum of 35 metres from the Croppa Creek Road (called North Star Road in the EIS)
- Comply with the conditions of approval as issued by the Gwydir Shire Council.

The EIS recommends that should a situation occurs where all three quarries (being Tikitere, Pearlman's and North Star) become operational at the same time, that a traffic management plan be developed for all three quarries to work together to ensure road safety can be maintained, road maintenance can be managed by Council's and other users can safely use the local road network, especially during grain harvest periods.

The EIS admits that the use do the local road network by the quarry will result in some damage, however overall no specific road safety issues where identified that require immediate action other than the Minilya Road.

Public Domain

The proposed development is considered to have very little impact on the public domain. The proposed development is in an open rural area dominated by dryland and irrigated cropping operations. The proposed development is located on area of land which is not currently used for cropping and will not interfere with the current properties cropping operations but is considered to compliment and diversify the properties current agriculturally based operations.

The proposed development does not limit pedestrian access or damage public open spaces due to its isolated rural location. No further assessment for this section has been offered either by the assessing Council or the proponent.

Utilities

The site has limited access to utilities, infrastructure or services. The constraints of the site shall be overcome by providing the following;

- Electricity shall be provided to the proposed development by a diesel generated when needed;
- Portable water will be sourced from rainwater and stored onsite in rainwater tanks or sourced from a licensed water supplier;
- Water for dust suppression shall be sourced from the sediment basins onsite or from a water supplier;
- Telecommunication shall be provided by mobile phone;
- Sewerage shall be handled via the installation of a portable pump out facility serviced by a licenced waste contractor; and
- A small diesel tank may be stored on site in a self-bunded container in accordance with AS 1940-2017 The Storage of Flammable and Combustible Liquids

Due to the remote location of the propose quarry the above measure provided by the proponent as considered appropriate.

Heritage

An Aboriginal Archaeological & Historic Heritage Assessment was undertaken by OzArk and is presented as Appendix 12 of the EIS. The field work component of this assessment was undertaken by OzArk Archaeologist, Taylor Foster, on Monday 19 April 2021 and a visual inspection was conducted by the Toomelah Local Aboriginal Land Council on 17 May 2021.

No Aboriginal sites, sensitive landforms or potential archaeological deposits were recorded during the survey. Like wise no items of historical significance were recorded.

The assessment recommended the following in relation to Aboriginal values and historical values with the site:

- The proposed work may proceed at North Star Quarry without further archaeological investigation under the following conditions:
    - All land and ground disturbance activities must be confined to within the archaeological surveyed area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the Proposal extend beyond the assessed areas, the further archaeological assessment may be required.
    - All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
- The assessment has concluded that there is allow likelihood that the proposed work will adversely harm Aboriginal cultural heritage sites. However, if Aboriginal objects are identified during the construction and operation of the proposal, all work should cease and the procedures in the Unanticipated Finds Protocol should be followed.
- In the event of skeletal remain being identified during the construction and operation of the proposal, the Unanticipated Skeletal Remains Protocol should be followed.
- Inductions for work crews should include heritage awareness procedure to ensure they recognise Aboriginal artefacts and are aware of the legislative protection of Aboriginal objects under the National Parks and Wildlife Act 1974 and the contents of the Unanticipated Finds Protocol.
- In the unlikely event that historical relics or deposits are unearthed during the proposed works, the Historical Heritage Unanticipated Finds Protocol should be followed.

It is considered that the procedures undertaken, the findings of the Aboriginal Archaeological & Historic Heritage Assessment and the recommendations above are satisfactory and no further assessment is required. It is noted that the draft conditions of consent shall emphasis the proponent's legislative responsibilities in relation to unanticipated finds and the required protocols.

Water/air/soils impacts

Ground Water

The site is located within an area covered by two groundwater management units:

1 Great Artesian Basin (GAB) is part of the "Eastern Recharge Zone" Ground Water Management Unit. The Water Sharing Plan for NSW Murray Darling Basin Fractured Rock Groundwater

Sources 2020 did not identify any priority Groundwater Dependant Ecosystem's (GDE's) within 2km of the proposed extraction and processing area.

2 Murray Darling Basin Fractured Rock "New England Fold Belt" Groundwater Unit. The Water Sharing Plan for NSW Murray Darling Basin Fractured Rock Groundwater Sources 2020 did not identify any priority GDE's within 2km of the proposed extraction and processing area.

However, the Water Sharing Plan for NSW Great Artesian Basin Groundwater Sources 2020 did indicate there is a high probability that major drainage in the North Star area (including Mungle Creek) have medium to high value groundwater dependent vegetation. At its closest point the proposed extraction area is located approximately 900m from Mungle Creek, which is located approximately 13m below the maximum depth of the proposed extraction area. The maximum depth of the quarry floor is proposed to be at 323m AHD which is less than 20m below the pre-development surface elevation.

Ground Doctor Pty Ltd produced a Groundwater Impact Assessment for the North Star Quarry (Appendix 13 of the EIS) on behalf of Regional Quarries Australia Pty Ltd, dated 12 March 2021. As a part of this study three monitoring bores were positioned in locations around and within the proposed development site.

- Monitoring Bore 1 (MB1) was installed approximately 50m to the southeast of the proposed extraction area;
- MB2 was installed 20m to the West of the proposed extraction area;
- MB3 was installed in the northern section within the proposed extraction area.

Details and depths of the boreholes drilled on the 28-29 January 2021 are summarized below:

Bore	Surface RL (m AHD)	Depth of bore (m bgl)	Bottom of hole RL (m AHD)	Hole Status
MB1	341m	25m	316m	Dry
MB2	327m	19m	308m	Dry
MB3	336m	25m	311m	Dry

As seen from the table above the status of the boreholes were dry at the time of installation. The boreholes where reinspected on the 15 February 2021 and again each borehole was gauged and found to be dry.

As groundwater was not encountered in any of the three bore holes drilled (which were drilled to a depth of least 6m below the maximum proposed quarry floor being 323m AHD) the proposed development is not considered an aquifer interference activity. The nearest eight registered groundwater works to the proposed quarry site indicate that the regional water table is at least 50m below the maximum proposed depth of excavations.

The Groundwater Impact Assessment undertaken by Ground Doctor Pty Ltd, dated 12 March 2021 (see Appendix 13 of EIS) states:

"The proposed development will no penetrate an aquifer, will not interfere with water in an aquifer, will not obstruct the flow of water and will not require dewatering of an aquifer."

"The proposed development involves blasting, crushing and screen of excavated rock. The proposed activities have little if any potential to add contaminants that could adversely change groundwater quality"

"Use of nitrogen containing explosives is unlikely to have adverse impacts to water quality and/or change the beneficial use category of groundwater resources beneath the proposed extraction area."

However, the Groundwater Impact Assessment also states:

"The proposed development will involve operation and minor maintenance of plant at the ground surface. Spillage of fuel, lubricants and hydraulic fluids pose a risk to underlying groundwater quality. This risk could be adequately managed by the establishment of dedicated vehicle servicing and refuelling areas and appropriate management controls"

The following measures are recommended for implementation to further minimise adverse environmental impacts relating to ground contamination:

- All chemicals to be stored and used in accordance with manufacturer's instructions and the relevant MSDS.
- All liquid chemicals to be store within an impermeable bunded area with a capacity of at least 110% of the capacity of the largest storage container.
- Chemicals that could potentially react with one another are not to be stored in the same area to prevent reactions in the event of a spill.
- Storing only minimal quantities of chemicals at the site at any one time.
- Readily available access to MSDS and appropriate spill management equipment in all storage areas
- Appropriate training of personnel in the proper handling of chemical as well as awareness of the proper procedural processes if a spill should occur,

Surface Water Assessment

Groundwork Plus produced a Surface Water Assessment for the North Star Quarry (Appendix 11 of the EIS) on behalf of Regional Quarries Australia Pty Ltd, dated May 2021.

It is proposed to manage the disturbed quarry are by diverting all surface water to a sediment basin located in the operations area and a second basin forming the quarry sump to capture surface water from the extraction area.

All clean water is proposed to be diverted around the quarry area and returned to natural pre-development drainage lines by the use of bunds.

Based on calculations produced in accordance with DECC)2008 Managing Urban Stormwater – Soils and Construction (Volume 2) the sediment basin volumes are considered appropriate for erosion and sediment control. The following table details the proposed quarries catchment areas and sediment basin's minimum and proposed volumes:

Sediment Basin (SB)	Catchment Area (Ha)	Upper Settling Requirement Volume (ML	Sediment Storage Requirement Volume (ML)	Sediment Storage Total Required Volume (ML)	Proposed Sediment Storage Volume (ML)
SB1	4.76	1.15	0.57	1.72	2.00
SB1	1.59	0.38	019	0.57	1.00

Please note that Sediment Basin Storage Requirements, details of the upper settling, sediment storage and subsequent total sediment basin storage requirements for the site are based on capture of a 38.2mm rainfall event, deemed the 5-day 90th percentile as per DECC 2008

Water Supply Requirements

As a part of the Surface Water Assessment produce by Groundwork Plus on behalf of Regional Quarries Australia Pty Ltd, dated May 2021 (see Appendix 11 of EIS) it was determined that the sediment basins that will be installed for erosion and sediment control shall not be of an adequate size to supply all the water requirements for the proposed development operations and/or dust suppression measures. As such an external licensed water supplier shall be sourced to meet the anticipated water supply shortfalls. The requirement for an externally sourced water supply will become even more necessary in drier than average rainfall periods.

Contamination

Should water be discharged from the sediment basins, which is not anticipated due to more than adequate storage volumes, water quality testing procedures and criteria will be adopted as part of the Quarry Operational Plan. These procedures and criteria will be consistent with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality. The effectiveness of the Quarry Operation Management Plan will be reviewed as necessary and/or at least once every three years.

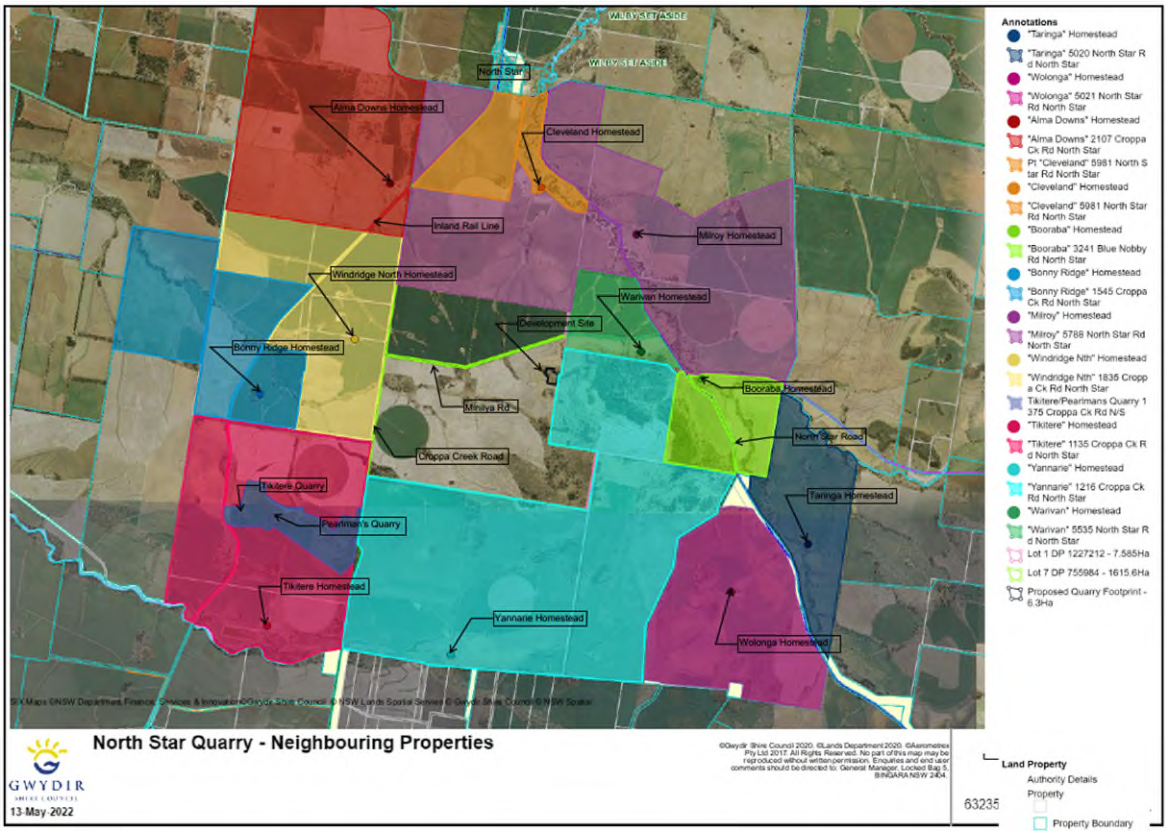
The monitoring of surface water management will be implemented during the quarry's operation include:

- The Quarry Manager or authorised representative is to regularly inspect the stormwater management devices, particularly prior to forecasted wet weather and following major rainfall events to ensure all devices are in good working order.
- The Quarry Manager or authorised representative is to ensure that drains and paved surfaces are kept free of wastes or other material, especially materials which may impact runoff water quality.
- The Quarry Manager shall carry out general surveillance to qualitatively assess stormwater release from the site during discharge events.

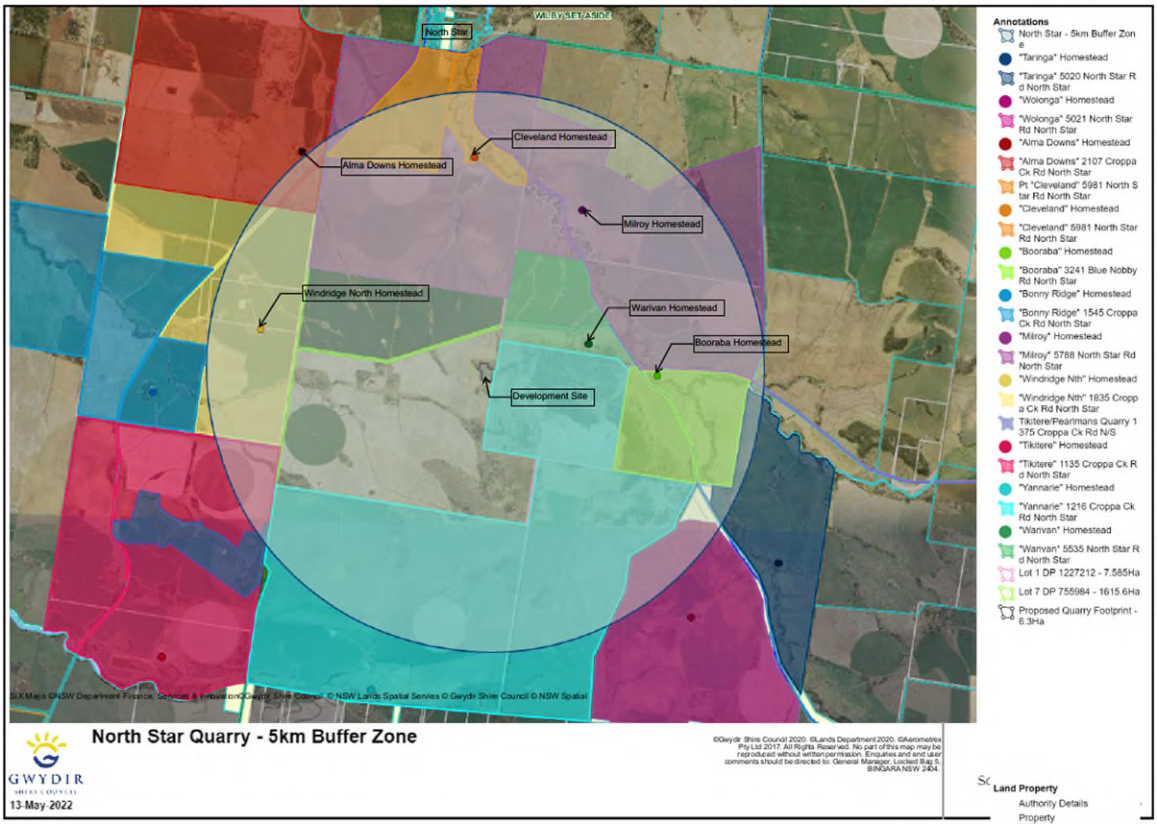
Air

An “Air Quality Impact Assessment” (AQIA) was undertaken by Northstar Air Quality Pty Ltd at the request of OzArk Environment & Heritage on behalf of Regional Quarries Australia Pty Ltd (dated 25 February 2021) and is presented as Appendix 9 of the EIS.

According to the ABS the quarry site is located in a area of low to very low population density (being between 0 and <500 persons/km^2). But in actuality, the site located in an area of cropping land where the nearest dwelling or sensitive receptor (on the property “Booraba”) that is not associated with the quarry is located approximately 3km to the East. See map of neighbouring properties and their homesteads below:



There are, however, dwellings located closer to the quarry site than the homestead on the property “Booraba”. These dwellings are located on properties owned or associated with the owner of the quarry site. The following map shows all the homesteads within a 5km radius of the proposed quarry site. Of the five homesteads within the 5km radius marker, three are owned or associated with the owner of the quarry site. Theses homesteads are located on the properties Milroy, Warivan and Cleveland.



The existing air quality experienced at the site are a result of emissions generated by natural and anthropogenic sources, on a variety of scales depending on the cropping seasons, rainfall events and the number of livestock located in the area.

The AQIA use a Dispersion Modelling Assessment in accordance with the NSW EPA approved CALPUFF atmospheric dispersion model which takes into consideration the meteorological circumstances of the area.

Typically, emissions from extractive industries are caused from dust and exhaust fumes emitted during the following processes:

- The removal, loading of haul truck, the transportation to stockpiles, unloading and storage of material, whether it be topsoil, overburden or quarried materials.
- Dust from drilling and blasting
- Loading of haulage trucks, the transportation of materials offsite, the unloading at delivery site and the storage of materials at the delivery site.
- Use of grader and roller on disturbed areas and for haul road construction
- Crushing and screening of material onsite
- Wind erosion in extraction and processing areas
- Emissions from vehicles, equipment and generator exhaust
- Additionally, emissions of oxides of nitrogen would be expected from blasting activities.

The AQIA adopted emission factors for drilling, blasting, material handing process, movement of trucks on unpaved site roads, crushing and screening, and wind erosion. These factors are appropriate for adoption in Australia and are routinely adopted in the assessment of quarry operations.

The results of the AQIA indicate that the air quality criteria can be achieved at all sensitive receptors, even when the quarry is operating at peak capacity and without the employment of mitigation measures such as haul route watering. Additionally, a Triger Action Response Plan (TARP) shall be developed as a part of the Environment Management Plan which will link visible dust generation from all quarry activities with wind conditions and generate a range of actions to reduce dust emissions. It should be noted that the development of the TARP is additional to the AQIA and is not necessary to achieve air quality criteria.

A summary of emission reducing measure are listed below:

- Dust control on drill rig
- Application of water on internal haulage routes
- Application of water sprays on material crushing operations
- Application of water sprays on material screening operations
- Retention of particular matter within the pit for activities occurring in the pit
- Covering of loads with tarpaulin
- Limiting load sizes to ensure material is not above the truck/trailer sidewalls
- Minimising travel speeds and distances.

The AQIA has satisfactorily demonstrated that the quarry can be operated in such a manner as to ensure compliance with all adopted air quality criteria.

Soil

A "Resource Assessment" for the North Star Quarry was prepared by Groundwork Plus for Regional Quarries Australia Pty Ltd, dated December 2020.

The Resource Assessment identifies the regions geology as characterized by sedimentary rock of the Surat Basin which were deposited in a fluviolacustrine environment during the onset of a period subsidence between the Early Jurassic and Early Cretaceous Periods. The rocks of the Surat Basin were then overlain by basaltic flows during the Tertiary period. These flows are typically thin and are composed of quartz-bearing tholeiitic basalt and dolerite.

The site of the proposed development is on a remnant basalt flow of the Mount Russell Volcanics and overlays fluviatile sedimentary rock (sandstone, siltstone). The site occupies a low hill towards the northeastern side of the property, which is elevated above the surrounding cropping lands that dominate the remainder of the property.

The EIS also refers to the sites "Great Soil Group" classification, as found on the NSW SEED Database. The Great Soil Group type was determined to be "Black Earths". Black Earths are defined under the OEH document called "Glossary of terms used in soils and landscape science" (September 2017) as:

"Black, heavy clay, alkaline to neutral soil with wide, deep cracks when dry"

A further search of the NSW SEED Database disclosed a further soil classification of "Vertosols" for the site. This classification was determined under the "Australian Soil Classification" types. Vertosols are defined under the OEH document called "Glossary of terms used in soils and landscape science" (September 2017) as:

> *"Clay soils with shrink swell properties that exhibit strong cracking when dry and at depth have slickensides and/or lenticular structural aggregates. Although many soils exhibit gilgia micro-relief, this feature is not used in their definition."*

The "Aboriginal Archaeological and Historic Heritage Assessment" prepared by OzArk for Regional Quarries Australia Pty Ltd, dated May 2021 (see Appendix 12 of the EIS) identifies the proposed development site as located within the "Yallaroi Basalts" landscape. The DECC document "Descriptions for NSW (Mitchell) Landscapes", version 2 (2002) identifies "Yallaroi Basalts as part of the Brigalow Belt South – Yallaroi Bioregion and is defined as"

> *"Rolling hills and flat top ridges on Tertiary basalt flows over Jurassic quartz and lithic sandstone. General elevation 300 to 530m, local relief 100m. Shallow stony, red or brown, well-structure clays with high nutrient values. Similar but thicker soils on the slopes and valley floors. Woodland and open forest of: white box (Eucalyptus albens), with silver-leaved ironbark (Eucalyptus melanophloia), white wood (Atalaya hemiglauca), bull oak (Allocasuarina luehmannii), ironbarks (Eucalyptus sp.). brown bloodwood (Corymbia trachyphloia) and brigalow (Acacia harpophylla) on alluvial clays. River red gum (Eucalyptus camaldulensis) on all streams."*

In addition to the above the proposed site is not identified as containing or comprising:

- Acid Sulphate Soils (ASS)
- Biophysical Strategic Agricultural Land (BSAL)
- Salinity issues.

The soils at the site are mapped on the NSW SEED Database under "Land and Soil Capability Monitoring for NSW" (Version 4.5) as having a capability class of 5 – Severe Limitations. The definition of Land and Soil Capability Class 5 is found in the OEH document "The land & soil capability assessment scheme", second approximation, dated October 2012, which states:

> *"Moderate-low capability land. Land ahs a moderate to high limitations for high impact land uses. Will largely restrict land use to grazing, some horticulture (orchards), forestry and nature conservation. The limitations need to be carefully managed to prevent long term degradation"*
> *"Class 5 land includes sloping lands with highly erodible soils and/or significant existing soil erosion, or land that will be subject to wind erosion when cultivated and left bare. Other limitations include shallow soils, stoniness, climate limitations, acidification, potential for structural decline and salinity hazards"*

Thus, land management considerations for bare and open soils/surfaces will need to include adequate erosion control measures. Windbreaks and groundcovers should be retained in areas prone to wind erosion wherever possible.

The EIS lists under section 5.7.3 (page 92-94) the erosion and sediment controls that will be implemented for the proposed development. An Environmental Management Plan for the proposal is to be prepared and will include an Erosion and Sediment Control Plan and a Rehabilitation Management Plan, and will include al the management measures as identified in the "Surface Water Assessment" by Groundwork Plus, dated May 2021 (see Appendix 11 of EIS).

The management measures proposed for any impacts that the proposed development may cause to soils are considered satisfactory.

Biodiversity impacts

A "Biodiversity Development Assessment Report" (BDAR) was prepared for the EIS by OzArk Environment & Heritage for Groundwork Plus on behalf of Regional Quarries Pty Ltd (dated August 2021). This BDAR was referred to NSW Planning Industry & Environment – Biodiversity, Conservation & Science Directorate (BCSD) for review. The BCSD provided recommendations for the amendment of the BDAR dated 19 October 2021, which was referred back to the proponent. The proponent provided a revised BDAR in accordance this BCSD recommendations known as "Biodiversity Development Assessment Report", dated April 2021 (this is assumed to be an error in typing and means April 2022) prepared by Dr Kate Hammill and Dr Crystal Graham of OzArk Environment & Heritage. Dr Kate Hammill is a Biodiversity Assessment Method (BAM) accredited ecologist (BAAS 18022) and revised by Dr David Orchard also of OzArk Environment & Heritage (BAAS 21028).

The BDAR is a requirement of the Biodiversity Conservation Act 2016. The report applies the BAM to calculate the number of ecosystems and species credits generated by the proposal requirement for offset due to the clearing of native vegetation. The native vegetation to be cleared has been identified in the BDAR as 2 hectares of Plant Community Type (PCT) 445 – *Brigalow viney scrub open forest on loomy soils in low hills landscapes in the northern Brigalow Belt South Bioregion*.

The area of proposed quarry footpring consists of partially cleared an degraded, and wholly cleared areas of vegetation. The wholly cleared areas are excluded from the assessment calculation and the partially cleared and degraded vegetation is not of a sufficient condition to be part of any Threatened Ecological Communities (TEC's).

The BDAR summary states:

> *"In total 16 potential ecosystem credits were predicted for the PCT and condition as a derived grassland."*
>
> *"Woodland areas around the quarry site were excluded from the development footprint after the design was modified, as part of avoidance measures."*
>
> *"Due to the low VI scores for each zone, no ecosystem credits either for the PCT or for the 16 predicted species are required to be offset."*
>
> *"10 candidate species credits species were determined from the BAM calculation. The following species have been excluded and area considered not impacted due to*

habitat requirements not being present in the subject land or due to targeted surveys having been conducted to determine presence or absence."

Absent

- *Pale Imperial Hairstreak (Jalminus ecbulus)*
- *Grey-headed Flying-Fox (Pteropus polioc ephalus)*
- *Koala (Phascolarctos cinereus)*
- *Ooline (Cadellia pentastylis)*
- *Belson's Panic (Homopholis belsonii)*

"The following species have been assessed as 'assumed present', due to there being no justifiable reason for excluding them for the site. Targeted surveys were not conducted for this species."

Present

- *Large-eared Pied Bat (Chalinolobus dwyeri)*
- *Large Bent-winged Bat (Miniopterus orianae oceanensis)*
- *Barking Owl (Ninox connivens)*
- *Masked Owl (Tyto novaehollandiae)*
- *Eastern Cave Bat (Vespadelus troughtoni)*

"The proponent is obligated to offset the impacts of the development on potential threatened species (species credit species) by purchasing and retiring species credits on the open market or by marking payment to the Biodiversity Conservation Fund."

"The following threatened species present or assumed present on the subject land have been assessed in relation to potential Significant and Irreversible Impacts (SAII) on the species, as per 9.1.2 of the BAM manual.

- *Large-eared Pied Bat (Chalinolobus dwyeri)*
- *Large Bent-winged Bat (Miniopterus orianae oceanensis)*
- *Eastern Cave Bat (Vespadelus troughtoni)"*

"The significance of the proposed impact to EPBC (Environment Protection and Biodiversity Conservation Act 1999) listed threatened, migratory, wetland and marine species predicted to occur within a 10km search area was assessed. No significant impact to a threatened, migratory, wetland or marine species likely to result in the extinction of a local population was identified. The residual ecological impacts of the project would be adequately mitigated using the management would be recommended. Therefore, a referral of the project to the Federal Department of Agriculture, Water and the Environment for these matters is not required."

Table 6-2 of the BDAR (see below) shows the credits produced by the clearing for vegetation and threatened species habitat by the proposed development.

Table 6-2. Ecosystem credits produced for vegetation and threatened species habitat cleared.

Zone	Vegetation zone name	Vegetation integrity loss/gain	Area (ha)	Species sensitivity to gain class (for BRW)	Biodiversity risk weighting	Ecosystem credits
1	445_cropped	0.8	0.24	Low sensitivity to potential gain	2.00	0
2	445_cleared	5.5	1.76	High sensitivity to potential gain	2.50	0
					Total	**0**

Table 6-3 of the BDAR (see below) show the credits produced by the clearing of habitat for fauna species by the proposed development.

Table 6-3. Species credits produced for the habitat cleared.

Species	Vegetation zone	Vegetation integrity (Habitat condition)	Area (ha)	Biodiversity risk weighting	Potential SAII	Species credits
Chalinolobus dwyeri / Large-eared Pied Bat (Fauna)	445_Derived 445_Cropped	5.5 0.8	1.8 0.24	3	Yes	7 1
Miniopterus orianae oceanensis / Large Bent-winged Bat (Fauna)	445_Derived 445_Cropped	5.5 0.8	1.8 0.24	3	Yes	7 1
Ninox connivens / Barking Owl (Fauna)	445_Derived 445_Cropped	5.5 0.8	1.8 0.24	2	No	5 1
Tyto novaehollandiae / Masked Owl	445_Derived 445_Cropped	5.5 0.8	1.8 0.24	2	No	5 1
Vespadelus troughtoni / Eastern Cave Bat (Fauna)	445_Derived 445_Cropped	5.5 0.8	1.8 0.24	3	Yes	7 1

There are no areas in the subject site of outstanding biodiversity value as listed under the Biodiversity Conservation Act 2016 and it is considered that it is unlikely that any of the above fauna species identified as a potential SAII will occurring in the development site due to the degraded nature of the habitat and the absence of suitable roosting and nesting locations.

The subject land meets the requirement of assessment under Chapter 3 – Koala Habitat Protection 2020 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (SEPP BC) due to the following factors:

- The subject land is within the RU1 Primary Production land use zone under the Gwydir Local Environmental Plan 2013 (GLEP).
- The subject site is located within the Northwest Slopes Koala Management Area.
- Gwydir Shire LGA is listed in Schedule 2 – Local Government Areas of the SEPP BC.

Thus, the proposed development site is required to be assessed as a potential Koala habitat. Under Chapter 3 of the SEPP BC potential koala habitat and core koala habitat are defined as:

> *"potential koala habitat means areas of native vegetation where trees of the type listed in Schedule 1 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component."*
>
> *"core koala habitat means on area of land with a resident population of koalas, evidenced by attributes such as breeding females, being females with young and recent sightings of and historical records of a population."*

The proposed development site is not considered to be potential or core koala habitat due to the absence of feed tree species in listed in Schedule 1 of the SEPP BC. In reality the proposed site has been largely cleared of trees, all but a few. Additionally, no evidence of a residential population of Koala's on the sight, although fire records of Koala's within 10km of the proposed development site from 2006 to 2019 but no exactly locations were provided.

Five BAM listed "High Threat Exotics" (HTE) weeds found at the proposed development site during the survey. These weeds are also listed under the NSW Biosecurity Act 2015 and are required to be controlled.

- Khaki Weed (Alternanthera pungens)
- Buffel Grass (Cenchrus ciliaris)
- African Boxthorn (Lycium ferocissimum)
- Noogoora Burr (Xanthium occidentale)
- Bathurst Burr (Xanthium spinosum)

The BDAR recommends the following minimisation measures and environmental safeguards.

Minimisation Measures:

- Before commencement of works, erect a physical vegetation clearing boundary using suitable materials such as temporary fencing, flagging tape etc.
- Vegetation to be removed is to be done so in such a way as to avoid damage to surrounding vegetation, ensuring disturbance of vegetation and soil is kept to a minimum.
- Implementation of the recommended environmental safeguards outlined below to reduce impacts on vegetation, soil and biodiversity.

Environmental Safeguards:

- Clearing and prevention of over-clearing
    - Induction of all personnel of the boundaries of the development footprint, as well as the proper treatment or avoidance of vegetation not to be disturbed located outside of the impact area.
    - Education of all personnel on the legislative consequences of unauthorised disturbance or destruction of vegetation located outside of the quarry impact area.
    - Evidence of inductions kept on file.

    - Before works commence, clearly identify the development boundaries and the extent of permitted clearing, as well as identification of areas to be retained as native vegetation.
    - Implement a pre-clearing process and unexpected threatened species finds procedure. Any fauna found during disturbance are to be allowed (or assisted) to relocate into adjoining retained native habitat.
    - Vegetation is to be removed in such a way as to avoid unnecessary damage to retained vegetation.
    - Vegetation that is to be removed should be mulched onsite and reused as a soil stabilisation measure, wherever possible.
    - Natural vegetation regeneration of any bare soil or cleared areas should be encouraged by retaining native vegetation material onsite and bush matting.
- Bushfire Protection
    - Ensure consistency wherever possible between the management of vegetation for Bushfire Protection and Biodiversity Protection by only removing vegetation where necessary to reduce fuel loads.
- Soil Management
    - Develop and implement an "Erosion and Sediment Control Plan" in accordance with the relevant requirements and guidelines.
- Damage to Native Vegetation oust of Impact area
    - Stockpiles and compound sites are to be located within the proposed development footprint and be located at least 40m from the nearest natural waterway, in an area of low ecological conservation significance and on level ground.
    - Additionally, stockpiles, equipment, structures, and parking areas are too located so that they avoid the dripline of any tree.
- Introduction and spreading of significant weeds and pathogens
    - Locate, identify and undertake control measures against environmental wees in accordance with a Site Vegetation Management Plan and Council's guidelines
    - All machinery that comes onto site are to be cleaned and free of any soil or particulates before entry.
    - Only weed free fill is to be used on the site should rehabilitation earthworks require it.
    - All herbicides are to be used in accordance with the requirements on the label. All personnel carrying out herbicide application are to be competent and appropriately trained.
- Disturbance of fallen timbers, dead wood and bush rock
    - All bush rock located at the development site is to be relocated to the edge of the disturbance area to enhance habitat regeneration.
    - If a threatened bat species is detected at the development site, all works must cease immediately and either leave the area undisturbed or engage a suitably qualified person to attempt a relocation.
- Threatened species
    - No new tracks are to be cleared outside of the unassessed area without further biodiversity assessments being undertaken.
    - Should the proposed quarry footprint change from it current extent as assessed in the BDAR, re-assessment of the BDAR would be required to ensure that impacts are not inadvertently caused to threatened species that may inhabit other areas of the property.

    - Works are only to occur during daylight hours to avoid indirect impacts on threatened fauna such as vehicle strikes
    - A 40km/hr speed limit on all access roads is to be enforced to reduce the risk of vehicle strikes on fauna at the development site.
- Indirect impacts
    - It is expected that the main impacts of the proposed development will be limited to the identified quarry footprint. However, noise, dust and increased traffic along the proposed haulage routes may cause indirect impacts to occur such as fauna being injured or killed by heavy vehicles, dust covering food supplies or noise disrupting fauna habitat.

Natural environment

The post extraction landform of the proposed development site is anticipated by the proponent to be suitable for rural activities such as cattle grazing. Figure 5 – Conceptual Final Land Form and Figure 6 – Conceptual Final Land Form (Cross Sections) of the EIS depict the proponents intended completed land form once rehabilitation has been completed (See below Figure 5 & Figure 6)

Figure 5 – Conceptual Final Land Form

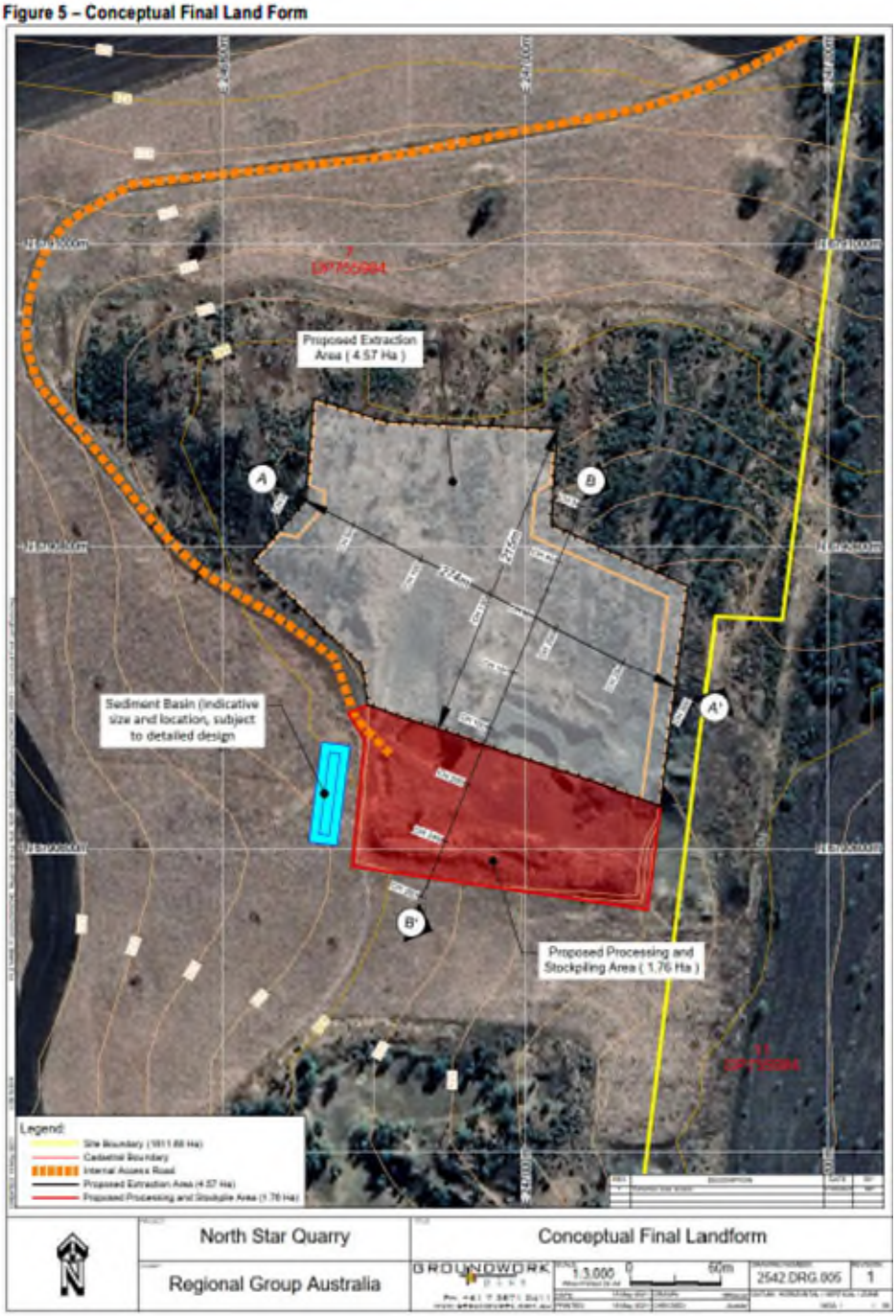
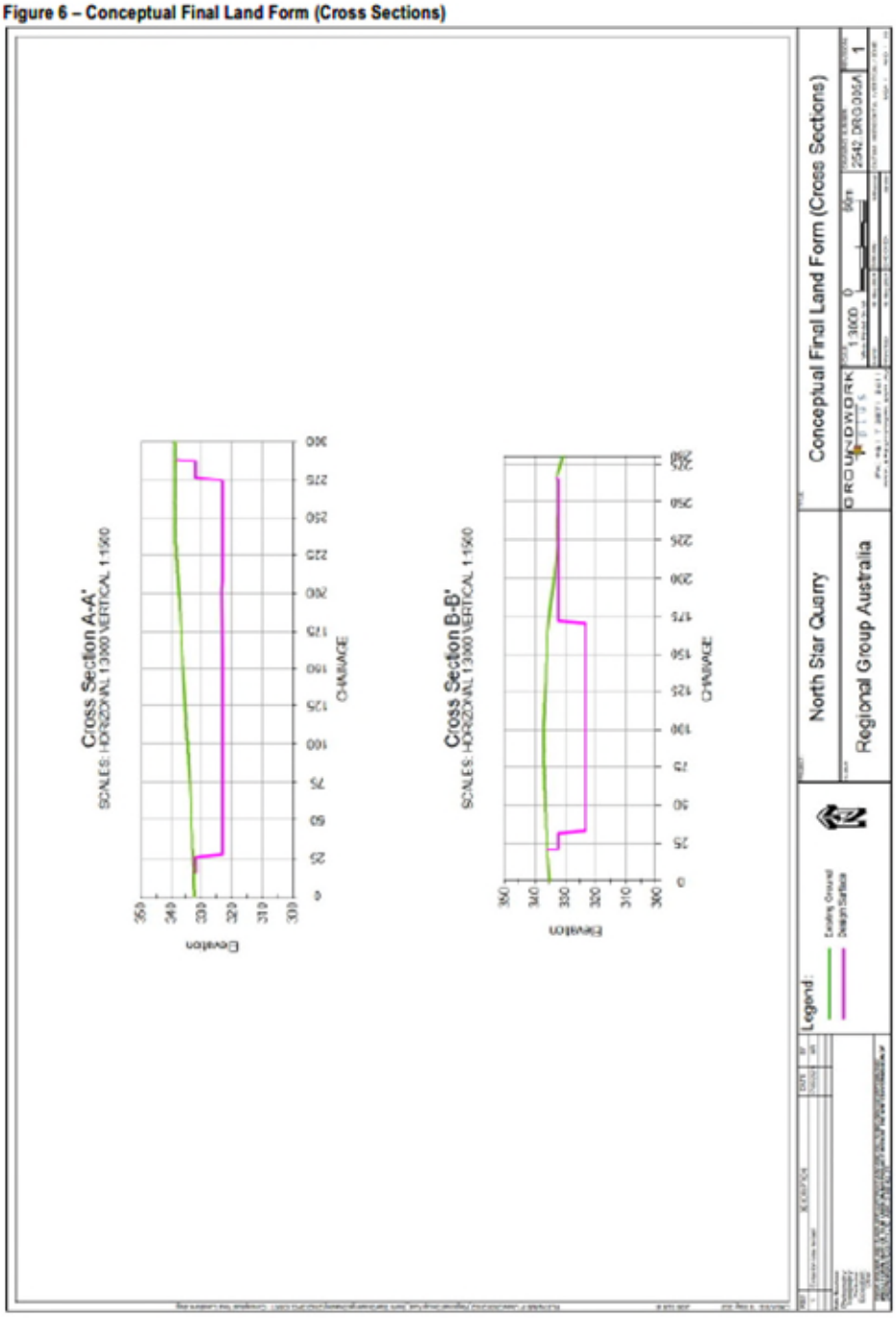


Figure 6 – Conceptual Final Land Form (Cross Sections)



The final pit floor, hardstand areas and stockpile sites are to be spread with a minimum of 100mm of topsoil and graded to fall towards the sediment basin so that post extraction agricultural activities can be undertaken on the site.

However, from the final landform cross section above it is more than likely that the final pit floor may become an area where surface water will collect and will become an water storage structure rather than be used for grazing or cropping as suggested by the EIS. Additionally, the sediment basins shall be cleaned and will be retained as clean water storage structures. All other infrastructure associated

with the proposed quarrying activities apart from access tracks and any utility services installed shall be removed at the cessation of the quarry's life.

Noise and vibration

Noise

The proposed development will create noise and vibration emissions during the following:

- Phase 1 – Construction of the Quarry
- Phase 2 – Operation of quarry consisting of:
    - Stage 1 a 5-year period with a maximum extraction level of 490,000 tonnes per year;
    - Stage 2 a further 10-year period with a maximum extraction level of 150,000 tonnes per year.
    - During haulage of materials along public roads
    - During Blasting Operations
    - Rehabilitation Works

The initial construction phase (Phase 1), which is expected to take between three and six weeks, of the proposed development shall include:

- Internal haul road and loading area improvements
- Installation of erosion and sediment controls (including construction of sediment basins and bunding)
- Clearing of operational area
- Stockpiling of topsoil and overburden for first bench
- Establishment of plant, equipment, site office and amenities
- Drilling and blasting activities shall be require in the initial phase to establish the first bench

Noise management levels at all sensitive receivers are to be a maximum of 45dB LAeq (15min) (RL + 10dB) during this initial phase.

A "Noise and Vibration Impact Assessment (NVIA) was prepared by Muller Acoustic Consulting Pty Ltd (MAC) of OzArk Environment & Heritage Management Pty Ltd on behalf of Groundwork Plus (dated 15 February 2021) and is presented as Appendix 10 of the EIS. The results of the NVIA analysis on Phase 1 of the proposed development shows that noise emissions are predicted to satisfy the relevant management criteria at all sensitive receiver locations.

The operational phase (Phase 2) of the proposed development, which is expected to continue for up to 15 years, at varying levels of extraction, needs to satisfy the following maximum noise criteria:

- The proposals noise trigger level is 35dB LAeq (15 min) for the morning shoulder period (being the period from 6.00am to 7.00am Monday to Saturday); and
- The proposals noise trigger level is 40dB LAeq (15 min) for the day period (being from 7.00am to 6.00pm Monday to Saturday or 8.00am to 6.00pm on Sundays and Public Holidays)
- The maximum noise trigger levels (being transient noise events that could cause sleep disturbance) is 40dB LAeq (15 min) and 52dB LAmax.

Noise emissions can be significantly affected by prevailing weather conditions which can increase (or decrease) noise levels by focusing sound waves at a single point. Data collected from surrounding (within 30km radius) weather monitoring station are used in assessing meteorological conditions (providing the surrounding area at the weather monitoring station/s has the same topography as the proposed development site). A review of Bureau of Meteorology (BOM) stations identifies the nearest weather monitoring station to the development site as Goondiwindi Airport station which is located approximately 52km away. As such the NVIA used the default noise enhancing meteorological conditions were used.

It should be noted that the NVIA used noise predictions that assumed that all plant were operating at peak capacity, thus representing the worse-case scenario.

The results of the predictive modelling shows that noise emissions caused by the proposed development operations during Stage 1 (with a extractive limit of 490,000 tonnes/yr for a period of 5 years) and for Stage 2 (with an extractive limit of 150,000 tonnes/yr for a further period of 10 years) to be between 35dB LAeq (15min) and 40dB LAeq (15 min) at the "Minilya" agricultural sheds and infrastructure and less than 35dB LAeq(15 min) for all other sensitive receiver locations.

In assessing the predicted sleep disturbance, a LAmax noise criteria of 117dB was used to represent the proposed developments operations should they occur during the night period (being 6.00pm to 6.00am Monday to Saturday and 6.00pm to 8.00am on Sundays and Public Holidays). The modelling identified that maximum level criteria will be satisfied for all sensitive/residential receivers and is predicted to be below the EPA screening criteria.

Road Traffic Noise

During Stage 1 of the proposed developments operations (being an extractive limit of 490,000 tonnes/year for a period of 5 years) it is assumed that up to 132 laden trucks per day shall use various nominated haulage routes to satisfy contractual demand for material by the Inland Rail and Newell Highway projects. It is also, assumed that during Stage 2 of the proposed developments operations (being an extractive limit of 150,000 tonnes/year for a further period of 10 years) the daily average heavy vehicle traffic would be 14 laden trucks per day.

A review of sensitive receptors with the nearest dwelling setback from the centre line along nominated haulage routes was undertaken. The review identified that dwellings along Edward Street North Star had an approximate average setback of 12m and along Buckie Road within the village of Croppa Creek the setbacks averaged approximately 35m. The United States (US) Environment Protection Agency's Road Traffic Calculation Method was used to predict the LAeq noise levels experienced by existing sensitive receivers. This method is an internationally accepted theoretical traffic noise prediction method.

The results of the road traffic noise calculations for those sensitive receivers along Edward Street North Star and Buckie Road within the village of Croppa Creek show that road traffic noise caused by the proposed developments use of these haulage routes shall remain below the relevant day and night assessment criteria.

Blasting Vibration and Overpressure

The ANZEC blasting limits for air-blast overpressure and ground vibrations are:

- Overpressure – 120dB Max and 115dB for 95% of all blasts
- Ground Vibration – 10mm/s Max and 5mm/s for 95% of all blasts

Calculations of overpressure and vibration estimates were both completed using the relevant AS2187.2 equation.

Results of the Blasting Assessment calculated the vibration levels at the nearest significant public infrastructure (being North Star Road – approximately 2.3km east of the proposed development site) to be below 5mm/s). Additionally, vibration levels at the nearest sensitive receiver (approximately 3.3km east) is calculated to be 0.25mm/s. Thus, results identify that proposed blasting activities would satisfy ground vibration criteria.

At worst the overpressure resulting from blasting activities at the proposed development site are predicted to be 112dB at the nearest directional receiver which located approximately 1.8km west (being Minilya agricultural sheds and infrastructure) and 104dB at the nearest sensitive/residential receiver (being the homestead at Booraba located 3.3km to the east of the proposed development site).

Thus, the predicted blast overpressure and ground vibration levels are below the regulatory criteria, based on the "Noise and Vibration Assessment" (Appendix 10 of the EIS). These results indicate that no significant noise or blasting impacts would be experienced by any surrounding sensitive receptors. The assessment shows compliance with the relevant operational and road criteria, as well as the relative EPA and DECCW policies. Please note that this has been achieved without consideration for any mitigation or minimisation measures.

The proponent proposed management and monitoring measures are restricted to limiting construction activities to 7.00am to 6.00pm Monday to Friday with no works on Saturdays, Sundays, or Public Holidays. The proponent also intends to limit operating hours to the below:

- Extraction and processing, 6.00am to 6.00pm Monday to Friday and 7.00am to 1.00pm on Saturdays
- Truck loading and dispatching, 6.00am to 6.00pm Monday to Friday and 7.00am to 1.00pm on Saturdays
- Blasting, 9.00am to 3.00pm Monday to Fridays
- No Operations on Sundays or Public Holidays

These hours of operation are in line with the EPA General Terms of Approval (see Appendix 1 to the Draft Schedule of Conditions located at Attachment A of this report)

Blast Management Plan

Upon request, the proponent advised that a Blast Management Plan is formerly prepared post-consent as a part of the Environmental Management Plan. However, the proponent did supply a very

simple blast management plan (see below extract from email received 20 May 2022) in order to satisfy an enquiry with concerns regarding the proposed developments close proximity (approximately 20m) to the neighbouring property.

Blasting Management

Purpose

Blasting will be required to fragment rock to a manageable size that can be transported and fed into the on-site crushing and screening plant. Blasting practice has the potential to generate excessive noise and vibration impacts that may cause nuisance for sensitive receptors.

Performance Targets

Blasting activities must not exceed the limits for peak particle velocity and air blast specified in the EPL (extracted below for reference) when measured at any sensitive place or commercial place.

P	
Airblast Overpressure	1 115dB the total number of blasts in the reporting period.
Ground Vibration	5mm/second peak particle velocity at any noise sensitive place for more than 5% of the total number of blasts in the report
	10mm/second peak particle velocity at any noise sensitive place at any time.

Notes:
*Error margins associated with any monitoring equipment used to measure the blasting limits are not to be taken into account in determining whether or not the limit has been exceeded.

Management Strategies

The following control measures may be implemented to assist in mitigating potential noise nuisance from blasting associated with the site activities:

?
?
?
the hours of 9am to 3pm Monday to Friday. Blasting is not permitted at any time on Saturdays, Sundays or Public Holidays
? transport and use of explosives shall be carried out in accordance with the requirements of
?
provide blasting services.
?
possible level.
?
materials where practicable, or where it is identified as a source of potential dust nuisance.

Monitoring

carried out at the site at the nearest residence that is not owned by the landowner for the site or subject to a private agreement relating to airblast overpressure and ground vibration levels.

The method of measurement and reporting of blasting must comply with AS 2187.2-2006. Measurements are to be conducted by suitably qualified person using appropriate equipment. Equipment must be calibrated on a regular basis in accordance with the manufacturers recommendations or other appropriate standards.

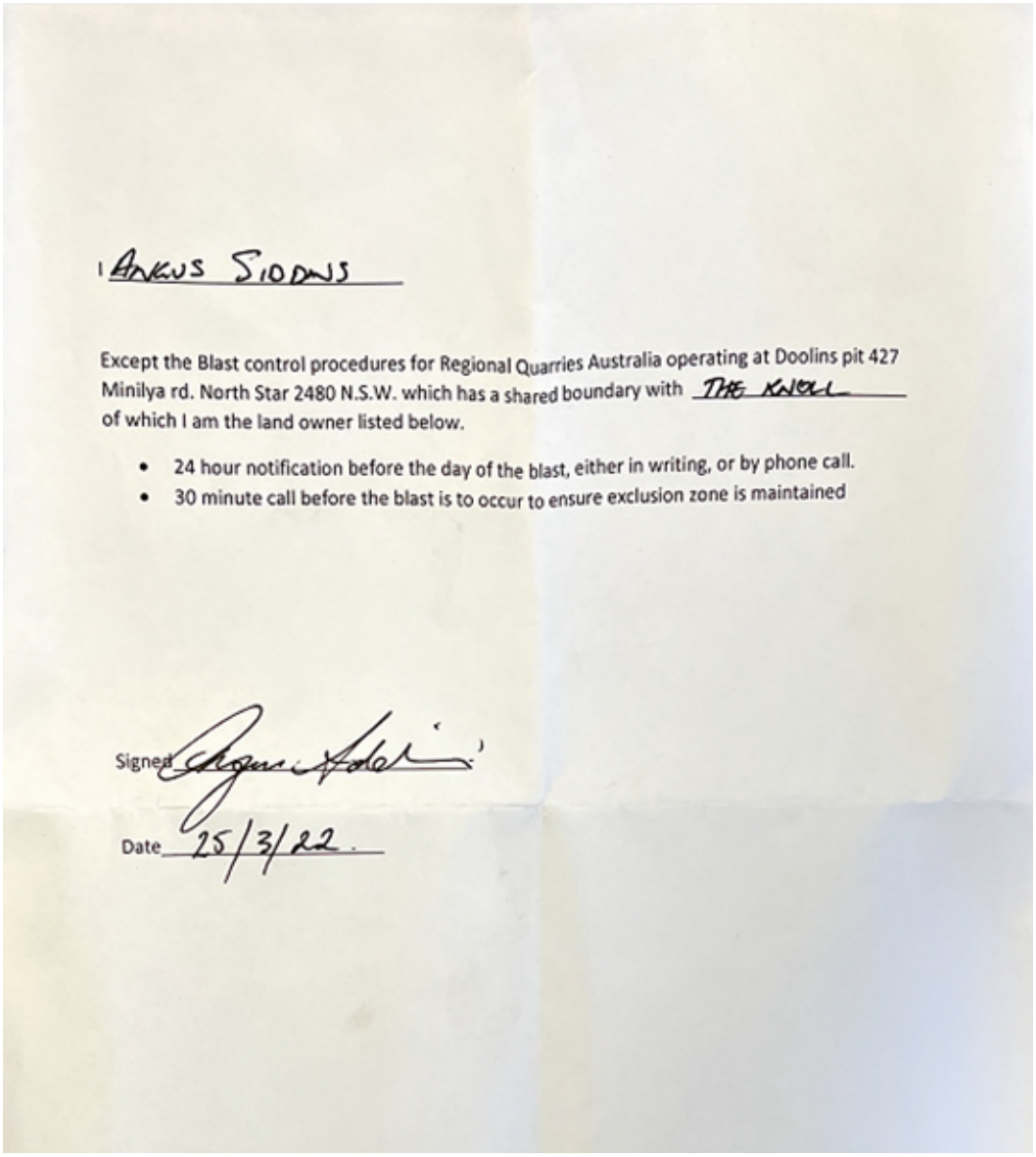
Contingency Plan

Any complaint received regarding nuisance at a sensitive or commercial place caused by blasting activities must be recorded and investigated by the Quarry Manager.

If blast monitoring determines an exceedance of the approved limits, the Quarry Manager may engage the services of a suitably qualified person to determine additional management strategies to mitigate impacts.

Additional blast monitoring will be undertaken where necessary to determine the efficacy of the additional management strategies.

The proponent also supplied a copy of a declaration from the owner of the allotment bordering the proposed development site. This allotment is identified as Lot 11 DP 755984 and is owned by Mr William Graham Thompson (confirmed via a title search). However, the declaration (see below) has declared to be owned by and signed by a Mr Angus Siddins.



I ANGUS SIDDNS

Except the Blast control procedures for Regional Quarries Australia operating at Doolins pit 427 Minilya rd. North Star 2480 N.S.W. which has a shared boundary with THE KNOLL of which I am the land owner listed below.

- 24 hour notification before the day of the blast, either in writing, or by phone call.
- 30 minute call before the blast is to occur to ensure exclusion zone is maintained

Signed

Date 25/3/22.

Apart from the above declaration not being signed by the actual owner of the land, the declaration does provide further information regarding the proponent's intentions towards notify the neighbouring property of when blasting will be occurring. The declaration allows for 24-hour notice before the date of the blast. It is considered that this time frame is too tight for the removal of livestock and to ensure no persons enter the area. Also, no exclusion zone has been indicated within the neighbouring property either in the declaration or in the EIS. This will also need to be addressed. In addition to this what happens to any current agreements regarding blasting and exclusion zones within Lot 11 DP 755984, in a legal sense, in the event that this allotment is no longer in the current ownership. It is considered that the location of the proposed development in relation to the

neighbouring property and the impacts that blasting activities on this land and its current grazing/agricultural operations have been completely overlooked by the proponent in the EIS.

It is proposed that a condition be added to the Draft Schedule of Conditions to ensure the rights and safety of persons and livestock whilst protecting the current grazing/agricultural use of the neighbouring land during blasting activities.

Natural hazards

Bushfire

The proposed development site is located within an area mapped under the Gwydir Shire Council current "Bushfire Prone Land" mapping, as Bushfire Prone Land.

The proposed quarry does not involve the erection or installation of structures or types of development that is required to satisfy the requirements of the Rural Fire Service's document "Planning for Bushfire Protection 2019". Every though no specific requirements relate to the proposed quarry the safety of personnel, equipment and the local community still need to be protected.

The proponent advises in the EIS that the establishment of the proposed development operations area will be located a minimum of 100m from areas of adjacent bushfire prone land, will be devoid of vegetation and will have a safe evacuation route to the local road network. This and the implementation of the below safeguards and controls is considered adequate protection should a bushfire event occur.

The Bushfire safeguards and controls to implemented include:

- A review of bush fire hazards and identification.
- A summary of controls and management measures including fire response equipment and locations.
- Emergency contact details
- Training of personnel
- Ensure the site remains fenced and the entrance locked when site is not occupied
- Store hydrocarbons and hazardous materials in bunded, impervious areas undercover in accordance with the relevant Australian Standards
- Ensure that fuel loads in undisturbed section of the site are managed to minimise the potential for bushfire
- Ensure that all plant is fitted with appropriate fire suppression equipment
- Ensure that a water cart is available during all extraction operations to provide firefighting capabilities
- In the event of the site being overrun by a bushfire, site personnel would be evacuated to the nearest safest point.

A condition shall be included in the Draft Schedule of Conditions to ensure the preparation and implementation of an Emergency Evacuation Procedure and Bushfire Management Plan forms part of the Environmental Management Plan and/or Quarry Operation Plan.

Flooding

The proposed development site is not located in a Flood Prone area as identified by Map 8 – Goondiwindi South, of the "MacIntyre Valley Flood Plain Atlas", prepared by Laurie, Montgomerie & Pettit Pty Ltd Consulting Engineers & Surveyors, on behalf of the NSW Water Resources Commission, 1982.

No further assessment is warranted.

No other natural hazards such as volcanics, seismic or ground slippage presently impact the proposed development site.

Safety, security and crime prevention

The proposed development site is located in an isolated area of rural lands which is not known for illegal or criminal activity. As such the proposed development only seeks to provide public safety measure by fencing the site and locking the entrance gate when the site is not occupied or in operation. In addition, appropriate signage shall be displayed along with the quarry operators contact details should be placed at the entrance to curtail any unauthorized access to the site.

The fencing and securing of the site is considered adequate measures to ensure public safety and to deter criminal activity.

Social and Economic impact

Where mitigation measures are not implemented the following impacts may be caused by the type of development proposed.

- Impacts on amenity of the surrounding area via noise, visual disturbance, odour and changes to local microclimates.
- Reduced access to the development site and property and to the surrounding local and regional road network
- Impacts in the existing built environment and access or maintenance of public infrastructure
- Impacts to existing or unknown heritage whether it is natural, Aboriginal, cultural or structural
- Impacts to community health, safety, resilience, employment, cohesion, housing, and access to services and facilities
- Impacts to natural resource values and the livelihood of the local community
- Impacts to air quality, biodiversity values, land stablisation or degradation, land capability and rehabilitation, water quality and availability.

An assessment of the likely social and economic impacts of the proposed development has been undertaken by the proponent as required by the SEAR's for the EIS. The assessment includes the nature of the impact and its level of risk. The following table (Table 16 – Checklist of Matter Assessment) was taken from s5.10.4 of the EIS (pg 100-101) and lists the proponent's consideration of the social and economic impacts of the proposed quarry development.

Table 16 – Checklist of Matters Assessment

Matters		Key Links to Social Impacts	Risk of Impact Without Mitigation	Nature of Impact	Explanation
Amenity	Acoustic	Way of life;	Unlikely	Negative	Noise emissions are unlikely to impact on nearby sensitive receptors.
	Visual	Surroundings	Unlikely	Negative	The proposal has been designed to avoid visual amenity impacts to the greatest numbers of nearby sensitive receptors as possible.
	Odour	Surroundings	Unlikely	Negative	The proposal will not produce a strong odour.
	Microclimate	Surroundings	N/A	Nil	The proposal will not significantly impact microclimate.
Access	Access to property	Way of life;	N/A	Nil	The proposal will not impact on access to neighbouring properties.
	Utilities and public transport	Access to infrastructure, services and facilities;	Unlikely	Negative	The proposal will utilise public roads for transportation. This will not result in the reduction of access to public transport services.
	Road and rail	Personal and property rights.	Unlikely	Negative	The proposal will utilise public roads and rail sidings for delivery of products. However, this will not preclude public access to these areas.
Built Environment	Public domain	Community;	N/A	Nil	The proposal will not impact the public domain as it will be located on private land.
	Public infrastructure	Access to infrastructure, services and facilities;	N/A	Nil	The proposal will not preclude public access to public infrastructure.
	Other built assets	Surroundings; Personal and property rights.	N/A	Nil	As above.
Heritage	Natural	Way of life;	N/A	Nil	The site is not mapped as comprising any natural heritage values.
	Cultural	Community;	Likely	Negative	The proposal will not impact on cultural values in the public domain.
	Aboriginal culture	Culture;	Likely	Negative	The proposal will implement the unexpected finds procedure.
	Built	Surroundings.	Unlikely	Negative	There are no built heritage items registered on the site
Community	Health	Health and wellbeing;	Likely	Negative	Dust and noise emissions are expected to be below NSW guidelines at the nearby sensitive receptors therefore minimising the possibility of any health impacts to the community.
	Safety	Surroundings;	Likely	Negative	The proposal has been assessed as not increasing a known safety risk.
	Services and facilities	Way of life; Access to infrastructure, services and facilities;	N/A	Nil	The proposal does not impact access to public services or facilities.

Matters		Key Links to Social Impacts	Risk of Impact Without Mitigation	Nature of Impact	Explanation
	Cohesion, capital and resilience	Way of life; Community; Culture;	Likely	Positive	The proposal will provide employment opportunities to the local community and contribute to the community through various community benefit programs.
	Housing	Way of life; Personal and property rights.	N/A	Nil	As per above.
Economic	Natural resource area	Way of life;	Likely	Positive	The proposal will utilise available natural resources in a sustainable manner. The natural resources consumed will be supplied to support the construction of the Inland Rail Project and associated road projects which have significant benefit to the region.
	Livelihood	Surroundings;	Likely	Positive	The proposal will provide employment and training opportunities for the area. The economic activity generated by the quarry will also relate to the longer-term benefit to the region through the construction of the Inland Rail Project and associated road projects.
	Opportunity cost	Personal and property rights	N/A	Nil	The net benefit to the community and region outweighs the utilisation of geological resources. The opportunity cost would favour the use of the land as a quarry over agricultural uses. The site can be rehabilitated for longer term outcomes.
Air	Air emissions.	Surroundings	Likely	Negative	The proposal will not exceed the NSW EPA air quality criteria. Air quality mitigation measures will be implemented during the operation and monitoring will be carried out to ensure ongoing compliance.
Biodiversity	Native vegetation and fauna	Surroundings	Likely	Negative	Vegetation clearing is proposed on site however the net loss of biodiversity impacts are to be offset by the provision of biodiversity credits under the NSW Biodiversity Offset Scheme. The sites most sensitive areas have been avoided.
Land	Stability/structure, land capability, topography	Surroundings	Likely	Negative	While the proposal will result in land disturbance, controls will be in place to overcome these impacts and the land will be rehabilitated following the cessation of the extractive activities.
Water	Quality, availability, hydrological flows	Surroundings	Unlikely	Negative	Soil and water management measures will be implemented to ensure the proposed development has minimal impact to surrounding water bodies and hydrological flows.

The proposed development intends to employ between 5-10 staff which will be sourced locally where possible. Furthermore, should staff or crews be sourced from outside the local area, they would be accommodated within the local area wherever possible.

It is considered, due to the low localised population of the area to be impacted, the adequate mitigation measure proposed to ensure that adverse impacts are negligible, the lack of interference the proposed development will have on the continuation of existing agricultural enterprises and the positive support of infrastructure development for the local region and the state, that the socio-economic examination of the local area have been satisfactory assessed and that the positives appear to outweigh any unmanageable adverse impacts to the area.

Site design and construction

The total area of the proposed development is 6.45 hectares which includes:

- An extraction area of 4.57 Hectares
- A processing and stockpiling area of 1.76 Hectares
- Sediment basins and associated controlled drainage area
- Internal access road

The extraction area will be developed in a single stage resulting a final pit floor at a depth of 323m AHD and surrounded by terminal benches of approximately 10m in height. The processing an stockpile areas will be located at AHD of 332m and will also be the location of the mobile processing plant, raw feed stockpile, product stockpile, topsoil stockpile and overburden stockpiles. Generally, the plant and equipment on site shall include (this is not an exhaustive list):

- Mobile crushing and screen plant
- Bulldozer/s
- Grader/s
- Excavator/s
- Drill Rig
- Off-road haulage vehicles
- On-road haulage vehicles
- Front end loader
- Light vehicles

The demountable/moveable site office, lunchroom and washroom as well as portable amenities and employee/visitor parking areas shall also be located with the processing and stockpile areas.

The extraction, processing and stockpile areas shall be located within a controlled drainage area which collects all onsite surface runoff into one of two sediment basins and re-directs clean runoff around the site, either to a clean surface water storage dam/s or into natural overland water flow paths. The proposed design and treatment of onsite stormwater is considered adequate and accordance with the relevant legislation, guidelines, and standards, in particular the Water Management Act 2000, relevant Water Sharing Plan/s and the DECC (2008) document “Managing Urban Stormwater – Soils and Construction” Volume 2E). The sediment basins have been designed to be of an adequate size to capture a 38.2mm rainfall event, deemed the 5-day 90th percentile as per DECC (2008) and is considered appropriate to control erosion and sediment from within the quarry footprint.

The location of the proposed extraction footprint has been modified to avoid areas of native vegetation that were considered significantly under the BDAR. Also, the proposed quarry footprint shall not adversely interfere with the existing properties current and further cropping operations. Additionally, the proposed extraction footprint has been located to ensure a 20m untouched land buffer with the properties (and allotments) eastern boundary line.

In order to undertake quarry operations, the site needs to be established, which will include the following activities:

- Marking out of disturbance area
- Construction/upgrade of internal access road
- Construction/upgrade of access to quarry site off Minilya Road
- Progressive clearing of vegetation and soil from within the disturbance area
- Construction of sediment basins and surface water management measures
- Construction of processing and stockpiling areas
- Delivery of plant and mobile process equipment
- Installation of site office, amenities, and other ancillary components (such as staff and visitor parking area).

The construction phase of the proposed development as state by the proponent shall be generally restricted to the hours of 7.00am to 6.00pm Monday to Friday, as per the EPA General Terms of Approval (see Appendix A of Attachment A - Draft Schedule of Conditions to this report).

It is considered that the proposed developments site design and construction operations (as well as the isolated location) are satisfactory and appropriately avoid, minimise, and mitigate any impacts caused by on the following:

- Noise and vibration
- Biodiversity
- Air quality
- Erosion and sediment
- Traffic generation and public road use
- Land use conflicts
- Aboriginal and cultural heritage

<u>Cumulative impacts</u>

The proposed development is located in a landscape dominated by agriculture. In addition to this the site of the proposed quarry has also been partially disturbed by historical excavation activities. The re-establishment and expansion of the proposed operations shall not directly impact the surrounding existing agricultural and other activities. Except for the significant increase in heavy vehicles proposed for the local road network and the possible inconvenience, increase in workload and safety issues caused by blasting activities at the site to the neighbouring property (being Lot 11 DP 755984 and forming part of the property “Yannarie” 1216 Croppa Creek Road North Star).

The development and implementation of an appropriate Blast Management Plan (BMP) as part of the Quarry’s Environmental and Operational Management Plan will be required. The BMP needs to

provide, at the very least, adequate notification procedures and timeframes (24 hours lead time is considered insufficient for surrounding landowners to prepare) as well as a mapped rock and/or debris fall exclusion zone/s. Personnel, equipment and/or livestock located at the development site and on the property where the development is located and on any impacted neighbouring properties need to be evacuated prior to blasting being undertaken.

The Traffic Impact Assessment failed to clearly represent any change in heavy vehicle traffic since official traffic counts were undertaken. As it happens there has been a significant increase in heavy vehicle traffic during the years 2018-2020 because of two similar sized extractive industries commencing operations and the use of the same/similar haulage routes to the proposed development. As per the requirements of the Gwydir Shire s94 (now s7.11) Development Contribution Plan the proposed development was internally referred to Council's engineers, who produced an appropriate 94 contributions rate that is to be paid by the proponent/owner/quarry operator. This will somewhat alleviate the cost of maintenance of the proposed haulage routes cause by the increase in heavy vehicle traffic.

The s94 contribution does not however assist with road safety issues, such as consideration of School Bus routes, School zones and appropriate driver behaviour. These issues need to be addressed by the proposed development through the development and implementation of a Traffic Management Plan and Driver Code of Conduct. The proponent has committed to production of and to the induction of all staff/personnel of a Traffic Management Plan and Driver Code of Conduct, however the details were not provided.

It has is considered that the assessment of cumulative impacts has been poorly presented in the EIS. However, in other areas and Appendix of the EIS. A condition shall be included in the "Draft Schedule of Conditions" (see Attachment A to this report) to ensure the production of an appropriate Blast Management Plan, Traffic Management Plan and Driver Code of Conduct and that these are approved by the consent authority prior to the proposed developments commencement.

Accordingly, it is considered that the proposal armed with the appropriate minimisation and/or mitigation measures, conditions and appropriate Environmental and Operations Management Plans will not result in any significant adverse impacts in the locality as outlined throughout 3.6 of this report.

3.7 Section 4.15(1)(c) - Suitability of the site

The proposed development site is located within an agricultural dominated landscape, with vast broad acre cropping fields interspersed with low ridge lines and small tracts of medium to low grade remnant native vegetation. The proposed development site is situated towards the southwestern end of a ridge line known as "Booraba Ridge" which rises from the cropping fields in the northeastern corner of the property "Minilya". This site has historically been excavated as part of the previous development consent DA 1527/2010 approved 1 July 2012 and further quarrying operations of the site shall not be unusual in the local setting.

The proposed development is shielded from the direct view of the nearest sensitive receptor (approx 3.3km to the east) not associated with the proposed development by the remainder of Booraba Ridge which continues further east from Minilya's eastern boundary line. The proposal can potentially be visible from the western and southern viewpoints but not from the eastern or northern viewpoints.

Additionally, there are a small number of other extractive industry sites within the local area, two of which are of a similar extraction size to the proposed development and are located approximately 5.5km to the southwest.

The existing infrastructure available to the proposed site includes:

- Sealed and unsealed, arterial, collector, local and minor rural road network
- The electricity network is not readily available to the proposed development site as such electricity shall be provided from diesel generators
- No reticulated water supply is available to the development site. Potable water will be sourced from rainwater tanks onsite or externally sourced from a licensed water supplier.
- No mains sewer is available to the development site. Portable pump out amenities shall be installed at the site and serviced by a licensed contractor.
- Telecommunications shall be provided via the existing mobile network
- A number of demountable/moveable structures shall be installed onsite to be used as a site office, lunchroom and washroom.

Due to the proposed developments nature and its isolated location the provision of utilities and services are not readily available but can be adequately provided for with portable structures and devices.

The site is not impacted by the following natural hazards:

- Flooding
- Land slip
- Volcanics
- Earth tremors
- Acid sulphate soils
- Salinity

The only natural hazard impacting the site is Bushfire. This hazard has been assessed in section 3.6 of this report.

The proposed development site, as stated before is located in a predominantly agricultural landscape, with nearly all properties in the region undertaking broad acre cropping and to a lesser extent cattle grazing. In saying this Booraba Ridge contains basalt deposits formed by volcanic flows in the Tertiary Period. A Resource Assessment has confirmed that the proposed development site contains the quality and quantity of basalt material suited to the production of quality aggregate for asphalt and spray seal pavements along with other general applications. The estimated quantity of basalt at the site is stated in the resource assessment as ben 1,516,200 tonnes (550,000m^3) of weathered and fresh basalt along with 44,400 tonnes of overburden. It is assumed from these estimates that if the quarry was to operate at full capacity, being the extraction of 490,000 tonnes per year, the basalt resource would be exhausted in little over three years.

The adjoining properties to the proposed development site are predominantly owned by or associated with the owner of the proposed development site. However, three adjoining properties to the

proposed development site (being Lot 7 DP 755985 & Lot 1227212) are independently owned. These properties are:

- Lot 4 DP 755984, Lot 5 & 6 DP 557322 – "Windridge North" 1835 Croppa Creek Road North Star owned by LC, JW & TW Woods (shown as Coppymurrumbilla Station Pty Ltd in section 4.3 of the EIS) located West of the proposed development site.
- Lot 1 DP 1256597 – "Tikitere" 1135 Croppa Creek Road North Star owned by AT Pealman located southwest of the proposed development site.
- Lots 2, 8 & 11 DP 755984 – "Yannarie" 1216 Croppa Creek Road North Star owned by W G Thompson located East, Southeast and South of the development site.

All of these properties undertake broad acre cropping both dryland and irrigated, generally supplemented by cattle grazing. Except for "Tikitere" which also has two operating quarries of a similar size to the proposed development. Each of these properties have a residential component however, these residences are location at a sufficient distance from the proposed quarry site not to be prohibitive. The use of the allotment Lot 11 DP 755984 which borders the eastern side of the development site may have some restrictions to endure should blasting activities at the proposed quarry be employed. The quarry pit is located at its nearest point approximately 20m from this boundary, so rock and debris fall would be a concern for any livestock, persons and/or equipment located in close proximity to this boundary line.

Apart from the proposed quarries close proximity to the eastern property boundary line and the possible use of blasting at the site, the site is considered suitable for the proposed development. The proposed development site:

- Has adequate separated from residences or other sensitive receivers as to cause minimal noise, vibration or dust impacts,
- is not considered a site of Aboriginal or cultural significance,
- has access to the public road network with some upgrades required for Minilya Road,
- is not the location of any threatened or endangered species or ecologies
- is not the site of a natural hazard other than being identified as bushfire prone land which can be adequately managed and mitigated,
- is located at least 800-900m from the nearest natural waterway which will be protected by the installation of adequate control drainage area and sediment basins
- has avoided, minimised and mitigated sufficiently the impacts on biodiversity and the clearing of native vegetation,
- is not the location of Environment Protection and Biodiversity Conservation Act listed threatened ecological communities,
- has the quality and quantity of resource material suitable and required by the market,
- creates minimal land use conflicts in the area.

It is concluded that with adequate minimisation and mitigation measure the proposed development site is considered suitable.

3.8 Section 4.15(1)(d) - Public Submissions

These submissions are considered in Section 5 of this report.

3.9 Section 4.15(1)(e) - Public interest

The proponent justifies the proposal in the EIS with the following statements:

"The proposal would provide for a new hard rock quarry to be established to support the Inland Rail Project in the short term and the general market in the long term. The proposal would contribute to a better environment by providing a source of construction materials for the project adjacent to the planned alignment of the Inland Rail Project. This will minimise environmental impacts, traffic impacts and other associated socio-economic impacts, whilst avoiding any significant biodiversity and aboriginal cultural heritage values. On this basis and considering that the proposal would offset any residual biodiversity impacts it is considered that the proposal conforms to the principles of ecological sustainable development.

The proposal would result in a beneficial use of the land for extractive industry without constraining the ongoing rural activities occurring on adjacent and surrounding land. The proposal would not contribute to impacts on the delivery and maintenance of affordable housing. The proposal avoids significant impacts to biodiversity values and where impacts can not be avoided an residual impact will be offset. The proposal exhibits good design and consideration of the amenity of the area by minimising visual amenity impacts to the greatest extent possible. The proposal has no impact on the proper construction and maintenance of buildings as any buildings will be temporary demountable buildings. The proposal has carefully considered the relevant environmental planning legislation. The applicant is of the view that the proposal meets all relevant requirements."

and

"While alternative sites may be available in due course to provide the required construction materials for the Inland Rail and associated road upgrade works the site is close to the proposed alignment and would minimise any remaining potential impacts through appropriate design and management measures.

The proposal would provide economic benefits to the local community through additional employment whilst also providing improved material delivery efficiencies to the Inland Rail Project which will benefit the wider region. Accordingly, it is considered that the proposal is justified and its impact acceptable subject to the implementation of the management and mitigation measures identified by the EIS and supporting specialist assessments."

It is considered that the public interest shall be impacted by a number of adverse and beneficial impacts. On the adverse side of the scales are the following:

- increased heavy vehicle movements on already substantially utilised rural roads
- increase maintenance cost and frequency to the local road network which is intended to be mostly offset by the payment of an appropriate s94 (s7.11) contribution.
- Increase road safety concerns due to the use of haulage routes that run through small urban areas with school zones and on road utilised as School Bus routes
- The close proximity of the quarry pit to the neighbouring property and the potential employment of blasting as an extraction technique at the site.
- Noise and dust impacts although these are considered minimal due to adequate separation distances from sensitive receivers.

- The removal of native vegetation and the disturbance of native habitat although it is considered that this will be minimal, and the condition of the ecology is not highly valued.

On the beneficial side of the scales are:

- The material extracted from the proposed quarry will support the Inland Rail Project and Newell Highway Project as well as supply local markets and road maintenance programs.
- The employment of 5-10 staff members from the local area, where possible, and the housing of these employees within the local area, where possible.
- The offset of any native vegetation lost to clearing of the proposed development site.
- Low socio-economic impacts
- Unlikely impacts on Aboriginal or cultural heritage values
- The building of local resilience due to the diversification economy in the area.
- Beneficial use of the land of the land without placing significant constraints on the ongoing rural/agricultural activities occurring on adjacent and surrounding land.

The EIS has demonstrated consistency with the planning controls and the is considered consistent with the New England North West Regional Plan – Goal 1: A strong and dynamic regional economy, whilst ensuring Goal2: A healthy environment with pristine waterways and underpinning Goal 3: Strong Infrastructure and transport networks for a connected future.

The proponent's willingness to develop and implement mitigation measures as listed throughout the EIS should significant reduce any impacts that have not been able to be avoid or minimised.

On the whole the balance of the proposal is consistent to the public interest

4. REFERRALS AND SUBMISSIONS

4.1 Agency Referrals and Concurrence

The development application has been referred to various agencies for comment/concurrence/referral as required by the EP&A Act and outlined below in Table 5.
There are no outstanding issues arising from these concurrence and referral requirements subject to the imposition of the recommended conditions of consent being imposed.

Table 5: Concurrence and Referrals to agencies

Agency	Concurrence/ referral trigger	Comments (Issue, resolution, conditions)	Resolved
Concurrence Requirements (s4.13 of EP&A Act)			
-	-	-	-
Referral/Consultation Agencies			

Water NSW (WNSW)	Request for general advice on proposed integrated & designated development	The proposal is not located near any WNSW land, assets or infrastructure; therefore we have no particular comments or requirements regarding the proposal	Y
DPIE	Cl 50(6) Designated Development under EP&A Regulations 2000	Decision not required	Y
DPIE-EES	Advice Only – Provide comment on the BDAR	Request for additional information with regards to inconsistences and errors throughout the BDAR	Y
DPI Ag	Advice regarding SEPP (Mining Petroleum Production & Extractive Industries) 2007 *(Please note this SEPP has been repealed and replaced by SEPP (Resources and Energy) 2021)*	DPI Ag was concerned with ensuring that non-agricultural development does not adversely impact local agricultural production, and that risk of land use conflict between existing agricultural land uses and proposed non-agricultural development is minimised. NSW DPI recommends the following: • The EIS identifies the landowner's interest in neighbouring land including Lot 11 DP 755984. • The possible encroachment of the extractive site upon the boundary of Lot 11 DP 755984 • The possible land use conflicts with neighbouring land in relation to other permissible land uses under the Gwydir LEP 2013 such as dwellings, bed and breakfast, farm stay accommodation, dwellings, rural workers dwellings and eco tourist facilities • The establishment of an appropriate buffer this is fenced and landscaped between the extractive site and the boundary of Lot 11 DP 755984	Y - A 20m buffer has been established between the extractive site and the boundary of Lot 11 DP 755984 and will be conditioned along with vegetation buffer requirements
Transport for NSW (TfNSW)	Cl 104 – Infrastructure SEPP	<u>General comments:</u>	Y

	Development that is deemed to be traffic generating development in Schedule 3. *(Please note this SEPP has been repealed and replaced by SEPP (Transport and Infrastructure) 2021)*	• The EIS does not directly address cl 104 of the Infrastructure SEPP *(now cl 2.121 of SEPP (Transport and Infrastructure) 2021)* • The handling, transport and use of explosive shall be carried out in accordance with AS 2187, the Explosive Act 2003 and Explosive Regulations 2013 • Where signage is proposed along haulage routes the consent authority is to seek the approval of the Local Traffic Committee <u>Key Intersections – classified roads:</u> • Any road works identified and conditioned within the road reserve of the Newell Highway (HW17) in relation to its intersections with IB Bore Road, Buckie Road and Croppa-Moree Road will require the consent of TfNSW under a Works authority Deed (WAD) or similar agreement • Any road works identified and conditioned within the road reserve of the Bruxner Way (MR462) in relation to its intersections with North Star Road will require the consent of TfNSW concurrence prior to approval by Gwydir Shire Council under a s138 Roads Act application. <u>Impacts on the road network – Intersections:</u> • The EIS did not sufficiently demonstrate the impacts on the road network of turn movements at key intersection along the proposed haulage rotes • Increase in traffic volume impacts only address daily	

		vehicle movements and does not address AM / PM peak hours <u>Cumulative Impacts:</u> • s5.5 of the TIA refer to two additional quarries of a similar size using the same or similar haulage routes and acknowledges the cumulative impacts of all three quarries operating currently and the potential this may have to create significant traffic issued relating to road safety and pavement damage, however it is unclear how this potential is mitigated or minimised by this proposal (eg. Proposed consultation and agreements with existing quarry operators to manage the impact of numerous developments operating concurrently on the road network) <u>Consultation with Road Authorities and TfNSW:</u> • Consent Authority to require the proponent to consult with the relevant Roads Authority and TfNSW to address impacts the proposed development will have on key intersections, classified road/s and the planned highway projects. A dilapidation report is further recommended to clearly identify the existing condition of road to inform a baseline assessment. <u>Traffic Management Plan:</u> • It is recommended that the Consent Authority condition the preparation, by suitably qualified person, and implementation of a Traffic Management Plan (TMP) that includes a copy of the Driver Code of Conduct (DCoC). The	

		DCoC should include (but in not limited to): - A map for the primary haulage routes highlighting critical locations (such school zone, bus stops etc) - Personnel induction and toolbox meetings - Procedures for travelling through residential areas - Any restrictions on certain roads/intersections during weather events and road works - Procedures and restrictions on travel during peak traffic periods (ie AM / PM Peak periods, school bus route times, harvest time) - Complaint resolution and disciplinary actions - Community consultation measures - Work health and safety requirement (Work Health & Safety Regulation 2017) <u>Rail Corridor Impacts</u> • A number of passive level crossings are located along the primary haulage route/s which may be impacted by heavy vehicle use. It is recommended that the consent authority be satisfied that heavy vehicles will not adversely impact the condition of passive rail crossings, in particular after the Inland Rail Project has been completed. The proponent was given the opportunity to respond to the above concerns and recommendations raised by the TfNSW. All were addressed satisfactorily.	
NPWS	S86 - Request any comments in relation to Aboriginal Heritage	Referral request rejected	Y

Moree Plains Shire Council (MPSC)	Request for general terms and comments with regard to the use of local roads within the MPSC	A response was provided by MPSC detailing conditions to be included with any consent relating to the payment of s7.11 contribution in accordance with the Moree Plains Shire Section 7.11 Plan – Traffic Generating Development	Y
Integrated Development (S 4.46 of the EP&A Act)			
EPA	S436(d), 48, 55 – Scheduled Activity POEO Act 1997 – Schedule 1	After a request for additional information regarding the water availability for dust control, the calculation of pit retention emission reduction factors and feasible mitigation measures inclusion in the Air Quality Impact assessment. The proponent provided the additional information to the satisfaction of the EPA who then issued their General Terms of Approved. Which are included in the Draft Schedule of Conditions (see Attachment A to the report)	Y

4.2 Council Referrals (internal)

The development application has been referred to various Council officers for technical review as outlined Table 6.

Table 6: Consideration of Council Referrals

Officer	Comments	Resolved
Traffic	Council's Traffic Engineering Officer reviewed the proposal and provided general terms which are to be included in any conditions of consent relating to: - S94 contribution rate - Upgrade works required for Minilya Road - Upgrade requirements for intersection of Minilya Road and the proposed quarry entrance. - Upgrade requirements for the intersection of Minilya and Croppa Creek Roads. - Restrictions on the use of unsealed roads during and after in adverse weather events.	Y

The outstanding issues raised by Council officers are considered in the Key Issues section of this report.

4.3 Community Consultation

The proposal was notified in accordance with the Council's Community Participation Plan from 20 September 2021 until 18 October 2021. The notification included the following:

- An advertisement in the local newspaper Moree Champion;
- A sign placed on the site;
- Notification on a the Planning Portal;
- Notification letters sent to adjoining and adjacent properties (7);
- Notification on the Gwydir Shire Council's website.

The Council received a total of zero unique submissions, comprising zero objections and zero submissions in favour of the proposal. There were no issues raised from submission.

5. KEY ISSUES

The following key issues are relevant to the assessment of this application having considered the relevant planning controls and the proposal in detail:

5.1 Vegetation Removal – Additional information requested for BDAR

NSW Planning Industry and Environment – Biodiversity Conservation and Science Directorate (BSC) initially reviewed the document "Biodiversity Development Assessment Report, North Star Quarry" (by OzArk Environment & Heritage, August 2021) (being Appendix 8 of the North Star Quarry Environmental Impact Statement, July 2012) on the 16 September 2021. BCS provided a detail response to Council dated 19 October 2021 with the following recommendations:

- Update all PCT references throughout the BDAR with the correct PCT number and PCT Name;
- Map all vegetation zones on site based on PCT and broad condition state;
- Ensure all data entered into the BAM-C is consistent with data, presented in the BDAR;
- Ensure that the BDAR conforms to BAM 2020;
- Ensure all references to the BAM are correct throughout the BDAR;
- Ensure all figures relating to the vegetation clearing are correct and consistent;
- All data in the BDAR and BAM-C must be correct and consistent
- Seek advice from DAWE on whether a referral should be made for Belson's Panic.

Council referred the BCS recommendations to the proponent on the 22 February 2022, who provide a response document and a revised BDAR to Council on the 28 April 2022. A copy of the proponents response can be found in Attachment C of this report and the revised BDAR (April 2022) replaces the original BDAR (August 202) located at Appendix 8 of the North Star Environmental Impact Statement, July 2021.

The review BDAR (April 2022) was again reviewed by the BCS and was a further response was received by Council from BCS on the 31 May 2022 which stated:

"BCS has reviewed the revised Biodiversity Development Assessment Report (BDAR) against our comments provided to you on 19 October 2021 and are satisfied that all issues raised have been adequately addressed."

Resolution: The issue has been resolved by the applicant/proponent providing a revised Biodiversity Development Assessment Report to the satisfaction of NSW Planning Industry and Environment – Biodiversity Conservation and Science Directorate and Gwydir Shire Council

5.2 Quarry Proximity to lot boundary – buffer required, particularly to the east

The proposed North Star Quarry footprint, in the "North Star Quarry – Conceptual Quarry Development Plan" (Drawing number 2542.DRG.004 – Revision 2), dated 26 April 2022, and in other maps and plans throughout the EIS as being located in close proximity to the eastern boundary of the development allotment (being Lot 7 DP 755984) but no setback distance is supplied. However, a clue was found in section 7 of Appendix 6 "Resource Assessment" of the EIS, which refers to a buffer area of at least 20 metres from the quarry footprint to the eastern property boundary line.

Because of the quarry footprint being near to the eastern boundary line of Lot 7 DP 775984, the proposed quarry footprint is also in close proximity to the neighbouring allotment known as Lot 11 DP 755984 (496.1Ha). Lot 11 DP 755984 forms part of the property "Yannarie" 1216 Croppa Creek Road North Star NSW 2408, owned by W G Thompson.

One of the owners of the development allotment, Mr S Doolin, provided a statutory declaration to Council signed by a Mr Angus Siddins. The declaration excepted the blast control procedures for Regional Quarries Australia which included 24 hours initial notice and a phone call 30 minutes prior blast time. Mr Sidden owns Lot 19 DP 755984, "Bonny Ridge" 1545 Croppa Creek Road North Star, which does not share a boundary line with the proposed development allotment and as far as Council is aware has no affiliation with or entitlement of Lot 11 DP 755984.

Resolution: As the provision of a 20 metre buffer between the quarry footprint and the eastern boundary line of Lot 7 DP 755984 is not made clear within the EIS and in order to ensure that a minimum 20 metre buffer area is established and maintained throughout the life of the proposed quarry a condition has been included in the Draft Schedule of Conditions. The conditioning of a 20m buffer will provide protection to the neighbouring allotment (Lot 11 DP 755984) from encroachment of the quarry operations and a minimal safeguard during blasting operations and possible rock or debris fall.

5.3 Traffic generation and cumulative impacts

The proponent acknowledges in the EIS that two (2) other quarries with the same or similar extraction capacities existing within 7km of the proposed North Star Quarry and that these other quarries are using most of the same haulage routes as proposed by the North Star Quarry. It should be noted that like the proposed North Star Quarry, existing two quarries are required to pay a s94 contribution to both the Gwydir Shire Council and the Moree Plain Shire Council for the use of local roads. Where cumulative impacts will be felt the greatest will be in relation to road safety.

Section 5.1.1 of the EIS under the heading of Cumulative Traffic Impacts the proponent suggest that all three quarries shall be buying for the same supply contracts which as estimated to be a total 700,000

tonnes of quarry material for the construction of the Inland Rail Moree to North Star. Should all three quarries be operating at once, with the addition of harvest activities and feedlot operations, the development of an overall traffic management plan to cater for the significant increase in local traffic could be considered. The proponent envisages that his plan will need to include speed controls and traffic management protocols to ensure that all vehicles comply to minimise congestion at intersections and other pinch points. The proponent admits that the development of such a plan is beyond the North Star Quarry's assessment capabilities as it would require the co-ordination of all existing traffic generating developments traffic impacts and control plans, including the Inland Rail and Newell Highway Projects.

Resolution: The issue has been resolved through the inclusion of a condition in the Draft Schedule of Conditions (Attachment A to this report) for the preparation, approval and implementation of an appropriate Traffic Management Plan and Truck Driver Code of Conduct, as well as providing appropriate avenues for the registering of complaints.

5.4 TfNSW – addition information to be requested regarding the haulage route intersections design, capacity and any required upgrades

Transport of NSW (TfNSW) as a part of its comments and recommendations raised a concern regarding the impact of the proposed development on key intersections, classified roads and the planned highway projects. TfNSW recommended a dilapidation report be produced to clearly identify the existing condition of the roads and pavement of the key intersections.

The proponent's response can be found at Attachment C to this report, states:

"The TIA did not identify that the development triggered any works on TfNSW roads. Therefore, there is no need for any further consultation or preparation of a dilapidation report or additional assessment."

Resolution: The overall response provided by the proponent to the TfNSW's questions and concerns provides further justification and explanation of the condition of the haulage routes relevant intersections and their appropriate existing capacity for use by the North Star Quarry. Additionally, as part of sight inspection undertaken by Council's Planning Officer and one of the panel members could not find any justification that would compel the proponent to undertaken further assessment.

5.5 Dust Suppression & Water Source availability for dust suppression

Although it is not clearly defined or easily found Section 3 of the North Star Surface Water Assessment (Appendix 11 of the EIS) provides a small amount of information regarding the North Star Quarry's water supply and the capacity of the proposed sediment basins to adequately supply water for dust suppression. The following is extracted from page of the North Star Surface Water Assessment:

"In the driest scenario, the water balance indicates water will need to be imported 63 days per year. In the above rainfall scenario, the water balance indicates water will need to be imported 14 days per year. It is noted that these scenarios assume a total dame volume of 6ML, with additional surface water being able to be held in the quarry pit. To further reduce reliance on external supplies, additional surface water could be harvested by increasing the sediment basin and/or clean water dams, or a larger sump in the quarry pit to harvest additional surface water.

Base on the above it is expected that the quarry will be moderately self-sufficient in water supply, hence construction and operation of the development can be undertaken with any additional water requirement being reasonably obtained from an appropriately authorised and reliable water supplier. The quarry will be responsible to ensure that any licensing requirement and other approvals required under the Water Act 1912 and/or Water Management Act 2000 are obtained.

During the days in the year where water could not be sourced from the quarry dam, the quarry would need to import up to 155m3 (155,000L) of water for dust suppression (per day). In these events if the sediment basin is fry, water would be sourced from an appropriately authorised and licenced water supplier".

Additionally, the following emissions reducing methods are recommended for adoption as part of the quarry operations (these are taken from Table 14 of Section 7 of the Air Quality Impact Assessment being Appendix 9 of the EIS);

Emission Control Method	Control efficiency (%)
Surface treatment – application of water	50%
Dust collection on drill rig	90%
Covering loads with a tarpaulin	Not quantified
Limit load sizes to ensure material is not above the truck sidewalls	Not quantified
Minimising travel speeds and distances	Not quantified
Keep travel route and materials moist	50%
Application of water on crushing activities	77.7%
Application of water on screening activities	91.2%
Enclosure of activities	70%
Road speed reduction from 65km/hr to 30km/hr	50-85%

Further,

"Should water availability become an issue at the Quarry, or should visible dust be observed to be emitted from haulage routes, the proponent would apply low silt aggregate and reduce the speed of vehicles along those haulage routes. In this way, the emission reduction efficiencies associated with haulage route watering applied within this assessment can be maintained, even in conditions of water shortage".

Resolution: The issue has been resolved through the EPA imposed General Terms of Approval which is Annexure A to the Draft Schedule of Conditions.

5.6 Blasting & proximity to the property boundary – assessment report to include consideration of fly rock. A Blast Management Plan is required to set out procedures for safety, including consideration of the adjoining Lot 11 and its possible inclusion if appropriate measures are unable to be provided.

The proponent has provided a simplified Blast Management Plan which can be seen at Attachment C of this report. This Plan only give basic generic information and as such a condition had been included in the Draft Schedule of Conditions (see Attachment A of this report) to ensure that the Blast Management Plan is updated to reflect the specific site characteristics.

Resolution: As addressed in section 5.1 above a 20 metre buffer area has been conditioned between the quarry footprint and the shared boundary line between Lot 7 DP 755984 and Lot 11 DP 755984. Additionally, a further condition has been included in the Draft Schedule of Conditions that requires a Blast Management Plan that includes but is not limited to the following:

i. Notification procedures for both the local community and neighbouring properties. In particular, the owner of Lot 11 DP 755984. It is also recommended that 48 hours prior notice is to be given to the owner of Lot 11 DP 755984 to allow time for the removal of any livestock, machinery or personnel;
ii. Compliance with EPA licence requirements and restrictions;
iii. Evacuation procedures for the site;
iv. Performance targets for overpressure and vibration;
v. Hazardous materials handling and management protocols;
vi. Blast management processes and strategies;
vii. Monitoring of overpressure and vibration procedures;
viii. Complaint handling and recording; and
ix. Minimisation and mitigation measures.
x. Any assessment of rock fall/fly rock or debris and an exclusion area map produced and supplied to neighbouring property owners

6. CONCLUSION

This development application has been considered in accordance with the requirements of the EP&A Act and the Regulations as outlined in this report. Following a thorough assessment of the relevant planning controls, issues raised in submissions and the key issues identified in this report, it is considered that the application can be supported.

All the key issues as stated in Section 5 of this report have either been resolved or conditioned to the satisfaction of the proponent and the Council. The site of the North Star Quarry is assessed to be suitable and compatible with the locality due to more than adequate existing separation distances from the neighbouring isolated residential sensitive receivers and from the village of North Star. Due to these adequate existing separation distance the impacts of noise, vibration and dust are considerably minimised and may almost be considered insignificant. All other impact can be adequately managed by the implementation of suitable industry management measures and devices such as the establishment of a controlled drainage area and sediment basins and the development and approval of Quarry Traffic Management and Environmental Management Plans.

It is considered that the key issues as outlined in Section 6 have been resolved satisfactorily through amendments to the proposal and/or in the recommended draft conditions at Attachment A.

7. RECOMMENDATION

That the Development Application DA No 34/2021 for the establishment and operation of a Basalt Quarry with a maximum extraction quantity of 490,000 tonne per year for a period of five (5) years from the dated of determination and a then a maximum extraction limit of 150,000 tonnes per year for the ten (10) years following located on the property “Minilya” 427 Minilya Road, North Star NSW

2408 be APPROVED pursuant to Section 4.16(1)(a) of the Environmental Planning and Assessment Act 1979 subject to the draft conditions of consent attached to this report at Attachment A.

The following attachments are provided:

- Attachment A: Draft Conditions of consent
- Attachment B: North Star Quarry Environmental Impact Statement with current Drawings and revised Appendix 8
- Attachment C: Applicants responses to additional information request by Transport for NSW, EPA, Biodiversity Conservation Team (including revised Biodiversity Development Assessment Report) and Blast Management Plan
- Attachment D: EPA General Terms of Approval
- Attachment E: Moree Plains Shire General Terms of Approval
- Attachment F: Current Plan Versions being:
    - North Star Quarry – Site Location Plan (Drawing No. 2542.DRG.001), dated 3 September 2020
    - North Star Quarry – Site and Surrounds (Drawing No. 2542.DRG.002), dated 3 September 2020
    - North Star Quarry – Conceptual Site Layout Plan (Drawing No. 2542.DRG.003) Revision 1, dated 18 May 2021
    - North Star Quarry - Conceptual Quarry Development Plan (Drawing No. 2542.DRG.004) Revision 2, dated 26 April 2022
    - North Star Quarry – Conceptual Final Landform (Drawing No. 2542.DRG.005) Revision 2, dated 26 April 2022
    - North Star Quarry – Conceptual Final Landform (Cross Sections) (Drawing No. 2542.DRG.005A) Revision 2, dated 26 April 2022
    - North Star Quarry – Surrounding Landholder Map (Drawing No. 2542.DRG.006) Revision 1, dated 18 May 2022
    - North Star Quarry – Rehabilitation Management Plan (Drawing No. 2542.DRG.007) Revision 2, dated 26 April 2022
    - North Star Quarry – Surface Water Management Plan (Drawing No. 2542.DRG.009) Revision 3, dated 26 April 2022
    - North Star Quarry – Conceptual Quarry Development Visualisation (Drawing No. 2542.DRG.010) Revision 1, dated 18 May 2021