

JOINT REGIONAL PLANNING PANEL (Northern)

JRPP No	2015NTH007
DA Number	MOD2015/0008 of DA2014/0024
Local Government Area	Clarence Valley Council
Proposed Development	Modification to DA2014/0024 (extraction rates, creek crossing and site access) Extractive Industry (hard rock quarry)
Street Address	Boundary Creek Forest Road, Nymboida
Applicant/Owner	Applicant: Greensill Bros P/L (c/o GeoLINK) Owner: Unwin Gaine Cartmill
Number of Submissions	2 Submissions (same author) 2 Submissions (same author) – late submissions
Regional Development Criteria (Schedule 4A of the Act)	Clause 8 Particular Designated Development Development for the purposes of an extractive industry, which meets the requirements for designated development under clause 19 of Schedule 3 to the <i>Environmental Planning and Assessment Regulation 2000</i> State Environmental Planning Policy (State and Regional Development) 2011 Clause 21 Council consent functions to be exercised by regional panels Determination of modification of development consents (s96(2)) previously granted by the panel, in accordance with Part 4 of the Act.
List of All Relevant s79C(1)(a) Matters	• State Environmental Planning Policy No. 33 – Hazardous and Offensive Development • State Environmental Planning Policy No. 44 – Koala Habitat Protection • State Environmental Planning Policy No. 55 – Remediation of Land • State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 • State Environmental Planning Policy (Rural Lands) 2008 • State Environmental Planning Policy (State and Regional Development) 2011 • Clarence Valley Local Environmental Plan 2011

	Clarence Valley Council Rural Zones Development Control Plan 2011
List all documents submitted with this report for the panel's consideration	- Notice of Determination of DA2014/0024 - Addendum to Environmental Impact Statement Nymboida Quarry, Nymboida, (second issue) 22 July 2015 - External correspondence – RMS, EPA, NSW Office of Water, NSW Fisheries - Submissions
Recommendation	That Application MOD2015/0008 of DA2014/0024 (JRPP reference No. 2015NTH007) be approved subject to the imposition of the modified Conditions contained in the Draft Schedule attached to this report.
Report by	Sarah Sozou, Development Planner, Clarence Valley Council

Assessment Report and Recommendation Cover Sheet

Summary

Application	2015NTH007 – MOD2015/0008 of DA2014/0024 – Modification to DA2014/0024 (extractive industry) - extraction rates, creek crossing and site access
Applicant	Greensill Bros c/o GeoLINK
Owner	Unwin Gaine Cartmill
Address	Boundary Creek Forest Road, Nymboida
Legal description	Lot 48 DP752839; Lot 50 DP752839; & Lot 20 DP46031
Submissions	2 submissions (same author) received during exhibition period 2 submissions (same author) received after exhibition period closed

The Joint Regional Planning Panel (JRPP) granted approval, subject to conditions, to Development Application DA2014/0024 (JRPP Reference No. 2014NTH001) at their Meeting of 22 December 2014 for a quarry on Lot 48 DP752839, Lot 50 DP752839 and Lot 20 DP46031, Boundary Creek Forest Road, Nymboida. A copy of the Notice of Determination is attached.

The Applicant is now seeking approval under MOD2015/0008 (s96(2) modification) to modify the approved development. Three changes to the development are sought:

1. Alter the staging of extraction and permit the maximum extraction of 200,000 tonnes being extracted from the commencement of quarrying.
2. Provide an alternative creek crossing (splash crossing) for Copes Creek on Boundary Creek Forest Road.
3. Provide an additional access to the quarry for heavy vehicles and subsequent amendments to the quarry layout plan.

The application has been assessed in accordance with the requirements of the Environmental Planning and Assessment Act, 1979 and the relevant environmental planning instruments which are discussed in detail in this report.

The application was advertised and notified (on two occasions) and 2 submissions from the same author to the development were received during that time. Two (2) submissions (same author) were received after the notification period closed. The issues raised in the submissions have been discussed within this report.

Recommendation

That Application MOD2015/0008 of DA2014/0024 (JRPP reference No. 2015NTH007) be approved subject to the imposition of the modified Conditions contained in the Draft Schedule attached to this report.

Site Description & Location

The subject land is identified as Lot 48 DP752839, Lot 50 DP752839 and Lot 20 DP46031, Boundary Creek Forest Road, Nymboida. The site is located approximately 11km south-west of the Nymboida Township by road. The site has a total area of 254 hectares of which approximately 9.97 hectares is to be used for the operation of the extractive industry. The two nearest dwellings are located 2km and 3.3km to the east of the quarry area.

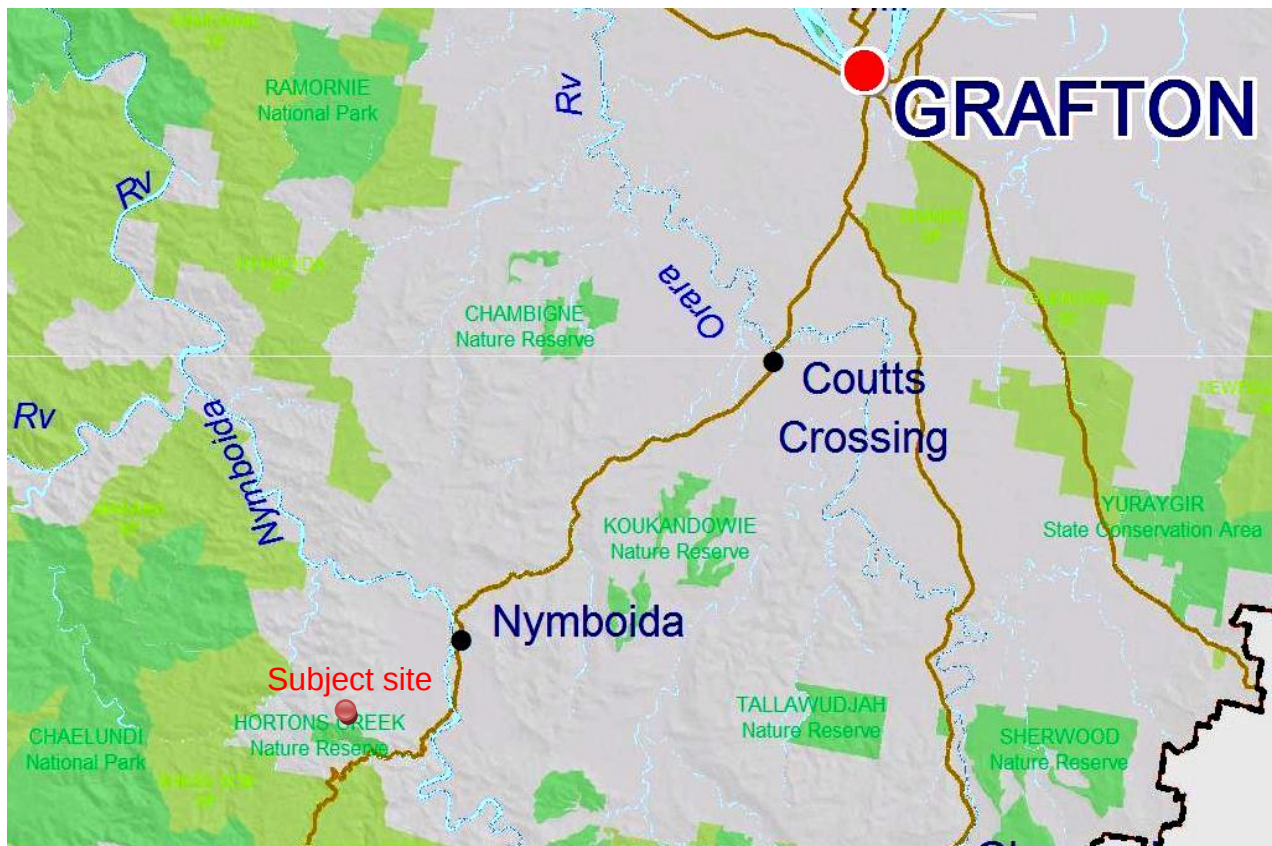


Figure 1: Locality Map – approximate location of quarry site (Source: CVC GIS)

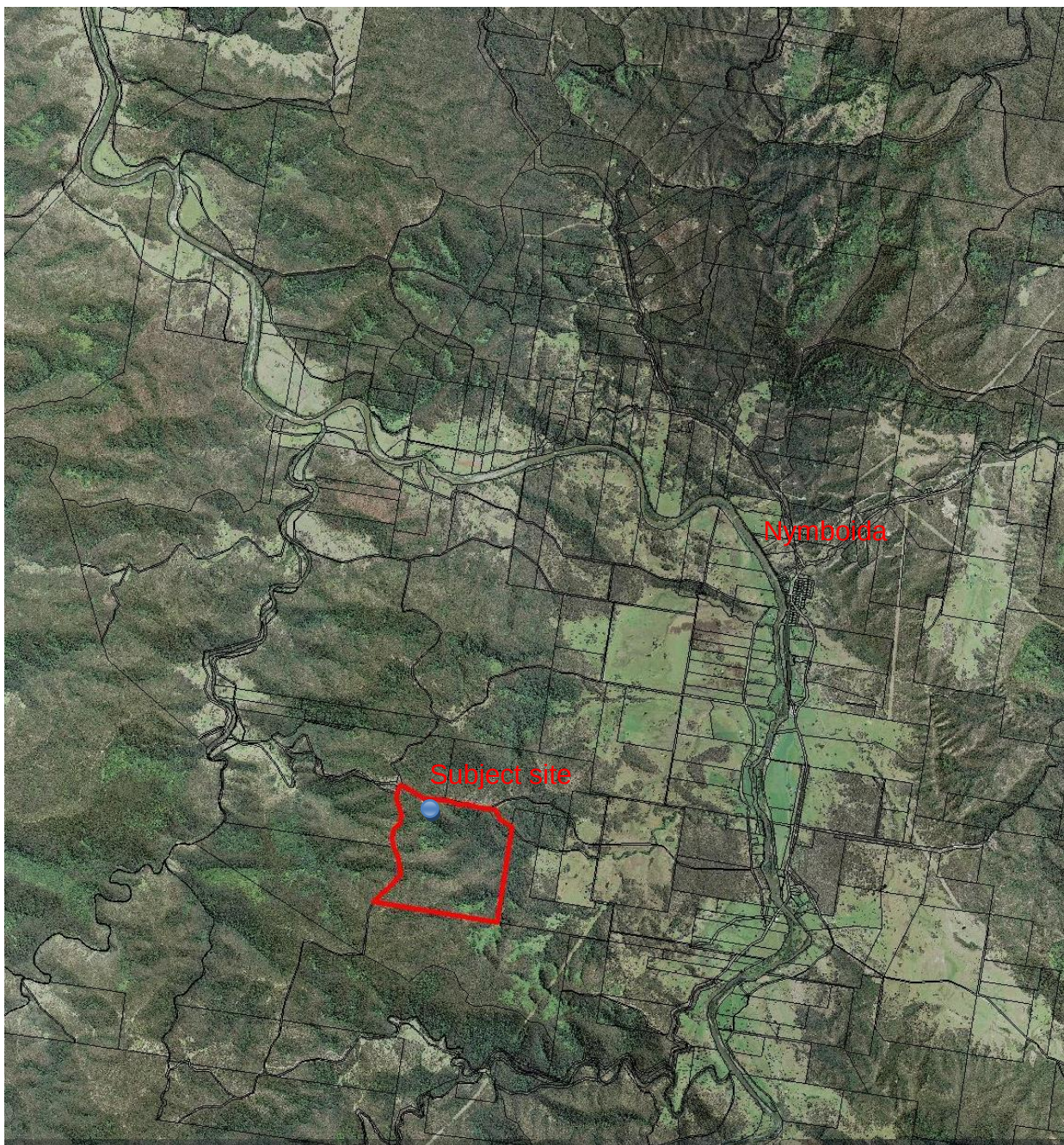


Figure 2: Aerial Photograph (Source: CVC GIS)

Details of proposal

The JRPP approved DA2014/0024 for an extractive industry, subject to conditions, at their Meeting of 22 December 2014.

The approved quarry is 9.97 hectares in area. The total extractable resource amount is 4.9million tonnes of material over an estimated quarry life of 25 years. A staged quarry operations and extraction rates were proposed and approved under that DA. The maximum extraction rate approved is 200,000 tonnes per annum (80,000 bank cubic metres). The approved stages and extraction rates are:

Area	Stage	Total BCM	Bank Cubic Metres Per Annum	Tonnes Per Annum
1	1A	40,000	8,000	20,000
1	1B	70,000	28,000	70,000
1	2	150,000	60,000	150,000
1	3	400,000	80,000	200,000
2	4	Between 800,000,– 1,300,000	80,000	200,000

The original DA was a staged development under s83B of the *Environmental Planning and Assessment Act 1979* (the EP&A Act). The consent granted operational approval to extract material from Area 1 and a concept approval to extract material from Area 2. Quarrying of Area 2 will be subject to lodgment and assessment of a separate Development Application.

A copy of the Notice of Determination for DA2014/0024 is attached.

MOD2015/0008, a s96(2) application, has been lodged with Council to seek approval to modify the approved development. The changes are detailed below.

1. Staging and extraction rates

The EIS for the approved quarry proposed staging the amount of material extracted from the quarry. Smaller extraction rates were proposed for the initial few years of the quarry (starting at 20,000 tonnes) and gradually increasing to the maximum extraction rate of 200,000 tonnes per annum at full capacity. Conditions of consent were applied to the consent to reflect the staging proposed.

The Applicant is now seeking to modify the staging of extraction and to allow a maximum extraction rate of 200,000 tonnes per annum upon commencement of the quarry operations, as shown in the below table. The amendments require changes to Conditions 2, 9 and Condition 29 of consent. The Applicant is not proposing to change the overall amount of material to be extracted from the quarry. Material will still be extracted from Area 1 in three stages, as shown in the amended plans.

Stage	Estimated Year of extraction	Total BCM	Bank Cubic Metres Per Annum	Tonnes Per Annum	Average Daily Truck Loads	Maximum Daily Truck loads
Area 1						
1	1-2	70,000	80,000	200,000	22 (44 Movements)	50 (100 movements)
2	1-3	150,000	80,000	200,000	22 (44 Movements)	50 (100 movements)
3	3-10	400,000	80,000	200,000	22 (44 Movements)	50 (100 movements)

Stage	Estimated Year of extraction	Total BCM	Bank Cubic Metres Per Annum	Tonnes Per Annum	Average Daily Truck Loads	Maximum Daily Truck loads
Area 2 (subject to further geotechnical investigation)						
4	10 – 25	Between 800,000 – 1,300,000	80,000	200,000	22 (44 Movements)	50 (100 movements)

(N.B. Area 2 is also subject to lodgment and assessment of a separate Development Application)

The reason for seeking approval to modify the extraction rates are:

- The developer initially proposed the lesser extraction rate of 20,000 tonnes if it could be undertaken without the need to upgrade the intersection of Boundary Creek Road and Armidale Road. However, the works are conditioned to be undertaken prior to commencement of any quarry activities.
- Although it is unlikely that the quarry would start operating at full capacity the proponent wants to make sure that it is not restricted to a lesser amount if he secures a contract that requires the quarry to operate at full capacity.

All of the impact assessments prepared as part of the initial EIS were based on the quarry operating at maximum capacity.

2. Alternative creek crossing for Copes Creek

Condition 19 of consent requires the existing causeway at Copes Creek, on Boundary Creek Forest Road, to be upgraded to a culvert crossing. The Applicant is seeking approval to install a splash crossing as an alternative to the culvert. Condition 19 is proposed to be modified to allow flexibility in the design / construction of the drainage line crossing to allow for the provision of either a splash crossing or a culvert crossing.

The Applicant has provided the following reasons to justify why a splash crossing is a suitable alternative to installing a series of culverts at the crossing:

- There will be no obstruction to flow velocities;
- A splash crossing satisfies Fisheries NSW requirements for fish passage identified in the publication Why DO Fish Need TO Cross the Road? Fish Passage Requirements for Waterway Crossings; and
- It is a less expensive option and therefore more economically sustainable in the longer term.

3. Additional access for heavy vehicles and amendments to the quarry layout

The approved development utilises the existing site access as the quarry access. The Applicant is now proposing a new heavy vehicle access point off Boundary Creek Forest Road. The new access will better service the operations of the quarry and is considered a better location in terms of road safety. The new access point will enable trucks to enter straight into the quarry footprint.

The existing access will be retained and utilised for light vehicle access only, to enable easy access to the staff amenities / parking area. Light vehicles will not need to traverse the quarry footprint area, which is a desirable outcome.

The new access location has also necessitated minor adjustments to the quarry layout and the staging of material extraction. The staging of extraction has been redesigned to include the new access through the middle of Area 1. The total area of the quarry footprint is not altered.

Statutory Development Assessment Framework

Approved DA – DA2014/0024

The approved DA was processed as Designated Development under Clause 19, Schedule 3 of the *Environmental Planning & Assessment Regulation 2000* (the EP&A Regulation).

The approved DA was determined by the JRPP as development listed under Schedule 4A of the EP&A Act for which regional panels may be authorised to exercise the consent authority functions of councils.

The approved DA is a staged development under s83B of the *Environmental Planning and Assessment Act 1979* (the EP&A Act).

The approved DA was processed as integrated development under s91A(2) of the EP&A Act and required the concurrence of the:

- NSW Environmental Protection Authority (EPA) under the Protection of the Environment Operations Act 1997,
- NSW Office of Water under the Water Management Act 2000, and
- Fisheries NSW under the Fisheries Management Act 1994.

Modified proposal – MOD2015/0008

Under *Clause 21: Council consent functions to be exercised by regional panels of State Environmental Planning Policy (State and Regional Development) 2011* the JRPP is the authority to determine s96(2) modification applications of development consents previously granted by the panel, in accordance with Part 4 of the Act.

Revised advice / General Terms of Approval from the above State authorities were received for the modified proposal. A copy of that correspondence is provided in the attachments and the conditions of consent have been modified, where required.

The modified proposal triggers an EPA licence being required from the commencement of quarry operations and not deferred until Stage 2. The EPA will be the responsible authority for monitoring water quality, noise impacts and erosion and sediment control measures from commencement.

Section 79C Assessment

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

(a) the provisions of:

(i) any environmental planning instrument, and

The approved development was assessed in accordance with the provisions of the following environmental planning instruments:

- State Environmental Planning Policy (Mining, Petroleum, Production and Extractive Industries) 2007
- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy (Rural Lands) 2008
- State Environmental Planning Policy 33 – Hazardous and Offensive Development
- State Environmental Planning Policy 44 – Koala Habitat Protection
- State Environmental Planning Policy 55 – Remediation of Land
- Clarence Valley Local Environmental Plan 2011

The proposed modification does not trigger a re-assessment of the development under all the EPI's, as that assessment has been undertaken for DA2014/0024. An assessment under the EPI's affected by the modification proposed is provided.

The impact assessments for the development (including the Soil & Water, Biodiversity, Traffic & Transport, Noise, Vibration & Blasting, Air Quality, and Waste Management assessment) in the EIS were all based on the quarry operating at full capacity, although the extraction was proposed to be staged. The assessment under DA2014/0024 was based on the quarry operating at maximum capacity. For that reason, the amendments to enable commencement of quarrying at full capacity do not require further assessment in terms of those impacts.

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

The permissibility of the extractive industry, and assessment of the developments compatibility with other land uses, impacts on groundwater resources, impacts on biodiversity, greenhouse gas emissions, resource recovery, transport, and rehabilitation are unchanged by the proposed modifications. The two areas that require further comment are water management and biodiversity.

Clause 14: Natural resources management and environmental management

Water Management

An amended soil and water management plan and rehabilitation plan were submitted to address the proposed new access road. The amended soil and water management plan shows the sedimentation ponds and stormwater diversions flows for the amended quarry layout. The plan has been prepared in accordance with *Managing Urban Stormwater: Soils and Construction: Volume 2E Mines and Quarries*. No significant impacts to water quality are likely to result from the operations detailed in the amended management plan.

The NSW Office of Water provided amended General Terms of Approval for the modified proposal. Condition 4 of consent is to be amended to reflect the amendments.

Biodiversity

An additional ecological assessment has been prepared for vegetation to be removed within the Boundary Creek Forest Road reserve for the proposed new access location. The outcome of that assessment reads:

“No Threatened Species were located within the footprint of the area assessed.

There were a total of 108 trees located on the north east side of Boundary Creek Road to be cleared and 114 trees located in the footprint of the area to be cleared on the Southern side adjacent to the Quarry site clearing. Approximately 50% of the trees to be cleared are Spotted Gum.

In view of the fact that there was no Threatened Species located there will be no significant impact on the ecology of the area to be cleared. All common species are quite dominant throughout the North Coast and therefore will also have no significant impact on the ecology of the forest.

All trees to be removed appear to be Regrowth trees. No Hollow bearing trees occur in the footprint.”

The proposed heavy vehicle entrance driveway to the quarry is considered to be a safer location because of the sight distances available. It is also likely to result in fewer trees to be removed to obtain the necessary sight distances when compared with the approved access location.

State Environmental Planning Policy (State and Regional Development) 2011

Clause 21: Council consent functions to be exercised by regional panels

The JRPP is the authority to determine s96(2) modification applications of development consents previously granted by the panel, in accordance with Part 4 of the Act.

Clarence Valley Local Environmental Plan 2011

The permissibility of the extractive industry and assessment of the zone objectives is unchanged from the original assessment of the LEP under DA2014/0024. The only clause that requires further comment is clause 7.7.

Clause 7.7: Drinking Water Catchment

(3) Consent must not be granted to the carrying out of development on land to which this clause applies unless the consent authority:

- (a) has taken into consideration whether there will be any adverse impact on drinking water quality and flows having regard to the following:*
 - (i) whether there is sufficient distance between the proposed development and waterways that feed into the water supply catchment,*
 - (ii) the on-site use, storage and disposal of any chemicals on the development site,*
 - (iii) the treatment, storage and disposal of wastewater and solid waste generated or used on the development site,*
 - (iv) any other potential adverse impacts on the water quality and quantity within the catchments, and*
- (b) is satisfied that:*

- (i) the development is designed, sited and will be managed to avoid any adverse impact on water quality and flows, or*
- (ii) if that impact cannot be avoided, after having taken into consideration feasible alternatives, the development is designed, sited and will be managed to minimise that impact, or*
- (iii) if that impact cannot be minimised, the development will be managed to mitigate that impact.*

The quarry site is mapped within the Drinking Water Catchment Map of the LEP. The quarry site is located within the Copes Creek catchment, which is a tributary to the Nymboida River.

Concerns have been raised due to potential for increased sediment and pollution entering Copes Creek from the proposed splash crossing at Copes Creek. Council's Water Cycle section provided comments to the proposed modification. A modified condition is proposed to require sealing of the road and turfing of the table drains for 50m (equivalent to 3 truck lengths) either side of the crossing to reduce the amount of sediment entering Copes Creek and filter runoff from the road prior to entering the creek.

NSW Fisheries have no objection to the splash crossing design and have provided updated General Terms of Approval (note - condition 5 to be amended to refer to updated approval).

The amended Soil and Water Management Plan details the management of stormwater runoff from within the disturbed quarry footprint. Stormwater is to be captured and reused or safely discharged.

- (ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the draft instrument has been deferred indefinitely or has not been approved), and**

Nil

- (iii) any development control plan, and**

Rural Zones Development Control Plan

There are no specific requirements for extractive industries under the Rural Zones DCP. The development was notified in accordance with Part B of the DCP which is discussed under S79C(d) of this report. The proposed modified development is not inconsistent with the objectives of the plan.

- (iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and**

Nil

- (iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,**

Nil

(v) any coastal zone management plan (within the meaning of the [Coastal Protection Act 1979](#)),

The subject land is not affected by any coastal zone management plan.

(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.

The amended extraction rates / staging proposed will enable the quarry to operate at full capacity (200,000 tonnes per annum) from the commencement of extraction. Although the extraction of material was proposed to be staged as part of the original DA, all of the impact assessments undertaken as part of the EIS were for the maximum extraction rate and have been previously assessed. There is however the potential for any impacts from the quarry, e.g. noise and traffic to be the maximum level from the beginning of operations rather than a gradual increase to the maximum impacts.

The splash crossing is considered suitable, and is not considered to impact on the drinking water catchment if the amended condition proposed by Council is applied, which requires sealing and turfing of the table drains 50m either side of the crossing. The sealed road and turfed drains will reduce the amount of sediment entering Copes Creek.

The additional access for heavy vehicles is considered a better location in terms of achieving suitable sight distances and reducing the amount of clearing required compared to the existing site access.

(c) the suitability of the site for the development,

The site is suitable for the proposed modified development subject to the imposition of modified conditions contained in the Draft Schedule.

(d) any submissions made in accordance with this Act or the regulations,

The proposed development was advertised and notified in accordance with the provisions of the Act, Regulations and Council's DCP. The application was advertised and notified on a second occasion due to changes to the proposal. Two (2) submissions, from the one author, were received during the notification periods. Two (2) submissions, from the one author, were received after the notification periods. Issues raised in the objections are discussed below.

1. Traffic and road conditions on Armidale Road

Concern:

The entire 40km stretch of the Armidale Road is substandard and already dangerous for users. It is narrow and winding, patched and potholed, with crumbling shoulders and an uneven surface. The extremely limited opportunities to safely overtake already presents a serious hazard for road-users, which will be increased significantly by the additional truck & dog trailer movements generated daily by the quarry.

To launch directly into full production, with 100 truck movements each day which, when allowing for restrictions during school bus operation periods, equates to one truck movement every 5 minutes, without upgrading the road, would be irresponsible at best.

Council must act immediately to pressure the RMS to undertake the work necessary to make that road safe for the thousands of people that travel on it each and every day.

A request for noise dampening barriers along Armidale Road at Nymboida was contained in a late submission.

Comment:

Armidale Road is a regionally classified road. A Traffic Impact Assessment (TIA) was provided as part of the EIS for the quarry and the impacts were assessed under DA2014/0024. That assessment was based on the quarry operating at full capacity with the maximum vehicle movements. The TIA identified necessary upgrading works for the intersection of Armidale Road and Boundary Creek Road, which will be required to be completed prior to any quarrying commencing.

The changes to the extraction rates proposed may result in more truck movements from the commencement of quarrying, however, the total amount of material, and the total truck movements over the life of the quarry, is not changed by this application. The rate is a maximum rate and it is likely that the actual amount of material extracted, and associated truck movements, will fluctuate annually to meet demand.

The RMS raised no objection to the modification.

A traffic noise assessment, based on the quarries maximum truck movements, was provided in the EIS for DA2014/0024. The assessment determined that the heavy vehicle noise generated by the haulage of material along Armidale Road is likely to be below the limits identified in the EPA NSW Road Noise Policy (RNP). The report did not identify the need for noise barriers to be installed as part of the mitigating measures proposed. No further assessment is required as part of the modification proposed.

2. Pollution of the region's drinking water supply

Concern:

Copes Creek runs directly into the Nymboida River, the source of drinking water for over 100,000 people living between Iluka and Bonville. The splash crossing will remove and deposit mud and fuel pollutants into the creek that were picked up at the quarry site, and oil and other leaking materials from the trucks' under parts to likewise wash off into our drinking water.

Comment:

Council's Water Cycle section was consulted in regards to the proposed modification. A modified condition is proposed to require sealing of the road and turfing of the table drains for 50m either side of the crossing to reduce the amount of sediment entering Copes Creek and to filter the runoff from the road that enters the creek.

Copes Creek is a 3rd order stream that flows intermittently and can cease to flow on an annual basis during dry periods. When there are flows, the vertical geometry of the splash crossing and the depth of flow across the crossing will limit the speed of trucks (for safety reasons). Low truck speeds when crossing will reduce the amount of splashing water, which will mitigate the potential for pollutants from the underside of the vehicles entering the creek. During high water flows, access to the splash crossing by road traffic may be limited for safety reasons. The Truck Drivers Code of Practice, to be prepared, will manage how and when vehicles use the crossing. Water depth markers are to be installed to indicate water depth at the crossing.

NSW Fisheries have no objection to the splash crossing design, subject to their amended General Terms of Approval.

The draft amended condition has been worded so that either a culvert or splash crossing can be installed for the upgrade of the creek crossing.

3. Removal of overburden from the site

Concern:

Overburden should be retained on-site for remediation works. Only hard rock should be permitted to be sold from the site.

Comment:

The original application and EIS proposed retaining 10,000m³ of overburden on site for rehabilitation works. Overburden necessary for rehabilitation works is to be retained on-site. There is no objection to selling excess overburden as fill.

(e) the public interest.

The proposed development complies with the relevant legislation and local policies ensuring that the public interest is maintained. Through the imposition of the modified conditions contained within the draft schedule, potential impacts from the development to the surrounding area will be minimised.

Schedule of Draft Modified Conditions

2. The development being completed in conformity with the Environmental Planning & Assessment Act, 1979, the Regulations thereunder, the Building Code of Australia (BCA) and being generally in accordance with the following documents and plans:
 1. Amended Quarry Footprint Plan ~~12 November 2014~~ **17 July 2015** prepared by GeoLINK
 2. Environmental Impact Statement 17 January 2014 prepared by GeoLINK
 3. Traffic Impact Assessment (second issue) prepared by GeoLINK & Road Safety Audit June 2014 prepared by Roadnet
 4. Addendum Ecological Assessment (second issue) 26 November 2014 prepared by GeoLINK
 5. **Addendum Environmental Impact Statement (second issue) 22 July 2015 prepared by GeoLINK.**

Or where modified by any conditions of consent.

4. Compliance with the conditions and advice of the NSW Office of Water, as contained in their letter dated 10 March 2014, consisting of 7 pages, **and as amended by their letter dated 24 September 2015, consisting of 3 pages**, as attached to this Notice of Determination.
5. Compliance with the conditions and advice of the Fisheries NSW, as contained in their letter dated ~~14 February 2014~~ **28 July 2015**, consisting of 2 pages, and as attached to this Notice of Determination.
9. ~~Development consent is given to extract the following maximum annual and total amounts of material:~~

Area	Stage	Total BCM	Bank Cubic Metres Per Annum	Tonnes Per Annum
1	1A	40,000	8,000	20,000
1	1B	70,000	28,000	70,000
1	2	150,000	60,000	150,000
1	3	400,000	80,000	200,000
2	4	Between 800,000,– 1,300,000	80,000	200,000

Development consent is given to extract a maximum of up to 200,000 tonnes of material per annum. The total amount of material to be extracted for Area 1 is 1.65 million tonnes and Area 2 is 3.25 million tonnes.

Note: Area 2 is subject to further development consent prior to commencing quarrying of this area.

10. The area of the quarry shall not exceed 9.97 ha as shown in the Amended Quarry Footprint Plan prepared by GeoLINK dated ~~12 November 2014~~ **17 July 2015**. All blasting, crushing, screening, stockpiling and loading is to be undertaken within this area.

19. Design plans and documentation for the following works are required to be assessed and approved by Council. The works shall then be constructed by the applicant and approved by Council prior to commencement of quarry operations:

- a) The location of the existing Boundary Creek Road and Boundary Creek Forest Road formations, with respect to the public road reserve boundaries, is to be determined by survey. Any road works shall be undertaken within the surveyed road reserve or the road reserve boundaries are to be adjusted with the written agreement of the owners of any affected properties. Revised survey plans will be required to be approved and registered with NSW Land and Property Information.
- b) The road section known as Boundary Creek Forest Road that provides access to the quarry site from the existing Council maintained Boundary Creek Road section, is to be constructed as a 6m wide unsealed gravel carriageway with 0.5m wide shoulders (minimum).
- c) The **proposed heavy vehicle** quarry ingress / egress driveway off Boundary Creek Forest Road shall be designed as a basic left-turn treatment (BAL) into the property and basic right-turn treatment (BAR) out of the property in accordance with Austroads and NRDC.
- d) If ~~a gate is~~ **driveway gates are** proposed for the quarry, ~~it~~**they** shall be set back so that the largest **design** service vehicle **utilising the driveway** can stand clear of Boundary Creek Forest Road.
- e) All Unsealed gravel pavements are to be designed for the in-situ subgrade conditions and design traffic.
- f) Stormwater drainage culvert road crossings are to provide a minimum 1 in 5 year Average Recurrence Interval (ARI) immunity against flood and drainage flows.
- g) ~~The existing causeway at Copes Creek, on Boundary Creek Forest Road, is to be upgraded to a culvert crossing that provides a minimum 1 in 20 year Average Recurrence Interval (ARI) road immunity against flood and drainage flows. Water depth markers and road edge guide posts are to be provided. Copes Creek is a third order stream. Comments and approval for any construction works are required from the NSW Department of Primary Industries – Fishing and Aquaculture.~~

Copes Creek is a third order stream. Comments and approval for any construction works are required from the NSW Department of Primary Industries – Fishing and Aquaculture and Clarence Valley Council. Comments from the NSW Office of Water and NSW Environmental Protection Authority shall be considered.

- ***The existing causeway at Copes Creek, on Boundary Creek Forest Road, is to be upgraded to either a culvert crossing that provides a minimum 1 in 20 year Average***

Recurrence Interval (ARI) road immunity against flood and drainage flows or a concrete 'Splash Crossing' designed in accordance with the NSW Department of Primary Industries – Fishing and Aquaculture documents 'Policy and Guidelines For Fish Friendly Waterway Crossings' and 'Why Do Fish Need To Cross The Road? Fish Requirements For Waterway Crossings (Fairfull and Witheridge 2003)'.

- ***A 'Splash Crossing' design must incorporate a reinforced concrete slab suitable for the design traffic loading, environmental flow conditions and fish passage requirements. Road-user warning signage, water depth markers and reflectorised road edge guide posts are to be installed as required by Council. Two coat 14/7mm bitumen sealing of the gravel pavement (in accordance with NRDC) and turfing of the table drains must be provided for 50m either side of the proposed 'Splash Crossing'.***
 - ***Detailed sedimentation and erosion control plan, specific to the construction works, is required in accordance with the NSW 'Blue Book'.***
- h) The section of Boundary Creek Road, extending from the 'Armidale Road – Boundary Creek Road' intersection to 'Boundary Creek Road - Boundary Creek Forest Road' intersection, is to be constructed as a 7m wide carriageway with minimum 0.5m wide shoulders.
- i) Armidale Road – Boundary Creek Road intersection is to be constructed as an 'Austroads' basic right and left turn (BAL & BAR) complying intersection. The bitumen sealed gravel pavement is to be designed for the in-situ subgrade conditions and design traffic. Bitumen sealing shall comprise emulsion or cutback primer plus 2 coat 14 / 7 mm seal. The design plans shall include details of linemarking, signage and road furniture and consider the 'RoadNet' Road Safety Audit Report (dated 13 June 2014) recommendations.
- j) A report, addressing items 1 to 5 in Appendix A of the Road Safety Audit prepared by Roadnet (dated 13 June 2014), detailing how they are to be managed and / or implemented is to be submitted by the applicant for the approval of Roads & Maritime Services and Council.
- k) Certification from the supervising professional engineer or registered land surveyor, that all works have been constructed in accordance with the Council approved plans and specifications are required.
- l) All quarry trucks exiting the site shall do so via a weighbridge to be installed prior to commencement of quarrying activities, or all trucks are to be loaded by a machine with scales to enable accurate records of loads.
- m) The existing site access road must be utilised for light vehicular access to the administration building car park area only. The access must be upgraded to comply with AS2890 and NRDC.***

Signage advising the vehicular access limitations for this driveway is to be installed.

29. Payment to Council of a road maintenance contribution per annum for the use of Council's roads by extractive industry trucks at a rate of \$0.05 per tonne of material extracted (***maximum annual rate is \$10,000***). The maximum annual contribution rates for each stage are:

Stage	Maximum extraction rate	Maximum annual rate
Stage 1A	20,000 tonnes	\$1,000
Stage 1B	70,000 tonnes	\$3,500
Stage 2	150,000 tonnes	\$7,500
Stage 3	200,000 tonnes	\$10,000
Stage 4	200,000 tonnes	\$10,000

NB

1. The contribution(s), as assessed, will hold for a period of 12 months from the date of this approval. Contributions not received by Council within 12 months of the date of this determination will be adjusted in accordance with the movement in the Consumer Price Index.
2. The contributions are to be paid to Council on an annual basis. The amount will be determined by the extraction amounts specified in the Plan of Management and revised annually by the operator.