

Memorandum

To: Consultant Town Planner, Libby Cumming
From: Manager Technical Services, Malcolm Donnelly
File: DA 41/16-17
Date: 20/02/2017
Re: Engineering Conditions for Proposed Extractive Industry at Lots 87, 101 and 113 DP753319, Matheson

Comments:

- This development application is for the extraction of up to 300,000 tonnes per annum (tpa) and a maximum daily extraction rate of 3,000 tonnes per day over 30 years, with an estimated total quarry extraction of 2,100,000 tonnes (840,000m³) at the final depth of approximately 1,160m AHD. The total disturbed area is approximately 8ha, in a total project site area of 212ha. Hence the project is classified as designated development. It is also integrated development and regional development as defined in the EP&A Act.
- Estimated traffic generation at the quarry during peak operation (Stage 1) is 100 truck and dog loads per day (or 200 truck only loads per day) and up to 12 light vehicles (or 24 vehicle trips per day). Additional vehicle trips will be generated for supply of fuel, mobile crushing plant, and waste removal. In Stage 2, estimated traffic generation is reduced to 80 heavy vehicle movements per day, and the same 24 light vehicle movements per day.
- The Bitzios Consulting traffic report notes that the quarry will operate in two stages:
 - Stage 1 – supply of material to the Glen Innes Wind Farm and Sapphire Wind Farm projects via internal roadways and the Gwydir Highway, with all external trips being to/from the west;
 - Stage 2 – post wind-farm construction, the quarry will predominately service the Glen Innes area with external trips being to/from the east.
- In the TIA it is assumed that 40% of heavy vehicle movements would occur directly between the quarry site and Glen Innes wind farm access road, giving combined traffic generation at the Wattle Vale TSR site of 78 heavy vehicle movements per day, and 24 light vehicle movements per day. This equates to 4 in : 4 out heavy vehicle movements per hour, and 12 in : 12 out light vehicle movements in peak hour given that light vehicle movements are all likely to occur at peak times whereas heavy vehicle movements will be regular throughout the day. The TIA proposes that the combined CHR(s) and AUL(s) treatment approved for the Glen Innes wind farm project will be sufficient for the combined traffic generation at the Wattle Vale TSR access onto the Gwydir Highway.
- Entry to the quarry is proposed via the Wattle Vale TSR, at the two-way access road approved for the Glen Innes wind farm project. Egress is proposed via a new exit-only access located 850m west of the ingress.
- The existing quarry approval (DA 26/16-17) should be surrendered as part of this consent to remove ambiguity over vehicle access and other operating conditions.
- A design for the western exit-only access has been included in the Traffic Impact Assessment (TIA). Due to the location of the proposed access (high point of the table drain), it has been designed without a pipe culvert.
- It is noted in the LEGS exit-only access design that the locality is subject to periods of adverse visibility conditions – low visibility due to fog. The report states that GISC has advised that in such conditions, the exit road will be closed to all exiting traffic movements and gravel export at this location will be suspended. Essential movements will have access/exit via the wind farm entrance.

- The existing rural property entrance at 1493 Gwydir Highway should be fully removed in association with the planned quarry egress only to the Gwydir Highway, and the road verge and fence reinstated.
- There is ample space within the project site to accommodate parking and manoeuvring areas in accordance with AS2890.1 and AS2890.2. In section 3.7 of the EIS there are an estimated 12 staff operating the quarry. Allowing three spaces for visitor parking, up to 15 car spaces may be required.
- It is not clear from the internal road arrangement how heavy vehicles would use the proposed weighbridge prior to egressing the site, however there is adequate space on site for circulation roadways complying with AS2890.2.
- Required approvals include:
 - Environmental Protection Licence under the POEO Act; and
 - s138 approval from GISC and RMS under the Roads Act.

The approval of Local Land Services (LLS) is also required to gain access through the TSR, and since the road reserve is a shared Council/Crown reserve will require LLS/Crown consent also.

Section 75 of the LLS notes that:

Local Land Services Act 2013 No 51

Current version for 19 December 2014 to date (accessed 24 April 2015 at 10:03)

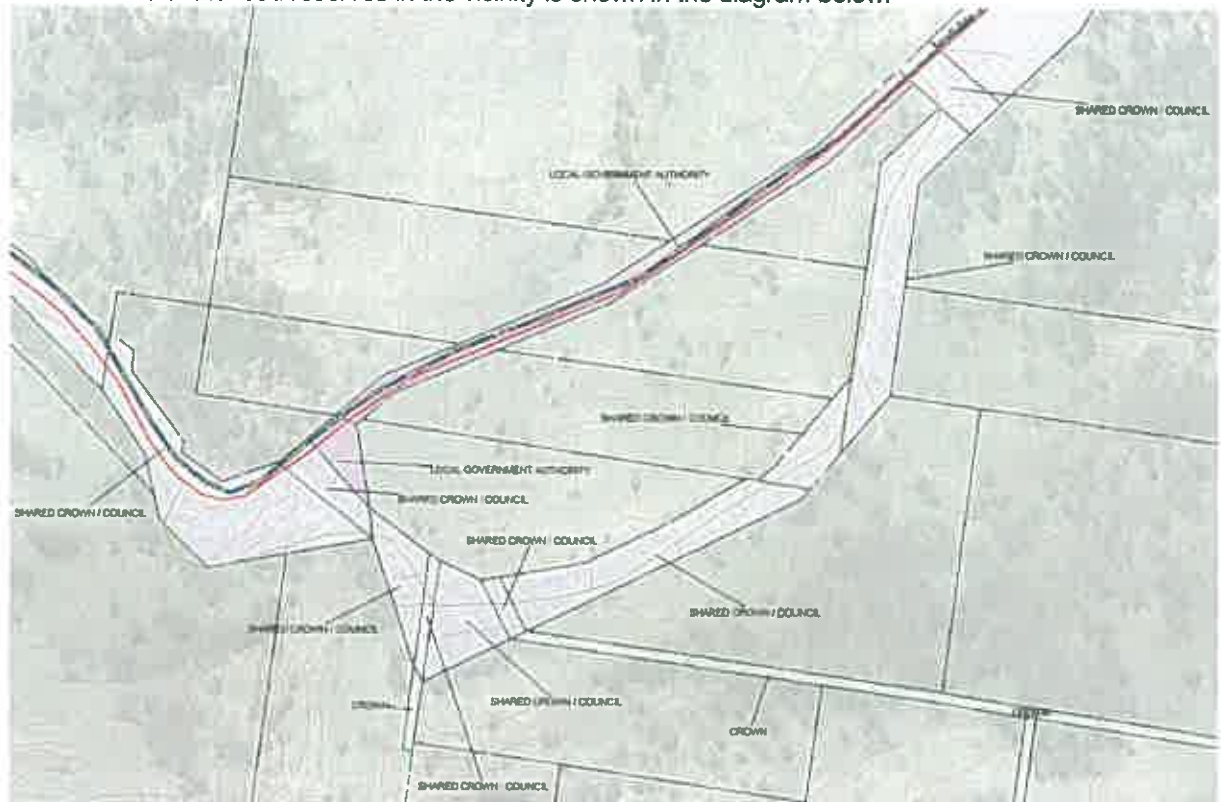
[Part 6](#) > [Division 5](#) > [Section 75](#)

<< page >>

75 Certain occupiers of land to have a right of access over travelling stock reserves

- (1) An occupier of land is entitled to a right of way over a travelling stock reserve (whether controlled or managed) to and from the road nearest to the land if no other access to and from the land by means of an established road or track is available.
- (2) A right of way is subject to such conditions as to its exercise (including any conditions as to its position, construction or improvement) as may be imposed by Local Land Services in a particular case.
- (3) Local Land Services is to give notice to the occupier of land of any condition imposed by it on a right of way of the occupier.
- (4) The occupier may, with the approval of Local Land Services, and must if directed to do so by Local Land Services by notice in writing, construct or make improvements to the occupier's right of way over the reserve.
- (5) Any construction or improvements are to be made at the expense of the occupier.

The current status of the road reserves in the vicinity is shown in the diagram below:



and the mapped TSR is shown in green shading below:



When considering potential conflict between the use of the TSR for travelling stock and the quarry use, LLS may require alterations to fencing, installation of stock grids or other improvements, and suggest should be formally consulted prior to any development consent.

- It is noted that operational activities associated with the quarry are only proposed between the hours of 7:00am and 5:00pm Monday to Friday, and between 8:00am and 4:00pm on Saturdays, with no work on Sundays or public holidays. Workforce would be at the site between approximately 6:30am and 6:30pm.

- The nearest residence is the dwelling on Wattle Vale, which appears to be approximately 1.1km distant from the proposed quarry.
- It is recommended that the quarry operators develop a traffic management plan and truck driver code of conduct covering issues such as haulage destinations, record keeping and on-site parking.
- The requirement to make contact with the local 'Inspector of Mines' comes from Clause 144 of the Mine Health & Safety Regulation 2007, and could instead be written as a note rather than a condition. There are statutory requirements to appoint a mine operator and production manager making this condition superfluous.
- It is noted that issues of noise and dust are likely to be controlled by conditions to be provided by the EPA. General standards for items such as airblast pressure and ground vibration are contained within the SEPP (Mining, Petroleum Production and Extractive Industries) 2007.
- A condition of development may restrict operating hours to mitigate noise, generated at the site from machinery, from staff travelling to and from the quarry, and from transport vehicles hauling quarry product.

Suggested Consent Conditions:

The surrender of Glen Innes Severn Council development consent number 26/16-17, prior to quarry production exceeding 30,000 cubic metres per year of extractive materials.

Reason: To avoid ambiguity in vehicle access and operating conditions, as both consents share common land.

The proposed extraction is to occur in accordance with the principles and mitigation measures designated within the Environmental Impact Statement (EIS) for the development dated December 2016, except as varied by these conditions of consent.

Reason: To ensure that adequate arrangements have been made for compliant mining operations at the site.

The design and construction of an intersection with the Gwydir Highway for all inbound traffic through Travelling Stock Route 67474. All work is to comply with Roads and Maritime Services (RMS), Australian Standards and Austroads CHR/S and AUL/S guidelines.

Note: All works within the Travelling Stock Reserve are to be approved by Local Land Services (LLS) prior to the commencement of works.

Reason: To provide for the safe entry of vehicles to the subject land and to provide for the convenience of motorists on the Gwydir Highway.

The design and construction of an intersection with the Gwydir Highway for all outbound quarry traffic, to be located approximately 850 metres west of the ingress location. All work is to comply with Roads and Maritime Services (RMS), Australian Standards and Austroads BAL guidelines.

Notes:

1. Vehicle egress is to be suspended from this intersection during periods of fog when sight distances are restricted, in which case egress may occur during the ingress location.
2. The existing property access at 1493 Gwydir Highway is to be fully decommissioned and fenced upon creation of the new egress location.

Reason: To provide for the safe exit of vehicles from the subject land and to provide for the convenience of motorists on the Gwydir Highway.

The vehicle ingress and egress are to be constructed prior to any traffic generation on the Gwydir Highway associated with the quarry extractive industry.

Reason: To provide for the safe exit of vehicles from the subject land and to provide for the convenience of motorists on the Gwydir Highway.

A road opening permit application is to be submitted to Council and approved prior to any works within a public road reservation.

Note: Works within the Gwydir Highway road reservation require concurrence from NSW Roads and Maritime Services (RMS) prior to any Council approval. The applicant will be required to enter into a Works Authorisation Deed with the RMS and comply with all RMS requirements.

Reason: To comply with road legislation and ensure that all works are performed in a safe manner, consistent with Council's development standards.

The design, construction and maintenance of a two-way heavy vehicle access roadway from the Gwydir Highway entrance to the proposed quarry entrance at Lot 113 DP753319. All work is to comply with Austroads guidelines and Council's Development Design and Construction Manual, and be completed prior to the commencement of extraction from the quarry site.

Note: All works within the shared road reserve are to be approved by Council and Local Land Services (LLS) prior to the commencement of works.

Reason: To provide for the safe entry of vehicles to the subject land.

The provision of vehicle parking and manoeuvring areas within the development in accordance with AS/NZS 2890: Parking Facilities, and the following:

- a) The construction of at least fifteen (15) designated car parking spaces on the subject land;
- b) Heavy vehicle standing areas are to be provided to allow queueing fully within the site;
- c) Disabled car parking spaces are to be provided as required by the Building Code of Australia;
- d) All parking and manoeuvring areas are to be clearly marked and surfaced with a hard standing material, and must be maintained in a satisfactory condition;
- e) All vehicles are to enter and exit the site in a forward direction at all times;
- f) Parking and manoeuvring areas shall not be used for the storage of goods and equipment;
- g) The separation of heavy vehicle and light vehicle movements as far as feasible;
- h) Appropriate signage and delineation to clearly delineate to motorists the means of access, parking and circulation within the site.

Reason: To adequately provide for the safe, all-weather loading, unloading, manoeuvring and parking of vehicles associated with the development.

Prior to undertaking any site works, the proponent is to apply to the NSW Environment Protection Authority (EPA) for an Environment Protection Licence (EPL).

Reason: To ensure appropriate environmental monitoring, pollution prevention, and the implementation of best practice.

An annual return showing gravel extraction for the preceding 12 month period is to be submitted to Council and the NSW Department of Industry, Resources and Energy Division, within 30 days after the end of each financial year until rehabilitation has been completed.

Reason: Because this level of production may trigger additional planning and environmental requirements under current legislation, and to monitor compliance with the consent conditions.

The applicant is to prepare a comprehensive Quarry Management Plan for the site setting out statutory requirements, guidelines, and the conditions of this development consent. The Quarry Management Plan shall include but not be limited to operational requirements such as noise, water and erosion, air quality, vibration, blasting, access, on-site parking and manoeuvring, transport route assessment and maintenance, driver's code of conduct, bushfires, hazardous materials, noxious weeds, rehabilitation, land care, community relations, compliance measures, monitoring and auditing, and waste; including measures to mitigate any adverse impacts to the environment, nearby residents and road users.

Reason: To prevent and/or minimise the likelihood of environmental harm and public nuisance.

Erosion and sediment controls are to be designed and implemented in accordance with the publication "Managing Urban Stormwater, Soils and Construction, Volume 2E Mines and Quarries" published by the NSW Department of Environment and Climate Change in 2008.

Reason: To minimise the impact of the development on the natural environment.

Upon completion of each stage of quarrying activities, all disturbed areas are to be promptly topsoiled and rehabilitated in accordance with NSW Government best practice guidelines.

Reason: To minimise soil erosion and sedimentation at the proposed quarry site.

Annual production from the quarry is not to exceed 300,000 tonnes per year of extractive materials. Any increase in production or alteration to operations is to be the subject of a further Development Application.

Reason: So that the impacts of any increase in the scale or duration of operations may be assessed and controlled as appropriate. Section 19 (1) (b) of the Environmental Planning and Assessment Regulation 2000, as amended.

The extractive industry is to be carried out so that a total surface area of not more than eight (8) hectares of land is disturbed as a result of clearing or excavating; or constructing dams, ponds or roads; or storing or depositing overburden, extractive materials or tailings.

Reason: So that the impacts of any increase in the scale or duration of operations may be assessed and controlled as appropriate. Section 19 (1) (b) of the Environmental Planning and Assessment Regulation 2000, as amended.

Compliance with all requirements of the NSW Environmental Protection Authority and SafeWork NSW in relation to the transport, storage and handling of dangerous goods associated with the development.

Reason: To ensure compliance with work health and safety regulations, and minimise risks to people arising from the proposed development.

The use and occupation of the site including construction plant and equipment installed thereon, shall not give rise to any offensive noise or vibration within the meaning of the Protection of the Environment Operations Act, 1997.

Reason: To ensure that the environmental quality of adjoining land is not adversely affected by the generation of excessive noise levels.

The registered proprietor of the land shall;

- (a) Repair, or pay the full costs associated with repairing any private or public infrastructure that is damaged as a result of carrying out the extractive industry; and
- (b) Relocate, or pay the full costs associated with relocating any public infrastructure that needs to be relocated as a result of the development.

Reason: To ensure any impacts associated with the operation of the development are dealt with by the registered proprietor.

The applicant is to make contact with the local 'Inspector of Mines', NSW Department of Industry, Mine Safety Operations Branch, prior to the commencement of operations or activities at the quarry.

Reason: To ensure that adequate arrangements have been made for safe mining operations at the site.

Possible additional conditions:

- Condition relating to dust mitigation for use of water truck within the pit and along any unsealed access and haul roads;
- that any outdoor lighting be shielded and portable buildings constructed from materials having low reflectivity indices, to minimise visual impact of quarry site;
- establishment of a vegetation buffer to block views from the highway;
- fencing the boundary of the quarry to control access;
- safeguards per the EIS about preserving cultural heritage;
- revoke consent upon discontinuation of operations for a specified period of time;
- noise/dust/vibration performance limits per SEPP 2007 and EPA advice;
- notifications prior to any blasting activity;
- Applicant to maintain a register of sales of aggregate and provide this to Council upon request for verifying quantities transported; or that operator conducts annual aerial surveys to verify total disturbed area and annual production; or that Council be provided reasonable access to conduct aerial surveys to verify same;
- batter slopes for rehabilitation;
- hours of operation, per section 3.8 of the EIS (sample format below from Oberon quarry, NSW Planning website, showing different hours for various noise generating activities).

Proposed Hours of Operation

Activity	Monday to Friday*	Saturday*	Sunday*
Drilling	7:00am to 5:00pm	-	-
Blasting & Rock Hammering	9:00am to 5:00pm	-	-
Processing	7:00am to 6:00pm	6:00am to 6:00pm	-
Transportation	6:00am to 6:00pm	6:00am to 6:00pm*	8:00am to 6:00pm*

*The majority (estimated 85%) of truck movements would occur during Monday to Friday. Generally only small volumes of material would be transported on Sundays, primarily for contingency purposes.

*Excludes public holidays