

# GREG ALDERSON & ASSOCIATES PTY. LTD.

A.B.N. 60 059 559 858

## CHARTERED PROFESSIONAL ENGINEERS & SCIENTISTS

OUR REF: S: 09094 LET\_21  
YOUR REF: 2011.34

May 2, 2012

General Manager  
Kyogle Shire Council  
PO Box 11  
KYOGLE NSW 2474

Attention: John Hession

**Re: Record of Decision by Joint Regional Planning Panel (2011NTH004)  
for Proposed Extractive Industry, Lot 12 DP 582916 and Lot 1 DP 366036, 904 Edenville  
Road, Cedar Point**

John,

As you are aware, we have been engaged to provide additional information to address the Final Record of Decision by the Joint Regional Planning Panel (JRPP) which was issued 1<sup>st</sup> November, 2011.

JRPP provided a summary of the work to be addressed as follows:

- Zoning of the site;
- Proposed development;
- Noise Assessment;
- Air Quality;
- Blast Design;
- Upgrade and replacement of Edenville Road (Cedar Point) Bridge;
- Offsite water discharge;
- Aboriginal and non-Aboriginal Heritage;
- Ecological and
- Project Justification

In order to provide additional supporting information to satisfy Council and the JRPP it was considered that specialist reports be provided to address the concerns raised in depth.

These additional reports are summarised below:

1. Advitech P/L – additional background noise assessment, supplementary information to the original noise assessment prepared by this office for the EIS.
2. ERM – Air Quality Assessment
3. Everick Heritage Consultants P/L – Heritage assessment
4. Australian Wetland Consulting P/L – additional assessment for test of significance.
5. Additional information relating to traffic, blast design and stormwater management provided by this office.

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MEMBER OF THE CIVIL COLLEGE, NATIONAL REGISTERED CIVIL ENGINEER, RPEQ 4907

### **Proposed Development Details**

The scientific assessments which have been carried out have not altered the proposal, which will remain at the proposed extraction rate of 47,000m<sup>3</sup> per year, over the life of 43 years, hence equating to a total in the order of 2.021 million cubic metres of material to be extracted. Calculations regarding the potential impacts on the local road network have been determined also based on the lower rate of 23,500m<sup>3</sup> per year as per the Development Assessment Report by Kyogle Council.

### **Air Quality**

ERM have undertaken prediction air quality modelling, assuming that the quarry is operating 365 days per year, with the outcome of the modelling presenting that the proposal is predicted to comply with the short term and long term NSW EPA air quality impact criteria for PM10, and TSP and dust at all receptors in the long term.

### **Heritage**

Everick Heritage Consultants P/L has undertaken a cultural heritage assessment of the site (*Cedar Point Quarry, Kyogle, NSW: Aboriginal Cultural Heritage Impact Assessment* April 2012). The assessment has identified that although there is a high potential to impact on the intangible values identified during this assessment, the proposed quarry project has a low potential to impact on places of particular intangible heritage significance (Aboriginal Places) as recognised under New South Wales legislation.

Everick Heritage Consultants P/L states that the original archaeological assessment undertaken by Hew Burton identified the Project as having a low risk of harming physical Aboriginal cultural heritage sites is a reasonable conclusion.

The assessment recommends that the following be undertaken to assist with mitigating any impacts to Aboriginal Cultural values as a result of the project:

1. Continued consultation;
2. Permanent protection of the aboriginal scarred trees through fencing and staff induction;
3. Cultural heritage inductions;
4. Stop work and contact authorities if aboriginal human remains are unearthed;
5. Stop work and contact authorities if aboriginal artefacts are found;
6. Notify the OEH on finding any Aboriginal cultural materials;
7. Avoid impacts to Aboriginal Cultural Heritage through conservation principles.

### **Ecology**

The additional assessment by Australian Wetlands Consulting (*Ecological Report in Response of Peer Review*, 1-11096, December 2011) has determined that the proposed works will not result in any significant impact to any of the subject threatened species that may occur at the site. Australian Wetlands Consulting recommends ecological offsets are used being 'like for like' and 1:1 replacement of the trees to be affected. In addition to the offset planting, progressive rehabilitation will be undertaken which includes planting a variety of trees at centres of approximately 40m<sup>2</sup> to create a woodland environment. The report concludes that there were no additional requirements based on this further assessment.

### **Noise**

Additional background noise testing was undertaken at three nearest dwellings and Background Noise Assessment report prepared by Advitech P/L see attached. The background levels were similar to those obtained in the original Noise Impact Assessment. The latest Project Specific Noise Levels (PSNL's) which are based on the Intrusiveness Criteria, at the nearest receptors compared to the original measurements are as follows:

Location	Advitech 2012	Development Application NIA GAA 2010
Lynch (R 2)	37	39.2
Canty (R3)	42	38.9
Stewart (R4)	38	42.3

This small difference, up to 4dB difference, is not to be unexpected, as the locations were slightly different. Both sets of background testing were taken for the period of seven days in accordance with the Industrial Noise Policy. Both monitoring periods were for approximately one or two weeks at each location in order to achieve seven days of valid data as per the Industrial Noise Policy.

Using the more conservative background noise levels to determine the design goals for the management of the quarry, a new plan has been prepared showing the area of the plateau were drilling and machine work can occur on the surface of the plateau, with the installation of noise bunds, and still be within the more conservative Advitech P/L design goals, see Potential Initial Cut Area plan attached.

This plan depicts the areas where work can commence with drilling, and includes the original starting point nominated in the development application, September 2010.

A set of performance limits should be placed on the operation of the quarry, and such a set of goals was proposed in the development application, and were nominated in the Operational Management Plan (September, 2010) within the development application.

### **Blasting**

A blast impact assessment has been prepared by this office. The assessment has determined that the blasting criteria for airblast overpressure and peak particle velocity will not be exceeded at the nearest residences with the management of the quarry. The assessment has also presented that appropriate blast management would also reduce the potential of flyrock from the site during a blast. Management requirements have been provided as part of the assessment, which includes limiting the maximum instantaneous charge and blasthole diameters, especially towards the limit of the quarry footprint to reduce potential impact on the nearest neighbours. A blast design plan is required to be provided by the blasting contractor, and the nearest receptors are to be monitored for each blast.

### **Traffic**

The attached traffic assessment, prepared by this office (09094\_let\_18 dated April 27, 2012) has concluded that there is a trigger for the upgrading of the Cedar Point Bridge, which can be related to the road traffic volumes, and at assumed growth rates, years.



A trigger of upgrading the bridge has been determined, as requested, based on level of service of the bridge relative to the volume of traffic on the bridge. It is calculated in the model, based on The Guide to Traffic Generating Developments, that after an estimated 51 years the bridge will need to be upgraded to two lanes. The model shows that the traffic generated by the proposed quarry, theoretically reduces the time before the bridge needs to be widened, by 2 years.

The assessment determined that there would be a need for an additional lane for the bridge, when the traffic reaches 120 vehicles per hour. Because the proposed quarry will be limited to a fixed annual and as a result daily maximum extraction rate, the dominant factor in determining the need for bridge widening, is the background traffic volume, which is based on traffic volumes on the local road network, not the quarry development traffic.

The assessment recommends that a Section 94 contribution plan could be instituted by Council to allow collection from traffic generating developments in the catchment of the bridge. It is calculated that this figure should be about \$11,873 per equivalent tenement.

The share of the bridge upgrade by the proposed quarry, based on total traffic volumes, is \$100,000 and it would be proposed that this could be paid at a rate of \$2000 per year for 50 years, in conjunction with the heavy haulage road maintenance levee.

#### **Offsite Water Discharge**

Additional information has been provided by this office (see letter 09094\_lets20 dated April 4, 2012) in regards to the requirement of the off-site discharge of stormwater for the proposed quarry. The assessment states that although the quarry can be developed as a closed system, it is considered that the discharging of some water from the site is good practice, which would allow some flows from the site and allow for additional work area within the pit. Discharge from the site can only be made at such time that water quality parameters are achieved. No water is to leave the site without water quality analysis in accordance with the Operational Plan of Management and consent conditions.

#### **Project Justification**

Additional information has been provided by the applicant, Graham's Concrete and this office (see report 09094\_QJ dated April, 2012). The assessment presents that there is a long term requirement of aggregate for the operation of the local concrete plant, which has recorded a substantial increase in production since the year 2000.

There is also a need for the quarry material for private and public enterprises within the region. This proposed quarry site can provide the high quality aggregate required.

Although the Kyogle Council area has numerous, small quarries, the quality of product material, which this proposed quarry site offers is more similar to that of quarries outside the Kyogle LGA, and these aggregates are currently being imported into the Kyogle LGA, at increased costs, delays etc.

The assessment by this office has demonstrated that the quarry benefits the local community and considerations in accordance with the Environmental Planning and Assessment Regulation (2000) have been made being:

- Socio-Economic Considerations;
- Ecological Sustainable Development;
- Precautionary Principle;

- Inter-Generational Equity;
- Conservation of Biological Diversity and Ecological Integrity; and
- Improved Valuation, Pricing and Incentive Mechanisms

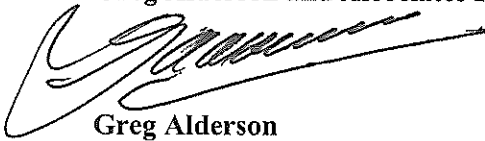
### **Conclusion**

The additional assessments undertaken have provided clarity on the management and mitigation requirements to be undertaken for the management of the proposed, as summarised above. This proposed quarry can in our opinion be operated in such a way to minimise its impacts on the environment.

If you have any questions, please contact this office.

Yours faithfully,

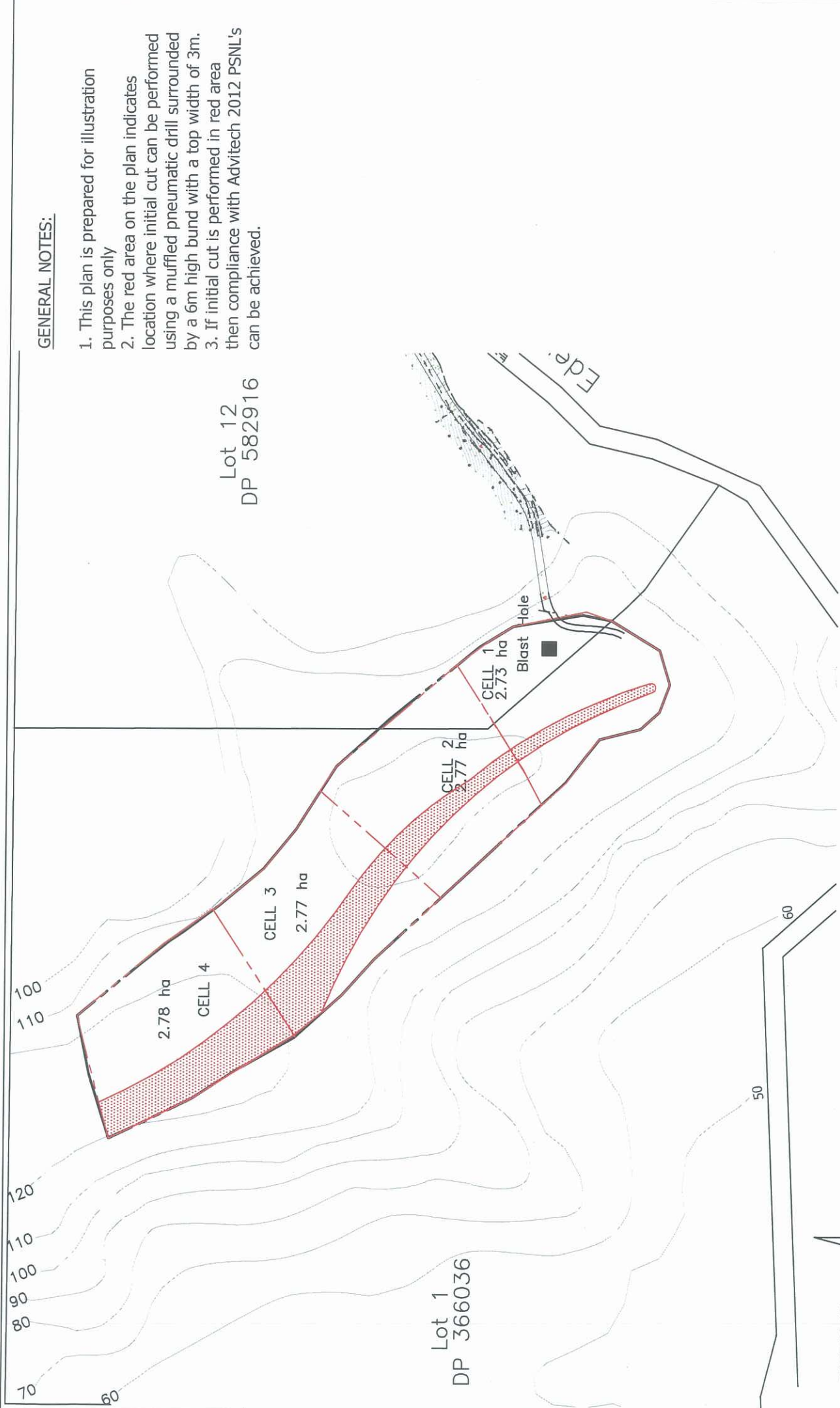
**Greg Alderson and Associates Pty Ltd**

A handwritten signature in black ink, appearing to read 'Greg Alderson', with a long, sweeping horizontal stroke extending to the right.

**Greg Alderson**

**Chartered Professional Engineer**

CC: R and K Graham; P and R Carlill



Lot 12  
DP 582916

Lot 1  
DP 366036

**GENERAL NOTES:**

1. This plan is prepared for illustration purposes only
2. The red area on the plan indicates location where initial cut can be performed using a muffled pneumatic drill surrounded by a 6m high bund with a top width of 3m.
3. If initial cut is performed in red area then compliance with Advitech 2012 PSNL's can be achieved.

**SITE PLAN:**  
SCALE 1:5000



Scale: As shown @ A4 Date:  
Source: GAA  
Drawing file: 09094\_SWM1.dwg

Checked: .....  
Greg Alderson, BSc(Eng), MIEAust, CPEng, RPEQ 4907,  
Member Civil School, NPRegistered-3 Civil, LGEC

**GREG ALDERSON &  
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**POTENTIAL INITIAL CUT AREA**  
**PROPOSED QUARRY**

Lot 1 DP 366036 and Lot 12 DP 582916  
For: Rodney Graham

**Job No.**  
**09094**

**01 / 01**