SMK
CONSULTANTS
surveying – irrigation – environmental – town planning

ABN 63 061 919 003

39 Frome Street
PO Box 774
Moree NSW 2400
Ph 02 6752 1021
Fax 02 6752 5070
Email
admin@smk.com.au

Preliminary Environmental Assessment

Runnymede Quarry Expansion

Prepared for
Johnstone Ready Mixed Concrete P/L

Prepared by
SMK Consultants Pty Ltd
Frome Street
MOREE

May 2010

Associated Company: M.F-G Shaw & Associate Pty Ltd
Registered Surveyors & Town Planners

Contents

1 INTRODUCTION

1.1 COMPANY PROFILE AND OWNERSHIP

Johnstone Ready Mixed Concrete Pty Ltd (ACN 106433390) (the Company) is a family-owned company that operates several quarries and concrete batching plants in the Moree, Narrabri, Warialda and Mungindi areas. The company is ISO 9001 endorsed and supplies road-building materials to both the RTA and local government in its area of operation as well as ready mixed concrete to the construction industry.

1.2 EXISTING DEVELOPMENT

The Company received development consent in early 1995 to develop a hard rock quarry on the grazing property "Runnymede". The initial approval was for the extraction of 20,000 cubic metres (60,220 tonnes) of hard rock per annum. A second approval in October 1995 was granted to allow the extraction of a further 60,000 tonnes of hard rock per annum. The second approval was Designated Development under Schedule 3 of the Environmental Planning and Assessment Regulation 1994 and was the subject of an Environmental Impact Assessment.

Both of these approvals are currently on foot and allow a combined extraction rate of 120,220 tonnes of material per annum.

1.3 PROPOSED DEVELOPMENT

The supply of quality road-building materials in the black soil shires of Moree and Narrabri is extremely limited and a number of road upgrading projects in these shires has resulted in an increased demand for product. To meet the increased demand from the both the RTA and local government, the Company proposes to increase production from its Runnymede operation to up to 300,000 tonnes per year. The additional production is within the capacity of the existing quarry plant and will achieve economies of scale through more efficient plant utilisation. The total volume of resource applied for under this application is up to 9 million tonnes (3,210,000 cubic metres), therefore the proposal is considered to be a development that falls under Part 3A of the Environmental Planning and Assessment Act 1979 and the Minister for Planning will be the consent authority.

1.4 LIAISON WITH GOVERNMENT AUTHORITIES

A focus meeting was held on the 18th of May 2009 between Gwydir Shire Council, DECC&W, RTA and SMK for preliminary discussions. Several informal meetings between various parties have been held as requested.

Information, advice and comments from the participants were taken into account in the preparation of this document. The proponent originally proposed to undertake the development under Part 4 of the Act and sought the requirements of the Director-General, Department of Planning. These are included in Appendix '1'. Replies received from authorities also consulted are included as Appendix '2'.

The proposal is Integrated Development as it requires an Environmental Protection Licence, although the quantity of material proposed to be extracted is within the capacity of the applicant's current Environment Protection Licence.

1.5 STUDY TEAM

The study team involved in the preparation of this Preliminary Environmental Assessment comprise the following personnel:

SMK PTY LTD

Peter Taylor, B.Sc. (Aust. Env. Studies)	Project Director, Flora and fauna and water management
Richard Clowes B.A. (Geography), Grad Dip Urb Reg Plan, MPIA, CPP Planner	Project Manager, land-use and planning, soils, road Certified Practising transport, heritage, socio-economic, noise Management
Sarah Lawson B.Env.Sc.	Dust, environmental monitoring & management, site rehabilitation

SUZANNE R HUDSON CONSULTING
ARCHAEOLOGICAL & ANTHROPOLOGICAL SURVEYS

Suzanne R Hudson	Aboriginal Cultural Heritage

1.6 FORMAT OF THE PRELIMINARY ENVIRONMENTAL ASSESSMENT

The Assessment has been written in nine sections with a set of appendices.

1 INTRODUCTION

Introduces the proposal, gives a brief description of the existing and proposed development, gives an outline of the Company involved, lists the Government agencies consulted about the proposal, and identifies the personnel responsible for preparing the document.

2 OBJECTIVES

Discusses the background of the proposal, the economic benefits that will flow from the development and the reasons for the need to increase production from the quarry.

3 ANALYSIS OF ALTERNATIVES

Provides an analysis of alternatives and presents the consequences of not proceeding with the development.

4 EXISTING ENVIRONMENT

Describes the existing natural and human environment of the surrounding area.

5 PROJECT DESCRIPTION

Describes the design of the quarry and how it will be managed in terms of resource extraction, water storage, disposal and application on the site; noise and dust control; transport of product within and outside the quarry and workforce.

6 PLANNING INSTRUMENTS

Lists the authorities whose concurrence or approval is required to be obtained, lists the Environmental Planning Instruments and Development Control Plans that apply to the subject land and/or the development and demonstrates compliance with those instruments and plans.

7 ENVIRONMENTAL IMPACT

This section addresses the Heads of Consideration set out in section 79C(1) of the Environmental

Planning and Assessment Act 1979.

8 ENVIRONMENTAL MONITORING

Describes the broad strategies for ongoing environmental monitoring throughout the life of the development.

9 SITE REHABILITATION

Describes the methods to be implemented for the rehabilitation of the site upon cessation of quarry operations.

1.7 SUMMARY

The property “Runnymede” is owned by Johnstone Ready Mixed Concrete Pty Ltd and comprises 650 hectares of undulating land located approximately 17 kilometres northeast of the village of Pallamallawa. The property contains a significant deposit of basalt which is suitable for use in road building and for the production of concrete used in the construction industry.

In 1995 the company received two development approvals from the then Yallaroi Shire Council allowing it to excavate and crush up to a total of 120,220 tonnes of basalt rock per annum. Since 1995 the “Runnymede” quarry has been supplying crushed basalt for road building and concrete production.

Due to an increase in demand for road building materials the applicant wishes to increase the output from the quarry to up to 300,000 tonnes per annum. This increase would satisfy the expected demand from road authorities and permit more efficient utilisation of the company’s existing production machinery.

The proposal is both a Major Project and Integrated development under the provisions of the Environmental Planning and Assessment Act 1979 and requires an approval from the Minister and an Environment Protection Licence from the Department of Environment, Climate Change and Water to allow it to proceed.

The studies undertaken to inform the preparation of this Preliminary Environmental Assessment have shown that the proposal will have little impact on native flora and fauna as the proposed extraction area has been extensively modified by farming and grazing over many years. The increase in the number of transport vehicles used to deliver the product to end users would impact on the public roads that comprise the haul routes. In this regard the applicant is seeking approval to use road train vehicles to reduce the number of trips and proposes to offer to enter into a planning agreement with Gwydir Shire Council to compensate for the wear associated with additional traffic generated the proposal.

2 OBJECTIVES

2.1 BACKGROUND

Due to the nature of the highly expansive black soils in this region roads deteriorate at an accelerated rate compared to roads in other regions in New South Wales. This rapid deterioration, coupled with the scarcity of suitable road-building materials on the floodplain, means that these materials need to be transported over long distances at considerable cost to the taxpayers and ratepayers.

In the early 1990s a large deposit of basalt rock was discovered on the grazing property "Runnymede" and by 1995 development consent was obtained to quarry initially 20,000 cubic metres (60,220 tonnes) of blue metal per annum. This was followed in the same year with a subsequent consent to quarry a further 60,000 tonnes blue metal per year which equates to a total production of 120,220 tonnes per annum. The quarry and its associated roadbase production plant became operational in 1996 and since that time has produced around one million tonnes of blue metal and roadbase (a mixture of blue metal, sand and lime) or 91,000 tonnes per annum.

2.2 ECONOMIC BENEFITS

Apart from direct employment, the economic benefits from maintaining and upgrading the national road network and the cost saving from shorter transport distances for road materials, the Runnymede quarry has to date provided 18,515 tonnes of roadbase to the Yallaroi Shire Council (now part of the Gwydir Shire Council) free of charge as part of a Planning Agreement between the Applicant and the Council.

2.3 SITE SELECTION

All extractive industries must be co-located with the resource that is to be extracted. The Runnymede quarry is an approved development and this application is to increase the annual output from the facility to meet increased State and local government demand.

3 ANALYSIS OF ALTERNATIVES

3.1 ALTERNATIVES

Due to the geomorphology of the Moree and Narrabri region accessible hard rock deposits suitable for use in concrete and road manufacture are very rare. Another, and potentially larger, deposit of basalt is to be found in the Bullala National Park about 2.5 kilometres to the north, although no exploration and testing of this deposit has been undertaken to determine its suitability for extraction and use. On this basis it is considered, at this time, that no viable alternative to this proposal is feasible.

3.2 CONSEQUENCES OF NOT CARRYING OUT THE DEVELOPMENT

If this proposal does not proceed then suitable material will have to be imported into the region. This will mean longer transport distances with the attendant higher transport costs, additional wear on the road network and impacts on residents and road-users along those road networks.

4 EXISTING ENVIRONMENT

4.1 REGIONAL SETTING

Runnymede quarry is located in the Northern Basalts subregion of the Brigalow Belt South Biogeographic Region in northern New South Wales mid way between the towns of Moree and Warialda.

4.2 LANDFORM

The landform comprises undulating low stony hills, long sloped with sandy wash and a mixture of sandy loams and heavy clays on the valley floors.

4.3 GEOLOGY

The geology of the quarry site comprises Tertiary basalts over Jurassic quartz and alluvial sediments derived from these. The Jurassic sandstones act as a significant intake for the Great Artesian Basin.

On the lower slopes and in the valleys are found Jurassic sandstones overlain by sandy soils with areas of exposed sandstone in the river beds and banks. Heavy clay soils predominate in the lower valleys and on the alluvial flats to the west.

4.4 SOILS

Black loams on basalt ridges, deep sands on sandstone, texture contrast soils on slopes and heavy grey clay on alluvial flats.

4.5 HYDROLOGY

4.5.1 Surface water

The Warialda area receives an average rainfall of 691mm per year of which 31mm runs of as surface flow. Surface water from Runnymede that is not captured in dams would flow to Bullala Creek, which is an intermittent watercourse located around one kilometre to the north. Bullala Creek rises in the Mastermans Range and flows in a generally south-westerly direction to join with Mosquito Creek which flows to the regulated Gwydir River.

4.5.2 Groundwater

Information from the Department of Natural Resources indicates that groundwater suitable for stock and domestic use is available from the Jurassic sandstone beds at depths of between 15 to 49 metres.

4.5.3 Water quality

The quality of both surface and groundwater is generally good although in some locations the groundwater can be brackish.

4.6 FLORA AND FAUNA

4.6.1 Flora

The area approved for extraction comprises mostly open grassland, adjoining slopes support a mixture of vegetation comprising mostly White Cypress (Callitris glaucophylla), Wilga (Geijera parviflora), Ironbark (Eucalyptus creba), Budda (Eromophila mitchellii) and scrubby acacia species. The existing vegetation is relatively young which suggests that the area has been heavily logged in the past. This suggestion is further supported by the fact that the present Bullala National Park was until quite recently a State Forest.

A search of the Atlas of NSW Wildlife did not reveal any threatened flora within a 10 square kilometre area centred on the quarry.

4.6.2 Fauna

The land on which the quarry is situated is used for grazing and several horses and a number of cattle are raised on the property. A small mob of grey kangaroos was observed grazing with the horses and occasionally birds were observed transiting the site.

A search of the Atlas of NSW Wildlife revealed that eight vulnerable species may be present in the above search area. A seven Part Assessment was conducted and the results are included in Appendix '4'.

4.7 CLIMATE

4.7.1 Meteorological data sources

Meteorological data has been obtained from records from the Warialda Post Office and the Moree Meteorological Station.

4.7.2 Temperature and humidity

Temperature and humidity levels in the region are quite mild with the annual average temperatures ranging between 8.3 to 26.2 degrees Celsius although temperature extremes of -9.2 and +43.1 have been recorded.

Mean Daily Temperature (^{0}C)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max	33.5	32.6	30.6	26.5	22.0	18.2	17.6	19.4	23.2	26.9	30.2	32.6
Min	16.3	16.0	13.2	7.9	3.6	1.4	0.0	1.3	4.2	8.8	12.2	15.1

Mean Daily Humidity (%)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
9am	60	62	63	66	70	73	71	67	62	59	58	57
3pm	49	42	35	36	42	44	38	42	38	38	35	45

4.7.3 Rainfall and evaporation

Rainfall averages 691.1mm par year and is summer dominant. Evaporation figures are only available from the Moree Bureau of Meteorology station and would be a little higher than at the quarry site.

Rainfall (mm)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	85.9	79.5	64.6	41.2	45.8	45.2	46.0	40.4	44.3	59.6	68.1	70.6
Highest	362.7	331.2	315.1	232.1	181.4	154.0	179.2	155.3	206.2	204.0	283.4	277.9
Lowest	2.4	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3	2.8	0.0	0.0

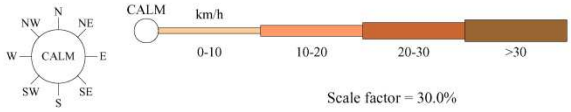
Evaporation (mm) (Moree comparison)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	291.4	232.4	220.1	147	96.1	69	71.3	99.2	144	210.8	258	300.7

4.7.4 Wind

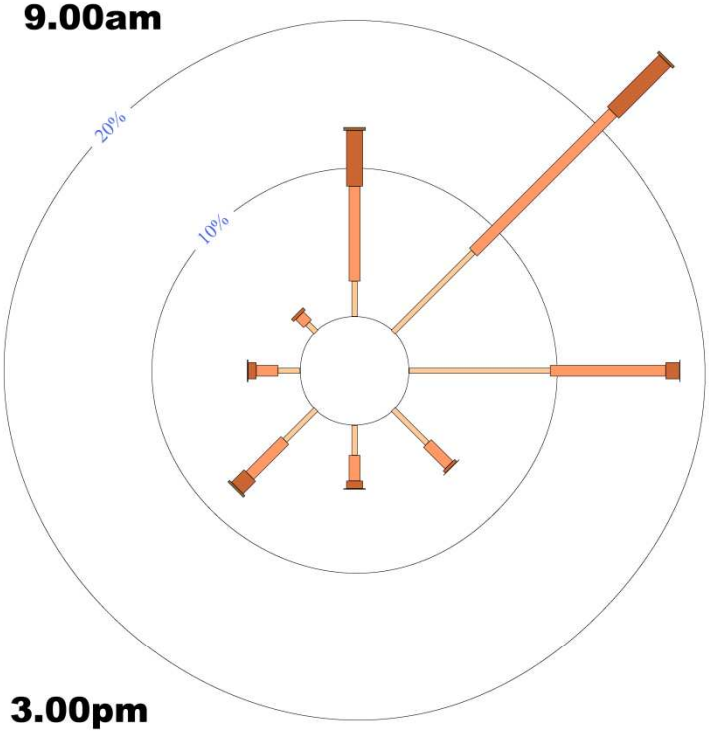
Winds in the region are moderate with north easterlies predominating in the morning and south westerlies in the afternoon.

Mean Wind Speed (km/h)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
9am	8.0	8.1	8.0	5.9	5.5	4.1	4.3	5.2	8.4	8.9	7.9	7.8
3pm	12.8	11.1	15.5	13.3	12.0	8.8	9.9	10.5	10.6	12.3	8.9	11.0

Wind frequency analysis data from the Moree Bureau of Meteorology suggests that the majority of winds are less than 20 kilometres per hour as shown on the vector diagrams below.


N
NW
NE
W
CALM
E
SW
SE
S
CALM
km/h
0-10
10-20
20-30
>30
Scale factor = 30.0%

9.00am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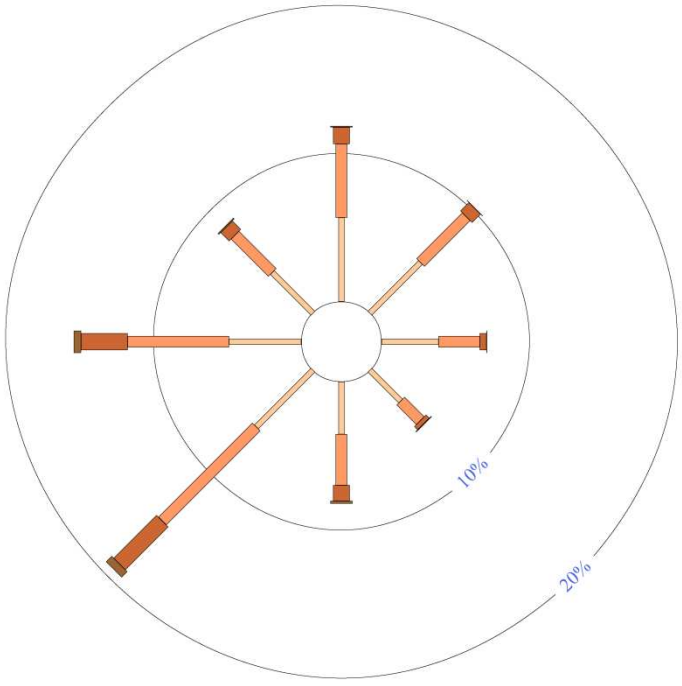
3.00pm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4.8 NOISE

4.8.1 Site Details

The quarry is located on the property "Runnymede" approximately 17 kilometres northeast of the village of Pallamallawa. The topography is undulating and the surrounding area comprises farming properties. The Bullala National park adjoins to the north and west. The owner's residence is situated on the property and adjoins the quarry stockpile area. The nearest residence not associated with the quarry is approximately 2.7 kilometres to the west.

Meteorological data from the Moree Meteorological Station show that the area has a mild climate with winds of generally less than 20km/h predominately from the northeast in the morning and southwest in the afternoon. The quarry has operated since 1995 with no noise complaints from adjoining neighbours.

4.8.2 Noise Monitoring

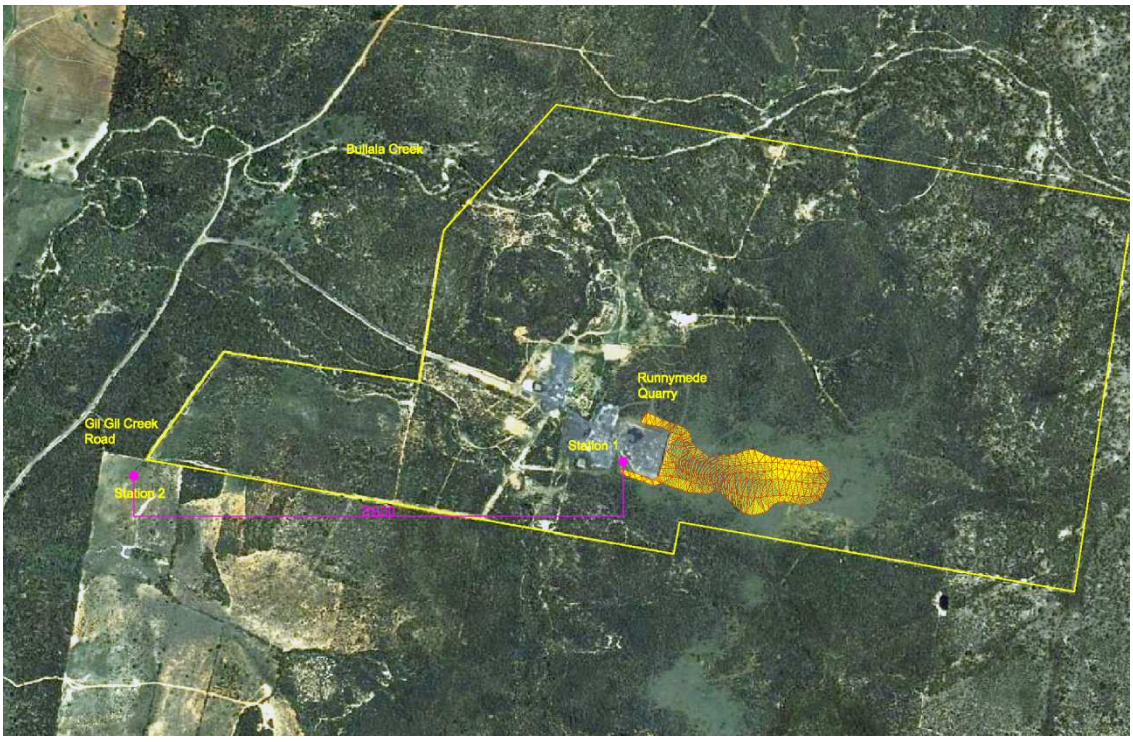
Noise monitoring was undertaken from the 21st of July to 28th of July 2009 using an Acoustic Research Laboratories EL-215 Environmental Noise Logger serial No. 194560. This is a type 2 meter and was set to fast response, 'A' weighting and a statistical interval of 15 minutes. The logger was calibrated both before and following noise measurements at each location.

As the quarry operates between 7.00am and 6.00pm monitoring was conducted between the hours of 6.00am and 7.00pm which allowed for measurement of background noise.

4.8.3 Noise Monitoring Locations

Two monitoring locations were chosen, location 1 was on the top of the quarry high wall overlooking the crushing and screening plant, the second, location 2, was on an adjoining grazing property.

The monitoring locations are shown below and are 2.6 kilometres apart, both were in open locations free of trees. Location 1 was monitored between the 21st and 24th and location 2 between the 24th and 28th. Normal farming activities were being undertaken in the vicinity of both locations, these activities are considered normal for this area.



Logger locations

4.8.4 Background Noise Level

Rating Background Level (RBL)

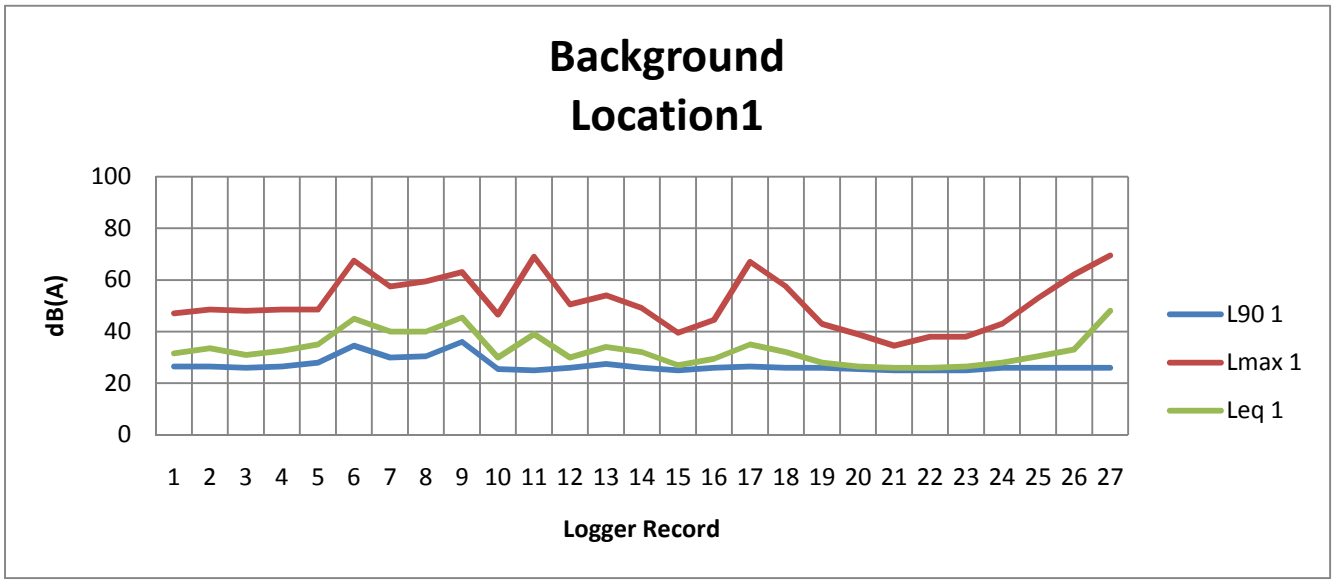
The RBL is the overall single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period (as opposed to over each 24 hour period used for the assessment background level). This is the level used for assessment purposes. It is defined as the median value of:

- All the day assessment background levels over the monitoring period for the day; (7 am to 6 pm)
- All the evening assessment background levels over the monitoring period for the evening; (6 pm to 10 pm) or
- All the night assessment background levels over the monitoring period for the night. (10 pm to 7 am)

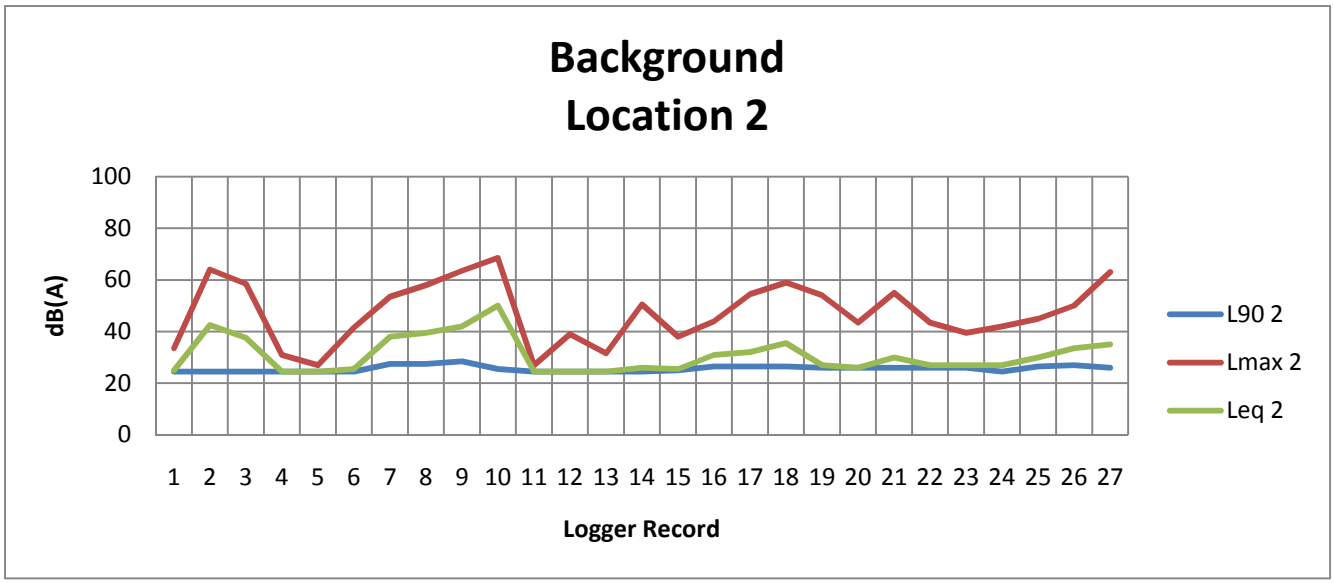
As the quarry operates between the hours of 7.00am and 6.00pm monitoring was undertaken between 6.00am and 7.00pm. Measurements taken outside the quarry operating hours were used to determine background levels for the locality.

Based on the methodology in Table B1 in the NSW Industrial Noise Policy 2000 the rating background level (no quarry operation) was set at 30 dB(A) for evening and night as the L_{A90} levels were below 30dB(A).

The following two graphs present data for both monitoring locations recorded during early morning and during the evening when the quarry was not operating.



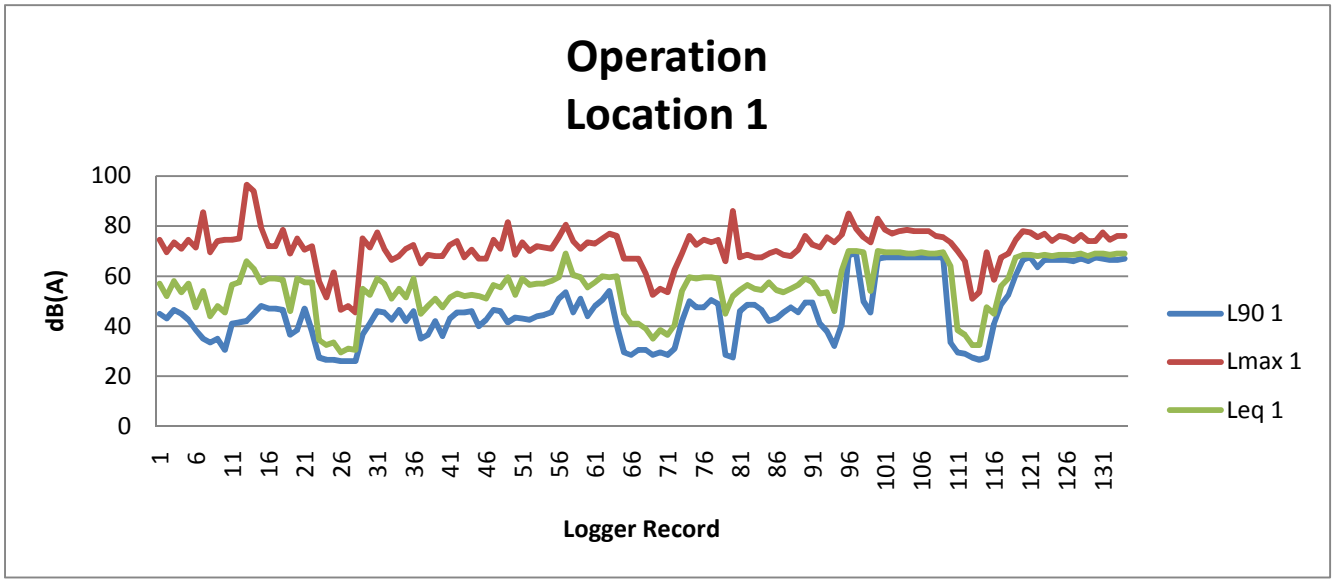
Location 1 – no quarry operation



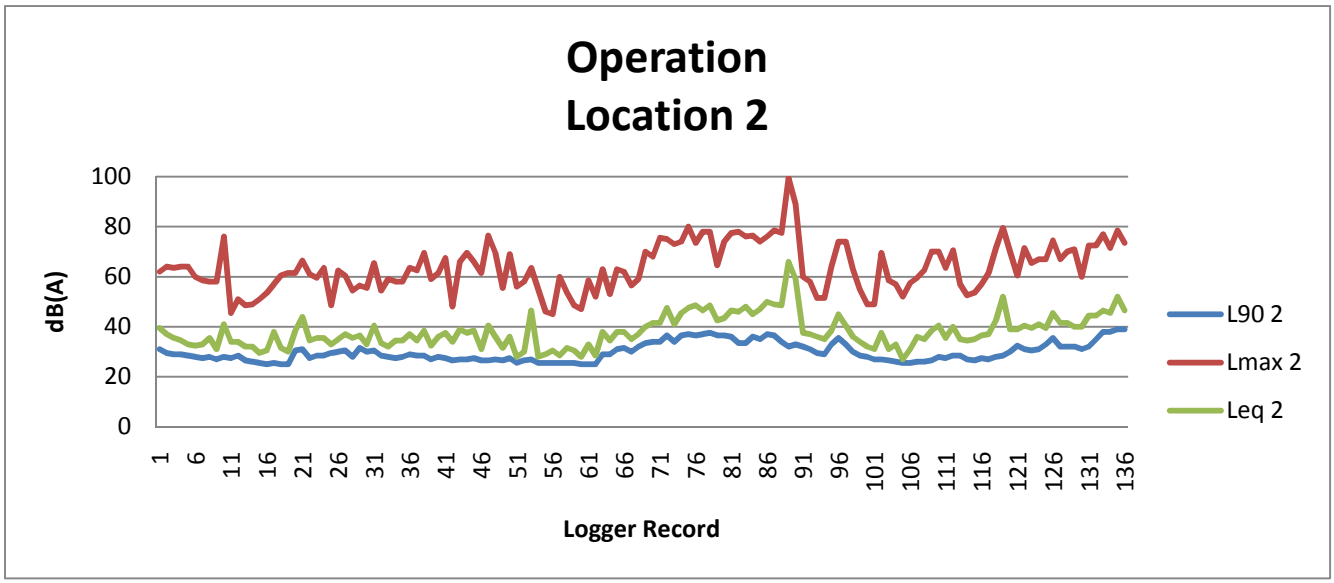
Location 2 – no quarry operation

4.8.5 Operational Noise Levels

The following two graphs present the data recorded during normal working hours 7.00am to 5.00pm. Rating background levels are 60.3 dB(A) and 31.7 dB(A) for locations 1 and 2 respectively.



Location 1 – Operational Noise



Location 2 – Operational Noise

4.8.6 Amenity and Intrusiveness Criteria

The aims of the NSW Industrial Noise Policy is to protect the community from intrusive noise and to preserve the amenity for specific land uses. The surrounding land uses are classified as Rural and Table 2.1 of the INP sets the following recommended L_{Aeq} noise levels for this land use.

The following table sets out the noise levels as determined in accordance with the NSW Industrial Noise Policy.

Location	Time of day	Existing L_{Aeq}	Existing RBL	Recom'd Acceptable Level	Amenity Criteria Level	Intrusiveness Criteria Level	Project Specific Level	Sleep Disturbance Level
1	Day	63.2	60.3	50.0	60.3	65.3	60.3	65.3
	Evening	38.4	30.0	45.0	60.3	65.3		
	Night	38.4	30.0	40.0	60.3	65.3		
2	Day	47.0	31.7	50.0	47.0	36.7	35.0	40.0
	Evening	38.1	30.0	45.0	38.1	35.0		
	Night	38.1	30.0	40.0	38.1	35.0		

The acceptable noise levels referred to in Table '2.1' for a rural area are, 50 dB(A) during the day, 45 dB(A) during the evening and 40 dB(A) at night.

Time of Day	Recommended L_{Aeq} Noise Level, dB(A)	
	Acceptable	Recommended Maximum
Day 7.00am – 6.00pm	50	55
Evening 6.00pm – 10.00pm	45	50
Night 10.00pm – 6.00am	40	45

From Table 2.1 of the INP

4.8.7 Modifying Factors

Presently the quarry does not operate in the evening or at night no adjustment was made to noise levels for temperature inversions. It is proposed that in the future the quarry may operate during evening and night periods on an as-required basis. Accordingly, initial screening as set out in Appendix 'C' of the Industrial Noise Policy was undertaken. Using the F-class inversion parameter of 3^{o}C/100m and no katabatic (drainage) wind, Table D1 of the INP shows a potential noise increase of 1.5dB which is considered to not require further assessment work.

As logger 2 was measuring daytime farm noise levels it has been assumed that these levels would be similar to those experienced by the sensitive receptor 2,700 metres to the west of the quarry. This would suggest that noise levels from the quarry would have decayed to a level significantly below the normal levels experienced by this receiver and no adjustment is required for tonal, low frequency, impulsive or intermittent noise.

4.8.8 Noise Prediction

Sound levels decay by the inverse square of the distance from the source and can be calculated using the following formula:

$L_2 = L_1 \times 20 \text{ Log}_{10} (d_1/d_2)$dB(A)

Where:

- L_1 = the sound level in dB(A) at the source;
- L_2 = the calculated sound level in dB(A) measured at the receptor;
- d_1 = the distance from the source at which L_1 is measured;
- d_2 = the distance of the receptor from the source;

To determine whether the operation of the quarry was having an impact on the sound levels measured at location 2 both the highest and the average Leq recorded at location 1 were fed into the equation. This yielded 35.18 dB(A) and 28.92 dB(A) respectively. As these figures are more than 10 dB(A) below the comparable results for location 2 it is concluded that both locations are independent of one another.

Criteria planning guidelines for new industrial development are contained in the NSW Industrial Noise Policy, January 2000. Table 2.1 of the Policy sets out recommended noise levels from industrial sources on specified receptors. The most sensitive receptor likely to be affected by the proposal is taken to be a neighbouring farm residence located on the adjoining property west of the quarry site. While both the quarry and the farm are industrial in nature the Rural criteria has been adopted for this study.

For location 1 the distance of the noise source to the data logger is taken to be 50 metres and to the residence is 2700 metres. Using the above formula the calculated noise at the adjoining farm residence would be 29 dB(A) for the $L_{Aeq(15\ min)}$ record and is considered to be acceptable. This calculation does not consider the shielding effect provided by the thick belt of trees between the noise source and the dwelling that is approximately one kilometre wide.

The proposed operation of the quarry during evening and night hours on an 'as required' basis would not impact on sensitive receivers,

4.9 DUST

Dust on the site is controlled by fine mist sprays fitted to the crushing and screening plant and by watering the roads and work areas using a water truck. Dust monitoring is being undertaken and has demonstrated that dust generated by quarry operations and haulage complies with statutory requirements. This is discussed further in section 7.10 under 'Air and Microclimate'.

4.10 LAND OWNERSHIP AND RESIDENCES

The subject land is owned by the applicant and contains a single residence.

The nearest residence not associated with the proposal is located 2.7km to the west, no other residences are within 3.0km of the quarry site.

4.11 LAND CAPABILITY

The land containing the extractive resource is cleared land that is used for light grazing. The surrounding land was previously logged and now contains regrowth White Cypress (Callitris glaucophylla), Wilga (Geijera parviflora), Ironbark (Eucalyptus creba), Budda (Eromophila mitchellii) and scrubby Acacia species.

4.12 LAND USE

4.12.1 Quarry site

The area on which the extractive resource is located is cleared land and is presently used for a combination of quarrying and grazing.

Once the available resource is exhausted the disturbed area will cover approximately 35 hectares of the 650 hectare site. Rehabilitation of the site will ensure that the disturbed area is able to be returned to grazing once resource extraction ceases.

Grazing will continue once quarrying has ceased and rehabilitation is complete.

4.12.2 Study area

The study area comprised the quarry and the surrounding area on the property “Runnymede”, surrounding residences to a distance of 3.6 kilometres and the existing haul routes:

- Gill Gill Creek Road to the south of the site;
- Mosquito Creek Road; and
- the Gwydir Highway.

Also investigated were the proposed haul routes:

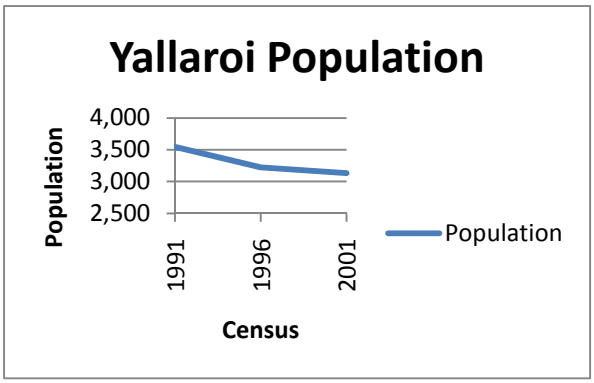
- Gill Gill Creek Road to the north of the site;
- County Boundary Road;

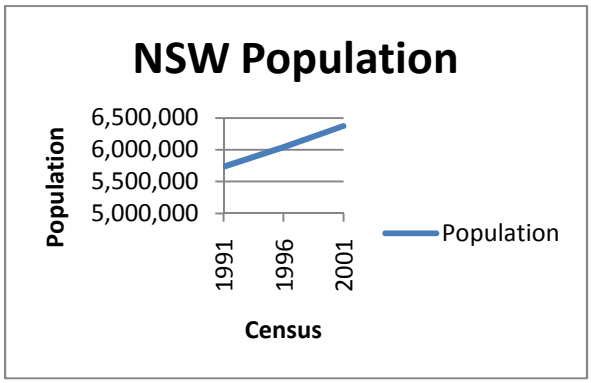
4.13 SOCIO-ECONOMIC CONDITIONS

4.13.1 Population

Due to the amalgamation of Yallaroi, Bingara and part of the Barraba Local Government Areas in 2004 the 2006 Census was conducted on new boundaries and is not directly comparable to previous records. For this reason time series profiles of the Yallaroi Local Government Act 1993 and New South Wales between 1991 and 2001 were used to develop a picture of the socio-economic characteristics of Yallaroi Local Government Act 1993 and the comparison with the State.

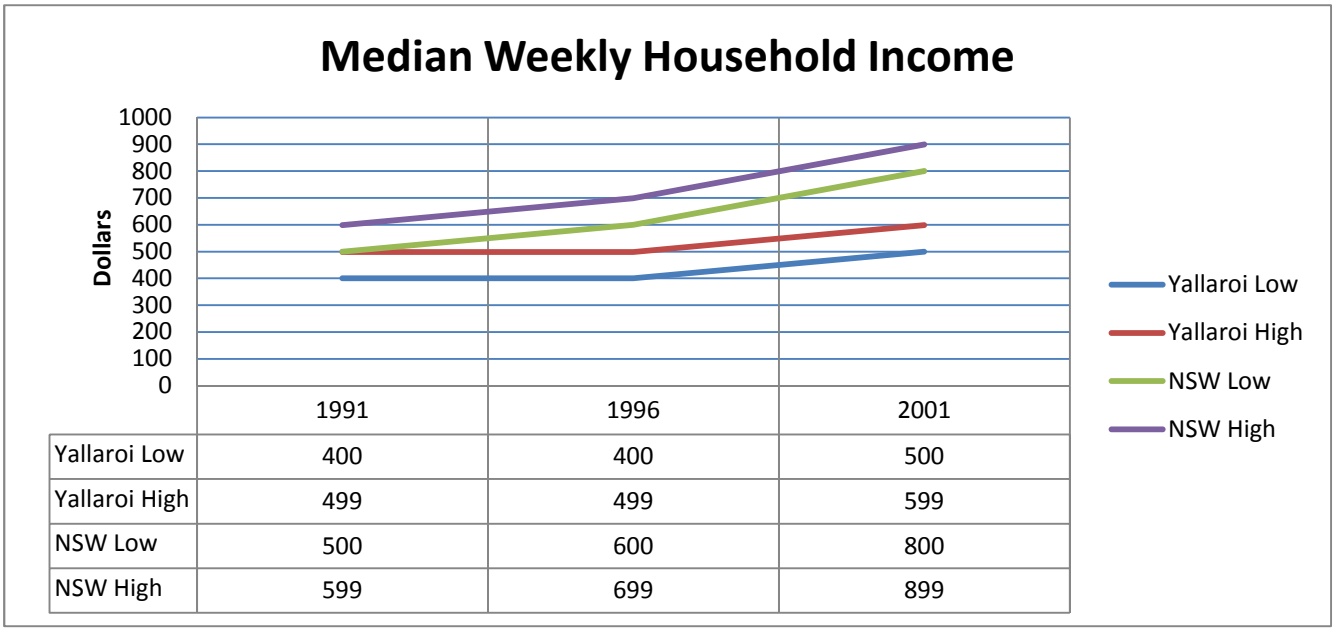
Over this period the population of the State has grown by approximately 11 percent while that of Yallaroi has declined by a like amount.





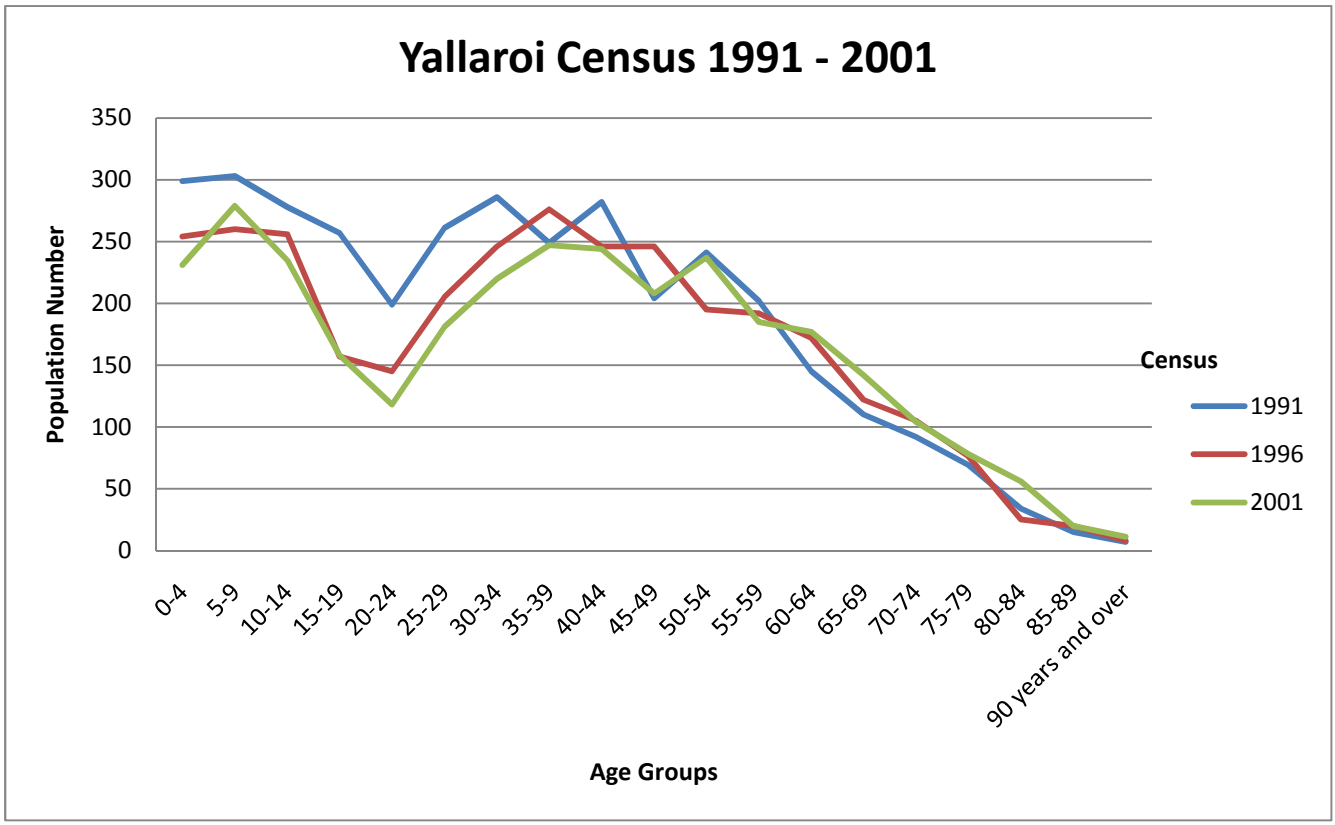
The population decline in Yallaroi has not been even with a disproportionate number of young people moving from the area. The following graphs compare the Yallaroi population structure with that of NSW as a whole.

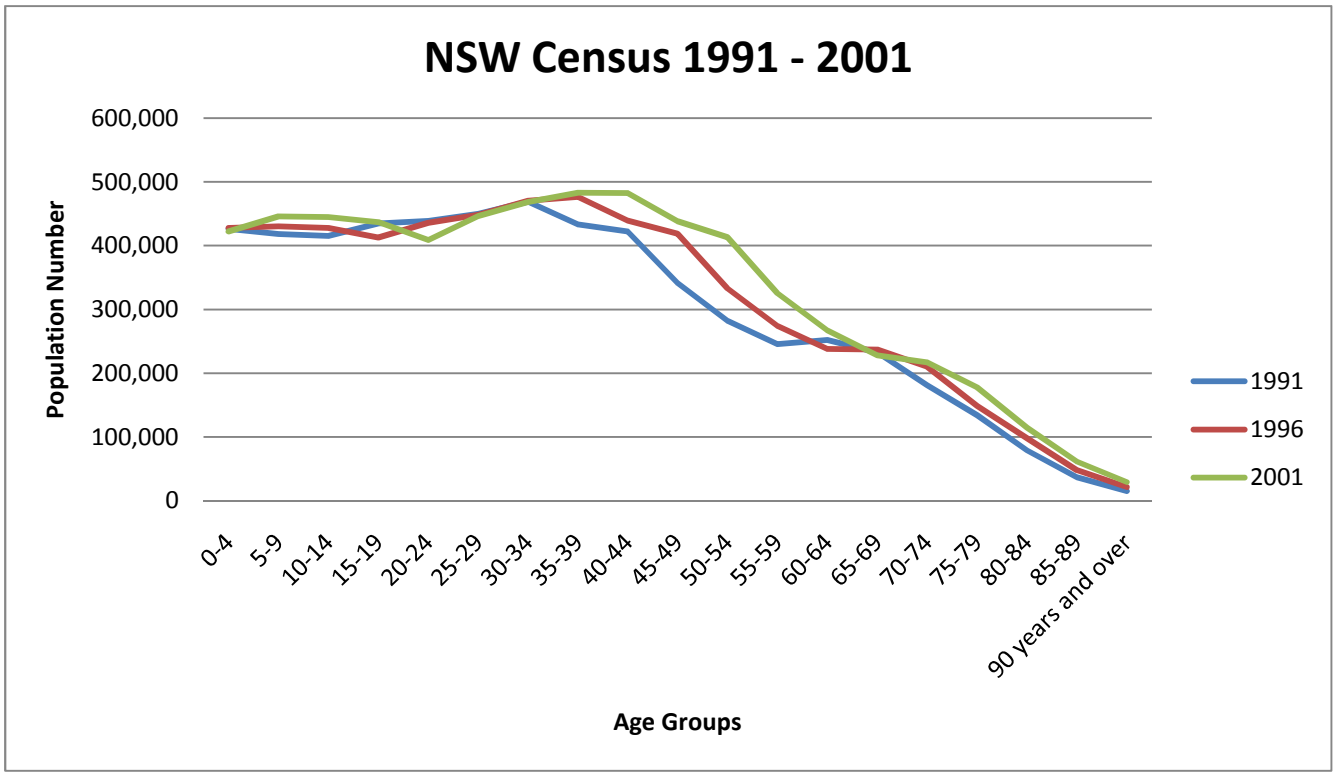
While it is usual for young people to move from country areas to pursue education the data show that over the census period the young are leaving earlier and those that do return are returning later and a growing number are not returning at all. There are no doubt a number of factors at play in the population decline which would include the recent drought, however, low wages, the casualisation of the agricultural workforce, the increasing mechanisation in this sector, along with the attractiveness of larger centres that offer greater opportunities are also likely to be significant contributors.



	1991	1996	2001
Yallaroi Low	400	400	500
Yallaroi High	499	499	599
NSW Low	500	600	800
NSW High	599	699	899

In comparing income movements in the Yallaroi area in comparison to those in the State, the above chart shows that while Yallaroi households were lagging the NSW median income by around $100 in 1991 they had fallen some $300 behind the State median in 2001 and this trend appears to have continued.

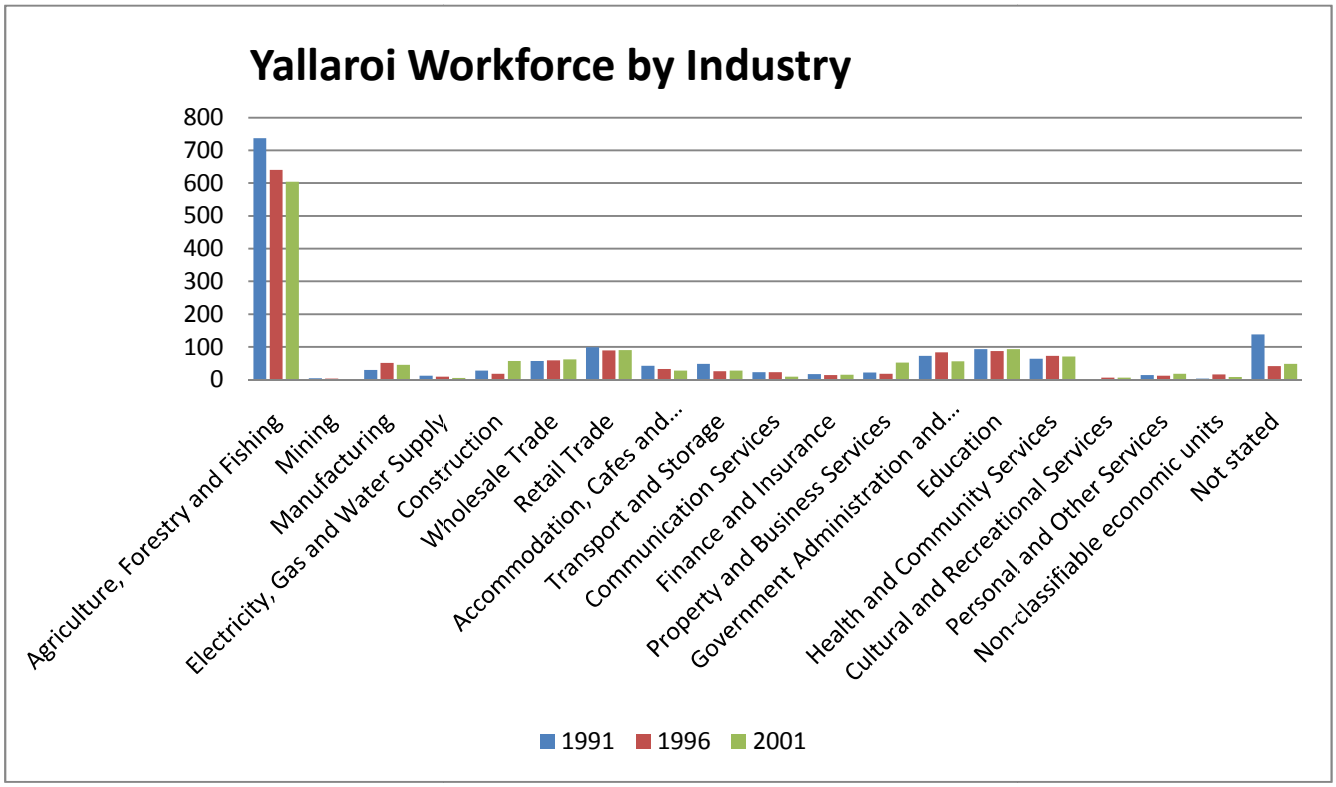




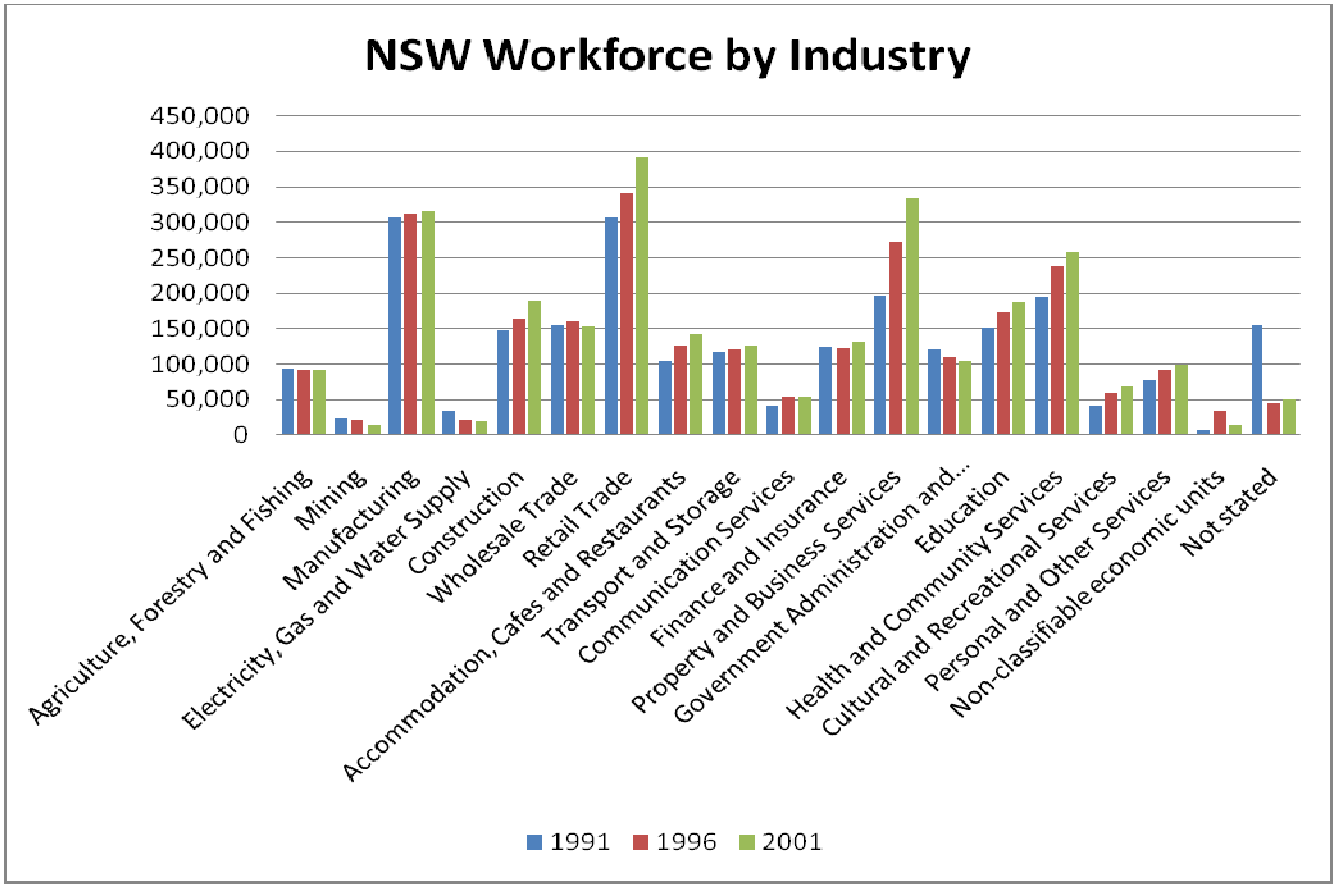
4.13.2 Employment

Yallaroi has a narrow economic base with the major employer being the primary production sector. During the 1991 – 2001 decade the number of people employed in primary production has declined by 18 percent and most other employment sectors have declined or remained flat. This contrasts with the State employment figures which show that employment in the majority of industry sectors across the

State has risen steadily.



New South Wales on the whole has shown steady growth in most employment sectors apart from government services and utilities.



The foregoing clearly demonstrates the need for economic stimulation and diversification in the study area to help arrest further decline in the population.

4.14 ABORIGINAL HERITAGE

A search of the Aboriginal Heritage Information Management System (AHIMS) at DECC&W revealed that no Aboriginal archaeological sites had been recorded within the project area.

An Aboriginal Archaeological and Cultural Heritage Impact survey of the land was undertaken by Suzanne Hudson between the 4th of June and the 7th of August, 2009. A report setting out the survey results is attached as Appendix '3'.

4.15 EUROPEAN HERITAGE

No items of European heritage are located on the land.

4.16 PLANNING AND ZONING

The subject land is zoned 1(a) General Rural under Yallaroi Local Environmental Plan 1991 and extractive industries are permitted in the zone with the consent of Council. However, as the project falls under Part 3A of the Environmental Planning and Assessment Act 1979 the Minister is the consent authority for the proposal.

4.17 ROAD NETWORK AND TRAFFIC VOLUMES

Roads used for transporting product from the quarry include Gil Gil Creek Road, Mosquito Creek Road and County Boundary Road. These roads are mostly unsealed gravel formations with some sections of Gil Gil Creek Road being black soil.

Product is transported using a combination of rigid truck and dog trailer and semi-trailer combinations and require approximately 3,200 transport trips per annum to move the 90,000 tonnes. This averages around twelve deliveries per working day (Monday to Friday).

5 PROJECT DESCRIPTION

5.1 SITE DESIGN

5.1.1 Pit

The quarry is shown on plans 1 to 4 and the quantity of proven resource remaining is in the order of 3,200,000 m^3 (9,635,200 tonnes) which is the subject of this application. At the proposed extraction rate of 300,000 tonnes per year the quarry will have a productive life of 25-30 years. The pit is around 300 metres wide and the extraction face is moving in an easterly direction.

5.1.2 Extraction

Extraction methods used involve periodic blasting, breaking and scraping. The quarry is presently licensed by the Department of Environment and Climate Change and Water to extract and process a maximum of 500,000 tonnes of hard rock and gravel per year.

5.1.3 Crushing and screening

Preliminary crushing is completed using a crusher located inside the pit. Fine crushing and screening is undertaken at the mouth of the pit in the area shown on Plan 1.

5.1.4 Stockpiles

The various grades of crushed material are held in stockpiles surrounding the crushing and screening plant. This location provides a windbreak and noise barrier and mitigates the effect of noise and dust on surrounding land.

5.1.5 Weighbridge

All transport vehicles entering and leaving the quarry pass over a weighbridge which ensures that an accurate record of inwards and outwards product is kept.

5.1.6 Workshop

A well equipped workshop is located on-site which ensures that all machinery is able to be maintained in a safe and efficient operating condition.

5.1.7 Plant and storage areas

Mobile quarry plant not in use is stored in a bunded area to the north of the workshop. Major spare part components are also located in this area so that they are readily available in the case of a breakdown.

5.1.8 Roads and access

Internal roads are maintained to a high standard using roadbase produced by the quarry, a photograph of the internal road is reproduced below.

Mosquito Creek and County Boundary Roads are a mixture of gravel and bitumen sealed formations and Gil Gil Creek road is a combination of gravel formation with black soil sections.

Figure 1 Internal access road - Runnymede Quarry

5.2 WATER MANAGEMENT PLAN

5.2.1 Drainage

Surface drainage from the pit is captured in a sediment pond located in the northwest corner of the pit floor.

Surface drainage from other areas of the property, including the stockpile areas and the crushing and screening plant is captured in several strategically located ponds. This water is used for dust suppression purposes around the quarry, stockpiles and the crushing and screening area.

5.2.2 Water supply

Water for stock and domestic use is provided by several harvestable rights dams, a bore and rainwater harvesting from building roofs.

Water for dust suppression and other quarry purposes is supplied from the sediment ponds and the harvestable rights dams.

5.3 WASTE MANAGEMENT

5.3.1 Liquid waste

Liquid waste consists of used engine lubricating oil resulting from plant servicing. Some of this waste oil is used to lubricate machine components and as a rust preventative coating on stored plant. The remainder is collected by a licensed waste oil recycling firm.

5.3.2 Solid waste

Solid waste, comprising packaging material and domestic waste, is disposed of to a licensed local waste facility.

5.4 DUST CONTROL

Potential sources of dust from the quarry include blasting, crushing and transporting the material both within the site on private roads and externally on public roads.

Dust from the quarry operation is controlled by:

1. fine mist sprays on the crushing and screening plant and the use of a water truck to wet road and work areas;
2. the distance from the quarry site to neighbouring properties; and
3. The retention of regrowth trees around the quarry site.

The public roads that form the transport network for the delivery of quarry materials also carry heavy farm traffic that transports grain and livestock to market, farm inputs such as fertiliser and agricultural chemicals to farms and also carries heavy farm machinery operated by contractors. The increased traffic on the unsealed portion of the transport routes that would be generated by the increased quarry output may require the use of a water truck during dry periods.

5.5 TRANSPORT

Present approved quarry production is 120,200 tonnes per annum and is carried on a mixture of rigid tippers with dog trailers and semi trailers that make an average of 12 trips per day Monday to Friday.

During a series of community consultation meetings the Crooble community has raised objections to trucks using Gil Gil Creek Road to the north of the quarry as they claim that the road is unsuitable. The proponent proposes to direct all delivery vehicles south along Gil Gil Creek Road to Mosquito Creek Road. This means that trucks delivering to destinations to the north of quarry will travel along County Boundary Road thus bypassing Crooble.

With production increased to 300,000 tonnes per annum the truck fleet would be expanded to include B-double trucks and road trains and the number of trips per day for deliveries would increase to a daily average of 15 to 20, or up to two trucks per hour over a 12 hour day.

5.6 WORKFORCE

Thirty people are directly employed by the proponent, a number of contractors provide services such as transport, drilling, blasting and environmental monitoring. Indirect employment would include those in concrete batching plants, owner drivers and road construction workers.

5.7 WORKING HOURS

The normal working hours will be during daylight hours as defined in the NSW Industrial Noise Policy Monday to Saturday for quarry operations. Depending on demand, operation could be required during evening and night hours. Maintenance of quarry plant and machinery may be carried out over 24 hours as necessary.

Transport operations may be necessary outside the normal quarry operating hours but wherever possible will be limited to daylight hours only.

6 PLANNING INSTRUMENTS

6.1 DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development involves increasing the approved annual output of the existing Runnymede quarry from 120,200 tonnes to 300,000 tonnes per annum utilising existing production machinery. The total resource available is estimated to be in the order of nine million tonnes.

6.2 REFERRAL/CONCURRENCE AUTHORITIES:

The proposal is a Major Project under Part 3A of the Environmental Planning and Assessment Act 1979, and clause 7 of Schedule 1 of State Environmental Planning Policy (Major Projects) 2005.

The proposal is also Integrated Development as an Environmental Protection Licence will be required. The present quarry is licensed to extract up to 500,000 tonnes of material per year although this licence may need to be amended to accommodate any new approval conditions.

6.3 THE PROVISIONS OF ANY ENVIRONMENTAL PLANNING INSTRUMENT

6.3.1 Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)

A search of the Department of Environment and Heritage web site was undertaken using the Protected Matters Search Tool on the 3rd of June 2009. The report returned the following information:

World Heritage Properties	None
National Heritage Places	None
Wetlands of International Significance	1
Commonwealth Marine Areas	None
Threatened Ecological Communities	3
Threatened Species	11
Migratory Species	11
Commonwealth Lands	None
Commonwealth Heritage Places	None
Places on the Register of the National Estate	None
Listed Marine Species	8
Whales and other Cetaceans	None
Critical Habitats	None
Commonwealth Reserves	None
State and Territory Reserves	None
Other Commonwealth Reserves	None
Regional Forest Agreements	None

Wetlands of International Significance

Gwydir Wetlands (Ramsar Site) is listed as being in the same catchment. The Gwydir Wetlands is a

terminal delta fed by the Gwydir River and is located more than 100 kilometres to the west of the quarry. The Gwydir River is a regulated waterway and except in periods of high flow most water flows from the Gwydir River into the Mehi River which bypasses the wetlands.

The quarry directs all stormwater runoff to on-site sediment dams for reuse to suppress dust. No harmful chemicals are used in the quarry operation and no sediment that could harm the environment is able to leave the site. On this basis it is concluded that the quarry has no impact on the Gwydir Wetlands.

Threatened Ecological Communities

Natural Grasslands on basalt and fine textured alluvial plains of northern New South Wales and southern Queensland are listed as a critically endangered threatened ecological community by the Commonwealth but do not have a concurrent listing in New South Wales. The listing report shows that this community occurs in the Darling Downs, Liverpool Plains and Moree Plains areas on alluvial plains derived from basalt or alluvium. The quarry is located on a basalt ridge to the east of the Moree Plains area and not on an alluvial plain. The landform on which the quarry is situated does not meet the criteria set out in the supporting report for this listing therefore the definition of the community is not met for this site.

Weeping Myall Woodlands are listed as an endangered threatened ecological community. This community is not present on the site.

White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland is listed as a critically endangered threatened ecological community but is not found on the site.

Plants

Ooline (Cadellia pentastylis) is listed as vulnerable. This species is not present on the site.

Belson's Panic (Homopholis belsonii) is listed as vulnerable. Occurs north from Warialda and into Queensland on poor soils in dry woodland (eg. Belah). The habitat of the site is unsuitable and this species is not found on the site.

Threatened Species

Regent Honeyeater (Anthochaera phrygia) is listed as endangered. They are a migratory species that ranges throughout the inland slopes of southeast Australia and favours open forest and temperate woodland habitat notably Box-Ironbark or River Sheoak woodlands. Distribution in NSW is restricted to the Capertee Valley and the Bundarra-Barraba regions. No suitable habitat exists on the subject land to attract this species. Not recorded for this area in the Atlas of NSW Wildlife.

Superb Parrot (Polytelis swainsonii) is listed as vulnerable. They breed on the south western slopes during spring/summer and migrate north during winter. Range extends from the central north of Victoria through central New South Wales and into central south Queensland. May forage across the region, however, as no habitat for this species will be removed as a result of the quarry operations there will be no impact on this species. Not recorded for this area in the Atlas of NSW Wildlife.

Australian Painted Snipe (Rostratula australis) is listed as vulnerable. They are a wetland species that inhabits freshwater wetlands. Range throughout eastern and northern Australia. No suitable habitat exists on the subject land to attract this species.

Large-eared Pied Bat (Chalinolobus dwyeri) is listed as vulnerable. Range from southern Queensland through the western slopes of the Great Dividing Range and the Pilliga Nature Reserve. They favour moderately to well wooded habitats and roost in caves and disused mine tunnels. No suitable habitat exists on the land approved for the quarry. May forage on surrounding lands which will not be disturbed by this proposal. Not recorded for this area in the Atlas of NSW Wildlife.

Eastern Long-eared Bat (Nyctophilus timoriensis) is listed as vulnerable. Range from south east South Australia, northern Victoria, central and western New South Wales, through southern and central

Queensland. Generally forage in understorey vegetation which is absent on the land approved for the quarry. May forage on surrounding lands which will not be disturbed by this proposal. Not recorded for this area in the Atlas of NSW Wildlife.

Ray-finned fishes

Murray Cod (Maccullochella peelii peelii) is listed as vulnerable. No suitable habitat exists for this species on the subject land. Range throughout the Murray Darling River system including tributaries.

Reptiles

Five-clawed Worm Skink (Anomalopus mackayi) is listed as vulnerable. Live in burrows under fallen timber. Favours open woodlands with low grass cover. Range through the western slopes of the Great Dividing Range and northern floodplains. Not observed on site and not recorded for this area in the Atlas of NSW Wildlife.

Bell's Turtle (Elseya belli) is listed as vulnerable. Inhabit pools of water flowing through granitic bedrock in the headwaters of the Gwydir and Namoi Rivers west of Armidale. No suitable habitat exists on the subject land. Not recorded for this area in the Atlas of NSW Wildlife.

Border Thick-tailed Gecko (Underwoodisaurus sphyrurus) is listed as vulnerable. Found on the tablelands and slopes of northern NSW and southern Queensland, reaching south to Tamworth and west to Moree. Inhabits rocky hills with dry open eucalypt forest or woodland. No suitable habitat exists on the land approved for the quarry. Not recorded for this area in the Atlas of NSW Wildlife.

Migratory Species

White-bellied Sea Eagle* (Haliaeetus leucogaster) Found in freshwater wetlands in inland areas, may overfly. No suitable nesting habitat on the subject land. Not listed as threatened or vulnerable. Range throughout all but central Australia. Not recorded for this area in the Atlas of NSW Wildlife.

White-throated Needletail* (Hirundapus caudacutus) Not observed on the subject land but may overfly. Not listed as threatened or vulnerable. Range throughout eastern Australia including Tasmania and the Torres Strait Islands. Not recorded for this area in the Atlas of NSW Wildlife.

Rainbow Bee-eater* (Merops ornatus) Not observed on the subject land but may overfly. Not listed as threatened or vulnerable. Range throughout Australia and the Torres Strait Islands except Tasmania. Not recorded for this area in the Atlas of NSW Wildlife.

Latham's Snipe, Japanese Snipe* (Gallinago hardwickii) Found in the Macquarie Marshes and wetlands to the west but not observed on the subject land, may overfly. Not listed as threatened or vulnerable. Range throughout eastern Australia, Tasmania and Torres Strait Islands. Not recorded for this area in the Atlas of NSW Wildlife.

Painted Snipe* (Rostratula benghalensis s. lat) Found in the Macquarie Marshes and other wetlands to the west but not observed on the subject land, may overfly. Not listed as threatened or vulnerable. Range throughout eastern and northern Australia. Not recorded for this area in the Atlas of NSW Wildlife.

(Species marked * are also listed as marine species)

Listed Marine Species

Fork-tailed Swift (Apus pacificus) Found in the Macquarie Marshes and other wetlands to the west but not observed on the subject land, may overfly. Not listed as threatened or vulnerable. Range throughout most of Australia including Tasmania and Torres Strait Islands except for south east Western Australia and western South Australia. Not recorded for this area in the Atlas of NSW Wildlife.

Great Egret, White Egret (Ardea alba) Found in the Macquarie Marshes and other wetlands to the west but not observed on the subject land, may overfly. Not listed as threatened or vulnerable. Range throughout most of Australia including Tasmania except for a small area of south east Western Australia

and western South Australia. Not recorded for this area in the Atlas of NSW Wildlife.

Cattle Egret (Ardea ibis) Found in the Macquarie Marshes to the west but not observed on the subject land, may overfly. Not listed as threatened or vulnerable. Range throughout most of Australia including Tasmania except central West Australia, central west South Australia and south west Northern Territory. Not recorded for this area in the Atlas of NSW Wildlife.

Conclusion

The land is already approved for the quarry operation and has been modified by past and present activities. Little vegetation will be removed over the life of the quarry other than sparse young regrowth. Following consideration of the proposal in accordance with the Department's *Significant Impact Guidelines: Matters of National Significance* (Commonwealth of Australia 2006) it is concluded that the proposed development will not impact on any matters of national significance and no referral is required.

6.3.2 Regional Environmental Planning Policy

No Regional Environmental Plan applies to the land.

6.3.3 State Environmental Planning Policy

State Environmental Planning Policy (Major Projects) 2005

This SEPP has the following aims:

(a) to identify development to which the development assessment and approval process under Part 3A of the Act applies,

(b) to identify any such development that is a critical infrastructure project for the purposes of Part 3A of the Act,

(c) to facilitate the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State,

(d) to facilitate service delivery outcomes for a range of public services and to provide for the development of major sites for a public purpose or redevelopment of major sites no longer appropriate or suitable for public purposes,

(e) to rationalise and clarify the provisions making the Minister the approval authority for development and sites of State significance, and to keep those provisions under review so that the approval process is devolved to councils when State planning objectives have been achieved.

Clause 7 of Schedule 1 identifies extractive industries that will extract more than 200,000 tonnes of extractive materials per year or extract from a total resource of more than 5 million tonnes, as a Major Development that falls under Part 3A of the Act.

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

This SEPP has the following aims:

(a) to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and

(b) to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and

(c) to establish appropriate planning controls to encourage ecologically sustainable development

through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources.

Clause 12 of the SEPP provides a number of matters that a consent authority must consider before determining a development application. These matters are similar to, but are in different terms to, the relevant matters contained in clause 10 of the LEP and are considered in the body of this report.

Clause 13 requires that Council must consider the compatibility of development proposals on land in the vicinity of existing mines etc or of land containing mineral or extractive resources. This provision is to ensure that these resources are not sterilised by incompatible development on surrounding land.

Clause 14 requires the Council to ensure that the development is undertaken in an environmentally responsible manner to avoid or minimise:

- impacts on significant water resources;
- impacts on threatened species and biodiversity; and
- greenhouse gas emissions.

Clause 15 requires that Council consider whether the proposed resource recovery is efficient.

Clause 16 (1) requires Council to consider whether a consent should contain conditions to:

- require some or all of the material to be transported by means other than by public road;
- limit or preclude truck movements on roads in residential areas or near to schools;
- require the preparation and implementation of a code of conduct relating to the transport of materials on public roads.

Clause 16 (2) requires Council to provide a copy of the development application to the Roads and Traffic Authority within seven (7) day of receipt.

Clause 16 (3) provides that Council must not determine the development application until it has taken into consideration any submission received from the Roads and Traffic Authority within 21 days after the Authority was provided with a copy of the application, and, provide the Roads and Traffic Authority with a copy of the determination.

Clause 17 requires that Council must consider whether or not the consent should be issued subject to conditions requiring rehabilitation of the land affected by the development.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

The DUAP publication *Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines* at page 3 sets out the steps to determine if the policy applies to particular development applications. The first step is to determine if the proposed development constitutes an ‘industry’ under the applicable planning instrument.

The Yallaroi Local Environmental Plan 1991 adopts the Environmental Planning and Assessment Model Provisions 1980. Clause 4 of the Model Provisions excludes extractive industries from the definition of ‘industry’ under the LEP.

The State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 also excludes extractive industries from the definition of ‘industry’, therefore, as extractive industries are not ‘industries’ this SEPP has no application to the proposal.

State Environmental Planning Policy No. 44 – Koala Habitat Protection

The area approved for extraction comprises mostly open grassland, adjoining slopes support a mixture of vegetation comprising mostly White Cypress (Callitris glaucophylla), Wilga (Geijera parviflora), Ironbark (Eucalyptus creba), Budda (Eromophila mitchellii) and scrubby acacia species. The existing vegetation is relatively young which suggests that the area has been heavily logged in the past. This

suggestion is further supported by the fact that the present Bullala National Park was until quite recently a State Forest.

The land contains none of the species of koala food trees listed in Schedule 2 of the SEPP and surveys of the area did not find any scats or scratch marks that would suggest that koalas may migrate through the site. The land therefore does not comprise either core or potential koala habitat.

A search of the Atlas of NSW Wildlife did not reveal any threatened flora within a 10 square kilometre area centred on the quarry.

State Environmental Planning Policy No. 55 – Remediation of Land

The objective of this policy is to provide a Statewide planning approach for the remediation of contaminated land. Where it is proposed to rezone the land or to carry out a development that would change the use of the land a consent authority must consider whether the land is contaminated and if it is, whether the land is suitable for the proposed development in its present state or whether remediation is required.

Even where no change of use is proposed a consent authority must consider whether the land is suitable for the proposed development if the land has been used for a purpose listed in Table 1 to the contaminated land planning guidelines. The land has been used for agricultural activities and this is a use that is listed in the table.

An initial evaluation of the land reveals that the agricultural activities that have been conducted involve logging and grazing. No cattle dip sites have been located on the land and no pesticides have been used. Non-agricultural uses involve quarrying basalt which is crushed for use in road building and for concrete manufacture. No concrete batching is conducted on site.

A visual inspection of the land did not reveal any signs of chemical contamination such as burnt patches of vegetation or bare or discoloured areas. The visual inspection and the history of the land's past and its present use have led to the conclusion that it is unlikely for there to be contamination such as to render the land unsuitable for the present and proposed uses.

6.3.4 Local Environmental Planning Policy

The subject land is zoned 1(a) General Rural under Yallaroi Local Environmental Plan 1991 (the LEP).

6.3.5 Does the proposal satisfy the requirements of the EPI?

"Runnymede" quarry is an existing quarry that operates under two development approvals. The quarry was approved after having been assessed under the Yallaroi LEP as designated development. This proposal is for an increase in the annual output from the quarry that places the development assessment under Part 3A of the Act. Prior to the enactment of Part 3A the proposal would have been permissible under Yallaroi LEP.

6.3.6 Is the proposal permissible within the zone?

The proposal is permissible in the 1(a) General Rural zone under clause 3 of the table to the matter to the zone in Yallaroi Local Environmental Plan 1991 as amended.

The objectives of the zone are:

> *The objective of this zone is to promote the proper management and utilisation of resources by:*
>
> *(a) protecting, enhancing and conserving:*
>
> *(i) agricultural land in a manner which sustains its efficient and effective agricultural production potential,*
>
> *(ii) soil stability, by controlling and locating development in accordance with soil capability,*

(iii) forests of existing and potential commercial value for timber productions,

(iv) value deposits of minerals, coal, petroleum and extractive materials, by controlling the location of development for other purposes in order to ensure the efficient extraction of those deposits,

(v) trees and other vegetation in environmentally sensitive areas, where the conservation of the vegetation is significant to scenic amenity or natural wildlife habitat or is likely to control land degradation,

(vi) water resources for use in the public interest,

(vii) areas of significance for nature conservation, including areas with rare plants, wetlands and significant habitat, and

(viii) places and buildings of archaeological or heritage significance, including the protection of Aboriginal relics and places,

(b) preventing the unjustified use of prime crop and pasture land for purposes other than agriculture,

(c) facilitating farm adjustments,

(d) minimising the cost to the community of:

(i) fragmented and isolated development of rural land, and

(ii) providing, extending and maintaining public amenities and services,

(e) providing land for future urban development, for rural residential development and for development for other non-agricultural purposes, in accordance with the need for that development, and

(f) providing areas for establishment of intensive agricultural pursuits and intensive livestock keeping establishments.

The proposal satisfies objective (a)(iv) as it ensures the efficient extraction of the resource.

Therefore the proposal is consistent with the aims and objectives of the EPI & land use zone.

6.4 THE PROVISIONS OF ANY DRAFT ENVIRONMENTAL PLANNING INSTRUMENT

No draft environmental planning instruments apply to this proposal.

6.5 DEVELOPMENT CONTROL PLANS

A search of Council's web site did not reveal any Development Control Plans that may affect this proposal.

6.6 LOCAL POLICIES

Council's Road Maintenance Management Plan 2008/09 sets out a hierarchy of roads and proposed maintenance level. It is expected that the applicant will enter into a planning agreement to offset the impact of this proposal on the nominated haul routes.

Council's Road Train policy provides guidance to operators of road trains on local roads.

Council's B-Double policy provides guidance to operators of B-Doubles on local roads.

Council's policy on the maintenance of the Crooble level crossing is based on the agreement between Council and State Rail for the maintenance of the Crooble level crossing.

6.7 ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2000

The proposed development is a Major Project under Part 3A of the Environmental Planning and

Assessment Act 1979 and 1A of the Environmental Planning and Assessment Regulation 2000 has effect.

7 ENVIRONMENTAL IMPACT

7.1 CONTEXT & SETTING

The quarry is situated on a low ridge that is more than two kilometres from the nearest public road. The quarry is surrounded by regrowth timber and is not visible from the road or adjoining lands.

The subject land has been used for logging and grazing as has surrounding lands. Other lands further to the west are used for broad-acre cropping, while the Bullala State Forest, which adjoins to the north and the west, has been reclassified as a National Park.

7.2 POTENTIAL IMPACT ON ADJACENT PROPERTIES:

Access to the subject land is from Gil Gil Creek Road and a private road that passes through what is now Bullala National Park. The quarry is operating at present and is not having a negative impact on adjacent properties. The proposed capacity increase will make more effective use of existing machinery while not affecting adjoining lands.

7.3 ACCESS, TRANSPORT & TRAFFIC

Access is via Mosquito Creek Road, Gil Gil Creek Road and then a private road. Truck traffic for the quarry presently comprises rigid tippers with dog trailers and semi-trailers and would increase from an average 12 deliveries per day to an average of 15-20 deliveries per day if B-double or B-triple trucks or road trains are introduced.

The roads that form the delivery route service local farms and are lightly trafficked. The proposed increase in vehicle movements is within the capability of the road network. As mentioned previously, the use of Gil Gil Creek Road to the north of the quarry through Crooble will be discontinued and northbound trucks will be directed along the bitumen sealed County Boundary Road.

Adequate on-site parking and manoeuvring areas are already provided at the quarry.

7.4 PUBLIC DOMAIN

The proposal makes no demand on the public domain other than the road network as discussed elsewhere in this report.

7.5 UTILITIES

Electricity and telephone are connected to the site and this proposal will not require the amplification of these services.

7.6 HERITAGE

A search of the AHIMS register was undertaken and an archaeological survey was undertaken by archaeologist Suzanne Hudson which found that there are no Aboriginal cultural heritage issues for this proposal. Her report is attached as Appendix ‘3’.

No items of European heritage are located on the land or would be impacted by this proposal.

7.7 OTHER LAND RESOURCES

The land was previously farmed, however, due to the number of rocks that came to the surface following ploughing, farming has been abandoned and the land is used for grazing cattle and horses.

Following the discovery of a large deposit of basalt on the land it is now used as a source of hard rock for road-building and concrete production.

The land is not located in a municipal water supply catchment.

7.8 WATER

Groundwater is an important and valuable resource and *The NSW State Groundwater Policy* aims to encourage the ecologically sustainable management of the State's groundwater resource to:

- slow and halt, or reverse any degradation of groundwater resources;
- ensure long term sustainability of the systems ecological support characteristics;
- maintain the full range of beneficial uses of these resources;
- maximise economic benefit to the Region, State and Nation.

The quarry is located on a ridge, does not intersect any groundwater resources and no groundwater is proposed to be extracted as a part of this proposal.

No surface streams are impacted by the quarry. Currently a diversion bund is utilised to prevent uncontaminated overland stormwater flows from entering disturbed areas and stormwater from disturbed areas (potentially contaminated runoff) is diverted to sedimentation dams where it is stored and used for dust suppression purposes.

7.9 SOILS

Soils in the immediate locality of the quarry are unsuitable for cultivation but support light grazing. Soils to the south and west on the low flats and floodplain support cultivation and grazing in rotation.

The soils on the site are not subject to instability such as subsidence, slip or mass movement. Erosion is controlled by revegetation and contour banking and sedimentation is controlled by directing stormwater to sediment dams where the water collected is reused for dust suppression.

7.10 AIR & MICROCLIMATE

Potential sources of airborne emissions have been identified below.

Diesel exhaust

Exhaust from diesel powered excavators, trucks and crushers. Diesel exhaust emissions are not expected to have a significant impact on air quality in the locality.

Dust

Dust from:

- Truck movements;
- Excavator operation;
- Bulldozer operation (removal of overburden);
- Crushers and conveyors;
- Wind generated dust.

The quarry has a small footprint when compared to surrounding farming operations and dust generation is relative to the area disturbed. Methods used to control dust on site include fine misting water sprays on crushers and watering of the stockpile and road area. Dust deposition monitoring has been undertaken from October 2009 and is ongoing. Monitoring of the quarry indicates that dust is deposited at an average rate of 1.4 grams of insoluble solids and 1.2 grams of ash per square metre per month while an identical gauge located 6 km to the southwest adjacent to an unsealed section of the haul route recorded an average deposition rate of 1.3 grams of insoluble solids and 1.1 grams of ash per square metre per month. Both levels are within the allowable limits for the maximum total deposited dust level set out in Table 7.1 of DEC (NSW) Approved Methods: for the Modelling and Assessment of Air Pollutants in New South Wales 2005.

7.11 FLORA & FAUNA

The land that has been developed for the quarry had previously been cleared and farmed and is now grazed. A search of the NSW National Parks and Wildlife Service's Atlas of NSW Wildlife over a ten kilometre square area centred on the quarry showed that there were no threatened flora and nine vulnerable fauna species recorded in the search area. The seven part assessment required by section 5A of the Environmental Planning and Assessment Act 1979 has been attached as Appendix '4'.

7.12 WASTE

The present waste management regime, discussed in section 5.3 above, has proved satisfactory and would continue.

7.13 ENERGY

The existing quarry machinery is of a modern and efficient design. This machinery is presently operating below its full capacity and is capable of satisfying the proposed additional demand. This machinery will continue in use.

7.14 NOISE & VIBRATION

Noise was considered in section 4.8 above where the background and operational noise was measured. As the existing machinery will continue in use there would be no increase in noise impacts on sensitive receivers from the quarry operation.

The increased production would generate an additional eight deliveries per day on average, increasing truck deliveries from 12 to up to 20, which would result in truck movements increasing from 24 to 40 per day.

Truck loading at the quarry only occurs in daytime hours between 7.00am to 6.00pm but this may need to be expanded from time to time to accommodate demand peaks.

7.15 NATURAL HAZARDS

The site is above the level of the one percent annual exceedence flood event and the surrounding land is managed for agriculture which reduces bushfire risk by controlling fuel loads.

The land is geologically stable and not subject to subsidence, slip or mass movement.

7.16 TECHNOLOGICAL HAZARDS

Blasting is undertaken when required by licensed contractors in compliance with relevant legislation. Explosive materials are transported to the site by the contractors on the day of use, no explosives are stored on site.

All quarry operations are undertaken in compliance with WorkCover requirements and the worksite is fenced to exclude members of the public.

Activities undertaken on surrounding lands do not pose a hazard for quarry operations.

7.17 SAFETY, SECURITY & CRIME PREVENTION

The quarry is located on land that is actively farmed and the land owner resides adjacent to the quarry area. The boundary of the land is fenced and fences are maintained in good repair. These security measures have proven to be effective over the years.

7.18 SOCIAL IMPACT IN THE LOCALITY

The proposal would increase traffic movements on haul routes from 12 deliveries to up to 20 deliveries per day. Haul routes within the Gwydir shire are mostly unsealed while those in the Moree Plains Shire are sealed.

Dust generation and pavement damage have been identified as a social cost of the quarry and it is expected that a planning agreement between the applicant and the respective councils will be negotiated to mitigate this issue.

The provision of quality road building and construction materials produced by the quarry is seen as a social benefit due to its contribution to the provision of community infrastructure at reasonable cost. If this material is not available locally then public infrastructure would suffer and costs increase. This would lead to a reduction in social wellbeing in the region as roads deteriorated or money was diverted from other projects.

7.19 ECONOMIC IMPACT IN THE LOCALITY

The availability of road building and construction materials that meet acceptable standards is extremely limited on the black soil plains in the region. Runnymede quarry contains one of the few deposits of hard rock in the region that is suitable for the construction of public roads and bridges and other infrastructure.

If Runnymede quarry is unable to supply this material development in the region would be impacted as supplies of hard rock would have to be imported from other regions at considerable additional cost, both financial and in wear and tear on the transport infrastructure.

The quarry also employs around 30 people directly and dozens more indirect jobs are created by its operations. This is a significant input into the Gwydir Shire economy.

7.20 SITE DESIGN

The design of the quarry is dictated by the size and location of the extractive resource. The crushing and stockpile area is sited on an exhausted section of the pit and drains and sediment ponds have been located based on the topography.

The operation is set well back from public areas such as Gil Gil Creek Road and is screened by thick regrowth vegetation.

7.21 CONSTRUCTION

All necessary infrastructure is present on the site and no additional construction works are proposed.

7.22 CUMULATIVE IMPACTS

The proposed increase in production would involve an additional eight truck deliveries per day to a total of up to 20 deliveries per day or on average two deliveries per hour.

This will result in additional dust generation on the unsealed sections of the haul routes and additional wear on both sealed and unsealed roads used for deliveries.

This has been a subject for discussion with the Gwydir Shire Council and it is proposed to develop a planning agreement for a contribution for road maintenance based on the volume of material hauled from the quarry.

8 ENVIRONMENTAL MONITORING

8.1 INTRODUCTION

Monitoring will be carried out as required by the Minister's Approval and the environment protection licence applying to the site.

8.2 BASELINE DATA

The provision of baseline data and the extent of environmental monitoring carried out at the quarry is necessary for the grant of a license under the provisions of the Protection of the Environment Operations Act 1997. Baseline data has been included in this report.

8.2.1 Water

The nearest waterway is Bullala Creek, an intermittent watercourse located around one kilometre to the north. All surface runoff from disturbed areas is directed to sediment dams by a series of catch drains and is used for dust suppression on internal roads, stockpiles and crushers.

8.2.2 Noise

Noise monitoring has been undertaken and the rating background level has been set at 30dB(A). Operational noise level at the nearest sensitive receiver has been calculated at 35dB(A).

8.2.3 Dust

Dust monitoring has been undertaken since October 2009 and the results are set out in section 7.10 of this document.

8.3 MONITORING

8.3.1 Water

Water levels in sediment dams will be monitored following rain to ensure that sufficient capacity remains in the dams to capture all runoff from disturbed areas.

8.3.2 Dust

Dust monitoring will continue at the two sites presently monitored or at alternative locations as may be agreed with DECC&W.

8.3.3 Noise

Noise monitoring would be conducted as and if required.

8.4 ANNUAL ENVIRONMENTAL AND MANAGEMENT REPORTING

8.4.1 Preparation and review

Runnymede quarry management will be responsible for the preparation of an Annual Environmental and Management Report (AEMR) which is to be submitted to the Department of Environment, Climate Change and Water.

The AEMR will form the basis of Department's consideration of the environmental performance of the quarry.

8.4.2 Contents

Relevant monitoring programs will be instigated as the operation develops and will continue to assess the following aspects of the operation:

- Annual quarry output
- Surface water

- Ambient dust
- Non-compliance

As well as the quantifiable measures outlined in the report it will also address and analyse complaints concerning matters such as noise and dust emissions.

9 SITE REHABILITATION

Johnstone Ready Mixed Concrete is committed to an integrated approach to rehabilitation of all the areas currently disturbed and planned to be disturbed within the project site.

9.1 REHABILITATION AND FINAL LAND USE OBJECTIVES

The following objectives have been adopted to guide rehabilitation procedures for the site:

- To produce a stable final landform able to support the continued use of the land for grazing;
- To provide a number of water storages to support the use of the land for grazing;
- To minimise the environmental impact of all site earthworks associated with rehabilitation works;
- To optimise the use of available overburden and topsoil as a substrate for vegetation; and
- To achieve a stable and functional drainage system at the site under extreme rainfall events.

9.2 FINAL LANDFORM

The final landform would be free draining with a gently sloping floor to the west about 15 metres below the present landform. Drainage would be designed to provide runoff to existing sediment dams.

The existing extraction faces would be retained and a four-strand rural fence erected along the top of the faces to exclude cattle. Stockpiled topsoil and overburden would be spread on the pit floor and the stockpile area, fertilised and vegetated with pasture grasses.

9.3 FINAL LAND USE

Once the pasture is established the area would be used to again graze cattle and horses.

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11 APPENDICES

11.1 APPENDIX 1 – DIRECTOR GENERAL'S REQUIREMENTS

NSW GOVERNMENT
Department of Planning

Major Projects Assessment
Mining
23-33 Bridge Street
GPO Box 39 SYDNEY NSW 2001
Contact: Carl Dumpleton
Phone: 9228 6283
Fax: 9228 6466
Email: carl.dumpleton@planning.nsw.gov.au

Mr Richard Clowes
SMK Consultants Pty Ltd
PO Box 774
MOREE
NSW 2400

Dear Mr Clowes

Director-General's Requirements
Runnymede Gravel Quarry (DGR No. 453)

I refer to your request for the Director-General's requirements for the preparation of an Environmental Impact Statement (EIS) for the expansion of the basalt quarry located off Gil Gil Road, within the Gwydir local government area approximately 45 kilometres (km) north-east of Moree.

Statutory Issues

Attachment 1 outlines the statutory matters that must be included in any EIS under clauses 71 and 72 of the *Environmental Planning and Assessment Regulation 2000* (the EP&A Regulation).

Specific Issues

Under clause 73(1) of the EP&A Regulation, the Director-General requires the EIS to address the following specific issues:

- **Description of the Proposal:** The EIS must include a full description of the proposal, clearly identifying the resource, the site, the proposed works (including rehabilitation works) and the duration and intensity of extraction operations, and any likely interactions between the proposed operations and existing/approved development and landuse in the area.
- Please note if the proposed total resource to be extracted for the project is greater than 5 million tonnes, then the project is likely to be a Major Project under the *State Environmental Planning Policy (Major Development) 2005* and a Part 3A project application will have to be lodged with the Department of Planning.
- **Justification for the Proposal:** The EIS must include a detailed justification of the proposal.
- **Environmental Planning Instruments:** The EIS must assess the proposal against the relevant provisions of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007; State Environmental Planning Policy No. 33 – Hazardous and Offensive Developments; State Environmental Planning Policy No. 44 – Koala Habitat Protection, State Environmental Planning Policy No. 55 – Remediation of Land; Yallaroi Shire Local Environment Plan (part of the Gwydir local government area); Western NSW Regional Strategy;* and section 94 plan.

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- **Key Issues:** The EIS must also assess the potential impacts of the proposal during the establishment, operation and decommissioning of the proposal The EIS must describe what measures would be implemented to avoid, minimise, mitigate, offset, manage and/or monitor the potential impacts listed below:
  - flora and fauna (particularly, critical habitats; threatened species, populations or ecological communities, or their habitats);
  - traffic and transport (in particular the potential impacts of traffic from the proposal on the safety and efficiency of the road network; and the measures that would be implemented to upgrade and/or maintain roads over the life of the project);
  - biodiversity offset strategies;
  - water quality (including surface and ground water);
  - heritage (both Aboriginal and non-Aboriginal);
  - noise;
  - air quality;
  - soils and erosion;
  - waste management;
  - hazards;
  - visual amenity;
  - utilities and services; and
  - social and economic impacts.
- **State Government Policies and Guidelines** The EIS must take into account relevant State Government policies and guidelines, in particular the *Draft Guidelines for Threatened Species Assessment under Part 3A of the Environmental Planning and Assessment Act 1979 (DEC)*, relevant AUSTROADS guideline(s), *New South Wales Groundwater Protection Policy*, the *Industrial Noise Policy* (EPA 2001), and *Soils and Construction: Managing Urban Stormwater* (Landcom 2004). During the preparation of the EIS, you must consult the Department's guideline, *Extractive Industries EIS Guideline — Quarries*. The guideline is available for purchase from the Department's Information Centre, 23-33 Bridge Street, Sydney or by calling 1300 305 695.
- **Rehabilitation and Final Land Use:** The EIS must:
  - justify the final land use in relation to the strategic land use objectives for the area;
  - describe in detail how the site would be progressively rehabilitated; and
  - describe what measures would be put in place for the ongoing management of the site following cessation of quarrying activities, including consideration of the most appropriate mechanisms for securing sufficient financial resources for the implementation of these measures in the long term.
- **Environmental Monitoring and Management:** The EIS must describe in detail how the environmental performance of the proposal would be monitored and managed over time.
- **Cumulative Impacts:** The EIS must assess the potential cumulative impacts of the proposal.

Integrated Development

Under section 91 of the *Environmental Planning and Assessment Act 1979* (the Act) the development is "integrated development" if it requires certain approvals (in addition to development consent) before it may be carried out.

In your Form A, you indicated that your proposal will not require any additional approvals under another piece of legislation. However, under the Act integrated development is development that requires another approval in order to be carried out. Accordingly, as the proposed development requires the existing Environmental Protection Licence (EPL), as well as development consent, the proposed development it is an integrated development despite the proposal requiring no additional approvals.

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Phone: (02) 9228 6111 Fax: (02) 9228 6455 Website: planning.nsw.gov.au

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The existing EPL issued by Department of Environment, Climate Change and Water (DECCW) for the quarry may need to be amended to reflect the changed extraction rate. Other existing approvals granted by Council for the quarry will also need to be amended as required.

The DECCW Office of Water of (OoW) and Gwydir Shire (Council) have not yet provided their requirements for this proposal to the Department. Please note that you are required to liaise directly with these agencies to obtain there requirements for this proposal. We request that copies of any requirements issued are also forward to the Department.

If any integrated approvals are identified before the Development Application (DA) is lodged, you must conduct your own consultation with the relevant agencies, and address their requirements in the EIS.

When you lodge your DA for the proposal, you must provide:

- Three (two hard and one electronic) copies of the EIS to the Department; and
- Two (one hard and one electronic) copies of the EIS directly to each integrated approval authority and a cheque for $250, to offset costs involved in the review of the DA and EIS.

Consultation

During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS.

In particular, you must consult Council, Roads and Traffic Authority (RTA), DECCW, OoW, the Department of Industry and Investment (DII) and surrounding landowners and occupiers that are likely to be impacted by the proposal.

The comments and requirements for approval from DII and DECCW have been received by the Department and are included in Attachment 2.

Details of the consultations carried out and issues raised must be included in the EIS.

The Commonwealth Environment Protection and Biodiversity Conservation Act

If your proposal contains any actions that could have a significant impact on matters of National Environmental Significance, then it will require an additional approval under the *Commonwealth Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. It is your responsibility to contact the Department of the Environment, Water, Heritage and the Arts in Canberra ((02) 6274 1111 or http://www.environment.gov.au) to determine if the proposal is likely to have a significant impact on matters of National Environmental Significance, and would require an approval under the EPBC Act. The Commonwealth Government has accredited the NSW environmental assessment process for assessing any impacts on matters of National Environmental Significance. As a result, if it is determined that an approval is required under the EPBC Act, please contact the Department immediately, as supplementary Director-General's requirements will need to be issued.

Mines Inspection Act 1901

Should the consent authority approve the proposal, then under section 44 of the *Mines Inspection Act 1901*, the owner or general manager of a mine or quarry must give notice to a Mines Inspector of the commencement (or continuation) of mining or quarrying operations. The Applicant should contact the DPI's Mine Safety Operations Branch in their local area in regard to compliance with the *Mines Inspection Act 1901*.

Administration

You should note that if the DA to which these requirements relate is not made within two years of the date of this letter, you must re-consult with the Director-General prior to lodging the application in order that these requirements may be revised if necessary.

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Phone: (02) 9228 6111 Fax: (02) 9228 6455 Website: planning.nsw.gov.au

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Enquiries

If you have any enquiries about the above, please contact Carl Dumpleton.

Yours sincerely

Howard Reed 9.9.09
A/Manager, Mining
as delegate of the Director-General

Bridge St Office GPO Box 39 Sydney NSW 2001
Phone: (02) 9228 6111 Fax: (02) 9228 6455 Website: planning.nsw.gov.au

Department of Planning

ATTACHMENT No. 1

STATUTORY REQUIREMENTS FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT UNDER PART 4 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

In accordance with the *Environmental Planning and Assessment Act 1979* (the Act), an environmental impact statement (EIS) must meet the following requirements.

Content of EIS

Pursuant to Schedule 2 and clause 72 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation), an EIS must include:

1. A summary of the environmental impact statement.
2. A statement of the objectives of the development or activity.
3. An analysis of any feasible alternatives to the carrying out of the development or activity, having regard to its objectives, including the consequences of not carrying out the development or activity.
4. An analysis of the development or activity, including:
   (a) a full description of the development or activity; and
   (b) a general description of the environment likely to be affected by the development or activity, together with a detailed description of those aspects of the environment that are likely to be significantly affected; and
   (c) the likely impact on the environment of the development or activity, and
   (d) a full description of the measures proposed to mitigate any adverse effects of the development or activity on the environment, and
   (e) a list of any approvals that must be obtained under any Act or law before the development or activity may be lawfully carried out.
5. A compilation, (in a single section of the environmental impact statement) of the measures referred to in item 4(d).
6. The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biophysical, economic and social considerations, including the following principles of ecologically sustainable development:
   (a) The precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
   In the application of the precautionary principle, public and private decisions should be guided by:
      (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
      (ii) an assessment of the risk-weighted consequences of various options,
   (b) Inter-generational equity - namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations,
   (c) Conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
   (d) Improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as:
      (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
      (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
      (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

An environmental impact statement referred to in Section 78A(8) of the Act shall be prepared in written form. The prescribed form to accompany the environmental impact statement must comply with the requirements of clause 71 of the Regulation and be signed by the person who has prepared it.

Procedures for public exhibition of the EIS are set down in clauses 77 to 81 of the Regulation.

Attention is also drawn to clause 283 of the Regulation regarding false or misleading statements in EISs.

Note

If the development application to which the EIS relates is not made within 2 years from the date of issue of the Director-General's requirements, under clause 73(6) of the Regulation the proponent is required to reconsult with the Director-General.

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11.2 APPENDIX 2 - AUTHORITY CORRESPONDENCE

NSW DEPARTMENT OF
PRIMARY INDUSTRIES

28th July 2009

Mr Collin Phillips
Industry and Mining
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Attention: Carl Dumpleton

Our ref: 09/4497

Dear Mr Phillips

Proposed Expansion of Runnymede Gravel Quarry
DGR ID No. – 453

I refer to your letter of 6th July 2009 in which you sought advice on Director General's requirements for the preparation of an Environmental Impact Statement for the above development proposal. This is a coordinated response incorporating comments from the Mineral Resources, Fisheries and Agriculture Divisions of the Department of Primary Industries. The proposal is not relevant to the interests of Forests NSW.

General Issues

The EIS Guideline for Extractive Industries (DUAP, 1996) should be followed in the preparation of the EIS.

Issues Related to Mineral Resources

The key issues that need to be addressed in the EIS are the size and quality of the resource. The proponent must be able to demonstrate that the size and quality of the resource have been adequately assessed and provide details of methods used to assess the resource and its suitability for the intended applications.

Issues related to Fish Habitat

The EIS should address any relevant issues in the attached general guidelines.

Issues related to Agriculture

The proposed Environmental Impact Statement should address the following issues:

- the agricultural and rural uses of the subject and adjoining lands
- the agricultural values of the subject property including the site to be developed
- the impact of the proposal on future agricultural production
- proposed rehabilitation measures and long term management/use of the subject lands,

MINERAL RESOURCES
PO Box 344 Hunter Region Mail Centre NSW 2310
516 High Street Maitland NSW 2320

ABN 51 734 124 190
www.dpi.nsw.gov.au
Tel: 02 4931 6666
Fax: 02 4931 6790

- proposed exclusion of livestock from the operational area in the short term as well as during the rehabilitation phase
- the compatibility of the operation with adjoining and nearby agricultural enterprises
- management of any adverse off-site impacts such as dust and on water resource impacts
- management of any drainage, local flooding and flood behaviour impacts on agricultural enterprises and farm access
- consultation with agencies, neighbours and community organisations and management of issues arising

If you have any further queries concerning this proposal, please contact Iain Paterson on 4931 6704 or iain.paterson@dpi.nsw.gov.au.

Yours sincerely

Iain Paterson
A/Chief Geoscientist, Land Use

NSW DEPARTMENT OF
PRIMARY INDUSTRIES

DPI FISHERIES
PROPOSED EXTRACTIVE INDUSTRY ENVIRONMENTAL IMPACT STATEMENT & STATEMENT OF ENVIRONMENTAL EFFECTS REQUIREMENTS

Matters to be Addressed

Definitions
The definitions given below are relevant to these requirements:

Fish means any part of marine, estuarine or freshwater fish or other aquatic animal life at any stage of their life history (whether alive or dead). This includes aquatic molluscs, crustaceans, echinoderms, worms, aquatic insect larvae and other macroinvertebrates .

Marine vegetation means any species of plant that at any time in its life must inhabit water (other than fresh water).

Waters refers to all waters including tidal waters as well as flowing streams, irregularly flowing streams, gullies, rivers, lakes, coastal lagoons, wetlands and other forms of natural or man made water bodies on both private and public land.

GENERAL REQUIREMENTS

- Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (1:25000) and aerial photographs.
- All waterbodies and waterways within the proposed area of development are to be identified.
- Description and maps of aquatic vegetation, snags, gravel beds and any other protected, threatened or dominant habitats should be presented. Description should include area, density and species composition.
- A survey of fish species should be carried out and results included. Existing data should be used only if collected less than 5 years previously.
- Identification of recognised recreational and commercial fishing grounds, aquaculture farms and/or other waterways users.
- Details of the location of all component parts of the proposal, including any auxiliary infrastructure, timetable for construction of the proposal with details of various phases of construction
- Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation and site rehabilitation eg Environment Management Plans, Rehabilitation Plans, Compensatory offsets
- For each freshwater body identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: flow characteristics, including any seasonal variations, bed substrate, and bed width
- For each marine or estuarine area identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and

Aquatic Habitat Protection
NSW Department of Primary Industries
Locked Bag 1
NELSON BAY NSW 2315

ABN 51 734 124 190
www.dpi.nsw.gov.au
Tel: 02 4916 3931
Fax: 02 4982 2306

stream morphology information such as: tidal characteristics, bed substrate, and depth contours

DREDGING AND RECLAMATION ACTIVITIES

- Purpose of works
- Type(s) and distribution of marine vegetation in the vicinity of the proposed works
- Method of dredging to be used
- Timing and Duration of works
- Dimension of area of works including levels and volume of material to be extracted or placed as fill
- Nature of sediment to be dredged, including Acid Sulphate Soil, contaminated soils etc
- Method of marking area subject to works
- Environmental safeguards to be used during and after works
- Measures for minimising harm to fish habitat under the proposal
- Spoil type and source location for reclamation activities
- Method of disposal of dredge material
- Location and duration of spoil stockpiling, if planned

ACTIVITIES THAT DAMAGE MARINE VEGETATION

- Type of marine vegetation to be harmed
- Map and density distribution of marine vegetation
- Reasons for harming marine vegetation
- Methods of harming marine vegetation
- Construction details
- Duration of works/activities
- Measures for minimising harm to marine vegetation under the proposal and details of compensatory habitat development to replace lost vegetation.
- Method and location of transplanting activities or disposal of marine vegetation

ACTIVITIES THAT BLOCK FISH PASSAGE

- Type of activity eg works in a stream that change flow or morphological characteristics of the stream, including culvert and causeway construction, sediment and erosion control measures, stormwater diversion structures.
- Length of time fish passage is to be restricted, whether permanent or temporary
- Timing of proposed restriction. Should be timed to avoid interfering with migratory movements of fish.
- Remediation or compensatory works to offset any impacts

THREATENED SPECIES

- Threatened aquatic species assessment (Section 5c, EP&A Act 1979). This must be addressed even if there are no Threatened Species present on the site.
- Seven Part Test

FISHING AND AQUACULTURE

- Outline and document commercial, recreational and indigenous fishing activities that may be affected by the activity, including regular commercial fishing grounds, popular recreational fishing sites, recognised indigenous harvesting sites.

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- Will the activity interfere with or cause an impact on the continuing operation and viability of nearby aquaculture or mariculture ventures.

2. Initial Assessment

A list of threatened species, endangered populations and endangered ecological communities must be provided. In determining these species, consideration must be given to the habitat types present within the study area, recent records of threatened species in the locality and the known distributions of these species.

In describing the locality in the vicinity of the proposal, discussion must be provided in regard to the previous land and water uses and the effect of these on the proposed site. Relevant historical events may include land clearing, agricultural activities, water abstraction/diversion, dredging, de-snagging, reclamation, siltation, commercial and recreational activities.

A description of habitat including such components as stream morphology, in-stream and riparian vegetation, water quality and flow characteristics, bed morphology, vegetation (both aquatic and adjacent terrestrial), water quality and tide/flow characteristics must be given. The condition of the habitat within the area must be described and discussed, including the presence and prevalence of introduced species. A description of the habitat requirements of threatened species likely to occur in the study area must be provided.

In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution. The study area must extend downstream and/or upstream as far as is necessary to take all potential impacts into account.

Please Note: Persons undertaking aquatic surveys may be required to hold or obtain appropriate permits or licences under relevant legislation. For example:

Fisheries Management Act 1994
- Permit to take fish or marine vegetation for research or other authorised purposes (Section 37)
- Licence to harm threatened (aquatic) species, and/or damage the habitat of a threatened species (Section 220ZW).

Animal Research Act 1985:
- Animal Research Authority to undertake fauna surveys.

It is recommend that, prior to any field survey activities taking place, those persons proposing to undertake those activities give consideration to their obligation to obtain appropriate permits or licences which may be required in the specific context of the proposed survey activities.

3. Assessment of Likely Impacts

The EIS must:
- describe and discuss significant habitat areas within the study area;

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- outline the habitat requirements of threatened species likely to occur in the study area;
- indicate the location, nature and extent of habitat removal or modification which may result from the proposed action;
- discuss the potential impact of the modification or removal of habitat;
- identify and discuss any potential for the proposal to introduce barriers to the movement of fish species; and
- describe and discuss any other potential impacts of the proposal on fish species or their habitat.

For all species likely to have their lifecycle patterns disrupted by the proposal to the extent that individuals will cease to occupy any location within the subject site, the EIS must describe and discuss other locally occurring populations of such species. The relative significance of this location for these species in the general locality must be discussed in terms of the extent, security and viability of remaining habitat in the locality.

4. Ameliorative Measures

The EIS must consider how the proposal has been or may be modified and managed to conserve fisheries habitat on the subject site and in the study area.

In discussing alternatives to the proposal, and the measures proposed to mitigate any effects of the proposal, consideration must be given to developing long term management strategies to protect areas within the study area which are of particular importance for fish species. This may include proposals to restore or improve habitat.

Any proposed pre-construction monitoring plans or on-going monitoring of the effectiveness of the mitigation measures must be outlined in detail, including the objectives of the monitoring program, method of monitoring, reporting framework, duration and frequency.

In the event of a request for concurrence or consultation of the Director of NSW Department of Primary Industries, one (1) copy of the EIS should be provided to NSW Department of Primary Industries in order for the request to be processed.

It should be noted that the NSW Department of Primary Industries has no regulatory or statutory role to review draft EISs unless they are accompanied by or are requested as part of a licence application under Part 7A of the FM Act. However, NSW Department of Primary Industries is available to provide advice to consent and determining authorities regarding Fisheries' opinion as to whether the requirements have been met if requested, pending the availability of resources and other statutory priorities.

Useful Information
To help you in the preparation of an EIS, the publication "*Guidelines for the Assessment of Aquatic Ecology in EIA*" (Draft 1998) produced by the Department for Urban Affairs and Planning may prove useful in outlining appropriate procedures and methodologies for conducting aquatic surveys.

Should you require any further information on these requirements please contact the Aquatic Habitat Protection Office at Port Stephens on 4916 3931.

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Department of Environment & Climate Change NSW

Notice No: 1104722

Mr Carl Dumpleton
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

7 August 2009

Dear Mr Dumpleton,

RE: Request for input into Director General Requirements for proposed expansion of Runnymede Quarry,

I refer to your request for the Department of Environment, Climate Change and Water (the Department) requirements for the environmental impact statement (EIS) in regard to the above proposal received by the Department on 10 July 2009. The Department has considered the details of the proposal and has identified the information it requires to issue its general terms of approval in **Attachment 'A'.**

To assist the Department in assessing the EIS it is requested that the format of Department of Planning's relevant guidelines for EISs be followed. In carrying out the assessment the applicant should refer to the relevant guidelines in **Attachments B, C and D.**

Pollution Control and Environmental Management

Based upon information provided in the application the Department provides the following comments as required by the Integrated Development Application (IDA) process for the issues that must be addressed in relation to the *Protection of the Environment Operations Act*. The Department considers that the following issues will be the key considerations requiring detailed assessment and definitive measures to mitigate any impacts. This assessment is further expanded in Attachment A:

- **Amenity issues** –dust generation and noise impacts on adjacent rural receptors;
- **Water** - water management systems and the protection of surface waters from runoff from disturbed areas;
- **Chemical storage** – management of on-site fuel and chemical bulk storage

The EIS will need to assess the impact of the proposed development on the issues raised in Appendix A with particular emphasis on the above issues.

The Department also notes that there has been significant concerns in relation to off-site dust impacts from increased truck haulage on unsealed roads, road safety concerns and deterioration of road surface. This is not a component regulated by the Department, however, it will need to be satisfactorily addressed by the proponent and properly considered by the consent authority in this instance.

Flora, Fauna, Threatened Species and Cultural Heritage

The proponent will need to address the following issues.

(a) **Flora and Fauna** - the known and potential impacts on flora, fauna, threatened species, populations, communities and their habitats.

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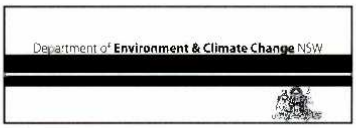

(b) **Aboriginal Cultural Heritage** - the potential for impacts on Aboriginal cultural heritage.

Attachments C and D covers natural and cultural heritage assessment guidelines respectively. These guidelines are designed for environmental impact assessment documents and therefore their content is relevant to the EIS. They address requirements under the *Environmental Planning and Assessment Act 1979* and the Department's areas of responsibility relating to flora, fauna, cultural heritage and threatened species, populations, ecological communities and their habitats.

It should be noted that Attachments C and D are only guidelines and it is up to the proponent (and later the consent authority after appropriate consultation) to determine the detail and comprehensiveness of the surveys and level of assessment required to form legally defensible conclusions regarding the impact of the proposal. The scale and intensity of the proposed development should dictate the level of investigation. It is important that all conclusions are supported by adequate data.

The primary aims of the EIS for the *Runnymede expansion* proposal, as it relates to biodiversity, will need to be to:

1. establish the area, character and conservation value of existing ecosystems and dependent species to be impacted either directly or indirectly by the proposal;
2. consider the impacts of the proposed operations on the adjoining Bullala National Park and in particular mitigation and management of impacts associated with the access road through the National Park to the quarry site;
3. consider the significance of all potential impacts in the regional context;
4. provide detailed information regarding the measures required to minimise impacts to natural and biological values on the proposed development site;

Statutory Requirements

The proposed development is scheduled under the *Protection of the Environment Operations Act* administered by the Environment Protection Authority (EPA). As such, the development (including construction activities) will require a variation to the existing Environment Protection Licence under that Act and is therefore Integrated Development under the EP&A Act. The proponent will need to make a separate application to the Department to vary this licence if planning project approval is given.

In carrying out the assessment, the proponent should refer to the relevant guidelines referenced in Attachments B, C and D, and also the following industry codes of practice or environmental best management practice guidelines.

General information on licence requirements can be obtained from the Department's Environment Line on 131 555 or be found at the Department web-site at http://www.environment.nsw.gov.au/licensing/

The environmental assessment should also assess the development in relation to the requirements of Section 5A of the *Environmental Planning and Assessment Act 1979*, and determine whether a permit to disturb Aboriginal objects under Part 6 s87, or whether a licence to destroy, deface or damage Aboriginal objects may be required under Part 6 s90, of the *National Parks and Wildlife Act 1974*. Please note that should the proponent require the destruction of items of cultural significance then this will be assessed under the Integrated Development process.

Department of **Environment & Climate Change** NSW

The Department will require 2 hard copies of the EIS and one digital copy when the application is submitted. These documents should be lodged with the Department's Armidale office - postal address PO Box 494 Armidale NSW 2350 and marked to the attention of the Manager, Armidale Region. If you have any queries regarding this matter please contact Mr Stephen O'Donoghue on (02) 6773 3000.

Yours sincerely

STEPHEN O'DONOGHUE
A/ Head Regional Operations Unit – North West – Armidale
Environment Protection and Regulation
Department of Environment and Climate Change

Encl: Attachment A – the Department's Director General's Requirements
Attachment B – Guidance Material Environmental Impacts
Attachment C- Environmental Assessment Guidelines – Flora and Fauna
Attachment D- EIS Requirements for the Assessment of Aboriginal Cultural Heritage Issues

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Department of Environment & Climate Change NSW

Attachment A

The Department's Recommended Director General's Requirements

Environmental impacts of the project

1. The following environmental impacts of the project need to be assessed, quantified and reported:
   - Air quality;
   - Noise and Blasting;
   - Ground and surface water quality and quantity impacts;
   - Flora, fauna and threatened species/communities; and
   - Aboriginal cultural heritage; and
   - Native vegetation.

   These should be assessed in accordance with the relevant guidelines listed in Attachment B.
2. Describe mitigation and management options that will be used to prevent, control, abate or minimise identified environmental impacts associated with the project and to reduce risks to human health/amenity and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

Impacts on air quality

The goal is to maintain existing ambient air quality and protect sensitive receptors both on and off site from adverse impacts. This assessment must be prepared in accordance with the Department documents entitled "*Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales, 2005.*" In particular, the impact assessment must assess and mitigate impacts associated with all quarrying and ancillary activities on the premises.

Impacts of noise and blasting

The development should be designed so that the quarry operations and associated activities comply with the requirements of the *Industrial Noise Policy* (INP). Impacts of noise from construction activities and sleep disturbance (where applicable) should also be evaluated. The assessment must include potential noise impacts from truck movements within the premises boundary which must be assessed in accordance with the INP including assessment of sleep disturbance from truck movements at night.

Impacts on water quality and quantity

The development should be designed to ensure adequate protection of surface and groundwaters from operations at the premises. In relation to surface water impacts, key pollutant will be sediment laden discharges to the receiving waters. The report should identify appropriate stormwater and erosion control management from disturbed areas and stockpiles in accordance with the document "*Managing Urban Stormwater: Soils and Construction: Volume 2E – Mines and Quarries, DECC 2008.*" In particular, due to the extended period of disturbance at the premises and location adjoining National Park, a minimum design of sediment basins to meet a 5 day 90%ile storm duration would be expected in the stormwater management design.

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Potential impacts on groundwater from pit area excavation and from management and storage of chemicals and fuels on the site should be assessed.

Chemical/ fuel storage
Identification of chemical/ fuel storages is required and measures in place to ensure appropriate storage and management to prevent land and water pollution.

Impacts of the project on flora, fauna, threatened species and their habitats

Assessment of the impacts of the proposal should be conducted in accordance with the *Environmental Assessment Guidelines: Flora and Fauna* (Attachment C). Guidelines for the threatened species "*Assessment of Significance*" (known previously as the "8 part test") are available from the Department at the following web address:

http://www.environment.nsw.gov.au/threatenedspecies/tsaguide.htm

The proponent should also utilise the document. 'Threatened Biodiversity Survey and Assessment Guidelines for Developments and Activities" available at:

http://www.environment.nsw.gov.au/surveys/BiodiversitySuveyGuidelinesDraft.htm

The assessment should describe, where relevant, the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts of the project on threatened species and their habitat. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

The proponent should also assess direct and indirect impacts on the adjoining National Park with reference to the following guideline:

http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm

Native Vegetation

The EA needs to address the potential impact on native vegetation, specifically:

- identify the hectares of native vegetation that will be cleared to accommodate the proposed quarry expansion;
- identify the floristics of the botanical communities of native vegetation that will need to be cleared;
- identify the extent of native vegetation on the site which may be remnant vegetation, protected regrowth or non-protected regrowth as defined by the Native Vegetation Act 2003;
- the requirement to develop suitable offsets to improve or maintain environmental outcomes for the lawful clearing of native vegetation.

The Department will assess all biodiversity offsets in accordance with the Department's Principles for the use of biodiversity offsets in NSW. These are outlined at the following web location:

http://www.environment.nsw.gov.au/biocertification/offsets.htm

Impacts of the project on Aboriginal cultural heritage values

It is important that the EIS identify the nature and extent of impacts on Aboriginal cultural heritage values across the project area and describe the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts of the project on Aboriginal cultural heritage values. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

The EIS also needs to clearly demonstrate that effective community consultation with Aboriginal communities have been undertaken in determining and assessing impacts, developing options and making final recommendations.

The EIS should address and document the information requirements set out in the *EIS Requirements For the Assessment of Aboriginal Cultural Heritage Issues (Attachment D)* and the documents *"Interim Community Consultation Requirements for Applicants'* and *"Aboriginal Cultural Heritage Standards and Guidelines Kit"* available at the following locations:

http://www.environment.nsw.gov.au/resources/cultureheritage/aboriginalHeritageGuidelinesKitFinal.pdf

http://www.environment.nsw.gov.au/conservation/AboriginalConsultationInterimGuidelines.htm

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Department of Environment & Climate Change NSW

Attachment B
Guidance Material – Environmental Impacts

1. Assessing Environmental Impacts

Air quality

- Protection of the Environment Operations (Clean Air) Regulation 2002
- Approved Methods for the Sampling and Analysis of Air Pollutants in NSW
- Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales
- Technical Framework: Assessment and Management of Odour from Stationery Sources in NSW, November 2006.

Noise and vibration

- NSW Industrial Noise Policy (EPA, 1999)
- NSW Environmental Criteria for Road Traffic Noise (EPA, 1999)
- Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC 1990)
- Interim Construction Noise Guideline (DECC, 2009)

Water and Soils

Water quality

- National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)
- NWQMS Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC 2000)
- Water Quality and River Flow Objectives (various for relevant catchment) (DEC, 2006)

Waste water

- National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC 1997)
- National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC 2000)
- Environmental Guidelines for the Utilisation of Treated Effluent by Irrigation (NSW DEC 2004)

Stormwater

- Managing Urban Stormwater: Soils and Construction 4th Edition (Landcom 2004)
- Managing Urban Stormwater: Soils and Construction: Volume 2 Series (DECC, 2008)
- Managing Urban Stormwater: Source Control (EPA 1998)
- Managing Urban Stormwater: Treatment Techniques (EPA 1998)

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Groundwater

- State Groundwater Policy Framework Document (DLWC 1997)
- The NSW State Groundwater Quality Protection Policy (DLWC 1998)
- (Draft) NSW State Groundwater Quantity Management Policy
- NSW State Groundwater Dependent Ecosystems Policy (DLWC, 2002)
- National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ & ANZECC, 1995)

Waste

- Guideline for the Use and Disposal of Biosolids Products (NSW EPA 1997)
- Environmental Guidelines: Solid Waste Landfills (NSW EPA 1996)
- Draft Environmental Guidelines - Industrial Waste Landfilling (April 1998)
- Waste Classification Guidelines Part 1: Classifying Waste, April 2008.
- NSW Waste Avoidance and Resource Recovery Strategy 2007

Department of Environment & Climate Change NSW

Attachment C
Environmental Assessment Guidelines
Flora And Fauna

Introduction

The *Environmental Planning and Assessment Act (1979)* (*EP&A Act*) requires that proponents of a development/activity and the Consent/Determining Authorities adequately assess the impact of a development or activity in any Environmental Impact Assessment (EIA) documents. These EIA documents include:

- Statement of Environmental Effects (SoEE), or
- Review of Environmental Factors (REF), or
- Environmental Impact Statement (EIS).

These are introductory, generic specifications of the Department of Environment and Climate Change (DECC) for an adequate assessment of the impacts of a development proposal on native flora and fauna (ie including protected and threatened species). However, DECC recognises that the scale and complexity of the project will to some extent, dictate the level of information that is required to address the questions posed below. Consequently, flora and fauna assessments need to be tailored to suit the proposal. For example, a development which is proposed on land which has already been totally (or substantially) cleared should address the issues raised below but the amount of work required to address these issues may be substantially less than if the area comprised undisturbed bushland and, therefore, of more significant wildlife habitat value. A preliminary assessment, including a desktop investigation and a preliminary site inspection, may indicate the need for a detailed survey of the site.

Aboriginal cultural heritage and archaeological sites may still be present on substantially disturbed areas and appropriate assessment of these is required. (Please refer to separate Cultural Heritage Assessment Guidelines included.)

It is up to the proponent (and later the consent and/or determining authorities after appropriate consultation) to determine the detail and comprehensiveness of assessment required to form legally defensible conclusions regarding the impact of the proposal. The scale and intensity of the proposed development should dictate the detail of investigation.

It is important that all conclusions are supported by adequate data and that these data are clearly presented in EIA documentation.

The DECC will consider the following issues when reviewing an EIA document:

1. **Concerns** - What are the DEC's concerns regarding the conservation of natural and cultural heritage in accordance with the relevant legislation? Is the proposal likely to affect natural and cultural heritage? How?
2. **Provision of Information** - Is adequate information provided for a valid assessment of the impacts?
3. **Validity of Conclusions** - Has the proponent arrived at valid conclusions as a result of the assessment of impacts?
4. **Recommended Conditions to Consent** - Should Consent or Approval be granted, what conditions (if any) are required to ensure that the project is developed, and thereafter managed in accordance with natural and cultural heritage conservation and the provisions of legislation administered by the DEC?

Thus the EIA document should fully describe the existing environment including flora and fauna, so that future impacts can be properly assessed and then reviewed (eg during the public participation phase).

Department of Environment & Climate Change NSW

FLORA

Background

The Australian flora comprises many endemic taxa and is therefore unique in the world.

The DECC is concerned at the extent to which vegetation has been cleared and otherwise modified in Western NSW. This high level of modification has been highlighted in the National State of the Environment Reports (1996 and 2001). Evidence strongly suggests that many plant species and communities are threatened with extinction.

Although the proposed site may be disturbed by various landuses, any remnants of native vegetation are of significant natural heritage value, including riparian and wetland areas. The area of vegetation and habitat at the proposed site may provide an area of high biological diversity, high conservation value or may not be well represented or protected elsewhere. It may also act as a corridor or migratory route for wildlife, drought refuge habitat or have other important values.

The NSW community places a high value on those areas of native vegetation that remain. The DECC is committed to the protection, appropriate management, and where necessary, rehabilitation of native vegetation. For these reasons, the DECC considers that careful planning should precede any development that involves further vegetation clearance or other significant impact within areas of remnant vegetation.

Report Requirements

The EIA documentation should include a report on the flora that includes the following:

- detailed location map and identification of the area surveyed (including the location of photographs, transects, areas of significance etc),
- at least one of the following: a land satellite image, vegetation communities map, aerial photograph, or a remnant vegetation map,
- a complete plant list (including scientific names of those plants) of all tree, shrub, ground cover and aquatic species, categorised according to country of origin (ie., native *vs* exotic),
- a detailed description of vegetation structure (in terms of a scientifically accepted classification system) and spatial distribution (i.e. plant densities and patterning) on the site, including a vegetation map,
- describe the condition and integrity of the vegetation including a description of any past disturbance,
- an account of the likely original vegetation communities (pre-, or at early settlement), and an assessment of the likely regional distribution of the original communities,
- an assessment of whether the plant communities are adequately represented in conservation reserves or otherwise protected,
- an account of the hydrology of the area and how this relates to the dynamics of the vegetation communities,
- a list of **known** and **likely** threatened species as listed under Schedules 1 & 2 (*Threatened Species Conservation Act 1995*) which might occur at the site. The DECC database needs to be accessed and the likelihood of occurrence of threatened flora species determined,
- an assessment of the impacts of the proposal on flora, on-site and off-site (eg siltation, water availability or drainage changes) and measures to mitigate these impacts,
- an assessment of the significance of the impact of the development at both the site and at the regional scale,
- a detailed rehabilitation/management plan including a list of the plant species to be used during rehabilitation (if required),

- detail methodologies used and a list of the reference literature cited, and
- any other issues that may be considered relevant.

The above guidelines will provide some of the information necessary to conduct an Assessment of Significance required for threatened flora and fauna under Section 5a of the *EP&A Act*, should threatened species be likely or known to occur in the locality of the subject development proposal. Similarly, it will provide some of the information required if an application is found to be necessary under the *Native Vegetation Conservation Act (1997)*. However the above relates mostly to the specific environmental assessment processes under the *EP&A Act* and does not constitute an Assessment of Significance.

FAUNA

Background

Evidence suggests that Western NSW has suffered the highest extinction rate for indigenous mammals of any region in the world. Many other vertebrate species are currently threatened. One of the major reasons for such a high level of extinction has been the destruction of habitat. Native vegetation including wetland, riparian and remnant environments, are very significant areas of fauna habitat. Therefore any development in such areas should fully consider the impact on fauna and its habitat.

Report Requirements

The EIA document should include a report on the fauna (including protected and threatened species) that includes the following:

- detailed location map and identification of the area surveyed (including the location of photographs, transects, areas of significance etc),
- at least one of the following: a land satellite image, vegetation communities map, aerial photograph, or a remnant vegetation map,
- a complete list of all **known** and **likely** terrestrial and aquatic species (eg birds, mammals, reptiles and amphibians including scientific names). It is suggested that invertebrates also be considered as they form part of the food chain for many fauna species,
- those species which are protected, threatened or listed under any international agreements, as well as introduced species,
- those species known or likely to breed in the area,
- any species which have specific habitat requirements found within the project area,
- those species or populations which may be near the limit of their geographic range or are a disjunct/isolated population,
- assessment of the importance or otherwise of the location as a corridor, migratory route or drought refuge, in relation to other remnant vegetation, riparian and wetland areas or habitat in the region,
- assessment of the impacts of the proposal on all fauna and its habitat, at both the site and at the regional scale,
- identification of any mitigation measures proposed to limit or ameliorate the impact of the proposal,
- detailed methodologies used and a list of the reference literature cited, and,
- any other issues that may be considered relevant.

SEPP No. 44 - Koala Habitat Protection

The Shire may be listed in Schedule 1 of SEPP No. 44 - Koala Habitat Protection. If so, the requirements of the SEPP regarding Koala habitat protection should be considered by the proponents.

THREATENED SPECIES OF FAUNA AND FLORA

BACKGROUND

Apart from the need to consider the impact on protected species, the proponent will need to address the requirements of legislation that currently governs threatened species protection and impact assessment in NSW.

The *Threatened Species Conservation Act (1995)* (*TSC Act*) protects all threatened flora and fauna native to NSW (excluding fish and marine plants). The proponent will need to consider the provisions of this Act.

The *TSC Act* contains lists of threatened species, which are divided into a number of categories – those presumed extinct, endangered species, critically endangered species and vulnerable species. It also contains lists of endangered populations, endangered ecological communities, critically endangered ecological communities and vulnerable ecological communities. This Act also allows for the declaration of critical habitat, key threatening processes and the preparation of both Recovery Plans and Threat Abatement Plans. These listings and plans must be considered as part of the EIA process.

If an activity or development is proposed in a locality likely or known to be occupied by a threatened species, population, ecological community or critical habitat, any potential impact to that threatened species must be taken into account during the development assessment process. However under the *EP&A Act*, some types of development are not required to go through approval processes. Please note that a licence may still be required under the *TSC Act* if such a development/activity is likely to harm a threatened species, population or ecological community. Guidelines for the Assessment of Significance are available from DEC.

ASSESSMENT OF SIGNIFICANCE & SPECIES IMPACT STATEMENTS

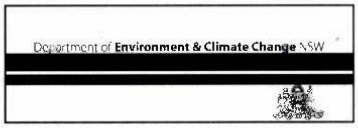
If during the flora or fauna assessment or survey, threatened species are **found** or are **likely** to occur in the area, the proponents must undertake an Assessment of Significance as outlined in section 5A of the *EP&A Act* to determine whether or not the development would be likely to have a significant impact upon threatened species.

The Assessment of Significance is a statutory mechanism which allows decision makers to assess whether a proposed development or activity is likely to have a significant effect on threatened species, populations or ecological communities, or their habitats.

The Assessment of Significance is contained within section 5A of the *EP&A Act* and consists of seven factors that need to be addressed for informed decisions to be made regarding the effect of a proposed development or activity on threatened species, populations or ecological communities, or their habitats. Guidelines for the Assessment of Significance are available from DEC.

Following threatened species assessment via the Assessment of Significance, it may be necessary to prepare a Species Impact Statement (SIS). The proponent will need to prepare a SIS in the following circumstances:

- If (after having addressed Section 5A) the flora/fauna assessment concludes that there is likely to be a significant impact to threatened species, or
- The proposed development is likely to affect critical habitat declared under the TSC Act.



If a SIS is required, the proponent (not the consultant) must write to the Director-General of DECC for any formal requirements for the SIS that he might deem appropriate. The SIS must then be prepared in accordance with these requirements and provided to the Director-General. In some instances the Minister for the Environment will also need to be consulted for approval. An information circular ('Species Impact Statements') is available from the DECC for detailed information about this assessment.

Methods to reduce the impact on the protected and threatened species should be considered fully, and are considered an integral requirement within any SIS document.

The DECC advises that conducting an Assessment of Significance or an SIS according to the provisions of the *EP&A Act* and the *TSC Act* is a complex task and should be undertaken by suitably qualified person(s).

AVAILABLE DATA

The DECC can supply, at the standard cost, fauna prediction data and recorded fauna sightings data (Wildlife Atlas of NSW) to help in the investigation. The following information on site recordings of Flora and Fauna is available from DEC:

- Atlas of NSW Wildlife (1995). A DECC database containing records of fauna and flora, including threatened species. Computer print-outs for all records on a 1:100,000 mapsheet are available (at cost) from the Data Exchange Officer on (02) 9585 6684. Information from the Atlas is also available at:

  http://wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas/watlas.jsp

- Flora and Fauna information is also available from the following websites:

  www.threatenedspecies.environment.nsw.gov.au

  www.bionet.nsw.gov.au

Other reference literature may be available for the subject locality/region. The proponent should explore this possibility thoroughly.

FURTHER INFORMATION

Should you wish to clarify any issues raised here or require further information please feel free to contact:

Environment and Conservation Programs
Environment Protection and Regulation Division
Department of Environment and Conservation
North West Branch
48 -52 Wingewarra St (PO Box 2111)
DUBBO NSW 2830

PH (02) 6883 5330
FAX (02) 6884 9382

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Department of Environment & Climate Change NSW

Attachment D
EIS Requirements For The Assessment Of Aboriginal Cultural Heritage Issues

Legislative framework and implications for timing

A Development Application is integrated in respect of the *National Parks and Wildlife Act 1974* (NPW Act) where Consent, pursuant to Section 90 (2) (commonly referred to as a Section 90 Consent) is sought or required for the proposed development to proceed. In these circumstances, the granting (or otherwise) of the Section 90 Consent, together with the conditions of any consent will form part of the General Terms of Approval issued by the DEC.

A Section 90 Consent is required in order to destroy, deface or damage or to cause or permit the destruction or defacement of or damage to an Aboriginal object or an Aboriginal place (Section 90 (1) of the NPW Act). While the NPW Act provides for the destruction of sites this should always be considered as a last option and must therefore be well supported.

A Permit, pursuant to Section 87 (1) of the NPW Act (commonly referred to as Section 87 Permits), is required to:

- disturb or excavate any land, or cause any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object; and/or
- disturb or move an Aboriginal object.

(cf: Section 86 and 87 of the NPW Act)

Section 87 Permits are not integrated under the *Environmental Planning and Assessment Act 1979* but are often required in order to fully investigate the nature and extent of Aboriginal objects for which a Section 90 Consent may be sought. Accordingly a Section 87 Permit will often be required well in advance of the submission of a Development Application.

A Section 87 Permit or Section 90 Consent is usually subject to special conditions that require impact minimisation and salvage. Salvage is a form of mitigation by documenting in detail what is to be lost by the impact and may involve archaeological excavation and analysis, or other types of recovery and study.

Section 87 applications should be accompanied by a care and control application pursuant to Section 85A of the NPW Act.

EIS Requirements

The EIS should comprehensively assess Aboriginal Heritage issues where any ground disturbance is anticipated. This assessment must be consistent with the attached document titled "*Aboriginal Cultural Heritage and the Integrated Development Assessment Process – Information for Applicants*" ("Information for Applicants") dated 20 February 2001 (Attachment D) and should include (but not limited to):

- Document that the DEC's Aboriginal Heritage Information Management System (AHIMS) has been accessed in the initial planning stage to determine if there are any already known sites, which will require protection. It should be noted that the AHIMS database is not a conclusive indicator that sites exist in the development area. Information from the AHIMS database may be sourced through the AHIMS Registrar by contacting the Cultural Heritage Division of DECC on 02 95856471.

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- Demonstrate that the Aboriginal community (which may include Local Aboriginal Land Councils, Native Title Groups and Elders Groups) have been consulted and have been advised about anticipated impact to sites relevant to their heritage. There also may be knowledge in the community about sites within the development area, particularly those related to oral traditions. The process of Aboriginal consultation must be maintained throughout the entire assessment procedure. The DECC *'Interim Community Consultation Requirements for Applicants'* included within Attachment D outlines the requirements for consultation in greater detail.

- An archaeological survey and assessment must be undertaken by an archaeologist in accordance with DECC guidelines contained in the "*Aboriginal Cultural Heritage: Standards and Guidelines*" that has been made widely available to archaeologists undertaking this work. This archaeological assessment must be included in the EIS in final form. DECC requires an additional copy of the final archaeological assessment.
  When undertaking this assessment the significance of the sites must also be assessed. The archaeological survey must determine the sites where disturbance can be avoided. Note that damage or destruction of some sites may be unacceptable or that special safeguards may be required.

  Test excavations are often needed to verify the location of aboriginal sites. Such excavations need to be undertaken prior to the lodgement of Development Application and in accordance with a Section 87 Permit.

- Before lodging the Development Application, Section 91 cards must be referred directly to the DECC and must **not** be submitted with the EIS.

Effect of not fully documenting Aboriginal objects and Aboriginal places in the EIS

Aboriginal sites are widespread throughout New South Wales with considerable regional variation in the types of sites, their age, their contents and how they are situated on the landscape. Under the NPW Act it is an offence to knowingly destroy, deface or damage an Aboriginal place or object without a statutory consent.

Any Section 90 Consent that may be granted based on the EIS will be limited to the matters documented in the EIS. Accordingly, Section 90 Consents are specific.

Therefore, in the event that additional Aboriginal objects are identified during construction, that construction must cease immediately and the nature and extent of the objects assessed, as described above. Accordingly, to avoid delays during construction and the possibility that the development may need to be amended if a (additional) Section 90 Consent is not granted a comprehensive assessment should be undertaken.

Department of Environment & Climate Change NSW

THE ABORIGINAL SITES REGISTER OF NSW
GENERAL INFORMATION

The Department of Environment and Conservation (DEC) maintains the Aboriginal Heritage Information Management System (formerly the Aboriginal Sites Register of NSW). This database includes a computer database and site recording cards for all recorded Aboriginal sites in NSW, in addition to a database index of archaeological reports and a library of these reports. Information from the database may be made available for a variety of uses.

What information is available?

Information relating to recorded Aboriginal sites in a particular area may be made available upon request. The information is generally available in the form of a standard report from the Register database. This report lists all recorded sites within and/or surrounding the area of interest, with each record including the site identifying number, site type, site location and Australian Map Grid co-ordinates, date of recording and the name of the recorder of the site.

If the area of interest is particularly large (e.g., a river catchment), a Data Licence Agreement may be required. This agreement is a legal contract document between the Director-General of the DECC and a named client, and is designed to ensure that any data supplied under the agreement is used appropriately.

In some cases, written support from the relevant Local Aboriginal Land Council may be required before information can be provided from the Register.

How is the data provided?

Site information will generally be provided as a standard computer print out, however, digital computer formats on disk may be available for specific purposes.

Is there a charge for data?

The cost for supply of a standard report is $30 per search area. An urgent database search may be conducted for $60. More complex reports may incur an additional charge.

In particular circumstances there may be no charge for a report (e.g. for Aboriginal Land Councils, research purposes etc.). The waiving of any charge requires discussion with the Aboriginal Sites Registrar.

There is no charge imposed for a Data Licence Agreement, however, any data supplied under a Licence Agreement will generally be charged at the current "cost of transfer".

Are there any limitations in the data?

It is essential to note that a report from the Register does not represent a comprehensive list of all Aboriginal sites in a specified area. A report lists recorded sites only. In any given area there may be a number of undiscovered and/or unrecorded sites. As a result of this limitation, and the fact that all Aboriginal sites are protected under NSW legislation, the DECC may recommend that a survey for Aboriginal sites is conducted where development is proposed.

Locational details are recorded as grid references. It is important to note that there *may* be errors in these recordings. If accurate site locations are required it may be necessary to confirm the locations on the ground.

If the information provided is to be used for ongoing purposes, it is recommended that regular updates are obtained as new records are continually being added to the database.

How to obtain Aboriginal sites data

To obtain information about recorded Aboriginal sites, a written request should be forwarded to the Aboriginal Sites Registrar (a request form is available if required). All requests must include;

- Company/organisation name (if applicable)

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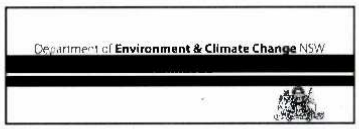

- Contact name, phone number and address details
- Purpose for which the information is required
- Copy of a topographic map with the area of interest clearly marked
- A cheque for $30 per search area, made out to the DECC (unless other arrangements have been made with the Registrar).

Applications should be forwarded to:

The Aboriginal Sites Registrar
Cultural Heritage Division
Department of Environment and Conservation
PO Box 1967
Hurstville, NSW 2220. or fax (02) 9585 6466

Further information

For further information about the Aboriginal Sites Register, please contact the Aboriginal Sites Registrar (02 9585 6471, fax 02 9585 6466).

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11.3 APPENDIX 3 – ABORIGINAL CULTURAL HERITAGE

Department of
Environment
and Climate Change (NSW)

Your reference : Gill Gill Creek Rd
Our reference : AHIMS #26645

SMK Consultants
P O Box 774
Moree NSW 2400

Friday, 24 July 2009

Attention: Richard Clowes

Dear Sir or Madam:

Re: AHIMS Search for the following area at Gill Gill Creek Rd;Lots 52 & 53 Dp 751093

I am writing in response to your recent inquiry in respect to Aboriginal objects and Aboriginal places registered with the NSW Department of Environment and Climate Change (DECC) at the above location.

A search of the DECC Aboriginal Heritage Information Management System (AHIMS) has shown that *0* Aboriginal objects and Aboriginal places are recorded in or near the above location. Please refer to the attached report for details.

The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.

The following qualifications apply to an AHIMS search:

- AHIMS only includes information on Aboriginal objects and Aboriginal places that have been provided to DECC;
- Large areas of New South Wales have not been the subject of systematic survey or recording of Aboriginal history. These areas may contain Aboriginal objects and other heritage values which are not recorded on AHIMS;
- Recordings are provided from a variety of sources and may be variable in their accuracy. When an AHIMS search identifies Aboriginal objects in or near the area it is recommended that the exact location of the Aboriginal object be determined by re-location on the ground; and
- The criteria used to search AHIMS are derived from the information provided by the client and DECC assumes that this information is accurate.

All Aboriginal places and Aboriginal objects are protected under the *National Parks and Wildlife Act 1974* (NPW Act) and it is an offence to destroy, damage or deface them without the prior consent of the DECC Director-General. An Aboriginal object is considered to be known if:

- It is registered on AHIMS;
- It is known to the Aboriginal community; or
- It is located during an investigation of the area conducted for a development application.

PO Box 1967 Hurstville NSW 2220
43 Bridge Street Hurstville NSW 2220
Telephone (02) 9585 6345
Facsimile (02) 9585 6094
ABN 30 841 387 271
ahims@environment.nsw.gov.au
www.environment.nsw.gov.au

If you considering undertaking a development activity in the area subject to the AHIMS search, DECC would recommend that an Aboriginal Heritage Assessment be undertaken. You should consult with the relevant consent authority to determine the necessary assessment to accompany your development application.

Yours Sincerely

Freeburn, Shannon
Administrator
Information Systems & Assessment Section
Culture & Heritage Division
Phone: 02 9585 6471
Fax: 02 9585 6094

List of Sites (List - Short)

Gill Gill Creek Rd

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 234568, Easting to = 239865, Northing From = 6743551, Northing to = 6746796, Requestor like 5803%, Service ID = 26645, Feature Search Type = AHIMS Features

Site ID	Site Name	Datum	Zone	Easting	Northing	Context	Site Features	Site Types (recorded prior to June 2001)	Recording (Primary)	Reports (Catalogue Number)	State Arch. Box No (for office use only)

No Site Recorded

Number of Sites : 0

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STATEMENT OF ABORIGINAL SIGNIFICANCE

FOR JOHNSTONE'S READYMIX CONCRETE "RUNNYMEDE" PALLAMALLAWA

Bitter quandong (*Santalum murrayanum)*

SUZANNE R HUDSON CONSULTING
15 Judith Street, Armidale 2350
Phone: 02 6771 4877
Mobile: 0412 649 580
email: sue.hud@bigpond.net.au

OCTOBER 2009

SITE ASSESSMENT

On Friday 23rd October 2009, an on-site assessment was made at Johnstone's Ready Mix Concrete quarry site on Gil-Gil Creek Road, Pallamallawa for Aboriginal objects, sites or places of significance.

Those present included:

Sue Hudson – Consulting Archaeologist, Armidale
Peter Taylor – SMK Consultants, Moree (on behalf of the owners)
Charlie Groves – Aboriginal Site Officer, Land Council, Moree
Liza Duncan – Site Officer, Ashford
Vicky Duncan – Site Officer, Inverell

The site being surveyed is located east of the present quarry and has been subjected to farming and grazing practices in the past. The area is covered with basalt "floaters" and is no longer suitable to farming, as these floaters have been brought to the surface by ploughing the ground. The area is situated on top of a hill and is surrounded by regrowth of native trees and shrubs. The photograph below shows a typical collection of basalt rocks.

Basalt floaters lying on the ground surface

Two transects were covered on foot with the group spread out between 5 and 10 metres apart and the ground was searched for any stone material that may have been brought in by Aboriginal people in the past. Each transect was walked from the edge of the present quarry to the eastern end of the proposed development area (west to east and return).

Transect 1 facing east from quarry

Bitter quandong tree at the end of transect 1
(Photo shows Vicky Duncan, Liza Duncan
and Peter Taylor eating fruit)

Transect 1 facing west to quarry

P

Transect 2 facing east to tree line at eastern edge of development area

RESULTS

It is considered by the archaeologist that there are no signs of Aboriginal occupation at this site. The hilltop where the development is to proceed contains no water to sustain a living site but would have been part of the hunter-gatherer activities undertaken by the traditional people using the area.

CONCLUSION

No Aboriginal objects, sites or places of significance were found during survey of this area and it is the opinion of the site officers present and the archaeologist that the development can proceed. It is recommended that the Bitter quandong tree at the edge of the proposed development be preserved, as Aboriginal people may which to pick the fruit during spring.

11.4 APPENDIX 4 – SEVEN PART ASSESSMENT

The following provides a seven part assessment of threatened species, populations or ecological communities, or their habitats as required under section 5A of the Environmental Planning and Assessment Act 1979.

Scientific Name	Common Name	Comments	7-Parameter Test?
		Threatened Species listed on the NSW NPWS Atlas of NSW Wildlife	
Flora			
None present	N/A	None listed	No
Fauna			
Aves			
Pyrrholaemus sagittatus	Speckled Warbler	**Range:** SE Aust, on and inland from Divide **Habitat:** Drier woodlands with tussocks, branches, rocks; in Qld, mulga, brigalow, vine scrubs **Breeding:** Aug-Jan to produce 3-4 chocolate-red eggs **Nest:** Domed of grass, bark-shreds, moss, lined with fur; on ground, low shrub, tree-trunk **Status** Vulnerable	Yes
Calyptorhynchus lathami	Glossy Black-Cockatoo	**Range:** NE Vic, inland NSW and Qld in hilly, rocky ridge country. **Habitat:** She oaks (mostly *Allocasuarinas*) in forests, woodlands, timbered watercourses. Also in Eucalypts, native Cypress (*Callitris*), Brigalow (*Acacia*) scrub. **Preferred Food:** Almost exclusively on seeds extracted from the wooden cones of casuarinas **Breeding:** March-August producing one large, white, oval egg. **Status:** Vulnerable	Yes
Glossopsitta pusilla	Little Lorikeet	**Range:** Eastern Australia from north of Cairns around east coast to Adelaide including the western slopes of the Great Divide **Habitat:** Dry Open Eucalypt Forests And woodlands **Preferred food:** Nectar and pollen in the tree canopy and fruits **Breeding:** Three to five eggs from May to September **Nest:** In hollows in living trees, mostly smooth barked eucalypts **Status:** Vulnerable	Yes

Scientific Name	Common Name	Comments	7-Parameter Test?
Neophema pulchella	Turquoise Parrot	**Range:** Slopes, lowlands of Divide in SE Australia **Habitat:** Open Grassy Woodland, with dead trees, near permanent water and forested hills, coastal heaths, pastures with exotic grasses, weeds, roadsides, orchards. **Preferred Food:** Seeds of grasses, herbaceous plants and shrubs, with a reliable source of water. Flowers, nectar, fruits, leaves and scale insects may also be eaten. **Breeding:** Aug-Dec and Apr-May to produce 4-5 white, round eggs **Nest:** In dead stump or sprout of eucalypt **Status:** Vulnerable	Yes
Tyto novaehollandiae	Masked Owl	**Range:** From the coast where it is most abundant to the western plains. Overall records for this species fall within approximately 90% of NSW **Habitat:** In Dry Eucalypt Forests and Woodlands from sea level to 1100 m. **Nest:** Roosts and breeds in moist Eucalypt forested gullies, using large tree hollows or sometimes caves for nesting. **Status:** Vulnerable	Yes
Mammalia			
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	**Range:** Eastern & northern Aust. **Habitat:** Wooded habitats of Mulga, Bimble Box – Pine communities, Northern floodplains. **Preferred Food:** Airborne insects above canopy and sometimes closer to ground. **Breeding:** Normally one per year **Status:** Vulnerable	No. Habitat not present.
Petaurus norfolcensis	Squirrel Glider	**Range:** Eastern Australia, from northern QLD to western VIC. **Habitat:** mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range and Blackbutt-Bloodwood forest with heath understorey in coastal areas. **Preferred Food:** Acacia gum, Eucalypt sap, nectar, honeydew and manna, with invertebrates and pollen providing protein. **Status:** Vulnerable	No. Habitat not present.

Scientific Name	Common Name	Comments	7-Parameter Test?
Phascolarctos cinereus	Koala	**Range:** Fragmented distribution throughout eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia. **Habitat:** Eucalypt woodlands and forests. **Preferred Food:** Foliage of more than 70 Eucalypt species and 30 Non-Eucalypt species. **Breeding:** Females breed at two years of age and produce one young per year. **Status:** Vulnerable	No. Habitat not present.
Chalinolobus picatus	Little Pied Bat	**Range:** NSW, Qld **Habitat:** Caves, mines, tunnels **Breeding:** Normally one per year **Status:** Vulnerable	No. Habitat not present.

Assessment

The revised test is referred to as an assessment of significance in the form of a Seven Parameter Test. The following presents the seven parameters:

a) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction:

Comment:

No. Habitat for the identified species listed above will not be impacted by this proposal.

b) in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction:

Comment:

No endangered populations have been declared for this site.

c) in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

Comment:

No endangered or critically endangered ecological communities are present on this site.

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

Comment:

No endangered or critically endangered ecological communities are present on this site.

d) in relation to the habitat of a threatened species, population or ecological community:

(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and

Comment:

No habitat will be removed as the quarry expansion will take place on previously cleared and farmed land.

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

Comment:

No.

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality:

Comment:

No habitat is to be removed to facilitate the quarry expansion which will be undertaken on previously cleared and farmed land.

e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly):

Comment:

No critical habitat has been declared for this site.

f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan:

Comment:

As the quarry expansion is to take place on previously cleared land which has been used for cultivation and more recently grazing the proposal is not considered to be inconsistent with recovery or threat abatement plans for the identified species.

g) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process:

Comment:

No.

Summary

The proposed quarry expansion complies with the requirements of the LEP, and is lawful use of the land.

The above list indicates species that may use the area, however, in many cases, the site in question does not include suitable habitat for the species.

Although searches of relevant data bases revealed that there are nine vulnerable species possibly found on or within the vicinity of the subject site, a Seven Parameter Test of Significance resulted in a decision that there was no need to undertake any further assessment such as a Species Impact Statement. This decision was based on the fact that the proposed quarry expansion would occur on previously cleared and farmed land and will have no impact on the surrounding native vegetation.

11.5 APPENDIX 5 – SEPP 55

SEPP 55

Contamination Assessment Report

for a

Proposed Quarry Expansion

"Runnymede"

Lots 52 & 53 DP 751093

Parish of Bullala
County of Burnett

Prepared for: Johnstone Ready Mixed Concrete P/L
C/- PO Box 774
Moree, NSW 2400

Prepared by: SMK Consultants
Frome Street
Moree, NSW 2400

April 2010

Executive Summary

SMK Consultants is acting for Johnstone Ready Mixed Concrete Pty Ltd in lodging a Development Application for consent to expand the production of a quarry under the provisions of the Environmental Planning and Assessment Act 1979 (the Act) and Yallaroi Local Environmental Plan 1991 (the LEP). The proposed development is Designated and Integrated Development and Gwydir Shire Council (the Council) is the Consent Authority under the Act.

The property consists of 650 hectares containing a grazing enterprise and a hard rock quarry. Existing land use patterns on adjoining farms comprise grazing activities.

The proposed development area was inspected for potential contamination from agricultural chemicals, oil-based fuels and waste disposal areas. Various herbicides have been utilised for weed control along fence lines and some pesticides have been used for veterinary purposes. Some modern herbicides have residual tendencies for a period of approximately 2 years or more. These herbicides have been used on "Runnymede" as part of the weed control program.

The assessment of the property revealed the proposed development site is not located near any fence lines and the potential for chemical residue from weed control activity is unlikely. The cattle on the farm have received regular applications of veterinary chemicals for many years. The net result of this is predicted to be potentially dispersed pockets of chemical at various stages of degradation. This chemical would not have penetrated to any depth and would not have contaminated the rock that is to be quarried. The veterinary chemical residue, if present, would be at a very low level and considered as compatible with the proposed use of this land for extractive industry purposes. No soil sampling was undertaken to test the potentially contaminated areas. The intention of the grazing operation is to continue using chemicals for weed control. The site of the quarry would be remediated once the resource was exhausted by contouring and revegetation and then returned to grazing.

The agricultural use on the property will remain and it is considered unlikely to change in the future. The use of residual herbicides and veterinary chemicals is considered part of standard farming practises and therefore the area is considered normal in regard to contamination from previous land use. There are no point contamination areas. The land is therefore considered acceptable for the proposed development in regard to SEPP 55 issues.

Scope of Work

This report has been prepared on behalf of the applicant as part of a development application to the Gwydir Shire Council. The assessment is required to determine whether a proposed extractive industry on the property is acceptable in regard to SEPP-55 Contaminated Land legislation. The proposed extractive industry is an expansion of an existing quarry and the land will continue to be used for agricultural purposes following remediation and revegetation once the extractive resource is exhausted. A locality plan and a site plan are attached to the main report (SoEE).

The assessment involves the investigation of the land included in the development application to determine whether contaminated land is present and if so, whether this land requires remediation or is acceptable when considering the intended land use. The proposed use is considered to be for an extractive industry and the land will be returned to agricultural purposes once quarrying ceases. Therefore threshold levels and potential risk to this level of development were set as the standard for this assessment.

The proposal for the investigation was to initially carry out a 'Preliminary Site Investigation' to determine if any contamination existed. If contamination was found to exist at a level that was considered unsuitable for the intended land use, the study should include remediation and validation of the site to ensure the site is acceptable before Council consent is issued for the development application.

The report presents the results and recommendations of the investigations.

Site Details

The study area is located about 17 kilometres northeast of Pallamallawa on Gil Gil Creek Road. The land is zoned No.1 (a) – (General Rural) and is currently utilised for grazing and an extractive industry. The proposed expansion of the extractive industry is to increase the production of basalt to meet the demands for road building and construction products.

Plan 2 (SoEE) presents a site plan of the proposal.

Land Use

The property is used to graze cattle and contains a quarry that provided up to 120,000 tonnes of roadbase and blue metal per year. Once the extractive resource has been exhausted the disturbed area would cover around 35 hectares, the grazing continues on the remaining 615 hectares. No areas of native vegetation have been retained on the development site.

The weed control program uses agricultural herbicides along fence lines and veterinary chemicals are used in animal husbandry. Numerous chemical constituents are present in the range of herbicides used for weed control. Some are considered to be "knock down" biodegradable herbicides. Others are applied as a residual chemical for in-crop and fallow weed control that is generally activated by rainfall or moisture. The bio-degradation rate of these chemicals varies considerably.

Site Condition and Adjoining Land Use

The majority of the development area and surrounding environment has been used for grazing and forestry operations. The forestry land has been converted to a national park, Sections of "Runnymede" have also been logged in the past. Land further to the west is used for cropping.

The half-life of the associated chemicals varies greatly. Some agricultural chemicals tend to decay rapidly once exposed to sunlight, rainfall and soil micro-organisms. These types of chemicals undergo testing and assessment prior to release. This is to ensure that when used in accordance with the instructions on the label, the chemical in question can be prepared and used safely, will have minimum impact to the environment and will meet residue standards for the product the chemical is utilised on (NSW Agriculture 2001). Other chemicals have a strong residual capability that may not be sufficient to continue their action on the target pest, but remain at levels that can cause long term potential for bioaccumulation in the food chain.

On this basis, the grazed areas were considered to have some potential for contamination from the veterinary chemicals and the herbicides used along fence lines. Limited data is available or has been prepared for soil threshold levels for many of the agricultural chemicals used today.

Fuel and oil for tractor and truck use may have been spilled around the machinery shed and workshop on occasions. There were no visible patches of bare ground or 'burnt' patches of grass (sometimes an indication of contamination) around these areas.

Sampling and Analysis Plan

The object of the investigation was to determine whether contaminated areas existed on the property and whether these sites may impact on the proposed or future land use. The areas of the property used for grazing were considered to have a "dispersed" potential for contamination because of the long-term application of veterinary chemicals and herbicide used to maintain fence lines. No rubbish tips or areas of chemical or fuel spill were noted to be of concern on the property.

In accordance with EPA Guidelines, a Preliminary Site Investigation was undertaken. The survey indicated that there was no requirement for soil testing, because land use on the site would not alter as a result of the proposed development. If the land use is altered, to market gardening for example, or re-zoned to Rural Residential, a more intensive investigation of the potentially contaminated areas of the site would be required. Change of land use is considered unlikely for this area.

Results

The investigation indicated that the land utilised for grazing on the property has some potential for contamination resulting from application of various veterinary chemicals and the use of herbicides along fence lines. The contamination could be described as a dispersed contamination in that not all of the land would retain residues. A detailed soil assessment would be required to determine whether chemicals are present. The presence of these chemicals is considered normal farming practise in animal husbandry and for the control of weeds.

Discussion and Recommendations

The investigation of the site has been carried out in accordance with the requirements of SEPP 55 and Guidelines published by the Environment Protection Authority.

The investigation indicated that the property has been utilised for agriculture. Some chemicals such as veterinary chemicals and herbicides are utilised as part of normal farming practices. These chemicals are generally unstable and biodegrade. The application and possible retention of some minor residue in the soil is consistent with farm practices and the proposed continued land use of the area included in the development application.

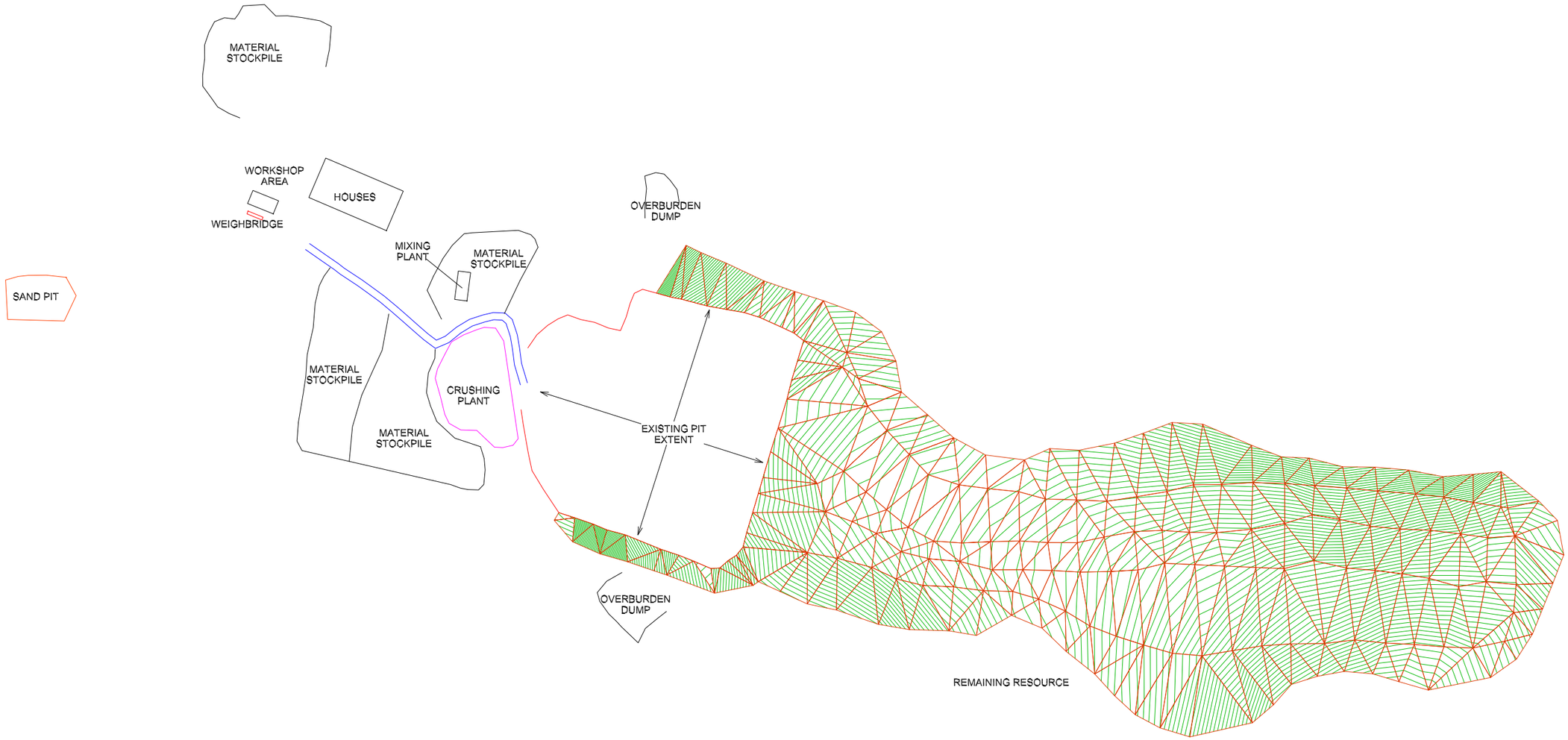
Based on this assessment, the property should be classified as acceptable for continued use as farming land and extractive industry. The homestead area has no visible signs of contamination from either spilt fuel or chemical drift.

There are no further requirements for investigation of the property.

Limitations

This report does not represent a detailed investigation of the property in regard to soil contamination or contamination of sites other than agricultural fields. The conclusions and recommendations are based on observations and advice provided by the Landowner in regard to chemicals applied to the land for current land use activities.

11.6 APPENDIX 6 - PLANS



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VERT 1 IN 5,000
DATUM : A.H.D. CONTOUR INTERVAL :

SURVEYED
DESIGNED
CHECKED

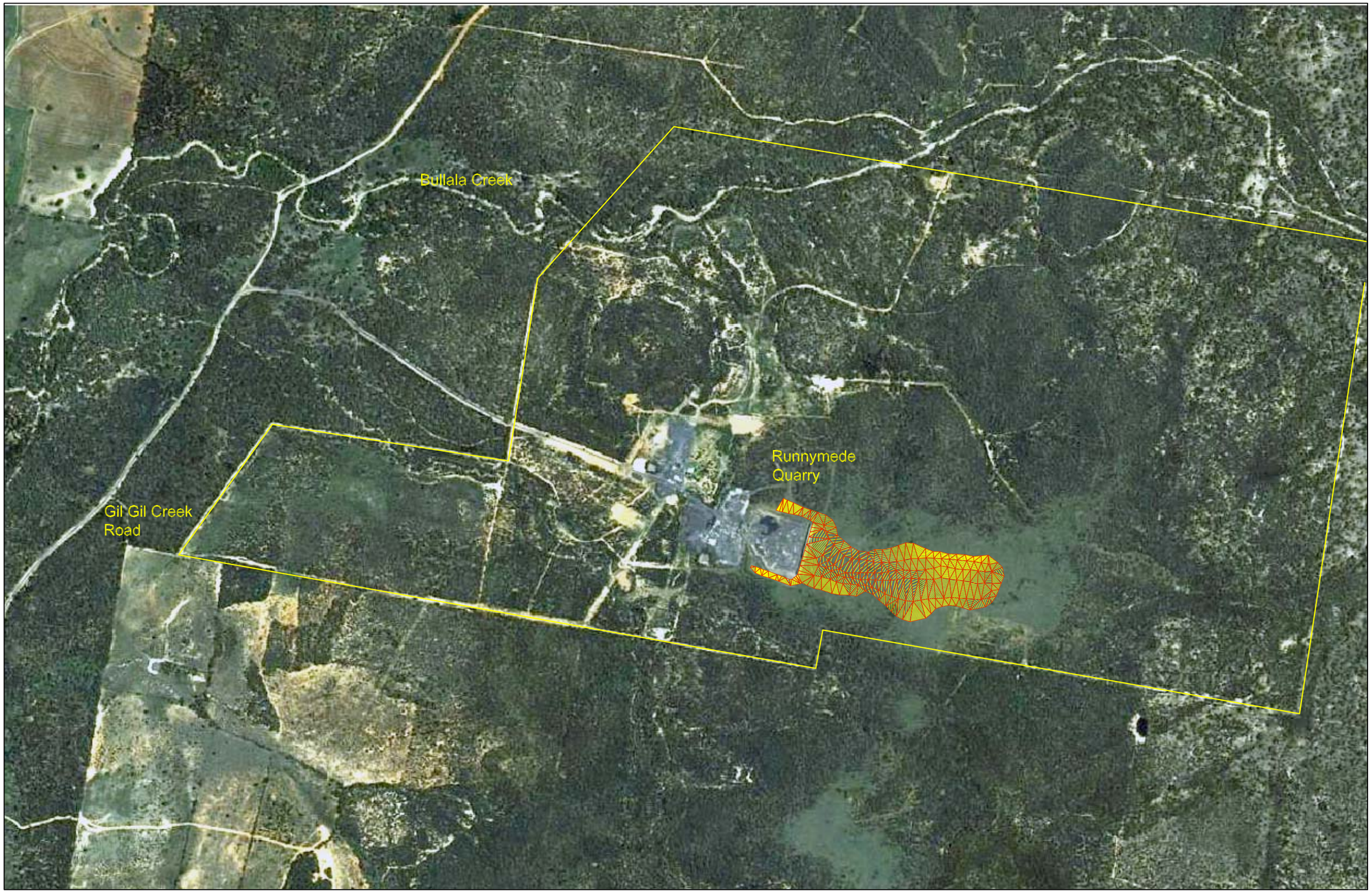
S.M.K. CONSULTANTS Pty Ltd
PO BOX 774 MOREE 2400
PHONE (02) 6752 1021

PLAN : Site Plan of Runnymede Quarry

FILE No. 09-62
PLAN No. 1
DATE JUNE 2009

SHEET No. 1
No.OF SHEETS 4

DRAWING FILE :
CALC. FILE :



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DESIGNED
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PLAN : Location of Runnymede Quarry

FILE No. 09-62
PLAN No. 2
DATE June 2009

SHEET No. 2

No.OF SHEETS 4

DRAWING FILE :
CALC. FILE :

SCALES : HORIZ 1 IN 7,000 Approx
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DATUM : A.H.D. CONTOUR INTERVAL :

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PO BOX 774 MOREE 2400
PHONE (02) 6752 1021

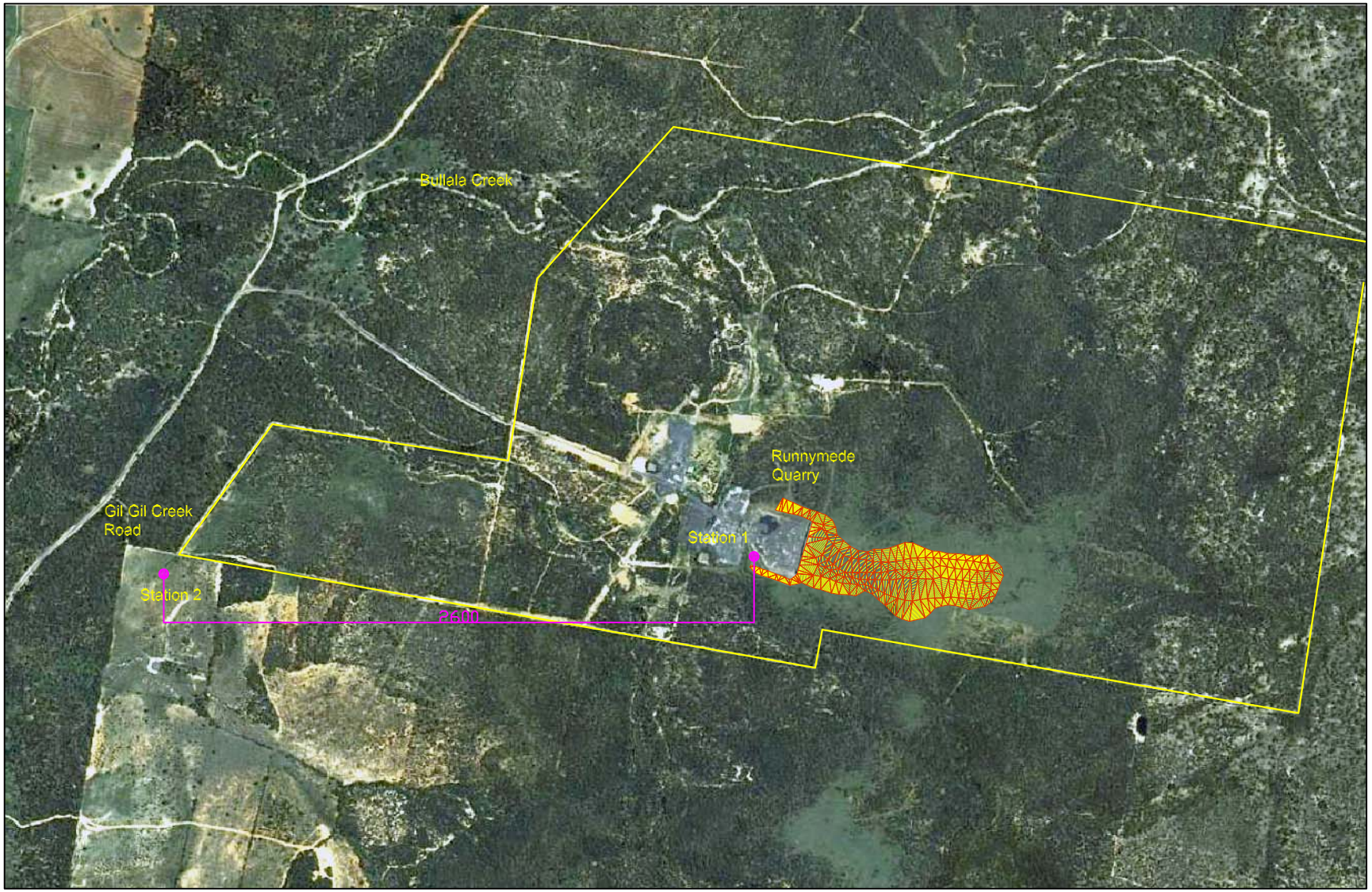
PLAN : Extent of Resource

FILE No. 09-62
PLAN No. 3
DATE June 2009

SHEET No. 3

No.OF SHEETS 4

DRAWING FILE :
CALC. FILE :



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S.M.K. CONSULTANTS Pty Ltd
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PHONE (02) 6752 1021

PLAN : Location of Noise Monitoring Stations

FILE No. 09-62
PLAN No. 2
DATE June 2009

SHEET No. 4
No.OF SHEETS 4

DRAWING FILE :
CALC. FILE :