by NSW RMS for use on the NSW public road network. All delivery vehicles are expected to comply with noise levels set by the Protection of the Environment Operations (Noise Control) Regulation 2008.

A basic calculation of road traffic noise based on 100 vehicle per hour (day) and 50 vehicles per hour (night) was modelled using the procedure detailed in the Calculation of Road Traffic Noise (CRTN - ISBN 0 11 550847 3). The modelling predicted noise levels of 59 dB(A) and 54 dB(A) for day and night time periods respectively. The traffic density used in the modelling was in excess of actual observed traffic density and this provides a conservative assessment of potential noise generated by road traffic generated by the proposal along with existing traffic levels. These results are based on all traffic movements, both light and heavy vehicles, and indicate that traffic noise levels would be below the day and night criterion at the façade of all receivers discussed above.

The results are the theoretical calculated noise levels considered applicable to the conditions and scenarios encountered for Pallamallawa roads. The calculations also assume a full line of sight (through approximately 120 degrees) and do not allow for the shielding effect of intervening structures or vegetation. As a result, the received noise levels may differ slightly from those shown above. The calculations indicate that noise levels would be within guideline levels.

15.11.5 Operating Hours and Potential Impacts

The changes to operating hours as proposed under this application would result in the potential for extended operating hours outside the standard daytime period as described under the NSW INP. The following discussion identifies the potential for changes in noise emissions and assessment of the impact on project specific noise levels.

Noise monitoring has indicated that primary crushing and loading of material within the quarry pit area does not generate any substantial noise outside of the pit. The noise deflects within the pit and rises vertically or absorbed within the pit. The noise generated by this operation would therefore not exceed the noise criteria in any time period.

The secondary crusher and sieve operation occurs on an elevated section outside of the quarry pit. The plant is highly visible and therefore some potential exists for direct travel of noise from this operation to receptors. Attended and unattended monitoring undertaken recently aimed at identifying the travel of noise generated from the operation of this plant at various distances from the plant and at the closest receptor. The monitoring was further examined using simple modelling calculations to determine attenuation of this noise over the distances between the plant and the receptors. The data presented above indicates that the operation of this plant meets the project specific noise level at the boundary of the property. The noise is definable at receptor residences under circumstances where natural or farming activity background noise is eliminated to levels estimated to be less than 30 dB(A). The level of noise identifiable as the secondary crushing and sieving plant is calculated to be in the order of 18 dB(A) at the closest residence. This is not considered to be an intrusive noise nor would it affect the amenity of rural life at the residence for any of the time periods described in the NSW INP.

The arrival, loading and despatch of trucks to and from the site may on occasion be extended into night and evening periods where project specific noise levels limit the emission of noise at the closest receptor to 35 dB(A) or less. Noise emission modelling of truck activity on the site has indicated that truck noise at the quarry is difficult to identify from the closest receptor. On occasion, truck noise on Gil Gil creek road is identifiable. This is a public road and therefore outside of the control of management at the quarry. The noise is a common

background noise in rural areas. However, the proposal for new operating hours include only minor changes to trucking hours other than under emergency conditions. The proposed operating hours would allow four road trains to operate outside of standard hours. As indicated, these trucks would be operating on long haul projects where they would make 2 to 4 trips per day from the quarry. This would result in a maximum of 8-truck trips between 6pm and 7am. This is not considered as a significant change to night traffic in the rural region and has no impact once entering the main roads such as the Gwydir Highway.

Under some circumstances with the current operating hours, trucks are turned away empty when arriving at 5 pm or have mechanical issues on the site that may delay their departure with a load of gravel. The proposed variation would allow these trucks that arrive within the operating times to be loaded and despatched rather than leaving the site empty. The change therefore does not alter the potential noise emissions as the trucks trips that may be captured in this change are existing trips. The trucks leaving the site in this delayed period could carry a load of material rather than returning along the haul road in an empty state. The loaded truck would create less noise due to the stabilisation of the trailer sides on the road.

The arrival and departure of employees and maintenance staff generally involves the use of light vehicles. Minimal noise emissions are generated by such vehicles.

Maintenance on the site generally consists of mechanical repairs to equipment. Such activity is generally undertaken manually and with minimal noise emission. Under circumstances where the plant has broken down and then repaired, the proposed conditions would allow an empty run of the particular equipment and therefore no load on the equipment. This would enable full production during the proposed hours of operation for the particular plant. The current operating hours do not allow maintenance of plant outside the operating hours. On many occasions whole days are lost to maintenance between Monday and Friday operating times. This places extreme pressure on production once the machinery is back on line and potentially increases the frequency where trucks movements hauling materials from the site are close together. Such concentrated periods of traffic on the haul road may create safety issues for other road users. On this basis, maintenance of machinery on the site has been identified as a low impact activity and therefore should be permitted outside of normal operating hours.

All other activity on the site is either to be restricted to suitable day time hours or produces minimal if any noise emissions that would be audible at the boundary of the quarry.

The proposal to expand annual production from the quarry includes a condition that would enable the Proponent to operate for extended hours to produce and supply materials for re-establishment of mainly public roads that may have been damaged under exceptional circumstances such as flooding or extreme rainfall events. Under such circumstances, the quarry would also have been impacted by the event which would generally mean no production has occurred. Under these circumstances, the initial supply of material would be taken from stockpiles at the quarry. Once the stockpiles are depleted, the potential production at the quarry would be limited to the current operating hours and therefore no increases in production to meet these exceptional circumstances would be possible.

Such circumstances occurred in the Moree Plains Shire in November 2011 and again in February 2012 as a result of extreme rain and flooding events. Roads and rail were significantly damaged in the Moree and greater region as a result of these floods. Access within and through the Shire had become limited as a result of road damage. Runnymede Quarry was the only feasible source of road base gravel available, however stockpiles at the

quarry were quickly depleted or not available to provide the required materials to rebuild local infrastructure. The quarry operation was limited to the current hours of 7am to 5.30pm and therefore the infrastructure could only be redeveloped at the rate of production from the quarry that is possible in this 10-hour period. This resulted in extensive delays and extensions to projects while the rebuilding authorities waited for Runnymede quarry materials to be delivered. Such delays were considered to cause significant economic and social impacts in the region that was affected by the two flood events due to the slow reconstruction of main and arterial roads.

The proposed alteration to operating hours would resolve this issue and enable ramping up of production and despatch of material from the quarry to meet the demand for rebuilding infrastructure.

Under such circumstances, the noise emissions from the site would not alter, however the site could operate on a 24-hour basis for an extended period. This would mean that activity would occur through the night period. Data presented in this assessment indicates that the site can be operated through the night without exceeding the night time noise criteria of 35 dB(A) at the closest receptor.

15.12 Blasting and Vibration

There are two main noise and vibration related impacts from blasting, mainly overpressure measured in dB(L) and ground vibration measured in peak particle velocity (PPV).

When explosives are detonated in a blast hole much of the energy is used to break up and move the rock. However, there is always some energy left over and this is converted into to vibration that travels away from the blast area through both the ground and air. The vibration through the air is generally known as air or blast overpressure and the vibration that travels through the ground as ground vibration. As the ground vibration travels away from the blast area the level rapidly reduces. The level of vibration felt at any location is controlled by the design of the blast, the distance to the blast and the intervening geology.

The criteria normally recommended for blasting in Australia are based on human discomfort and are contained in the Australian and New Zealand Environment Council Guidelines (ANZEC, 1990) and (Environmental Australia, 1998).

The ANZEC criteria for the control of blasting impact at residences are:

(a) Airblast overpressure:

- *The recommended maximum level for airblast overpressure is 115 dB Linear (dBL).*
- *(b) The level of 115 dBL may be exceeded on up to 5% of the total number of blasts over a period of 12 months; however the level should not exceed 120 dBL at any time.*

(b) Ground vibration:

- *The recommended maximum level for ground vibration is 5 mm/sec PPV*
- *The PPV level of 5 mm/sec may be exceeded on up to 5% of the total number of blasts over a period of 12 months. The level should not exceed 10 mm/sec at any time.*

(c) Blasting should generally only be permitted during the hours of 9.00 am to 5.00 pm Monday to Saturday. Blasting should not take place on Sundays or Public Holidays.

(d) Blasting should generally take place no more than once per day. (This requirement would not apply to minor blasts such as for clearing crushers, feed chutes, etc).

(e) The restrictions on times and frequency of blasting referred to in (c) and (d) do not apply to those premises where the effects of blasting are not perceived at noise sensitive sites.

A blast conducted on the 23rd of August 2011 was monitored for air blast overpressure and peak particle velocity. The monitor was located at the intersection of the quarry entrance road

and Gil Gil Creek Road 2,400 metres from the working (eastern) quarry face and on a direct line to the nearest sensitive receiver at "Kirkton" which is a further 1,100 metres distant. The blast and monitoring was conducted by Sequel Drill & Blast

The blast design parameters, weather conditions and results for the monitored blast are set out in the following table.

Location	Runnymede quarry
Face	Eastern end of quarry
Nearest noise sensitive receiver	"Kirkton"
Distance and direction to receiver	3,500 metres w-n-w
Bench height	14 metres average
Hole depth	14.62 metres average
Hole angle	10 degrees
Hole diameter	102 millimetres
Hole spacing	3.2 metres
No. of holes	296
Burden	2.8 metres
Stemming	2.7 metres
Explosive	ANFO
Maximum instantaneous charge	145.2 kg
Date	23rd of August, 2011
Time	4:14:21 pm
Weather	Fine
Temperature degrees C	23.0
Relative humidity	32%
Wind speed	15 km/h
Wind direction	SSE
Cloud	5/8
MSLP	1026.7 hPa
Coupling	Spiked
Peak vibration level (vector sum)	0.46 mm/s
Peak overpressure level	106.0 dB(L)

Table 33 Blast monitoring and weather conditions

Note: Blast design details supplied by Sequel Drill & Blast – monitoring results supplied by Heilig & Partners Consulting Engineers and weather data supplied by BOM for Moree Aero (station 053115).

The data presented above indicates that the blast impact in relation to vibration and peak noise levels was within the required criteria. Blasting occurs between 2 and 4 times per year at the quarry and therefore the impact of this blasting is not a regular occurrence.

15.13 Air Quality

Air quality in the location of the quarry is typical of farming areas with dust generated from cultivation, harvesting, fertiliser and chemical application and transport along gravel roads and smoke generated from stubble burning.

Dust monitoring was undertaken at the quarry and at two residential locations. The result of the monitoring and management strategies is reported elsewhere in this report. The data indicated that operations at Runnymede quarry could not be isolated as a significant contributor to dust in the air.

No odour is produced from the quarry and therefore the quarry operation is considered as satisfactory. The increase in annual production is to be undertaken in accordance with management strategies to minimise the level of impact. These strategies have proven to be satisfactory to date.

15.14 Visual

The quarry is located 2.2 kilometres from Gil Gil Creek road and is separated from the road by dense regrowth timber. Due to the separation distance, the terrain and the intervening vegetation, the quarry is not visible from the closest public road.

The quarry is on an elevated area on the western side of a central ridge through the Runnymede property. As the ridge is elevated, the quarry is visible in part from similar hills to the west and southwest. The closest point from which the quarry can be observed is some approximately 4-5 km to the west and approximately 6.5 km to the southwest by direct line of sight.

The part of the quarry that is visible is the secondary crushing and sieving plant, the main entrance to the extraction area and stockpiles around the higher part of the plant. The infrastructure that is visible is a similar colour to the rocky outcrops and therefore blends with the background of this rock. The profile of the plant is lower than the highest section of the ridge line and therefore this infrastructure is not visible as a structure higher than the surrounding landscape.

The extension of the excavation in an easterly direction would not alter the view that is available from the west and south west as these views are restricted by their lower elevation. The quarry extends into the ridge line and would therefore not alter the western aspect. On this basis, the visual intrusion of the quarry operation would not alter over the life of the quarry. Once quarry operations cease and the rehabilitation plan is undertaken, the edges of the excavation will be revegetated and blend into the surrounding woodland. The excavation would remain out of site from adjoining land.

15.15 Waste

Runnymede Quarry presently disposes of its waste in a lawful manner and these disposal methods, as detailed below, would continue.

15.15.1Liquid 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 and removed from the site.

Wastewater generated from ablutions is disposed of via a septic tank and absorption trench system that is in place. The increased employment on the site would result in an increase in daily wastewater production. The intention is to extend the absorption trench system once the site employs more people. This is considered as a minor alteration to the facility.

15.15.2 Solid waste

Solid waste, comprising packaging material and domestic waste, is disposed of to a licensed local waste facility. The solid waste generated on the site is estimated to be in the order of one small box trailer load per fortnight. This is generally disposed of through the Proponent waste disposal program at their Moree depot.

15.15.3Greenhouse Gas

The National Greenhouse and Energy Reporting Act 2007 (NGER Act) established a single, national system for reporting greenhouse gas emissions, abatement actions, and energy consumption and production by corporations from 1 July 2008.

The likely Greenhouse Gas emissions generated during expanded operations at Runnymede Quarry were calculated in order to give an indication of potential greenhouse gas reporting requirements.

Under the NGER Act reporting will be compulsory if a corporation triggers any one of the reporting thresholds during the reporting period which is specified as one financial year. A corporation will trigger the reporting threshold if a facility under its control either emits greenhouse gasses or produces or consumes energy at or above a level specified by the NGER Act. From 1 July 2010 these thresholds are:

- CO2-e emission 50k tonnes
- Energy production/consumption 200t joules

Prediction of the greenhouse gas emissions associated with the quarry was determined using empirically derived data contained in a paper by Flower and Sanjayan titled *Green House Gas Emissions due to Concrete Manufacture*. In this study CO2 generated from the production of coarse basalt aggregate, amongst other things, was obtained from direct measurement and included all production steps from initial blasting to the delivery of the finished aggregate to the concrete batching plant. Inputs included electricity, diesel fuel and explosives and the study produced a CO2-e output value in tonnes CO2-e/ tonne of basalt. The electricity use component was converted from the Victorian emission factor to the New South Wales emission factor using Table 5 on page 19 of the publication *National Greenhouse Accounts (NGA) Factors 2009* following which the figures were fed into the NGERS Calculator on the Department of Climate Change and Energy Efficiency website.

The results obtained from the NGERS Calculator are reproduced on the following pages which show that the quantities for both CO2 emissions and energy consumption are below the thresholds and that registration is not required.

NGERS Calculator Assessment Outcome

Australian Government
Department of Climate Change and Energy Efficiency

Based on the data you have entered, the NGERS Calculator has summarised your greenhouse gas emissions, measured in CO2–e (carbon dioxide equivalents) and your energy consumption for each of the fuel types entered. The data is presented here as annual scope 1, annual scope 2, total annual emissions (with waste excluded), and annual energy consumption. These terms are explained below. Emissions data entered has been disaggregated into scope 1 and scope 2 data, consistent with how emissions data would be reported and publicly disclosed according to these scopes under the NGERS. Energy consumption is presented as an annual total only. The NGERS thresholds are triggered by combined scope 1 and scope 2 emissions or energy production or energy consumption.

The calculated totals are estimates only, based on data entered, and should be treated as such. They are based on emission factors that are consistent with the National Greenhouse Accounts Factors.

Methods and criteria for measuring greenhouse gas emissions for the NGERS will be set out in the National Greenhouse and Energy Reporting (Measurement) Determination 2008 (The Determination). Technical Guidelines will also be provided to help corporations understand The Determination. Default emissions factors will be published in both these documents and can currently be accessed through the National Greenhouse Accounts Factors (available at: www.climatechange.gov.au/workbook).

Annual scope 1 emissions can be described as direct emissions of greenhouse gases emitted from sources within the boundary of a facility and as a result of that facility's activities.

Annual scope 2 emissions can be described as indirect emissions from the consumption of purchased electricity, heat or steam consumed by a facility, but produced outside of the facility's boundary.

Total annual emissions (kt CO2-e) are the combined total of annual scope 1 and annual scope 2 emissions (with waste excluded).

Annual energy consumption (TJ) is the total amount of energy consumed.

Summary Data for: Runnymede Quarry

State/Territory: NSW

Created Date: 24/09/2010 Time: 10:00 (GMT +10:00)

Fuel/process	Quantity	Unit	Period	Annual Scope 1 emissions kt CO2 -e	Annual Scope 2 emissions kt CO2 -e	Total Annual emissions kt CO2 -e	Annual energy consumption TJ
Electricity	5924353.0 0	kWh	Year	0.00	5.31	5.31	21.33
Diesel	821100.00	L	Year	2.22	0.00	2.22	31.69
Other petroleum products (including waste oils)	1.00	kL	Year	0.00	0.00	0.00	0.03
Industrial Waste (Tyres)	1.00	tonnes	Year	0.00	0.00	0.00	0.01
Totals						**7.53**	**53.06**

Australian Government
Department of Climate Change and Energy Efficiency

NGERS Calculator Assessment Outcome

An estimate based on the information you have submitted today is presented below against the NGERS thresholds. The information presented assumes the level of greenhouse gas emissions and energy consumption will remain constant for all NGERS reporting periods.

Your estimate may also indicate that your corporation may not meet the first year reporting thresholds, but may meet the lower thresholds for the 2009-10, 2010-11 reporting years and beyond. Corporations will need to submit applications to register under NGERS by 31 August following the year in which the threshold is met. If the information below indicates your corporation's greenhouse gas emissions or energy consumption meets, or is approaching any of the reporting thresholds, the Department of Climate Change and Energy Efficiency recommends your corporation apply to register. Corporations are encouraged to apply to register as early as possible, as once registered they will obtain access to training and support from the Department of Climate Change and Energy Efficiency. For information on applying for registration under the NGERS please see the Department of Climate Change and Energy Efficiency website at: www.climatechange.gov.au/reporting/

Reporting Assessment for: Runnymede Quarry

State/Territory: NSW

Created Date: 24/09/2010 Time: 10:00 (GMT +10:00)

Year	Data	Threshold	Assessment
Greenhouse Gas Emissions			
2008 - Onwards	7.53 25.00 kt CO2-e	below threshold:	Registration not recommended
Energy Consumption			
2008 - Onwards	53.06 100.00 TJ	Below threshold:	Registration not recommended

I accept that use of the National Greenhouse and Energy Reporting System Calculator (the application) is provided for information only and that use of the application will not be construed as determinative of whether legislative requirements of the National Greenhouse and Energy Reporting Act 2007 are met. I will not use the application as a substitute for obtaining independent legal advice and/or undertaking independent investigation as to whether thresholds have been met. As custodian of the application, the Department of Climate Change and Energy Efficiency will not be liable for any loss, damage, expense or cost incurred by any person or organisation arising out of use of the information contained in this application. I accept that the custodian cannot warrant the accuracy, currency or completeness of the application, and that in no event will the custodian be liable for any incidental or consequential loss or damage resulting from use of the information.

The contribution of greenhouse gas from the concrete batching plant has been ignored in this study as the amount of basalt consumed for concrete manufacture is minor with most of the output from the quarry being used for road and rail construction by State and Local Government authorities.

15.16 Heritage

15.16.1 Aboriginal Cultural Heritage

A search of the Aboriginal Heritage Information Management System managed by the NSW National Parks and Wildlife Service indicated that no Aboriginal sites were recorded on the land.

An Aboriginal Cultural Heritage assessment of the site was undertaken by consulting Archaeologist, (Suzanne R Hudson Consulting). The consultant is familiar with the area through regular investigations in the local region on behalf of both private investigations and public authorities. The investigation involved a detailed search of the areas affected by the extension of the quarry in accordance with appropriate guidelines for Aboriginal Cultural Heritage investigations. The search was undertaken by representatives of the Local Aboriginal Land Council in conjunction with the Archaeologist's team.

The assessment concluded that "*No Aboriginal objects, sites or places of significance were found during the 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 wish to pick the fruit during spring.*" A copy of the report and search of the AHIMS data base is attached in Appendix 2.

15.16.2 European Heritage

Searches for European heritage objects were also made of the Yallaroi LEP 1991 and the on-line databases maintained by the Commonwealth and NSW Heritage Council. No items were listed in the literature. No items were discovered on the site. The land had been cleared and farmed in the 1980's. Prior to that, some logging has occurred but no early historical use has occurred on the property.

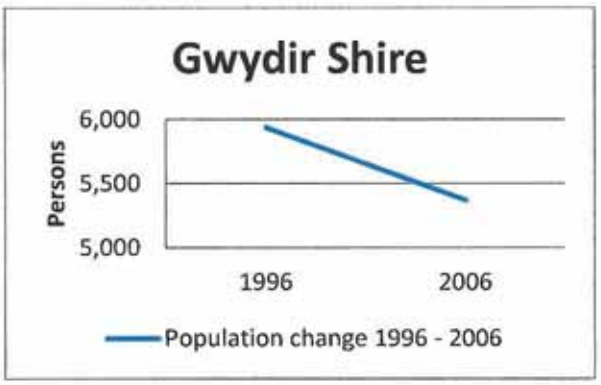
15.17 Socio-economic

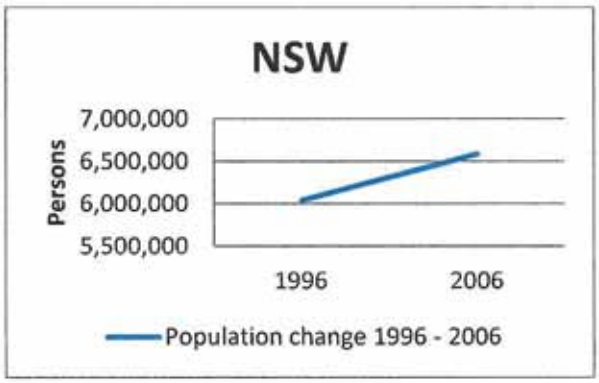
The following section presents an assessment of the existing socio-economic environment in the region and potential impacts on this if the quarry proposal proceeds.

Data for this section of the report was taken from the 2006 Census *Community Profile Series: Cat. 2003.0* published by the Australian Bureau of Statistics.

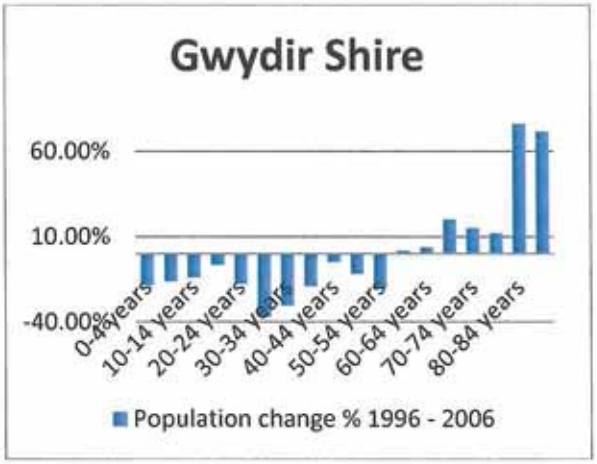
15.17.1Population

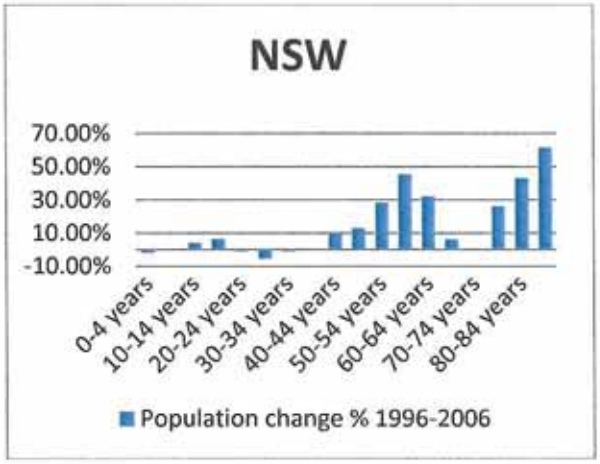
Population numbers in the Gwydir Shire have fallen in the period 1996 -2006 while population numbers in New South Wales have risen by more than 500,000 in the same period.





The population decline in Gwydir Shire has not been even with a disproportionate number of young people moving from the area and the number of older people increasing as shown below. The following graphs compare the Gwydir Shire population structure with that of NSW as a whole. New South Wales lost some population in the 0-4 year and 20-39 year age groups whereas as the Gwydir Shire lost population in the 0-54 year age groups.





While it is usual for young people to move from country areas to pursue education, the data show that over the census period for the Gwydir Shire the young people are leaving earlier. This is more particular for those grouped in the child-bearing age groups (20-40 years of age). Those that do return are returning when they have reached the age of 60-years or more. A worrying trend is that a growing number of working-age people are not returning at all leading to a rapid age redistribution of the population and work force.

There are a number of influencing factors in the population decline which include the recent drought. Contributing factors include comparably low wages (particularly compared with the mining industry), the casualisation of the agricultural workforce, the increasing mechanisation in the agricultural sector and the fact that larger centres appear to offer greater education and lifestyle opportunities.

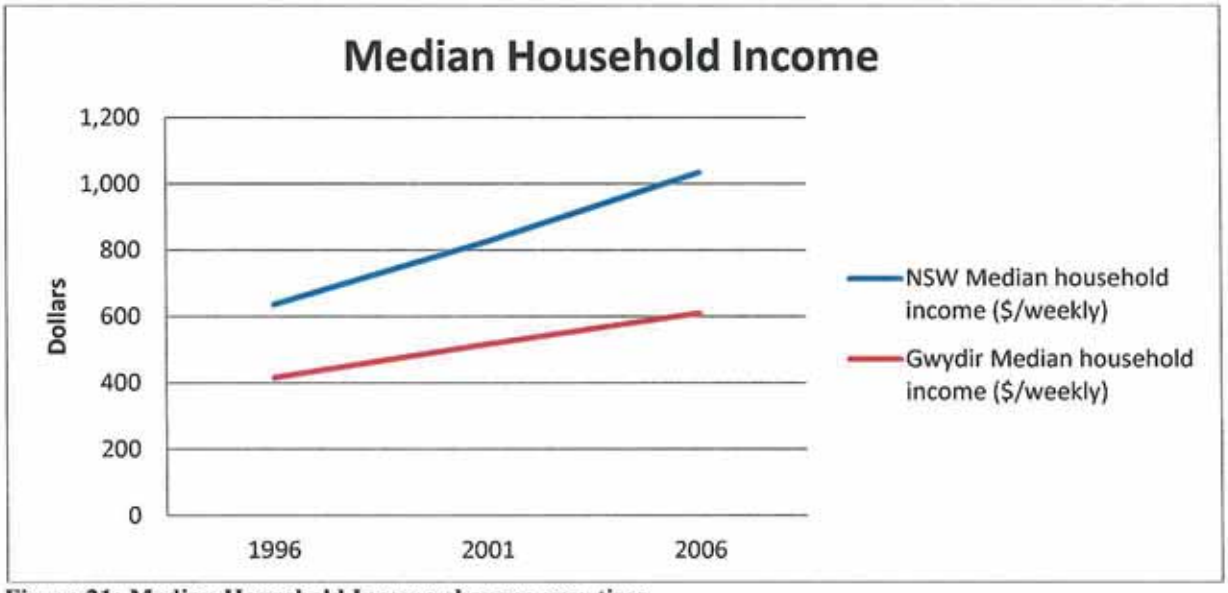


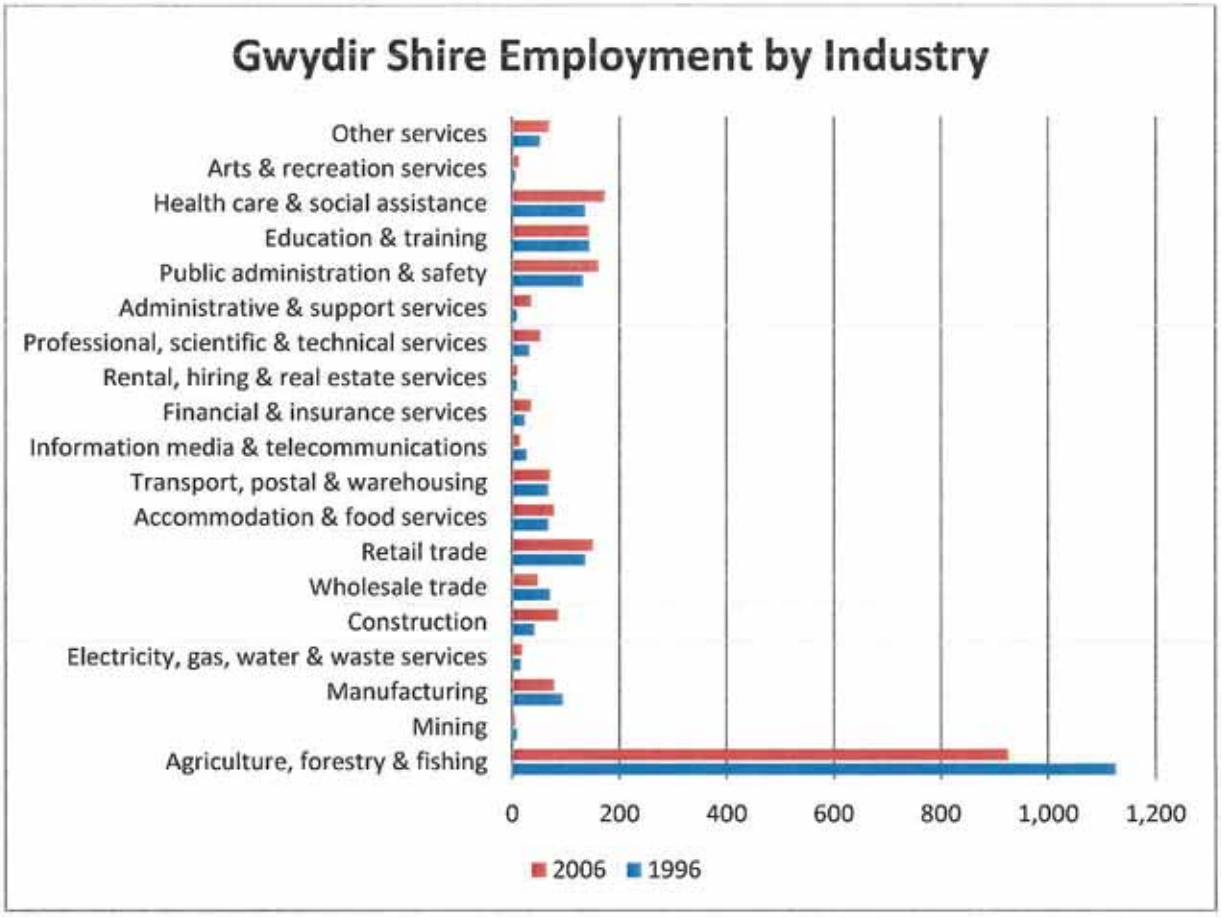
Figure 21: Median Household Income changes over time

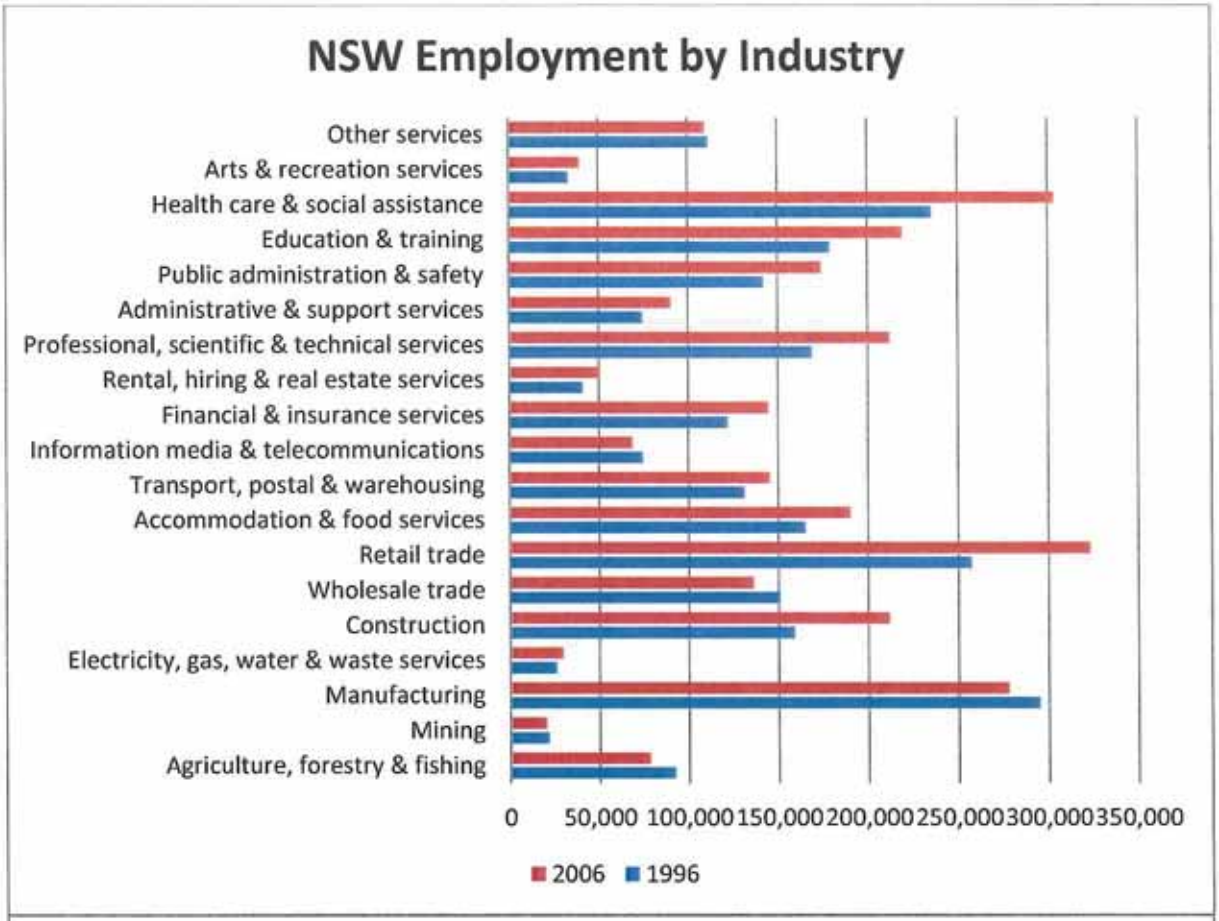
Income movements in the Gwydir Shire, in comparison to those in the State, are shown in the above chart. The data shows that in 1996 Gwydir Shire households were lagging the NSW median household income by around $221/week. By 2006 they had fallen some $423 behind the State median. Household incomes for NSW had increased by 62% in this period, incomes in the Gwydir Shire had only moved up by 47%, adding further impetus to the outmigration of the working age group.

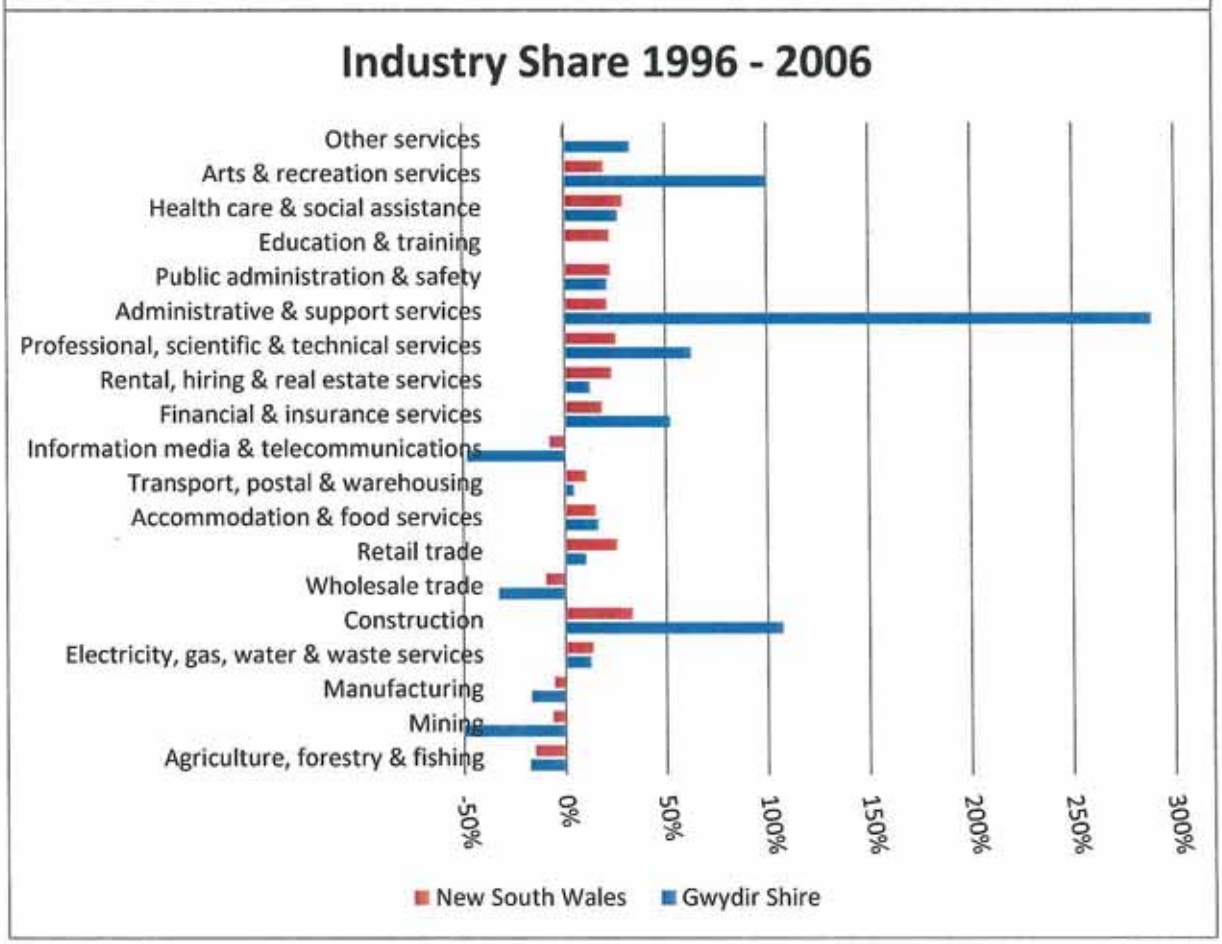
15.17.2Employment

The Gwydir Shire has a narrow economic base with the major employer being the primary production sector. During the 1996 – 2006 decade the number of people employed in primary production has declined by almost 18 percent. A number of other employment sectors, including mining, manufacturing, wholesale trade, information and education have also declined. The remaining sectors have increased marginally. State employment figures also show a modest decline in these areas, however, state employment has shown growth while Gwydir Shire figures reveal an overall decline in employment numbers.

The following two graphs show the employment by industry sectors for Gwydir Shire and New South Wales in 1996 and 2006 respectively. The third graph shows the change in industry share as a percentage for Gwydir Shire and New South Wales.




NSW Employment by Industry
Other services
Arts & recreation services
Health care & social assistance
Education & training
Public administration & safety
Administrative & support services
Professional, scientific & technical services
Rental, hiring & real estate services
Financial & insurance services
Information media & telecommunications
Transport, postal & warehousing
Accommodation & food services
Retail trade
Wholesale trade
Construction
Electricity, gas, water & waste services
Manufacturing
Mining
Agriculture, forestry & fishing
0
50,000
100,000
150,000
200,000
250,000
300,000
350,000
2006
1996


Industry Share 1996 - 2006
Other services
Arts & recreation services
Health care & social assistance
Education & training
Public administration & safety
Administrative & support services
Professional, scientific & technical services
Rental, hiring & real estate services
Financial & insurance services
Information media & telecommunications
Transport, postal & warehousing
Accommodation & food services
Retail trade
Wholesale trade
Construction
Electricity, gas, water & waste services
Manufacturing
Mining
Agriculture, forestry & fishing
-50%
0%
50%
100%
150%
200%
250%
300%
New South Wales
Gwydir Shire

The proposed expansion of the quarry operations would offer additional employment in the region. This employment would be on a permanent basis including onsite jobs for operation of the quarry in addition to a requirement for contractors to service the facility and offer transport for the product. This additional employment would be of benefit to the Gwydir community as Warialda is one of the closest towns to the quarry. The quarry at present employs several plant operators from Warialda.

15.17.3Economy

There are two widely used tools to assist with understanding a local economy; the shift-share and the economic base analysis.

The shift-share analysis is a technique used to examine changes in employment in a locality. It can provide useful information about the characteristics of growth and competitiveness of local industries compared to a larger reference area, in this case NSW. Shift-share analysis allows analysis of change in local employment in terms of structural change, not just a general change in total employment in a locality.

Shift-share analysis decomposes employment change in a locality over a given time period into three contributing factors:

- National Growth effect (NS) represents the share of local employment growth that can be attributed to the growth of the reference economy. This component is based on the assumption that if the reference economy is experiencing employment growth, it is reasonable to expect that this growth will influence the local employment growth.
- Industry Mix effect (IM) represents the effect that specific industry trends at the reference economy level have had on the change of employment in the locality. This component captures the fact that some industries in the reference economy grow faster or slower than others and that these differences are reflected in the local industry structure. A positive industry mix implies that the employment in the locality grew above the overall reference economy average, while a negative industrial mix indicates the opposite.
- Regional Shift (RS) shows how industrial groups in a locality performed relative to those groups at the reference economy average. It is based on the assumption that for the same industry groups, sometimes the locality may not follow the reference economy trends with the same magnitude. This is due to the locality having a comparative advantage in terms of natural resource base, labour resources and so forth. A positive shift-share component suggests that the locality increased its share of employment in that industry, a negative shift-share component means the opposite.

The economic base analysis is a simple tool that assumes that the local economy can be divided into two main sectors; basic and non-basic. The basic sector is made up of local businesses that produce goods and services that exceed the need of the local community and the excess is exported and sold outside the local area. The non-basic sector is composed of those firms that produce goods and services that are consumed locally and depend on local markets. The location quotient (LQ) measures the relative concentration of a given industry in a given location compared to a larger reference area. The LQ is the ratio of an industry's share of the local employment divided by its share of the reference economy.

The following table contains employment numbers and percentage change for industry sectors in both the Gwydir Shire and New South Wales which comprises the input data for the shift-share and economic base analysis.

Employment Sector	Local Employment		% change	NSW Employment		% change
	1996	2006	96/06	1996	2006	96/06
Agriculture, forestry & fishing	1125	925	-17.78%	92160	78104	-15.25%
Mining	8	4	-50.00%	21446	20019	-6.65%
Manufacturing	94	78	-17.02%	294984	277678	-5.87%
Electricity, gas, water & waste services	16	18	12.50%	25698	29177	13.54%
Construction	41	85	107.32%	158988	211724	33.17%
Wholesale trade	70	47	-32.86%	150809	136078	-9.77%
Retail trade	136	150	10.29%	257329	323222	25.61%
Accommodation & food services	67	78	16.42%	165165	190248	15.19%
Transport, postal & warehousing	67	70	4.48%	131197	145166	10.65%
Information media & telecommunications	27	14	-48.15%	74552	68778	-7.74%
Financial & insurance services	23	35	52.17%	121885	144401	18.47%
Rental, hiring & real estate services	8	9	12.50%	40951	50470	23.24%
Professional, scientific & technical services	32	52	62.50%	169206	212326	25.48%
Administrative & support services	9	35	288.89%	74595	90308	21.06%
Public administration & safety	132	160	21.21%	142130	174558	22.82%
Education & training	144	143	-0.69%	179214	219257	22.34%
Health care & social assistance	136	172	26.47%	235712	303685	28.84%
Arts & recreation services	6	12	100.00%	33057	39520	19.55%
Other services	52	69	32.69%	111465	109889	-1.41%

The following table contains the result of the shift-share and economic base analyses discussed above.

Employment Sector	Shift Share Analysis				Economic Base Analysis		
	NS	IM	RS	SS	LQ	Basic	Imp/ex
Agriculture, forestry & fishing	1276	-322	-28	925	15.37	978.37	export
Mining	9	-2	-3	4	0.26		import
Manufacturing	107	-18	-10	78	0.36		import
Electricity, gas, water & waste services	18	0	0	18	0.80		import
Construction	46	8	30	85	0.52		import
Wholesale trade	79	-16	-16	47	0.45		import
Retail trade	154	17	-21	150	0.60		import
Accommodation & food services	76	1	1	78	0.53		import
Transport, postal & warehousing	76	-2	-4	70	0.63		import
Information media & telecommunications	31	-6	-11	14	0.26		import
Financial & insurance services	26	1	8	35	0.31		import
Rental, hiring & real estate services	9	1	-1	9	0.23		import
Professional, scientific & technical services	36	4	12	52	0.32		import
Administrative & support services	10	1	24	35	0.50		import
Public administration & safety	150	12	-2	160	1.19	120.33	export
Education & training	163	13	-33	143	0.85		import
Health care & social assistance	154	21	-3	172	0.73		import
Arts & recreation services	7	0	5	12	0.39		import
Other services	59	-8	18	69	0.81		import

A LQ using employment data has certain limitations as it implies that local productivity per worker is the same as productivity in the reference economy. A LQ greater than one suggests the industry is producing in excess of local consumption and is exporting the surplus. However, we can get an LQ greater than one if the industry requires more employees than average to produce the same level of output due to labour inefficiency. Therefore, the LQ for the Public administration sector above should be treated with the usual caution that is warranted when considering the efficiency of the bureaucracy.

Generally, the above analyses indicate that the Gwydir Shire is losing population, particularly in the productive working age groups and has a rapidly ageing population. The ageing of the population may explain the increase in employment in the health care sector while the shrinkage in the school-age population would tend to explain the reduction in employment in the education sector.

The economy is heavily reliant on the agriculture, forestry and fishing sector and although there was some employment gain in some other sectors, this started from a very low base and overall employment fell between 1996 and 2006.

15.17.4Employment at Runnymede Quarry

The approval of the requested increase on quarry output would create an estimated 30 full-time jobs which would have a significant impact on unemployment and community wellbeing.

15.17.5Conclusion

Many areas of the economy in the Gwydir Shire are in steady decline and population is in decline in the 55 year old and under age group. The increase in production sought for the

Runnymede Quarry has the potential to create an additional 30 full-time jobs over the life of the quarry. The multiplier effects of this employment boost would flow throughout the local economy and help secure ongoing economic activity. The provision of better maintained road infrastructure would also have considerable benefits by improving access to markets for agricultural commodities while reducing wear and tear on delivery vehicles.

16. Monitoring and Mitigation Measures

16.1 Surface Water Monitoring Program

The Surface Water Monitoring Program for the Runnymede Quarry details a recommended program to monitor the discharge of water from the sediment dams in accordance with Environment Protection Licence 7379.

16.1.1 Monitoring Locations

The required surface water monitoring locations are as follows:

EPA identification number	Type of monitoring point	Type of discharge point	Description of location
1	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 300 metres to the north-east of the Runnymede residence as shown on map titled 'EPA Identification Points' dated 13/11/06.
2	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from the final sediment basin located approximately 250 metres to the west of the Runnymede residence and within the catchment of the washing plant for the precoat product, as shown on map titled 'EPA identification Points" dated 13/11/06.
3	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 400 metres to the south of the Runnymede residence and south of the stockpiles and main crushing plant area as shown on map titled 'EPA Identification Points" dated 13/11/06.
4	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 150 metres south of the Runnymede residence and west of the stockpiles and main crushing plant area, as shown on map titled 'EPA Identification Points' dated 13/11/06.
5	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 700 metres to the south of the Runnymede residence and south of the stockpiles and main crushing plant area, as shown on map titled 'EPA Identification Points' dated 13/11/06.

Table 34: Monitoring locations determined by the EPA

These locations have been chosen by the EPA as being appropriate for monitoring and reporting in accordance with the requirements of the Protection of the Environment Operations Act 1997 and in particular:

- to identify the quality of water discharged from the site;
- to assess whether the development site may be having any impact on the off-site environment;
- to assess the effectiveness of erosion and sediment control measures.

The following table identifies the proposed monitoring point locations, the type of monitoring point and with a brief description (where relevant) of the location and frequency.

16.2 Monitoring requirements

Points 1, 2, 3, 4 & 5

Pollutant	Units of measure	Frequency	Sampling method
Oil and grease	milligrams per litre	Special frequency 1*	Representative sample
Total suspended solids	milligrams per litre	Special frequency 1*	Representative sample

Table 35: EPA monitoring requirements

* Special frequency 1 means the collection of samples on the first day of each discharge event.

16.2.1 Concentration limits

The following table presents the concentration limits for each monitoring location. Exceedances of the discharge quality limit specified in Environmental Protection Licence 7379 for total suspended solids from all discharge points is permitted if the discharge occurs during, or within 24 hours after, a rainfall event at the premises exceeding a total of 42 millimetres over any consecutive five day period.

Points 1, 2, 3, 4 & 5

Pollutant	Units of measure	100 percentile concentration limit
Total suspended solids	milligrams per litre	50

Table 36: EPA concentration limits

16.2.2 Water quality

Environment Protection Licence 7379 requires that monitoring of stormwater discharges are monitored on the first day of each discharge event for total suspended solids and oil and grease. There has been one discharge event since the quarry began operating and this occurred on the 29th of November, 2011 following heavy rain.

Runnymede Quarry		Total suspended solids measured mg/L	Suspended solids permitted mg/L	Oil and grease mg/L
Monitoring point	Date			
2	29/11/2011	14	50	< 10

Table 37 Stormwater discharge monitoring results

This discharge event occurred following rainfall that resulted in significant flooding in the Moree area in November 2011 and demonstrates that the site water treatment methods meet the requirements of the licence.

16.3 Surface and groundwater impacts

The potential for impacts to surface and groundwater regimes is related to methods used to extract and process the resource and the size of the area to be disturbed. The present operation has not had any negative impacts on off-site water quality and has not intersected or extracted any groundwater. The quality of stormwater discharged following a significant rainfall event has complied with the conditions of the Environmental Protection Licence issued for the operation of the quarry as demonstrated above.

Neither the method of extracting or processing the resource nor the area to be disturbed is proposed to change from those presently approved.

17. Statement of Commitments

The Environmental Assessment of the proposal has identified a range of environmental, social and management outcomes and measures required to avoid or mitigate the environmental and social impacts of the proposal.

This section sets out a draft of the actions and initiatives the proponent commits to implement once the project receives approval. These commitments are designed to effectively manage, mitigate, guide and monitor the operation of the proposal.

Desired Outcome	Action	Timing
Extraction and processing activities		
Extraction and processing rates do not exceed approved quantities.	Ensure total extraction rates do not exceed 300,000 tonnes per year.	Continuous during operations.
Operating hours		
Managing operating hours in accordance with approved operating hours.	Drilling works to be undertaken at any time.	During operations.
	Blasting and rock hammering to be undertaken between 9.00 am and 5.00 pm Monday to Saturday.	During operations.
	Crushing and screening to be undertaken at any time.	During operations.
	Stockpiling and loading to be undertaken at any time.	During operations.
	Blending (pug mill etc) to be undertaken at any time.	During operations.
	Transport (trucks inwards) to be undertaken between 6.00 am to 9.00 pm Monday to Saturday.	During operations.
	Transport (trucks outwards) 6.00 am to 9.00 pm Monday to Saturday.	During operations.
	Maintenance to be undertaken as required at any time.	During operations.
	Emergency supply of road and rail construction materials at any time as required.	During operations.
Transport		
Continue safe and efficient transport operations	Provide a 'code of conduct' to all drivers setting out the required conduct at all times. The code would require amongst other things: • pre-start checks must be completed and documented for each day; • personal protective equipment must be worn; • on arrival at the quarry drivers are required to park between the entrance gate and the weighbridge and contact the quarry on UHF channel 36 for instruction;	During operations.

Desired Outcome	Action	Timing

	• once cleared to proceed advise over UHF of intention to proceed to loading area;
	• truck speed within the quarry site is not to exceed 30 km/h;
	• drivers are not to leave the cab of the truck in the loading area;
	• once loaded advise over UHF of intention to travel from loading area to weighbridge;
	• all loaded trucks must exit the site via the weighbridge;
	• all loads must be covered prior to exiting the quarry;
	• there shall be no use of exhaust brakes in residential areas;
	• on leaving the quarry the following speed limits apply:
	  • Gil Gil Creek Road- 60 km/h;
	  • Mosquito Creek Road – 60 km/h;
	  • Pallamallawa town area – 40 km/h;
	• on unsealed roads drivers must not exceed 40 km/h when passing dwellings set back less than 100 metres from the road;
	• drivers must follow approved route to delivery site;	

	Restrict transportation of materials to between 7.00 am to 9.00 pm Monday to Saturday.	During operations.
	Direct any overloaded trucks to unload a portion of their load to ensure that the vehicle mass remains within legal mass loadings.	During operations.
Fuel storage facility		
Ensure ongoing safe storage of diesel fuel.	Construct additional bunded enclosure as set out in the report.	Priority.
Noise and vibration		
All activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding residents.	Maintain a continuous record from the on-site weather station.	Ongoing.
	Retain, as far as practicable, finished material stockpiles to the west of the secondary crusher and screens to create additional acoustic shielding.	During operations.
	Ensure that trucks being loaded within the stockpile area are loaded on the	During operations.

Desired Outcome	Action	Timing
	eastern side of the product stockpiles whenever possible.	
	Ensure that blasting and rock hammering are restricted to between 9.00 am to 5.00 pm Monday to Saturday.	During operations.
	Undertake all rock hammering on the quarry floor within 20 metres of the eastern quarry face.	During rock hammering.
	In the event of a noise complaint, undertake noise monitoring at the affected residence in accordance with the NSW Industrial Noise Policy.	In the event of a noise complaint.
Achieve compliance with all ANZECC Blasting Guidelines.	Avoid blasting during adverse weather conditions.	Prior to blasting.
	Restrict blasting between the hours of 9.00 am to 5.00 pm Monday to Saturday.	Prior to blasting.
	Ensure the use of burden distance and stemming so that explosion gasses are almost completely without energy by the time they emerge into the atmosphere.	Prior to blasting.
	Ensure setting of charges in carefully designed sequences and with inter-row delays so as to consistently detonate and provide good progressive release of burden.	Prior to blasting.
	Ensure use of appropriate stemming materials, eg. 20mm aggregates.	Prior to blasting.
	Limit the maximum weight of explosive detonated in a given delay period (MIC) to conservative and proven levels.	Prior to blasting.
	In the event of a blast related complaint undertake an investigation and monitoring at the affected location in consultation with the EPA.	Following blasting.
Air quality		
Site activities conducted without adversely impacting on surrounding sensitive receivers.	Locate the primary crushing plant within the quarry pit which provides topographical shielding from the effects of winds.	During crushing.
	Use dust suppression water sprays on the secondary crushers and screens.	During crushing and screening.
	Use a water truck to wet the active internal roads when vehicles are planned to use those roads and weather conditions require the application of water.	As required.

Desired Outcome	Action	Timing
	Minimise the drop height between front-end loader bucket and trucks carrying raw materials, products or soil through operator training on the management of dust.	Ongoing.
	Ensure drill rig used for drilling blast holes is fitted with dust collectors or uses water injection.	During drilling operations.
	Avoid blasting in strong winds from the eastern quadrant where possible to avoid an increase in short term dust exposure for sensitive receivers.	During blasting.
	In the event of a dust related complaint undertake dust monitoring at the affected sensitive receiver in consultation with the EPA.	Following a complaint.
Surface water		
Minimise the volume of sediment-laden water discharged off site.	Increase the capacity of the sediment pond serving catchment 5 to 0.8ML.	Priority.
	Maintain all catch drains and sediment ponds in good working order.	During operations.
	Maintain clean water diversion bank east of the extraction area to divert clean surface water into existing drainage lines north and south of the extraction area.	Ongoing.
	Ensure adequate free capacity in sediment dams is available to contain expected stormwater inflow by recycling water for dust control.	Ongoing.
Monitor water quality for any discharge of water to the environment.	Monitor water quality in any discharge from the sediment dams for total suspended solids and total oil and grease.	During any discharge event.
Monitoring and Reporting		
Maintain a complaints recording and rectification system.	Maintain a complaints hotline and a database to record all complaints and action taken to resolve any complaint.	Ongoing.
Collect meaningful monitoring data and regularly review performance.	Review all monitoring data on an annual basis and reassess the required monitoring frequency and parameters.	Annually.
Reporting	Report all monitoring results within the Annual Environmental Management Report.	

Table 38 Draft Statement of Commitments

18. Conclusion

The proposal is to increase the amount of aggregate product produced each year from the existing Runnymede Quarry, without increasing the presently approved footprint or overall amount of product to be extracted.

18.1 Justification of the Proposal

The supply of quality aggregate material for use in civil construction in the black soil shires of Moree, Narrabri and other western shires is extremely limited. An increasing number of road and rail upgrading projects, along with mining activity has resulted in an increased demand for these products from State and Local Government and the private sector.

18.2 Site suitability

The development site presently contains a hard rock quarry that has for the past seventeen years been supplying high quality aggregates to the civil construction industry for use in infrastructure projects in the state's northwest. This proposal would not expand on the presently approved development footprint which is located on extensively modified land previously used for farming and grazing.

18.3 Ecologically Sustainable Development

The term 'ecologically sustainable development' was coined by the Commonwealth Government in June 1990 and is defined as:

> *Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.*

ESD Working Groups were subsequently established and involved representatives of government, industry, environment, union, welfare and consumer groups. The ESD Working Groups developed a series of policy directions and recommendations which provided the foundation for development of the *National Strategy for Ecologically Sustainable Development*.

The National Strategy for Ecologically Sustainable Development was endorsed by the Council of Australian Governments in December 1992. In addition, the Intergovernmental Agreement on the Environment (IGAE) was signed in 1992 by Federal and State Governments, Territories and the Australian Local Government Association, promoting intergovernmental cooperation.

ESD is a concept now firmly entrenched in NSW environmental legislation and government policy. The concept of ESD has been given legal definition in NSW by the Protection of the Environment Administration Act 1991 (NSW). Section 6(1)(a) of that Act requires the NSW DECCW (now Environment and Heritage) which was established by the Act, in its role in protecting, restoring and enhancing the quality of the environment in NSW, to have regard to the need to maintain ecologically sustainable development requiring the effective integration of economic and environmental considerations in decision making processes.

Schedule 2 of the EP&A Regulation clearly establishes four guiding principles to assist in achieving ESD, as follows:

- **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.
- **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.

- **Conservation of biological diversity and ecological integrity** – namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.
- **Improved valuation and pricing of environmental resources** - namely, that environmental factors should be included in the valuation of assets and services, such as polluter pays, full life cycle costing, and utilising incentive structures/market mechanisms to meet environmental goals.

The EPBC Act also identifies a fifth principle for consideration in environmental impact, namely:

> *Decision making processes should effectively integrate long term and short term economic, environmental, social and equitable considerations.*

These five principles are interrelated and need to be considered both individually and collectively as part of determining whether or not a project would contribute to, or be consistent with the principles of ESD in Australia.

18.3.1 Precautionary Principle

The IGAE in its definition of the precautionary principle advises that both public and private decisions should undertake the following:

- *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and*
- *an assessment of the risk-weighted consequences of various options.*

The proponent has taken on board the 'precautionary principle' for the quarry, as represented by investigation of alternative locations and through the detailed investigations undertaken to determine the characteristics of the environment, and the likely impacts associated with the preferred option at development site.

The identification of potential impacts to the environment through environmental studies undertaken as part of the EA has enabled the proposed project to be designed to avoid significant environmental impacts, and allowed environmental management measures to be developed to manage potential impacts to ensure that significant adverse environmental impacts are prevented.

Environmental monitoring of the operations and the recommended safeguards would also be undertaken for the life of the quarry, to ensure that the environmental impacts are appropriately managed and adjustments made to ensure environmental strategies and goals are met for the proposal.

18.3.2 Intergenerational Equity

The principle of 'intergenerational equity' requires that decisions made by the present generation would not result in a degradation of the environment for future generations.

The proposed increase in annual output from the quarry would have minimal long-term impacts on the environment as a result of there being no increase in the overall footprint which would prevent or mitigate significant impacts on the environment, and in particular on biodiversity, water resources and adjoining landowners.

The operational impacts associated with the quarry, such as the impacts of dust and noise, are managed through the implementation of environmental management measures, and are reversible in nature, that is, they relate to the operational phase of the quarry and would cease once the resource extraction was completed, and would therefore not result in significant environmental degradation for future generations.

The design and management of the quarry would ensure that environmental impacts are managed during the operational phase of the quarry and would not result in significant long term environmental damage, thereby meeting the principle of 'intergenerational equity'.

18.3.3 Social Equity

Social equity involves value concepts of justice and fairness so the basic needs of all sectors of society are met and that there is a fair distribution of costs and benefits to improve the well-being of the population. Social equity does not imply equality, but that there should be equal access to opportunities for improved welfare.

The proposal is consistent with the principles of social equity through the efficient use of a resource that provides fair and wide-ranging benefits to society. The proposed increase in production will ensure a timely supply of high quality aggregates for use in road, rail and civil construction projects in the state's northwest region at a rate of 300,000 tonnes per year for a 30 year period.

18.3.4 Biological Diversity and Ecological Integrity

The principle of 'biological diversity and ecological integrity' requires a full and diverse range of plant and animal species to be maintained and conserved.

The quarry would be developed on previously cleared farmland and the impacts would be confined largely to planted pasture species. In this regard, no native vegetation was removed to facilitate the operation of the quarry. As the pasture species would be replanted once quarry operations are concluded the impacts would be short-term and reversible.

The terrestrial ecology investigations undertaken to inform the EA concluded that the increased production from the quarry is unlikely to have significant impacts on flora and fauna species or habitat.

Monitoring of the environmental safeguards and environmental impacts would be carried out for the lifetime of the project.

The proposed increased production from the quarry would not impact on ecosystems, species and genetic diversity and therefore meets the principle of biological diversity and ecological integrity.

18.3.5 Valuation and Pricing of Environmental Resources

The IGAE and POEO Act require improved valuation, pricing and incentive mechanisms to be included in policy making and program implementation. In the context of environmental assessment and management, this would translate to environmental factors being considered in the valuation of assets and services.

Integration of environmental and economic goals is a key principle of ESD, which can be measured undertaking a cost-benefit analysis, that is, by measuring the costs of proceeding with a project against the benefits arising from the project.

Given the different values placed on an environment, and the various components of an environment, it is difficult to assign a monetary value against the environmental costs and benefits associated with the project. Given this, the approach adopted for this project is the management of environmental impacts through appropriate safeguards, and to include the cost of implementing recommended safeguards and rehabilitation in the total cost of the project.

Relevant to the consideration of the valuation and pricing of environmental resources are the environmental assessment and alternative options which have been developed during the original planning of the quarry.

The value of the environment is also managed through the legislative process by imposing financial penalties or requirements to rehabilitate on persons responsible for polluting the environment.

The applicant would implement the safeguards and monitoring requirements outlined in the EA to minimise environmental impacts caused by the proposed increase in output from the quarry, and to minimise the potential for pollution to occur.

18.3.6 Benefits of the Proposal

Approval of the proposal would ensure the timely, ongoing supply of high quality aggregates for road and rail construction and civil engineering works to State and local government and private construction companies. The proposal would maximise the efficient use of existing quarry infrastructure through achieving a production rate that fully utilises its production capacity.

The increased production would permit the quarry to satisfy the needs of State and local government authorities and private companies for construction materials, safeguard the jobs of existing employees and provide additional employment in an area of growing unemployment and associated outmigration of working age residents and their families.

Once resource extraction is complete the disturbed area would be rehabilitated by sowing improved pastures and returned to grazing.

19. Statement

I certify that I have prepared the contents of this EA and to the best of my knowledge:

- *it is in accordance with section 75 of the Environmental Planning and Assessment Act 1979 and the Director General's Requirements;*
- *it contains all available information that is relevant to the environmental assessment of the development to which this statement relates; and*
- *it is true in all material particulars and does not, by its presentation or omission of information, materially mislead.*

Name: Peter Taylor B.Sc. MEIANZ
Director
SMK Consultants

Signature:
Date: 11-7-13

20. References

Australian Bureau of Statistics. 1996-2001. *Census of Population and Housing.* Commonwealth of Australia, Canberra.

Australian Heritage Commission. 2002. *Ask First: A guide to respecting Indigenous heritage places and values.* AHC, Canberra.

Australian Government. 2006. *Mine Rehabilitation.* Department of Industry, Tourism and Resources, Canberra.

Australian Greenhouse Office, 2004. *AGO Factors and Methods Workbook.* Commonwealth of Australia, Canberra.

Australian and New Zealand Environment Council. 1990. *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration.* ANZEC, Canberra.

Cunningham, G. Mulham, W. Milthorpe, P. & Leigh, J. 1981. *Plants of Western New South Wales.* NSW Government Printing Office, Sydney.

Department of Climate Change. 2009. *National Greenhouse Accounts (NGA) Factors.* Commonwealth of Australia, Canberra.

Department of Climate Change. 2009. *National Greenhouse and Energy Reporting System Measurement: Technical Guidelines for the estimation of greenhouse gas emissions by Facilities in Australia.* Commonwealth of Australia, Canberra.

Department of Environment and Climate Change. 2008. *Guidelines for development adjoining Department of Environment and Climate Change land.* DECC, Sydney.

Department of Environment and Climate Change. 2008. *Managing Urban Stormwater: Soils and Construction. Volume 2E Mines and quarries.* DECC, Sydney.

Department of Environment and Climate Change. 2009. *Aboriginal Heritage Information Management System (AHIMS).* DECC, Sydney.

Department of Environment and Climate Change. 2009. *Interim Construction Noise Guideline.* DECC, Sydney.

Department of Environment and Climate Change. 2009. *Operational Policy: Protecting Aboriginal Cultural Heritage.* DECC, Sydney.

Department of Environment and Climate Change. 2009. *Aboriginal Cultural Heritage: Draft Community Consultation Requirements for Proponents.* DECC, Sydney.

Department of Environment and Conservation. 2005. *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales.* DEC, Sydney.

Department of Environment and Conservation. 2005. *Aboriginal Scarred Trees in New South Wales: A field manual.* DEC, Sydney.

Department of Environment and Conservation. 2006. Combined geographic and habitat search – Castlereagh-Barwon region. www.threatenedspecies.environment.nsw.gov.au/tsprofile

Department of Environment and Conservation. 2007. *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.* DEC, Sydney.

Department of the Environment and Heritage. 2006. *Significant Impact Guidelines: Matters of National Environmental Significance.* Commonwealth of Australia, Canberra.

Department of Urban Affairs and Planning. 1996. *Extractive Industries Quarries: EIS Guideline.* DUAP, Sydney.

Department of Urban Affairs and Planning. 1998. *Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land.* DUAP, Sydney.

Doley, D. 2006. *Airborne particulates and vegetation: Review of physical interactions.* Clean Air and Environmental Quality, Vol 40 No. 2. May 2006.

Environment Australia. 2000. *Emission Estimation Technique Manual for Mining and Processing of Non-Metallic Minerals V2.0.* NPI, Canberra.

Flower, DJM. Sanjayan, JG. 2007. *Green House Gas Emissions due to Concrete Manufacture.* Int J LCA 12 (5) 282-228.

Frankel. D. 1991. *Remains to be seen: archaeological insights into Australian prehistory.* Longman Australia, Melbourne.

Kearle, A. Gosper, C. Achurch, H. & Laity, T. 2002. *Darling Riverine Plains Bioregion Background Report.* Department of Environment and Conservation, Dubbo NSW.

Landcom. 2004. *Soils and Construction: Managing Urban Stormwater.* NSW Government, Sydney.

Leven, H. 1988. *The Earth Through Time.* Saunders College Publishing, New York.

Linacre, E. & Hobbs, J. 1987. *The Australian Climatic Environment.* John Wiley & Sons, Brisbane.

Long, A. 2005. *Aboriginal Scarred Trees in NSW.* Department of Environment and Conservation, NSW.

Menkhorst, P. & Knight, F. 2004. *A Field Guide to the Mammals of Australia.* Oxford University Press, Melbourne.

Moore, P. 2005. *A Guide to Plants of Inland Australia.* Reed New Holland, Sydney.

NSW Department of Environment and Conservation. 2004. *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities.* DEC, Sydney.

NSW Department of Land & Water Conservation. 1997. *The NSW State Groundwater Policy Framework Document.* DLWC, Sydney.

NSW Department of Land & Water Conservation. 1998. *The NSW Groundwater Quality Protection Policy.* DLWC, Sydney.

NSW Department of Land & Water Conservation. 2002. *The NSW State Groundwater Dependent Ecosystems Policy.* DLWC, Sydney.

NSW Environment Protection Authority. 1999. *Environmental criteria for road traffic noise.* EPA, Sydney.

NSW Environment Protection Authority. 2000. *NSW Industrial Noise Policy.* EPA, Sydney.

NSW Government. 1979. *Environmental Planning and Assessment Act 1979.* NSW Government, Sydney.

NSW Government. 2000. *Environmental Planning and Assessment Regulation 2000.* NSW Government, Sydney.

NSW Government. 1974. *National Parks and Wildlife Act 1974.* NSW Government, Sydney.

NSW Government. 1997. *Protection of the Environment Operations Act 1997.* NSW Government, Sydney.

NSW Government. 2000. *Protection of the Environment (Noise Control) Regulation 2000.* NSW Government, Sydney.

NSW Government. 1995. *Threatened Species Conservation Act 1995.* NSW Government, Sydney.

NSW Government. 2002. *Threatened Species Conservation Regulation 2002.* NSW Government, Sydney.

NSW Government. 1912. *Water Act 1912.* NSW Government, Sydney.

NSW Government. 2000. *Water Management Act 2999.* NSW Government, Sydney.

NSW Government. 2004. *Water Management (General) Regulation 2004*. NSW Government, Sydney.

NSW Government. 2007. *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries)*. NSW Government, Sydney.

NSW Government. 2005. *State Environmental Planning Policy (Major Projects)*. NSW Government, Sydney.

NSW Government. 1998. *State Environmental Planning Policy No. 55 – Remediation of Land)*. NSW Government, Sydney.

NSW Government. 1995. *State Environmental Planning Policy No. 44 – Koala Habitat Protection.* NSW Government, Sydney.

NSW Government. 1992. *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development.* NSW Government, Sydney.

NSW Government. 1997. *Guidelines For Assessing Social Impacts.* Social Policy Development Unit, The Cabinet Office, Sydney.

NSW National Parks and Wildlife Service. 1997. *Aboriginal Cultural Heritage Standards & Guidelines Kit.* NPWS, Sydney.

NSW National Parks and Wildlife Service. 1998. *Threatened Species Management: Species Information.* NPWS, Sydney.

NSW National Parks and Wildlife Service. 1999. *Endangered Fauna of Western New South Wales.* NPWS, Sydney.

Pizzey, G. & Knight, F. 2002. *The Field Guide to the Birds of Australia.* Harper Collins Publishers. Sydney.

Resource and Conservation Assessment Council. 2002. *Aboriginal Cultural Heritage Assessment: Brigalow Belt South Stage 2 Final Report.* Resource and Conservation Division, Planning NSW.

Saunders, D. & Hobbs, R. eds.1991. *The Role of Corridors.* Surrey Beatty & Sons Pty Ltd, Sydney.

Skinner, B. & Porter, S. 1987. *Physical Geology.* John Wiley & Sons, New York.

Smith, P. Lawrie, J. Welch, A. & Wiecek, D. 2004. *Developing a land capability system for the Western Plains of New South Wales.* Australian New Zealand Soils Conference. University of Sydney. (www.regional.org.au/au/asssi/).

Triggs, B. 2004. *Tracks, Scats and Other Traces.* Oxford University Press, Melbourne.

Appendices

Appendix 1 – Correspondence

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.

- **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.

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.

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.

ATTACHMENT No. 2

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

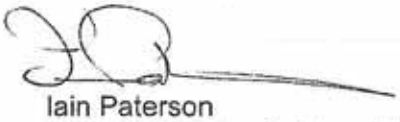
PO Box 344 Hunter Region Mail Centre NSW 2310
516 High Street Maitland NSW 2320

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

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.

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

- 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;

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

- 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.

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

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.

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

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.

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)

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).

- 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

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

- 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.

- 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).

NSW EPA
ENVIRONMENT PROTECTION AUTHORITY

E-MAILED
25-1-12

RECEIVED
27 JAN 2012
Gwydir Shire Council

Your reference: 1568/2011:11/11746: grp:pmc
Our reference: DOC12/2634 LIC09/1017-03
Contact: Lindsay Fulloon (02) 6773 7000
Date: 25 January 2012

Mr Max Eastcott
General Manager
Gwydir Shire Council
Locked Bag 5
BINGARA NSW 2404

Attn: Mr Glen Pereira

Dear Mr Eastcott

Request to Stop the 'Deemed Development Clock' for Application to Modify Development Consent (No. 1568/2011), Johnstone Ready mixed Concrete Pty Ltd, Runnymede Quarry, 530 Gil Gil Creek Road, Pallamallawa.

On the 19 January 2012, the Environment Protection Authority (EPA) received a copy of the Notice of Proposed Modification of Development Consent forwarded to it by Gwydir Shire Council for the variation of operating hours at the Johnstone Ready Mixed Concrete Pty Ltd Runnymede Quarry located on Lots 52 & 53 in DP751093, 530 Gil Gil Creek Road, Pallamallawa. This matter was referred to the EPA as integrated development, further to the licensing requirements of the *Protection of the Environment Operations Act 1997*.

Further to clause 110(2) of the *Environmental Planning and Assessment Regulation 2000* an approvals body can request additional information and stop the 'deemed development clock' within 25 days of receiving a matter referred to it by a consent authority.

The EPA has reviewed the EIS and found that it has insufficient information to enable it to consider issuing its General Terms of Approval (GTAs) for the proposal. The EPA therefore requests that Council 'stops the deemed development clock' and requests the information detailed in Attachment A from the applicant. In summary, the EPA requires additional information with regard to the following issues:

1. Noise impacts; and
2. Air Quality/Dust

It is also noted that while the EPA has no jurisdiction over haul truck traffic once it enters the public road network from the project site, this has been the subject of considerable public concern and complaint. It is noted that the proponent has implemented a set of Haulage Contractor Guidelines in an attempt to mitigate the impacts of truck traffic along the gravel roads servicing the site However, the EPA strongly recommends that Council seriously considers requiring the proponent to implement and maintain other measures such as sealing sections of the relevant roads in sensitive locations (e.g. where the road passes in close proximity to residential premises).

PO Box 494 Armidale NSW 2350
85 Faulkner Street Armidale NSW
Tel: (02) 6773 7000 Fax: (02) 6772 2336
ABN 30 841 387 271
www.environment.nsw.gov.au

Should you require any further information, please do not hesitate to contact Mr Lindsay Fulloon of this office on (02) 6773 7000.

Yours sincerely

Robert O'Hern
Head Regional Operations Unit - Armidale
NSW Environment Protection Authority

Attachment A

Issue 1 – Noise Impacts

The Schedule to the Section 96 Application (prepared by SMK Consultants) referred to the EPA by Gwydir Shire Council with the modification application, does not provide an assessment of the potential noise impacts of the proposed varied operating hours in accordance with the requirements of the *NSW Industrial Noise Policy* (INP). The following inadequacies were noted by the EPA:

1. The assessment of background noise has not been completed in accordance with the appropriate method (long-term) for determining background noise (see Appendix B of the INP) as monitoring was not undertaken over the required time-period, nor did it incorporate appropriately documented attended noise monitoring;
2. The definition of Project Specific Noise Levels (PSNLs) does not appear to have followed the process defined in the INP (see figure 1.3 in the INP), rather the amenity criteria appear to have been adopted as appropriate potential noise limits without justification, when the intrusiveness criterion (of 30dBA RBL + 5 dB = 35dBA) should be applied as it is lower than the amenity criteria;
3. The calculated predictions of noise impacts are not supported by attended monitoring data at the nearest receptor locations. Rather they based on the extrapolation of unattended noise monitoring data collected at one location (i.e. at the quarry premises within 50 metres of the noise sources), rather than noise modelling techniques. The data collected at Location 2 (approx. 2600 m from the quarry) does not appear to support the predictions for the nearest receptor (2700m from the noise sources) as the monitoring data exceeds the predicted impacts by more than would be expected due to the 100m difference in distances from the quarry noise sources. This may be due to the unattended nature of this data and the possible involvement of other extraneous noise sources. Separate predictions have not been calculated for each of the daily time periods required by the INP. Some attempt to verify these predictions with appropriately documented attended noise monitoring at receptor locations and other distances from the quarry noise sources is necessary;
4. There appears to have been no analysis of the potential impacts of the proposed variations to the quarry's operating times. For example, it is not clear if the operation of primary crushing and screening equipment within the quarry void from 6am is likely to exceed the relevant night time noise criteria (likely to be 35 dBA) at the nearest receptor. Nor have the noise impacts of the proposed provision for exceptional circumstances (potentially 24 hour operations 6 to 7 days per week) been quantified; and
5. Many of the proposed noise mitigation measures (e.g. only operating primary crushing and screening equipment before 7am, vehicle traffic speed limits etc) are heavily reliant on operational staff abiding by the measures to be implemented via the proposed Operational Environmental Management Plan. The modification application must incorporate a description of how compliance with these requirements will be monitored, documented and recorded by the proponent. Monitoring and recording measures must be incorporated that enable the proponent to demonstrate compliance (or otherwise) with the proposed mitigation measures.

Additional information required:

To enable the EPA to consider issuing its General Terms of Approval for the development, the proponent must provide:

- An assessment of background noise completed in accordance with the long-term method defined in Appendix B of the INP for each time period (i.e. Day, Evening and Night);
- PSNL's for the proposal that have been defined in accordance with the processes defined in the INP (see Figure 1.3) for each time period (i.e. Day, Evening and Night); and
- Noise impact predictions should be calculated or modelled for each of the time periods defined in the INP (i.e. Day, Evening and Night);
- Appropriate verification of predicted noise impacts through provision of documented attended noise monitoring data for the closest receptor location(s) and other distances from quarry noise sources;

- An analysis of the impacts of the proposed varied operating hours/scenarios, particularly the operation of the primary crushing and screening plant within the quarry void from 6am until 7am, and the potential 24 hr operation of the quarry under the proposed exceptional circumstances provisions; and
- A description of the monitoring and recording mechanisms that will be employed by the proponent to ensure that its compliance (or otherwise) with the proposed mitigation measures and Operational Environmental Management Plan is documented and reported to the relevant regulatory authorities, including the EPA.

Issue 2 – Air Quality/Dust

The Air Quality assessment provided within the schedule to the Section 96 application (prepared by SMK Consultants) of the modification application does not assess the likely air/dust emissions from the site within the context of the prevailing meteorological conditions. Rather it relies solely on the results from existing depositional dust monitoring at two locations, without determining whether these adequately represent the locations most impacted by the quarry's operations. The likely impact of the requested variation to operating hours in dust/air quality impacts have not been quantified through appropriate modelling or calculations based on representative operational emissions data. Other air emissions and their impacts (i.e. TSP, PM_{10} and $PM_{2.5}$) have not been assessed to determine whether the proposed varied operating hours will expose receptors to impacts that exceed accepted exposure criteria.

Furthermore, there is no discussion of the measures that will be employed to minimise dust emissions from the premises to ensure compliance with its Environment Protection Licence and the *Protection of the Environment Operations Act 1997* (sections 124 to 127). It potentially forms an offence for an activity to be carried out in such a manner as to cause air pollution, if this is caused by an operator's failure to carry out its activities in a proper and efficient manner. The application of best practice management dust mitigation is therefore an expectation of the EPA, and the modification application needs to define the mechanisms that will be utilised at the site to achieve this outcome.

Furthermore the modification application needs to demonstrate that such measures can be successfully applied at the site. In particular, this analysis should include a water balance that quantifies the water required for continual operation of best practice dust suppression processes and demonstrates that sufficient water is available to maintain best practice dust suppression measures at all times under the proposed operational scenarios (including the requested provision for 24 hour operations under exceptional circumstances).

Additional information required:

To enable THE EPA to consider issuing its General Terms of Approval for the development, the proponent must provide:

- An assessment of air quality impacts at all impacted receptor locations in the context of site meteorological conditions for the full range of relevant air quality parameters (e.g. deposited dust, total suspended particulates, PM_{10} and $PM_{2.5}$) against accepted exposure criteria. This must be based on modelling or calculations that incorporate representative operational emissions data in order to quantify the impacts of the proposed operational scenarios (including the requested provision for 24 hour operations under exceptional circumstances);
- Clear definition of the best practice dust mitigation measures that will be employed at the site; and
- An analysis that demonstrates that the proposed best practice dust mitigation measures can be successfully applied at the site during all operational scenarios. This analysis must include water balance calculations which quantify the water demand of the proposed best practice dust mitigation measures, and which demonstrate that this demand can be met in order to maintain best practice controls under all the proposed operational scenarios, including the requested provision for 24 hour operations in exceptional circumstances.

NSW EPA

Our reference : DOC12/38660 LIC09/1017-03
Contact : Lindsay Fulloon ~ 02 6773 7000 ~ armidale@epa.nsw.gov.au
Date : 17 September 2012

Mr Glen Pereira
Building and Environmental Services Director
Gwydir Shire Council
Locked Bag 5
BINGARA NSW 2404

Dear Mr Pereira

DA1568/2011 – Modification of Development Consent – Johnstone's Runnymede Quarry, 530 Gil Gil Road, Pallamallawa

I refer to the consent modification application for the Johnstone's Runnymede Quarry received by the Environment Protection Authority (EPA) on 19 January 2012, and the additional information provided by the proponent on 12 September 2012 following the EPA's request dated 25 January 2012. After reviewing the consent modification application and the additional information provided by the proponent, the EPA has determined that it will not raise an objection to the approval of the consent modification application subject to Council applying its recommended conditions provided at **Attachment 1**.

If modification approval is granted by Council, the EPA will then be in a position to apply the conditions provided at Attachment 1 to the premises Environment Protection Licence (No. 7379) to enable EPA to regulate the site as the appropriate regulatory authority. The proponent will need to submit a licence variation application to the EPA's Armidale office before they commence operating under any approval for extended hours, otherwise they may be found to be operating in breach of the current licence conditions.

The EPA also notes the agreement reached between the proponent and Gwydir Shire Council with respect to the sealing of haul routes from the quarry, including Gil Gil Creek Road and Mosquito Creek Road. While the EPA has no jurisdiction over haul truck traffic once it enters the public road network from the project site, given the community concerns raised around the dust and safety issues associated with haulage along unsealed roads, it is strongly recommended that Council considers conditioning the development to only permit quarry product haulage along these designated routes.

Please also note that the EPA has not recommended the application of blasting limits in this instance. This decision is based on the fact that the site has operated to date without complaint in respect to this issue. Given that the modification does not involve an increase in production, blasting practices are therefore likely to remain the same as those used historically at the site (i.e. 2 to 4 times per year). Furthermore, the distances to the nearest neighbouring residences are likely to be sufficient to attenuate the overpressure and vibration impacts of blasts of the scale that are likely to be utilised at the site under the proposed operational scenario. The application of blasting limits to the modification approval is therefore not considered necessary at this juncture. However, should the EPA receive complaints in relation to blasting practices at the site in future, it may decide to apply blasting limits and monitoring conditions to the licence to address these issues.

PO Box 494 Armidale NSW 2350
85 Faulkner Street Armidale NSW
Tel: (02) 6773 7000 Fax: (02) 6772 2336
ABN 43 692 285 758
www.environment.nsw.gov.au

If you have any further enquiries about this matter please contact Mr Lindsay Fulloon in our Armidale office on 02 6773 7000 or armidale@epa.nsw.gov.au.

Yours sincerely

Michael Lewis
Acting Head Regional Operations Unit – Armidale
Environment Protection Authority

Encl: Attachment 1 - Consent Modification Approval Conditions Recommended by EPA

Attachment 1: Consent Modification Approval Conditions Recommended by EPA

Limit Conditions

Production Limits

L1.1 Production from the premises must not exceed a total of 120,220 tonnes in any consecutive 12 month period.

Justification: Noise and air assessments provided in support of the modification application indicate that predicted impacts were based on no increase in production. The application of the current rate of production as the production limit is therefore recommended to ensure impacts do not exceed those predicted.

Operating Hours

L2.1 Activities at the premises may only be carried out at the times specified in the table below:

Activity	Monday to Friday	Saturday	Sunday	Public Holidays
Dispatch of trucks to haul aggregate or arrival of trucks delivering products	7.00am to 5.30pm	7.00am to 2.00pm	8.00am to 2.00pm	Nil
Arrival and loading of trucks to haul aggregate	6.30am to 5.30pm	7.00am to 2.00pm	8.00am to 2.00pm	Nil
Light vehicle traffic associated with employees, site residents or light service vehicles entering or leaving the site	24 hours a day	24 hours a day	24 hours a day	24 hours a day
Maintenance of plant and equipment including workshop activity, repairs/alterations to processing equipment and unloaded test runs.	6.00am to 10.00pm	7.00am to 5.00pm	7.00am to 5.00pm	7.00am to 5.00pm
Operation of primary-crushers and associated equipment within the confines of the excavated quarry area	6.00am to 6.00pm	7.00am to 5.00pm	8.00am to 2.00pm	8.00am to 2.00pm
Operation of secondary crushers, sieves, separators, blending, pug-mill and conveyors outside quarry confines	7.00am to 6.00pm	7.00am to 5.00pm	8.00am to 2.00pm	8.00am to 2.00pm
Operation of loaders, excavators, trucks, pre-coating equipment within the lower storage yard area	7.00am to 6.00pm	7.00am to 5.00pm	8.00am to 2.00pm	8.00am to 2.00pm
Drilling	7.00am to 6.00pm	7.00am to 5.00pm	8.00am to 2.00pm	8.00am to 2.00pm
Blasting	9.00am to 4.00pm	Nil	Nil	Nil
Exceptional circumstances – all crushing, loading and product haulage activities within and from the site to enable manufacture and delivery to high priority RTA or Shire Projects only. Haulage outside normal operating hours is to be limited to four (4) trucks only.	24 hours with written notification and approval from Gwydir Shire Council and the Environment Protection Authority	24 hours with written notification and approval from Gwydir Shire Council and the Environment Protection Authority	24 hours in emergencies only with written notification and approval from Gwydir Shire Council and the Environment Protection Authority	Nil

Justification: To amend the approved operating hours as requested by the proponent.

Noise Limits

L3.1 Noise generated from the premises must not exceed the noise limits in the table below. The locations referred to in the table below are defined within the document entitled Runnymede Quarry (Moree) Acoustic Assessment by Vipac Engineers and Scientists Pty Ltd dated 10/9/2012:

Locality and Location	Day LAeq (15 minute)	Evening LAeq (15 minute)	Night LAeq (15 minute	Night LA1 (1 minute)
The residence on the property "Kirkton" as marked in the document entitled *Runnymede Quarry (Moree) Acoustic Assessment* by Vipac Engineers and Scientists Pty Ltd dated 10/9/2012	35 dB(A)	35 dB(A)	35 dB(A)	45 dB(A)
Any other affected residence not owned by the proponent	35 dB(A)	35 dB(A)	35 dB(A)	45 dB(A)

L3.2 For the purpose of the condition above;

a) Day is defined as the period from 7am to 6pm on any day;
b) Evening is defined as the period 6pm to 10pm on any day; and
c) Night is defined as the period from 10pm to 7am on any day.

Note: For the purpose of the noise criteria for this condition, 5dBA must be added to the measurement level if the noise is substantially tonal or impulsive in character.

L3.3 The noise limits set out in the Noise Limits table apply under all meteorological conditions except for the following:

a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
c) Stability category G temperature inversion conditions.

For the purposes of this condition:

d) Data recorded by an appropriate meteorological station (that is located in a situation where it will provide meteorological data that is representative of those at the site) to be nominated by the proponent in writing for approval by the EPA must be used to determine meteorological conditions; and
e) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

L3.4 To determine compliance:

a) with the Leq(15 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located:
   i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
   ii) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
   iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.
b) with the LA1(1 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located within 1 metre of a dwelling façade.
c) with the noise limits in the Noise Limits table, the noise measurement equipment must be located:
   i) at the most affected point at a location where there is no dwelling at the location; or
   ii) at the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.

Note: A non-compliance of the Noise Limits table will still occur where noise generated from the premises in excess of the appropriate limit is measured:

i) at a location other than an area prescribed in part (a) and part (b); and/or
ii) at a point other than the most affected point at a location.

L3.5 For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

Justification: The Acoustic assessment provided in support of the modification application indicates that the relevant noise criteria (established as noise limits above) will not be exceeded under normal operating scenarios. It is not clear whether the proposed provision for 24 hour operations in exceptional circumstances will create additional impacts. As such, EPA recommends that the relevant noise criteria apply as noise limits at all times. Should complaints arise following approved 24 hour exceptional circumstance operations the EPA reserves the right to require noise monitoring to determine whether 24 hour operations exceed the noise limits, and to require the proponent to approach any receptors potentially impacted by 24 hour operations in exceptional circumstances and negotiate acceptable noise agreements in accordance with the NSW Industrial Noise Policy with respect to these short duration, infrequent impacts.

Where negotiated agreements are reached with respect to the 24 hour operations during exceptional circumstances approved further to condition L2.1, the EPA may vary the licence to amend the noise limits applying to operations during approved exceptional circumstances for the relevant receptors.

Monitoring Conditions

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Air Monitoring Requirements

Pollutant	Units of measure	Frequency	Sampling method
PM10	Micrograms per cubic metre	Special frequency 1	AM-18
Solid Particles	Grams per square metre per month	Special frequency 1	AM-19

Note: For the purposes of this condition, Special Frequency 1 means sampling as required from time to time in writing by the EPA.

Justification: The air assessments provided in support of the modification application compared the proposed operating scenarios to existing air emissions. This comparison has predicted that dust and PM10 emissions will be reduced by the proposed reduction in operational intensity. However, the supporting assessment of current site emissions against relevant air emissions criteria was limited to a single 24-hour period. Air quality impacts at the nearest surrounding residences may vary with meteorological conditions and may therefore be higher than measured at times.

While the EPA notes that complaints regarding dust emissions from the quarry premises have not been received from the closest residents to the site to date, the EPA recommends applying air monitoring conditions to the modification approval that can be triggered in the event that complaints are received following the commencement of the extended operating hours given the extremely limited nature of the monitoring that has been undertaken to date. This will enable the EPA to determine whether impacts exceed relevant criteria and require mitigation works if necessary to protect surrounding residents.

Appendix 2 – Current Development Approvals and EPL for Runnymede Quarry

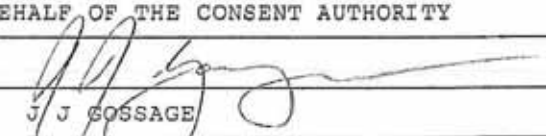
ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 1994

Notice of Determination of Development Application

Issued under the Environmental Planning and Assessment Act 1979 Section 92

DEVELOPMENT APPLICATION	
Applicant Name:	Johnstone Ready Mixed Concrete
Applicant Address:	PO Box 941 (Kurrajong Street)
	MOREE NSW 2400
Land to be Developed: (address)	"Runnymeade", Mosquito Creek Road, Warialda
	Portion 52, 53 Parish Bullala, County of
Proposed Development:	Burnett, Shire of Yallaroi
	DP 751093J

DETERMINATION	
Made On (date)	19 May 1995
Determination	[ ] Consent granted Unconditionally [X] Consent granted subject to conditions below [ ] Application refused
Consent to Operate from (date)	19 May 1995
Consent to Lapse on (date)	19 May 2000
Details of Conditions (including Section 94 (conditions)	(1) That quantities of materials of all types extracted are not to exceed 20,000 cubic metres per annum. (2) That a plan for soil conservation and rehabilitation be prepared in conjunction with the Soil Conservation Service be submitted to Council for approval within a period of three (3) months from the date of consent. (3) The proposed improvements to Road 16 be carried out in conjunction with the Council's Manager of Engineering and Technical Services. (cont. over)

Details of Conditions (cont.)	(4) That the applicant meet with Council's representatives to discuss future maintenance of roads within the area. (5) That necessary licenses be obtained from EPA and Mines Department.
Reasons for Conditions/Refusal	(1) So as to comply with schedule 3 of the EPA Act. (2) To ensure proper conservation and rehabilitation programs and methods are put in place. (3) To ensure that Council standards are maintained. (4) To create an avenue for agreement for maintenance assistance. (5) Statutory requirement.
Right of Appeal	If you are dissatisfied with this decision, section 97 of the Environmental Planning and Assessment Act 1989 gives you the right to appeal to the Land and Environment Court within 12 months after the date on which you receive this notice.
SIGNED ON BEHALF OF THE CONSENT AUTHORITY	
Signature:	
Name:	J J COSSAGE
Date:	24 May 1995

OK to sign

COUNCIL OF THE SHIRE OF YALLAROI

Hope Street, WARIALDA NSW 2402
PO Box 93, WARIALDA NSW 2402

Telephone: 067 291 016
Facsimile: 067 291 400

All communications to be addressed to
General Manager

If phoning or calling ask for:

Our Ref:

Your Ref: 267/1 64/94/95/194: RM: CG

24 October 1995

Mr I Johnstone
PO Box 941
MOREE NSW 2400

Dear Sir

Please find attached a notice of determination of your development application for "Runnymede".

You will note the conditions attached to such notice or determination and it is necessary for you to satisfy each of these to finalise the details, by notifying Council of each approval and submitting required plans within the permitted times.

Council will prepare an agreement for the road maintenance and contribution to improvements, based on the details contained in the survey, for your consideration. It is necessary for the agreement to be in writing for the future as Councillors and staff will change and there is a commitment required on both sides. It will be forwarded within the next week.

I look forward to arriving at a satisfactory arrangement.

Yours faithfully

J J GOSSAGE
GENERAL MANAGER

enc

ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 1994

Notice of Determination of Development Application

Issued under the Environmental Planning and Assessment Act 1979 Section 92

DEVELOPMENT APPLICATION	
Applicant Name:	Johnstone Ready Mixed Concrete
Applicant Address:	PO Box 941
	MOREE NSW 2400
Land to be Developed: (address)	"Runnymede" Mosquito Creek Rd, Warialda
	Lots 52, 53 Parish Bullala County Burnett
Proposed Development:	Quarry for Blue Metal and Road Base
	together with crushing on site.

DETERMINATION		
Made On (date)		20 October 1995
Determination	☐	Consent granted Unconditionally
	X	Consent granted subject to conditions belqw
	☐	Application refused
Consent to Operate from (date)		20 October 1995
Consent to Lapse on (date)		20 October 2000
Details of Conditions (including Section 94 (conditions)		For details of Conditions please see attachment to this determination.

Reasons for Conditions/Refusal	(1) So as to ensure erosion control and restoration is properly planned and executed. (2) To ensure that soil is available for rehabilitation and top dressing of batters. (3) To provide stability to disturbed soils where necessary. (4) These are statutory requirements of the Government Agencies. (5) It is in both parties interest to ensure that the roads, to be utilised for transport of gravel, do not deteriorate and in fact are improved to cater for the increased usage.
Right of Appeal	If you are dissatisfied with this decision, section 97 of the Environmental Planning and Assessment Act 1989 gives you the right to appeal to the Land and Environment Court within 12 months after the date on which you receive this notice.
SIGNED ON BEHALF OF THE CONSENT AUTHORITY	
Signature:	
Name:	J J GOSSAGE
Date:	24 October 1995

CONDITIONS

(ATTACHMENT TO NOTICE OF DETERMATION OF DEVELOPMENT APPLICATION FOR JOHNSTONE READY MIXED CONCRETE)

(1) That an erosion and sedimentation plan be prepared for the extraction, plant and stockpile sites to the guidelines and specification of the Department of Land and Water Conservation. Such plan to include the following matters and be submitted within three (3) months of date of consent -

* A site plan showing permanent work to control runoff and sedimentation.
* Temporary runoff erosion and sedimentation works to be implemented as required.
* Proposed clearing/staging of clearing of native vegetation.
* Staging of the implementation of permanent/temporary erosion and sedimentation control works.
* Revegetation of each stage of proposed rehabilitation.
* Progressive rehabilitation of site.
* Staging of extraction, proposed batter grades and final landforms.
* Topsoil removal, stockpiling and replacement.
* Maintenance strategies for all control measures to ensure they continue to operate to design capacities.

(2) Topsoil to be retained on site for rehabilitation.

(3) The access roads to and within the site to be protected with appropriate erosion and sediment control works. All disturbed areas excluding the road to be sown with a recommended seed/fertilizer mixture.

(4) That all necessary approvals and licenses are obtained from the Environmental Protection Authority and the Department of Mineral Resources.

(5) That acceptable arrangements to both parties are made so as to maintain roads in a reasonable condition and improve poor areas identified in survey.

Section 55 Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 7379

NSW GOVERNMENT | Environment, Climate Change & Water

Licence Details

Number:	7379
Anniversary Date:	25-June

Licensee

JOHNSTONE; IAN ANTHONY
PO BOX 941
MOREE NSW 2400

Licence Type

Premises

Premises

'RUNNYMEDE'
GIL GIL ROAD
PALLAMALLAWA NSW 2399

Scheduled Activity

Crushing, grinding or separating
Extractive activities

Fee Based Activity	Scale
Land-based extractive activity	> 100000 - 500000 T obtained

Region

North West - Armidale
Level 1, NSW Govt Offices, 85 Faulkner Street
ARMIDALE NSW 2350
Phone: 02 6773 7000
Fax: 02 6772 2336

PO Box 494 ARMIDALE
NSW 2350

Environment Protection Licence

Licence - 7379

NSW GOVERNMENT | Environment, Climate Change & Water

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

JOHNSTONE; IAN ANTHONY
PO BOX 941
MOREE NSW 2400
JOHNSTONE; LEE- ANNE ROBYN
PO BOX 941
MOREE NSW 2400
JOHNSTONE; PAUL FRANCIS
PO BOX 941
MOREE NSW 2400
JOHNSTONE; JULIE MARGARET
PO BOX 941
MOREE NSW 2400

subject to the conditions which follow.

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Crushing, grinding or separating
Extractive activities

Fee Based Activity	Scale
Land-based extractive activity	> 100000 - 500000 T obtained

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
'RUNNYMEDE'
GIL GIL ROAD
PALLAMALLAWA
NSW
2399
LOT 52 & 53 DP751093, PARISH OF BULLALA, COUNTY OF BURNETT

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identification no.	Type of monitoring point	Type of discharge point	Description of location
1	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 300 metres to the north-east of the Runnymede residence as shown on map titled 'EPA Identification Points' dated 13/11/06.
2	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from the final sediment basin located approximately 250 metres to the west of the Runnymede residence and within the catchment of the washing plant for the precoat product, as shown on map titled ' EPA Identification Points" dated 13/11/06.
3	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 400 metres to the south of the Runnymede residence and south of the stockpiles and main crushing plant area as shown on map titled 'EPA Identification Points' dated 13/11/06.
4	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 150 metres south of the Runnymede residence and west of the stockpiles and main crushing plant area, as shown on map titled "EPA Identification Points' dated 13/11/06.
5	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow from sediment basin located approximately 700 metres to the south of the Runnymede residence and south of the stockpiles and main crushing plant area, as shown on map titled "EPA Identification Points' dated 13/11/06.

3 Limit conditions