Executive Summary

INTRODUCTION

This *Environmental Assessment* has been prepared to support an application by Rocla Pty Ltd ("Rocla") for project approval to extract and process sand ("the Project") from within 76 ha of land within the "Green Valley" property (the "Project Site") adjacent to Hume Highway near its crossing of Paddys River. The Project Site is located approximately 28km southwest of Berrima and 14km northeast of Marulan. **Figure A** locates the Project Site.

The bulk of the Project Site has previously been used in part for pine plantations, grazing and timber harvesting. The Project Site is largely freehold land, however, it incorporates an area of Crown land with roads (one section of former Hume Highway) that provide access to and use of the "Freestone" hill for two communications towers at that location.

The Project is classified as a Major Project in accordance with Paragraph 5, Schedule 1 of the *State Environmental Planning Policy (Major Development) 2005* and the Minister for Planning is the approval authority. As a Major Project, it would be assessed under Part 3A of the *Environmental Planning and Assessment Act 1979* and an *Environmental Assessment* report is required to be prepared.

This summary introduces Rocla as the Proponent, provides relevant background to the Project, presents an overview of the Project design, operational safeguards that would be adopted in the Project, and summarises the predicted Project-related impacts on the environment.

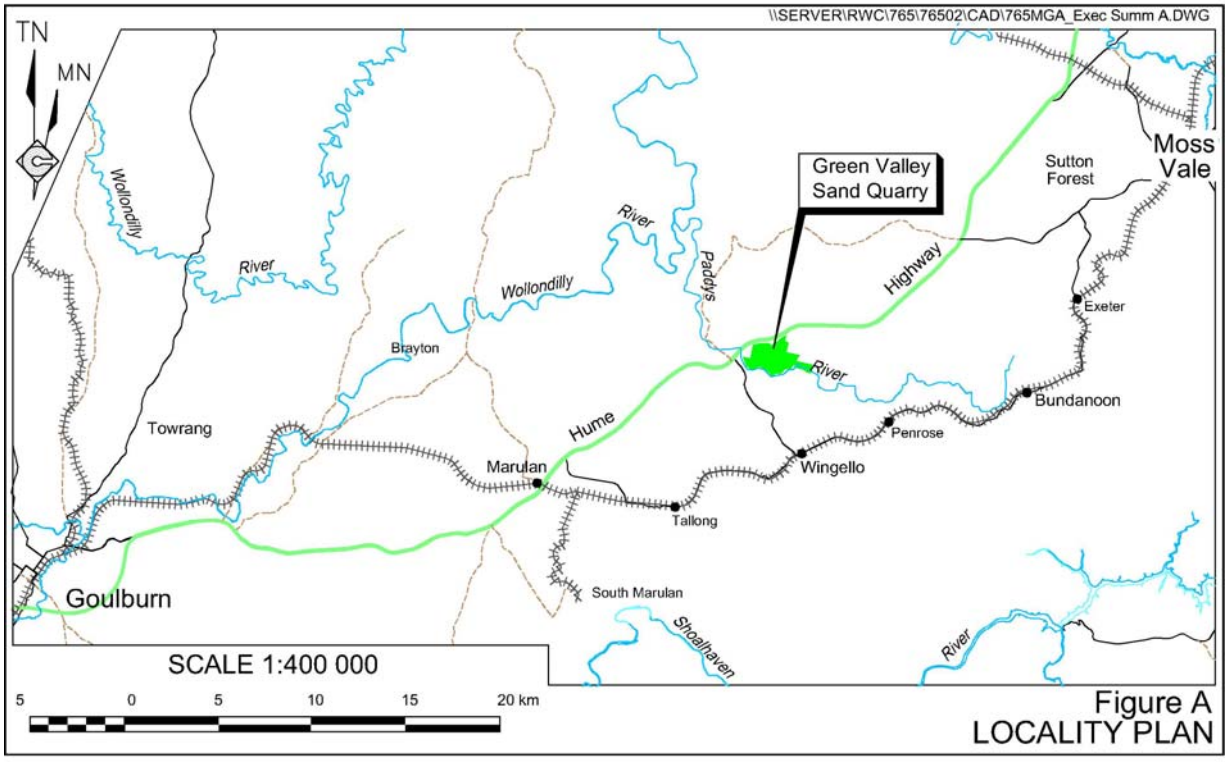


Figure A
LOCALITY PLAN

THE PROPONENT

The Proponent for the proposed Green Valley Sand Quarry is Rocla Pty Ltd. Rocla has entered into an agreement with the owner of the "Green Valley" property that enables Rocla to lease a section of the property to undertake the extraction and processing outlined in this document. Rocla is a wholly-owned subsidiary of Fletcher Building from New Zealand.

PLANNING INSTRUMENTS

The Project Site lies within an area categorised as Zone E3 (Environmental Management) under Wingecarribee Local Environmental Plan 2010. The Project Site is located within an area designated as "Identified and Potential Extractive Material" and, as such, sand extraction would be permissible within the Project Site.

The Project would be developed and operated in accordance with a number of State and local planning instruments listed below.

- State Environmental Planning Policy (Major Development) 2005,
- State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
- State Environmental Planning Policies 33, 44 and 55,
- Illawarra Regional Environmental Plan No 1,
- Drinking Water Catchments Regional Environmental Plan No 1,
- Wingecarribee Local Environmental Plan 2010,
- Wingecarribee Strategic Plan 2002.

The following approvals and licences would be required in addition to the project approval.

- An Environment Protection Licence from the Department of Environment, Climate Change and Water (DECCW) under Section 47 of the *Protection of the Environment Operations Act 1997* for the extraction and processing activities.
- A licence from DECCW under Part 5 of the *Water Act 1912* to account for groundwater in-flow during the extraction operations.
- A licence from DECCW under Part 5 of the *Water Act 1912* for the pumping of water from the Berry Formation for use on site.
- An approval from the Department of Water and Energy under Sections 91 and 92 of the *Water Management Act 2000* for the activities proposed within 40m of the bank of Paddys River.
- A Section 138 Permit from the RTA under the *Roads Act 1993* for the construction of the two intersections with the Hume Highway.

PROJECT BACKGROUND

Government-sponsored studies of current and potential sources of construction sand for Sydney have confirmed that fine-grained sand sourced from within the Sydney basin would soon be in critically short supply (Geos Mining, 2006). Rocla, as the major supplier of fine sand to the Sydney construction industry, is aware of the declining fine sand resource base at the existing fine sand quarries. As such, Rocla recognises the need to identify and develop new sand sources to meet the ongoing need for fine sand in New South Wales.

Rocla has identified the "Green Valley" property as a potential resource area for the extraction and processing of fine sand particularly to supply the construction industry servicing the southwestern suburbs of Sydney. Following an exploration

program involving the drilling of 22 holes on the "Green Valley" property, Rocla reached an agreement with the owner of the "Green Valley" property to undertake further investigations including a range of environmental studies to progress its application for project approval. The findings of the environmental studies, and matters relating to planning, Project development and operation, rehabilitation and environmental management, are comprehensively addressed in this *Environmental Assessment.*

PROJECT OBJECTIVES & OUTCOMES

The main objectives of the Project are to:

- secure access to sand resources to ensure the continued provision of a range of high quality materials to the construction industry in NSW at a competitive price;
- extract and process raw sand materials in consultation with the surrounding landowners and wider community, and in an environmentally responsible manner that complies with all relevant statutory requirements;
- planning and removing the sand resource in a manner that maximises the quality and quantity of materials removed;
- progressively rehabilitate disturbed areas at the site to potentially provide for future agricultural pursuits, nature conservation, and other land uses at the end of quarry life at the site;
- increase local employment levels; and
- contribute to the economy of NSW.

The main outcomes of the Project would be:

- production of high quality sand products to meet the demands of the construction industry in NSW for approximately 30 years;
- contribution to the sustainable growth of construction industry in NSW and thus the economy of NSW; and
- rehabilitation of the disturbed areas and production of a stable final landform with functional drainage system able to support a range of final land uses.

THE PROJECT

The Project, if approved, would produce up to 1 000 000 tonnes of sand products annually. An estimated 41 million tonnes of friable sandstone has been defined within the Project Site capable of yielding approximately 30 million tonnes of high quality sand products throughout a quarry life of approximately 30 years.

The Project would involve:

- a site establishment phase comprising vegetation clearing and soil removal within marked areas, construction of on-site infrastructure, and construction of two intersections with the Hume Highway,
- the development and operation of the sand extraction activities;
- the operation of a sand processing plant and management of process residues;
- the despatch of sand products and importation of virgin excavated natural materials and excavated natural materials; and
- progressive rehabilitation of the disturbed areas.

Figure B displays the proposed layout for the Project. The extraction activities would be staged incorporating seven extraction stages (Stages 1 to 7).

ISSUE IDENTIFICATION AND PRIORITISATION

The issues (and their potential impacts) likely to be of greatest significance to the local environment, neighbouring landowners and the wider community were identified through a program of community

and government consultation, preliminary environmental studies and literature review. This was followed by an analysis of the risk posed by each potential impact in order to prioritise the assessment of the identified environmental issues.

Consultation

Consultations were held with:

- relevant Government agencies and authorities throughout the planning phase of the Project;
- Aboriginal communities;
- the local community and involved:
  - individual discussions with the surrounding landowners / residents of properties,
  - Providing relevant information sheets and copies of the *Preliminary Environmental Assessment*.

Issue Prioritisation

Following identification of environmental issues to be considered, a risk analysis was conducted for each issue. Using the allocated risk rating in conjunction with the frequency, the issue was identified the relative priority was determined for each potential environmental impact. The following order of priority of environmental issues has been determined.

1. Groundwater
2. Surface Water
3. Terrestrial Flora and Fauna
4. Aquatic Ecology
5. Traffic and Transport
6. Noise
7. Air Quality
8. Visibility
9. Heritage
10. Soils and Land Capability
11. Bushfire
12. Socio-economic Climate

ENVIRONMENTAL SAFEGUARDS AND IMPACTS

The features of the existing environment within and surrounding the Project Site have been studied in detail and the Project has been designed to avoid or minimise project-related impacts on that environment. A brief overview of the main components of the surrounding environment, the proposed safeguards and the assessed level of impact are set as follows.

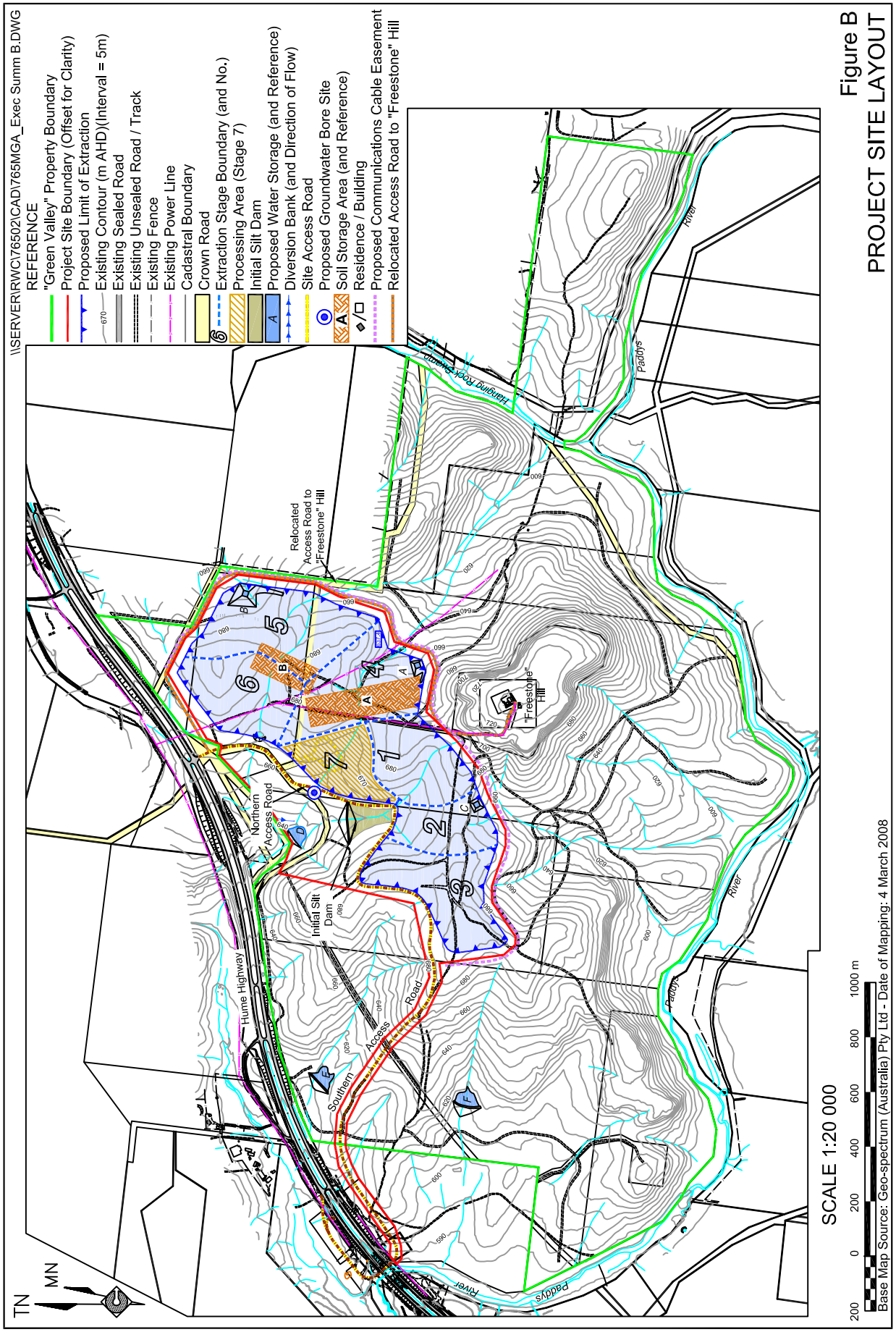
Groundwater

The Hawkesbury Sandstone, the source of the sand to be extracted is the principal aquifer located in the elevated areas of the Project Site. The friable nature of the sandstone results in rapid infiltration of rainfall with relatively small quantities retained within the sandstone.

Groundwater flow within the "Green Valley" property is controlled by the sloping contact of the less permeable shales of the Berry Formation, which lies beneath the Hawkesbury Sandstone. The primary discharge mechanism for the local Hawkesbury Sandstone aquifer is via 'hanging swamps' found to the east and southeast where the sloping contact within the underlying Berry Formation intersects the natural topography. The water that emerges to the surface in the hanging swamps has similar water quality and chemistry to the Hawkesbury Sandstone.

The groundwater is moderately acidic with pH values generally in the range 4.5 – 5.5. It also has low salinity.

There are two main potential impacts of the Project on the groundwater beneath the Project Site, namely, localised lowering of groundwater levels within the Hawkesbury Sandstone, (due to groundwater inflows to the extraction areas) and possible impacts on groundwater baseflow contributions to the hanging swamps and Paddys River.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REFERENCE
"Green Valley" Property Boundary
Project Site Boundary (Offset for Clarity)
Proposed Limit of Extraction
Existing Contour (m AHD)(Interval = 5m)
Existing Sealed Road
Existing Unsealed Road / Track
Existing Fence
Existing Power Line
Cadastral Boundary
Crown Road
Extraction Stage Boundary (and No.)
Processing Area (Stage 7)
Initial Silt Dam
Proposed Water Storage (and Reference)
Diversion Bank (and Direction of Flow)
Site Access Road
Proposed Groundwater Bore Site
Soil Storage Area (and Reference)
Residence / Building
Proposed Communications Cable Easement
Relocated Access Road to "Freestone" Hill
Figure B
PROJECT SITE LAYOUT
TN
MN
SCALE 1:20 000
200 0 200 400 600 800 1000 m
Base Map Source: Geo-spectrum (Australia) Pty Ltd - Date of Mapping: 4 March 2008
Hume Highway
Northern Access Road
Initial Silt Dam
Southern Access Road
Relocated Access Road to "Freestone" Hill
"Freestone" Hill
Paddys River
Hanging Rock Swamp

Groundwater modelling conducted to assess the potential impacts of the Project on the groundwater regime took into consideration (i) the predicted groundwater extraction rates (including both inflows to excavations and any external dewatering); (ii) regional and localised changes in groundwater levels due to sand extraction; and (iii) changes in baseflow contributions to surface watercourses.

Groundwater modelling established the following.

1. The base flows to the down-slope hanging swamp would be maintained throughout the life of the Project and possibly enhanced slightly due to increased effective recharge as operational areas are exposed.
2. Predicted inflows to active extraction areas would provide Rocla with the opportunity to harvest up to approximately 35ML of water per year or approximately 43% of the maximum water requirement.
3. Impacts on surrounding groundwater users would be negligible.

The above outcomes would be achieved largely through (i) the retention of a 2m section of the friable Hawkesbury Sandstone above the sloping contact to provide a conduct for ongoing water flows and (ii) increased surface runoff following the removal of the existing vegetation within the areas extracted.

While the impact assessment has concluded that impacts upon the groundwater on the Project Site would be small, a monitoring program would be implemented to compare the actual performance with predicted impacts.

Surface Water

The Project Site is located adjacent to Paddys River at the Hume Highway bridges crossing.

The Project Site drains into four small, separate catchments in a mostly radial pattern. Three of these sub-catchments include downstream hanging swamps noted above. The entire site ultimately drains into Paddys River which is located in the Wollondilly River sub-catchment of the Hawkesbury - Nepean River catchment, and drains into Lake Burragorang.

The Project Site is dominated by highly permeable, infertile sandy soils with the majority of rainfall infiltrating into the soil, where it is either used by vegetation or recharged to groundwater. Surface water flows within the Project Site are minimal and surface water runoff would generally only occur in larger storm events (e.g. an event greater than a 2-year ARI). As a result, surface water runoff from the Project Site is relatively insignificant to the various hanging swamps.

However, the proposed quarry development could lead to potential increases in surface water runoff and minor decreases in relative infiltration. As a result, management measures would be implemented to maintain infiltration and recharge of groundwater stores, particularly to those hanging swamps that obtain significant volumes of water from the Project Site (i.e. those to the east).

Removal of existing vegetation and creation of an internally-draining extraction area would increase the amount of groundwater recharge during operations. Much of this would be as a result of surface water ponding in the extraction area, then infiltrating into the sandy substrate.

In order to mitigate the potential for any changes in groundwater recharge during and after operations, a system of surface water management structures would be incorporated within the Project Site. These would include infiltration dams, water storage dams, diversion drains and pumping systems, all designed to control infiltration rates into the groundwater system.

These structures would also provide water for sand-washing purposes.

A water balance undertaken for the site, assuming three main water supply components (surface water runoff from the hardstand processing area captured in a dam (Dam D), groundwater supply from pit inflows, and groundwater supply from two bores), has concluded that the Dam D would be able to maintain a water supply of up to 42.68ML/annum. Hence, at the initial production rate of 200 000 tonnes per annum 100% of the water demand would be met by Dam D while at the maximum production rate of 1 000 000 tonnes per annum only approximately 65% of the supply would be met by Dam D source and the shortfall would be made up from groundwater sources noted above. Therefore, during operations, the water management strategy would be designed to be impact-neutral, with any excess water that might have been generated (either in terms of excess runoff or excess recharge to groundwater) would be harvested for on-site use. Surface and groundwater flows would be maintained as part of this strategy throughout the life of the quarry.

Fauna and Flora

A comprehensive flora and fauna field survey was undertaken of the "Green Valley" property, with particular targeted survey techniques employed to locate threatened species of flora and fauna and ecological communities.

The study identified three threatened plants and one threatened ecological community on the property, along with three additional plants considered to be of conservation importance. None of these features occurs within the proposed extraction area or on land where the associated infrastructure are located. The study also identified six threatened animal species; habitat for all of the recorded threatened animal species is present on the quarry site.

An offset area has been delineated to compensate for the removal of 46.1 hectares of remnant and regrowth forest. The offset covers approximately 131 hectares; which is approximately 2.8 times the area of forest cleared to accommodate the quarry. The value of the offset is in fact greater than the 2.8 nominated as the ratio is based solely on areas. Virtually all of the offset area is remnant native vegetation in excellent condition whereas the bulk of the native vegetation to be removed is regrowth.

Aquatic Ecology

A literature review and survey were conducted to identify threatened species, populations and ecological communities that occur or could potentially occur within Paddys River and the Wollondilly River.

Previous surveys in the Wollondilly sub-catchment found that the macroinvertebrate assemblages were generally impaired and the rivers in poor health. The fish assemblage in the Wollondilly River contained a mixture of native and introduced species, including the threatened Macquarie perch.

Aquatic biota were sampled at three locations in Paddys River; at the Hume Highway Bridge crossing immediately adjacent to the proposed works, and at locations approximately 500m upstream and downstream of this point. The habitat and biota were moderately healthy at the locations surveyed. The riparian vegetation and banks in the vicinity of the Hume Highway bridges were degraded, presumably from previous works associated with the highway and/or bridges.

No threatened or protected species or communities were observed during the field survey.

Potential environmental constraints associated with the Project relate predominantly to the mobilisation of sediments into the river from the proposed works and pollutants associated with heavy vehicles and roadways. Mitigation

strategies, such as standard construction site sediment controls, appropriate water quality monitoring and development of management plans that can respond to environmental contingencies, can be implemented to ensure that sedimentation and pollution of Paddys River do not occur as a result of the proposed works.

The Project would have no impact on the majority of regional threatened species and communities as neither the taxa nor their habitat occur within the area potentially affected by the proposed works. Assessments of significance carried out for the Macquarie perch and giant dragonfly indicate that potential impacts on these species would be negligible provided standard sediment and pollution control strategies are implemented.

Traffic and Transport

The Hume Highway provides the main access route to and from the Project Site, and the site can only be currently accessed from the Hume Highway from the north at the existing "Green Valley" property entrance. A range of internal access roads/tracks currently exist within the Project Site.

Two intersections would be constructed with the Hume Highway to allow access to the Project Site both from the north and the south. The northern intersection would remain at the current property entrance, but would be upgraded along with the access road (northern access road) connecting it to the proposed processing area. A new southern intersection with the Hume Highway would be constructed near Paddys River. It would provide access to the processing area via the southern access road. The southern access road would generally follow an existing track to Paddys River traversing both the "Green Valley" property and an area of Crown Land and then loop around under the bridges that cross over Paddys River to join the north-bound lanes of the Hume Highway.

At full production of 1 000 000 tonnes per annum, the project would generate 240 truck movements on an average day and up to 284 truck movements on a busy day. An additional 80 light vehicle movements plus 2 to 4 truck movements associated with staff, visitors, fuel deliveries and maintenance would also occur daily.

The increase in total vehicles represents only 1.0% the total vehicles and 2.3% of heavy vehicles currently using the Hume Highway north and south of the Project Site.

Operational safeguards that would be implemented by Rocla would ensure that no traffic congestion occurs on the section of the Hume Highway in the vicinity of the northern and southern intersections. The operational safeguards would also ensure that road safety would not be compromised.

Given that the increase in the traffic volumes would be small, few operational safeguards would be adopted to minimise traffic congestion and maintain road safety, and the capacity of the Hume Highway to accommodate 3 600 equivalent passenger car units per hour in both directions.

Noise

The current background noise environment within and surrounding the Project Site lacks industrial noise sources but includes noise sources associated with a rural environment (insects, livestock, farming activities, wind through vegetation) and most importantly, traffic on Hume Highway.

An assessment of the Project-related operational noise involved modelling of three different extraction stages – Stages 1, 3 and 5, representing the centre, southern-most and the eastern-most stages of the extraction area. Two scenarios of average 16 trucks/hr and maximum 50 trucks/hour movements were modelled using noise sources associated with sand extraction and processing activities under the atmospheric

conditions (daytime neutral, temperature inversion, wind speed, wind direction) typical of the Project Site and surrounding areas. Assessments for off-site traffic noise, especially from traffic on Hume Highway, were made, although these are expected to be intermittent.

The assessment predicted compliance with the night-time noise criterion of 35dB(A) at all receivers for the average product transport rate of 16 trucks/hour. During a two hour period between 4:00am and 6:00am, coinciding with the maximum transport rate of 50 trucks/hour, moderate (3dB) exceedances were predicted at two locations although these were obtained under inversion conditions only. A minor (1dB) exceedance has been predicted at two other locations under the same conditions.

The predicted exceedances are for only a two-hour period under winter inversion conditions and would occur in an environment dominated by higher levels of traffic noise from Hume Highway. Hence, the exceedances noted above are not likely to impact on residential amenity and as such mitigation of the exceedances would not be required.

Off-site road traffic noise was established not to be an issue given the considerable traffic levels on the nearby Hume Highway.

Air Quality

The impacts upon the local air quality attributed to the extraction, processing and product transportation activities at the proposed Green Valley Sand Quarry were assessed in three stages to identify the potential air quality impacts that the Project would have on residents surrounding the Project Site.

Dispersion modelling was used to assess the impact that dust emissions from the operation would have on the local air quality. The emissions inventories developed for each of the three stages were used with local meteorological data in a computer model to predict the maximum 24-hour PM_{10}, annual average PM_{10}, annual average TSP and annual average dust deposition (insoluble solids) over an area extending approximately 6km (east-west) and 6km (north-south). The modelling has been undertaken to show the effects of the Green Valley Sand Quarry alone and with background dust levels considered. Cumulative impacts with the nearby Penrose Sand Quarry were also considered.

It is concluded that air quality impacts would not exceed the assessment goals at any of the surrounding residences, even when existing background concentrations and cumulative impacts from the Penrose Sand Quarry are considered.

Visibility

The operational areas within the Project Site would be well shielded behind natural landforms and mature remnant vegetation such that on-site extraction and processing activities would not be visible from the surrounding road network and nearby residences. The most visible feature of the Project will be the introduction of heavy and light vehicles travelling through the two new intersections with the Hume Highway and the nearby sections of the site access roads onto the Project Site.

The principal controls to manage the visual impacts of the Project include vegetation retention, vegetation screens (to limit headlights) and careful placement of on-site security and operational lighting.

Heritage

A field investigation was undertaken in consultation with relevant Aboriginal stakeholders and to undertake a field investigation of the Project Site. As a consequence of this investigation a series of shelters/overhangs in a cliff-line, close to, but outside the footprint of proposed activities, was recorded as a potential archaeological deposit (PAD). The PAD would be protected by a 50m buffer zone.

A site previously recorded by others would be contained within the buffer zone around the PAD. No other archaeological or cultural deposits were recorded during the investigation, and therefore no sites occur within the footprint of the proposed quarry or the haul road.

ASR recommended that as a result of the investigation, there are no constraints on aboriginal cultural grounds to the proposed Project.

An investigation was also conducted to identify any structures, places or relics of European significance within the Project Site. A search of the State Heritage Register and National Trust Register found that there were no listings for structures or relics of heritage interest for the Project Site. A search of the *Local Environmental Plan 2010* found that the Project Site was not listed as a place of heritage interest.

The only potential European value near the Project Site could be attached to the former alignment of the Hume Highway. There is an area of land that represents land which is Remembrance Driveway and which was Resumed and Vested in the RTA (Commissioner of Main Roads) as it was known when it was formally dedicated as Public Reserve on 25 October 1985. The Project Site boundary has been located to avoid the Public Reserve.

Soils and Land Capability

The following Soil Landscape units were identified within the Project Site and, although they had variable topographic conditions, all showed fairly similar soil characteristics.

- Penrose Soil Landscape (estimated 75% of Project Site area),
- Penrose Variant A Soil Landscape (estimated 10%),
- Soapy Flat Soil Landscape (estimated 10%),
- Martins Flat Soil Landscape (estimated 5%).

Excavations within the Project Site revealed that topsoils were encountered to a depth of around 350mm in most test pits while subsoil depths varied markedly – from being absent in some locations to extending to 1.0m depth above the weathered sandstone.

The soils were found to be naturally poorly structured but are relatively stable, with mostly low to moderate erodibility, although prone to wind erosion. Soils were found to be non-saline but slightly acidic (pH 5.0 – 5.8) and highly infertile.

The soils within the Project Site would be handled as little as possible during the site establishment phase of the project. The stripped topsoils and subsoils would be stockpiled on site for use in the progressive rehabilitation of the site. Based on the review of the physical and chemical attributes of the soils, it was established that with careful management strategies the proposed Project-related activities would have minimal long-term impacts on the Project Site soils.

Under the NSW Land Capability System (Emery, 1985) the Project Site's pre-development Land Capability Class has been assessed to be Class VI and the Agricultural Land Suitability Class to be Class 5. These categories are unlikely to be changed following rehabilitation activities, and hence would limit the potential of the rehabilitated land for agricultural use.

Bushfire Management

The land within and surrounding the Project Site requires standard management procedures to control the hazards that exist in this largely vegetated area. The principal activities requiring management relate to refuelling and vegetation clearing. The adoption of standard management measures should ensure that bushfire risks are effectively managed. All bushfire management controls will be undertaken in close consultation with the local rural fire service.

Socio-Economic Setting

The proposed Project has, to the extent feasible, been designed to minimise the social and economic cost of the Project on the local community. Little social fabric is present in the local community, largely because many of the landowners are not permanent residents.

The Project provides for the removal, processing and despatch of sand products recognised to be in short and diminishing supply within the Sydney/South Coast market. The Project would contribute to generating local employment opportunities and boosting the local economy and other communities throughout the Wingecarribee local government area.

Through the design of the Project and implementation of the operational safeguards and management measures proposed, it has been assessed that the Project would have limited but acceptable impact on the environment on and surrounding the Project Site, eg. noise, air quality, water resources, flora and fauna, heritage, and land use.

Based on the above, the Project is not anticipated to have a significant adverse impact on the community surrounding the Project Site but would deliver a number of benefits locally and regionally.

PROJECT EVALUATION AND JUSTIFICATION

An evaluation of the Project has been undertaken by firstly re-assessing the risks posed to the local environment by project-related activities following the implementation of all operational controls, safeguards and/or mitigation measures, and secondly through consideration of the principles of ecologically sustainable development.

The evaluation found that, with the implementation of the proposed controls, safeguards and/or measures, the residual risk posed by each possible environmental incident or impact was reduced from its original level to predominantly either moderate or low, and therefore acceptable.

The Project has also addressed each of the sustainable development principles. It has been concluded that the Project achieves a sustainable outcome for the local and wider environment.

The Project has also been justified in terms of a wide range of biophysical, social and economic issues. These impacts have been justified in terms of the low risk of environmental impacts and the positive economic and social benefits that would result for the local community and wider Wingecarribee local government area, primarily through the provision of construction materials likely to be in deficit within the next few years.

CONCLUSIONS

The Project has, to the extent feasible, been designed to address all issues raised by the local community and all levels of government as well as the principles of ecologically sustainable development.

The Project provides for the extraction and transportation of fine sand products predicted to be in deficit within the Sydney construction market by 2011/2012. The Project has been designed such that compliance with all nominated environmental criteria has been predicted with the final landform to be created that blends with the surrounding topography.

In order to compensate for the proposed disturbance to approximately 46.1ha of remnant / regrowth native vegetation within the proposed area of disturbance, Rocla has negotiated with the owner of the "Green Valley" property to set aside in perpetuity 131ha of the property as the biodiversity offset. The proposed biodiversity offset meets the DECCW's 13 principles for the establishment of biodiversity offsets in NSW.

In light of the conclusions incorporated throughout the *Environmental Assessment*, it is assessed that the Project could be developed and operated in a manner that would satisfy all relevant statutory goals and criteria, environmental objectives and reasonable community expectations.

The *Environmental Assessment* supported by the range of specialist consultant studies has established that if the Project proceeds, it would:

- provide necessary fine sand products for Sydney and South Coast construction markets;
- reduce risk levels associated with possible environmental incidents and adverse impacts on the environment to an acceptable level;
- have a minimal and manageable impact on the biophysical environment;
- satisfy sustainable development principles;
- provide for continuing and future use of the Project Site for agricultural, grazing, pine plantations and nature conservation;
- provide social and economic benefit to the local and wider community; and
- address perceived social impacts.