

Environmental Assessment Report - Gregory Street, South West Rocks

Final

Macleay Valley Property Group Pty Limited

February 2007

0045027

www.erm.com



Approved by: Fiona van der Hoeven

Position: Project Director

Signed:

Date: 19 February, 2007

Environmental Resources Manacement Australia Ptv Ltd Quality System

0045027

www.erm.com

This report was prepared in accordance with the scope of services set out in the contract between Environmental Resources Management Australia Pty Ltd ABN 12 002 773 248 (ERM) and the Client. To the best of our knowledge, the proposal presented herein accurately reflects the Client's intentions when the report was printed. However, the application of conditions of approval or impacts of unanticipated future events could modify the outcomes described in this document. In preparing the report, ERM used data, surveys, analyses, designs, plans and other information provided by the individuals and organisations referenced herein. While checks were undertaken to ensure that such materials were the correct and current versions of the materials provided, except as otherwise stated, ERM did not independently verify the accuracy or completeness of these information sources

SUBMISSION OF ENVIRONMENTAL ASSESSMENT

prepared under Part 3A of the Environmental Planning and Assessment Act 1979

EA PREPARED BY Names:	– Fiona van der Hoeven	Christine Allen
ranics.	Tiona van aci Hoeven	Cintotine Hitch
Qualifications:	Bachelor of Arts (Hons) Masters of Town Planning	BSc (Hons) Urban and Regional Planning
Address:	Building C, 33 Saunders Street	
	Pyrmont	
	NSW 2009	
PROJECT PLAN APPLICATION		
Applicant name:	Macleay Valley Property Group	Pty Ltd
Applicant address:	PO Box 3254	
11	NARELLAN NSW 2567	
Land to be developed:	Property description of land to b	pe developed is contained in the
Proposed development:	Project approval is sought for the purposes and associated subdivision	subdivision of land for residential works.
ENVIRONMENTAL ASSESSMENT	✓ An EA is attached which add Part 3A of the Environmenta Act 1979.	
CERTIFICATE	the environmental assewhich the EA relates; a it is true in all material presentation or omissio	information that is relevant to ssment of the development to
Signature:	mislead. Charlestown	CuAlten
Name:	Fiona van der Hoeven	Christine Allen
	16 February 2007	16 February 2007

FINAL REPORT

Macleay Valley Property Group Pty Limited

Environmental Assessment Report - Gregory Street, South West Rocks *Final*

February 2007

Environmental Resources Management Australia

Building C, 33 Saunders Street Pyrmont, NSW 2009 Telephone +61 2 8584 8888 Facsimile +61 2 8584 8800 www.erm.com

CONTENTS

1	INTRODUCTION	
1.1	GENERAL	1
1.2	METHODOLOGY	2
1.2.1	TECHNICAL INVESTIGATIONS	2
1.2.2	CONSULTATION	2
2	THE LOCALITY AND SITE	
3	THE PROPOSAL	
3.2	PROJECT ALTERNATIVE	18
3.3	SUBDIVISION LAYOUT, DESIRED FUTURE CHARACTER AND	
	SUSTAINABILITY	31
3.3.1	SUBDIVISION LAYOUT AND SUSTAINABILITY	31
3.3.2	DESIRED FUTURE CHARACTER	35
3.3.3	STAGING	44
4	JUSTIFICATION FOR THE PROJECT	
4.1	Introduction	47
4.2	ASSESSMENT OF THE SUITABILITY OF THE SITE FOR THE PROPOSED SUBDIVISION AND FUTURE LAND USE	47
4.2.1	ZONING	47
4.2.2	PLANNING STRATEGY	47
4.2.3	APPROPRIATENESS IN RELATION TO ENVIRONMENTAL	
	IMPLICATIONS	48
4.3	PUBLIC INTEREST	48
5	PLANNING PROVISIONS	
5.1	Introduction	49
5.2	ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979	49
5.3	STATE ENVIRONMENTAL PLANNING POLICIES	50
5.3.1	STATE ENVIRONMENTAL PLANNING POLICY (MAJOR PROJECTS)	50
5.4	KEMPSEY LOCAL ENVIRONMENTAL PLAN (LEP) 1987	60
5.5	OTHER PROVISIONS	60
5.5.1	STRATEGIES, PLANS AND POLICIES	60
5.5.2	KEMPSEY SHIRE COUNCIL DEVELOPMENT CONTROL PLANS AND	
	POLICIES	64
6	ANALYSIS OF KEY ISSUES	
6.1	Introduction	69
6.2	FLORA AND FAUNA	69

CONTENTS

6.2.1	THREATENED SPECIES	69
6.2.2	FAUNA HABITAT	72
6.2.3	FAUNA MOVEMENTS	73
6.2.4	VEGETATION	73
6.3	NATURAL HAZARDS	<i>7</i> 5
6.3.1	Bushfires	<i>7</i> 5
6.3.2	FLOODING	78
6.3.3	ACID SULPHATE	78
6.4	WATER CYCLE MANAGEMENT	80
6.4.1	WATER SENSITIVE URBAN DESIGN AND WATER REUSE	80
6.4.2	DRAINAGE	80
6.4.3	RECEIVING WATERS	81
6.4.4	EROSIONS AND SEDIMENT CONTROLS	81
6.5	HERITAGE	81
6.5.1	EUROPEAN HERITAGE	81
6.5.2	Aboriginal Heritage	82
6.6	TRAFFIC MANAGEMENT AND ACCESS	82
6.7	Infrastructure Provision	86
6.8	ENVIRONMENTAL RISK ANALYSIS	88
7	DRAFT STATEMENT OF COMMITMENTS FOR THE PROJECT	
7.1	BACKGROUND	91
8	CONCLUSION	

LIST OF TABLES

TABLE 3.1	PROPOSED LOT SIZES	31
TABLE 5.1	SEPP 71: MATTERS FOR CONSIDERATION	52
TABLE 5.2	COMPLIANCE WITH DCP 22	66
TABLE 6.1	ASSET PROTECTION ZONE REQUIREMENTS	76
TABLE 6.2	TYPICAL MINIMUM WIDTHS OF URBAN ROADS, KEMPSEY DCP 36	83
TABLE 6.3	ADDITIONAL DAILY TRAFFIC VOLUMES, YEAR 2016 INCLUDING DEVELOPMENT	84
TABLE 6.4	INTERSECTION PERFORMANCE WITH PROPOSED DEVELOPMENT	84
TABLE 6.5	Intersection Performance Of Cumulative Development Scenario	85
TABLE 6.6	SUMMARY OF KEY ENVIRONMENTAL RISKS AND PROPOSED MITIGATION	88
TABLE 7.1	DRAFT STATEMENT OF COMMITMENTS	92

LIST OF FIGURES

ANNEX A INFORMATION FLYER

FIGURE 2.1	LOCALITY PLAN	8
FIGURE 2.2	SITE PLAN	9
FIGURE 2.3	AERIAL PHOTOGRAPH OF SITE	11
FIGURE 3.1	STAGE 1 PLAN	19
FIGURE 3.2	STAGE 2 PLAN	21
FIGURE 3.3	STAGE 3 PLAN	23
FIGURE 3.4	OVERALL PLAN	25
FIGURE 3.5	PROPOSED CIVIL WORKS	27
FIGURE 3.6	PROPOSED CIVIL WORKS	29
Figure 3.7	OPPORTUNITIES AND CONSTRAINTS	33
FIGURE 3.8	PROPOSED CIVIL WORKS	37
FIGURE 3.9	LANDSCAPE CONCEPT PLAN	39
FIGURE 3.10	DETAILS PLAN	41
Figure 6.1	IDENTIFIED THREATENED SPECIES AND HOLLOW BEARING TREES	<i>7</i> 1
FIGURE 6.2	ASSET PROTECTION ZONES	77
FIGURE 6.3	FLOOD PLAN	79
FIGURE 6.4	WATER AND SEWER LOCALITY PLAN	87

EXECUTIVE SUMMARY

Purpose And Proposal

This Environmental Assessment Report (the Report) has been prepared by Environmental Resources Management Pty Ltd (ERM), on behalf of Macleay Valley Property Group Pty Ltd pursuant to Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A). It has been prepared for the application for project approval for the subdivision of land at the corner of Gregory Street and Arakoon Road, South West Rocks. The land will be subdivided in to 44 residential lots and will generate residential growth and development consistent with the Kempsey Shire Council's Residential Strategy 1997.

The preparation of the project has involved input from a range of disciplines including ecology, landscape architecture, heritage, engineering, traffic engineering, bushfire management, geotechnical assessment and planning. A consultation program with surrounding residents, key community groups, government departments and service agencies was conducted in the preparation of the technical reports and project design.

The Site And Locality

Lot 2 in DP 581117 (the site) is located on the north east intersection of Gregory Street and Arakoon Road, approximately 3 kilometres south of the town centre of South West Rocks and 3.5 kilometres directly south of the nearest coastline (Trial Bay). The site cannot be seen from locations close to the beach or from coastal foreshore areas.

The site has frontage to Arakoon Road, Gregory Street and Cooper Street and has a total area of approximately 4.8 hectares. Cooper Street is a sealed road that serves the site and rural residential properties to the east. The site has a slight fall to the south and west. Vegetation on the site is characterised by mature trees (open forest), with an understorey disturbed by rural residential uses, including livestock grazing. A dwelling and ancillary structure are located in the north portion of the site.

Residential subdivision in the South West Rocks township is located west of the site, on the west side of Gregory Street. Spencers Creek passes approximately 150 metres to the west of the site. Rural and rural residential properties are located to the north and north-east and Hat Head National Park, which includes wetlands, is located to the south. Arakoon Road separates the site from Hat Head National Park. Land to the north is zoned but not yet developed for residential development. It is understood that applications for development of the properties to the north have been lodged with DoP and Kempsey Shire Council. There is no rural zoned land adjacent to the site.

The site is currently zoned as 2(a) Residential. The objective of the zone is "to provide areas for low density residential development". Residential subdivision is permissible with consent within the zone.

Subdivision Layout, Desired Future Character And Sustainability

The subdivision design is based on comprehensive analysis of the opportunities and constraints of the site and its surrounds. The analysis considered the surrounding land uses, potential bushfire risk, existing vegetation, road network and transportation links, views, orientation, aboriginal heritage and stormwater management.

The subdivision layout creates regular shaped lots with a north-south or east-west orientation, providing opportunities for good solar access, in accordance with ESD principles. It also provides each lot with good development potential and access from an internal road. The subdivision incorporates best practice stormwater management by providing a detention basin / sediment pond, limited filling within flood prone areas, the installation of a separate non-potable water supply pipe network and stormwater controls.

The subdivision design, has taken into consideration the aesthetics of the site as it is at the 'entrance to South West Rocks'. It endeavours to retain as many trees as possible within the development to contribute to attractive streetscapes along Gregory Street, Arakoon Road and the internal streets. This will be supplemented by landscaping. The subdivision has been designed to avoid the development 'turning its back' on Gregory Street by prohibiting high back fences along Gregory Street and requiring dwellings to front Gregory Street. Fencing along Arakoon Road is proposed to be a height of 1.5 metres and be constructed of material that is suitable for locating in asset protection zones. Landscaping, along the fence line will soften the appearance of the fence.

The site is within close proximity to a number of foreshore open space areas such as parks and beachside areas at Front Beach and Horseshoe Cove. The design provides for pedestrian, cycle and vehicle links to Gregory Street which provides access to the existing open spaces.

Environmental Assessment

The proposed development has evolved in response to environmental implications investigated and mitigation and management measures recommended in the supporting technical documents to create a diverse and sustainable development that is integrated into the natural setting.

Flora And Fauna

An ecological assessment of the site was completed during the preparation of the environmental assessment report and is documented in the Environmental Assessment Report - Gregory Street, South West Rocks First Draft, prepared by ERM, December 2006.

The assessment identified the following threatened species on-site: the Brush-tailed Phascogale; Squirrel Glider; Grey-headed Flying-fox; and four microchiropteran bats. No threatened flora species were recorded on the site and the vegetation communities on site were not listed as threatened under State or Commonwealth legislation.

There is some connectivity of the trees within the site to vegetation to the north and south, however, it was considered unlikely that the site provides for major movement and dispersal of fauna in the locality. National Parks and Wildlife Services produced a map of key habitats and regional and subregional fauna movement corridors within the north east of NSW (Canri Website). The site was not identified as contributing to two regional corridors that occur within the locality of the site these corridors, nor was it identified as a key habitat.

The EA includes a number of management and mitigation measures, which will be implemented as part of the development of the site to mitigate and manage potential impacts to fauna and flora, including: the retention of as many trees as possible on site for foraging and shelter habitat; installation of habitat boxes; removal of vegetation outside of key breeding times of threatened species; banning of cats from the residential development. Pre-clearance surveys will be undertaken prior to any removal of trees. Education of residents regarding the types of fauna they might encounter on the site or in adjacent vegetation. Planting of endemic species in landscaped areas and tree protection measures will be implemented during the construction phase to reduce the potential impacts on retained trees from construction activities.

Bushfire

Bushfire hazard mapping indicated that the site contained land classified as 'bushfire prone', with the nearest mapped hazard occurring within the National Park and forested areas to the south and east. The proposal has incorporated critical design considerations to manage bushfire risk, namely Asset Protect Zones (APZs), construction standards, access and water supply. These design considerations are in accordance with Planning for Bushfire Protection Guidelines, 2001.

Flooding

The 100-year Average Recurrence Interval (ARI) flood in Spencers Creek is reported to reach RL 3.6 in the vicinity of the site, which causes backwater flooding of the south west corner of the site. Filling the south-western corner will result in a loss of approximately 400 cubic metres of flood storage volume during a 100-year ARI flood in Spencers Creek. This is expected to have negligible impact on flood levels in Spencers Creek.

A covenant will be included on affected lots in the south west corner of the site requiring buildings to have floor levels at least 300mm above the 100-year ARI flood level.

Acid Sulphate Soil

A review of the Kempsey Acid Sulphate maps shows that the site is not included in the area where acid sulphate soils exist. This was verified by acid sulphate screen testing completed by Coffey Geotechnics Pty Ltd, 334 – 356 Gregory Street, South West Rocks, Geotechnical Assessment, October 2006.

Water Cycle Management

The development seeks to reduce urban impacts using a variety of water sensitive urban design (WSUD) principles. The proposed development will include a range of WSUD measures, including, the requirement for rainwater tanks to be installed for each dwelling, water efficient fittings to be prescribed in dwellings and the construction of a sediment/detention basin with infiltration capability. In addition a gross pollutant trap with capacity to trap oils and greases will be installed at the entry to the basin.

A separate non-potable water supply pipe network will be installed to reduce demand on potable water when it is connected to Macleay Water's proposed dual reticulation system.

A conventional piped drainage system and road geometry are proposed to provide a suitably graded overland flow path to the proposed detention basin and sediment pond in the electricity easement in the south west corner of the site.

Stormwater controls will be implemented to prevent pollutant discharges during construction of the development. The controls will be detailed in an Erosion and Sediment Control and Stormwater Management Plan submitted as part of this EA.

Cultural Values

A search of the Heritage databases (including the Register of the National Estate, National Heritage List, commonwealth Heritage List and the NSW Government Gazette) in February 2006, revealed 14 registered heritage sites in the South West Rocks area, none of which were within the site.

A comprehensive archaeological survey for items of Aboriginal heritage conducted in April 2006. No Aboriginal sites were found on the site during the field survey and it was concluded that the absence of artefacts (including shells) in the eroded and extensive exposures in the site indicated archaeological paucity of the site. As such the no further Aboriginal heritage work was recommended.

Traffic And Transport

The proposed road layout provides two way roads in a form that allows for the lot layout to respond to the features of the site and existing road network. It is designed to meet the road and carriageway width requirements of the Kempsey Development Control Plan No 36 – Guidelines for Engineering and Subdivision. The design also restricts direct vehicle access to Gregory Street but provides for pedestrian movement within the subdivision and to Gregory Street and landscaping opportunities.

Infrastructure

Infrastructure is provided near the site. A sewer main runs along the west side of Gregory Street and there is a sewer pump station on the site and water mains extend along Gregory Street, the north side of Cooper Street and along the north site of Arakoon Road. The proposal will connect into these systems.

Justification Of The Project

The project is justified as it:

- meets the objectives of the planning framework for the region;
- creates the opportunity for future low density residential development, consistent with the objective of the zone; and
- has been designed in response to a comprehensive investigation of the key environmental opportunities and constraints that affect the site.

1 INTRODUCTION

1.1 GENERAL

Macleay Valley Property Group Pty Limited seeks approval under Part 3A of the *Environmental Planning and Assessment Act* 1979 (EP&A Act) for the subdivision of land at the corner of Gregory Street and Arakoon Road, South West Rocks. The land will be subdivided in to 44 residential lots plus a residue lot and one lot for the existing sewer pump station, to be acquired by Kempsey Shire Council. It will facilitate future residential growth and development consistent with the Kempsey Shire Council's *Residential Strategy* 1997.

In correspondence dated 21 November 2005, the New South Wales Department of Planning (DoP) confirmed that it has determined that the proposed subdivision is a 'major project' to which Part 3A of the EP&A Act applies. It is a major project as the land is in the coastal zone and the proposal creates more than 25 lots (schedule 2 of SEPP Major Projects).

This Environmental Assessment Report (EA) has been prepared by Environmental Resources Management Pty Ltd (ERM) in accordance with Part 3A of the EP&A Act and the Director General's Requirements issued 5 July 2006. It describes the proposal and the environmental implications associated with the key issues of the proposed development of the site.

This EA is structured as follows.

- A description of the site and locality is set out in Chapter 2.
- A description of considered alternatives and the proposal is set out in Chapter 3.
- The relevant existing planning provisions applying to the site are set out in Chapter 4.
- Justification for the project is set out in Chapter 5.
- An assessment of key issues and mitigation and management regimes are set out in Chapter 6.
- A draft Statement of Commitments is set out in Chapter 7.

1.2 METHODOLOGY

1.2.1 Technical Investigations

The preparation of the project has involved input from a range of disciplines including aboriculture, ecology, landscape architecture, heritage, engineering, traffic engineering and planning.

A series of supporting technical reports are submitted as part of the EA report. 125These reports investigate the environmental implications of the project and provide mitigation and management measures. The reports are:

- 'Rosarii' Proposed Residential Subdivision Lot 2 DP 581117, Gregory Street, South West Rocks: Bushfire Hazard Assessment, November 2006, ERM(a);
- 'Rosarii' Proposed Residential Subdivision Lot 2 DP 581117, Gregory Street, South West Rocks: Traffic Assessment, November 2006, ERM(b);
- South West Rocks Rosarii: Ecological Assessment, November 2006, ERM (c);
- South West Rocks Rosarii: Aboriginal Assessment, November 2006, ERM (d);
- South West Rocks, Stormwater Management, November 2006, ERM (e);
- *TreeAZ / SULE Report*, July 2006, Rodney Page Arboricultural Consultancy;
- 334 356 Gregory Street, South West Rocks, Geotechnical Assessment, October 2006, Coffey Geotechnics Pty Ltd.

1.2.2 Consultation

Community Consultation

A community information sheet was distributed to residents surrounding the site and key community groups. It outlined the proposal and invited surrounding residents and key community groups, including Friends of South West Rocks and the Ratepayers Association, to a project information session. The information sheet is included in Annex A.

A public information session was held on site between 10:30am and 12:30pm on 25 November 2006 and 22 residents attended.

The session was in the form of an information display and provided opportunities for attendees to gain an understanding of the project, to ask questions, to clarify issues and to express their views in regards to the project.

Attendees showed an interest in the project and were appreciative of the opportunity to learn about the project and express their views. Comments were generally positive in regards to the development proposal. Matters raised at the information session are set out below.

- Fencing / appearance from Gregory Street Many attendees expressed disappointment in regards to what has happened in the vicinity of Bi Lo. There was unanimous support for the proposed fencing style which eliminates the opportunity for colorbond back fences facing the street. It was suggested that controls on dwelling design should also be considered, particularly for the lots fronting Gregory Street.
- Relationship to lots adjacent to the eastern boundary of the site Owners of
 these lots were appreciative of the separation between dwellings and their
 own residences, thus minimising impacts on amenity. Questions were
 raised about the responsibility for fencing along this boundary and the
 potential to extend services to this area of residential zoned land.
- Traffic impacts on Cooper Street Some residents were concerned about the potential impact of increased traffic on Cooper Street. It was explained that the developer will be required to seal and upgrade the section of Cooper Street leading to the development.
- Traffic impacts on Gregory Street There were positive comments with regard to the subdivision having no direct vehicular access to Gregory Street.
- Flooding clarity was sought by some residents regarding the extent of flood affectation to the site. This was explained in detail with reference to plans and diagrams.
- Appearance of the development from dwellings on western side of Gregory street – residents on the western side of Gregory Street were very positive about the design of the subdivision and the absence of back fences fronting the street.

Aboriginal Consultation

Aboriginal cultural heritage investigations conducted as part of the project design, included consultation in accordance with the DEC *Interim Community Consultation Requirements Guidelines* (2004) for Aboriginal Consultation.

Letters requesting advice on Aboriginal organisations to consult and any known heritage issues to be taken into consideration were faxed on 5 April 2006 to:

- NSW Department of Environment & Conservation (DEC);
- Registrar, Aboriginal Land Rights Act 1983 (NSW);
- Kempsey Shire Council; and
- Kempsey Local Aboriginal Land Council.

A local press advertisement was run in the Macleay Argus newspaper on 7 April 2006 requesting Aboriginal individuals and groups interested in being consulted to write to ERM. While no responses were received to this advertisement, initial consultation with a number of organisations including the Department of Environment and Conservation (DEC) and Kempsey Shire Council identified a number of groups to be contacted. These groups were the:

- Baryulgil Square Co-operative Society Ltd;
- Benelongs Haven Limited;
- Burabi Aboriginal Corporation;
- Burra:Waj:Ad;
- Collum Collum Aboriginal Corporation;
- Cultural Respect and Communication Consultants;
- Dunghutti Aboriginal Elders Tribal Council;
- Dunghutti Elders Aboriginal Corporation;
- Figtree Aboriginal Corporation;
- Garby Elders;
- Gunbular Julipi Elders Council Aboriginal Corporation;
- Gumbaynggirr Nation;
- Gumbila Julipi Elders;
- Gumbaynggirr Warrior Elders of the Nambucca River;
- Guri Wa-Ngundagar Aboriginal Corporation;
- Kempsey Local Aboriginal Land Council;
- Miimi Mother Aboriginal Corporation;
- Mudjay Elders;
- Mulla Ngullingah Aboriginal Corporation;
- Ngurrala Aboriginal Corporation;
- Nulla Nulla Boongutti Aboriginal Corporation;
- Wutuma Keeping Place Aboriginal Corporation; and
- Yarrawarra Aboriginal Corporation.

These groups were contacted and only one response was received. In a phone conversation, the Dunghutti Elders Aboriginal Corporation registered their interest in this project however, this phone call was received approximately seven weeks after fieldwork had been undertaken. Details of the Aboriginal consultation are provided in ERM 2006(d) report.

Consultation With Government Departments And Agencies

Consultation with key government departments, Council and service agencies was undertaken in the preparation of the technical reports and project design. Key stakeholders include:

- Department of Environment and Conservation (DEC);
- Department of Natural Resources (DNR);
- Kempsey Shire Council (Council);
- NSW Rural Fire Service (RFS);
- Country Energy; and
- the Roads and Traffic Authority (RTA).

The information sheet sent to the local community was also sent to DEC, DNR, Council, the RFS and the RTA, inviting representatives to the project information session. No representatives attended the session.

In a letter dated 4 December 2006, the RFS advised that information was required as to how the issues of water, access and asset protection zones are to be addressed in the development. This is discussed in section 6 of the report.

2 THE LOCALITY AND SITE

Lot 2 in DP 581117 (the site) is located on the north east intersection of Gregory Street and Arakoon Road. It is a 'gateway' site approximately three kilometres south of the town centre of South West Rocks and 3.5 kilometres directly south of the nearest coastline (Trial Bay). The site cannot be seen from locations close to the beach or from coastal foreshore areas (*Refer to Figure 2.1 Locality Plan*).

Existing residential subdivision forming part of the South West Rocks township is located on the west side of Gregory Street. Spencers Creek passes approximately 150 metres to the west of the site. Rural and rural residential properties are located to the north and north-east and Hat Head National Park, which includes wetlands, is located to the south. Arakoon Road separates the site from Hat Head National Park. Land to the north is zoned but not yet developed for residential development. It is understood that applications for development of the properties to the north have been lodged with DoP and Kempsey Shire Council. There is no rural zoned land adjacent to the site.

The site is also in proximity to a number of community and commercial services and facilities, including 'The Rocks' shopping centre and a new medical centre which are approximately 650 metres to the north.

The site has frontage to Arakoon Road, Gregory Street and Cooper Street and a total area of approximately 4.8 hectares. Cooper Street is a sealed road that serves the site and rural residential properties to the east. Gregory Street is the main arterial road into South West Rocks with 60 km/hr speed limit and Arakoon Road links Gregory Street/South West Rocks Road with the residential and rural residential areas of Arakoon to the east. It also caters for tourist vehicle movements to Lighthouse Road, Hat Head National Park and the Arakoon State Recreation Area. A dwelling and ancillary structure are located in the north portion of the site (*Refer to Figure 2.2 Site Plan and Figure 2.3 Aerial Photograph of Site*).

The site has a slight fall to the south and west. Vegetation on the site is characterised by mature trees with an understorey disturbed by rural residential uses, including livestock grazing. Scribbly Gum / Tallowwood Woodland occurs across most of the site. Areas close to the residence on site retained some native shrub species, and some remnants of shrubs were recorded around the bases of trees. Blackbutt Open Forest occurs in the eastern portion of the site and Forest Red Gum was found in the west potion of the site. Coastal Banksia over a slashed grassy understorey occur in a small area in the southwest of the site.

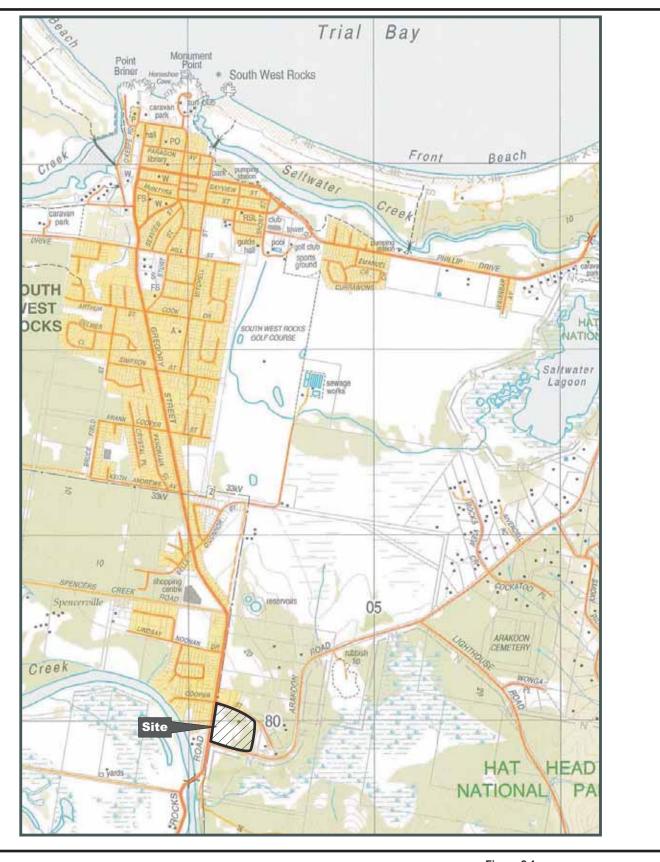


Figure 2.1 Client: Macleay Valley Property Group **Locality Plan** Project: Lot 2 DP5811117 South West Rocks Drawing No: 0045027_01 Date: 20/12/06 Drawing size: A4 Reviewed by: FV Drawn by: Environmental Resources Management Australia Pty Ltd 53 Bonville Avenue, Thornton, NSW 2322 Telephone +61 2 4964 2150 Source: 1:25 000 Topo Series Scale: Refer to Scale Bar









Drawing size: A3 Reviewed by: FV

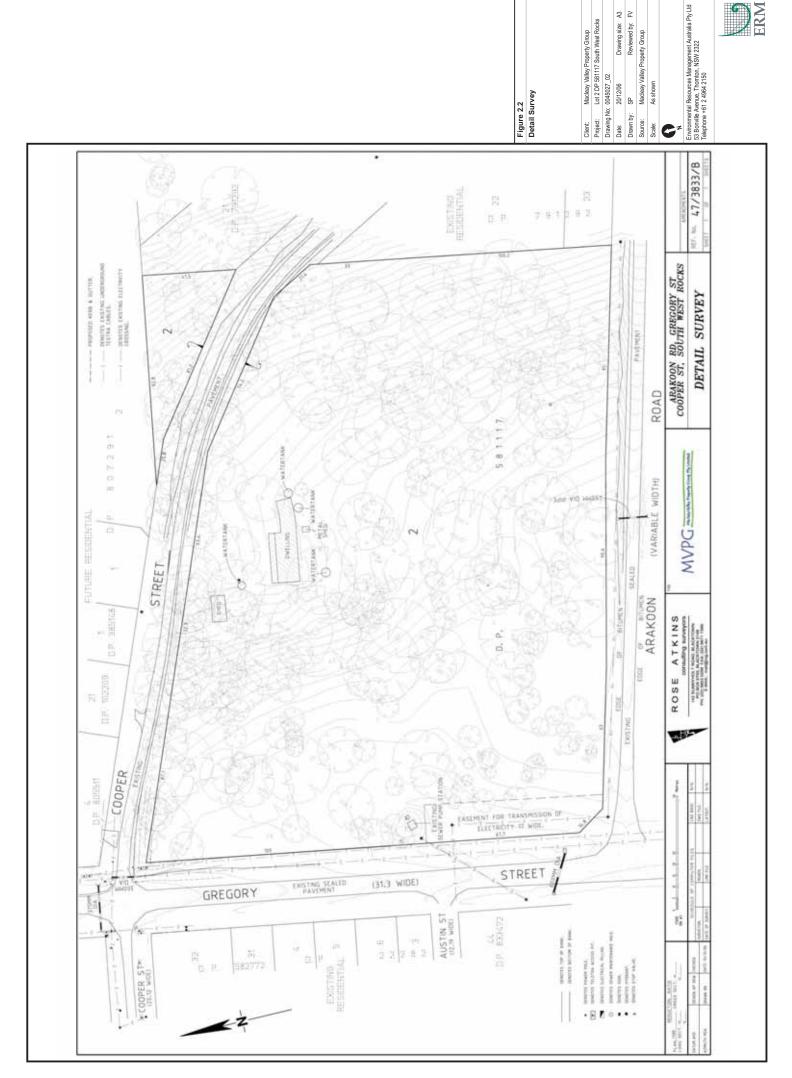




Figure 2.3 Aerial Photograph of the Site

Client:	Macleay Valley Property Group	rty Group
Project:	Lot 2 DP 581117 South West Rocks	th West Rocks
Drawing No:	Drawing No: 0045027_03	
Date:	20/12/06	Drawing size: A3
Drawn by:	SP	Reviewed by: -
Source:		
Scale:	Refer to Scale Bar	
C	0	50m

Environmental Resources Management Australi Building C, 33 Saunders St. Pyrmont, NSW 200

S Saunders St, Pyrmont, NSW 2009 r1 2 8584 8888



Photograph 1

View north: Existing Gregory Street streetscape (subject site on the east side of Gregory Street).



Photograph 2

View south west: National Park on the south side of Arakoon Road.



Photograph 3

View west: Residential development on the west side of Gregory Street.



Photographs



Photograph 4

View east: Existing frontage to Cooper Street.



Photograph 5

View east: Existing frontage to Arakoon Road.



Photograph 6

View north: Existing frontage to Gregory Street.



Photographs





Photograph 7

View north west: The site.



Photograph 8

View east: The site.

