



pricemerrett
C O N S U L T I N G

Planning Report

Euston Park Pump site

August 2021

F8618



SURVEYING
ENGINEERING
IRRIGATION
PROJECT
MANAGEMENT

Version	Doc version	Written by	Approved by	Date issued
Original	1	SG	PM	August 2021

Project Details

Project Name	Euston Park – Model Farm
Client	Pat & Kevin Hope
Report Authors	Price Merrett Consulting P/L
PMC Project Reference	F8618
Consultant Contact	PO Box 313 9478 Murray Valley Highway Kerang VIC 3579 PH: 03 5452 2490

Author: Price Merrett Consulting Pty. Ltd.

©The design is copyright and owned by Price Merrett Consulting Pty. Ltd. (the designer).

Any change to the design without the permission of the designer contributes a breach of copyright.

©Price Merrett Consulting Pty. Ltd. No portion of this report may be reproduced in any form without written permission from the authors.

Disclaimer: This publication has been produced as part of a process for a specific purpose and in response to specific instructions. It should not be used for any other purposes unless agreed in writing by Price Merrett Consulting P/L. No liability is accepted by Price Merrett Consulting P/L or co-authors to any party other than our client. This document remains the property of Price Merrett Consulting P/L.

The author disclaims all liability for any error, loss or other consequence which may arise from the use of any information in this publication.

CONTENTS

1.0	Property Details.....	5
1.1	<i>Introduction.....</i>	7
1.2	<i>Project in brief.....</i>	8
1.2.1	<i>Pump Specifications.....</i>	8
1.3	<i>Prior Approvals & Consultations.....</i>	9
2.0	Location and Site Description	10
3.0	Proposal	10
4.0	Construction Timetable	13
5.0	Planning- Balranald LEP 2010.....	14
5.1	<i>Zone W1</i>	14
5.2	<i>Zone RU1</i>	15
5.3	<i>Riparian Lands & Watercourses</i>	16
5.4	<i>Biodiversity.....</i>	17
5.5	<i>Wetlands</i>	19
6.0	Cultural Heritage	20
7.0	Murray REP No.2	21
7.1	<i>Access</i>	21
7.2	<i>Settlement</i>	21
7.3	<i>Landscape.....</i>	21
7.4	<i>Flooding.....</i>	21
7.5	<i>Bank Disturbance</i>	21
7.6	<i>Land Degradation.....</i>	21
7.7	<i>River Related Issues.....</i>	22
7.8	<i>Water Quality.....</i>	22
7.9	<i>Wetlands</i>	22
8.0	Impact Assessment.....	23
8.1	<i>Storm Water.....</i>	23
8.2	<i>Air Quality & Dust Control.....</i>	23
8.3	<i>Noise and Vibration.....</i>	23
8.4	<i>Hazardous substances.....</i>	24
8.5	<i>Minimising Erosion</i>	24
8.6	<i>Sediment Controls</i>	24
8.7	<i>Stockpile and Batter Management.....</i>	25
8.8	<i>Waste Management.....</i>	25
8.9	<i>Access Roads</i>	25

9.0 Appendix	26
9.1 Appendix 1 – Cultural Heritage Assessment Report	26
9.2 Appendix 2 – BOSET.....	28
9.3 Appendix 3 – Reports.....	30
9.3.1 Hydrogeology.....	30
9.4 Appendix 4 – Title	31
9.5 Appendix 5 - Plans	33

FIGURES

<i>Figure 1: Development site on Euston Park</i>	5
<i>Figure 2: Property details</i>	6
<i>Figure 3: Location of existing pump site</i>	8
<i>Figure 4: Existing pumps on floating boom</i>	10
<i>Figure 5: Profile elevation of the proposed pump site (specifications of the original pump site)</i>	11
<i>Figure 6: Pump site location adjacent to existing pump station</i>	12
<i>Figure 7: Access track</i>	13
<i>Figure 8: Planning map with site location</i>	14
<i>Figure 9: Riparian Lands and Watercourse</i>	16
<i>Figure 10: Showing the Biodiversity on the Balranald 2010 Map</i>	17
<i>Figure 11: BOSET mapping tool result at pump site (showing existing and proposed works area)</i>	18
<i>Figure 12: Wetland overlay</i>	19
<i>Figure 13: Distance to Scar tree</i>	20

1.0 Property Details

Land Owner: Perpetual Lease

Euston Park Pty Ltd
Pat & Kevin Hope

Lot: 4/DP1170452

Local Government: Balranald Shire Council

Street Address: Sturt Highway EUSTON NSW

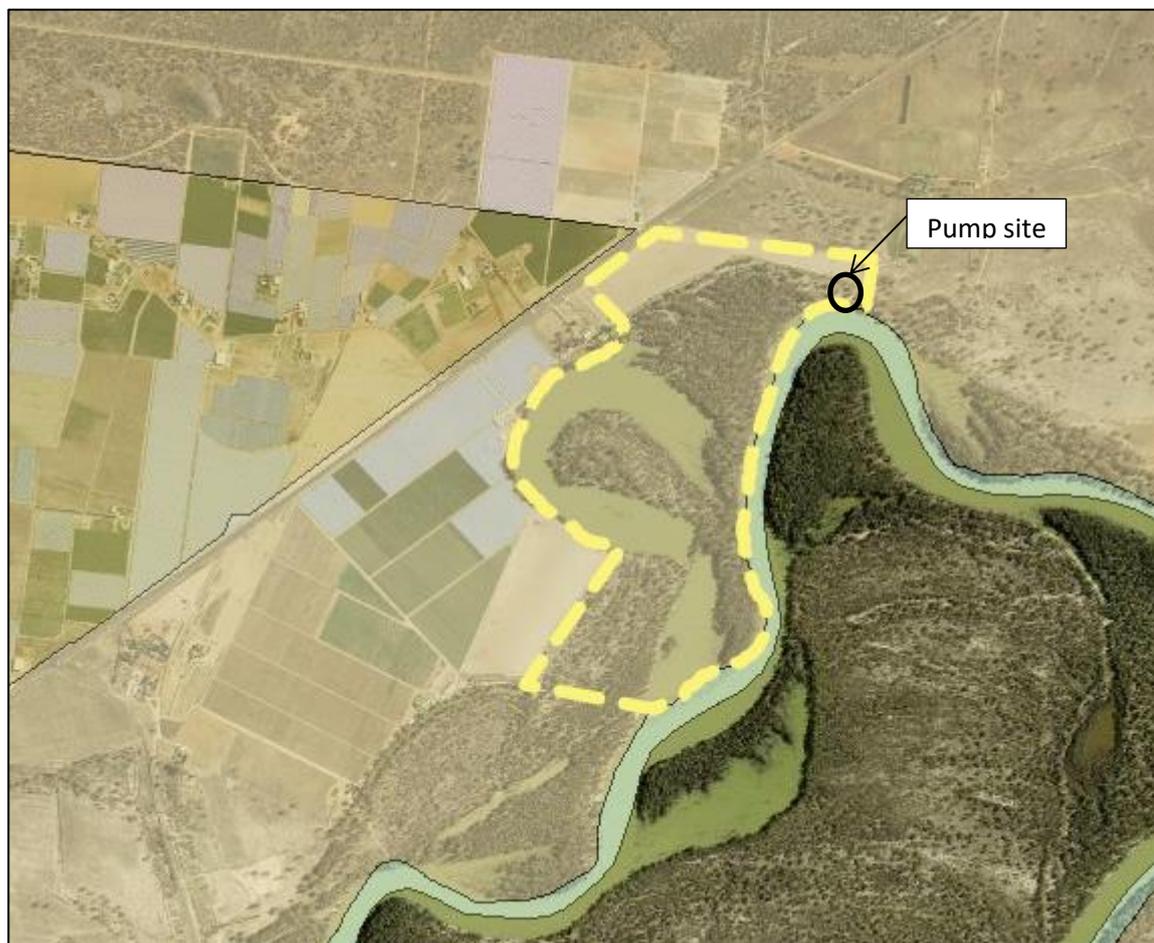


Figure 1: Development site on Euston Park



Property Details

Address: STURT HIGHWAY EUSTON 2737
 Lot/Section /Plan No: 4/-/DP1170452
 Council: BALRANALD SHIRE COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Balranald Local Environmental Plan 2010 (pub. 9-7-2010)
Land Zoning	RU1 - Primary Production: (pub. 9-7-2010)
Height Of Building	NA
Floor Space Ratio	NA
Minimum Lot Size	40 ha
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Terrestrial Biodiversity	High Conservation Value
Wetlands	Wetlands

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

Figure 2: Property details

1.1 Introduction

Euston Park Pty Ltd is seeking development approval to install additional pumps on a boom and pontoon structure and associated infrastructure in the Murray River, adjacent to their existing pump site. The new infrastructure will be a duplicate setup of the existing infrastructure.

Euston Park Pty Ltd has an extensive horticultural enterprise in the Euston area. It is also in the process of expanding an additional 12.5 pivots to increase the area of irrigated potato production. To ensure the viability of the new plantings additional irrigation water will have to be supplied. The existing irrigation pumping infrastructure is insufficient to supply the additional irrigation capacity at the site.

The site is located on the northern bank of the Murray River approximately 7.2km downstream of the Euston-Robinvale Bridge and approximately 74km west of the township of Balranald. The site is an existing pump site consisting of three 100mm pumps on a floating boom and associated infrastructure. This pump supplies irrigation water to an on farm storage dam. This pump supplies irrigation water for an existing irrigated pivot potato crop on Mendook Station. The capacity of the existing pump installation will not be sufficient enough to supply water for optimal growth and production.

Following consideration of the Balranald LEP, Murray REP No.2, relevant SEPPs and various other approval requirements the proposal to install the new pumps and associated works is considered worthy of support

The REF will contain a full description of the proposal and will include:

- The size of the proposed activity footprint
- A description of any ancillary activities
- A description of all the stages of the project
- Project plans
- A description of any possible maintenance, future extensions or additions
- Construction timetable
- Collection, storage and onsite management for all materials
- Any earthworks
- Measures to support sustainability outcomes, including materials choice
- Any mitigation measures and management options.



Figure 3: Location of existing pump site

1.2 Project in brief

Price Merrett Consulting Pty Ltd (PMC) has been engaged by Euston Park Pty Ltd, being Mr Kevin Hope & Mr Pat Hope, to apply for water supply works approval as part of the pumpsite upgrade to support the centre pivot development to irrigate 405 HA to grow potatoes. The potato development site is located at 50942 Sturt Highway, Euston, situated approximately 6km north of the Murray River and 1.2km north of the Sturt Highway. Lot 5 & 6 DP756075 lies 53km west of the township of Balranald. In order to adequately irrigate the potatoes, an increase in water supply from additional pumps at the existing pumpsite is proposed.

The original DA approval number for the pumpsite is 21/06 on Lot 4 DP1170452. The pumpsite development proposes to replicate the existing pump site on the Murray River to add three 250mm pumps on a boom in the river.

A transfer of two existing pump licences on Dry Lake to the river infrastructure, plus two additional pumps to be installed for a total of six, requiring an amendment to the water supply licenses. This will consolidate the licensing for efficiency and reduce the overall footprint at the waterways to offer a decreased environmental impact.

The development will duplicate the existing infrastructure at the site and be located adjacent to the existing pump station. The additional pumps will be connected to the existing mainline. Existing power will also be extended to the new pumps.

1.2.1 Pump Specifications

There are three 200mm pumps installed on the existing pump station. The proposal is to install an additional three 250mm pumps on the Murray River on an additional floating pontoon structure.

Pump type – centrifugal

Pump size – existing 200mm x 3
Pump size – proposed 250mm x 3
Pump capacity – 180 lt/sec

See Figure 5 for pontoon specifications. Total length 15m.

1.3 Prior Approvals & Consultations

The development for Euston Park is seeking approval for:

- Water supply approval

As part of the preparation for the project, consultation with the following relevant authorities was undertaken:

- Water NSW
- Crown Lands
- Local Lands Services
- Nutrien Water - Irrigation Design Management Plan (IDMP)

Original Development Approval - Balranald Shire Council 21/06

Existing easement through Lot 4 DP1170452 for mainline and access.

2.0 Location and Site Description

Irrigation water will be supplied to the property from the existing pump station consisting of a boom and three pumps on the Murray River. The existing pump station site is located at Lot 4/DP1170452 at E: 664475E N: 6175957 Zone 54, on the Murray River approximately 6.3km south west of the proposed agricultural development. The existing pipeline runs into a 300ML on-farm storage dam and water will be accessed from this dam to supply the centre pivots for irrigation. See figure 3 photos of site.



Figure 4: Existing pumps on floating boom

3.0 Proposal

The installation of the additional pumps at the existing site is integral to Euston Parks operation and management of its potato development at Euston.

The design of the proposed pontoon and boom structure will be similar in construction and specifications to the existing structure. See Figure 5.

There is an existing easement for the pumpsite and mainline footprint.

The proposal is to install three additional 250mm pumps on a floating pontoon adjacent to the existing one. A consolidation of licences from WaterNSW will be applied for in conjunction.

Earthworks will be required for the footings to secure the boom and pipelines to the bank. These are concrete 1.7m deep by 3.6m in length by 5m wide. These will sit adjacent to the existing pump site. Existing power will be extended to the new pumps. Three 250mm pumps will be connected to the floating pontoon structure in the river. They will be plumbed into to the existing mainline.

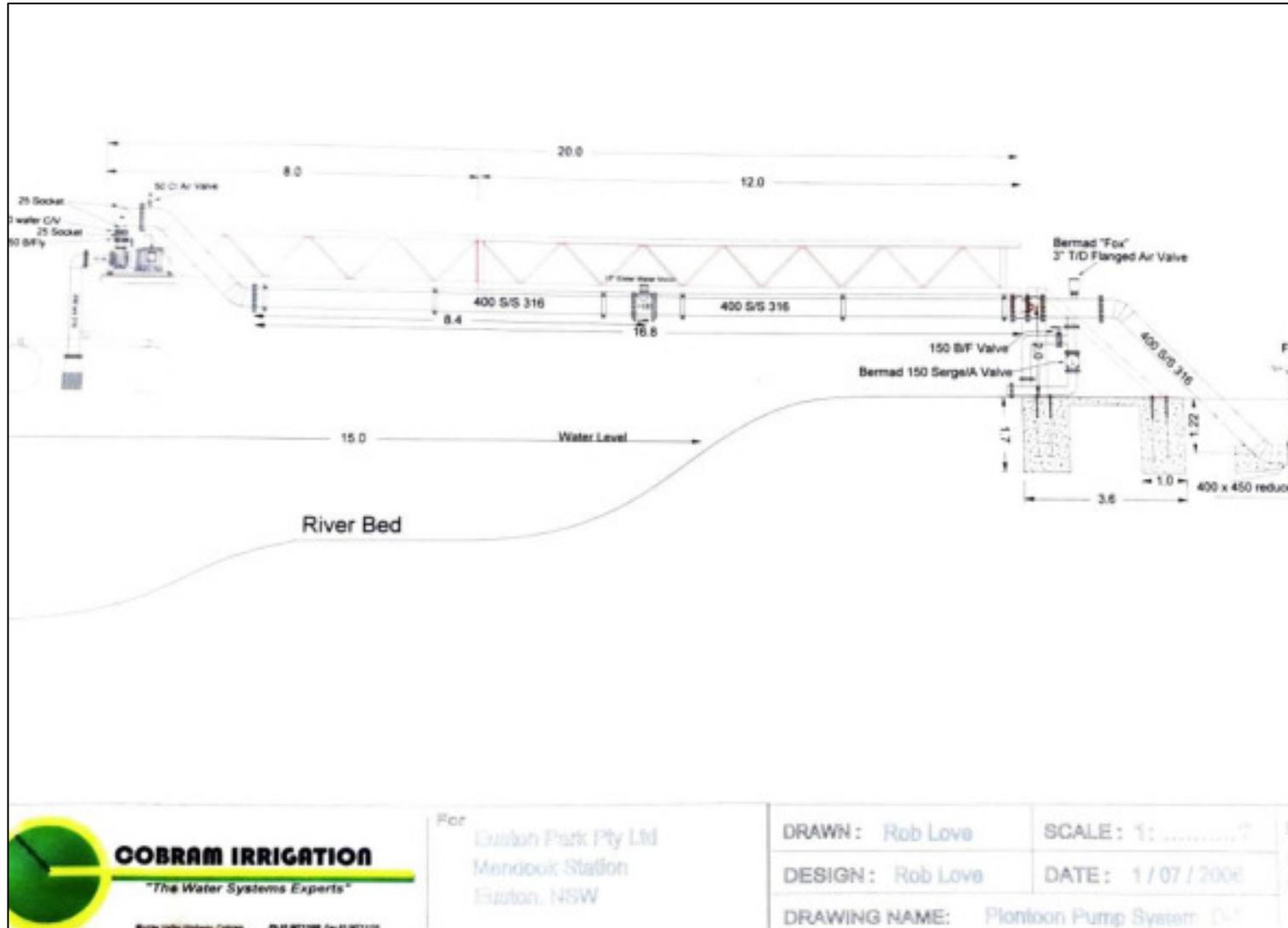


Figure 5: Profile elevation of the proposed pump site (specifications of the original pump site)



Figure 6: Pump site location adjacent to existing pump station.

Access to the site will be via the existing 6m farm road easement which connects to the Sturt Highway.



Figure 7: Access track

4.0 Construction Timetable

Development of the site is expected to begin in 1-5 years on approval of the water supply works/water use approval at the site from Water NSW.

5.0 Planning- Balranald LEP 2010

The proposed construction of the new pump station is defined as a Water Supply System under the Balranald LEP. The LEP defines a Water Supply System as:

Any of the following:

- a) A water reticulation system,
- b) A water storage facility,
- c) A water treatment facility,
- d) A building or place that is a combination of any of the things referred to in paragraphs (a)-(c)



Figure 8: Planning map with site location

5.1 Zone W1

In accordance with the Balranald LEP zoning maps the proposed works will be contained within the zone W1 Zone – Waterways.

The objective of this zone W1 is:

- *To protect the ecological significance and scenic values of natural waterways.*

The proposed development will have little additional impact on the ecological values of the immediate region. The works site is an existing operational pump station and has no significant

ecological value as habitat. The aquatic habitat will not be interfered with as there is no contact with the bed of the river. No snags will be removed from the river.

- *To prevent development that would have an adverse effect on the natural values of waterways in this zone.*

The proposed development will create an additional pump station on the river; adjacent to the footprint of the existing one, so as the rising main can connect to the existing pipeline which runs to the farm supply dam.

- *To provide for sustainable fishing industries and recreational fishing.*

There will be no adverse impacts on fishing or fish populations as a result of the proposed development.

Development consent is required under zone W1 for the Water Supply System.

5.2 Zone RU1

The infrastructure will occupy this zone and includes the footings which secure the gantry to the bank and the rising main and its connection to the existing mainline which is buried.

Other relevant clauses from the LEP are as follows:

- 6.1 Biodiversity
- 6.2 Riparian Land, waterways and groundwater vulnerability
- 6.4 Flood planning
- 6.5 Development on riverfront areas
- 6.6 Development on riverbeds and banks
- Earthworks

The land is affected by the following mapping in addition to the zoning of the land:

- Riparian lands and watercourses
- Terrestrial Biodiversity
- Wetlands

5.3 Riparian Lands & Watercourses



Figure 9: Riparian Lands and Watercourse

- There will be no impacts on any river flows as a result of this proposal.
- The pump station will not interrupt views of, or disrupt access to, the river and its environs.
- The site is an existing pump station, and visually the additional pumping infrastructure will match the existing pump pontoon and gantry and will create no greater negative impact on visual amenity than the existing pump station.

5.4 Biodiversity

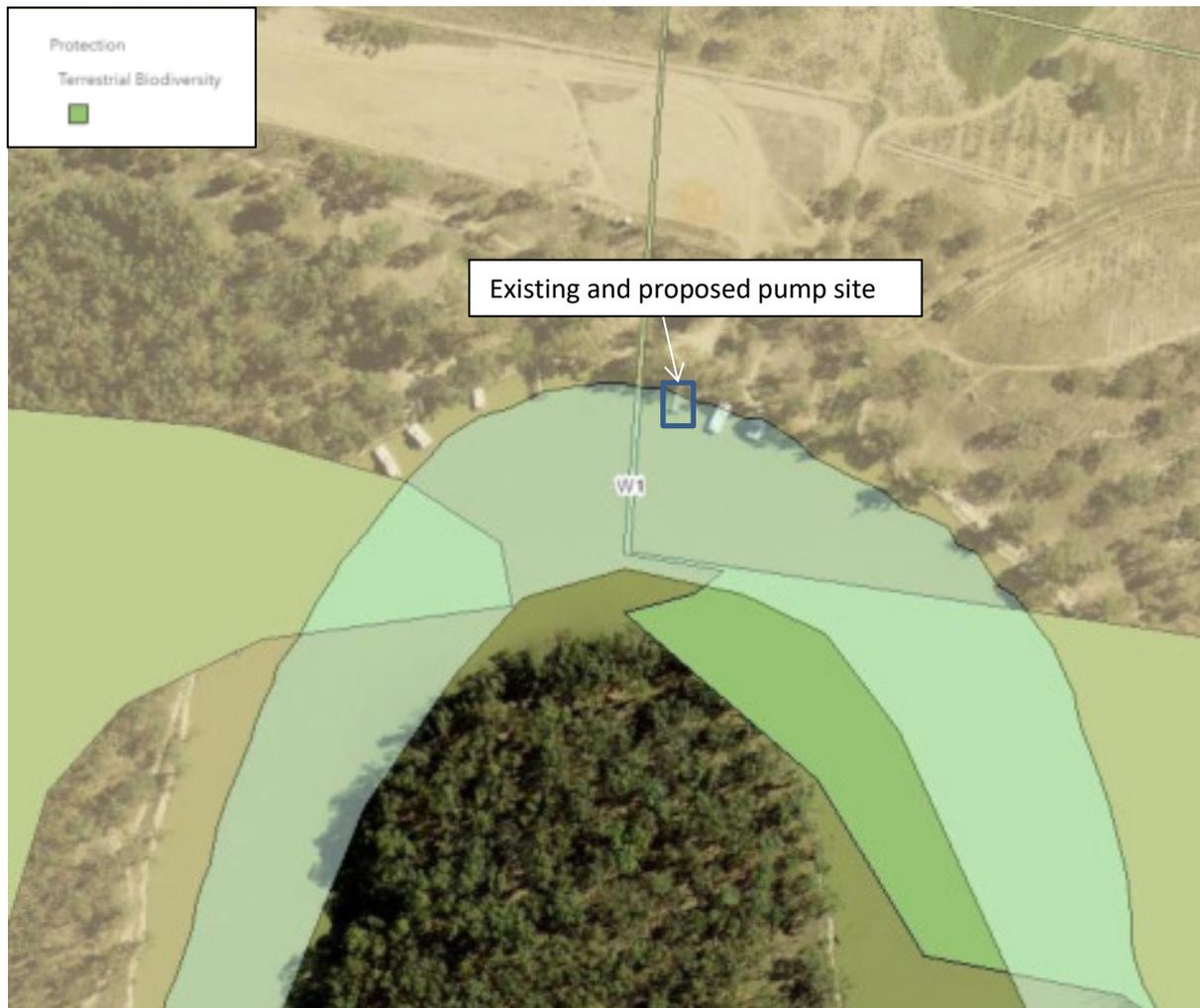


Figure 10: Showing the Biodiversity on the Balranald 2010 Map

High conservation value of native vegetation is generally associated with the terrestrial biodiversity along the river alignment. The proposed development contains a small section of significant terrestrial biodiversity associated with fragmented native bushland as identified under the Balranald Shire Council Local Environment Plan, indicating Biodiversity.



Figure 11: BOSET mapping tool result at pump site (showing existing and proposed works area)

The results of the BOSET mapping tool indicate the requirement for the preparation of a BDAR report. See Appendix 2

Vegetation assessment completed by Dr. Steve Hamilton of Hamilton Environmental Services in August 2021. See submitted report.

5.5 Wetlands



Figure 12: Wetland overlay

The works are located in a wetlands area. Works are not expected to impact on the wetland environment as works are located on the high bank of the river and extend into the river. It is envisaged that the proposal will have no adverse impacts on the native flora and fauna, their habitat and their interrelationship with the environment.

6.0 Cultural Heritage

In accordance with the 'Due Diligence Code of Practice for the protection of Aboriginal Objects in NSW' a search of the AHIMS database was conducted and the search found that one record of Aboriginal sites or places have been recorded or declared on or near the location of the proposed development area on river pump site.

See Appendix 1 for AHIMS online search.

According to the due diligence search on the AHIMS database, one significant object was found within 50m of Lot 4/DP1170452. A single Habitation Structure – Modified tree (Scarred or Carved) is located on the neighbouring property to the east on Billa Downs. The tree is over 100m from the pumpsite and will not be impacted from any works.



Figure 13: Distance to Scar tree

7.0 Murray REP No.2

7.1 Access

The proposed works will not adversely impact the river or foreshore area. Access will remain unchanged and existing river frontage will remain unchanged.

The suction pipe and pontoon will extend into the river and river navigation will not be restricted.

7.2 Settlement

As is the nature of the development it must be located on the river bank. The site is located amongst other irrigation water supply structures, and this proposal will not have any impact on the availability of cropping, pastoral or productive land.

7.3 Landscape

There is limited vegetation at the site and construction impact is expected to be minimal as once the construction works have been finalized, the species will remain undisturbed and be allowed to regrow under and around the pylons.

7.4 Flooding

The proposed pump site is not identified on the Flood Planning Map as being 'Land subject to flooding'. The gantry attaches to the concrete footings in the ground, and have been designed to be above the 1 in 100 year flood level + 0.5m freeboard.

7.5 Bank Disturbance

The works proposed will have some minor disturbance to the high bank of the river. Due to the nature of the installation including piles being driven into the ground there will be no material exchange or disturbance to the shape or profile of the river bank.

The native vegetation will be cleared from the footprint of the concrete footings which secure the gantry to the bank and post construction understory species will naturally be allowed to regenerate around the site and provide stability to the immediate area of the structure. The footprint of the works on the top of the bank is 3.6m x 5m approximately.

7.6 Land Degradation

The installation of the pylons is anticipated to be the only impact on the river bank. Areas of native grasses will be encouraged to regrow and this will ensure stability and prevent erosion of the river bank.

There will be no large scale excavation at the site as part of the proposed works. Footings approximately 1.7m deep and 3.6m long will be used to secure the pipelines and the boom to the bank. This will minimise the likelihood of the impact with groundwater and soil acidity.

7.7 River Related Issues

The development can only be sited adjacent to the existing pump site as a means to access the existing delivery pipeline to the farm. By duplicating the existing pump infrastructure, it will minimise the impacts for the site. Alternative pump types and design set back from the river would ultimately increase construction impacts leading to bank disturbance and erosion.

7.8 Water Quality

There will be no effect on water quality as a result of the proposed works. There is the potential for minor sediment distribution into river water during the building phase with footing construction. However, this will be limited as floating pontoon is considered a low impact technique and the construction of the infrastructure elements offsite and are then assembled at the pump site.

7.9 Wetlands

The works are located in a wetland environment as located on the Balranald LEP 2010 Map. The infrastructure is not expected to intercept flow paths or inhibit water accession into the wetland environment. The structure sits on the high bank away from any low lying aquatic areas and extends directly into the river. The mainline is buried and is directed north away from the river towards the irrigation areas.

8.0 Impact Assessment

8.1 Storm Water

Objective: To minimise the quantity of uncontaminated storm water entering cleared areas	
Actions	1. Establish cut-off or intercept drains to redirect storm water away from cleared areas and slopes to stable (vegetated) areas or effective treatment installations
	2. Reduce water velocities by adding rock check dam

8.2 Air Quality & Dust Control

Objective: To manage construction activities with the potential to impact on air quality	
Actions	1. Ensure that all vehicles and machinery are fitted with appropriate emission control equipment, maintained frequently and serviced to the manufacturers specifications
	2. Smoke from internal combustion engines should not be visible for more than 10 seconds
	3. Implement a dust prevention strategy
	4. Take dust suppression measures, such as promptly watering exposed areas when visible dust is observed

8.3 Noise and Vibration

Objective: To appropriately manage noise during construction activities to minimise impact to workers, neighbours & community members	
Actions	1. Ensure that all vehicles and earth moving equipment on site are fitted with appropriate mufflers which are maintained frequently and serviced to the manufacturers specifications
	2. Enclose noisy equipment
	3. Provide noise attention screens where appropriate
	4. Where an activity is likely to cause a noise nuisance to nearby residents, restrict operating hours to between 7am to 6pm weekdays and 7am to 1pm Saturdays, except where, for practical reasons, the activity is unavoidable
	5. Noise should not be above background levels inside any adjacent residence between 10pm to 7am.
	6. Advise local residents when unavoidable out of hours work will occur
	7. Schedule deliveries to the site so that disruption to local amenity and traffic are minimised
	8. There will be no detectable vibration or dust or any other type of emissions from the operating pump station

8.4 Hazardous substances

Objective: To manage construction activities with the potential to cause contaminated soil	
Actions	1. Minimise fuel and chemicals stored on site
	2. Install bunds and other precautions to reduce the risk of spills
	3. Implement a contingency plan to handle spills, so that environmental damage is avoided
	4. Ensure safety data sheets are available for all hazardous chemicals on site

8.5 Minimising Erosion

Objective: To manage construction activities to minimise erosion	
Actions	1. Minimise cleared area and keep the cleared area for a very short time
	2. Mulch, roughen and seed (with sterile grass) cleared slopes and stockpiles where no works are planned for more than 28 days
	3. Keep vehicles to well defined haul roads
	4. Rehabilitate cleared areas promptly with at least 75% native ground cover species*

* Recommended groundcover species would be those indigenous to the Balranald Floodplain area. A list of these is available from the 'Native Vegetation Guide for the Riverina' Subregion 'Penarie' pages 218-219. Of the listed species limited groundcovers are available commercially. Some species which are available and appropriate include *Agrostis avenacea* (Blown Grass), *Austrodanthonia spp.* and *Atriplex semibaccata* (creeping saltbush).

8.6 Sediment Controls

Objective: To manage construction activities to minimise sediment run off	
Actions	1. Install erosion and sediment control measures, if possible before construction commences
	2. Identify drainage lines and install control measures to handle protected stormwater and sediment loads generated in the mini catchment
	3. Straw bale filter to be installed appropriately to control run-off erosion and sediment run-off to site conditions to handle a 1 in 2 year storm event (2 year ARI with intensity of 6 hours) for temporary structures and 1 in 50 year storm event for permanent structures
	4. Establish an adequate inspection, maintenance and cleaning program for sediment run-off control structures
	5. Continually assess the effectiveness of sediment control measures and make necessary improvements

8.7 Stockpile and Batter Management

Objective: To manage stockpiles and batters during construction activities	
Actions	1. Minimise the number of stockpile, and the area and the time stockpiles are exposed
	2. Keep topsoil and underburden stockpiles separate
	3. Locate stockpiles away from drainage lines, at least 10 meters away from natural waterways and where they will be least susceptible to wind erosion
	4. Ensure that stockpiles and batters have slopes no greater than 2:1 (horizontal/vertical)
	5. Stabilise stockpiles and batters that will remain bare for more than 28 day by covering with mulch or anchored fabrics or seeding with sterile grass
	6. Establish sediment controls around un-stabilised stockpiles and batters
	7. Suppress dust on stockpiles and batters, as circumstances demand

8.8 Waste Management

Objective: To appropriately manage waste during construction activities	
Actions	1. Maintain a high quality of housekeeping and ensure that materials are not where they can be wasted or blown away to become litter
	2. Provide bins for construction workers and staff at locations where they consume food, but all workers should be encouraged to remove waste materials from the site at the conclusion of each working day.
	3. Conduct ongoing awareness with staff of the need to avoid littering

8.9 Access Roads

Objective: To appropriately manage access roads during construction activities	
Actions	1. Ensure that the roads are swept at least once a day on uncontrolled road crossings when construction vehicles are travelling off the sites
	2. Cover all loads of soil being taken off site for disposal
	3. Install litter traps lined with filter cloth in all side entry pits

9.0 Appendix

9.1 Appendix 1 – Cultural Heritage Assessment Report



AHIMS Web Services (AWS) Search Result

Purchase Order/Reference : F8618
Client Service ID : 573272

Price Merrett Consulting
PO Box 313
Kerang Victoria 3579
Attention: Arundeeep Saini
Email: arundeeep.saini@pricemerrett.com.au

Date: 04 March 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 4, DP:DP1170452 with a Buffer of 200 meters, conducted by Arundeeep Saini on 04 March 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

1	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
47-4-0031	Billa Downs 26	GDA	54	664479	6176025	Open site	Valid	Habitation Structure : -, Modified Tree (Carved or Scarred): -		101408
	Contact						Recorders Doctor Sarah Martin			Permits

Report generated by AHIMS Web Service on 04/03/2021 for Arandeep Saini for the following area at Lot : 4, DP:DP1170452 with a Buffer of 50 meters. Additional Info : development application. Number of Aboriginal sites and Aboriginal objects found is 1

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

9.2 Appendix 2 – BOSET



Legend

-  Biodiversity Values that have been mapped for more than 90 days
-  Biodiversity Values added within last 90 days

Notes

© Office of Environment and Heritage |
NSW Environment & Heritage



Biodiversity Values Map and Threshold Report

Results Summary

Date of Calculation	04/05/2021 9:24 AM	BDAR Required*
Total Digitised Area	0.01 ha	
Minimum Lot Size Method	LEP	
Minimum Lot Size	40 ha	
Area Clearing Threshold	1 ha	
Area clearing trigger Area of native vegetation cleared	no	no
Biodiversity values map trigger Impact on biodiversity values map(not including values added within the last 90 days)?	yes	yes
Date of the 90 day Expiry	N/A	

*If BDAR required has:

- at least one 'Yes': you have exceeded the BOS threshold. You are now required to submit a Biodiversity Development Assessment Report with your development application. Go to <https://customer.lmbc.nsw.gov.au/assessment/AccreditedAssessor> to access a list of assessors who are accredited to apply the Biodiversity Assessment Method and write a Biodiversity Development Assessment Report
 - 'No': you have not exceeded the BOS threshold. You may still require a permit from local council. Review the development control plan and consult with council. You may still be required to assess whether the development is "likely to significantly affect threatened species" as determined under the test in s. 7.3 of the Biodiversity Conservation Act 2016. You may still be required to review the area where no vegetation mapping is available.
- # Where the area of impact occurs on land with no vegetation mapping available, the tool cannot determine the area of native vegetation cleared and if this exceeds the Area Threshold. You will need to work out the area of native vegetation cleared - refer to the BOSET user guide for how to do this.

On and after the 90 day expiry date a BDAR will be required.

Disclaimer

This results summary and map can be used as guidance material only. This results summary and map is not guaranteed to be free from error or omission. The State of NSW and Office of Environment and Heritage and its employees disclaim liability for any act done on the information in the results summary or map and any consequences of such acts or omissions. It remains the responsibility of the proponent to ensure that their development application complies with all aspects of the *Biodiversity Conservation Act 2016*.

The mapping provided in this tool has been done with the best available mapping and knowledge of species habitat requirements. This map is valid for a period of 30 days from the date of calculation (above).

Acknowledgement

I as the applicant for this development, submit that I have correctly depicted the area that will be impacted or likely to be impacted as a result of the proposed development.

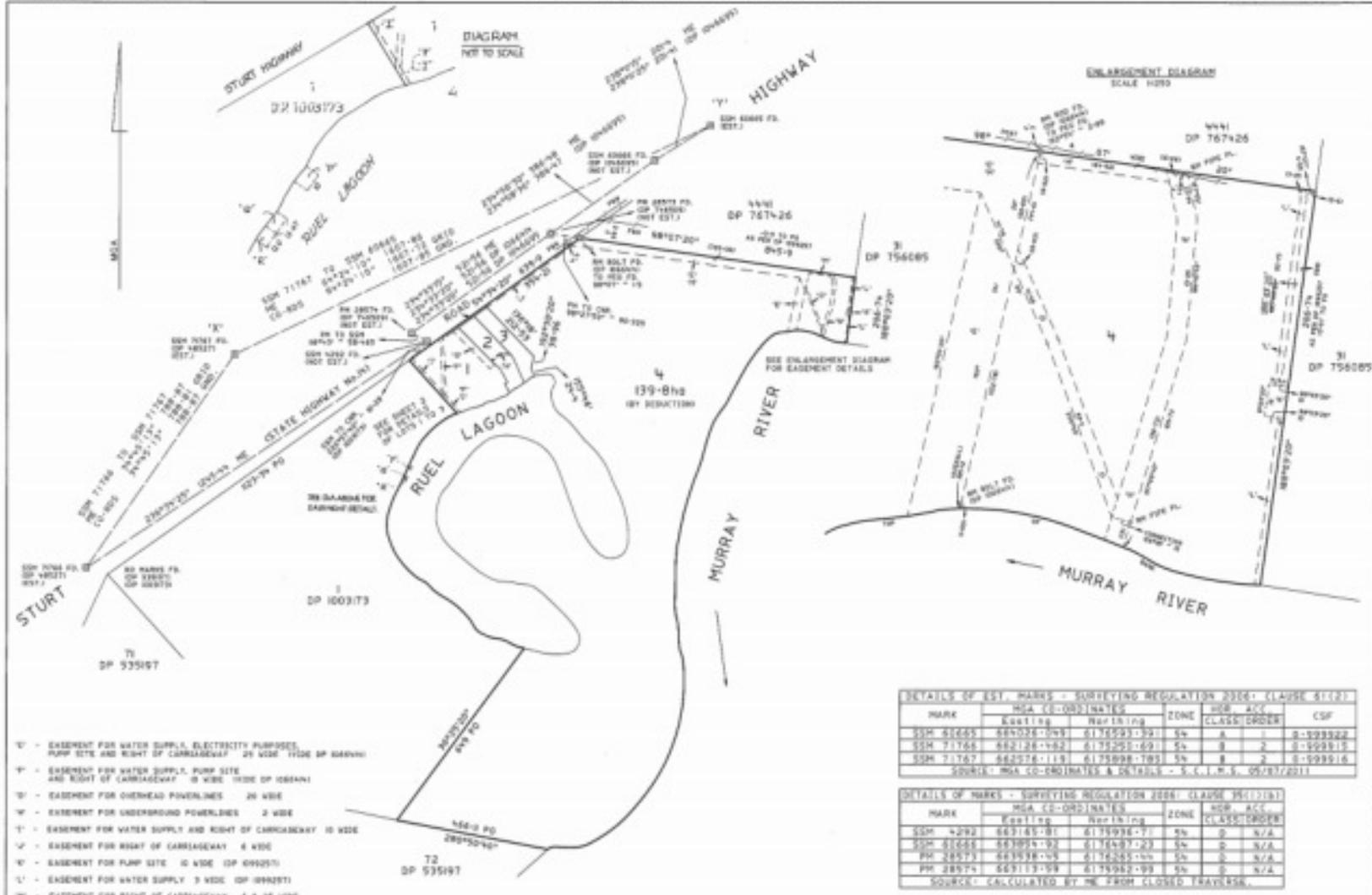
Signature _____ Date: 04/05/2021 09:24 AM

9.3 Appendix 3 – Reports

9.3.1 Hydrogeology

TBS - SMEC Hydrogeological Study 2021

9.4 Appendix 4 – Title



SECTION OF THE REGISTERED-GENERAL / PLAN (DRAWING) / PLAN (FIELD) MEASUREMENTS CONSULTING

- 1' - EASEMENT FOR WATER SUPPLY, ELECTRICITY PURPOSES, PUMP SITE AND RIGHT OF CARRIAGEWAY 20 MIDE (SIDE OF ROAD)
- 2' - EASEMENT FOR WATER SUPPLY, PUMP SITE AND RIGHT OF CARRIAGEWAY 10 MIDE (SIDE OF ROAD)
- 3' - EASEMENT FOR OVERHEAD POWERLINES 20 WIDE
- 4' - EASEMENT FOR UNDERGROUND POWERLINES 2 WIDE
- 5' - EASEMENT FOR WATER SUPPLY AND RIGHT OF CARRIAGEWAY 10 WIDE
- 6' - EASEMENT FOR RIGHT OF CARRIAGEWAY 8 WIDE
- 7' - EASEMENT FOR PUMP SITE 10 WIDE (DP 090251)
- 8' - EASEMENT FOR WATER SUPPLY 3 WIDE (DP 090251)
- 9' - EASEMENT FOR RIGHT OF CARRIAGEWAY 4 & 25 WIDE
- 10' - EASEMENT FOR WATER SUPPLY AND RIGHT OF CARRIAGEWAY 10 WIDE
- 11' - EASEMENT FOR ELECTRICITY PURPOSES AND RIGHT OF CARRIAGEWAY 8 WIDE
- 12' - EASEMENT FOR PUMP SITE 10 WIDE (SIDE OF ROAD)
- 13' - EASEMENT FOR PUMP SITE 10 WIDE (SIDE OF ROAD)
- 14' - EASEMENT FOR PUMP SITE 10 WIDE (SIDE OF ROAD)

DETAILS OF EST. MARKS - SURVEYING REGULATION 2006 (CLAUSE 61(2))

MARK	MGA CO-ORDINATES		ZONE	NSR ACC CLASS	ORDER	CSP
	Easting	Northing				
SSM 61605	687028.1073	6176231.32	54	0	2	0-523324
SSM 71766	682124.1582	6176231.62	54	0	2	0-523318
SSM 71767	682076.1118	6176231.193	54	0	2	0-523314

SOURCE: MGA CO-ORDINATES & DETAILS - S.L.M.S. 05/21/2011

DETAILS OF MARKS - SURVEYING REGULATION 2006 (CLAUSE 61(1)(a))

MARK	MGA CO-ORDINATES		ZONE	NSR ACC CLASS	ORDER
	Easting	Northing			
SSM 4292	683185.01	6175996.71	54	0	N/A
SSM 61606	683005.92	6176231.23	54	0	N/A
PM 28573	683198.05	6176231.06	54	0	N/A
PM 28574	683119.9	6176231.99	54	0	N/A

SOURCE: CALCULATED BY ME FROM CLOSED TRAVERSE.

Surveyor: ROBERT BRUCE FREDMAN Date of Survey: 06 MAY 2011 Surveyor's Reference: 835/10	PLAN OF SUBDIVISION OF LOT 2 IN DP 603173	LGA: BALRANALD Locality: EUSTON Subdivision No. 4800 Lengths are in metres. Reduction Ratio 1:1000	Registered 21.2.2012 DP1170452 P
---	--	---	---

FREDMAN & FREDMAN P.O. BOX 205, HILDRAY, WA. PH (08) 94262029 FAX (08) 94262065 EMAIL rf@rbf.com.au

9.5 Appendix 5 - Plans

