

**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114



---

**APPENDIX i**

---

**LAND CHANNEL PROPERTY REPORT**



Land  
.vic.gov.au

## Property Report

from [www.land.vic.gov.au](http://www.land.vic.gov.au) on 22 August 2018 10:05 AM

**Address:** 85 ACKLAND ROAD LETHBRIDGE 3332

**Crown Description:** Allot. 81 PARISH OF WABDALLAH

**Standard Parcel Identifier (SPI):** 81\PP3692

**Local Government (Council):** GOLDEN PLAINS Council Property Number: 40600110

**Directory Reference:** VicRoads 522 B8

This property is in a designated bushfire prone area.  
Special bushfire construction requirements apply. Planning provisions may apply.

Further information about the building control system and building in bushfire prone areas can be found in the Building Commission section of the Victorian Building Authority website [www.vba.vic.gov.au](http://www.vba.vic.gov.au)

### State Electorates

**Legislative Council:** WESTERN VICTORIA

**Legislative Assembly:** BUNINYONG

### Utilities

**Rural Water Corporation:** Southern Rural Water

**Urban Water Corporation:** Barwon Water

**Melbourne Water:** outside drainage boundary

**Power Distributor:** POWERCOR (Information about [choosing an electricity retailer](#))

### Planning Zone Summary

**Planning Zone:** [LOW DENSITY RESIDENTIAL ZONE \(LDRZ\)](#)

[SCHEDULE TO THE LOW DENSITY RESIDENTIAL ZONE \(LDRZ\)](#)

**Planning Overlay:** [DESIGN AND DEVELOPMENT OVERLAY \(DDO\)](#)

[DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 5 \(DDO5\)](#)

**Areas of Aboriginal Cultural Heritage Sensitivity:**

All or part of this property is an 'area of cultural heritage sensitivity'.

Planning information continued on next page

Copyright © - State Government of Victoria

**Disclaimer:** This content is provided for information purposes only. No claim is made as to the accuracy or authenticity of the content. The Victorian Government does not accept any liability to any person for the information provided. Read the full disclaimer at [www.land.vic.gov.au/home/copyright-and-disclaimer](http://www.land.vic.gov.au/home/copyright-and-disclaimer)

85-ACKLAND-ROAD-LETHBRIDGE-BASIC-PROPERTY-REPORT

Page 1 of 2

Page **20** of 39  
Reference Number: 113883



Planning scheme data last updated on 15 August 2018.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting [Planning Schemes Online](#). This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987. It does not include information about exhibited planning scheme amendments, or zonings that may affect the land. To obtain a Planning Certificate go to [Titles and Property Certificates](#). The Planning Property Report includes separate maps of zones and overlays. For details of surrounding properties, use this service to get the Reports for properties of interest. To view planning zones, overlay and heritage information in an interactive format visit [Planning Maps Online](#). For other information about planning in Victoria visit [www.planning.vic.gov.au](http://www.planning.vic.gov.au)

**Areas of Aboriginal Cultural Heritage Sensitivity**

'Areas of cultural heritage sensitivity' are defined under the Aboriginal Heritage Regulations 2007, and include registered Aboriginal cultural heritage places and land form types that are generally regarded as more likely to contain Aboriginal cultural heritage.

Under the Aboriginal Heritage Regulations 2007, 'areas of cultural heritage sensitivity' are one part of a two part trigger which require a 'cultural heritage management plan' be prepared where a listed 'high impact activity' is proposed.

If a significant land use change is proposed (for example, a subdivision into 3 or more lots), a cultural heritage management plan may be triggered. One or two dwellings, works ancillary to a dwelling, services to a dwelling, alteration of buildings and minor works are examples of works exempt from this requirement.

Under the Aboriginal Heritage Act 2006, where a cultural heritage management plan is required, planning permits, licences and work authorities cannot be issued unless the cultural heritage management plan has been approved for the activity.

For further information about whether a Cultural Heritage Management Plan is required go to <http://www.aav.nrms.net.au/aavQuestion1.aspx>

More information, including links to both the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2007, can also be found here - <https://www.vic.gov.au/aboriginalvictoria/heritage/planning-and-heritage-management-processes.html>

**Area Map**



Copyright © State Government of Victoria

+++++ Railway    -|-|-|-|-| Tram    ——— River, stream    [Blue Area] Lake, waterbody

Copyright © - State Government of Victoria

**Disclaimer:** This content is provided for information purposes only. No claim is made as to the accuracy or authenticity of the content. The Victorian Government does not accept any liability to any person for the information provided. Read the full disclaimer at [www.land.vic.gov.au/home/copyright-and-disclaimer](http://www.land.vic.gov.au/home/copyright-and-disclaimer)

85-ACKLAND-ROAD-LETHBRIDGE-BASIC-PROPERTY-REPORT

Page 2 of 2

**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114




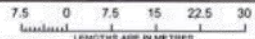
---

**APPENDIX ii**

**DESIGN RESPONSE PLAN**





 <p>Licensed Land Surveyors                  PO Box 36                  Bannockburn Vic 3331                  ph: 03 5281 0019                  admjn@jhsurveying.com.au                  ABNO 36 122 547 710</p>	SCALE 1: 750	 <p>7.5 0 7.5 15 22.5 30                  LENGTHS ARE IN METRES</p>	ORIGINAL SHEET SIZE: A3	SHEET 1
	REF: 17030 VERSION B	DESIGN RESPONSE PLAN 85 ACKLAND ROAD LETHBRIDGE		

**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114



---

**APPENDIX iii**

---

**AERIAL AND SITE PHOTOGRAPHS**

**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114



**AERIAL PHOTOGRAPH**

**Client:** TRAVIS WAYTH  
**Ref. Number:** 11388J  
**Date:** 14/10/2018  
**Site:** Lot 2, 85 Ackland Road, LETHBRIDGE



SUBJECT SITE

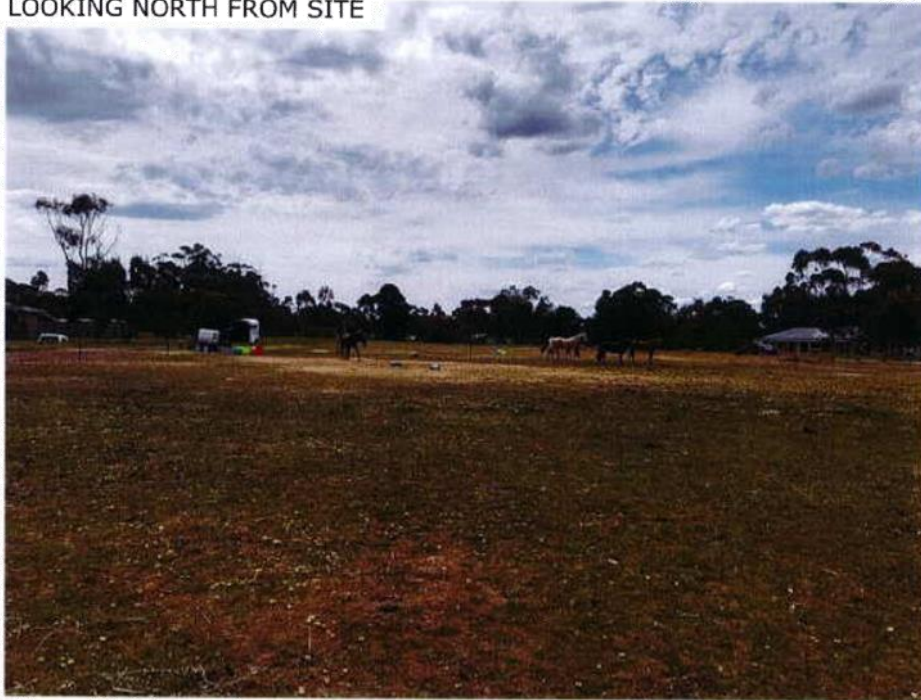


**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114

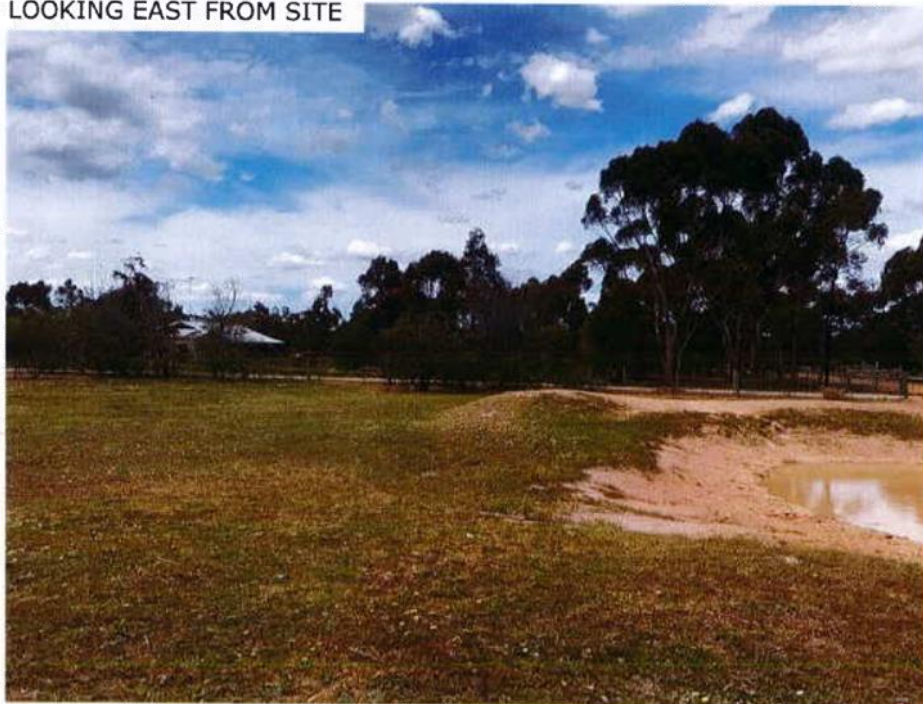


**SITE PHOTOGRAPHS**

LOOKING NORTH FROM SITE



LOOKING EAST FROM SITE

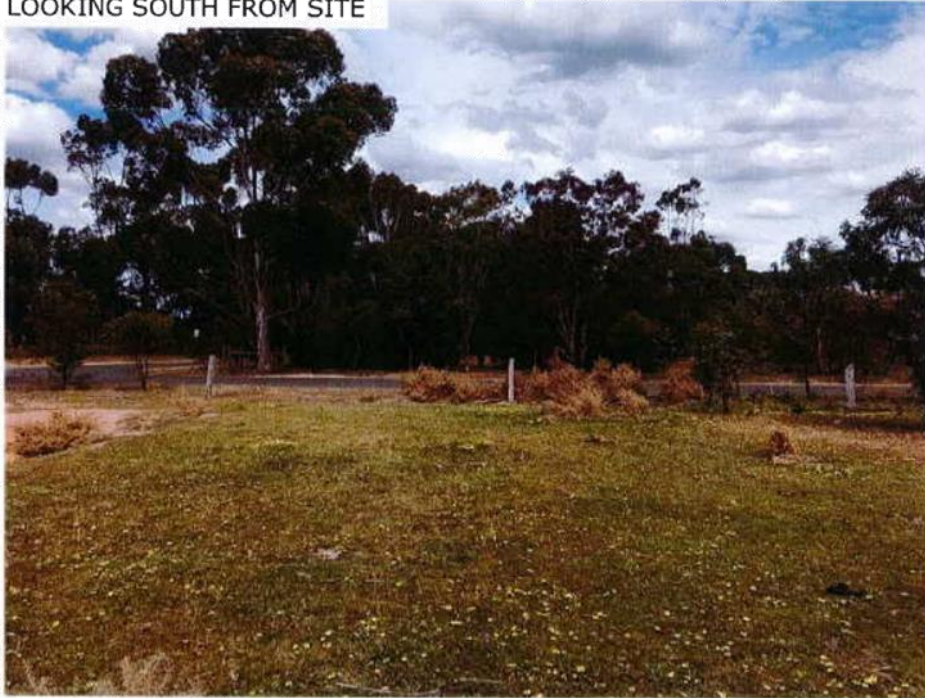


**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114

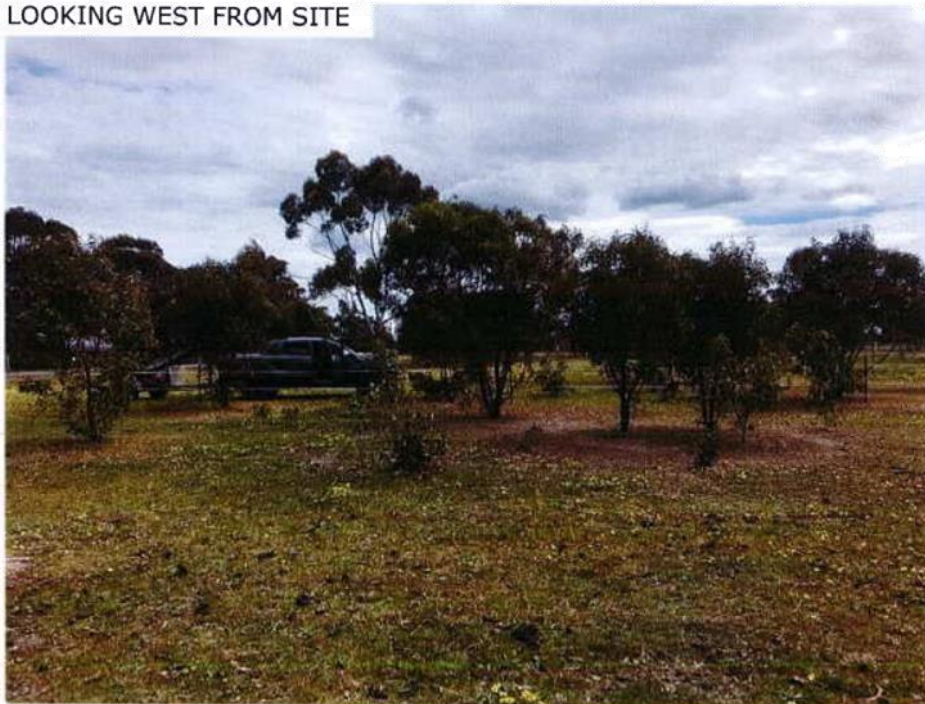


**SITE PHOTOGRAPHS**

LOOKING SOUTH FROM SITE



LOOKING WEST FROM SITE



**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114



---

**APPENDIX iv**

---

**BUREAU OF METEOROLOGY CLIMATE REPORT  
FOR BANNOCKBURN**

---

Page **28** of 39  
Reference Number: 11388J

Monthly Rainfall (millimetres)

BANNOCKBURN

Station Number: 087009 · State: VIC · Opened: 1898 · Status: Open · Latitude: 38.02°S · Longitude: 144.16°E · Elevation: 108 m

Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>Mean</b>	31.3	35.0	35.8	41.4	42.9	42.9	42.9	46.1	50.9	52.9	48.7	41.2	509.2
<b>Lowest</b>	0.0	0.0	0.0	0.0	5.1	6.3	8.3	6.3	15.2	2.8	0.0	0.5	275.9
<b>5th percentile</b>	1.0	2.2	3.9	7.3	10.0	14.4	17.4	15.2	18.6	12.9	11.5	4.9	335.4
<b>10th percentile</b>	3.0	4.6	7.1	11.4	15.1	18.3	20.3	18.4	21.5	19.2	15.3	10.4	369.0
<b>Median</b>	24.8	25.1	27.4	37.1	43.5	40.0	40.6	45.9	48.7	51.3	41.6	36.0	515.5
<b>90th percentile</b>	70.7	85.9	74.0	83.0	71.2	73.5	70.6	69.5	79.7	90.2	95.9	79.2	658.8
<b>95th percentile</b>	81.9	98.8	94.9	96.1	76.8	86.3	83.9	80.0	83.8	94.9	102.8	95.9	677.9
<b>Highest</b>	108.2	203.2	159.0	143.6	112.5	153.4	96.3	143.2	189.5	134.8	145.6	119.2	848.2

Statistics calculated over the period 1961-1990

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>Mean</b>	36.8	36.7	34.8	41.9	50.0	38.4	43.6	51.5	50.7	58.2	44.9	44.3	535.8
<b>Lowest</b>	2.3	0.0	8.4	7.2	7.0	6.3	10.2	13.2	15.2	5.3	6.3	0.5	275.9
<b>5th Percentile</b>	2.9	1.0	8.6	11.0	12.3	16.7	17.1	25.6	15.6	10.4	10.6	4.0	336.8
<b>10th percentile</b>	3.9	1.0	9.1	13.1	15.9	18.4	17.9	26.7	17.7	22.6	11.5	9.3	387.8
<b>Median</b>	30.5	21.3	36.3	36.3	48.2	35.6	42.7	55.8	52.2	56.3	42.5	39.1	530.0
<b>90th percentile</b>	81.9	89.8	56.8	78.2	94.4	58.2	70.2	78.0	76.0	94.0	67.6	78.0	681.4
<b>95th percentile</b>	95.0	107.4	65.4	91.3	107.8	74.6	84.0	80.7	86.4	110.7	97.1	103.7	705.6
<b>Highest</b>	104.2	203.2	80.8	127.5	112.5	92.6	92.9	82.8	93.7	134.8	145.6	119.2	848.2

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

<http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml>.



Product code: IDCJAC0001 reference: 41624022 Created on Tue 09 Oct 2018 16:03:37 PM EST

© Copyright Commonwealth of Australia 2018, Bureau of Meteorology.  
Prepared using Climate Data Online, Bureau of Meteorology <http://www.bom.gov.au/climate/data>.  
Contact us using details on <http://www.bom.gov.au/climate/how/contacts.shtml>.

We have taken all due care but cannot provide any warranty nor accept any liability for this information.  
<http://www.bom.gov.au/other/copyright.shtml>

**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114



---

**APPENDIX v**

**TEST SITE LOCATION PLAN  
(DESIGN RESPONSE PLAN)**

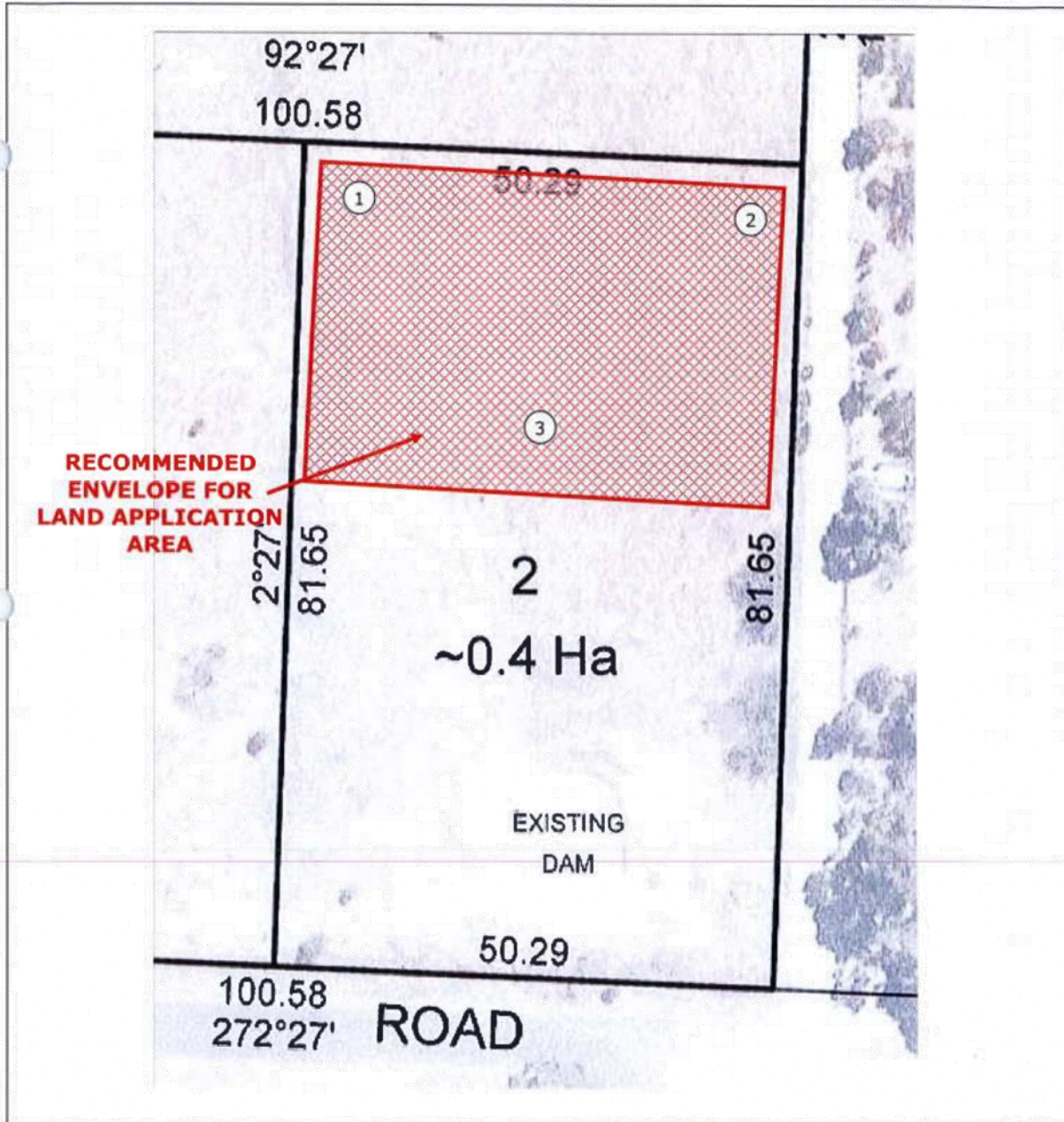
**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
 A.B.N. 88 090 400 114



**TEST SITE LOCATION PLAN**

(Not to Scale) - ○ Distances are approximate

**Client:** TRAVIS WAYTH  
**Ref. Number:** 11388J  
**Date:** 14/10/2018  
**Site:** Lot 2, 85 Ackland Road, LETHBRIDGE





**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114



---

**APPENDIX vi**

**BORELOG DESCRIPTIONS**



**PROVINCIAL GEOTECHNICAL PTY. LTD.**

<b>CLIENT:</b> TRAVIS WAYTH				<b>REFERENCE NUMBER:</b> 11388J				<b>DATE:</b> 14/10/2018			
<b>PROJECT ADDRESS:</b> Lot 2, 85 Ackland Road, LETHBRIDGE				<b>GEOLOGIST:</b> Andrew Redman				<b>DRILLING METHOD:</b> 100mm diameter drill rig or hand auger			
<b>TEST SITE 1 EXCAVATION METHOD: HYDRAULIC DRILLING RIG</b>				<b>TEST SITE 2 EXCAVATION METHOD: HYDRAULIC DRILLING RIG</b>				<b>TEST SITE 3 EXCAVATION METHOD: HYDRAULIC DRILLING RIG</b>			
Depth mm	SOIL PROFILE	Fill	CAT	Depth mm	SOIL PROFILE	Fill	CAT	Depth mm	SOIL PROFILE	Fill	CAT
100	<b>SANDY SILTY CLAY (Clay Loam) weakly structured dry; firm</b>		4b	100	<b>SANDY SILTY CLAY (Clay Loam) weakly structured dry; firm</b>		4b	100	<b>SANDY SILTY CLAY (Clay Loam) weakly structured dry; firm</b>		4b
200				200				200			
300				300				300			
400				400				400			
500	<b>SLIGHTLY SILTY CLAY (light Clay) moderately structured yellow brown moist; stiff</b>		5b	500	<b>SLIGHTLY SILTY CLAY (light Clay) moderately structured yellow brown moist; stiff</b>		5b	500	<b>SLIGHTLY SILTY CLAY (light Clay) moderately structured yellow brown moist; stiff</b>		5b
600				600				600			
700				700				700			
800				800				800			
900				900				900			
1000				1000				1000			
1100			1100			1100					
1200			1200			1200					
1300			1300			1300					
1400			1400			1400					
1500			1500			1500					
1600	<b>END BORE HOLE</b>			1600	<b>END BORE HOLE</b>			1600	<b>END BORE HOLE</b>		
1700				1700				1700			
1800				1800				1800			
1900				1900				1900			
2000				2000				2000			
2100				2100				2100			
2200				2200				2200			
2300				2300				2300			
2400				2400				2400			
2500				2500				2500			

**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
A.B.N. 88 090 400 114



---

**APPENDIX vii**

**LABORATORY RESULTS**

**Groundswell laboratories**  
"A New Force In Analytical Testing"

**CERTIFICATE OF ANALYSIS**

<b>Client Name :</b>	Provincial Geotechnical	<b>Groundswell Batch # :</b>	G518739
<b>Client Address :</b>	91 Nicholas Street, Newrown, Victoria, 3120	<b>Project Name :</b>	Lot 2, 85 Ackland Road, LerbrIDGE, VIC
<b>Client Phone # :</b>	03 5223 1566	<b>Project # :</b>	11388J
<b>Client Fax # :</b>	03 5224 4560	<b>Date Samples Received :</b>	15-10-18
<b>Project Manager :</b>	Andrew Rodman	<b>Sample Matrix :</b>	Soil
<b>E-mail :</b>	admin@gsoc.com.au	<b>Sample # Submitted :</b>	1
<b>Project Sample Manager :</b>	Andrew Rodman	<b>Groundswell Quote # :</b>	Not Applicable
<b>E-mail :</b>	admin@gsoc.com.au	<b>Date CoFA issued :</b>	19-10-18

  
 Paul Woodward  
 Managing Director  
 paul@groundswelllabs.com.au

Reference #GSoc Date Issued : 19/10/2018

### Soil Analysis Results

Client Sample ID		Sample 1	
Laboratory Sample Number		GS18739-1	
Date Sampled		14-10-18	
Analytes	Units	LOR	
	pH	pH Units	0.1
Electrical Conductivity @ 25°C	dS/m	0.005	0.028
Exchangeable Calcium	mg/Kg	1	392
Exchangeable Magnesium	mg/Kg	1	67
Exchangeable Potassium	mg/Kg	1	16
Exchangeable Sodium	mg/Kg	1	58
CEC	MEQ%	0.1	2.8
ESP	%	0.1	9.0
Sodicity Rating	—	—	Sodic
			0.16

Reference AP/SL/Rev4 Date Issued : 19/12/2014

**Comments :**

- 1- pH & electrical conductivity determined & reported on a 1:5 soil:water extraction
- 2- CEC determined by soil chemical method 1581 'Exchangeable bases and cation exchange capacity - 1M ammonium chloride at pH 7.0, no pre-treatment for soluble salts'
- 3- ESP, sodicity rating & SAR determined by calculation using the exchangeable cation results

Groundswell Laboratories Pty Ltd    ABN 24 133 248 923  
 116 Moray Street, South Melbourne, Victoria, 3205    Ph (03) 8669 1450    Fax (03) 8669 1451    E-mail : paul@groundswelllabs.com.au  
 Page 2 of 4

### Soil Analysis Results

Client Sample ID	Sample 1	Sample 1
Laboratory Sample Number	GS18739-1	GS18739-1
Date Sampled	14-10-18	14-10-18
Analytes		
	Units	LOR
Sample Type	---	---
Emerson Aggregate Class - 2 Hours	Air Dried Aggregates	Re-moulded Ped
Emerson Class Number	Slaking / Some Dispersion Class 2	Slaking / Some Dispersion Class 2
Emerson Aggregate Class - 20 Hours	Slaking / Some Dispersion Class 2	Slaking / Complete Dispersion Class 1
Emerson Class Number	---	---
Addition of 1M HCl	---	---
1:5 Soil:Water 10 minute extraction	---	---
Emerson Class Number	---	---

Reference: 8156.Rev0 Date Issued: 13/8/2014

**Comments :**

1- Classification conducted in accordance with Emmerson 'A' classification of soil aggregates based on their coherence in water', 1967 & AS1289.C8.1-1980

## Inorganics Quality Control Report

Client Sample ID Laboratory Sample Number	Method Blank		Laboratory Control Standard (LCS)	
	Method Blank Acceptance Criteria (<LOR) (Pass/Fail)	Within GSL Acceptance Criteria (Pass/Fail)	LCS (%R)	Within GSL Acceptance Criteria (Pass/Fail)
<b>Analyte</b>	<b>Units</b>	<b>LOIR</b>	<b>LCS (%R)</b>	<b>Within GSL Acceptance Criteria (Pass/Fail)</b>
pH	pH units	0.1	7.00	7.00 ± 0.1 pH Unit Pass
Conductivity	dS/m	0.005	101%	80-120% Pass
Exchangeable Calcium	mg/kg	1	96%	70-130% Pass
Exchangeable Magnesium	mg/kg	1	100%	70-130% Pass
Exchangeable Potassium	mg/kg	1	94%	70-130% Pass
Exchangeable Sodium	mg/kg	1	98%	70-130% Pass
CEC	MEC0%	0.1	NA	NA NA
ESP	%	0.1	NA	NA NA
SAR	—	0.01	NA	NA NA

Reference #196.1844 Date Issued: 3/11/2019

**Comments :**

- 1- Exchangeable cations LCS values based on independent water standards
- 2- NA = Not Applicable

Groundswell Laboratories Pty Ltd ABN 24 133 248 923  
 116 Moray Street, South Melbourne, Victoria, 3205 Ph (03) 9669 1450 Fax (03) 9669 1451 E-mail : admin@groundswelllabs.com.au  
 Page 4 of 4

**PROVINCIAL GEOTECHNICAL PTY. LTD.**  
**CONSULTING GEOLOGISTS**  
 A.B.N. 88 090 400 114



PRINCIPAL: ANDREW P. REDMAN BSc.

**GEELONG**  
 91 Nicholas Street, NEWTOWN VIC 3220  
 P.O. BOX 1161, GEELONG VIC 3220  
 Phone: (03) 52 231566 Fax: (03) 52 224560

**BALLARAT**  
 P. O. BOX 1124, BAKERY HILL VIC 3354  
 Phone: (03) 53 381770 Fax: (03) 53 396598

**E-MAIL: admin@pgvic.com.au**

15<sup>th</sup> October 2018

Our Reference: 11388J

Groundswell Laboratories  
 115 Moray Street  
 SOUTH MELBOURNE VIC 3205

Dear Sir/Madam,

**Re: Lot 2, 85 Ackland Road, Lethbridge, VIC.**

Please perform the following soil tests:

- i Emerson Aggregate Class
- ii Cation Exchange Capacity
- iii Electrical Conductivity (EC)
- iv pH
- v Sodicity – Exchangeable Sodium Percentage (ESP)
- iv Sodium Absorption Ratio (SAR)

For the following One (1) sample from one (1) location:

DATE	SAMPLE	TEST SITE	DEPTH (mm)	MATERIAL	LAB ID
14/10/2018	1	1	300mm	SOIL	

Yours sincerely

ANDREW REDMAN BSc.  
GEOLOGIST.

AR: hs