

# Appendices



# Appendix 1: Existing Approvals - Extracts

# PL 252 Resource authority public report

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## ▼ Permit details

<b>Permit ID:</b>	PL 252
<b>Status:</b>	Granted
<b>Lodged date:</b>	19/02/2007
<b>Grant date:</b>	20/09/2008
<b>Commencement date:</b>	20/09/2008
<b>Expiry date:</b>	19/09/2038
<b>Plan/program expiry date:</b>	30/06/2025
<b>Current term:</b>	30 years
<b>Work program type:</b>	
<b>Conditions:</b>	
<b>Locality:</b>	SOUTH-WEST OF DALBY WITHIN THE WALLOON COAL MEASURES
<b>Remarks:</b>	.
<b>Act permit granted under:</b>	Petroleum and Gas (Production and Safety) Act 2004
<b>Act now administered under:</b>	Petroleum and Gas (Production and Safety) Act 2004

▼ H o l d e r s

**Authorised holder representative (AHR)**

FERGUSON, Suzanne  
C/- Tenement Manager GPO Box 5262 Brisbane QLD 4001

**Holders**

Holder name	Share %	Status	Held from	Held to	Authorised holder
* ARROW ENERGY PTY LTD GPO Box 562 Brisbane QLD 4001	70.000000000000	Current	06/01/2011		Yes
* ARROW CSG (AUSTRALIA) PTY LTD C/- Tenement Manager GPO Box 5262 Brisbane QLD 4001	30.000000000000	Current	05/10/2010		No
ARROW ENERGY LTD	70.000000000000	Former	21/12/2009	06/01/2011	
SHELL CSG (AUSTRALIA) PTY LTD	30.000000000000	Former	21/12/2009	05/10/2010	
ARROW ENERGY LTD	100.000000000000	Former	08/07/2008	21/12/2009	
ARROW ENERGY NL	100.000000000000	Former	19/02/2007	08/07/2008	

**Tenancy type:** Tenancy in Common

**Area**

<b>Location:</b>	<a href="#">View Map</a>
<b>Mining district:</b>	Dalby
<b>Local authority:</b>	Western Downs Regional Council
<b>Area:</b>	25 Sub-blocks
<b>Exclusions:</b>	
<b>Marked out date:</b>	

**Sub-blocks**

BIM	Block	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Brisbane	2749	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

**Background land**

No data available

**Survey plans**

Plan No.	Description	Date received	Locality	Volume	Folio
MP38492	PWLs - "Stratheden #10, 11, 12, 13, 14"	02/03/2009	DUCKLO		
MP38493	PWL - STRATHEDEN 16, 18, 19	02/03/2009	DUCKLO		
MP38744	PWL - "Stratheden #15"	09/03/2010	DUCKLO		
MP38734	PWL - "Stratheden #17, 20, 22 & 24, 25, 26, 27"	09/03/2010	DUCKLO		
MP38853	PWL - "Stratheden #5"	18/08/2010	DUCKLO		
MP39583	PWL - Stratheden #60 & 61	12/11/2012	RANGES BRIDGE		
MP39593	PWL - Stratheden #40, 41, 42, 43, 44, 45, 46	14/12/2012	RANGES BRIDGE		
MP43663	PWL - STRATHEDEN 62, 63, 64, 65, 66, 67, 68, 69	14/10/2013	DUCKLO		
MP45812	PWL OF STRATHEDEN 111, STRATHEDEN 112, STRATHEDEN 113, STRATHEDEN 114, STRATHEDEN 115 AND STRATHEDEN 116	23/08/2018	RANGES BRIDGE		

**Relinquishment details**

No data available

**Sub-blocks retained**

No data available

**Term history**

Term	Date notice issued	Date lodged	Date approved	Date commenced	Date term ends	Term	Act granted under
2008 - 2038		19/02/2007	20/09/2008	20/09/2008	19/09/2038	30 years	Petroleum and Gas (Production and Safety) Act 2004

Native title

Outcome	Process
All land subject to Native Title (<10%) is excluded from the permit area	Predominantly Exclusive Land

Purpose and minerals

<b>Purpose</b>
PETROLEUM
<b>Minerals</b>
Coal Seam Gas

Related permits

<b>Pre-requisite permits:</b>	ATP 790
<b>Applied from permits:</b>	<a href="#">WMA2014</a> ; <a href="#">WMA2015</a> ; <a href="#">WMA2016</a>
<b>Dependent permits:</b>	WMA2; <a href="#">WMA3</a> ; <a href="#">WMA4</a> ; <a href="#">WMA5</a> ; <a href="#">WMA2017</a>

Financial

Rent details	
<b>Area units:</b>	75
<b>Rate/unit area:</b>	\$159.30

▼ Activities

Activity name	Activity / Dealing No	Status	Date received	Expected completion	Date completed	Remarks
Coordination arrangement	347503	Requested	28/04/2021			
Coordination arrangement	347490	Requested	28/04/2021			
Add excluded land	213520	Approved	19/07/2017		23/08/2017	Approval given to add excluded land namely land that may be subject to native title.
Later Development Plan Due		Requested	24/06/2014	19/09/2018		LDP DUE 19/09/2018.
Later Development Plan		Closed	06/06/2013	30/06/2014	18/06/2014	LDP DUE 19-SEP-2013. LDP RECEIVED 06/06/13, WITHIN TIMEFRAME, FOR PERIOD OF 5 YRS FROM 20/09/2013 TO 19/09/2018. CHECKLIST COMPLETED. TAS REQUIRED. LDP FORWARDED TO DELEGATE FOR APPROVAL 20/05/14. LDP APPROVED BY REGIONAL DIRECTOR ON 18/06/14 FOR THE PERIOD TILL 19/09/2018.
Change of holder name	1020891	Closed	06/01/2011	06/01/2011	06/01/2011	Changed name from ARROW ENERGY LTD to ARROW ENERGY PTY LTD
Coordination arrangement	131810	Approved	11/10/2010		20/03/2019	
Change of holder name	1019581	Closed	05/10/2010	05/10/2010	05/10/2010	Changed name from SHELL CSG (AUSTRALIA) PTY LTD to ARROW CSG (AUSTRALIA) PTY LTD
Change of holder name	1012587	Closed	08/07/2008	08/07/2008	08/07/2008	Changed name from ARROW ENERGY NL to ARROW ENERGY LTD
Later Development Plan		Closed	22/02/2007	19/04/2007	20/09/2008	INITIAL DEVELOPMENT PLAN LODGED WITH APPLICATION FOR A TERM OF 5 YEARS TO COMMENCE 20 SEP 2008 TO EXPIRE 19 SEP 2013

# PL 260 Resource authority public report

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## ▼ Permit details

<b>Permit ID:</b>	PL 260
<b>Status:</b>	Granted
<b>Lodged date:</b>	08/01/2008
<b>Grant date:</b>	16/03/2011
<b>Commencement date:</b>	01/04/2011
<b>Expiry date:</b>	31/03/2041
<b>Plan/program expiry date:</b>	30/06/2025
<b>Current term:</b>	30 years
<b>Work program type:</b>	
<b>Conditions:</b>	<p>Entry into relevant arrangement (a) The holders of PL 260 must enter into contract(s), coordination arrangement(s) or other arrangement(s) (relevant arrangement(s)) to supply petroleum produced from the area of PL 260, where the relevant arrangement(s) provide for: i. the supply of petroleum produced from the area of PL 260 to occur by no later than 31 December 2018; and ii. the volume of petroleum produced from the area of PL 260 to equal or exceed 300TJ by 31 December 2019. (b) The holders of PL 260 must provide the following to the department administered by the Minister by no later than 30 June 2017: i. evidence of the relevant arrangement(s) to supply petroleum produced from the area of PL 260 which meets the requirements of clause (a); and ii. a written declaration that the petroleum produced from the area of PL 260 will meet all or some of the petroleum required to be supplied under the relevant arrangement. (c) The Minister may determine that s/he is not satisfied that the holders of PL 260 have entered into relevant arrangement(s) if the Minister reasonably believes: i. a relevant arrangement relating to PL 260 is not an arm's length commercial transaction; or ii. supply under the relevant arrangement is unlikely to be carried out.</p>
<b>Locality:</b>	SOUTH OF DALBY
<b>Remarks:</b>	Prerequisite tenure Id's ATP 683
<b>Act permit granted under:</b>	Petroleum and Gas (Production and Safety) Act 2004
<b>Act now administered under:</b>	Petroleum and Gas (Production and Safety) Act 2004



▼ H o l d e r s

**Authorised holder representative (AHR)**

FERGUSON, Suzanne  
C/- Tenement Manager GPO Box 5262 Brisbane QLD 4001

**Holders**

Holder name	Share %	Status	Held from	Held to	Authorised holder
* ARROW CSG (AUSTRALIA) PTY LTD C/- Tenement Manager GPO Box 5262 Brisbane QLD 4001	30.000000000000	Current	05/10/2010		No
* ARROW (TIPTON TWO) PTY LTD GPO Box 5262 Brisbane QLD 4001	28.000000000000	Current	09/08/2010		No
* ARROW (TIPTON) PTY. LTD. GPO Box 5262 Brisbane QLD 4001	42.000000000000	Current	02/04/2009		Yes
SHELL CSG (AUSTRALIA) PTY LTD	30.000000000000	Former	09/08/2010	05/10/2010	
ARROW (TIPTON TWO) PTY LTD	40.000000000000	Former	09/09/2009	09/08/2010	
SHELL CSG (AUSTRALIA) PTY LTD	18.000000000000	Former	02/04/2009	09/08/2010	
ARROW (TIPTON) PTY. LTD.	60.000000000000	Former	22/01/2008	02/04/2009	
BEACH PETROLEUM (SURAT) PTY LTD	40.000000000000	Former	22/01/2008	09/09/2009	

**Tenancy type:** Tenancy in Common

Area

<b>Location:</b>	<a href="#">View Map</a>
<b>Mining district:</b>	Dalby
<b>Local authority:</b>	Western Downs Regional Council
<b>Area:</b>	72 Sub-blocks
<b>Exclusions:</b>	
<b>Marked out date:</b>	

Sub-blocks

BIM	Block	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Brisbane	2678	A					F	G				L	M	N			Q	R	S	T		V	W	X	Y	Z
Brisbane	2750	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Brisbane	2751						F																			
Brisbane	2822	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
Brisbane	2894	A	B	C	D		F	G	H																	

Background land

No data available

Survey plans

Plan No.	Description	Date received	Locality	Volume	Folio
MP43668	PWL - LONGSWAMP 7 & 8	05/11/2013	RANGES BRIDGE		
MP38962	PWL - LONGSWAMP 25, LONGSWAMP 26	18/01/2018	SPRINGVALE		
MP45800	PWL - LONGSWAMP 27	06/02/2018	Nandi		
MP45805	PWL OF LONGSWAMP 32, LONGSWAMP 33, LONGSWAMP 34, LONGSWAMP 35	20/04/2018	DUCKLO		
MP45806	PWL OF LONGSWAMP 28, LONGSWAMP 29, LONGSWAMP 30, LONGSWAMP 30R & LONGSWAMP 31	20/04/2018	NANDI & DUCKLO		

Relinquishment details

No data available

Sub-blocks retained

No data available

Term history

Term	Date notice issued	Date lodged	Date approved	Date commenced	Date term ends	Term	Act granted under
2011 - 2041		08/01/2008	16/03/2011	01/04/2011	31/03/2041	30 years	Petroleum and Gas (Production and Safety) Act 2004

**Native title**

Outcome	Process
Land subject to Native Title is excluded from the permit area	Predominantly Exclusive Land

**Purpose and minerals**

Purpose
Gas, OIL
Minerals
Coal Seam Gas

**Related permits**

<b>Pre-requisite permits:</b> ATP683 (CONSENT GIVEN) P&G ACT
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**Financial**

**Rent details**

<b>Area units:</b>	216
<b>Rate/unit area:</b>	\$159.30

**Activities**

Activity name	Activity / Dealing No	Status	Date received	Expected completion	Date completed	Remarks
Add excluded land	213527	Approved	19/07/2017		23/08/2017	Approval given to add excluded land namely land that may be subject to native title.
Later Development Plan Due		Requested	12/06/2014	31/03/2016		LDP DUE 31/03/2016.
Change of holder name	1019581	Closed	05/10/2010	05/10/2010	05/10/2010	Changed name from SHELL CSG (AUSTRALIA) PTY LTD to ARROW CSG (AUSTRALIA) PTY LTD
Change of holder name	1016426	Closed	09/09/2009	09/09/2009	09/09/2009	Changed name from BEACH PETROLEUM (SURAT) PTY LTD to ARROW (TIPTON TWO) PTY LTD

# Permit

Environmental Protection Act 1994

## Environmental authority EPPG00972513

*This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.*

**Environmental authority number: EPPG00972513**

**Environmental authority takes effect on 19 August 2021**

### Environmental authority holder(s)

Names(s)	Registered address
ARROW ENERGY PTY LTD	Level 39 111 Eagle Street BRISBANE QLD 4001
AUSTRALIAN CBM PTY LTD	Level 39 111 Eagle Street BRISBANE CITY QLD 4000 Australia
ARROW (TIPTON) PTY. LTD.	Level 39 111 Eagle Street BRISBANE CITY QLD 4000 Australia
ARROW (DAANDINE) PTY. LTD.	Level 39 111 Eagle St BRISBANE CITY QLD 4000 Australia
ARROW CSG (AUSTRALIA) PTY LTD	Level 39 111 Eagle Street BRISBANE CITY QLD 4000 Australia
ARROW (TIPTON TWO) PTY LTD	Level 39 111 Eagle Street BRISBANE CITY QLD 4000 Australia
CLEANCO QUEENSLAND LIMITED	Comalco Place Level 32 12 Creek St BRISBANE CITY QLD 4000 Australia

### Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Resource Activity, Ancillary 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no- release works, with a total daily peak design capacity of, (a-i) 21 to 100EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	PL252

Resource Activity, Ancillary 14 - Electricity Generation, 1: Generating electricity by using gas at a rated capacity of 10MW electrical or more	PL238, PL258, PL252, PL194, PL198, PL230, PL260
Resource Activity, Ancillary 15 - Fuel burning, Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour	PL238, PL258, PL252, PL194, PL198, PL230, PL260
Resource Activity, Ancillary 56 - Regulated Waste Storage Receiving and storing regulated waste	PL230
Resource Activity, Ancillary 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no- release works, with a total daily peak design capacity of, (a-i) 21 to 100EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme.	PL198, PL230, PL260, PL238, PL258
Resource Activity, Ancillary 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no- release works, with a total daily peak design capacity of, (b-i) more than 100 but not more than 1500EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	PL238, PL258, PL252, PL194, PL198, PL230, PL260
Resource Activity, Ancillary 64 - Water treatment, 2: Desalinating, in a day, the following quantity of water, allowing the release of waste to waters other than seawater, (b) more than 5ML	PL238, PL258, PL252, PL194, PL198, PL230, PL260
Resource Activity, Schedule 3, 06: A petroleum activity carried out on a site containing a high hazard dam or a significant hazard dam	PL238, PL258, PL252, PL194, PL198, PL230, PL260
Resource Activity, Schedule 3, 07: A petroleum activity involving injection of a wastefluid into a natural underground reservoir or aquifer	PL238, PL258, PL252, PL194, PL198, PL230, PL260
Resource Activity, Schedule 3, 08: A petroleum or GHG storage activity, other than items 1 to 7, that includes an activity from Schedule 2 with an AES	PL238, PL258, PL252, PL194, PL198, PL230, PL260

#### Additional information for applicants

##### Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

### Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website [www.qld.gov.au](http://www.qld.gov.au), using the search term 'duty to notify'.

### Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
- b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
- c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Sustainable Planning Act 2009* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Clancy Mackaway  
Department of Environment and Science  
Delegate of the administering authority  
*Environmental Protection Act 1994*

**Enquiries:**  
Energy and Extractive Resources  
Department of Environment and Science  
Phone: 3330 5715  
Email: [EnergyandExtractive@des.qld.gov.au](mailto:EnergyandExtractive@des.qld.gov.au)

**Date issued:** 19 August 2021

## Appendix 2: Title Searches



Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 16558189	<b>Search Date:</b> 17/09/2021 16:45
<b>Date Title Created:</b> 10/01/1984	<b>Request No:</b> 38600414
<b>Previous Title:</b> 14004244, 14004245	

#### ESTATE AND LAND

Estate in Fee Simple

LOT 1 CROWN PLAN DY787  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 703441498 08/07/1999

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 703441498

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by Deed of Grant No. 11805224 (POR 1V)
2. MORTGAGE No 715264553 19/08/2013 at 15:36 AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005 357 522

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 18087248	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 18/01/1991	<b>Request No:</b> 38572524
<b>Previous Title:</b> 15138129, 15138130	

### ESTATE AND LAND

Estate in Fee Simple

LOT 1 CROWN PLAN DY931  
Local Government: WESTERN DOWNS

### REGISTERED OWNER

Dealing No: 703441530 08/07/1999

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 703441530

### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by Deed of Grant No. 11881050 (POR 5V)
2. MORTGAGE No 715264553 19/08/2013 at 15:36 AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005 357 522

### ADMINISTRATIVE ADVICES

NIL

### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 17695007	<b>Search Date:</b> 16/09/2021 07:47
<b>Date State Tenure Created:</b> 21/10/1995	<b>Request No:</b> 38572523
<b>Creating Dealing:</b>	

## DESCRIPTION OF LAND

Tenure Reference: RL 16/2451

Lease Type: NO TERM

LOT 1 CROWN PLAN RL2451  
Local Government: WESTERN DOWNS

Area: 13.300000 Ha. (ABOUT)

Area Description:

The road separating subdivision 1 of portion 5V from subdivisions 3 and 4 of portion 263.

No Forestry Entitlement Area

Purpose for which granted:  
NO PURPOSE DEFINED

## REGISTERED LICENSEE

Dealing No: 703441530 08/07/1999

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
FOR WARAKIRRI AGRICULTURAL LAND TRUST II

## COMMENCEMENT DATE

Commencement Date: 16/05/1955

## CONDITIONS

NIL

## ENDORSEMENTS

NIL

## ADMINISTRATIVE ADVICES

NIL

## UNREGISTERED DEALINGS

NIL

Corrections have occurred - Refer to Historical Search

\*\* End of Current State Tenure Search \*\*

Information provided under section 34 Land Title Act (1994) or section 281 Land Act (1994)

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 15605217	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 24/01/1977	<b>Request No:</b> 38572529
<b>Previous Title:</b> 12793043, 14237145, 14239015	

### ESTATE AND LAND

Estate in Fee Simple

LOT 1 REGISTERED PLAN 154777  
Local Government: WESTERN DOWNS

### REGISTERED OWNER

Dealing No: 703441470 08/07/1999

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 703441470

### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by  
Deed of Grant No. 11355018 (POR 63)  
Deed of Grant No. 11901015 (POR 3V)
2. MORTGAGE No 715264553 19/08/2013 at 15:36  
AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005  
357 522

### ADMINISTRATIVE ADVICES

NIL

### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 50272040	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 30/06/1999	<b>Request No:</b> 38572530
<b>Previous Title:</b> 14017190, 14017191	

#### ESTATE AND LAND

Estate in Fee Simple

- LOT 2 CROWN PLAN DY787  
Local Government: WESTERN DOWNS
- LOT 2 REGISTERED PLAN 106958  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 703783902 24/12/1999  
WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 509 370 TRUSTEE  
UNDER INSTRUMENT 703783902

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by  
Deed of Grant No. 13745006 (POR 2V)  
Deed of Grant No. 13745007 (POR 59)
2. MORTGAGE No 715264553 19/08/2013 at 15:36  
AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005  
357 522

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b>	<b>14584120</b>	<b>Search Date:</b>	16/09/2021 07:49
<b>Date Title Created:</b>	10/05/1971	<b>Request No:</b>	38572535
<b>Previous Title:</b>	14058218, 14058220, 14058222		

#### ESTATE AND LAND

Estate in Fee Simple

LOT 2 REGISTERED PLAN 85916  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 718742192 11/05/2018

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 718742192

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by  
Deed of Grant No. 12050012 (POR 13)

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 15689193	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 16/09/1977	<b>Request No:</b> 38572528
<b>Previous Title:</b> 14057123, 14057124, 14057125	

### ESTATE AND LAND

Estate in Fee Simple

LOT 2 REGISTERED PLAN 99387  
Local Government: WESTERN DOWNS

### REGISTERED OWNER

Dealing No: 705330929 16/01/2002

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 705330929

### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by Deed of Grant No. 12042048 (POR 1V)
2. MORTGAGE No 715264553 19/08/2013 at 15:36 AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005 357 522

### ADMINISTRATIVE ADVICES

NIL

### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 50272040	<b>Search Date:</b> 16/09/2021 07:49
<b>Date Title Created:</b> 30/06/1999	<b>Request No:</b> 38572534
<b>Previous Title:</b> 14017190, 14017191	

#### ESTATE AND LAND

Estate in Fee Simple

- LOT 2 CROWN PLAN DY787  
Local Government: WESTERN DOWNS
- LOT 2 REGISTERED PLAN 106958  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 703783902 24/12/1999  
WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 509 370 TRUSTEE  
UNDER INSTRUMENT 703783902

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

- Rights and interests reserved to the Crown by  
Deed of Grant No. 13745006 (POR 2V)  
Deed of Grant No. 13745007 (POR 59)
- MORTGAGE No 715264553 19/08/2013 at 15:36  
AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005  
357 522

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*



Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 50634412	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 03/11/2006	<b>Request No:</b> 38572522
<b>Previous Title:</b> 40052662	

#### ESTATE AND LAND

Estate in Fee Simple

LOT 12 SURVEY PLAN 193328  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 718742192 11/05/2018

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 718742192

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by  
Deed of Grant No. 11205098 (POR 12)

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 13047163	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 08/08/1957	<b>Request No:</b> 38572525
<b>Previous Title:</b> 11192119	

#### ESTATE AND LAND

Estate in Fee Simple

LOT 36 CROWN PLAN DY45  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 718384463 08/11/2017

WARRAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 718384463

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by  
Deed of Grant No. 11192119 (POR 36)

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 50634411	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 03/11/2006	<b>Request No:</b> 38572521
<b>Previous Title:</b> 40052661	

**ESTATE AND LAND**

Estate in Fee Simple

LOT 57 SURVEY PLAN 193329  
Local Government: WESTERN DOWNS

**REGISTERED OWNER**

Dealing No: 718384463 08/11/2017

WARRAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 718384463

**EASEMENTS, ENCUMBRANCES AND INTERESTS**

1. Rights and interests reserved to the Crown by  
Deed of Grant No. 11366020 (POR 17)

**ADMINISTRATIVE ADVICES**

NIL

**UNREGISTERED DEALINGS**

NIL

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 13883004	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 18/05/1966	<b>Request No:</b> 38572527
<b>Creating Dealing:</b>	

#### ESTATE AND LAND

Estate in Fee Simple

LOT 60 CROWN PLAN DY802  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 703441470 08/07/1999

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 703441470

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by Deed of Grant No. 11167081 (POR 60)
2. MORTGAGE No 715264553 19/08/2013 at 15:36 AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005 357 522

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

Queensland Titles Registry Pty Ltd  
ABN 23 648 568 101

<b>Title Reference:</b> 16517101	<b>Search Date:</b> 16/09/2021 07:47
<b>Date Title Created:</b> 08/09/1983	<b>Request No:</b> 38572526
<b>Previous Title:</b> 11748129	

#### ESTATE AND LAND

Estate in Fee Simple

LOT 70 CROWN PLAN DY138  
Local Government: WESTERN DOWNS

#### REGISTERED OWNER

Dealing No: 703394503 15/06/1999

WARAKIRRI ASSET MANAGEMENT PTY LTD A.C.N. 057 529 370 TRUSTEE  
UNDER INSTRUMENT 703394503

#### EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by Deed of Grant No. 11748129 (POR 3 A OVER V)
2. MORTGAGE No 715264553 19/08/2013 at 15:36 AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED A.C.N. 005 357 522

#### ADMINISTRATIVE ADVICES

NIL

#### UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

\*\* End of Current Title Search \*\*

## Appendix 3: Land Parcel and Property Details

Property 1: **57SP193329, 36DY45, 2RP85916 and 12SP193328**

**Property Details**

- This property is designated as cropping (Class 3.3).
- This property is presently utilised for dryland and irrigated crops.
- Proposed infrastructure is to be located on parcels 57SP193329 and 36DY45. No infrastructure is proposed to be located on the parcels 12SP193328 and 2RP85916.
- There is one proposed well pad on this property, and it is located in a corner of the paddock on Lot 57SP193329.
- Approximately half of the gathering proposed for this property is located on the boundary of the paddock while the remaining gathering traverses the middle of the paddock across 57SP193329.
- The majority of access track proposed for this property is located on the western boundary of the paddock while a section of track traverses the middle of the paddock across 36DY45.
- Two deviated well trajectories enter 57SP193329 and one of those also enters 12SP193328 from a neighbouring property at a subterranean depth of at least 200 m.
- Surrounding land use is generally cropping.



**Image of Lot 57SP193329**





Image of Lot 57SP193329



Image of Lot 36DY45





Image of Lot 36DY45

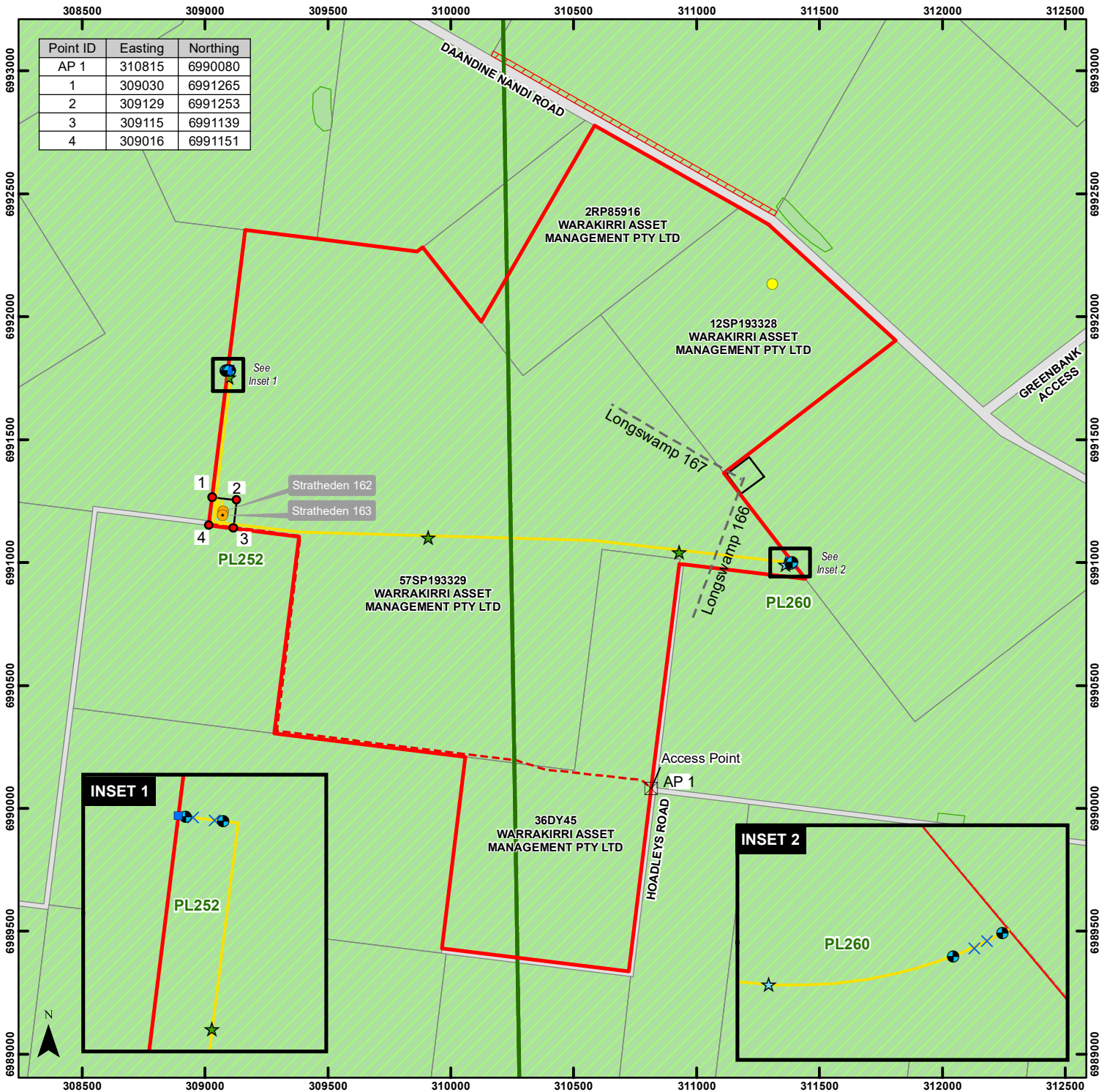
### **Field Layout Summary**

- The locations of above ground infrastructure is indicative only at this stage and once an engineering review has been undertaken they will be re-located to more strategic locations to minimise impacts to farming activities.
- Arrow will utilise existing landholder access tracks to infrastructure and will upgrade existing tracks as necessary.
- The proposed gathering and access tracks traversing the boundaries are located to avoid and minimise impacts to farming activities as much as possible.
- Gathering is proposed to be located across the paddock on 57SP193329 to create a connection with wells located to the East of this property
- The access track proposed to be located across 36DY45 will be constructed to enable the use of the existing access point off Hoadley's Road. Using this access can help to avoid houses and small blocks

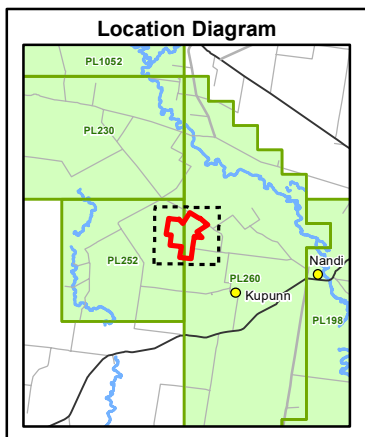
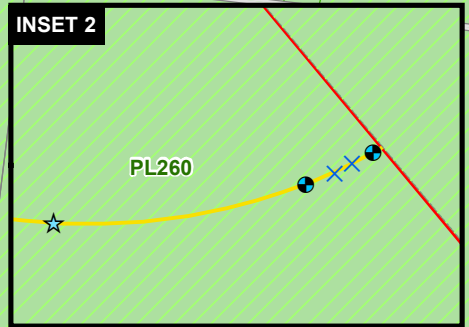
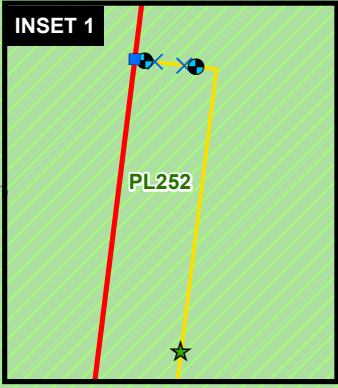
### **Infrastructure summary**

- 1 x 2-well multi-well pad – 1.15 ha (during construction) – reducing to 175 m<sup>2</sup> (during operation)
- Pipeline Right of Way – 9 ha (during construction)
- Access track – 2.85 ha (operational footprint)
- 3 x high point vents – 0.0108 ha (operational footprint)
- 1 x low point drain – 0.0036 ha (operational footprint)
- 4 x valves – 0.00008 ha (operational footprint)
- 2 x subterranean deviated well trajectories

# CCA Map



Point ID	Easting	Northing
AP 1	310815	6990080
1	309030	6991265
2	309129	6991253
3	309115	6991139
4	309016	6991151



**Tenement: PL252, PL260**

**LotPlan: 57SP193329, 12SP193328, 36PDY45, 2RP85916**

**Well/s: Stratheden - SE162, SE163**

**Project Name: Duleen Kupunn Part 3**

**Owner: WARRAKIRRI ASSET MANAGEMENT PTY LTD AS TTE**

Metres 0 200 400 600 800

Coordinate System: GDA 1994 MGA Zone 56

Scale @ A4: 1:22,500

**Legend**

- Arrow Well (Proposed)
- Sensitive Receptor
- Future Service Connection
- Isolation Valves
- Tie-in
- Access Point
- LPD (Proposed)
- HPV (Proposed)
- Proposed RoW – 30m wide
- Access Track
- Well Area
- Subject Property
- EWA
- Property Boundary
- Strategic Cropping Area
- Priority Agricultural Area
- PL (Arrow)

Rev	Date	Revision Description	By	App	Check	Scale
2	06/09/2021	SCA & PAA added to map	AW	BJ	GG	
1	29/07/2021	Issued for Use	CO	BJ	GG	
0	26/07/2021	Issued for review	AW	BJ	GG	

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Data Source: Arrow Energy Limited, QSPatial

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Status: IFU  
Issued To: G.Gunther  
Author: awolhuter

**Surat Basin**

(2)

Property 2: 1DY931, 70DY138, 1RP154777, 1DY787, 60DY802, 2RP106958, 2RP99387, 2DY787 and 1RL2451

**Property Details**

- This property is designated as cropping (Class 3.3), except for Lot 1RL2451 which is designated as grazing / native vegetation.
- This property is presently utilised for dryland and irrigated crops, except for Lot 1RL2451 which is used as a road.
- Proposed infrastructure is to be located on parcels 1DY931, 70DY138, 1RP154777, 1DY787, 60DY802, 2RP106958 and 1RL2451. No infrastructure is proposed to be located on the parcels 2RP99387 and 2DY787.
- There are four well pads proposed to be located on this property.
- Of these, there are two single well pads proposed to be located on 1DY931. Both of these well pads are proposed to be located on the boundary of this lot. Gathering and access tracks are also proposed to be located along the boundary of this lot along with the valves and low point drains proposed for this lot.
- There is a proposed 4-well multi-well pad to be located on 1DY787 in the south eastern corner of the paddock next to the Moonie Highway. There is also gathering proposed to be located along the southern boundary of this lot along with a valve and future service connection and an access track proposed to run parallel to the Moonie Highway.
- There is a 3-well multi-well pad proposed to be located on 1RP154777 towards the middle of the paddock. An access track will traverse half the length of the paddock with gathering traversing the length of the paddock and then a section of the southern boundary. The low point drains and high point vents proposed for this lot are located on the boundaries or within the RoW.
- Gathering is proposed to be co-located with an existing access track on 70DY138 with associated infrastructure located within the RoW also.
- Gathering is proposed to be located along the northern boundary of 60DY802 and a section of gathering is proposed to be located along the western boundary of 2RP106958.
- There is a proposed future gathering crossing location on the road 1RL2451.
- There are 10 deviated well trajectories proposed to enter this property from neighbouring lots at a subterranean depth of at least 200 m.
- Surrounding land use is generally cropping.





**Image of Lot 1DY931**



**Image of Lot 1DY931**





Image of Lot 70DY138



Image of Lot 70DY138





**Image of Lot 1RP15477**



**Image of Lot 1RP15477**





Image of Lot 1DY787

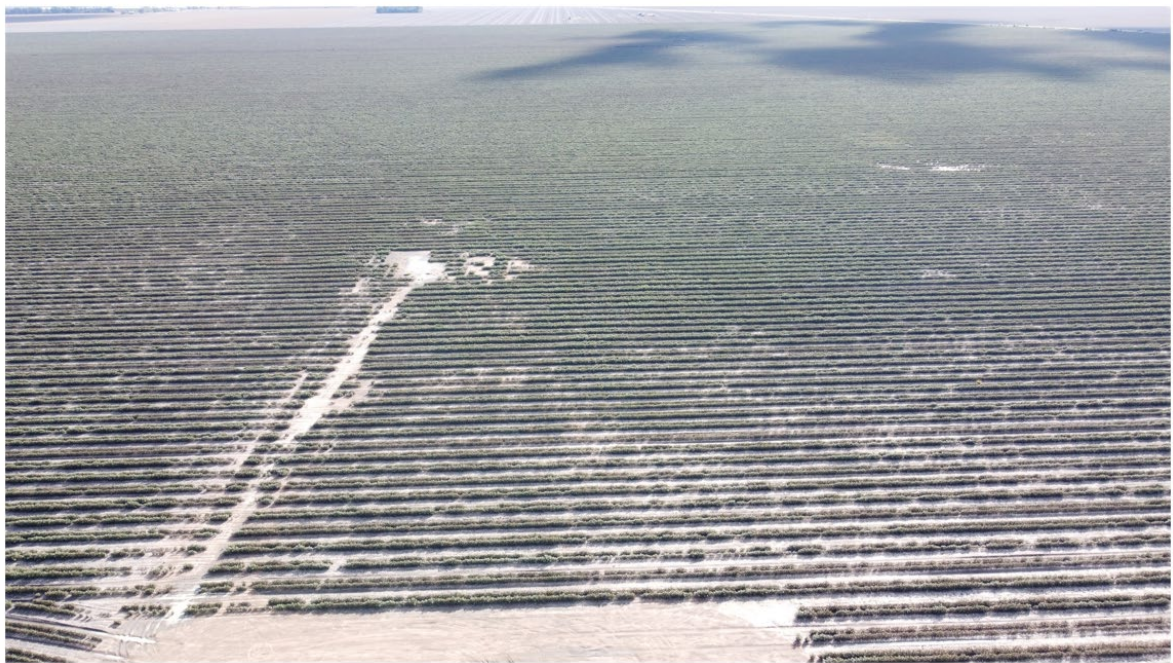


Image of Lot 1DY787





**Image of Lot 60DY802**



**Image of Lot 2RP106958**





Image of Lot 2RP106958



Image of Lot 1RL2451 (the tree line in the back of photo)

### **Field Layout Summary**

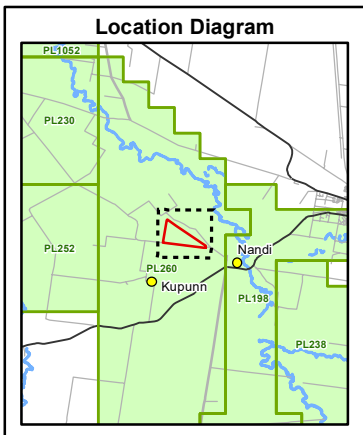
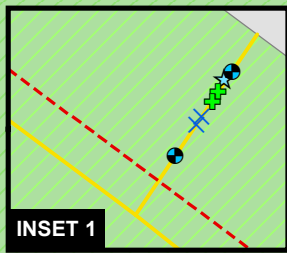
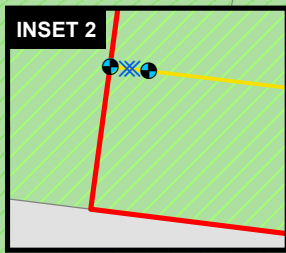
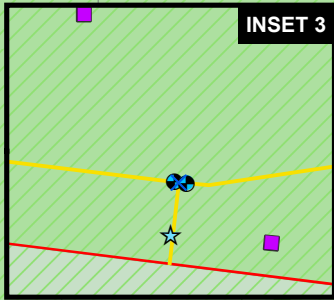
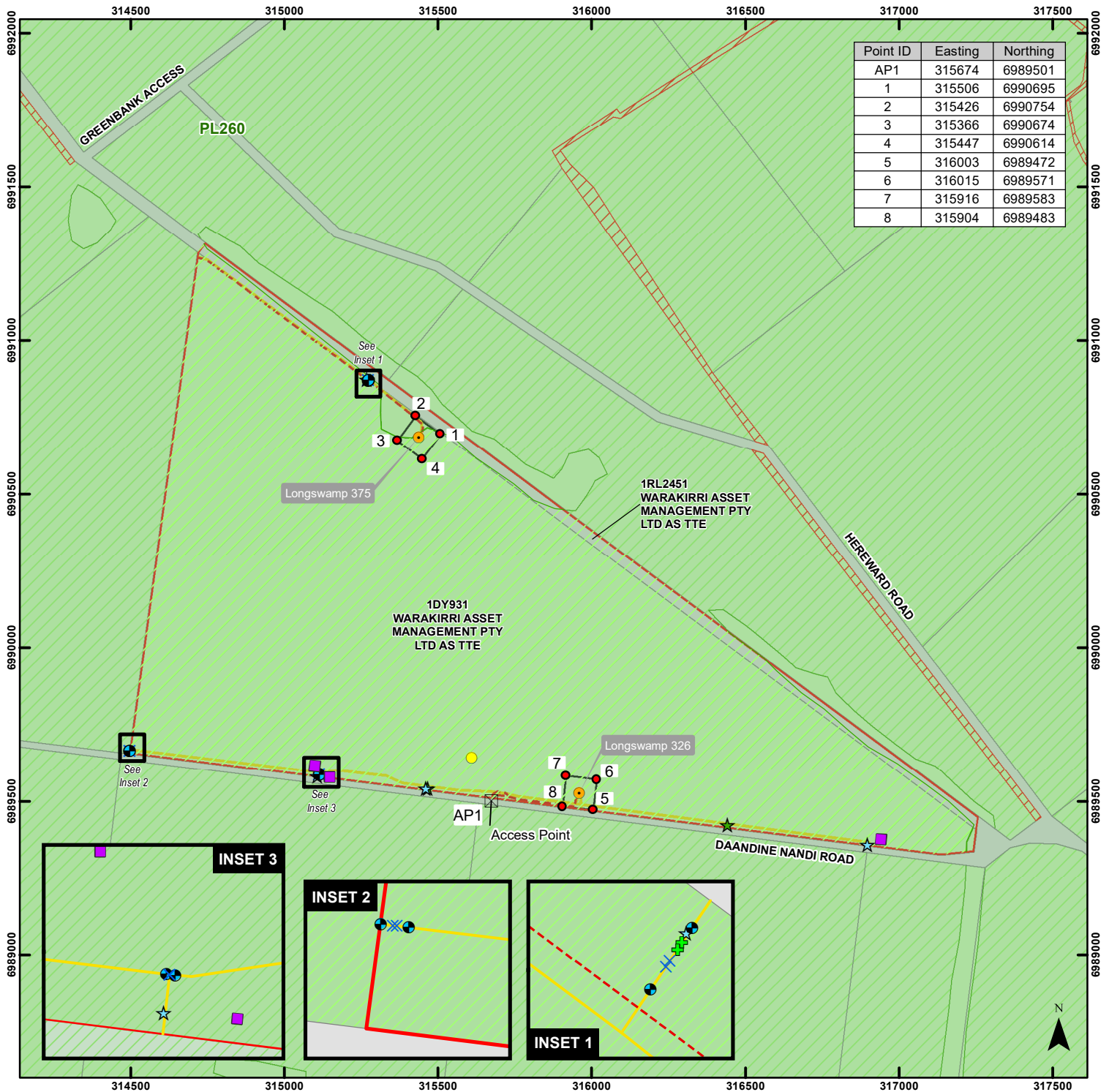
- The locations of above ground infrastructure is indicative only at this stage and once an engineering review has been undertaken infrastructure will be re-located to more strategic locations to minimise impacts to farming activities.
- Arrow will utilise existing landholder access tracks to access infrastructure and will upgrade existing tracks as necessary.
- The section of gathering proposed to be located on 2RP106958 is adjacent the road to minimise impacts. This pipeline will be constructed as close to the road as possible.
- The proposed infrastructure on 1DY931 is to be located along property boundaries and adjacent existing roads and access tracks to avoid and/or minimise impacts to farming activities.
- The proposed infrastructure on 1DY787 is adjacent the Moonie Highway. The proposed access track runs adjacent the highway and the well pad is positioned in the corner to minimise impacts. The proposed gathering location has been selected because it is the shortest and most direct route.
- The proposed infrastructure on 60DY802 is directly adjacent the northern boundary of the property to minimise impacts to farming activities.
- The proposed well pad on 1RP154777 has been located next to a shed in the centre of the property to utilise an existing disturbed area and in a location with an existing access point. The proposed access track has been selected to utilise existing access and the proposed gathering is situated along this existing access. The selection of the location for this well pad has allowed Arrow to exclude less accessible areas of the property and also allows Arrow to minimise impacts to farming activities as much as practicable.
- The proposed gathering on 70DY138 is directly adjacent Kupunn Road on an existing access track located on the property boundary to minimise impacts to farming activities.

### **Infrastructure summary**

- 2 x single well pads – 2 ha (during construction) - reducing to 240 m<sup>2</sup> (120 m<sup>2</sup> each) (during operation)
- 1 x 3-well multi-well pad – 1.3 ha (during construction) - reducing to 230 m<sup>2</sup> (during operation)
- 1 x 4-well multi-well pad – 1.45 ha (during construction) - reducing to 285 m<sup>2</sup> (during operation)
- Pipeline Right of Way – 30 ha (during construction)
- Access track – 1 ha (operational footprint)
- 11 x high point vents – 0.032 ha (operational footprint)
- 10 x low point drains – 0.036 ha (operational footprint)
- 16 x valves – 0.00032 ha (operational footprint)
- 10 x subterranean deviated well trajectories
- Up to 7 x Extra Work Areas - 0.25 ha (during construction)



# CCA Map



**Tenement:** PL260  
**LotPlan:** 1RL2451, 1DY931  
**Well/s:** Longswamp 326, Longswamp 375  
**Project Name:** Duleen Kupunn Part 3  
**Owner:** WARAKIRRI ASSET MANAGEMENT PTY LTD AS TTE

Metres 0 160 320 480 640

Coordinate System: GDA 1994 MGA Zone 56  
 Scale @ A4: 1:18,000

**Legend**

- Arrow Well (Proposed)
- Sensitive Receptor
- Future Service Connection
- Isolation Valves
- Future Connection Branch
- Access Point
- LPD (Proposed)
- HPV (Proposed)
- Proposed RoW – 30m wide
- Access Track
- Well Area
- Subject Property
- EWA
- Property Boundary
- PL (Arrow)
- Road

Rev	Date	Revision Description	By	App	Rev
3	06/09/2021	SCA & PAA added to map	AW	AH	AH
2	03/08/2021	Issued for Use	CO	BJ	GG
1	29/07/2021	Issued for Use - Infrastructure Update	CO	BJ	GG
0	26/07/2021	Issued for review	JL	BJ	GG

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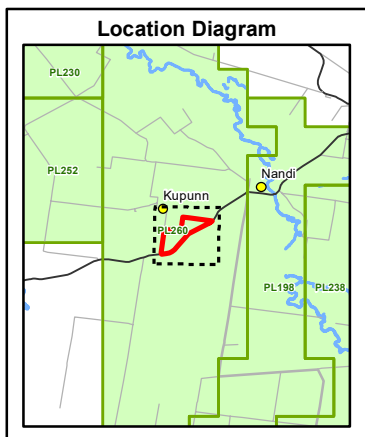
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Data Source: Arrow Energy Limited, QSPatial

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Status: IFU  
 Issued To: A Hall  
 Author: awolhuter

# CCA Map



**Tenement: PL260**  
**LotPlan: 2DY787, 2RP106958**  
**Project Name: Duleen Kupunn Part 3**  
**Owner: WARAKIRRI ASSET MANAGEMENT PTY LTD AS TTE**

Metres 0 150 300 450 600  
**Coordinate System: GDA 1994 MGA Zone 56**  
**Scale @ A4: 1:19,000**

**Legend**

- Sensitive Receptor
- ⊕ Future Service Connection
- ✕ Isolation Valves
- Access Point
- ★ LPD (Proposed)
- ★ HPV (Proposed)
- Proposed RoW – 30m wide
- Well Path (Planned)
- Well Area
- Subject Property
- EWA
- Property Boundary
- Priority Agricultural Area
- Strategic Cropping Area
- Road
- PL (Arrow)

Rev	Date	Revision Description	By	App	Check	Drawn	Scale
3	06/09/2021	SCA & PAA added to map	AW	AH	-	-	AH
2	03/08/2021	Issued for Use, Revised EWA	CO	BJ	-	-	GG
1	30/07/2021	Issued for Use, Revised Infrastructure	CO	BJ	-	-	GG
0	26/07/2021	Issued for use	JL	BJ	-	-	GG

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 Data Source: Arrow Energy Limited, QSPatial

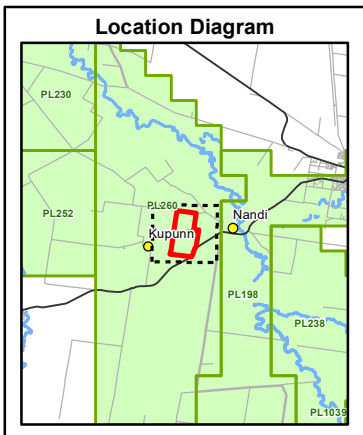
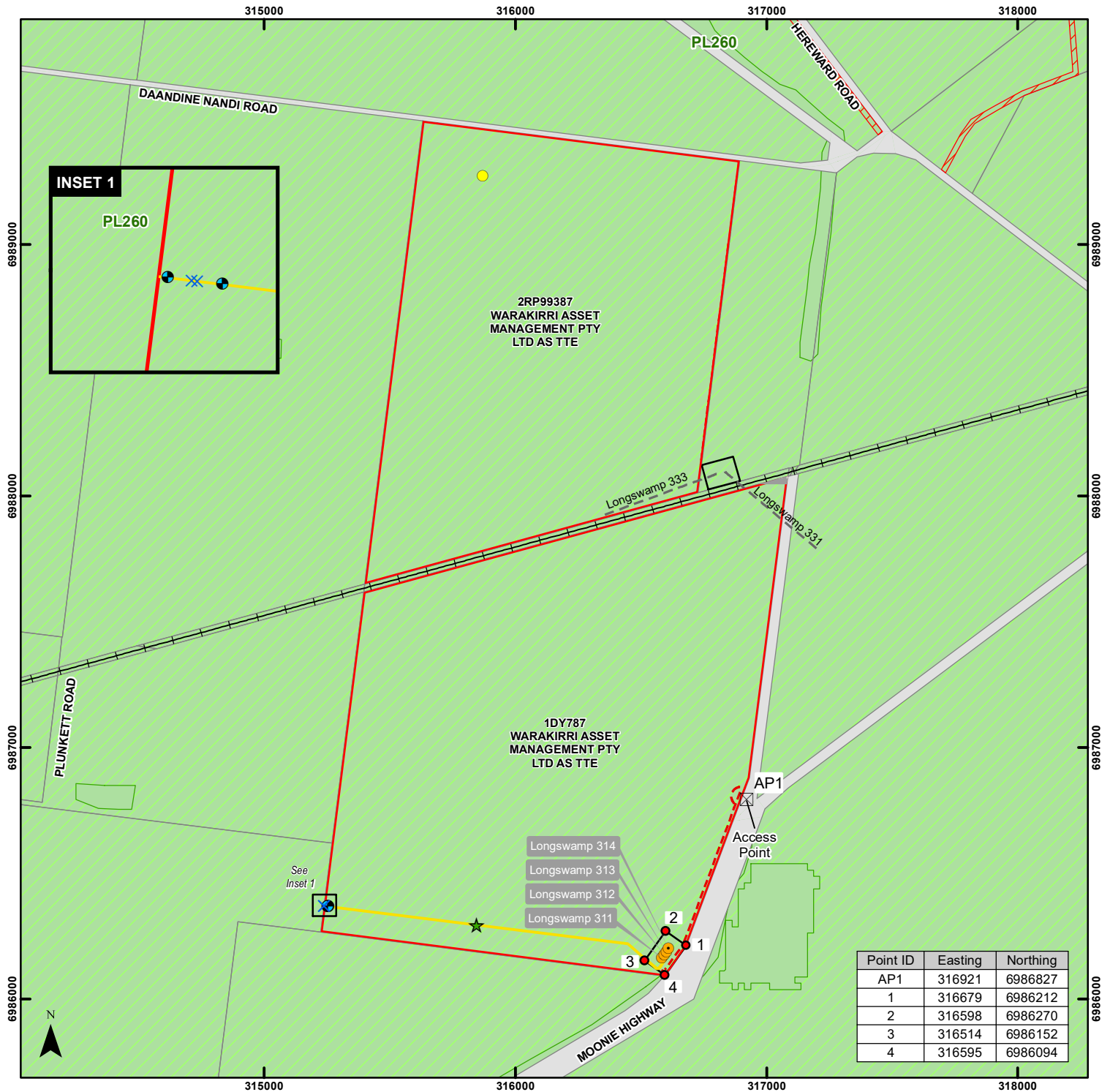
**arrowenergy**  
 go further

**Status: IFU**  
**Issued To: A Hall**  
**Author: awolhuter**

**Surat Basin**

**(3)**

# CCA Map



**Tenement: PL260**

**LotPlan: 2RP99387, 1DY787**

**Well/s: Longswamp 311, 312, 313, 314**

**Project Name: Duleen Kupunn Part 3**

**Owner: WARAKIRRI ASSET MANAGEMENT PTY LTD AS TTE**



Coordinate System: GDA 1994 MGA Zone 56

Scale @ A4: 1:22,000

## Legend

- Arrow Well (Proposed)
- Sensitive Receptor
- Future Service Connection
- Isolation Valves
- Access Point
- HPV (Proposed)
- Proposed RoW – 30m wide
- Access Track
- Well Path (Planned)
- Well Area
- Subject Property
- Property Boundary
- Strategic Cropping Area
- Priority Agricultural Area
- PL (Arrow)

Rev	Date	Revision Description	AW	AH	CO	BJ	JL	BJ	GG
2	06/09/2021	SCA & PAA added to map	AW	AH	CO	BJ	JL	BJ	GG
1	30/07/2021	Issued for Use	AW	AH	CO	BJ	JL	BJ	GG
0	26/07/2021	Issued for review	AW	AH	CO	BJ	JL	BJ	GG

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Data Source: Arrow Energy Limited, QSPatial

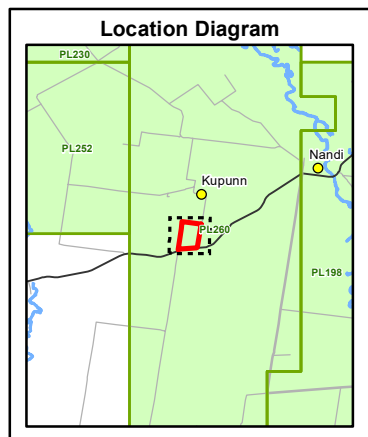
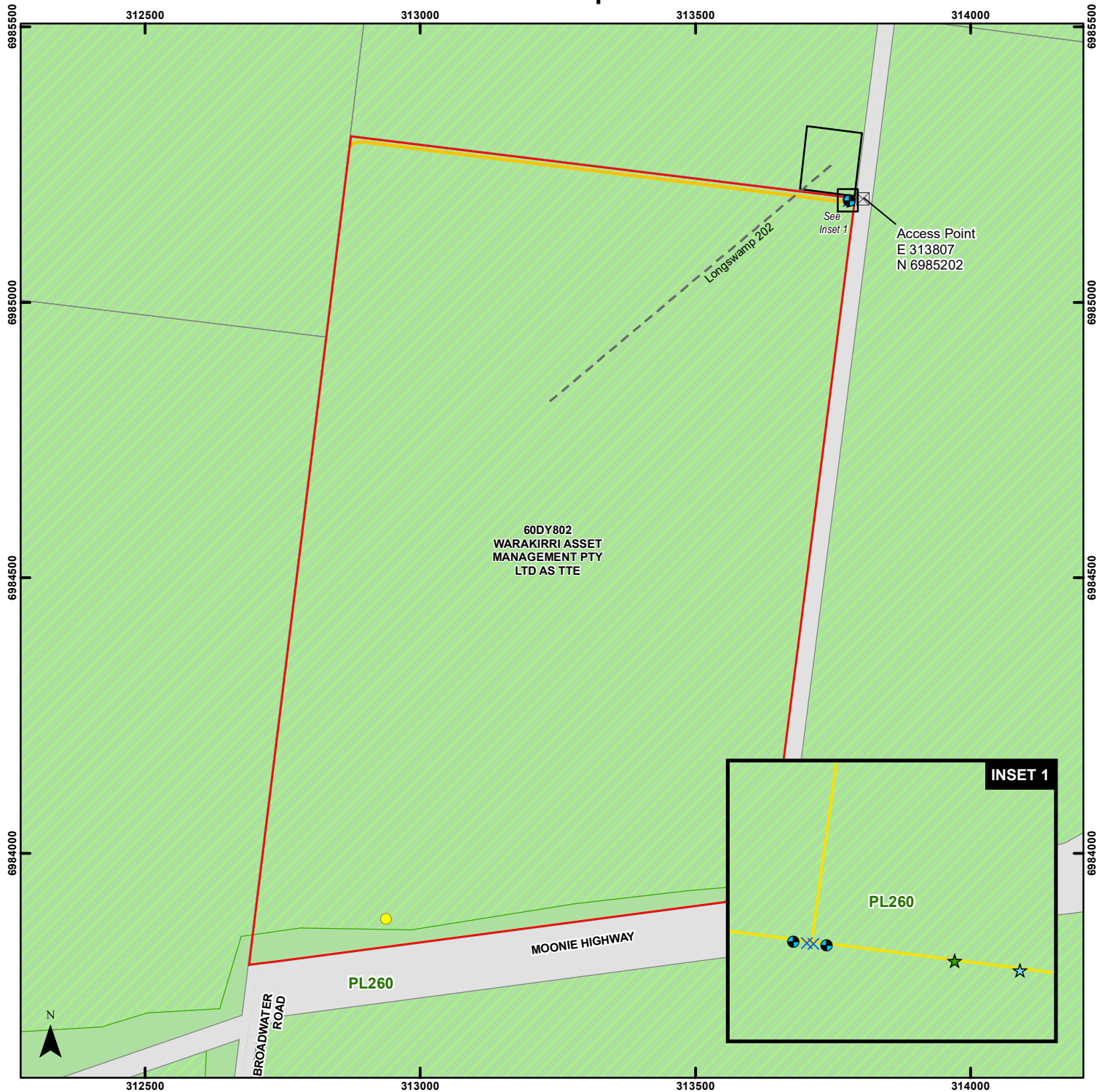
**arrowenergy**  
go further

Status: IFU  
Issued To: A Hall  
Author: awolhuter

## Surat Basin

(2)

# CCA Map



**Tenement: PL260**  
**LotPlan: 60DY802**  
**Project Name: Duleen Kupunn Part 3**  
**Owner: WARAKIRRI ASSET MANAGEMENT PTY LTD AS TTE**

Metres 0 100 200 300 400  
 Coordinate System: GDA 1994 MGA Zone 56  
 Scale @ A4: 1:10,000

**Legend**

- Sensitive Receptor
- ⊕ Future Service Connection
- ⊗ Isolation Valves
- Access Point
- ★ LPD (Proposed)
- ★ HPV (Proposed)
- Proposed RoW – 30m wide
- Well Path (Planned)
- Well Area
- Subject Property
- Property Boundary
- Strategic Cropping Area
- Priority Agricultural Area
- PL (Arrow)

Rev	Date	Revision Description	By	Chk	App	Rev
2	06/09/2021	Issued for Use	AW	AH	-	AH
1	30/07/2021	Issued for Use	CO	BJ	-	GG
0	30/07/2021	Issued for use	JL	BJ	-	GG

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Data Source: Arrow Energy Limited, QSPatial

**arrowenergy**  
go further

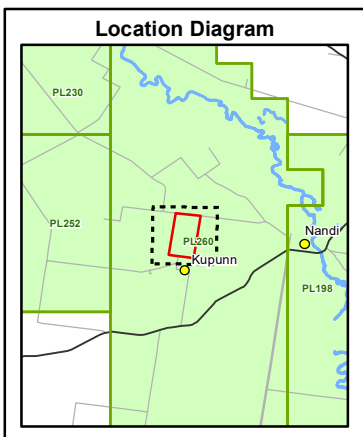
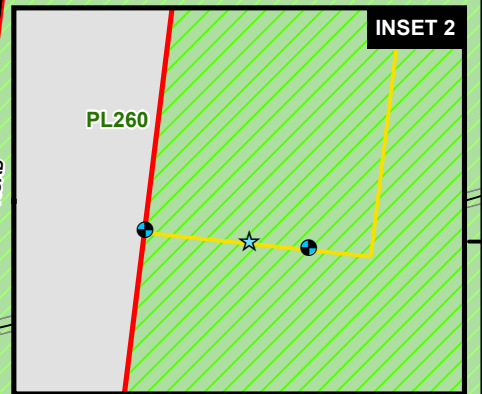
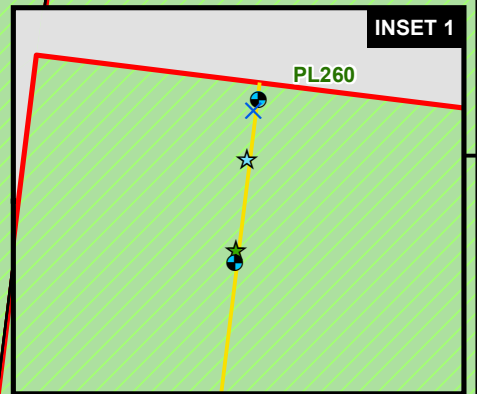
**Status: IFU**  
**Issued To: A Hall**  
**Author: awolhuter**

**Surat Basin**

**(2)**



# CCA Map



**Tenement: PL260**

**LotPlan: 70DY138**

**Project Name: Duleen Kupunn Part 3**

**Owner: WARAKIRRI ASSET MANAGEMENT PTY LTD AS TTE**



Coordinate System: GDA 1994 MGA Zone 56

Scale @ A4: 1:15,500

## Legend

- Sensitive Receptor
- Future Service Connection
- ✕ Isolation Valves
- ✕ Access Point
- ★ LPD (Proposed)
- ★ HPV (Proposed)
- Proposed RoW – 30m wide
- Existing Access Tracks
- Well Path (Planned)
- Well Area
- Subject Property
- EWA
- Property Boundary
- Strategic Cropping Area
- Priority Agricultural Area
- Road
- PL (Arrow)

Rev	Date	Revision Description	By	App'd	Check'd	Issued
1	06/09/2021	SCA & PAA added to map	AW	AH	-	AH
1	30/07/2021	Issued for Use	CO	BJ	-	GG
0	26/07/2021	Issued for use	JL	BJ	-	GG

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Data Source: Arrow Energy Limited, QSpatial

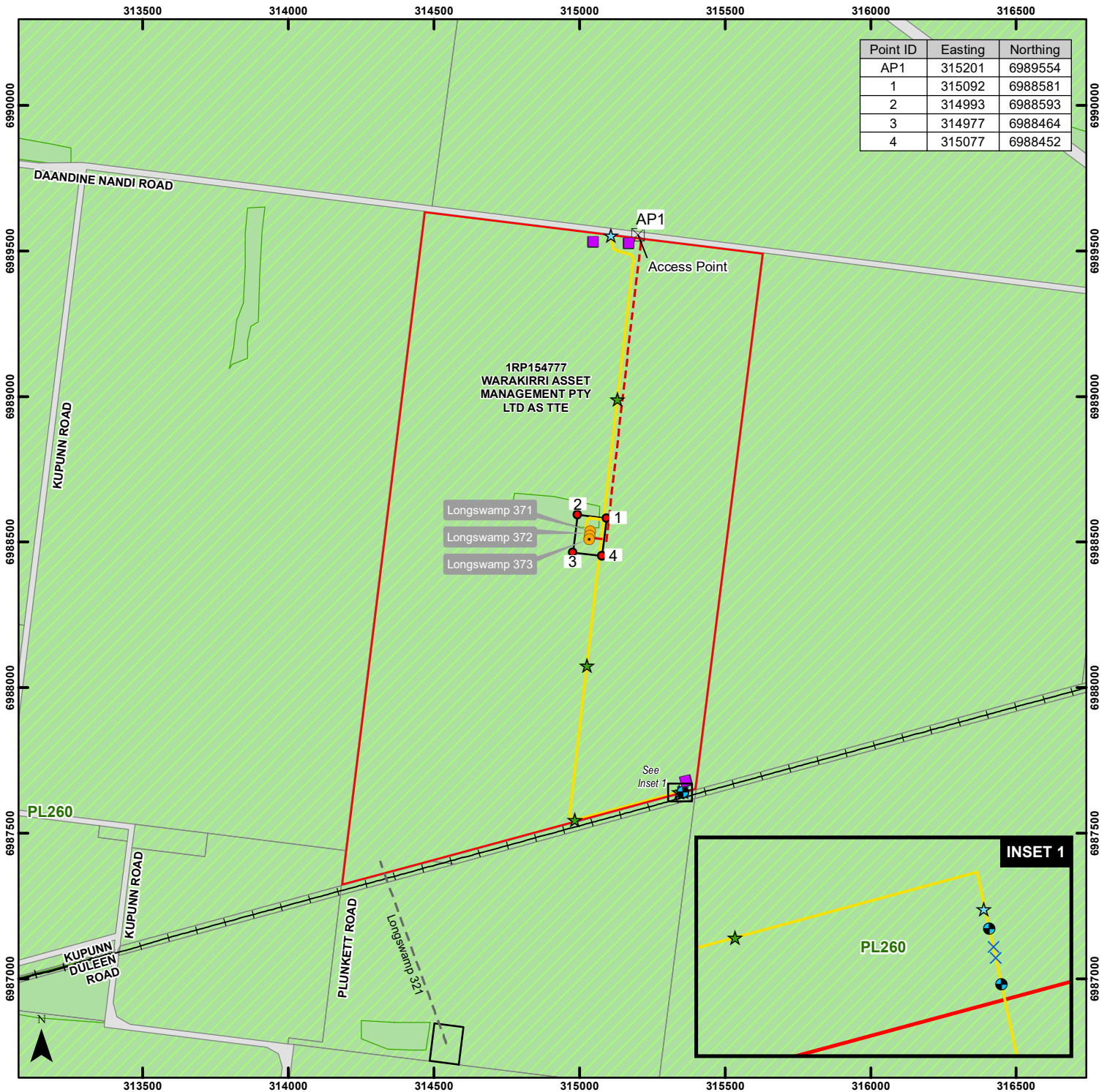
**arrowenergy**  
go further

Status: IFU  
Issued To: A Hall  
Author: awolhuter

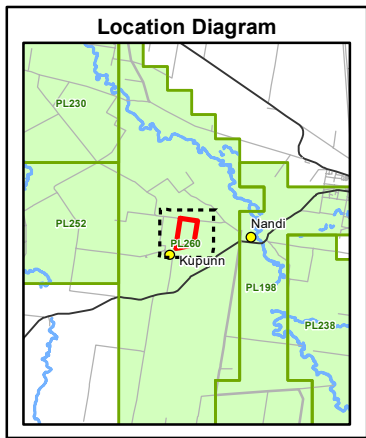
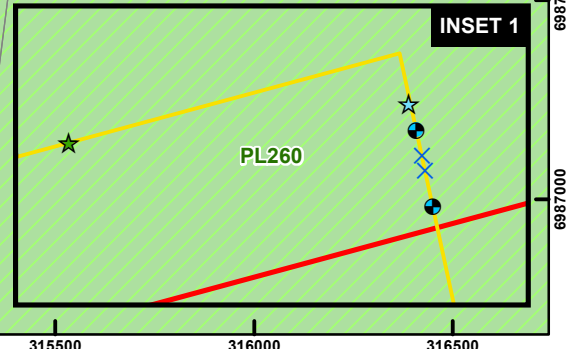
**Surat Basin**

**(2)**

# CCA Map



Point ID	Easting	Northing
AP1	315201	6989554
1	315092	6988581
2	314993	6988593
3	314977	6988464
4	315077	6988452



**Tenement: PL260**  
**LotPlan: 1RP154777**  
**Well/s: Longswamp 371, Longswamp 372, Longswamp 373**  
**Project Name: Duleen Kupunn Part 3**  
**Owner: WARAKIRRI ASSET MANAGEMENT PTY LTD AS TTE**

Metres 0 190 380 570 760

Coordinate System: GDA 1994 MGA Zone 56  
 Scale @ A4: 1:19,000

**Legend**

- Arrow Well (Proposed)
- Future Service Connection
- Isolation Valves
- Access Point
- LPD (Proposed)
- HPV (Proposed)
- Proposed RoW – 30m wide
- Access Track
- Well Path (Planned)
- Well Area
- Subject Property
- EWA
- Property Boundary
- Strategic Cropping Area
- Priority Agricultural Area
- PL (Arrow)

Rev	Date	Revision Description	By	Chk	App	Rev
2	6/09/2021	SCA & PAA added to map	AW	AH	-	AH
1	30/07/2021	Issued for Use	CO	BJ	-	GG
0	26/07/2021	Issued for use	JL	BJ	-	GG

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Data Source: Arrow Energy Limited, QSPatial

**arrowenergy**  
go further

Status: IFU  
 Issued To: A Hall  
 Author: awolhuter

**Surat Basin**

(2)



## Appendix 4: Aerial photography and satellite imagery for years 2011-2020 for 1RL2451

Based on the aerial imagery below, it appears that the area leased for a road is remnant vegetation, it is not mapped as SCA and it can be demonstrated to not be PAA, due to the imagery showing remnant vegetation which demonstrates a lack of cropping over the past 10 years.

1RL2451– Imagery illustrates the proposed area to be disturbed by the wellfield development has consistently been vegetated since 2011 and has not been used for a PALU



## **Appendix 5: Queensland Land Use Mapping Program (QLUMP)**

Land use in this mapping is classified according to the Australian Land Use and Management Classification (ALUMC) Version 8, 2016, based upon land use within the Condamine natural resource management region as at 2012.



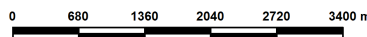
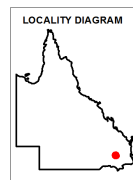
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- Selected Lot and Plan
- Other minimal use
- Grazing native vegetation
- Cropping
- Irrigated cropping
- Residential and farm infrastructure
- Reservoir/dam
- Freeways / motorways; Highways
- Secondary roads; Streets



This product is projected into GDA 1994 Queensland Albers

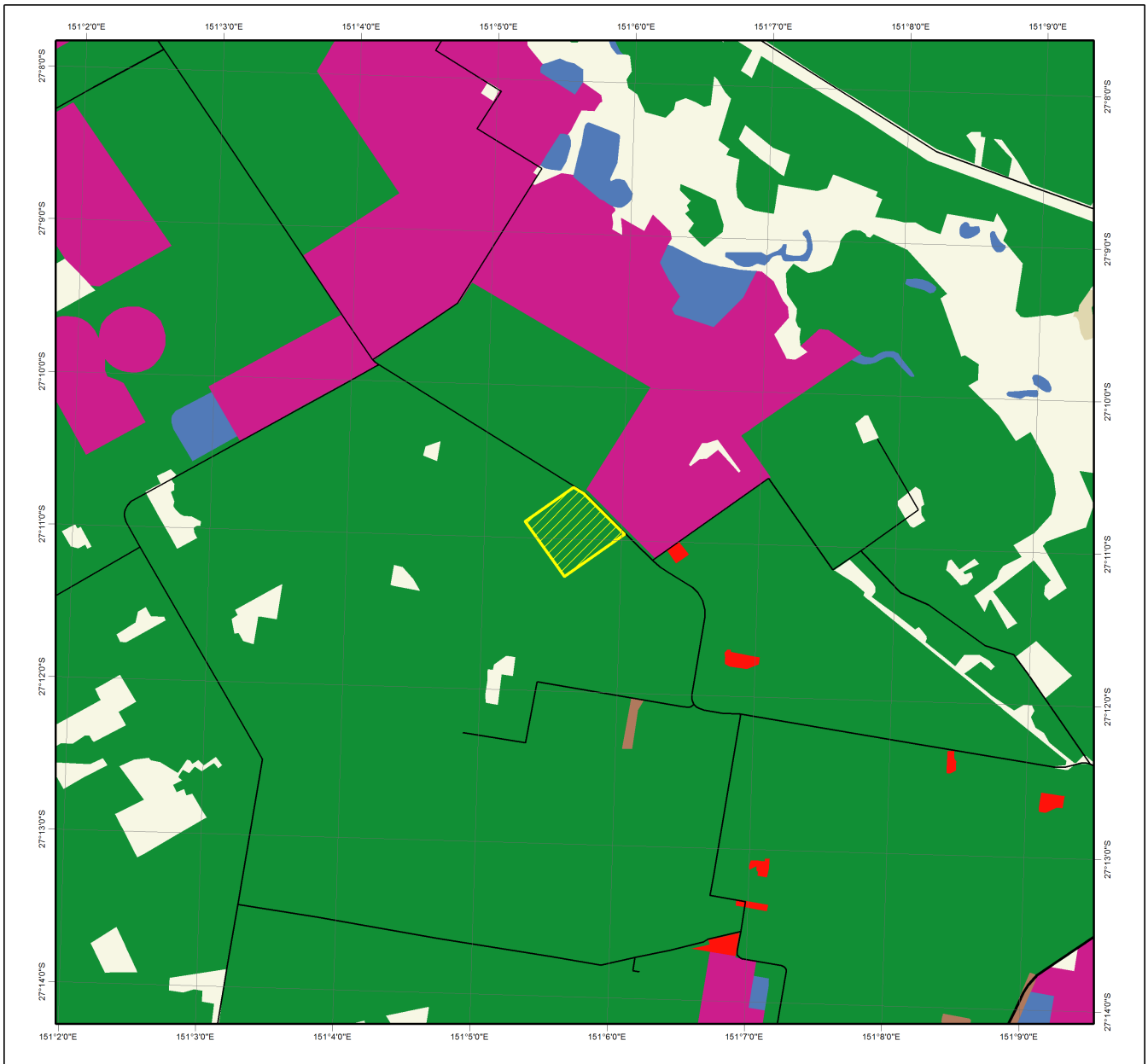
The land use dataset is a product of the Queensland Land use Mapping Program (QLUMP), at a nominal scale of 1:50,000. The layer is a polygon dataset with each feature having attributes describing land use. It presents the most current land use information available in Queensland.

Land use is classified according to the Australian Land Use and Management Classification (ALUMC) Version 8, October 2016. Primary and secondary levels relate to land use (i.e. the principal use of the land in terms of the objectives of the land manager), the tertiary level further discriminate land use, eg. commodity/intensity. Where required and possible, attribution is performed to tertiary level. QLUMP maps the land use classes of sugar and cotton consistently to tertiary level. The minimum attribution level for land use mapping in Queensland is secondary land use, as presented in this map.

Refer to the contact position for additional information regarding source data. Further information relating to land use mapping can be found at <http://www.qld.gov.au/environment/land/vegetation/mapping/qlump/> and <http://www.agriculture.gov.au/abares/aclump/land-use/>

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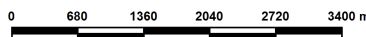
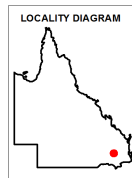
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- Selected Lot and Plan
- Nature conservation
- Other minimal use
- Grazing native vegetation
- Cropping
- Irrigated cropping
- Residential and farm infrastructure
- Reservoir/dam
- Freeways / motorways; Highways
- Secondary roads; Streets



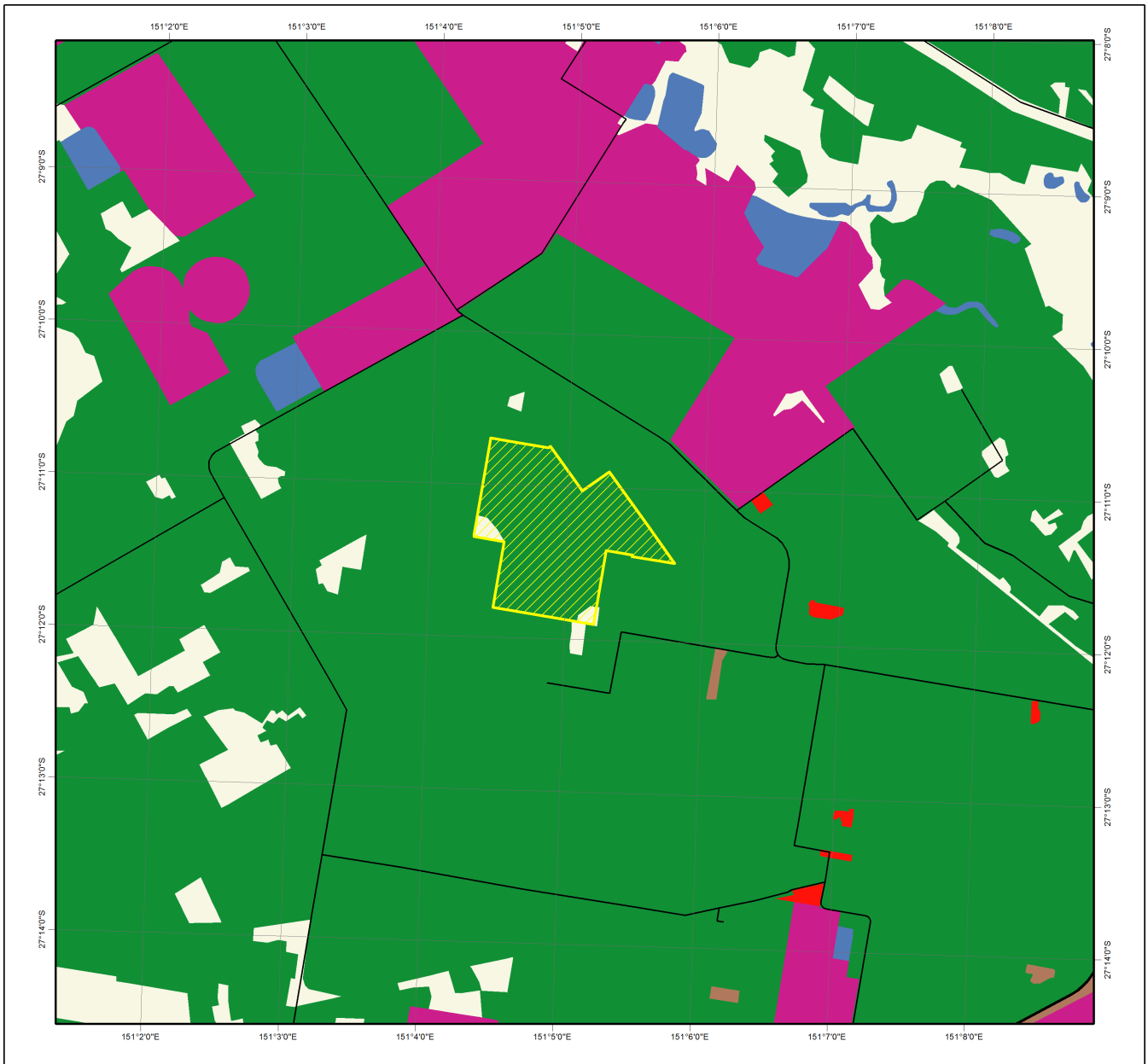
This product is projected into GDA 1994 Queensland Albers

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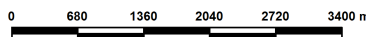
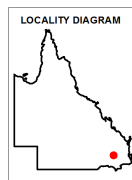
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- |  |                                     |  |                                |
|--|-------------------------------------|--|--------------------------------|
|  | Selected Lot and Plan               |  | Freeways / motorways; Highways |
|  | Other minimal use                   |  | Secondary roads; Streets       |
|  | Grazing native vegetation           |  |                                |
|  | Cropping                            |  |                                |
|  | Irrigated cropping                  |  |                                |
|  | Residential and farm infrastructure |  |                                |
|  | Reservoir/dam                       |  |                                |



This product is projected into GDA 1994 Queensland Albers

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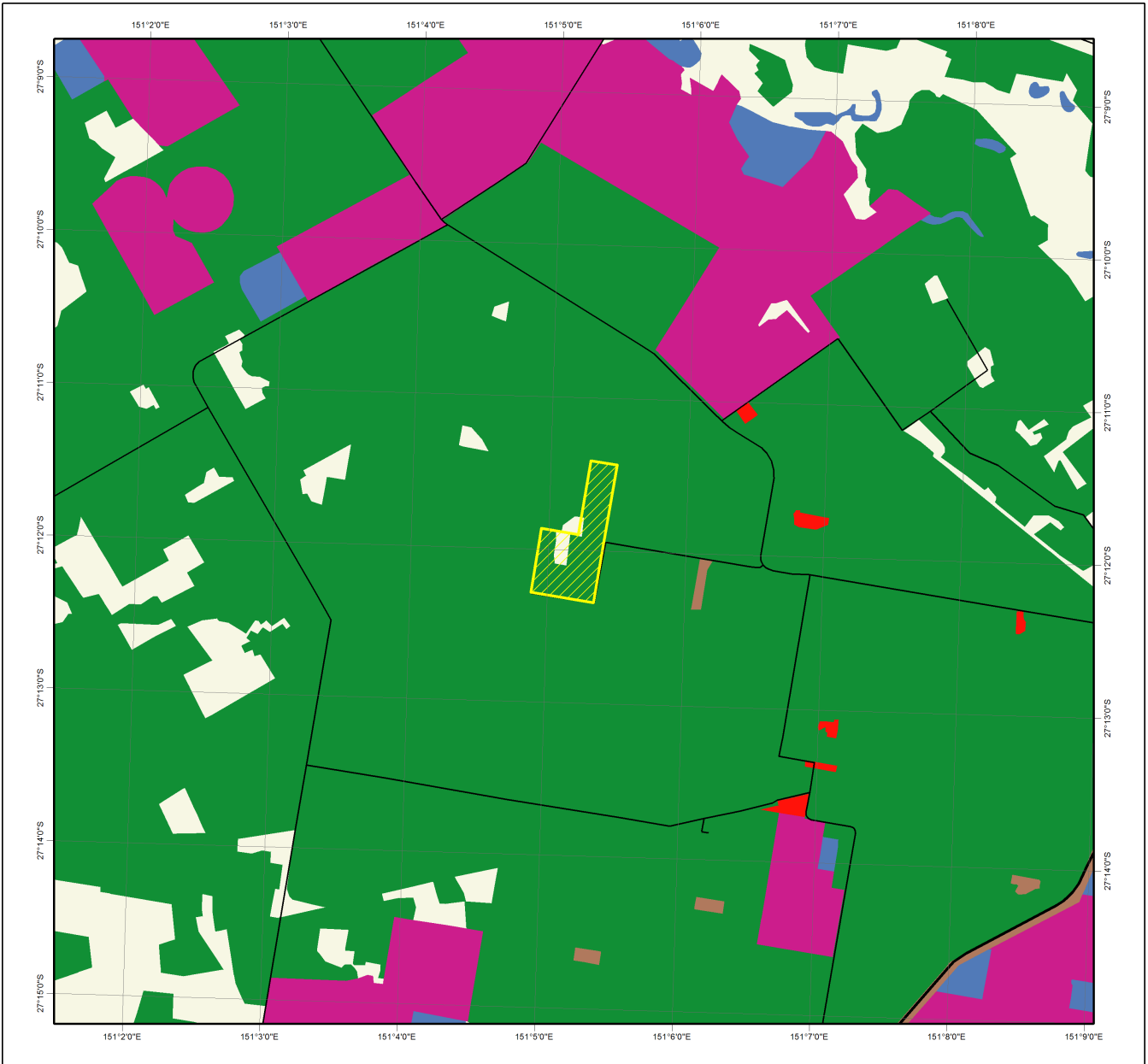
Land use is classified according to the Australian Land Use and Management Classification (ALUMC) Version 8, October 2016. Primary and secondary levels relate to land use (i.e. the principal use of the land in terms of the objectives of the land manager), the tertiary level further discriminate land use, eg. commodity/intensity. Where required and possible, attribution is performed to tertiary level. QLUMP maps the land use classes of sugar and cotton consistently to tertiary level. The minimum attribution level for land use mapping in Queensland is secondary land use, as presented in this map.

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







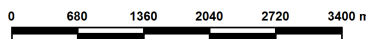
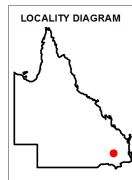
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- |   |  |
|---|--|
|  Selected Lot and Plan               |  Freeways / motorways; Highways |
|  Other minimal use                   |  Secondary roads; Streets       |
|  Grazing native vegetation           |  |
|  Cropping                            |  |
|  Irrigated cropping                  |  |
|  Residential and farm infrastructure |  |
|  Reservoir/dam                       |  |



This product is projected into GDA 1994 Queensland Albers

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










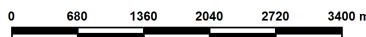
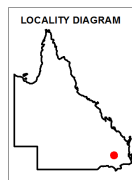
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- |   |  |
|---|--|
|  Selected Lot and Plan               |  Freeways / motorways; Highways |
|  Nature conservation                 |  Secondary roads; Streets       |
|  Other minimal use                   |  |
|  Grazing native vegetation           |  |
|  Cropping                            |  |
|  Irrigated cropping                  |  |
|  Intensive animal production         |  |
|  Residential and farm infrastructure |  |
|  Services                            |  |
|  Reservoir/dam                       |  |



This product is projected into GDA 1994 Queensland Albers

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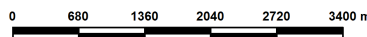
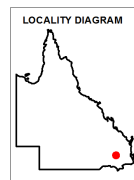
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- |  |                                     |  |                                |
|--|-------------------------------------|--|--------------------------------|
|  | Selected Lot and Plan               |  | Freeways / motorways; Highways |
|  | Nature conservation                 |  | Secondary roads; Streets       |
|  | Other minimal use                   |  |                                |
|  | Grazing native vegetation           |  |                                |
|  | Cropping                            |  |                                |
|  | Irrigated cropping                  |  |                                |
|  | Intensive animal production         |  |                                |
|  | Residential and farm infrastructure |  |                                |
|  | Services                            |  |                                |
|  | Reservoir/dam                       |  |                                |



This product is projected into GDA 1994 Queensland Albers

The land use dataset is a product of the Queensland Land use Mapping Program (QLUMP), at a nominal scale of 1:50,000. The layer is a polygon dataset with each feature having attributes describing land use. It presents the most current land use information available in Queensland.

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


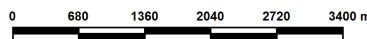
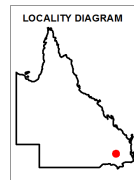
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

-  Selected Lot and Plan
-  Nature conservation
-  Other minimal use
-  Grazing native vegetation
-  Cropping
-  Irrigated cropping
-  Residential and farm infrastructure
-  Reservoir/dam
-  Freeways / motorways; Highways
-  Secondary roads; Streets



This product is projected into GDA 1994 Queensland Albers

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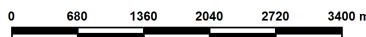
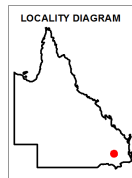
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- Selected Lot and Plan
- Nature conservation
- Other minimal use
- Grazing native vegetation
- Cropping
- Irrigated cropping
- Intensive animal production
- Residential and farm infrastructure
- Reservoir/dam
- Freeways / motorways; Highways
- Secondary roads; Streets



This product is projected into GDA 1994 Queensland Albers

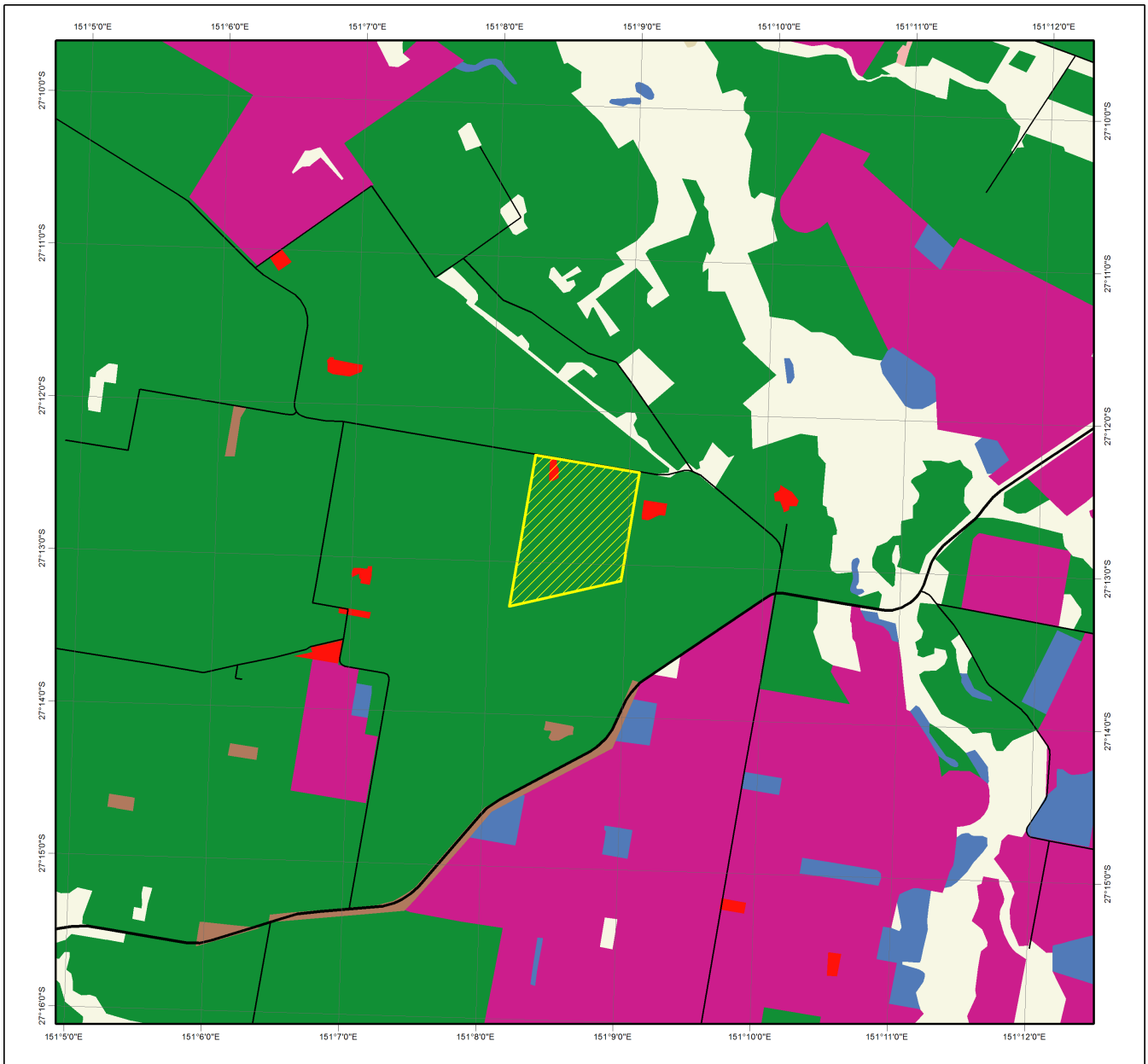
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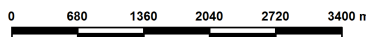
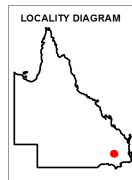
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- Selected Lot and Plan
- Nature conservation
- Other minimal use
- Grazing native vegetation
- Cropping
- Irrigated cropping
- Intensive animal production
- Residential and farm infrastructure
- Reservoir/dam
- Freeways / motorways; Highways
- Secondary roads; Streets



This product is projected into GDA 1994 Queensland Albers

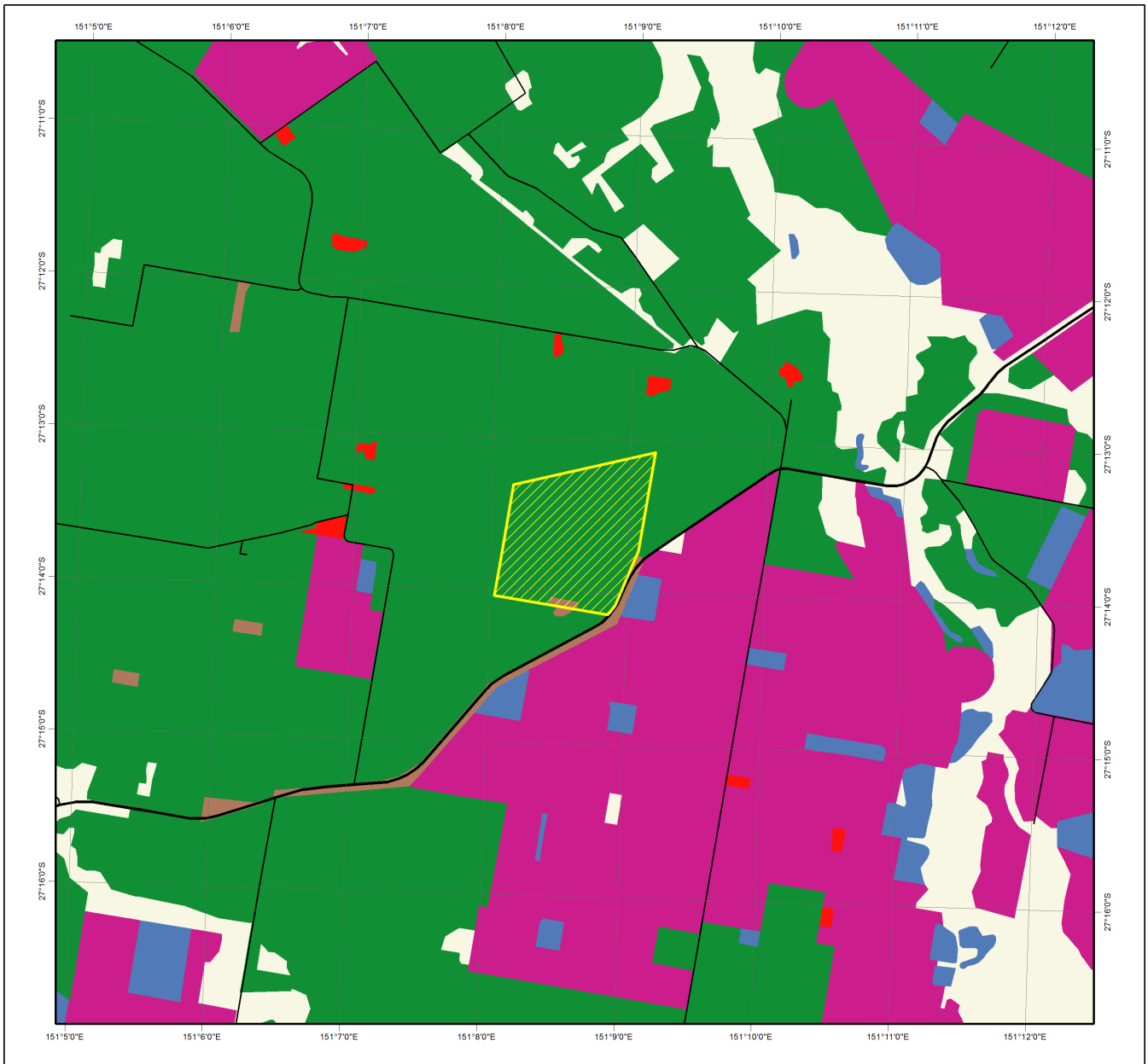
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







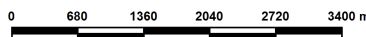
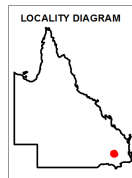
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- |   |  |
|---|--|
|  Selected Lot and Plan               |  Freeways / motorways; Highways |
|  Other minimal use                   |  Secondary roads; Streets       |
|  Grazing native vegetation           |  |
|  Cropping                            |  |
|  Irrigated cropping                  |  |
|  Residential and farm infrastructure |  |
|  Reservoir/dam                       |  |



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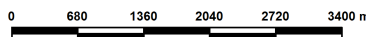
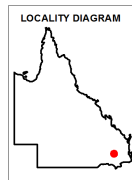
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- Selected Lot and Plan
- Other minimal use
- Grazing native vegetation
- Cropping
- Irrigated cropping
- Residential and farm infrastructure
- Reservoir/dam
- Freeways / motorways; Highways
- Secondary roads; Streets



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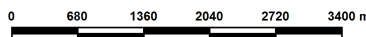
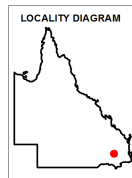
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

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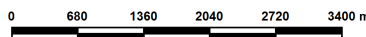
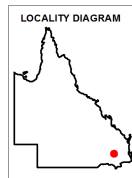
## Land Use

### Queensland Land Use Mapping Program

#### Legend

#### ALUM v8 Secondary level

- Selected Lot and Plan
- Other minimal use
- Grazing native vegetation
- Cropping
- Irrigated cropping
- Residential and farm infrastructure
- Reservoir/dam
- Freeways / motorways; Highways
- Secondary roads; Streets



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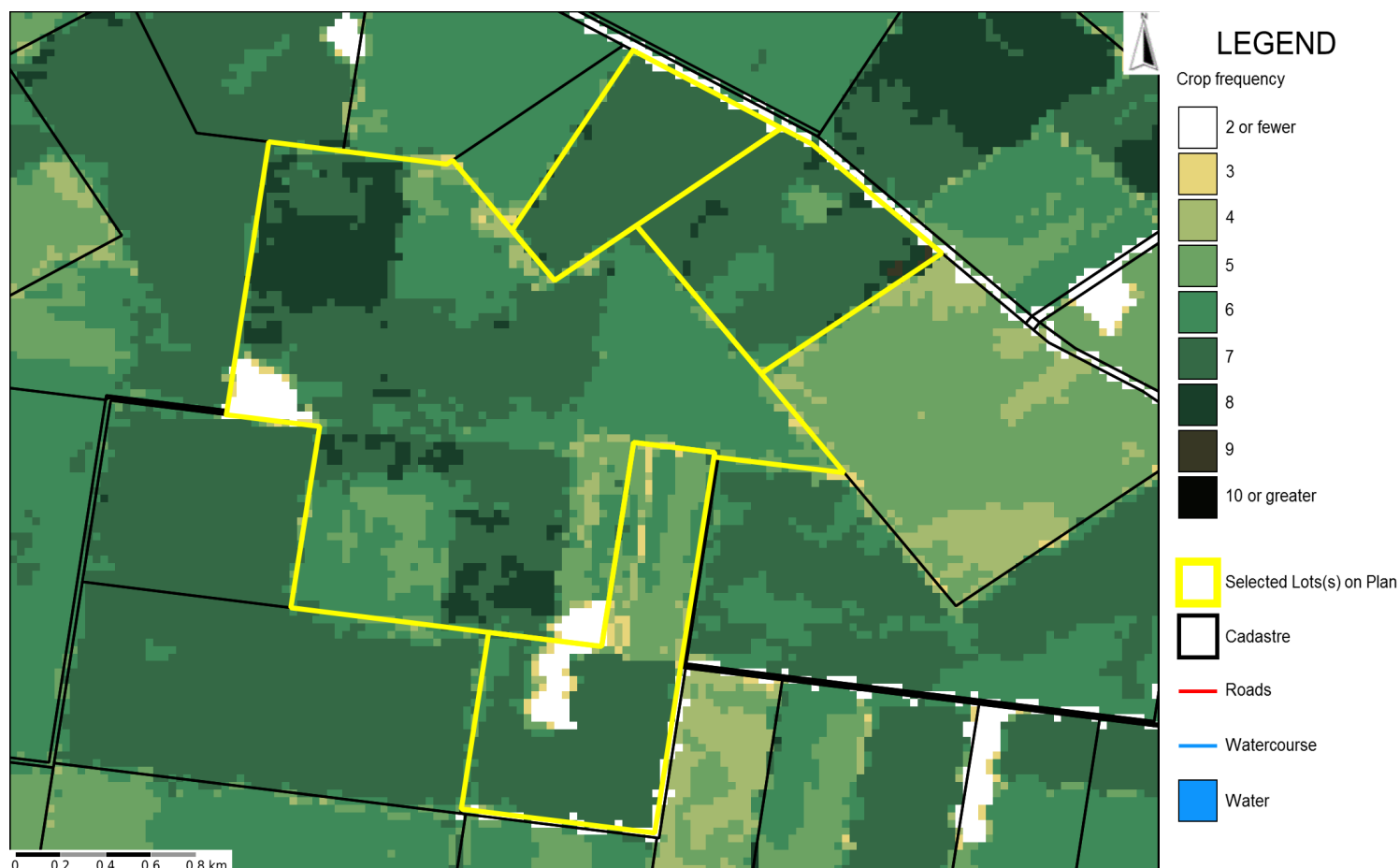
# Appendix 6: Forage Crop Frequency Data for the years 2011 – 2020



## Introduction

This report presents maps of crop frequency for your chosen area, and chosen time period. Maps are based on time-series analysis of satellite imagery (30-m spatial resolution), for both the summer and winter growing seasons, aimed at detecting cycles of greenness in vegetation. Composite satellite images that display the maximum greenness within a summer or winter growing season for each year are also provided, as a visual reference. For further information refer to the FORAGE User Guide ([https://data.longpaddock.qld.gov.au/static/forage\\_user\\_guide.pdf](https://data.longpaddock.qld.gov.au/static/forage_user_guide.pdf)).

## Estimated total crop frequency map (2011 - 2020)



## How to interpret the information

**Crop-frequency mapping:** Coloured areas on the maps indicate locations where active crops have been detected three or more times in the summer or winter growing seasons, for the time period specified. The map on this page shows "Total Frequency" which is a count of the number of times that an active crop was detected. The maps on the following page show the summer and winter crop frequency, respectively. Analysis of satellite imagery can result in some misclassification, so it is recommended to view the composite imagery (see below) to help confirm the presence of a crop in a given season.

**Mapping of broad groups of crops:** Crop frequency is also separated into estimates of the broad crop groups within the area. This estimation is based on an automated classification approach (see <https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/crops> for more detail).

In the winter season the classification differentiates between the groups:

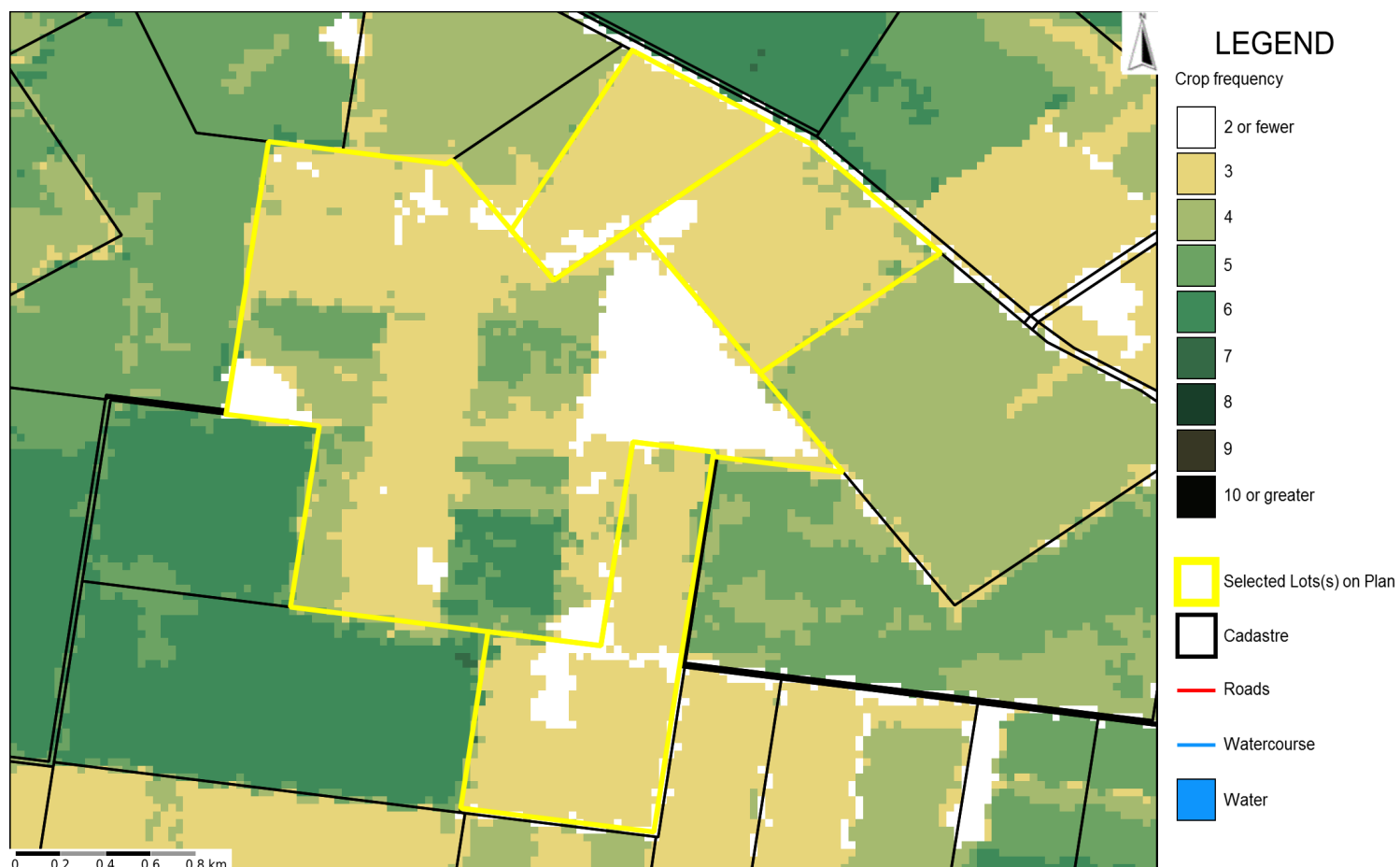
- Cereal crops (e.g. wheat, barley, oats);
- Pulse crops (e.g. chickpea).

In the summer season the classification differentiates between the groups:

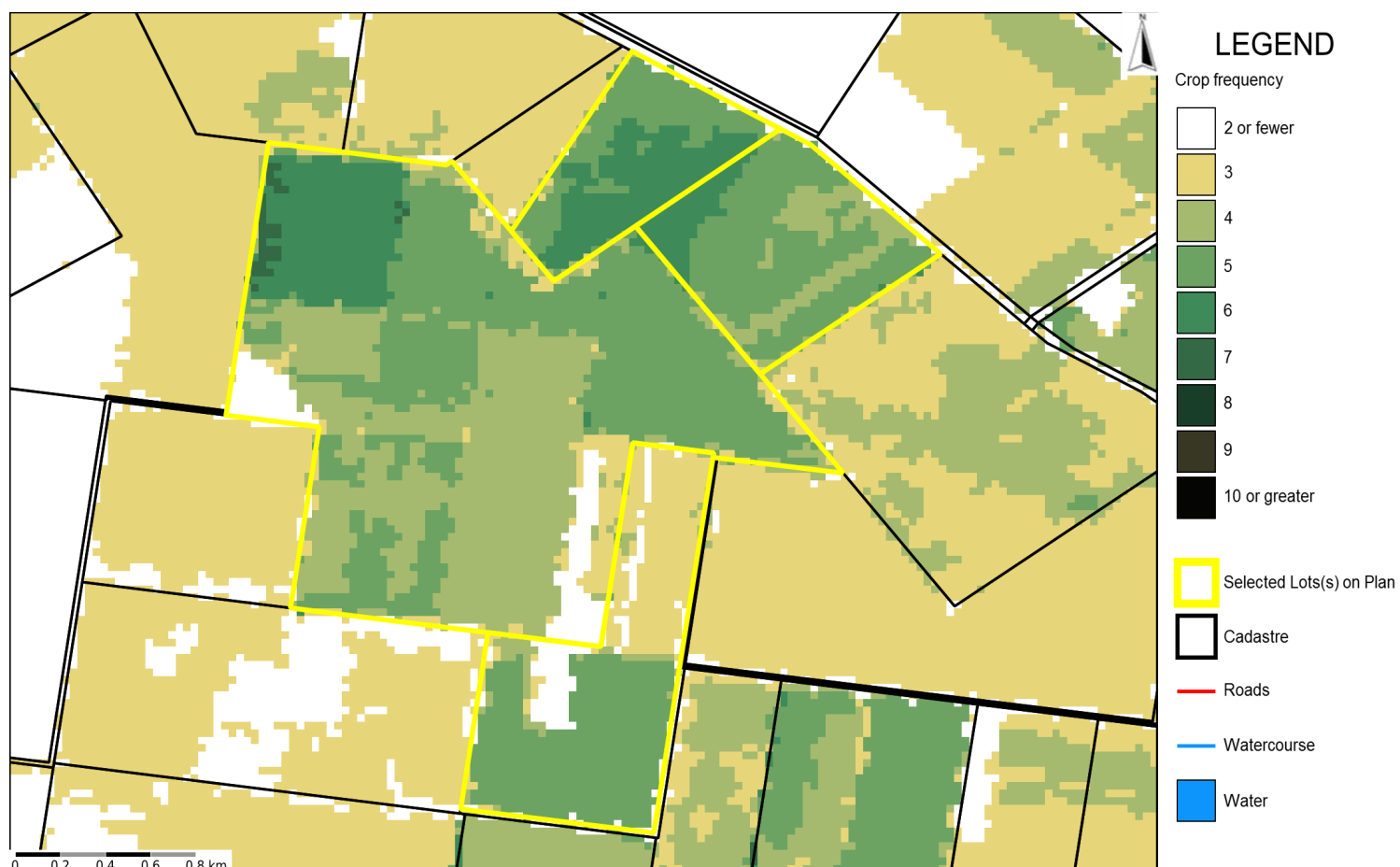
- Coarse-grain and pulse (e.g. sorghum, maize, mungbean);
- Cotton crop.

**Composite satellite imagery:** Due to the limitations of the automated method used to detect active cropping, it is recommended to view the seasonal composite images (pages 5 onward), compiled to represent the maximum greenness (per pixel) within a growing season. Cropped areas will generally appear bright green in the imagery compared with the surrounding landscape. Even if the crop-frequency mapping does not indicate cropping in an area, it is important to check each composite image to confirm that cropping has not been undertaken. Sometimes it will not be possible to clearly identify cropped areas in the imagery, e.g. in some wetter seasons the entire landscape might appear green. In this case, it is recommended to undertake further investigation using other information sources. Note: the composite images are only used to confirm the presence or absence of cropping activity; it is not possible to visually differentiate between the crop groups.

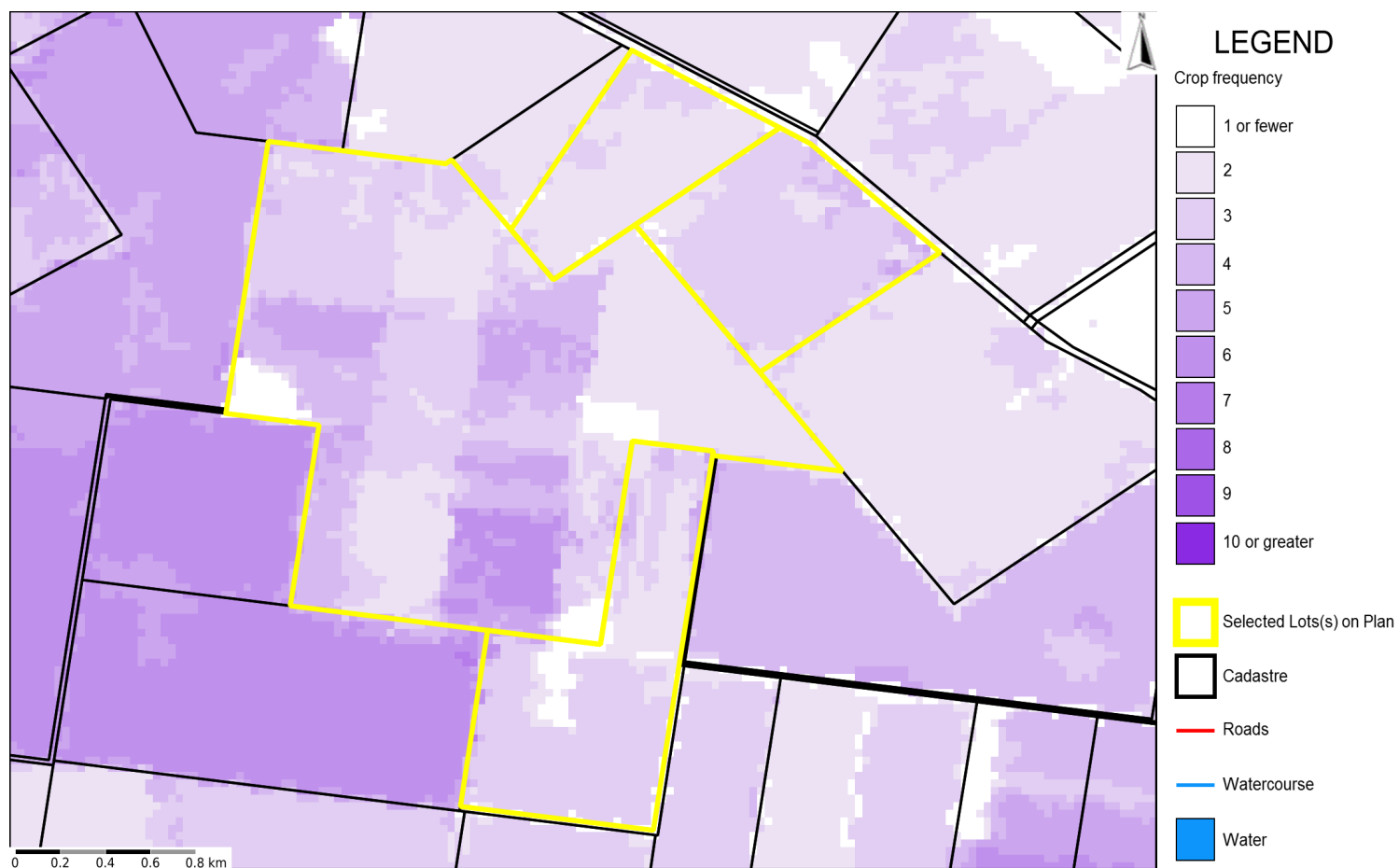
## Estimated frequency map for summer (February) crops (2011 - 2020)



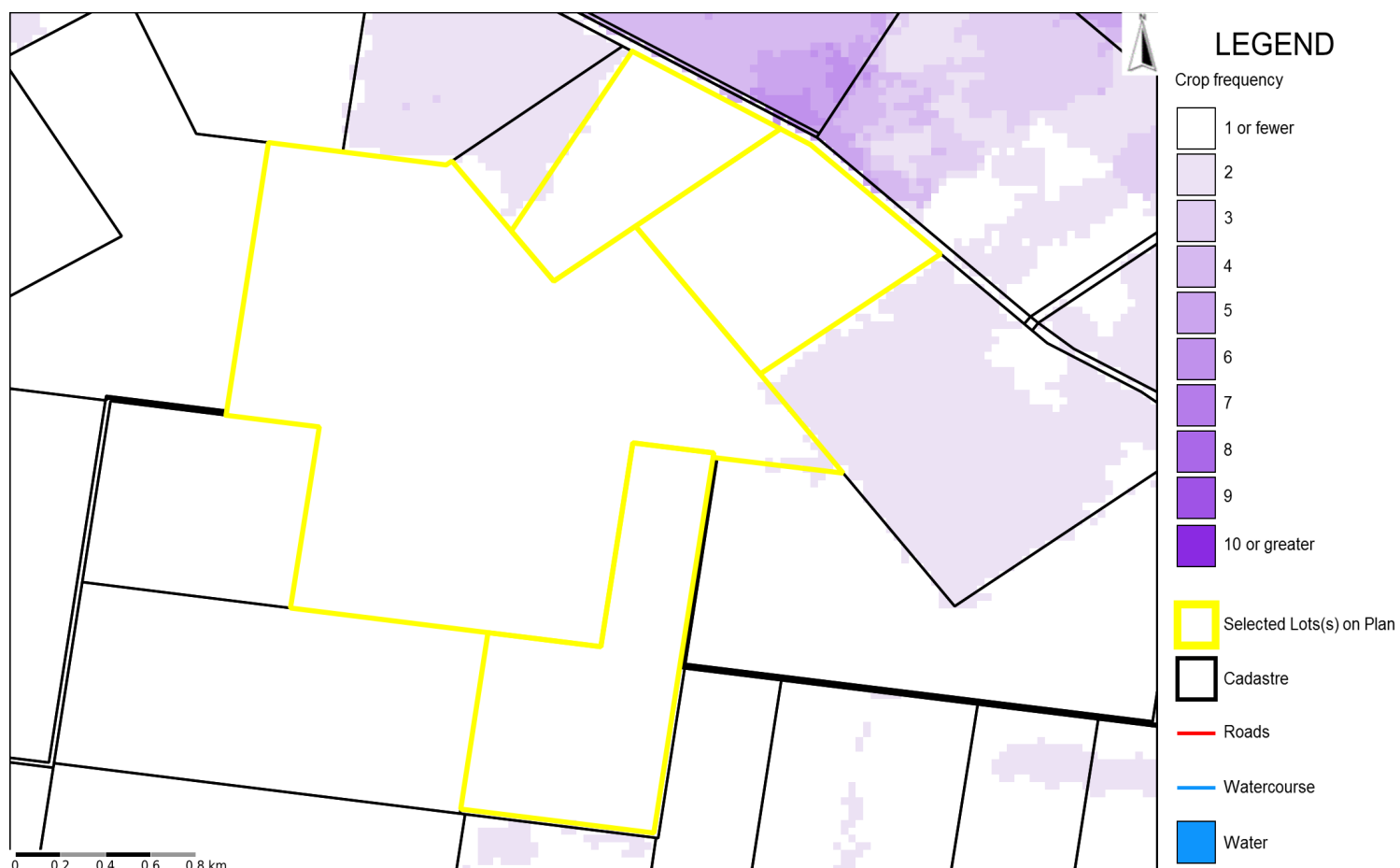
## Estimated frequency map for winter (September) crops (2011 - 2020)



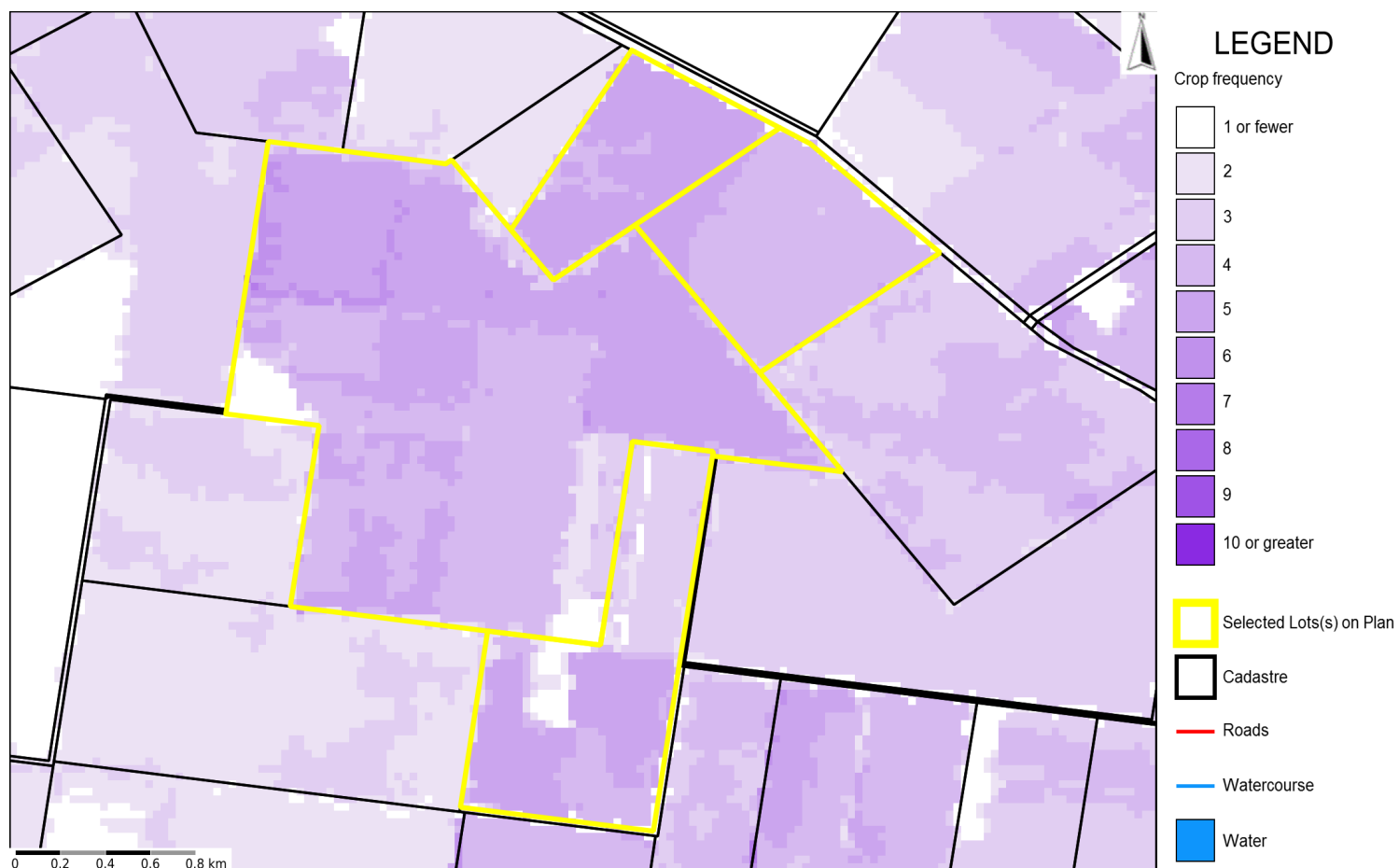
## Estimated frequency map for summer (February) coarse grain and pulse crops (2011 - 2020)



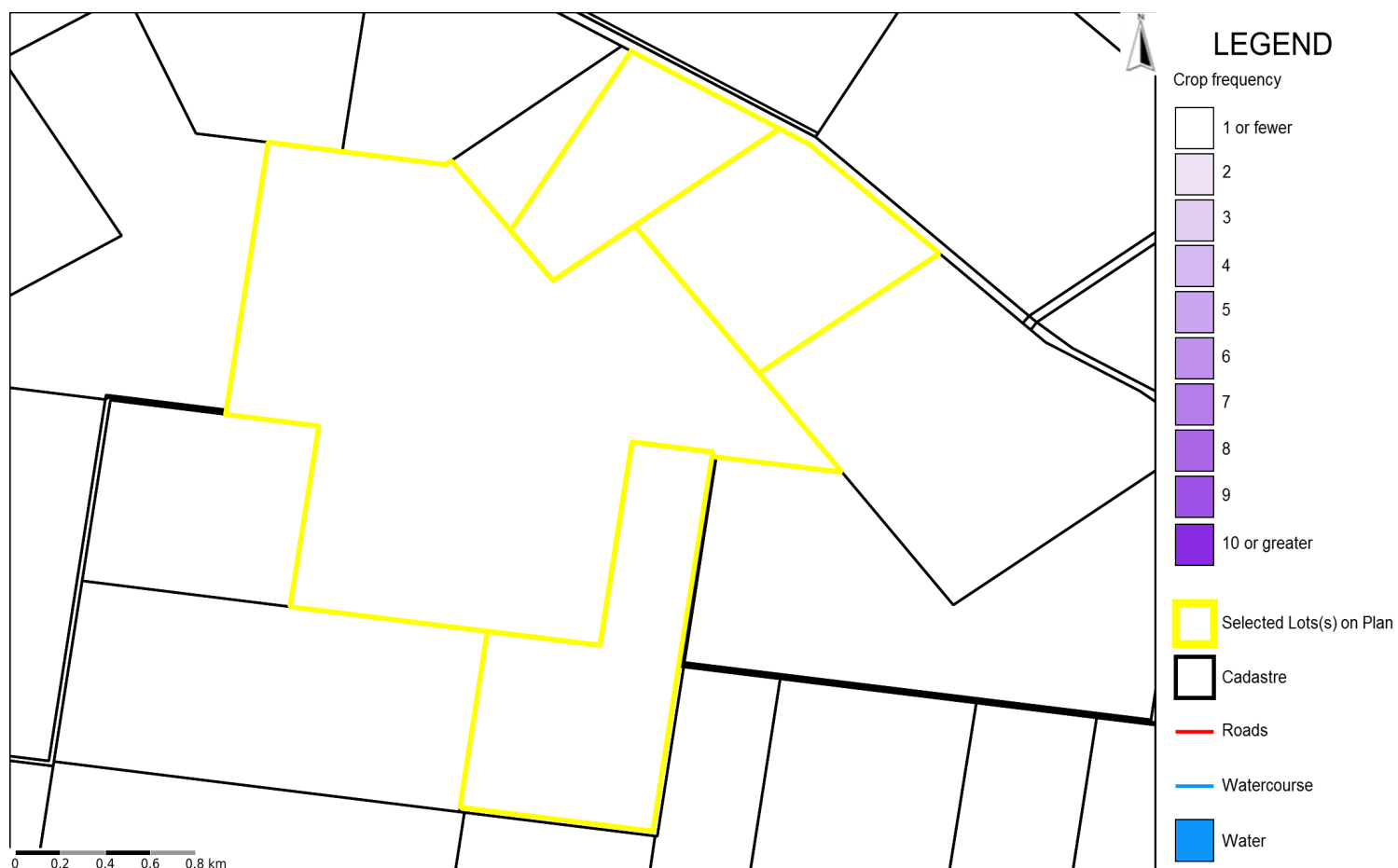
## Estimated frequency map for summer (February) cotton crops (2011 - 2020)



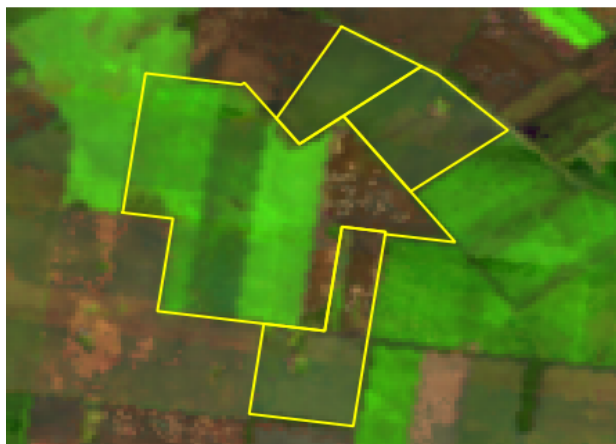
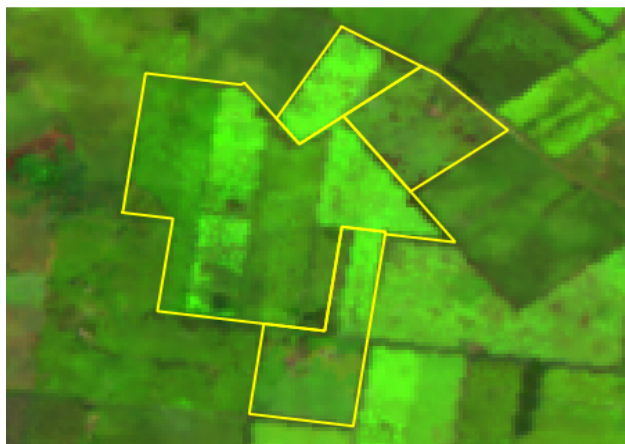
## Estimated frequency map for winter (September) cereal crops (2011 - 2020)



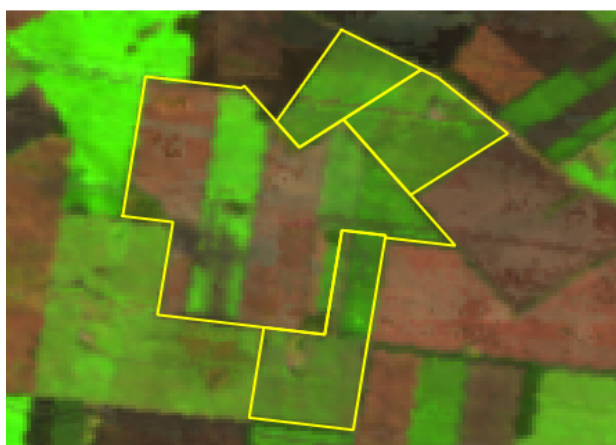
## Estimated frequency map for winter (September) pulse crops (2011 - 2020)



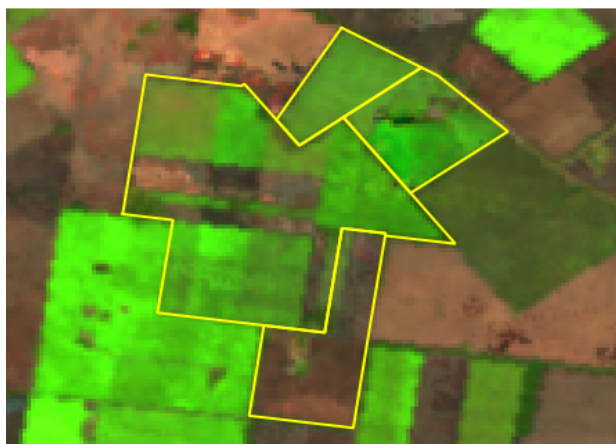
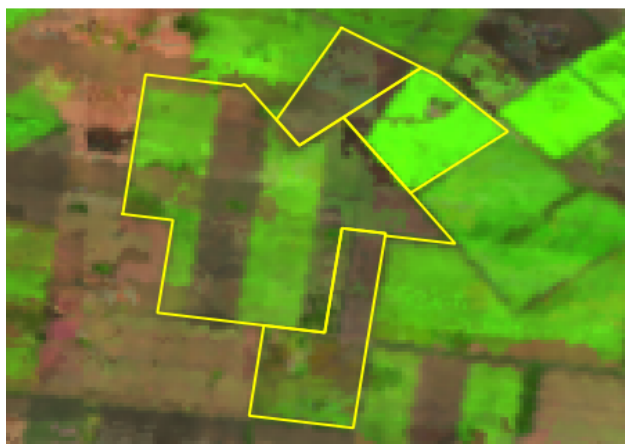
## February (left) and September (right) images for 2011



## February (left) and September (right) images for 2012

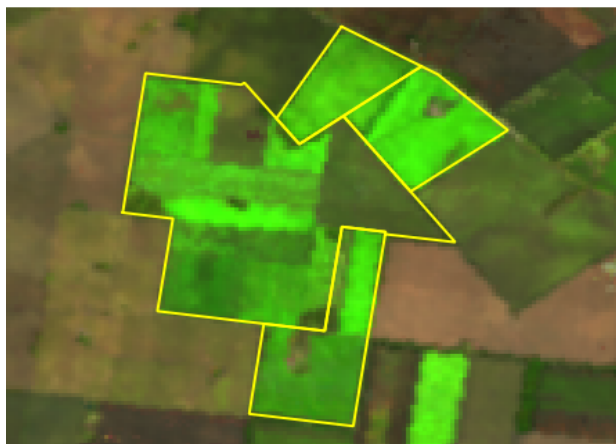


## February (left) and September (right) images for 2013

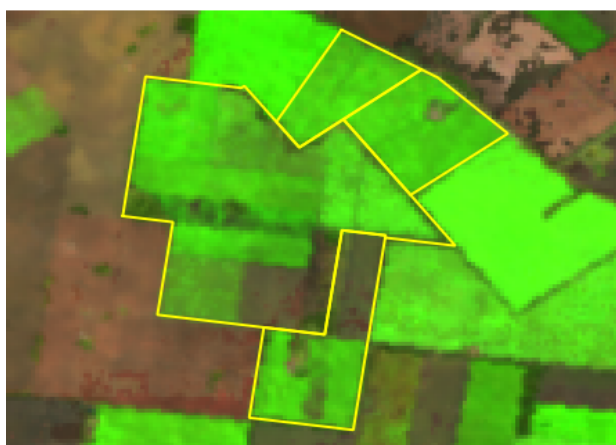




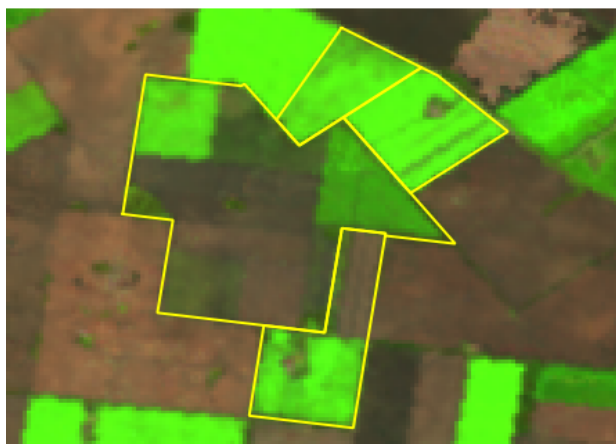
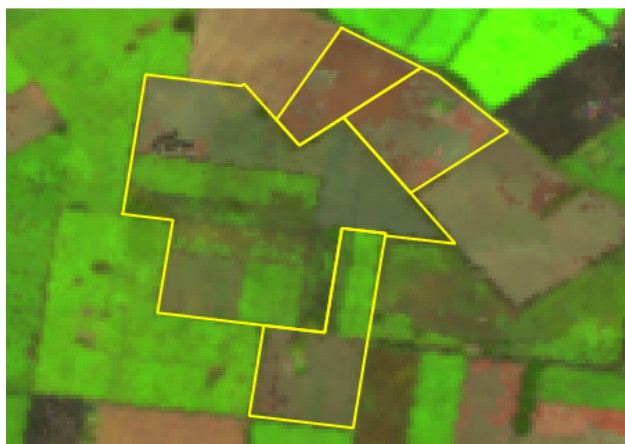
## February (left) and September (right) images for 2014



## February (left) and September (right) images for 2015

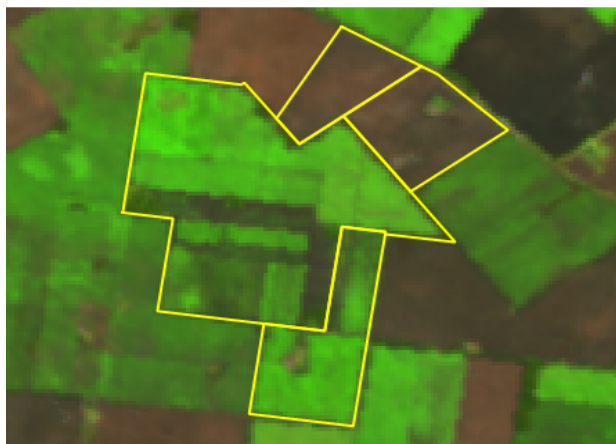


## February (left) and September (right) images for 2016

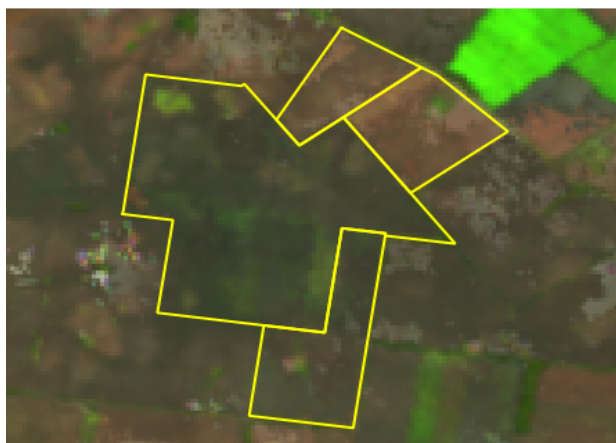




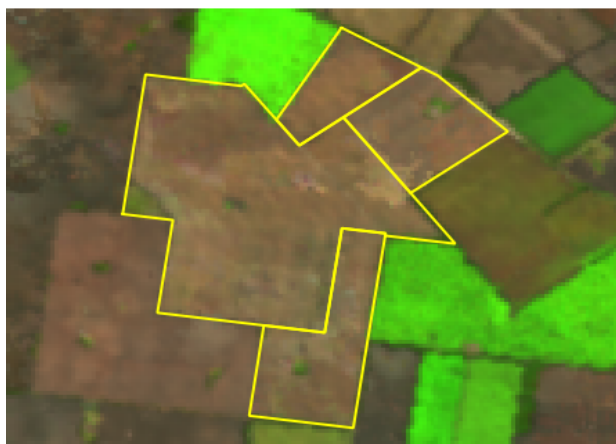
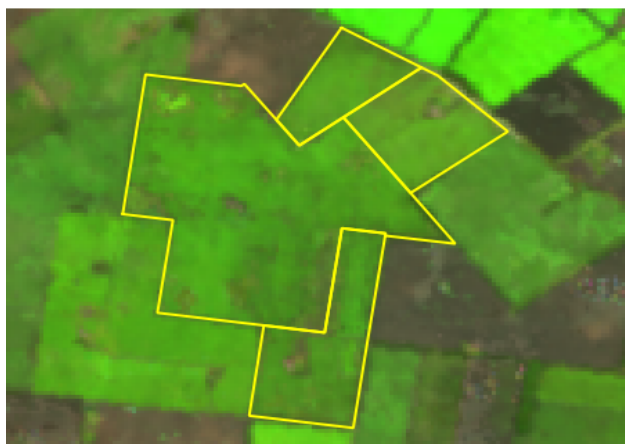
## February (left) and September (right) images for 2017



## February (left) and September (right) images for 2018



## February (left) and September (right) images for 2019



# FORAGE REPORT: CROP FREQUENCY

<http://www.longpaddock.qld.gov.au/forage>

June 25, 2021

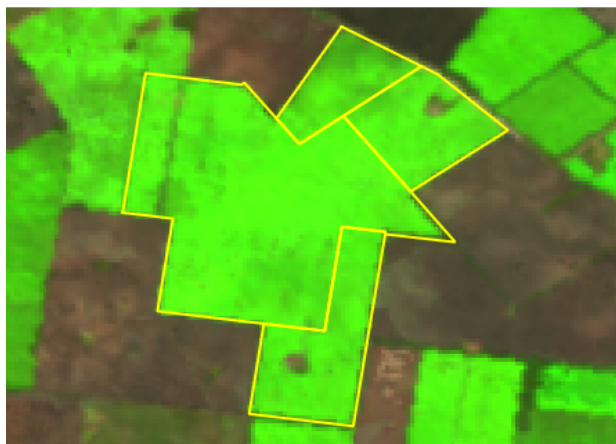
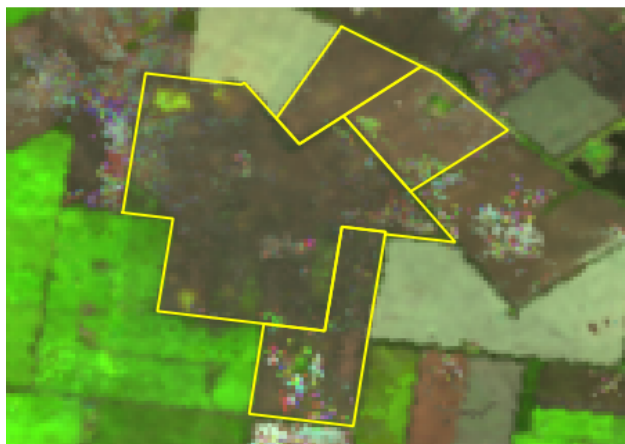
Lot on Plan: 2RP85916,12SP193328,57SP193329,3 etc.

Label: noLabel



Queensland  
Government

February (left) and September (right) images for 2020



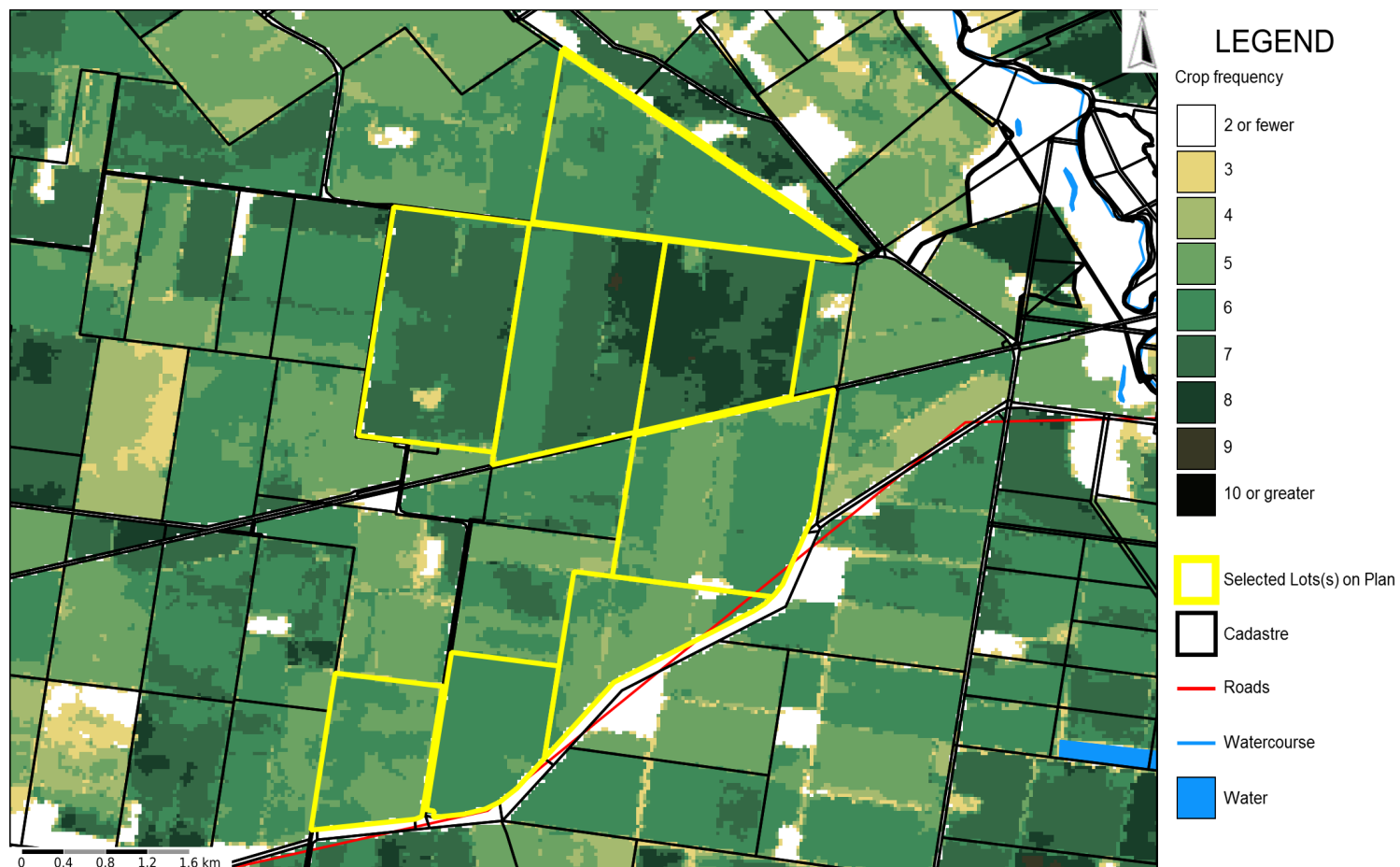
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## Introduction

This report presents maps of crop frequency for your chosen area, and chosen time period. Maps are based on time-series analysis of satellite imagery (30-m spatial resolution), for both the summer and winter growing seasons, aimed at detecting cycles of greenness in vegetation. Composite satellite images that display the maximum greenness within a summer or winter growing season for each year are also provided, as a visual reference. For further information refer to the FORAGE User Guide ([https://data.longpaddock.qld.gov.au/static/forage\\_user\\_guide.pdf](https://data.longpaddock.qld.gov.au/static/forage_user_guide.pdf)).

## Estimated total crop frequency map (2011 - 2020)



## How to interpret the information

**Crop-frequency mapping:** Coloured areas on the maps indicate locations where active crops have been detected three or more times in the summer and winter growing seasons, for the time period specified. The map on this page shows "Total Frequency" which is a count of the number of times that an active crop was detected. The maps on the following page show the summer and winter crop frequency, respectively. Analysis of satellite imagery can result in some misclassification, so it is recommended to view the composite imagery (see below) to help confirm the presence of a crop in a given season.

**Mapping of broad groups of crops:** Crop frequency is also separated into estimates of the broad crop groups within the area. This estimation is based on an automated classification approach (see <https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/crops> for more detail).

In the winter season the classification differentiates between the groups:

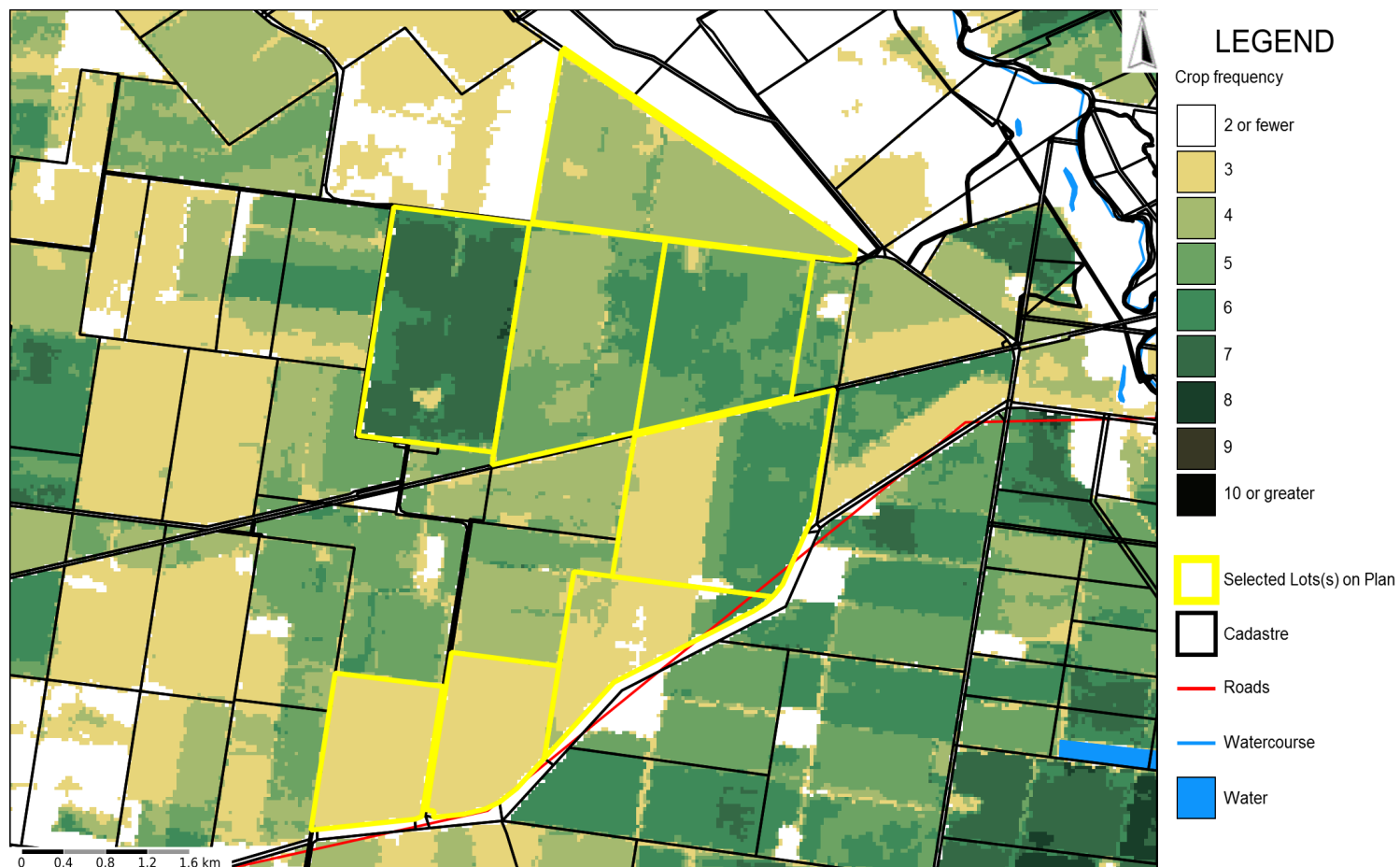
- Cereal crops (e.g. wheat, barley, oats);
- Pulse crops (e.g. chickpea).

In the summer season the classification differentiates between the groups:

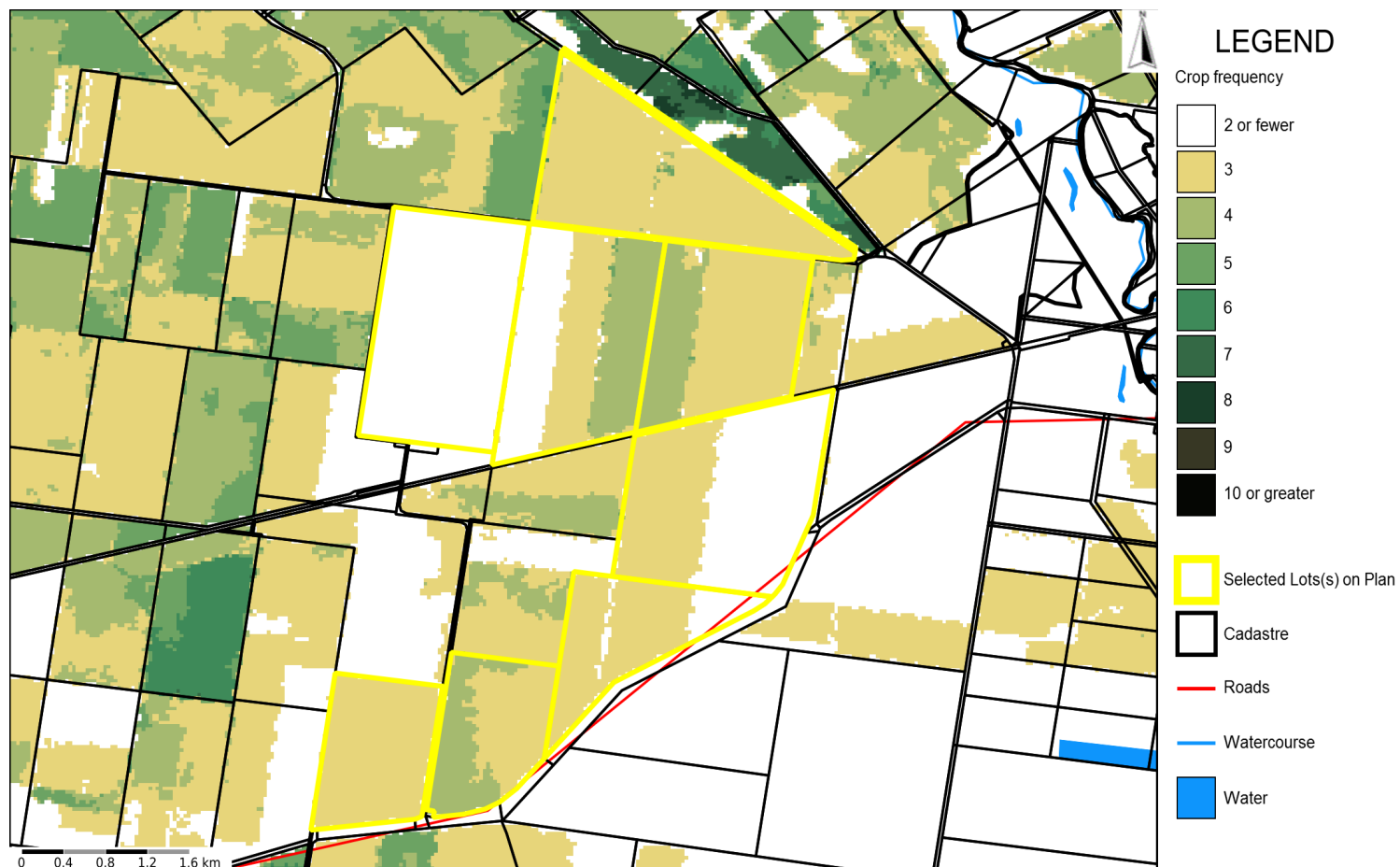
- Coarse-grain and pulse (e.g. sorghum, maize, mungbean);
- Cotton crop.

**Composite satellite imagery:** Due to the limitations of the automated method used to detect active cropping, it is recommended to view the seasonal composite images (pages 5 onward), compiled to represent the maximum greenness (per pixel) within a growing season. Cropped areas will generally appear bright green in the imagery compared with the surrounding landscape. Even if the crop-frequency mapping does not indicate cropping in an area, it is important to check each composite image to confirm that cropping has not been undertaken. Sometimes it will not be possible to clearly identify cropped areas in the imagery, e.g. in some wetter seasons the entire landscape might appear green. In this case, it is recommended to undertake further investigation using other information sources. Note: the composite images are only used to confirm the presence or absence of cropping activity; it is not possible to visually differentiate between the crop groups.

## Estimated frequency map for summer (February) crops (2011 - 2020)

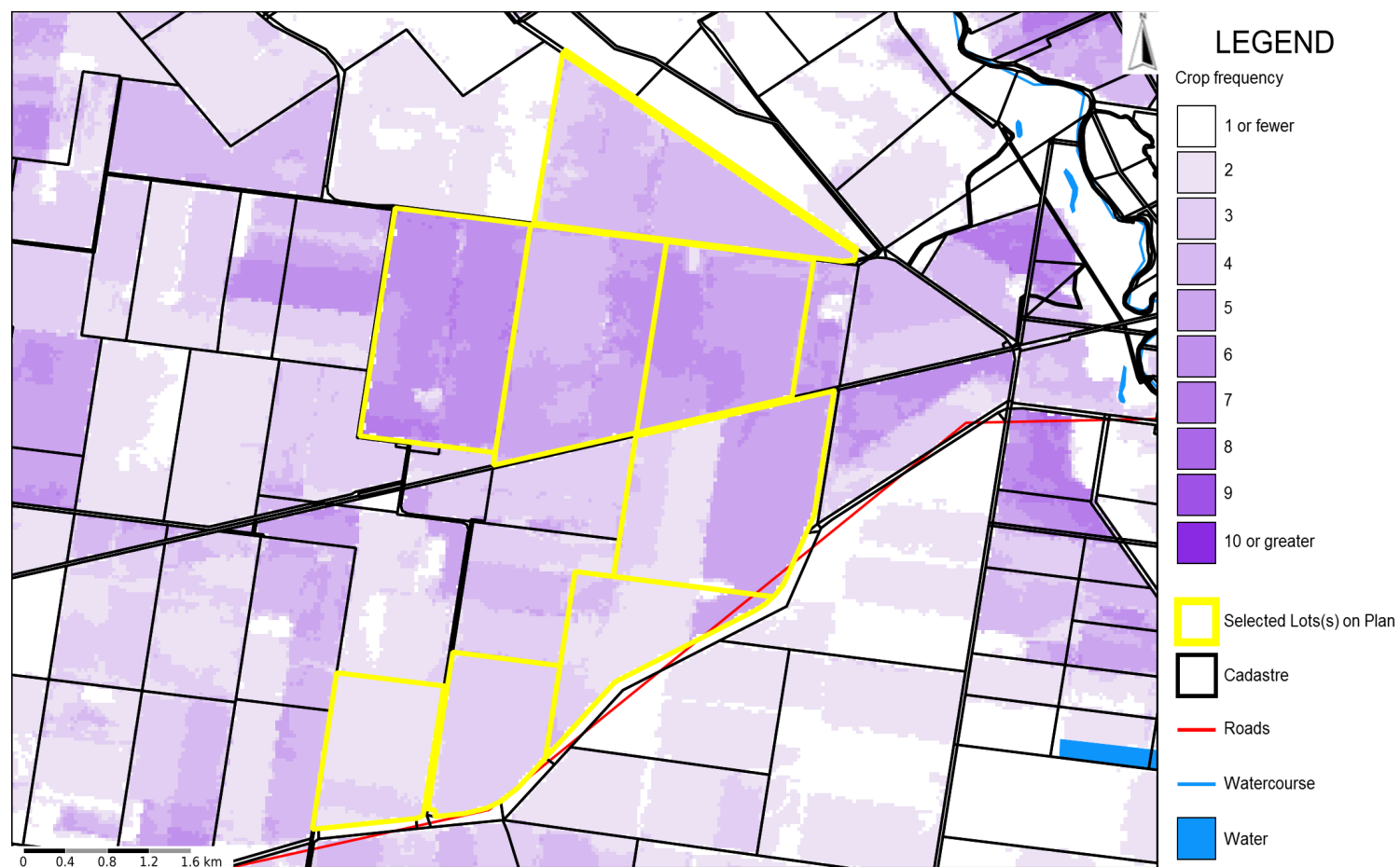


## Estimated frequency map for winter (September) crops (2011 - 2020)

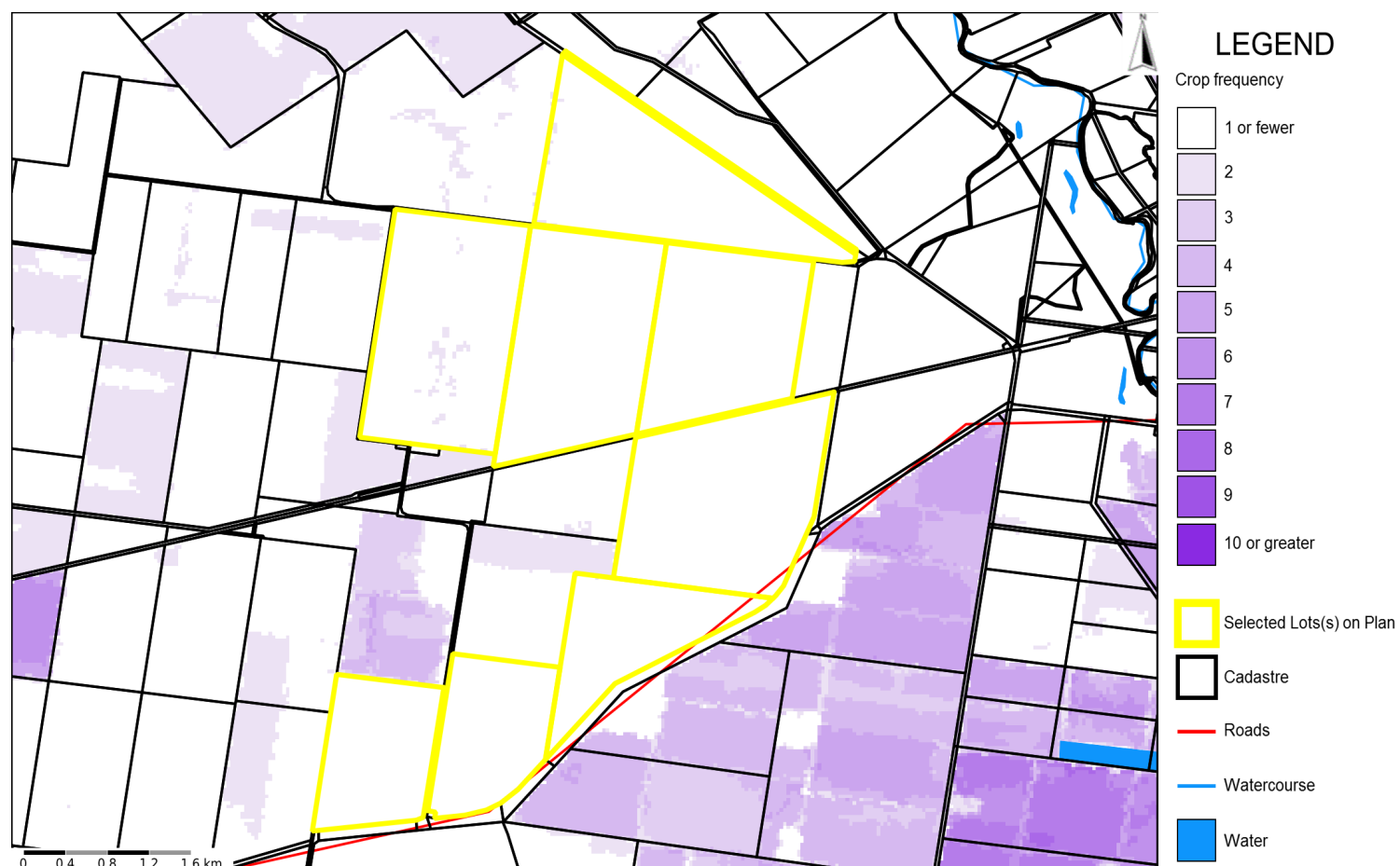




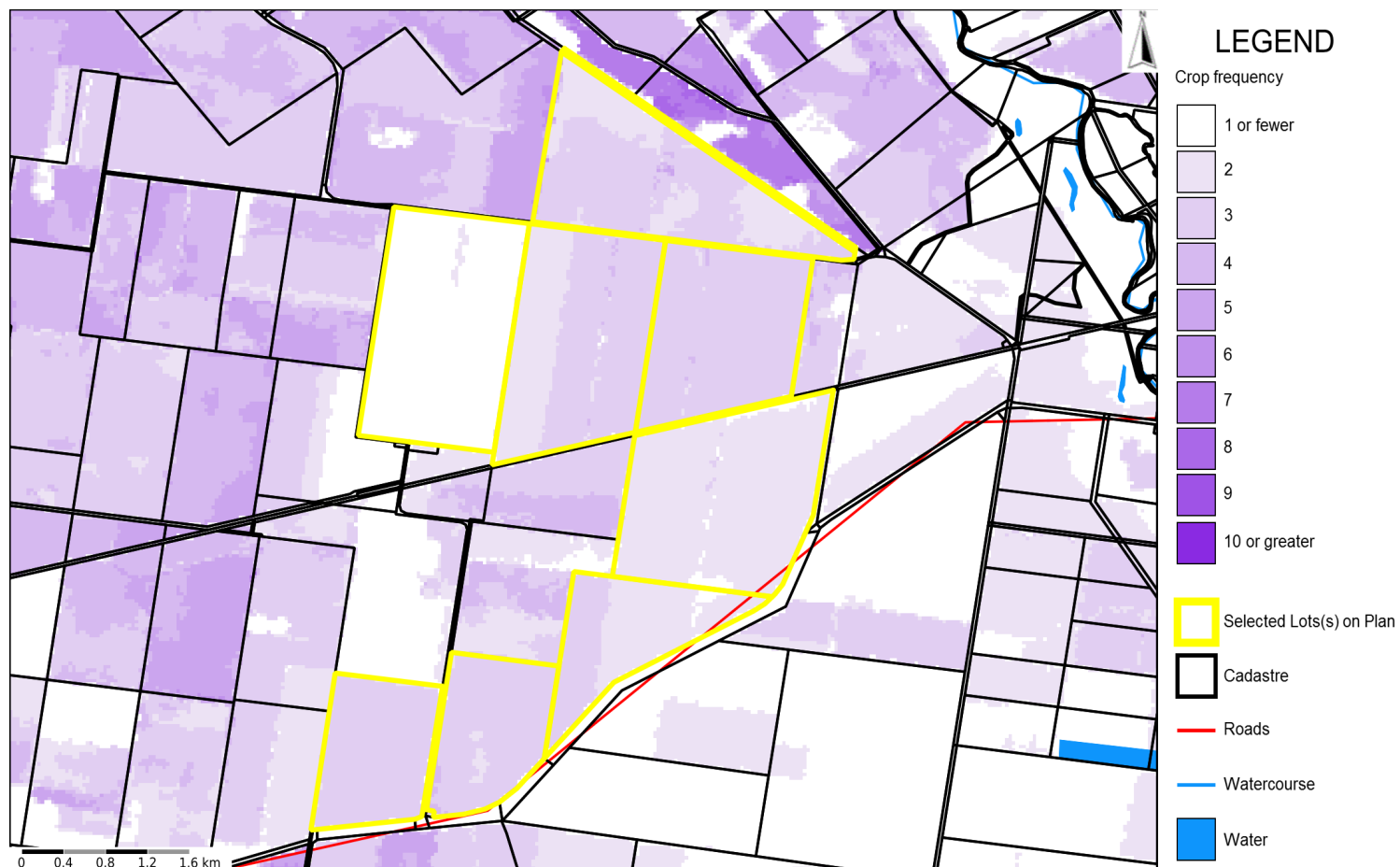
## Estimated frequency map for summer (February) coarse grain and pulse crops (2011 - 2020)



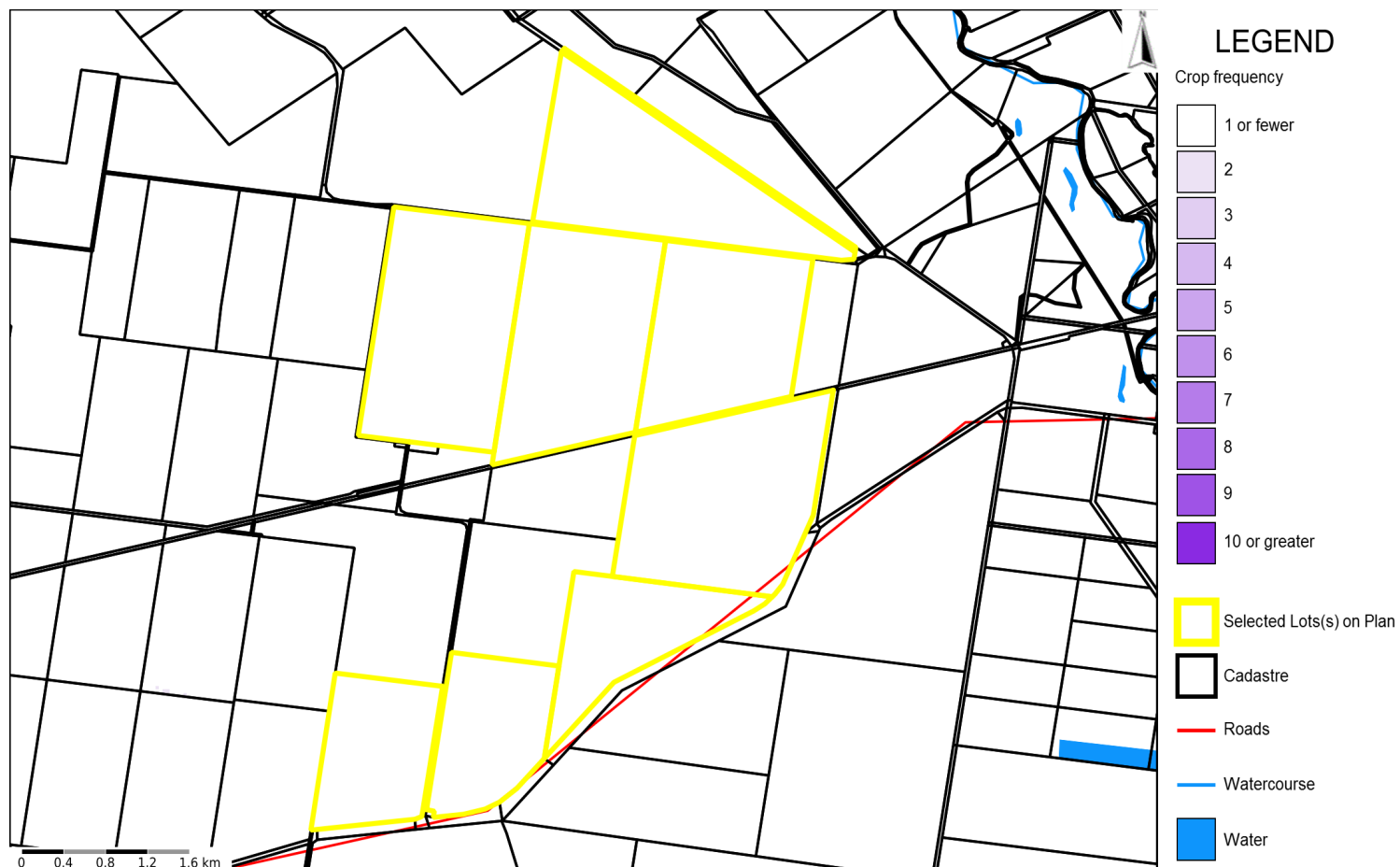
## Estimated frequency map for summer (February) cotton crops (2011 - 2020)



## Estimated frequency map for winter (September) cereal crops (2011 - 2020)

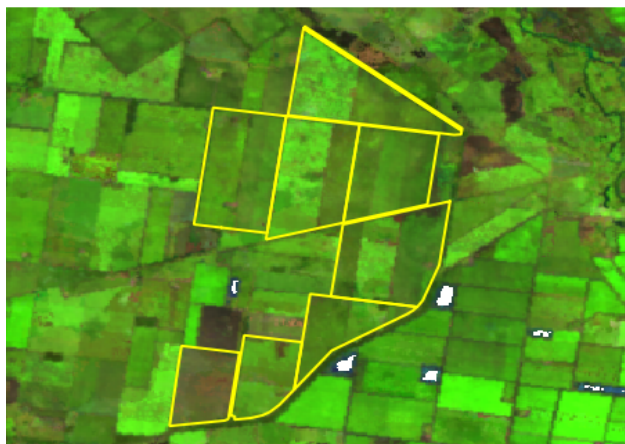


## Estimated frequency map for winter (September) pulse crops (2011 - 2020)





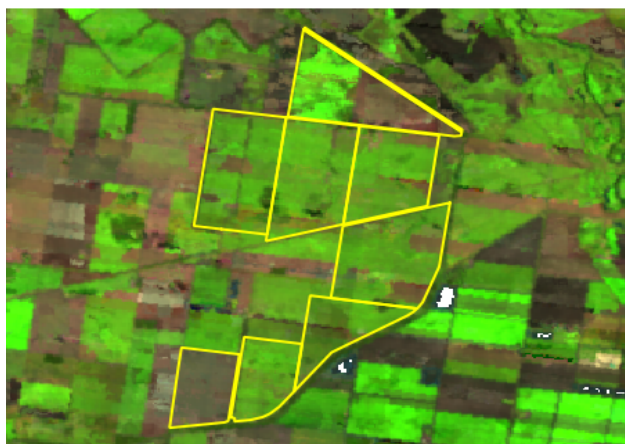
## February (left) and September (right) images for 2011



## February (left) and September (right) images for 2012



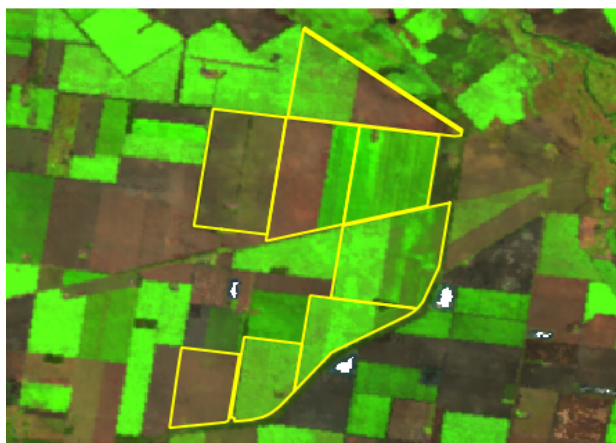
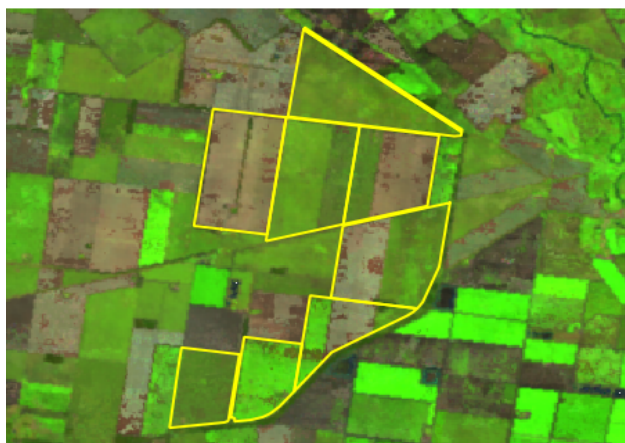
## February (left) and September (right) images for 2013



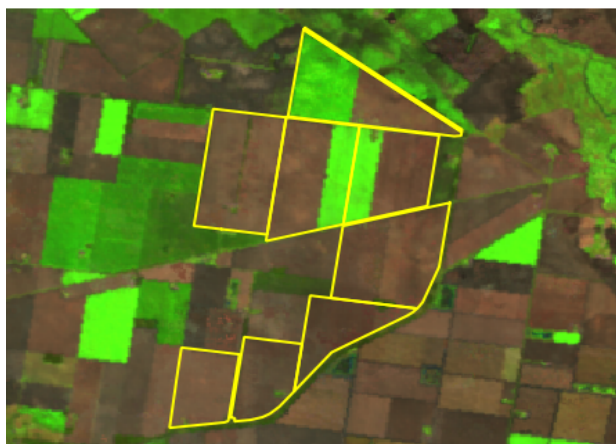
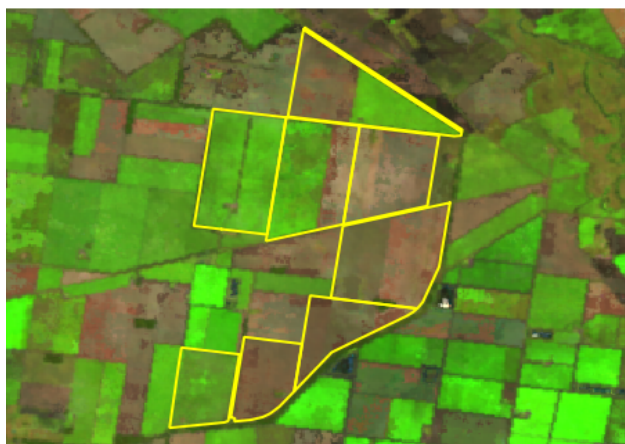
## February (left) and September (right) images for 2014



## February (left) and September (right) images for 2015

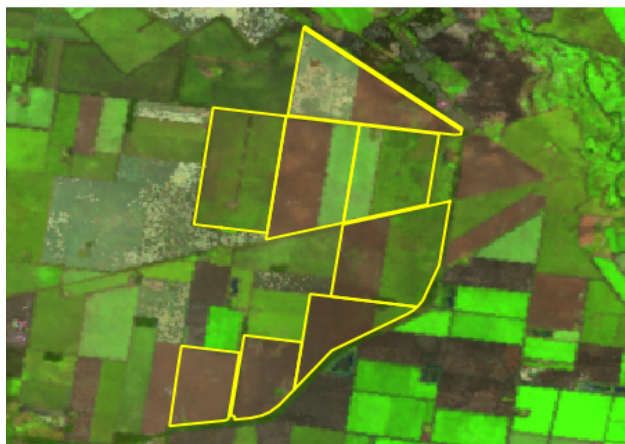


## February (left) and September (right) images for 2016





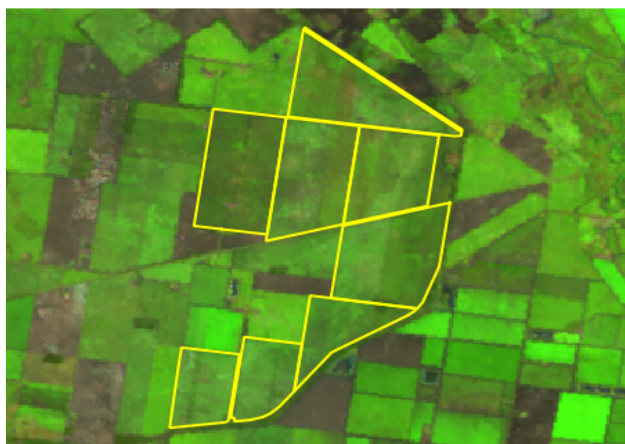
## February (left) and September (right) images for 2017



## February (left) and September (right) images for 2018



## February (left) and September (right) images for 2019



# FORAGE REPORT: CROP FREQUENCY

<http://www.longpaddock.qld.gov.au/forage>

June 25, 2021

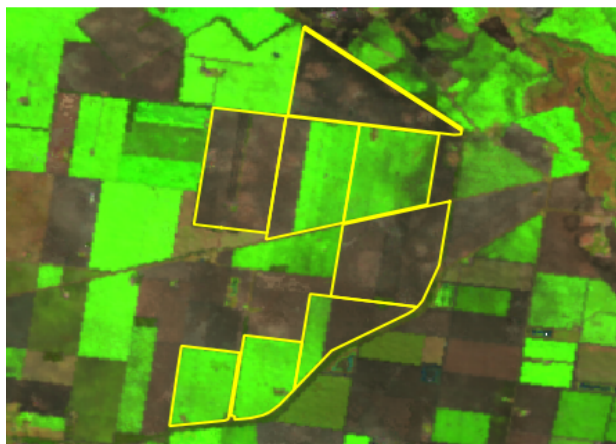
Lot on Plan: 1DY931,2RP99387,1RP154777,70DY13 etc.

Label: noLabel



Queensland  
Government

February (left) and September (right) images for 2020

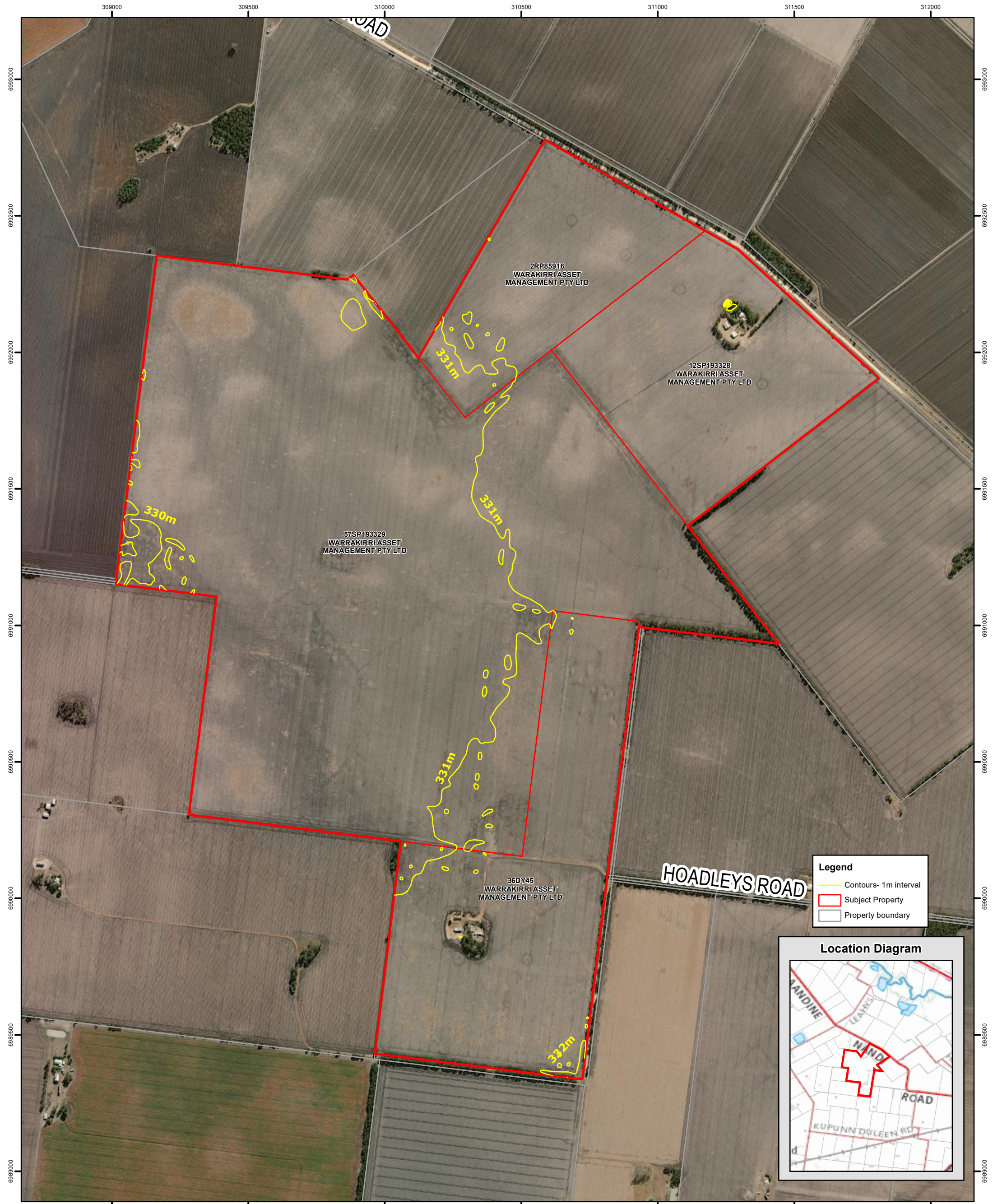


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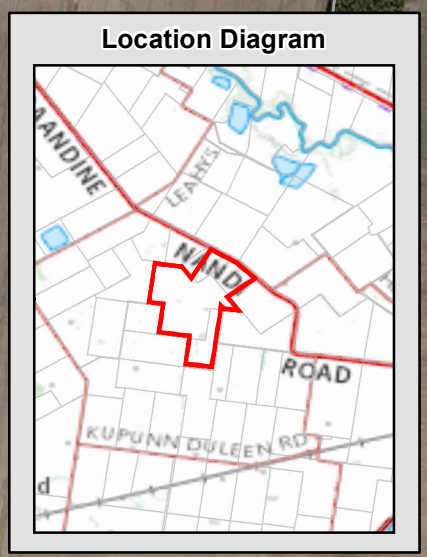
## Appendix 7: Topography Map Series



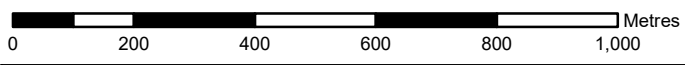


**Legend**

- Contours- 1m interval
- Subject Property
- Property boundary



Scale @ A3: 1:12,500 Coordinate System: GDA 1994 MGA Zone 56



Contour interval: 1 Metre

Rev	Date	Revision Description	By	Chk	App	Per
0	20/09/2021	Initial issue.	AW	AH	-	AH

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The dimensions, areas, number of lots, size & location of corridor information are approximate only and may vary.

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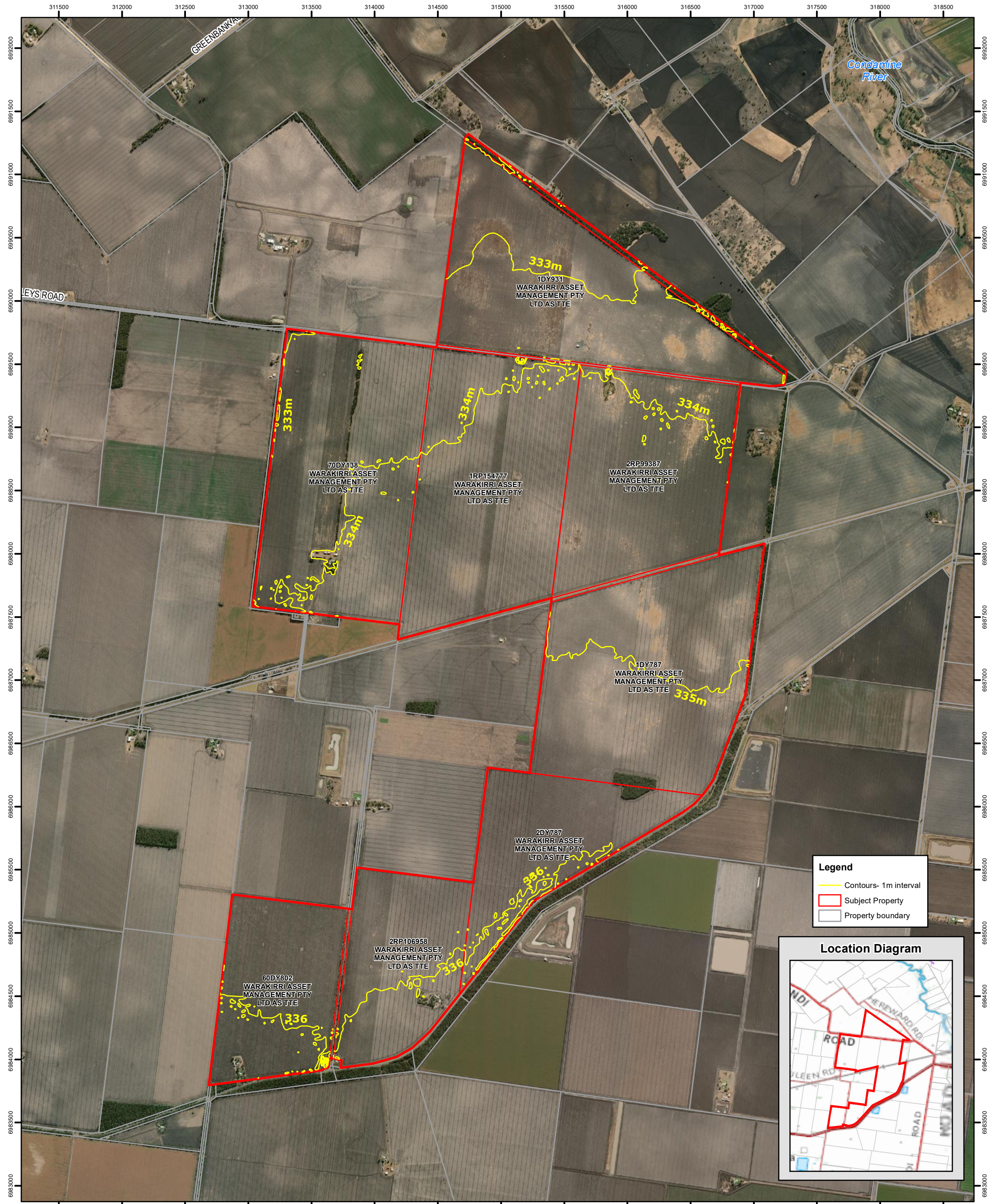
**Source:** Arrow Energy Limited, Geoscience Australia, Queensland Government

Status: IFU  
 Issued to: A Hall  
 Author: awolhuter



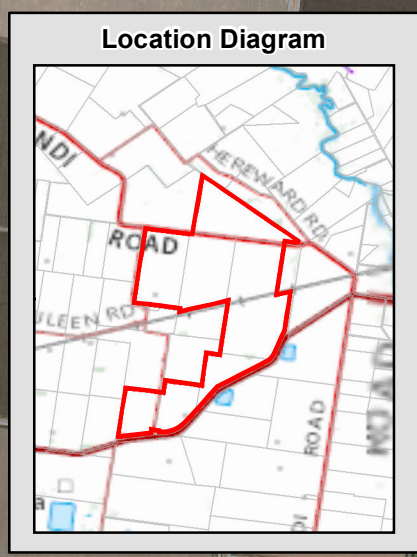
**Surat Basin  
 Warakirri Asset Management  
 Property 1  
 - Topography**



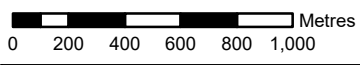


**Legend**

- Contours- 1m interval
- Subject Property
- Property boundary



Scale @ A3: 1:27,000    Coordinate System: GDA 1994 MGA Zone 56



Contour interval: 1 Metre

Rev	Date	Revision Description	AW	AH	CH	SH	PH
0	20/09/2021	Initial issue.					

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**Surat Basin**  
**Warakirri Asset Management**  
**Property 2**  
**- Topography**