- Managing spatial data
- Positioning technology
- Latest spatial imagery
- New access tools

Queensland
Government

Spatial data

- related to the surface of the Earth (incl. above & below)

- Latitude / longitude
- Coordinates (X,Y & Z)
- Big & Small, Natural & Built objects
  - *Country*
  - *State & Region*
  - *Local Government Area, Electorate, Postcode…*
  - *Place, Locality, Suburb*
  - *Street Address, Road*
  - *Building, apartment, shop, room…*
  - *Point*
- Typically grouped into Themes or Layers

Spatial Data Themes

Imagery is a snapshot of Queensland's natural and physical assets and environment captured by a camera or sensor from terrestrial, Remotely Piloted Aircraft System (drone), manned aircraft, or satellite platforms.

Location Address describes where the physical location of a property is.

Place Names are the recorded names of cultural, physical and geographical features (whether natural or artificial).

Transport is the representation of land, water and air networks (roads, rail, ports and transport infrastructure).

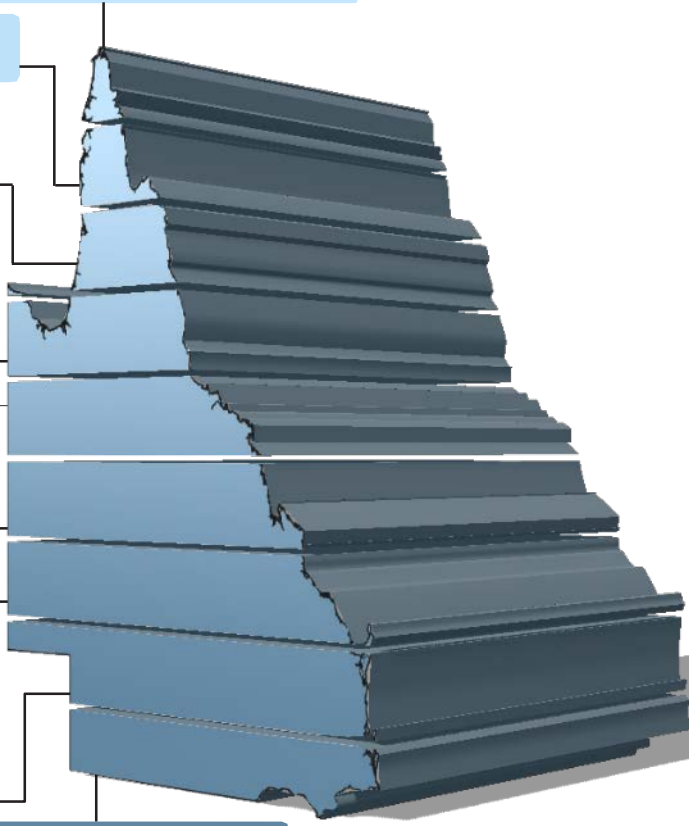
Administrative Boundaries is a collection of legislative, regulatory, statistical, political, maritime and other general administrative boundaries.

Land Parcel and Property (cadastre) contains descriptive data including boundaries, tenure, ownership type, size and a record of interests in land for the purpose of land administration.

Elevation and Depth is the measurement of the Earths' surface above or below a vertical datum.

Water encompasses the movement, distribution, and quality of surface water or groundwater.

Positioning provides the precise location of points above, on or within the earth (includes names, unique code, latitude, longitude, datum and height).



Queensland Foundation Spatial Data Themes (10)

Imagery
Imagery provides a photographic record of Queensland's natural and physical assets and environment recorded from an aircraft or satellite.

Location addressing
Location addressing is used to describe the physical location of a property, i.e. any separately owned or occupied area of land, or each separately owned or occupied building or part of a building.

Place Names
Place Names are the recorded names of cultural and physical features with associated location and extent - the most commonly used spatial identifier and can include alternate and historical place names.

Transport
Transport describes the land, water and air networks used to move people and goods, and deliver services - providing information on roads, rail, ports, and transportation infrastructure.

Land Parcel and Property
Land Parcel and Property provides the basic fabric of land ownership. The cadastre is established for land administration including land parcel and property information.

Queensland Foundation Spatial Data Themes (10)

Administrative Boundaries
Administrative Boundaries are a collection of legislative, regulatory, political, maritime and general administrative boundaries sourced from local and state boundary datasets.

Land Cover
Land Cover is the observed biophysical cover on the earth's surface including trees, shrubs, grasses, soils, exposed rocks and water bodies, and other elements such as plantations, crops and built environments.

Water
Water encompasses the hydrology of movement, distribution, and quality of water - includes surface hydrology, hydrogeology and drainage basin management.

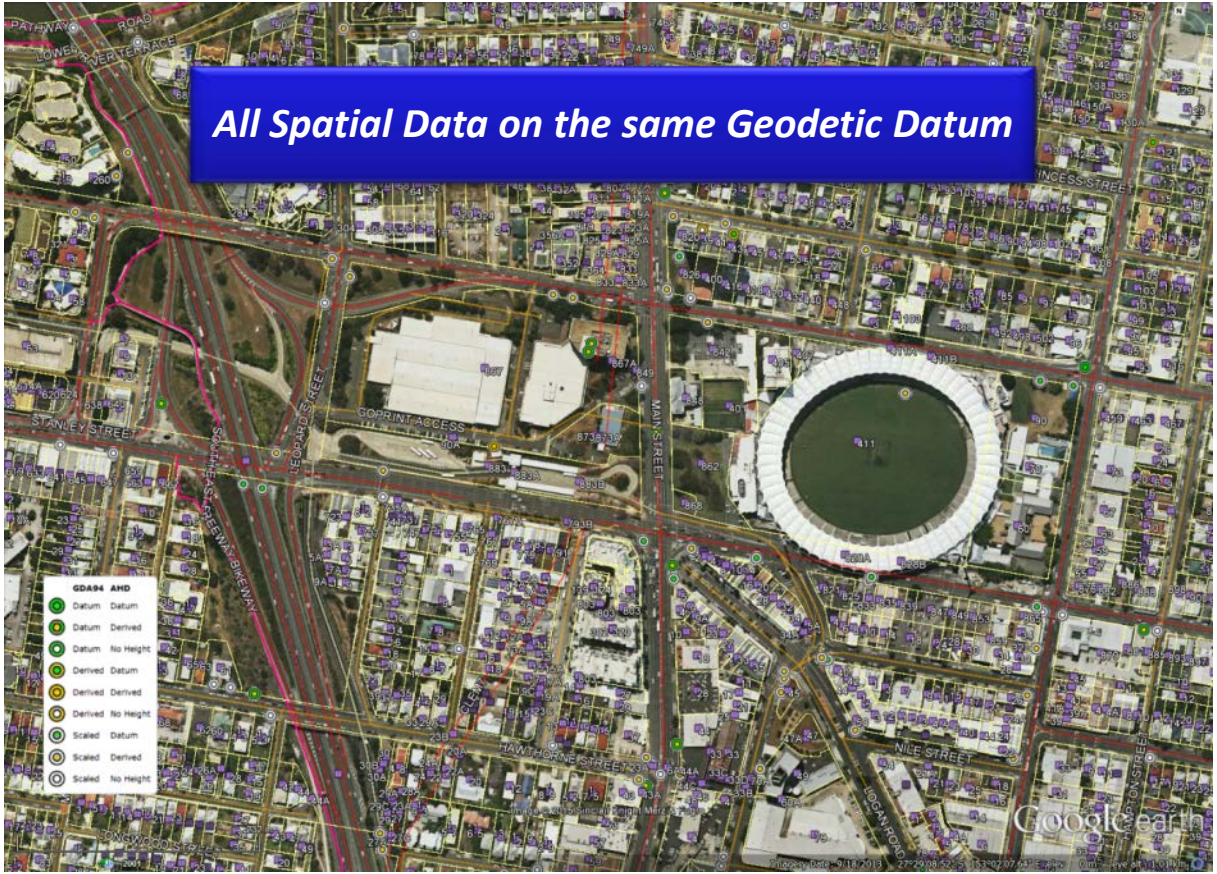
Elevation and Depth
Elevation and Depth is the measurement of the Earth's surface above or below a vertical datum to obtain the land height or bathymetric depth.

Positioning
Positioning provides a common reference system for establishing a coordinate system for all spatial data. It ties all spatial data to a common and recognised horizontal (GDA94) and vertical (AHD) coordinate system.

Coordinate Consistency

Geodetic Datum

Imagery +
DCDB +
Addresses +
Boundaries
+…

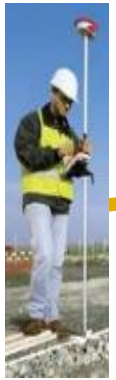


Precise Positioning Applications

Agriculture

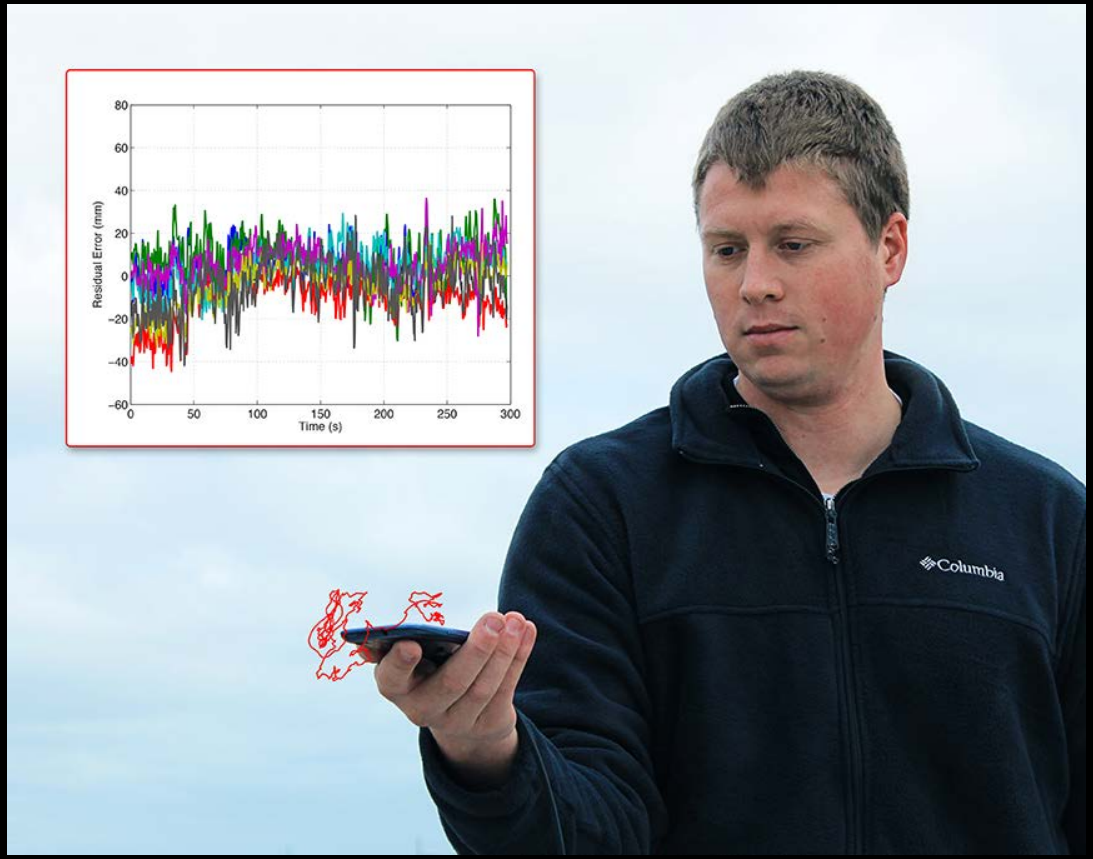
Aerial Imagery

Mining

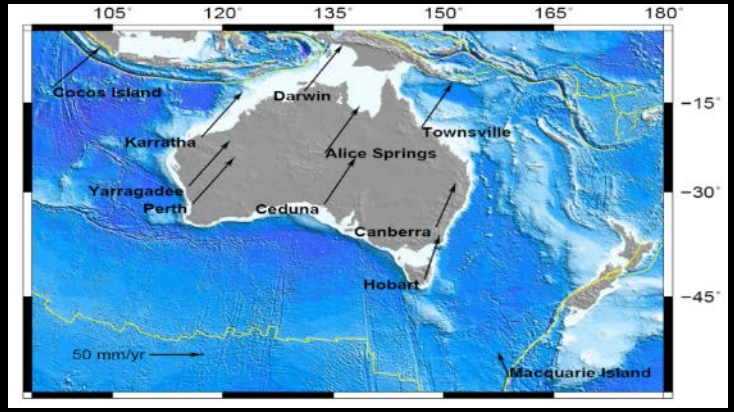


Land Surveying

Construction



It is possible to get +/- 3cm from GNSS Smart phones now

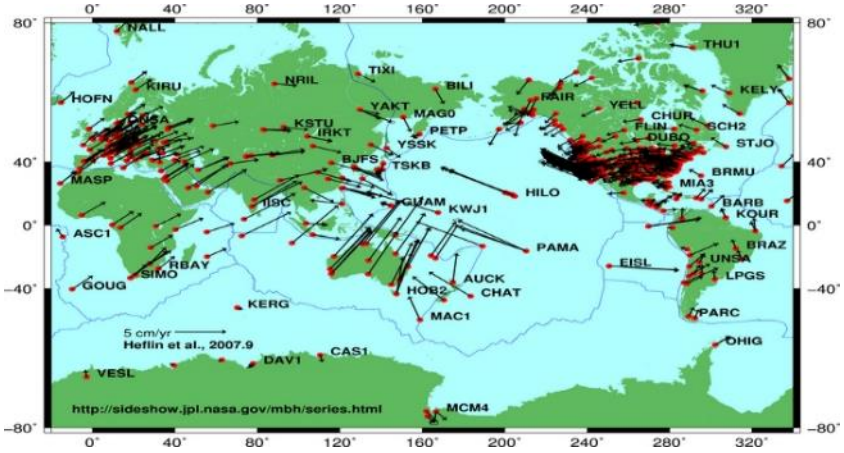


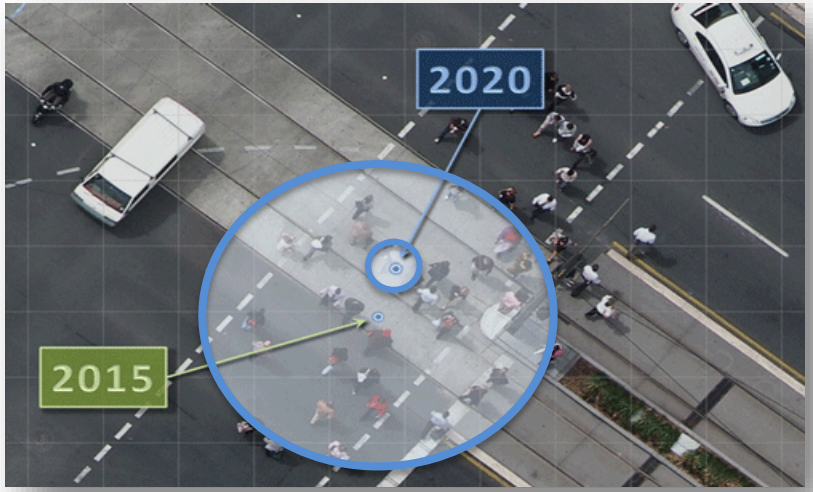
But the country is moving 7.5cm p.a.!

© State of Queensland 2015

Our datum needs to move with the times…

- Currently on GDA94
- Moving to GDA2020
- Plan to introduce a dynamic datum





Queensland Government

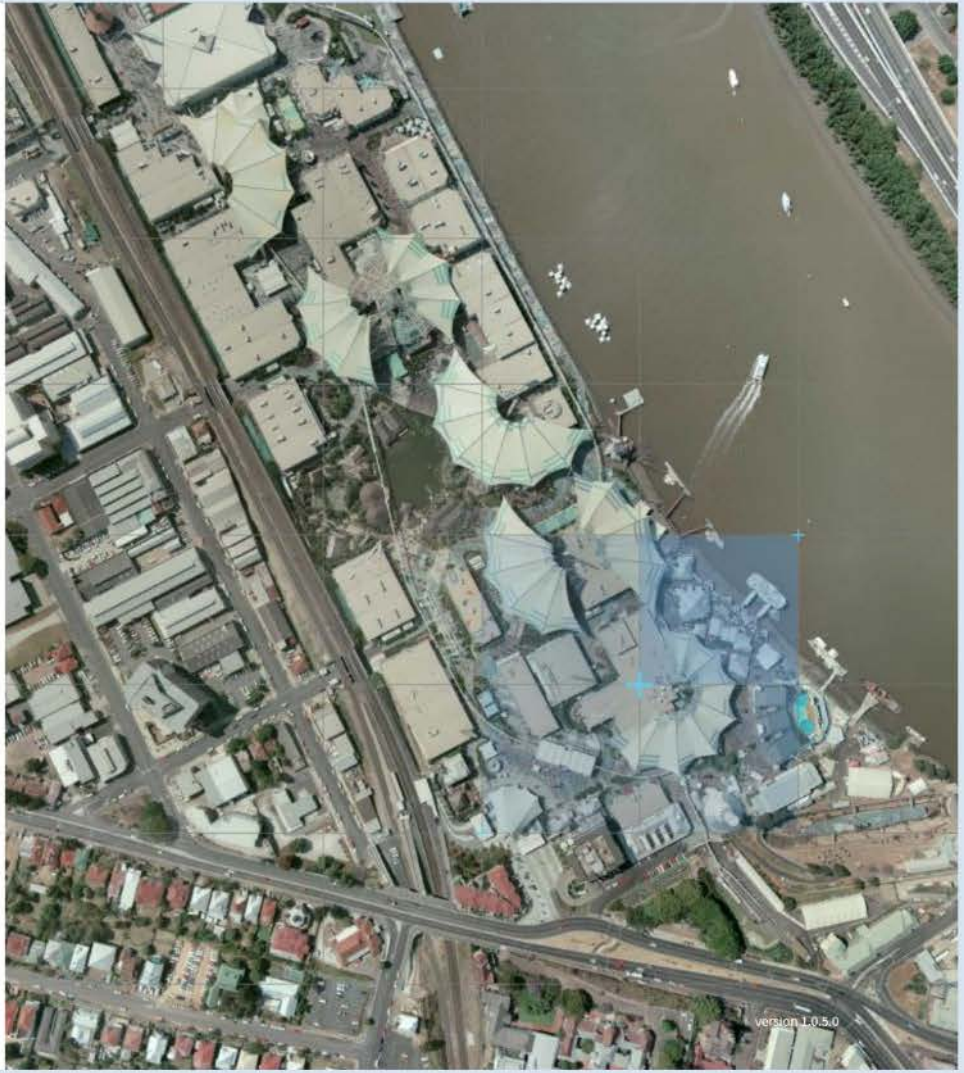
Welcome to QImagery

Queensland Government's online collection of photographs from the 1930's to 2009.

Search and download images as you investigate Queensland's history and see how the landscape has changed over time. The photographs are available free to everyone for use as they require within licence conditions.

☐ I acknowledge I have read and agree to the Terms & Conditions.

Get Started



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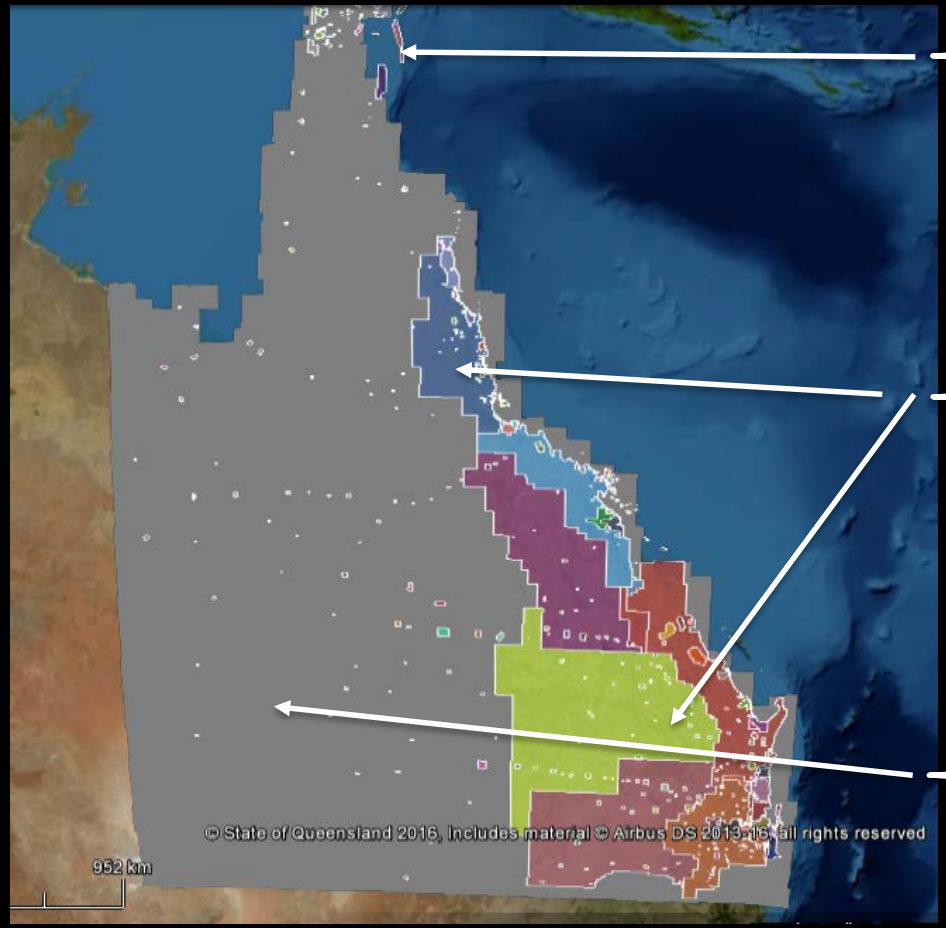
Queensland Government

Copyright Disclaimer Privacy Right to information Accessibility Jobs in Queensland Government
Other languages (italiano)

Queensland's current imagery program



Drones
(2cm resolution)
very small area projects

Aerial photography (aircraft: 10cm – 50cm)
large area projects

Satellite imagery
(space: 1.5m
resolution)
state-wide every 3
years

DNRM Market Assessment (RFI / RFQ)
Acquisition of State-wide Satellite Imagery

EARTH i
intelligent data from space

Will deliver:

- High resolution imagery at 80cm - *(was 1.5m)*
- Annual state-wide acquisition – *(was every 3 years)*
- Available in the Queensland Globe

OLD - Strathmore SPOT 1.5m – 3 February 2015

NEW - Strathmore Earth-i 80cm – 20 June 2016

OLD - Strathmore SPOT 1.5m – 3 February 2015

NEW - Strathmore Earth-i 80cm – 20 June 2016

OLD - Betoota SPOT 1.5m – 12 July 2013

NEW - Betoota Earth-i 80cm – 28 August 2016

OLD - Mt Isa SPOT 1.5m – 8 December 2013

NEW - Mt Isa Earth-i 80cm – 28 August 2016

OLD - Kogan Cattle Yards SPOT 1.5m – 19 August 2013

NEW - Kogan Cattle Yards Earth-i 80cm – 24 May 2016

A Superior Solution…

- *Tender process identified a new and unique opportunity*

geoplex

PLANET LABS

GEOIMAGE
Unique Insight

EARTH i
intelligent data from space

AIRBUS

DigitalGlobe™

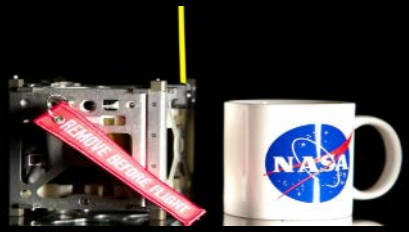
AAM

A Superior Solution…

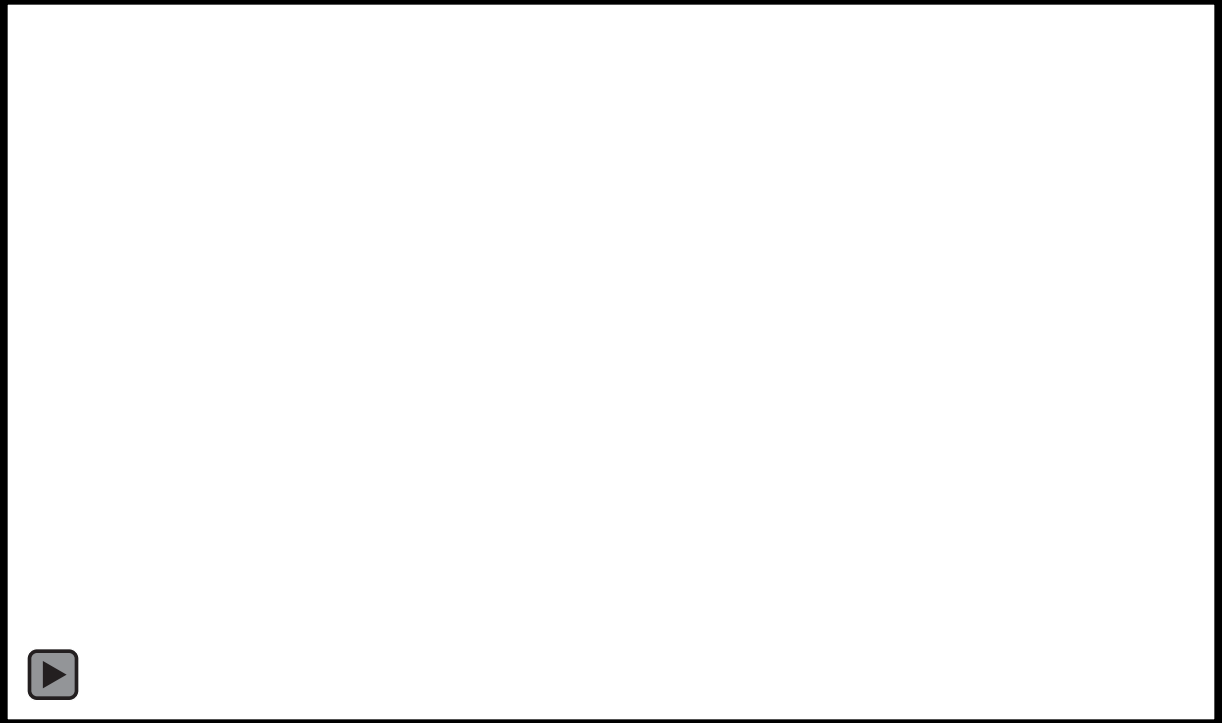
- *Tender process also identified a new and unique opportunity*
- *Cube Sats – Geoplex / Planet Labs*

CubeSats:

- *Small (10cm x 10cm x 30cm)*
- *Low cost ($10K - $100K)*
- *Many (hundreds of them)*
- *Medium resolution (+/- 3m)*
- *Daily imagery*



ABC Catalyst program – Tuesday 18th October 2016

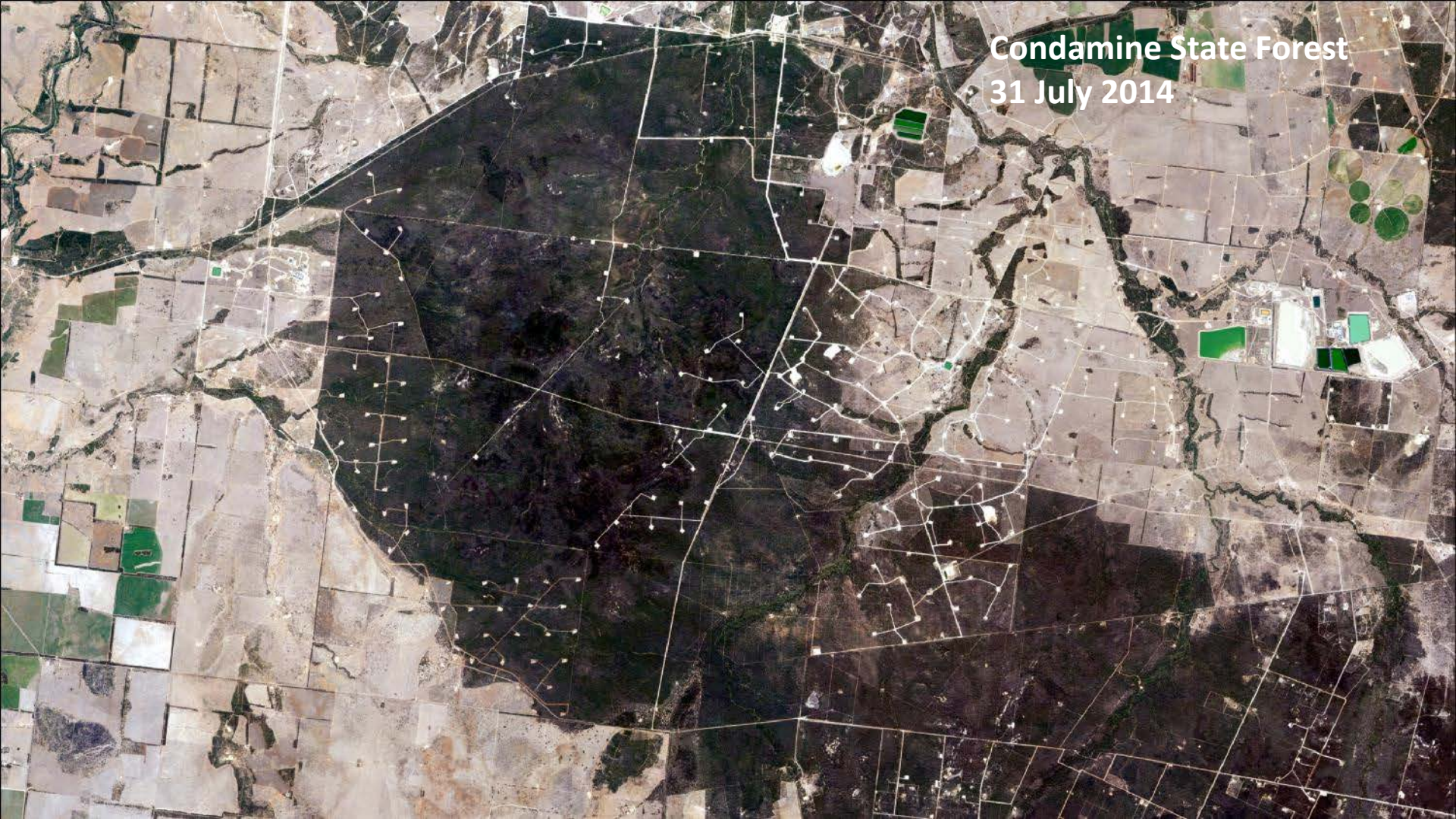


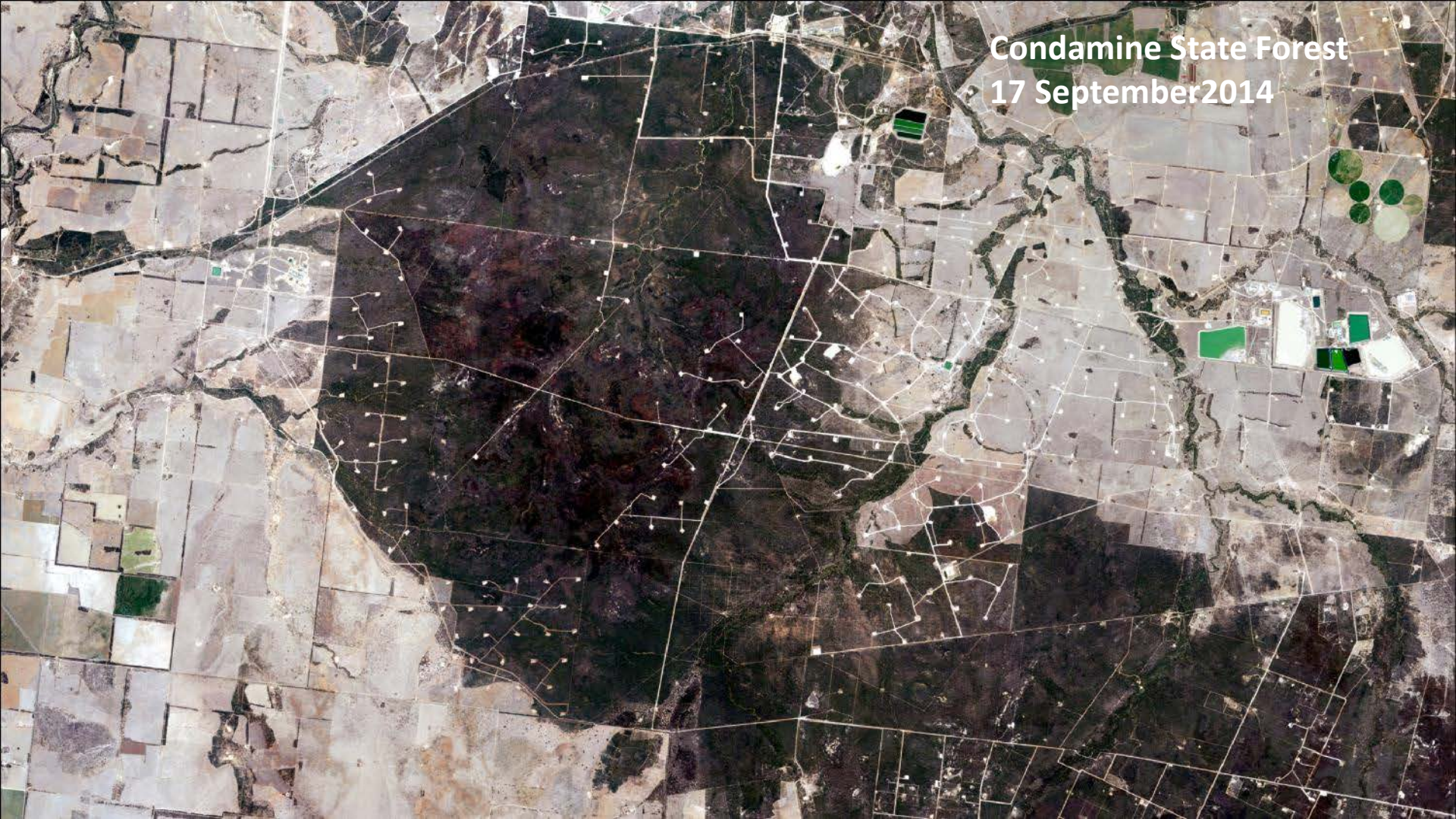
Vegetation Management

Vegetation clearing near Hazeldean – 6 June 2016

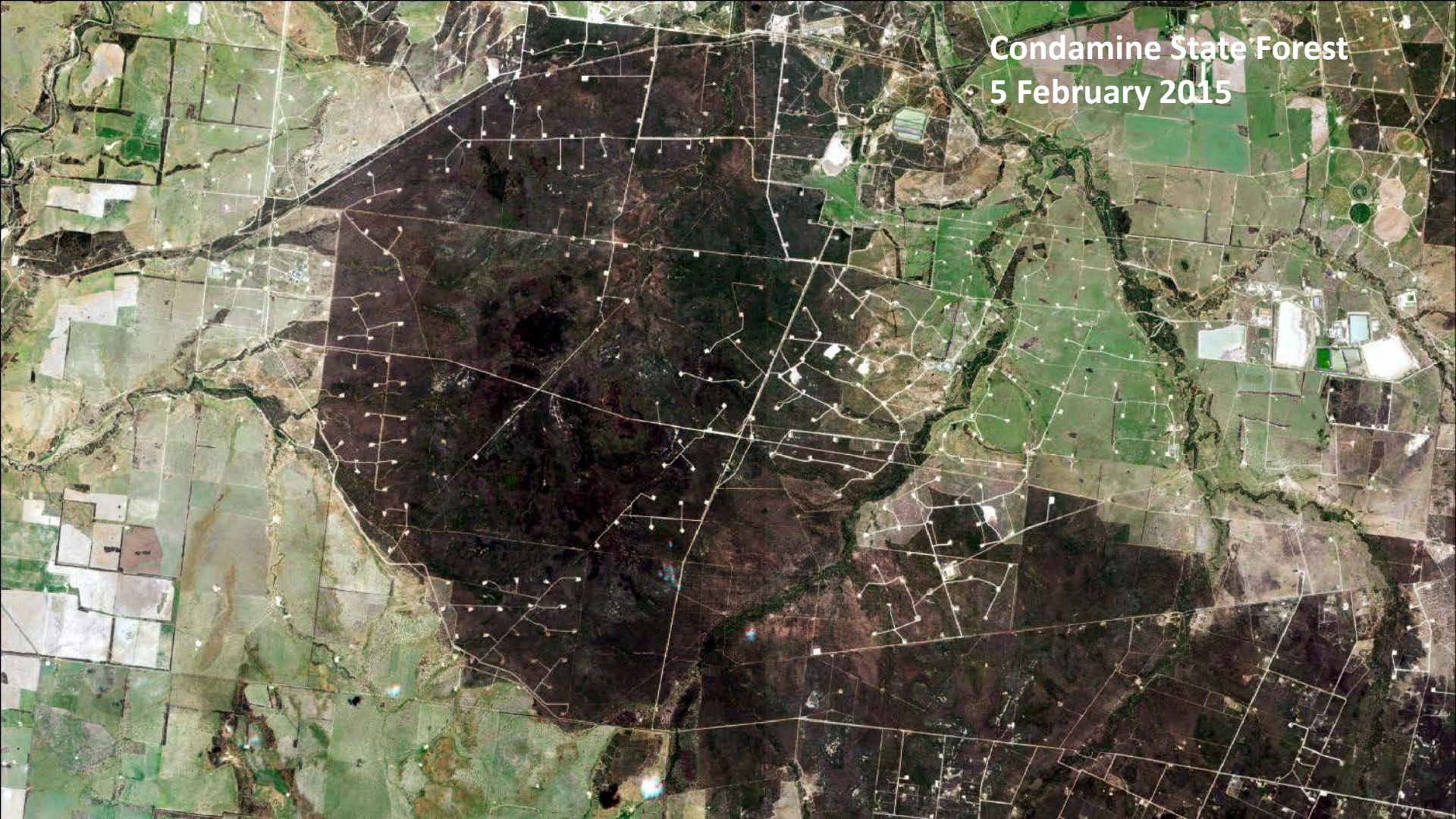
Vegetation Management

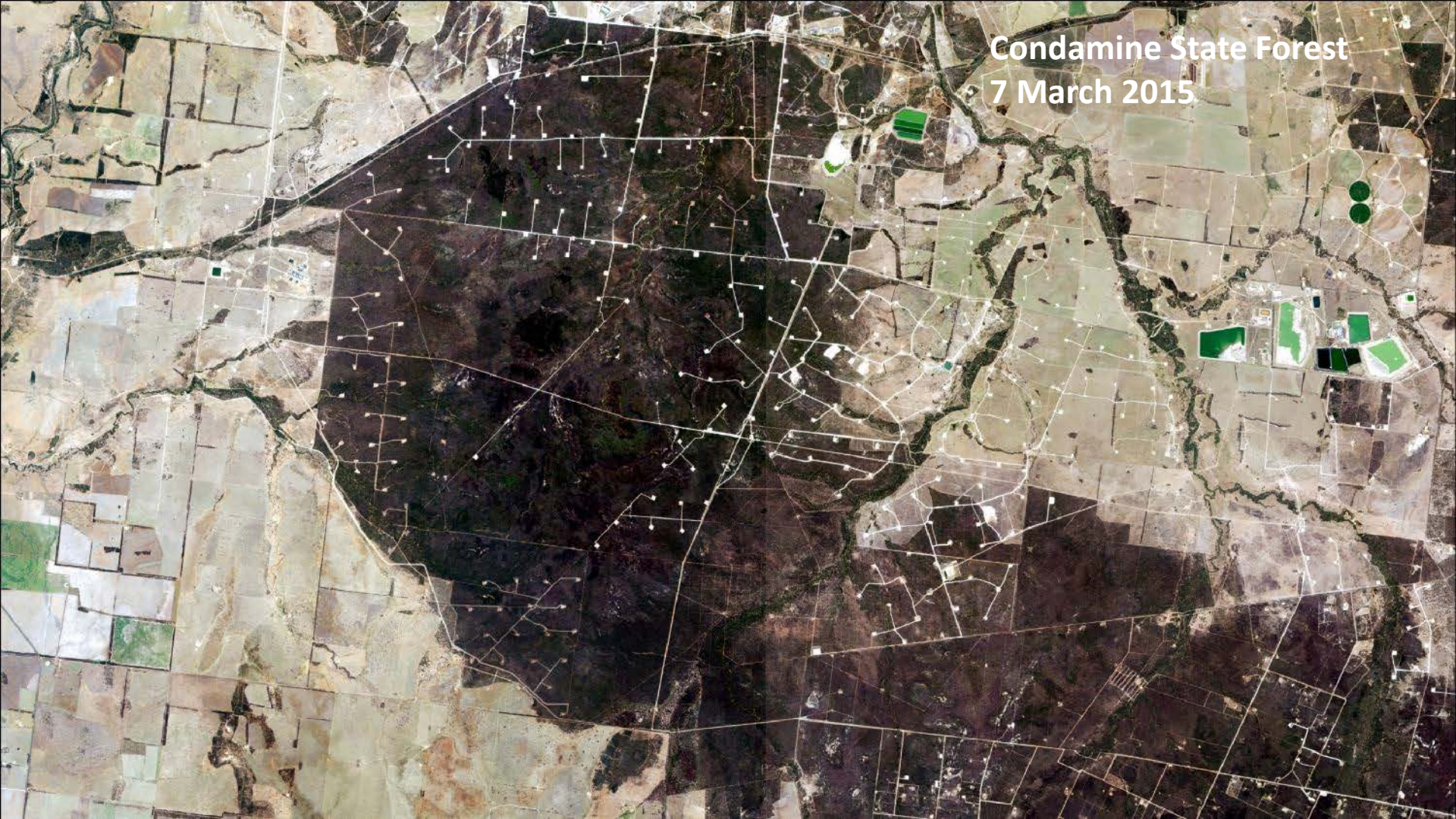
Vegetation clearing near Hazeldean – 27 July 2016


Condamine State Forest
31 July 2014

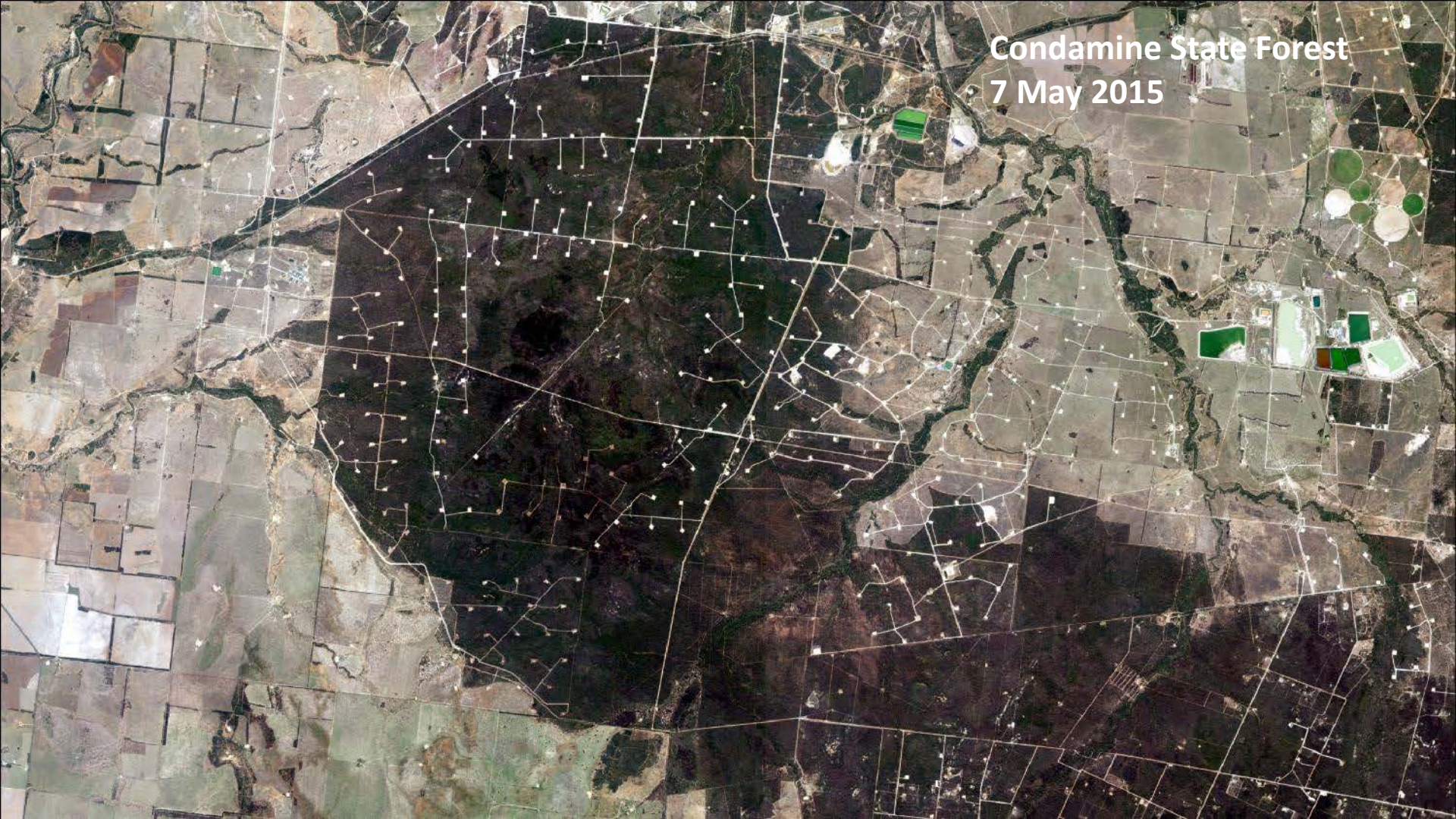

Condamine State Forest
17 September2014

Condamine State Fores
14 November 2014

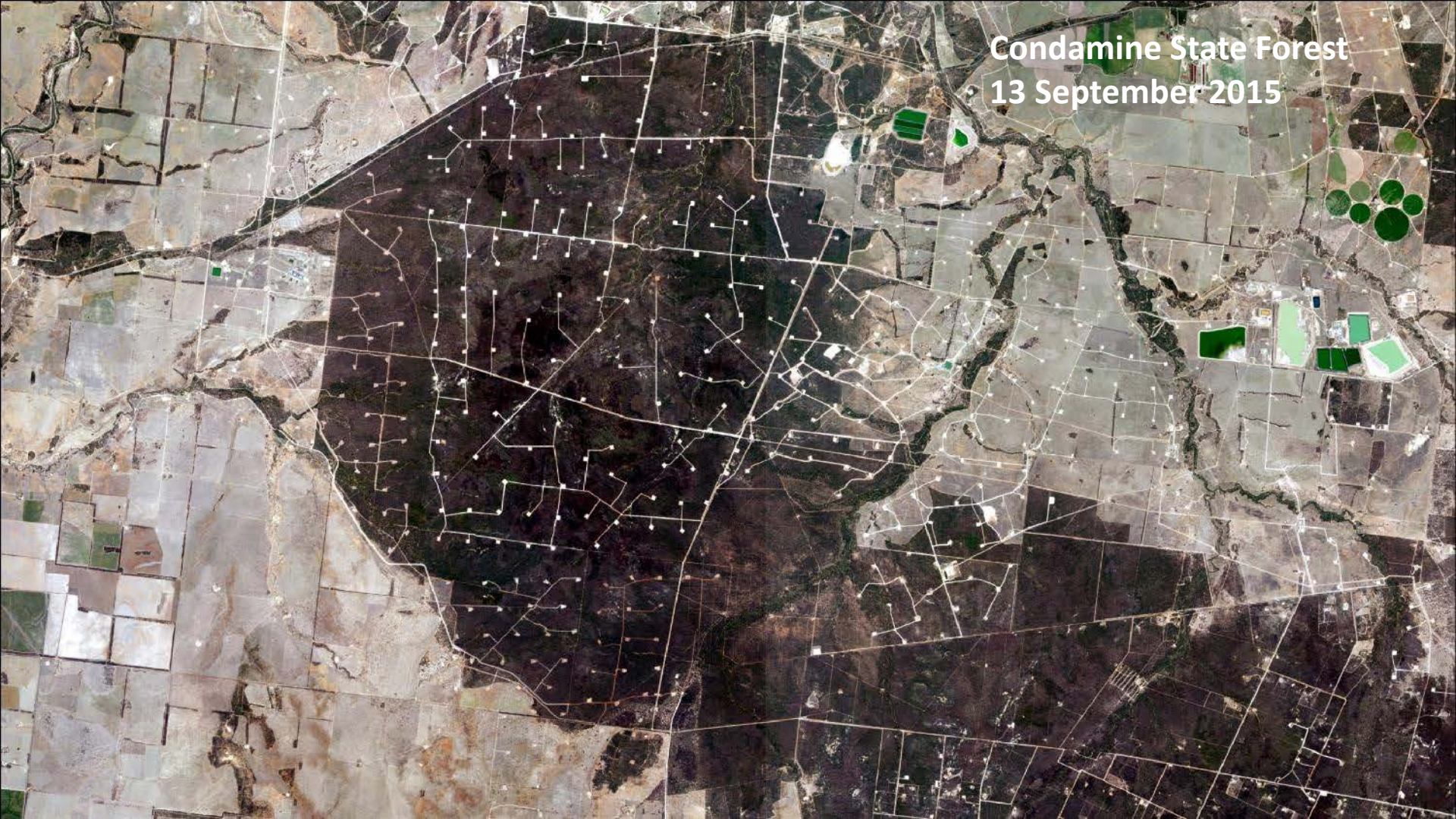

Condamine State Forest
5 February 2015

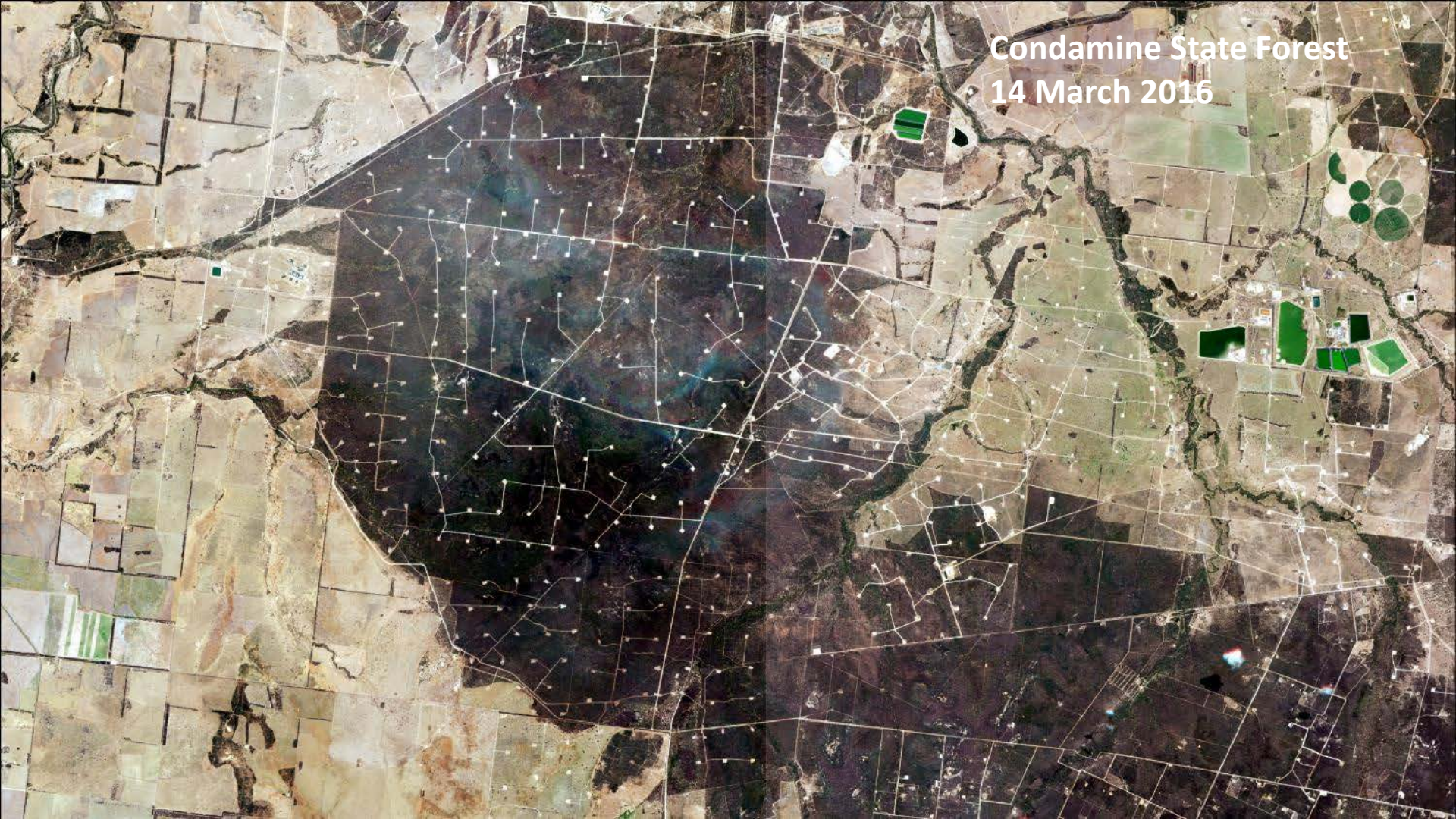

Condamine State Forest
7 March 2015

Condamine State Forest
21 March 2015


Condamine State Forest
7 May 2015

Condamine State Forest
9 August 2015

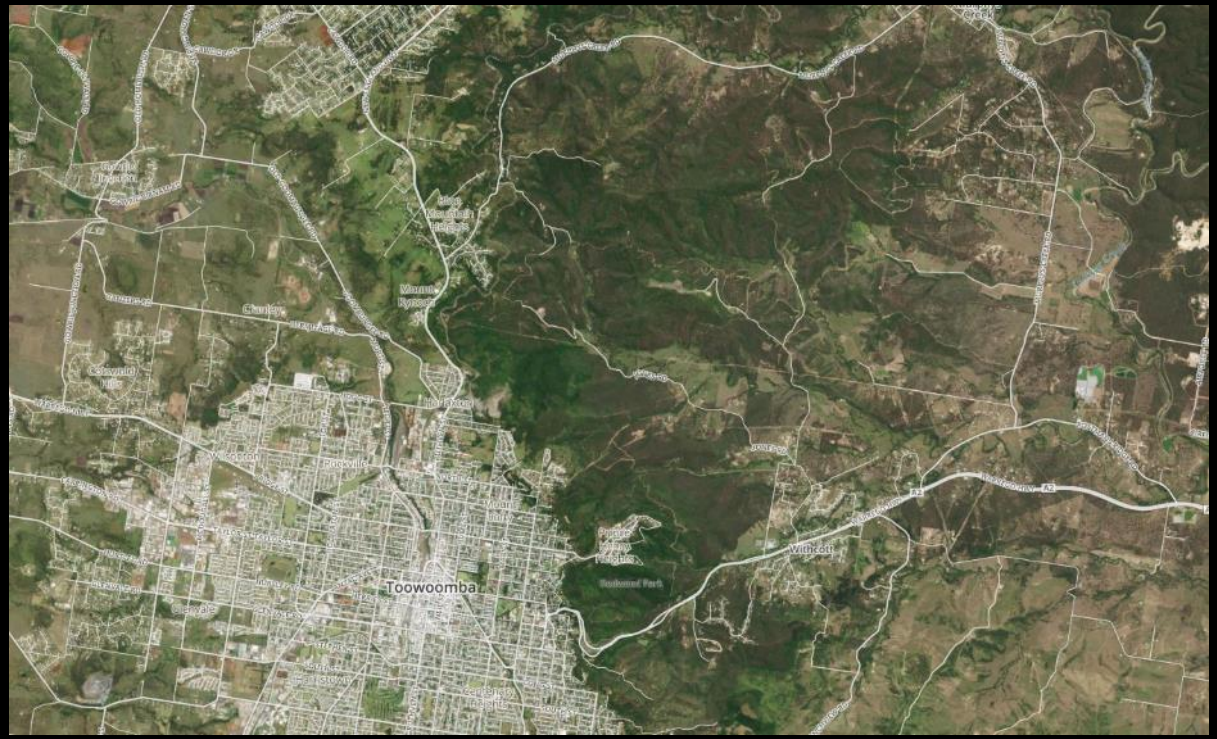

Condamine State Forest
13 September 2015


Condamine State Forest
14 March 2016

Condamine State Forest
3 July 2015

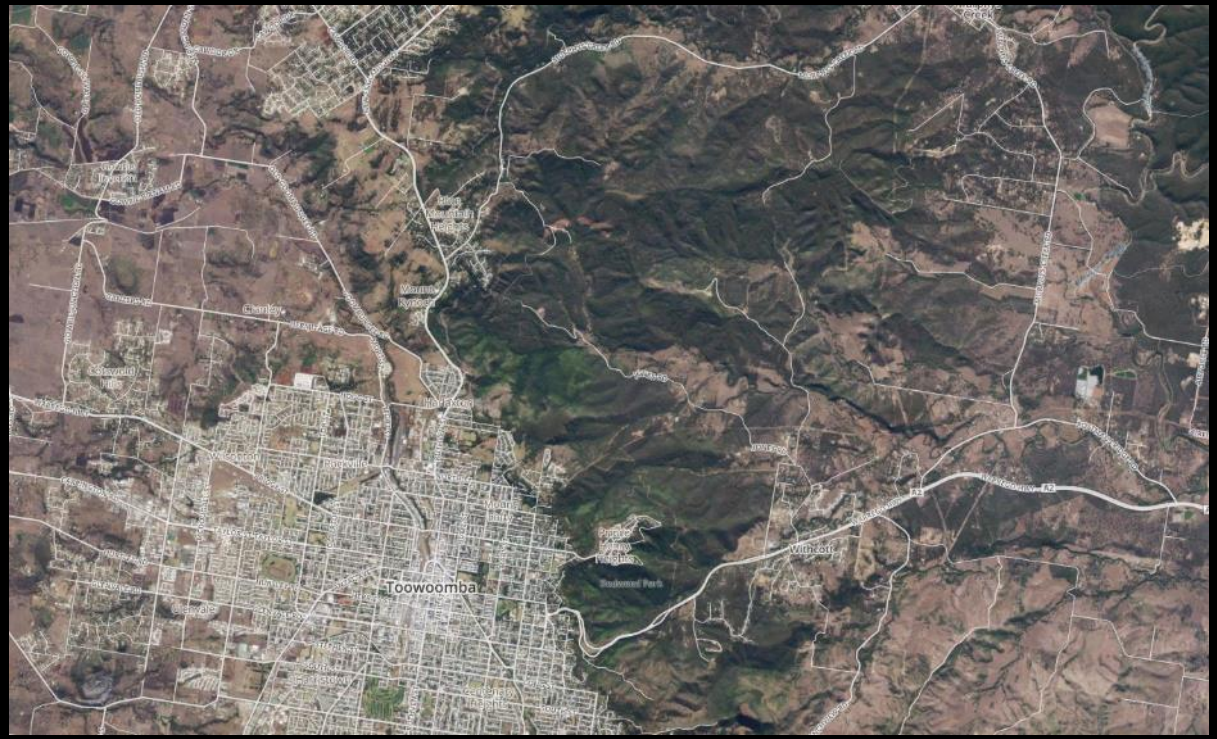
Condamine State Forest
31 January 2017

Monitoring Infrastructure



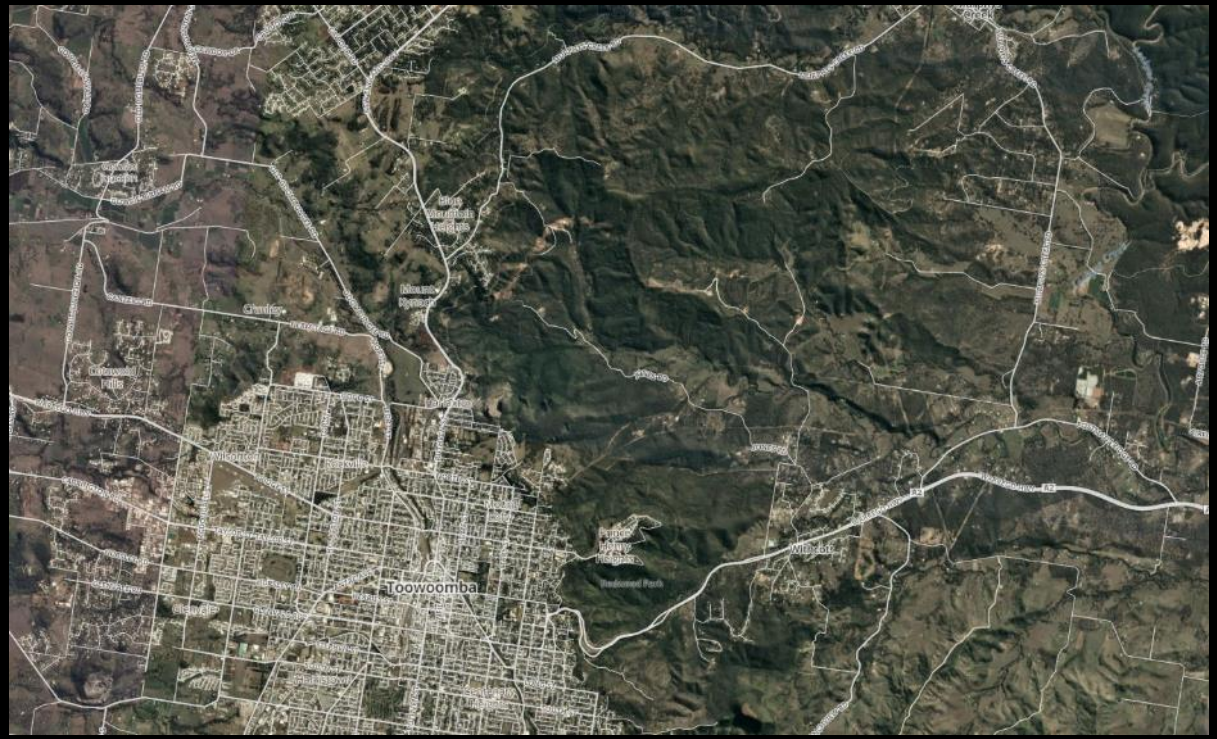
Toowoomba 2nd Range Crossing– 25 Feb 2016 (RapidEye)

Monitoring Infrastructure



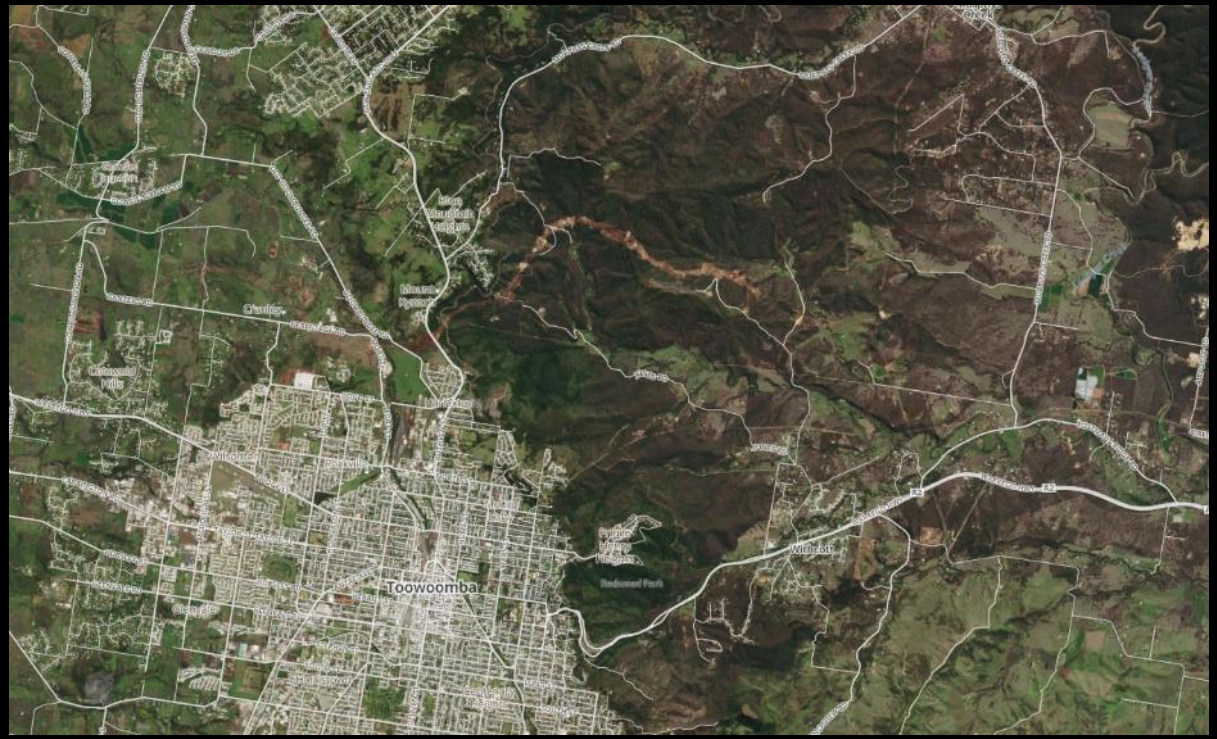
Toowoomba 2nd Range Crossing– 8 Jun 2016 (RapidEye)

Monitoring Infrastructure



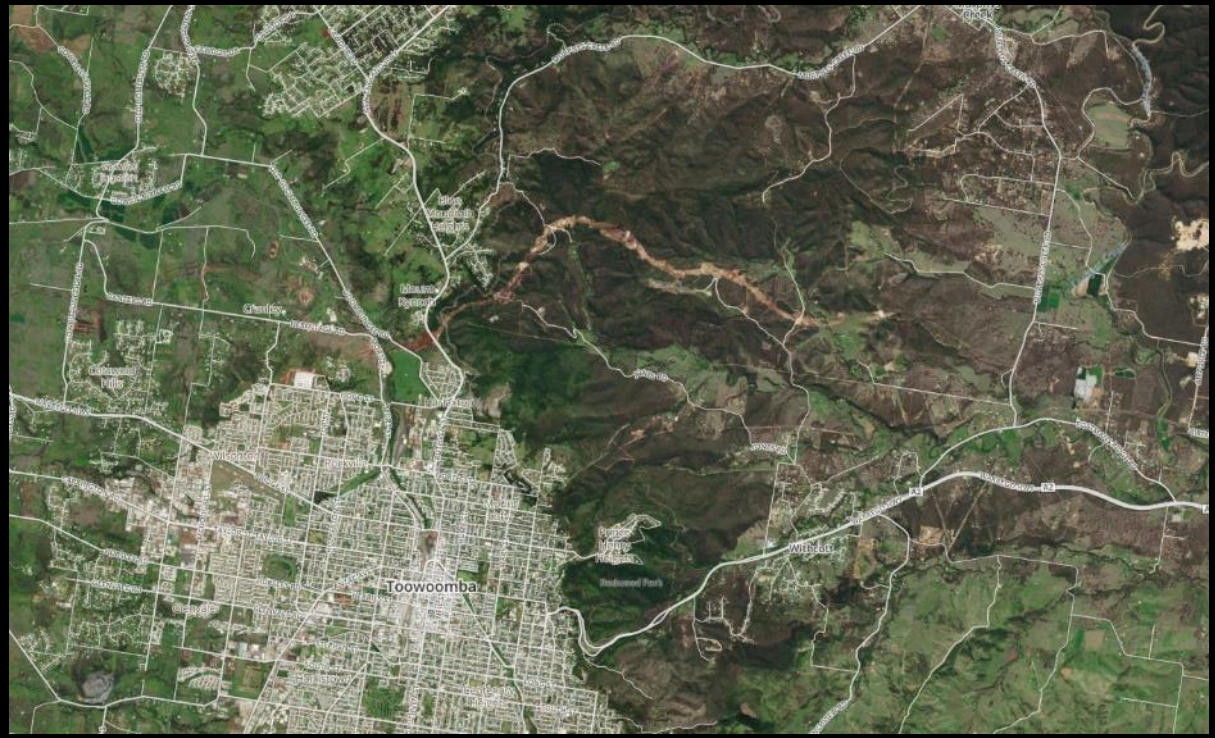
Toowoomba 2nd Range Crossing– 25 Jul 2016 (Planetscope)

Monitoring Infrastructure



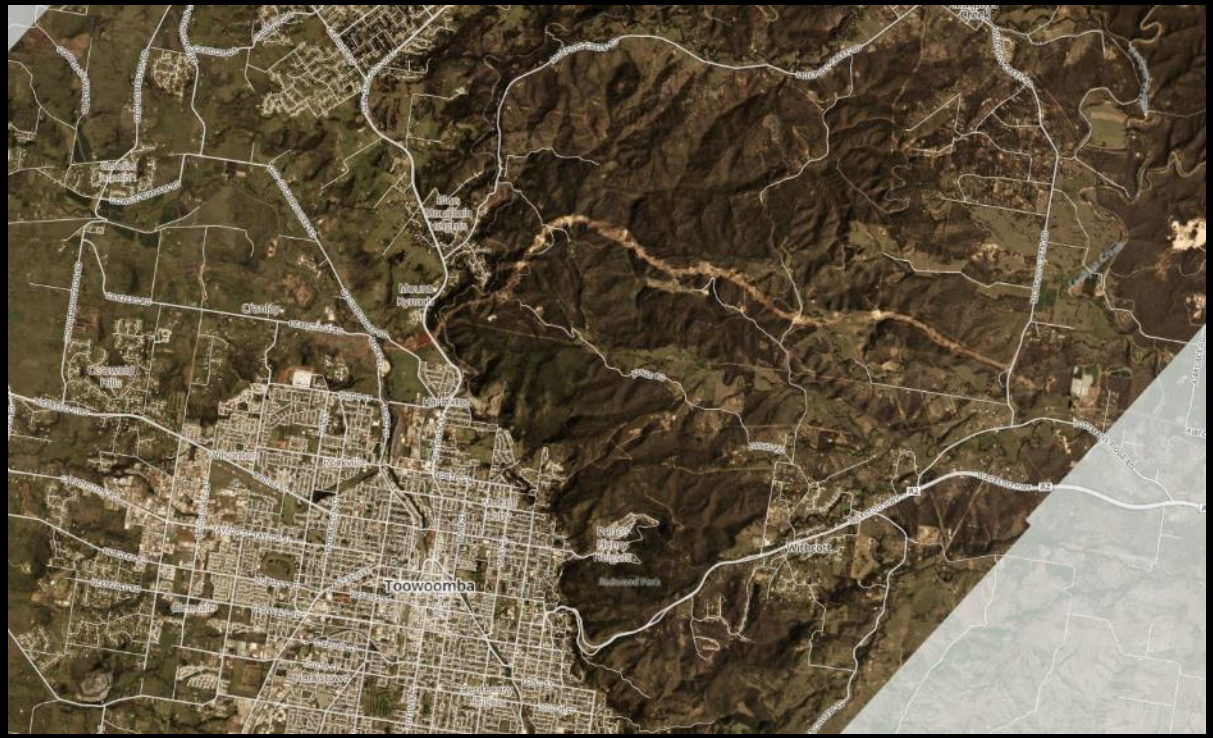
Toowoomba 2nd Range Crossing– 11 Sep 2016 (RapidEye)

Monitoring Infrastructure



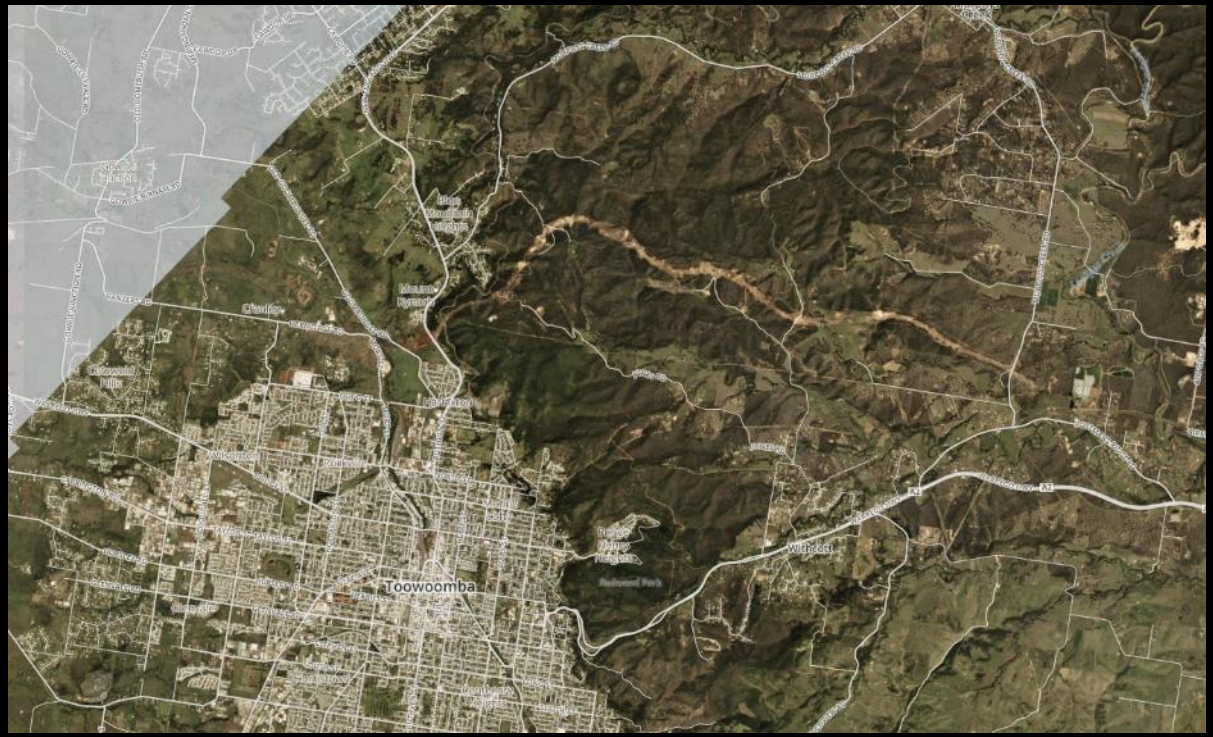
Toowoomba 2nd Range Crossing– 20 Sep 2016 (RapidEye)

Monitoring Infrastructure



Toowoomba 2nd Range Crossing– 1 Oct 2016 (Planetscope)

Monitoring Infrastructure

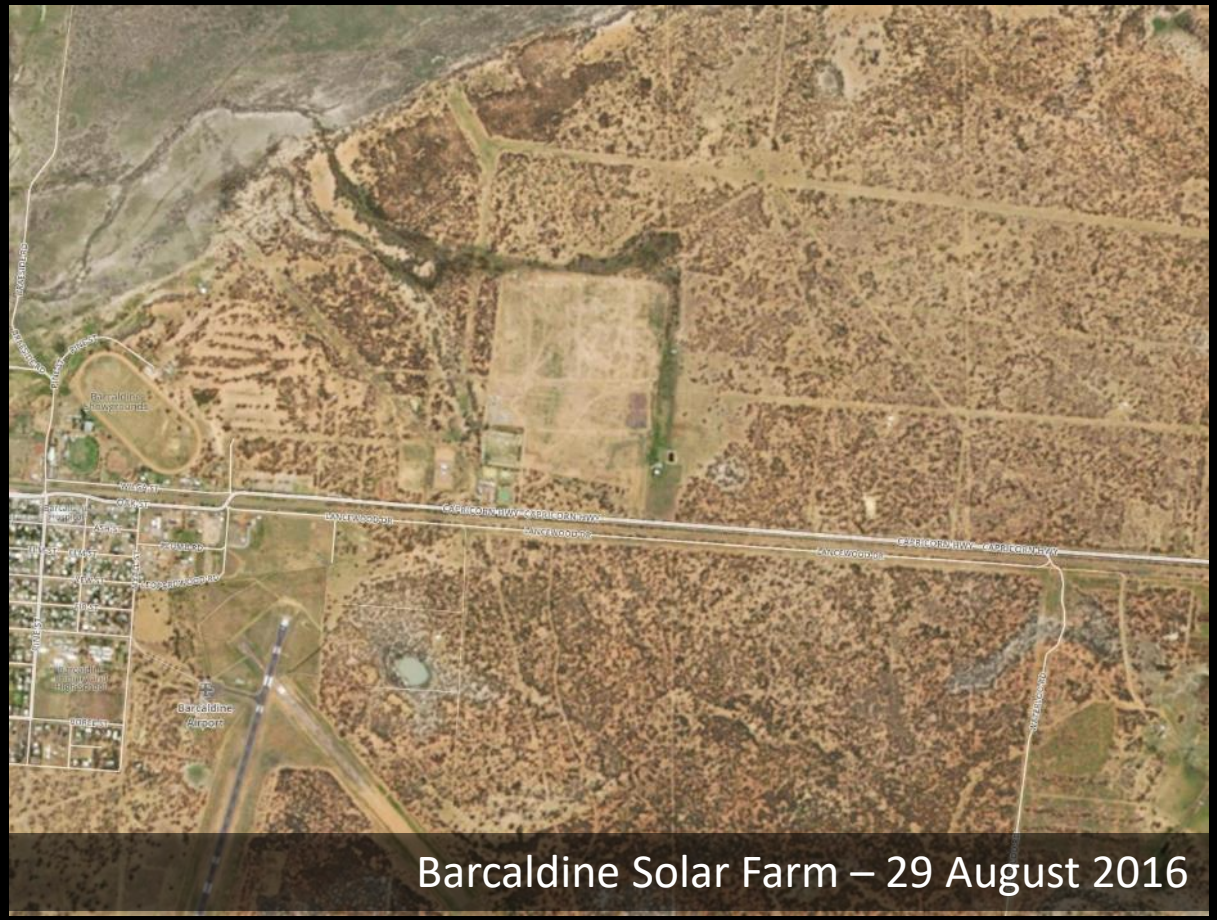


Toowoomba 2nd Range Crossing– 4 Oct 2016 (Planetscope)

Solar Farm Development

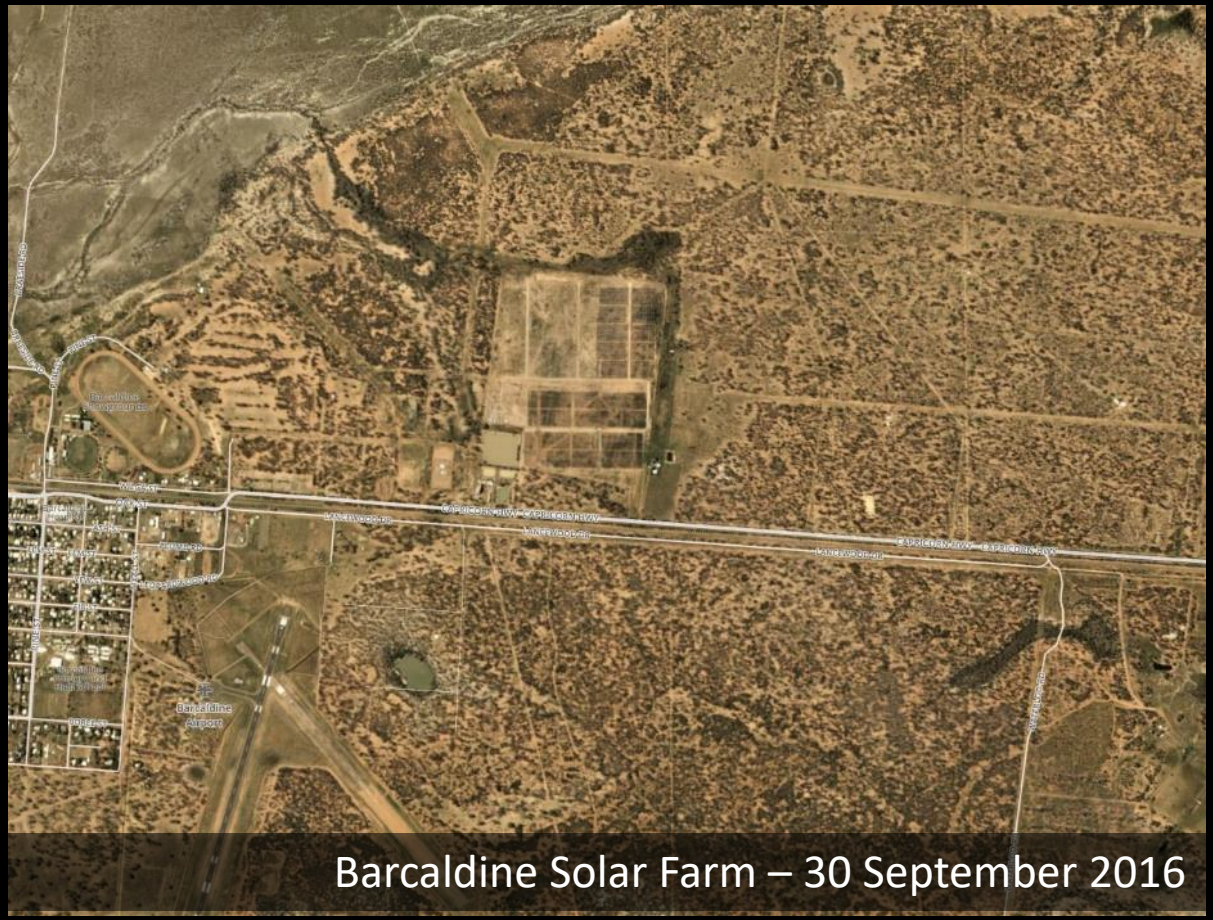
Barcaldine Solar Farm – 31 July 2015

Solar Farm Development



Barcaldine Solar Farm – 29 August 2016

Solar Farm Development

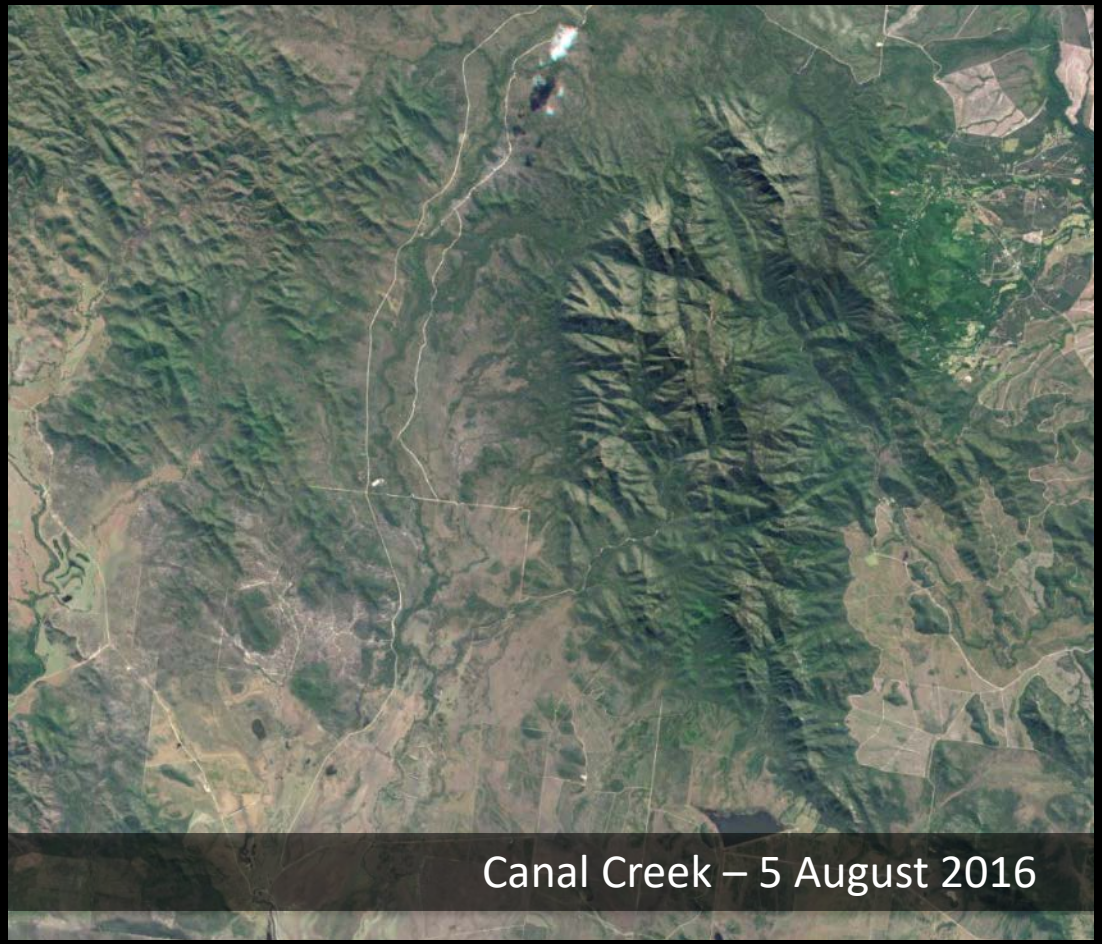


Barcaldine Solar Farm – 30 September 2016

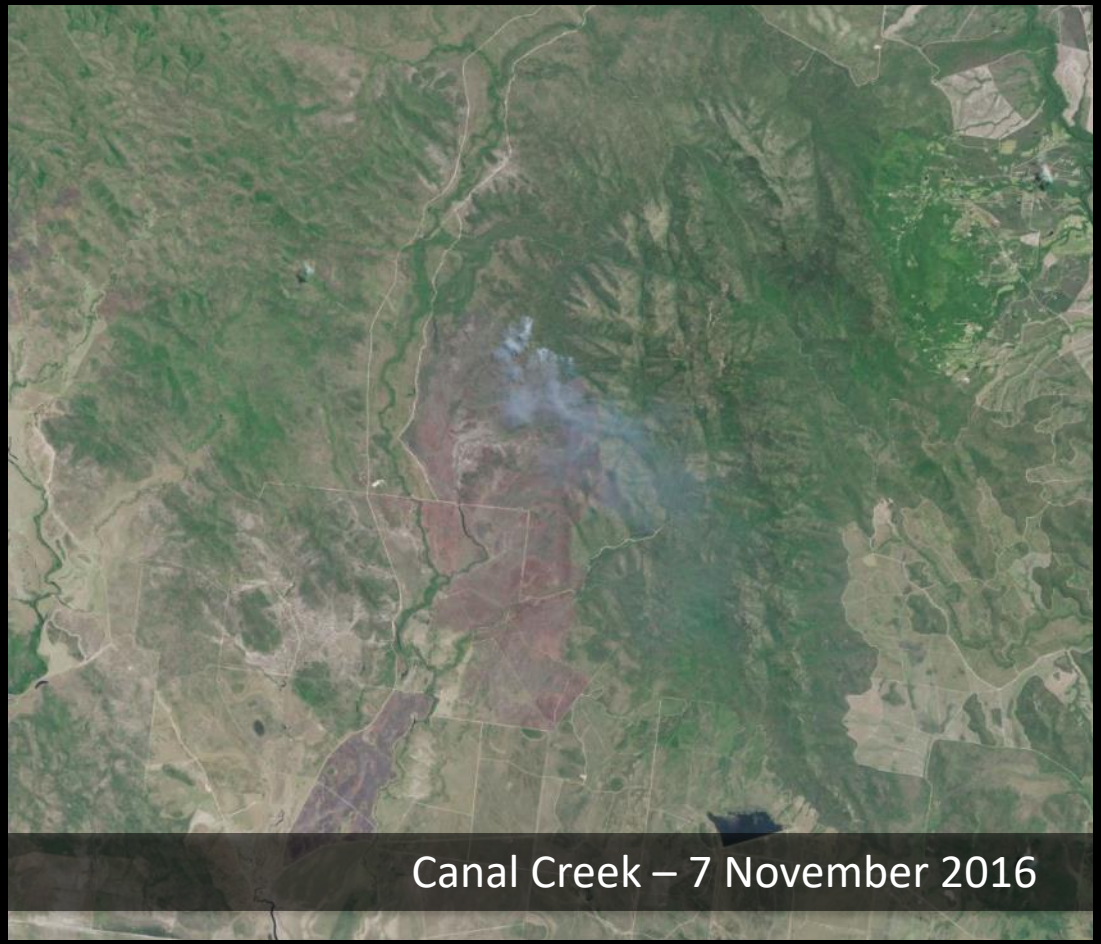
Solar Farm Development

Barcaldine Solar Farm – 30 January 2017

Environmental Monitoring - Fire



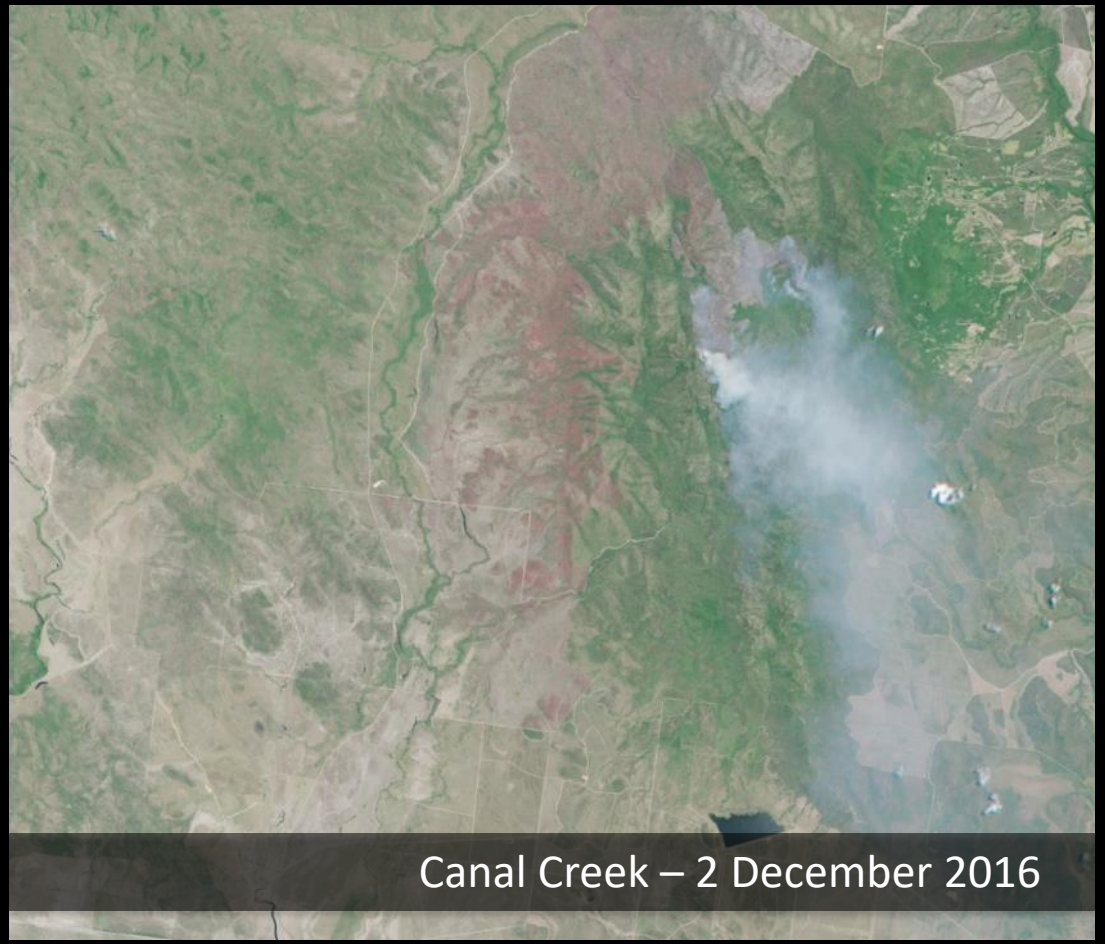
Environmental Monitoring - Fire



Environmental Monitoring - Fire

Canal Creek – 29 November 2016

Environmental Monitoring - Fire



Emergency Management

Coolum Bush Fire – 30 November 2016

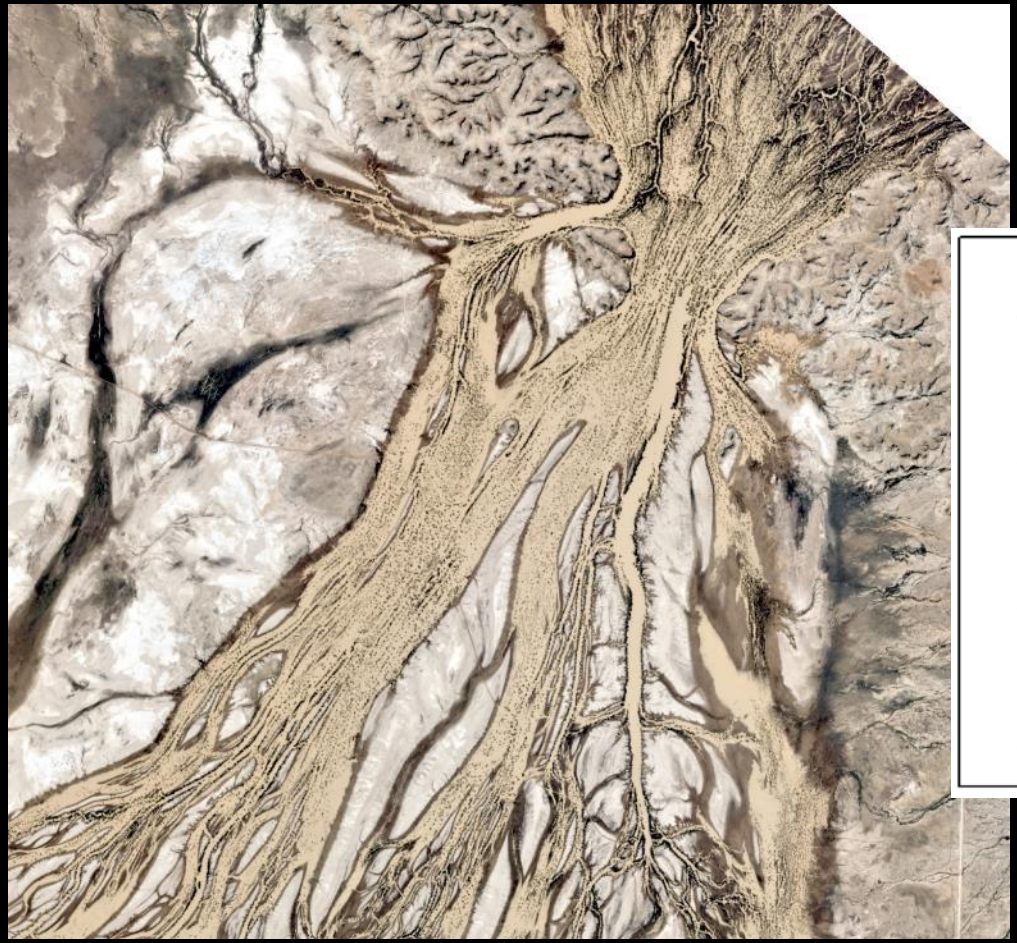
Emergency Management

Coolum Bush Fire – 19 January 2017

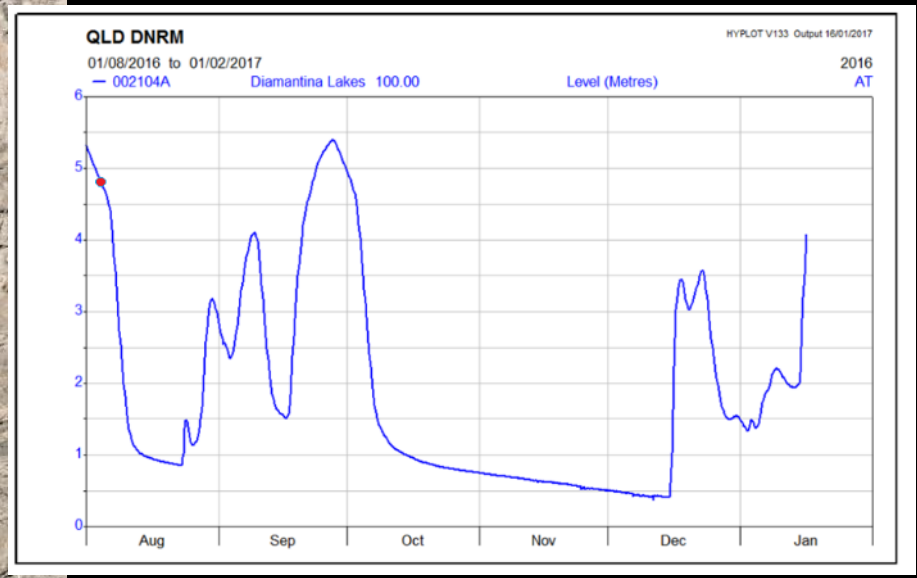
Emergency Management

Coolum Bush Fire – 26 January 2017

Environmental Monitoring - Flooding

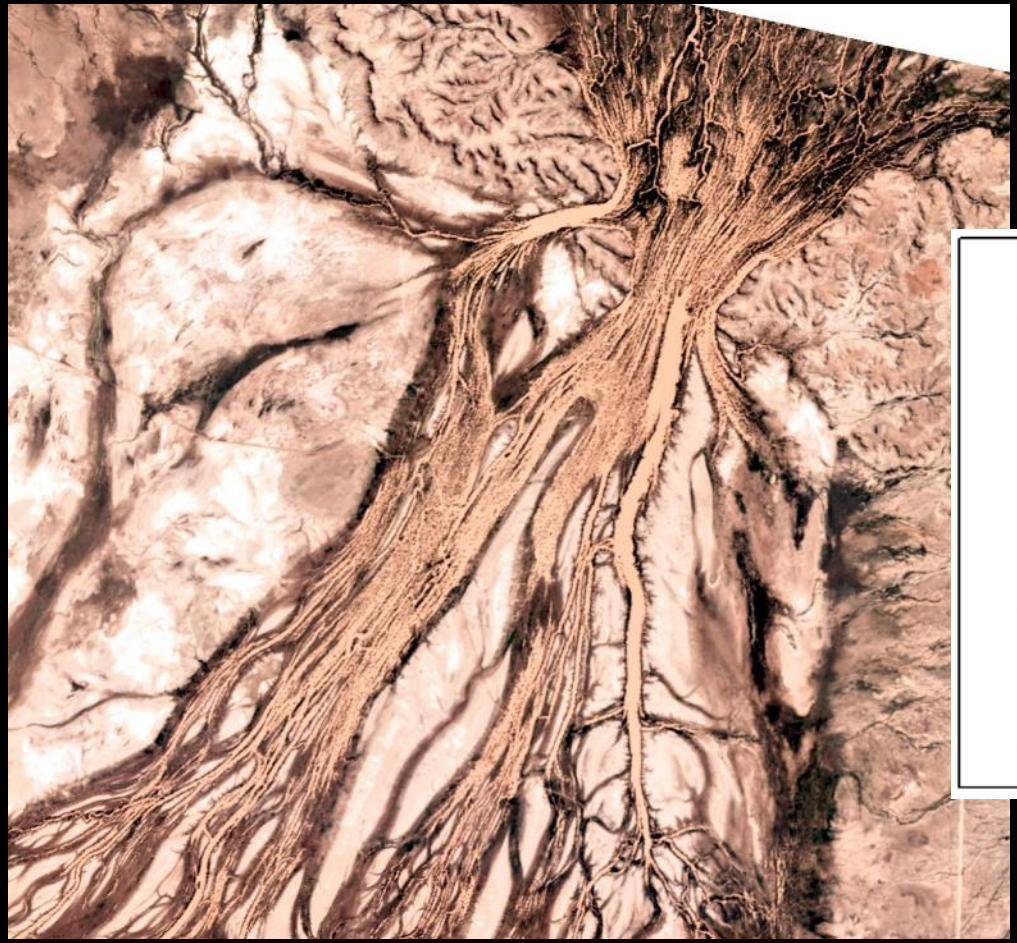


PlanetScope Imagery & Stream Water Levels

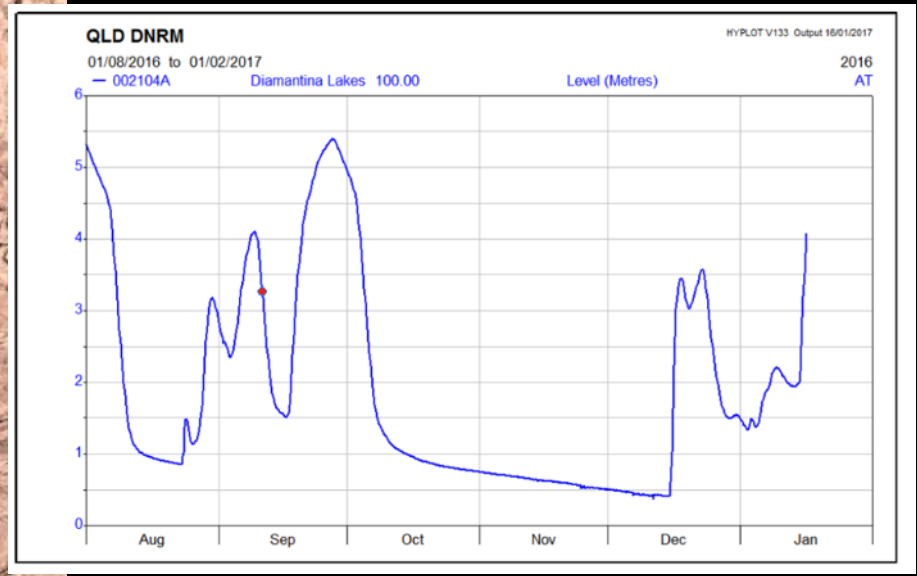


Diamantina Lakes – 3 August 2016

Environmental Monitoring - Flooding

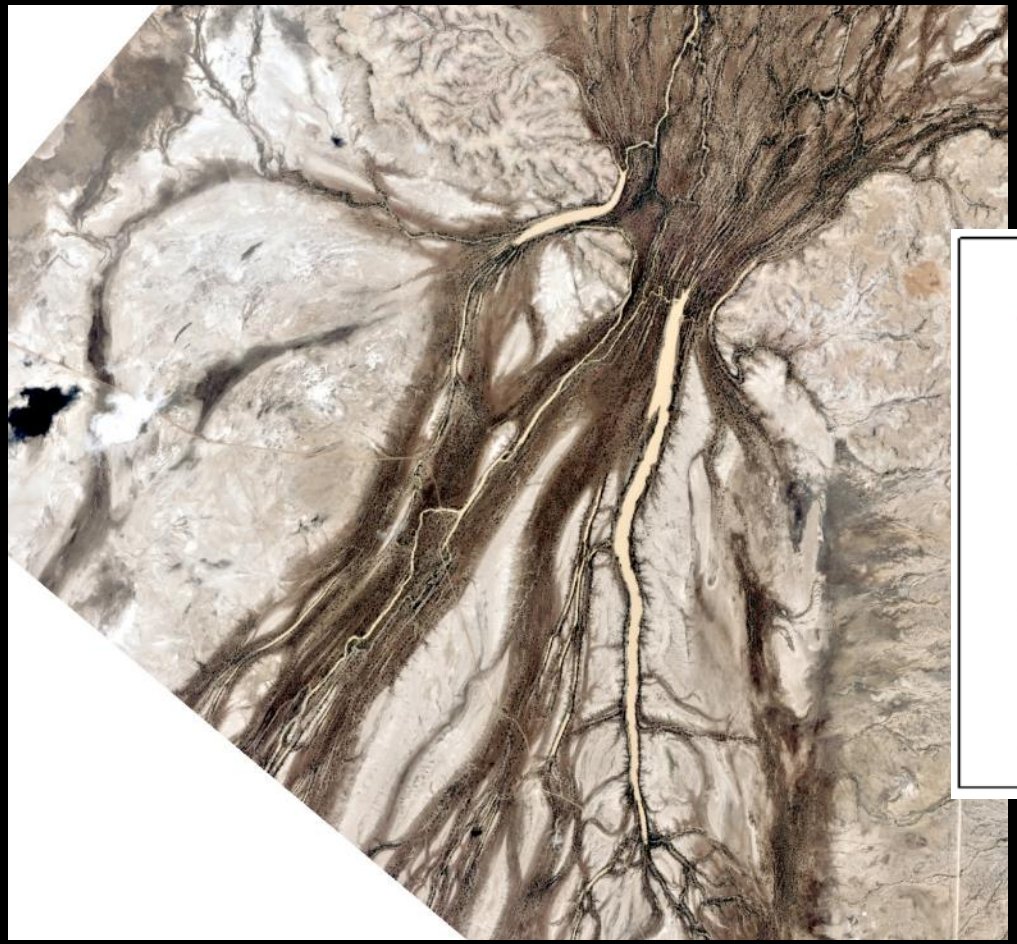


PlanetScope Imagery & Stream Water Levels

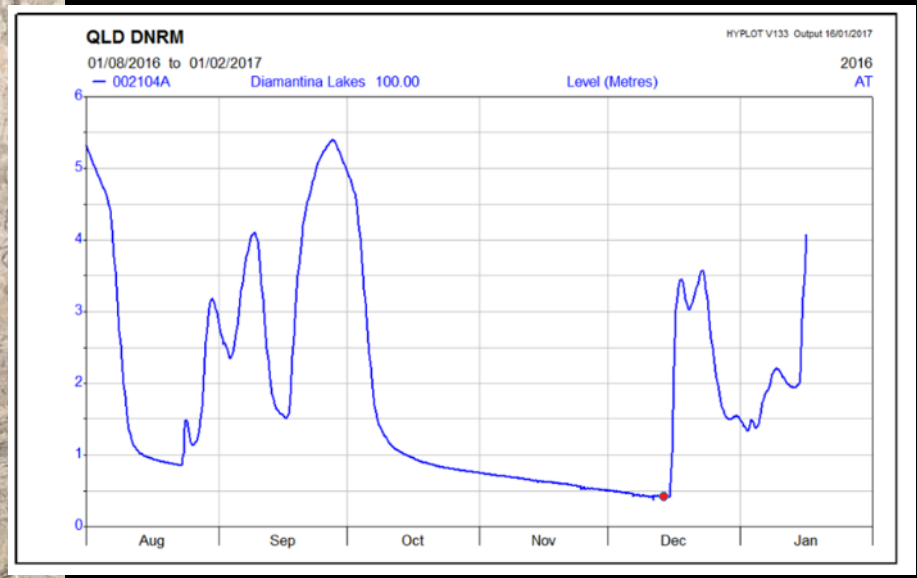


Diamantina Lakes – 7 September 2016

Environmental Monitoring - Flooding



PlanetScope Imagery & Stream Water Levels



Diamantina Lakes – 12 December 2016

A Superior Solution…

- *Earth-I's 80cm imagery p.a. plus*
- *3m Planet imagery*
- *Imagery archive available back to mid 2015*
- *Full coverage of Queensland*
- *Plus 4 'snapshots' of Queensland from Planet (every quarter) for archive*
- *One snapshot available as 'Open Data' – creative commons for anyone to use*
- *All imagery will be accessible for viewing in the Queensland Globe*

Data available to:

- *all Queensland Government Agencies*
- *All Local Governments*
- *All Government Owned Corporations*

Queensland Globe

Accessing Queensland's Spatial Data

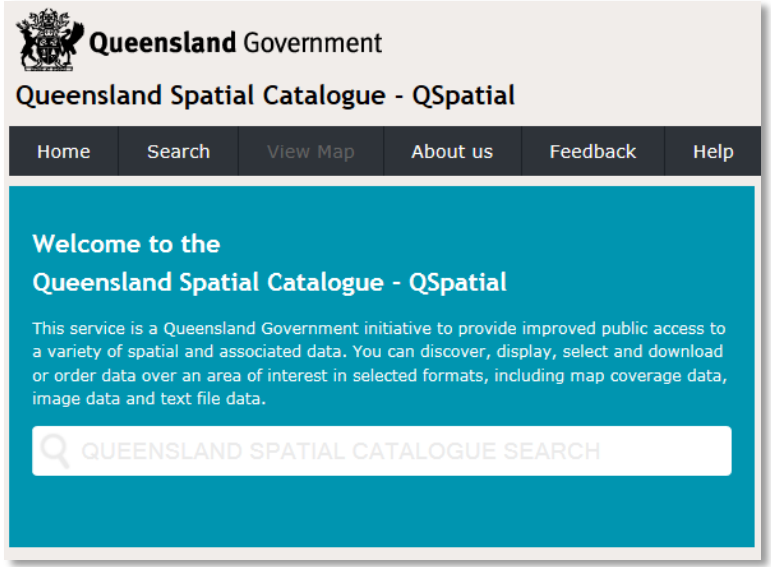
Queensland Government

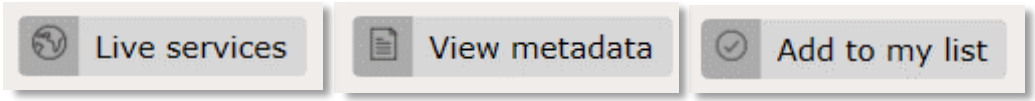
Queensland Globe

User choice

Find, connect, download & view

- Visualise through Qld Globe
- Download
- Connect directly via web services





Queensland Globe

Introducing a new release of the Queensland Globe

Online portal to view location based information maintained by the Queensland Government

Over 600 layers of data

Current, free and available on any device

- Biota (flora and fauna)
- Boundaries
- Economy
- Elevation
- Environment
- Farming
- Geoscientific information
- Imagery and base maps
- Inland waters
- Locations
- Oceans
- Planning cadastre
- Society

Queensland Government

Welcome to Queensland Globe

The Queensland Globe is part of the Queensland Government's open data initiative.

The new Qld Globe draws on our experience with the current Globe and user feedback to improve our customers experience accessing the vast array of spatial information available, and importantly, it provides a sound foundation for future development.
While the beta version doesn't include all intended data layers or functionality, this is an important opportunity for you to experience the updated Globe and provide valuable feedback to assist us in refining the product prior to release.

☑ By using the Queensland Globe you acknowledge the following Terms & Conditions and Specific Data Conditions

GET STARTED | TAKE TOUR

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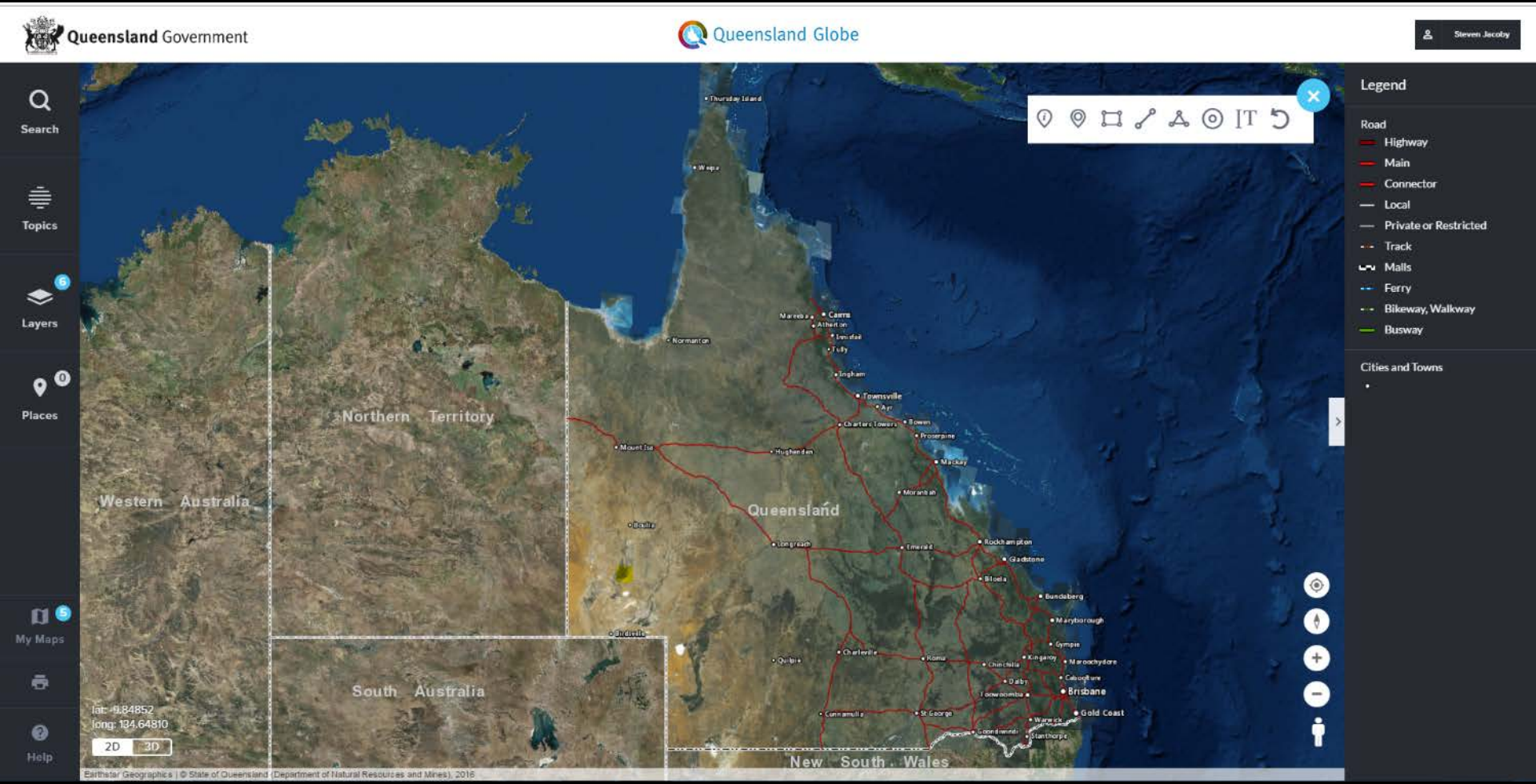
Snipping Tool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Steven Jacoby
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Track
Malls
Ferry
Bikeway, Walkway
Busway
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Northern Territory
Western Australia
Queensland
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New South Wales
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Weipa
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lat: -9.84852
long: 134.64810
2D
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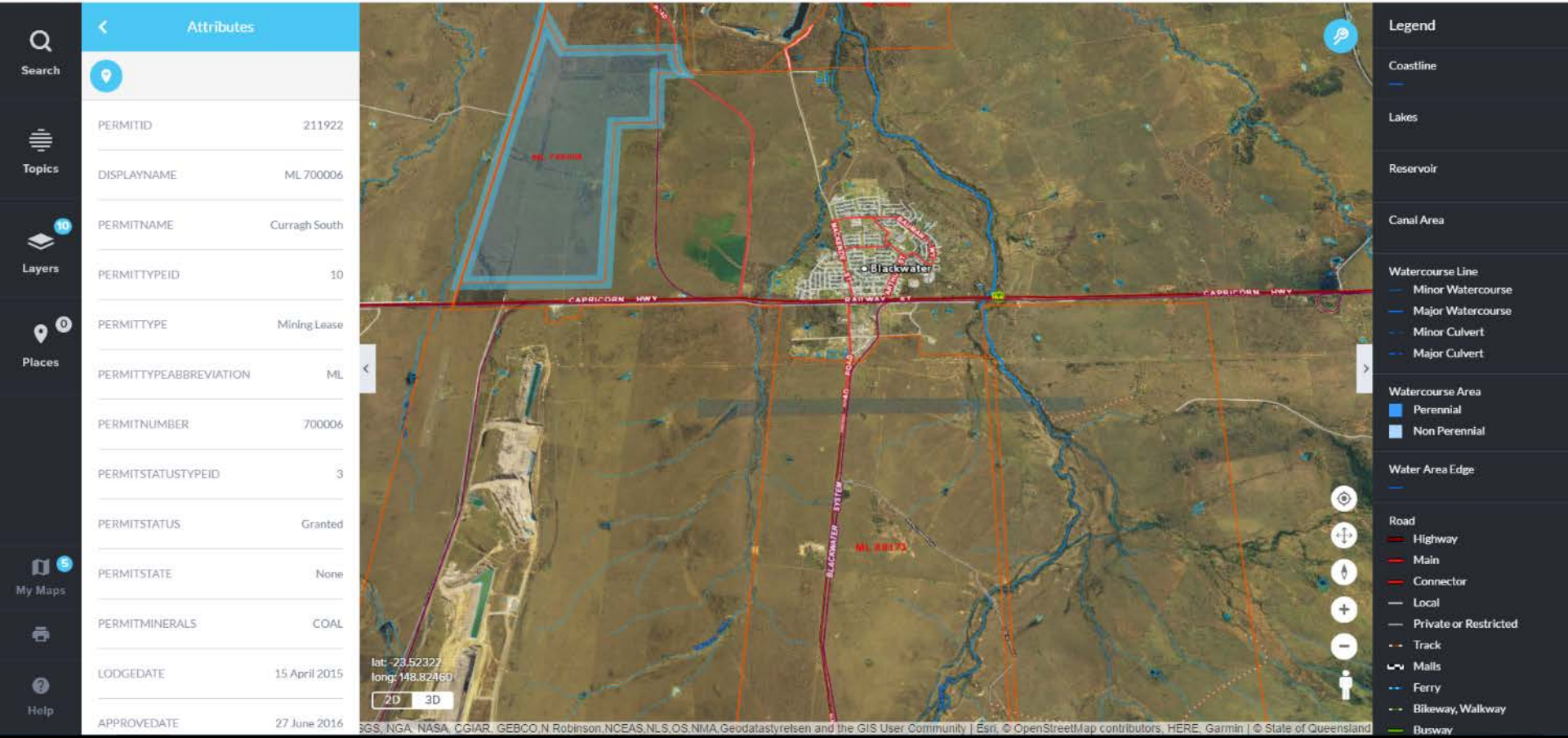

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Thank-you

Questions or follow-up
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