



# Central Eyre Iron Project Community Update

August 2013



# Notices

## Forward-Looking Statements

This presentation contains forward looking statements concerning the projects owned by Iron Road Limited. Statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward looking statements as a result of a variety of risks, uncertainties and other factors. Forward looking statements are based on management's beliefs, opinions and estimates as of the dates the forward looking statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments. Data and amounts shown in this presentation relating to capital costs, operating costs and project timelines are internally generated best estimates only. All such information and data is currently under review as part of Iron Road Limited's ongoing development and project studies. Accordingly, Iron Road Limited cannot guarantee the accuracy and/or completeness of the figures or data included in the presentation until the project studies are completed.

## Competent Person's Statements

The information in this report that relates to Exploration Results is based on and accurately reflects information compiled by Mr Larry Ingle, who is a fulltime employee of Iron Road Limited and a Member of the Australasian Institute of Mining and Metallurgy. Mr Ingle has sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ingle consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on and accurately reflects information compiled by Mr Iain Macfarlane and Mr Alex Virisheff, both of Coffey Mining Ltd, who are consultants and advisors to Iron Road Limited and Members of the Australasian Institute of Mining and Metallurgy. Mr Macfarlane and Mr Virisheff have sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Macfarlane and Mr Virisheff consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

## Exploration Targets

It is common practice for a company to comment on and discuss its exploration in terms of target size and type. The information in this presentation relating to exploration targets should not be misunderstood or misconstrued as an estimate of Mineral Resources or Ore Reserves. Hence the terms Resource(s) or Reserve(s) have not been used in this context. Any potential quantity and grade is conceptual in nature, since there has been insufficient work completed to define them beyond exploration targets and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

# Agenda and Purpose

- Welcome by Meeting Chair, Barry Wilkins
  - Inform all stakeholders about the project, including progress of studies
  - Understand concerns and suggestions
  - Answer questions
- Introductions by Andrew Stocks
- Project Overview
- Environmental Aspects
- Groundwater
- Community Engagement & Community Consultative Committee (CCC)
- Questions
  - Microphone
  - Text messages to 0409 135 254
- Refreshments and informal one on one discussions

# Introductions

- Andrew Stocks, Managing Director
- Larry Ingle, General Manager
- Tim Scholz, Principal Advisor Stakeholder Engagement
- Tilly Smart, Community Engagement Advisor
- Aaron Deans, Project Manager (Construction)
- Steve Green, Environmental Manager
- Alan Millett, Infrastructure Manager
- Ben Jeuken, Consulting Hydrogeologist
- Nicole Seal, Administration Assistant



# Iron Road Limited

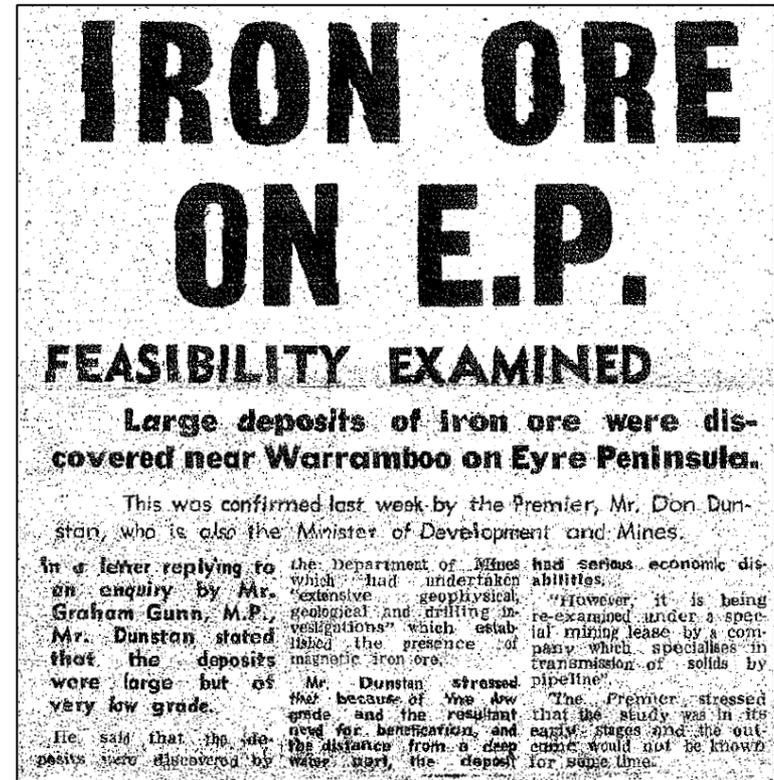


- Listed on the Australian Securities Exchange in 2008
- Our vision is to become a trusted and reliable supplier of premium iron concentrates
- Two projects, Central Eyre Iron Project and Gawler Iron Project
- Adelaide head office
  - Approximately 30 Iron Road staff and 40 local consultants
  - Consultants also working out of other offices in Adelaide, Melbourne, Perth and Brisbane

# A Brief History of the Project

Deposit studied by the SA Department of Mines in the 1960's

- Iron Road acquired exploration licence in 2008
- Commenced drilling shortly thereafter
- The deposit has been the subject of two prefeasibility studies:
  - 1960's SA Department of Mines; and
  - 2011 Iron Road Limited
- Infrastructure component recently declared a Major Development by the South Australian government



# Central Eyre Iron Project

Large scale iron ore project near Warramboo

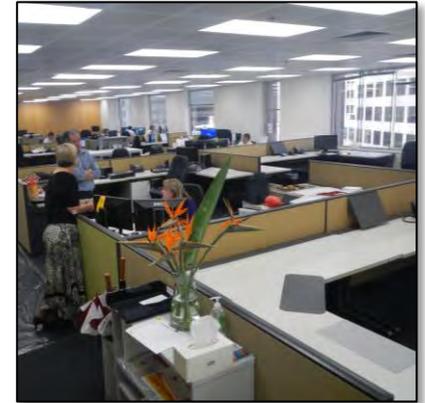
- Second largest resources project in SA history (after Olympic Dam)
- Open pit mine
- Processing plant
- Waste rock and tailing storage
- Power upgrade to the Eyre Peninsula and project
- Water treatment facilities
- Offices and accommodation
- Infrastructure corridor to link the mine and port
- Standard gauge railway line
- Deep water port at Cape Hardy



# September 2011 to now

What has changed since our last community meetings in September 2011?

- The Mineral Resource at Warramboe has increased to 3.7 billion tonnes
- Definitive feasibility study (DFS) commenced January 2012, estimated completion late this year
- Investigating 20 million tonnes per annum of product for export
- Adelaide office change of premises; now approximately 30 staff plus 40 consultants in the office
- Established regional office within the Wudinna Telecentre
- Announced plans to develop a deep water port at Cape Hardy
- The definitive feasibility study is still underway, this presentation provides an update on progress and current thinking



# Study Main Points of Difference

	Prefeasibility Study	Definitive Feasibility
Production rate	12.4Mtpa	20Mtpa
Concentrate transport	Slurry pipeline	Standard gauge railway
Water	Potable water used in process, desalination on the coast	Potable water only used for final concentrate wash, desalination on site
Port	Third party facility	Cape Hardy

# Mining

Large scale, conventional open pit mining – drill, blast, load and haul.

**Cat 6090**  
**980t**  
**7-8 units**



**Cat 797F**  
**360t payload**  
**54 units**



# Processing Plant

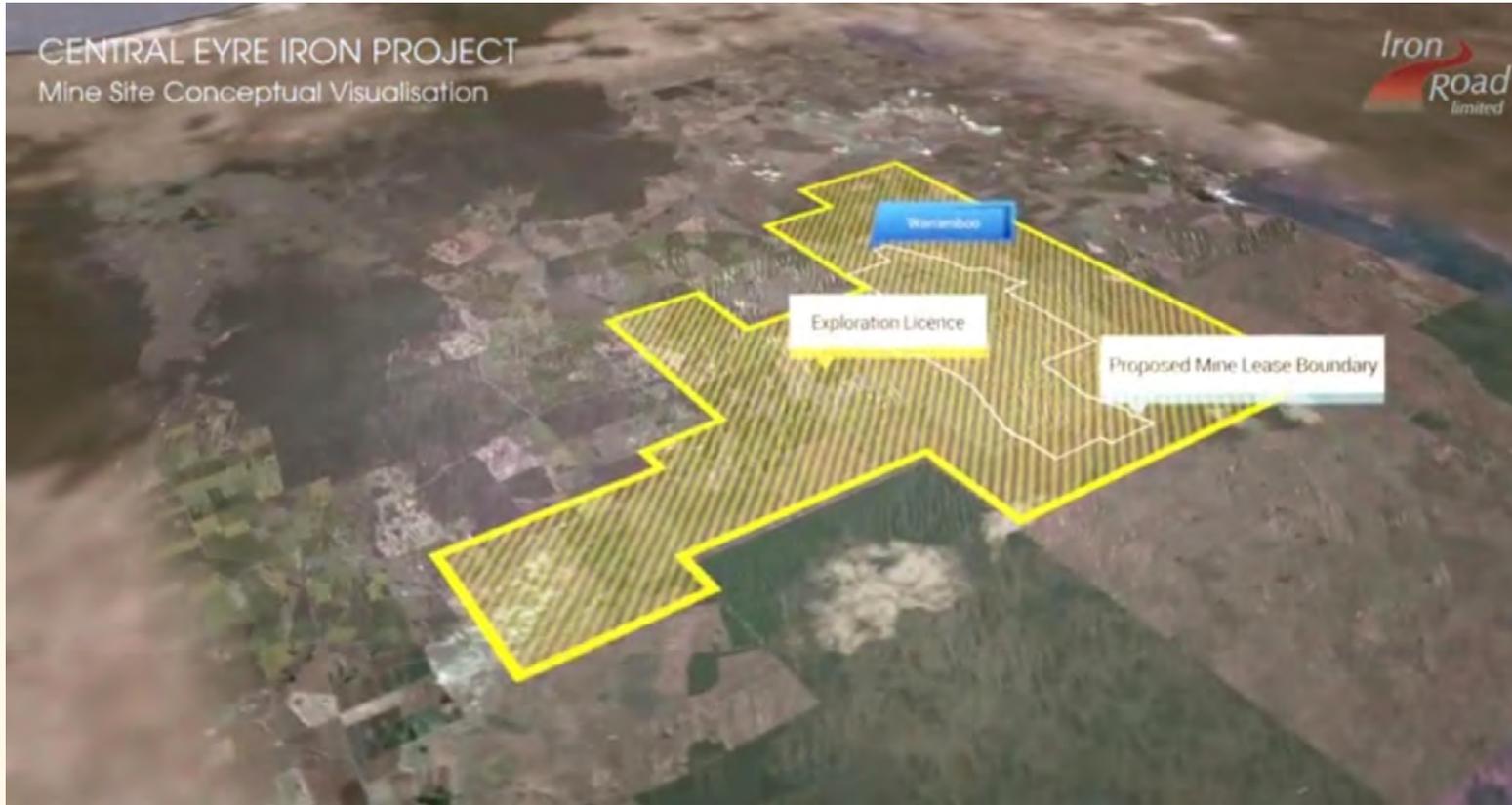


*Aerial view of the Karara Iron Project, Western Australia*

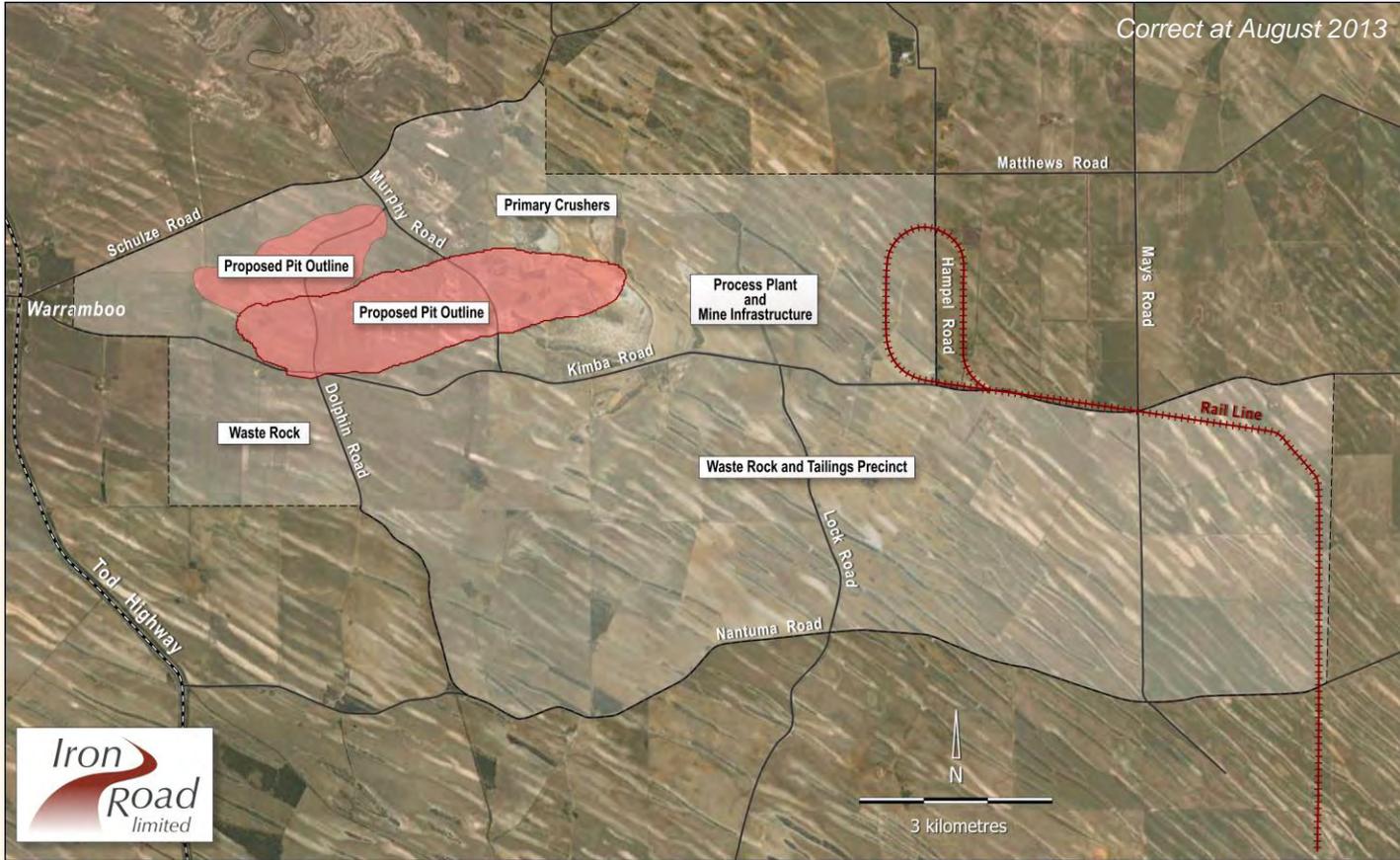
Common process, established technology

- On-site crushing, grinding and magnetic separation
- Ore treatment throughput +100Mtpa
- Concentrate production of 20Mtpa @ 67% iron and low impurities

# Mine Area Fly Through



# Mine Footprint



# Rail and Utilities

- Standard gauge rail, approximately 145 kilometres from mine to port
- Infrastructure corridor for rail, water and power
- Potential to link rail into the wider national network
- Twin rotary car dumper – 660,000t stockpile at port
- Seawater pipeline from port, with desalination unit on mine site
- High voltage power upgrade – to service entire district



# Infrastructure and Utilities Corridor



- Rationale for the Corridor
  - Minimise impact, one corridor only
- Comprises rail, pipeline, power line, service road, pump station
- Best route possible avoiding remnant native vegetation, towns and dwellings
- Corridor quarantined during construction
- Automated crossings, culverts for stock, service road
- Rail schedule- six return trips per day
- Power line to site, reinforcement of EP transmission network
- Corridor fenced

# Port Facility



- Why we need a new port
- Why we chose this location
- Will we have two or three new ports?
- Deep water required, other ports too small
- No other bulk commodity port has committed to development
- Necessary for each proposal to seek approvals
- No dredging

# Port Facility

- East coast of the Eyre Peninsula offers sheltered, deep water locations
- 1.6km modular jetty and wharf structure
- 30Mtpa capacity at commissioning, 20Mtpa required for CEIP
- Handymax, Panamax and Capesize capable
- Ship loader capacity of 7,300tph
- Easy and cost effective expandability of wharf
- First and only Capesize port in South Australia
- Land parcel sufficient to cater for third party access and facilities



*Cape Hardy visualisation*

# Employment Opportunities

## Mine

- 1000+ during construction
- 550 during operation

## Port & Rail

- 600 during construction
- 100 during operation

## Total Direct

- 1600+ during construction
- 650 during operation

## Indirect

- Industry employment multiple of 4

# Environment

- Environment ↔ natural, social, cultural and economic
- Comprehensive baseline
- Listen to community, government and technical experts
- Undertake impact and benefit assessments
- Modify design for optimal outcome
- Positive legacy



# Environment

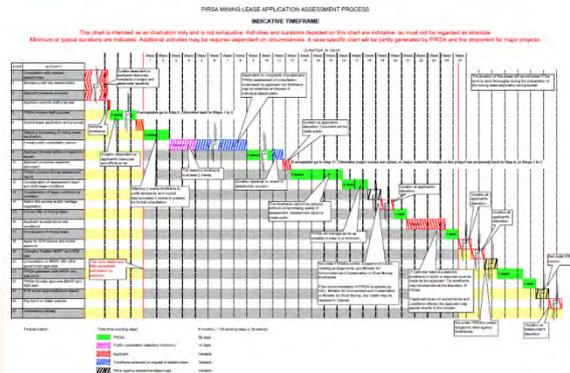
Topics raised to date include:

- Natural – noise, dust, visual, waste, flora, fauna, water
- Social / Economic – employment, lifestyle, traffic, land values, human services, tourism
- Cultural – Aboriginal sites of significance, shipwrecks, cemeteries



# Approval Processes and Timelines

It is involved...



Mining Act

**The major development assessment process**

**Stage 1 – Referral to the Development Assessment Commission**

Once a proposal has been declared a major development by the Minister, and a formal development application received, it is referred to the [Development Assessment Commission \(DAC\)](#).

The DAC will determine what level of assessment is required and issue formal guidelines.

There are three possible levels of assessment:

1. an environmental impact statement
2. a public environmental report
3. a development report

**Stage 2 – Detailed assessment documents released**

Once the necessary assessment document is completed by the proponent, the document is released for public or agency comment for three to six weeks. The document is made available at the relevant local council and on the listing of [major developments proposals](#).

**Stage 3 – Responding to public comment**

After the public comment period, the proponent is required to respond to any public or agency comments. This completed response document is released for public information and is made available at the relevant local council and on the listing of [major developments proposals](#).

**Stage 4 – Assessing the proposal**

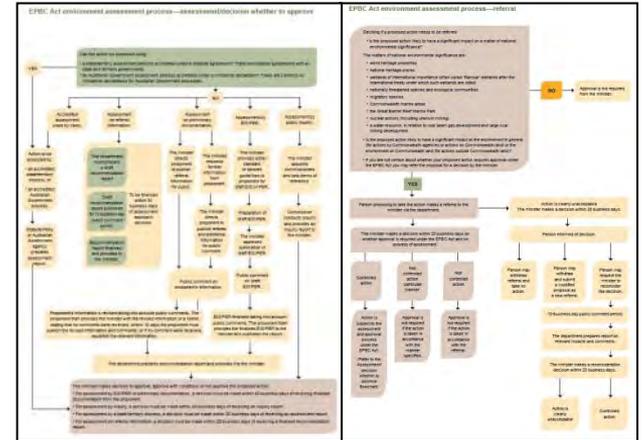
The Minister will consider the proposal and detail in an assessment report. The completed report is made available at the relevant local council and the listing of [major developments proposals](#).

**Stage 5 – Decision**

The Governor will make a decision on the final proposal having regard to the assessment report and other documentation. This will be notified:

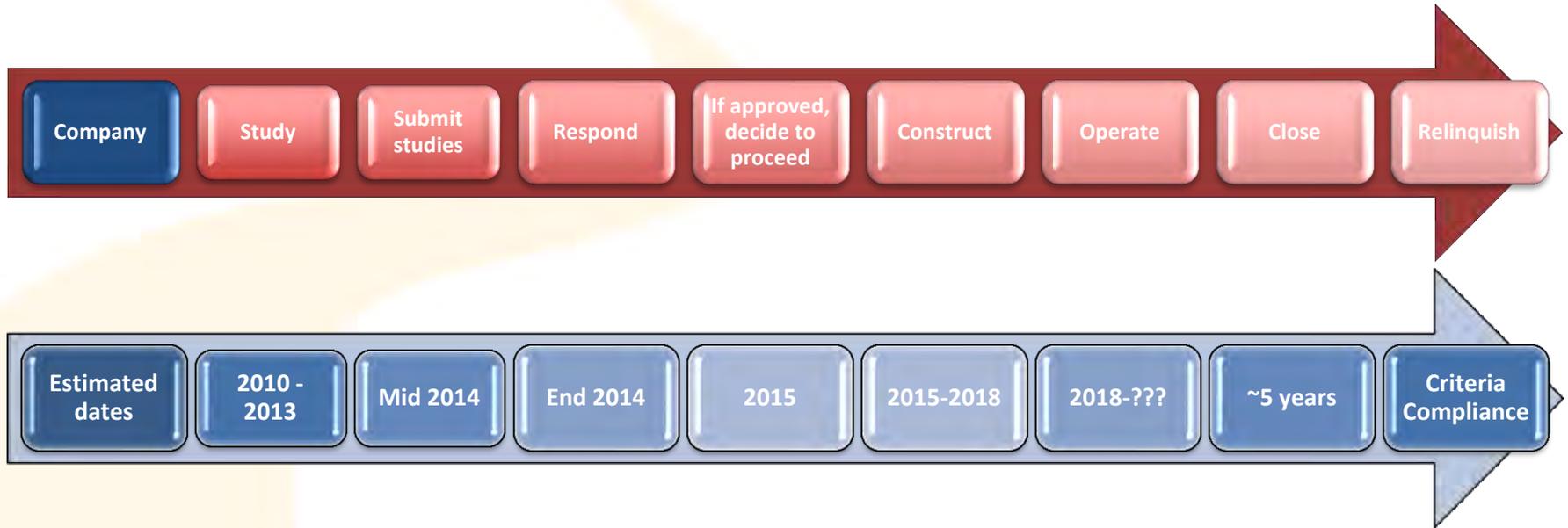
- in the [Government Gazette](#)
- by listing on this site under current [major developments proposals](#)
- to the local media.

Development Act



Environment Protection and Biodiversity Conservation Act

# Simplified Timeline



# Simplified Process



# Bulk Materials



Course tailings – gravel



Fine tailings – silt like



Product – magnetite concentrate

# Bulk Materials



Course tailings – gravel, sand



Fine tailings – silt like



Product – magnetite concentrate

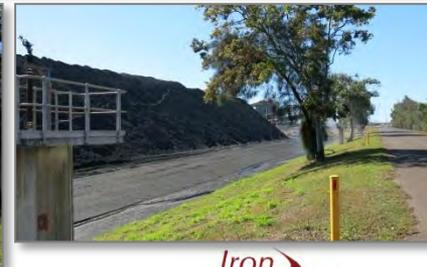
# Dust - Veneering

Pollutant	Standard	Goal (National)
Particles as PM <sub>10</sub>	Max. 24 hour average, 50µg/m <sup>3</sup>	Exceedences on 5 days per year only
Total suspended particulates (TSP)	Annual average, 90µg/m <sup>3</sup>	No exceedences
Deposited dust	Annual average, 2g/m <sup>2</sup> /month	Maximum increase above background



# Dust – stockpile management

Aspect	Coal (Hay Point Area)	Iron (Cape Hardy)	Comment
Stockpiles	14	1	Much smaller scale
Length	Short 600m long 1.3km	~1000m	Mid-size
Density	Light (SG 1.17)	Heavy (SG 3.68)	Much heavier → less potential for dust
% moisture to eliminate dust (DEM)	8%	0.6% (product is 8%)	Minimal water to keep dust down
Reclaimer height	Elevated	Ground level	Lower height → less wind → less potential for dust



# Flora and Fauna – Mine Site Summary

- Remnant isolated mallee patches within agricultural landscape
- Agricultural weeds present, (e.g. Wild Turnip, Onion Weed, Ice Plant)
- No EPBC listed vegetation communities.
- No EPBC listed flora identified, potential for Yellow Swainson Pea
- EPBC listed fauna present (e.g. Slender-billed Thornbill, Rainbow Bee-eater)
- NPW Act listed flora present (e.g., Large-fruit Crassula)
- Potential NPW Act flora (Spiny Speargrass, Vickery's Speargrass, Rasp Daisy Bush, Knotted Poa)
- NPW Act listed fauna present (e.g. White-winged Chough, Gilbert's Whistler)
- Impact Mitigation:
  - SEB offsets, revegetation of buffers/linkage
  - Construction EMP
  - Management of weeds, particularly WoNs and declared
  - Management of feral fauna (e.g. foxes and rabbits)



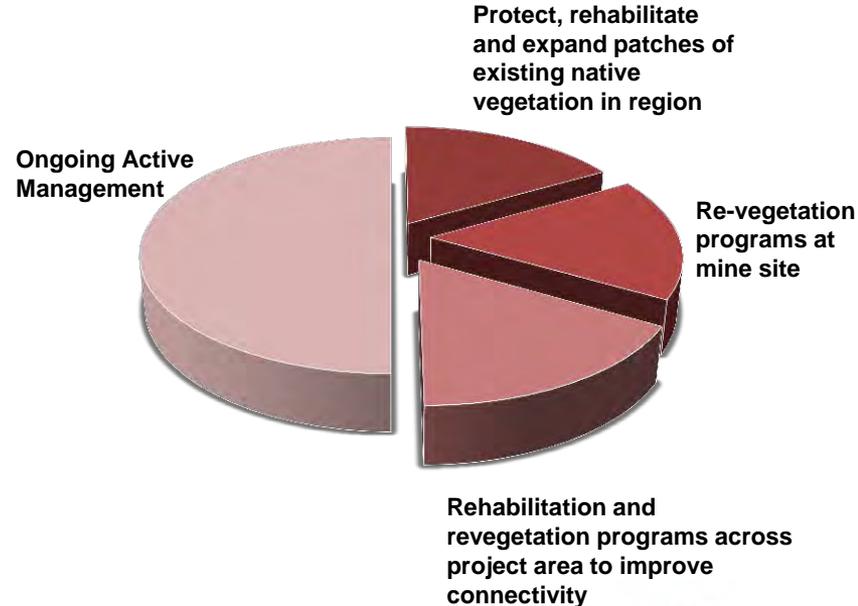
# Vegetation Offsets

## Overall Aim

- Leave the region in a measurably improved ecological state in terms of an increase in biodiversity values and ecological connectivity.

## SEB Priorities

- Protect and improve existing remnant vegetation (e.g. Heritage Agreements)
- Implement ongoing monitoring programs
- Revegetate strategically to improve habitat quality and connectivity
- Integrate with existing regional and local conservation initiatives



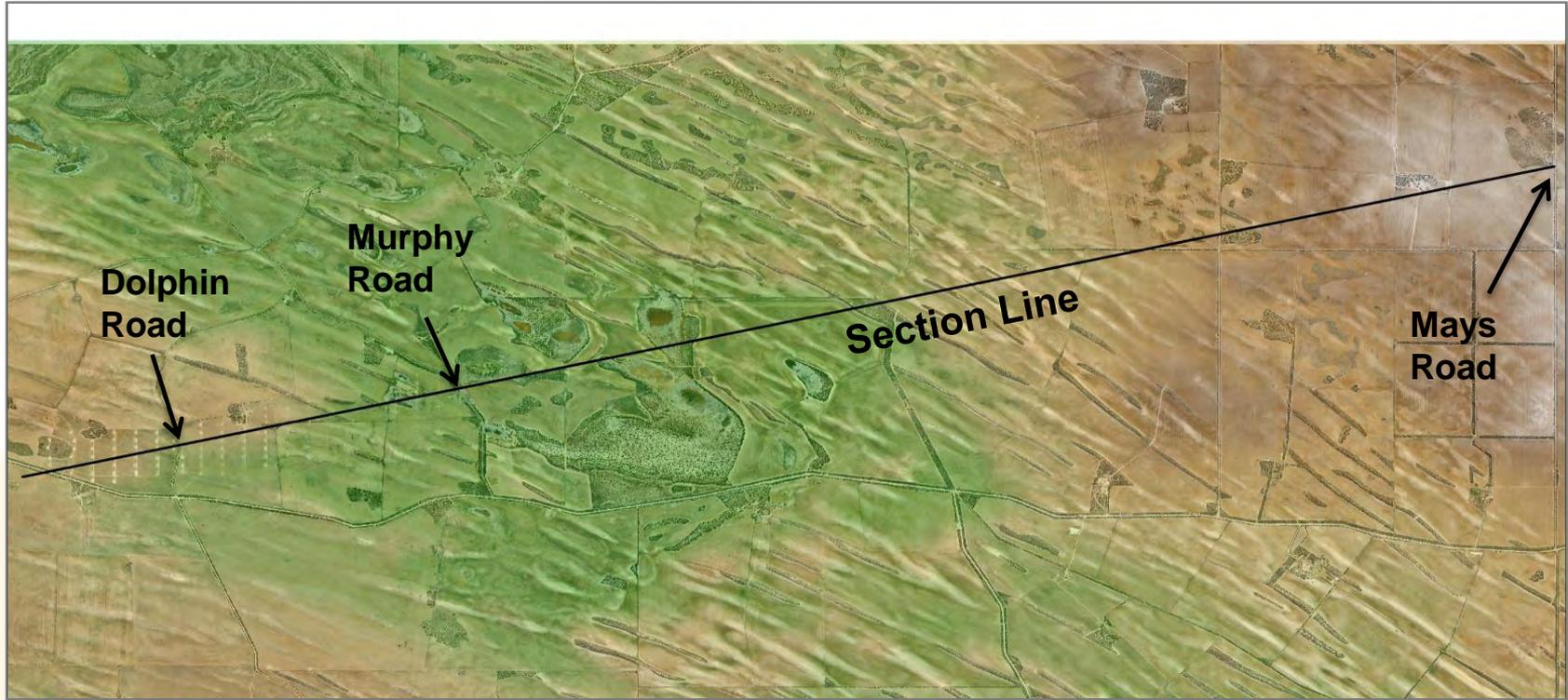
# Groundwater

## Investigations to date

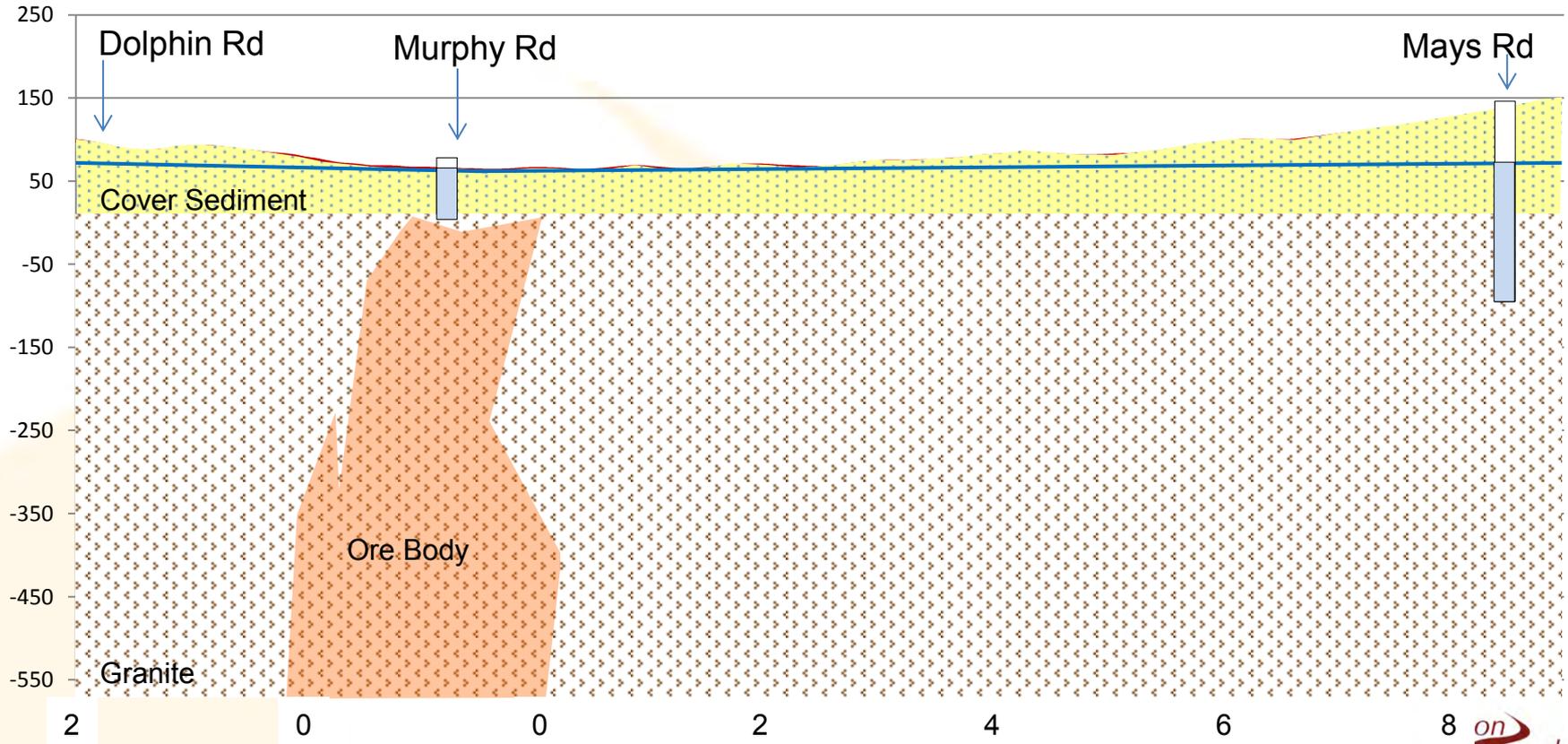
- Nine investigation wells drilled
- Groundwater salinity ranges from 20,000 ppm to 150,000 ppm – 2/3 to 5 times as salty as seawater
- Water table is at 2-3m depth in low-lying areas and 10 to 30m below ground surface on the higher ground
- Bore yields are low, <0.5l/s.



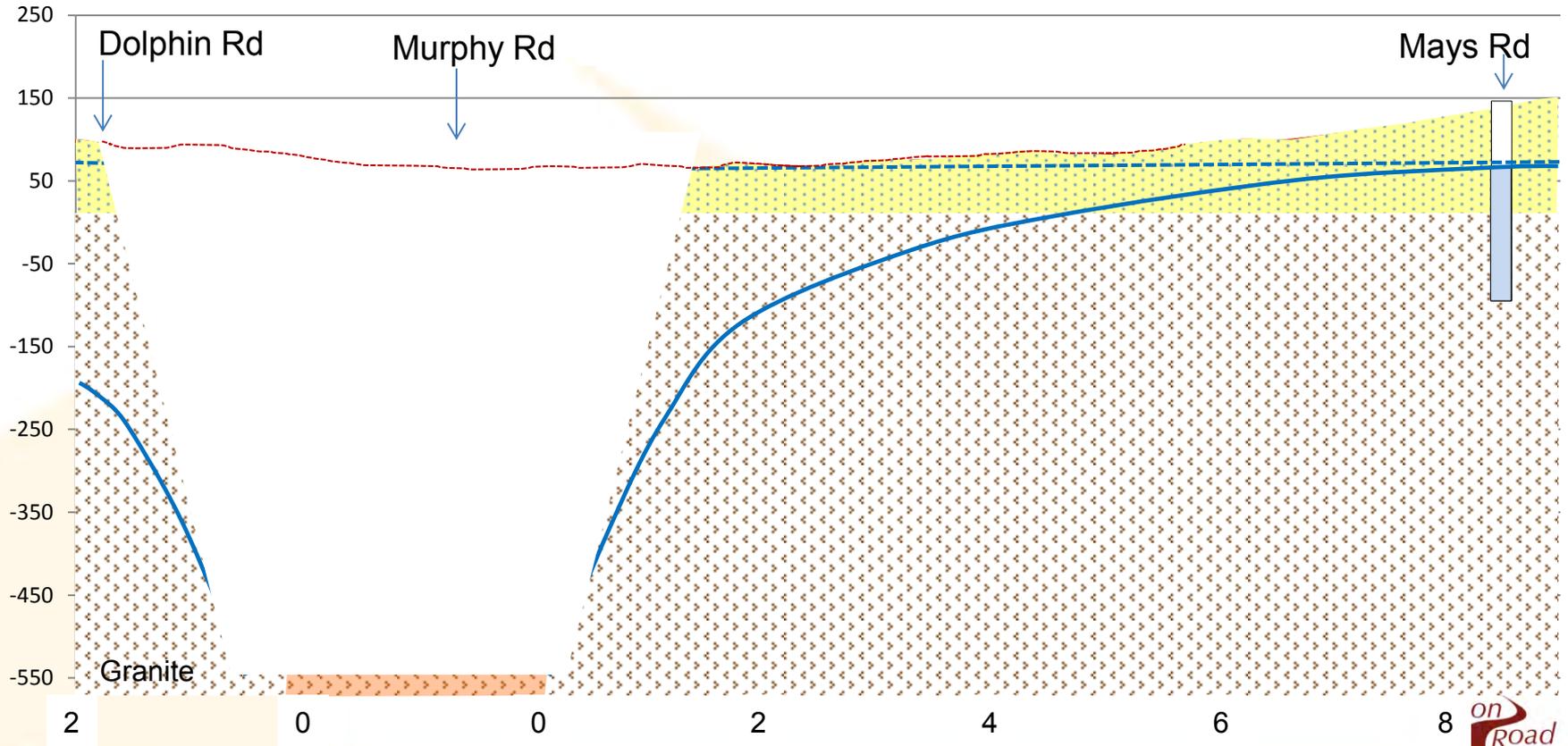
# Groundwater Cross-Section



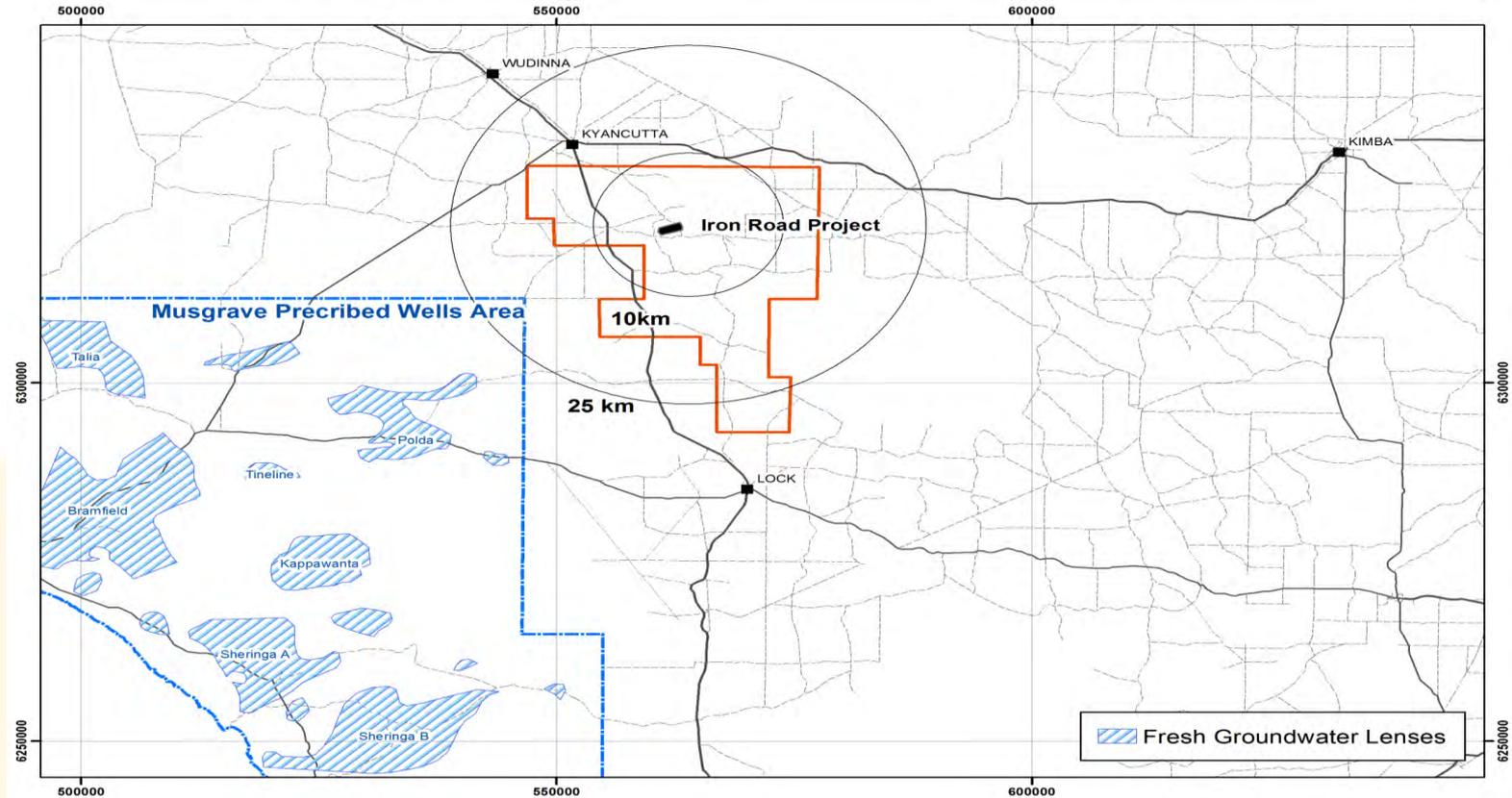
# Cross-Section Before Mining



# Cross-Section During Mining



# Distance to Fresh Groundwater



# Groundwater

## Impacts from mining operations

- Mine dewatering will reduce the level of the local saline water table. Drawdown will be greatest close to the mine and diminish quickly with distance. Preliminary estimates are a maximum radius of about 6km.
- Potable groundwater. The nearest source of fresh groundwater is the Poldia Lens in the Musgrave Prescribed Wells Area. This lens is 25 kilometres from the mine, not connected and too far away to be impacted by mining.
- Soil Moisture: Groundwater is saline. Areas where soil moisture is supported by groundwater are low lying salinized areas where the water table is close to the surface. Soils suitable for cropping are not supported by saline groundwater. Dewatering will not impact on the moisture content of these soils used for cropping.



# Groundwater



## Further Work

- Drilling, construction and pumping tests of 10 investigation bores in and around the mine site.
- Objective is to obtain more information regarding, groundwater salinity, groundwater yield and aquifer properties.
- Data will be used to support detailed groundwater modelling of the mine site.

# Community Engagement Update



## Port

- Public Information Sessions at Port Neill and Tumby Bay
- Port Neill Reference Group
- Tumby Bay and Districts Community Consultative Group briefing

## Utilities Corridor

- We have met with most impacted landowners

## Mine

- Community Project Updates – Warrambo and Wudinna
- Community Consultative Committee (CCC)

# Keeping the Community Informed

- Community Information Sessions
- Dedicated community team
- Involved in local events
- Presentations to community groups, councils and government agencies
- Regular updates in the *Granite*
- Work with the CCC to further improve project communications



# Community Consultative Committee (CCC)

## CCC Public Information Sessions

### Working with interested community members

- Terms of Reference
- Community Representation
- Independent Chairperson

### Iron Road Supporting the CCC

- Voice of the community
- Improve decision making
- Inform the company on community expectations



# Next Steps

Complete  
supporting  
studies

Community  
Consultative  
Committee

Government  
submissions  
and  
applications

We will  
continue to  
keep  
communities  
informed  
and involved

# *Thank you for your time*

# Questions



Questions this evening

- ✓ With the microphone
- ✓ Send a text message to 0409 135 254
- ✓ During the refreshments time

After the meeting by contacting Iron Road or the  
Community Consultative Committee (CEIP CCC)

CEIP CCC Helen Lamont

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Iron Road [community@ironroadlimited.com.au](mailto:community@ironroadlimited.com.au)

1800 176 008 (toll free)

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