



# Iluka Resources Limited

## Macquarie WA Forum

Adele Stratton, Chief Financial Officer

3 December 2019



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## Non-IFRS Financial Information

This document contains non-IFRS financial measures including cash production costs, non production costs, Mineral Sands EBITDA, Underlying Group EBITDA, EBIT, free cash flow, and net debt amongst others. Iluka management considers these to be key financial performance indicators of the business and they are defined and/or reconciled in Iluka's annual results materials and/or Annual report. Non-IFRS measures have not been subject to audit or review.

All figures are expressed in Australian dollars unless stated otherwise.

## Mineral Resources and Ore Reserves Estimates

As an Australian company with securities listed on the Australian Securities Exchange (ASX), Iluka is subject to Australian disclosure requirements and standards, including the requirements of the Corporations Act and the ASX. Investors should note that it is a requirement of the ASX listing rules that the reporting of ore reserves and mineral resources in Australia comply with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code") and that the Ore Reserve and Mineral Resource estimates underpinning the production targets in this presentation have been prepared by a Competent Person in accordance with the JORC Code 2012.

Information that relates to Mineral Resources estimates has been previously announced to ASX on 24 July 2019 in *Eneabba Mineral Sands Recovery Project Updated Mineral Resource Estimate*, on 20 February 2017 in *Updated Mineral Resource and Ore Reserve Statement*, on 21 February 2019 in *2018 Annual Report* and on 27 February 2018 in *2017 Annual Report*, all available at [www.iluka.com/investors-media/asx-disclosures](http://www.iluka.com/investors-media/asx-disclosures). Iluka confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. Iluka confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

## Production outlook

Production outlook and the basis thereof are noted within the relevant disclosure. The outlook included in this presentation is indicative only and should not be construed as guidance. The information is subject to changes in market and operating conditions; political risk; and any significant unplanned operational issues.





# Sustainability is central to everything we do

3

## Key Pillars

- Health and Safety
- People
- Social Performance
- Environmental Stewardship
- Economic Responsibility and Governance

## Approach

- Continued progression towards alignment with ICMM Sustainable Development Principles
- Accountability and transparency through setting of targets and performance linked to incentive plans
- Earning trust of communities by delivering on our commitments
- Sierra Rutile to operate in accordance with the IFC's Environmental and Social Performance Standards



**3.7 TRIFR**

No fatalities or permanent disabling injuries



**490**

Hectares rehabilitated H1 2019



**↓ 60%**

Level 3+ enviro. incidents



**\$980K**

Social investment 2018



**↓ 50%**

Malaria and typhoid cases in 2019

Member of  
**Dow Jones Sustainability Indices**

In Collaboration with RobecoSAM



FTSE4Good



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## Strong Market Fundamentals

Mineral sands demand linked to urbanisation, rising living standards, increasing array of applications

## Quality Mineral Sands Assets

Australia and Sierra Leone operations  
Product mix weighted to premium zircon and high grade titanium dioxide

## Project Pipeline

Sustaining and growth projects in Australia and Sierra Leone

## Value Driven Marketing Model

Direct customer relationships  
Price driven by value in use  
Focussed on sustainable pricing

## Capital Discipline Framework

Strong balance sheet, disciplined capital allocation  
Focus on shareholder returns via dividend framework

## World-class Iron Ore Royalty

Royalty stream from BHP's Mining Area C hub in Western Australia  
Growth from BHP's South Flank development



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60 years' experience in mineral sands exploration, project development, mining, processing and marketing



World class royalty over iron ore produced from BHP's Mining Area C (MAC) province



# Mineral Sands Industry and Market Outlook

Geraldton, Western Australia

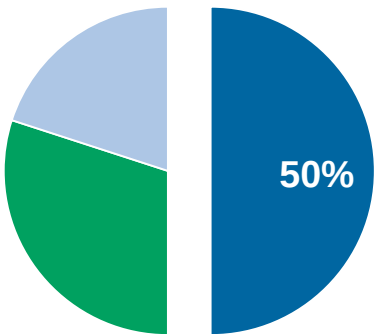


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Zircon is opaque (white) and water, chemical, heat and abrasion resistant

2018 global demand

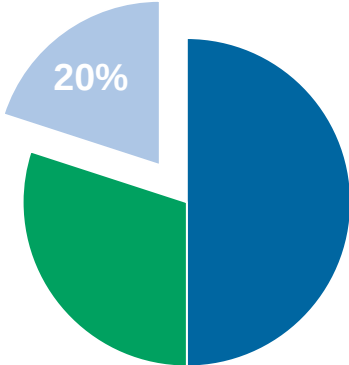
### Ceramics



Tiles, sanitary ware, table ware



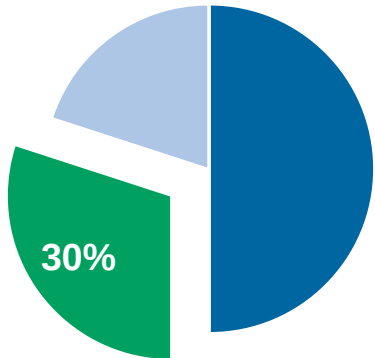
### Chemicals, Fused Zirconia and Specialty Uses



Electronics, catalytic converters, fibre optics, nuclear fuel rods



### Refractory and Foundry



Investment casting, glass, steel and cement industries

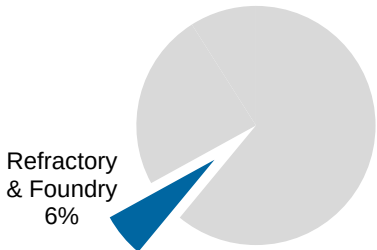
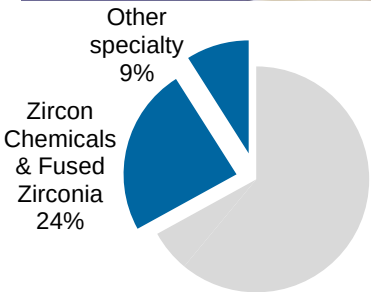
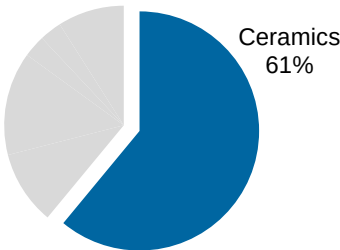


### Key drivers of demand

- Short term
- Construction industry
  - Industrial activity

- Medium to long term
- GDP per capita
  - Urbanisation
  - Flooring trends
  - Innovation and increased applications

2018 Iluka sales



Demand source: TZMI  
Sales source: Iluka

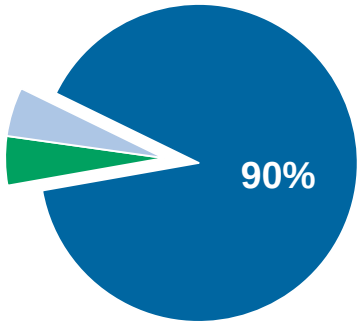




Titanium pigment is opaque (white), UV resistant and inert.  
Titanium metal has high strength to weight ratio and is corrosion resistant.

2018 global demand

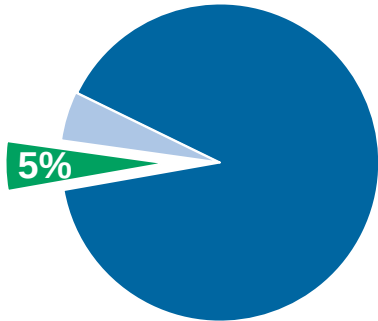
Titanium Pigment



Paint, plastics, inks, specialty coatings



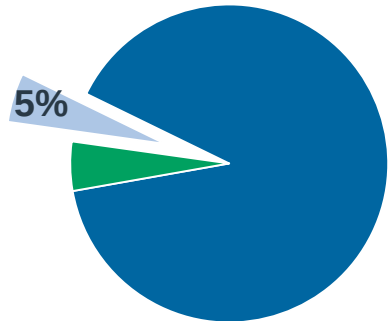
Titanium Metal



Aircraft frames and engines, medical items, sporting goods



Welding (flux)



Steel fabrication, ship building

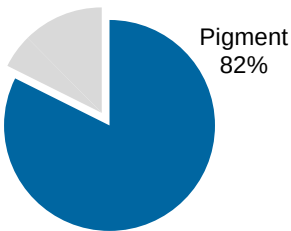


Key drivers of demand

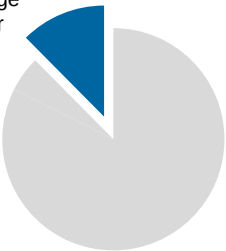
- Short Term
- Construction industry
  - Consumer spending
  - Renovation spending
  - Steel industry
  - Ship build orders
  - Aircraft build orders

- Medium to long term
- GDP per capita
  - Urbanisation
  - Innovation and increased applications

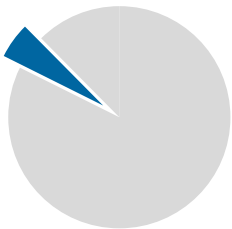
2018 Iluka sales



Ti Sponge / Other 13%



Welding 5%

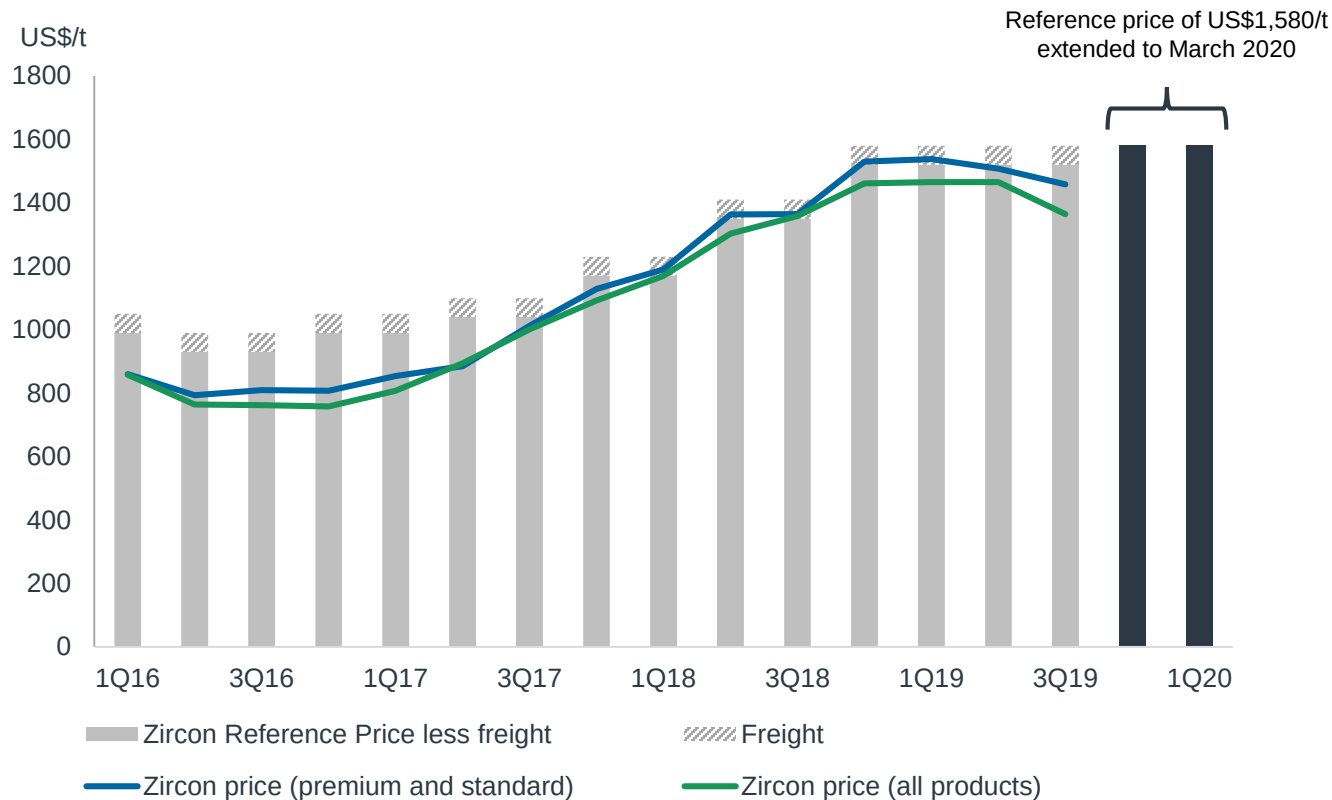


Demand source: TZMI  
Sales source: Iluka





## Iluka's Zircon Reference Price and Received Price



Notes: Price differential between Zircon (Premium and Standard) and Zircon (all products) varies based on the price of each product and the mix of products sold in each period.  
Source: Iluka

## Zircon Reference Price

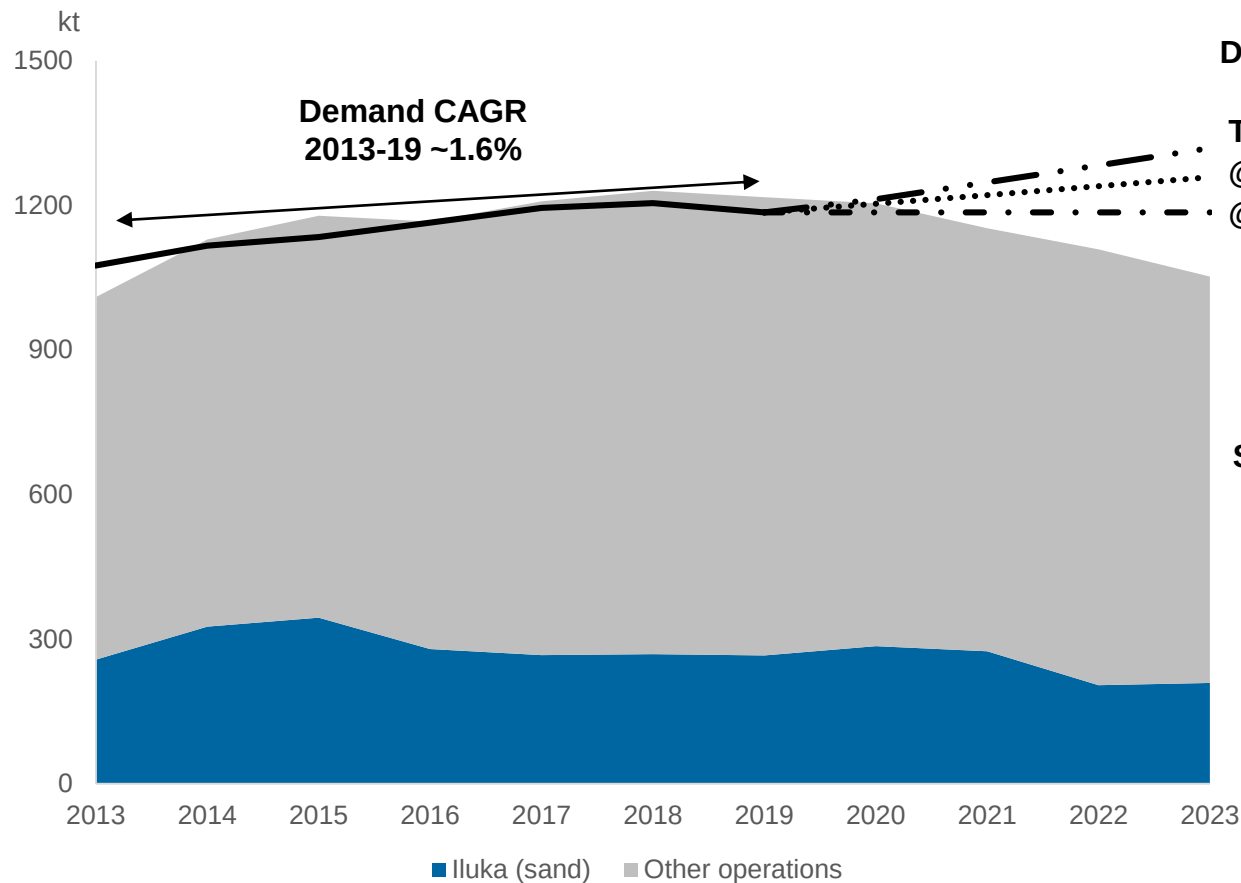
Iluka introduced Zircon Reference Price in 2015

- Zircon Reference Price is based on a 2 tonne bag of Zircon Premium, DAT, ex-China warehouse
- Provides transparency for customers
- Actual price paid a function of location, quantity, quality, purchase history etc

## Rewards scheme for customers

- Objective is fair pricing among customers, strengthening loyalty, valuing reliability and quality of supply
- Reward based on volumes of offtake, commitment to take allotted quantities and other factors
- Works with the reference price to provide pricing transparency instrument for customers

## Global Zircon Supply and Demand Outlook – Existing Operations<sup>1</sup>



1. Illustrative demand CAGRs (2019-23) are indicative only and not Iluka forecasts. 2019 demand forecast of 1.2mt is from TZMI (August 2019). Demand is underlying (net of inventories). Iluka (sand) production forecast is sourced from TZMI and does not represent Iluka's production forecast. In addition to zircon sand, Iluka also produces ZIC which is processed elsewhere and included in 'Other operations'.  
 Source: TZMI August 2019

## Short term demand softness ...

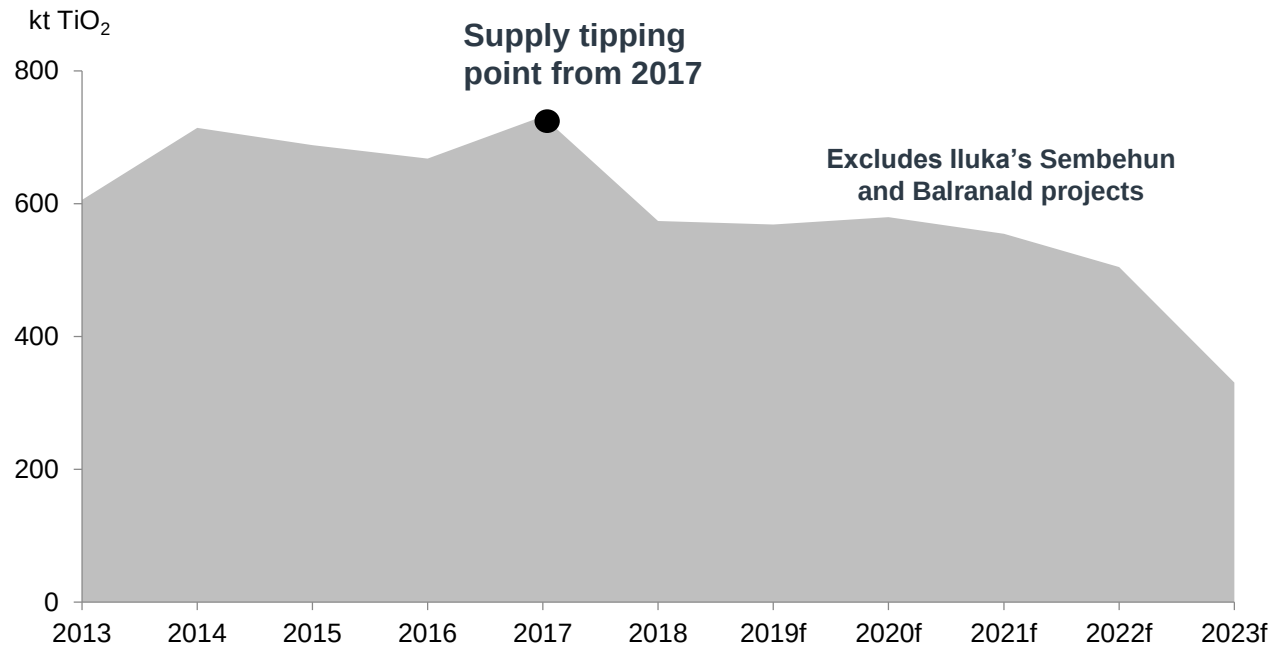
- Business confidence affected by trade tensions and global economic uncertainty
- Destocking of zircon in downstream supply chain

## ... solid long term fundamentals

- Urbanisation and growing middle class in Africa and Asia over next ten years
- Caution on quantum of demand growth
- Zircon will sell based on value in use with new technical specifications
- Declining supply from existing producers
- Iluka has project pipeline to maintain supply



## Global Rutile Supply Outlook



Source: Iluka and TZMI

## Positive dynamics in high grade titanium market

- Long term demand underpinned by pigment market growth and rising living standards
- Rutile and other very high grade feedstocks have unique properties and uses in niche markets as well as ability to increase pigment plant yield
- Increasingly important in reducing pigment plant waste footprint
- Declining supply from existing producers
- Iluka has project pipeline to maintain supply





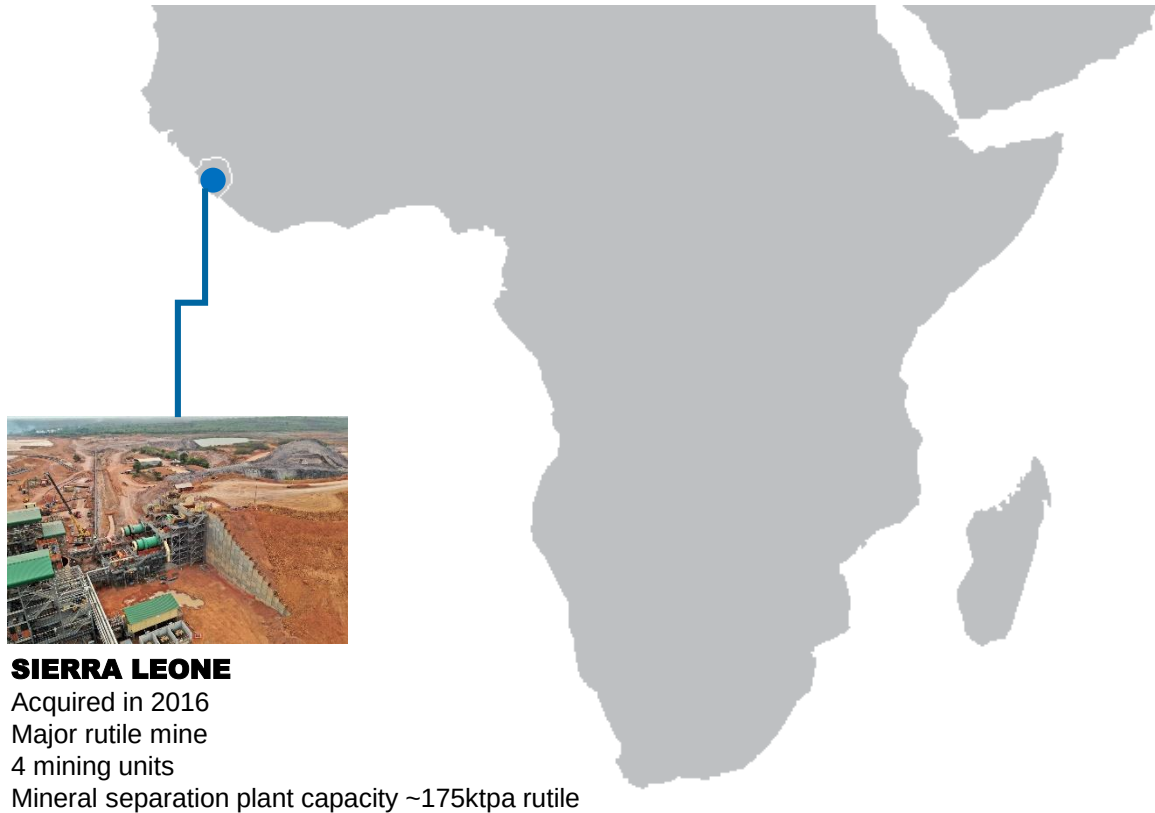
# Mineral Sands Operations and Project Pipeline

Cataby, Western Australia



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**CATABY**  
Commissioned 2019  
2 mining units  
Ilmenite source feed for synthetic rutile  
Significant zircon and rutile production  
Production ~440ktpa ilmenite 2019-22



**CAPEL**  
2 synthetic rutile kilns (1 currently idle)  
Ilmenite feed from Cataby  
SR2 capacity ~220ktpa synthetic rutile

**JACINTH AMBROSIA**  
1 mining unit  
Major zircon mine  
1,300tph ore mining unit capacity





## Operations Summary

- Large chloride ilmenite rich deposit, 150km north of Perth
- Ilmenite feeds synthetic rutile kiln at Capel, Western Australia
- Synthetic rutile offtake contracts underpin financial returns
- Significant zircon and rutile production processed at Narngulu, Western Australia
- 8.5 year mine life, with potential 4 year extension

## Recent Developments

- Mining commenced and fully operational
- 4 pits open
- ~110kt of ilmenite transported to Capel
- ~50kt of non-magnetic material transported to Geraldton



## Cataby Ore Reserves, as at December 2018

| Deposit                 | Ore Reserve Category | Ore Mt       | In Situ HM Mt | HM Grade (%) | HM Assemblage |            |            |
|-------------------------|----------------------|--------------|---------------|--------------|---------------|------------|------------|
|                         |                      |              |               |              | Ilmenite (%)  | Zircon (%) | Rutile (%) |
| Cataby                  | Proved               | 87.8         | 5.5           | 6.3          | 59.7          | 9.3        | 4.1        |
|                         | Probable             | 32.6         | 1.3           | 4.1          | 62.3          | 9.4        | 4.3        |
| <b>Total</b>            |                      | <b>120.4</b> | <b>6.9</b>    | <b>5.7</b>   | <b>60.2</b>   | <b>9.3</b> | <b>4.1</b> |
| <b>Development plan</b> |                      | <b>80</b>    | <b>5.3</b>    | <b>6.6</b>   | <b>60.0</b>   | <b>9.6</b> | <b>4.1</b> |

This slide should be read in conjunction with disclaimers and compliance statement on slide 2.  
Source: ASX Release *Updated Mineral Resource and Ore Reserve Statement*, 20 February 2017, with minor adjustments reported in Iluka's 2018 Annual Report



## Operations Summary

- Discovered in 2004, mining commenced 2010
- Iluka's major source of zircon production
- 1,300tph ore mobile mining unit
- 1,000tph rougher head feed concentrator
- Heavy mineral concentrate trucked to Port of Thevenard for further processing at Narngulu mineral separation plant, Western Australia

## Recent Developments

- Mining unit moved to Ambrosia deposit in August
- Ambrosia mine fully commissioned and ramped up



## Eucla Basin Ore Reserves, as at December 2018

| Deposit  | Ore Reserve Category | Ore mt | In situ HM mt | HM Grade % | HM Assemblage |          |          |
|----------|----------------------|--------|---------------|------------|---------------|----------|----------|
|          |                      |        |               |            | Ilmenite %    | Zircon % | Rutile % |
| Ambrosia | Proved               | 53.9   | 1.9           | 3.5        | 23.7          | 52.7     | 4.8      |
|          | Probable             | 2.6    | 0.1           | 2.3        | 20.9          | 48.9     | 4.7      |
| Jacynth  | Proved               | 34.5   | 1.2           | 3.6        | 36.5          | 40.2     | 4.8      |
|          | Probable             | 1.4    | 0.0           | 1.8        | 19.1          | 59.2     | 3.4      |
| Total    |                      | 92.4   | 3.2           | 3.5        | 28.5          | 47.9     | 4.8      |

This slide should be read in conjunction with disclaimers and compliance statement on slide 2.  
Source: ASX Release *Updated Mineral Resource and Ore Reserve Statement*, 20 February 2017, with minor adjustments reported in Iluka's 2017 and 2018 Annual Report





## Operations

- Began operations 1967 and acquired by Iluka December 2016
- World's largest rutile mine
- Large, long life operations (up to 5 years remaining at current mining area, 15-20 years at Sembehun)
- Two dry mining operations at Lanti and Gangama
- Heavy mineral concentrate trucked to mineral separation plant (~175ktpa capacity)
- Bulk shipment via Nitti Port, ~15km from mineral separation plant

## Recent Developments

- Doubling of capacities at Lanti and Gangama completed in 2019
- Re-scoping of development options at Sembehun project
- Partnership with International Finance Corporation (IFC), investing US\$20 million for 3.57% stake



**Employs ~2,600 people**  
98% of whom are Sierra Leonean



**~3% of Sierra Leone GDP**



**13% of Domestic Exports**



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## Projects Executed in 2019 to Sustain Value Total Capital Expenditure in 2019 of ~\$215 million

**Cataby,  
Western  
Australia**



**SR2 Kiln Major  
Maintenance  
Outage,  
Western  
Australia**



**Ambrosia Mine  
Move, South  
Australia**



**Gangama  
Expansion,  
Sierra Leone**



**Lanti  
Expansion,  
Sierra Leone**



## Operations Configured to Deliver Value



### **CATABY**

8.5 year mine life with returns underpinned by synthetic rutile offtake agreements, also contributes significant zircon and rutile production



### **CAPEL**

Maintaining supply of high grade feedstock in tight market with returns underpinned by offtake agreements



### **JACINTH AMBROSIA**

Mine move completed and zircon production maintained



### **NARNGULU**

One of world's largest mineral separation plants, optimised to process Cataby and Jacinth-Ambrosia production



### **SIERRA LEONE**

Lanti and Gangama operational expansion completed to maximise value of assets





## Atacama, South Australia

Satellite deposit to existing J-A operation  
Pre-feasibility study progressing  
Potential to add material zircon production

## Wimmera, Victoria

Zircon and rare earth project  
Pre-feasibility study progressing  
Test pit completed product samples with customers

Other

## Eneabba Mineral Sands Recovery, Western Australia

Monazite-rich stockpile from historic mining  
Offtake secured, execute phase  
Simple process proposed with low capital expenditure



## Sembehun, Sierra Leone

Expansion to new deposits  
Development of next phase at SRL  
Re-scoping development options – focus on optimising risk/ return

## SR1 restart, Western Australia

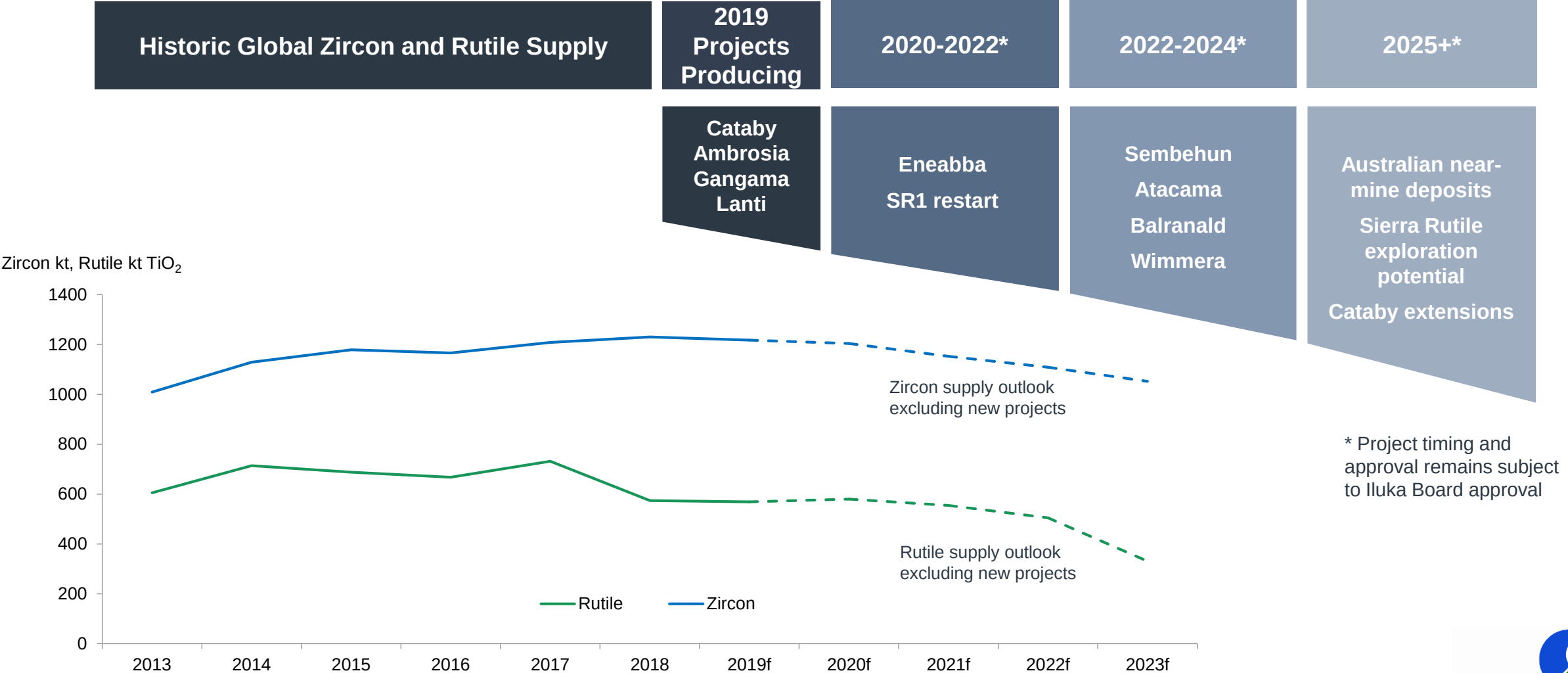
Scoping study progressing  
Detailed execution planning underway and long lead time items ordered.  
Potential for 110 - 120ktpa of synthetic rutile  
Subject to appropriate commercial arrangements

## Balranald, New South Wales

Rutile and zircon rich deposits  
Development of innovative underground mining method via directional drilling  
Pre-mobilisation activities underway to prepare for 3<sup>rd</sup> trial



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\* Project timing and approval remains subject to Iluka Board approval



# Corporate and Capital Structure Review



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- Formal review commenced to determine most appropriate corporate and capital structure of two principal businesses – Mineral Sands and Mining Area C royalty
- Work commenced in September 2019
- Review to consider:
  - Iluka's corporate and capital structure
  - capital requirements, business plans, management structures, and cost and tax implications
- A number of significant issues to be considered as part of the review and no certainty that it will result in change
- Expect to provide an update on the review no later than the announcement of full year results in February 2020





## The Royalty Terms

- Royalty over “all ore mined from time to time from M(ining) A(rea) C”
- Royalty terms:
  - 1.232% of Australian denominated revenue from royalty area; and
  - one-off payment of A\$1 million per million tonne increase in annual capacity

**360km<sup>2</sup>**

Combined North and South Flank Development Envelope<sup>1</sup>

**1,024km<sup>2</sup>**

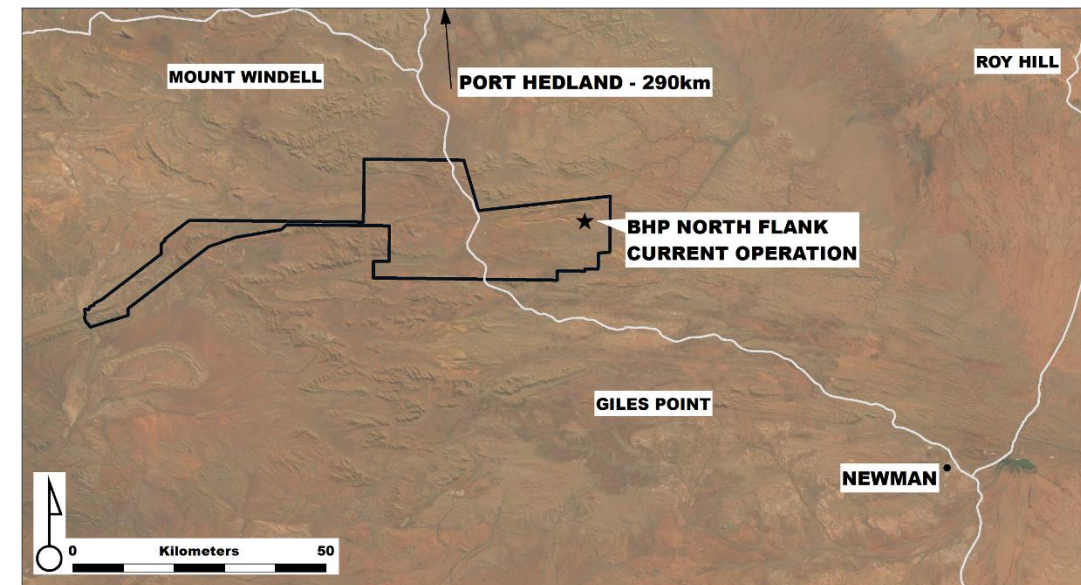
Total Royalty Area<sup>2</sup>

**2 mining operations**

North Flank and soon South Flank

The MAC Royalty provides an uncapped option on future discoveries and developments made within the MAC area

## MAC Royalty Area



Source: Satellite map with overlay of MAC Royalty.

Note: Location and mineralisation outline digitised from small scale A4 map and should be used for illustrative purposes only.

Source:

1. [BHP, Mining Area C Southern Flank Public Environmental Review, May 2017](#).

2. Area of Temporary Reserve 3156H (Area “C”).



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# MAC Royalty Area – Current Operations

23

|                          |       | H1 2019 | H1 2018 | % change |
|--------------------------|-------|---------|---------|----------|
| Sales volumes            | MDMT  | 27.8    | 27.3    | 1.8      |
| Implied price            | A\$/t | 120.2   | 83.9    | 43.2     |
| Net Royalty income       | \$m   | 41.2    | 28.2    | 42.6     |
| Annual capacity payments | \$m   | -       | 1.0     | n/a      |
| Iluka EBITDA             | \$m   | 41.2    | 29.2    | 41.1     |

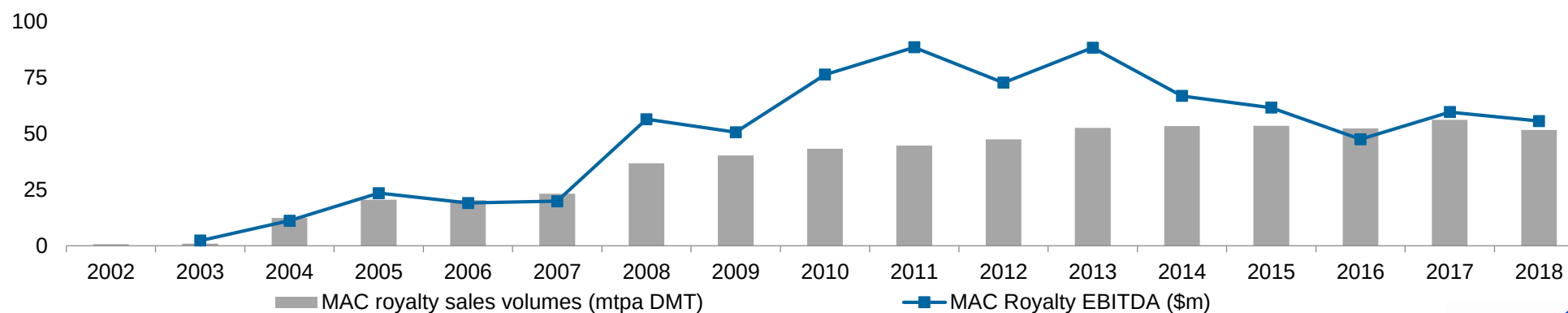
(mdmt = million dry metric tonnes)

**~\$850m  
EBITDA**

Since North Flank commenced  
operations in October 2003

**\$41m  
EBITDA  
H1 2019**

## Iluka Royalty EBITDA and Mining Area C Sales Volumes (DMT)



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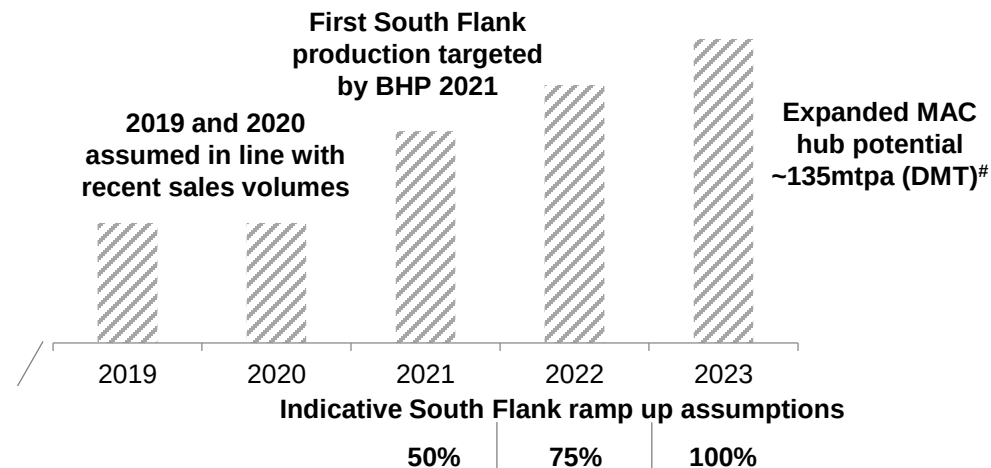


## South Flank Development

- Approved by BHP Board June 2018
- ~145mtpa (WMT) from combined MAC hub
- Quality ore – contributing to increase in BHP's Western Australian average iron grade from 61% to 62%, and overall proportion of lump from 25% to ~35%
- Project 50% complete (as at September 2019)
- Initial production target 2021
- BHP have guided 25+ year life

Source: BHP

## Indicative Royalty Sales Volumes with South Flank Development



## Royalty revenue set to grow with South Flank development

Earnings contribution will be dependent on the rate of ramp up, iron ore pricing, the ratio of lump to fines, the premium lump attracts over fines and the USD:AUD exchange rate.

- If 145mtpa (WMT) production is achieved by 2023 (135mtpa DMT), the lump ratio from South Flank is 35% and the premium attracted by lump is 20%, then EBITDA contribution in that year could be as shown.
- In addition to annual royalty earnings, one-off capacity payments will be approximately A\$80 million, payable as annual tonnages increase over the course of the ramp up of South Flank.
- Iluka Board remains focused on optimising returns to shareholders from MAC royalty.

| Royalty revenue (A\$) |      | Iron Ore Fines: US\$/DMT, 62% Fe (FOB) |        |        |
|-----------------------|------|----------------------------------------|--------|--------|
|                       |      | 50                                     | 55     | 90*    |
| AUD:USD               | 0.75 | \$118m                                 | \$129m | \$212m |
|                       | 0.70 | \$126m                                 | \$139m | \$227m |
|                       | 0.65 | \$136m                                 | \$149m | \$244m |

\* Based on spot pricing as at October 2019

<sup>#</sup>145mtpa (WMT) expanded MAC hub potential assumption in line with BHP disclosures, noting BHP's May 2017 EPA approval has nominal combined processing rate of 150mtpa (WMT) of blended ore.



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BHP's current operations at North Flank and South Flank are expected to continue until ~2050:

*"First ore from South Flank is targeted in the 2021 calendar year, with the project expected to produce ore for more than 25 years."*

[ASX Announcement, BHP approves South Flank project, 14 June 2018](#)

*"It is expected that the life of the Mining Area C mining operation, inclusive of Northern and Southern Flanks, will be approximately 30 years, commencing in approximately 2020."*

[Mining Area C Southern Flank Public Environmental Review, May 2017.](#)

... with potential for future development to extend operations well beyond that date:

*"The long-term strategy for Mining Area C is to continue operations to 2073."*

[Mining Area C Mine Closure Plan AML7000281 Rev 3.1 October 2017](#)

Two potential future operations identified by BHP in its long-term plan, Tandanya and Mudlark, are likely to fall at least partially within the Royalty Area

## Future Mines - BHP's 50-100 Year Plan

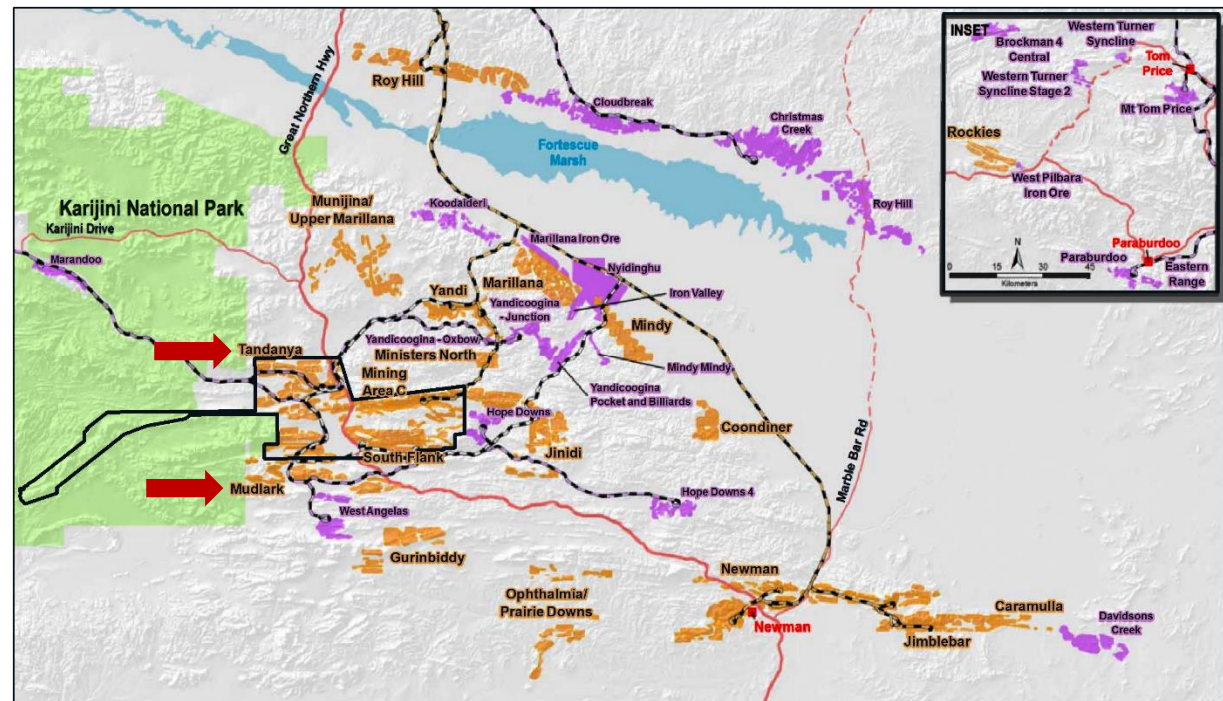


Figure 1: Current and future proposed iron ore mining operations in the Pilbara

Source: [BHP Billiton Iron Ore Pilbara Strategic Proposal - Flora and Vertebrate Fauna Screening Assessment, 2016](#), overlay of MAC Royalty area added.





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