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# Welcome to the Worsley Mine Development Community Meeting

To allow all participants to join, we will start at 11.05am



# Worsley Mine Development

Continuing Operations

Community Meeting  
6 May 2020



# Check in & Ongoing Engagement

- **Meeting set up & housekeeping**
  - Introductions
  - Meeting format
    - Feel free to ask question via the WebEx chat function at any time
  - Questions will be taken at the end of the presentation
- **We're all in this together**
- **COVID-19 social distancing measures likely to continue for some time**
- **How would YOU like us to continue to provide updates on the Project?**
  - Web based updates (like this)
  - Updates on the webpage ([www.south32.net/worsleymineddevelopment](http://www.south32.net/worsleymineddevelopment))
  - Written (factsheets/letters etc)
  - Phone calls
  - If you see us - ask us



# Worsley Mine Development

## Continuing Operations

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1. Introduction to South32 & Worsley Alumina
2. Environmental Approvals Update
3. Details of our Application
  - Timeline
  - Environmental Scoping Document
  - Technical studies
4. Questions

# Introduction to South32 & Worsley Alumina

**Mark Worthington – Lead Corporate Affairs Worsley Alumina**

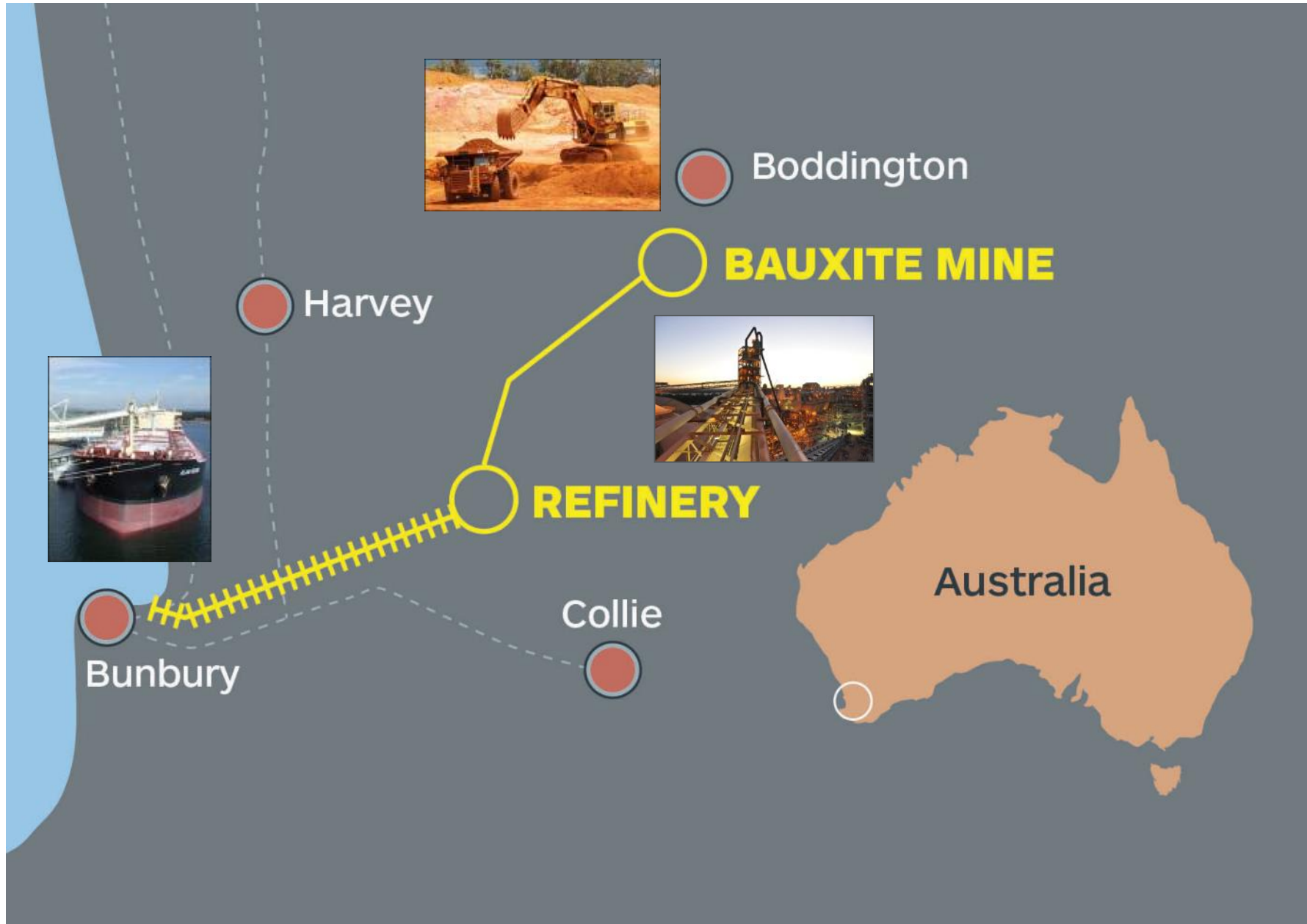
We're a global company, listed on three continents and with operations across five countries

Our purpose is to make a difference by developing natural resources, improving people's lives now and for generations to come.

We are trusted by our owners and partners to realise the potential of their resources



# Worsley Alumina



# Boddington Bauxite Mine

## Mining commenced in the early 1980's

- Bauxite deposits occur in pods that are close to the surface and about five metres thick
- Crushed bauxite travels more than 50 kilometres by overland conveyor to the refinery, near Collie
- Bauxite mining is a continuous process of clearing, mining and rehabilitation





# Environmental Approvals Update

**Dennis Lindgren – Lead Environment Major Projects and Approvals**

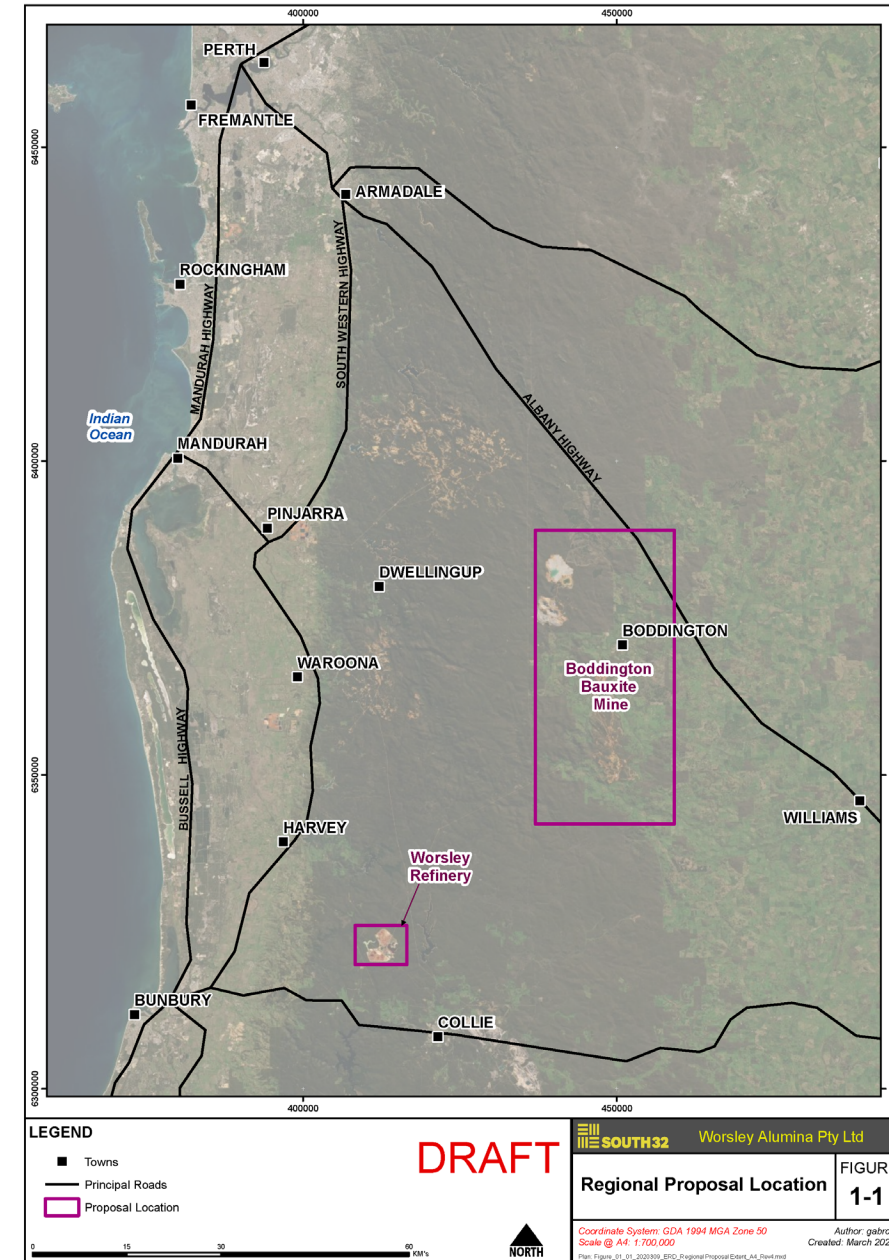
# Continuing Operations

Worsley is a long-term operation with a current known ore reserve life of 15 years with further significant ore resources potentially beyond this.

South32 is seeking a consolidated assessment and approval from the Commonwealth and State for the whole of operations (future ongoing use of existing operations, continuation of existing uses and expansion elements) going forward.

A new modern approval is needed for Worsley to support:

- Continuation and extension of bauxite mining at the Boddington Bauxite Mine;
- Continuation of Alumina Refining at the currently approved alumina production capacity of 4.7 Mtpa and mining rate of 18.8 Mtpa (dry);
- Continuation of the regional exploration program; and
- The use of existing conveyors, roads and supporting transport infrastructure.



# Details of our Application

**Tori Henderson – Specialist Environment Major Projects and Approvals**

# PRIMARY ASSESSMENT AREA



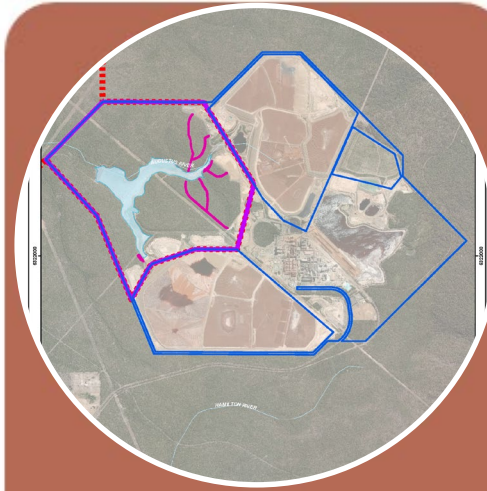
## WMDE

Worsley Mine  
Development Envelope



## BTC

Bauxite Transport  
Corridor



## CBME

Contingency Bauxite  
Mining Envelope

Existing approval = 22,102 ha, new = 29,357 ha (7,255ha additional)

The proposal involves:

Up to 5,841 ha of additional native vegetation clearing

Activity on the Beds and Banks of the Hotham River  
- Includes multiple river crossings

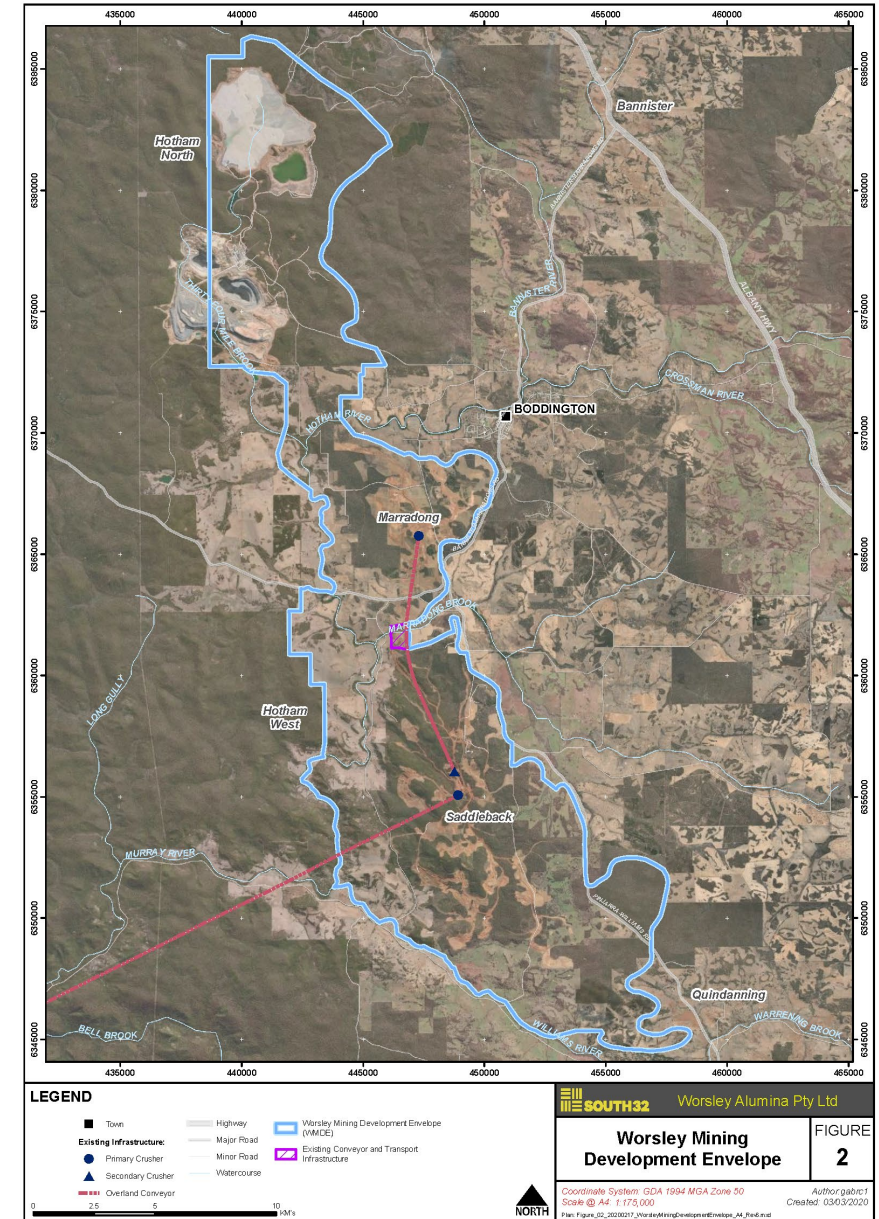
Development of additional mining areas and associated infrastructure

### Minor additional activities:

Access to bauxite stockpiles at Newmont Boddington Gold, exploration drilling

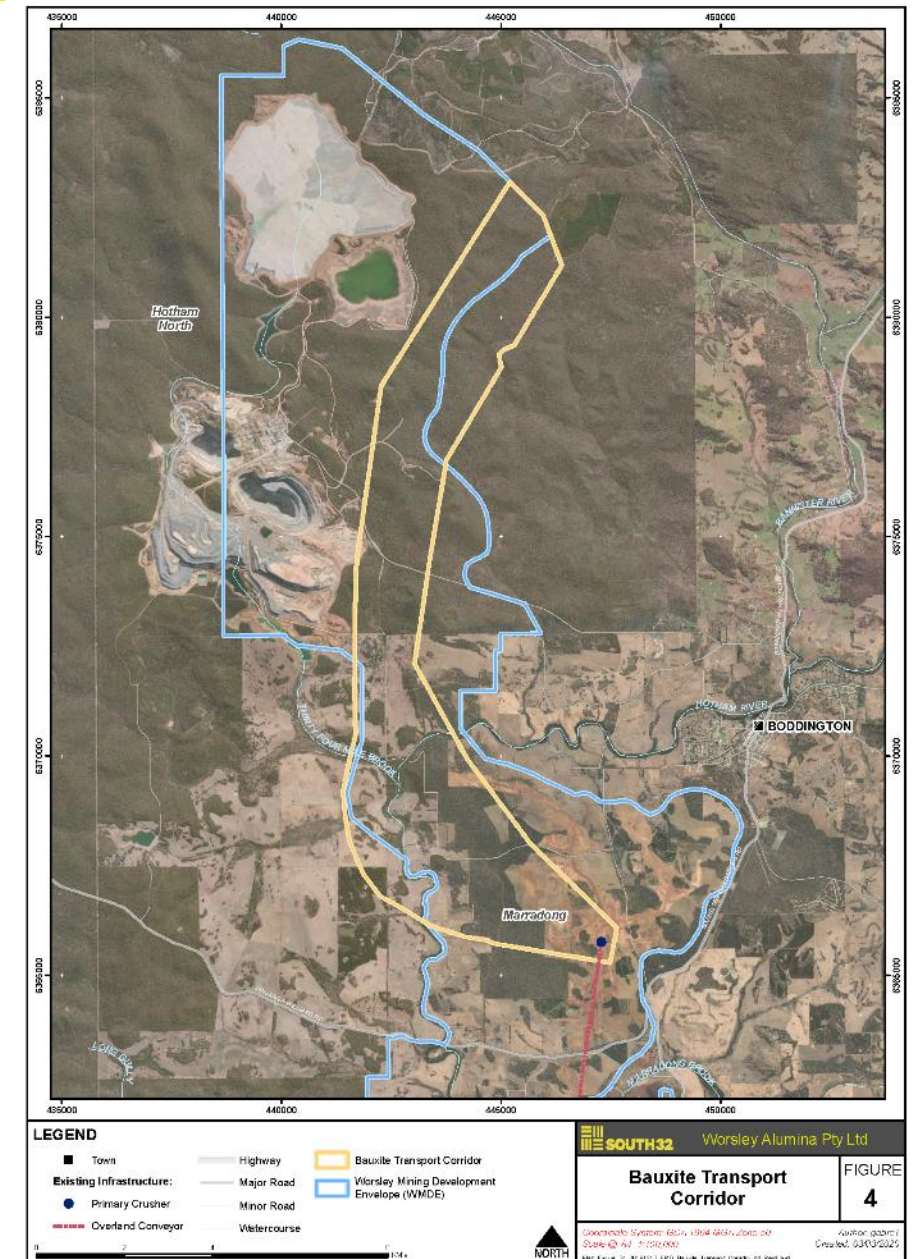
# Worsley Mining Development Envelope (WMDE)

- Next phase of mining near Boddington
- Primarily to the west and north of current mining areas
- Utilise existing crushers & conveyors
- Several bridges are required (roads and rivers)
- No change to mining rate



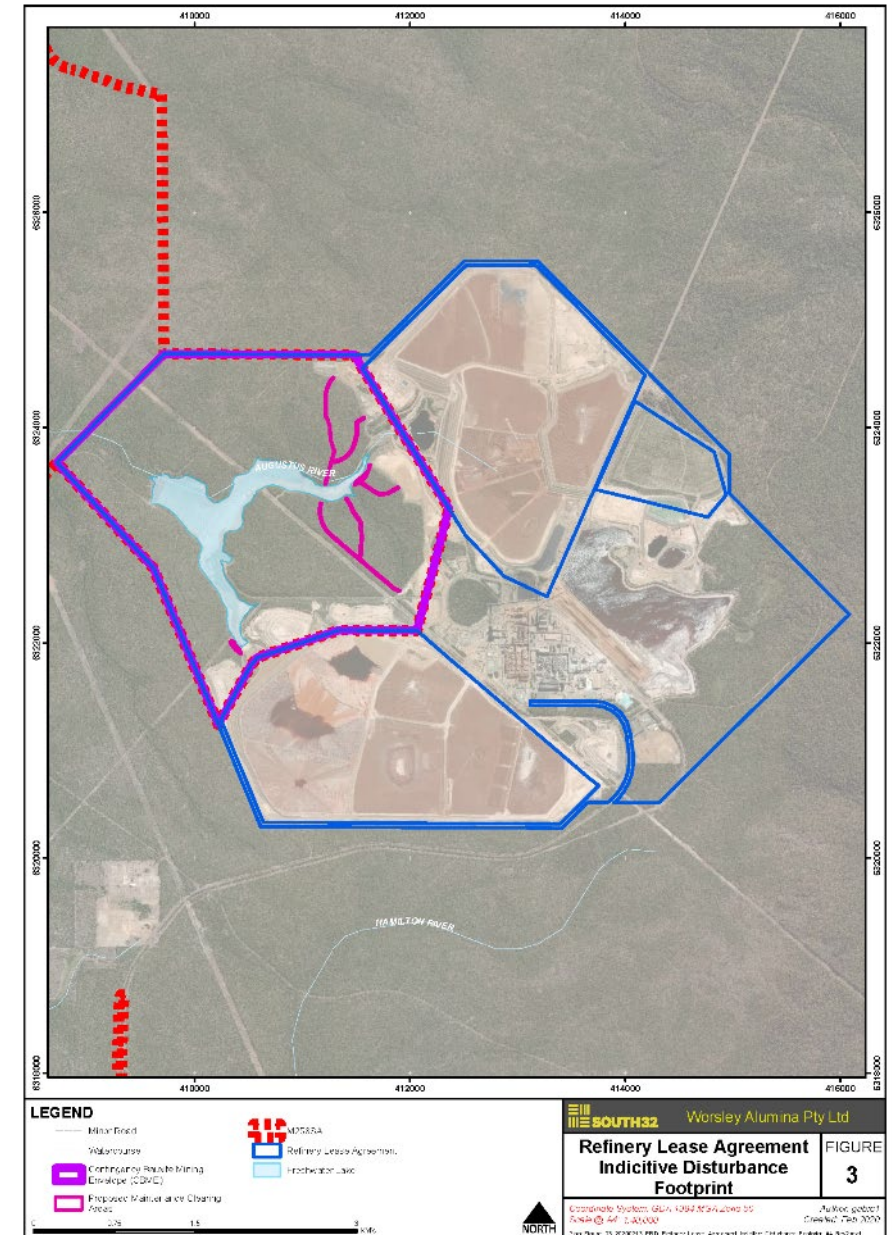
# Bauxite Transport Corridor (BTC)

- Links current mining areas to new and future mining areas
- Most of the area overlaps the WMDE
- Engineering work is progressing on the mode of transport for the longer term



# Contingency Bauxite Mining Envelope (CBME)

- Will provide a supply of bauxite close to the refinery
- Back up for significant unplanned events impacting the conveyor (eg bushfire)
- Includes minor works to the Refinery area



# Timeline – towards approval

Step		
Referral Submitted EPA (State Regulator) DAWE (Federal Regulator)	April 2019	✓
Final Environmental Scoping Document Approved	Feb 2020	✓
Draft Environmental Review Document (ERD) to be submitted to EPA	July 2020	
EPA provides comments on draft ERD (6 weeks)	Aug 2020	
Revised Draft ERD submitted to EPA	Sept 2020	
EPA authorise release of ERD for public review (2 weeks)	Oct 2020	
Public review period (8 weeks)	Nov 2020	
Worsley responds to public submissions	Jan 2021	
EPA Reviews responses to public submissions (4 weeks)	Feb 2021	
EPA prepares draft assessment report & completes assessment (6 weeks)	April 2021	
EPA finalises assessment report and gives report to Minister (6 weeks)	May 2021	
Secondary Approvals (progress as required)	Ongoing	



# Environmental Scoping Document (ESD)

- What is an ESD?
- Approved on 7<sup>th</sup> Feb 2020
- Document prepared by the EPA in consultation with Worsley and other Decision Making Authorities
- Defines the form, content, timing and procedure of the Environmental Review
- Outlines the expectations for Environmental Impact review and assessment and includes the following factors
  - Flora & Vegetation
  - Terrestrial Fauna
  - Terrestrial Environmental Quality
  - Inland Waters
  - Social Surroundings

## 5,841 ha Native Vegetation Clearing

Technical studies undertaken by:

### **Mattiske Consulting**

*(Flora and Vegetation):*

- Consolidate historical reports
- Defining flora and vegetation values
- Update vegetation mapping and botanical surveys
- Define Threatened and Priority species information
- Define PEC and TEC communities
- Conduct impact assessments (including MNES)

### **Glevan Consulting**

*(Dieback)*

- Undertaking Dieback assessment and mapping

Flora & Vegetation 

## Impacts on Fauna Habitats due to Native Vegetation Clearing

Technical studies undertaken by:

### **Phoenix Environmental**

*(Short Range Endemic Invertebrates)*

- Consolidating historic surveys
- Conducting additional surveys to update & contemporise under State guidelines
- Conducting SRE impact assessment

### **Biostat Zoological Services**

*(Terrestrial Vertebrates)*

- Consolidating historical fauna surveys
- Updating habitat mapping and species information
- Defining fauna values
- Conducting impact assessments for the Proposal (including MNES)

Terrestrial Fauna 

## Impacts to the Hotham River and Local Groundwater Resources

Technical studies undertaken by:

### **GHD**

- Conducting a review of existing hydrological and hydrogeological information
- Expand studies and characterise inland water values and impacts associated with the Proposal.

Inland Waters 

# Key Environmental Factors

## Dust & Greenhouse Gases

Technical studies undertaken by:

### Environmental Technologies & Analytics

*(Dust and Air Quality)*

- Review of dust monitoring data from the existing Worsley operation
- Conduct dust modelling and air quality study for the Proposal

### KASA Consulting

*(GHG)*

- Conducting a GHG study

Air Quality

## Noise, Visual Amenity and Heritage

Technical studies undertaken by:

### Talis Consulting

*(Noise)*

- Noise modelling study against sensitive receptors

### ERM

*(Visual Amenity)*

- Visual Impact Assessment

### Brad Goode & Associates

*(Heritage)*

- Aboriginal Heritage Surveys

Social Surrounds

## Impacts associated with disturbance and rehabilitation of soils. (salinity, erosion, ASS, contamination and closure)

Technical studies undertaken by:

### GHD

- Conduct a soils characterisation study, including mapping
- A risk assessment into Acid Sulphate Soils
- Inform project implementation and closure planning practices

Terrestrial Environmental Quality





# Questions

\* Please introduce yourself

## CONTACT DETAILS

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