

# SHEET 9 – PROJECT OVERVIEW

## What is the Project

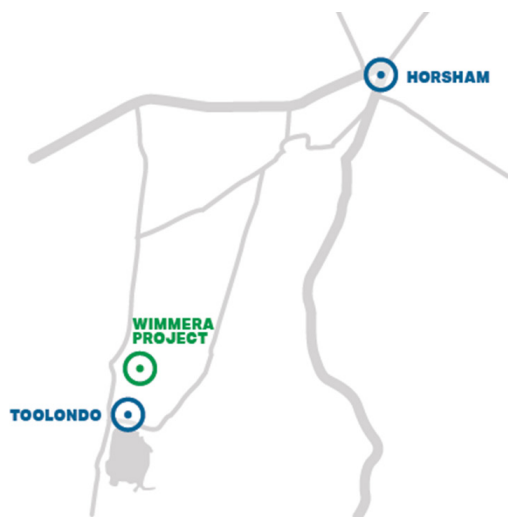
Iluka Resources Limited (Iluka) proposes to develop the Wimmera Project, a mine and processing plant/refinery to extract mineral sands from the WIM100 mineral sands deposit and to refine them onsite to produce zircon, titanium dioxide and rare earth products.

Mining is proposed to be conducted 24-hours per day, 365-days per year for a period of up to 25 years. Mined areas will be progressively rehabilitated as the mine advances, with the aim of restoring land to be equivalent to its pre-mining capability, or to another end landuse as agreed with landowners and regulators.

Considerable employment opportunities will be generated during the construction, operational and rehabilitation phases of the Project.

An off-site accommodation camp will be developed to accommodate the construction staff. No camp is proposed for the operations phase as employees and contractors are expected to be sourced largely from the region.

Project activities will include construction, mineral sand mining, processing, refining, decommissioning and rehabilitation of the mine and associated infrastructure.



## Where is the Project

The Wimmera Project is in Western Victoria, approximately 40 kilometres (km) south-west of Horsham.

The Project site is located just to the north of the Toolondo Reservoir and the associated small settlement of Toolondo.

Iluka's former Echo and Douglas mines are approximately 5 km to the east and 20 km to the south-west of the Project site respectively.

## What will be mined and what will it be used for

The WIM100 deposit contains heavy mineral sands ore. Should the Project proceed, it will produce zircon, titanium dioxide and rare earth mineral products.

Product	Key characteristics	Typical end use	Predominant customer base
Refined zircon product	Opaque. Resistant to water, heat and abrasion.	Ceramics, refractory and foundry purposes, paper coatings, antiperspirants, artificial teeth and nanotechnologies.	China
Refined titanium dioxide product	Opaque. Chemically inert. Resistant to ultraviolet (UV)	Pigments, welding and other applications.	Europe and the US
Rare earth oxide equivalent as a mixed concentrate	Highly conductive. Strongly paramagnetic. High melting point. Fluoresce under UV light.	Used to improve material properties in alloys for high performance applications. Renewable energy applications such as electric cars, wind turbines and other green technologies.	China

## What is the overall Project schedule

The Wimmera Project will only proceed if it is approved by the Victorian and Commonwealth governments, and the Iluka Board approves the required capital investment. From that point in time, there will be a 2-year construction period followed by up to 25 years of mining operations, including initial pre-strip, ore mining, processing and refining, return of all stockpiled overburden and revegetation. Site rehabilitation and monitoring activities will occur progressively during operation and will continue for approximately 14 years following the completion of mining.

Note this timeline is indicative only, assumes the Project will proceed, and may change.



## What is the deposit geology

The target mineral zone (ore) is approximately 18 metres (m) below ground level (BGL) and has a thickness of approximately 5–10 m. It is hosted within the lower Loxton-Parilla Sands unit and is overlain by approximately 15–20 m of overburden (the Shepparton Formation unit).

The maximum depth to the base of the ore is approximately 28 m. The ore is underlain by medium to high plasticity sandy clay (the Geera Clay, Winnambool, and Ettrick Formation units).

The regional watertable is approximately 15–18 m BGL, meaning that in order to mine using conventional mining equipment, pit dewatering will be required.



## What are the key Project components

The Project will comprise onsite and offsite components.

Key onsite components:

- a conventional open pit mine and ore handling system;
- processing plants comprising:
  - a mineral separation plant; and
  - a refinery.
- supporting infrastructure.

Infrastructure in the mine area will include:

- an ore receipt and liquefaction system;
- water pipelines;
- pit dewatering infrastructure;
- mine by-products transport and containment infrastructure; and
- electricity supply infrastructure.

The process plant and infrastructure area will include:

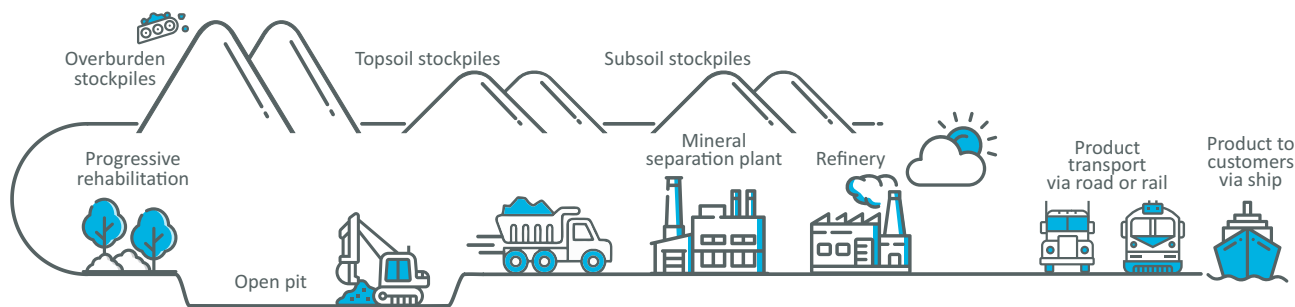
- a mineral separation plant:
  - screening and clay separation;
  - froth flotation and physical separation equipment;
  - water recovery (thickener and tails water recovery);
- a refinery:
  - product storage and out-loading;
  - refinery by-product disposal infrastructure;
  - reagent storage; and
  - residue treatment and water recovery plants.

Site infrastructure will also comprise:

- administration buildings, meeting and training rooms;
- first aid facilities;
- ablutions block and crib rooms;
- workshop and plant maintenance areas;
- water storage dams;
- fuel storage areas;
- internal access and haul roads;
- laydown areas; and
- car parks.

Offsite components will comprise:

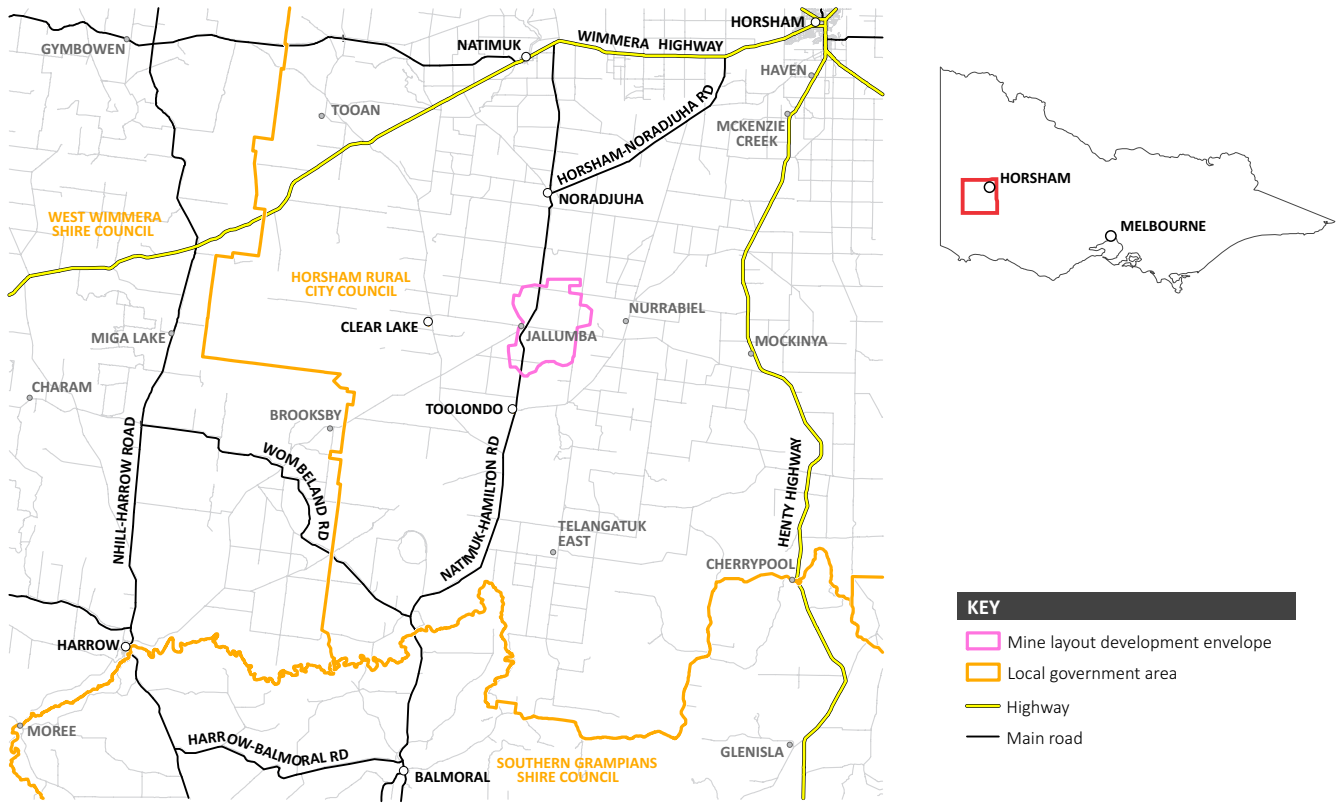
- a 350-room temporary construction camp in or near Horsham during the construction phase;
- a new 30-km water pipeline connecting the mine to the Rocklands Douglas pipeline;
- a new 5-km powerline extension to connect to the existing overhead powerline at Toolondo-Wonwondah Road/Nurrabiell Church Road intersection;
- a new access road off Natimuk-Hamilton Road; and
- public road intersection upgrades, if required.



## What is the Project footprint size

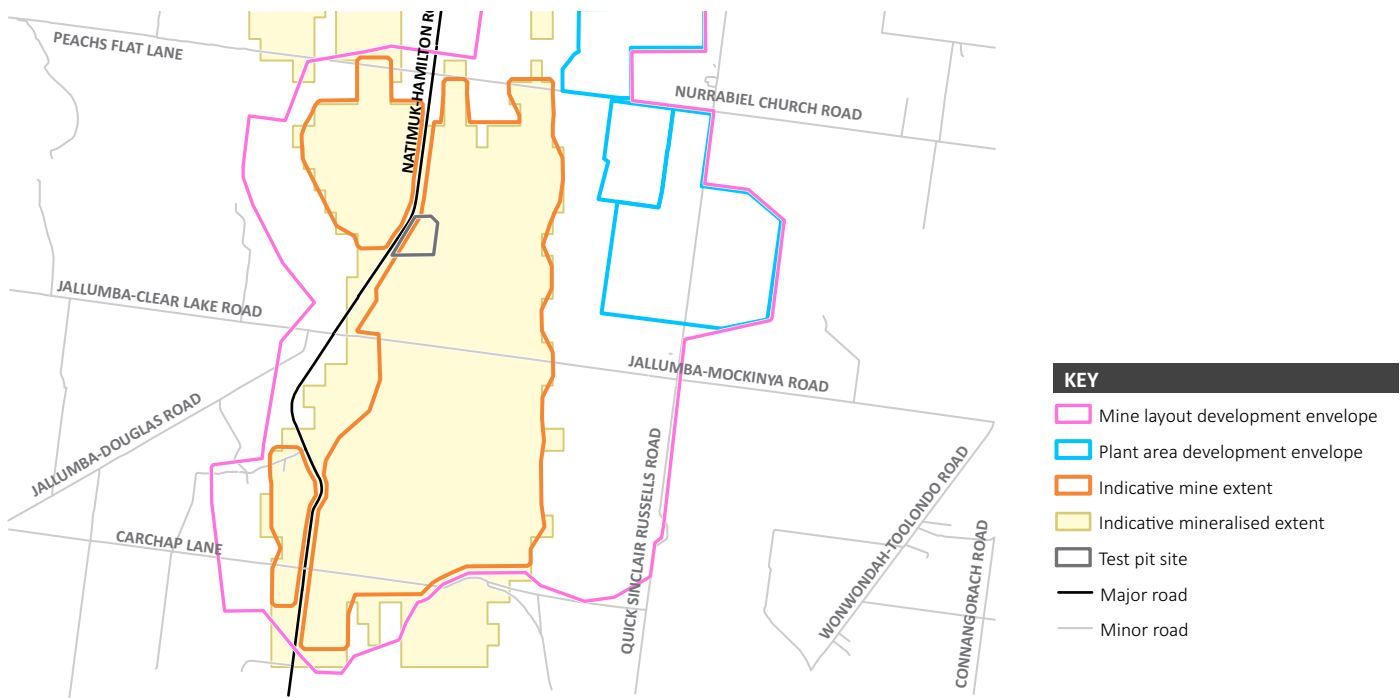
The onsite Project footprint corresponds with the mine layout development envelope and is approximately 3,400 hectares (ha).

Onsite area	Approximate area (ha)	Description
Indicative mineralised extent	1,891	Area comprising the economically extractable mineralised resource.
Indicative mining extent	1,420	The extent of the economically extractable mineralised resource proposed to be mined. The final footprint was selected to exclude areas of environmental value and main transport routes.
Plant area development envelope	500	The development envelope within which the mineral separation plant, zircon refinery, rare earth refinery and supporting infrastructure will be located.
Surface mining infrastructure and stockpiles	1,470	Area comprising ancillary surface infrastructure such as mining unit plant (MUP) pads, mine access and haul roads, stockpiles, water storage dams and public road diversions
Mine layout development envelope	3,400	The Project site corresponds to the mine layout development envelope. This area comprises the indicative mining extent, the plant area development envelope, and additional area associated with surface mining infrastructure and stockpiles.



Assessments for offsite components are still underway and the final footprints are yet to be determined.

The mine layout design and associated footprints may change over time as more detailed environmental or design information becomes available.



## HAVE YOUR SAY

Public comments are invited on the draft scoping requirements in relation to matters that should be investigated and documented in the environment effects statement (EES) process for the proposed Wimmera Project.

The draft scoping requirements are open for public comment until midnight on 31 March 2020.

Any comments received will be considered by DELWP during the finalisation of the scoping requirements and will be treated as public documents. Your comments also will be considered by the proponent in the preparation of the EES. Personal details and identifying features (eg names, addresses and contact details) will be removed before your submission is shared with Iluka Resources Limited. You must provide written consent for DELWP to provide your name and address to Iluka Resources Limited.

Comments should be emailed to: [environment.assessment@delwp.vic.gov.au](mailto:environment.assessment@delwp.vic.gov.au)

Written comments can also be posted to:

Impact Assessment Unit, Planning  
Department of Environment, Land, Water  
and Planning  
PO Box 500, EAST MELBOURNE, VIC  
8002

To discuss the draft EES scoping requirements with Iluka or for more information please contact Iluka:

Phone: 1800 305 993

Visit: [www.iluka.com/engage/wimmera](http://www.iluka.com/engage/wimmera)

Email: [wimmeraproject@iluka.com](mailto:wimmeraproject@iluka.com)

Drop in: Wimmera community drop-in centre at Horsham Real Estate office Tuesdays and Fridays 9.30 am–2.30 pm or by appointment

## What will be the key operational activities

The key operational activities will comprise:

- open pit mining including the removal of and stockpiling of topsoil, subsoil and overburden as well as mine pit dewatering;
- processing and refining of the ore;
- transport of product and by-product within the Site;
- receipt of consumables into the Site;
- backfilling the mine voids with overburden and tailings;
- packaging and transporting of product to port facilities;
- progressive rehabilitation;
- ongoing environmental management, monitoring and reporting; and
- transport of employees to and from the site.

## What is the proposed mining method

The mining method has not been finalised, however it is likely that the deposit will be progressively mined using mobile earthmoving equipment.

It is likely that scrapers will be used for the removal and replacement of topsoil, subsoil, and that bulldozers will be used for overburden removal and replacement. Assessment of options is still underway for the extraction of ore. The mine will progress in strips approximately 75 m wide. The mining void (pit) will be approximately 28 m deep prior to the overburden replacement.

It is estimated that the mine advance rate will be approximately 20 m per day, resulting in an annual pit disturbance area of approximately 30–55 ha. It is anticipated that, on average, a total of approximately 17.0 million m<sup>3</sup> of material will be mined annually.

Further disturbance will be associated with haul roads, stockpiles, surface water management systems and other ancillary supporting infrastructure.

## What will the landscape look like when it is finished

Mined areas will be progressively restored and rehabilitated as the mine advances, with the aim of restoring land to be equivalent to its pre-mining capability, or to another end use as agreed with landholders and regulators.

A draft work plan and associated draft rehabilitation management plan will be prepared and exhibited alongside the EES. The plans will detail Iluka's plans for Site rehabilitation, including what infrastructure will be left onsite (if any), the proposed landform and how Iluka will ensure the landform remains stable, is of an acceptable visual amenity and what measures will be in place to protect public safety.

