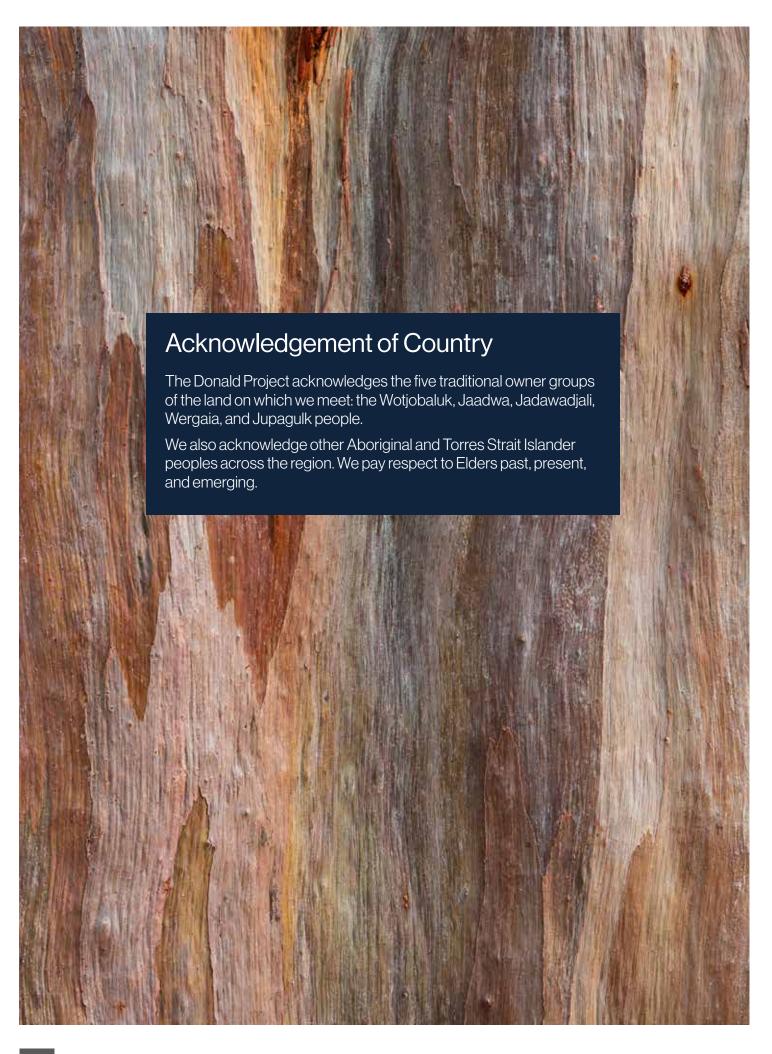


# The Donald Project

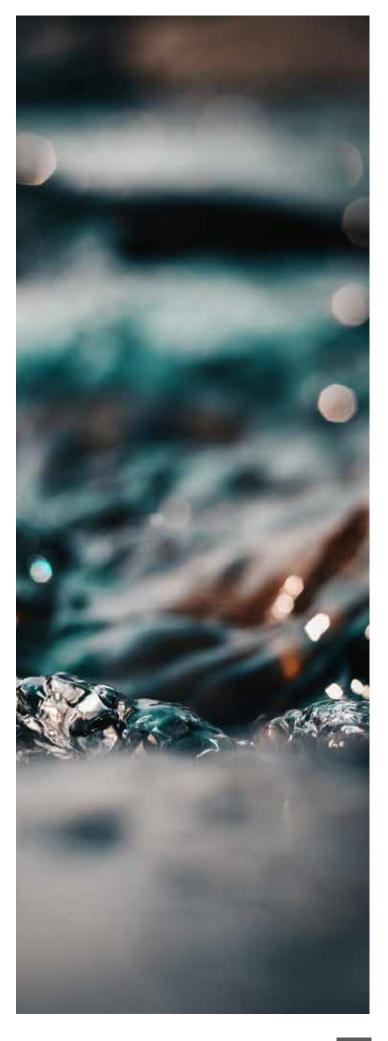
An overview of the Donald Rare Earth and Mineral Sands Project

September 2025



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## Global context

The global push to electrify and reduce fossil fuel use is among the most significant structural changes in global energy markets since the Industrial Revolution.<sup>1</sup>

The transition to a more sustainable world relies increasingly on critical minerals. A single electric vehicle requires six times the mineral inputs of a conventional car, including lithium, nickel, cobalt, and rare earth elements. This unprecedented demand is reshaping global supply chains and international relations, as nations compete to secure access to these essential resources.

The challenge extends beyond supply. Developing sustainable and ethical mining practices, while meeting soaring demand, will be crucial to ensuring the energy transition delivers on its promise of environmental stewardship.

In a sign of the growing importance of sovereign minerals sands deposits, the Victorian Government released its <u>Critical Minerals</u> Roadmap in December 2024.

"By investing in critical minerals, we're not just building an industry – we're shaping a prosperous, sustainable future for all Victorians, with lasting social and economic benefits for our regional communities and Traditional Owners."

- The Hon. Lily D'Ambrosio MP, Minister for Energy and Resources.

# The Donald Project

The Donald Rare Earth and Mineral Sands Project (the Donald Project) is near Minyip, in the Wimmera region of Victoria, about 300 km north-west of Melbourne.

Discovered in the 1980s, the minerals in this globally significant resource are in demand for their applications in everyday life. Those applications span industries and high-tech applications, including:

- Ceramics
- Paints, tiles, toothpaste, cosmetics
- Biomedicine
- Energy generation
- Aerospace

With a multigenerational project lifespan, the Donald Project promises long lasting economic and social benefits to the region, including jobs, investment, and growth.

Estimates suggest the project will:

- Increase net gross regional product by \$200 million a year
- Create more than 600 jobs
- Boost investment in local communities and infrastructure

Astron Limited and US-based critical minerals producer Energy Fuels Inc have formed a joint venture to develop the Donald Project. The joint venture is Donald Project Pty Ltd, trading as Donald Mineral Sands (DMS).

# Location and composition

The 28 km<sup>2</sup> tenement is about 15 kms east of Minyip. The land area is currently arable and mixed-use land.

DMS manages the Donald deposit licences, which include:

- Mining Licence MIN5532 (2,778.54 ha)
- Retention Licence RL2002 (24,371 ha)

DMS will develop the Donald deposit in two phases. Phase 1 is MIN5532. Phase 2 is the potential future development of RL2002 (only the hashed area on the tenement map on page 6; less than half the total Retention Licence area).

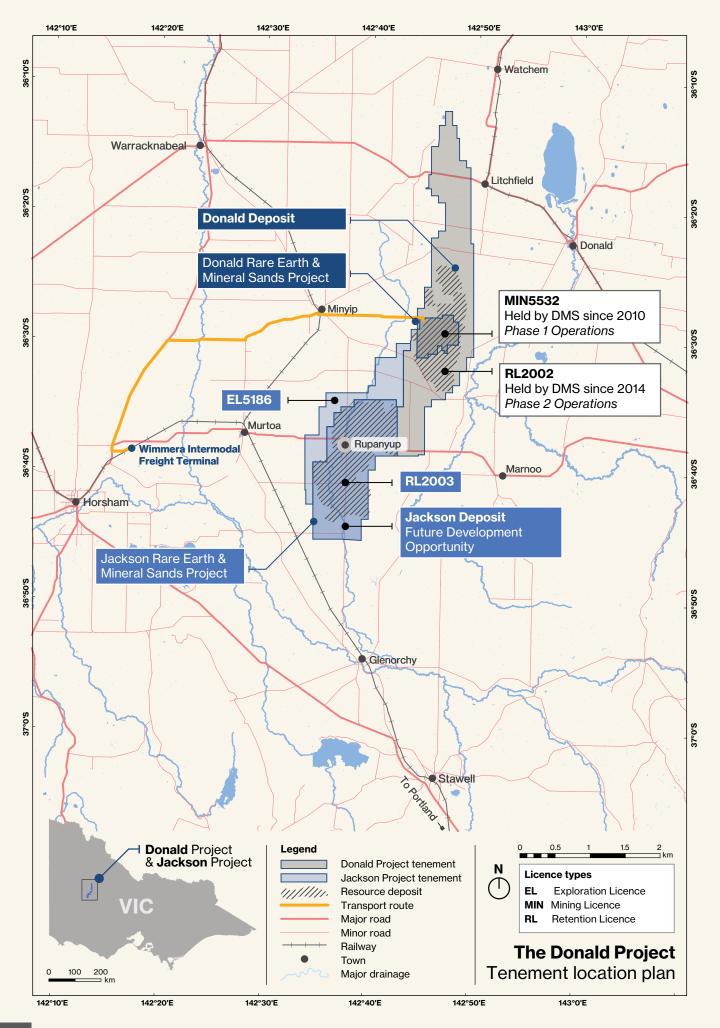
To develop RL2002, we would need to convert the Retention Licence to a Mining Licence. That would only happen after securing the necessary extensive planning, environmental and heritage assessment, and approvals. The process is rigorous. Under one per cent of exploration projects become an active mine (Resources Victoria).

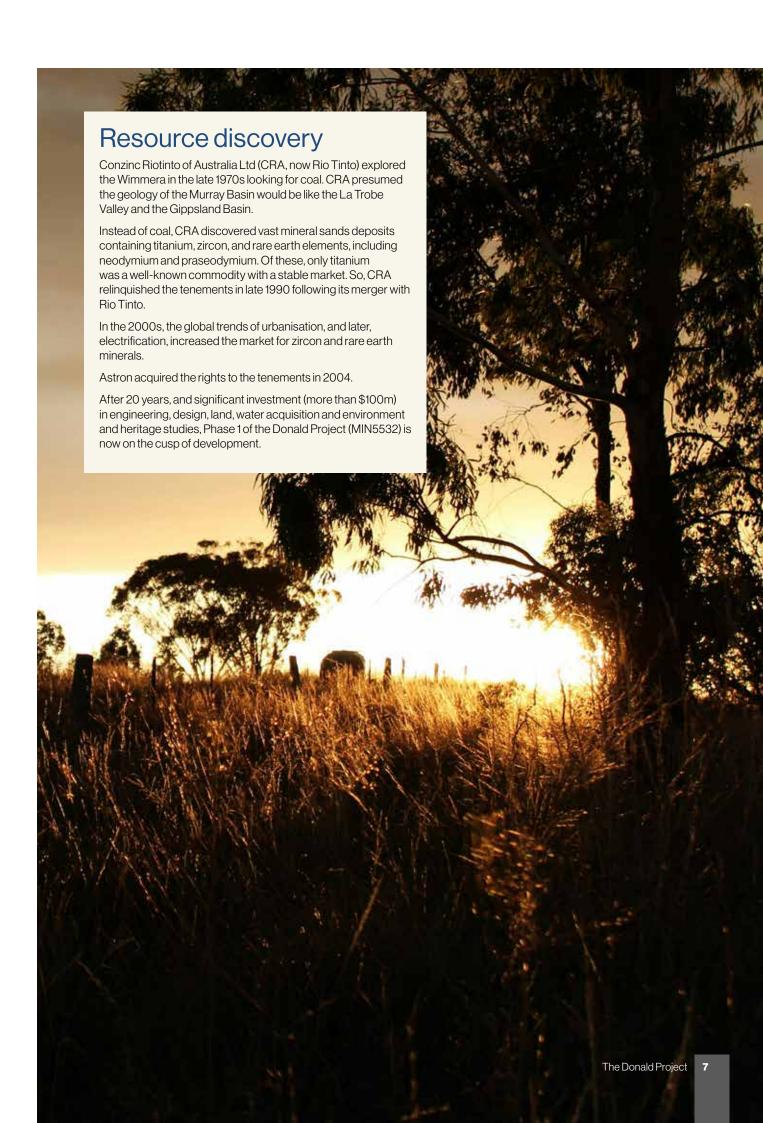
A separate entity, wholly owned by Astron Corporation, Jackson Mineral Sands (JMS), will manage the Jackson deposit licences, which include:

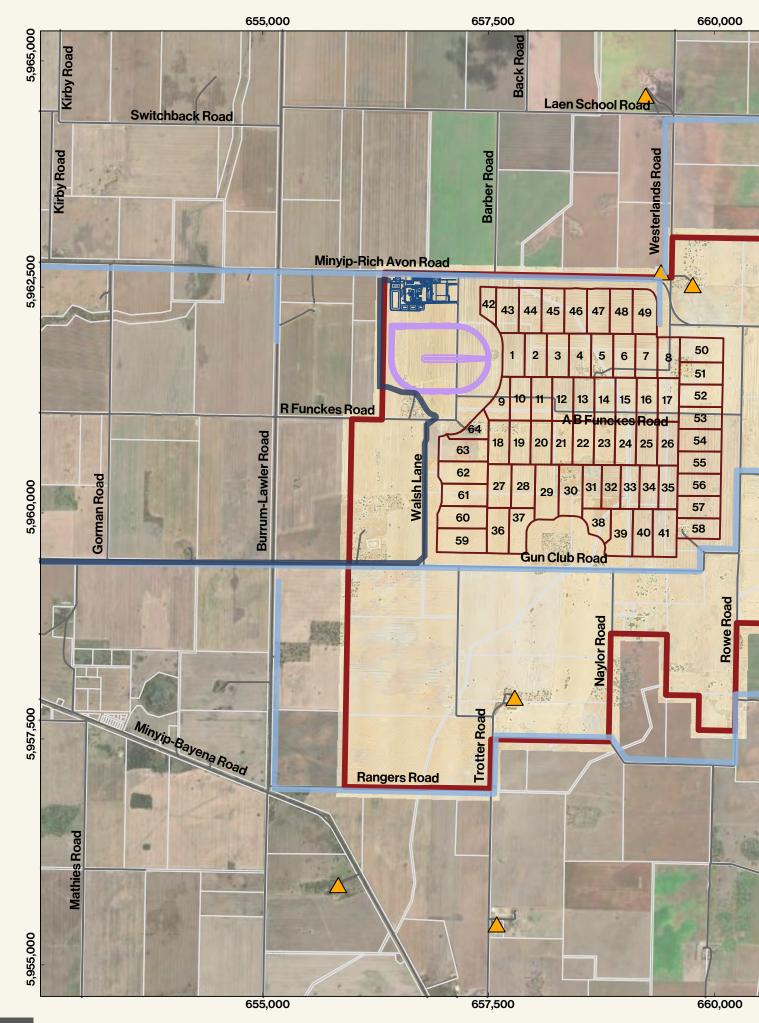
- Retention Licence RL2003 (16,230 ha)
- Exploration Licence EL8516

The Jackson deposit is a potential future development opportunity. It, too, would be subject to conversion to a Mining Licence and the necessary planning, environmental and heritage assessment, and approvals.







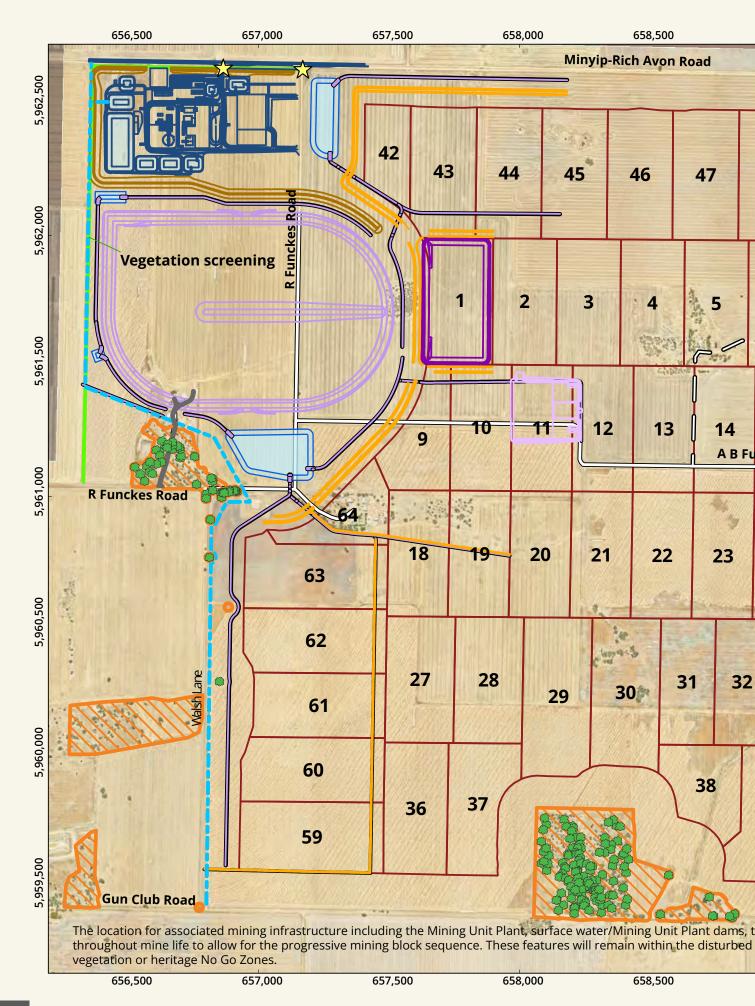


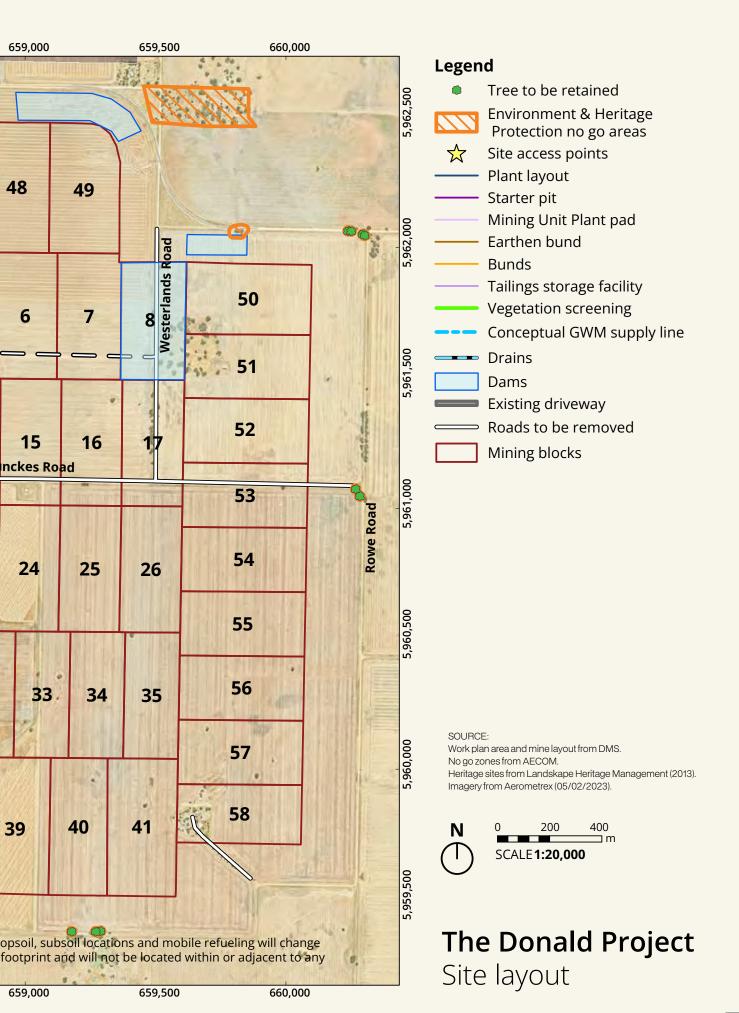


665,000

662,500

# The Donald Project Mining licence area





## What are mineral sands?

Mineral sands are ancient beach, river, dune sands or seabeds containing valuable mineral deposits. They originally formed as crystals in igneous rocks, such as granite or basalt and some metamorphic rocks.

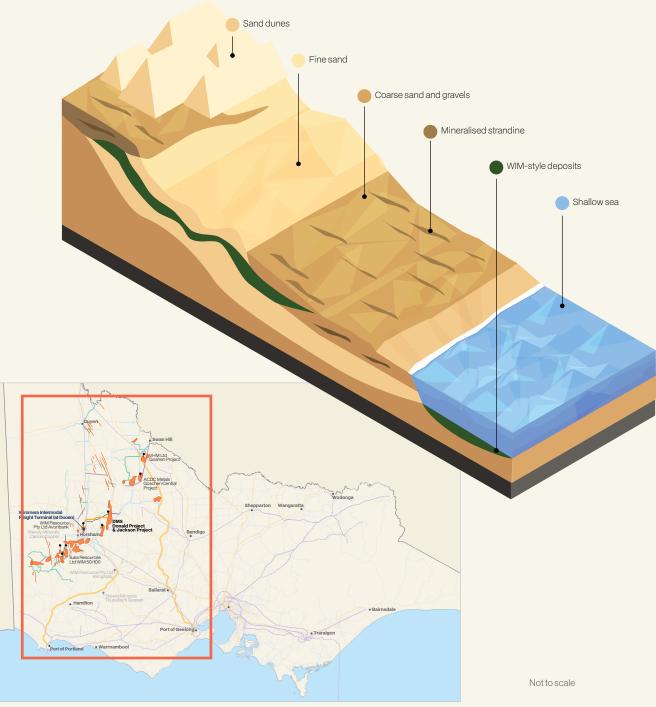
Wind, rain, and rivers eroded these minerals over millions of years. The resulting grains washed down to the sea to become part of the coastal sands of ancient beaches.

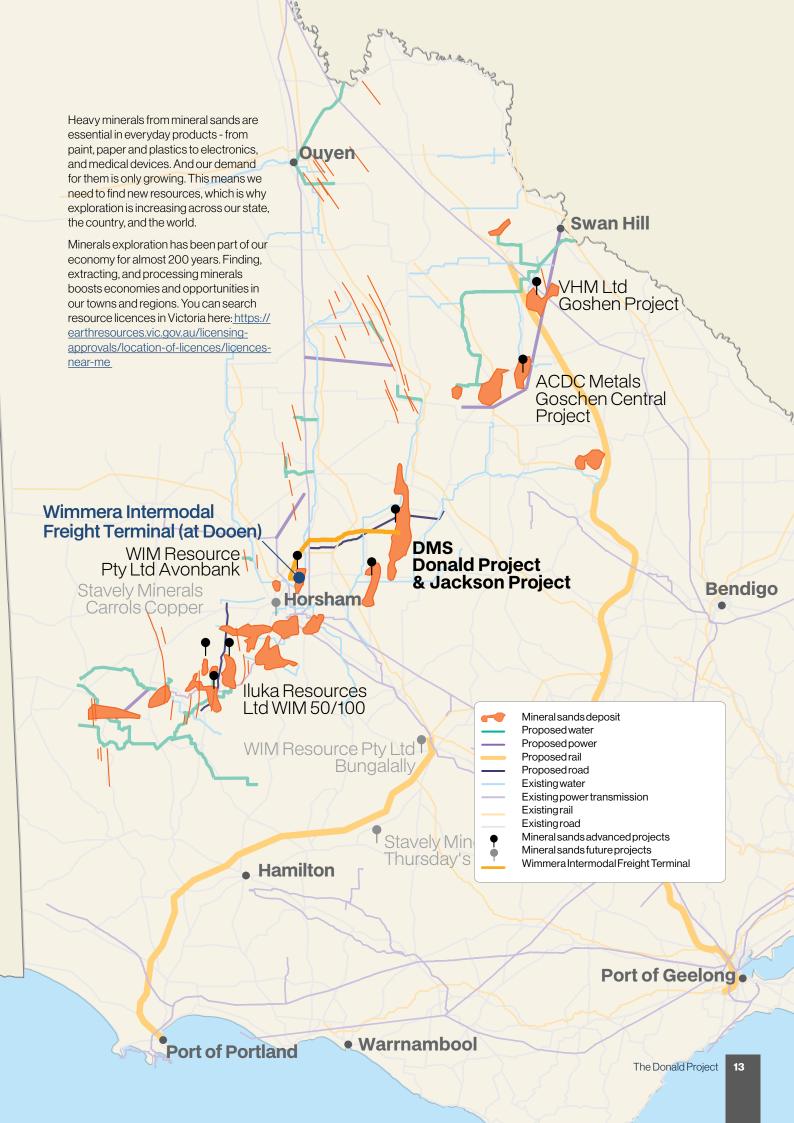
When the world's oceans receded, including the prehistoric seas that covered vast stretches of Victoria, they left these deposits exposed far from today's coastlines.

Two major geological basins shaped where we find mineral sands today. The Murray Basin stretches across north-western Victoria from the South Australian border towards Echuca and Shepparton, with the western Victorian highlands marking

its southern edge. This basin continues north into New South Wales and west into South Australia. The Gippsland Basin lies in Victoria's south-east, extending from east of Melbourne to the state border and south into Bass Strait, with the Great Dividing Range forming its northern boundary.

These ancient seabeds host significant mineral sand deposits. In the Murray Basin, Wimmera-style (WIM-style) deposits like the Donald Project are large deposits of fine-grained minerals that formed 7.2 to 4.5 million years ago during the late Miocene to Pliocene ages. They are different from the smaller, typically higher grade and coarser grained strandline (shoreline or beach) or dunal (dune) deposits.





# What mineral sands contain

Heavy mineral sands contain three core product streams, with many applications:

- 1. Heavy Mineral Concentrates (HMC)
  - Titanium minerals (ilmenite, leucoxene, rutile)
  - Zircon
  - Magnetite and other iron-bearing minerals
- 2. Rare Earth Element Concentrates (REEC)
  - Monazite
  - Xenotime
- 3. Secondary minerals and other components
  - Alumina-silicates
  - Garnet
  - Staurolite

Rising household income, increasing population, and growing consumption are driving demand for goods using these products.

#### **Titanium applications**

Manufacturers use more than 90% of the world's titanium to produce titanium pigment (high purity TiO2) — a crucial ingredient of paint. Cosmetic products such as lipstick and sunscreen also contain the pigment, which helps block damaging ultraviolet light.

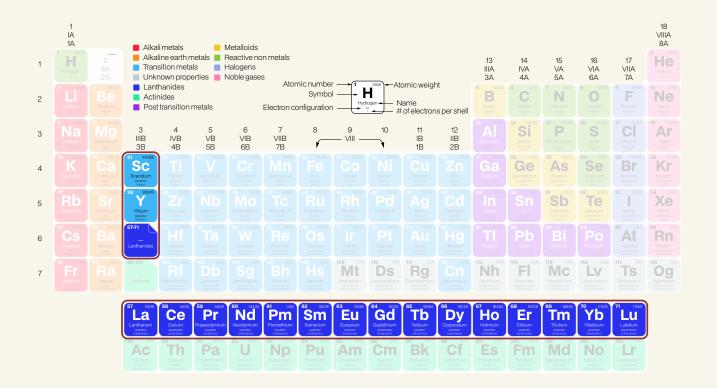
Titanium is in sports equipment, such as golf clubs and bike frames.

High-tech applications also incorporate titanium. For example, titanium metal in aeroplanes, medical devices, 3D-printing (e.g. medical grade implants), welding rods, and rockets (e.g. satellite frames and rocket castings).

#### **Zirconium applications**

The zircon market spans multiple high-value sectors: ceramics (tiles, sanitaryware, and household appliances), specialty chemicals (deodorants, protective coatings, and medical implants), and foundry applications (precision metal casting and additive manufacturing).

Beyond these traditional uses, zircon will play a crucial role in emerging technologies. Notably, we expect next-generation solid-state batteries, which promise to revolutionise energy storage and enable longer-range electric vehicles, to incorporate zirconium and lithium metal alloys in their design.



# Rare earth elements

Rare earth elements (REEs) comprise 17 elements of the lanthanide series. Despite their name, they are not rare – but finding them in economically viable concentrations is. The Donald Project's Rare Earth Element Concentrates (REEC), derived from monazite and xenotime, are rich in four critical rare earths:

- Neodymium (Nd)
- Praseodymium (Pr)
- Dysprosium (Dy)

Rutile (TiO<sub>2</sub>)

Ilmenite (FeTiO<sub>3</sub>)

Terbium (Tb)

Rare earths have diverse applications.

They are essential for permanent magnets, electric vehicles, and renewable energy technologies. They are found in consumer electronics, from phones and tablets to laptops. For example, samarium cobalt magnets remain magnetic at high temperatures, enabling manufacturers to miniaturise electronic devices.

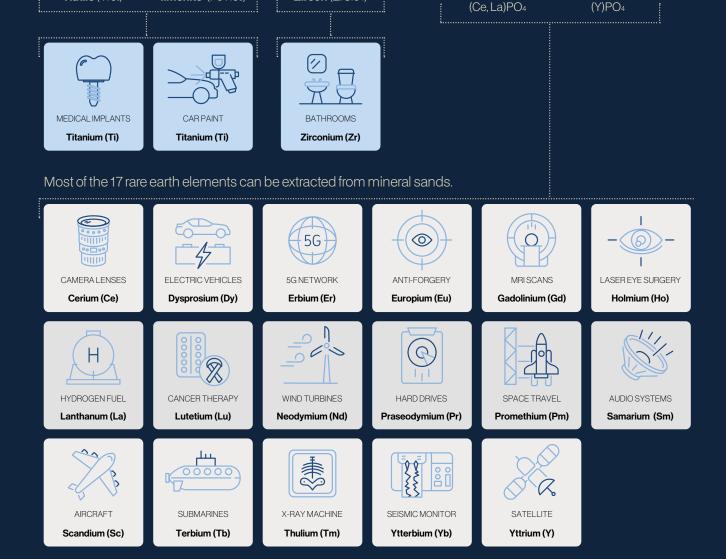
The importance of rare earth elements has grown with the acceleration of electrification and renewable energy development. Rare earth magnets, particularly neodymium and praseodymium (NdPr) magnets, are crucial components in both electric vehicle motors and wind turbines.

Australia's commitment to achieving net-zero emissions by 2050 and Victoria's aim to achieve 95% renewable energy generation bolsters the need for domestic minerals production.

Zircon (ZrSiO<sub>4</sub>)

Monazite

Xenotime



# Mining in Victoria

In Victoria, mineral resources under the land surface belong to the state (the Crown) be they on private, commercial, or government land. Ownership of the minerals changes hands if the government grants a mining licence to a mining company. On extraction, minerals become the extractor's property.

In return, under the *Mineral Resources (Sustainable Development)* Act 1990 (MRSDA), the mining licence holder must pay royalties to the state government for the right to extract these minerals. In Victoria, this is set at 2.75% of the net market value of the minerals produced.

Minerals exploration in Victoria is carefully regulated. More than 20 laws apply to exploration and mining. These laws protect landowners' rights, the environment, Indigenous heritage, water, land, Native Title, plants and animals, biodiversity, and water catchments.

This strict regulatory framework combined with the preoperational developmental expense make converting an exploration licence a long and challenging process. Less than one per cent of exploration projects typically progress to establishing a mine, according to Resources Victoria. This reflects the challenging nature of mineral exploration and the complex geological conditions that must align for commercially viable deposits.

# Licence types

#### **Exploration**

An exploration license grants the holder exclusive rights to explore for specific minerals within the designated licence area. Importantly, this does not automatically guarantee physical access to the land. Licensees must still obtain the necessary permissions from landowners and relevant authorities.

While exploration licenses often encompass large areas, the actual exploration activities typically focus on small, targeted locations within these areas. This targeted approach helps minimise environmental impact and optimise resources. If a licence holder finds mineral resources, it may then apply for a mining licence.

#### Retention

A retention licence is suitable where a mining company has identified a mineral resource, but the resource is not yet commercially viable to mine though it may be in the future. Or the mining company needs the resource to support an existing mining operation in the future.

Exploration and retention licences do not permit mining activities.

#### **Mining**

A mining licence holder is entitled by government to mine the land the licence covers, explore for minerals, and build mining facilities related to the mining operation.

For the different licence types we hold, please refer to the tenement map on p6.



# Approvals and regulation

In June 2025, the Victorian Government approved the comprehensive Donald Project Work Plan—the final major regulatory milestone permitting DMS to develop the resources. Following Work Plan approval, the next step is a Final Investment Decision by the joint venture. Subject to a positive decision, construction and operation would follow.

#### Completed regulatory approvals

Key approval requirement	Completed
Work Plan Approval	$\bigcirc$
Environment Effects Statement	$\bigcirc$
Commonwealth EPBC Act Approval	$\bigcirc$
Mining Licence MIN5532	$\bigcirc$
Water Rights	$\bigcirc$
Cultural Heritage Management Plan	$\bigcirc$
Radiation Management Licence	$\bigcirc$

Since the Victorian Government approved our Environment Effects Statement, we have reassessed the project's environmental impact using current methods and standards. Our studies show the project's effects are the same or less than originally predicted. Our environmental management plans align with current laws and industry best practices.

We have planned the location and layout of mine infrastructure to minimise disturbance of sensitive areas, including native vegetation (e.g. remnant Buloke woodland), historic heritage and cultural heritage. We have also developed detailed plans to manage and mitigate potential impacts, including transport, noise, and dust. Please refer to our *Environmental Management* fact sheet for more information about our approach.

We continue to engage with landowners, community organisations, the Barengi Gadjin Land Council, and state, federal, and local governments to communicate effectively, manage impacts, and maximise community benefits.



# Mining and rehabilitation

We will use the 'moving hole' technique to extract the ore, dividing the site into numbered blocks, 500m by 200m long. That means we will be mining one set of blocks, while rehabilitating previously mined blocks, and preparing the next for extraction. By choosing this approach, we allow for progressive rehabilitation, while minimising dust and land impacts.

#### 1. Excavate the mining area

Use conventional excavation equipment to carefully remove vegetation, topsoil, subsoil and overburden (the last layer of rock and soil before the ore).

#### 2. Store excavated materials

Separately stockpile topsoil, subsoil, and overburden onsite. When we have removed the ore, we can then refill the excavated area in soil layer order.

#### 3. Dewatering the pit

About 80 per cent of the ore lies below the groundwater table. We will install dewatering wells around the first mine blocks six months before mining begins. The groundwater we recover will be hypersaline and unsuitable for agricultural use. We will store it in an onsite dam to use in processing. The nearest registered groundwater users with stock/domestic bores are about 20 km east of our site.

#### 4. Mine the ore

We will mine the ore using ordinary excavation equipment (e.g. diggers and dump trucks). We will stockpile mined ore at surface level before feeding it into a Mining Unit Plant (MUP), which screens, and slurries (mixes with water) the ore, removing oversize material. From the MUP, we will pump the wetted ore on for further processing.

#### 5. Store and process tailings

The valuable material (HMC or REEC) left after processing will be about three per cent of what we dig up. The remaining commercially valueless material, known as tailings, is mainly quartz sand and clay.

GWMWater pipeline

Enclosed tailings pipe

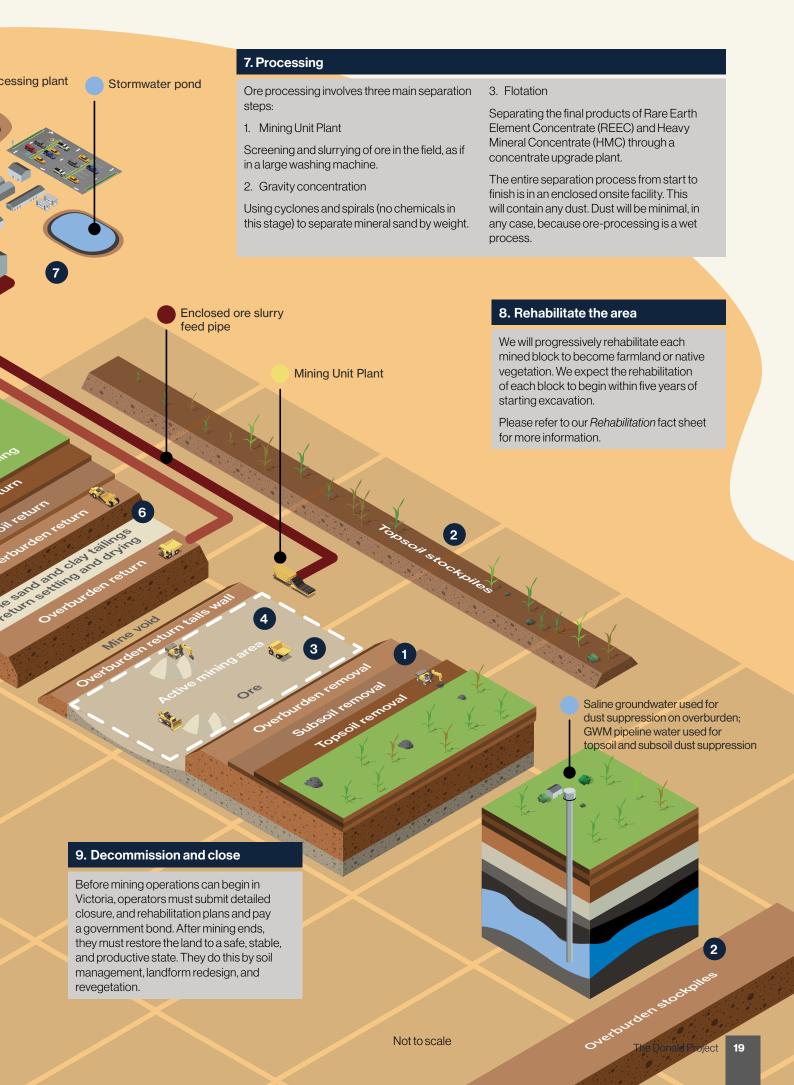
Pro

8

Before we establish the first mine void to receive tailings, we will store the initial tailings in an above-ground tailings storage facility (TSF), an earth-fill embankment, for about 12 months. Later, we will pump the tailings into successive mine voids.

#### 6. Backfilling the void

We will return tailings, overburden, subsoil, and topsoil to the mined area, ready for rehabilitation.



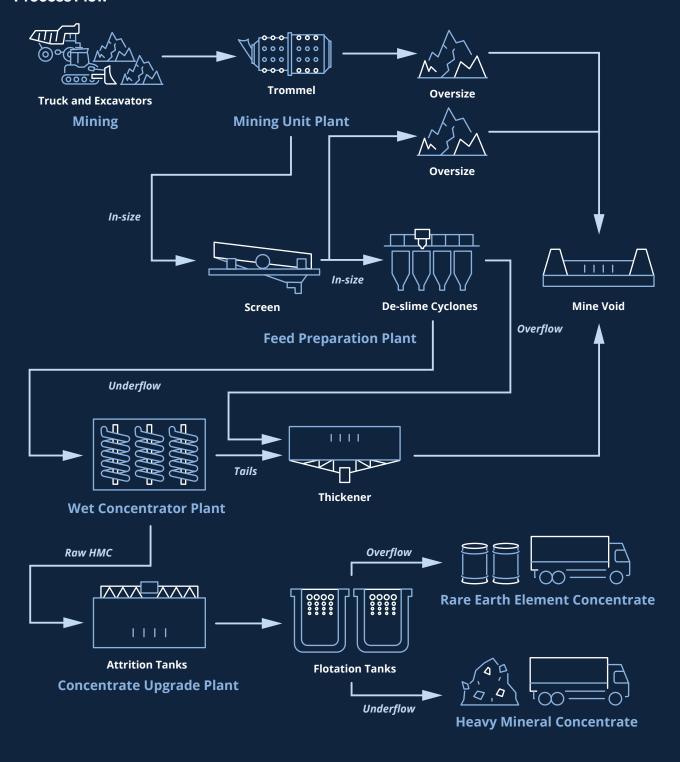
# **Processing**

Ore processing involves three main separation steps:

- 1. Mining Unit Plant: Screening and slurrying ore in the field, as if in a large washing machine.
- 2. Gravity concentration: Using cyclones and spirals to separate mineral sand by weight.
- **3. Flotation:** Separating the final products, REEC and HMC, through a concentrate upgrade plant.

The whole separation process is within an enclosed area to manage noise and dust.

#### **Process Flow**





#### **REEC Product Transport**

- Product is transported at 7% moisture
- Average 1 truck a day leaving site to the Wimmera Intermodal Freight Terminal (WIFT)
- Transported by truck to Port of Adelaide
- · Loaded on ship to USA
- Class 7 material transported in accordance with laws and regulations

#### **HMC Product Transport**

- Product is transported at 7% moisture
- Average 16 trucks a day leaving site to the WIFT
- Transported by rail to Port of Portland
- Loaded on ship to China

# Water supply and management

We bought a water entitlement from GWMWater in 2011, drawn from savings the Wimmera Mallee Pipeline project created. We will build an 11km pipeline from Minyip Rural Pump Station (near the corner of Stawell-Warracknabeal Road and Rupanyup-Boolite Road) along Gun Club Road to our mining site (MIN5532) off Walsh Lane.

In November 2024, we finished the first stage of the pipeline. This included the connection and first 80m of pipe along Minyip-Banyena Road and Gun Club Road. We will build the rest of the pipeline in 2025. GWMWater confirms other customers' water supply and pressure will stay the same.

We designed our plant to reuse water where possible. To use less GWMWater supply, we will also use:

- · Groundwater from the site
- Water from the ore
- Rainwater we collect onsite

The groundwater is too salty for farming. The closest farms using groundwater for stock and homes are about 20km east of our site.

We will manage onsite water through dams, banks, and channels that follow best practice design and layout. We will direct clean

rainwater away from work areas using channels and raised earth barriers. We will collect water, which contacts disturbed areas, in our dams. Our work will not affect any important waterways.

For more information about how we will manage water, please read our *Water* fact sheet.



#### How the site will look

The below rendering shows the view of the planned Donald Project site from the intersection of Minyip Rich Avon Road and Burrum-Lawler Road, looking east across farmland. The processing plant is on the left, the Tailings Storage Facility (TSF) on the right.

We will minimise visual impact on the surrounding landscape by:

- Locating the processing plant away from major roads and residential areas
- Establishing native vegetation screens around both the plant and TSF

Our design integrates the infrastructure into the existing agricultural landscape, where screening elements provide visual buffering from 1.1 kms. As Minyip Rich Avon Road is a local road with low traffic volume, the overall visual impact on the community will remain limited.



# **Transport**

Project trucks will follow approved heavy vehicle routes along Minyip-Rich Avon Road, connecting to Donald-Murtoa Road, Horsham-Minyip Road, and the Henty Highway.

HMC trucks will travel to Dooen's Wimmera Intermodal Freight Terminal (WIFT) for rail transport to Portland, while REEC trucks will go to the Port of Adelaide.

Construction will require 5-15 daily truck movements. During operations, we will need 16 return HMC truck movements daily (fewer than three per hour over 12 hours) and one REEC truck every second day.

We will store HMC and REEC in an enclosed facility and transport them in sealed, labelled shipping containers, with multiple weighing checks to ensure compliance.

Road improvements will include:

- Upgrading the six-ways intersection of Minyip-Rich Avon, Johnston, Stawell-Warracknabeal, Golf and R Learmonth roads
- Creating two site access points on Minyip-Rich Avon Road
- Widening Minyip-Rich Avon Road from Stawell-Warracknabeal Road to site
- Widening and paving Johnston and C Leach roads
- Improving intersections at C Leach Road/ Donald-Murtoa Road and Henty Highway/ Horsham-Minyip Road

Community protection measures will include:

- No transport during school drop-off/pick-up times
- Daytime-only operations
- Routes avoiding Minyip's centre
- No engine brakes or high beams in residential areas
- Speed restrictions on project vehicles
- Council road maintenance funding
- Complying with Country Fire Authority directions relating to Fire Danger Periods and Total Fire Bans and using only established roads (sealed or unsealed).

A transport working group with council, transport department and emergency services representatives will meet regularly to monitor these arrangements during construction and operation.





# Managing naturally occurring radioactive material

#### **Exposure levels**

We are all exposed to low levels of radiation every day from natural and medical sources. The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) reports Australians receive 1.5 millisievert (mSv) each year from natural sources.

The ore we extract from the Donald Project site will contain traces of naturally-occurring radioactive materials (NORM). While these materials contain ionising radiation present in all soils and rocks, mineral sand deposits contain a slightly higher concentration. However, the exposure risk remains very low and comparable with background and medical radiation exposure, even before we implement site controls.

Under the most conservative assumptions, the maximum annual dose at the mine site boundary measures 0.025 millisievert (mSv) - a fraction of the regulatory limit for public exposure above background (1 mSv) and average background radiation in Australia (1.5 mSv).

#### Mineral sands not uranium

We will mine mineral sands, not uranium, though all soils naturally contain trace uranium. The material we mine will contain about:

- 9 parts per million (0.0009%) uranium by weight
- 28 parts per million (0.0028%) thorium by weight

These levels are well below the limits set in Victoria's *Nuclear Activities (Prohibitions) Act* 1983:

- Uranium: 0.02% by weight (project levels are 22 times lower)
- Thorium: 0.05% by weight (project levels are 18 times lower)

You can find more information about NORM across different industries and products, including building and agriculture, here: <a href="https://world-nuclear.org/information-library/safety-and-security/radiation-and-health/naturally-occurring-radioactive-materials-norm">https://world-nuclear.org/information-library/safety-and-security/radiation-and-health/naturally-occurring-radioactive-materials-norm</a>.

Our factsheet, Radiation, contains more information.

## Rehabilitation

We will implement a comprehensive land rehabilitation approach on the Donald Project site. The site covers 2,778 hectares (equivalent to about three average-size farms).

Restoring the land to a safe, stable, and productive state after mining will involve careful soil management, landform redesign, and revegetation. While early rehabilitation of a 2018 test pit has been successful, we will employ a more sophisticated approach developed through ongoing research and industry best practice.

Before mining begins, the team will conduct detailed soil analysis. The project will progressively rehabilitate the site, maintaining about nine active mining blocks of 250m by 500m. During operations, we will use GPS-guided precision equipment to remove and store soil layers separately, later carefully replacing them in their original sequence.

We aim to return each rehabilitated block to productive farmland within five to 10 years, followed by regular monitoring of soil conditions and crop yields. The project team will collaborate with government bodies, educational organisations, and community stakeholders to continually enhance our rehabilitation techniques.

Under Victorian law, no mine operation can begin without a detailed closure plan, rehabilitation plan, and payment of a government bond, which the Earth Resources Regulator reviews annually to ensure it covers third-party rehabilitation costs if an operator defaults on obligations.

For more information about our rehabilitation approach, please refer to our *Rehabilitation* fact sheet.

# Shared benefits

We are committed to sharing prosperity with the region during and after mining and leaving a positive legacy beyond the mine life

The Donald Project will generate significant economic and social benefits across the Wimmera region over its 42-year lifespan.

Our operations will create more than 600 local jobs and contribute more than \$200 million annually to the region's economy. Working with local communities, we will support regional development through training, business partnerships, and community investment. We will share information, address concerns, and earn trust and confidence.

For more about how the Donald Project will benefit the region, please read our *Community Benefits* fact sheet.

# The Donald Project: Investing in the Wimmera

With a multigenerational lifespan, the Donald Project promises long-lasting economic and social benefits to the region, including jobs, investment, and growth.





The total deposit contains an estimated

2.4 billion

tonnes of ore.



Investment of a total of approximately

\$470 million

to develop the Donald Project.



536 FTE

average increase in FTE employment per year in the local project region.

invest about



## \$4.3 billion

in operational and sustaining capital expenditure to operate the mine.



# \$2.2 billion

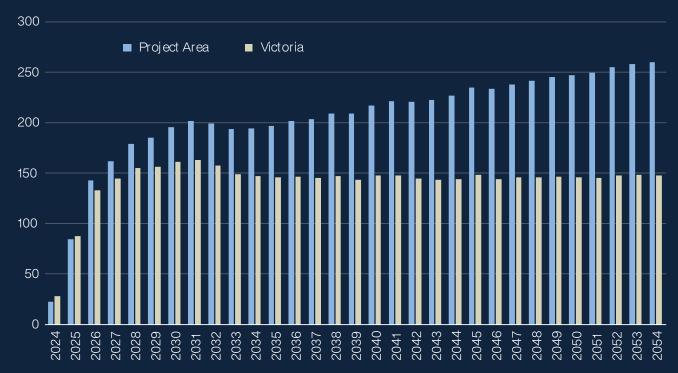
net increase in gross regional product (GRP) within the local project region.



# \$205 million

average annual increase in value over 30 years.

Economic analysis indicates the Donald Project will create substantial economic benefits for the region and beyond.



Source: Deloitte Access Economics: Economic Impact of the Donald Rare Earths and Mineral Sands Project, December 2022.



A community partnerships initiative, which involves voluntary funding for initiatives co-developed with the community. Initiatives may include

scholarships and vocational training, support for regional events and organisations, local business development, and community development projects.



Improved infrastructure, including housing, road upgrades, water services



Support and investment in local suppliers, community facilities, and services



Partnerships with regional institutions to upskill coming generations.

# Community engagement

The Donald Project is in the heart of a proud, pioneering, and close-knit agricultural community. We understand a new industry naturally raises questions and concerns.

We have been – and will continue to be - an active, contributing member of this community. We are committed to maximising regional benefits through responsible operations, careful impact mitigation, and thorough post-mining land rehabilitation.

We are reviewing our social impact assessment to better understand and address potential effects on the local community. This process involves ongoing engagement with community members, councils, businesses, and advocacy groups. Their valuable input has already been instrumental in shaping our work plans and strategies. And we welcome ideas for our community partnerships initiative.

Our project's success depends on meaningful engagement with residents and stakeholders. As our project evolves, we will maintain an open dialogue with landowners, Wimmera communities, and local organisations.

As a long-life project, DMS will provide new opportunities across generations for locals to stay in or return to the region – and for new people to settle here. In turn, this will significantly increase economic activity in the region, spur investment, and draw a wider range and quality of services.

#### **Engagement channels**



Drop-in community information sessions



Open feedback channels (e.g. phone, email, social media, office)



One-to-one and small group meetings



Pop-up stalls at local events



Coffees on us around the district



**Environment Review Committee** 



Periodic community newsletters





#### Have your say

The Donald Project is a significant opportunity for the Wimmera region of Victoria.

With its potential to create jobs, stimulate local economic growth, and contribute to the global supply of critical minerals, the project aims to balance economic development with environmental responsibility and leaving an enduring positive impact in the area.

To stay informed about the Donald Project and to engage with us in shaping its future, please contact us:



#### Contact us

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