

Project Update 1 - March 2022

Despite disruption across Victoria from the COVID-19 restrictions throughout 2021, VHM Limited (VHM) has been able to safely continue developing its plans for the Goschen Mineral Sands and Rare Earths Project. We are pleased to provide our first project update for 2022 and we will continue to provide regular project updates throughout the year.

Goschen Project redefined

Since October 2018 when the Minister for Planning determined that an Environment Effects Statement (EES) was required under the Environment Effects Act 1978 (the Act) for the Goschen Project, and the release of the Scoping Requirements in 2019, further work undertaken by VHM has determined the original project presented in 2018 will be redefined.

The key drivers for refining the project include:

- Meeting obligations of the Act's General Environmental Duties (GEDs) to minimise key environmental impacts to the extent reasonably practicable
- Limiting the project footprint to two key areas
- Financial viability – the project has been re-scaled to fix ore throughput at 5 Mtpa for approximately 20 years, and introduced additional on-site processing of rare earth minerals

A number of material risks have been eliminated or minimised as a result of the project refinements. These include:

- No dewatering is required – all mining will occur above the water table
- Avoiding all significant remnant patches of native vegetation
- Reducing air and noise emissions with the limited mine footprint

- Avoiding any culturally-sensitive sites with the limited mine footprint - therefore a complex assessment is not required
- Eliminating the need for a Tailings Storage Facility (TSF) – tailings and process waste will be homogenised and placed back into the mine void
- No radioactive classified material from site - additional processing on site to generate higher value products
- Water supply limiting the plant throughput at 5 Mtpa - sourcing water from the Murray Darling Basin system from Kangaroo Lake via a pipeline to site

Over the next few months VHM's team will be out and about across the Gannawarra and Swan Hill regions and available to discuss these project refinements. Keep an eye out for advertisements in local newspapers and on our **website: vhmltd.com.au** to see where VHM will have a pop-up information stand or dates and venues for upcoming drop-in information sessions.

At a glance, the key changes to the Goschen project description are summarised below

	2018 Referral	2022 Optimised project for EES
Target minerals	Mineral sands and rare earth	No change
Ore reserve	198.7 Mt	198.7 Mt
Project area	8,300 hectares	1,479 hectares
Project life	30 years	~20 years
Processing throughput	5-10 Mtpa	5 Mtpa (+/- 10 percent)
Processing	Mining Unit Plant (MUP) Wet Concentrator Plant (WCP) Mineral Separation Plant (MSP)	Phase 1: <ul style="list-style-type: none"> • Mining Unit Plant (MUP) • Wet Concentrator Plant (WCP) • Rare Earth Mineral Concentrate (REMC) Flotation Circuit • Hydrometallurgical Facility Phase 2 – as per Phase 1 plus: <ul style="list-style-type: none"> • Mineral Separation Plant (MSP) • Chrome removal flotation circuit
Products	Zircon and rutile concentrate Titanium concentrate Rare earth concentrate	Phase 1: <ul style="list-style-type: none"> • Zircon/Titania Heavy Mineral Concentrate (HMC) • Mixed rare earth carbonate concentrate Phase 2: <ul style="list-style-type: none"> • Premium zircon • Zircon concentrate • HiTi/Rutile • HiTi Leucoxene • LoTi Leucoxene • Low chrome Ilmenite • Mixed rare earth carbonate concentrate
Dewatering	Mine pit dewatering	Removed – no groundwater dewatering Dewatering limited to tailings in pit
Water supply	Untreated rural water supply from Murray River and groundwater from local bore field	Pump station at Kangaroo Lake (Goulburn Murray Water) with 37-kilometre water supply pipeline
Water requirements	Up to 5.5 GL/annum	4.7 GL/annum
Transport of products	Rail or road transport	No change
Power	Under investigation – access to high voltage transmission, solar or on site power station	Dual fuel on site generators with future ambitions to utilise solar power – diesel and gas (with LNG storage)
Port	To be determined	Port of Melbourne (current preferred)

Contact us

We encourage you to provide feedback and direct any enquiries to:

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