



The Sandy Ridge Proposal

Tellus is seeking planning approval from the Western Australian and Federal Government to construct and operate the proposed dual revenue Sandy Ridge Facility (the 'Facility' or the 'Proposal'). The Facility would involve:

1. Mining, processing and export of kaolin clay average depth of about 23 metres (see figure above).
2. Long term storage, recovery or permanent isolation of hazardous and intractable chemical wastes and low level radioactive wastes, such as smoke detectors and fire alarms, into the void spaces created by the mining.

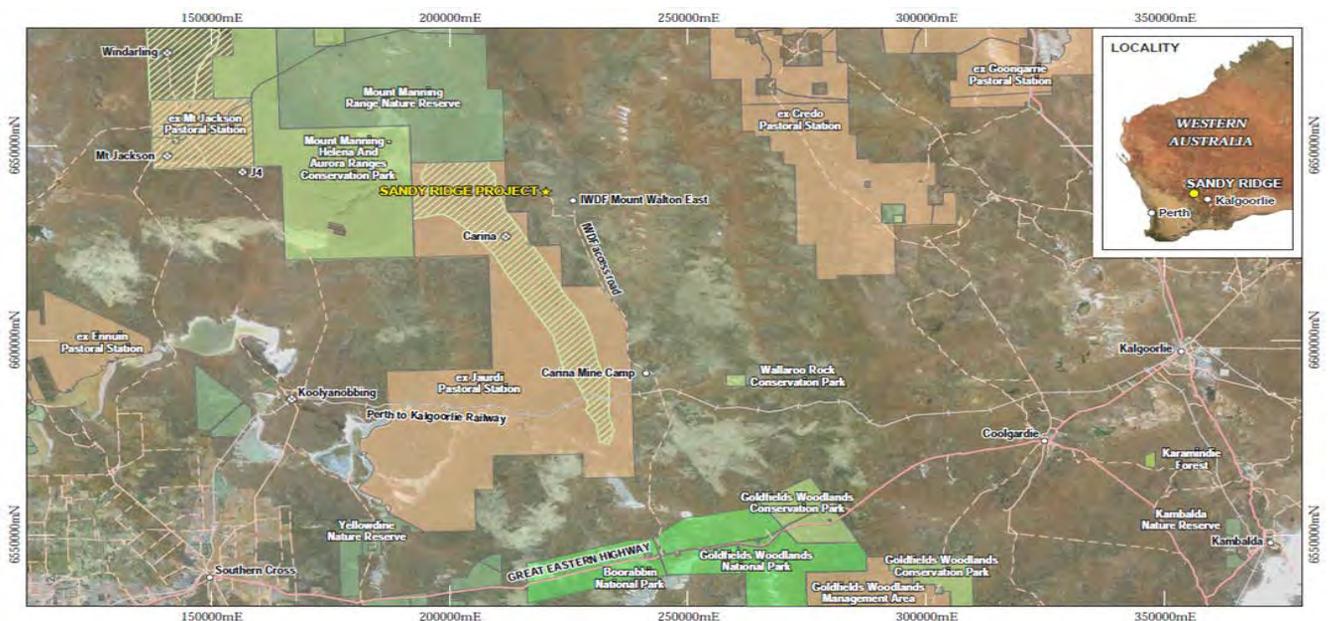
The Facility would become an arid near surface geological repository.

It would use a combination of (natural) geological and engineered barriers. These barriers would help to store and/or permanently isolate wastes from the environment over geological time.

If approved, the Facility would be located approximately 75 km north-east of Koolyanobbing, in remote Western Australia (see figure below). The nearest permanent residents are located at the Carina Iron Ore Mine Accommodation Village, approximately 52 km to the south.

The location was specifically chosen because of key environmental characteristics. Together, they make it ideal for use as a geological repository.

These characteristics include:



- A quality kaolin mineral resource and a host geological formation.
- Long term stable semi-arid climate – very high evaporation and low rainfall.
- Geologically stable (no risk of earthquakes).
- No regional groundwater.
- Lack of surface water e.g. streams / rivers.
- Flat topography with very low risk of flooding.
- Extremely low erosion rates.
- No recorded items of cultural heritage.
- Is not constrained by rare, threatened or endangered plants or animals.
- No local population.

The Proposal would be located entirely on Crown Land. The land is not regarded as having any current or future value for mining (of minerals other than kaolin). In addition, it is not regarded as valuable for agricultural or cultural purposes.

Kaolin would be extracted using the open cut method of mining carried out in mining campaigns (see figure on the left below).

The frequency of the campaigns would be dependent on the volume of waste requiring isolation but is expected to be once or twice every 12 months. Up to 40,000 (tpa) of kaolin would be mined per year for use in ceramics, paints and for other industrial uses.

The mined voids would be filled with waste that would be segregated for safety reasons. The voids would then be backfilled (with kaolin)



Open cut kaolin mine creates the voids (left). The voids are used for the safe and secure storage and permanent isolation of waste in sealed containers (right).

and compacted. A thick layer of low permeability clay would then be placed on top of the waste to seal the waste layers and to prevent water from entering the waste cell. Further backfill (compacted gravel and laterite) would be placed on top of the clay layer. A clay domed cap would be situated on top of the waste cell. Soil would be placed over the domed clay cap to enable future re-vegetation.

An average of 66,000 tpa over 25 years would be safely and securely stored or permanently isolated at the Facility. If approved, the Facility would be licensed to accept up to 100,000 tpa.

The waste cells would be designed and managed to allow for future waste recovery opportunities – that is, wastes would be stored like-with-like and the final disposal locations of all waste would be tracked and logged for future reference. At some point in the future, a technology park would be established to support research and development into ways to release the stored waste materials back into the circular economy.

A construction workforce of up to 90 people and an operational workforce of 23 (direct) and 46 (indirect) would be required for the proposed Facility. Where possible, local people would be employed to run and work at the Facility. A 4 day on and 3 day off working roster is planned.

An accommodation camp with a capacity to house up to 40 people would be constructed. It would include a kitchen, dining room, wet mess, air conditioned bedrooms, laundries, plus recreation and exercise facilities.

