WIMMERA PROJECT

ILUKA

GROUNDWATER

Iluka Resources is preparing an Environment Effects Statement (EES) for the Wimmera Project, a proposed mineral sands mine located approximately 35km south-west of Horsham. The Wimmera Project will introduce mining infrastructure and activities into an agricultural landscape, and the EES process seeks to understand and manage the potential impacts of this change on people and the environment.

SPECIALIST STUDIES

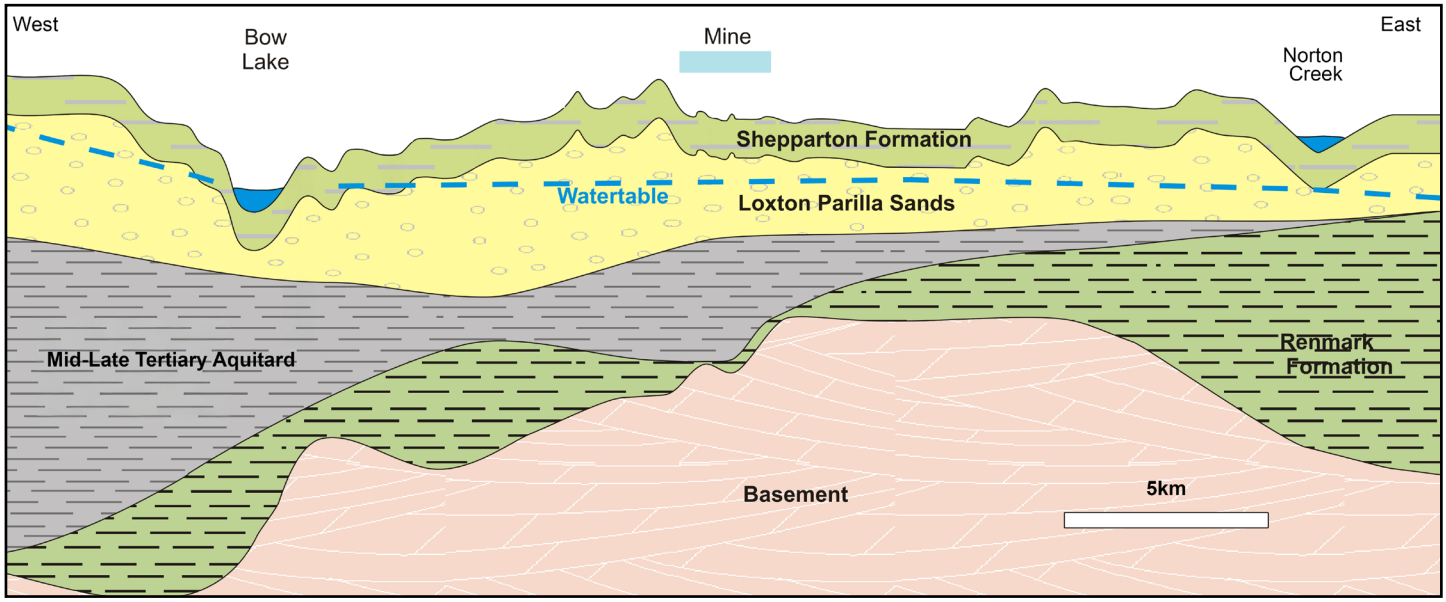
A Groundwater and Geochemical Impact Assessment (GGIA) is being prepared by consultants at Jacobs to determine the project's potential effects on groundwater. It characterises the geology and hydrogeology of the surrounding area, waterbodies and existing groundwater users. It considers whether the project may affect groundwater quality, flow or level and how changes may affect the use and environmental values of groundwater.

The potential effects of the project on groundwater have been primarily assessed using the results of numerical groundwater modelling. As part of this assessment, Jacobs attended a Wimmera Project community information session to describe the study and listen to community feedback. Baseline data and stakeholder input are considered by both Jacobs and Iluka to inform project design and management strategies.

EXISTING CONDITIONS

The uppermost geology unit at the proposed mine is the unsaturated Shepparton Formation. Below this is the Loxton-Parilla Sand geological unit which hosts the main regional aquifer, with the groundwater table at least 10 metres below the ground surface. Local rainfall recharge of the groundwater is very low due to the presence of a relatively thick layer of low permeability Shepparton Formation. The groundwater flow is slow, moving from south to north across the proposed mine site. The figure below shows a conceptual cross-section of the geology and groundwater level across the site.

Salinity of the groundwater ranges from an average of 800mg/L at the southern end of the proposed mining area near Red Gum Swamp to 7,700mg/L at the northern boundary of the proposed mining area. The average salinity across the project area is approximately 5,300mg/L. There are no bores licensed for consumptive purposes such as irrigation, dairy or industrial uses near to the proposed mine site. Groundwater use for agriculture in the area is low due to the presence of better quality and reliable water from the GWMWater-managed reticulated pipeline network.



Conceptual cross-section of geology and groundwater levels west to east through the Wimmera Project site, illustrating that the water table is relatively flat and intersects the surface where topography decreases.

IMPACTS AND MANAGEMENT

Identified groundwater impacts from the project are regarded as having either an insignificant or minor impact on environmental values (including human use). Some temporary changes in groundwater level and quality are predicted as a result of operations, and these may include moderate effects for short periods of time in localised areas. Groundwater levels are expected to recover rapidly after mining ceases.

Iluka seeks to avoid impacts on the environment and people from the outset through careful project design. Where complete avoidance of impacts is not possible, Iluka will implement measures to minimise their duration, intensity and extent as far as reasonably practicable.

During operations, ore will be extracted using a dredge floating on a dredge pond within a mining pit. Water in the dredge pond will include groundwater, rainfall runoff and water sourced from the Rocklands Reservoir and Strathlynn Borefield to maintain the dredge pond level when required. As the ore and the optimal dredge pond level are below the water table, groundwater will flow into the mining pit, primarily from the Loxton-Parilla Sand aquifer.

The groundwater impacts that have been identified include a relatively small groundwater mound that will develop below the tailings storage area during mining, and a small region of drawdown that is predicted to occur in the immediate vicinity of the mine as the dredge moves across the deposit. The drawdown occurs due to the dredge pond level being maintained below the pre-mining groundwater level to optimise dredge operations.

Groundwater levels are also likely to rise during operations below nearby surface water features, such as Darragan Swamp and Jallumba Marsh, and to decline below Red Gum Swamp and Lake Toolondo. These impacts are expected to be of small magnitude and to dissipate rapidly once mining is finished. The GWIA has determined that there are no direct surface water-groundwater interactions within the project area, and hence the wetlands are not considered to be Groundwater Dependent Ecosystems.

Groundwater modelling shows mounding and drawdown associated with mining is not expected to adversely impact existing and future groundwater users. Because existing groundwater is of relatively poor quality and the local water table is typically more than 10 metres below ground surface, there are few groundwater users and no groundwater-dependent ecosystems located near the mine.

Mine process water will also be recovered to minimise seepage and other mitigation and management measures will be detailed in a Groundwater Management Plan. Ongoing groundwater monitoring will be conducted through all phases of the project. If further risks are identified as part of the ongoing monitoring and modelling of mining operations, additional investigation and mitigation measures will be adopted.

NEXT STEPS

The Groundwater and Geochemical Impact Assessment is being finalised and will be available to view when the EES is submitted in mid-2026. If you would like to be kept informed about this process and future opportunities for engagement on the Wimmera Project, please email **wimmera.project@iluka.com** to be added to the project email list.