Independent consultants CDM Smith have:

- developed a conceptual hydrogeological model of the Douglas mine site and surrounds;
- developed a numerical groundwater flow model and calibrated that model against groundwater monitoring results; and
- used the calibrated model to predict flow paths of liquid seeping from Pit 23, changes in groundwater levels and mass balance.

**Hydrogeological model**

Key features of the conceptual hydrogeological model include:

- regionally groundwater flows to the north, northeast and northwest – groundwater flow from Pit 23 is to the northwest;
- groundwater from the regional water table discharges to the surface via a series of saline lakes;
- the Glenelg River receives groundwater discharge from the basement aquifer; and
- the groundwater level at Pit 23 is at or slightly above the base of the pit excavation.

**Numerical groundwater flow model**

The numerical groundwater flow model is:

- capable of simulating water table response to recharge; and
- fit for purpose.

**The model predicts:**

- water particles leaving Pit 23 will migrate to the northwest and discharge at McGlashins Swamp or a surface drainage line;
- no water particles from Pit 23 will reach existing stock and domestic bores, Lake Kanagulk or the Glenelg River;
- the fate of water particles leaving Pit 23 would be unchanged by the proposed continuation of by-product disposal; and
- there would be no residual effects on groundwater levels or flow direction.