

What the impact assessment study found

In the mine vicinity, surface water is not relied upon due to relatively low rainfall and lack of waterways. This reduces the potential for the mine development to cause undesirable surface water impacts.

While the water supply pipeline interacts with the Back Creek floodplain, the waterway is ephemeral and only flows during Avoca River flood events.

The only likely surface water impact is a reduction in surface water run-off to two patches of trees to the west of Area 1. Surface water run-off within the project area flows to the west, and there are more defined flow paths across Area 1 than Area 3. The run-off from both areas largely forms isolated pools in depressions and quickly infiltrates or evaporates.

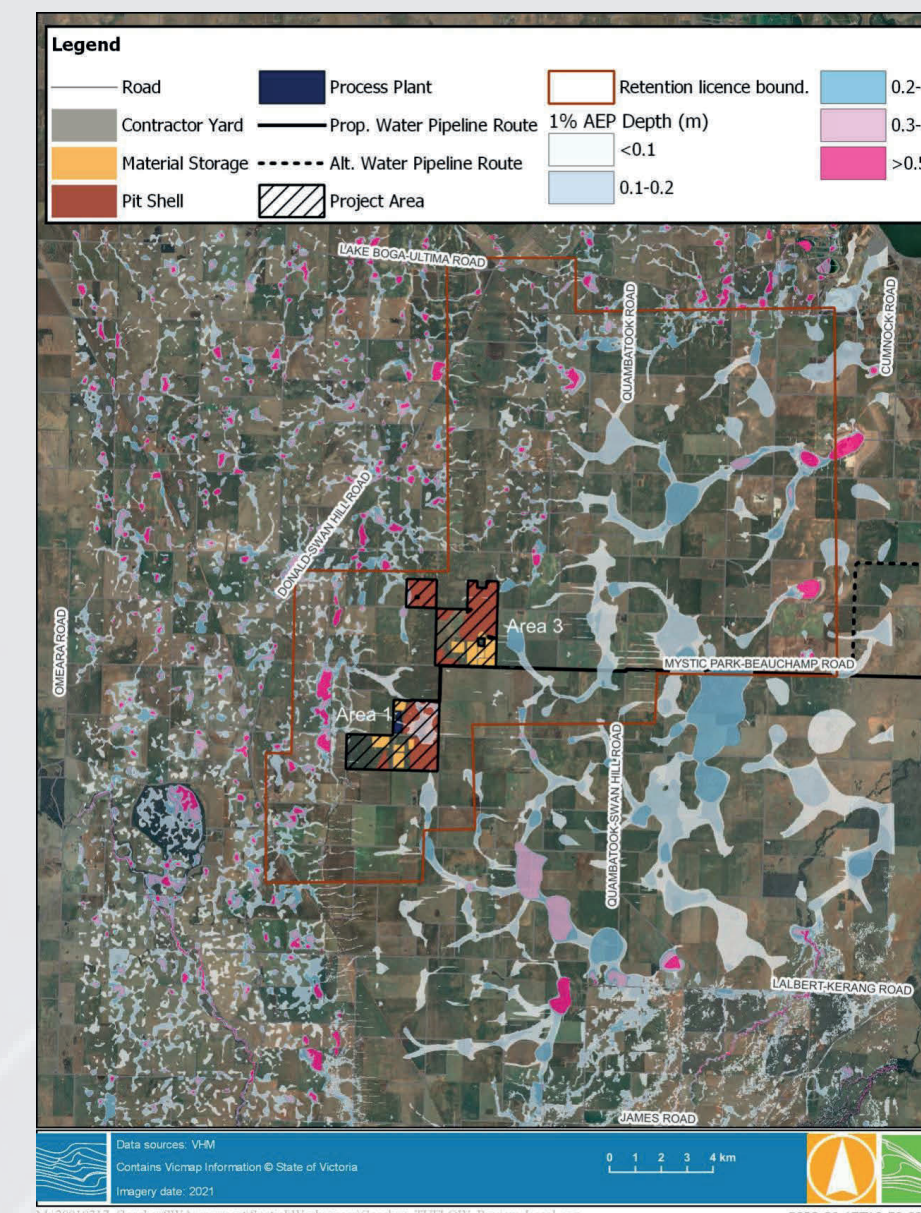
There is limited surface water quality data currently available – this gap in understanding will be filled by opportunistic surface water quality testing.

Mitigation measures

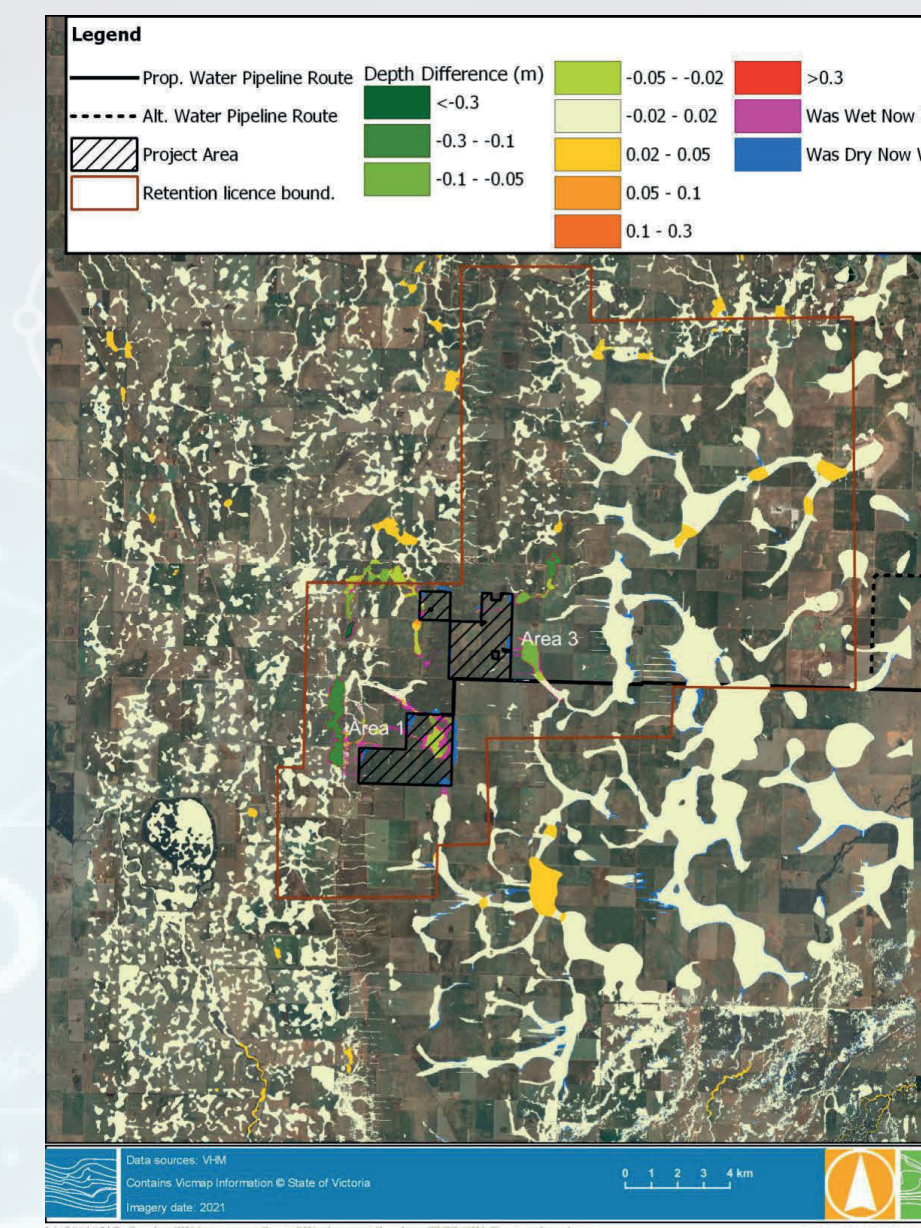
- Standard operational mining practices will be included in the Environmental Management Plan
- Development of a Surface Water Management Plan for construction, operation and decommissioning activities
- Design internal storages and drainage infrastructure to accommodate sufficient volumes of water to prevent/limit spills
- Ensure run-off from around work areas is captured in water treatment infrastructure on site such as sediment ponds, wetlands etc
- Revegetate disturbed areas as quickly as possible on completion of construction and/or mining
- Implement appropriate spill-control and bunding measures to control and contain spills
- Develop and implement a Construction Environmental Management Plan which includes a Sediment, Erosion and Water Quality Management Plan addressing regulatory requirements
- Avoidance and minimisation of any large modifications to natural waterways (Back Creek floodplain)
- Include appropriately sized culverts or bridges on drainage lines crossed by access roads, as stipulated in works on waterways permits
- Ensure that any surface water diversions that are implemented, discharge into the natural downstream discharge point, or the same discharge point as prior to any works commencing on site
- Any infrastructure within the one percent Annual Exceedance Probability (AEP) storm extent is to be designed to withstand potential flooding, and would be subject to compliance with the specific requirements of the North Central and Mallee CMA's floodplain works approval process.

Monitoring and contingency measures

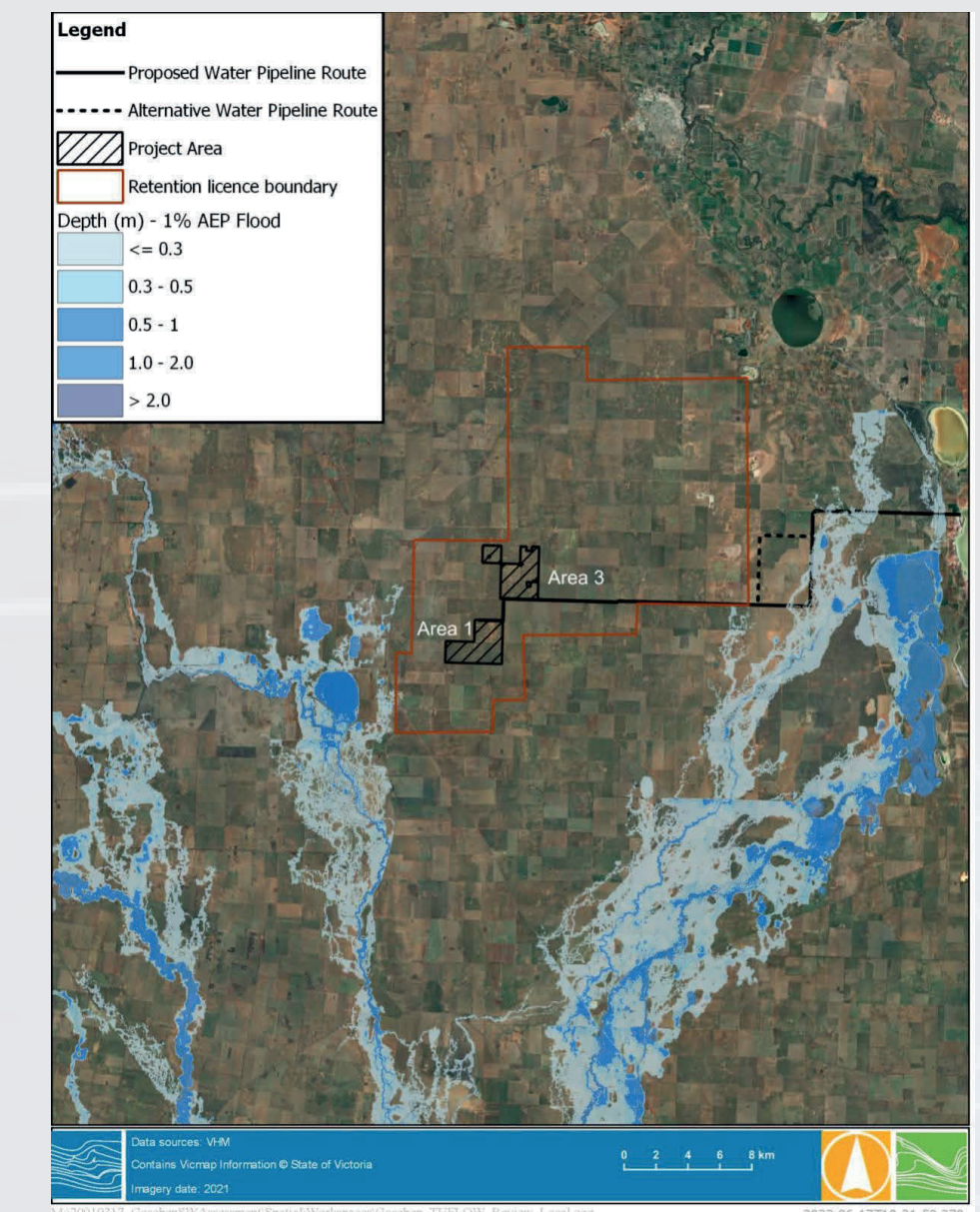
- Implement contingency plans to clean up and manage spills
- Develop and maintain a Water Quality Monitoring Program that complies with applicable legislation and guidelines
- Ecological and water quality monitoring of any surface water diversions to ensure that no impact occurs on downstream ecosystems. If change is detected, remedial actions must be made to rectify the problem immediately to avoid irreversible damage to downstream ecosystems.



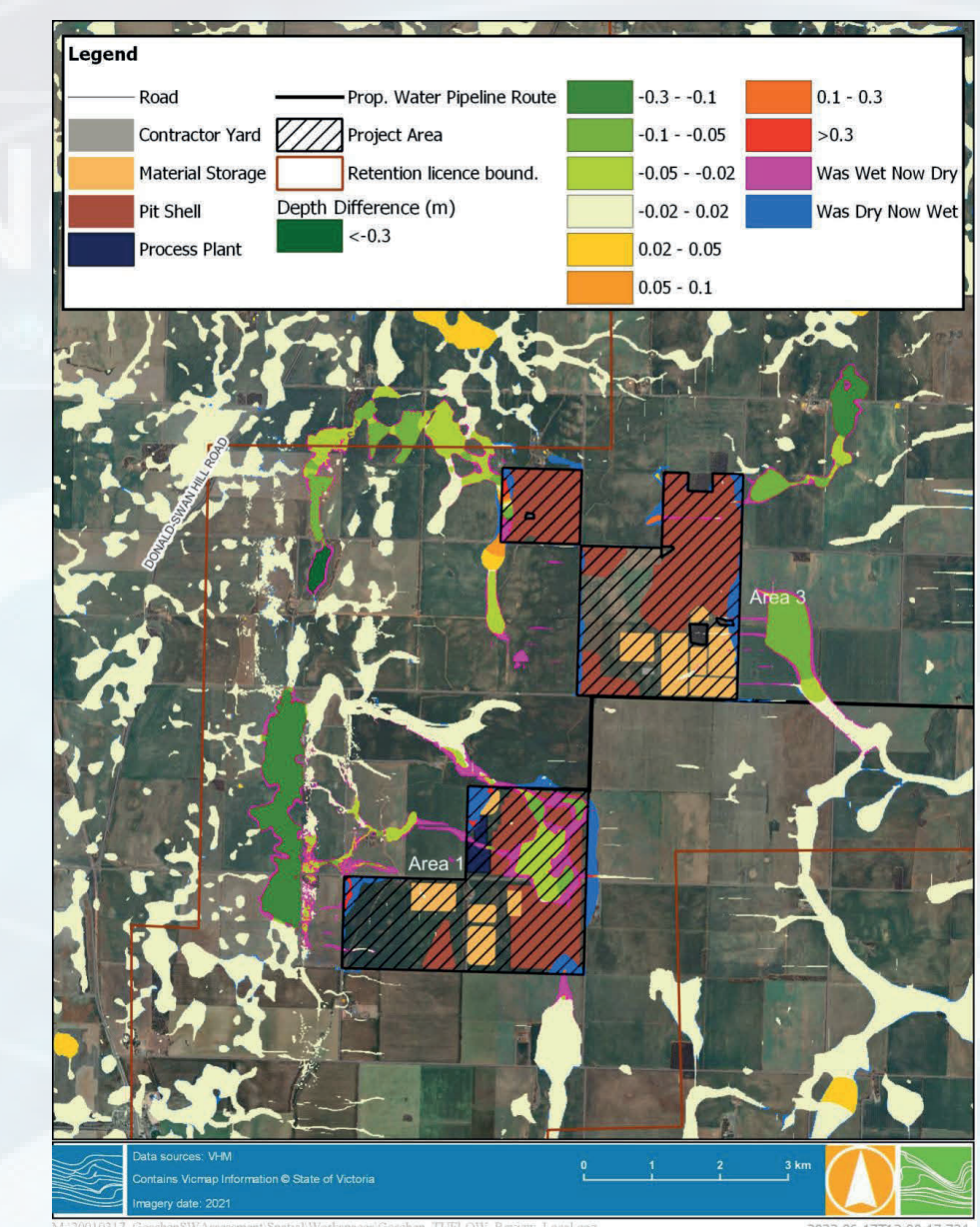
Above: existing conditions – 1 percent Annual Exceedance Probability (AEP) flood depth.



Above: Change in 1 percent AEP water levels due to implementation of bunds.



Above: AEP riverine flood near the Goschen Project area.



Above: Change in 1 percent AEP water levels at the project areas due to implementation of bunds.