



Pit lakes

A pit lake is a body of water formed within a mine pit at cessation of mining activities by either ground, surface or marine water inflow. These may form naturally or may be planned and deliberately filled or allowed to fill.

Pit lakes are a common landform in rehabilitated mines around the world. The flooding of former mine pits can pose hazards which may require ongoing active management. However, they can also provide social opportunities including tourism and landscape restoration.

The characteristics of pit lakes, as well as the related risks and opportunities vary between mines and regions. In Victoria's brown coal mines, lakes (should that be the final landform) provide risk mitigation for bushfire and geotechnical instability. The volumes required to create and maintain any lakes, however, pose unique challenges in a changing climate.



Image: Yallourn North Mine Extension, Yallourn North, Victoria, Australia

Understanding pit lakes in mine rehabilitation

The [Hazelwood Mine Fire Inquiry](#) found that using water to create pit lakes in areas where coal has been mined is likely to be the most viable way to achieve safe and stable rehabilitation of the mines. However, the Inquiry recognised that significant knowledge gaps existed in relation to the feasibility of pit lakes as a rehabilitation option and recommended further investigations be carried out.

Specific technical studies are being undertaken by declared mine licensees to

address relevant knowledge gaps. These studies will be assessed by Victorian government regulators.

In addition to the work being completed by the mine licensees, the Mine Land Rehabilitation Authority is collaborating with the Cooperative Research Centre for Transformations in Mining Economies (CRC TiME) in their research into pit lakes. When this study is completed it will be publicly available.

How does this affect you?

You may have a vision for the use of the rehabilitated mines in the future. Learning more about the technical, environmental and social issues around mine rehabilitation can help inform this vision. An informed community is an empowered community.

One way of staying informed about the technical, environmental and social issues around mine rehabilitation is by watching our videos and following us on social media.

Want to get involved?

If you have any questions about this, want to join the conversation or meet with us? Contact us at 1800 571 966 or contactus@mineland.vic.gov.au

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