



Aspect	Normal	Trigger 1	Trigger 2	Response
<b>Groundwater environment</b>				
Groundwater quality	Monitored groundwater quality within or below values presented in Table 4-3, Table 4-4, Table 4-5 and Table 4-6.	<p>Monitored groundwater quality is outside or above the Stage 1 values presented in Table 4-3, Table 4-4, Table 4-5 and Table 4-6 for three consecutive monitoring rounds.</p> <p>Monitored groundwater quality is outside or above the Stage 2 values.</p> <p><b>Action: Review recent monitoring results and any relevant operational data (e.g. mining activities, meteorological data).</b></p> <p><b>Undertake investigation to determine if the change in groundwater quality is due to mining-related activities.</b></p>	<p>Investigation into Stage 1 trigger identified that change in groundwater quality is due to mining related activity.</p> <p>Community complaint to Centennial Mandalong regarding groundwater quality.</p> <p><b>Action: If environmental impacts are unacceptable and/or if the beneficial use of the groundwater changes, remediation options will be considered as per Appendix D.</b></p> <p><b>Loss of water supply from an adjacent landholder will need to be replaced by Centennial Mandalong.</b></p>	<p><b>Trigger 1: Notify Environment and Community Coordinator/ Mine Manager as soon as non-conformance is detected.</b></p> <p><b>Trigger 2: Notify relevant agencies in accordance with Pollution Incident Response Management Plan (PIRMP) requirements or if material harm has occurred.</b></p> <p><b>Notify Department of Planning, Industry and Environment (DPIE-Water) and any potentially affected landowners as soon as practicable if the investigation into the Stage 1 trigger identifies that change in groundwater quality is due to mining related activities.</b></p>

Aspect	Normal	Trigger 1	Trigger 2	Response
Groundwater level	Monitored groundwater levels are greater than values presented in Table 4-2.	<p>Monitored groundwater levels are below the values presented in Table 4-2.</p> <p><b>Action: Review recent monitoring results and any relevant operational data (e.g. mining activities, meteorological data). Investigate the source of the exceedance.</b></p>	<p>Investigation into Stage 1 trigger identifies that trigger exceedance is due to mining-related activity. Community complaint to Centennial Mandalong regarding groundwater levels. Drawdown at any water supply work exceeds 2 m.</p> <p><b>Action: Verify whether monitoring results are consistent with hydrogeological model predictions and consider recalibration.</b></p> <p>Loss of alluvial groundwater may need to be licensed under the water sharing plan.</p> <p>If predicted environmental impacts are unacceptable, develop and implement corrective/preventative actions based on the outcomes of the investigation, as per Appendix E.</p>	<p><b>Trigger 1: Notify Environment and Community Coordinator/ Mine Manager as soon as non-conformance is detected.</b></p> <p><b>Trigger 2: Notify relevant agencies in accordance with PIRMP requirements or if material harm has occurred.</b></p> <p>Notify DPIE-Water and any potentially affected landholders as soon as practicable if the investigation into the Stage 1 trigger identifies that change in groundwater levels is due to mining related activities.</p>

Aspect	Normal	Trigger 1	Trigger 2	Response
<b>Watercourse and flooding</b>				
Flooding	<p>Subsidence levels are within predictions.</p> <p>No increase in post mining out of channel flood levels identified by flood model.</p> <p>Increase in ponding consistent with flood modelling predictions (Umwelt 2020).</p> <p><b>Action: Continue flood monitoring and modelling for each Extraction Plan.</b></p>	<p>Subsidence levels are 1.5 times greater than predicted</p> <p>Increase in post mining out of channel flood depths causing ponding above predicted.</p> <p>Remnant ponding area exceeds the extent of predictions by the flood model.</p> <p><b>Action: Determine extent of increase in flood depths and if any potential loss of vegetation or land area due to inundation.</b></p> <p><b>Consult with ecologist, landowners and government departments on whether mitigation measures are required to improve water drainage.</b></p>	<p>Subsidence levels two times greater than predicted</p> <p>Significant increase in post mining out of channel flood depths causing ponding.</p> <p>Significant increase in remnant ponding area which exceeds the extent of predictions by the flood model.</p> <p><b>Action: Verify whether monitoring results are consistent with flood model predictions and consider recalibration. Refer to Appendix E for potential engineering solutions.</b></p> <p><b>Consult with ecologist, landowner and government departments on flood drainage remediation measures and implement/report effectiveness of measures.</b></p>	<p><b>Trigger 1: Notify Environment and Community Coordinator/ Mine Manager as soon as practicable.</b></p> <p><b>Trigger 2: Notify relevant agencies in accordance with PIRMP requirements or if material harm has occurred.</b></p> <p><b>Notify DPIE-Water as soon as practicable.</b></p>

Aspect	Normal	Trigger 1	Trigger 2	Response
Water quality	Water quality at monitoring locations are within or below SSGVs provided in Table 4-1 (for Morans Creek) or consistent with historical baseline (for other watercourses).	<p>Water quality is outside or above SSGVs provided in Table 4-1 (for Morans Creek) or not consistent with historical baseline for at least one parameter for two consecutive sampling events.</p> <p><b>Action: Review recent monitoring results and any relevant operational data (e.g. operational activities, meteorological data) and identify any potentially contributing factors.</b></p> <p><b>Investigate the source of the exceedance and .</b></p>	<p>Investigation into Stage 1 trigger identifies that trigger exceedance is due to operational activity.</p> <p>Community complaint to Centennial Mandalong regarding surface water quality.</p> <p><b>Action: determine if an incident has potentially occurred.</b></p> <p><b>Increase monitoring frequency and undertake additional monitoring where relevant.</b></p> <p><b>Develop and implement corrective/preventative actions, in consultation with relevant agencies, based on the outcomes of the investigation and additional monitoring, as per Appendix E.</b></p>	<p><b>Trigger 1: Notify Environment and Community Coordinator/ Mine Manager as soon as exceedance is detected.</b></p> <p><b>Trigger 2: Notify relevant agencies in accordance with PIRMP requirements or if material harm has occurred.</b></p> <p><b>Notify DPIE-Water as soon as practicable if Stage 2 exceedance is found to be mining related.</b></p>

Aspect	Normal	Trigger 1	Trigger 2	Response
Water flow	Creek flow rates and relationships with rainfall are consistent with historical baseline results.	<p>Reduction in flow compared with historical baseline results and reference sites.</p> <p><b>Action: Review recent monitoring results and any relevant operational data (e.g. operational activities, meteorological data) and identify any potentially contributing factors.</b></p> <p>Investigate the source of the reduction in flow and develop corrective/ preventative actions based on outcomes.</p>	<p>Loss of flow compared with historical baseline results and reference sites.</p> <p>Community complaint to Centennial Mandalong regarding surface water flow.</p> <p><b>Action: Review recent monitoring results and any relevant operational data (e.g. operational activities, meteorological data) and identify any potentially contributing factors.</b></p> <p>Determine if an incident has potentially occurred and investigate the sources of the loss of flow.</p> <p>Develop and implement corrective/preventative actions, in consultation with relevant agencies, based on the outcomes of the investigation and additional monitoring, as per Appendix E.</p> <p>Loss of water supply from an adjacent landholder will need to be replaced by Centennial Mandalong.</p>	<p><b>Trigger 1: Notify Environment and Community Coordinator/ Mine Manager as soon as non-conformance is detected.</b></p> <p>Trigger 2: Notify relevant agencies in accordance with PIRMP requirements or if material harm has occurred.</p> <p>Notify DPIE-Water as soon as practicable if loss in flow is mining related.</p>

Aspect	Normal	Trigger 1	Trigger 2	Response
<b>Geomorphic condition and watercourse stability</b>				
Watercourse instabilities	<p>Watercourse monitoring indicates no areas of instabilities due to subsidence.</p> <p><b>Action: Continue site inspections in accordance with the monitoring program.</b></p>	<p>Watercourse monitoring indicates one or more areas of instabilities in watercourses possibly as a result of subsidence impacts.</p> <p><b>Action: Review historical monitoring records. Investigate the factors contributing to the instability, which may include advice from technical specialists.</b></p> <p><b>Implement corrective actions as required as soon as practicable to stabilise the surface and/or watercourses based on the outcomes of the investigation.</b></p> <p><b>Increase monitoring frequency and undertake additional monitoring where relevant.</b></p>	<p>Watercourse monitoring indicates one or more areas of instabilities in watercourses possibly as a result of subsidence impacts. Causing sediment loads to migrate and/or impact to riparian vegetation.</p> <p><b>Action: Immediately isolate areas of instability and implement remediation measures to stabilise surface and/or watercourse.</b></p> <p><b>Investigate the factors contributing to the instability, which may include advice from technical specialists.</b></p> <p><b>Implement corrective/preventative actions based on the outcomes of the investigation and/or additional monitoring. Prioritise actions based on the risk to the environment and likelihood of further impact.</b></p> <p><b>Increase monitoring frequency and undertake additional monitoring where relevant.</b></p>	<p><b>Trigger 1: Notify Environment and Community Coordinator/ Mine Manager as soon as practicable.</b></p> <p><b>Trigger 2: Notify relevant agencies in accordance with PIRMP requirements or if material harm has occurred.</b></p> <p><b>Notify DPIE-Water as soon as practicable.</b></p>