

		Revision 3 - 8/3/2021				
		CHAIN VALLEY COLLIERY- SUBSIDENCE MANAGEMENT TRIGGER ACTION RESPONSE PLAN (TARP)				
		SUBSIDENCE MANAGEMENT NORTHERN MINING AREA DOMAIN (S5 and Northern Pillar Area)				
		DETAILED PERFORMANCE INDICATORS	MONITORING REQUIREMENTS	CONTAINMENT / REMEDIATION MEASURES	ADAPTIVE MANAGEMENT MEASURES	CONTINGENCY PLANS
	SUBSIDENCE PARAMETERS (Bathymetric Survey)	<b>Normal</b> Subsidence ≤ 500mm	As per Subsidence Monitoring (SM) Program			
		<b>Trigger Level 1</b> Subsidence > 500mm to ≤ 780mm	6 monthly surveys until subsidence stabilises, then as per SM Program		Update subsidence predictions based on monitoring data Identify controlling mechanisms  Review potential change in impact on natural and built features & update management plans if required Implement further controls as applicable from review	Review ability to limit further increases based on understood mechanisms including; Extraction heights, panel widths, panel recovery
		<b>Trigger Level 2</b> Subsidence >780mm	6 monthly until subsidence stabilises then as per SM Program	Review if increase likely to create impact at foreshore/seagrass or exceed final subsidence prediction  Notify immediately DPIE if incident and within 7 days for non-compliance Notify RR, BCD, affected landholders or infrastructure owner	Update subsidence predictions based on monitoring data  Update impact assessment on natural and built features	Immediately review mine plan including panel width, pillar widths, extraction height and panel length Consult with DPIE and RR  Review and update Extraction Plan
	SUBSIDENCE PARAMETERS (Foreshore Survey over minimum of 2 adjacent pegs)	<b>Normal</b> <20mm recorded movement	Monitoring as per SM Program			
		<b>Trigger Level 1</b> <20mm recorded movement with slow (3-5mm/month) creep	Validate increase with additional monthly survey/s then as per SM program		Update subsidence predictions based on monitoring data Identify controlling mechanisms  Review potential change in impact on natural and built features & update management plans if reqd	
		<b>Trigger Level 2</b> >20mm recorded movement (assoicated with mining)	Implement Ecological Monitoring program for HWMSB exceedance  Increase frequency of subsidence parameter monitoring to until rates stabilises. Then as per SM program	<b>Cease extraction in panel in question until review conducted in consultation with DPIE and DRE</b>  Notify immediately DPIE if incident and within 7 days for non-compliance Notify RR, OEH, affected landholders or infrastructure owner	Investigate cause of exceedance (ie validate impact due to FAS extraction or not).  Update subsidence predictions based on monitoring data  Update impact assessment on natural and built features	Provide offsets for any ecological communities or threatened species in the HWMSB if impacts detected  Immediately review mine plan including panel width, pillar widths, extraction height in consultation. Consult with DPIE and RR  Review and update Extraction Plan
	BUILT FEATURES	<b>Normal</b> No damage requiring remediation	Monitoring as per Subsidence Monitoring Program			
		<b>Trigger Level 1</b>  Subsidence parameters exceeded such that Fassifern workings indicated to have potential impact on foreshore  Private bore capacity reduced	RMS routine monitoring navigation markers  Monitoring as per BFMP (Built Feature Management Plan)	Review navigational marker freeboard and notify Transport for NSW if impacted  Notify immediately DPIE if incident and within 7 days for non-compliance  Notify RR and potentially affected landholders or infrastructure owner. Provide temporary water if required.		Develop BFMP in conjunction with owner for built features surrounding potential impact area
		<b>Trigger Level 2</b> Impact to built feature	Monitoring as per BFMP	<b>Cease extraction in panel in question until review conducted in consultation with DPIE and RR</b>  Assist owner with information to aid in Subsidence Advisory NSW claim in accordance with BFMP	Update impact assessment based on observed damage	Immediately review mine plan including panel width, pillar widths Consult with DPIE and RR Review and update Extraction Plan

		CHAIN VALLEY COLLIERY- SUBSIDENCE MANAGEMENT TRIGGER ACTION RESPONSE PLAN (TARP) SUBSIDENCE MANAGEMENT NORTHERN MINING AREA DOMAIN (S5 and Northern Pillar Area)					Revision 3 - 8/03/2021
		DETAILED PERFORMANCE INDICATORS	MONITORING REQUIREMENTS	CONTAINMENT / REMEDIATION MEASURES	ADAPTIVE MANAGEMENT MEASURES	CONTINGENCY PLANS	
Triggers	PUBLIC SAFETY (Foreshore area and steep slopes)	<b>Normal</b> No impact	Monitoring as per SM Program and Public Safety MP				
		<b>Trigger Level 1</b>  Subsidence parameters exceeded such that Fassifern workings indicated to have potential impact on foreshore	  Increase visual inspection of foreshore to daily until public safety risk quantified as low  Inspect foreshore in vicinity of steep slopes and retaining walls for signs of movement ASAP. Implement TARP as required.		  Review potential of flooding and drainage impacts about foreshore or stability concerns at steep slopes/ retaining walls. Undertake appropriate risk assessments		
		<b>Trigger Level 2</b>  Area around foreshore becomes unstable / shows signs of mining induced impact  Flooding or drainage impacts considered likely as result of Fassifern extraction	  Visual inspections frequency to be commensurate with level of risk (ie increase until controls put in place)  Inspect foreshore in vicinity of other steep slopes and retaining walls for signs of movement ASAP. Implement TARP as required.	<b>Cease extraction in panel in question until review conducted in consultation with DPIE and RR</b>  Immediately implement temporary safety controls (barricades and signage available from mine site). Arrange for assistance and stay at site if immediate risk to public exists  Inform ECC as to result of inspection  Geotechnical Engineer to inspect area immediately. Notify LMCC and Transport for NSW Notify BCD, DPIE and RR	  Implement longer term safety controls	  Foreshore stabilisation of unsafe areas in consultation with LMCC/CC Council and RR as soon as possible  Flooding and drainage rectification works in consultation with infrastructure owner as soon as possible	
	BENTHIC COMMUNITIES	<b>Normal</b> ANOVA/ANOSIM >5%	Monitoring as per Benthic MP				
		<b>Trigger Level 1</b> ANOVA/ANOSIM level is approaching 5%	Liaise with monitoring consultant & undertake internal review to determine if impacts are related to mining  Arrange a peer review of the monitoring results and statistical analysis				
		<b>Trigger Level 2</b> ANOVA/ANOSIM <5%	Undertake follow up monitoring at affected sites to obtain confirmation of impacts.  Incident Report to be completed and distributed to relevant agencies	Notify DPIE-Fisheries, LMCC and DPIE Notify immediately DPIE if incident and within 7 days for non-compliance	Consult with relevant authorities about monitoring and management controls	Consult with relevant authorities to identify if offsets are required and how these are to be implemented.	
	SEAGRASS	<b>Normal</b> Negligible impact	Monitoring as per Seagrass MP				
		<b>Trigger Level 1</b> Approaching 20% decline in condition Approaching 20mm of additional mine induced subsidence within mapped seagrass	Liaise with monitoring consultant & undertake internal review to determine if impacts are related to mining		Review if variation is within broader background variation range for the site.		
		<b>Trigger Level 2</b> >20% decline in conditions from year baseline survey  ≥150mm of additional mine induced subsidence at survey location	Incident Report to be completed and distributed to relevant agencies	Notify immediately DPIE if incident and within 7 days for non-compliance Notify DPIE-Fisheries and LMCC	Consult with relevant authorities about monitoring and management controls	Consult with relevant authorities to identify if offsets are required and how these are to be implemented.	
	THREATENED SPECIES AND ENDANGERED POPULATIONS	<b>Normal</b>  Negligible environmental consequences	Monitoring as per Subsidence Monitoring Program, Benthic Communities Management Plan and Seagrass Management Plan				
		<b>Trigger Level 1</b> As per Seagrass and Benthic Community Management Plans Monitoring Level 1 triggers	Liaise with monitoring consultant & undertake internal review to determine if impacts are related to mining and greater than neglible environmental consequences.		Review if variation is within broader background variation range for the site.		
		<b>Trigger Level 2</b> As per Seagrass and Benthic Community Management Plans Monitoring Level 2 triggers  >780mm subsidence	Incident Report to be completed and distributed to relevant agencies	Notify immediately DPIE if incident and within 7 days for non-compliance  Notify DPIE-Fisheries and LMCC	Initiate ecological monitoring program to assess the impacts to ecological communities and threatened species.  Consult with relevant authorities about monitoring and management controls	Consult with relevant authorities to identify if offsets or rehabilitation is required and how this is to be implemented.	
	WATER INFLOW	Ongoing monitoring of water inflows and site water management through operational Water Management and Monitoring TARP process					

		<div>Revision 3 - 8/03/2021</div> <div>CHAIN VALLEY COLLIERY- SUBSIDENCE MANAGEMENT TRIGGER ACTION RESPONSE PLAN (TARP)</div> <div>SUBSIDENCE MANAGEMENT NORTHERN MINING AREA DOMAIN (S5 and Northern Pillar Area)</div>
Responsibilities	Environment Compliance Coordinator	Coordinate and undertake all environmental monitoring as outlined in TARP Implement TARP actions in consultation with regulatory agencies as/lf required Notify the relevant Government agencies and other affected parties of exceedance of performance measures Coordinate Subsidence Review as a part of Annual Environmental Reporting Arrange for subsidence prediction and impact updates as required Update Extraction Plan as required Audit public safety controls regularly
	Mine Surveyor	Coordinate subsidence monitoring as outlined in TARP Review subsidence monitoring results against TARP triggers Inform relevant stakeholders as to subsidence monitoring trends and exceedances
	Mine Manager	Ensure adequate financial and personnel resources are made available for implementation of this plan Review and approve required mine plan changes