

		Version 1- 22/5/13			
		AUSTAR COAL MINE- TRIGGER ACTION RESPONSE PLAN (TARP) SUBSIDENCE MANAGEMENT LWA7 TO LWA10			
			CONTAINMENT / REMEDIATION MEASURES	ADAPTIVE MANAGEMENT MEASURES	CONTINGENCY PLANS
Triggers	SUBSIDENCE PARAMETERS	Normal			
		LESS THAN MAXIMUM PREDICTED	Monitoring as per SM Program		
		Trigger Level 1 EXCEEDS MAX PREDICTED (but less than upper bound) Subsidence = 1525mm Tilt = 5.5mm/m Hogging curvature = 0.04km-1 Sagging Curvature = 0.09km-1	Monitoring as per SM Program	Update subsidence predictions based on monitoring data	
		Trigger Level 2 EXCEED UPPER BOUND Subsidence = 2575mm Tilt = 9mm/m Hogging curvature = 0.06km-1 Sagging Curvature = 0.15km-1	Notify DP&I and DRE Notify affected landholders or infrastructure owner	Increase frequency of subsidence parameter monitoring Update subsidence predictions based on monitoring data Update impact assessment on natural and built features	Review mine plan including panel width, pillar widths or extraction height in consultation with DP&I and DRE Review and update Extraction Plan
	RESIDENTIAL STRUCTURES	Normal			
		No damage requiring remediation	Pre mining Structural Engineers Inspection arranged by Austar Monitoring as per individual Built Features Management Plan Post mining engineer inspection		
		Trigger Level 1 Building structure (houses) damage below Safe Serviceable (SSR) criteria	Assist landholder with information to aid in MSB claim Post mining engineer inspection	Update impact assessment based on observed damage	Prepare landholder BFMP
		Trigger Level 2 Building structure (houses) exceed Safe Serviceable Repairable (SSR) criteria	Notify DP&I and DRE Assist landholder with information to aid in MSB claim	Arrange Structural Engineers inspection	If necessary acquire as per PA08 0111 conditions
	BUILT FEATURES (NON RESIDENTIAL)	Normal			
		No damage requiring remediation	Monitoring as per Built Features Management Plan		
		Trigger Level 1 Damage requires remediation Minor dam/water tank leakage/private bore capacity reduced	Assist built feature owner with information to aid in MSB claim in accord with BFMP Provide temporary water replacement if required	Update impact assessment based on observed damage	Prepare individual BFMP for services in conjunction with Infrastructure owner to ensure these remain safe and serviceable
		Trigger Level 2 Damage requires replacement Failure of dam or water tank	Arrange Structural Engineers inspection as appropriate Assist landholder with information to aid in MSB claim Provide temporary water replacement	Update impact assessment based on observed damage	
	LAND SURFACE AND PUBLIC SAFETY	Normal			
		No visual impact	Monitoring per SM Program and Public Safety Management Plan Erection of warning signs of the 20mm subsidence area on roads		
		Trigger Level 1 Minor cracking, surface irregularities (ie humps)	Rehabilitate landform, landuse and ecosystem function to that existing pre mining in accordance with LMP in consultation with landowner.		
		Trigger Level 2 Moderate cracking, surface irregularities (ie humps), erosion Toppling rock failure or mass movement of steep slope Public safety risk from impact to road	Repair surface with suitable soil in consultation with land owner Rehabilitate landform, landuse and ecosystem function to that existing pre mining in accordance with LMP Notify NPWS in accordance with Public Safety Management Plan. Notify DRE Coal Mine Inspectors and Principal Subsidence Engineer Restrict access to risk areas. Implement public safety risk mitigation in accordance with Public Safety Management Plan (notifications, warning signs, traffic control) Notify DRE Coal Mine Inspectors and Principal Subsidence Engineer Assist with information to aid in MSB claim.	Update impact assessment Provide ongoing resources to prevent access to the affected area until remediation plan can be enacted. Stabilise unstable structures. Remediate in accordance with LMP Update impact assessment Update impact assessment based on observed damage Provide ongoing resources to prevent access to the affected area until remediation plan can be enacted.	 Prepare Traffic Management Plan for Quorrobolong Rd and Coney Creek lane in consultation with Council
	WATERCOURSE MANAGEMENT	Not applicable to LWA7 to LWA10 Extraction Area as there are no Creeks or alluvium present. Gathering of baseline information is addressed in the Austar Site Water Management Plan			
	FLOODING AND PONDING	Normal			
		No change in drainage or ponding	Monitoring as per SM Program and Built Features Management Plan		
		Trigger Level 1 Drainage or ponding impacts land use in way hadn't prior subsidence or; additional erosion due to change in water drainage patterns	Develop plan in consultation with land owner	Remediate in accordance with LMP	
		Trigger Level 2 Ponding prevents access to property	Correct drainage to allow temporary access	Correct drainage flow to prevent future access issues	
	CULTURAL HERITAGE	Normal			
		No impact to identified sites	Monitoring as per ACHMP		
		Trigger Level 1 Remediation required in area of identified artefact Remediation encounters new Cultural Heritage site	Surface collection in accordance with ACHMP. If sites found during remedial works notify Registered Aboriginal Parties and OEH, follow protocol in ACHMP	Temporary storage of sites for repositioning after works Complete Aboriginal Site Impact Recording Form per ACHMP	
		Trigger Level 2 Subsidence impact on grinding groove	Nil. Aboriginal groups specified no work to occur in this area	Nil. Aboriginal groups specified no work to occur in this area	Grinding groove offset strategy agreed with Registered Aboriginal Parties and detailed in the ACHMP
	ECOLOGICAL MONITORING	Normal			
		No impact of terrestrial flora and fauna	Monitoring as per Biodiversity Management Plan and SM Program		
		Trigger Level 1 Isolated subsidence induced impact on terrestrial flora and fauna identified by Ecologist or SM Program	Develop remediation plan as appropriate in consultation with land owner		
		Trigger Level 2 Isolated subsidence induced impact on threatened terrestrial flora and fauna identified by Ecologist or SM Program	Determine if subsidence incident has occurred in consultation with specialists. Review of monitoring data	Undertake corrective actions in consultation with OEH and landowner. Monitor after completion to ensure effectiveness	
Responsibilities	ECM	Seek access for monitoring programs Arrange monitoring as per Biodiversity MP Arrange monitoring as per ACHMP Owner of the EP, LMP, BMP, ACHMP, BFMP - private and roads PSMP	Notify DP&I and DRE of subsidence exceedence Notify affected landholder of subsidence exceedence Rehabilitate landform in accordance with LMP, BMP & ACHMP Notify NPWS regarding steep slopes risks Develop biodiversity remediation plan with consultation with land owner Arrange temporary water replacement as required Assist private built feature owner with MSB claims Arrange pre and post subsidence building inspections by Structural Engineer where access granted per BFMP	Signage and access restriction as per Public Safety MP Correct drainage to prevent future access issues Stabilise unstable structures. Remediate in accordance with LMP Provide ongoing resources to prevent access to the affected area until remediation plan can be enacted. Develop remediation strategy with OEH Arrange building inspection by Structural Engineer to review impact	Activate acquisition clauses of PA08 0111 as required Reduce safety hazards to that of pre-mining Prepare Traffic Management Plan for Quorrobolong Rd and Coney Creek lane in consultation with Council Implement the Grinding Groove Offset strategy Prepare landholder BFMP
	TSM	Owner of the SM Program, BFMP - Ausgrid and Telstra Owner of the Coal Resource Recovery Plan Arrange monitoring by Surveyors per SM Program	Assist public built feature owner with MSB claims (Ausgrid, Telstra) Notify DRE Coal Mine Inspectors and Principal Subsidence Engineer of identified public safety issues.	Update subsidence prediction and impact assessment as required Increase frequency of subsidence monitoring in consultation with the Principal Subsidence Engineer	Review mine plan as required in consultation with DP&I and DRE Prepare individual BFMP for services in conjunction with Infrastructure owner to ensure these remain safe and serviceable
	Mine Surveyor	Undertake subsidence monitoring as per the Subsidence Monitoring Program, LMP, BFMP, and Public Safety MP			
	GM	Ensure adequate resources are available to implement the Extraction Plan			

Table of Amendments

[illegible]