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MOOLARBEN COAL



UG4 LONGWALLS 409 TO 414 DRIP, CORNER GORGE AND GOULBURN RIVER MONITORING AND REPORTING PROGRAM

Version	**Issue Date** *(Month/YYYY)*	**Revision Detail** *(Include the main areas reviewed, trigger / why the change)*	**Author(s)**	**Review Team**
1	April 2025	Original Monitoring Program for the UG4 Longwalls 409-414 Extraction Plan	MCO	MCO
2	June 2025	Updated in response to Comments from the IEAPM	MCO	MCO
3	April 2026	Updated in response to Comments from the IEAPM	MCO	MCO
4	May 2026	Updated in response to comments from DPHI	MCO	MCO
5	September 2026	Updated to incorporate installation of additional GNSS monitors and associated TARP for valley closure along the Goulburn River	MCO	MCO

OVERVIEW

This UG4 Longwalls 409 to 414 Drip, Corner Gorge and Goulburn River Monitoring and Reporting Program (the Monitoring Program) outlines the proposed monitoring network, monitoring frequency, process for Technical and Steering Committee input and Trigger Action Response Plans (TARPs) to manage the extraction of Longwalls 409 to 414 (LW409-414) and demonstrate there is no exceedance of the relevant performance measures.

The Technical Committee members for the Monitoring Program are as follows:

- MCO Underground Technical Services Manager (Chair).
- MCO Underground Chief Surveyor.
- MCO Environment and Community Superintendent.
- Subsidence Technical Specialist (Mine Subsidence Engineering Consultants Pty Ltd).
- Groundwater Technical Specialist (Australasian Groundwater and Environmental Consultants Pty Ltd).
- Surface Water Technical Specialist (WRM Water and Environment Pty Ltd).
- Independent Subsidence Technical Expert (whose appointment has been endorsed by the Department of Planning, Housing and Industry).
- Independent Groundwater Technical Expert (whose appointment has been endorsed by the Department of Planning, Housing and Industry).

The Steering Committee members for the Monitoring Program are as follows:

- MCO Underground Operations Manager (Chair).
- MCO General Manager.
- MCO Environment and Community Manager.
- MCO Underground Technical Services Manager.

Review and reporting processes have been developed for the Drip and Corner Gorge (**Figure A**) as well as the Goulburn River (**Figure B**), including progressive review of monitoring data against incremental predictions for each longwall panel and reporting milestones for the Technical and Steering Committees.

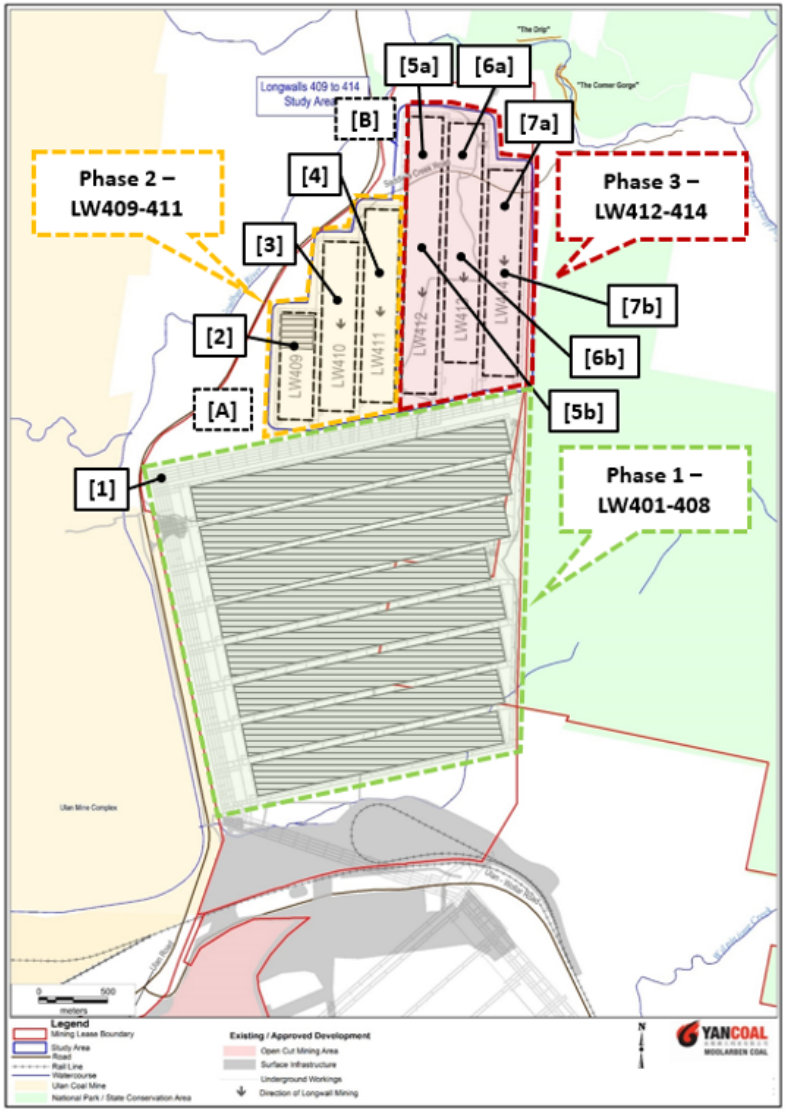
The review and reporting process allows for adaptive management of monitoring and management measures if required as secondary extraction of LW409-414 progresses and would be undertaken in three key phases, as follows:

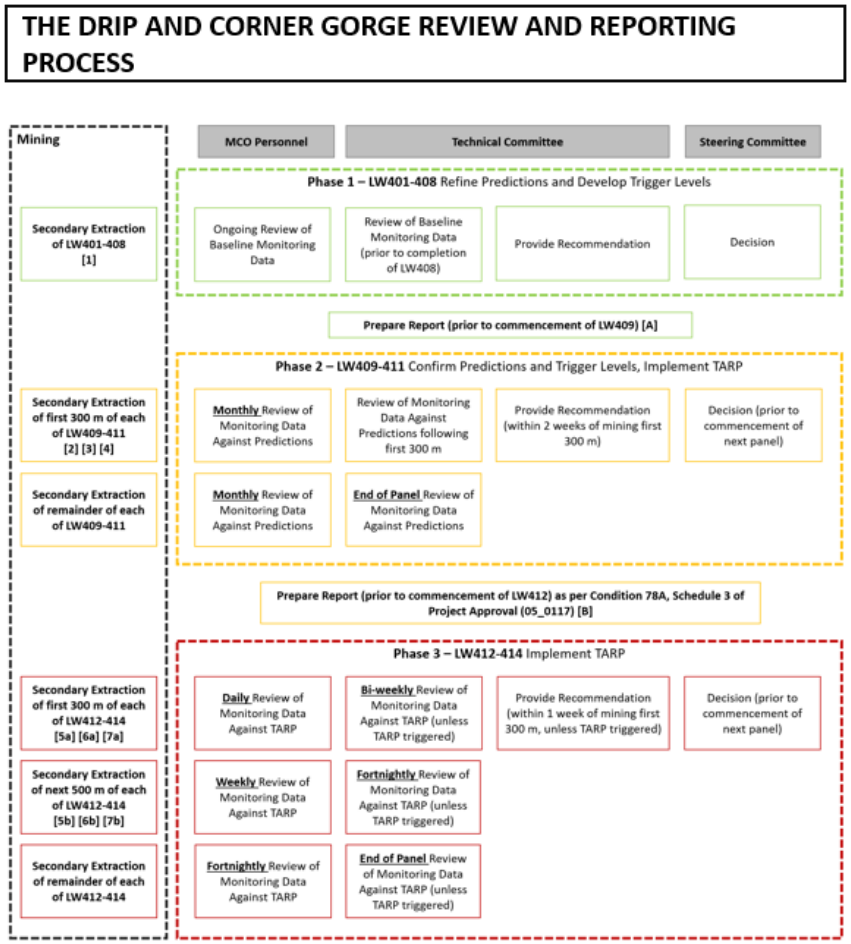
- Phase 1 – Refine predictions and update trigger levels (during secondary extraction of LW401-408).
- Phase 2 – Confirm predictions and trigger levels and implement TARPs as necessary (during secondary extraction of LW409-411).
- Phase 3 – Implement TARPs (during secondary extraction of LW412-414).

The frequency of monitoring data collection and review, as well as timing of input for the Technical and Steering Committees, is determined by the relevant feature, current review phase and distance of mining from the commencing end of each longwall panel (**Figures A** and **B**).

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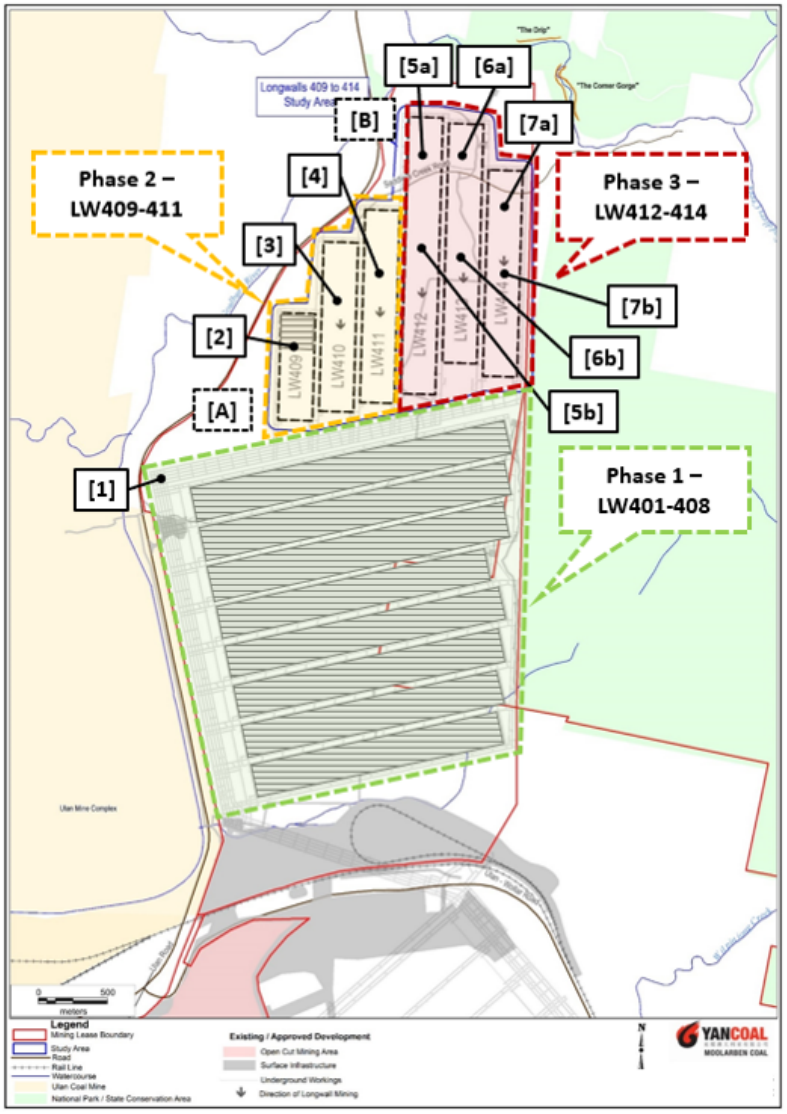
Figure A: The Drip and Corner Gorge Review and Reporting Process

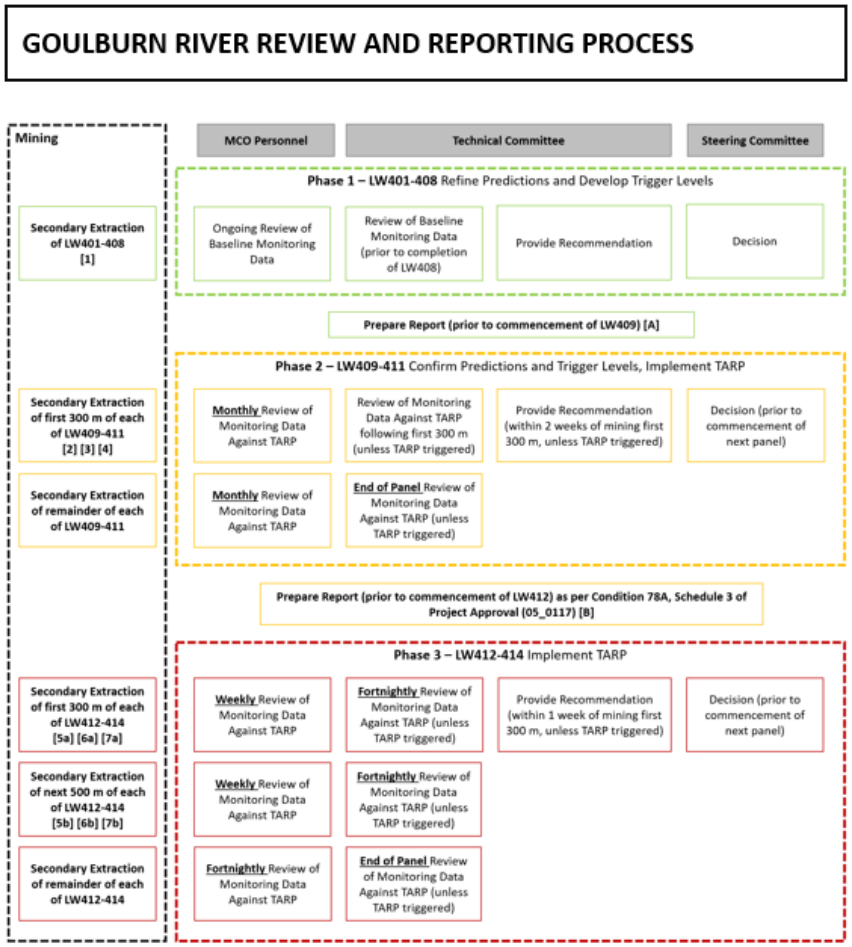




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Figure B: Goulburn River Review and Reporting Process





Note: For valley closure monitoring along the section of the Goulburn River adjacent to LW409-412, the monitoring review frequency adopted during Phase 2 will continue to be applied during mining of LW412. The monitoring frequency to be applied during mining of LW413-414 will be reviewed by the Technical Committee and recommended based on monitoring data collected during mining of LW409-412.

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1.0 INTRODUCTION

This UG4 Longwalls 409 to 414 Drip, Corner Gorge and Goulburn River Monitoring and Reporting Program (the Monitoring Program) forms a part of the Extraction Plan developed for Longwalls 409 to 414 (LW409-414) of the approved UG4 Underground Mine (UG4) by Moolarben Coal Operations Pty Ltd (MCO). The Drip, Corner Gorge and Goulburn River are sensitive environmental features located in the vicinity of the UG4 LW409-414 Study Area[1] (**Figure 1**).

Purpose: This Program outlines the proposed monitoring network, monitoring frequency, process for Technical and Steering Committee input and Trigger Action Response Plans (TARPs) to manage the extraction of LW409-414 and demonstrate there is no exceedance of the relevant performance measures for the Drip, Corner Gorge and Goulburn River.

Scope: This Program considers potential physical (i.e. far-field and differential movements), groundwater and surface water-related impacts to the Drip and Corner Gorge, as well as the Goulburn River.

1.1 STRUCTURE OF THE MONITORING PROGRAM

This Program is structured as follows:

Section 1 Outlines the purpose and scope of the Monitoring Program, provides the structure of the Monitoring Program and details the members and respective roles of the Technical and Steering Committees.

Section 2 Provides baseline data for monitoring undertaken to date, as well as modelling and assessment outcomes.

Section 3 Details the relevant subsidence impact performance measures.

Section 4 Describes the proposed monitoring program, trigger levels and TARPs.

Section 5 Outlines the review and reporting process.

Attachment 1 Provides the consolidated TARP for the Drip and Corner Gorge.

Attachment 2 Provides the consolidated TARP for the Goulburn River.

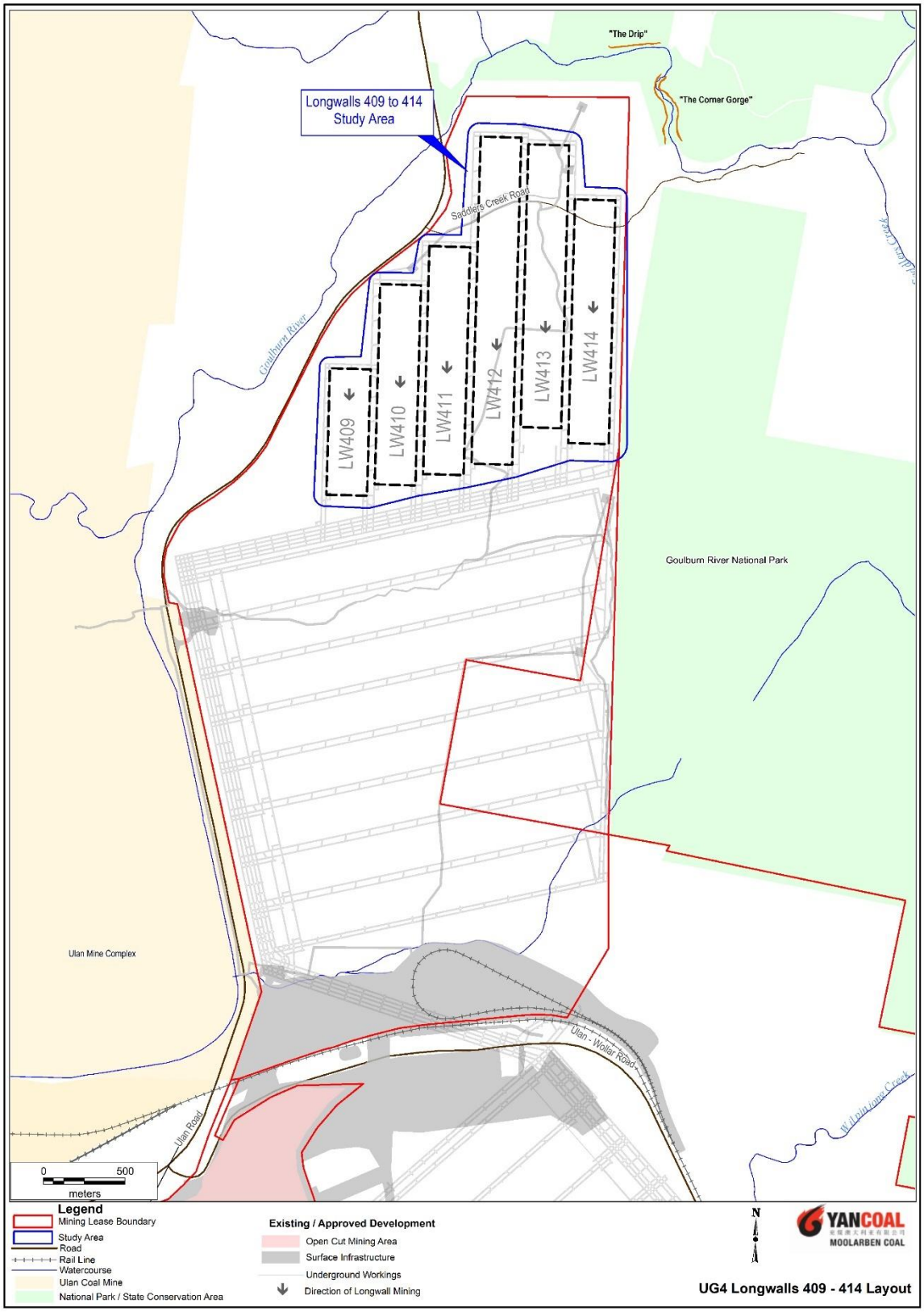
Attachment 3 Provides a register of Committee Meetings, Recommendations and Decisions to be completed as mining progresses.

Attachment 4 Outlines an indicative template structure for any reporting prepared in accordance with Section 5.

Attachment 5 Provides a review checklist for the Technical Committee to consider when reviewing monitoring data for the Drip and Corner Gorge against subsidence and groundwater predictions.

[1] The LW409-414 Study Area is identified as the area of land within the furthest extent of the 26.5 degree (°) angle of draw and 20 millimetre (mm) predicted subsidence contour.

Figure 1: Location of the Drip, Corner Gorge and Goulburn River in Relation to UG4 LW409-414



1.2 TECHNICAL AND STEERING COMMITTEES

The Technical Committee for the Drip, Corner Gorge and Goulburn River will be composed of MCO and technical specialist members, including an independent expert whose appointment has been endorsed by the Department of Planning, Housing and Industry (DPHI), as listed in **Table 1**.

Table 1: Technical Committee Members

Organisation	Position	Current Person in Position (as at September 2026)
MCO	Underground Chief Surveyor	Mr James Hord
	Underground Technical Services Manager – Chair	Mr Liam Mildon
	Environment and Community Superintendent	Ms Rebecca Shanks
MSEC	Subsidence Technical Specialist	Mr Peter DeBono*
AGE	Groundwater Technical Specialist	Mr Andrew Durick*
WRM	Surface Water Technical Specialist	Dr David Newton*
Independent Subsidence Technical Expert (whose appointment has been endorsed by DPHI)		
Independent Groundwater Technical Expert (whose appointment has been endorsed by DPHI)		

Note: MSEC = Mine Subsidence Engineering Consultants Pty Ltd, AGE = Australasian Groundwater and Environmental Consultants Pty Ltd, WRM = WRM Water and Environment Pty Ltd.

* *Technical specialists endorsed by the Secretary of DPHI for the UG4 LW409-414 Extraction Plan (as per letter dated May 2024).*

The roles of the Technical Committee are as follows:

1. Review and interpret the results of monitoring undertaken in accordance with the Monitoring Program.
2. Assess the status of the Drip, Corner Gorge and Goulburn River with respect to relevant trigger levels, TARPs and performance measures.
3. Provide recommendations to the Steering Committee regarding interpretation of monitoring results and any required actions for the Drip, Corner Gorge and Goulburn River.

The Steering Committee for the Drip, Corner Gorge and Goulburn River will be composed of MCO members as listed in **Table 2**.

Table 2: Steering Committee Members

Organisation	Position	Current Person in Position (as at September 2026)
MCO	Underground Operations Manager - Chair	Mr Ryan Davidson
	General Manager	Mr Timothy Slater
	Environment and Community Manager	Mr Ian Flood
	Underground Technical Services Manager	Mr Liam Mildon

The roles of the Steering Committee for the Drip, Corner Gorge and Goulburn River are as follows:

1. Provide the resources to implement the Monitoring Program.
2. Review recommendations provided by the Technical Committee and decide on any action, considering acceptability of the ongoing level of risk to the Drip, Corner Gorge and Goulburn River.
3. Coordinate resources required and implement any action/s, in consultation with Technical Committee.

The current person in the relevant positions of the Technical and Steering Committees (as at September 2026) is listed in **Tables 1** and **2**. In an event where one of the Technical or Steering Committee members is unable to perform their required role or there is a change in the relevant position, another suitably qualified person can provide input in their place.

The review and reporting process to be followed by the Committees is detailed in **Section 5.0**.

2.0 BASELINE DATA

2.1 THE DRIP AND CORNER GORGE

The Drip and Corner Gorge are natural cliff features located on the Goulburn River, outside of the LW409-414 Study Area (**Figure 1**):

- The Drip is a prominent feature comprising a south facing cliff with sheer to sub-vertical faces up to approximately 25 metres (m) high and approximately 300 m long. The Drip is located approximately 645 m from LW413 and is approximately 770 m from LW412. The distance of 645 m to the Drip represents approximately 4.5 times the depth of cover of 145 m from LW413.
- The Corner Gorge comprises east and west facing cliffs along the Goulburn River. The western cliff is approximately 380 m long with a maximum height of approximately 25 m. The eastern cliff is approximately 600 m long with a maximum height of approximately 30 m. The Corner Gorge is located approximately 450 m from LW414 and is approximately 575 m from LW413. The distance of 450 m to the Corner Gorge represents approximately 3.5 times the depth of cover of 130 m from LW414.

A photograph of the Drip is provided in Plate 1.



Plate 1: The Drip (Source: MSEC [2024])

It is noted the original Moolarben Stage 1 Environmental Assessment (MCM, 2006) (Stage 1 EA) proposed a longwall layout for UG4 where mining of LW412-414 would occur at a distance of 250 m to 450 m from the Drip.

In response to comments received on the Stage 1 EA by the Independent Hearing and Assessment Panel (IHAP), MCO revised the UG4 mine plan to increase the minimum setback from the Drip to 645 m. The revised layout also incorporates a setback from the Corner Gorge of 450 m.

The IHAP review of the revised underground mining layout concluded "the revised mine plan incorporates important mitigation measures that significantly reduce the level of risk of subsidence related damage to several important features, with the Drip, Corner Gorge and Goulburn River now being 'well outside the recorded subsidence damage from longwall mining'".

The Director General's Environmental Assessment Report on the Stage 1 Project concluded (NSW Department of Planning, 2007):

> *Both the Department and DPI concur with the Panel's findings, and are satisfied that the revised mine plan has reduced the residual subsidence impacts of the project to an acceptable level, and that these impacts can be suitably managed through the current subsidence management plan process.*

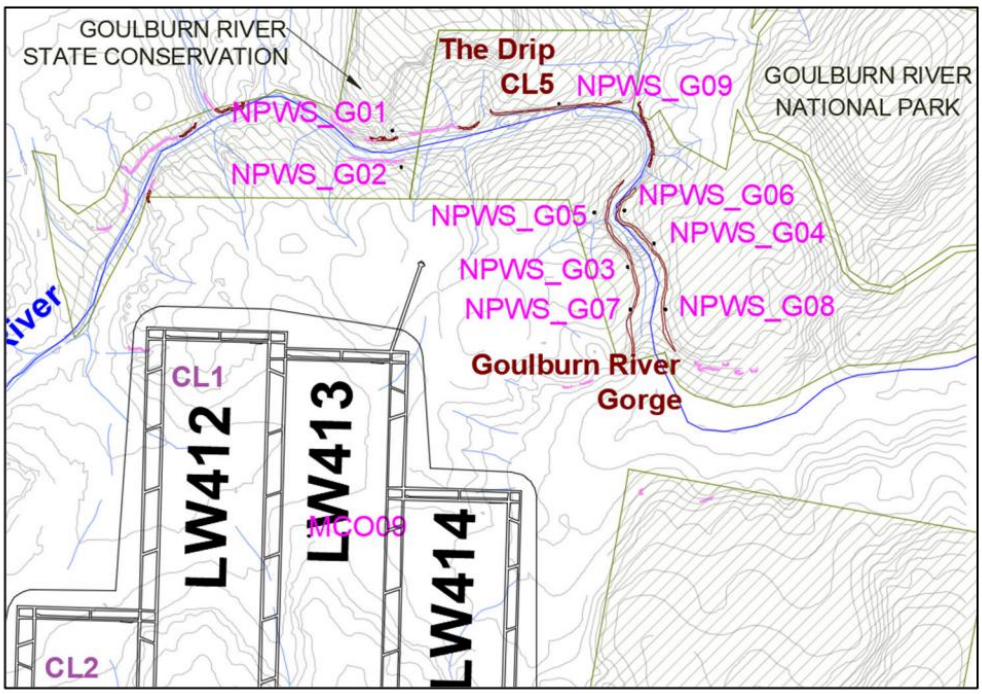
A summary of relevant baseline data is provided below.

2.1.1 Subsidence

There are natural vertical and horizontal movements occurring at the Drip and Corner Gorge, particularly following rainfall events. Nine Global Navigation Satellite System (GNSS) units were installed within proximity to the Drip and Corner Gorge in December 2023 to determine the magnitude of these movements (**Figure 2**). Review of GNSS monitoring data from December 2023 to March 2026 has identified that the Drip and Corner Gorge currently experience a level of baseline natural and tolerance horizontal movements up to approximately ±10 millimetres (mm) (i.e. greater than nil).

Current longwall mining is greater than 2.5 km from the features and therefore any movements at the GNSS monitors are likely not a result of longwall mining. In addition, variations in observed GNSS data at surrounding regional monitors (located at Dunedoo, Mudgee and Merriwa) show typical movement of ±9 mm horizontally and ±20 mm vertically. This movement is attributed to seasonal and environmental effects (e.g. temperature and atmospheric conditions, solar activity) as these monitors are all located over 30 km from underground mining.

Figure 2: Existing GNSS Monitoring Locations at the Drip and Corner Gorge (Source: MSEC [2024])



Using existing GNSS monitoring data from secondary extraction of LW401-407, MSEC (2026) has prepared preliminary predictions of expected far-field movements for similar distances of mining from the Drip and Corner Gorge:

- At distances of 450 m or more, the Drip and Corner Gorge will not experience measurable conventional tilts, curvatures or strains from the extraction of LW409-414.
- At a distance of 450 m from active mining, the maximum observed horizontal far-field movements at GNSS located near LW401-407 is 40 mm and potential differential movements and ground strain are predicted to be negligible.[2]

Whilst far-field movements are predicted, there have been no known cases of mining-related physical impacts to cliff lines at distances of 450 m or more and greater than 3.5 times the depth of cover from extracted longwalls. Due to the significant distance and low magnitude of expected far-field movement at the cliffs, MSEC (2024) has concluded that mining-related impacts to the Drip and Corner Gorge due to the extraction of LW409-414 are considered unlikely to occur.

Valley closure movements greater than the model tolerance (i.e. 20 mm of differential movement, ±5 mm for each unit or ±10 mm in total for GNSS monitor accuracy) are unlikely to be observed at the Drip and Corner Gorge (MSEC, 2025).

A subsidence monitoring program has been developed for the Drip and Corner Gorge, detailing the process for ongoing review of GNSS data to confirm baseline natural movements and refine subsidence predictions (i.e. far-field movements). The monitoring program for the Drip and Corner Gorge is outlined in **Section 4.1** and the review and reporting process is detailed in **Section 5.0**.

GNSS monitoring undertaken at Cliff Line (CL) 7, a minor cliff located 185 m from the commencing end of LW405 (**Figure 3**), has been reviewed by MSEC to inform the Drip and Corner Gorge monitoring program. GNSS monitoring data at CL7 (i.e. MCO17) recorded a total horizontal far-field movement of approximately 100 mm following secondary extraction of LW407 while vertical movements remained within the accuracy range of the GNSS unit and shows no developing vertical subsidence. No mining-related physical impacts have been observed at CL7 during visual inspections undertaken between June 2022 and March 2026.

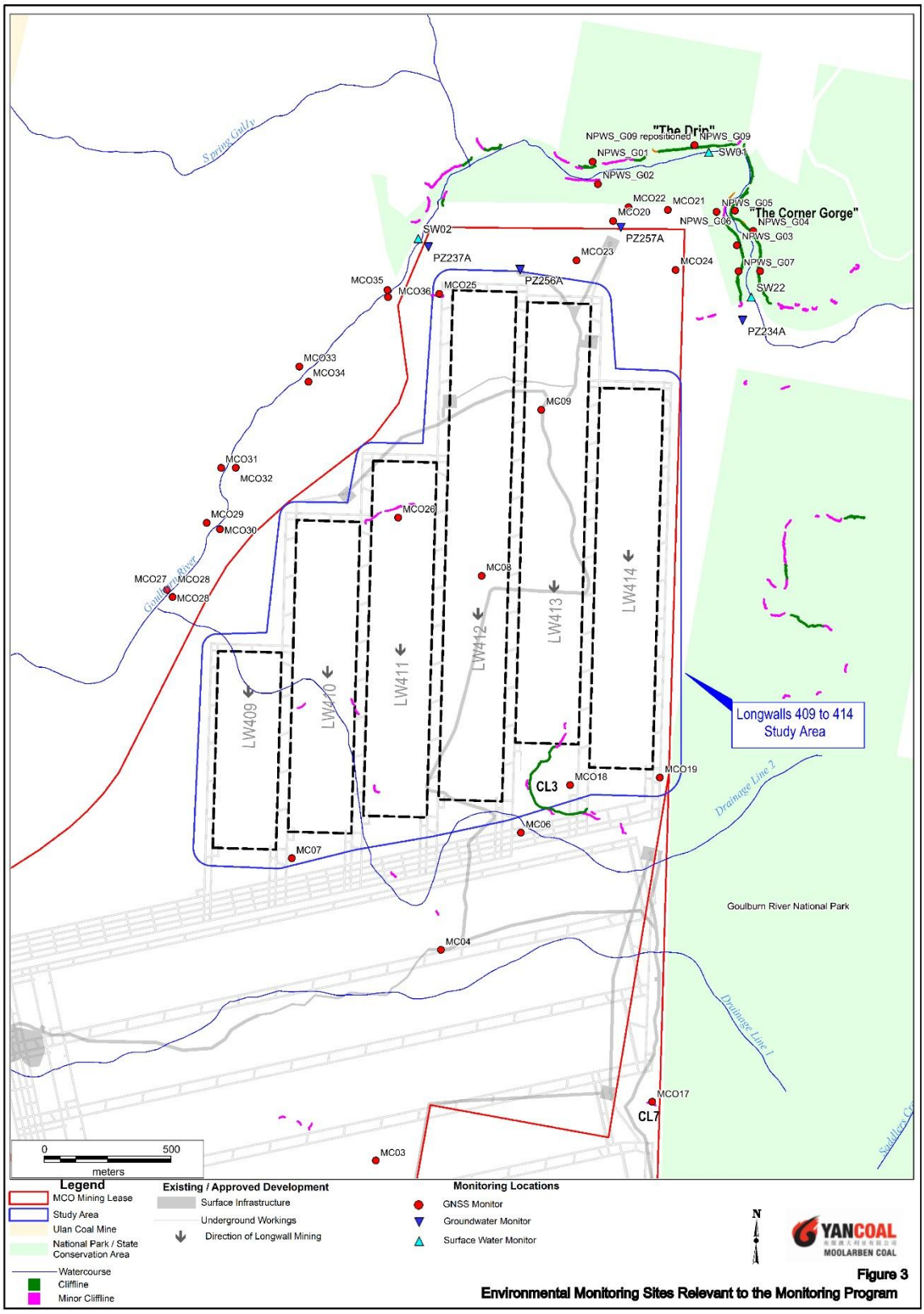
It is noted that the GNSS monitor at CL7 was installed just prior to commencement of secondary extraction of LW405, and therefore these observations do not include any movements which occurred due to previous secondary extraction of LW401-404.

Visual inspection and GNSS monitoring undertaken at CL3, a cliff located over 165 m to the north of LW408, will also be reviewed at similar distances to mining in relation to the Drip and Corner Gorge.

Observed monitoring data from CL7 and CL3 will be used to refine predictions of far-field and differential movements at the Drip and Corner Gorge and identify the maximum observed movements at these features, where no physical impacts were detected.

[2] This data is not representative of longwall mining geometry in relation to the Drip and Corner Gorge (i.e. mining towards vs mining away from the GNSS monitors).

Figure 3: Monitoring Network for the Drip, Corner Gorge and Goulburn River



In addition to monitoring data from extraction of LW401-408, monitoring data from ongoing extraction of LW409-411 will be incorporated in the existing data set to form a comprehensive database of movement at UG4 which is representative of the geomorphology of the Drip and Corner Gorge.

2.1.2 Groundwater

Considering the elevation of the Drip in relation to the regional water table, the conceptualisation of the Drip as a spring fed by shallow groundwater that is perched on a relatively impermeable layer of lithic Triassic sandstone (which prevents water from percolating vertically) is widely accepted by groundwater experts and regulatory agencies.

In its advice on the Moolarben OC3 Extension Project, the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (2023) stated the Drip:

> *"… is fed by a local shallow aquifer within the Triassic Sandstone on the far side of the Goulburn River (see recent work in ACARP 2022). Environmental tracers undertaken indicate The Drip seepage is distinctive from deeper aquifers, is a localised flow and is probably a perched aquifer."*

On this basis, AGE (2024) considers the Drip to be effectively disconnected from the underlying regional water table and therefore hydraulically isolated from any mining-related impacts because there is low permeability material at the upper and lower seepage faces of the Drip that enhances horizontal conductivity. This is supported by an independent peer review of the monitoring and reporting program for the Drip by Dr Lloyd Townley (2026), who concluded:

> *"… I believe the source of the water supply for The Drip is so small (approximately 1.1 ha, which is less than a couple of soccer fields in area) that there is a significant chance that drilling one or more boreholes 400-500 m to the north would fail to intersect the hydrogeological features that control and enable water supply to The Drip."*

Although Dr Townley states the "lowest seepage face is almost certainly controlled by the regional water table to the north, and this is the way it has been represented in modelling" this indicates the lower seepage face is influenced by a layer of lower permeability material that enhances horizontal (rather than vertical) seepage in this location.

Notwithstanding, the groundwater model conservatively represents the Drip as connected to the regional water table rather than being a perched water system. Results of groundwater modelling indicate that, even if the Drip has connectivity with the regional water table, secondary extraction of LW409-414 would not impact the shallow groundwater levels in this area (AGE, 2024).

Due to practical limitations to installing a groundwater monitoring bore within the immediate vicinity of the Drip (including access to Goulburn River National Park, steep terrain, required depth of the bore, vegetation disturbance and associated safety considerations), the nearest groundwater bore is located more than two kilometres (km) north of the Drip. The proposed groundwater monitoring program for the Drip for LW409-414 is outlined in **Section 4.1**.

2.2 GOULBURN RIVER

The Goulburn River is the main watercourse in the vicinity of UG4 and has been previously heavily modified by the Goulburn River Diversion adjacent to UG4. The Goulburn River is located on the north-western side of LW409-412 at distances of 180 m to 440 m from the longwall commencing ends, and to the north and north-east of LW412-414 at distances of 460 m to 500 m from the longwall commencing ends (**Figure 1**).

At its nearest point of 180 m from LW409-414, the distance to the Goulburn River represents about 1.3 times the depth of cover from LW409-414. Elsewhere, the Goulburn River is two or more times the depth of cover from LW409-414.

The subsidence impacts to the Goulburn River based on the Approved Layout do not change based on the Extraction Plan Layout. It is considered unlikely that fracturing of the bed of the Goulburn River would occur due to LW409-414 based on the magnitude of expected movements and the offset distances of the longwalls from the Goulburn River. If fracturing does occur, it is likely that the fractures will be localised in nature and relatively minor in size and represent no greater than negligible impact. It is expected that the majority of the bedrock in the bed of the river will be covered with alluvial deposits, which would cover any minor fractures that may develop in the bedrock. Minor fractures that potentially develop outside extracted longwalls are not generally associated with any increased rate of diversion of surface water into near-surface substrata. Valley closure movements greater than the model tolerance (i.e. 20 mm of differential movement, ±5 mm for each unit or ±10 mm in total for GNSS monitor accuracy) are unlikely to be observed at the Goulburn River (MSEC, 2024).

Four “pairs” of GNSS unis were installed an opposite side of the section of the Goulburn River adjacent to LW409-412 in August 2026 at the locations shown in Figure 3. These GNSS unit “pairs” will be used to monitor differential movements (i.e. valley closure) across the Goulburn River.

In November 2023, MCO installed two additional gauging stations, namely SW02 and SW22, and two shallow standpipe monitoring bores PZ237A and PZ234A, to compare surface/groundwater levels at two locations along the Goulburn River (**Figure 3**). The data collected at these monitoring locations to date indicates both gaining and losing conditions between surface water and groundwater occurring along the length of the Goulburn River adjacent to LW409-414. The predicted changes to baseflow from LW409-414 are limited, and these small predicted changes would be undetectable compared to observed baseflow in the Goulburn River (AGE, 2024).

Monitoring of surface water quality, streamflow and stream health, as well as groundwater levels and quality adjacent to the Goulburn River, is undertaken in accordance with the LW409-414 Water Management Plan (WMP) and the complex-wide WMP and would continue throughout secondary extraction of LW409-414.

3.0 SUBSIDENCE IMPACT PERFORMANCE MEASURES

In accordance with Condition 73, Schedule 3 of Project Approval (05_0117), MCO must ensure that there is no exceedance of the subsidence impact performance measures listed in Table 14. The subsidence impact performance measures relevant to the Drip, Corner Gorge and Goulburn River are provided in **Table 3**.

Table 3: Subsidence Impact Performance Measures

Natural Feature	Performance Measure
The Drip and Corner Gorge	*Nil impact or environmental consequences*
Goulburn River and the bed of the Goulburn River	*Negligible impact or environmental consequences.* *Remain outside the zone of recorded subsidence damage for longwall mining*

Considering the significant distance of mining and low magnitude of predicted far-field movements at the Drip and Corner Gorge, mining of LW409-414 would achieve the subsidence impact performance measure of nil impact or environmental consequences (MSEC, 2024).

In accordance with Table 11 of Condition 32, Schedule 3 of Project Approval (05_0117), the water management performance measure of 'nil impact on the water supply to the Drip' has also been considered in the Monitoring Program. As described in **Section 2.1.2**, even with the Drip conservatively modelled as being connected to the regional water table (it is in fact considered a perched system which is not connected to the regional water table) mining at LW409-414 would not impact the shallow groundwater levels in this area, meaning compliance with the water management performance measure is achievable and expected (AGE, 2024).

MSEC (2024) determined that conventional subsidence at the Goulburn River would be less than limits of survey accuracy. WRM (2024) concluded that based on the subsidence predictions, the performance measure of negligible impact or environmental consequences for the Goulburn River will be achieved (from the perspective of surface water). Updated groundwater modelling indicates that mining of LW409-414 would result in a negligible impact or environmental consequence on the Goulburn River (AGE, 2024).

Section 4.0 describes the monitoring that will be conducted to assess LW409-414 against the relevant performance measures, including associated trigger levels and TARPs.

4.0 MONITORING PROGRAM, TRIGGER LEVELS AND TRIGGER ACTION RESPONSE PLANS

The proposed monitoring program for the Drip, Corner Gorge and Goulburn River is outlined below, and the locations of the monitors are shown on **Figure 3**. Comprehensive review of all aspects of the Extraction Plan, including Aboriginal heritage, biodiversity, surface water, groundwater and subsidence, would be undertaken during secondary extraction of LW409-414.

4.1 THE DRIP AND CORNER GORGE

4.1.1 Monitoring Program

The monitoring program for the Drip and Corner Gorge considers both subsidence and groundwater and comprises GNSS monitoring of far-field and differential movements, visual inspection to identify physical impacts and monitoring at groundwater bores (PZ257A, PZ256A and PZ237A) installed between LW409-414 and the Goulburn River (**Table 4**).

Table 4: Monitoring Program for the Drip and Corner Gorge

Monitoring Component	Monitoring Method/Sites	Duration	Parameters
Subsidence	GNSS units	• Prior to and during secondary extraction of LW409-414.	Real-time measurement of far-field and differential movements, reviewed in accordance with **Section 5.1**.
	Visual inspection	• Baseline inspection prior to the secondary extraction of LW409[1]. • At least every two months during mining of LW409-414 (and more frequently during the periods outlined in **Figure 5**). • At the completion of LW414. • Additional observations at the Drip and Corner Gorge if GNSS monitoring identifies an exceedance of the Level 1 trigger (**Attachment 1**).	Observations and description features (including existing rockfalls, cliff instabilities, surface cracking and changes to water supply) and comparison to baseline photography, reviewed in accordance with **Section 5.1**.
Groundwater	PZ257A PZ256A PZ237A	• Baseline monitoring once installed and up to commencement of secondary extraction of LW409. • During mining of LW409-414. • Additional review of data if visual inspection identifies any change in water supply to the Drip.	Continuous measurement of water level, reviewed in accordance with **Section 5.1**.

[1] *Baseline visual inspection of the Drip and Corner Gorge has been completed as part of the UG4 LW401-408 Extraction Plan.*

The existing GNSS monitoring array has been expanded by installing additional monitors north of LW412-414, between the longwalls and the boundary of the Goulburn River National Park and Goulburn River State Conservation Area. These monitors will provide additional real-time and continuous data of far-field horizontal and differential movements, build on the dataset as mining progresses towards the Drip and Corner Gorge and act as an 'early warning' of observed movements trending towards and/or above predictions.

The locations of additional monitors are shown in **Figure 3**.

4.1.2 Trigger Levels

Subsidence

As detailed in **Section 2.0**, baseline monitoring at the GNSS units installed at the Drip and Corner Gorge commenced in December 2023. This baseline monitoring has identified natural vertical and horizontal movements at the Drip and Corner Gorge, particularly following rainfall events (current longwall mining is greater than 2.5 km away).

A subsidence monitoring program has been developed for the Drip and Corner Gorge including a process for ongoing review of subsidence-related trigger levels for these features. The subsidence monitoring program would involve:

- Review of GNSS monitoring data at the Drip and Corner Gorge, as well as surrounding regional monitors, to confirm baseline natural movements;
- Review of GNSS monitoring data from mining operations in LW405-408 and LW409-411 to refine the subsidence predictions and confirm the trigger levels; and
- Reporting on the outcomes of the review (**Section 5.3**).

As described in **Section 2.1.1**, review of GNSS monitoring data from December 2023 to March 2026 has identified that the Drip and Corner Gorge currently experience a level of baseline natural far-field movements up to approximately ±10 mm. Predicted far-field movements at the Drip and Corner Gorge above baseline at the end of each panel are outlined in **Attachment 5**.

Trigger levels for valley closure (i.e. differential movement) at the Drip and Corner Gorge are as follows:

- Predicted Impacts – Observed differential movements greater than baseline movements but less than or equal to ±15 mm of differential movement.
- Level 1 – Observed differential movements greater than ±15 mm but less than or equal to ±20 mm of differential movement.
- Level 2 – Observed differential movements greater than ±20 mm of differential movement above baseline.

The observed baseline movements and trigger levels for far-field and differential movements at the Drip and Corner Gorge would continue to be reviewed and updated (if required) in consideration of ongoing monitoring data.

The proposed frequency of review of GNSS monitoring data throughout secondary extraction of LW409-414 is outlined in **Section 5.1**.

Groundwater

PZ257 comprises two standpipe monitoring bores (i.e. PZ257A, PZ257C) and a VWP (i.e. PZ257B). PZ256 comprises two standpipe monitoring bores (i.e. PZ256A, PZ256C) and a VWP (i.e. PZ256B). PZ237 comprises three standpipe monitoring bores (i.e. PZ237A, PZ237B, PZ237C).

PZ257A, PZ256A and PZ237A are the relevant trigger bores for the Drip to provide an 'early warning' in the event observed drawdown of groundwater levels exceeds modelled predictions. PZ257A and PZ256A are located north of LW412-414 and south of the Goulburn River. PZ237A is located between the northwestern corner of LW412 and the Goulburn River (**Figure 3**).

In its Advice Report, the IEAPM recommended the groundwater model be recalibrated prior to commencement of LW410. MCO has accepted this recommendation and commissioned AGE to undertake the groundwater model update.

On this basis, interim investigation trigger levels have been established for PZ257A, PZ256A and PZ237A which would apply until the groundwater model update is completed (**Table 5**).

The interim investigation trigger levels will be reviewed and updated (if required) to reflect the outcomes of the updated modelling.

Table 5: Interim Groundwater Investigation Trigger Levels for the Drip and Corner Gorge

Piezometer	Screened Interval	Screened Depth (mbgl)	Minimum Observed Groundwater Level (mAHD)	Interim Investigation Trigger Level (mAHD)
PZ257A	Triassic	58 - 61	377.0	376.5
PZ256A	Triassic	37 - 40	374.2	373.7
PZ237A	Triassic	14 - 17	383.1	382.9

The relevant trigger events for potential groundwater impacts to the Goulburn River are as follows:

> *The monitored groundwater level trend at PZ257A, PZ256A or PZ237A exceeds relevant trigger level for two consecutive monitoring rounds (with monitoring round being 1 month of data, and groundwater level being the average for that month).*

The proposed frequency of review of groundwater monitoring data throughout secondary extraction of LW409-414 is outlined in **Section 5.1**.

In addition to the above, the IEAPM has also recommended MCO install additional investigation bores north of the Drip to confirm the conceptualisation of the Drip as a perched system. If at some future time the investigation bores are able to be established, observed data would indirectly inform monitoring of the water supply to the Drip by assisting to identify any requirement for review and/or recalibration of the groundwater model, which would include review of predictions for the Drip.

4.1.3 Trigger Action Response Plan

A TARP has been developed for the Drip and Corner Gorge and is provided in **Attachment 1**. This TARP would be implemented and monitoring data reviewed against the relevant trigger levels during secondary extraction of LW409-414.

The TARP demonstrates how the subsidence and groundwater predictions, monitoring program, trigger levels, and Technical and Steering Committee responsibilities are structured to demonstrate

compliance with the relevant performance measures, as well as the framework for implementation of management and contingency actions.

The TARP will be subject to regular review by the Technical Committee and updated in response to any actions signed-off by the Steering Committee, in accordance with the process outlined in **Section 5.1**.

4.2 GOULBURN RIVER

4.2.1 Monitoring Program

The monitoring program for the Goulburn River considers subsidence, groundwater and surface water, and comprises GNSS units and visual inspection to identify physical impacts, along with surface water flow and quality monitoring of the Goulburn River and groundwater monitoring adjacent to the Goulburn River (**Table 6**).

Table 6: Monitoring Program for the Goulburn River

Monitoring Component	Monitoring Method/Sites	Duration	Parameters
Subsidence	Visual inspection	• Baseline inspection prior to completion of LW409. • Every 6 months during mining of LW409-414 and for up to 1 year following completion of secondary extraction of LW414.	Observations and descriptions (including photographic record) of condition of vegetation, any areas of active erosion, sediment deposition, water ponding or streambed cracking.
	GNSS units[1]	• During secondary extraction of LW409-414.	Real-time measurement of far-field and differential movements, reviewed in accordance with **Section 5.1**.
Surface water	SW02, SW22	• Monthly (if flowing) prior to and during secondary extraction of LW409-414, data manually downloaded in accordance with **Section 5.1**.	Continuous measurement of flow. Monthly observation measurement of water quality (pH, EC, TSS, TDS, temperature, turbidity).
		• Six-monthly (in addition to above).	Al, Cu, Pb, Zn, Ni, Fe, Mn, As, Se, Cd, Cr, Li, Ba, Sr, DO, Total P and Total N
		• After rainfall event (>30 mm in 24 hours).	Flow – Observation pH, EC, TSS, TDS, Zn, Fe
Groundwater	PZ234A, PZ237A	• Baseline monitoring up to commencement of secondary extraction of LW409. • During mining of LW409-414, data manually downloaded in accordance with **Section 5.1**.	Continuous measurement of water level.

[1] Additional GNSS monitors for differential movements (i.e. valley closure) for the section of the Goulburn River adjacent to LW409-412 were installed in August 2026.

Additional GNSS sites to monitor differential movements (representative of valley closure) along the section of the Goulburn River adjacent to LW409-412 were installed in August 2026. The locations of the additional GNSS sites is shown on **Figure 3**.

4.2.2 Trigger Levels

Subsidence

The relevant trigger event for potential subsidence impacts to the Goulburn River is as follows:

> *Visible indication of mining-related movement identified during monitoring inspections.*

As described in **Section 4.2.1**, additional GNSS sites along the section of the Goulburn River adjacent to LW409-412 were installed in August 2026. Associated trigger levels for valley closure (i.e. differential movement) at the section of the Goulburn River adjacent to LW409-412 are as follows:

- Predicted Impacts – Observed differential movements greater than baseline movements but less than or equal to ±15 mm of differential movement.
- Level 1 – Observed differential movements greater than ±15 mm but less than or equal to ±20 mm of differential movement.
- Level 2 – Observed differential movements greater than ±20 mm of differential movement above baseline.

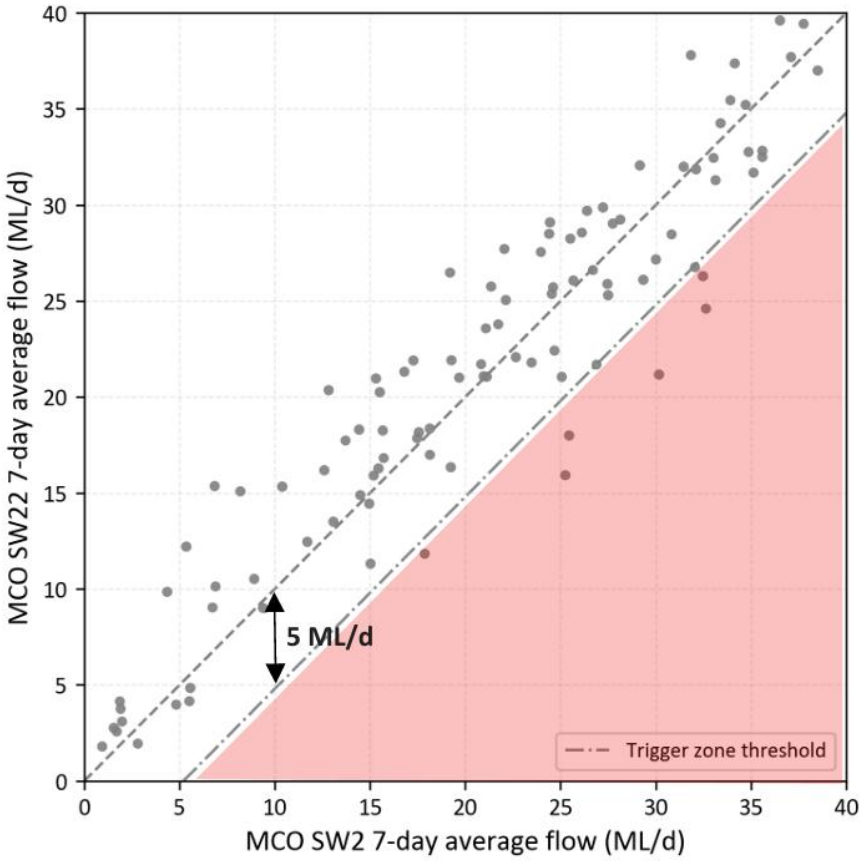
The observed baseline movements and trigger levels for far-field and differential movements at the section of the Goulburn River adjacent to LW409-412 would continue to be reviewed and updated (if required) in consideration of ongoing monitoring data.

The proposed frequency of review of GNSS monitoring data throughout secondary extraction of LW409-414 is outlined in **Section 5.1**.

Surface Water

Average 7-day flow loss between SW02 and SW22 for the baseline monitoring period of November 2023 to October 2025 is shown in **Figure 4**. An interim investigation trigger level for allowable flow loss between SW02 and SW22 has been established at average 7-day flow loss of 5 ML/day. The practicality of this interim trigger is to be reviewed by the Technical Committee during secondary extraction of LW409 given inherent inaccuracies with flow gauges on natural streams.

Figure 4: Allowable Flow Loss for Goulburn River Between SW02 and SW22



The trigger investigation levels relevant to surface water quality are provided in **Table 7**.

Table 7: Surface Water Quality Trigger Investigation Levels for the Goulburn River

Waterway	Monitoring Site	Trigger Investigation Values		
		pH	EC (µs/cm)	Turbidity (NTU)
Goulburn River	SW02/SW22	6.5 – 8.5*	900**	25***

* Based on the 20th/80th % ile values.

** EC trigger levels reflect approved discharge limits at the Ulan Mine Complex (Ulan's discharge points are located upstream of SW01)

*** Based on the ANZECC Guideline values.

The relevant trigger events for potential surface water impacts to the Goulburn River are as follows:

> *Two consecutive monthly surface water quality monitoring results exceed (or below in event of a trigger of the lower pH limit) investigation triggers at trigger monitoring locations.*
>
> *Weekly (i.e. Monday to Sunday 7-day period) average flow loss between SW22 and SW02 exceeds the allowable flow loss for four consecutive (i.e. non-overlapping) periods, including the most recent 7-day period.*

The proposed frequency of review of surface water monitoring data throughout secondary extraction of LW409-414 is outlined in **Section 5.1**.

Groundwater

PZ234 comprises three standpipe monitoring bores (PZ234A, PZ234B, PZ234C). PZ237 comprises three standpipe monitoring bores (i.e. PZ237A, PZ237B, PZ237C).

PZ234A and PZ237A are the relevant trigger bores for the Goulburn River as they have been installed adjacent to SW02 and SW22 and provide information regarding the surface water-groundwater interaction at the river. PZ234A is located between the northeastern corner of LW414 and the Goulburn River and PZ237A is located between the northwestern corner of LW412 and the Goulburn River (**Figure 3**).

In its Advice Report, the IEAPM recommended the groundwater model be recalibrated prior to commencement of LW410. MCO has accepted this recommendation and commissioned AGE to undertake the groundwater model update.

On this basis, interim investigation trigger levels have been established for PZ234A and PZ237A which would apply until the groundwater model update is completed (**Table 8**).

The interim investigation trigger levels will be reviewed and updated (if required) to reflect the outcomes of the updated modelling.

Table 8: Groundwater Investigation Trigger Levels for the Goulburn River

Piezometer	Screened Interval	Screened Depth (mbgl)	Minimum Observed Groundwater Level (mAHD)	Interim Investigation Trigger Level (mAHD)
PZ234A	Triassic	15 - 18	372.7	372.3
PZ237A	Triassic	14 - 17	383.1	382.9

The relevant trigger event for potential groundwater impacts to the Goulburn River is as follows:

> *The monitored groundwater level trend at locations PZ237A and PZ234A exceeds trigger levels for two consecutive monthly monitoring rounds (with 'monitoring round' referring to 1 month of data, and groundwater level being the average for that month).*

The proposed frequency of review of groundwater monitoring data throughout secondary extraction of LW409-414 is outlined in **Section 5.1**.

4.2.3 Trigger Action Response Plan

A TARP has been developed for the Goulburn River and is provided in **Attachment 2**. This TARP would be implemented and monitoring data reviewed against the relevant trigger levels and events during secondary extraction of LW409-414.

The TARP demonstrates how the subsidence, groundwater and surface water predictions, monitoring program, trigger levels and Technical and Steering Committee responsibilities are structured to demonstrate compliance with the relevant performance measures, as well as the framework for implementation of management and contingency actions.

The TARP will be subject to regular review by the Technical Committee and updated in response to any actions signed-off by the Steering Committee, in accordance with the process outlined in **Section 5.1**.

5.0 REVIEW AND REPORTING

The monitoring data review process, recommendations and reporting milestones to be undertaken by the Technical and Steering Committees for this Program are outlined below.

5.1 MONITORING DATA REVIEW

The monitoring data review process would be undertaken in three key phases, as follows (**Figures 5** and **6**):

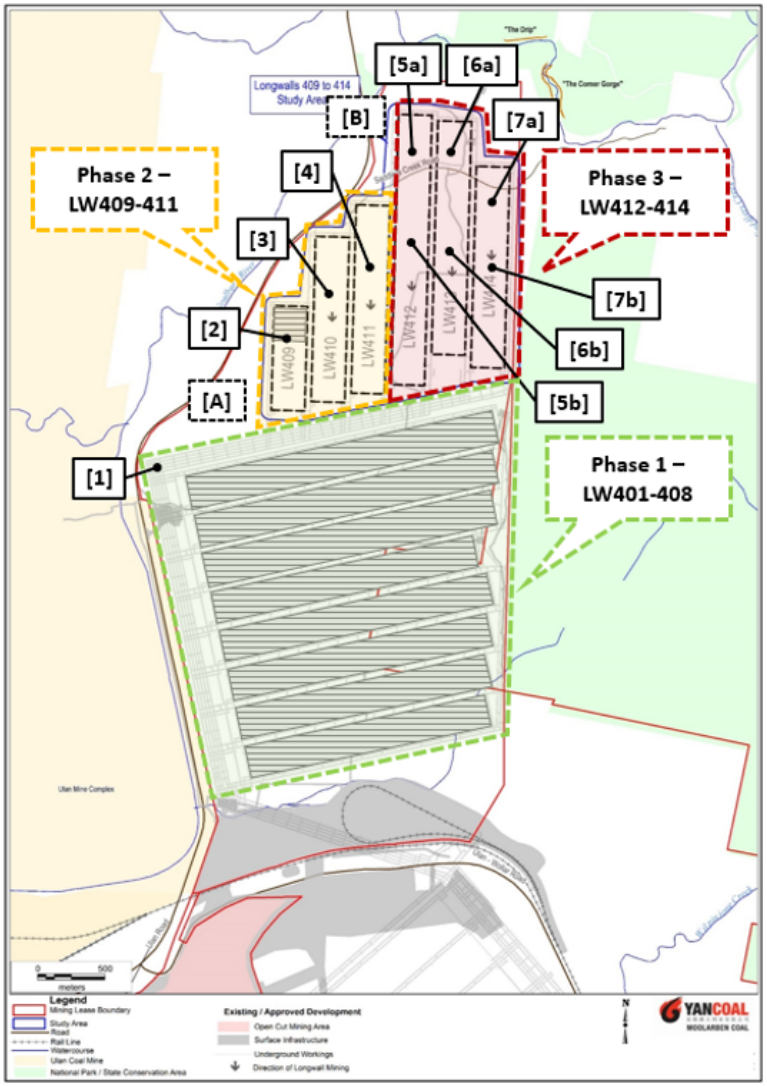
- Phase 1 – Refine predictions and update trigger levels (during secondary extraction of LW401-408).
- Phase 2 – Confirm predictions and trigger levels and implement TARPs as necessary (during secondary extraction of LW409-411).
- Phase 3 – Implement TARPs (during secondary extraction of LW412-414).

The general actions to be undertaken by the Technical and Steering Committees during each phase is outlined below:

1. Technical Committee reviews monitoring data for relevant period.
2. Technical Committee prepares recommendation (refer to **Section 5.2**).
3. Committee Meeting between Technical and Steering Committee members to present review findings and recommendation. The Committee Meeting provides an opportunity for any feedback from the Steering Committee to be considered by the Technical Committee when finalising the recommendation. A register of meetings, recommendations and decisions is provided in **Attachment 3** and would be updated as mining progresses.
4. Technical Committee finalises recommendation to Steering Committee and provides a copy to DPHI along with a summary of the supporting monitoring data reviewed (**Table 9**).
5. Steering Committee to consider recommendation and decide on any action/s.
6. Steering Committee decision documented and a copy provided to DPHI (**Table 9**).
7. Steering Committee to coordinate resources required and implement any action/s, in consultation with Technical Committee.

In consideration of proximity of features to the longwall panels, separate review and reporting processes are provided for the Drip and Corner Gorge (**Figure 5**) as well as the Goulburn River (**Figure 6**). The timing that each of the review phases would be implemented with respect to mining progression is shown in **Figures 5** and **6**. **Table 9** provides a summary of the review points and reporting milestones described and shown in **Figures 5** and **6**.

Figure 5: The Drip and Corner Gorge Review and Reporting Process



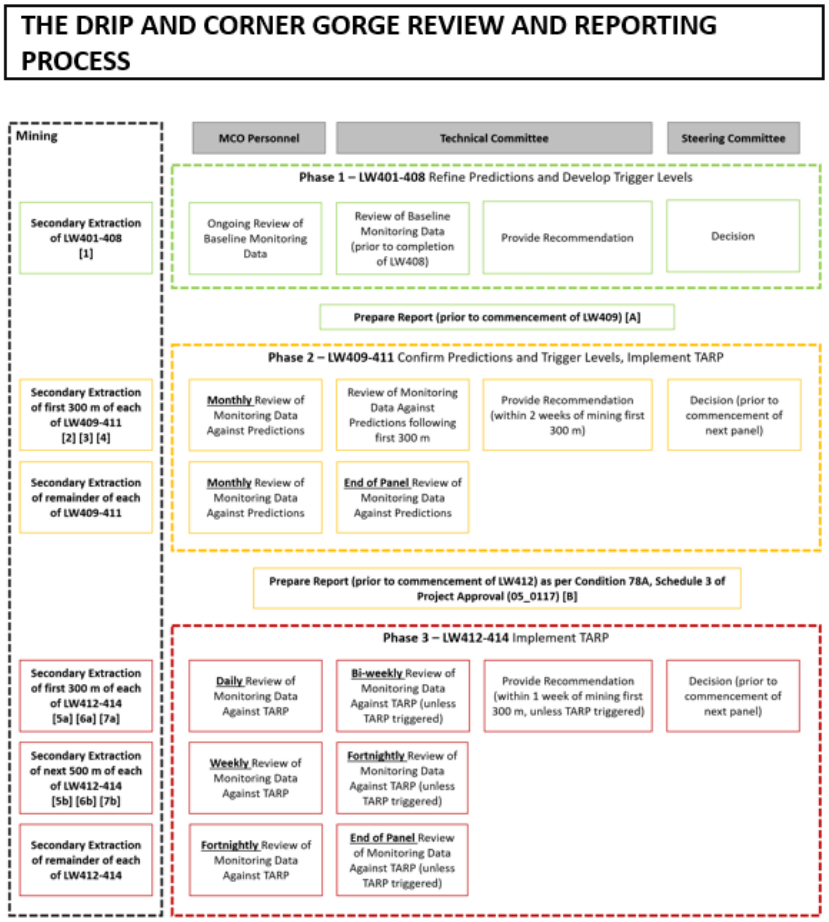
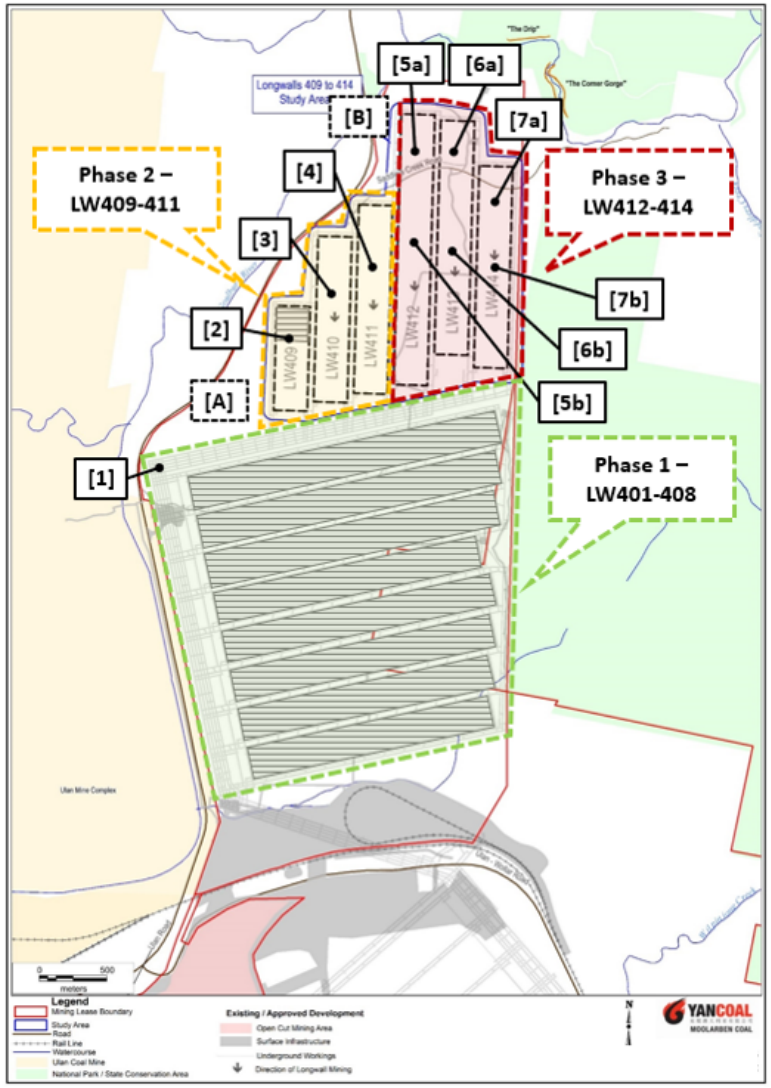
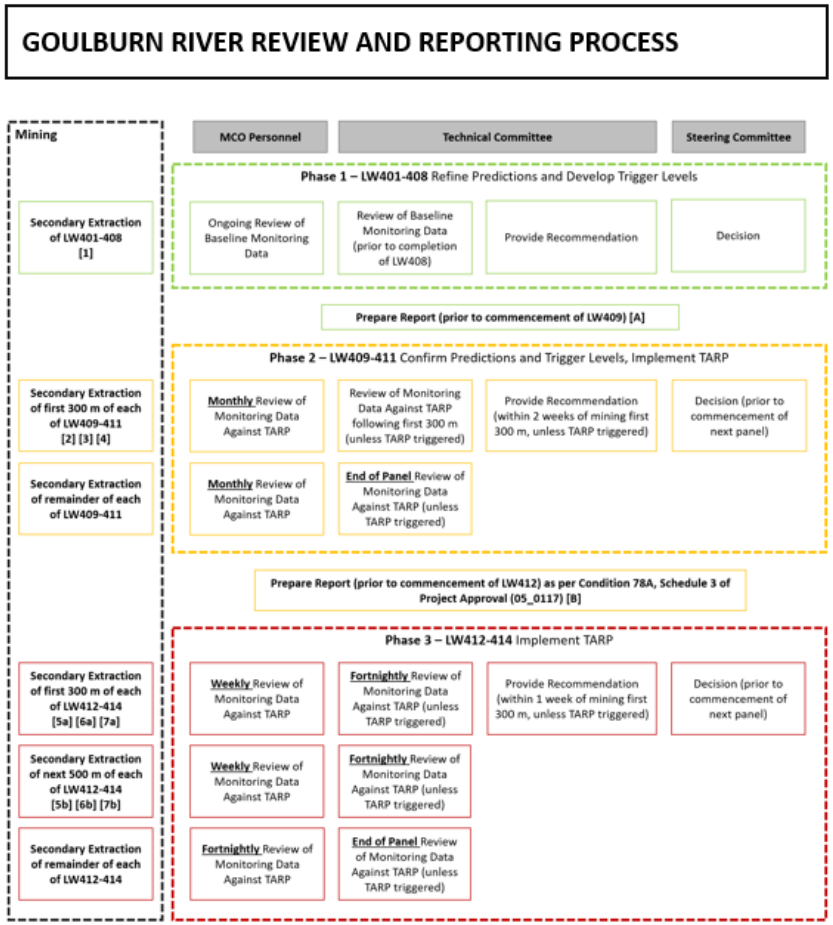


Figure 6: Goulburn River Review and Reporting Process





Note: For valley closure monitoring along the section of the Goulburn River adjacent to LW409-412, the monitoring review frequency adopted during Phase 2 will continue to be applied during mining of LW412. The monitoring frequency to be applied during mining of LW413-414 will be reviewed by the Technical Committee and recommended based on monitoring data collected during mining of LW409-412.

Table 9: Summary of Program Review Points and Reporting Milestones

Program Phase	Review Point	Description	Reporting
Phase 1	**[1]**	Secondary Extraction of LW401-408	-
	[A]	Prior to commencement of LW409	Report on monitoring data from LW401-407, available monitoring data from LW408 (as mining would not be complete) and baseline data from LW409-414 monitors, any refinements to predictions and proposed trigger levels for the Drip, Corner Gorge and Goulburn River.
Phase 2	**[2]**	Following Secondary Extraction of First 300 m of LW409	Review relevant monitoring data, document recommendation/decision (in accordance with **Attachment 4**) and provide copy to DPHI.
	[3]	Following Secondary Extraction of First 300 m of LW410	Review relevant monitoring data (including any additional data from secondary extraction of remainder of LW409 [i.e. end of panel review]), document recommendation/decision (in accordance with **Attachment 4**) and provide copy to DPHI.
	[4]	Following Secondary Extraction of First 300 m of LW411	Review relevant monitoring data (including any additional data from secondary extraction of remainder of LW410 [i.e. end of panel review]), document recommendation/decision (in accordance with **Attachment 4**) and provide copy to DPHI.
	[B]	Prior to commencement of LW412	In accordance with Condition 78A, Schedule 3 of Project Approval (05_0117), report on available monitoring data from LW409-411 to confirm predictions and trigger levels and provide copy to DPHI.
Phase 3	**[5a]**	Following Secondary Extraction of First 300 m of LW412	Review relevant monitoring data (including any additional data from secondary extraction of remainder of LW411 [i.e. end of panel review]), document recommendation/decision (in accordance with **Attachment 4**) and provide copy to DPHI.
	[6a]	Following Secondary Extraction of First 300 m of LW413	Review relevant monitoring data (including any additional data from secondary extraction of remainder of LW412 [i.e. 500 m and end of panel reviews]), document recommendation/decision (in accordance with **Attachment 4**) and provide copy to DPHI.
	[7a]	Following Secondary Extraction of First 300 m of LW414	Review relevant monitoring data (including any additional data from secondary extraction of remainder of LW413 [i.e. 500 m and end of panel reviews]), document recommendation/decision (in accordance with **Attachment 4**) and provide copy to DPHI.

The frequency of monitoring data collection and review, as well as timing of actions outlined above, is determined by the relevant feature and current review phase as well as the distance of mining from the commencing end of each longwall panel (**Figures 5** and **6**). Further description of each phase of the review process, including relevant actions, timing and responsibilities, is provided below.

Phase 1

Subsidence, groundwater and surface water monitoring data collected during secondary extraction of LW401-407, available monitoring data from LW408 (as mining would not be complete) and baseline data from monitoring locations relevant to LW409-414, will be reviewed by the Technical Committee to refine predictions and confirm/update associated trigger levels for the Drip, Corner Gorge and Goulburn River TARPs.

Recommendations from the Technical Committee and associated Steering Committee decisions on any action/s would be finalised and documented prior to commencement of LW409.

Phase 2

Subsidence, groundwater and surface water monitoring data will be reviewed by the Technical Committee at the completion of the first 300 m of each of LW409-411[3] (i.e. approximately a 4 week period). The purpose of this review is to determine that observed monitoring is within predicted levels and confirm proposed trigger levels.

Recommendations from the Technical Committee and associated Steering Committee decisions on any action/s would be finalised and documented (in accordance with **Attachment 4**) prior to commencement of the next panel.

For the remainder of each of LW409-411, the monitoring data will be reviewed at the end of each panel. Any relevant observations from this monitoring would be incorporated in the recommendation/decision prepared after secondary extraction of the first 300 m of the next panel.

The TARPs will be considered throughout Phase 2 and implemented where relevant (i.e. in the event of a trigger level exceedance).

Phase 3

During secondary extraction of the first 300 m of each of LW412-414:

- Subsidence and groundwater level monitoring data for the Drip and Corner Gorge will be reviewed daily by MCO personnel (unless there is a trigger level exceedance) and twice a week by the Technical Committee.
- Surface water and groundwater monitoring data for the Goulburn River will be reviewed weekly by MCO personnel (unless there is a trigger level exceedance) and every two weeks by the Technical Committee.

[3] For valley closure monitoring along the section of the Goulburn River adjacent to LW409-412, the monitoring review frequency adopted during Phase 2 will continue to be applied during mining of LW412. The monitoring frequency to be applied during mining of LW413-414 will be reviewed by the Technical Committee and recommended based on monitoring data collected during mining of LW409-412.

Recommendations from the Technical Committee and associated Steering Committee decisions on any action/s in consideration of this monitoring review would be finalised and documented (in accordance with **Attachment 4**) prior to commencement of the next panel.

During secondary extraction of the next 500 m of each of LW412-414:

- Subsidence and groundwater level monitoring data for the Drip and Corner Gorge will transition to weekly review by MCO personnel (unless there is a trigger level exceedance) and fortnightly review by the Technical Committee.
- Surface water and groundwater monitoring data for the Goulburn River will continue to be reviewed weekly by MCO personnel (unless there is a trigger level exceedance) and fortnightly by the Technical Committee.

For the remainder of each of LW412-414, monitoring data for the Drip, Corner Gorge and Goulburn River will be reviewed at the completion of secondary extraction of each of LW412-414.

Any relevant observations from the 500 m or end of panel monitoring review would be incorporated in the recommendation/decision prepared after secondary extraction of the first 300 m of the next panel.

5.2 RECOMMENDATION

Any recommendation from the Technical Committee will consider and provide comment on the following:

- Are monitoring observations within predictions at relevant monitoring locations for the Drip, Corner Gorge and/or Goulburn River?
- Is the monitoring program, proposed trigger levels and/or TARP appropriate to demonstrate compliance with the performance measures for the Drip, Corner Gorge and/or Goulburn River?
- Is the mine plan appropriate to maintain compliance with the performance measures for the Drip, Corner Gorge and/or Goulburn River?

In particular, the Technical Committee must consider whether monitoring observations and/or revised subsidence predictions require the following interventions/actions:

1. Pause secondary extraction in relevant areas where appropriate and safe to do so.
2. Depending on outcomes of further investigations, consider whether:
    - longwall extraction of the current and/or future panels should cease prematurely;
    - longwall extraction of the current panel should be relocated further outbye;
    - future panels should commence further outbye than the approved mining layout;
    - the density of cut throughs should be increased within the first portion of extraction of future panels to enable earlier pause and/or cessation of the longwall extraction, if required;
    - retreat speed of future panels should be limited for the first portion of extraction to enable additional time to review/assess monitoring data; and/or
    - no change to the approved mining layout is required.

If required, the Technical Committee will specify any recommended updates or actions to ensure mining of LW409-414 continues to comply with the performance measures for the Drip, Corner Gorge and/or Goulburn River.

A checklist of specific subsidence and groundwater predictions for the Drip and Corner Gorge monitoring program for each longwall panel, to be considered by the Technical Committee, is provided in **Attachment 5**.

5.3 REPORTING

A number of reporting milestones are proposed to provide DPHI with the outcomes of ongoing review of monitoring data and outline any updates to predicted impacts, monitoring (including location, frequency and/or type), trigger levels and/or TARPs for the Drip, Corner Gorge and Goulburn River (**Table 9**).

Prior to commencement of LW409, MCO would report on monitoring data from LW401-407, available monitoring data from LW408 (as mining would not be complete), and baseline data from LW409-414 monitors as well as any refinements to predictions and proposed trigger levels for the Drip, Corner Gorge and Goulburn River.

Prior to commencement of LW412, MCO would prepare a report in accordance with Condition 78A, Schedule 3 of Project Approval (05_0117):

> *78A. Prior to the commencement of second workings in longwall LW12, the Proponent shall:*
>
> *(a) prepare a report:*
>
> *i. analysing the subsidence, surface water, and groundwater impacts of the cumulative progress of longwall mining for the project, including consideration of data collected from the previously mined panels up to and including commencement in longwall LW11;*
>
> *ii. updating the predicted impacts based on the available local data and current scientific understanding of these relevant fields (demonstrating compliance with the requirements of this approval);*
>
> *(b) commission suitably qualified subsidence and groundwater experts whose appointment has been approved by the Secretary to review the report, and if necessary recommend changes to the monitoring programs and/or mine plan for subsequent panels; and*
>
> *(c) submit a copy of the report and expert review to the Department, Resources Regulator, BCS and Water Group, including a response to any recommendations contained in the expert review;*
>
> *to the satisfaction of the Secretary.*

MCO would notify DPHI as soon as practicable in the event of any exceedance of trigger levels that, following further investigation, is identified as being mining-related (**Attachments 1** and **2**).

6.0 REFERENCES

Australasian Groundwater and Environmental Consultants Pty Ltd (2024) *UG4 LW409 to LW414 Extraction Plan Groundwater Technical Report.*

Australasian Groundwater and Environmental Consultants Pty Ltd (2025) *Moolarben UG4 LW409-414 EP Technical Memorandum – IEAPM Response*.

Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (2023) *IESC 2023-140: Moolarben Coal Complex OC3 Extension (EPBC 2022/9162 and SSD 33083358) – Expansion.*

Lloyd Townley (2026) *Review of Proposed Monitoring and Reporting Program for The Drip in Relation to UG4 LW409-414*.

Mine Subsidence Engineering Consultants Pty Ltd (2024) *Moolarben Project Stage 1 – Longwalls 409 to 414 Subsidence Predictions and Impact Assessments for the Natural and Built Features in Support of the Extraction Plan.*

Mine Subsidence Engineering Consultants (2025) *Moolarben Coal Operations – Longwalls 409 to 414 - Subsidence predictions and impact assessments for the Drip and Corner Gorge*

Mine Subsidence Engineering Consultants Pty Ltd (2026) *Moolarben Coal Operations – Longwalls 401-407 End of Panel Subsidence Review Report*.

Moolarben Coal Mines Pty Limited (2006) *Moolarben Coal Project Environmental Assessment Report.*

NSW Department of Planning (2007) *Major Project Assessment - Moolarben Coal Project*.

WRM Water and Environment Pty Ltd (2024) *UG4 Longwalls 409 to 414 Extraction Plan Surface Water Technical Report.*

ATTACHMENT 1

TRIGGER ACTION RESPONSE PLAN FOR THE DRIP AND CORNER GORGE

Table A1-1: TARP for the Drip and Corner Gorge

Condition	Nil Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Nil Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Subsidence – Far-field Movements and Physical Impact					
Trigger	Baseline natural movements at the Drip and Corner Gorge (e.g. as a result of changes in temperature, rainfall events) (as detailed in **Section 4.1.2**).	Observed level of movement at the Drip and Corner Gorge between baseline natural movements but less than or equal to predicted far-field movements (as detailed in **Attachment 5**).	Observed level of movement at the Drip and/or Corner Gorge greater than the predicted far-field movements but less than the observed level of far-field movement at other features* associated with UG4 mining where no physical impacts were identified, or visual inspection identifies minor physical impacts (e.g. minor rockfall) at the Drip and/or Corner Gorge (whether due to longwall extraction or not).	Observed level of movement at the Drip and/or Corner Gorge greater than the predicted far-field movements and greater than the observed level of far-field movement at other features* associated with UG4 mining where no physical impacts were identified.	Observed level of movement at the Drip and/or Corner Gorge as per Level 2 Trigger and visual inspection identifies new physical impacts (e.g. rockfalls, cliff instabilities, surface cracking) at the Drip and/or Corner Gorge (whether due to longwall extraction or not). **
Action	Determine baseline natural movements: • Review baseline GNSS monitoring data at the Drip and Corner Gorge. • Visual inspections of the Drip and Corner Gorge (baseline photography), including observations of existing rockfalls / instabilities / surface cracking. Refine predictions of expected far-field movement at the Drip and Corner Gorge and update Trigger Levels.	Conduct monitoring as described in **Section 4.1**, including: • Subsidence monitoring of GNSS units at the Drip and Corner Gorge, consistent with the LW409-414 SMP. • Visual inspection of the Drip and Corner Gorge. Prior to commencement of extraction of LW412, confirm Trigger Levels.	Where new impacts are identified, DPHI, NPWS Area Manager and BCS notified. Review subsidence predictions and far-field movements and, if required, mine plan (i.e. longwall starting position) for LW412-414. The Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2**. Undertake further investigation to determine if management measures are required (e.g. review monitoring frequency, review of Trigger Levels in consideration of additional available monitoring data).	Implement Contingency Plan including notifications as described in Section 4.1 of the LW409-414 Extraction Plan. Incidents will be reported and investigated in accordance with Section 4.3 of the LW409-414 Extraction Plan. Take all reasonable steps to ensure that the exceedance does not recur. Actions as stated for Level 1.	Pause secondary extraction in relevant areas where appropriate and safe to do so. Actions as stated for Level 2. Undertake further investigations to identify appropriate management actions and to determine if longwall extraction can recommence without further impacting the Drip/Corner Gorge. If the outcome of the investigation is that longwall extraction should cease prematurely, prepare a recovery plan to safely recover the longwall equipment and minimise impacts to the Drip/Corner Gorge (Note: further longwall retreat may be required).
Frequency	Prior to the secondary extraction of LW409**.**	To be implemented during mining of LW409-414 at frequency as specified in **Figure 5**.	To be implemented if required during mining of LW409-414 (i.e. if monitoring identifies movements consistent with Level 1 Trigger).	To be implemented if required during mining of LW409-414 (i.e. if monitoring identifies movements consistent with Level 2 Trigger).	To be implemented if required during mining of LW409-414 (i.e. if monitoring identifies movements consistent with Level 3 Trigger).
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Baseline far-field movements, trigger levels and TARP would be reviewed and updated (if required) in consideration of ongoing monitoring data.

Note: Baseline and far-field movement predictions are outlined in Table A5-1 and are required to be reviewed with the TARP. The GNSS Accuracy of ±5mm will be considered by the Technical Committee when assessing the actual observed movement.

* 'Other features' refers to cliff features associated with UG4 which would also be subject to monitoring (i.e. CL7 and CL3) to inform refinement of predictions for the Drip and Corner Gorge.

** Excluding instance where a natural disaster (e.g. earthquake) is known to have occurred which caused the 'exceedance'.

Condition	Nil Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Nil Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Subsidence – Valley Closure Movements					
Trigger	Baseline natural differential movements at the Drip and Corner Gorge (e.g. as a result of changes in temperature, rainfall events) (as detailed in **Section 4.1.2**).	Observed differential movements greater than baseline movements but less than or equal to ±15 mm of differential movement.	Observed differential movements greater than ±15 mm but less than or equal to ±20 mm of differential movement.	Observed differential movements greater than ±20 mm of differential movement .	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measure.
Action	Determine baseline natural differential movements: • Review baseline GNSS monitoring data for differential movements at the Drip and Corner Gorge. • Confirm trigger levels (i.e. model tolerance range for differential movements ±5 mm to account for GNSS monitor accuracy).	Conduct monitoring as described in **Section 4.1**, including: • Subsidence monitoring of GNSS units at the Drip and Corner Gorge.	Review subsidence predictions in consideration of observed differential movements. Undertake further investigations, including consideration of other relevant monitoring data (e.g. far-field movements, weather, groundwater, visual inspection) to confirm if trigger exceedance is mining-related. If Level 1 trigger exceedance is identified as mining-related: • Notify DPHI as soon as practicable. • Technical Committee to consider whether management measures are required (e.g. review of monitoring frequency, review of trigger levels in consideration of additional monitoring data).	Pause secondary extraction in relevant areas where appropriate and safe to do so. Actions as stated for Level 1. The Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2**, and confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measures and advise if longwall extraction can recommence.	Actions as stated for Level 2. Undertake further investigations to determine if mine plan (e.g. longwall start position) requires review for current and/or next panel. Implement Contingency Plan including notifications as described in Section 4.1 of the LW409-414 Extraction Plan. Incidents will be reported and investigated in accordance with Section 4.3 of the LW409-414 Extraction Plan.
Frequency	Prior to the secondary extraction of LW409.	To be implemented during mining of LW409-414 at frequency as specified in **Figure 5**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414 (i.e. if monitoring identifies movements consistent with Level 2 Trigger).	To be implemented if required during mining of LW409-414 (i.e. if monitoring identifies movements consistent with Level 3 Trigger).
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

Note: Baseline as at September 2026 is ±10 mm natural movement. The GNSS Accuracy of ±5 mm will be considered by the Technical Committee when assessing the actual observed movements.

Condition	Nil Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Nil Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Subsidence – Water Supply to the Drip					
Trigger	Baseline observations of water seepage at the Drip.	No observed unpredicted loss of water supply to the Drip during photographic monitoring.	Unpredicted loss of water supply to the Drip observed during photographic monitoring.	Investigation identifies trigger exceedance is mining-related.	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measures.
Action	Establish baseline conditions: • Visual inspections of the Drip (baseline photography).	Conduct monitoring as described in **Section 4.1**, including: • Visual inspections of the Drip (comparison to baseline photography).	1. Check and Validate Data. 2. Notify Environment and Community Manager or delegate. 3. Undertake investigation to confirm if investigation trigger exceedance is mining-related: a. If necessary, engage a suitably qualified person(s) to determine if impact is related to LW409-414 extraction. b. Review subsidence monitoring results, weather, groundwater monitoring data and any other relevant data. c. If investigation confirms trigger exceedance is not mining-related, record data and cease investigation.	4. Pause secondary extraction in relevant areas where appropriate and safe to do so. 5. Notify DPHI and other relevant agencies as soon as practicable. 6. Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2**, confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measures and advise if longwall extraction can recommence.	7. Notify DPHI and other relevant agencies if performance measures are exceeded as soon as practicable. 8. Complete Preliminary investigation report and provide to DPHI and relevant agencies within 7 days of identifying the incident. 9. Implement contingency and remedial measures in consultation with DPHI.
Frequency	Prior to the secondary extraction of LW409.	To be implemented during mining of LW409-414 at frequency as specified in **Figure 5**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

Condition	Nil Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Nil Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Groundwater					
Trigger	Baseline groundwater level monitoring of PZ257A, PZ256A and PZ237A.	Groundwater level monitoring at PZ257A, PZ256A and PZ237A within relevant trigger levels (as detailed in **Section 4.1.2**).	The monitored groundwater level trend at PZ257A, PZ256A or PZ237A exceeds relevant trigger level for two consecutive monitoring rounds (with monitoring round being 1 month of data, and groundwater level being the average for that month).	Investigation identifies trigger exceedance is mining-related.	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measure.
Action	Establish baseline conditions: • Review baseline groundwater monitoring data (PZ257A, PZ256A and PZ237A). • Update trigger levels once sufficient baseline data has been collected.	Conduct monitoring as described in **Section 4.1**, including: • Groundwater level monitoring at PZ257A, PZ256A and PZ237A. • Following model recalibration, review and update trigger levels (if required). • Prior to commencement of extraction of LW412, confirm trigger level for PZ257A, PZ256A and PZ237A.	1. Check and validate data against other relevant trigger bores. 2. Notify Environment and Community Manager or delegate. 3. Undertake investigation to confirm if investigation trigger exceedance is mining-related: a. If necessary, engage a suitably qualified person. b. Consider relevant recent conditions, including climate and land-use activities. c. Consider relevant monitoring data (e.g. other monitoring bores, subsidence, surface water). d. If investigation confirms trigger exceedance is not mining-related, record data and cease investigation.	4. Pause secondary extraction in relevant areas where appropriate and safe to do so. 5. Notify DPHI and other relevant agencies as soon as practicable. 6. Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2**, confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measure to the Drip (by considering relevant monitoring data [e.g. monitoring bore proposed to the north of the Drip, if at some future time the bores are able to be established], ecological data, etc.) and advise if longwall extraction can recommence.	7. Notify DPHI and other relevant agencies if performance measures are exceeded as soon as practicable. 8. Complete Preliminary investigation report and provide to DPHI and relevant agencies within 7 days of identifying the incident. 9. A detailed Investigation Report (inclusive of any management/mitigation measures) would be provided to DPHI within 3 months of an incident occurring where a performance measure is exceeded. 10. Implement contingency and remedial measures in consultation with DPHI.
Frequency	Prior to secondary extraction of LW409.	To be implemented during mining of LW409-414 at frequency as specified in **Figure 5**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

ATTACHMENT 2

TRIGGER ACTION RESPONSE PLAN FOR THE GOULBURN RIVER

Table A2-1: TARP for the Goulburn River

Condition	Negligible Impact or Environmental Consequence		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Negligible Impact or Environmental Consequences
	Baseline Conditions	**Predicted Impacts**	**Level 1**	**Level 2**	**Level 3**
Subsidence – Physical Impact					
Trigger	Baseline monitoring of Goulburn River.	No indication of visible movement observed during ongoing monitoring.	Visible indication of movement identified during monitoring inspections.	Investigation identifies trigger exceedance is mining-related.	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measure.
Action	Establish baseline conditions: • Undertake visual inspections at access points along Goulburn River (baseline photography), including observation of condition of vegetation in the channel, and any areas of active erosion, sediment deposition, water ponding or streambed cracking. • Confirm Trigger Levels.	Conduct monitoring as described in **Section 4.2,** including: • Visual inspection at access points along Goulburn River.	1. Check and validate data. 2. Notify Environment and Community Manager or delegate. 3. Undertake investigation to confirm if investigation trigger exceedance is mining related: a. If necessary, engage a suitably qualified person(s) to determine if impact is related to LW409-414 extraction. b. Review subsidence monitoring results and any other relevant data. c. If investigation confirms trigger exceedance is not mining-related, record data and cease investigation.	4. Notify DPHI as soon as practicable. 5. Engage suitably qualified person(s) to determine any potential downstream impacts and provide advice on appropriate remediation works. 6. Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2** and confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measure.	7. Notify DPHI and other relevant agencies if performance measures are exceeded as soon as practicable. 8. Complete Preliminary investigation report and provide to DPHI and relevant agencies within 7 days of identifying the incident. 9. Implement contingency and remedial measures in consultation with DPHI.
Frequency	Prior to completion of LW409.	To be implemented during mining of LW409-414 at frequency as specified in **Table 4**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

Condition	Negligible Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Negligible Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Subsidence – Valley Closure Movements					
Trigger	Baseline natural differential movements at the section of the Goulburn River adjacent to LW409-412 (e.g. as a result of changes in temperature, rainfall events).	Observed differential movements greater than baseline movements but less than or equal to ±15 mm of differential movement.	Observed differential movements greater than ±15 mm but less than or equal to ±20 mm of differential movement.	Observed differential movements greater than ±20 mm of differential movement.	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measure.
Action	Confirm baseline natural differential movements and trigger levels: • Review baseline GNSS monitoring data for differential movements at other GNSS units at UG4.	Conduct monitoring as described in **Section 4.2**, including: • Subsidence monitoring of GNSS units at the section of the Goulburn River adjacent to LW409-412.	Review subsidence predictions in consideration of observed differential movements. Undertake further investigations, including consideration of other relevant monitoring data (e.g. far-field movements, weather, groundwater, visual inspection) to confirm if trigger exceedance is mining-related. If Level 1 trigger exceedance is identified as mining-related, Technical Committee to consider whether management measures are required (e.g. review of monitoring frequency, review of trigger levels in consideration of additional monitoring data).	Actions as stated for Level 1. If Level 2 trigger exceedance is identified as mining-related, notify DPHI as soon as practicable. The Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2**, and confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measures.	Actions as stated for Level 2. Undertake further investigations to determine if mine plan (e.g. longwall start position) requires review for current and/or next panel. Implement Contingency Plan including notifications as described in Section 4.1 of the LW409-414 Extraction Plan. Incidents will be reported and investigated in accordance with Section 4.3 of the LW409-414 Extraction Plan.
Frequency	During mining of LW409-414.	To be implemented during mining of LW409-414 at frequency as specified in **Figure 5**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414 (i.e. if monitoring identifies movements consistent with Level 2 Trigger).	To be implemented if required during mining of LW409-414 (i.e. if monitoring identifies movements consistent with Level 3 Trigger).
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

Condition	Negligible Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Negligible Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Surface Water – Water Quality					
Trigger	Baseline monitoring of water quality of Goulburn River.	Surface water quality monitoring results are within trigger levels (as detailed in **Section 4.2.2**).	Two consecutive monthly surface water quality monitoring results exceed (or below in event of a trigger of the lower pH limit) investigation triggers at trigger monitoring locations.	Investigation identifies trigger exceedance is mining-related.	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measure.
Action	Establish baseline conditions: • Review baseline surface water quality monitoring at SW02 and SW22. • Update/confirm trigger levels.	Conduct monitoring, as described in **Section 4.2,** including: • Monthly surface water quality monitoring at SW02 and SW22.	1. Check and validate data. 2. Notify Environment and Community Manager or delegate. 3. Undertake investigation to confirm if investigation trigger exceedance is mining related: a. If necessary, engage a suitably qualified person(s) to determine if impact is related to LW409-414 extraction. b. Review subsidence monitoring results and any other relevant data. c. If investigation confirms trigger exceedance is not mining-related, record data and cease investigation.	4. Notify DPHI as soon as practicable. 5. Engage suitably qualified person(s) to determine any potential downstream impacts and provide advice on appropriate remediation works. 6. Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2** and confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measure.	7. Notify DPHI and other relevant agencies if performance measures are exceeded as soon as practicable. 8. Complete Preliminary investigation report and provide to DPHI and relevant agencies within 7 days of identifying the incident. 9. Implement contingency and remedial measures in consultation with DPHI.
Frequency	Prior to secondary extraction of LW409.	To be implemented during mining of LW409-414 at frequency as specified in **Figure 6**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

Condition	Negligible Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Negligible Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Surface Water – Flow					
Trigger	Baseline monitoring of Goulburn River flow.	Surface water flow monitoring results within trigger levels (as described in **Section 4.2.2**).	Weekly (i.e. Monday to Sunday 7-day period) average flow loss between SW22 and SW02 exceeds the allowable flow loss for four consecutive (i.e. non-overlapping) periods, including the most recent 7-day period.*	Investigation identifies trigger exceedance is mining-related.	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measure.
Action	Establish baseline/ conditions: • Review continuous baseline surface water flow monitoring at SW02 and SW22. • Update/confirm trigger levels.	Conduct monitoring as described in **Section 4.2,** including: • Continuous surface water flow monitoring at SW02 and SW22.	1. Check and validate data. 2. Notify Environment and Community Manager or delegate. 3. Undertake investigation to confirm if investigation trigger exceedance is mining-related: a. If necessary, engage a suitably qualified person(s) to determine if impact is related to LW409-414 extraction. b. Review subsidence monitoring results and any other relevant data: i. Review groundwater monitoring data at adjacent groundwater monitoring bores PZ234A and PZ237A. If these bores show no impact from mining, no further investigation required. ii. Review additional flow data including Ulan and MCO daily treated water discharges and the Ulan river flow gauge to confirm any change in discharge. iii. Consult stream gauge maintenance contractor to assess whether a change in stream conditions or the rating curve at either gauge has occurred. iv. Revise rating curves if necessary and reassess flow loss. 4. If investigation confirms trigger exceedance is not mining-related, record data and cease investigation. a. A non-mining related trigger exceedance may require updates to the surface water flow monitoring system, including approval from NPWS to relocate monitoring equipment and/or regauge the monitoring sites. Monitoring data collected in the period between any trigger exceedance and confirmation and implementation of monitor updates will not be used to assess triggers.	5. Notify DPHI as soon as practicable. 6. Engage suitably qualified person(s) to determine any potential downstream impacts and provide advice on appropriate remediation works. 7. Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2** and confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measure.	8. Notify DPHI and other relevant agencies if performance measures are exceeded as soon as practicable. 9. Complete Preliminary investigation report and provide to DPHI and relevant agencies within 7 days of identifying the incident. 10. Implement contingency and remedial measures in consultation with DPHI.
Frequency	Prior to commencement of secondary extraction of LW409.	To be implemented during mining of LW409-414 at frequency as specified in **Figure 6**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

*Interim trigger – the practicality of this trigger to be reviewed by the Technical Committee during secondary extraction of LW409 given inherent inaccuracies with flow gauges on natural streams.

Condition	Negligible Impacts or Environmental Consequences		Further Investigation/Implement Management Measures	Restoration/Contingency Phase	Potential for Greater than Negligible Impacts or Environmental Consequences
	Baseline Conditions	Predicted Impacts	Level 1	Level 2	Level 3
Groundwater					
Trigger	Baseline monitoring at PZ234A and PZ237A.	Groundwater level monitoring results are within trigger levels (as described in **Section 4.2.2)**.	The monitored groundwater level trend at locations PZ237A and PZ234A exceeds relevant trigger levels for two consecutive monthly monitoring rounds (with monitoring round being 1 month of data, and groundwater level being the average for that month).	Investigation identifies trigger exceedance is mining-related.	Trigger exceedance has caused, or has the potential to cause, exceedance of the performance measure.
Action	Establish baseline conditions: • Review baseline groundwater level monitoring at PZ234A and PZ237A. • Update/confirm trigger levels.	Conduct monitoring as described in **Section 4.2,** including: • Groundwater level monitoring at PZ234A and PZ237A.	1. Check and validate data. 2. Notify Environment and Community Manager or delegate. 3. Undertake investigation to confirm if investigation trigger exceedance is mining-related: a. If necessary, engage a suitably qualified person. b. Consider relevant recent conditions, including climate and land-use activities. c. Consider relevant monitoring data, e.g. other monitoring bores and adjacent surface water monitoring locations. d. If investigation confirms trigger exceedance is not mining-related, record data and cease investigation.	4. Notify DPHI as soon as practicable. 5. Technical Committee to consider whether monitoring observations and/or revised subsidence predictions require the investigations/actions as detailed in **Section 5.2** and confirm if mining-related activities have caused, or have the potential to cause, exceedance of the performance measure.	6. Notify DPHI and other relevant agencies if performance measures are exceeded as soon as practicable. 7. Complete Preliminary investigation report and provide to DPHI and relevant agencies within 7 days of identifying the incident. 8. A detailed Investigation Report (inclusive of any proposed management/mitigation measures) would be provided to the DPHI within 3 months of an incident occurring where a performance measure is exceeded. 9. Implement contingency and remedial measures in consultation with DPHI.
Frequency	Prior to secondary extraction of LW409.	To be implemented during mining of LW409-414 at frequency as specified in **Figure 6**.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.	To be implemented if required during mining of LW409-414.
Position of Decision Making	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.	Technical and Steering Committees.

Note: Trigger levels and TARP will be reviewed and updated (if required) throughout secondary extraction as additional monitoring data becomes available.

ATTACHMENT 3

REGISTER OF COMMITTEE MEETINGS, RECOMMENDATIONS AND DECISIONS

Table A3-1: Register of Committee Meetings, Recommendations and Decisions

Review Point	Committee Meeting	Technical Committee Recommendation	Steering Committee Decision
Following Secondary Extraction of First 300 m of LW409			
Following Secondary Extraction of First 300 m of LW410			
Following Secondary Extraction of First 300 m of LW411			
Following Secondary Extraction of First 300 m of LW412			
Following Secondary Extraction of First 300 m of LW413			
Following Secondary Extraction of First 300 m of LW414			

ATTACHMENT 4

TEMPLATE STRUCTURE OF REVIEW REPORTING

Table A4-1: Template Structure of Review Reporting

Report Section	Content
Overview	Provides an overview of the key outcomes of the Report.
1. Introduction	Details the relevant monitoring period and timing of key Technical and Steering Committee input to the report (including meeting dates and other relevant correspondence).
2. Monitoring Data	Presents the monitoring data from the relevant monitoring period that has been reviewed.
3. Monitoring Review	Outlines the outcomes of the monitoring review by the Technical Committee, including comparison of monitoring results to predictions as well as previous monitoring data.
4. Technical Committee Recommendation	Details the recommendations from the Technical Committee based on their review of monitoring data.
5. Steering Committee Decision	Records the decision made by the Steering Committee following review of the Technical Committee recommendation.
6. Summary of Actions	Provides a summary of actions as an outcome of the Steering Committee decision, including proposed timing and responsibility for each action.

ATTACHMENT 5

TECHNICAL COMMITTEE REVIEW CHECKLIST FOR THE DRIP AND CORNER GORGE

Table A5-1: Technical Committee Review Checklist – The Drip and Corner Gorge

Longwall	Indicative Distance between Longwall and the Drip (m)	Predicted Far-field Movement at the Drip (mm)[1]	Indicative Distance between Longwall and Corner Gorge (m)	Predicted Far-field Movement at Corner Gorge (mm)[1]
LW409	2,460	10	2,275	10
LW410	1,860	10	1,730	10
LW411	1,490	10	1,350	10
LW412	770	20	880	17
LW413	645	25	585	29
LW414	925	25	450	40

[1] *Baseline movements to be calibrated and reviewed as additional monitoring data is obtained.*