

Rehabilitation

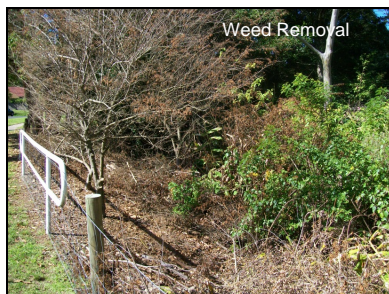
Rehabilitation Strategy – Surface Facilities Area

A Metropolitan Coal Rehabilitation Strategy has been prepared for the surface facilities. The Rehabilitation Strategy has been developed to be a concise framework document which describes the development of rehabilitation objectives and completion criteria for the preferred future land use for the surface facilities area following the completion of mining activities.

Detailed rehabilitation plans for the surface facilities area will be developed over the life of the Project and will be presented in the Mine Closure Plan and future revisions of the Rehabilitation Strategy.

Disturbance areas at the Metropolitan Coal surface facilities area are minimal and have remained relatively unchanged for many years. The surface facilities area includes roads, facilities (e.g. the Coal Handling and Preparation Plant, administration buildings and workshops), stockpiles (coal and reject stockpiles), railroads and water storages and infrastructure. The surface facilities area is an active operational area, which will be required for the entire mine life. As a result of the site being an active operational area, progressive rehabilitation is not possible at this stage.

Rehabilitation activities during the reporting period have included active planting of native vegetation, primarily around the boundary of the site and weed control measures. In 2012, native planting (approximately 180 native plantings) and weed control measures were carried out in the area adjacent to Parkes Street on the northern and western boundaries, and along Colliery Road on the southern/western boundary of the site. In 2013, approximately 7,200 native plants were planted, targeting areas with low regeneration of native species. The plantings were concentrated along Parkes Street and along Helensburgh Gully.



Rehabilitation Management – Underground Mining Area

The implementation of rehabilitation and remediation measures in the underground mining area and surrounds is monitored by Metropolitan Coal.

Surface Disturbance Areas

A Rehabilitation Management Plan – Surface Disturbance Register is used to manage the rehabilitation of surface disturbance areas. Some surface disturbance areas will be able to be rehabilitated during the life of the Project (e.g. monitoring sites no longer required), while other surface disturbance areas will likely remain until after the completion of mining operations.

Once a surface disturbance area is no longer being utilised, monitoring will be conducted to assess:

- where appropriate, whether equipment/infrastructure items have been removed;
- whether the area is tidy or rubbish removal is required;
- whether erosion and sediment controls are required and if so, the effectiveness of those installed;
- the presence of weeds and the need for the implementation of weed control measures;
- where appropriate, whether vegetation is re-establishing naturally or whether active revegetation is required; and
- if active revegetation is conducted, whether vegetation is establishing.

No surface disturbance areas were rehabilitated during the reporting period as the majority of disturbance pertained to the installation of environmental monitoring sites which are a life of mine asset. These sites will be rehabilitated to appropriate standards following the cessation of mining.

Stream Pool Monitoring and Rock Bar Remediation

Water levels in pools on the Waratah Rivulet (Pools A, B, C, E, F, G, G1, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V and W, Figure 1) are manually monitored on a daily basis or monitored using a continuous water level sensor and logger to determine whether stream remediation is required to be initiated during the mining of Longwalls 20-22.

Stream remediation is initiated at pools/rock bars on Waratah Rivulet between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir if the water level in a pool falls below its cease to overflow level (i.e. stops overflowing), except as a result of climatic conditions.

An assessment of the monitored pool water levels on Waratah Rivulet between Flat Rock Swamp and the full supply level of the Woronora Reservoir has been conducted for the reporting period (1 August 2012 to 31 December 2013).

Pools A, B, C, E, F, G, G1, H and I on the Waratah Rivulet are situated in the completed mining area (i.e. overlying Longwalls 1 to 13) between Flat Rock Swamp and the tailgate of Longwall 20 (Figure 1). As a result of previous mining, the water levels in pools upstream of Flat Rock Crossing (i.e. Pools A to F) and immediately downstream of Flat Rock Crossing (Pools G and G1) have previously been impacted by mine subsidence.

During the reporting period, Pools A, B, E, F, G1, K and O temporarily ceased to flow during December 2012 and/or January 2013. Reference pools on Woronora River also ceased overflowing during the same December 2012 to January 2013 period. The Woronora River has not been impacted by longwall mining activity and these pools are considered to be reference or control pools reflecting natural conditions. The cease to flow behaviour of the Waratah Rivulet pools would have been influenced by the same period of low flow. Water levels in the Waratah Rivulet pools remained above their respective cease to flow levels over the remainder of the reporting period.

Water levels in Pools C and G fell below their cease to flow levels during December 2012 and/or January 2013, and at other times during the reporting period (Pool C - between the 22 November 2012 and 25 January 2013 and between the 7 and 8 November 2013; Pool G - from the 24 September 2012 to the 25 January 2013 and then periodically over the remainder of the reporting period). As indicated above, Pools C and G have previously been impacted by mine subsidence.

Pool N ceased overflowing in early September 2012, and accordingly the stream remediation process has been initiated at this site. Notwithstanding, pool water levels subsequently recovered and continued to overflow the downstream rock bar over the remainder of the reporting period.

The water level monitoring results indicate that the remainder of the pools did not stop overflowing or reflected continuous through-flow and natural pool level behaviour over the reporting period.

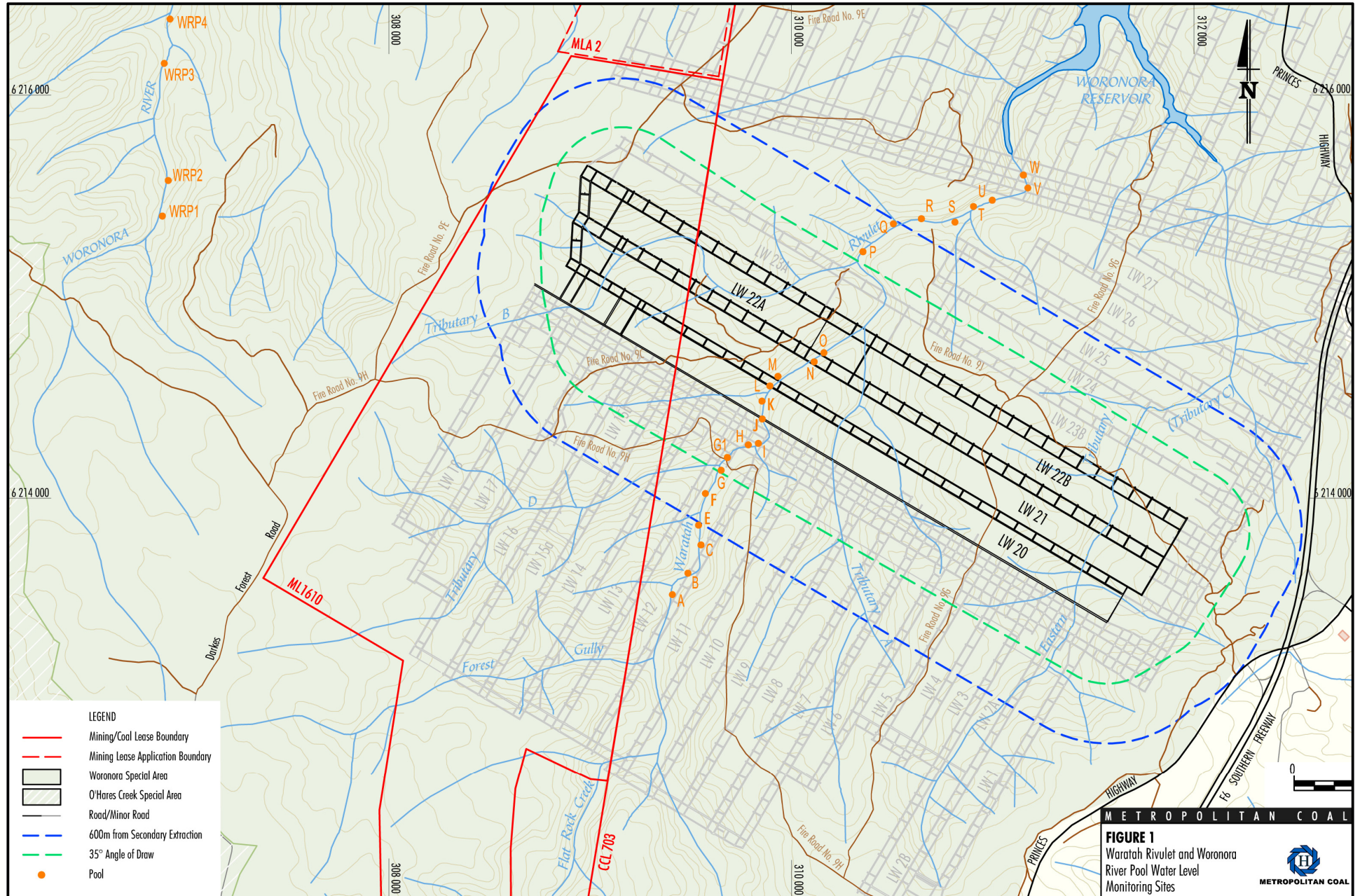
Stream remediation activities have previously been conducted at Pools A and F on the Waratah Rivulet in accordance with approvals obtained from the Sydney Catchment Authority (SCA) under Part 5 of the EP&A Act. Stream remediation activities at these pools have included the drilling of holes and the injection of grout (polyurethane resin) into sub-surface fractures. Associated activities have included the mobilisation, placement and operation of equipment and the implementation of a variety of environmental management measures.

No stream remediation activities were conducted on the Waratah Rivulet during the reporting period as access via Fire Road 9H was restricted while the road was deemed as being unfit for purpose by the SCA. During the reporting period Metropolitan Coal commissioned a road remediation design, applied to implement the design, gained the necessary approvals from the SCA and completed the civil upgrade works to the required fire roads.

While access for stream remediation was restricted, Metropolitan Coal commissioned a Continued Improvement Study to assess the efficacy of the stream remediation methodology. The Study considered the remediation works conducted to date to be functional, however recommended technical improvements to the grouting methodology to accelerate remediation success. Metropolitan Coal will revise the Metropolitan Coal Rehabilitation Management Plan in the next reporting period to reflect the improved process.

Metropolitan Coal will recommence stream remediation activities in the next reporting period at Pool F. Thereafter, stream remediation activities will be conducted at Flat Rock Crossing and Pool N.

METROPOLITAN COAL - ENVIRONMENTAL MONITORING SUMMARY



Catchment Improvement Works

Metropolitan Coal commenced two Sydney Catchment Area Rehabilitation Projects during the reporting period in consultation with the SCA. The Rehabilitation Projects have been conducted in accordance with Condition 5(b), Schedule 6 of the Project Approval which requires Metropolitan Coal to carry out catchment improvement works in the Woronora catchment area.

The catchment improvement works include:

- the rehabilitation of a former quarry on Fire Road 9H; and
- the rehabilitation of a disused access track to the Darkes Forest Mine (a historic mine located to the south of Metropolitan Coal).

The rehabilitation site on Fire Road 9H is a former ironstone quarry. Rehabilitation activities during the reporting period have focused on re-introducing organic matter and seeds into the site and creating conditions that are conducive to natural regeneration along Fire Road 9H. This involved distributing native mulch and brush matting over the site.

A disused track to the former Darkes Forest Mine, which has been closed since 1991, has also been subject to rehabilitation activities. The track provides a vector for deer access, dispersal of weed species and unauthorised access (e.g. dirt bikes) to the catchment. Rehabilitation activities during the reporting period have focused on weed control. Weed management activities have been undertaken monthly, and more frequently in spring when weeds were actively growing. In the next reporting period, weed control measures will continue to be implemented as well as methods to encourage the regeneration of native species within the site.

