

METROPOLITAN COAL

REHABILITATION MANAGEMENT PLAN



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Revision Status Register

Section/Page/ Annexure	Revision Number	Amendment/Addition	Distribution	DRG Approval Date
All	RMP-R01-A	Original	SCA, DECCW, NSW Office of Water, NSW I&I (Fisheries), DoP and NSW I&I (Mineral Resources)	14 May 2010
All	RMP-R01-B	Edits made to address comments from the NSW I&I (Mineral Resources), SCA and DoP	NSW I&I (Mineral Resources)	22 October 2010
All	RMP-R01-C	Edits made to reflect the content of current management plans (e.g. Water Management Plan, Biodiversity Management Plan and Heritage Management Plan).	NSW I&I (now DTIRIS) (Minerals and Energy Division)	20 September 2011
Section 7.2, Section 8.2.2.2, Appendix 4 and Appendix 7	RMP-R01-D	Revision to include revised stream remediation methodology	DTIRIS (DRE) and SCA	-
Sections 7.2.3, 7.2.5 and 7.2.6, Attachments A and B, Appendices 5 and 7	RMP-R01-E	Edits made to address comments from the SCA	DTIRIS (DRE) and SCA	22 May 2014
All	RMP-R01-F	Amendments made for consistency with the Longwalls 301-303 Extraction Plan	WaterNSW, OEH, CLWD, DPI-Fishing, DP&E and DRG	26 April 2018
All	RMP-R01-G	Amendments to reflect the preparation of the Stream Remediation Plan)	WaterNSW, OEH, DP&E and DRG	-

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1 INTRODUCTION

Metropolitan Coal is a wholly owned subsidiary of Peabody Energy Australia Pty Ltd (Peabody). Metropolitan Coal was granted approval for the Metropolitan Coal Project (the Project) under Section 75J of the New South Wales (NSW) *Environmental Planning and Assessment Act, 1979* (EP&A Act) on 22 June 2009. A copy of the Project Approval is available on the Peabody website (<http://www.peabodyenergy.com>).

The Project comprises the continuation, upgrade and extension of underground coal mining operations and surface facilities at Metropolitan Coal. The underground mining longwall layout is shown on Figure 1.

1.1 PURPOSE AND SCOPE

This Rehabilitation Management Plan (RMP) has been prepared for the Project in accordance with Condition 4, Schedule 6 of the Project Approval.

The Project Approval defines rehabilitation and remediation as follows:

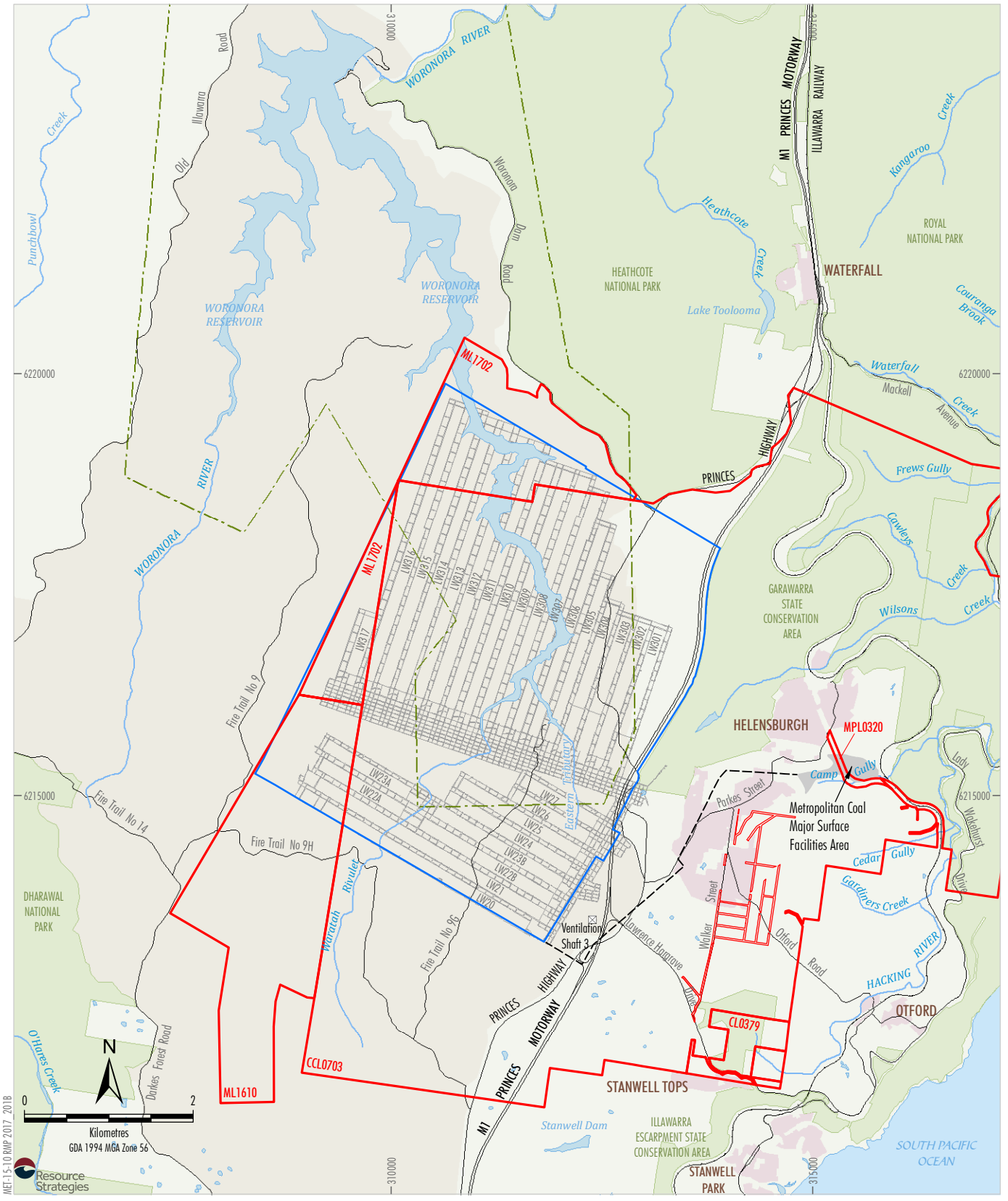
Rehabilitation: The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment.

Remediation: Activities associated with partially or fully repairing or rehabilitating the impacts of the project or controlling the environmental consequences of this impact.

The relationship of this RMP to the Metropolitan Coal Environmental Management Structure is shown on Figure 2. Of particular relevance (Figure 2):

- the Metropolitan Coal Rehabilitation Strategy required by Condition 2, Schedule 6 of the Project Approval will describe the Rehabilitation Strategy for the mine's Major Surface Facilities Area (Figure 1) and the two ventilation shaft sites;
- a Construction Management Plan will be prepared for surface construction works (excluding rehabilitation and remediation works) in the Woronora Special Area in accordance with Condition 11, Schedule 3 of the Project Approval; and
- a number of detailed management plans have been prepared for the Metropolitan Coal Extraction Plan, including a Water Management Plan, Biodiversity Management Plan, Land Management Plan, Heritage Management Plan, Built Features Management Plan and Public Safety Management Plan in accordance with Condition 6, Schedule 3 of the Project Approval. A number of rehabilitation and remediation measures are included in these detailed plans. In particular, the Metropolitan Coal Stream Remediation Plan is included as an Appendix to the Metropolitan Coal Water Management Plan. The Stream Remediation Plan has been prepared to outline the activities that will be conducted to meet the rehabilitation objective for the Waratah Rivulet and Eastern Tributary, *Restore surface flow and pool holding capacity as soon as reasonably practicable.*

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- LEGEND**
- Mining Lease Boundary
 - Woronora Special Area
 - Railway
 - Project Underground Mining Area
Longwalls 20-27 and 301-317
 - Woronora Notification Area
 - Existing Underground Access Drive (Main Drift)

Source: Land and Property Information (2015); Department of Industry (2015); Metropolitan Coal (2019)

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 METROPOLITAN COAL
 Project Longwalls 20-27
 and Longwalls 301-317 Layout

Figure 1

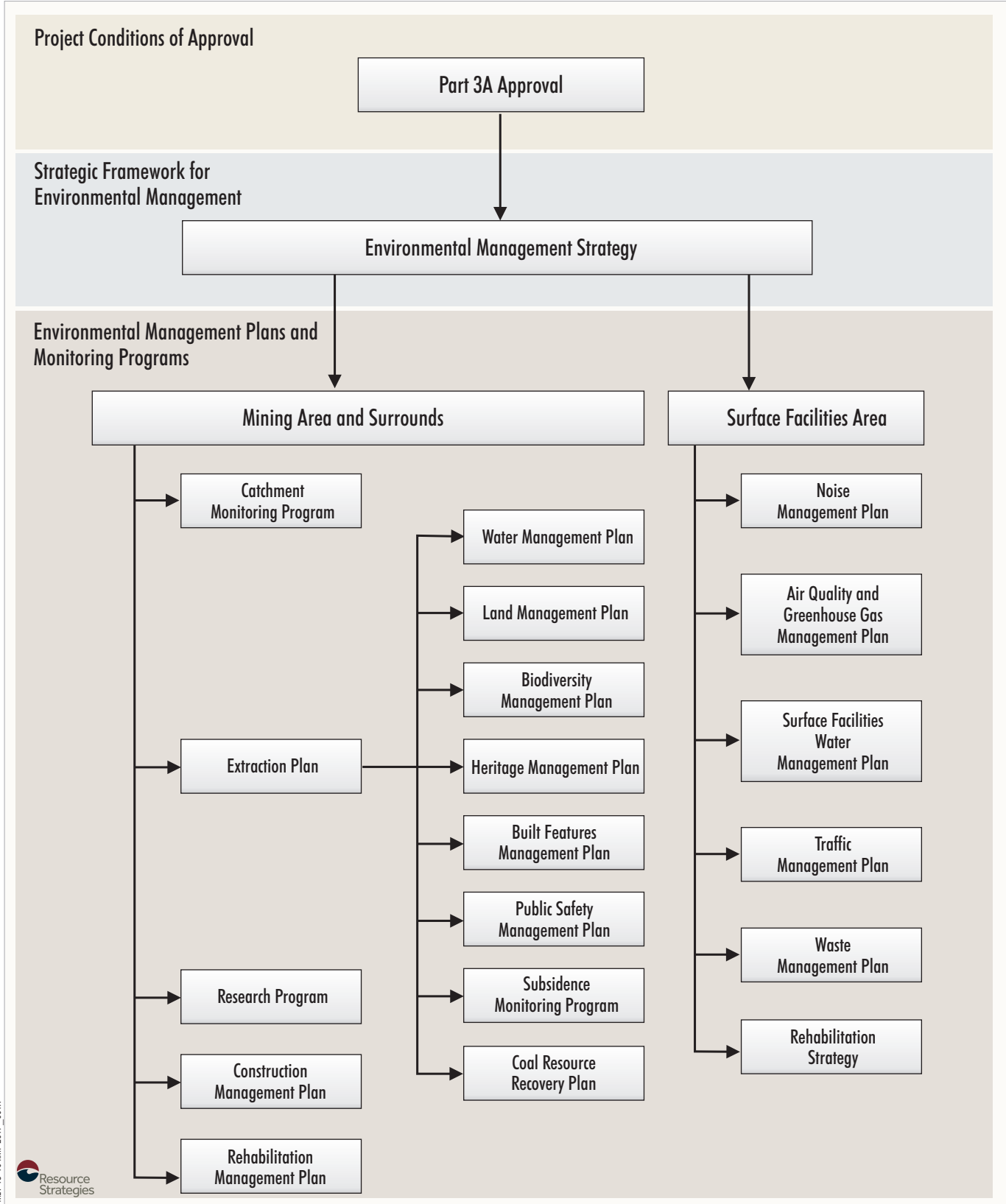


Figure 2

1.2 STRUCTURE OF THE RMP

The remainder of the RMP is structured as follows:

- Section 2: Describes the review and update of the RMP.
- Section 3: Outlines the statutory requirements applicable to the RMP.
- Section 4: Describes the areas requiring rehabilitation or remediation activities.
- Section 5: Details the rehabilitation objectives and performance indicators that will be used to assess the Project.
- Section 6: Provides the detailed baseline data.
- Section 7: Describes the rehabilitation and remediation measures.
- Section 8: Describes the monitoring program.
- Section 9: Provides a Contingency Plan to manage any unpredicted impacts and their consequences.
- Section 10: Describes the annual review and improvement of environmental performance.
- Section 11: Outlines the management and reporting of incidents.
- Section 12: Outlines the management and reporting of complaints.
- Section 13: Outlines the management and reporting of non-compliances with statutory requirements.
- Section 14: Lists the references cited.

2 RMP REVIEW AND UPDATE

In accordance with Condition 4, Schedule 7 of the Project Approval, this RMP will be reviewed within three months of the submission of:

- an audit under Condition 8, Schedule 7;
- an incident report under Condition 6, Schedule 7;
- an annual review under Condition 3, Schedule 7; and

if necessary, revised to the satisfaction of the Executive Director of the Division of Resources and Geoscience (DRG), to ensure the RMP is updated on a regular basis and to incorporate any recommended measures to improve environmental performance.

The RMP will also be reviewed within three months of approval of any Project modification and if necessary, revised to the satisfaction of the Executive Director of the DRG.

Consistent with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, the RMP will be updated as new areas requiring rehabilitation and remediation works arise to the satisfaction of the Executive Director of the DRG. Prior to the completion of mining operations, the RMP will be reviewed and revised to include details of the final rehabilitation works and post-closure maintenance and monitoring requirements.

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The revision status of this RMP is indicated on the title page of each copy. The distribution register for controlled copies of the RMP is described in Section 2.1.

2.1 DISTRIBUTION REGISTER

In accordance with Condition 10, Schedule 7 of the Project Approval 'Access to Information', Metropolitan Coal will make the RMP publicly available on the Peabody website. A hard copy of the RMP will also be maintained at the Metropolitan Coal site.

Metropolitan Coal recognises that various regulators have different distribution requirements, both in relation to whom documents should be sent and in what format.

An Environmental Management Plan and Monitoring Program Distribution Register has been established in consultation with the relevant agencies and infrastructure owners that indicates:

- to whom the Metropolitan Coal plans and programs, such as the RMP, will be distributed;
- the format (i.e. electronic or hard copy) of distribution; and
- the format of revision notification.

Metropolitan Coal will make the Distribution Register publicly available on the Peabody website.

Metropolitan Coal is responsible for maintaining the Distribution Register and for ensuring that the notification of revisions is sent by email or post as appropriate.

In addition, Metropolitan Coal employees with local computer network access will be able to view the controlled electronic version of this RMP on the Metropolitan Coal local area network. Metropolitan Coal will not be responsible for maintaining uncontrolled copies beyond ensuring the most recent version is maintained on Metropolitan Coal's computer system and the Peabody website.

3 STATUTORY REQUIREMENTS

Metropolitan Coal's statutory obligations are contained in:

- (i) the conditions of the Project Approval;
- (ii) relevant licences and permits, including conditions attached to mining leases; and
- (iii) other relevant legislation.

These are described below.

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3.1 EP&A ACT APPROVAL

Condition 4, Schedule 6 of the Project Approval requires the preparation of a RMP for the Project. Approval Condition 4, Schedule 6 states:

Rehabilitation Management Plan

4. *The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director Mineral Resources. This plan must be prepared in consultation with the relevant stakeholders, and submitted to DRE¹ for approval prior to carrying out any second workings in the mining area.*

Note: In accordance with condition 12 of schedule 2, the preparation and implementation of Rehabilitation Management Plans is likely to be staged, with each plan covering a defined area (or domain) for rehabilitation. In addition, while mining operations are being carried out, some of the proposed remediation or rehabilitation measures may be included in the detailed management plans that form part of the Extraction Plan. If this is the case, however, then the Proponent will be required to ensure that there is good cross-referencing between the various management plans.

For the purpose of this RMP, relevant stakeholders are considered to include WaterNSW (previously the Sydney Catchment Authority [SCA]), the NSW Office of Environment and Heritage (OEH), the Department of Industry – Water (DI - Water), DPI (Fishing) (previously DPI-fisheries) and the NSW Department of Planning and Environment (DP&E). This RMP has been prepared to the satisfaction of the Executive Director of the DRG.

In addition, Condition 12, Schedule 2 of the Project Approval indicates strategies, plans or programs required by the Project Approval may be submitted on a progressive basis. As described in Section 2, the RMP will be updated as new areas requiring rehabilitation and remediation works arise to the satisfaction of the Executive Director of the DRG.

Condition 2, Schedule 7 of the Project Approval outlines management plan requirements that are applicable to the preparation of the RMP. Table 1 indicates where each component of the condition is addressed within this RMP.

¹ Now the NSW Division of Resources and Geoscience (DRG).

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**Table 1
Management Plan Requirements**

Project Approval Condition	RMP Section
Condition 2, Schedule 7	
2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:	
a) detailed baseline data;	Section 6
b) a description of:	
• the relevant statutory requirements (including any relevant approval, licence or lease conditions);	Section 3
• any relevant limits or performance measures/criteria;	Section 5
• the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;	Section 5
c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Sections 7, 8 and 9
d) a program to monitor and report on the:	
• impacts and environmental performance of the project;	
• effectiveness of any management measures (see c above);	Sections 7, 8 and 10
e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 9
f) a program to investigate and implement ways to improve the environmental performance of the project over time;	Sections 8 and 10
g) a protocol for managing and reporting any:	
• incidents;	Section 11
• complaints;	Section 12
• non-compliances with statutory requirements; and	Section 13
• exceedances of the impact assessment criteria and/or performance criteria; and	Section 9
h) a protocol for periodic review of the plan.	Section 2

3.2 LICENCES, PERMITS AND LEASES

In addition to the Project Approval, all activities at or in association with Metropolitan Coal will be undertaken in accordance with the following licences, permits and leases which have been issued or are pending issue:

- The conditions of mining leases issued by the NSW Division of Resources and Geoscience (DRG), under the NSW *Mining Act, 1992* (e.g. Consolidated Coal Lease [CCL] 703, Mining Lease [ML] 1610, ML 1702, Coal Lease [CL] 379 and Mining Purpose Lease [MPL] 320).
- The *Metropolitan Coal Mining Operations Plan 1 October 2012 to 30 September 2019* approved by the DRG.

- The conditions of Environment Protection Licence (EPL) No. 767 issued by the NSW Environment Protection Authority (EPA) under the NSW *Protection of the Environment Operations Act, 1997*. Revision of the EPL will be required prior to the commencement of Metropolitan Coal activities that differ from those currently licensed.
- The prescribed conditions of specific surface access leases within CCL 703 for the installation of surface facilities as required.
- Water Access Licences (WALs) issued by the NSW Department of Primary Industries – Water (now the Department of Industry – Water [DI – Water]) under the NSW *Water Management Act, 2000*, including WAL 36475 under the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011* and WAL 25410 under the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011*.
- Mining and workplace health and safety related approvals granted by the NSW Resources Regulator and WorkCover NSW.
- Supplementary approvals obtained from WaterNSW for surface activities within the Woronora Special Area (e.g. fire road maintenance activities).

3.3 OTHER LEGISLATION

Metropolitan Coal will conduct the Project consistent with the Project Approval and any other legislation that is applicable to an approved Part 3A Project under the EP&A Act.

The following Acts may be applicable to the conduct of the Project (Helensburgh Coal Pty Ltd [HCPL], 2008)²:

- *Contaminated Land Management Act, 1997*;
- *Crown Land Management Act, 2016*;
- *Dams Safety Act, 2015*;
- *Dangerous Goods (Road and Rail Transport) Act, 2008*;
- *Energy and Utilities Administration Act, 1987*;
- *Fisheries Management Act, 1994*;
- *Mining Act, 1992*;
- *Protection of the Environment Operations Act, 1997*;
- *Rail Safety (Adoption of National Law) Act, 2012*;
- *Roads Act, 1993*;
- *Biodiversity Conservation Act, 2016*;
- *Biosecurity Act, 2015*;
- *Water NSW Act, 2014*;
- *Water Act, 1912*;
- *Water Management Act, 2000*;

² The list of potentially applicable Acts has been updated to reflect changes to the Acts that were in force at the time of submission of the Metropolitan Coal Project Environmental Assessment (Project EA) (HCPL, 2008).

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- *Work Health and Safety Act, 2011*; and
- *Work Health and Safety (Mines and Petroleum Sites) Act, 2013*.

Relevant licences or approvals required under these Acts will be obtained as required.

4 AREAS REQUIRING REHABILITATION OR REMEDIATION MEASURES

4.1 SURFACE DISTURBANCE AREAS

Project surface disturbance areas requiring rehabilitation will include those associated with surface exploration activities, vehicular access tracks, environmental monitoring activities (e.g. locations where monitoring equipment has been installed) and other minor Project-related surface activities.

Consistent with the Metropolitan Coal Construction Management Plan, surface works will be sited, where practicable, to minimise the amount of disturbance and vegetation clearance required (e.g. the positioning of sites to avoid the removal of trees or the siting of infrastructure in previously disturbed areas such as the slashed verges of existing WaterNSW roads/tracks).

Existing or currently proposed surface disturbance areas include Metropolitan Coal's surface exploration activity sites and monitoring equipment sites.

The location of existing sites containing Metropolitan Coal monitoring equipment is shown on Figures 3 to 8. Metropolitan Coal monitoring equipment includes pluviometers, an evaporimeter, stream flow monitoring equipment, pool water level monitoring equipment and groundwater bores. Some of the groundwater bores also represent surface exploration activity sites.

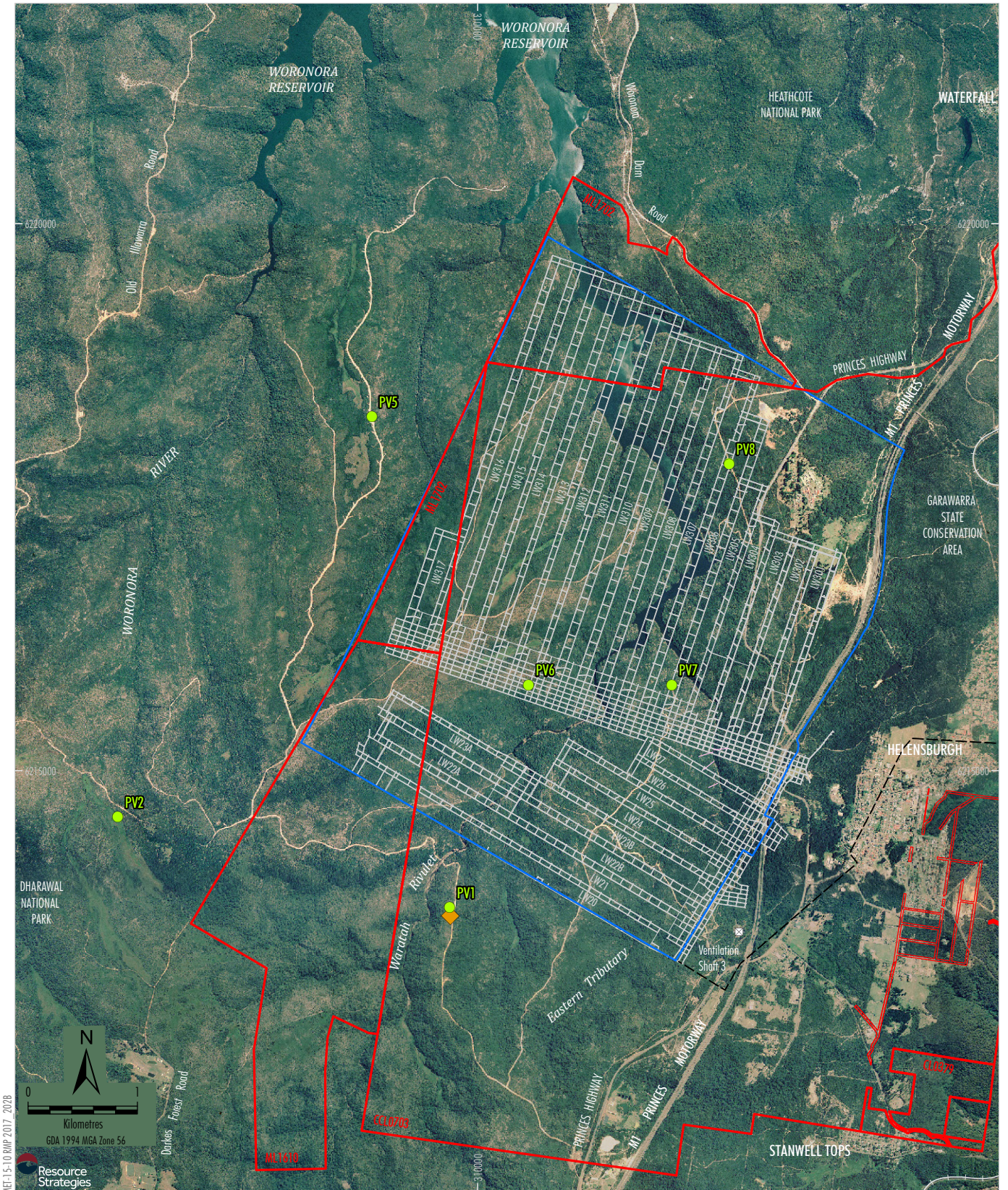
A Rehabilitation Management Plan – Surface Disturbance Register will be used to progressively monitor surface disturbance areas requiring rehabilitation (Appendix 1). The Rehabilitation Management Plan – Surface Disturbance Register will be made available to WaterNSW and DRG upon request.

4.2 STREAM POOLS AND ROCK BARS

Metropolitan Coal is required to achieve the rehabilitation objective specified in Table 11 of Condition 1, Schedule 6 of the Project Approval for Waratah Rivulet and the Eastern Tributary.

Table 11: Rehabilitation Objectives

Domain	Rehabilitation objective
<i>Waratah Rivulet, between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir</i>	<i>Restore surface flow and pool holding capacity as soon as reasonably practicable</i>
<i>Eastern Tributary, between the maingate of Longwall 26 and the full supply level of the Woronora Reservoir</i>	



Source: Land and Property Information (2015); Date of Aerial Photography 1998; Department of Industry (2015); Metropolitan Coal (2019)

LEGEND

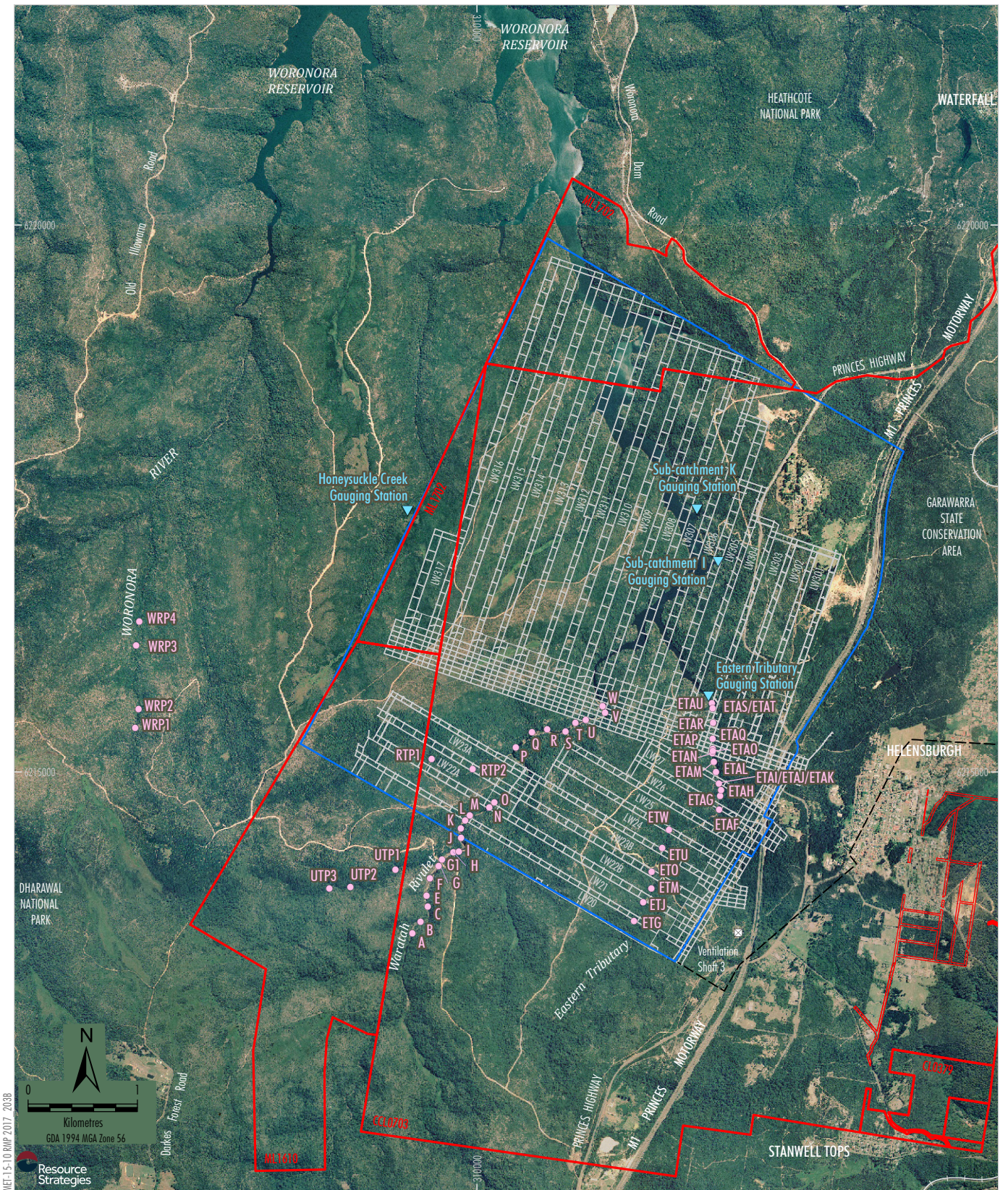
- Mining Lease Boundary
- Railway
- Project Underground Mining Area
Longwalls 20-27 and 301-317
- Existing Underground Access Drive (Main Drift)
- ◆ Evaprimeter
- Pluviometer

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Metropolitan Coal Meteorological
Monitoring Equipment Sites

Figure 3

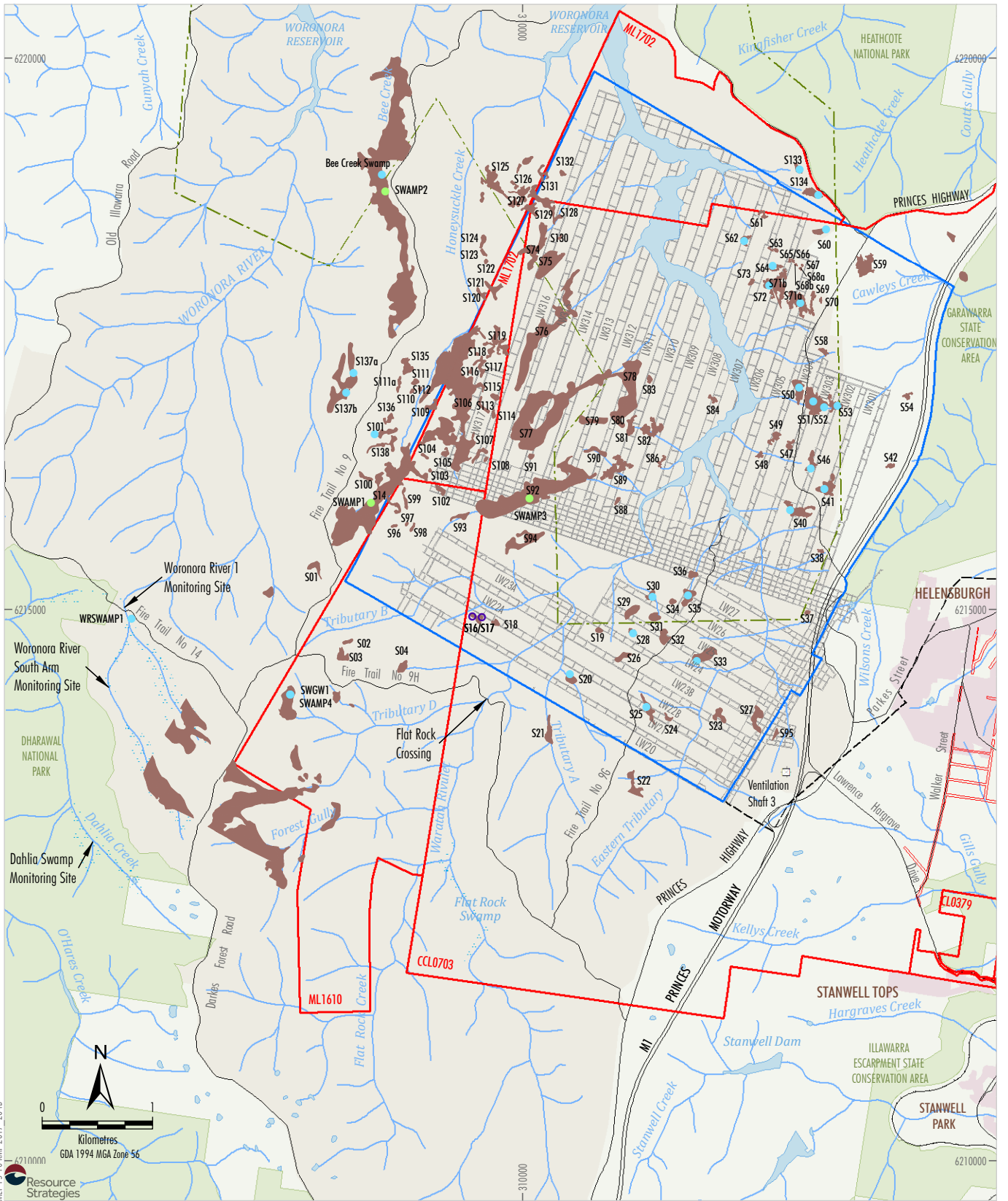


- LEGEND**
- Mining Lease Boundary
 - Railway
 - Project Underground Mining Area
Longwalls 20-27 and 301-317
 - Existing Underground Access Drive (Main Drift)
 - ▼ Gauging Station
 - Pool Water Level Site

Note: Pool numbering is consistent with the detailed stream mapping for Waratah Rivulet and the Eastern Tributary provided in the Metropolitan Coal Water Management Plan Appendices 1 to 4.

Source: Land and Property Information (2015); Date of Aerial Photography 1998; Department of Industry (2015); Metropolitan Coal (2019)

Figure 4



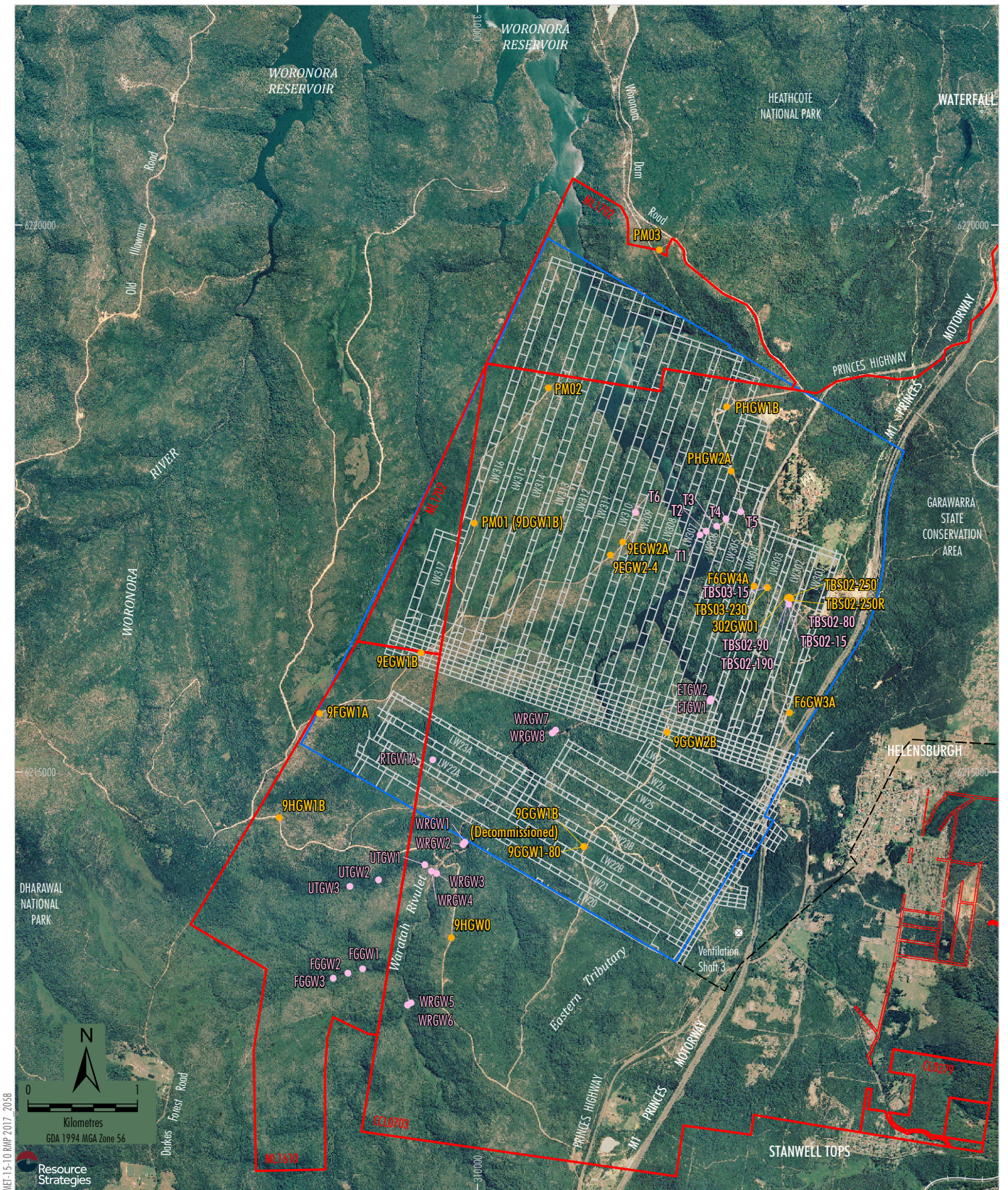
- LEGEND**
- Mining Lease Boundary
 - Woronora Special Area
 - Railway
 - Project Underground Mining Area Longwalls 20-27 and 301-317
 - Existing Underground Access Drive (Main Drift)
 - Woronora Notification Area

- Upland Swamp
- Swamp Substrate and Shallow Groundwater Piezometer
- Swamp Substrate Groundwater Piezometer
- Swamp Shallow Groundwater Piezometer

Source: Land and Property Information (2015); Department of Industry (2015); Metropolitan Coal (2019); after NPWS (2003), Bangalay Botanical Surveys (2008) and Eco Logical Australia (2015; 2016; 2018)

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 Upland Swamp Groundwater
 Monitoring Equipment Sites

Figure 5

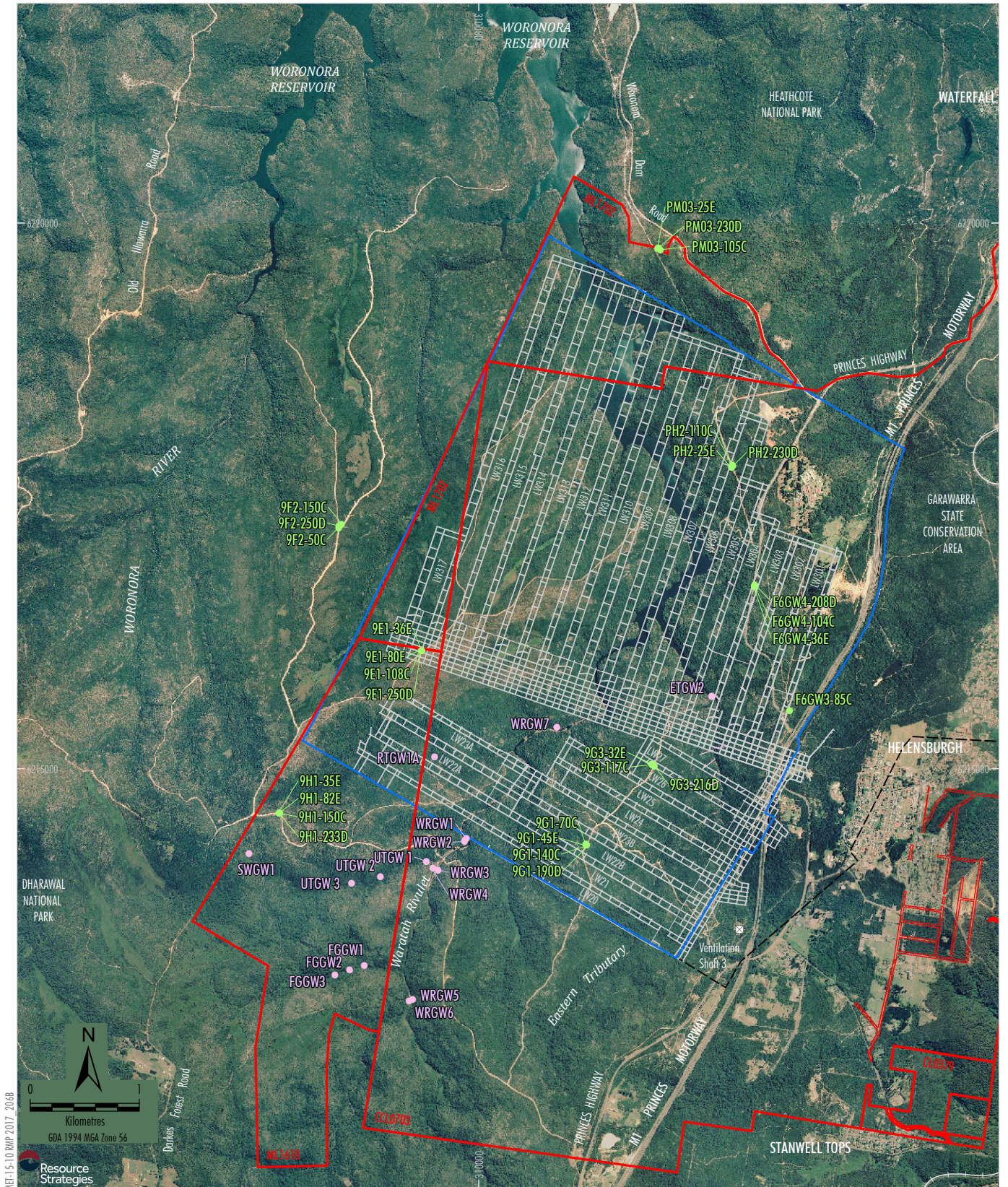


- LEGEND**
- Mining Lease Boundary
 - Railway
 - Project Underground Mining Area
Longwalls 20-27 and 301-317
 - Existing Underground Access Drive (Main Drift)
 - Groundwater Level/Pressure Bore
 - Groundwater Level Bore

Source: Land and Property Information (2015); Date of Aerial Photography 1998;
Department of Industry (2015); Metropolitan Coal (2019)

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METROPOLITAN COAL
Groundwater Monitoring Equipment Sites

Figure 6



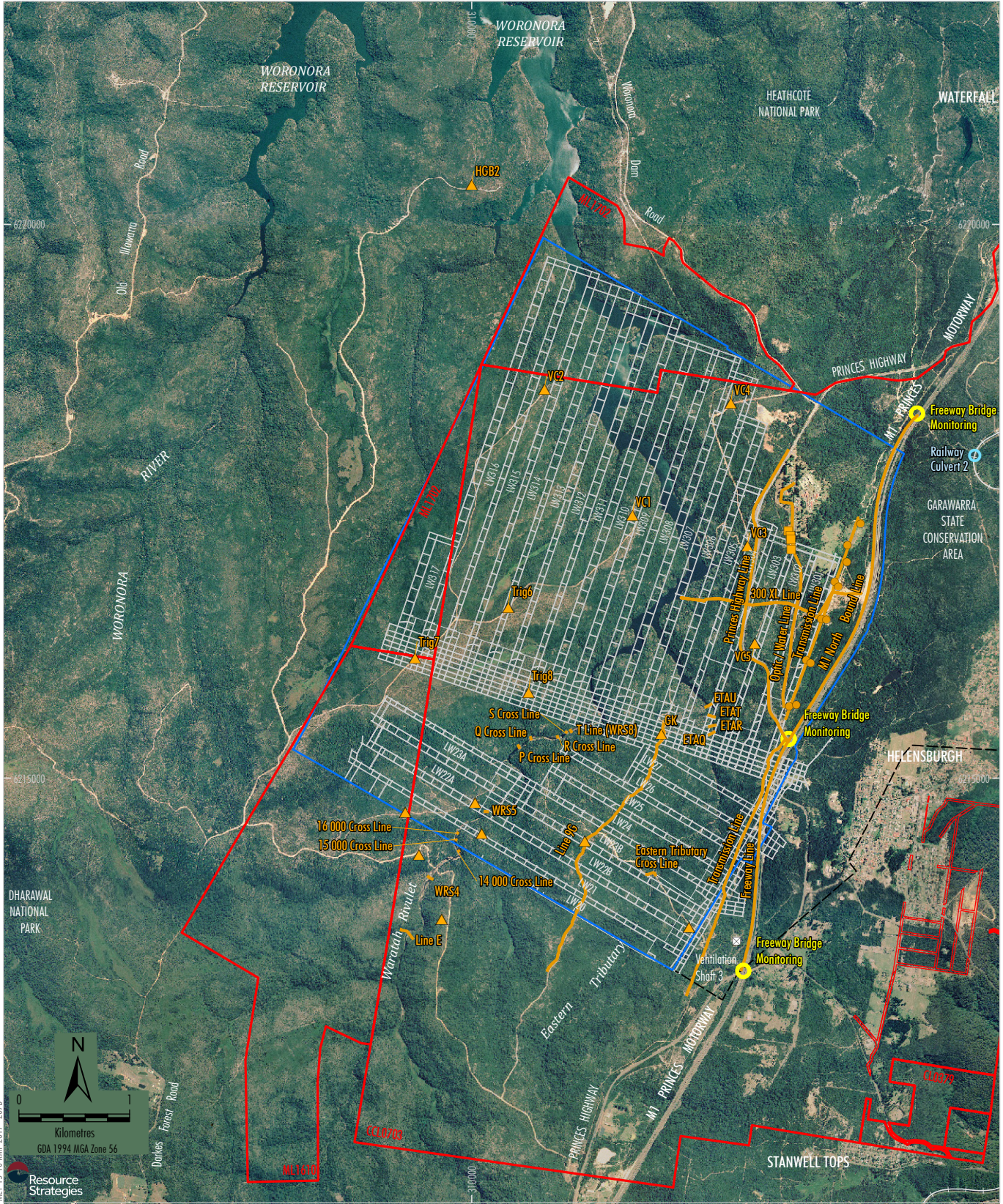
LEGEND

- Mining Lease Boundary
- Railway
- Project Underground Mining Area
Longwalls 20-27 and 301-317
- Existing Underground Access Drive (Main Drift)
- Deep Groundwater Chemistry Monitoring Site
- Stream Shallow Groundwater Quality Monitoring Site

Source: Land and Property Information (2015); Date of Aerial Photography 1998;
Department of Industry (2015); Metropolitan Coal (2019)

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Groundwater Quality Monitoring
Equipment Sites

Figure 7



MET-15-10 RAMP 2017 207B
 0
 Kilometres
 GDA 1994 MGA Zone 56
 Resource Strategies

- LEGEND**
- Mining Lease Boundary
 - Railway
 - Project Underground Mining Area
Longwalls 20-27 and 301-317
 - Existing Underground Access Drive (Main Drift)
 - ▲ Ridge Survey Point
 - Subsidence Line
 - Transmission Towers - Endeavour Energy and TransGrid
 - Communications Towers
 - Freeway Bridge Subsidence Monitoring
 - Railway Culvert Monitoring

Source: Land and Property Information (2015); Date of Aerial Photography 1998;
 Department of Industry (2015); Metropolitan Coal (2018); MSEC (2018)

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 Subsidence Monitoring
 Equipment Locations

Figure 8

Metropolitan Coal is also required to achieve the subsidence impact performance measures specified in Table 1 of Condition 1, Schedule 3 of the Project Approval in relation to watercourses.

Table 1: Subsidence Impact Performance Measures

Watercourses	
<i>Waratah Rivulet between the full supply level of the Woronora Reservoir and the maingate of Longwall 23 (upstream of Pool P)</i>	<i>Negligible environmental consequences (that is, no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining, and minimal gas releases)</i>
<i>Eastern Tributary between the full supply level of the Woronora Reservoir and the maingate of Longwall 26</i>	<i>Negligible environmental consequences over at least 70% of the stream length (that is no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining and minimal gas releases)</i>

The Metropolitan Coal Stream Remediation Plan describes the stream remediation that will be conducted on Waratah Rivulet and the Eastern Tributary in accordance with Condition 1, Schedule 6 of the Project Approval.

The location of pools/rock bars along the Waratah Rivulet and Eastern Tributary are shown on Figure 9 and in the detailed mapping on figures provided 3in Appendix 2. Figure 9 shows the location of the pools/rock bars in relation to Longwalls 20-27 and Longwalls 301-317.

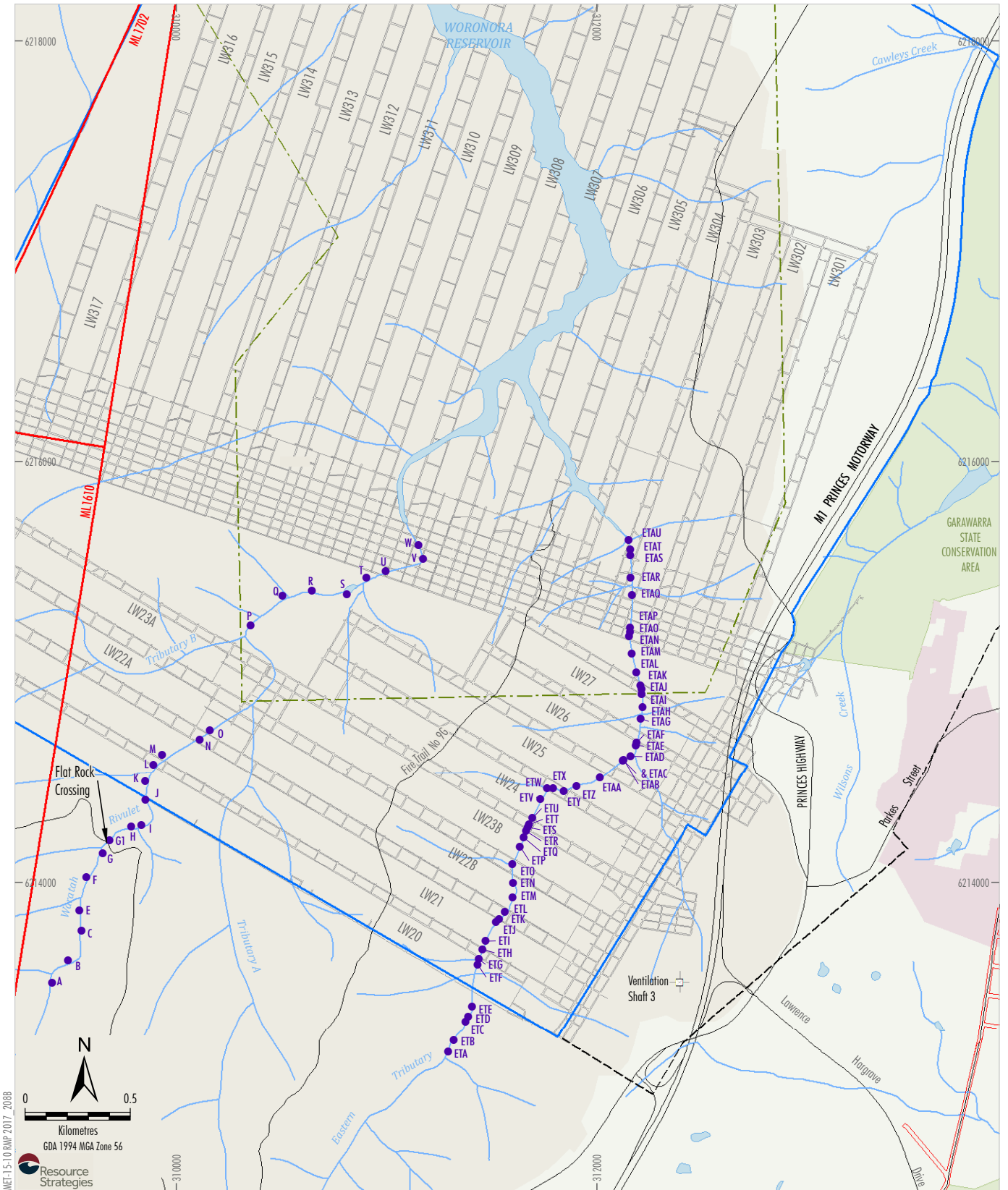
4.3 OTHER NATURAL OR BUILT FEATURES IMPACTED BY SUBSIDENCE

In addition to the remediation of stream pools and rock bars described in Section 4.2, rehabilitation or remediation measures may be required for impacts to other natural or built surface features resulting from subsidence.

In accordance with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, these rehabilitation and remediation measures are described in the detailed management plans prepared for the Metropolitan Coal Extraction Plan, viz. the Water Management Plan, Biodiversity Management Plan, Land Management Plan, Heritage Management Plan, Built Features Management Plan and Public Safety Management Plan. These management plans will be revised for future longwalls and included in future Extraction Plans.

In summary:

- The Land Management Plan describes measures for cliffs and associated overhangs, steep slopes and land in general.
- The Water Management Plan describes measures for aesthetic values and excessive stream bank erosion and sedimentation.
- The Biodiversity Management Plan describes measures for impacts on upland swamps and other vegetation (e.g. riparian vegetation).
- The Built Features Management Plan describes measures for infrastructure items.
- The Public Safety Management Plan describes measures for subsidence impacts that are deemed to present a safety hazard.



MEF-15-10 RMP 2017, 2088
 0 0.5
 Kilometres
 GDA 1994 MGA Zone 56
 Resource Strategies

LEGEND
 Mining Lease Boundary
 Woronora Special Area
 Project Underground Mining Area
 Longwalls 20-27 and 301-317

Woronora Notification Area
 Existing Underground Access Drive (Main Drift)
 Pool

Source: Land and Property Information (2015); Department of Industry (2015); Metropolitan Coal (2019)

Note: The streams are based on mapping by the Lands Department (2006). More detailed and accurate mapping of the streams is provided in the Metropolitan Coal Water Management Plan Appendices 1 to 4.

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 Waratah Rivulet and
 Eastern Tributary Pools

Figure 9

5 REHABILITATION OBJECTIVES AND PERFORMANCE INDICATORS

The Project Approval requires Metropolitan Coal to achieve the rehabilitation objectives outlined in Table 11 of Condition 1, Schedule 6, detailed below. An additional column has been added to Table 11 from the Project Approval to outline the relevant Metropolitan Coal management plan in which each rehabilitation domain is covered in more detail.

The rehabilitation objectives for each domain detailed in Table 11 of Condition 1, Schedule 6 of the Project Approval are discussed below.

Table 11: Rehabilitation Objectives

Domain	Rehabilitation objective	Relevant Plan(s)
Surface Facilities Area	Set through condition 2 below	Metropolitan Coal Rehabilitation Strategy
Waratah Rivulet, between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir Eastern Tributary, between the maingate of Longwall 26 and the full supply level of the Woronora Reservoir	Restore surface flow and pool holding capacity as soon as reasonably practicable	Metropolitan Coal Rehabilitation Management Plan
Cliffs	Ensure that there is no safety hazard beyond that existing prior to mining	Metropolitan Coal Public Safety Management Plan
Other land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: <ul style="list-style-type: none"> • comprised of local native plant species; with • a landform consistent with the surrounding environment 	Metropolitan Coal Rehabilitation Management Plan
Built features	Repair/restore to pre-mining condition or equivalent	Metropolitan Coal Built Features Management Plan
Community	Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment Ensure public safety	Metropolitan Coal Rehabilitation Strategy and/or Metropolitan Coal Public Safety Management Plan

5.1 SURFACE FACILITIES AREA

The rehabilitation objective for the surface facilities area is set through Condition 2, Schedule 6 of the Project Approval, which states:

Rehabilitation Strategy – Surface Facilities Area

2. *By the end of October 2011, the Proponent shall prepare a Rehabilitation Strategy for the surface facilities area to the satisfaction of the Director-General³. This strategy must:*
 - (a) *be prepared by a team of suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;*
 - (b) *be prepared in consultation with relevant stakeholders, including WCC and the CCC;*
 - (c) *investigate options for the future use of the area upon the completion of mining;*
 - (d) *describe and justify the proposed rehabilitation strategy for the area; and*
 - (e) *define the rehabilitation objectives for the area, as well as the proposed completion criteria for this rehabilitation.*

In accordance with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, the rehabilitation objective for the surface facilities area will be addressed in the Metropolitan Coal Rehabilitation Strategy (Figure 2).

5.2 WARATAH RIVULET AND EASTERN TRIBUTARY

The rehabilitation objective for Waratah Rivulet (between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir) and the Eastern Tributary (between the full supply level of the Woronora Reservoir and the maingate of Longwall 26), *viz. Restore surface flow and pool holding capacity as soon as reasonably practicable*, is addressed in the Metropolitan Coal Stream Remediation Plan.

Metropolitan Coal will assess the progress of the stream remediation measures in achieving the rehabilitation objective for Waratah Rivulet and the Eastern Tributary against the performance indicators detailed in the Stream Remediation Plan:

The rehabilitation objective will be considered to have been met if surface flow and pool holding capacity has been restored in the impacted pool.

5.3 CLIFFS

In accordance with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, the rehabilitation objective for cliffs, *viz. Ensure that there is no safety hazard beyond that existing prior to mining*, will be addressed in the Metropolitan Coal Public Safety Management Plan (Figure 2).

5.4 OTHER LAND AFFECTED BY THE PROJECT

The rehabilitation objective for other land affected by the Project, *viz. Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: comprised of local native plant species; with a landform consistent with the surrounding environment*, is addressed in Sections 7.1, 8.1 and 8.3 of this RMP.

³ The Director-General is now the Secretary of the DP&E.

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Metropolitan Coal will assess the progress of the rehabilitation and remediation measures in achieving the rehabilitation objective for other land affected by the Project against the following performance indicators:

Redundant equipment/infrastructure items have been removed.

The site is neat and tidy (i.e. it does not contain any rubbish).

No weed management measures are required.

No erosion or sediment control measures are required.

Where appropriate, native vegetation is naturally regenerating or active revegetation is establishing.

No further active revegetation measures are required.

5.5 BUILT FEATURES

In accordance with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, the rehabilitation objective for built features, *viz. Repair/restore to pre-mining condition or equivalent*, will be addressed in the Metropolitan Coal Built Features Management Plan (Figure 2).

5.6 COMMUNITY

In accordance with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, the rehabilitation objective for the community, *viz. Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment*, will be addressed in the Metropolitan Coal Rehabilitation Strategy (Figure 2).

In accordance with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, the rehabilitation objective for the community, *viz. Ensure public safety*, will be addressed in the Metropolitan Coal Public Safety Management Plan for the underground mining area and surrounds and in the Metropolitan Coal Rehabilitation Strategy for the Major Surface Facilities Area (Figure 2).

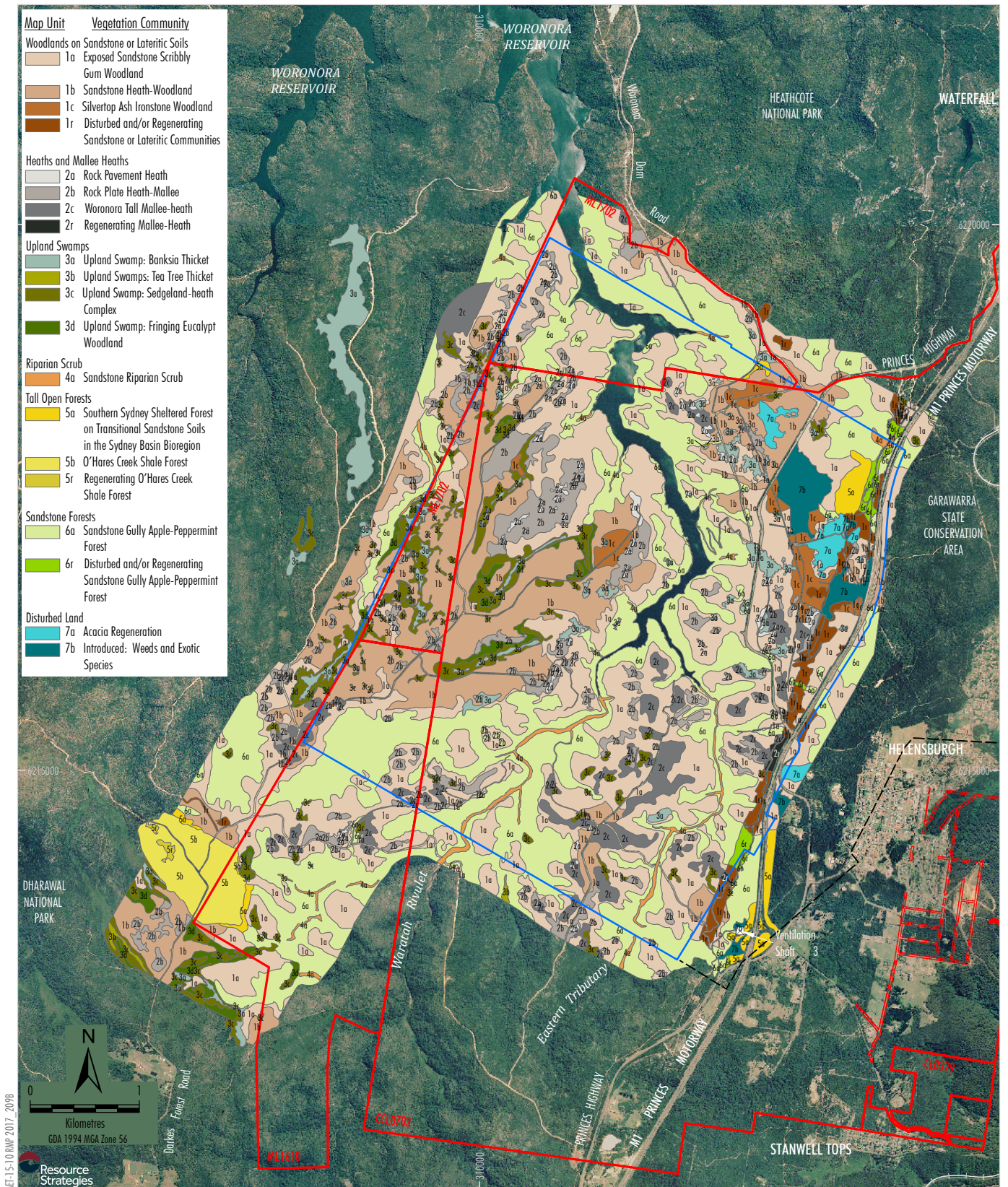
6 BASELINE DATA

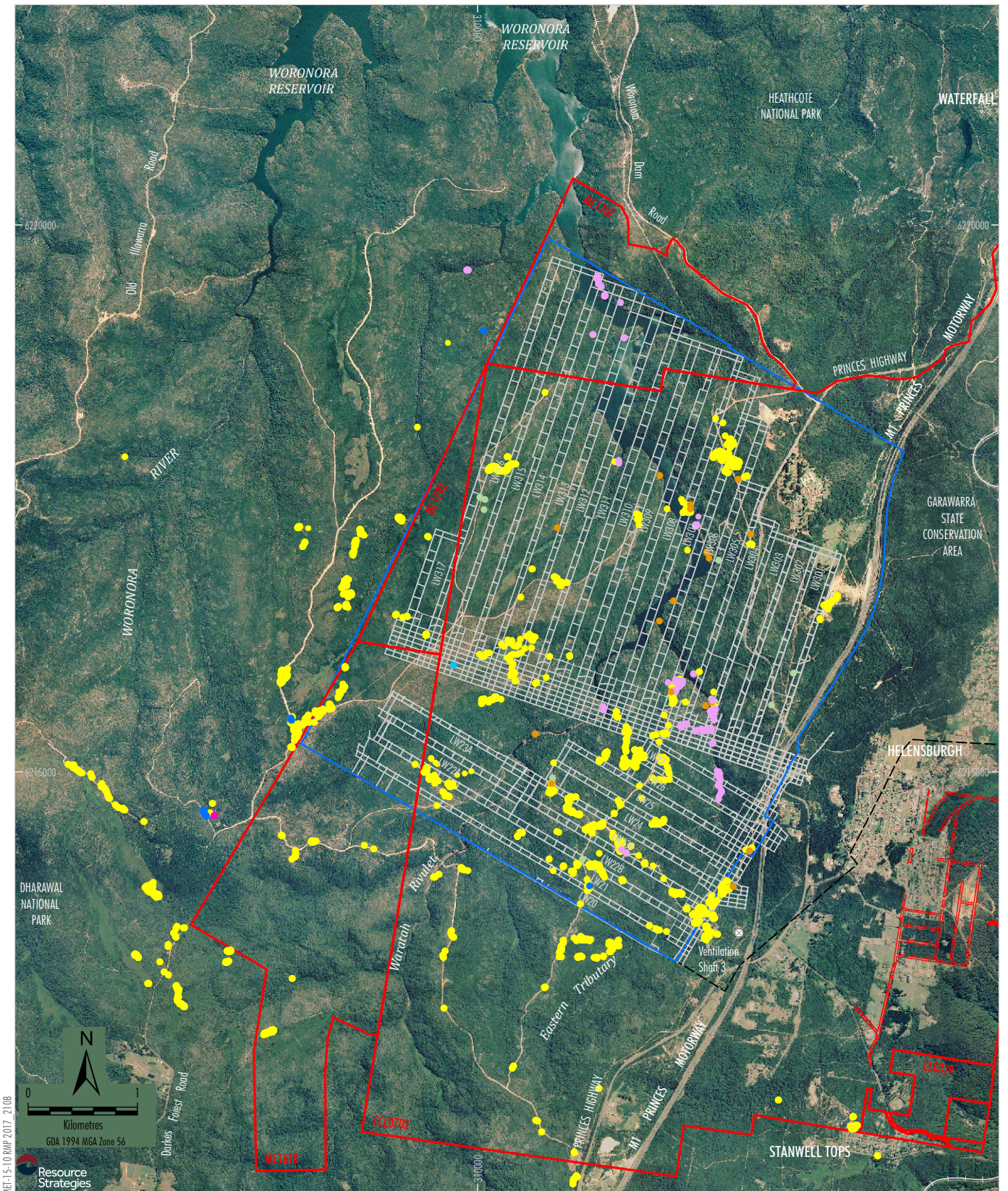
Baseline data of relevance to areas requiring rehabilitation or remediation activities includes:

Ecological Information

- Vegetation community mapping by Bangalay Botanical Surveys (2008) and Eco Logical Australia (2015; 2016; 2018), which includes mapping of upland swamp vegetation (Figure 10).
- Threatened flora species recorded in the Project underground mining area and surrounds (Figure 11).
- Endangered Ecological Communities (EECs) recorded in the Project underground mining area and surrounds (Figure 10), namely:
 - Southern Sydney Sheltered Forest on Transitional Sandstone Soils in the Sydney Basin Bioregion EEC (vegetation community 5a shown on Figure 10).
 - O'Hares Creek Shale Forest EEC (vegetation communities 5b and 5r shown on Figure 10).
- Threatened fauna recorded in the Project underground mining area and surrounds (Figure 12).

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LEGEND

- Mining Lease Boundary
- Railway
- Project Underground Mining Area
- Longwalls 20-27 and 301-317
- Existing Underground Access Drive (Main Drift)

Confirmed Threatened Species

- *Astroticha crassifolia*
- *Acacia bynoeana*
- *Acacia baueri* subsp. *aspera*
- *Melaleuca deanei*
- *Pultanea aristata*
- *Cryptostylis hunteriana*

Potential (Unconfirmed) Threatened Species

- *Epacris purpurascens* var. *purpurascens*
- *Leucopogon exalasius*

Source: Land and Property Information (2015); Date of Aerial Photography 1998; Department of Industry (2015); Metropolitan Coal (2019) Threatened species recorded by Bangalay Botanical Surveys (2008); FloraSearch (2008, 2009); Eco Logical (2010-2018)

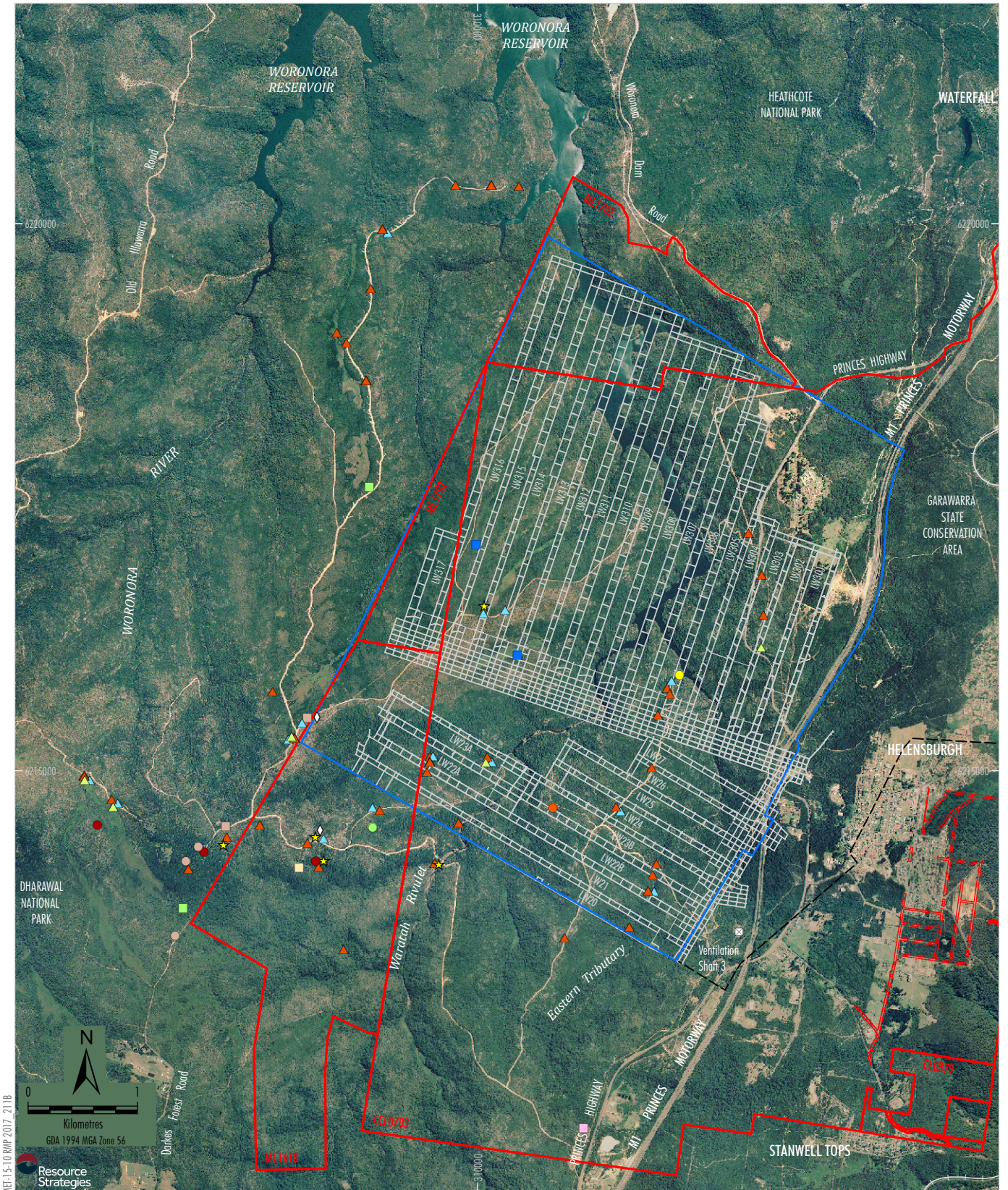
Notes 1. Includes threatened species records up to and including the Autumn 2018 surveys.
2. Each symbol is indicative of a specific location rather than the number of individuals of each species.

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METROPOLITAN COAL

Threatened Flora Recorded During
Metropolitan Coal Surveys

Figure 11



MEF-15-10 RMP 2017 2118

LEGEND

- Mining Lease Boundary
- Railway
- Project Underground Mining Area Longwalls 20-27 and 301-317
- Existing Underground Access Drive (Main Drift)

Threatened Fauna

- ▲ Giant Burrowing Frog
- ▲ Littlejohn's Tree Frog
- ▲ Red-crowned Toadlet
- ▲ Grey Falcon
- ▲ Square-tailed Kite
- ▲ Black-necked Stork
- ▲ Eastern Ground Parrot
- ▲ Turquoise Parrot
- Grey-headed Flying Fox
- Large-footed Myotis
- Squirrel Glider
- Eastern Pygmy-possum
- Eastern Bentwing Bat
- ★ Broad-headed Snake
- ◇ Diggings that could potentially belong to the threatened Southern Brown Bandicoot or Long-nosed Potoroo, or the Protected Long-nosed Bandicoot

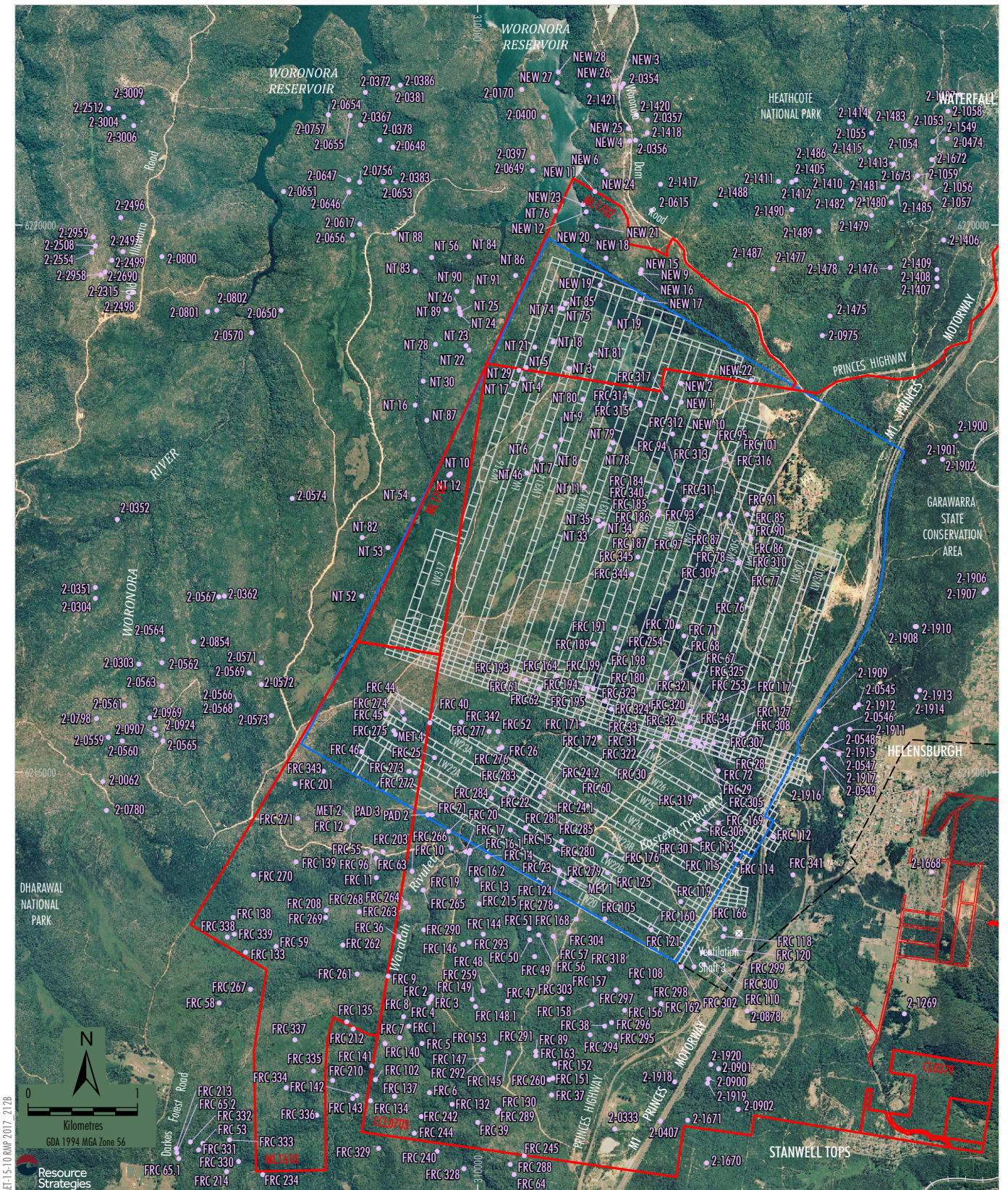
Source: Land and Property Information (2015); Date of Aerial Photography 1998; Department of Industry (2015); Metropolitan Coal (2019); Threatened Species recorded by Western Research Institute and Biosphere Environmental Consultants (2008); Cenwest Environmental Services (2008-2018)

Notes: 1. Includes threatened species records up to March 2018.
 2. Each symbol is indicative of a specific location rather than the number of individuals of each species.

Peabody

METROPOLITAN COAL
 Threatened Fauna Recorded During
 Metropolitan Coal Surveys

Figure 12



Source: Land and Property Information (2015); Date of Aerial Photography 1998; Department of Industry (2015); Metropolitan Coal (2019) Illawarra Prehistory Group (2007; 2008); AHIMS (2007); Kayandel Archaeological Services (2006; 2007; 2008); Niche Environment and Heritage (2013)

Peabody

METROPOLITAN COAL

Known Aboriginal Heritage Sites
Within Project Underground Mining Area
and Surrounds

Figure 13

- Terrestrial and aquatic ecology data and baseline information described in the Metropolitan Coal Biodiversity Management Plan.
- Terrestrial and aquatic ecology data and information included in the Metropolitan Coal Project Environmental Assessment (Project EA) (HCPL, 2008).

Aboriginal Heritage Information

- Known Aboriginal heritage sites recorded in the Project underground mining area and surrounds (Figure 13).
- Aboriginal heritage site data and baseline information described in the Metropolitan Coal Heritage Management Plan.
- Aboriginal heritage data and information included in the Project EA (HCPL, 2008).

Land Information

- Information on cliffs and associated overhangs, steep slopes and land in general provided in the Metropolitan Coal Land Management Plan.
- Land information included in the Project EA (HCPL, 2008).

Water Information

- Detailed stream mapping and photographic records of the Waratah Rivulet, Eastern Tributary, Tributary A and Tributary B provided in the Metropolitan Coal Water Management Plan.
- Watercourse data (e.g. surface and groundwater quantity and quality data) referred to in the Metropolitan Coal Water Management Plan and Catchment Monitoring Program.
- Watercourse information included in the Project EA (HCPL, 2008).

As described in Section 7.1.1, the Metropolitan Coal Construction Management Plan will describe the management measures that will be implemented for surface construction works (excluding remediation or rehabilitation works) for future surface disturbance areas in the Woronora Special Area. This includes pre-disturbance planning activities such as the identification of specific flora characteristics of the areas proposed to be disturbed and identification of specific management measures to minimise impacts on flora, prior to, during and/or following the completion of the surface works including natural regeneration and/or rehabilitation measures. Such baseline information will be available for any new surface disturbance sites addressed by the Construction Management Plan.

For previously established surface disturbance areas, reports such as Environmental Management Plans and Review of Environmental Factors submitted to WaterNSW contain relevant baseline information for the existing surface disturbance sites.

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7 REHABILITATION AND REMEDIATION MEASURES

This section describes the measures that will be implemented to rehabilitate and/or remediate Project impacts, including impacts associated with surface activities in the underground mining area and surrounds (Section 7.1) and impacts associated with subsidence impacts on stream pools and rock bars (Section 7.2).

As described in Section 4.3, other rehabilitation and remediation measures will be described in the detailed management plans prepared for the Metropolitan Coal Extraction Plan including the Water Management Plan, Biodiversity Management Plan, Land Management Plan, Heritage Management Plan, Built Features Management Plan and Public Safety Management Plan, and future revisions of these plans.

Rehabilitation and remediation measures will be implemented, as appropriate, to comply with the relevant statutory requirements and the Project rehabilitation objectives.

Monitoring of the performance of the rehabilitation and remediation measures against the rehabilitation objectives and performance indicators is described in Section 8.

Rehabilitation and remediation activities will be reported in the Annual Review (Section 10).

7.1 REHABILITATION OF SURFACE DISTURBANCE AREAS

In accordance with Table 11 of Condition 1, Schedule 6 of the Project Approval, Metropolitan Coal is required to achieve the following rehabilitation objective for other land affected by the Project:

Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems:

- *comprised of local native plant species; with*
- *a landform consistent with the surrounding environment.*

A Rehabilitation Management Plan – Surface Disturbance Register will be used to manage the implementation of rehabilitation measures (Appendix 1). Monitoring of the performance of the rehabilitation measures is described in Section 8.

Sections 7.1.1 to 7.1.5 outline the measures that will be implemented to rehabilitate surface disturbance areas.

7.1.1 Pre-Disturbance Planning

The Metropolitan Coal Construction Management Plan will describe the management measures that will be implemented for surface construction works (excluding remediation or rehabilitation works) for future surface disturbance areas in the Woronora Special Area.

The management of vegetation clearance/surface disturbance activities will include:

- Detailed site inspections to identify the specific flora characteristics of the areas proposed to be disturbed.

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- Identification of areas in which specific surface works involving vegetation clearance will be avoided or limited (e.g. within swamps, EECs and areas where threatened flora species are present).
- Final site selection and works design so as to minimise the amount of vegetation clearance required.
- Identification of management measures to minimise impacts on flora, prior to, during and/or following the completion of the surface works including natural regeneration and/or rehabilitation measures.
- Identification of management measures to minimise impacts on terrestrial fauna and their habitats.

This information will be used to inform the rehabilitation of each site.

7.1.2 Removal of Equipment or Infrastructure

Equipment and infrastructure items that are redundant will be removed. The surface disturbance area will be inspected to identify the measures required to rehabilitate the site, such as those described in Sections 7.1.3 to 7.1.5. Some equipment/infrastructure items may be removed during the life of the Project in accordance with the relevant Metropolitan Coal management plan(s), while other equipment/infrastructure items are likely to remain in place until after the completion of mining operations.

As described above, the RMP will be reviewed and revised to include details of the final rehabilitation works and post-closure maintenance and monitoring requirements prior to the completion of mining operations.

7.1.3 Erosion and Sediment Control Measures

Temporary erosion and sediment controls (e.g. silt fences and sediment control structures) may be required to be installed prior to the commencement of surface disturbance activities. Erosion and sediment control measures will be designed in general accordance with applicable erosion and sediment control principles and guidelines (e.g. *Managing Urban Stormwater: Soils and Construction, Volume 2E Mines and Quarries* [Department of Environment and Climate Change, 2008]) in accordance with the Metropolitan Coal Construction Management Plan. Erosion and sediment controls will remain in place until such time as ground disturbed by the works has been stabilised.

7.1.4 Weed Management Measures

Where weeds are found to occur specifically in areas subject to mine-related surface activities, weed management measures will be implemented to limit the spread and colonisation of noxious and environmental weeds.

In accordance with the Metropolitan Coal Construction Management Plan, Metropolitan Coal will limit activities that cause soil disturbance.

Weed management of surface disturbance areas will include:

- Inspections of mine-related surface disturbance areas to identify areas requiring weed management measures to be implemented.

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- Implementation of weed management measures (e.g. mechanical removal and application of approved herbicides in authorised areas). Prior to the use of any chemical controls, the chemicals will be approved by the relevant landholder and the Material Safety Data Sheet (MSDS) for the chemical obtained prior to spraying.
- Follow-up inspections to assess the effectiveness of the weed management measures implemented and the requirement for any additional management measures.
- Consultation with WaterNSW and other relevant landholders in relation to weed management activities.
- The implementation of measures that favour the restoration of native vegetation (where appropriate) is also considered an effective method of weed management.

The weed management activities will be reported in the Annual Review (Section 10).

7.1.5 Natural Regeneration/Revegetation Measures

It is anticipated that the majority of surface disturbance areas required by the Project will be of a size that revegetation of the disturbed area would occur naturally from adjacent native vegetation. In other disturbance areas, measures may need to be implemented to encourage natural regeneration (e.g. placing stockpiled vegetative material over cleared areas).

Active revegetation of native vegetation (e.g. planting and/or direct seeding) will be implemented in the event natural regeneration is not considered to be progressing satisfactorily.

The selection of species for active planting and/or direct seeding will be determined in consideration of the site characteristics (e.g. slope, elevation and soil) and vegetation communities at, or in the vicinity of, the disturbance area. Active revegetation will utilise endemic plant species. Specifically, any active revegetation in the Woronora Special Area will utilise seed collected from the Woronora Special Area. Active revegetation will include the seeding and/or planting of upper, mid and lower storey native species. Metropolitan Coal will consult with WaterNSW and DRG prior to the conduct of any active revegetation in the Woronora Special Area.

The overriding objective of both natural regeneration and active revegetation is to establish self-sustaining vegetation appropriate to the landforms.

7.2 STREAM POOL/ROCK BAR REMEDIATION

Metropolitan Coal is required to achieve the rehabilitation objective specified in Table 11 of Condition 1, Schedule 6 of the Project Approval for Waratah Rivulet and the Eastern Tributary.

Table 11: Rehabilitation Objectives

Domain	Rehabilitation objective
<i>Waratah Rivulet, between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir</i>	<i>Restore surface flow and pool holding capacity as soon as reasonably practicable</i>
<i>Eastern Tributary, between the maingate of Longwall 26 and the full supply level of the Woronora Reservoir</i>	

The Metropolitan Coal Stream Remediation Plan details the stream remediation measures to be implemented for the Project. In summary, the Stream Remediation Plan:

- describes the vegetation and Aboriginal heritage management measures that will be implemented at a stream remediation site prior to the commencement of remediation activities;
- describes the fracture characterisation and stream remediation that will be conducted on the Waratah Rivulet and Eastern Tributary;
- provides a description of the stream grouting techniques that will be used;
- outlines the site layout of stream remediation activities at each rock bar; and
- details the environmental management measures that will be implemented during the conduct of the stream remediation activities.

8 MONITORING

8.1 SURFACE DISTURBANCE AREAS

8.1.1 Monitoring of Rehabilitation Measures

The Rehabilitation Management Plan – Surface Disturbance Register (Appendix 1) will be used to monitor the performance of the measures implemented to rehabilitate 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.

The frequency of monitoring of surface disturbance areas subject to rehabilitation will be largely driven by the status of the site. For example, sites that are identified as requiring the implementation of further rehabilitation measures (e.g. weed control or erosion and sediment control) will be inspected on a more frequent basis to assess whether the measures have been effective. The dates on which individual site inspections are conducted will be recorded in the Rehabilitation Management Plan – Surface Disturbance Register, along with the findings of the site inspection (Appendix 1).

Rehabilitation measures will be reported in the Annual Review (Section 10).

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8.1.2 Assessment against Performance Indicators and Rehabilitation Objective

Metropolitan Coal will assess the progress of the rehabilitation measures against the following performance indicators:

Redundant equipment/infrastructure items have been removed.

The site is neat and tidy (i.e. it does not contain any rubbish).

No weed management measures are required.

No erosion or sediment control measures are required.

Where appropriate, native vegetation is naturally regenerating or active revegetation is establishing.

No further active revegetation measures are required.

The progress of the rehabilitation will be recorded in the Rehabilitation Management Plan – Surface Disturbance Register (Appendix 1).

When appropriate, an assessment of the site will be made against the rehabilitation objective for other land affected by the Project, viz. *Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: comprised of local native plant species; with a landform consistent with the surrounding environment.*

The rehabilitation objective will be considered to have been met if:

- the site contains self-sustaining native vegetation (i.e. the vegetation is able to sustain itself, without the implementation of any management measures);
- the vegetation is healthy;
- the native vegetation is comprised of local native plant species, as assessed by a suitably qualified botanist;
- ecosystem function is considered to have been restored (i.e. ecosystem processes [water cycle, nutrient cycle and energy interception]⁴ at site scale are functioning well); and
- the landform is consistent with the surrounding environment.

The assessment will be recorded in the Rehabilitation Management Plan – Surface Disturbance Register (Appendix 1).

The rehabilitation objective will be met prior to lease relinquishment. It is anticipated that many of the minor surface disturbance areas will meet this rehabilitation objective during the life of the Project, however, other areas will require a greater period of time for Metropolitan Coal to achieve the rehabilitation objective.

⁴ Water cycle considerations (e.g. does the water cycle provide adequate moisture through infiltration into the soil or does it run off the land causing erosion?).
 Nutrient cycle considerations (e.g. are nutrients available to living things?).
 Energy flow considerations (e.g. how much sunlight falls on green leaves and gets turned into food for the ecosystem? How much is wasted striking dead growth or bare ground?).

8.2 STREAM POOL/ROCK BAR REMEDIATION

The Metropolitan Coal Stream Remediation Plan describes monitoring of the Waratah Rivulet and Eastern Tributary stream remediation activities. In summary, the monitoring program is consistent with the Metropolitan Coal Water Management Plan and includes:

- photographic surveys of the Waratah Rivulet (from Pool P to the full supply level of the Woronora Reservoir) and Eastern Tributary (from the full supply level of the Woronora Reservoir to the maingate of Longwall 26);
- monitoring of rainfall and climate data;
- surface water flow monitoring at gauging stations;
- monitoring of Waratah Rivulet, Eastern Tributary and Woronora River pool water levels;
- monitoring of stream remediation measures and environmental controls; and
- monitoring of water quality upstream and downstream of the stream remediation works.

Metropolitan Coal will assess the progress of the stream remediation measures against the performance indicators detailed in the Stream Remediation Plan:

The rehabilitation objective for the Waratah Rivulet between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir and the Eastern Tributary between the maingate of Longwall 26 and the full supply level of the Woronora Reservoir, *viz. Restore surface flow and pool holding capacity as soon as reasonably practicable*, will be assessed in accordance to the Metropolitan Coal Stream Remediation Plan.

8.3 OTHER NATURAL OR BUILT FEATURES IMPACTED BY SUBSIDENCE

In accordance with Condition 4, Schedule 6 and Condition 12, Schedule 2 of the Project Approval, rehabilitation and remediation measures for impacts to other natural or built surface features resulting from subsidence are described in the detailed management plans prepared for the Metropolitan Coal Extraction Plan. The relevant management plan for subsidence impacts on natural or built surface features is outlined in Table 2.

Table 2
Summary of Rehabilitation and Remediation Measures included in Other Management Plans

Potential Subsidence Impact	Relevant Plan(s)
Impacts on streams including aesthetic values, stream bank erosion and cliff falls	Metropolitan Coal Water Management Plan
Impacts on upland swamps and vegetation	Metropolitan Coal Biodiversity Management Plan
Cliffs and associated overhangs, steep slopes and land in general	Metropolitan Coal Land Management Plan and Metropolitan Coal Public Safety Management Plan
Aboriginal heritage items	Metropolitan Coal Heritage Management Plan
Built features	Metropolitan Coal Built Features Management Plan

In relation to the rehabilitation objective for other land affected by the Project, viz. *Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: comprised of local native plant species; with a landform consistent with the surrounding environment*, Metropolitan Coal will monitor rehabilitation and remediation measures implemented in accordance with the Metropolitan Coal Biodiversity Management Plan and revisions of the plan for future Extraction Plans. The results of the monitoring will be used to assess whether this rehabilitation objective has been met.

9 CONTINGENCY PLAN

The detailed management plans prepared for the Metropolitan Coal Extraction Plan (i.e. Water Management Plan, Biodiversity Management Plan, Land Management Plan, Heritage Management Plan, Built Features Management Plan and Public Safety Management Plan) include Contingency Plans to manage unpredicted impacts and their consequences.

10 ANNUAL REVIEW AND IMPROVEMENT OF ENVIRONMENTAL PERFORMANCE

In accordance with Condition 3, Schedule 7 of the Project Approval, Metropolitan Coal will conduct an Annual Review of the environmental performance of the Project by the end of March each year.

The Annual Review will specifically address the environmental performance of the RMP and will:

- describe the works that were carried out in the past calendar year, and the works that are proposed to be carried out over the current calendar year;
- include a comprehensive review of the monitoring results and complaints records of the Project over the past year, including a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - monitoring results of previous years; and
 - relevant predictions in the Project EA, Preferred Project Report and Extraction Plan;
- identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
- identify any trends in the monitoring data over the life of the Project;
- identify any discrepancies between the predicted and actual impacts of the Project, and analyse the potential cause of any significant discrepancies; and
- describe what measures will be implemented over the next year to improve the environmental performance of the Project.

As described in Section 2, this RMP will be reviewed within three months of the submission of an Annual Review, and revised where appropriate.

11 INCIDENTS

An incident is defined as a set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in the Project Approval.

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The reporting of incidents will be conducted in accordance with Condition 6, Schedule 7 of the Project Approval. Metropolitan Coal will notify the Secretary of the DP&E and any other relevant agencies of any incident associated with the Project as soon as practicable after Metropolitan Coal becomes aware of the incident. Within seven days of the date of the incident, Metropolitan Coal will provide the Secretary and any relevant agencies with a detailed report on the incident.

12 COMPLAINTS

A protocol for the managing and reporting of complaints has been developed as a component of Metropolitan Coal’s Environmental Management Strategy and is described below.

The Environment & Community Superintendent is responsible for maintaining a system for recording complaints.

Metropolitan Coal will maintain public signage advertising the telephone number on which environmental complaints can be made. The Environment & Community Superintendent is responsible for ensuring that the currency and effectiveness of the service is maintained. Notifications of complaints received are to be provided as quickly as practicable to the Environment & Community Superintendent.

Complaints and enquiries do not have to be received via the telephone line and may be received in any other form. Any complaint or enquiry relating to environmental management or performance is to be relayed to the Environment & Community Superintendent as soon as practicable. All employees are responsible for ensuring the prompt relaying of complaints. All complaints will be recorded in a complaints register.

For each complaint, the following information will be recorded in the complaints register:

- date and time of complaint;
- method by which the complaint was made;
- personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- nature of the complaint;
- the action(s) taken by Metropolitan Coal in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by Metropolitan Coal, the reason why no action was taken.

The Environment & Community Superintendent is responsible for ensuring that all complaints are appropriately investigated, actioned and that information is fed back to the complainant, unless requested to the contrary.

In accordance with Condition 10, Schedule 7 of the Project Approval, the complaints register will be made publicly available on the Peabody website and updated on a monthly basis. A summary of complaints received and actions taken will be presented to the Community Consultative Committee as part of the operational performance review.

13 NON-COMPLIANCES WITH STATUTORY REQUIREMENTS

A protocol for the managing and reporting of non-compliances with statutory requirements has been developed as a component of Metropolitan Coal's Environmental Management Strategy and is described below.

Compliance with all approvals, plans and procedures will be the responsibility of all personnel (staff and contractors) employed on or in association with Metropolitan Coal, and will be developed through promotion of Metropolitan Coal ownership under the direction of the General Manager.

The Technical Services Manager and/or Environment & Community Superintendent will undertake regular inspections, internal audits and initiate directions identifying any remediation/rectification work required, and areas of actual or potential non-compliance.

As described in Section 11, Metropolitan Coal will notify the Secretary of the DP&E and any other relevant agencies of any incident associated with Metropolitan Coal as soon as practicable after Metropolitan Coal becomes aware of the incident. Within seven days of the date of the incident, Metropolitan Coal will provide the Secretary of the DP&E and any relevant agencies with a detailed report on the incident.

A review of Metropolitan Coal's compliance with all conditions of the Project Approval, mining leases and all other approvals and licences will be conducted prior to (and included within) each Annual Review. The Annual Review will be made publicly available on the Peabody website.

Additionally, in accordance with Condition 8, Schedule 7 of the Project Approval, an independent environmental audit was undertaken by the end of December 2011, and is undertaken a minimum of once every three years thereafter. A copy of the audit report will be submitted to the Secretary of the DP&E and made publicly available on the Peabody website. The independent audit will be undertaken by an appropriately qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary of the DP&E.

14 REFERENCES

Bangalay Botanical Surveys (2008) *Metropolitan Coal Project Baseline Flora Survey – Proposed Longwall Mining Area*. Report prepared for Helensburgh Coal Pty Ltd.

Department of Environment and Climate Change (2008) *Managing Urban Stormwater: Soils and Construction, Volume 2E Mines and Quarries*.

Eco Logical Australia (2016) *Longwalls 301-303 Upland Swamp Vegetation Mapping and Proposed Monitoring Program*. Report prepared for Metropolitan Coal. August 2016.

Eco Logical Australia (2018) *Revised Longwalls 304-310 Upland Swamp Vegetation Mapping*. Report prepared for Metropolitan Coal.

Helensburgh Coal Pty Ltd (2008) *Metropolitan Coal Project Environmental Assessment*.

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APPENDIX 1

REHABILITATION MANAGEMENT PLAN
SURFACE DISTURBANCE REGISTER

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Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance	
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)
Monitoring Equipment													
<i>Meteorological Monitoring Equipment</i>													
1-1	PV1	Pluviometer, Evaporimeter											
1-2	PV2	Pluviometer											
1-3	PV5	Pluviometer											
1-4	PV6	Pluviometer											
1-5	PV7	Pluviometer											
<i>Surface Water Flow Monitoring Equipment</i>													
2-1	GS300016	Streamflow											
2-2	GS300017	Streamflow											
2-3	GS	Streamflow											
2-4	GS	Streamflow											
<i>Pool Water Level Monitoring Equipment</i>													
3-1	Pool A	Water level sensor and logger											
3-2	Pool F	Water level sensor and logger											
3-3	Pool J	Water level sensor and logger											
3-4	Pool K	Water level sensor and logger											
3-5	Pool L	Water level sensor and logger											
3-6	Pool M	Water level sensor and logger											
3-7	Pool N	Water level sensor and logger											
3-8	Pool O	Water level sensor and logger											

Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance	
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)
3-9	Pool P	Water level sensor and logger											
3-10	Pool Q	Water level sensor and logger											
3-11	Pool R	Water level sensor and logger											
3-12	Pool S	Water level sensor and logger											
3-13	Pool T	Water level sensor and logger											
3-14	Pool U	Water level sensor and logger											
3-15	Pool V	Water level sensor and logger											
3-16	Pool W	Water level sensor and logger											
3-17	Pool ETAF	Water level sensor and logger											
3-18	Pool ETAG	Water level sensor and logger											
3-19	Pool ETAH	Water level sensor and logger											
3-20	Pool ETAI	Water level sensor and logger											
3-21	Pool ETAQ	Water level sensor and logger											
3-22	Pool ETAU	Water level sensor and logger											

Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance	
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)
3-23	Pool ETF	Water level sensor and logger											
3-24	Pool ETJ	Water level sensor and logger											
3-25	Pool ETM	Water level sensor and logger											
3-26	Pool ETU	Water level sensor and logger											
3-27	Pool ETW	Water level sensor and logger											
3-28	Pool RTP1	Water level sensor and logger											
3-29	Pool RTP2	Water level sensor and logger											
3-30	Pool UTP1	Water level sensor and logger											
3-31	Pool UTP2	Water level sensor and logger											
3-32	Pool UTP3	Water level sensor and logger											
3-33	Pool WRP1	Water level sensor and logger											
3-34	Pool WRP2	Water level sensor and logger											
3-35	Pool WRP3	Water level sensor and logger											
3-36	Pool WRP4	Water level sensor and logger											

Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance		
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)	
<i>Groundwater Monitoring Equipment</i>														
4-1	S16/17	Piezometer												
4-2	S20	Piezometer												
4-3	S25	Piezometer												
4-4	S101	Piezometer												
4-5	WRSWAMP1	Piezometer												
4-6	SWG1	Piezometer												
4-7	SWAMP1	Piezometer												
4-8	SWAMP2	Piezometer												
4-9	SWAMP3	Piezometer												
4-10	SWAMP4	Piezometer												
4-11	ETGW1	Piezometer												
4-12	FGGW1	Piezometer												
4-13	FGGW2	Piezometer												
4-14	FGGW3	Piezometer												
4-15	RTGW1A	Piezometer												
4-16	UTGW1	Piezometer												
4-17	UTGW2	Piezometer												
4-18	UTGW3	Piezometer												
4-19	WRGW1	Piezometer												
4-20	WRGW2	Piezometer												
4-21	WRGW3	Piezometer												
4-22	WRGW4	Piezometer												
4-23	WRGW5	Piezometer												
4-24	WRGW6	Piezometer												
4-25	WRGW7	Piezometer												
4-26	9DGW1B/ PM01	Piezometer												
4-27	9EGW1B	Piezometer												
4-28	9FGW1B	Piezometer												
4-29	9GGW1B	Piezometer												
4-30	9GGW2B	Piezometer												

Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance	
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)
4-31	9HGW0	Piezometer											
4-32	9HGW1B	Piezometer											
4-33	PM02	Piezometer											
4-34	PM03	Piezometer											
4-35	PHGW1	Piezometer											
4-36	9FGW2	Piezometer											
4-37	9EGW2	Piezometer											
4-38	9GGW3	Piezometer											
4-39	PHGW2	Piezometer											
4-40	PHGW3	Piezometer											
4-41	F6GW2	Piezometer											
4-42	F6GW3	Piezometer											
4-43	FanGW1	Piezometer											
<i>Subsidence Lines</i>													
5-1	D Line	Survey Pegs											
5-2	Line 9C	Survey Pegs											
5-3	Line 9C West	Survey Pegs											
5-4	Line 9G	Survey Pegs											
5-5	Line 9J	Survey Pegs											
5-6	LW20 Longitudinal Line	Survey Pegs											
5-7	E Line (WRS3)	Survey Pegs											
5-8	WR Cross Line 1	Survey Pegs											
5-9	WR Cross Line 2	Survey Pegs											
5-10	WR Cross Line 3	Survey Pegs											
5-11	WR Cross Line 4	Survey Pegs											
5-12	WR Cross Line 5	Survey Pegs											
5-13	WR Cross Line 6	Survey Pegs											

Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance	
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)
5-14	WR Cross Line 7	Survey Pegs											
5-15	WR Cross Line 8	Survey Pegs											
5-16	WR Cross Line 9	Survey Pegs											
5-17	WR Cross Line 10	Survey Pegs											
5-18	WR Cross Line 11	Survey Pegs											
5-19	WR Cross Line 12	Survey Pegs											
5-20	WR Cross Line 13	Survey Pegs											
5-21	LW20-22 Cross Line 1	Survey Pegs											
5-22	LW20-22 Cross Line 2	Survey Pegs											
5-23	LW20-22 Cross Line 3 (WRS5)	Survey Pegs											
5-24	WR Rock bar P Cross Line	Survey Pegs											
5-25	WR Rock bar Q Cross Line	Survey Pegs											
5-26	Ridgetop 1	Survey Pegs											
5-27	Ridgetop 2	Survey Pegs											
5-28	Ridgetop 3	Survey Pegs											
5-29	Ridgetop 4	Survey Pegs											
5-30	Ridgetop 5	Survey Pegs											
5-31	Transmission Line Monitoring	Survey Pegs											
5-32	Princes Highway Line	Survey Pegs											
5-33	Freeway Line	Survey Pegs											
5-34	Freeway Bridge	Survey Pegs											

Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance	
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)
Surface Exploration⁹													
6-1	9DGW1B/ PM01	Surface exploration borehole											
6-2	9EGW1B	Surface exploration borehole											
6-3	9FGW1B	Surface exploration borehole											
6-4	9GGW1B	Surface exploration borehole											
6-5	9GGW2B	Surface exploration borehole											
6-6	9HGW0	Surface exploration borehole											
6-7	9HGW1B	Surface exploration borehole											
6-8	PM02	Surface exploration borehole											
6-9	PM03	Surface exploration borehole											
6-10	PHGW1	Surface exploration borehole											
6-11	9FGW2	Surface exploration borehole											
6-12	9EGW2	Surface exploration borehole											
6-13	9GGW3	Surface exploration borehole											
6-14	PHGW2	Surface exploration borehole											

Rehabilitation Management Plan – Surface Disturbance Register

Register Number ¹	Site Name ²	Site Type ³	Site Co-ordinates ⁴		Description of Rehabilitation Requirements ⁶							Assessment of Performance	
			Easting	Northing	Date of Inspection ⁵	Equipment/ Infrastructure Removal Required? (Yes/No)	Is the Site Neat and Tidy? (Yes/No)	Erosion or Sediment Control Measures Required? (Yes/No)	Weed Management Measures Required? (Yes/No)	Natural Regeneration? (Yes/No)	Active Revegetation Required? (Yes/No)	Have the Performance Indicators been achieved? ⁷ (Yes/No)	Has the Rehabilitation Objective been met? ⁸ (Yes/No)
6-15	PHGW3	Surface exploration borehole											
6-16	F6GW2	Surface exploration borehole											
6-17	F6GW3	Surface exploration borehole											
6-18	FanGW1	Surface exploration borehole											
Other													
7-1													

Notes:

- 1: Fill out all details in the Rehabilitation Management Plan – Surface Disturbance Register Assessment Form and record the register number here, according to whether the site is a monitoring equipment site, surface exploration site, vehicular access track, or other.
- 2: Record the name allocated to the site.
- 3: Record the type of site (e.g. pluviometer, stream flow monitoring equipment, water level sensor and logger, groundwater bore, survey pegs, vehicular access track, surface exploration borehole etc.)
- 4: Record the site's co-ordinates (Easting/Northing).
- 5: Record the date of the site inspection as recorded on the Rehabilitation Management Plan – Surface Disturbance Register Assessment Form.
- 6: Fill out the description of rehabilitation requirements according to the Rehabilitation Management Plan – Surface Disturbance Register Assessment Form. Yes/No
- 7: Has the performance indicators been met? (Yes/No). Based on the assessment recorded on the Rehabilitation Management Plan – Surface Disturbance Register Assessment Form.
- 8: When appropriate, assess whether the rehabilitation objective has been met? (Yes/No). Based on the assessment recorded on the Rehabilitation Management Plan – Surface Disturbance Register Assessment Form.
- 9: Note that some surface exploration sites are the same as some groundwater monitoring equipment sites.

**Rehabilitation Management Plan – Surface Disturbance Register
Assessment Form**

Date:

Observer (Name and position):

Register Number (i.e. Number 1, 2, etc.):

Site Name:

Site Type:

Site Co-ordinates (Easting/Northing):

Description of Rehabilitation Requirements

Equipment/Infrastructure Removal Required?

- Is there any equipment/infrastructure that needs to be removed?
- Type of equipment/infrastructure?
- Has the equipment/infrastructure been removed?

Is the Site Neat and Tidy?

- Is there any rubbish that needs to be removed?
- Type of rubbish requiring removal?
- Has the rubbish been removed?

Erosion or Sediment Control Measures Required?

- Is any erosion or sediment control required?
- Type of erosion or sediment control required?
- Are the existing erosion and sediment controls working effectively?
- Have the erosion or sediment controls been removed if no longer required?

Weed Management Measures Required?

- Are there any weeds that need to be controlled?
- List the weeds requiring control and estimate the area affected.
- Have previous weed control measures been effective?

Natural Regeneration?

- Is natural regeneration of native vegetation occurring from surrounding vegetation?
- What is the approximate height of the regenerating vegetation compared to the surrounding vegetation?
- Are any measures required to encourage natural regeneration?

Active Revegetation Required?

- Is active revegetation required (i.e. following the removal of the disturbance, the site does not appear to be naturally regenerating)?
- What is the surrounding vegetation community according to mapping by Bangalay Botanical Surveys (2008)?
- If active revegetation has been implemented, is the vegetation establishing?

Note: consultation with the SCA and DITRIS is required for any proposed active revegetation.

Rehabilitation Measures to be Implemented:

Attach photographs, where appropriate

Description of Photographs:

Have the Performance Indicators been achieved?

<i>Redundant equipment/infrastructure items have been removed</i>	<input type="checkbox"/>
<i>The site is neat and tidy (i.e. it does not contain any rubbish)</i>	<input type="checkbox"/>
<i>No weed management measures are required</i>	<input type="checkbox"/>
<i>No erosion or sediment control measures are required</i>	<input type="checkbox"/>
<i>Where appropriate, native terrestrial vegetation is naturally regenerating or active revegetation is establishing</i>	<input type="checkbox"/>
<i>No further active revegetation measures are required</i>	<input type="checkbox"/>

Has the Rehabilitation Objective been achieved?

<i>The site contains self-sustaining native terrestrial vegetation (i.e. the vegetation is able to sustain itself, without the implementation of any management measures)</i>	<input type="checkbox"/>
<i>The vegetation is healthy</i>	<input type="checkbox"/>
<i>The native vegetation is comprised of local native plant species, as assessed by a suitably qualified botanist</i>	<input type="checkbox"/>
<i>Ecosystem function is considered to have been restored (i.e. ecosystem processes [water cycle, nutrient cycle and energy interception]¹ at site scale are functioning well</i>	<input type="checkbox"/>
<i>The landform is consistent with the surrounding environment</i>	<input type="checkbox"/>

Actions Required: Rehabilitation Measures	<input type="checkbox"/>
Contingency Plan Initiated	<input type="checkbox"/>
Incident Notification	<input type="checkbox"/>
Safety Measures/Public Safety	<input type="checkbox"/>
Management Plan Requirements	<input type="checkbox"/>

¹ Water cycle considerations (e.g. does the water cycle provide adequate moisture through infiltration into the soil or does it run off the land causing erosion?).

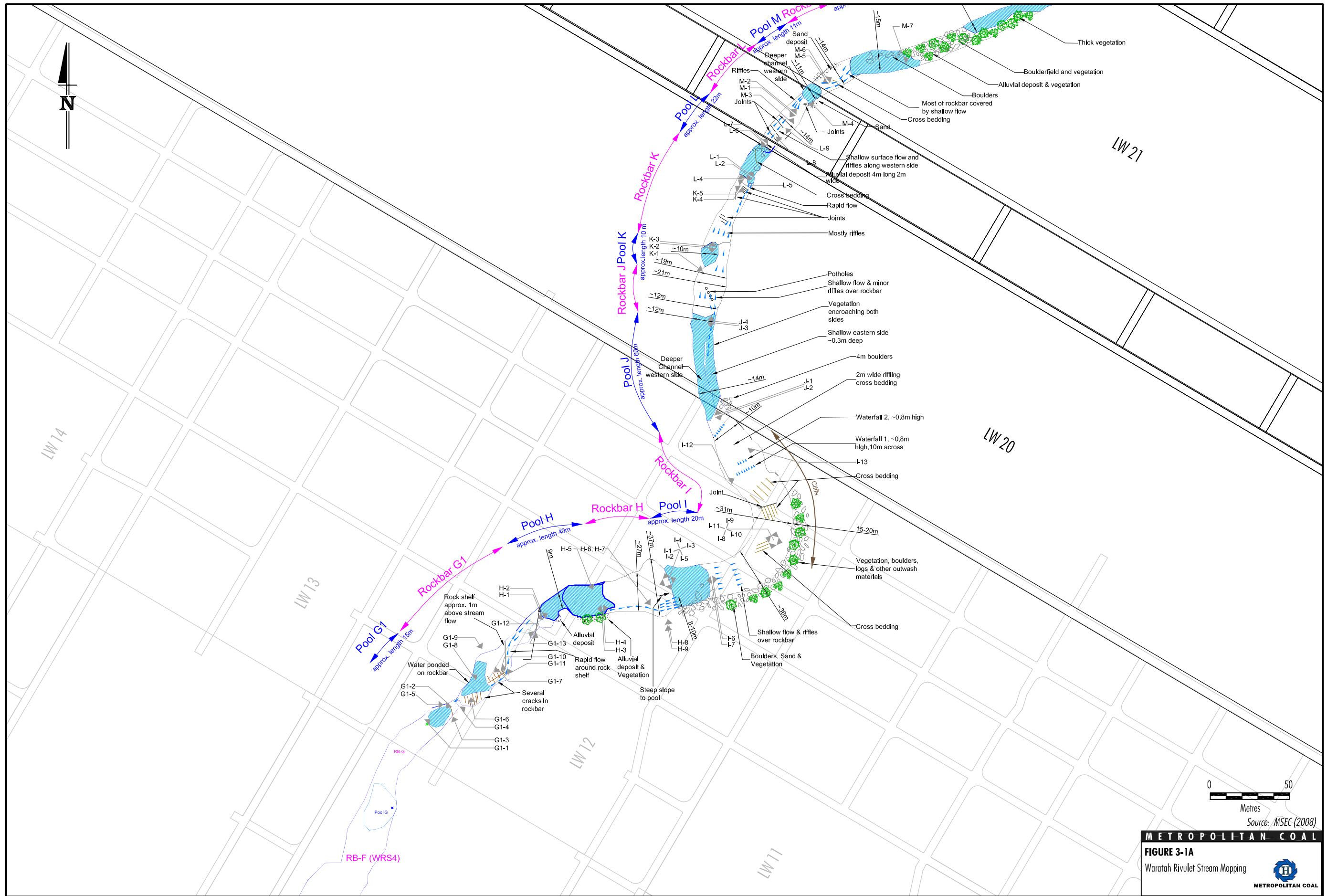
Nutrient cycle considerations (e.g. are nutrients available to living things?).

Energy flow considerations (e.g. how much sunlight falls on green leaves and gets turned into food for the ecosystem? How much is wasted striking dead growth or bare ground?).

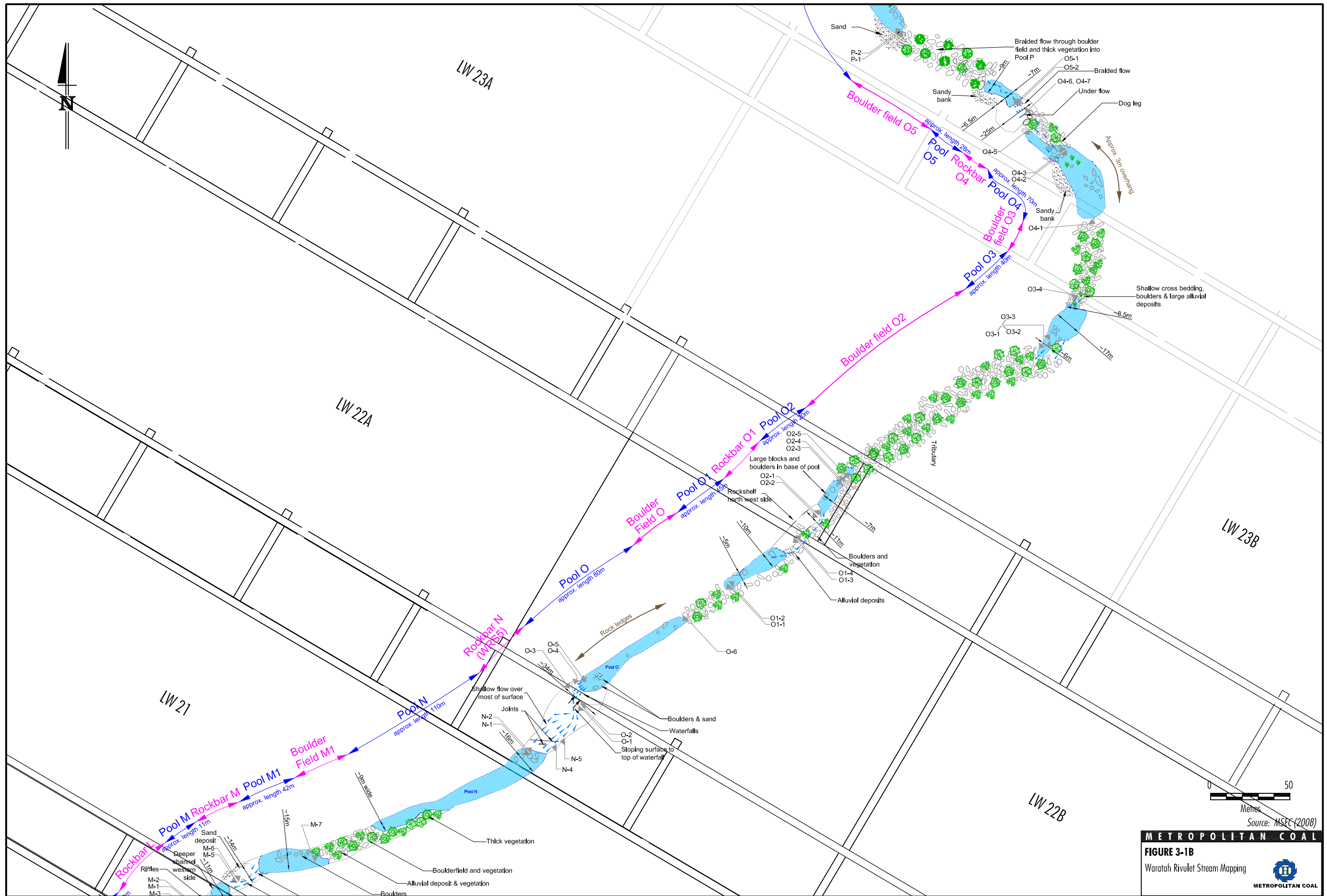
APPENDIX 2

WARATAH RIVULET AND EASTERN TRIBUTARY STREAM MAPPING

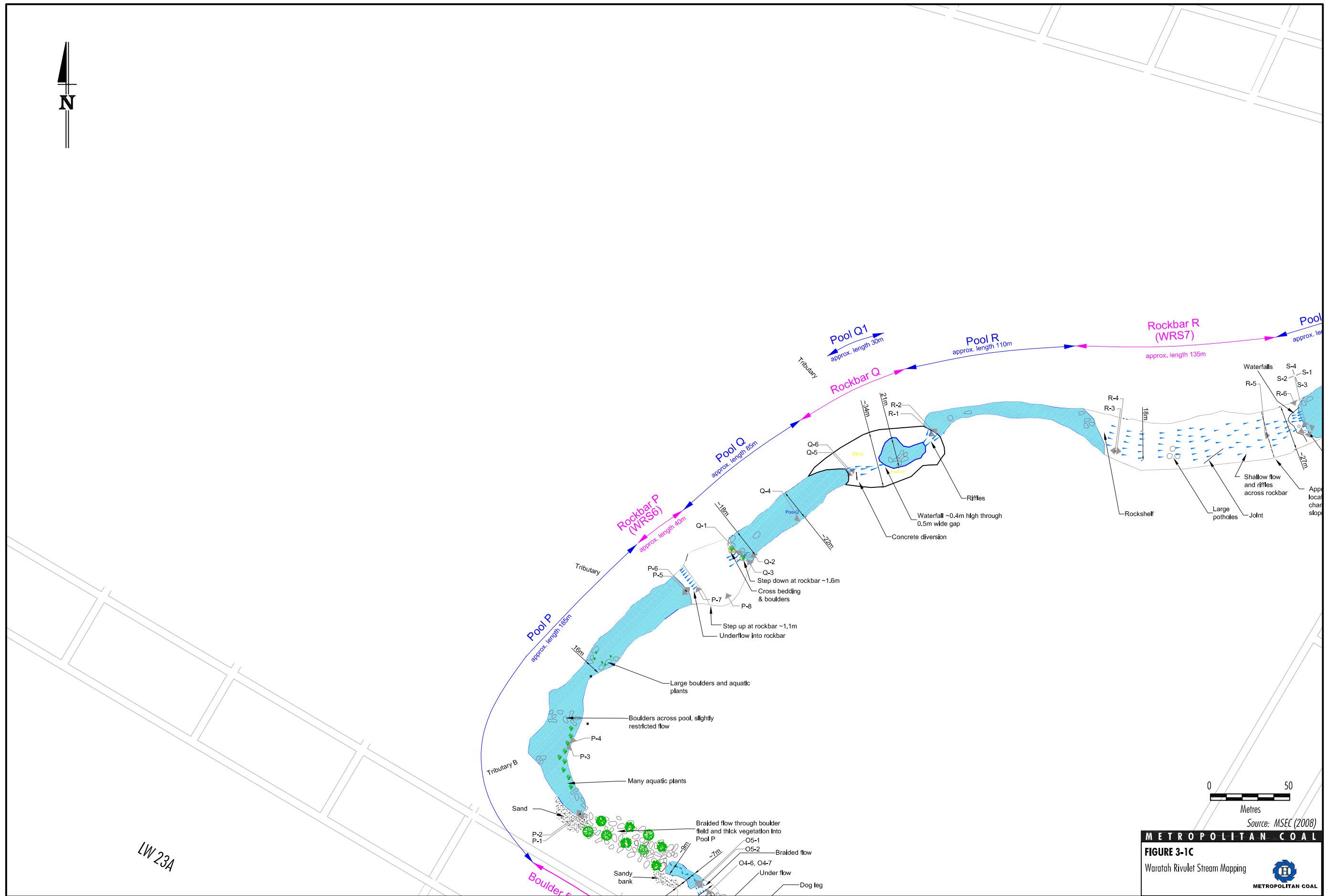
Metropolitan Coal – Rehabilitation Management Plan		
Revision No. RMP-R01-G		
Document ID: Rehabilitation Management Plan		



METROPOLITAN COAL
FIGURE 3-1A
 Waratah Rivulet Stream Mapping
METROPOLITAN COAL

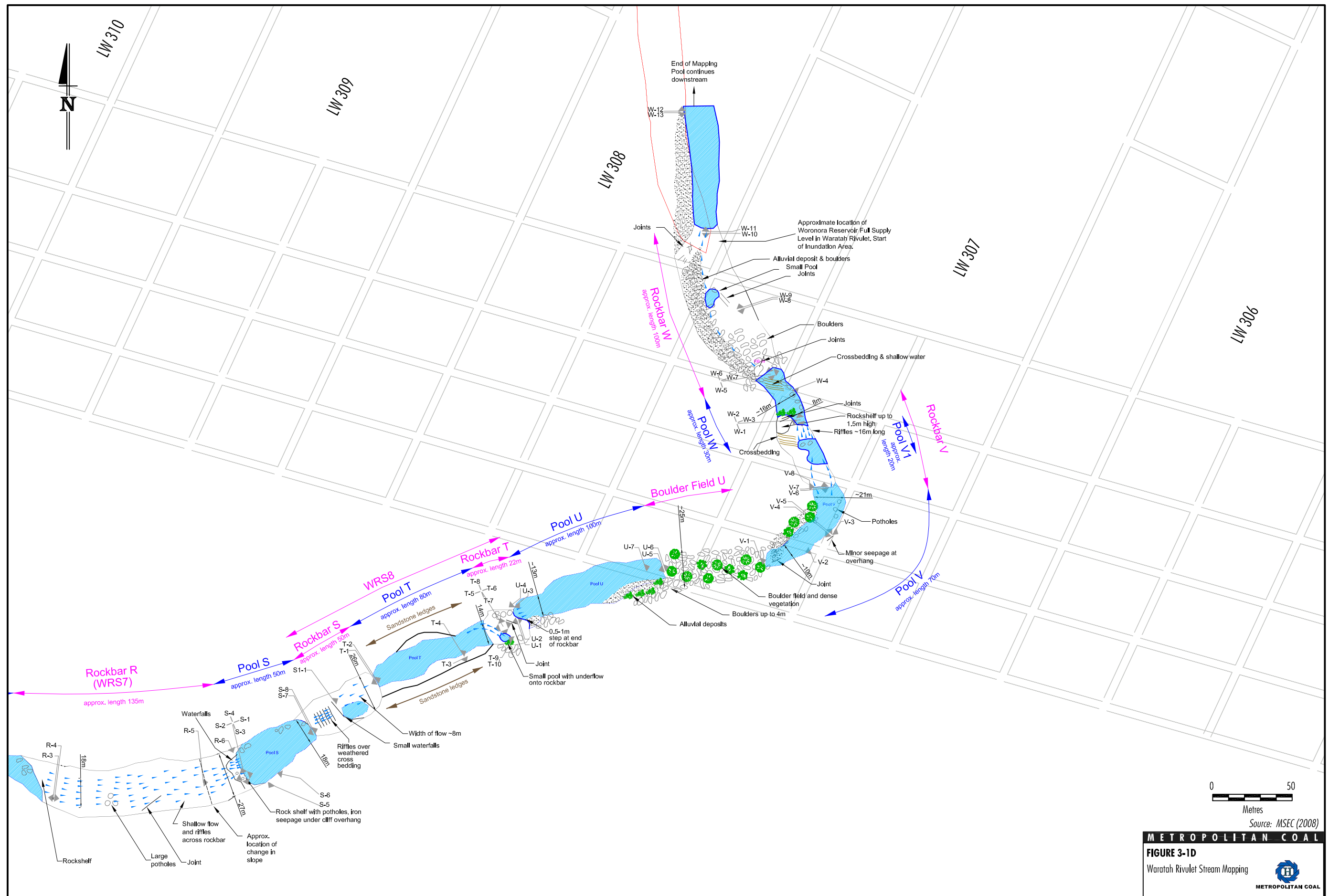


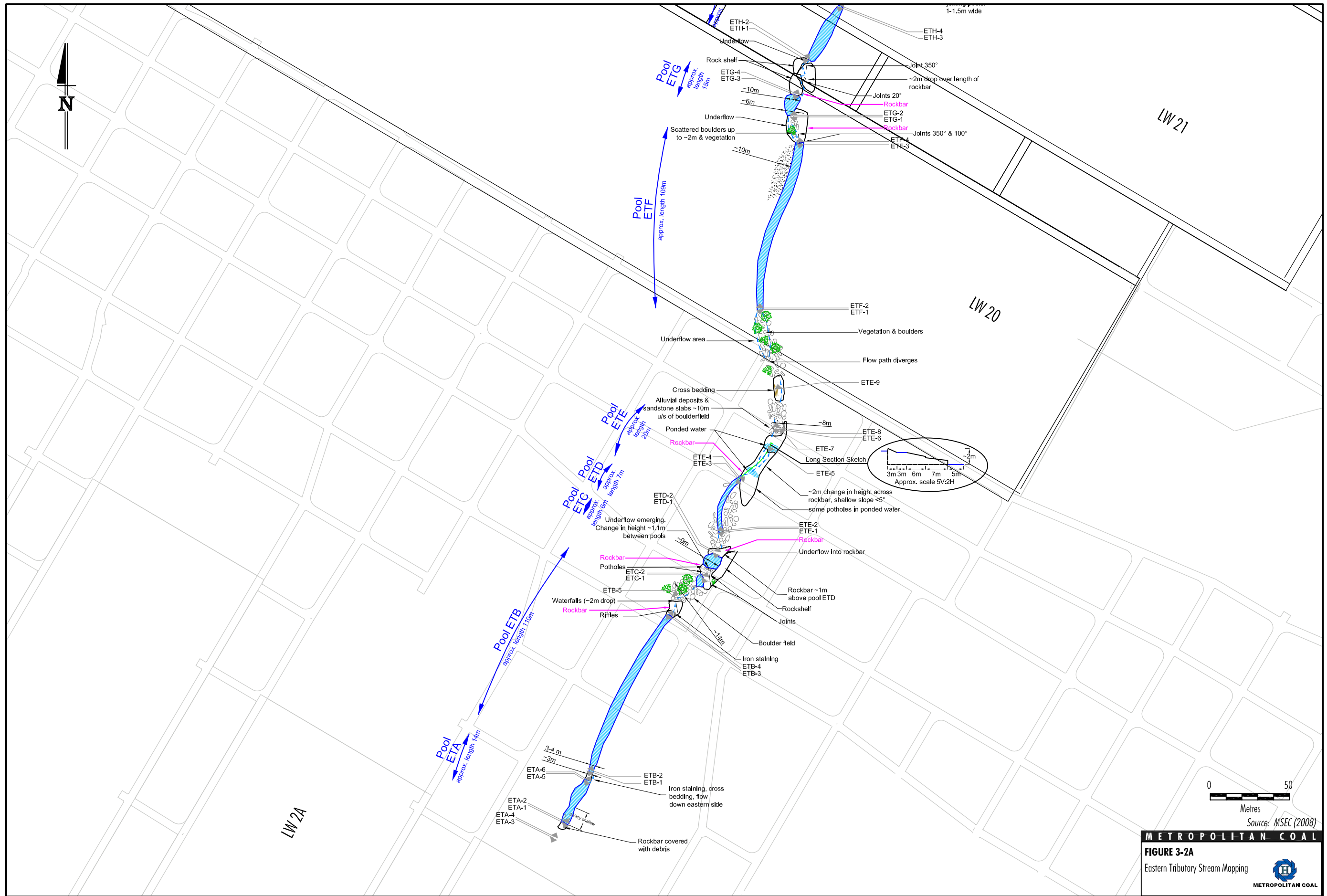
METROPOLITAN COAL
FIGURE 3-1B
 Waratah Rivulet Stream Mapping
 Source: MSEC (2008)
METROPOLITAN COAL



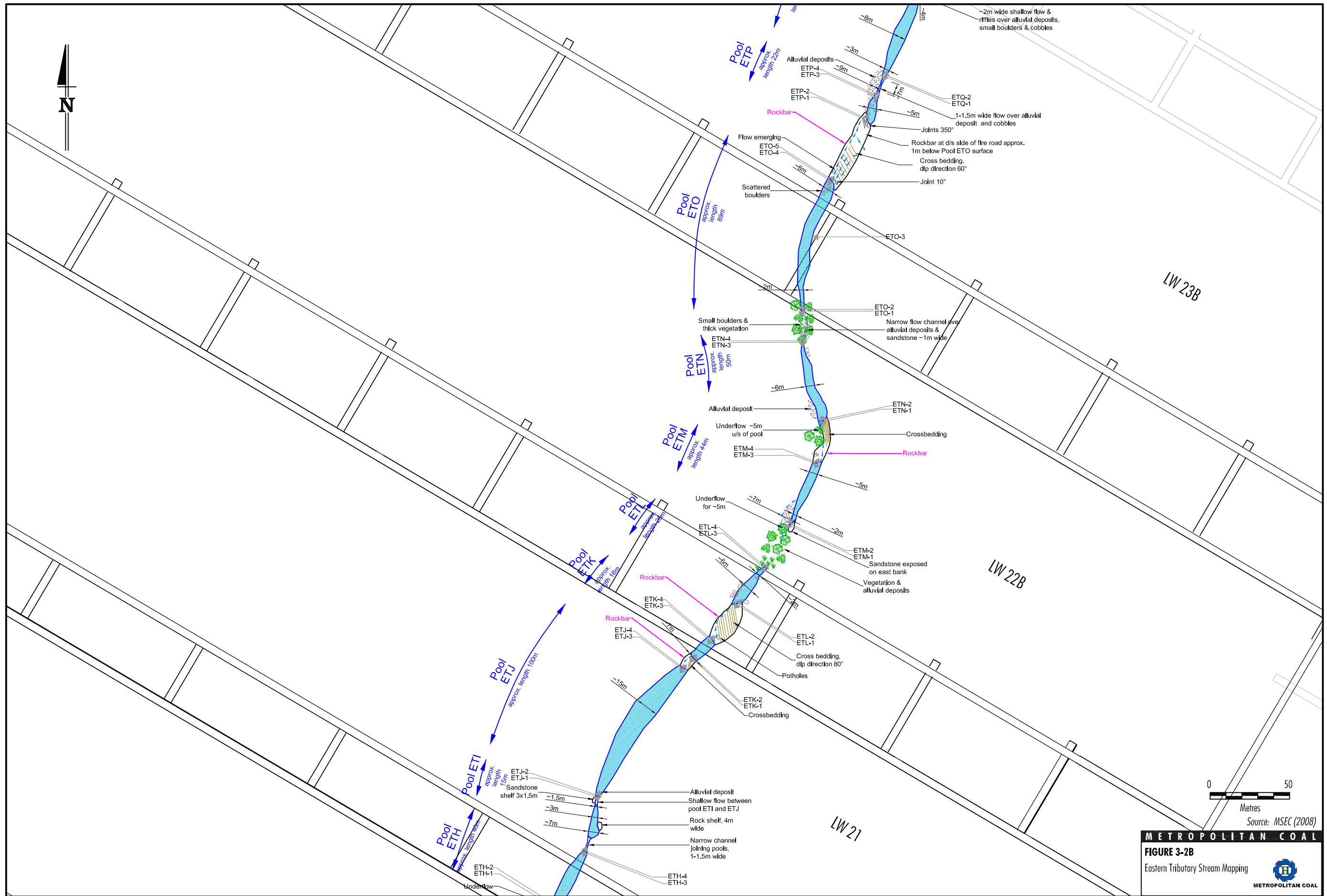
METROPOLITAN COAL
FIGURE 3-1C
Waratah Rivulet Stream Mapping

METROPOLITAN COAL



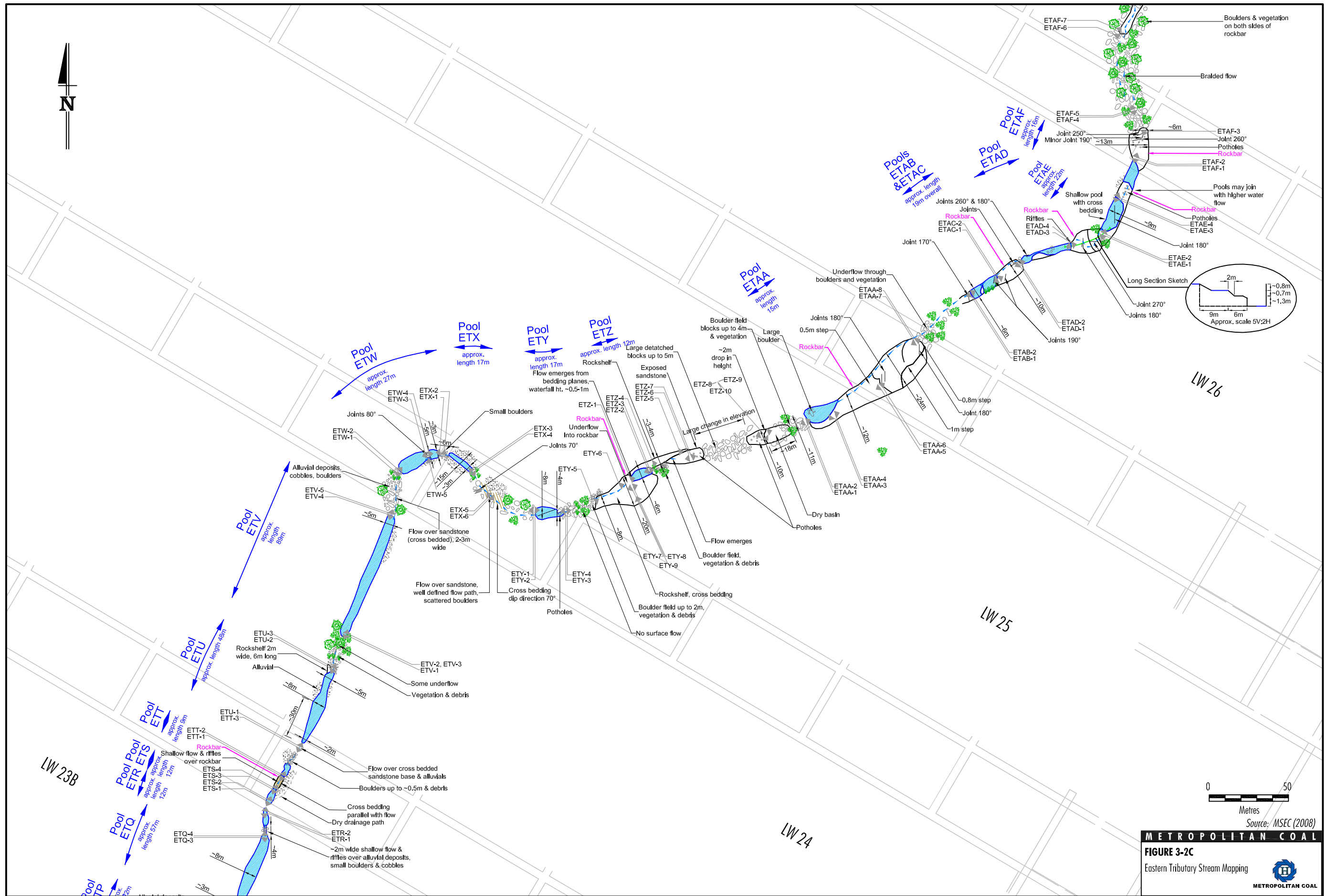


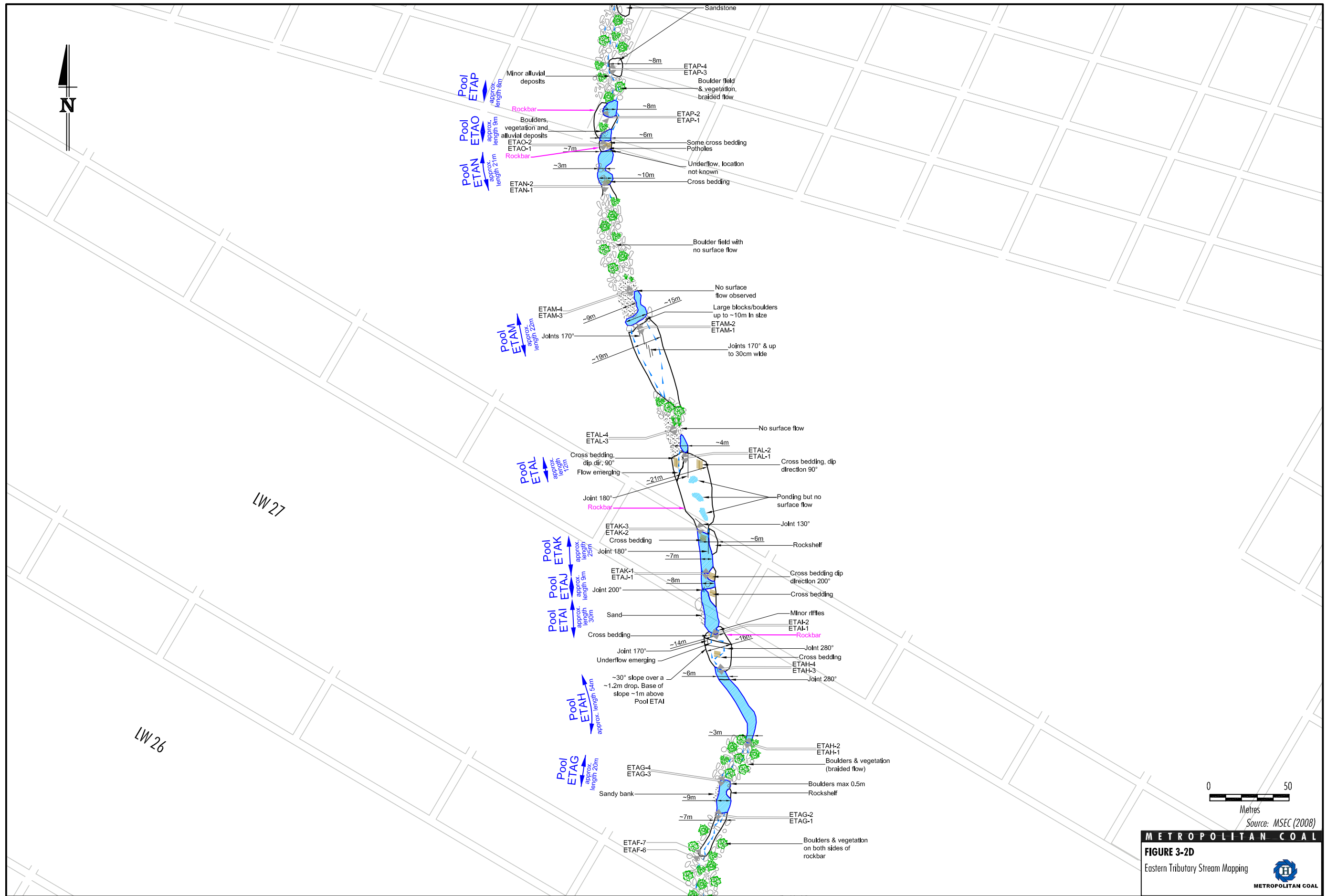
METROPOLITAN COAL
FIGURE 3-2A
 Eastern Tributary Stream Mapping
 METROPOLITAN COAL



METROPOLITAN COAL
FIGURE 3-2B
 Eastern Tributary Stream Mapping
 Source: MSEC (2008)

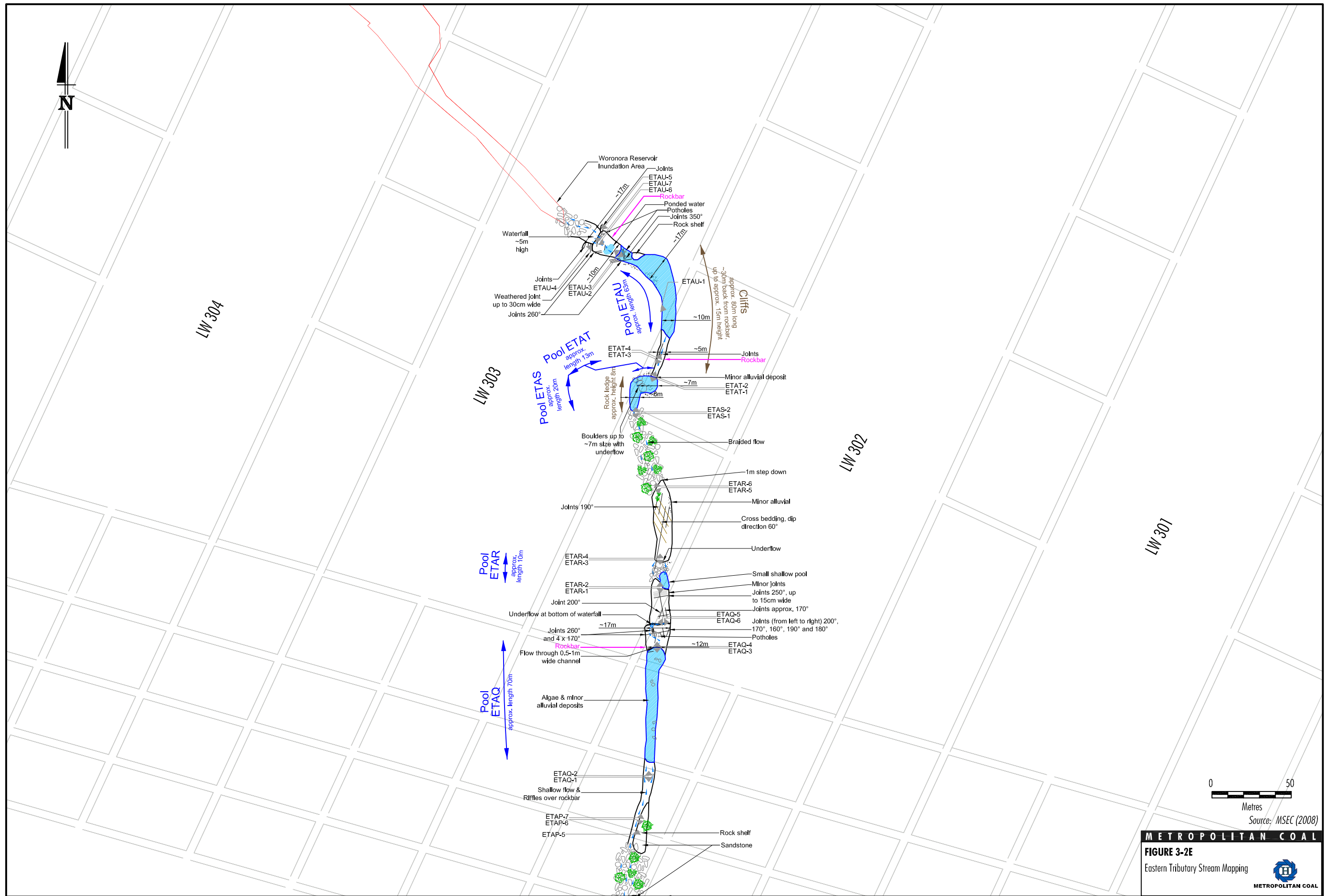
METROPOLITAN COAL





METROPOLITAN COAL
FIGURE 3-2D
 Eastern Tributary Stream Mapping
 Source: MSEC (2008)

METROPOLITAN COAL



METROPOLITAN COAL
FIGURE 3-2E
 Eastern Tributary Stream Mapping
 METROPOLITAN COAL