YANCOAL
兖煤澳大利亚有限公司

AUSTAR COAL MINE
PART OF THE YANCOAL AUSTRALIA GROUP

LWA7 to LWA10

Public Safety Management Plan

DOCUMENT CONTROL

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1 INTRODUCTION

Austar is currently developing the first longwall panels in the Stage 3 project area. The Stage 3 Mining Area comprises Longwall Panels A7 to A19 which are located in the Greta Seam of the Austar Coal Mine, varying between 450 metres and 750 metres below the surface. The Austar Mine Complex area is shown in **Figure 1**.

An Extraction Plan has been prepared in accordance with the requirements of Schedule 3, Condition 4 of Project Approval PA08_0111 to provide management strategies for secondary extraction of longwall panels LWA7 to LWA10 within the Greta Seam at Austar using LTCC technology. The area of surface impact as defined by the predicted 20mm subsidence contour from secondary extraction of LWA7 to LWA10 is referred to as the **Extraction Plan Area**. Proposed longwall mining in the Extraction Plan area is planned to take place over a four year period commencing in June 2013.

The preparation of this Public Safety Management Plan is required by PA08_0111, as a sub-plan to the Extraction Plan, and to meet the requirements of the Division of Resources and Energy's *Guideline for Subsidence Management Approvals* (December 2003).

1.1 SCOPE & OBJECTIVE

This plan applies to the land surface features and infrastructure, including public roads, within the Extraction Plan Area as shown in **Figure 2**.

The management of private property improvements, powerlines, and telecommunications infrastructure are outlined in separate Built Features Management Plans and are therefore not covered by this plan.

The objective of this Plan is to outline the management measures to minimise surface safety risks to the public during mining within the Extraction Plan Area such as:

- monitoring of areas posing safety risks;
- erection of warning signs and possible entry or use restrictions;
- backfilling of surface cracks and/or re-profiling of humps and swales on tracks and roads (in conjunction with the MSB);
- infilling of subsidence pot holes;
- securing of potentially unstable structures and rockmasses;
- identification of potential flood-related impacts that may pose a risk to public safety; and
- provision of regular updates regarding mining progress to the community where management of public safety is a significant issue.

Required actions and responsibilities are defined to ensure detection and timely remediation of any potential public safety hazards from mining induced subsidence.

2 BASELINE INFORMATION

2.1 AUSTAR HISTORICAL PUBLIC SAFETY PERFORMANCE RELATING TO SUBSIDENCE

Austar has successfully undertaken mining using the LTCC mining method for Stage 1 (LWA1 to LWA2), and Stage 2 (LWA3 to LWA5a) over the period of 2006 to 2013 (refer to **Figure 1**).

Austar's experience during that period has indicated no reactive public safety management actions have been required at any time. This is due to the high depth of covers, with minimal observed surface impact. Consequently risks to public from secondary extraction in the Extraction Plan Area are also expected to be very low. This is supported by the subsidence assessment for Stage 3 (MSEC 2011).

2.2 SURFACE FEATURES, LAND OWNERSHIP AND PUBLIC ACCESS TO LAND

Land ownership within the Stage 3 mining area is shown in **Figure 3**. Land within the Stage 3 project area is overlain by a combination of the Werakata State Conservation Area, private landholdings, and public roads. The private landholdings include residential dwellings and farm infrastructure (sheds, dams, one poultry farm).

The surface of the land within the Extraction Plan Area is generally flat to undulating with the major topological feature being a ridge line (the Brokenback Range) with steep slopes located over longwall A7 and A8 (**Figure 2)**.

Either the private landowners or the general public may therefore access all these areas. It is important to note that Austar may not undertake any works (including inspections) on land outside of Austar's ownership described in this plan without landowner permission.

Austar has a comprehensive consultation program to facilitate access for monitoring and potential remediation activities within the Stage 3 project area, and has already secured access to significant areas of land subject to this plan prior to any potential impacts from subsidence occurring. In particular, Austar has secured access to all properties that are within the 20mm subsidence affectation area caused by extraction of Longwall A7 (National Parks and Wildlife Service, Penney & Linton, and Leigh) which is planned for extraction during 2013.

Austar is significantly progressed in securing access to further private lands beyond LWA7 in order to meet Austar's obligations and commitments of PA 08_0111 in relation to subsidence management. This will significantly assist in identification of public safety issues to be managed by this plan.

3 PERFORMANCE MEASURES

The performance measures in relation to public safety will be based around reducing risk to members of the public to as low as reasonably practical. **Table 3.1** indicates the performance measures in relation to Public Safety for the Extraction Plan area.

Table 3.1 Public Safety Performance Measures

Subsidence Impact	Performance Measure
Surface Cracking	Surface cracking or deformation remediated where required in accordance with the Landscape Management Plan (LMP) to not impact on public safety
Dams	Impacts to dam walls monitored and maintained to minimise risk of failure in accordance with individual Built Features Management Plan
Public roads and tracks	Public roads and tracks remediated to not impact on public safety in conjunction with MSB
Steep slopes and unstable ground/structures	At risk areas identified and exclusions established where risk to public identified. Remedial measures implemented to remove risk (e.g. securing of rock mass, earthworks and shaping)
Flooding and access	Access from private properties established to maintain safe passage at predicted flood/storm event levels

4 PREDICTED SUBSIDENCE IMPACTS AND PUBLIC SAFETY CONSEQUENCES

4.1 POTENTIAL SAFETY RISKS

It is not expected that mining of Longwalls A7 to A10 in the Greta seam will pose a significant risk to public safety as there are no areas of shallow depth of cover (less than 80 metres). The key potential surface safety risks identified during the Longwalls A7 to A14 risk review (RA0500, Austar 2013) held on 1 February 2013 were:

- surface cracking;
- public roads;
- drainage lines;
- dam safety;
- steep slopes;
- impacts on buildings; and
- fences.

A summary of the potential surface safety risks resulting from subsidence is provided below. Further detail regarding subsidence predictions is contained in the subsidence report MSEC484 (MSEC 2011). The proposed management strategies for each of the identified surface safety risks are outlined in the relevant sections of this report.

4.2 SURFACE CRACKING

As subsidence occurs, cracks, known as rib-line fractures, can appear in the tensile strain zone. Most of the cracks will occur within a distance of approximately 50 metres of, and generally parallel to, the longwall perimeter. The incidence of cracks on the surface, due to subsidence above a longwall panel, is dependent upon the thickness and inherent plasticity of the soils that overlie the bedrock. The widths of the cracks and the frequency of occurrence of the cracks are also dependent upon the pre-existing jointing patterns in the bedrock. Noticeable cracks are less likely to occur at low levels of strain, i.e. where the strains are less than 2 mm/m, such as occurs over a longwall chain pillar.

As the depth of cover within the Extraction Plan Area is generally greater than 500 metres it is unlikely that surface cracks from systematic subsidence movements would exceed 25 mm (MSEC 2011). If a reasonable thickness of soil exists above the longwalls, it is more likely that the surface would exhibit a number of narrower cracks, rather than a single larger crack (MSEC 2011), however experience to date with the mining of Stage 2 has not revealed any observable surface cracks related to mining subsidence.

4.3 PUBLIC ROAD SAFETY RISKS

There are four regularly used public roads in the Extraction Plan area:

- Quorrobolong Road (sealed);
- Coney Creek Lane (unsealed);
- Big Hill Road (unsealed);
- Pelton Road (unsealed).

There are also several mostly unused and un-serviced tracks including No.1 Fire Trail, Bee Box Road, Kitchener Trail, Cowyard Link Road, and Red Hill Link Road. These are shown on **Figure 4**. These roads will see lower subsidence impact than Quorrobolong Road, Coney Creek Lane and Big Hill Road as they are located on the edge of the Stage 3 Extraction Plan Area. As such the management strategies applied for the major roads will also be effective for the lesser used roads.

For Quorrobolong Road and Coney Creek Lane, the predicted level of tilt is unlikely to have a significant impact on the serviceability or drainage of the road (MSEC 2011). The predicted systematic curvatures and strains are less that that experienced in Stage 2 where no surface cracking was observed.

For Big Hill Road the predicted level of tilt is unlikely to have a significant impact on the serviceability or drainage of the road (MSEC 2011). The predicted systematic curvatures and strains are less that that experienced in Stage 2 where no surface cracking was observed.

As Big Hill Road follows the ridge line along steep slopes there is the potential for increased localised tensile cracking. The road is not a regularly used access and is used mainly for fire fighting within the State Conservation Area. Any tensile cracking or compressive rippling of the unsealed road surface could be remediated by regrading and recompacting the surface using standard road maintenance techniques. With the implementation of standard road maintenance techniques, Big Hill Road can be maintained in a safe and serviceable condition during undermining (MSEC 2011).

4.4 PUBLIC SAFETY RISK FROM DRAINAGE LINES

The Stage 3 mining area is located with the Sandy Creek/Cony Creek drainage system (also known as the Quorrobolong Valley). The Extraction Plan Area for LW A7 to A10 is restricted to the undulating hill slopes of the valley, so does not extend to the Cony Creek system. Consequently, there are no Public Safety risks to landholder access or creek banks within the Extraction Plan area.

4.5 PUBLIC SAFETY RISK FROM STEEP SLOPES

A steep slope has been defined as an area of land having a gradient greater than 1 in 3 (MSEC 2011). Steep slopes are identified as areas where the existing ground slopes are considered to be marginally

stable (MSEC 2011). However the stability of natural slopes varies depending on soil or rock type and natural slopes can be stable at gradients much higher than 1 in 3 (MSEC 2007).

There are steep slopes within the A7 to A9 vicinity of the Extraction Plan area (refer to **Figure 2**) (MSEC 2011). The steep slopes are located with the Broken Back Range which crosses the area. The natural surface gradients along the range, directly above the proposed longwalls, typically vary between1 in 3 and 1 in 2 (i.e. a grade of 50 %, or an angle to the horizontal of 27), with isolated areas having natural surface gradients of up to 1 in 1.5 (i.e. a grade of 67 %, or an angle to the horizontal of 34) (MSEC 2011).

The steep slopes are more likely to be impacted by ground curvature (strains) than tilt, as the maximum predicted tilt of 5.0 mm/m represents a change in surface gradient of 0.5%, which is very small compared to the natural gradients of the steep slopes (MSEC 2011).

The maximum predicted curvature of 0.09km^{-1} is unlikely to result in any large scale downward slope movements based on Southern Coalfield experience (MESC 2011). Any surface cracking is expected to be of a minor nature, with increased potential for cracks greater than 100mm to be located in rock formations at the top of the slopes (MSEC 2011). If movement of the surface soils were to occur during mining, minor tension cracks at the top of slopes and minor compression ridges at the bottoms of slopes may form which may require remediation works (including infilling of cracks and regrading or recompacting of compression bumps).

4.6 PUBLIC SAFETY RISK FROM IMPACTS ON PRIVATE BUILT FEATURES

There are eight houses located within or immediately adjacent to the Extraction Plan Area (refer to **Figure 3** for land ownership)

- Kauter house (MSEC 2011 ID: A12a);
- Gough house (A13a);
- Watts house (A14a);
- Lennon house (A16a);
- Penney and Linton house (A31a);
- Mears and Rayner house (A34a);
- Smith house (A32a);
- Kinloch house (A44a);
- Wilson house (Lot 11 DP 1093269);

There are also building structures within the Extraction Plan Area, which includes garages, sheds and other non-residential structures. In relation to dwelling houses within the Stage 3 Mining Area, MSEC (2011) provided:

"Residents have not been exposed to immediate and sudden safety hazards as a result of impacts that occur due to mine subsidence movements in the NSW Coalfields, where the depths of cover were greater than 400 metres, such as is the case above the proposed longwalls. This includes the recent experience at Tahmoor Colliery, which has affected more than 1000 houses, and the experiences at Teralba, West Cliff and West Wallsend Collieries, which have affected around 500 houses.

Emphasis is placed on the words "immediate and sudden" as in rare cases, some structures have experienced severe impacts, but the impacts did not present an immediate risk to public safety as they developed gradually with ample time to relocate residents.

All houses within the Study Area [the Study area is the Stage 3 Mining Area] *are expected to remain safe, serviceable and repairable throughout the mining period, provided that they are in sound structural condition prior to mining."*

A Built Features Management Plan (BFMP), outlining the management of subsidence impacts and inclusion of a Structural Engineer's Inspection, will be developed for each of the above listed properties, and will be provided prior to subsidence impact to those structures. The individual BFMPs will also address public safety of the personnel at the property, and specifically will incorporate recommendations from the structural engineer inspections as they relate to public safety. Built Feature Management Plans are to be developed prior to subsidence impact to the dwellings development for private residences is provided in **Appendix B**.

4.6.1 Fences

A number of fences are located within the Extraction Plan Area, the majority of which are constructed from timber or steel posts with fencing wire or timber railings. The fences are located throughout the SMP area and are likely to be subject to the full range of subsidence movements. Wire fences are generally flexible in construction and can usually tolerate tilts of up to 10 mm/m and strains of up to 5mm/m without any significant impact (MSEC 2011).

The maximum systematic tilt within the Extraction Plan Area is 5.5 mm/m, this level of tilt should have only a minor impact on fences. Curvatures are predicted to be less than $0.09km^{-1}$ and are unlikely to significantly impact on the fences (MSEC 2011). Monitoring of fences will need to occur to ensure wire tensions remain suitable for stock control and thus minimise any risk to public safety. This monitoring will be undertaken as part of the individual BFMPs.

5 MANAGEMENT CONTROLS AND MONITORING PLAN

The predicted subsidence levels from mining are expected to pose minimal risk to public safety. The management of public safety will largely be controlled by programmed and targeted inspections in accordance with the Subsidence Monitoring Program (**SM Program**), in addition to reviewing predicted subsidence against actual subsidence from installed subsidence monitoring lines.

The management controls and monitoring required for each potential surface safety risk are listed in **Table 5.1** below. All inspections outlined in **Table 5.1** will be documented and photos taken where appropriate. In addition to the controls outlined in **Table 5.1**, subsidence monitoring lines will be established in accordance with the SM Program.

At the completion of mining in a longwall panel, a full surface inspection will be conducted.

Actual subsidence impacts and consequences will be assessed against predictions. If there is found to be a significant difference between predicted and actual subsidence consequences which are material to public safety risks, this plan will be reviewed and the required changes to management measures implemented. Circumstances which may be material to public safety risk include if subsidence cracking to land is occurs repeatedly at greater levels than predicted, if actual subsidence impacts to roads require repeated remediation, if repeated steep slope stability issues are identified, or built features are repeatedly impacted at greater than predictions in the subsidence assessment, or similar).

Table 5.1 Public Safety Performance Measures

Surface Safety Risk	Action/Response	Person Responsible
Surface Cracking	Regular inspections of the zone defined as being 500 metres behind and 100 metres in front of the current face position will include inspection of surface cracking (refer to Subsidence Monitoring Program).	Technical Services Manager or delegate
	Undertake surface remediation works as required in accordance with Land Management Plan. Any remediation works required will be determined in consultation with the relevant stakeholders. Possible remediation techniques for soil cracking may involve infilling, local re-grading or re-compacting.	Environment and Community Manager or delegate
Public Roads and tracks	Regular inspections of roads within the zone defined as being 500 metres behind and 100 metres in front of the current face position (refer to Subsidence Monitoring Program).	Technical Services Manager or delegate
	Signs will be erected on roads at the extent of the 20mm subsidence contour requesting caution and indicating that users are entering a subsidence affected area.	Environment and Community Manager or delegate

Surface Safety Risk	Action/Response	Person Responsible
	Remediation works (if required) will be determined in consultation between the Roads Authority (Cessnock City Council, DPI-Crown Land, or the NPWS) and the MSB. Refer to relevant Built Features Management Plan.	Environment and Community Manager or delegate; Roads Authority (Cessnock City Council Representative, DPI-Crown Land Representative or NPWS Representative); MSB Representative
Drainage Lines	Extraction Plan Area does not extend to Creeks. Undertake visual monitoring of general landform and drainage lines as a part of the Subsidence Monitoring Program.	Mine Surveyor or delegate
Natural Vegetation	Monitoring of natural vegetation will be undertaken in accordance with the *Biodiversity Management Plan* and general vegetation comments will be made as part of the Subsidence Monitoring Program.	Environment & Community Manager or delegate
	Identified unstable trees may need removal in accordance with BMP requirements.	Environment & Community Manager or delegate
Steep Slopes	Regular inspections of the steep slopes within the zone defined as being 500 metres behind and 100 metres in front of the current face position will include inspection of surface cracking and compression ridges on steep slopes (refer to Subsidence Monitoring Program).	Technical Services Manager or delegate
	Undertake surface remediation works as required in accordance with LMP. Any remediation works required will be determined in consultation with the landholder (private or NPWS). Possible remediation techniques for soil cracking and compression ridges may involve infilling, local regrading or recompacting and securing unstable structures.	Environment & Community Manager or delegate
Built Features	Buildings and associated non-residential infrastructure (including fences) will be managed in accordance with the relevant Built Features Management Plans, including Structural Engineer inspections of dwellings. Refer to Appendix B for timing of Built Features Management Plans, and the safety actions arising from those plans.	Environment & Community Manager or delegate Infrastructure owner MSB

5.1 NOTIFICATIONS

In accordance with the requirements of the SMP guidelines, a number of stakeholder agencies and organisations will be notified of the date of commencement of extraction and the expected duration of the subsidence resulting from mining of Longwalls A7 to A10.

The stakeholders to be notified include the Department of Planning and Infrastructure (DP&I), Division of Resources and Energy (DRE), NSW Office of Water (NOW), Office of Environment & Heritage (OEH), National Parks and Wildlife Service (NPWS), Department of Primary Industries-Catchment & Lands (DPI-CL), Cessnock City Council and the Mine Subsidence Board (MSB).

Landholders within the Extraction Plan Area and the Austar Community Consultative Committee will also be informed about current and future mining activities and issues relating to public safety. The notification will include subsidence and inspection results, any public safety issues identified (and proposed remediation works) and mining progression. The frequency of reporting will be in accordance with the Extraction Plan requirements.

5.2 REMEDIATION MEASURES

5.2.1 Public Safety Issues Requiring Immediate Remediation

If any public safety issue is identified during SM Program inspections that requires immediate remedial works to ensure public safety, the person that identified the issue shall:

- immediately notify the Stakeholder (or responsible person) of the issue (Stakeholder list contained in **Appendix A,** Landowners Shown in **Figure 3**);
- take actions to remediate the issue (if possible);
- erect 'NO ACCESS' tape and warning signs (e.g. traffic control signs, traffic controllers as appropriate) if remediation is not possible;
- notify the Environment & Community Manager (ECM) to coordinate actions; and
- Technical Services Manager (TSM) to notify the DRE District Inspector of Coal Mines and DRE Principal Subsidence Engineer of the identified public safety issue.

5.2.2 Other Public Safety Issues

If any public safety issues are identified during inspections that are not able to be remedied immediately or other public safety issues are identified during assessment of monitoring or inspection results, the person who identifies the potential issue shall:

- notify the Environment & Community Manager (ECM);
- erect 'NO ACCESS' tape and warning signs (e.g. traffic control signs, traffic controllers as appropriate) if remediation is not possible;
- ECM to notify the landholder or infrastructure owner of the potential issue (Stakeholder list contained in **Appendix A**);
- Technical Services Manager (TSM) to notify the DRE District Inspector of Coal Mines and DRE Principal Subsidence Engineer of the identified public safety issue;
- ECM arrange for remediation works in accordance with the LMP or BFMP in consultation with the landholder (and MSB if required).

Any remediation works in the State Conservation Area will require approval from the NPWS prior to the commencement of works.

5.3 ADAPTIVE MANAGEMENT

It is unlikely based on the subsidence predictions and previous mining impact observed in the Stage 1 and Stage 2 mining area that any form of remediation or adaptive strategy will be required. If however continued impact outside that expected occurs due to mining subsidence, Austar is committed to reviewing options with landholders, the MSB and service/infrastructure providers to put measures in place to prevent on-going reoccurrence.

5.4 CONTINGENCY PLANS

Where any unexpected and uncontrolled public safety risk presents itself, Austar will provide on-going resources to prevent access to the affected area until such time a remediation plan can be enacted. If this prevents members of the public access to their residence Austar will assist in making alternative arrangements including temporary accommodation.

6 RESPONSIBILITIES

Table 6 outlines the roles and responsibilities of Austar personnel to ensure the efficient implementation of this Public Safety Management Plan.

Role	Responsibilities
Environment and Community Manager	Owner of the Public Safety Management Plan
	Ensure all notifications required under Section 5.1 are carried out
	Liaise with officers of MSB public utility providers, government departments, landholders, remediation consultants and contractors as required
	Ensure that this Plan is reviewed at the end of each longwall, or if any changes to the mine plan occur, levels of subsidence are greater than predicted, or an incident occurs.
	Incorporate recommendations from BFMP as they relate to public safety at the dwellings and structures into this Public Safety Management Plan.
Technical Services Manager	Promptly notify the District Inspector of Coal Mines and Principal Subsidence Engineer of any identified public safety issue.
	Inform the Mine Manager of public safety issues that the DRE should be notified of.
	Ensure that the requisite personnel and equipment are provided to enable the SM Program to be implemented effectively.
	Review and assess subsidence monitoring results and inspection checklists.
	Ensure that persons conducting the inspection are appropriately trained, understand their obligations and the specific requirements of this plan and the SM Program.
Mine Surveyor (or delegate)	Ensure that subsidence inspections are undertaken in accordance with the SM Program schedule.
	Promptly notify the Technical Services Manager and Environment and Community Manager of any identified public safety issue.
	Take actions to remediate any public safety issue identified during inspections (if possible).
	Where actions are beyond their capabilities immediately attempt to notify the landowner.

7 TRAINING

All personnel who conduct SM Program inspections will be trained in the requirements of this Public Safety Management Plan. Training will be conducted on the identification of the various subsidence impacts and the associated public safety risks.

8 REPORTING

The results of inspections will be documented with the SM Program. The effectiveness of the Longwalls A7 to A10 Public Safety Management Plan in managing public safety risks will be reported where relevant in the Extraction Plan Stakeholder Reporting process and the Annual Review / Annual Environmental Management Report.

9 REVIEW

This plan is to be reviewed after the completion of each longwall. The plan will also be reviewed as a result of an incident, if subsidence levels are significantly higher than predicted, or if any changes to the mine plan occur.

10 REFERENCES

MSEC (2011), *Stage 3 – Longwalls A7 to A19 Subsidence Predictions and Impact Assessments for Natural Features and Surface Infrastructure in Support of a Modification to the Development Consent, Mine Subsidence Engineering Consultants*, Report No. MSEC484, May 2011

MSEC (2007). *The Prediction of Subsidence Parameters and the Assessment of Mine Subsidence Impacts on Natural Features and Surface Infrastructure resulting from the Extraction of Proposed Austar Longwalls A3 to A5 in Support of a SMP Application.* Report Number MSEC275, Revision C.

Figures

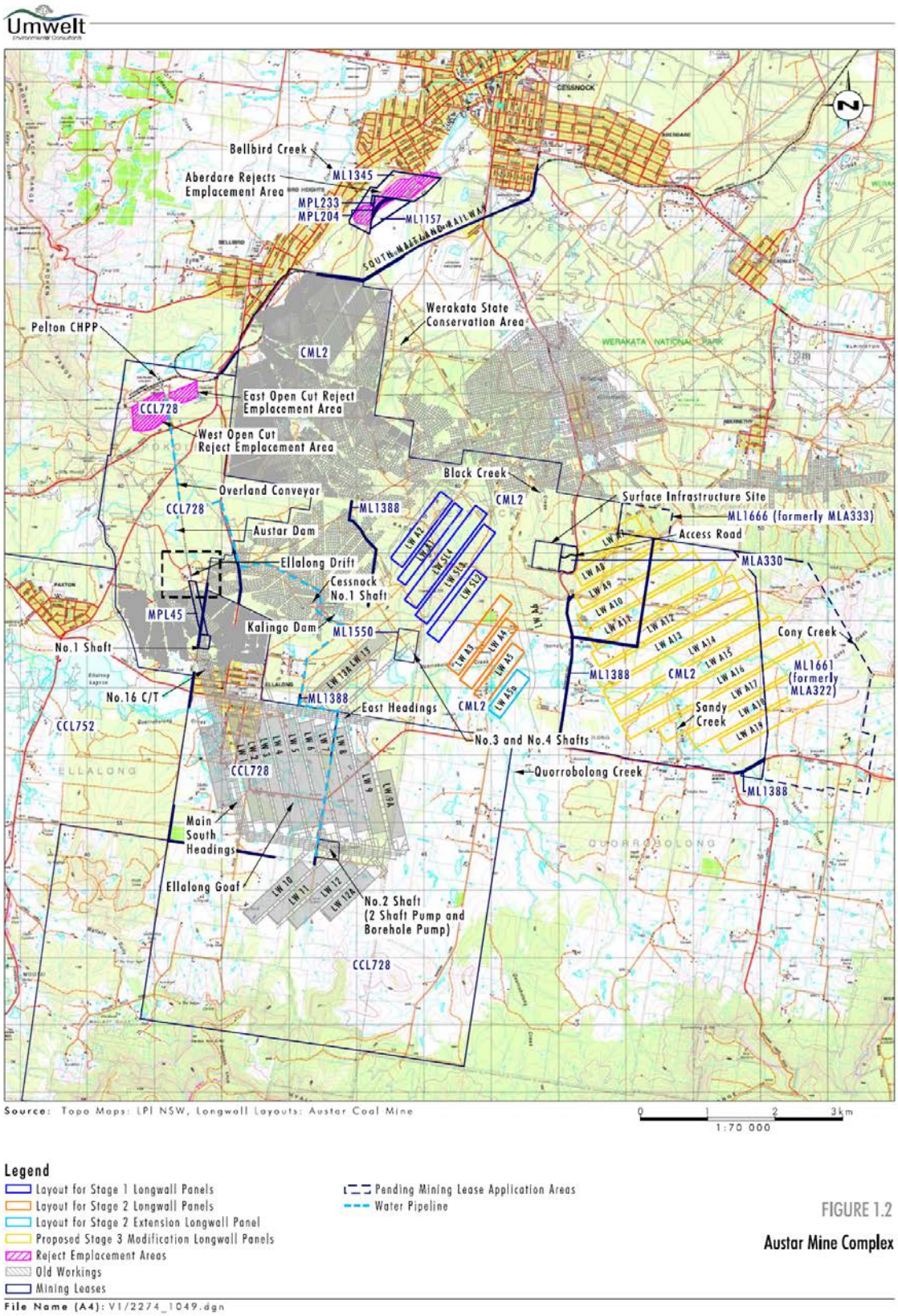

Figure 1 Austar Mine Complex

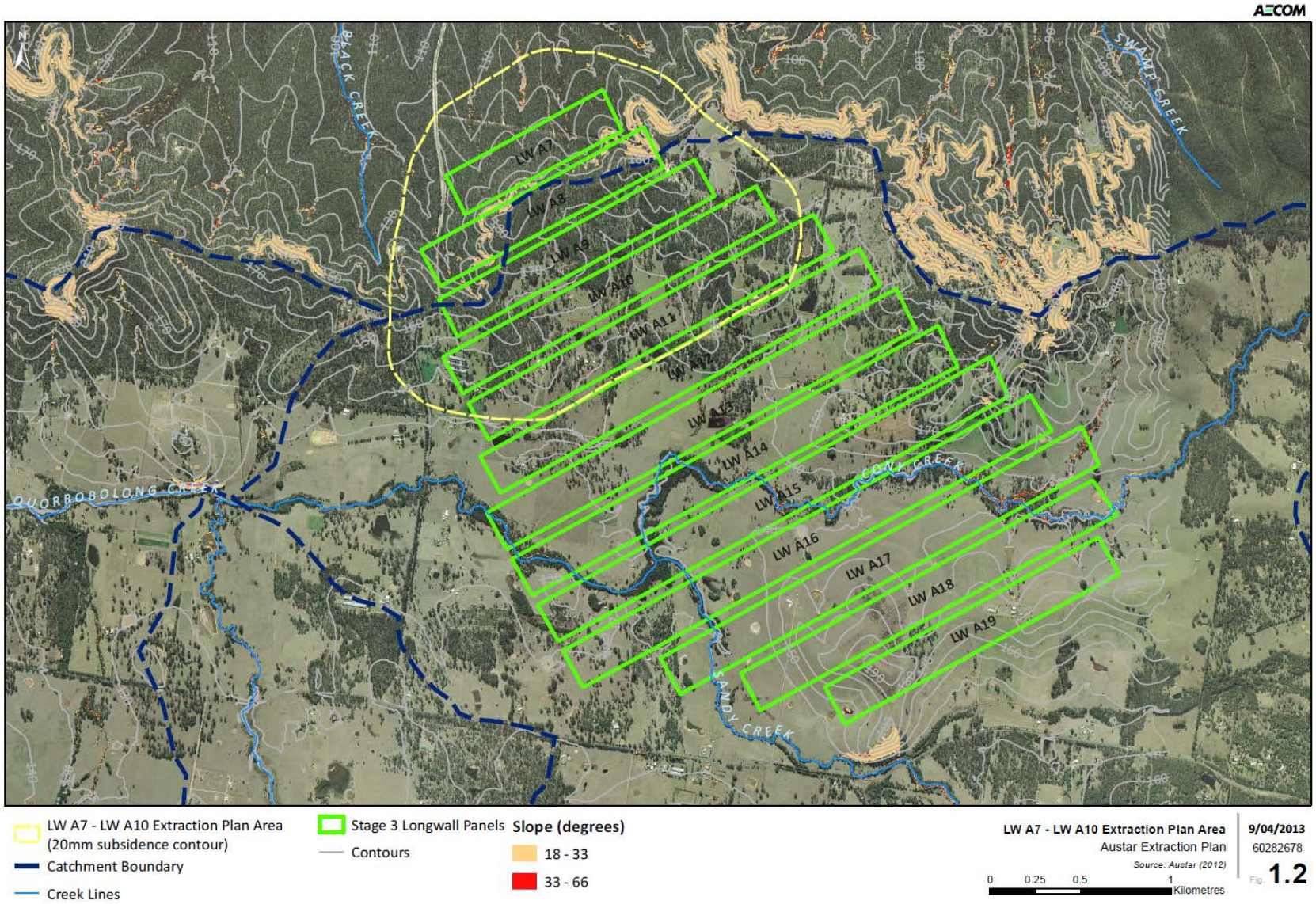

Figure 2 Extraction Plan Area

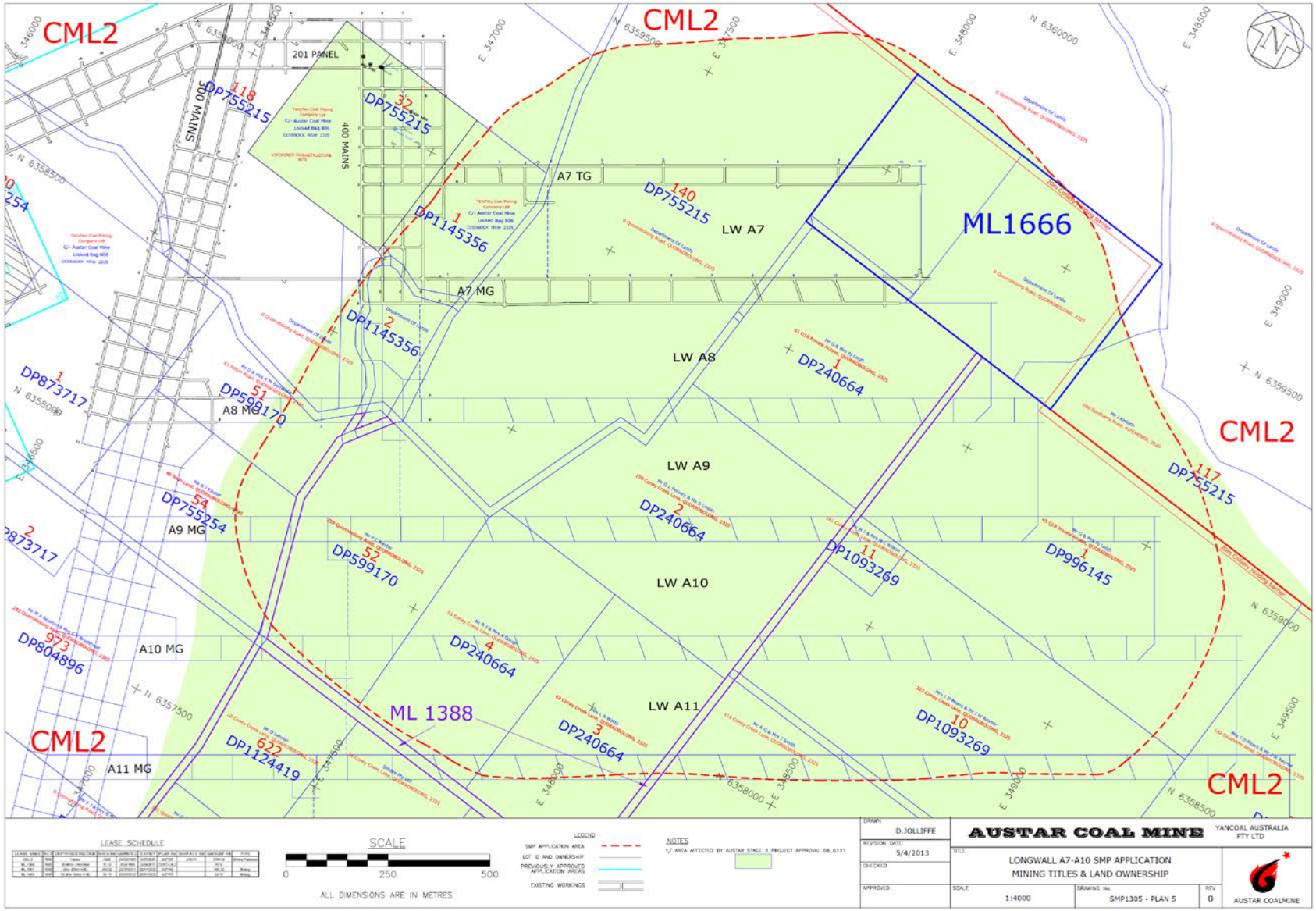

Figure 3 Land Ownership

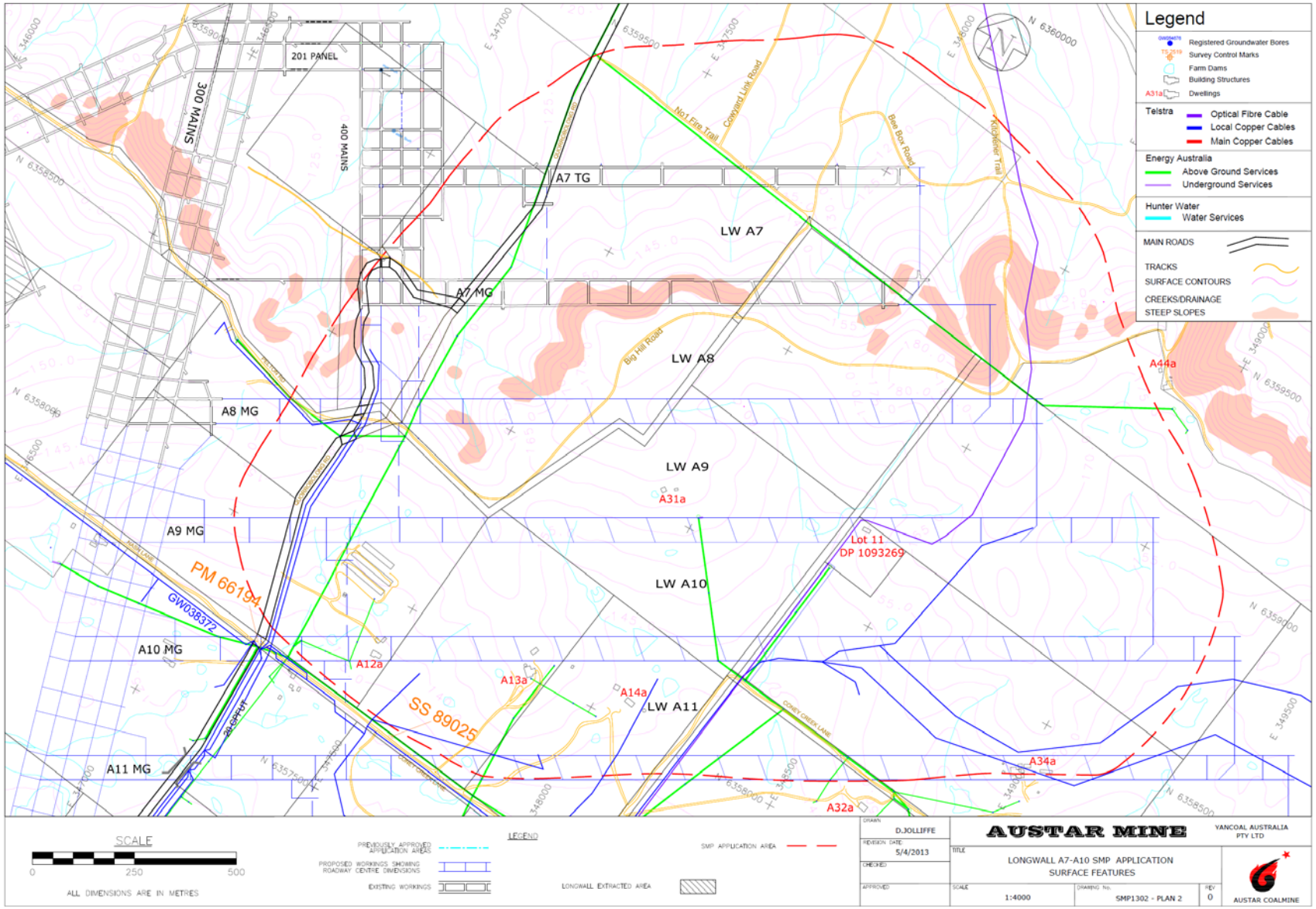

Figure 4 – Surface Features

Appendices

Appendix A

Stakeholder Contact Details

Austar Coal Mine LWA7 to LWA10 Extraction Plan Stakeholder List

Position	Name	Phone
AUSTAR		
Austar General Manager	David McLean	4993 7356
Austar Mine Manager	Kelvin Schiefelbein	4993 7303
Austar Technical Services Manager	Adrian Moodie	4993 7293
Austar Environment and Community Manager	Gary Mulhearn	4993 7334
Austar Mine Surveyor	Daryl Jolliffe	4993 7206
Austar After Hours	Control Room	4993 7220
GOVERNMENT		
DRE Mine Safety – Coal Inspectors	Maitland Office	4931 6666
DRE – Principal Subsidence Engineer	Maitland Office	4931 6666
MSB District Manager	Richard Pickles	6572 4344
Cessnock City Council After Hours Contact Number (Emergency)	-	4940 7816
Cessnock City Council Operations – Works Delivery Manager	Geoff Bent	4993 4284
Cessnock City Council Strategic Asset Planning Manager	Phil Miles	4993-4251
DPI-Crown Land	Melanie Osborne	4937 9332
NPWS Werakata SCA Ranger	Brooke Jackson	4946 4106
Ausgrid – Manager of Customer Supply, Planning and Reliability, Lower Hunter	Pat Boyle	4910 1701
Telstra – Senior Technical Specialist	Mark Schneider	8851 2297
Land and Property Information - Senior Surveyor, Hunter Survey Infrastructure & Geodesy,	Peter O'Kane	4925 9984
LANDHOLDERS	Refer to Austar internal contact register	

Appendix B

Timing for BFMP Development and Actions for Public Safety Management

Asset	Description	Ownership	Specific Management Plan	Timing for preparation of BFMP	Safety Actions
Public Roads	Quorrobolong Road (sealed)	Cessnock City Council	BFMP – Council including Traffic Management Plan (to be developed)	Prior to extraction of LWA7 reaching maingate cut-through No. 5.	Erect subsidence warning signage and contact details
	Coney Creek Lane (unsealed)	Cessnock City Council	BFMP – Council including Traffic Management Plan (to be developed)	Prior to extraction of LWA10	Erect subsidence warning signage and contact details
	Crown Roads Pelton Road (unsealed) Big Hill Road	DPI-Catchment and Lands	See BFMP - NPWS	Tracks in this area managed by NPWS. Refer to BFMP – NPWS.	Erect subsidence warning signage and contact details
	NPWS unsealed tracks and fire trails Big Hill Road No. 1 Fire Trail Bee Box Road Kitchener Fire Trail	NPWS	BFMP - NPWS	Prior to extraction of LWA7	Erect subsidence warning signage and contact details
Electricity Transmission Lines	33kV Feeder 11 kV Transmission Line Local Distribution lines	Ausgrid	BFMP – Ausgrid	Prior to extraction of LWA7	Ausgrid to fit rollers and temporarily remove conductor tie wires to higher risk locations prior to Extraction of LWA8.
Private properties with dwelling in EP Area	Features may include: House Water tanks Poultry sheds Rural sheds Dams Private access roads Fences	P. Kauter (MSEC Property ID: A12a); R & A Gough (A13a); L Watts (A14a); G Penney & S Linton (A31a); J Mears and J Rayner (A34a); J Kinloch (A44a); AG & J Smith (A32a) M Wilson (Lot11 DP1093269)	Individual landholder specific BFMPs	Prior to extraction of LWA9 Prior to extraction of LWA9 Prior to extraction of LWA9 Prior to extraction of LWA8 Prior to extraction of LWA8 Prior to extraction of LWA9 Prior to extraction of LWA10 Prior to extraction of LWA9	Notification of commencement of mining and regular updates. Seek landholder agreements to formalise access for public safety issues. Incorporate recommendations from BFMP as they relate to public safety at the dwellings and structures into this Public Safety Management Plan.

Asset	Description	Ownership	Specific Management Plan	Timing for preparation of BFMP	Safety Actions
Private properties without dwelling in EP Area	Features may include: Rural sheds Water tanks Dams Private access roads Fences	B.J Kauter G & A Leigh K Serradilla	Individual landholder specific BFMPs	Prior to extraction of LWA9 Prior to extraction of LWA7 Prior to extraction of LWA9	Notification of commencement of mining and regular updates. Seek landholder agreements to formalise access for public safety issues. Incorporate recommendations from BFMP as they relate to public safety at the dwellings and structures into this Public Safety Management Plan.
Austar Coal Mine SIS infrastructure and access road.	Access road	Austar Coal Mine	Public Safety Management Plan	NA – Austar owned	Public Safety Management Plan