



Longwalls B1 to B3

Built Features Management Plan

May 2016



DOCUMENT CONTROL

DOCUMENT DETAILS	Title	LWB1-B3 Built Features Management Plan		
	Reference	Austar LW B1-B3 BFMP		
	Document Status	Final		
APPROVAL DATE	Revision	Revision Details	Prepared	Approved
9/5/2016	0	Original document	D Lee G Mulhearn	G Mulhearn

TABLE OF CONTENTS
Page

1 INTRODUCTION	1
1.1 SCOPE & OBJECTIVE	1
2 PERFORMANCE OBJECTIVES	3
3 BUILT FEATURES MANAGEMENT.....	4
3.1 LAND OWNERSHIP	4
3.2 IDENTIFICATION OF BUILT FEATURES AND MANAGEMENT	4
3.2.1 INDIVIDUAL BUILT FEATURES MANAGEMENT PLANS	4
3.2.2 MANAGEMENT OF PUBLIC SAFETY RELATING TO BUILT FEATURES	4
4 DEVELOPMENT OF BFMP	7
4.1 AGENCY CONSULTATION	7
4.2 PROPERTY OWNER CONSULTATION	7
4.3 INFRASTRUCTURE OWNER CONSULTATION	8
5 SUBSIDENCE MONITORING AND MANAGEMENT	9
6 PLAN IMPLEMENTATION	11
6.1 REPORTING FRAMEWORK	11
6.1.1 Annual Review / Annual Environmental Management Report (AEMR)	11
6.1.2 Regular Stakeholder Reporting.....	11
6.2 REVIEW OF THE BFMP.....	11
6.3 EXTRACTION PLAN ROLES AND ACCOUNTABILITIES.....	12
7 REFERENCES.....	14

TABLE OF FIGURES/PLANS

Figure 1: Austar Coal Mine Complex
Figure 2: Extraction Plan Area
Figure 3: Land Ownership
Figure 4: Surface Features

APPENDICES

Appendix A Stakeholder Contact Details

1 INTRODUCTION

Austar Coal Mine Pty Ltd (Austar), a subsidiary of Yancoal Australia Limited (Yancoal), owns Austar Coal Mine, an underground coal mine located approximately 10 kilometres south of Cessnock in the Lower Hunter Valley in NSW. The mine is an aggregate of the former Ellalong, Pelton, Cessnock No.1 and Bellbird South Collieries and is located in the South Maitland Coalfields. These operations, including coal extraction, handling, processing and transport, collectively form the Austar Mining Complex.

A modification to the Bellbird South development consent (DA29/95 MOD6) was approved under delegated authority of the Minister for Planning on 29 January 2016. The modification extends the Bellbird South consent area and permits the transfer of coal from three conventional longwall panels (Longwalls B1 to B3) within the Ellalong Colliery and Bellbird South Colliery areas to existing infrastructure for processing and transport of coal. The modification also extends the development consent expiry for five years to allow the longwall panels to be extracted.

During 2016, Austar gained further information on the location and nature of geological structures in the area of Longwall B2 and Longwall B3. This resulted in a necessary refinement of the mine plan to shorten those panels at the commencing and finishing ends in response to those structures. Austar was approved by the nominee for the Secretary of the Department of Planning and Environment on 29 April 2016 to shorten Longwall B2 and Longwall B3, and the extent of those shortened panels has been used in all diagrams and subsidence predictions in the preparation of this Extraction Plan.

The location of Austar's mining areas, and previous mining is shown with the Austar Mine Complex in **Figure 1**.

1.1 SCOPE & OBJECTIVE

The objective of this Built Features Management Plan (BFMP) is to identify the framework for management of subsidence induced impacts on built features from secondary extraction of longwall panels LWB1 to LWB3 within the Greta Seam at Austar using conventional longwall mining techniques (the **Extraction Plan Area** see **Figure 2**).

The objective of the Built Features Management Plan will be achieved by:

- Identifying the built features within the Extraction Plan Area and their owner;
- Identifying the predicted subsidence impacts and/or consequences for the Built Features within the Extraction Plan Area in general terms (specific information for each built feature to be included in individual Built Feature Management Plans);
- Identifying the management activities (including consultation, monitoring, and remediation method) prepared to address the predicted subsidence impacts for Built Features; and
- Identifying the review and reporting activities to allow for assessment of the performance of Built Features management measures by Austar, and identification of areas where either

continual improvement may be achieved, or management of unpredicted subsidence impacts can be managed.

The BFMP has been prepared to address conditions of DA 29/95 (MOD 6), and structured in general accordance with draft *Guidelines for the Preparation of Extraction Plans* provided to Austar Coal by the Department of Planning and Environment in 2016. The BFMP is a component plan to the overall Extraction Plan for LWB1 to LWB3.

The document will focus on the predicted consequences of subsidence, and how these consequences may be managed. Impact assessment information will largely not be presented, though is available within the relevant Subsidence Assessment reports prepared by MSEC for the Longwalls B1 to B3 (MSEC833).

2 PERFORMANCE OBJECTIVES

Performance objectives in relation to subsidence impacts in the LWB1-LWB3 Extraction Plan Area from DA29/95 are presented in **Table 2.1**.

Table 2.1 Performance Objectives from DA29/95

Domain	Rehabilitation Objective
Built features	Repair/restore/replace to pre-mining condition or better, unless a claim under the <i>Mine Subsidence Compensation Act 1961</i> is made for the repairs, restoration or replacement.
Subsidence Impact Assessment Criteria	<p>If the subsidence generated by the development results in damage to any residence on privately-owned land that in the opinion of the MSB exceeds safe, serviceable and repairable criteria, the Applicant shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 3 to 5 of Schedule 4.</p> <p>However, the Applicant does not have to act on any such request if:</p> <ul style="list-style-type: none"> (a) the Applicant has a current written negotiated agreement with the landowner in regard to the management of subsidence-related impacts, and a copy of this agreement has been forwarded to the Department by the Applicant; or (b) the landowner has agreed to the MSB purchasing the land under the Mine Subsidence Compensation Act 1961.

3 BUILT FEATURES MANAGEMENT

3.1 LAND OWNERSHIP

The Extraction Plan Area extends underneath Cessnock City Council roads as well as private rural residential land holdings, privately owned access tracks and Crown land. Land ownership is shown in **Figure 3**.

3.2 IDENTIFICATION OF BUILT FEATURES AND MANAGEMENT

Built features within the Extraction Plan Area and the relevant owners are presented in **Table 3.1** and are shown on **Figure 4**. The proposed manner of specific management for each built feature is also provided. Stakeholder contact details are provided in **Appendix A**.

3.2.1 INDIVIDUAL BUILT FEATURES MANAGEMENT PLANS

As described in **Table 3.1**, Austar proposes to manage individual owners of built features using an owner specific BFMP. The individual BFMPs will be developed progressively during extraction within the Extraction Plan Area in consultation with the relevant built features owner prior to subsidence effects occurring on the particular Built Feature and will be submitted to the Secretary of DPE. **Table 3.1** also provides the proposed timing for development of the individual BFMPs in relation to longwall extraction.

3.2.2 MANAGEMENT OF PUBLIC SAFETY RELATING TO BUILT FEATURES

Public safety matters relating to Built Features will be identified in individual Built Features Management Plans. Any specific public safety management controls recommended during the development of individual Built Features Management Plans (including from structural engineer inspections) shall be incorporated into the Extraction Plan – Public Safety Management Plan LWB1 to LWB3.

Table 3.1 Built Features Associated within the Extraction Plan Area and Timing for Preparation of Individual BFMPs

Asset	Description	Ownership & Folio Identifier (MSEC dwelling reference)	Specific Management Plan	Timing for Preparation of BFMP
Public Roads	Sandy Creek Road (sealed)	Cessnock City Council	Public Safety Management Plan BFMP – Cessnock Council	Prior to LWB2 impacting
	Barraba Lane (unsealed)	Cessnock City Council	Public Safety Management Plan BFMP – Cessnock Council	Prior to LWB1 impacting
Electricity Transmission Lines	11 kV Transmission Line Local Distribution lines	Ausgrid	BFMP – Ausgrid	Prior to LWB2 impacting
Telecommunications infrastructure	Local Copper Cables	Telstra	BFMP – Telstra	Prior to LWB2 impacting
Properties with dwelling in EP Area	Features may include: House Water tanks Poultry sheds Rural sheds Dams Private access roads Fences	Smith – 12/1075943 (B04h03) Sternbeck – 18/779060 (B03h01) Duckworth – 2/819222 (A06a) Duckworth – 201/1136015 (A02c) Duffy – 10/1075943 (B04h01) Weston – 214/1044421 (B12h01) Ball & Moore – 213/1044421 (B11h01) McMahon – 211/1044421 (B09h01) Cowley – 212/1044421 (B10h01)	Individual landholder specific BFMPs	Prior to LWB2 impacting Prior to LWB2 impacting Prior to LWB2 impacting Prior to LWB2 impacting Prior to LWB1 impacting Prior to LWB1 impacting Prior to LWB1 impacting Prior to LWB1 impacting
Properties without dwelling in EP Area	Features may include: Rural sheds Water tanks Dams Groundwater bores Private access roads Fences	Thompson – 1/726039 Thompson – 1292/1113215 Thompson – 1291/1113215 Morphett – 100/255530 Morphett – 13/866231 Crown Lands – 249/755225 Duckworth – 31/849031 Broadfoot – 10/708972 Smith – 114/1013882 Smith – 1/986143	Individual landholder specific BFMPs	Prior to LWB2 impacting Prior to LWB2 impacting Prior to LWB2 impacting Prior to LWB2 impacting Prior to LWB2 impacting Prior to LWB3 impacting Prior to LWB3 impacting Prior to LWB1 impacting Prior to LWB1 impacting Prior to LWB1 impacting

Asset	Description	Ownership & Folio Identifier (MSEC dwelling reference)	Specific Management Plan	Timing for Preparation of BFMP
		Wright – 11/1075943 Jones – 215/1044421 Forbes – A/161957		Prior to LWB1 impacting Prior to LWB1 impacting Prior to LWB1 impacting
Survey Marks	Survey marks: PM 82899 SS 42796	NSW Land and Property Information	BFMP – Survey Control Marks	Prior to LWB2 impacting

4 DEVELOPMENT OF BFMP

4.1 AGENCY CONSULTATION

This BFMP forms part of Austar's Extraction Plan. The following agencies of relevance to this plan are involved in assessing the Extraction Plan and key component sub-plans of relevance to Built Features:

- Department of Industry, Division of Resources and Energy; and
- Department of Planning and Environment.

Additionally, Austar has consulted with Mine Subsidence Board (MSB) personnel in relation to the role of the MSB in relation to subsidence impact management to Built Features, and the likely timing of mining beneath those built features. These discussions have been used to frame the management plan and individual infrastructure owner BFMPs.

4.2 PROPERTY OWNER CONSULTATION

The Bellbird South LWB1-B3 modification was approved in January 2016. Leading up to the approval, Austar consulted with landholders within the LWB1-B3 area via mail, meetings, and through the Austar Community Consultative Committee in relation to predicted impacts and proposed mitigation strategies that are being now formalised in the Extraction Plan and sub-plans.

Within the Extraction Plan Area, Austar has reached agreement with five of the private landholders in relation to allow Austar to access the land to undertake environmental monitoring. Austar will continue to consult with all landholders regarding pre subsidence impacts inspections of Built Features proposed under this BFMP (including inspections by a structural engineer for building structures, where access is granted), to assist with any claim made under the *Mine Subsidence Compensation Act 1961* (if these are required).

On 22 March 2016, all landholders were provided with an update on the approval of the Bellbird South LWB1-B3 modification and the preparation of an Extraction Plan, which will include a Built Features Management Plan. On 15 April 2016, the Department of Primary Industries – Lands were also advised of the Extraction Plan preparation.

Landholders within the Extraction Plan area will be provided with regular updates on mining progress and subsidence and other environmental monitoring results.

4.3 INFRASTRUCTURE OWNER CONSULTATION

Austar is in consultation with infrastructure owners to develop individual Built Features Management Plans to manage potential subsidence effects. Owners include:

- Public Roads (Cessnock City Council);
- Telstra; and
- Ausgrid.

Telstra (Mr Mark Schneider) were contacted in late 2015 in relation to management of Telstra's assets to potential subsidence impacts. Telstra have directed Austar to their representative in relation to potential subsidence management (Mr Colin Dove). Austar will engage Mr Dove to prepare a BFMP- Telstra to manage potential impacts on serviceability to Telstra's communications infrastructure. This plan will be completed prior to subsidence impacts occurring. Telstra has been provided with an update on the Extraction Plan and BFMP process on 15 April 2016.

A BFMP – Ausgrid will be prepared in consultation with Ausgrid's Manager of Customer Supply and Planning and Reliability, Lower Hunter, Mr Patrick Boyle to assist the management of serviceability of Ausgrid's assets during subsidence. This plan will be completed prior to subsidence impacts occurring. Ausgrid has been provided with an update on the Extraction Plan and BFMP process on 15 April 2016.

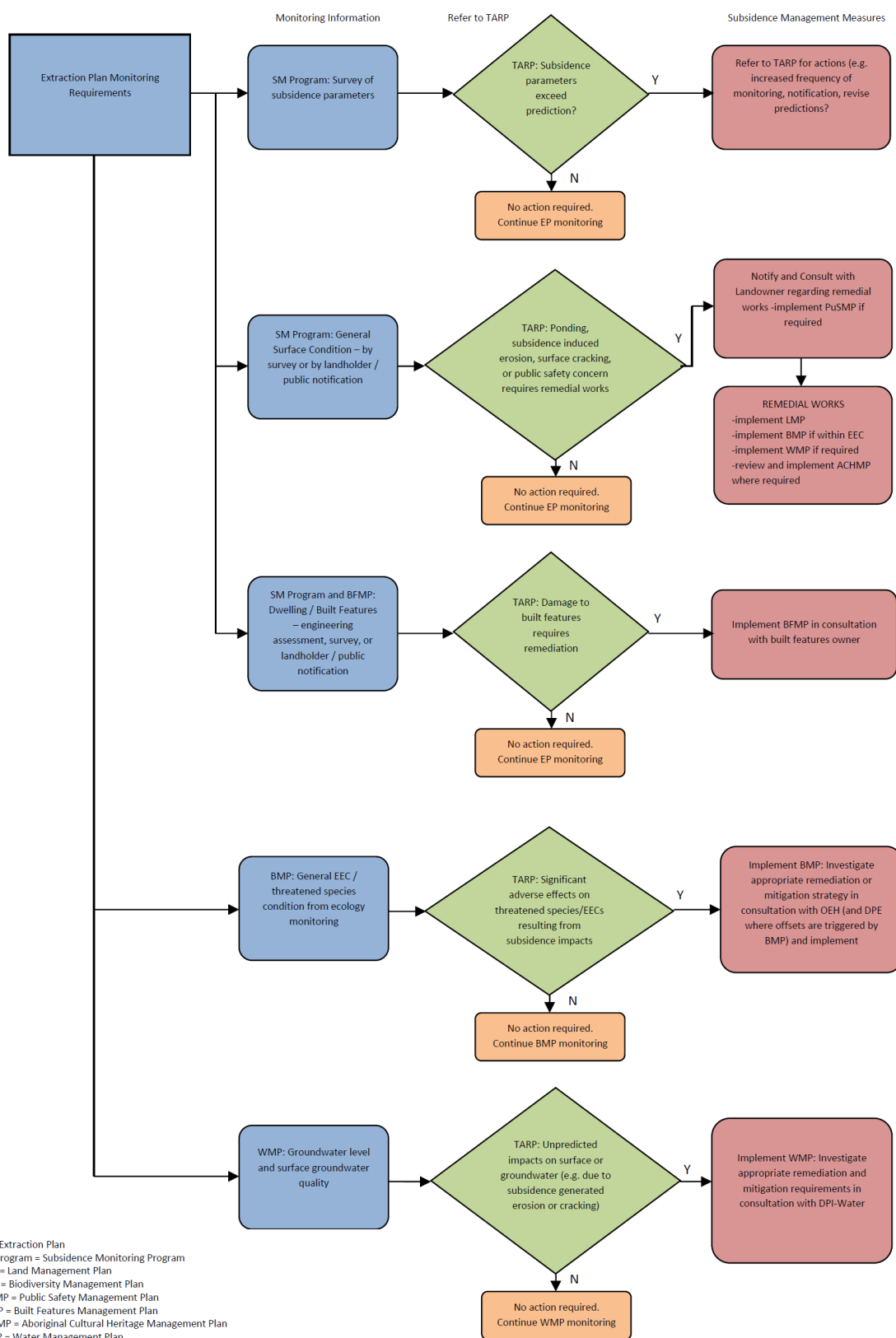
A BFMP – Public Roads will be prepared in consultation with Cessnock City Council Asset Engineer, Mr Stephen Long to assist in the management and repair of any public safety issue. This plan will be completed prior to subsidence impacts occurring. Cessnock City Council, including Council's Asset Engineer, were consulted during meetings in the preparation of the Environmental Assessment for LWB1-B3. Council has been provided with an update on the Extraction Plan and BFMP process on 15 April 2016.

The Land and Property Information (LPI) were contacted in June 2015 regarding the location of survey marks within the Extraction Plan area. LPI will be notified as per the Surveyor General's direction No. 11 *Preservation of Survey Infrastructure* of potential impacts to permanent and state survey marks within the Extraction Plan area prior to subsidence impacts. Once subsidence impacts have completed, Austar Mine will liaise with the LPI and the Mine Subsidence Board regarding re-establishment of disturbed survey marks. Survey marks within the Extraction Plan area are shown on **Graphical Plan 2**.

5 SUBSIDENCE MONITORING AND MANAGEMENT

The overall framework of subsidence monitoring and management for Built Features and other environmental consequences is described simply by a flowchart which follows (as taken from the **Extraction Plan**).

EXTRACTION PLAN SUBSIDENCE MONITORING & MANAGEMENT FLOWCHART – LWB1 to LWB3



6 PLAN IMPLEMENTATION

6.1 REPORTING FRAMEWORK

6.1.1 Annual Review / Annual Environmental Management Report (AEMR)

The Annual Review / AEMR is prepared to summarise Austar's environmental performance for the reporting year and is prepared in accordance with Schedule 5 Condition 5 of DA29/95 and to satisfy Mining Lease conditions.

Performance in accordance with this BFMP, as a key component plan of the Extraction Plan, will be reported using timings and protocols as the main Extraction Plan.

6.1.2 Regular Stakeholder Reporting

The results of monitoring undertaken in accordance with individual BMFPs will be provided to the relevant built feature owner at a frequency agreed in the individual BFMP.

6.2 REVIEW OF THE BFMP

Review of the Extraction Plan (including the BFMP), and revision if necessary, shall occur where unpredicted impacts and/or environmental consequences are identified through the monitoring and management strategies proposed in the Extraction Plan.

Review of the Extraction Plan (including the BFMP) is also required following any modification to DA29/95, or if directed by the Secretary of DPE.

Any revision to the Extraction Plan (including the BFMP) must be completed to the satisfaction of the Secretary of DPE.

6.3 EXTRACTION PLAN ROLES AND ACCOUNTABILITIES

Detailed below are key personnel involved with implementing this Extraction Plan to manage subsidence, their roles and responsibilities.

Role	Responsibilities
Operations Manager	<ul style="list-style-type: none"> • Make appropriate resources available for the implementation of this Built Features Management Plan • Conduct underground mining activities in accordance with the Extraction Plan Coal Resource Recovery Plan. • Notify and liaise with DRE Inspectors (if required)
Environment and Community Manager (ECM)	<ul style="list-style-type: none"> • Owner of BFMP • Ensure that all environmental monitoring and reporting is undertaken in accordance with individual BFMPs • Ensuring building structures located within the subsidence affectation area are inspected by a structural engineer prior to and after undermining and appropriate management measures implemented where access is granted • Liaise with Mine Subsidence Board in relation to Built Features impacts • Liaise with Landholders in relation to environmental consequences of subsidence and in relation to access for the BFMP monitoring program • Notify and liaise with neighbours and community in relation to mining timing and monitoring performance; • Review and update the BFMP as required.
Technical Services Manager (TSM)	<ul style="list-style-type: none"> • Liaise with Government Agencies and Community members in relation to subsidence matters and the Extraction Plan subsidence predictions and monitoring program • Incorporate public safety management controls identified during development of individual BFMPs into the Extraction Plan - Public Safety Management Plan. • Liaise with infrastructure owners in preparation of individual Built Features Management Plans • Coordinate Mine Surveyor to ensure subsidence monitoring is undertaken in accordance with the SM Program • Review subsidence monitoring data against predictions and TARPs in order to trigger any actions required on the basis of subsidence results • Manage / implement subsidence management actions required by the Extraction Plan in relation to Built Features and Infrastructure (Ausgrid, Telstra). • Liaise with Mine Subsidence Board in relation to Built Features impacts • Provide support and guidance in relation to subsidence effects to Environment & Community Manager

Role	Responsibilities
Mine Surveyor	<ul style="list-style-type: none">• Ensure that all subsidence monitoring is completed to the requirements of the Subsidence Monitoring Program and provided to the TSM for review.

7 REFERENCES

MSEC (2016), *Longwalls B1 to B3, Subsidence Predictions and Impact assessments for the Natural and Built Features in Support of the Extraction Plan for Longwalls B1 to B3 at the Austar Coal Mine*, Report No. MSEC833, Revision A.

Umwelt (2015), *Austar Coal Mine – LWB1-B3 Modification, Environmental Assessment*, November 2015.

Figures

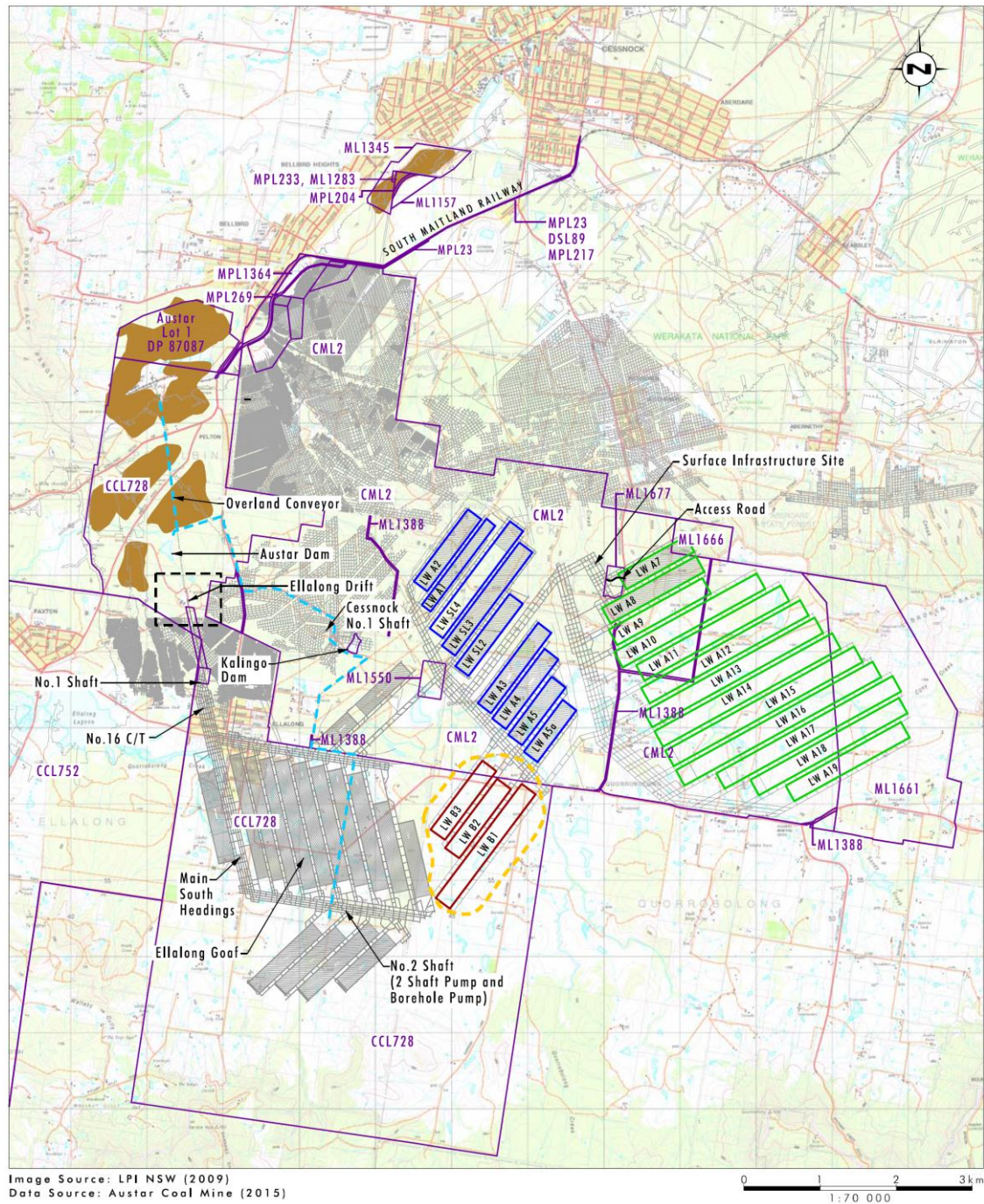


FIGURE 1.1
Austar Coal Mine Complex

Figure 1 Austar Coal Mine Complex

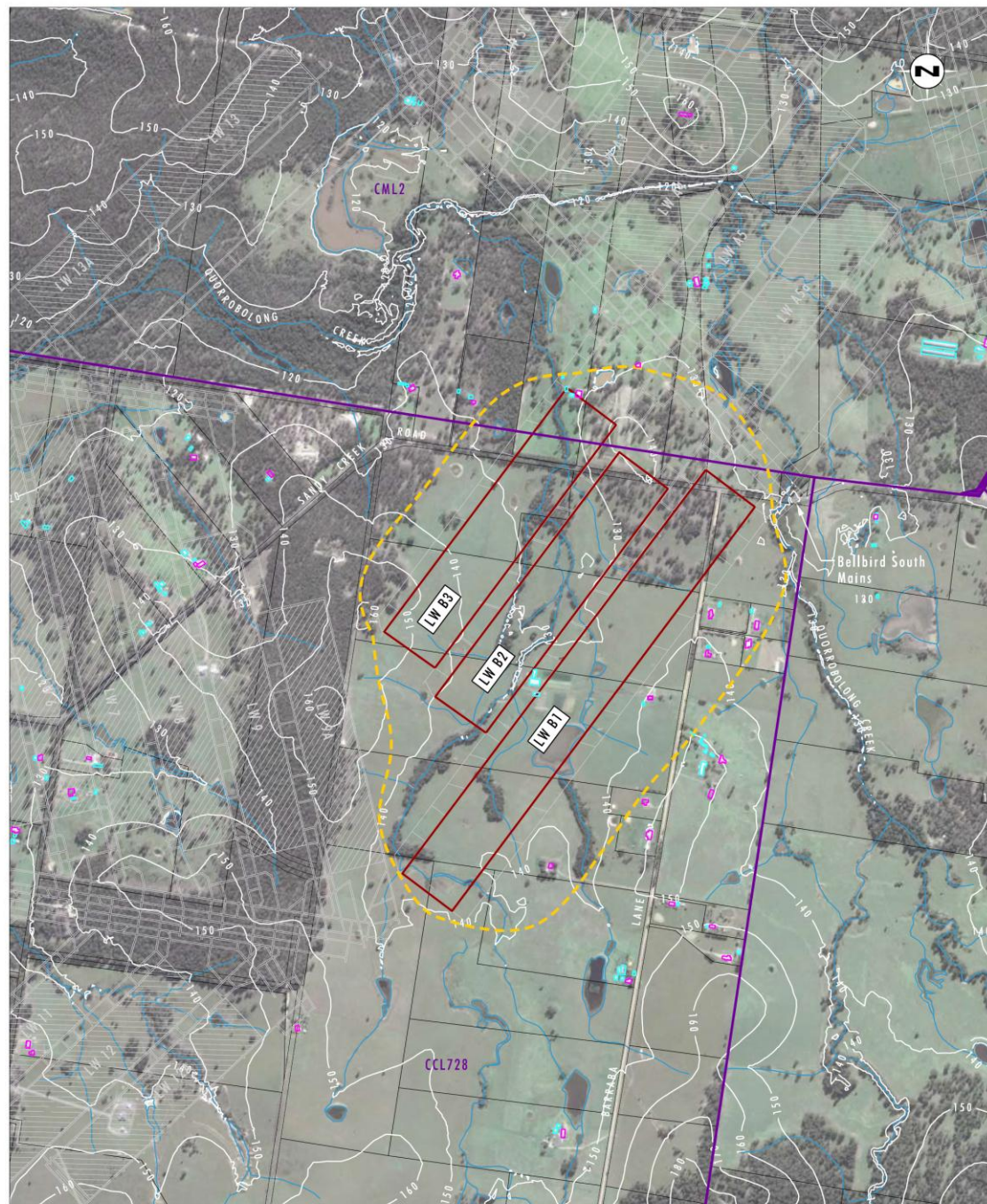


Image Source: Google Earth (2014)
Data Source: Austar Coal Mine (2015)
Note: Contour Interval 10m

Legend

- LWB1-B3 Extraction Plan Longwall Panels
- LWB1-B3 Extraction Plan Area
- Completed Underground Workings
- Mining Lease Boundary
- Drainage Line
- Contour
- Dwelling
- Other Structure

File Name (A4): 3542_194.dgn
20160316 13.43

0 0.25 0.5 1.0km
1:20 000

FIGURE 1.2

LWB1-B3 Extraction Plan Area

Figure 2

Extraction Plan Area



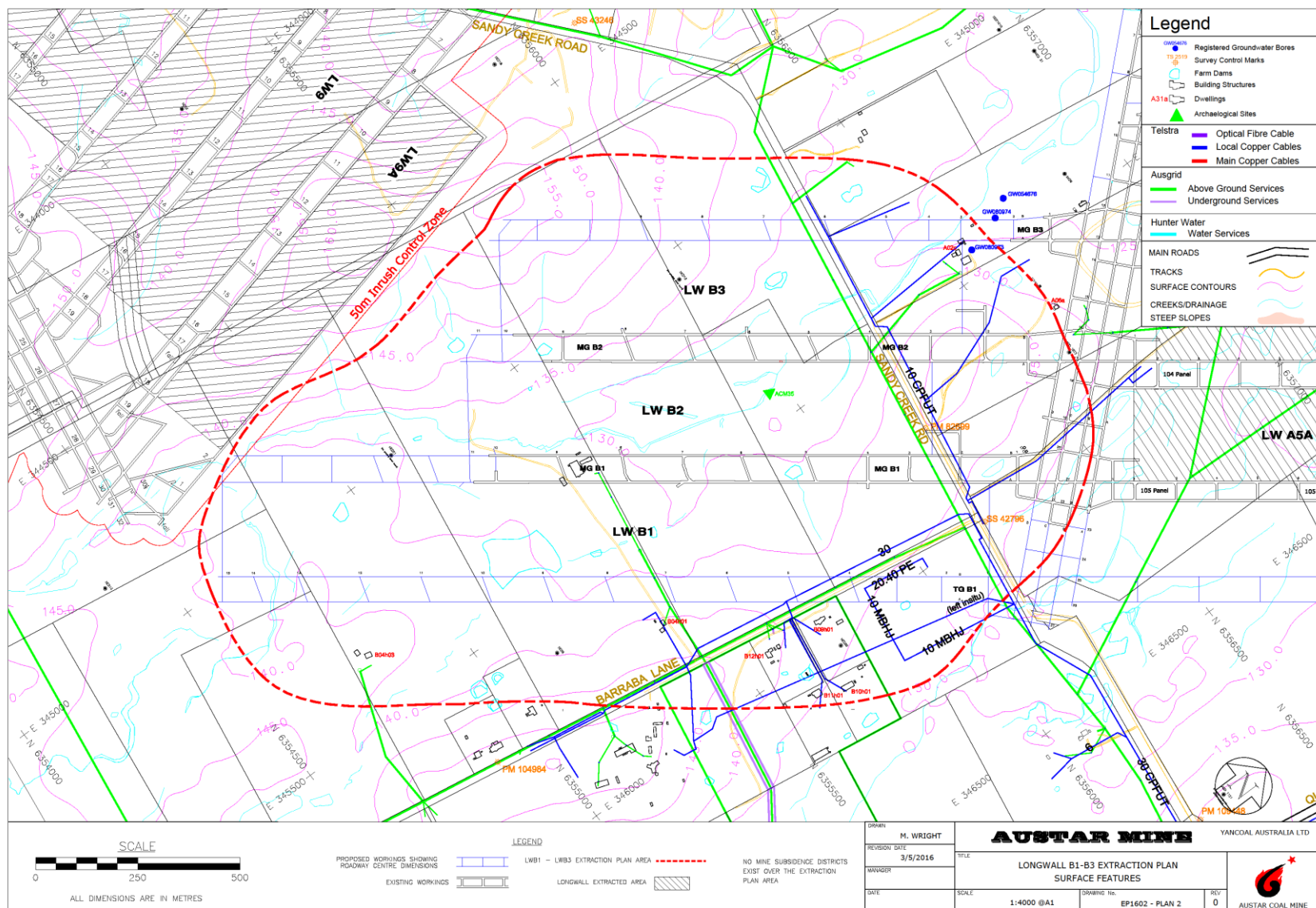


Figure 4 Surface Features

Appendices

Appendix A

Stakeholder Contact Details

Austar Coal Mine LWB1 to LWB3 Extraction Plan Stakeholder List

Position	Name	Phone
AUSTAR		
Operations Manager	Brian Wesley	4993 7356
Technical Services Manager	Tony Sutherland	4015 1105
Environment and Community Manager	Gary Mulhearn	4993 7334
Mine Surveyor	Matthew Wright	4993 7206
Austar After Hours	Control Room	4993 7220
GOVERNMENT		
MSB District Manager	Troy Atkin	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	Stephen Long	4993 4251
DPI-Crown Land	Melanie Osborne	4937 9332
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,	Joel Edwards	4925 9983
LANDHOLDERS	Refer to Austar internal contact register	