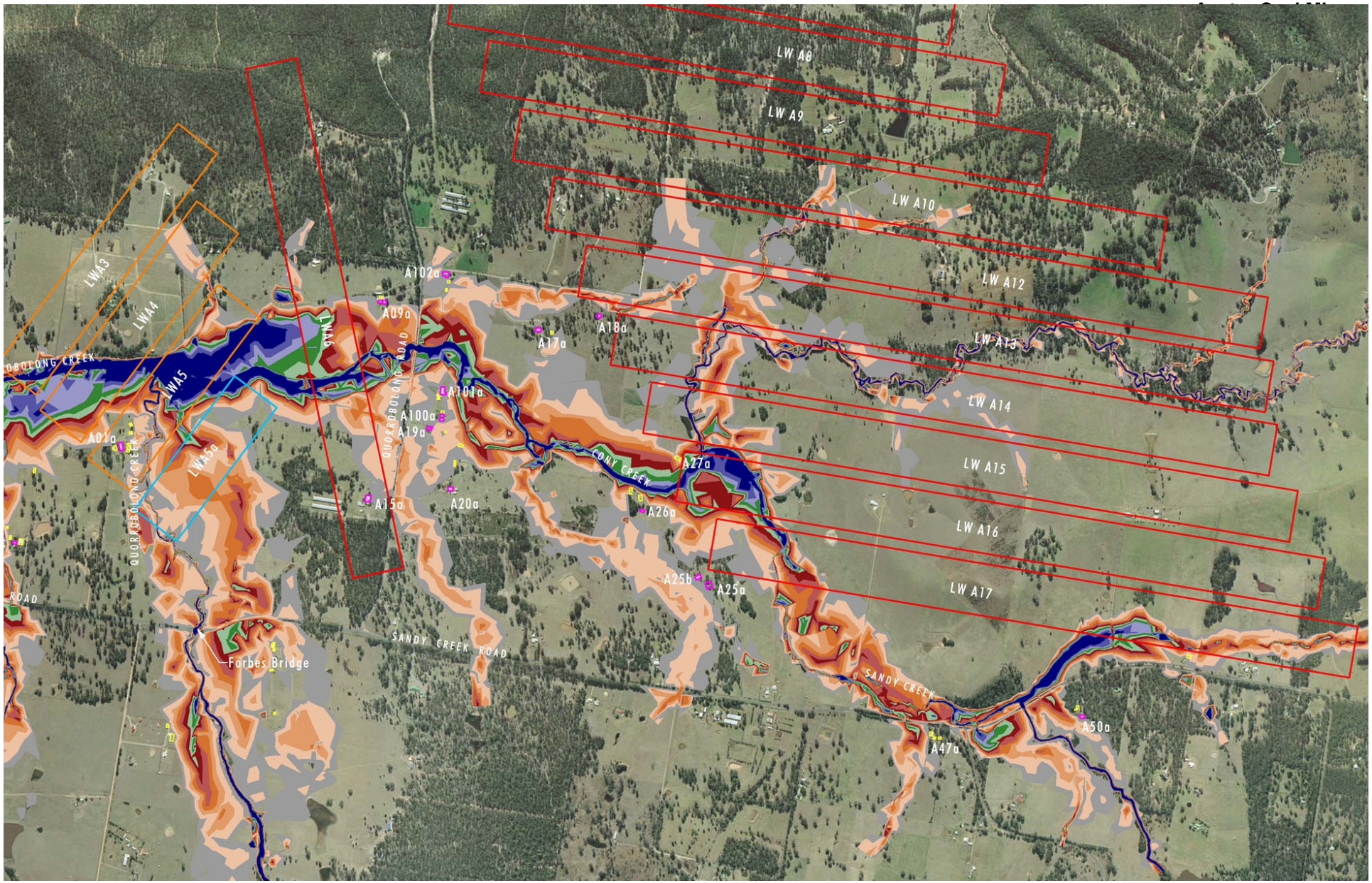
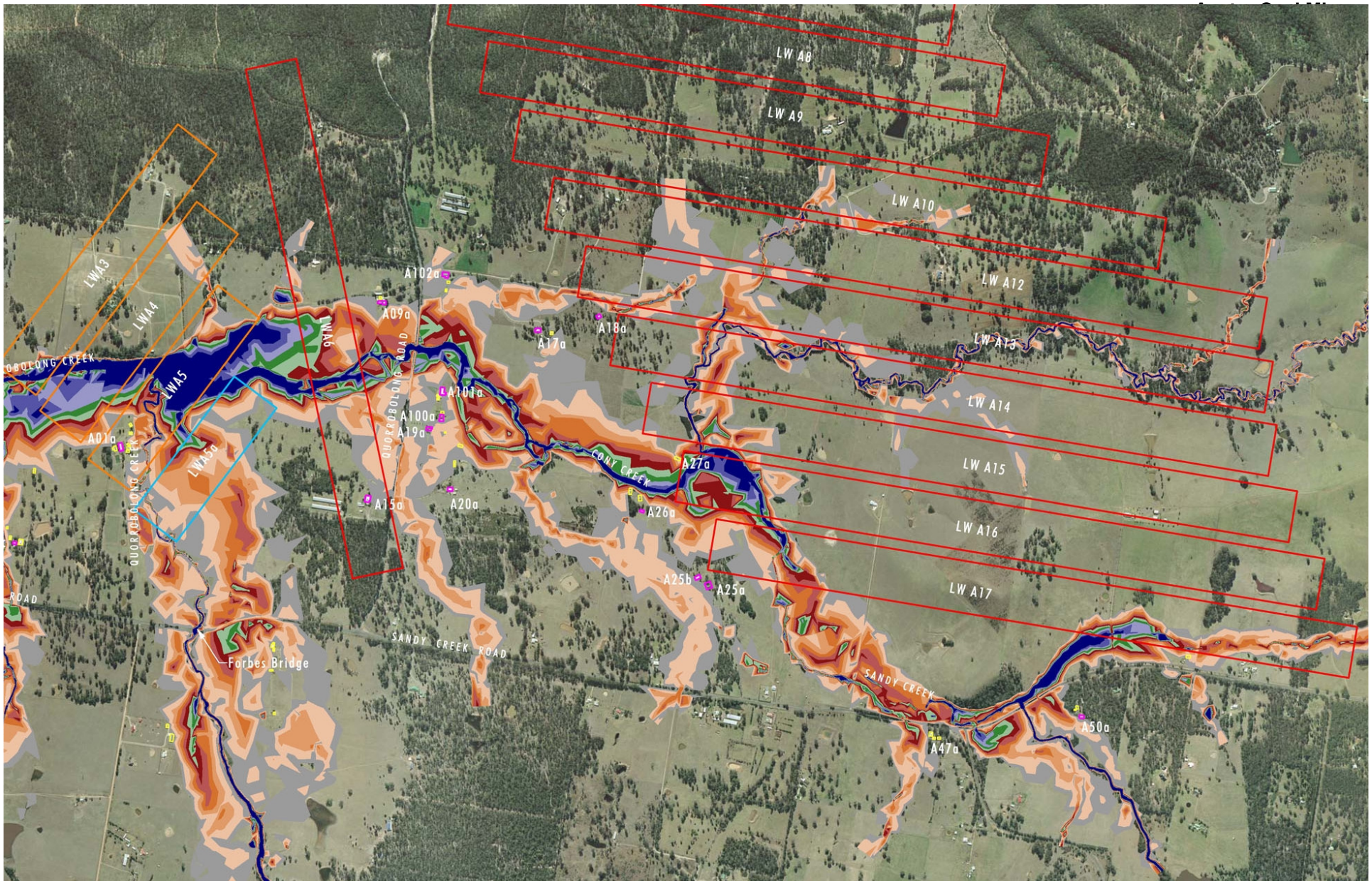
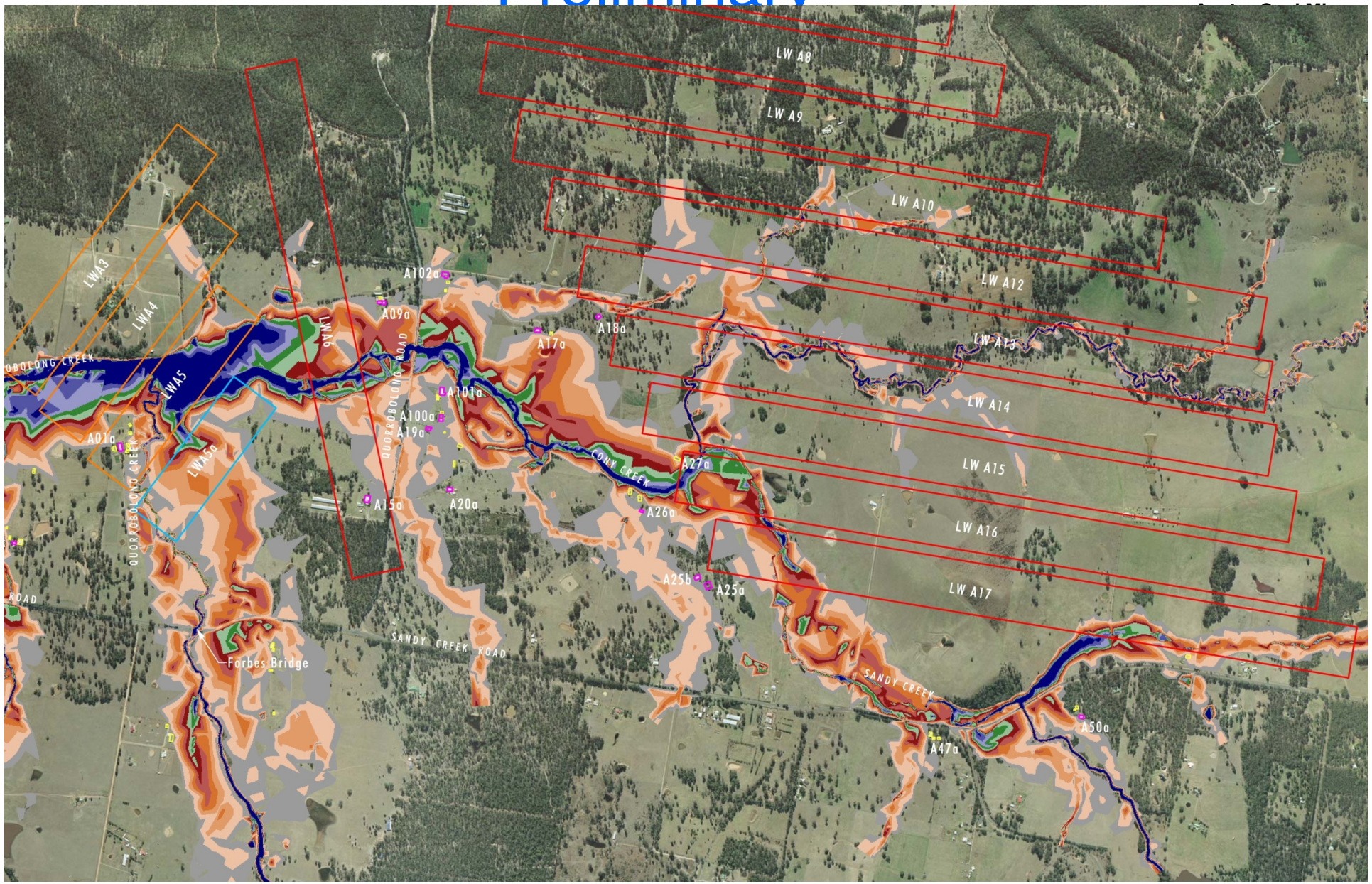
Stage 3 – 100 yr ARI Flood Depth



Stage 3 + A5a – 100 yr ARI Flood Depth



Stage 3 Mod – 100 yr ARI Flood Depth - Preliminary



Summary

Austar Coal Mine

- Changes provide for a lower risk and less potential interruption to mining and landholders
- Overall impacts consistent with currently approved
- Current management strategies anticipated to be appropriate for modified plan
- Area of greatest change in impact is in western part of Stage 3 area but level of impact no greater than for remainder of Stage 3 area
- Benefit of access to property for assessing impact potential and documenting prior conditions, including
  - -Types and construction of improvements
  - -Ecology
  - -Aboriginal archaeology

Access and Compensation Agreements

Sharing the Benefits of Mining

- The traditional mechanisms applied through the Mining Act means that landowners are only eligible for actual compensable loss for any damage resulting from subsidence to property improvements such as houses, sheds, dams & fences.

- Austar's objective is to maximise coal extraction.

- Austar 'Sharing the Benefits' policy allows landowners to get a share of the coal revenue.

- Detailed review of the Agreement has been done with existing landholders who have taken up the Agreement and most recently with members of the CCC from the Stage 3 area.

Sharing the Benefits of Mining

- Two forms of agreement
  - Short Form Access Agreement for limited, one off type access i.e. exploration, environmental surveys
  - Sharing the Benefits Agreement for access and compensation

Sharing the Benefits of Mining

- The Short Form Access Agreement:
  - Ceases to apply when a Sharing the Benefits Agreement is in place
  - Terms reflect the NSW Farmers Association access agreement
  - Includes terms and conditions to be adhered to by Austar
  - Makes provisions for amounts to be paid by Austar for the access
  - Provides for financial support for a landholder to secure independent legal advice
  - Establishes times, conditions and periods of access agreed with the landholder
  - Provides protection for the landholder against liability which may arise due to the access
  - Can be terminated if the landholder sells the property.

Sharing the Benefits of Mining

- Sharing the Benefits Access Agreement:
  - Commercial agreement between landholder and Austar and recognises the commitment to “sharing the benefits” of mining
  - Agreed protections for surface impacts of mining & to manage impacts on houses & improvements.
  - Agreed EMP (PSMP’s) for jointly managing the effects of mining beneath properties.

Sharing the Benefits of Mining

- Duration of the Sharing the Benefits Agreement

  – Commences on the Commencement Date (date of signing)

  – Ceases on the Property Compliance Date (date when all requirements of the Minister have been satisfied)

  – Applies a CPI to the offered $1/t mining fee (payable at time of extraction) from Commencement Date to payment date.

Sharing the Benefits of Mining

- 5 Key Austar Obligations:
  1. Importance of Landowner rights.
  2. Existing Access to Mine Subsidence Board
  3. Extent of mineable reserves beneath your property.
  4. Flexibility in agreed arrangements, open and transparent.
  5. Independent legal, valuation & other advice.

Sharing the Benefits of Mining

- Landholder obligations under the Sharing the Benefits Agreement:
  - Not create further interest in the property without consent of Austar, who will not object if its position under the Agreement is maintained
  - Give Austar the ability to make a “Prior Offer” in respect to sale of the property
  - Accept the Access and Mining fee as the total compensation entitlement
  - Allow Austar to access the property to support Mining Operations (under test on reasonableness)
  - Co-operate in formulating all necessary Management Plans (ie PSMP’s)

Access to Information and Contacting Austar

Access to Information

- Austar Website – www.austarcoalmine.com.au
  - Statutory Approvals
  - Environmental Management Plans
  - Monitoring Results
  - CCC Minutes
  - Independent Audit Reports
  - Annual Reviews (formerly AEMR)
- Phone contact
  - Reception 02 4993 73200
  - General Manager – Frank Fulham
  - Technical Services Manager – Adrian Moodie
  - Environmental Coordinator – Gary Mulhearn

AUSTAR COAL MINE

Login

Web Site Search

Welcome to Austar Coal Mine

Home | About Us | Operations | Environment | Community | Employment | News | Contact Us

Austar Coal Mine
ENVIRONMENTAL ASSESSMENT
Proposed Stage 2 Extension Project

The Stage 2 Extension Project Environmental Assessment is on public display from 2 August 2010 to 20 August 2010. Click here to learn more.

The Stage 3 Project was approved in September 2009. The Stage 3 Environmental Assessment is available for viewing. Click here to learn more.

Quick Links

- Locality Plan
- Community Information Sheets
- Contact Us

Files available for download from this website are in PDF format. Adobe Reader will be required to

Austar Coal Mine (Austar) is a deep underground coal mine located approximately 10km south west of Cessnock in the Newcastle Coalfields of New South Wales, Australia.

Austar Coal Mine is owned by Yancoal Australia Pty Ltd, an Australian - Chinese partnership. Yancoal purchased the mine in December 2004 and renamed it Austar Coal Mine.

Austar commenced mining operations in April 2005 undertaking underground mining activities within the company's existing mining lease area and introduced a new technology called Longwall Top Coal Caving (LTCC) technology in September 2006.

Introduced in France, and further refined in China for the last 15 years, top coal caving uses a modified longwall mining system. LTCC technology is ideal in thick seams and enables significantly greater resource recovery in seams such as the Greta Seam.

The introduction of LTCC to Australia is a collaborative effort between Chinese, German and Australian engineers. Austar's parent company Yanzhou Coal Mining Company is acknowledged as being one of the safest and most productive users of the technique.

Community

Austar welcomes feedback from the community about our operations, and operates a Community Consultative Committee involving community representatives. Click here to learn more

Environment

A number of environmental management plans and environmental reports are provided. Click here to learn more

Employment

Current Advertised Jobs Click here to learn more

Media

- **Stage 3 Mine Approval to sustain 275 jobs**

Click here to learn more

Avenues to Communicate

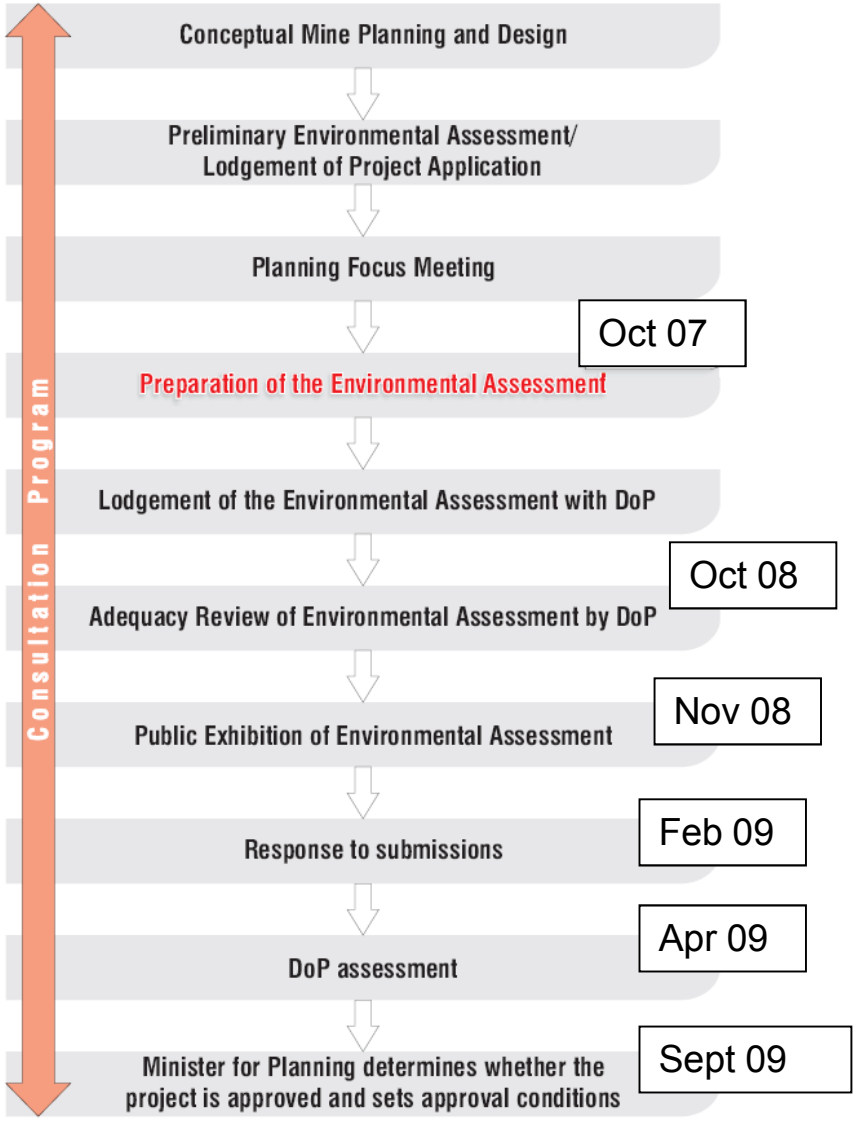
- Austar Website – www.austarcoalmine.com.au
- Phone Contact
- Community Consultative Committee
- Complaints Line – 1800 701 986

Conclusion and Open Forum

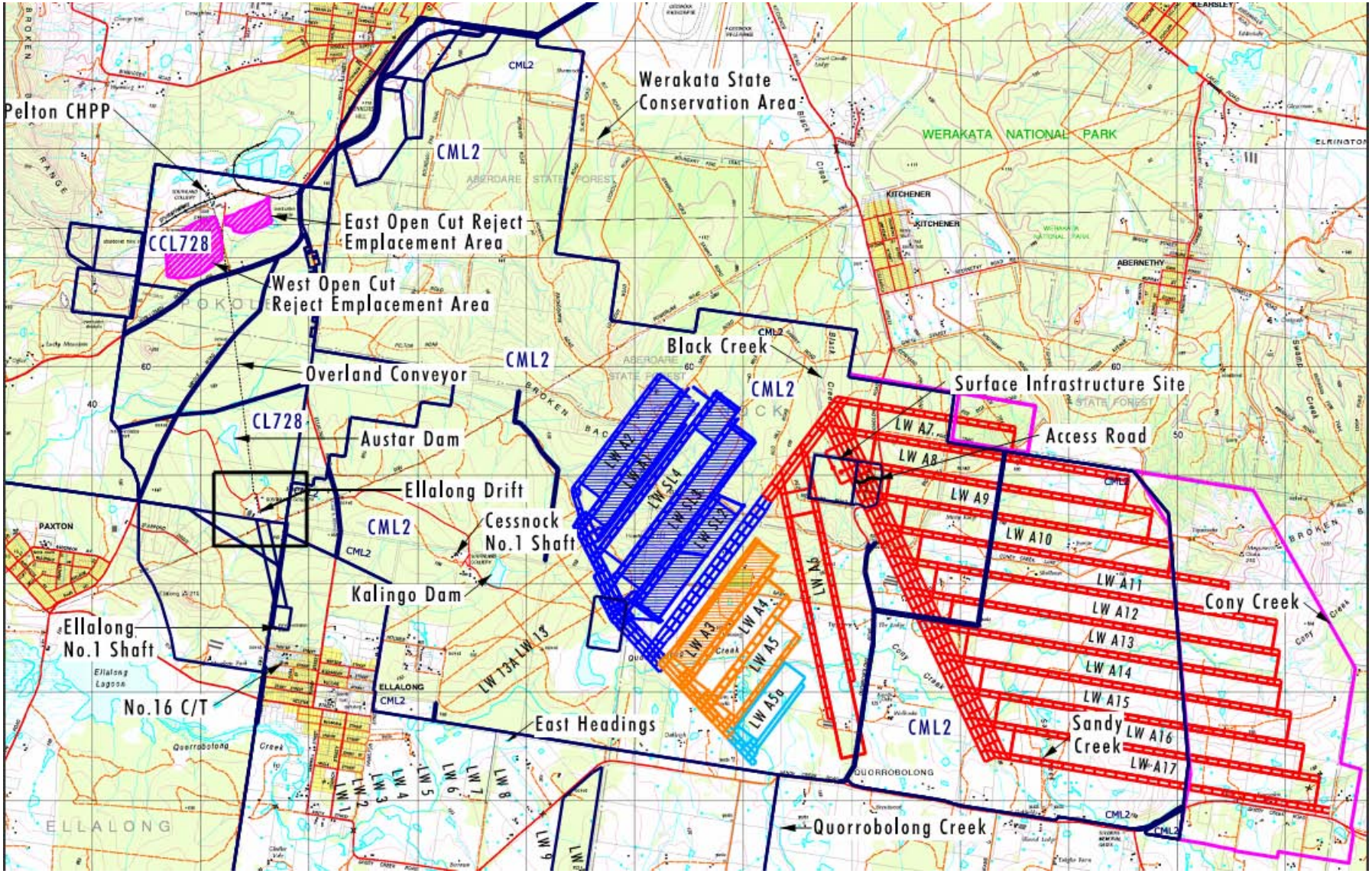
Austar Coal Mine

Stage 3 Project Presentation

Austar Coal Mine Stage 3 Project



Austar Current Operations and the Stage 3 Project



Legend

- Layout for Stage 1 Longwall Panels
- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Conceptual Layout for Stage 3 Longwall Panels
- Proposed Stage 3 Extension Boundary
- Reject Emplacement Areas

FIGURE 1

Austar Mine Complex

Overview

Austar Coal Mine

- Austar currently has approval to mine within CML2 using the following facilities:
  - Ellalong Drift and Pit Top and remote infrastructure sites
  - Pelton CHPP and associated coal handling, processing and rail infrastructure
  - Reject Emplacement areas in accordance with the Austar MOP
  - Water Management infrastructure in accordance with the Site Water Management Plan

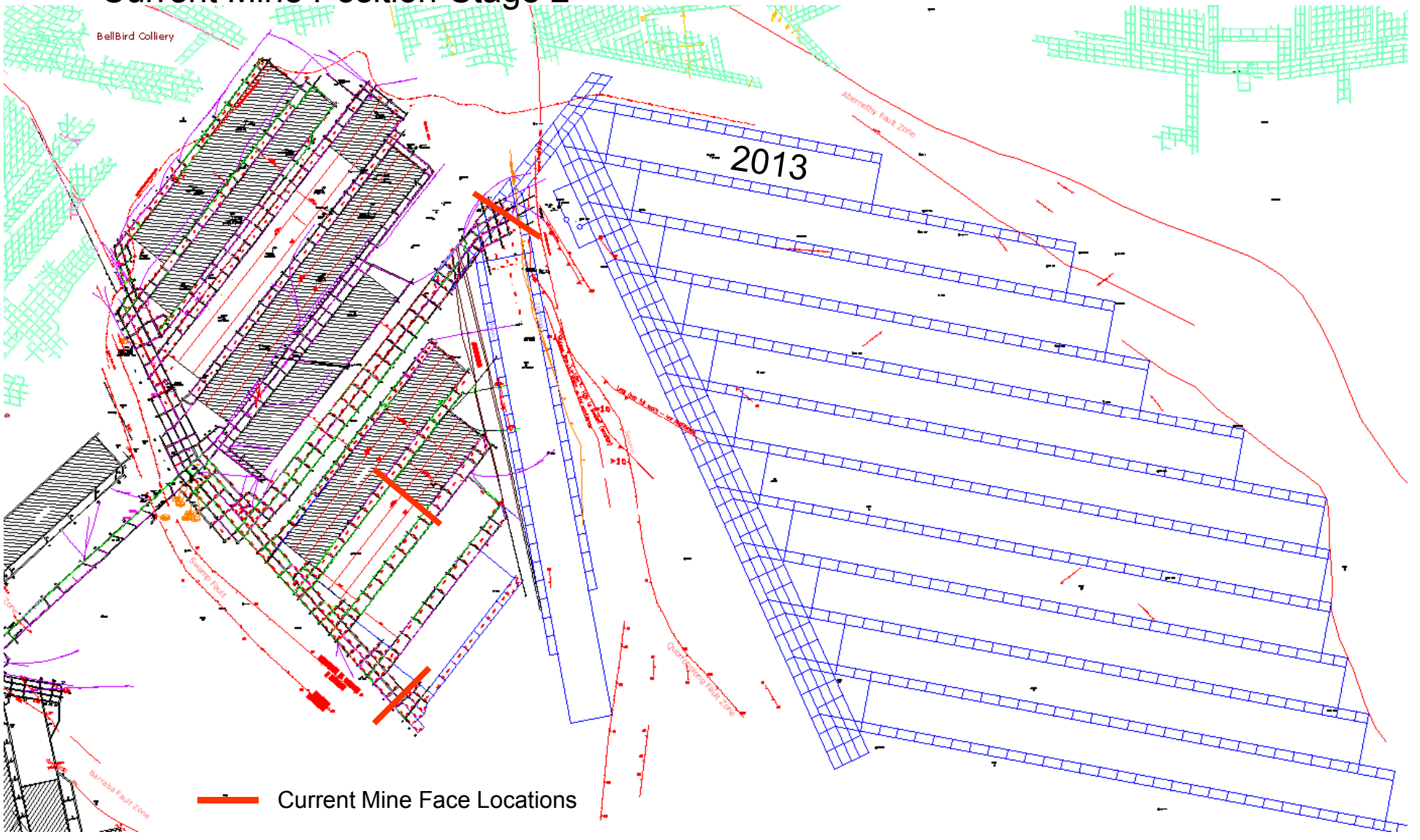
Overview

Austar Coal Mine

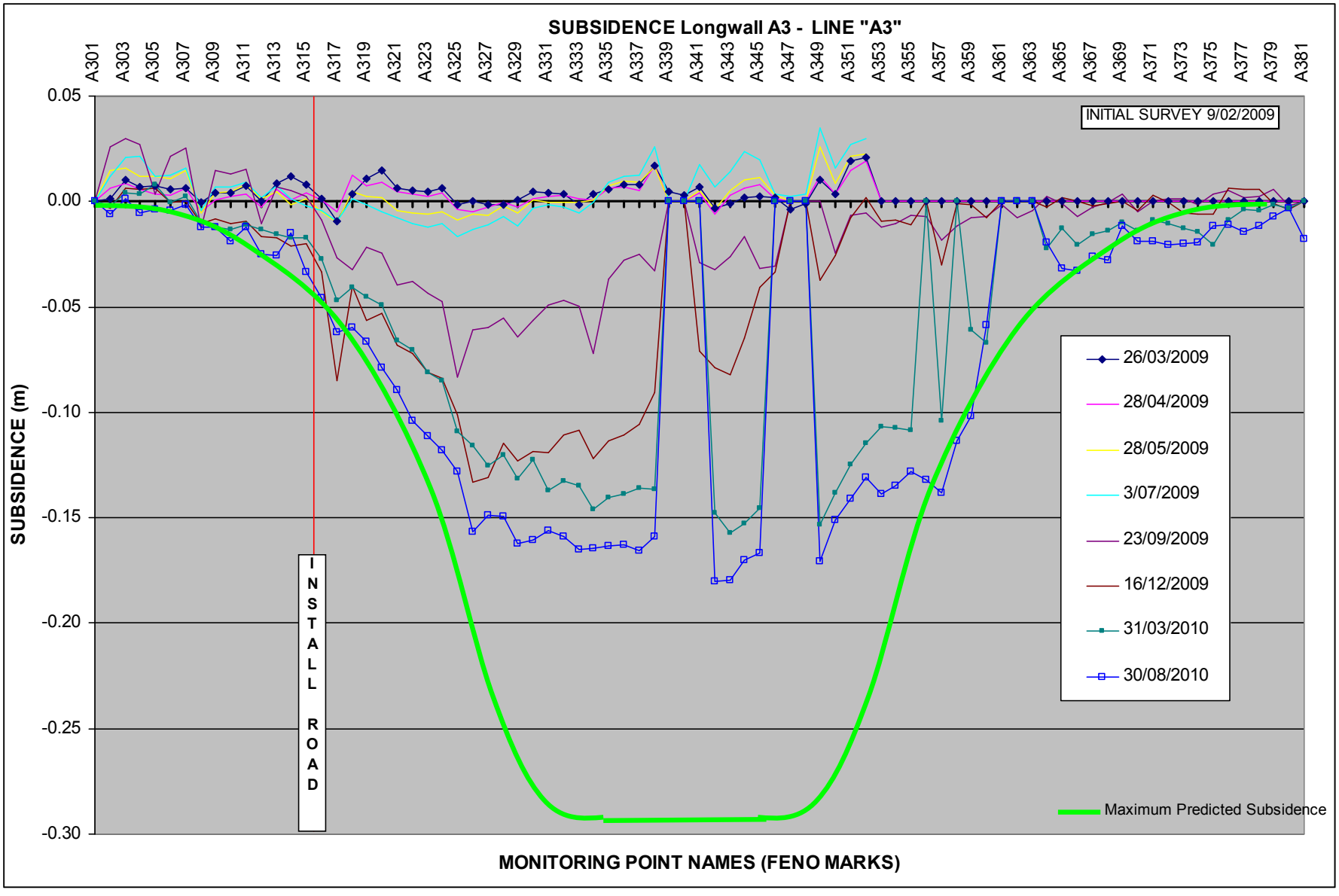
- 98% of product is transported to the port via rail for export
- Remainder is transported via road to domestic customers unable to be reached via rail/shipping and to customers who require coal of specific sizes. Road transport diminishes the risk of the coal size being reduced during transport.

Mining Operations Progress

Current Mine Position-Stage 2



Subsidence Monitoring



Kitchener Infrastructure Site

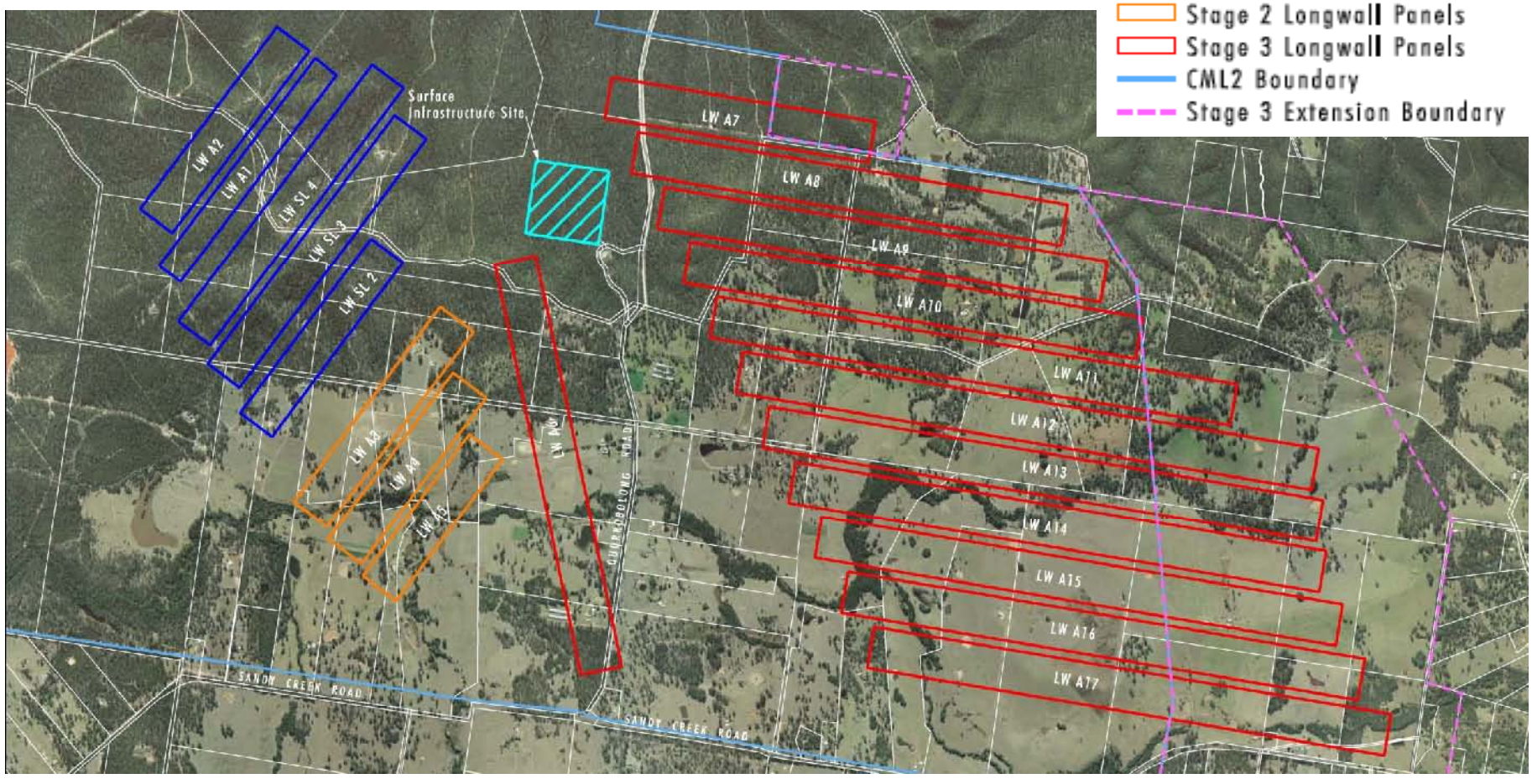
- 4.5m diameter ventilation shaft first required piece of infrastructure at Kitchener
- Clearing works and site preparation commenced late November 2009
- Shaft construction commenced early December 2009
- Shaft currently at 200m depth (460m total depth)
- Anticipated completion in July 2011

Kitchener Infrastructure Site

- Upcoming works in 2011-2012 for the Kitchener Site:
  - 33kV Power line extension from Kitchener
  - Men and Materials Shaft construction
  - Ventilation fan build
  - Final intersection upgrades
- Construction activities are to be environmentally managed under the “Shaft Construction Environmental Management Plan” approved by the Department of Planning in accordance with Schedule 4- Condition 1 of the Stage 3 Consent.

Austar Stage 3 Project

Austar Coal Mine



Key Approval Aspects

Austar Coal Mine

- Approval for underground mining:
  - In accordance with EA, statement of commitments and consent conditions
  - extraction of up to 3.6 MTPA ROM from Austar Mine Complex through to 31 December 2030
  - 60,000 TPA of coal and coal reject transported by road, the remainder by rail
  - Extraction of up to 7 metres of coal using Longwall Top Coal Caving technology
- Construction and operation of new Surface Infrastructure Site which will provide access to underground mining area for workers and materials

Key Approval Aspects

Austar Coal Mine

- Projects will use existing and approved infrastructure:
  - Ellalong drift
  - Pelton Coal handling Preparation Plant
  - Austar and South Maitland Railway
  - Emplacement of reject at Pelton and Aberdare open cuts

Stage 3 Approval and the Community

Austar Coal Mine

- Prepare and implement an Aboriginal Cultural Heritage Management Plan
- Cultural Awareness Training
- Road intersection upgrades prior to construction of SIS buildings
  - Access intersection to SIS off Quorrobolong Rd
  - Wollombi Rd / West Ave intersection (designated right turn to West Ave)

Stage 3 Approval and the Community

Austar Coal Mine

- Use best endeavours for 3 road/rail level crossing upgrades prior to construction of SIS buildings
    - Cessnock Rd, Kearsley
    - Neath Road, Neath
    - Mitchell Avenue, Weston
- Road Maintenance Contributions
    - From the end of 2009, an appropriate annual contribution to be made to Cessnock City Council for road haulage routes for the project.

Stage 3 Approval and the Community

Austar Coal Mine

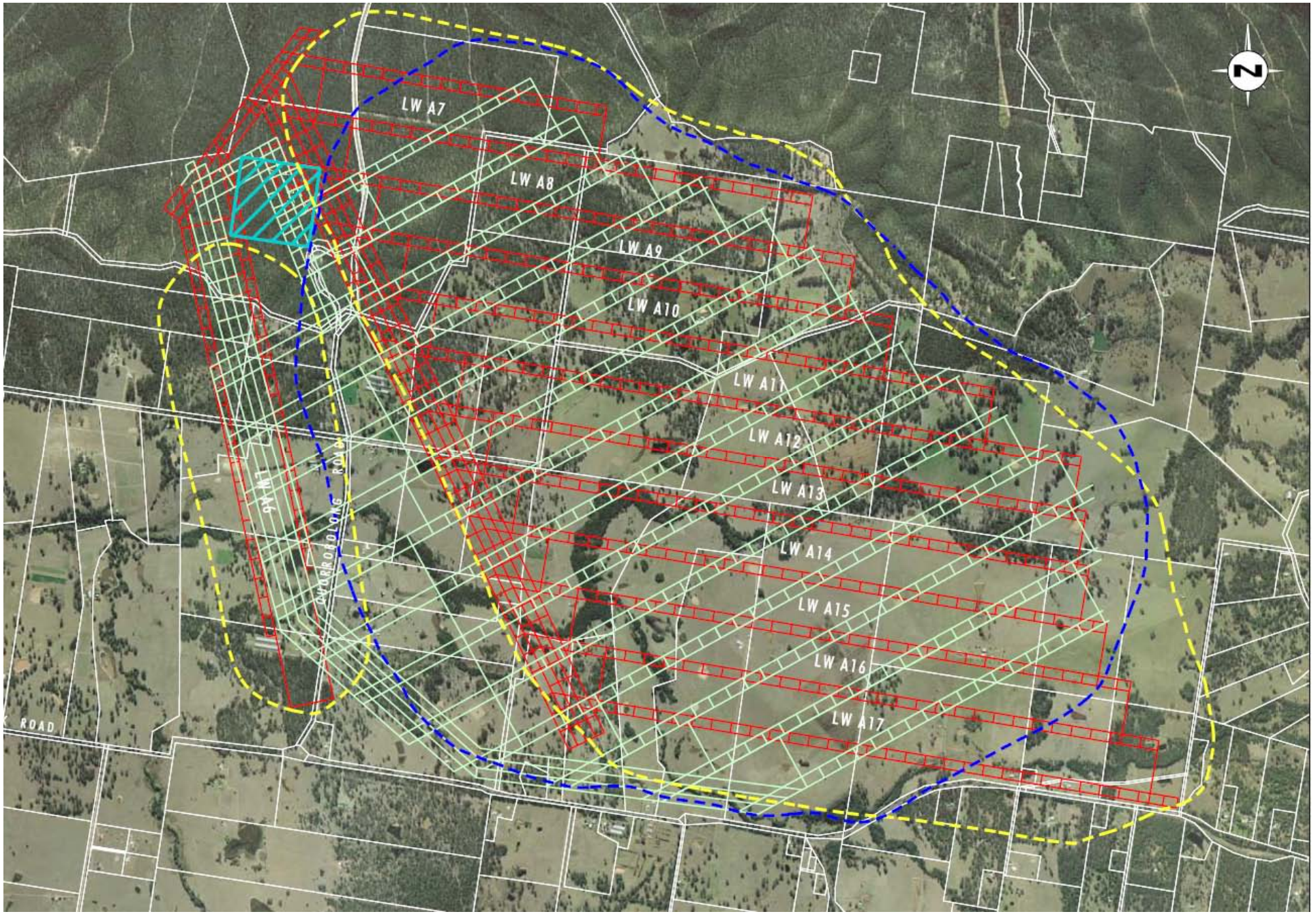
- Community Commitments
  - $100,000 Contribution to Aboriginal community projects
  - Provide support to Kitchener Public School through the provision of sporting equipment and contributions to school/community projects
  - Contribute to the ongoing maintenance of Poppet head Reserve, Kitchener

Description of Proposed Stage 3 Modification

Proposed Modification Outcomes

Austar Coal Mine

- Removal of LWA6 and reorientation of longwalls A7 to A17
- Movement of the Stage 3 main headings and longwall finish lines to the west
- Increase in chain pillar width
- No change in the life of the operation
- No change in rate if coal extraction
- No change in method of coal extraction
- Mining to remain within Mining Lease CML2
- No change to Kitchener pit top facilities
- No change to the number of properties affected
- No change to the operation of Austar Mining Complex (existing infrastructure)


LW A7
LW A8
LW A9
LW A10
LW A11
LW A12
LW A13
LW A14
LW A15
LW A16
LW A17
N
ROAD

Reasons Behind Proposed Modification

Austar Coal Mine

- Further geological information gained
  - Stress orientation
    - Lowest risk longwall orientation is more aligned with stress direction (now better defined)
  - Impact of geological structures on east-west orientated panels
  - Improved coal quality in western area of Stage 3
- Mine Planning considerations
  - Geological structures around longwall A6 pose to high a risk to production
  - Movement of mains allows earlier access to new pit bottom and shafts
  - Increase in chain pillar width reduces roadway failure risks and also subsidence impact risks

These changes are anticipated to reduce risk and provided for more consistent production with less interruption whilst having no increase in environmental impact levels

Modification Approval Pathway

Austar Coal Mine

- Modification Application will be prepared under s75W of the Environmental Planning and Assessment Act 1979
- An environmental assessment (EA) will be prepared to accompany the application
- EA will assess environmental impact changes to what is already approved for the Stage 3 project

Modification Approval Pathway

Austar Coal Mine

- EA will be submitted for adequacy review and then public exhibition around April 2011
- This will follow completion of the various independent environmental assessments and completion of final exploration around the Quorrobolong fault. Each of which may result in some adjustment to either mains location or longwall finish positions.

Environmental Assessment Elements

Austar Coal Mine

The following will be assessed for change in impact over what is already approved:

- Subsidence assessment
- Flooding and drainage assessment
- Ecological assessment
- Aboriginal Archaeology and Cultural Heritage
- Socio-Economics
- Cumulative Impacts

Environmental Assessment

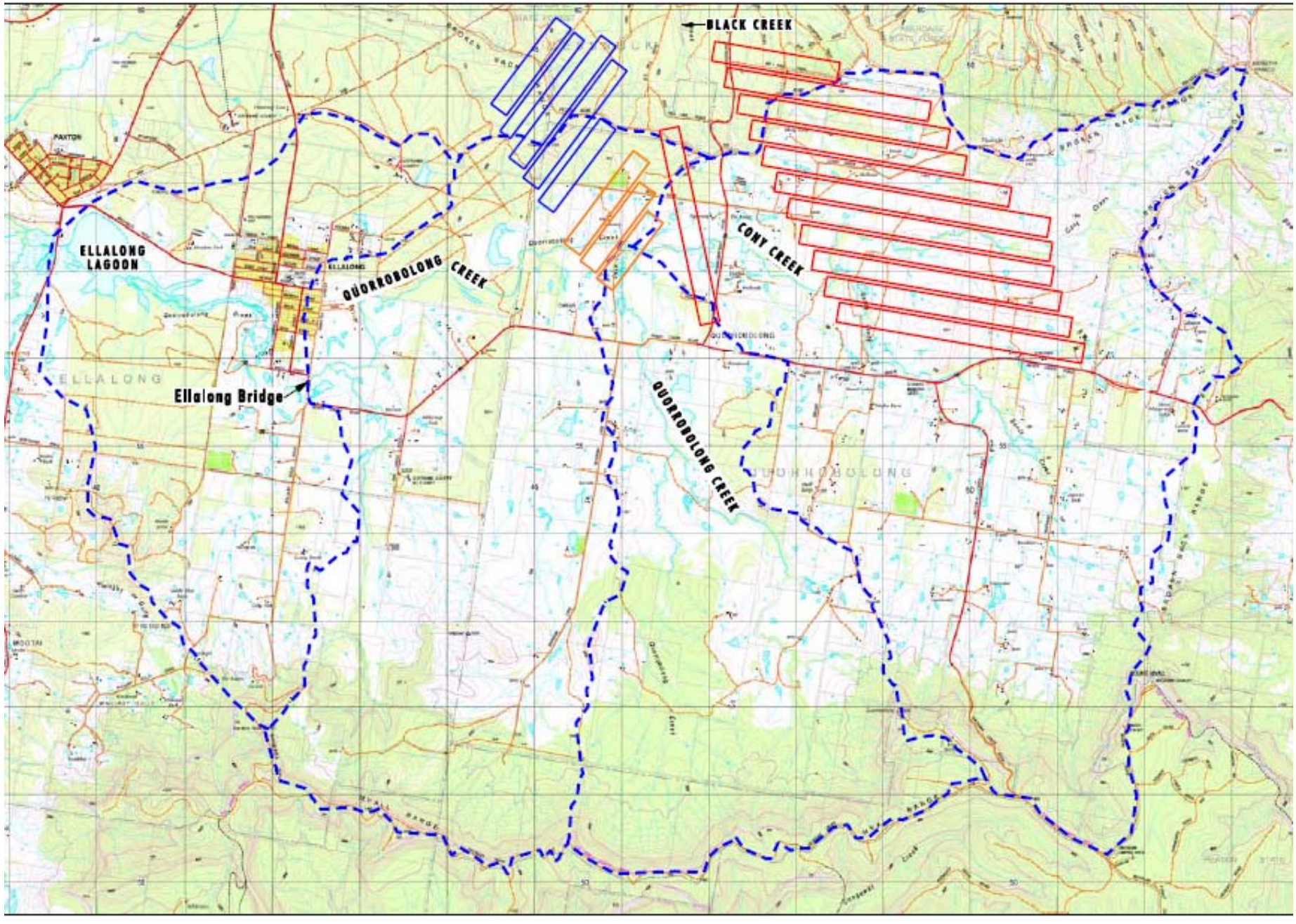
Environmental Assessment Process

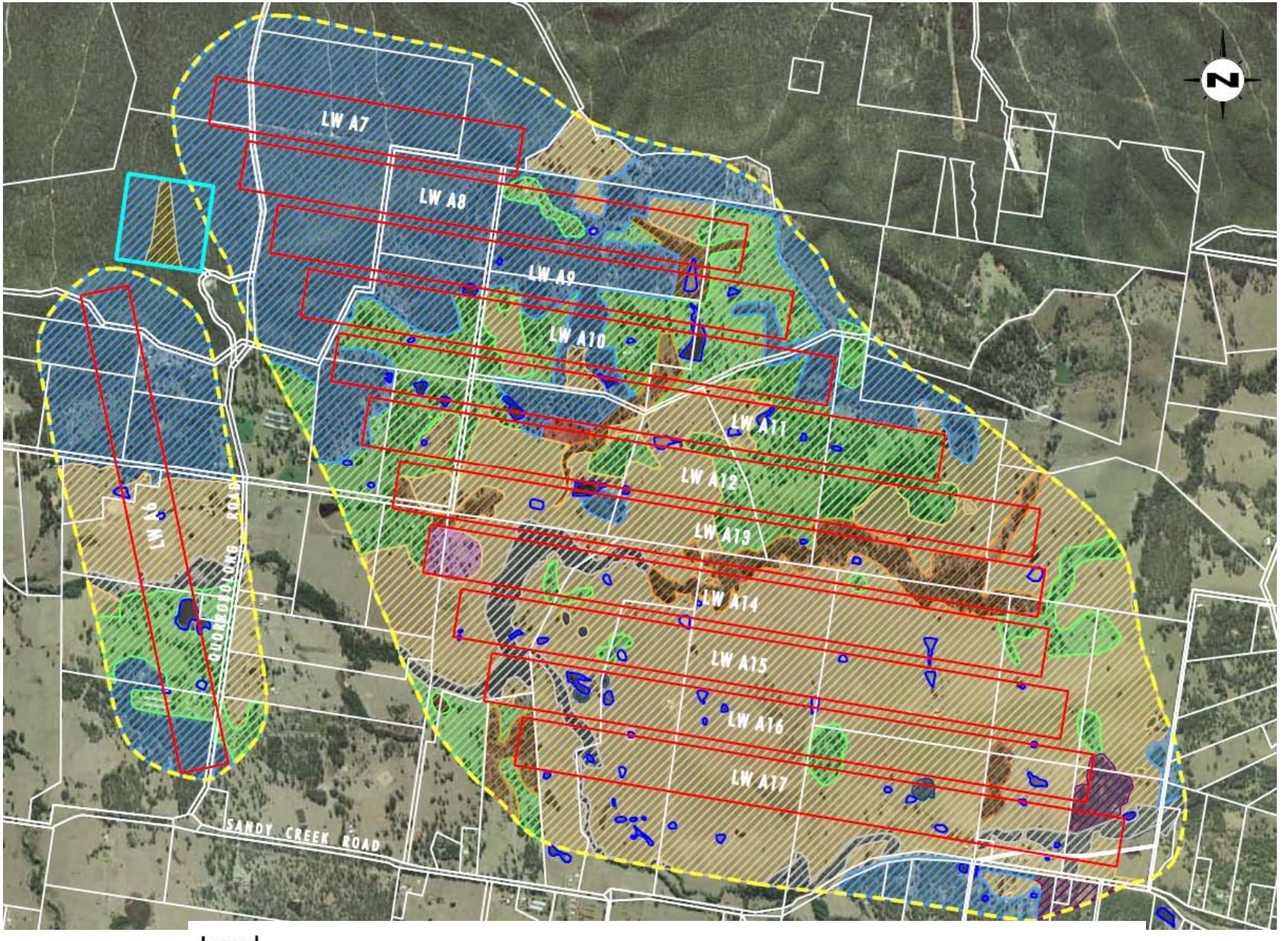
Austar Coal Mine

Existing Environment

Austar Coal Mine

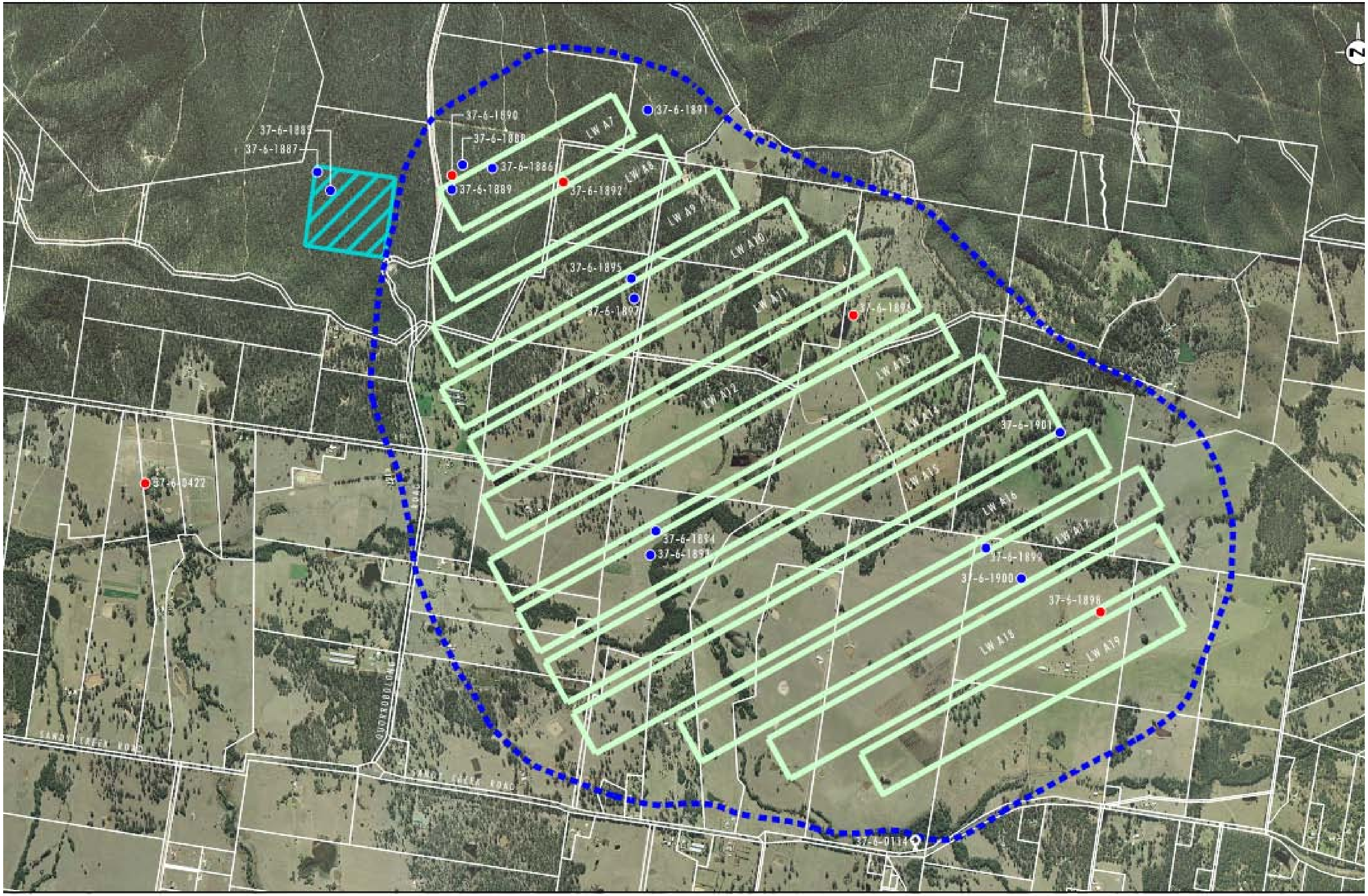
- Broken Back Range in the north (Werakata State Conservation Area)
- Undulating hill slopes in the centre and south (privately owned farm land)
- Cony Creek, Sandy Creek and Quorrobolong Creek
- Threatened ecological communities present


BLACK CREEK
PAXTON
ELLALONG LAGOON
QUORROBOLONG CREEK
CONY CREEK
Ellalong Bridge
QUORROBOLONG CREEK



Legend

- Conceptual Layout for Stage 3 Longwall Panels
- 20mm Subsidence Contour
- Surface Infrastructure Site
- Spotted Gum - Ironbark Forest
- Red Gum - Grey Box Forest on Drainage Flats
- Quorrobolong Scribbly Gum Woodland
- Swamp Oak Riparian Forest
- Derived Grassland with Scattered Canopy Trees
- Derived Grassland
- Woolybutt Open Forest
- Riparian Red Gum Forest
- Dam



37-6-1890
37-6-1891
37-6-1888
37-6-1885
37-6-1887
37-6-1886
37-6-1889
37-6-1892
LW A7
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LW A18
LW A19
37-6-1895
37-6-1897
37-6-1896
37-6-1901
37-6-0422
37-6-1894
37-6-1893
37-6-1899
37-6-1900
37-6-1898
37-6-0114
SANDY CREEK ROAD

Environmental Assessment Outcomes to Date

Assessment Outcomes to Date

Austar Coal Mine

SUBSIDENCE

- As per previous assessments both Maximum Predicted and Upper Bound subsidence will be modelled and reported
- As actual data from the four (4) LTCC longwalls to date supports, Maximum Predicted Subsidence will be the focus of the assessment with Upper Bound being used for risk assessment purposes in the modification assessment
- This data has been incorporated into the updated subsidence predictions for the modified layout

Assessment Outcomes to Date

Austar Coal Mine

Comparison of the Maximum Predicted subsidence parameters based on the previous and modified layouts

Layout	Maximum Predicted Total Conventional Subsidence (mm)	Maximum Predicted Total Conventional Tilt (mm/m)	Maximum Predicted Total Conventional Hogging Curvature (1/km)	Maximum Predicted Total Conventional Sagging Curvature (1/km)
Previous Layout (Report No. MSEC309)	1925	6.7	0.06	0.12
Modified Layout (Report No. MSEC424)	1850	6.5	0.05	0.10

Maximum subsidence parameters are similar or slightly less for the modified layout as with the high depth of cover and strata characteristics the overall subsidence is controlled by the chain pillar compression and an increase in the pillars width from 45m to 55m is proposed which increases pillar strength and reduces compression.

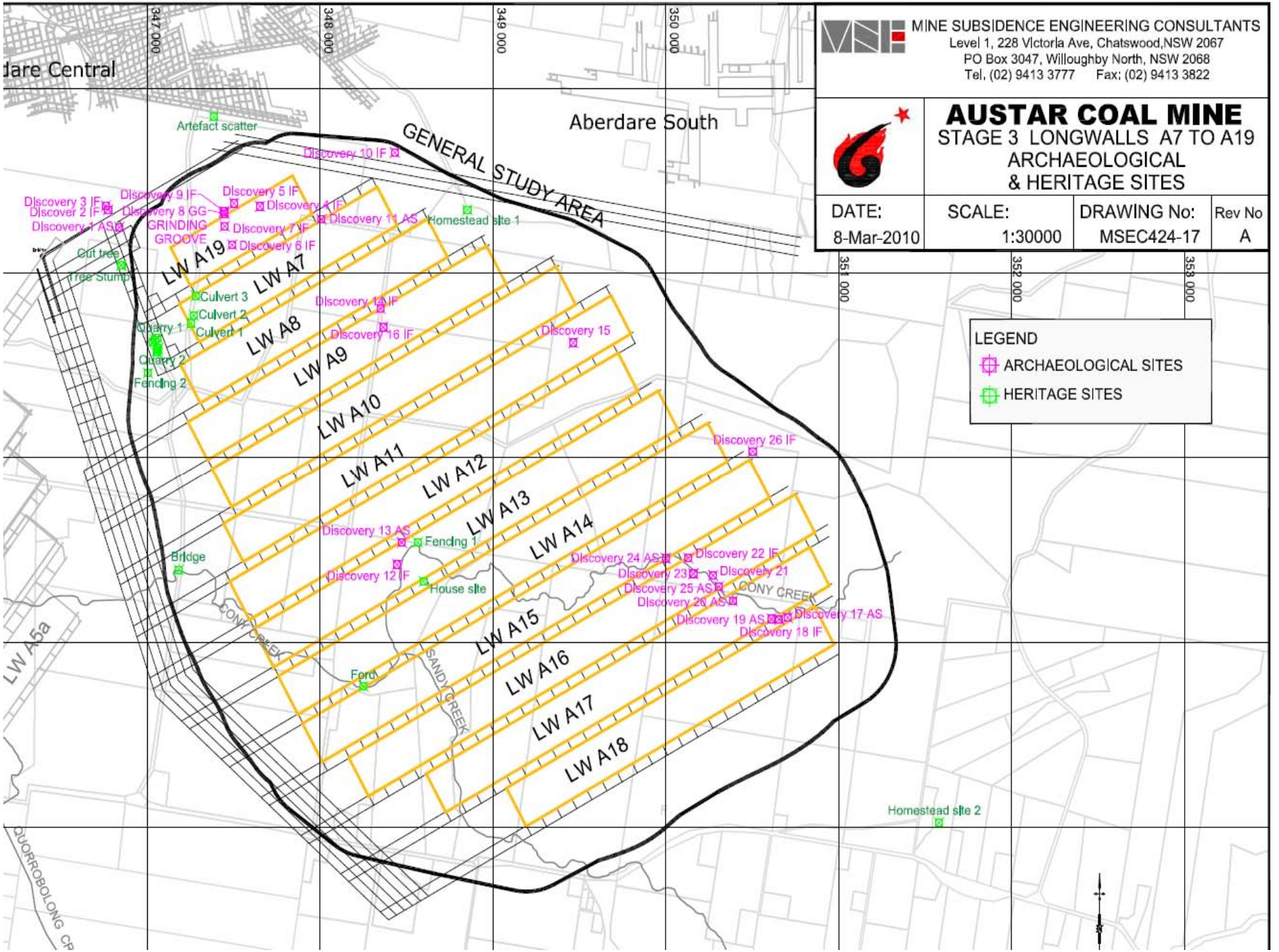
Assessment Outcomes to Date

Austar Coal Mine

Subsidence Impact to Natural Features and Infrastructure:

- **Coney Creek-** Similar to slightly less
- **Sandy Creek-** Same
- **Archaeological Sites-** similar to slightly less with the Grinding Grove site much less than for the previous layout
- **Roads**- similar to slightly less
- **Houses and Rural Structures-** Overall same to slightly less across the Stage 3 area but individual pieces of infrastructure will slightly increase or decrease depending on the location relative to the modified longwall layout

In summary the management strategies adopted and approved for the current Stage 3 layout will be appropriate for the new layout


MINE SUBSIDENCE ENGINEERING CONSULTANTS
Level 1, 228 Victoria Ave, Chatswood,NSW 2067
PO Box 3047, Willoughby North, NSW 2068
Tel, (02) 9413 3777 Fax; (02) 9413 3822
AUSTAR COAL MINE
STAGE 3 LONGWALLS A7 TO A19
ARCHAEOLOGICAL
& HERITAGE SITES
DATE: 8-Mar-2010
SCALE: 1:30000
DRAWING No: MSEC424-17
Rev No A
GENERAL STUDY AREA
Aberdare South
Aberdare Central
347 000
348 000
349 000
350 000
351 000
352 000
353 000
LW A19
LW A7
LW A8
LW A9
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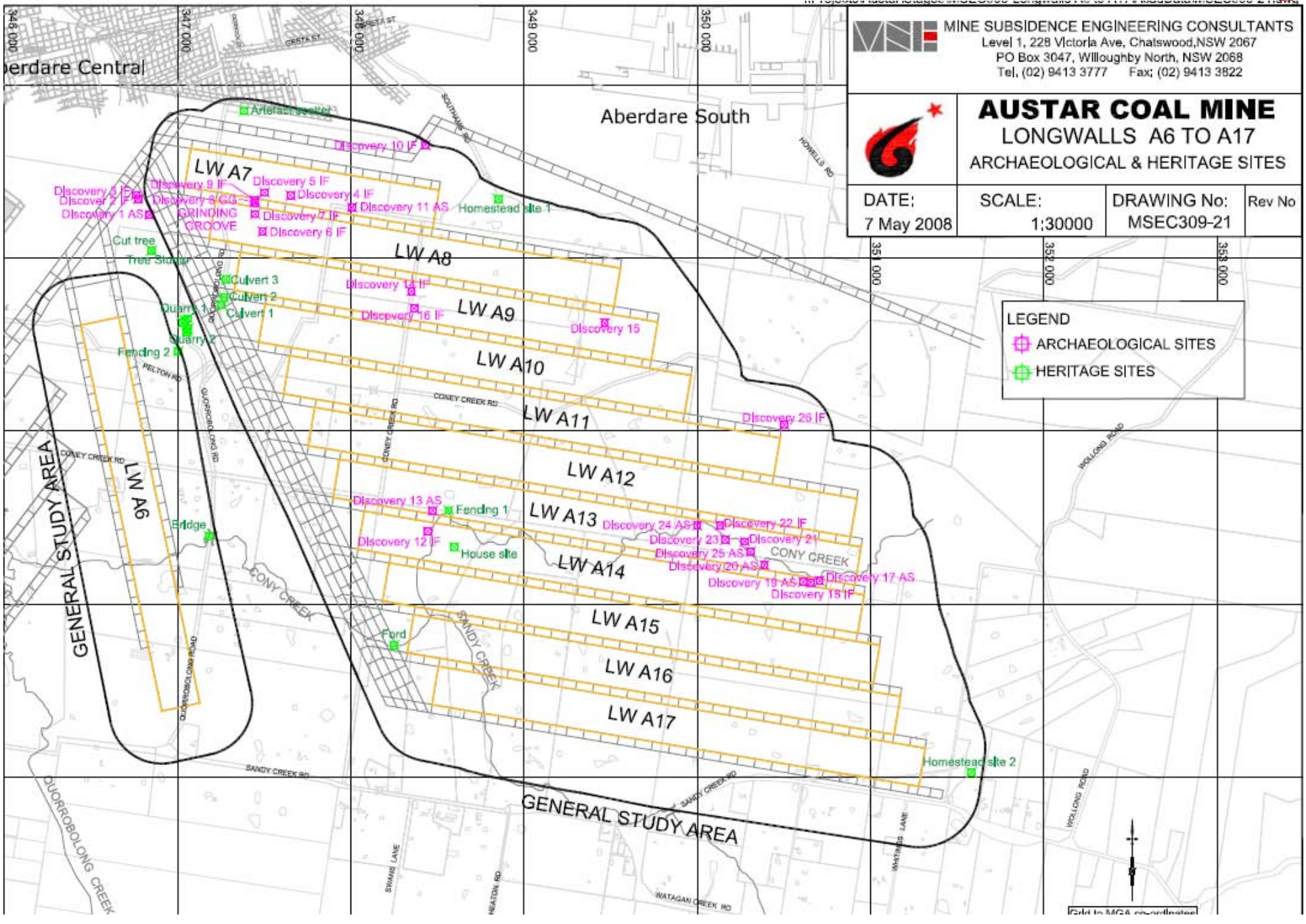
LW A14
LW A15
LW A16
LW A17
LW A18
LW A5a
Artefact scatter
Discovery 10 IF
Discovery 3 IF
Discover 2 IF
Discovery 1 AS
Discovery 9 IF
Discovery 8 GG
GRINDING GROOVE
Discovery 5 IF
Discovery 4 IF
Discovery 7 IF
Discovery 6 IF
Discovery 11 AS
Homestead site 1
Cut tree
Tree Stump
Culvert 3
Culvert 2
Culvert 1
Quarry 1
Quarry 2
Fencing 2
Discovery 14 IF
Discovery 16 IF
Discovery 15
Discovery 26 IF
Discovery 13 AS
Fencing 1
Bridge
Discovery 12 IF
House site
Discovery 24 AS
Discovery 22 IF
Discovery 23
Discovery 21
Discovery 25 AS
Discovery 20 AS
CONY CREEK
Discovery 19 AS
Discovery 17 AS
Discovery 18 IF
Ford
SANDY CREEK
Homestead site 2
QUORROBOLONG CR
LEGEND
ARCHAEOLOGICAL SITES
HERITAGE SITES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Level 1, 228 Victoria Ave, Chatswood,NSW 2067
PO Box 3047, Willoughby North, NSW 2068
Tel. (02) 9413 3777 Fax: (02) 9413 3822
AUSTAR COAL MINE
LONGWALLS A6 TO A17
ARCHAEOLOGICAL & HERITAGE SITES
DATE: 7 May 2008
SCALE: 1:30000
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Rev No
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Aberdare Central
LW A6
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LW A8
LW A9
LW A10
LW A11
LW A12
LW A13
LW A14
LW A15
LW A16
LW A17
GENERAL STUDY AREA
GENERAL STUDY AREA
LEGEND
ARCHAEOLOGICAL SITES
HERITAGE SITES
Discovery 10 IF
Discovery 9 IF
Discovery 5 IF
Discovery 3 IF
Discovery 2 IF
Discovery 4 IF
Discovery 1 AS
Discovery 3 GG
GRINDING GROOVE
Discovery 11 AS
Homestead site 1
Discovery 7 IF
Discovery 6 IF
Cut tree
Tree Stump
Culvert 3
Culvert 2
Culvert 1
Discovery 14 IF
Discovery 16 IF
Discovery 15
Quarry 1
Quarry 2
Fending 2
Discovery 26 IF
Discovery 13 AS
Fending 1
Discovery 24 AS
Discovery 22 IF
Discovery 12 IF
House site
Discovery 23
Discovery 21
Discovery 25 AS
Discovery 20 AS
Discovery 19 AS
Discovery 17 AS
Discovery 18 IF
Bridge
Ford
Homestead site 2
CONY CREEK
SANDY CREEK
QUORROBOLONG CREEK
CONEY CREEK RD
QUORROBOLONG ROAD
SANDY CREEK RD
WOLLONG ROAD
WATAGAN CREEK RD
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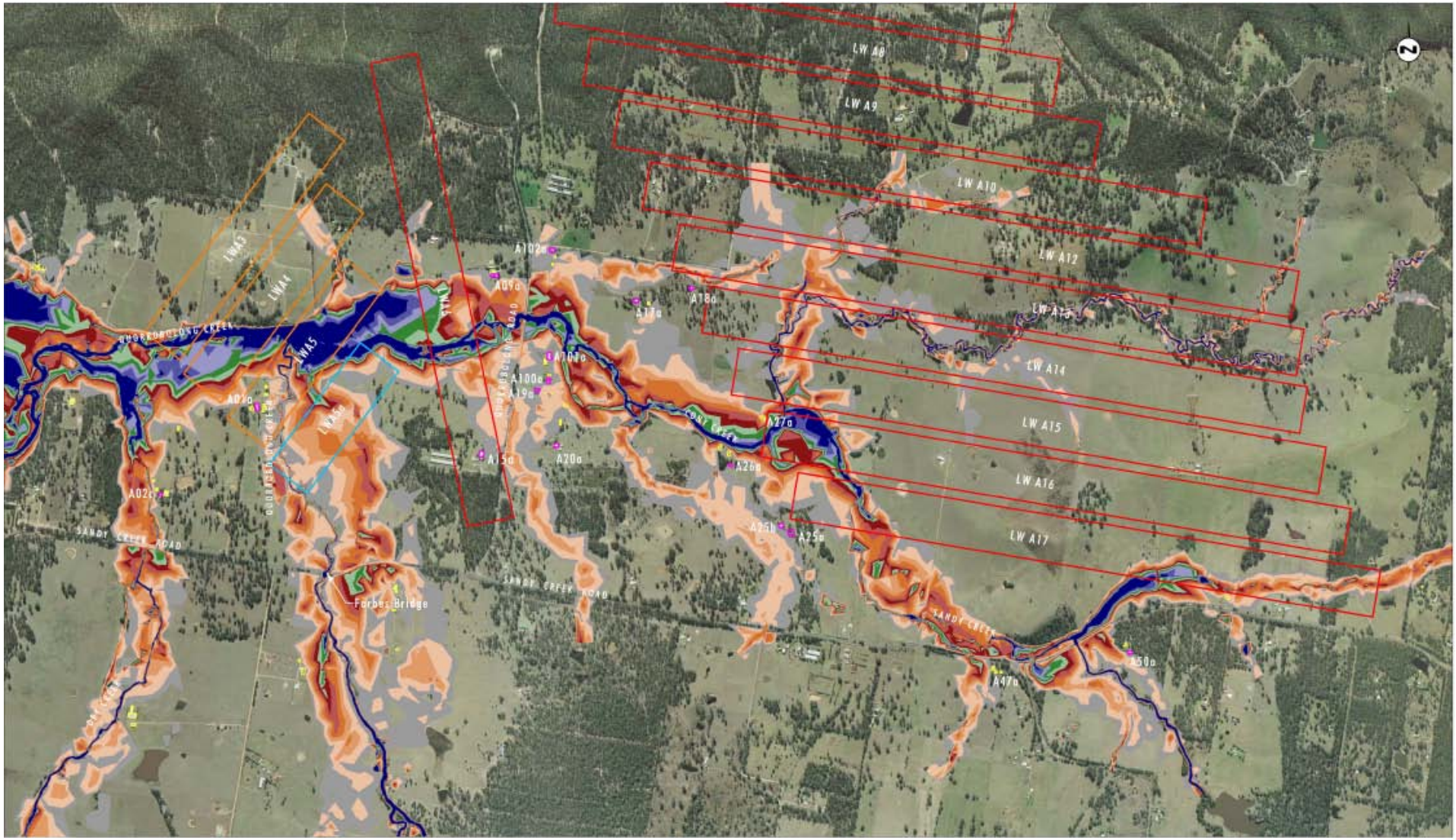
Summary

Austar Coal Mine

- Changes provide for a lower risk and less potential interruption to mining and landholders
- Overall impacts consistent with currently approved
- Current management strategies anticipated to be appropriate for modified plan
- Area of greatest change in impact is in western part of Stage 3 area but level of impact no greater than for remainder of Stage 3 area
- Impact on archaeological sites is similar to slightly less with the Grinding Grove site much less than for the previous layout



Legend

- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Conceptual Layout for Stage 3 Longwall Panels
- Building
- Dwelling

A01a Dwelling Reference Number

Water Depth (m)

- Range [0.001 : 0.100]
- Range [0.100 : 0.300]
- Range [0.300 : 0.500]
- Range [0.500 : 0.700]
- Range [0.700 : 0.900]
- Range [0.900 : 1.100]
- Range [1.100 : 1.300]
- Range [1.300 : 1.500]
- Range [1.500 : 1.700]
- Range [1.700 : 1.900]
- Range [>1.900]

Community Consultation

Austar Coal Mine

- Commencing with landholder information session in December 2010 and follow up sessions in the coming months
- Comments on social impacts of the project to:
  - Catherine Pepper at Umwelt, or
  - Adrian Moodie at Austar.

Aboriginal Cultural Heritage and Archaeology