

# **Appin Colliery Area 7 Longwalls 705 to 710**

**SUBSIDENCE MANAGEMENT PLAN APPLICATION**

**WRITTEN REPORT**

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**Volume 1/3**

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Prepared for:



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### Document Compliance with Subsidence Management Plan (SMP) Guidelines

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<b>SMP Guideline Section</b>	<b>SMP Application Section Number Reference</b>
6.2 The SMP Area	Volume 1- Section 2
6.3 Mining System and Resource Recovery	Volume 1- Section 3
6.4 Site Conditions of the SMP Area	Volume 1- Section 4
6.5 Stability of Underground Workings	Volume 1- Section 5
6.6 Characterisation of Surface and Sub-Surface Features within the SMP Area	Volume 1- Section 6
6.7 Subsidence Prediction	Volume 1- Section 7
6.8 Community Consultation	Volume 1- Section 14
6.9 Statutory Requirements	Volume 1- Section 12
6.10 Subsidence Impacts	Volume 1- Sections 8, 9, 10 and 11
6.10.2 Risk Assessment	Volume 1- Section 13
7. Proposed Subsidence Management Plan	Volume 2
9. Plans	Volume 3 (A0 size) and Volume 1 (reduced)
10. SMP Approved Plan	Volume 3 (A0 size) and Volume 1 (reduced)

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## 1. INTRODUCTION

### 1.1. OVERVIEW

BHP Billiton Illawarra Coal (Illawarra Coal) proposes to continue its underground mining operations within Appin Colliery Area 7, located in the Southern Coalfield of New South Wales, by extracting coal from the Bulli Seam using longwall mining techniques. Appin Colliery is one of three operating underground mines managed by Illawarra Coal south of Sydney.

A number of natural features and items of surface infrastructure have been identified in the vicinity of the proposed longwalls, including the Nepean River, creeks, cliffs, steep slopes, roads, the HW2 Hume Highway, the Main Southern Railway, the Upper Canal system, electrical services, telecommunications services, groundwater bores, survey control marks and building structures.

This report supports an application for approval of a Subsidence Management Plan (SMP) for the development of longwall roadways by first workings and the secondary extraction of coal from Longwalls 705 to 710, **see Approved Plan**.

The proposed mining method uses continuous miner and longwall equipment to develop and extract the coal from the longwall panel. Illawarra Coal has recently mined longwalls (Longwall LW701) in the vicinity of the proposed workings in accordance with the approved SMP for Longwalls 701 to 704.

A condition of the mining lease (which is granted under the *Mining Act 1992*) is that the leaseholder shall prepare and have approved a Subsidence Management Plan prior to commencing any underground mining operations which will potentially lead to subsidence of the land surface. This process is administered by the Department of Primary Industries Minerals (DPIM). The specific requirements for gaining approval of an SMP are set out in the *Guideline for Applications for Subsidence Management Approvals (Department of Mineral Resources, 2003)*.

Approval is sought for the SMP for Longwalls 705 to 710 as per the subsidence management approval process. In accordance with the relevant DPIM guidelines, this report provides details on the:

- SMP Area
- Proposed mining system and resource recovery
- Site conditions within the SMP Area
- Surface and sub-surface features within the SMP Area
- Subsidence predictions
- Government and community consultation
- Statutory requirements
- Subsidence impacts associated with the proposed mining.

This assessment (**Volume 1 – Written Report**) and the SMP for the extraction of Longwalls 705 to 710 has been developed using the principals of risk management and the *New Approval*

Process for Management of Coal Mining Subsidence (NSW Mineral Resources, 2003). The SMP itself is presented as **Volume 2** of the submission.

Mine Subsidence Engineering Consultants (MSEC) were commissioned by Illawarra Coal to study the mining proposal, to identify natural features and all surface infrastructure, and to prepare subsidence predictions and impact assessments for these features. The MSEC report is included in **Appendix A** and key conclusions are presented in this Written Report. Further impact assessments for terrestrial and aquatic ecology, surface water quality and flow, groundwater and Aboriginal and European heritage were undertaken by Biosis Research, The Ecology Lab, Ecoengineers and Geoterra. These reports are provided in **Appendices B to H**.

## 1.2. THE APPLICANT

The owner and operator of the underground operation at Appin Colliery Area 7 is Illawarra Coal, which is a wholly owned subsidiary of BHP Billiton. Illawarra Coal's three operating mines in the Illawarra region produce hard coking coal, approximately 65% of which is consumed at steelworks in Port Kembla and Whyalla, while the remainder is exported.

## 1.3. APPROVALS SOUGHT

### 1.3.1. SMP Approval

This SMP application seeks approval for the activity of developing the longwall roadways associated with Longwall panels 705 to 710 and the mining of coal via the longwall method within Appin Colliery Area 7 (the Activity) (refer **Figure 1.1**). The Activity includes the monitoring, mitigation and remediation measures proposed in this report and the SMP to minimise the impacts from the proposed mining. An aerial photograph of the area to be mined is provided in **Figure 2.1**.

### 1.3.2. Part 5 Approval under the *Environmental Planning and Assessment Act 1979*

The DPIM aims to promote the responsible development of the State's resources for the community's benefit and in doing this must administer a range of environmental legislation that is applicable to mining in NSW. The Department is concerned to ensure that any adverse effects of mining are minimised, and that a consistent high standard of environmental protection and rehabilitation is practiced throughout NSW.

Longwalls 705 to 710 are within an existing mining lease, where there is an existing mine. Appin Colliery is subject to the Wollondilly Local Environment Plan, which adopts Clauses 35 and Schedule 1(7) of the Environmental Planning and Assessment Model Provisions. Under these provisions a Development Consent is therefore not required for the project. However, the *EP&A Act* requires that DPIM comply with Part 5 when determining the SMP application for Longwalls 705 to 710. This report provides information on the environmental impacts of the Activity (the activity being the proposed mining of Longwalls 705 to 710 and the mitigation and rehabilitation measures that will be implemented to minimise impacts from this mining).

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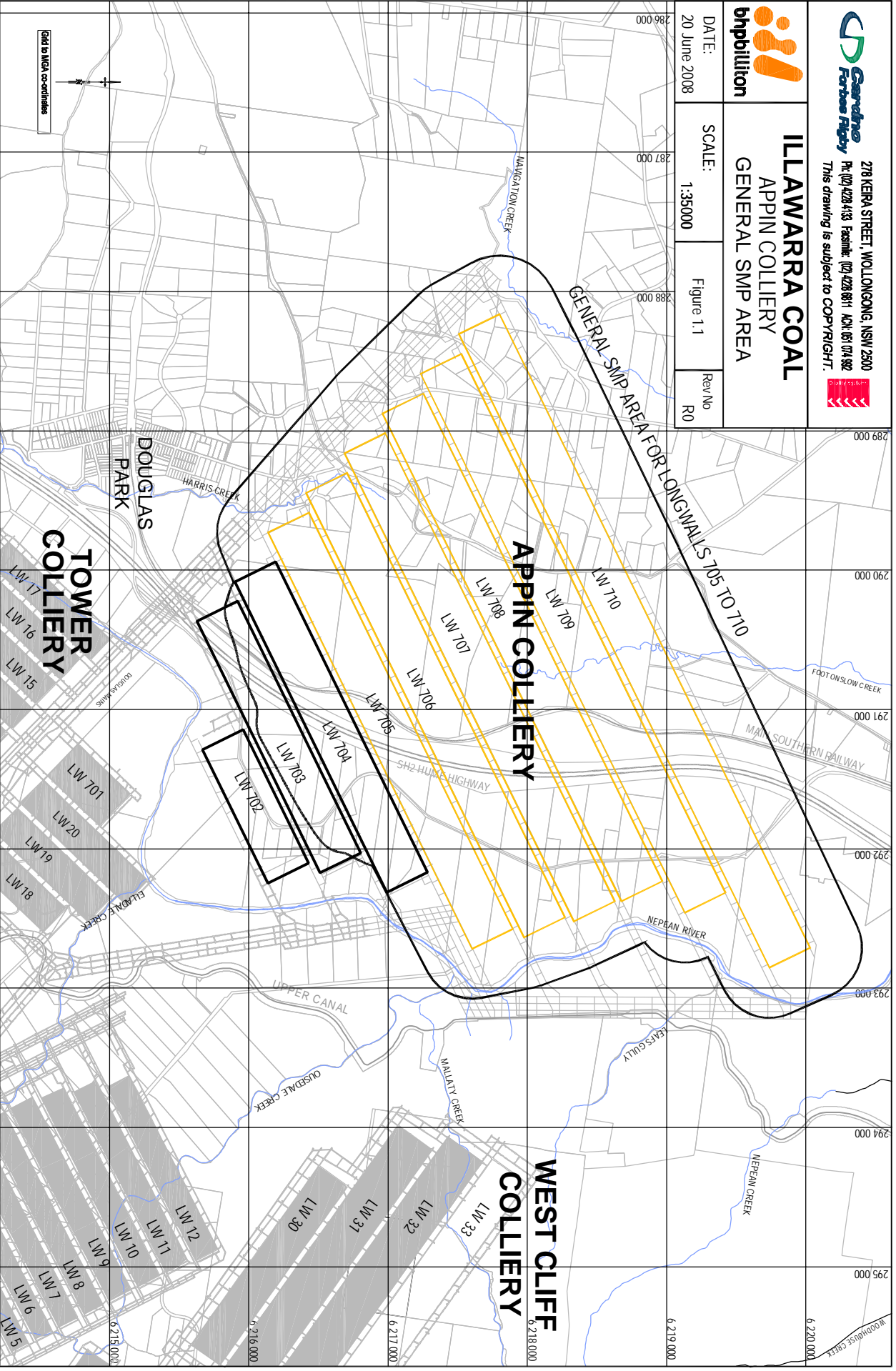
- Provides the DPIM with the information required by the *EP&A Act* for DPIM to be able to comply with the requirements imposed on DPIM by Part 5 of the *EP&A Act* in assessing the SMP application for the Activity

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**ILLAWARRA COAL**  
 APPIN COLLIERY  
 GENERAL SMP AREA

DATE: 20 June 2008	SCALE: 1:35000	Figure 1.1	Rev No R0
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- Has also been prepared in accordance with the *Guideline for Applications for Subsidence Management Approvals* (Department of Mineral Resources, 2003) to seek approval for the SMP for Longwalls 705 to 710.

This report demonstrates that for the purposes of Part 5 of the *EP&A Act* the proposed Activity does not significantly affect the environment and accordingly an EIS is not required for this Activity.

#### **1.4. LAND OWNERSHIP**

The SMP Area encompasses land owned by private landowners, commercial landowners and state government (refer **Plan 5**).

#### **1.5. FIRST WORKINGS APPROVAL**

##### **1.5.1. First working application**

As stated above this SMP application is for approval of both the mining of Longwalls 705 to 710 by longwall mining methods and the development of the roadways, by way of first workings, which delineate Longwalls 705 to 710.

#### **1.6. PRIOR APPROVALS**

SMP approval for mining of Longwalls 701 to 704 to the south of Longwalls 705 to 710 was granted on 1 November 2006.

##### **1.6.1. SMP Study Team**

The specialist studies undertaken for the Longwalls 705 to 710 SMP include:

- Subsidence (Mine Subsidence Engineering Consultants) – **Appendix A**
- Water Quality Subsidence Impact Assessment (Ecoengineers) – **Appendix B**
- Aquatic Ecology Subsidence Impact Assessment (The Ecology Lab) – **Appendix C**
- Flora and fauna Subsidence Impact Assessment (Biosis Research) – **Appendix D**
- Cultural Heritage Subsidence Impact Assessment (Biosis Research) – **Appendix E**
- Stakeholder Consultation – **Appendix F**
- Subsidence Risk Assessment (AXYS Consulting) – **Appendix G**
- Hydrogeological Subsidence Impact Assessment (Geoterra) – **Appendix H**.

This report refers to a number of different areas relevant to the mining proposal. These are the SMP Area and the Extent of Workings, as shown in the **Approved Plan**. These are further explained below.