

PROPOSED WARKWORTH EXTENSION

Preferred Project Report

September 2011



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Preferred Project Report

Final Report

Report J11058RP1 | Prepared for Warkworth Mining Limited | 22 September 20 11

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This Preferred Project Report (the Report) has been prepared in accordance with the brief provided by the Client and has relied upon the information collected at or under the times and conditions specified in the Report. All findings, conclusions or recommendations contained within the Report are based only on the aforementioned circumstances. Furthermore, the Report is for the use of the Client only and no responsibility will be taken for its use by other parties.

Document Control

Version	Date	Prepared by	Reviewed by
1	1 September	Duncan Peake/Brett McLennan	Paul Mitchell
2	20 September	Brett McLennan	Paul Mitchell

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F	Mr Robert Gillespie – Economic costs and benefits of environmental restrictions
G	Mr Robert Gillespie - Alternative coal resources
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1 Introduction

1.1 Background

Warkworth Mining Limited (WML) operates Warkworth Mine, an existing open cut coal mine located approximately 15 kilometres (km) southwest of Singleton. The mine currently operates under a development consent issued by the then Minister for Planning in May 2003 under Part 4 of the New South Wales (NSW) *Environmental Planning and Assessment Act 1979* (EP&A Act) and a Commonwealth approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) granted by the First Assistant Secretary of the Approvals and Wildlife Division on 18 February 2004. The local context of Warkworth Mine is provided in Figure 1.1.

On 1 March 2010, an application for Project Approval under the EP&A Act was lodged with the NSW Minister for Planning for an extension to Warkworth Mine. An Environmental Assessment (EA) was lodged with the Department of Planning (now known as the Department of Planning and Infrastructure (DP&I)) on 28 April 2010 in accordance with the Director Generals' Requirements (DGRs). A referral to assess the proposed Warkworth Extension under the EPBC Act was lodged on 27 August 2009 and was subsequently modified and resubmitted on 2 September 2009. On 20 October 2009, the Acting Assistant Secretary determined that the proposed Warkworth Extension was or was likely to have a significant impact on matters of national environmental significance (NES) and, therefore, constituted a 'controlled action'. The relevant assessment pathway for the referral was decided to be via the 'accredited assessment' under the bilateral agreement between the Commonwealth and NSW governments. The EA was placed on public exhibition from 30 April to 15 June 2010.

The proposal includes all aspects of existing operations for Warkworth Mine, specifically maintaining approved production levels of up to 18 million tonnes per annum (Mtpa) of run of mine (ROM) coal extraction and 13 Mtpa of ROM coal processing at the Warkworth CPP. The key components of the proposed Warkworth Extension include:

- extending the two main pits at Warkworth Mine to the west;
- the completion, filling and rehabilitation of other smaller pits;
- the transfer of overburden and coal, between Warkworth Mine and Mount Thorley Mine;
- progressive replacement of the aging equipment fleet to allow for improved mining efficiencies;
- upgrading of some support infrastructure;
- closure of Wallaby Scrub Road; and
- continuing the life of the Mount Thorley coal preparation plant (CPP) and other mining infrastructure at Mount Thorley Mine currently used as part of the integrated Mount Thorley Warkworth (MTW) operations beyond the expiry of the Mount Thorley development consent in 2017.

The proposed Warkworth Extension also includes a substantial offsets package to mitigate impacts from clearing of woodland.

A total of 110 submissions were received during the public exhibition period, including eight from government agencies, 19 from non-government organisations and 83 from the community. A response to

submissions (RTS) was prepared and submitted to DP&I in August 2010 which addressed the submissions received.

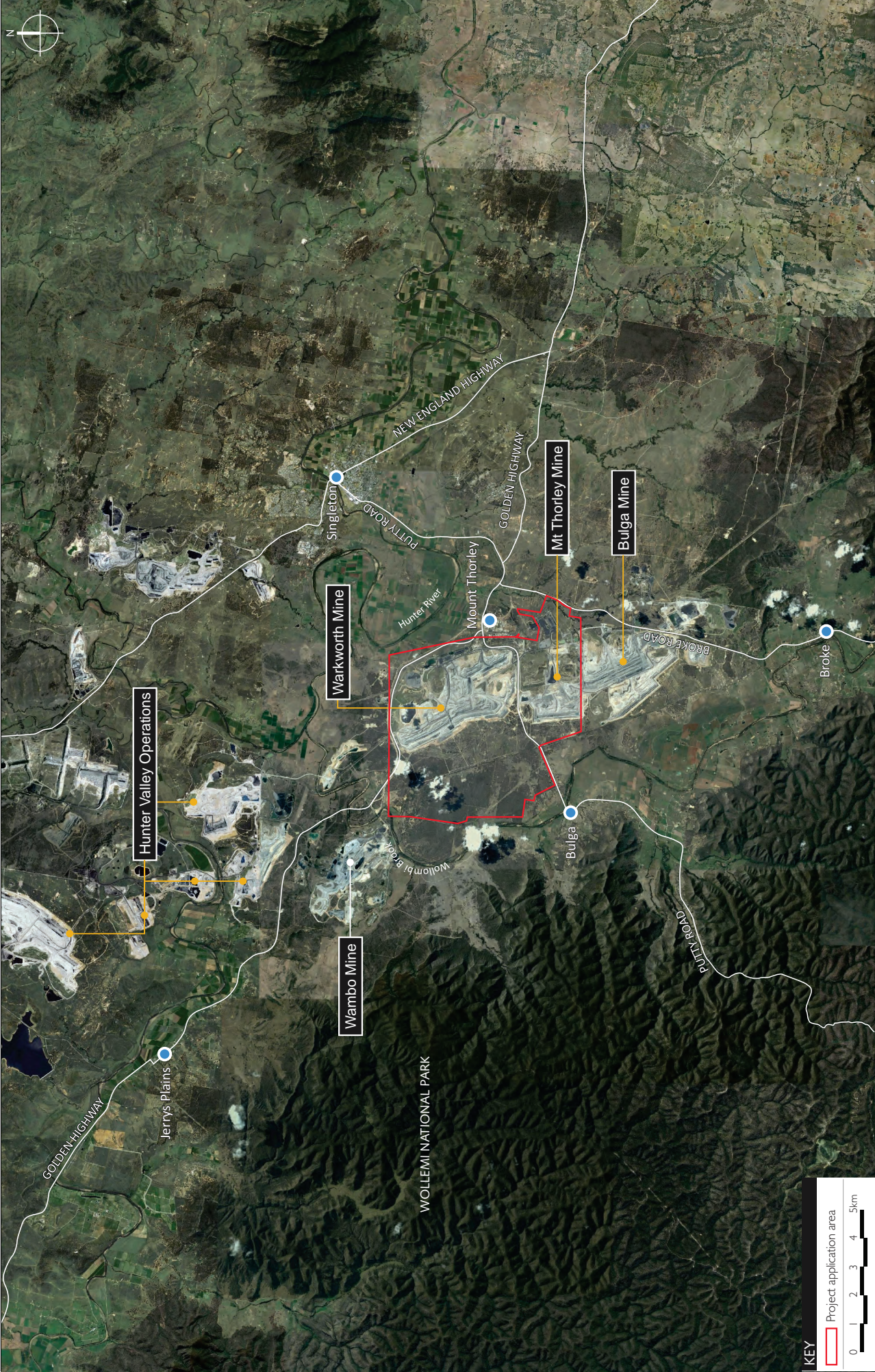
At a meeting between DP&I and the proponent on 17 August 2011, DP&I requested that a Preferred Project Report (PPR) be prepared for the project. This was confirmed in writing in a letter from DP&I to RTCA on 28 August 2011.

1.2 Structure of this report

As discussed in Chapter 2 of this PPR, there have not been many changes to the proposed Warkworth Extension as described in the EA that was placed on public exhibition. The changes to the project mainly relate to the offset package for woodland clearing and environmental management.

This report has been prepared as a PPR as requested by DP&I. It is set out as follows:

- Chapter 2 details changes to the project made since the exhibition of the EA;
- Chapter 3 provides details on ecological matters;
- Chapter 4 provides an update on noise matters;
- Chapter 5 provides an update on blasting matters;
- Chapter 6 provides an update on air quality and greenhouse gas matters;
- Chapter 7 provides an update on Aboriginal cultural heritage matters;
- Chapter 8 provides an update on visual matters;
- Chapter 9 responds to specific queries raised by DP&I as discussed above; and
- Chapter 10 provides a conclusion.



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2 The proposal

2.1 Introduction

Since publication of the RTS, consideration of the public submissions and following a rigorous process with government agencies, there have been a number of significant improvements made to the proposed Warkworth Extension to minimise the environmental impacts of the project. Principally these changes involve further compensation in respect of the removal of woodland, through provision of additional offsets and rehabilitation. These changes have been communicated in various documents provided to DP&I post public exhibition and are summarised below.

The only changes to the proposed Warkworth Extension are those changes described below.

2.2 Rehabilitation

Rehabilitation of mined land included as part of the proposed Warkworth Extension was described in Section 5.11.3 of the EA and detailed on various figures, primarily Figure 5.5 (Volume 1). The main elements of rehabilitation outlined in the EA consisted of approximately 781 ha of EEC woodland communities, approximately 218ha of trees over grass not conforming to any particular woodland community (but providing useful fauna habitat) and approximately 1,313 ha of grassland communities with a native component.

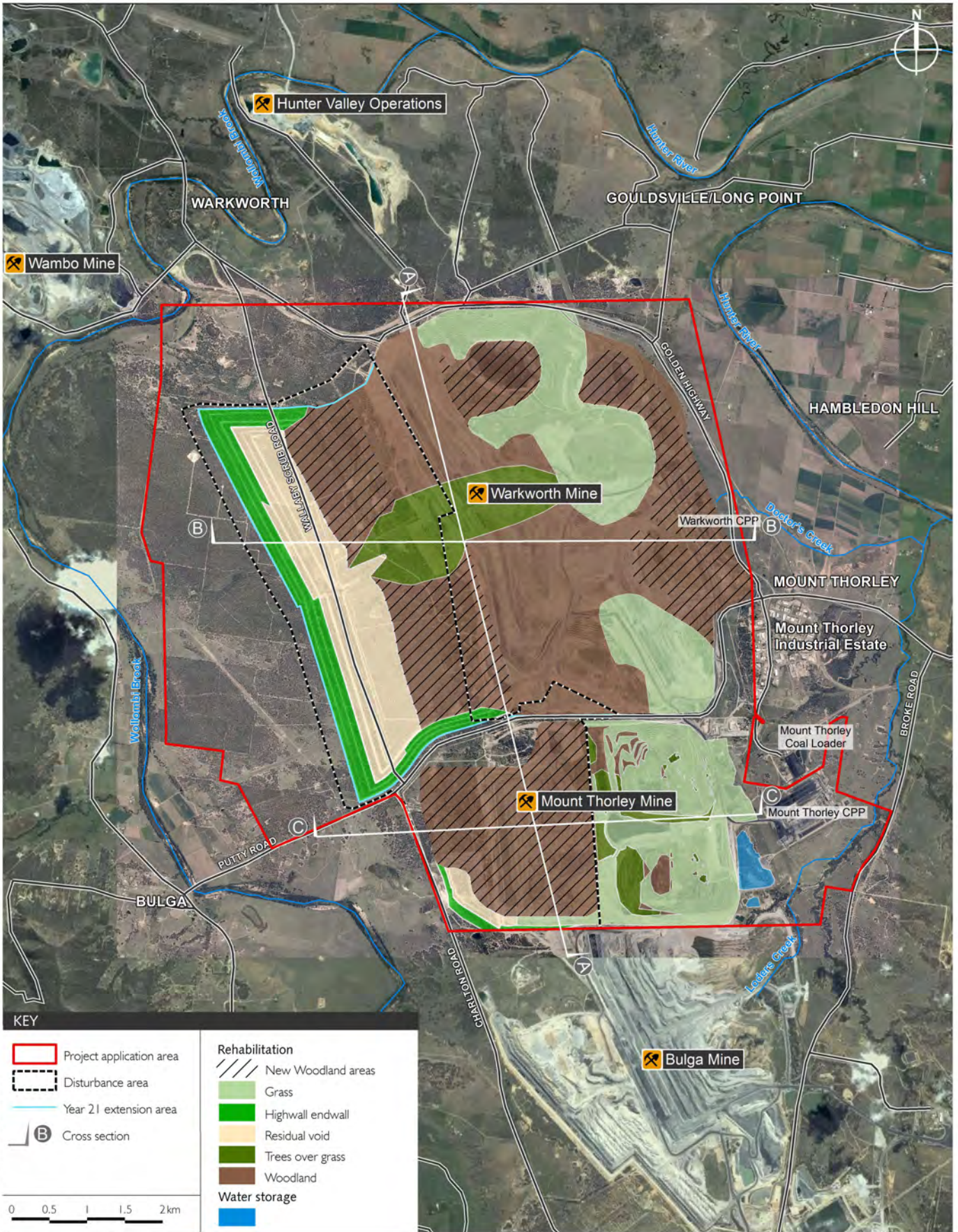
On 4 February 2011, it was confirmed that approximately 781 ha proposed for rehabilitation would be rehabilitated to the Central Hunter Grey Box – Ironbark Woodland and Central Hunter Ironbark – Spotted Gum – Grey Box Forest EECs (collectively known as the CH Grey Box – Ironbark – Spotted Gum communities). In June 2011, based on feedback from DP&I and OEH, the area of CH Grey Box – Ironbark – Spotted Gum communities to be rehabilitated was increased by approximately 1,333.4 ha to a total of approximately 2,114 ha. This decision was confirmed in a letter to DP&I on 30 June 2011 which stated that:

This proposed rehabilitation combined with rehabilitation from other mines aimed at regeneration of this community will restore large areas across the valley floor. Rehabilitation combined with existing remnants and regrowth which are secured currently in previously approved mining offsets provide long term conservation certainty for this community.

Our expert ecologist, Dr David Robertson from Cumberland Ecology, has advised that rehabilitating the overstorey of CH Grey Box-Ironbark-Spotted Gum communities is well established on mined lands, however recommends further research on returning the ground stratum species to enable the full community to be represented in rehabilitation.

Based on this recommendation, the proponent committed to contributing up to \$500,000 to research aimed at improving rehabilitation of ground stratum plant species of the Central Hunter Grey Box-Ironbark-Spotted Gum communities. Further information on this is provided in Chapter 3.

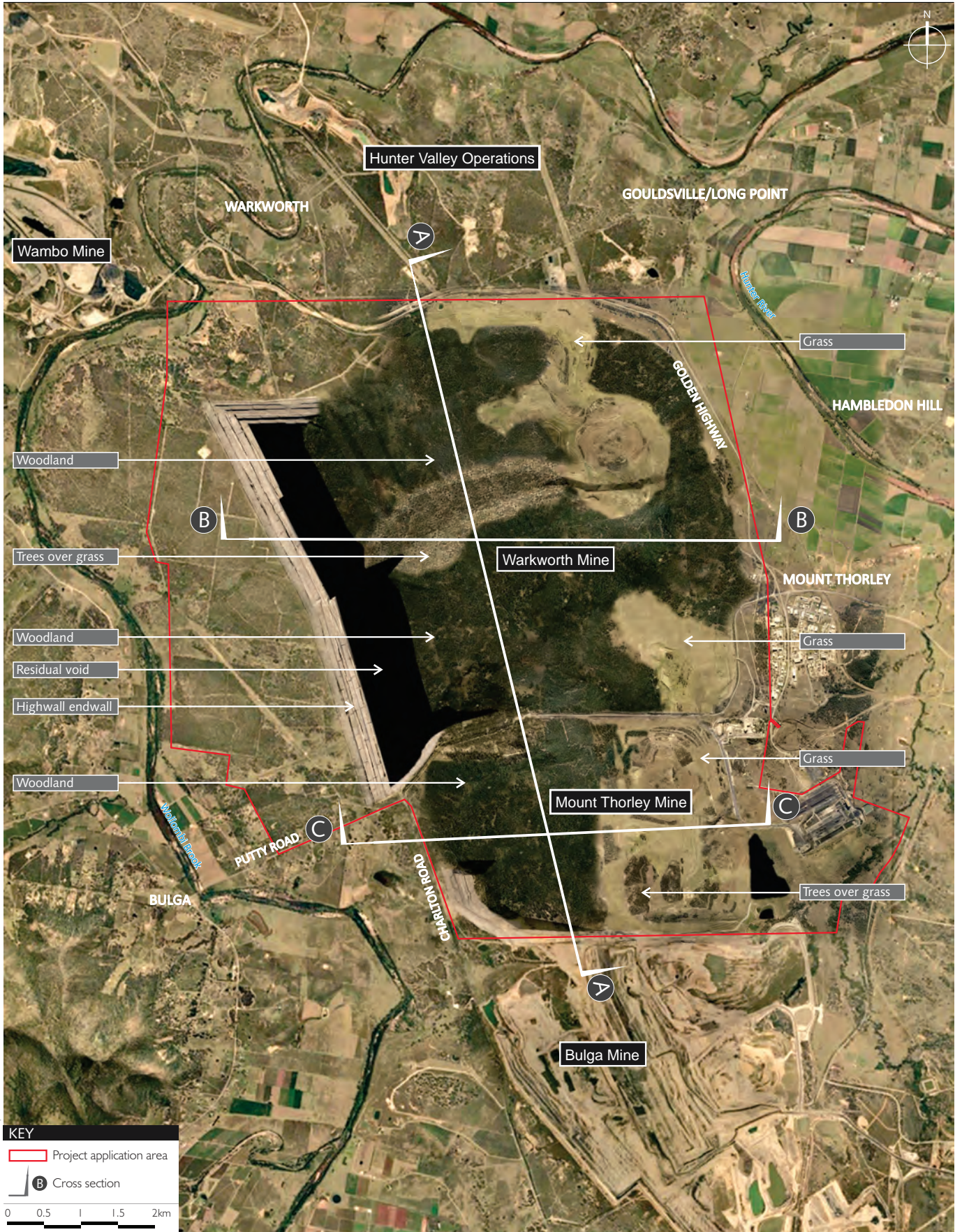
The significant additional rehabilitation commitments are shown on the indicative final landform as hatched areas on Figure 2.1. Conceptual final landform visualisations and cross sections are shown in Figures 2.2 to 2.6. Details on commitments to rehabilitation are provided in the Statement of Commitments in Appendix H.



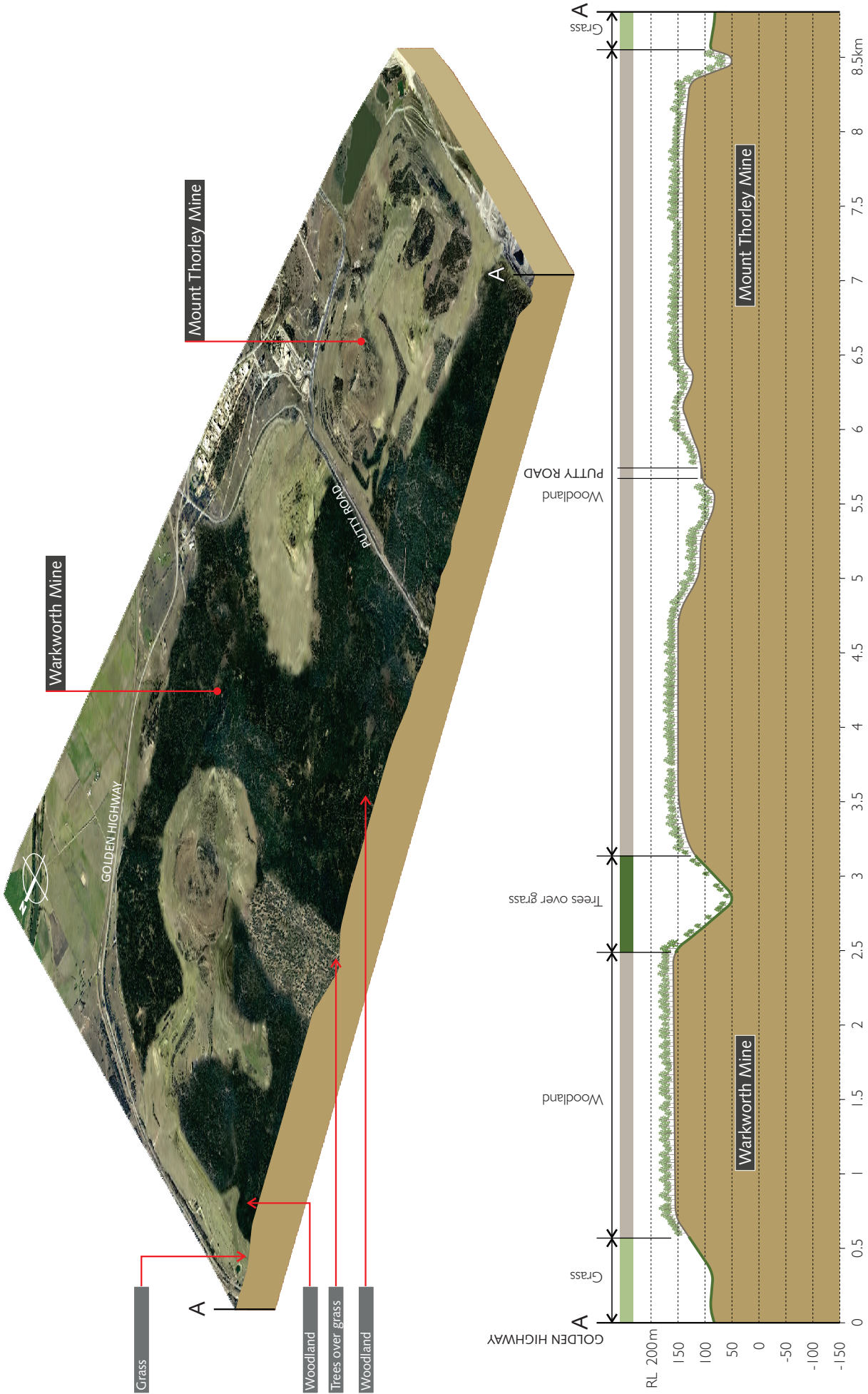
Indicative final landform

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FIGURE 2.1



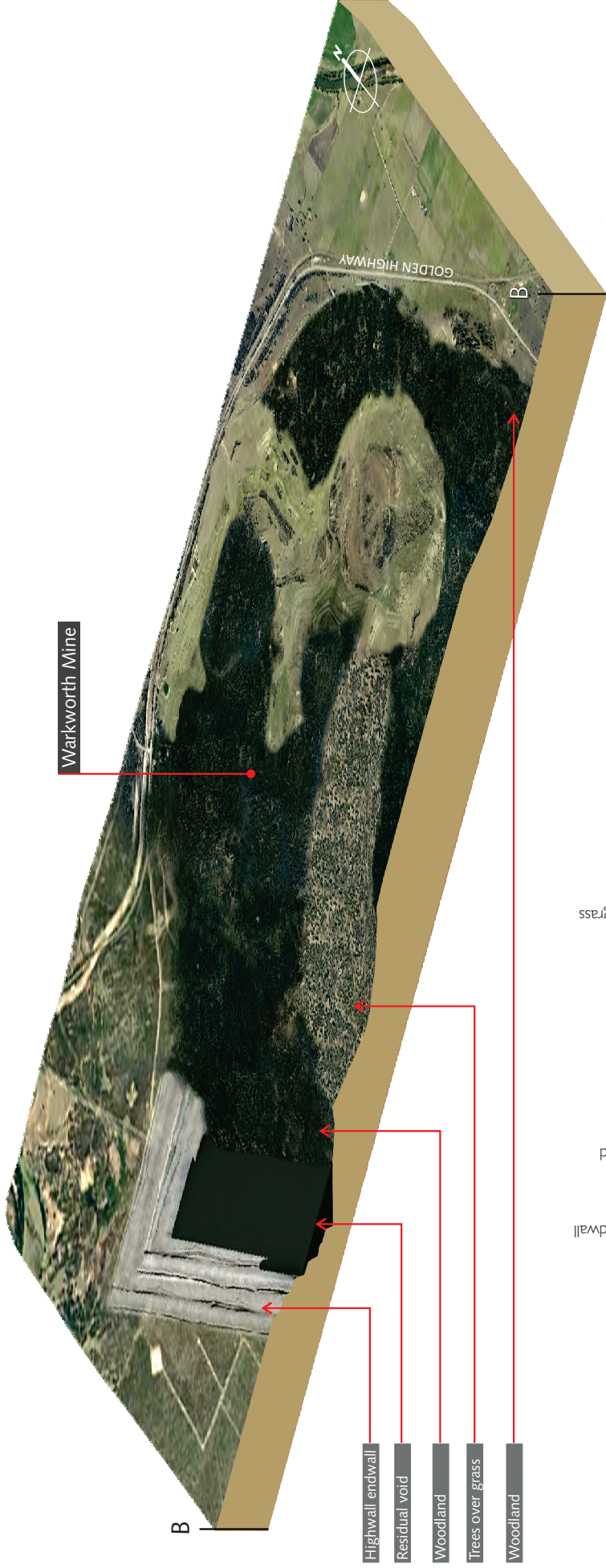
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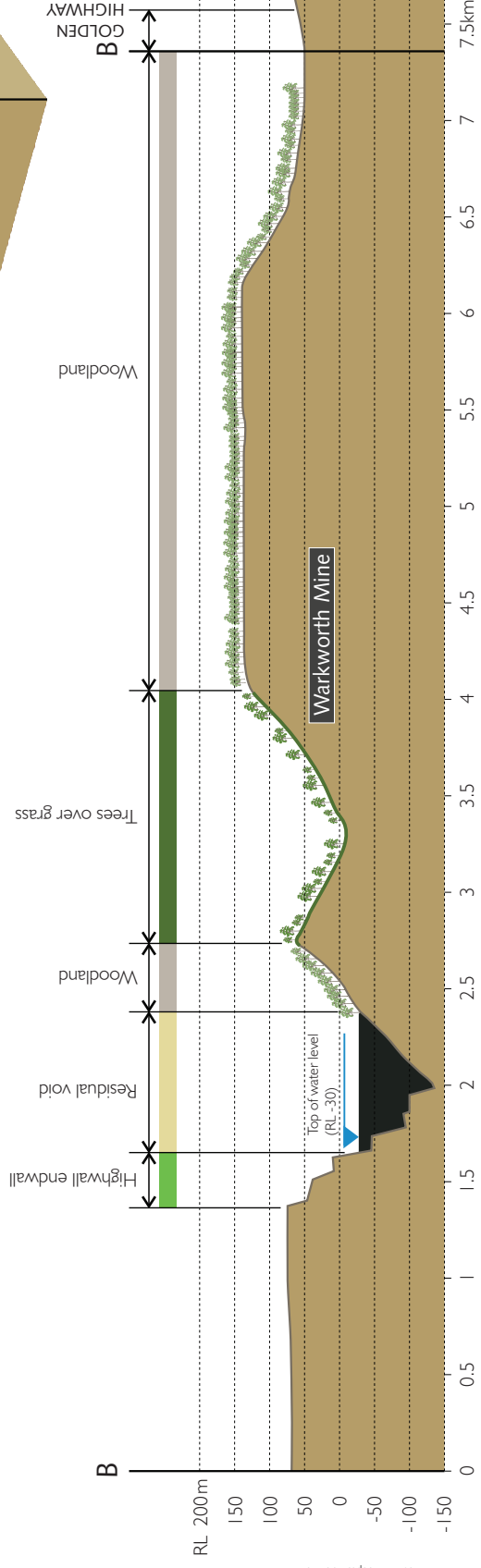
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Indicative final landform visualisation and cross section A-A
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FIGURE 2.3

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- Highwall endwall
- Residual void
- Woodland
- Trees over grass
- Woodland



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