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# Hazelwood Coal Mine Fire Inquiry

Submission from the Victorian Government

Latrobe Valley Coal Mines Rehabilitation

August 2015



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Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne.

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# 1. Glossary

Common terms used throughout this Submission include:

AH Act	<i>Aboriginal Heritage Act 2006</i> (Vic)
Board of Inquiry	The Board of Inquiry into the Hazelwood Coal Mine Fire, comprising The Honourable Bernard Teague AO (Chair), Professor John Catford and Mrs Anita Roper
Declared Mine	A mine specified in a Ministerial Order under section 7C of the <i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic) because there are geotechnical or hydrogeological factors within the mine that pose a significant risk to public safety, the environment or infrastructure
Dangerous Goods Act	<i>Dangerous Goods Act 1985</i> (Vic)
Department Head	Secretary to the Department of Economic Development, Jobs, Transport and Resources
EE Act	<i>Environment Effects Act 1978</i> (Vic)
EP Act	<i>Environment Protection Act 1970</i> (Vic)
Former Board of Inquiry	The Board of Inquiry into the Hazelwood Coal Mine Fire (2014), comprising the Honourable Bernard Teague AO (Chair), Professor John Catford and Ms Sonia Petering
Greenfield's Inquiry Report	Economic Development and Infrastructure Committee of Parliament, <i>Inquiry into Greenfields Mineral Exploration and Project Development in Victoria</i> (May 2012)
Hazelwood Coal Mine	The open cut coal mine at Hazelwood
Hazelwood Coal Mine Fire	The fire at the Hazelwood Coal Mine in February and March 2014
Heritage Act	<i>Heritage Act 1995</i> (Vic)
Inquiry	The re-opened Inquiry into the Hazelwood Coal Mine Fire
KPMG Report	KPMG, <i>Options for Financial Assurance for Rehabilitation of Mine and Quarry Sites in Victoria</i> (June 2011)
Latrobe Planning Scheme	Latrobe Planning Scheme sets out the framework for decisions about the use and development of land in Latrobe City, in accordance with the <i>Planning and Environment Act 1987</i> (Vic)
Latrobe Valley coal mines	The Loy Yang, Hazelwood and Yallourn coal mines
Licensee	Holder of a mining licence under the <i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic)
Loy Yang Complex Agreement	An agreement made between the State Electricity Commission of Victoria (SECV), Loy Yang Power (LYP) and Edison Mission Energy Australia (EME) on 29 March 1997
Minister	Minister for Energy and Resources
Ministerial Guidelines	Ministerial Guidelines on Notices and Injunctions Relating to Regulation of Earth Resources in Victoria, issued by the former Minister for Energy and Resources under section 120A of the <i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic)
MR(SD) Act	<i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic)
MR(SD) Amendment 2012	<i>Mineral Resources (Sustainable Development) Amendment Act 2012</i> (Vic)

MR(SD) Amendment 2014	<i>Mineral Resources (Sustainable Development) Amendment Act 2014 (Vic)</i>
MR(SD) Regulations	<i>Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013 (Vic)</i>
NT Act	<i>Native Title Act 1993 (Cth)</i>
OHS Act	<i>Occupational Health and Safety Act 2004 (Vic)</i>
PE Act	<i>Planning and Environment Act 1987 (Vic)</i>
Rehabilitation Bond Review Project	Department of Economic Development, Jobs, Transport and Resources, <i>Project Plan: Rehabilitation Bond Reviews</i> (June 2015)
Resources Legislation Amendment Bill	<i>Resources Legislation Amendment Bill 2015</i>
This Submission	The Victorian Government's Submission to the Hazelwood Coal Mine Fire Inquiry, titled <i>Submission from the Victorian Government Latrobe Valley Coal Mines Rehabilitation</i>
TOS Act	<i>Traditional Owner Settlement Act 2010 (Vic)</i>
Water Act	<i>Water Act 1989 (Vic)</i>
Workplace Injury Rehabilitation and Compensation Act	<i>Workplace Injury Rehabilitation and Compensation Act 2013 (Vic)</i>
Yallourn Environmental Monitoring Plan	Part of the Yallourn 1996 work plan, outlining inspection and auditing of environmental monitoring
Yallourn Mine Batter Failure Inquiry	Mining Warden's <i>Inquiry into the Yallourn Mine Batter Failure</i> (2007)
2002 Rehabilitation Bond Discussion Paper	Former Department of Natural Resources and Environment, <i>Discussion Paper: Review of NRE's Policy on the Determination and Application of Rehabilitation Bonds for Mining and Extractive Industries</i> (April 2002)
2004 Rehabilitation Bond Position Paper	Former Department of Primary Industries, Minerals and Petroleum Division, <i>Rehabilitation Bonds for the Mining and Extractive Industries</i> (March 2004)
2004 Rehabilitation Plans Guidelines	Former Department of Primary Industries, Minerals and Petroleum Division, <i>Guidelines for Environmental Management in Exploration and Mining: Rehabilitation Plans and Other Environmental Aspects of Work Plans</i> (July 2004)
2007 Draft Environmental Guidelines	Former Department of Primary Industries, <i>Draft Environmental Guidelines, Establishment and Management of Rehabilitation Bonds for the Mining and Extractive Industries</i> (November 2007)
2010 Rehabilitation Bond Policy	Former Department of Primary Industries, Earth Resources Regulation, <i>Establishment and Management of Rehabilitation Bonds for the Mining and Extractive Industries</i> (September 2010)
2014 Inquiry Report	Hazelwood Mine Fire Inquiry Report 2014
2015 Rehabilitation Bond Review Project plan	Department of Economic Development, Jobs, Transport and Resources Rehabilitation Bond Review Project plan 24 June 2015



The following acronyms are used throughout this Submission:

DEDJTR	Department of Economic Development, Jobs, Transport and Resources
DNRE	Former Department of Natural Resources and Environment
DPI	Former Department of Primary Industries
DSDBI	Former Department of State Development, Business and Innovation
DSE	Former Department of Sustainability and Environment
EES	Environment Effects Statement
EME	Edison Mission Energy Australia Limited
EPA	Environment Protection Authority, Victoria
ERC	Environment Review Committee
ERR	Earth Resources Regulation Branch, in the Regulation and Compliance Division of the Department of Economic Development, Jobs, Transport and Resources. The Regulation and Compliance Division forms part of the Agriculture, Energy and Resources group of DEDJTR.
LYP	Loy Yang Power Limited
RAMP	Risk Assessment and Management Plan
RMP	Rehabilitation Master Plan
SECV	State Electricity Commission of Victoria, a former body corporate established under the <i>State Electricity Commission Act 1958 (Vic)</i>
TOR	Terms of Reference made by Order in Council on 26 May 2015
TRB	Technical Review Board. The Technical Review Board provides independent advice to assist the Minister and Department of Economic Development, Jobs, Transport and Resources on mine and quarry stability issues specifically in relation to reducing risks to the environment, public safety and infrastructure.



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## 2. Introduction

### Hazelwood Coal Mine Fire Inquiry 2014

- 2.1 In February and March 2014, a fire burned in the Hazelwood Coal Mine. The fire required significant resources to bring it under control, and impacted on local communities, particularly in the town of Morwell.
- 2.2 An independent inquiry into the circumstances of the Hazelwood Coal Mine Fire was held in 2014. The Board of Inquiry conducted a thorough investigation into the Hazelwood Coal Mine Fire, which included community consultations, public submissions and 14 days of public hearings.
- 2.3 The 2014 Inquiry Report was tabled in parliament on 2 September 2014.
- 2.4 The Victorian Government has committed to implementing the 2014 Inquiry Report Recommendations and Affirmations, with \$30 million announced in the 2015/16 Victorian budget to fulfil this commitment.<sup>1</sup>
- 2.5 The Hazelwood Mine Fire Inquiry Implementation Monitor has been appointed to monitor and report on the implementation of the 2014 Inquiry Report by the Victorian Government and the Hazelwood Coal Mine operator, GDF Suez, annually for three years.

### Reopened Hazelwood Coal Mine Fire Inquiry

- 2.6 On 26 May 2015, The Honourable Lily D'Ambrosio MP, Minister for Energy and Resources, and The Honourable Jill Hennessy MP, Minister for Health, announced the reopening of the Hazelwood Mine Fire Inquiry.
- 2.7 On 26 May 2015, the Governor in Council appointed a Board of Inquiry into the Hazelwood Coal Mine Fire, chaired by The Honourable Bernard Teague AO, with Professor John Catford and Mrs Anita Roper as Board Members.
- 2.8 The Board of Inquiry will inquire into, and report on, whether the Hazelwood Coal Mine Fire contributed to an increase in deaths, measures to improve the health of the Latrobe Valley communities, options for rehabilitation of the Latrobe Valley coal mines and options to minimise the risk of fire at the Anglesea coal mine for the 2015/16 summer season.

### Victorian Government Submission – Latrobe Valley Coal Mines Rehabilitation

- 2.9 The Victorian Government welcomes the opportunity to assist the Board of Inquiry in regards to the rehabilitation of the Latrobe Valley coal mines.
- 2.10 This Submission has been prepared on behalf of all relevant departments and agencies of the Victorian Government.
- 2.11 This Submission responds to TOR 8 to 10, which appointed the Inquiry to inquire into and report on:

‘8. Short, medium and long term options to rehabilitate:

- (a) land on which work has been, is being or may lawfully be done in accordance with a work plan approved for the Hazelwood Mine, the Yallourn Mine, and the Loy Yang Mine

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<sup>1</sup> Victorian Budget 2015/16, Service Delivery Budget paper p 3, 12 – 15.

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- (b) land in relation to which an application for variation of the Work Plan is under consideration for the Hazelwood Mine, the Yallourn Mine, or the Loy Yang Mine.

9. For each rehabilitation option identified under paragraph 8:

- (a) whether, and to what extent, the option would decrease the risk of a fire that could impact the mine and if so, the cost of the option relative to the cost of other fire prevention measures
- (b) whether, and to what extent, the option would affect the stability of the mine
- (c) whether, and to what extent, the option would create a stable landform and minimise long term environmental degradation
- (d) whether, and to what extent, the option would ensure that progressive rehabilitation is carried out as required under the Mineral Resources (Sustainable Development) Act 1990
- (e) the estimated timeframe for implementing the option
- (f) the option's viability, any associated limitations and its estimated cost
- (g) the impact of the option on any current rehabilitation plans for each mine
- (h) whether, and to what extent, the option would impact the future beneficial use of land areas impacted by the mines
- (i) whether the option is otherwise sustainable, practicable and effective.

10. Having regard to the rehabilitation liability assessments that have been or will be reported in 2015 by the operators of each of the Hazelwood Mine, the Yallourn Mine, and the Loy Yang Mine, as required by the Mineral Resources (Sustainable Development) Act 1990, and to the outcome of the Rehabilitation Bond Review Project:

- (a) whether the rehabilitation liability assessments referred to above are adequate;
- (b) whether the current rehabilitation bond system, being one of the measures to provide for progressive rehabilitation by end of mine life as required under the Mineral Resources (Sustainable Development) Act 1990, is, or is likely to be, effective for the Hazelwood Mine, the Yallourn Mine, and the Loy Yang Mine; and
- (c) any practical, sustainable, efficient and effective alternative mechanisms to ensure rehabilitation of the mines as required by the Mineral Resources (Sustainable Development) Act 1990.'

2.12 The Victorian Government intends to make further submissions to the Board of Inquiry.

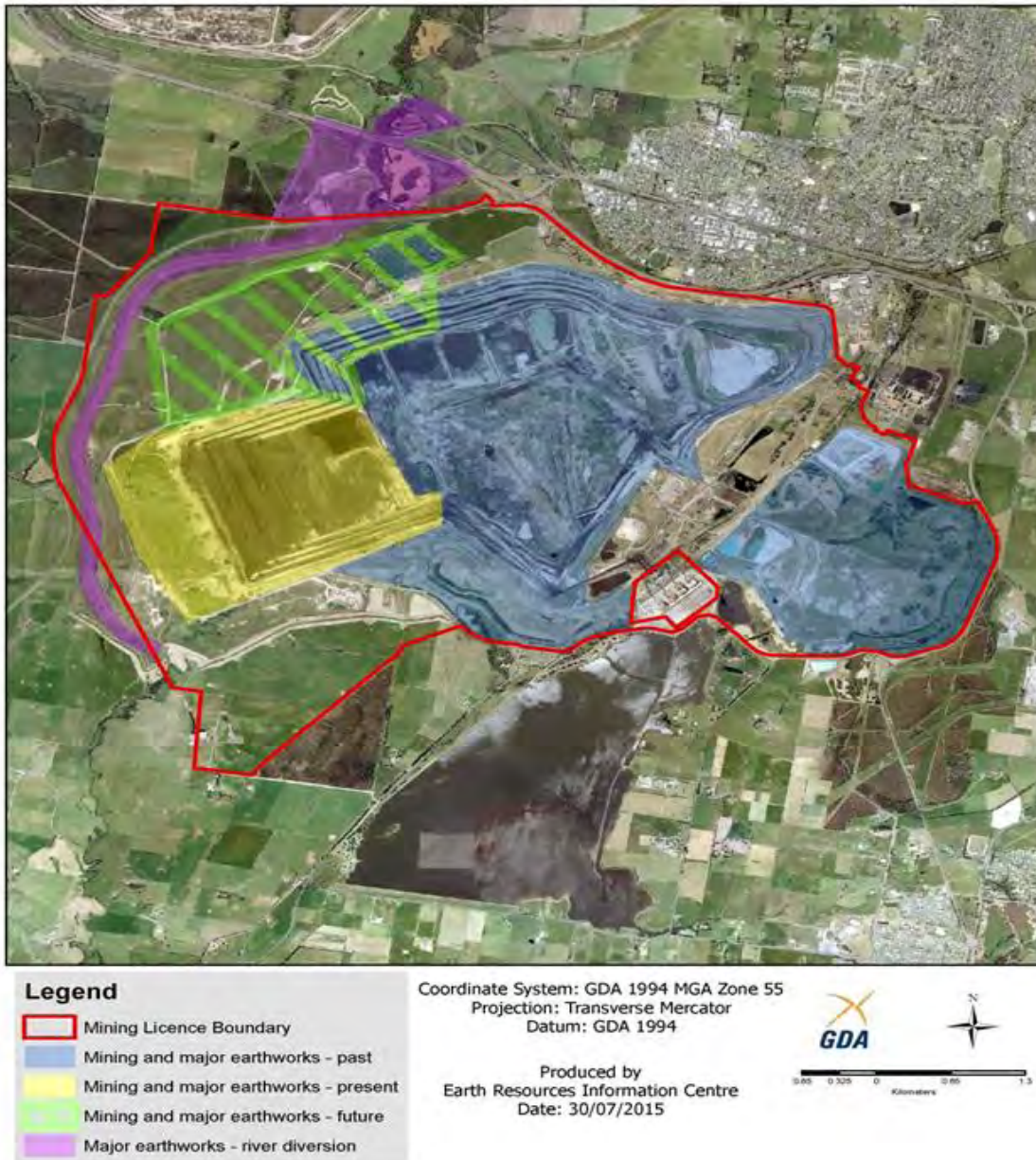
2.13 This Submission sets out:

- the legislative and regulatory frameworks for mine rehabilitation and bonds
- the Latrobe Valley coal mine work plans and rehabilitation plans
- an overview of current rehabilitation bonds, rehabilitation liability assessments and the Rehabilitation Bond Review Project
- actions to implement the recommendations in the 2014 Inquiry Report.

## Maps identifying the Latrobe Valley coal mine licence and work plan areas

- 2.14 The following section shows maps for each of the Latrobe Valley coal mines. These maps (**Figures 1-3**) show details of mining and major earthworks that have occurred in the past, present and that are planned for the future.
- 2.15 **Figure 1** sets out the mining licence boundary areas for the Hazelwood Coal Mine. It details past, present and future mining works and the major earthworks for the Morwell River diversion.

### Hazelwood Mining and Major Earthworks



**Figure 1: Hazelwood Coal Mine boundary areas**

#### Disclaimer

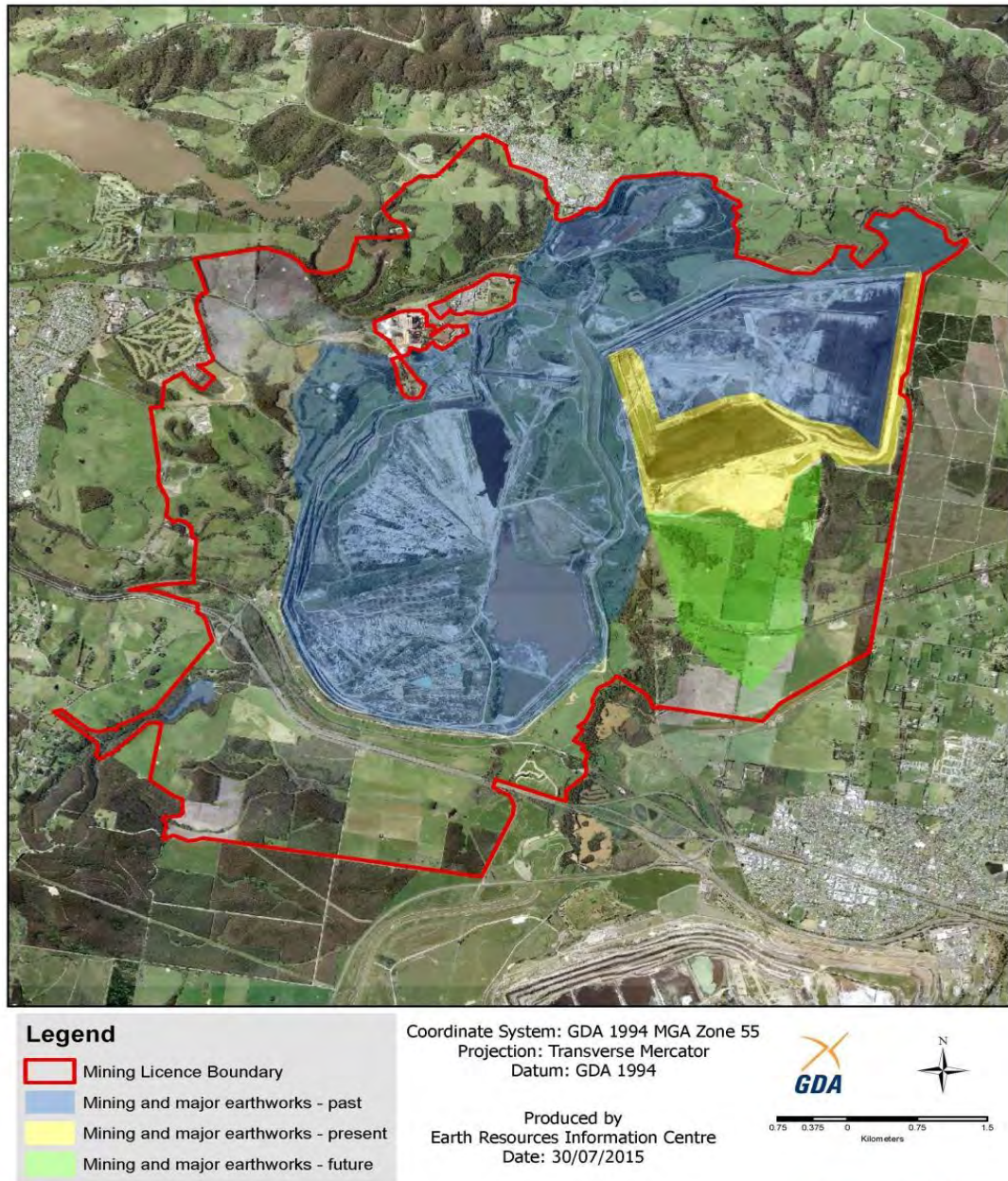
This plan depicts those areas where the Department considers that work may lawfully be carried out pursuant to the approved work plan for the mine and where rehabilitation work may need to be undertaken in accordance with the approved rehabilitation plan for the mine. This plan was prepared for the express purpose of assisting the Board of Inquiry to ascertain the scope of its jurisdiction under TOR 8.

The Department makes no warranty as to the accuracy of the plan and accepts no responsibility for any errors or omissions on the plan or any loss or damage that may be caused by its use.



2.16 **Figure 2** sets out the mining licence boundary areas for the Yallourn Coal Mine. It details past, present and future mining works.

### Yallourn Mining and Major Earthworks



**Figure 2: Yallourn Coal Mine boundary areas**

#### Disclaimer

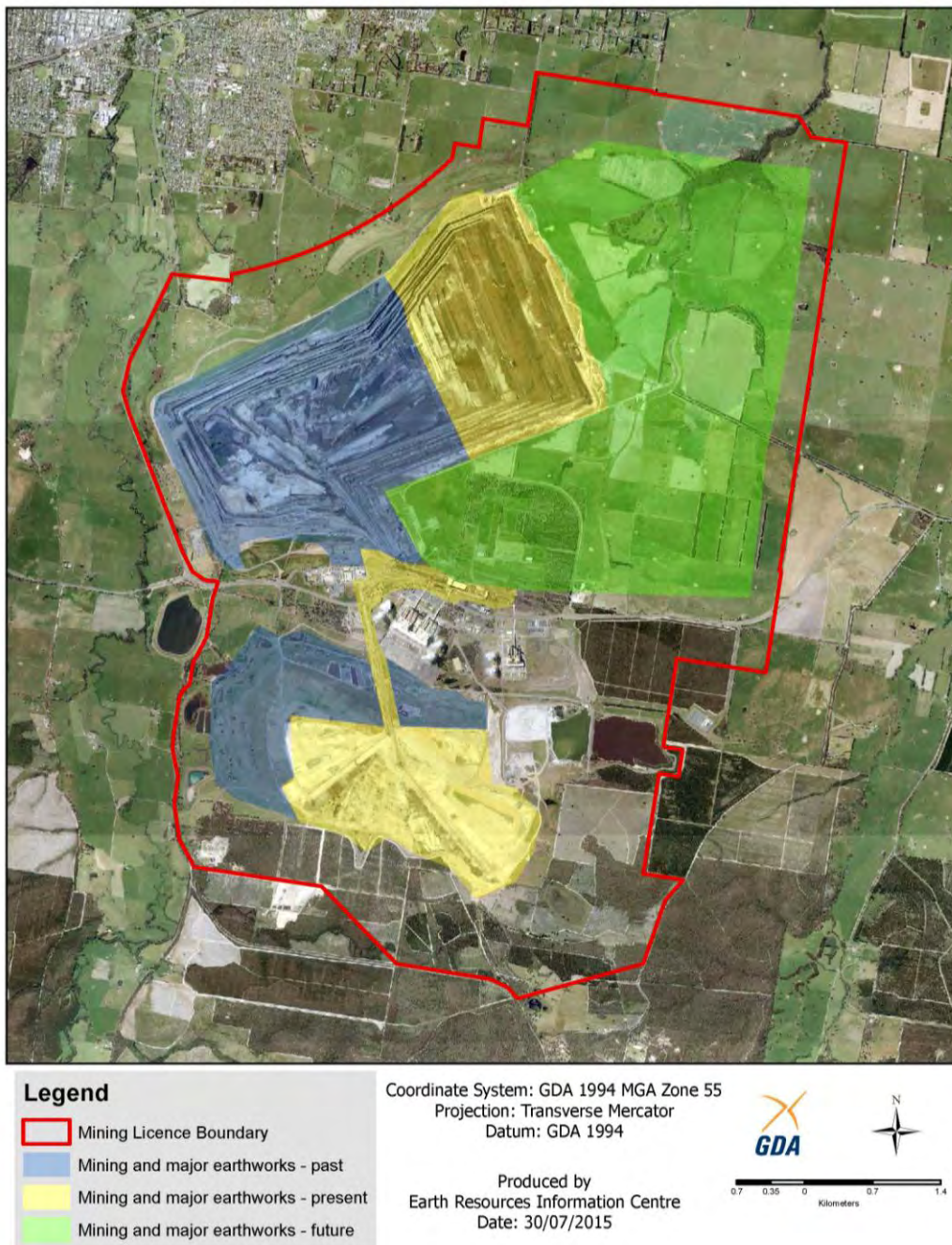
This plan depicts those areas where the Department considers that work may lawfully be carried out pursuant to the approved work plan for the mine and where rehabilitation work may need to be undertaken in accordance with the approved rehabilitation plan for the mine. This plan was prepared for the express purpose of assisting the Board of Inquiry to ascertain the scope of its jurisdiction under TOR 8.

The Department makes no warranty as to the accuracy of the plan and accepts no responsibility for any errors or omissions on the plan or any loss or damage that may be caused by its use.



2.17 **Figure 3** sets out the mining licence boundary areas for the Loy Yang Coal Mine. It details past, present and future mining works.

### Loy Yang Mining and Major Earthworks



**Figure 3: Loy Yang Coal Mine Boundary Areas**

#### Disclaimer

This plan depicts those areas where the Department considers that work may lawfully be carried out pursuant to the approved work plan for the mine and where rehabilitation work may need to be undertaken in accordance with the approved rehabilitation plan for the mine. This plan was prepared for the express purpose of assisting the Board of Inquiry to ascertain the scope of its jurisdiction under TOR 8.

The Department makes no warranty as to the accuracy of the plan and accepts no responsibility for any errors or omissions on the plan or any loss or damage that may be caused by its use.

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## 3. Overview of legislative and regulatory framework for coal mine rehabilitation and bonds

### Introduction and context

- 3.1 Coal mining is regulated in Victoria under the MR(SD) Act.
- 3.2 The MR(SD) Act and the MR(SD) Regulations impose an obligation on licensees:
- to rehabilitate land that has been mined in accordance with an approved rehabilitation plan
  - to enter into a rehabilitation bond for an amount determined by the Minister.
- 3.3 Rehabilitation is the process used to transform the mined area into a state that is suitable for the future use of the site after mining has finished.
- 3.4 The purpose of a rehabilitation plan is to establish a schedule for, and details of, progressive and final rehabilitation towards an expected use of the site on mine closure.<sup>2</sup>
- 3.5 The purpose of the bond is to pay for final rehabilitation if the mining licensee should default on its obligation to rehabilitate the land and to provide an incentive for licensees to comply with their rehabilitation obligations.<sup>3</sup>
- 3.6 This chapter describes the regulatory approach of the Victorian Government mining regulators to mine rehabilitation. It also provides an overview of the legislative and regulatory framework for rehabilitation of the Latrobe Valley coal mines.
- 3.7 Chapter 4 sets out the application of the regulatory framework to the Latrobe Valley coal mines. Chapter 5 sets out current rehabilitation bond amounts and the rehabilitation liability assessments of the Latrobe Valley coal mines.

### Statutory framework for coal mine rehabilitation

- 3.8 The MR(SD) Act aims to encourage mineral exploration and economically viable mining and extractive industries that make the best use of, and extract the value from, resources in a way that is compatible with the economic, social and environmental objectives of the State of Victoria.<sup>4</sup>
- 3.9 The MR(SD) Act and MR(SD) Regulations establish five key instruments to fulfil this purpose, which are relevant to the Latrobe Valley coal mining licences:
- licences
  - work plans
  - rehabilitation plans
  - community engagement plans

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<sup>2</sup> DPI, Minerals and Petroleum Division, *Guidelines for Environmental Management in Exploration and Mining: Rehabilitation Plans and Other Environmental Aspects of Work Plans* (July 2004).

<sup>3</sup> DNRE, *Discussion Paper: Review of NRE's Policy on the Determination and Application of Rehabilitation Bonds for Mining and Extractive Industries* (April 2002) at p 1.

<sup>4</sup> Section 1, MR(SD) Act.

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- environmental management plans.<sup>5</sup>
- 3.10 Under this regulatory framework, responsibility for rehabilitation lies with the relevant licensee, including:
- preparing rehabilitation plans
  - lodging rehabilitation bonds
  - progressively carrying out rehabilitation works
  - reporting on rehabilitation activities, expenditure and rehabilitation liability to the Minister.
- 3.11 The Minister is responsible for:
- assessing licence applications and imposing licence conditions
  - determining and reviewing community engagement plans, environmental management plans and the amount of rehabilitation bonds
- 3.12 The Department Head is responsible for approving work plans and variations to work plans, including rehabilitation plans.
- 3.13 The Minister, the Department Head, the Chief Inspector of Mines, and inspectors appointed under the MR(SD) Act are variously responsible for enforcing legislative requirements under appropriate legislation.

### **Licences**

- 3.14 Under section 8 (1)(a) of the MR(SD) Act, a person cannot carry out mining in Victoria without obtaining a mining licence from the Minister.
- 3.15 An applicant for a mining licence must satisfy the Minister that the applicant can meet the requirements set out in section 15 (6) of the MR(SD) Act, including that the applicant is likely to be able to finance the proposed work and rehabilitation of the land.<sup>6</sup>
- 3.16 The Minister is empowered to impose conditions on a mining licence, including conditions as set out in section 26 (2) of the MR(SD) Act. In particular, the Minister has power to impose licence conditions about rehabilitation of the land.<sup>7</sup>
- 3.17 The Minister is also empowered to vary licence conditions under section 34 of the MR(SD) Act. In particular, the Minister may:
- act at the request of the licensee,<sup>8</sup> or
  - if the Minister decides it is necessary for the protection of the environment, for rehabilitation or for stabilisation of the land to which the licence applies.<sup>9</sup>

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<sup>5</sup> Under the MR(SD) Act, rehabilitation plans are a requirement as part of the work plan. See paragraph 3.18.

<sup>6</sup> Subsection 15 (6)(d), MR(SD) Act.

<sup>7</sup> Subsection 26 (2)(a), MR(SD) Act.

<sup>8</sup> Subsection 34 (2)(a), MR(SD) Act.

<sup>9</sup> Subsection 34 (2)(b), MR(SD) Act.



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### **Work plans**

- 3.18 With the exception of small, low risk sites, a licensee must obtain a work plan prior to commencing work. Section 39 of the MR(SD) Act provides that work can only be carried out in accordance with the licence and an approved work plan.
- 3.19 Section 40 of the MR(SD) Act requires a licensee who proposes to do work under a licence to lodge a work plan with the Department Head.
- 3.20 Under section 40 (3) of the MR(SD) Act, a work plan must include:
- a rehabilitation plan
  - a community engagement plan
  - prescribed information.
- 3.21 Under subsection 40 (3)(b) of the MR(SD) Act and Part 2 of Schedule 15 of the MR(SD) Regulations, Declared Mines must also include prescribed mine stability requirements in their work plan. Each of the Latrobe Valley coal mines are Declared Mines.
- 3.22 Regulation 32 (1)(b) and Schedule 15 of the MR(SD) Regulations set out the prescribed information referred to under section 40 (3) of the MR(SD) Act, which includes:
- specification of the location and how mining work is to be carried out
  - requirements for an environmental management plan
  - content of a rehabilitation plan
  - content of a community engagement plan.

### **Rehabilitation plans**

- 3.23 A rehabilitation plan must be prepared as part of an application for a work plan.<sup>10</sup>
- 3.24 The Department Head has power to approve or refuse a rehabilitation plan (as part of a work plan) and may require changes to the rehabilitation plan.<sup>11</sup>
- 3.25 The holder of a mining licence must rehabilitate land in accordance with a rehabilitation plan approved by the Department Head<sup>12</sup> and must, as far as practicable, complete rehabilitation before the expiry of the licence.<sup>13</sup>
- 3.26 Under subsection 79 (a) of the MR(SD) Act, the content of a rehabilitation plan must take into account the following:
- any special characteristics of the land
  - the surrounding environment
  - the need to stabilise the land
  - the desirability or otherwise of returning agricultural land to a state that is as close as is reasonably possible to its state before the mining licence or extractive industry work authority was granted
  - any potential long term degradation of the environment.

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<sup>10</sup> Subsection 40 (3)(c), MR(SD) Act.

<sup>11</sup> Subsection 40A, MR(SD) Act.

<sup>12</sup> Subsection 78 (1), MR(SD) Act.

<sup>13</sup> Subsection 81 (1), MR(SD) Act.

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3.27 Item 6, Part 1 of Schedule 15 of the MR(SD) Regulations further provides that rehabilitation plans in a work plan must:

- address concepts for the end utilisation of the site
- include a proposal for the progressive rehabilitation and stabilisation of extraction areas, road cuttings and waste dumps, including revegetation species
- include proposals for the end rehabilitation of the site, including the final security of the site and the removal of plant and equipment.

#### **Carrying out further rehabilitation works**

3.28 The Minister may request the licensee to undertake further rehabilitation of the land if he or she is not satisfied that rehabilitation has been carried out in accordance with the rehabilitation plan or that further rehabilitation is necessary.<sup>14</sup>

3.29 If the licensee fails to undertake further work within a reasonable time, the Minister may take any necessary action to rehabilitate the land<sup>15</sup> and may recover any costs incurred for additional rehabilitation works from the licensee, where those costs exceed the amount of the rehabilitation bond.<sup>16</sup>

3.30 If the rehabilitation work has not been completed prior to the expiry of the licence, the former licensee must complete rehabilitation work as expeditiously as possible and must continue to employ a manager to control and manage the former licence worksite.<sup>17</sup>

#### **Reporting requirements**

3.31 The licensee must report annually on expenditure and activities, including rehabilitation expenditure.<sup>18</sup>

3.32 Each of the Latrobe Valley coal mines will also report annually on:

- rehabilitation works completed each year
- the cumulative area rehabilitated since mining commenced
- a map showing worked areas, areas cumulatively rehabilitated and areas rehabilitated in the 12-month cycle.

#### **Mine stability requirements**

3.33 The Victorian Government's response to the Yallourn Mine Batter Failure Inquiry included amendments to the MR(SD) Act, to incorporate additional requirements for Declared Mines in relation to mine stability. Each of the Latrobe Valley coal mines are Declared Mines.

3.34 Additional requirements for Declared Mines include that:

- work plans must include prescribed mine stability requirements<sup>19</sup>
- licensees must provide six-monthly reports on mine stability to the Department Head<sup>20</sup>

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<sup>14</sup> Subsection 83 (1) and (3), MR(SD) Act.

<sup>15</sup> Subsection 83 (1), MR(SD) Act.

<sup>16</sup> Subsection 83 (4), MR(SD) Act.

<sup>17</sup> Subsections 81 (2) and (3), MR(SD) Act.

<sup>18</sup> Regulation 35 and item 7, Schedule 19 of the MR(SD) Regulations.

<sup>19</sup> Subsection 40 (3)(b) of the MR(SD) Act and Part 2 of Schedule 15 of the MR(SD) Regulations.

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- Latrobe Valley coal mine licensees must pay an annual mine stability levy.<sup>21</sup>
- 3.35 Declared Mines must submit work plan variation applications within 60 days of their declaration.<sup>22</sup>

### **Monitoring and enforcement**

- 3.36 The MR(SD) Act sets out powers to inspect worksites and enforce compliance with the MR(SD) Act and MR(SD) Regulations.

#### *Inspectors*

- 3.37 Part 9 of the MR(SD) Act provides for employment of inspectors and sets out inspection powers. Inspectors are employed under the *Public Administration Act 2004* (Vic) by ERR and conduct periodic inspections of each mine.

#### *Enforcement*

- 3.38 Enforcement powers under the MR(SD) Act include powers for the Minister (or delegate) to:

- issue a compliance notice<sup>23</sup>
- vary, suspend or revoke a condition of a licence<sup>24</sup>
- cancel a licence.<sup>25</sup>

- 3.39 The Minister is empowered to issue compliance notices under section 110 of the MR(SD) Act, including where the Minister believes on reasonable grounds that:

- an act or omission by the licensee is likely to result in a risk to public safety, the environment, land, property or infrastructure
- the licensee has contravened, or is likely to contravene, the MR(SD) Act or MR(SD) Regulations, or
- there is non-compliance with licence conditions or the work plan.

- 3.40 Under section 110AA of the MR(SD) Act, the Minister may apply to the Supreme Court for an injunction to require compliance with a section 110 notice. Under section 110AB, the Minister may take remedial action that is required in a court order or injunction, but has not been undertaken by the licensee. Ministerial Guidelines have been issued in relation to the exercise of Ministerial discretion under sections 110, 110AA and 110AB.

#### *Reportable events*

- 3.41 Section 41AC of the MR(SD) Act also requires licensees to notify the Chief Inspector of Mines of a 'reportable event'. 'Reportable events' include events that are abnormal and result, or may result, in significant impacts on public safety, the environment or infrastructure. The 2014 Hazelwood Mine Fire was a 'reportable event'.

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<sup>20</sup> Section 41AB, MR(SD) Act and regulation 45, MR(SD) Regulations.

<sup>21</sup> Part 2, Div 9, MR(SD) Act and Sch 29 of the MR(SD) Regulations.

<sup>22</sup> Section 41AE, MR(SD) Act.

<sup>23</sup> Section 110, MR(SD) Act.

<sup>24</sup> Section 34, MR(SD) Act.

<sup>25</sup> Section 38, MR(SD) Act.

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### *ERC meetings*

- 3.42 The approved work plan for each Latrobe Valley coal mine requires the establishment of an ERC. ERC meetings provide a forum to discuss any compliance issues and to monitor whether work at each mine – including rehabilitation work – is proceeding in accordance with the relevant mining licence, work plan and rehabilitation plan. At least one ERR officer attends each ERC meeting.

### **Requirements for rehabilitation bonds**

#### *Requirements to enter into a rehabilitation bond*

- 3.43 A licensee must enter into a rehabilitation bond and must not carry out work on any land covered by the licence unless it has entered into a rehabilitation bond.<sup>26</sup>
- 3.44 A licensee may be required to enter into a further rehabilitation bond where the amount of the bond already entered into is determined to be insufficient.<sup>27</sup>
- 3.45 The mining licence may also include conditions about entering into a rehabilitation bond.<sup>28</sup>

#### *Determining and reviewing the amount of the bond*

- 3.46 The Minister has power to set the amount of the rehabilitation bond<sup>29</sup> and may require the licensee to enter into a further rehabilitation bond where the amount of the bond already entered into is determined to be insufficient.<sup>30</sup>
- 3.47 In addition, the Minister may require a licensee to undertake a rehabilitation liability assessment.<sup>31</sup> This assessment may be used to determine the amount of the rehabilitation bond or the review of the amount of the rehabilitation bond.

#### *Return of the bond*

- 3.48 The Minister may require a licensee to engage an auditor to certify that the land has been rehabilitated in accordance with the rehabilitation plan.<sup>32</sup>
- 3.49 The Minister must return the bond if he or she is satisfied that the land has been rehabilitated and the rehabilitation is likely to be successful. Where the land is private land, the Minister may only return the rehabilitation bond after the landowner and municipal council have been consulted.<sup>33</sup>

### **Proposed works that could have a significant effect on the environment**

- 3.50 If a person or body (the relevant decision-maker) is required by any Act or law to make a decision in respect of works that could have a significant effect on the environment, the relevant decision-maker may seek the advice of the Minister for Planning as to whether an EES should be prepared for the works.<sup>34</sup> Following a request from a relevant decision-maker, the Minister for Planning can require an EES to be prepared.<sup>35</sup> Where the Minister

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<sup>26</sup> Subsection 42 (1)(b) and section 80, MR(SD) Act.

<sup>27</sup> Subsections 80 (4A) – (6), MR(SD) Act.

<sup>28</sup> Subsection 26 (2)(g), MR(SD) Act.

<sup>29</sup> Subsection 80 (1), MR(SD) Act.

<sup>30</sup> Subsection 80 (4), MR(SD) Act.

<sup>31</sup> Section 79A, MR(SD) Act.

<sup>32</sup> Subsection 81A (1), MR(SD) Act.

<sup>33</sup> Section 82, MR(SD) Act.

<sup>34</sup> Section 8, EE Act.

<sup>35</sup> Section 8B, EE Act.

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for Planning declares that an EES is required, all approval decisions relating to the project are put on hold until the EES process is completed.<sup>36</sup>

- 3.51 The EES process is not an approval process, rather it informs statutory decision-makers (including the Department Head) about the environmental effects of a proposed project, to inform the decision about whether the project should proceed. After the EES is completed and released for public comment, the Minister for Planning provides an assessment to the relevant decision-makers.
- 3.52 Where an EES has been prepared for a new work plan or a work plan variation under the MR(SD) Act, the final content of the work plan (or work plan variation) and rehabilitation plan will be informed by the outcome of the EES process.
- 3.53 EES have been required for work plan variation applications at Hazelwood and Yallourn.
- 3.54 **Figure 4** summarises the respective obligations and roles of the licensee and DEDJTR in relation to regulation of rehabilitation.

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<sup>36</sup> Section 8C, EE Act.

### Summary of statutory rehabilitation framework

	Licensee obligations	Minister or Department Head's roles
<b>Licence application</b>	<ul style="list-style-type: none"> <li>Obtain a licence</li> <li>Demonstrate an ability to finance proposed activity (including rehabilitation)</li> <li>Comply with licence conditions</li> </ul>	<ul style="list-style-type: none"> <li>Must be satisfied that the applicant will be able to finance proposed activity and rehabilitation</li> <li>Impose conditions and vary where necessary for the protection of the environment, the rehabilitation or stabilisation of the land</li> <li>Inspect, audit and enforce compliance</li> </ul>
<b>Work plans</b>	<ul style="list-style-type: none"> <li>Prepare a work plan</li> <li>Comply with work plan requirements and conditions</li> </ul>	<ul style="list-style-type: none"> <li>Approve, refuse or require variations to new and varied work plans</li> <li>Inspect, audit and enforce compliance</li> </ul>
<b>Rehabilitation plans</b>	<ul style="list-style-type: none"> <li>Prepare a rehabilitation plan (as part of the work plan)</li> <li>Comply with rehabilitation plan requirements and conditions</li> </ul>	<ul style="list-style-type: none"> <li>Approve, refuse or require variations to new or varied rehabilitation plan</li> <li>Inspect, audit and enforce compliance</li> </ul>
<b>Rehabilitation bonds</b>	<ul style="list-style-type: none"> <li>Lodge rehabilitation bond and enter a further bond if required to do so</li> </ul>	<ul style="list-style-type: none"> <li>Set amount of rehabilitation bond</li> <li>Alternatively, may require licensee to undertake assessment to determine the amount of a bond or to review the amount of an existing bond</li> <li>May carry out an assessment of rehabilitation liability to determine the amount of a bond or to review the amount of an existing bond</li> <li>May require the licensee to enter into a further bond if the bond already entered into is insufficient</li> </ul>
<b>Carrying out rehabilitation works</b>	<ul style="list-style-type: none"> <li>Undertake progressive rehabilitation according to the approved rehabilitation schedule and engage an auditor to certify rehabilitation works if required to do so</li> <li>Undertake final rehabilitation according to the approved rehabilitation plan and engage</li> </ul>	<ul style="list-style-type: none"> <li>Issue compliance notices.</li> <li>May require licensee to engage auditor to certify completion of rehabilitation</li> <li>May request further rehabilitation be undertaken by the licensee</li> <li>May undertake further rehabilitation where the licensee fails to do so</li> </ul>

	Licensee obligations	Minister or Department Head's roles
	an auditor to certify rehabilitation works if required to do so	<ul style="list-style-type: none"> <li>May recover costs from licensee where these exceed the amount of the bond</li> </ul>
<b>Reporting</b>	<ul style="list-style-type: none"> <li>Annual reporting on activities and expenditure</li> </ul>	<ul style="list-style-type: none"> <li>Verify compliance with expenditure conditions on mining licences and may take enforcement action if non-compliant</li> </ul>
<b>Mine stability</b>	<ul style="list-style-type: none"> <li>Prepare work plan variations to address mine stability requirements</li> <li>Provide six-monthly reports on mine stability</li> <li>Pay an annual mines stability levy</li> </ul>	<ul style="list-style-type: none"> <li>Inspect, audit and enforce compliance</li> </ul>

**Figure 4: Summary of statutory rehabilitation framework**

### Regulatory and decision-making policies and guidelines

- 3.55 The Minister and Department Head exercise their powers under the MR(SD) Act in light of any relevant policy guidance. Policy guidance is being developed by the Regulation and Compliance Group at DEDJTR.
- 3.56 Specific guidelines have been developed to guide the exercise of the Minister's and the Department Head's power in relation to the:
- approval of work plans (including rehabilitation plans)
  - assessment of rehabilitation liability for the purpose of determining the amount of rehabilitation bonds.

### Guidelines on rehabilitation plans

- 3.57 In 2004, DPI (now DEDJTR) issued the Rehabilitation Plans Guidelines. The Rehabilitation Plans Guidelines are still current and used as an advisory document by ERR.
- 3.58 The guidelines provide assistance on the following general principles for rehabilitation planning:
- end use objectives and the final concept plan – establish expected end use/s of the site and its general characteristics at the completion of rehabilitation and a schematic plan showing salient features of the land following rehabilitation
  - progressive rehabilitation – detail on the proposed rehabilitation works, how they will be undertaken and their sequence and timing
  - landscaping and screening – minimising views of exposed faces, unvegetated waste heaps, stockpiles and plant
  - soil removal – location and depth of soil stripping



- soil respreading – approximate depth of respread soil and its location
- soil stockpiling – locations and dimensions
- seedbed preparation – proposed seedbed treatments and the reasons for their selection
- revegetation – proposed revegetation method (seeding, tube stock, and natural regeneration) and the general mix of species
- alternative revegetation methods – acceptable provided that the rehabilitation standards achieved are at least equal to those that would be expected using conventional methods
- roads, tracks and other compacted areas – progressive rehabilitation, decommissioning and final rehabilitation of those tracks and roads not retained
- run-off and erosion control – permanent control measures, such as drainage channels and dams, which are to be incorporated in the final land form
- removal of plant, equipment and rubbish at completion of works
- site safety and security – security of the site and public safety following cessation of operations
- maintenance and monitoring – proposed schedules.

#### **Rehabilitation bond guidelines**

3.59 Rehabilitation bonds must be provided in the form of a bank guarantee.<sup>37</sup> A bank guarantee is provided by way of a letter of credit from a banking institution.

3.60 Bonds are calculated based on the 2010 Rehabilitation Bond Policy, which:

- describes an industry self-assessment system that may be applied for rehabilitation liability, based on licensees’ annual reports on rehabilitation liability as required under the MR(SD) Regulations
- outlines the administrative and consultative process for the establishment, review and retirement of rehabilitation bonds (Part A)
- describes rehabilitation liability estimation methods for use by both the DEDJTR and industry (Part B) – specifically the use of a rehabilitation bond calculator and the use of standard rates for simple operations ( $\leq 5$  ha disturbed and  $\leq 5$  m deep).

3.61 The Latrobe Valley coal mine rehabilitation bonds were set as follows:

Yallourn	\$11,460,500
Hazelwood	\$15,000,000
Loy Yang	\$15,000,000

3.62 The Latrobe Valley rehabilitation bonds are currently under review, detailed in Chapter 5.

#### **Role of expert advice in decision-making**

3.63 The Minister seeks advice from the TRB as part of its administration of mine stability requirements under the MR(SD) Act.

<sup>37</sup> DNRE Corporate Procedure FM29, ‘Bank Guarantees and Securities’.

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- 3.64 The TRB was established as an advisory panel under Part 4A of the MR(SD) Act in 2009 in response to the recommendations by the Yallourn Mine Batter Failure Inquiry.
- 3.65 The TRB is comprised of a team of experts with international mining experience. The primary purpose of the TRB is to provide advice to the Minister on mine and quarry stability issues, specifically in relation to reducing risks to the environment, public safety and infrastructure.<sup>38</sup>
- 3.66 The Minister recently approved amended Terms of Reference, which include:
- ‘The Board will report to the Minister on an annual basis. The Minister may subsequently release the Board’s report to [DEDJTR] and relevant industry stakeholders.
- The Board will periodically provide advice on mine and quarry stability, to the Minister and [DEDJTR], in the following areas:
- a) Strategy
- written and/or verbal advice on the [DEDJTR]’s strategies and regulatory approach to mine and quarry stability and geotechnical issues
  - written and/or verbal advice on new developments in technology and science relating to the understanding, monitoring or management of mine and quarry stability and related geotechnical and hydrogeological issues.
- b) Stability reports
- review mine and quarry stability reports including monitoring data that has been submitted to [DEDJTR] and provide written advice to the Minister.
- c) Other Activities
- advise the Minister in formulating appropriate response to significant events relating to mine and quarry stability, and related geotechnical and hydrogeological issues
  - advise the Minister on appropriate guidelines and educational initiatives related to mine and quarry stability
  - with the knowledge and agreement of the Minister, interact directly with industry on mine and quarry stability and related geotechnical and hydrogeological issues, including participation in site visits, presentations and dialogue, particularly with respect to communicating findings of reviews with relevant stakeholders.
  - in conjunction with [DEDJTR], interact with Federation University Australia in relation to the Research and Development program on brown coal geotechnical and hydrological issues.
- d) Rehabilitation
- provide written advice and guidance to [DEDJTR] on any issues related to rehabilitation, including progressive rehabilitation within the mines and quarries.<sup>39</sup>

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<sup>38</sup> ‘What is the purpose of the Board?’ at <http://www.energyandresources.vic.gov.au/earth-resources/policy-and-legislation/advisory-councils-and-review-boards/technical-review-board>.

<sup>39</sup> Technical Review Board, Terms of Reference, July 2015.

## 4. Application of the regulatory framework for the Latrobe Valley mines

### Relevant licence conditions and rehabilitation plans

- 4.1 The current requirements for rehabilitation at the Latrobe Valley coal mines arise from licences, work plans and rehabilitation plans. A number of work plan variations have been approved over the years, shaping the current rehabilitation plans.

### Summary of Latrobe Valley coal mine licence details

- 4.2 **Figure 5** below outlines the current relevant licences for Latrobe Valley coal mines and identifies the current work plans and rehabilitation plans for each mine.

	YALLOURN	LOY YANG	HAZELWOOD
Mining licence			
Current licence holder	Yallourn Energy Pty Ltd	AGL LYP 1 Pty Ltd, AGL LYP 2 Pty Ltd, AGL LYP 3 Pty Ltd and AGL LYP 4 BV	Hazelwood Power Corporation Pty Ltd
Date granted	9 April 1996	6 May 1997	10 September 1996
Licence number	5003, 5216, 5304 <sup>40</sup>	5189	5004
Term	30 years	40 years	30 years
Size of land	5,361 hectares	4,834 hectares	3,289.65 hectares
Work plans			
Identifies which work plans currently address rehabilitation	Both the 2000 and the 2011 work plans govern rehabilitation at the mine	The initial work plan currently governs rehabilitation. Should the proposed variation be approved, that variation would govern rehabilitation at the mine	The 2009 work plan now governs rehabilitation of the mine

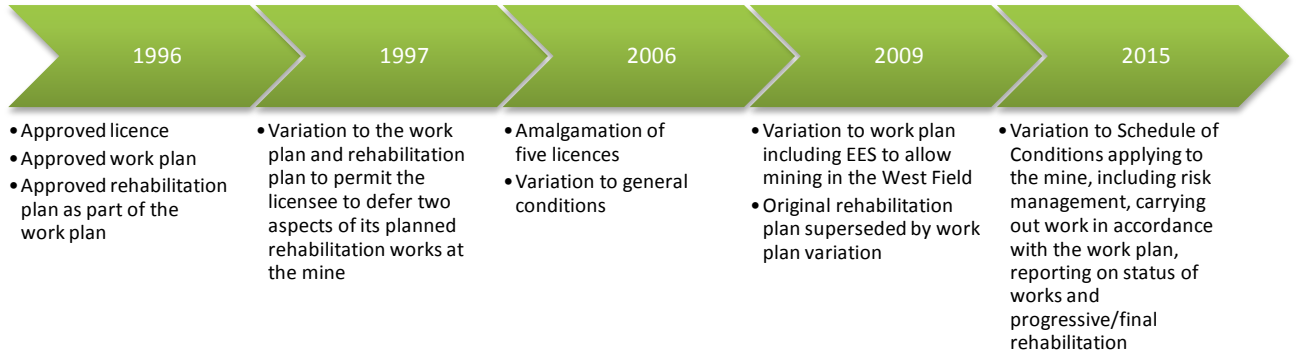
**Figure 5 – Summary of Latrobe Valley coal mine licences and work plans**

<sup>40</sup> Licence numbers 5216 and 5304 provide for the expansion of the Maryvale Field and appropriate buffers around the proposed pit area.

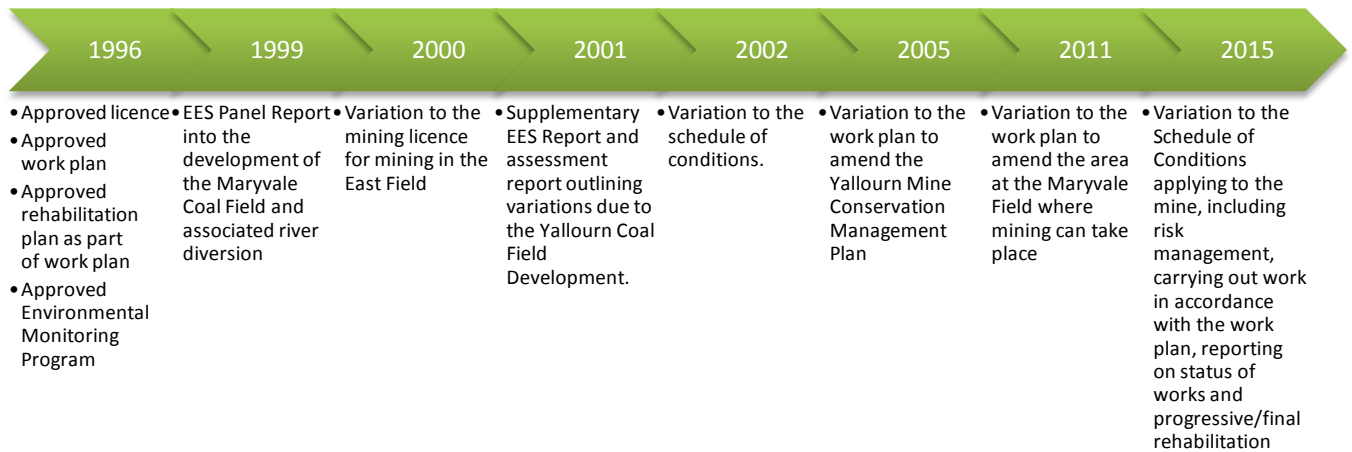
## Overview of licence, work plan and rehabilitation plan variations

4.3 **Figure 6** below identifies each mine and summarises variations and amendments made over time.

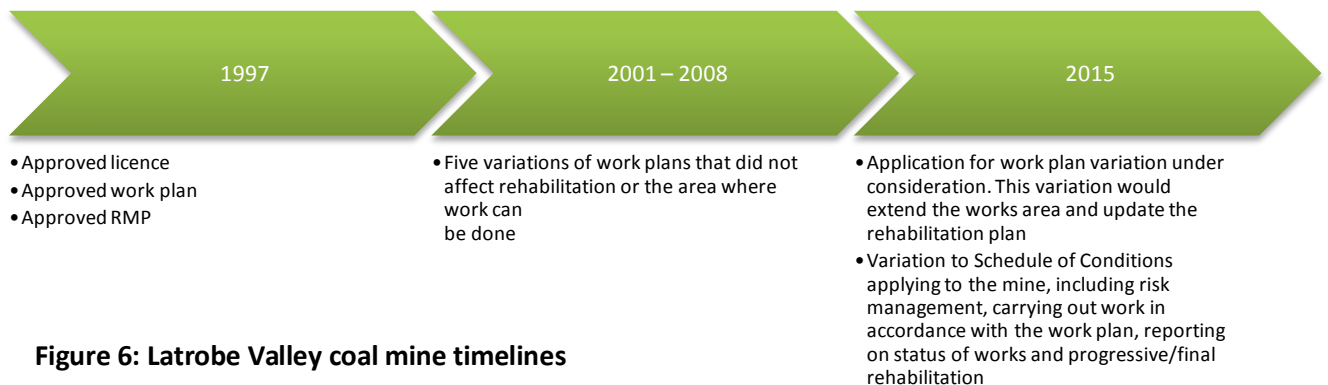
### Hazelwood amendments and variations – Licence # 5004



### Yallourn amendments and variations – Licence # 5003, 5216, 5304



### Loy Yang amendments and variations – Licence # 5189



**Figure 6: Latrobe Valley coal mine timelines**

## Latrobe Valley mines' work plans and rehabilitation

- 4.4 In accordance with the various work plans and rehabilitation plans, the Latrobe Valley coal mines carry out mining works under their approved licences. The following sections outline the specific relevant rehabilitation history and current rehabilitation for each mine.

### Hazelwood Coal Mine

- 4.5 **Figure 7** provides a visual explanation of the rehabilitation activities at the Hazelwood Coal Mine for the purposes of the Inquiry.

### Hazelwood Rehabilitation



**Figure 7: Hazelwood rehabilitation map**

#### Disclaimer

This plan depicts those areas where the Department considers that work may lawfully be carried out pursuant to the approved work plan for the mine and where rehabilitation work may need to be undertaken in accordance with the approved rehabilitation plan for the mine. This plan was prepared for the express purpose of assisting the Board of Inquiry to ascertain the scope of its jurisdiction under TOR 8.

The Department makes no warranty as to the accuracy of the plan and accepts no responsibility for any errors or omissions on the plan or any loss or damage that may be caused by its use.



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## Licensing

- 4.6 The Governor in Council approved mining licence 5004 for the Hazelwood Coal Mine on 10 May 1996.
- 4.7 On 10 September 1996, the Governor in Council revoked the licence and granted mining licence 5004, approved an authority to commence work, a work plan and a rehabilitation plan for the Hazelwood Coal Mine. The licence has general conditions and also a schedule of conditions. The general conditions were varied on 11 July 2006 to add condition 6.
- 4.8 The schedule of conditions that now apply to the mine were varied by the Minister on 20 January 2015.
- 4.9 Condition 1 of the schedule of conditions provides that work will be carried out in accordance with an approved work plan, which incorporates a rehabilitation plan and that, when requested, the licensee must submit reports on the status of work.<sup>41</sup>
- 4.10 Conditions 15 and 16 of the schedule of conditions govern rehabilitation (see Appendix 1).

## Work plan and rehabilitation plan

- 4.11 The work plan for the Hazelwood Coal Mine was approved in 1996 and included a rehabilitation plan.
- 4.12 The stated aim of the original rehabilitation plan was:  
‘... to provide an overall vision for the ultimate rehabilitation of all disturbed land at Morwell Mine in compliance with policy requirements’.<sup>42</sup>
- 4.13 The rehabilitation plan comprised the following matters:
- screening operations
  - final land use
  - water management
  - visual management
  - ecological management
  - fire protection
  - timing
  - critical decision points.
- 4.14 The rehabilitation plan included an overall Rehabilitation Concept Master Plan, which focused on flooding the mine with water in order to form a lake after removing operational infrastructure from the mine. The remaining land areas would be used for grazing, conservation, recreation and forestry. The rehabilitation plan envisaged five-year rolling implementation plans.<sup>43</sup>

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<sup>41</sup> Hazelwood Power Corporation Pty Ltd, Instrument of Variation and Addition of Licence Conditions, 20 January 2015.

<sup>42</sup> Hazelwood Power Corporation (HPC) Five-year Rolling Mine Rehabilitation Plans Summer – Autumn 1996, *Victorian Government Gazette* S104 (1996) p 34.

<sup>43</sup> *Ibid* p 36.

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## Environment Effects Statement and hearings

- 4.15 In 2003, the Hazelwood Coal Mine licensee sought to vary the work plan to increase the mining area (described as Phase 2 of the West Field).
- 4.16 In response to a letter dated 5 March 2003 from the then Minister for Energy, Industry and Resources as a ‘relevant decision-maker’ under the EE Act, the Minister for Planning required the licensee to prepare an EES for the proposed work plan variation. Upon development of an EES by the licensee, the Hazelwood West Field EES Panel was commissioned to jointly assess the EES and proposed Latrobe Planning Scheme amendments. The Hazelwood West Field EES Panel conducted hearings in 2004.
- 4.17 The Hazelwood West Field EES Panel’s terms of reference initially excluded consideration of greenhouse gas emissions arising from the burning of coal from Phase 2 of the West Field in the Hazelwood Power Station, and consequently this was not addressed in the first round of hearings.
- 4.18 The terms of reference were successfully challenged at the Victorian Civil and Administrative Tribunal,<sup>44</sup> and new hearings were conducted in 2005 so that submitters could submit evidence on the impact of burning Phase 2 coal in the Hazelwood Power Station.
- 4.19 Rehabilitation formed a core component of the proposal submitted to the Hazelwood West Field EES Panel and addressed the specific requirements in the MR(SD) Act.
- 4.20 The Hazelwood West Field EES Panel was concerned that the rehabilitated mine did not pose a bushfire hazard:

‘The DSE in its submission supported the inclusion of indigenous species in the proposed revegetation of the mine site. However the DSE noted that the use of plant species would depend on their tolerance to coal and overburden. It went on to state:

“It is noted by the proponent that the use of plant species will depend on their tolerance to coal and overburden (EES, p8-22). Additionally, DSE notes that the mine faces will not replicate the original topography of the area, providing very different degrees of insolation and moisture. Initial choice of plants may be limited to the more robust species found in the area but not necessarily on the site.”

The DSE indicated a preference for the flattening of the batters and capping them with overburden to “provide a more hospitable substrate for plants to establish in and would have the additional, not insignificant, benefit of reducing the risk of fire on the exposed coal surfaces.”<sup>45</sup>

- 4.21 In 2005, the Hazelwood West Field EES Panel recommended the following:

‘The long-term view is that the mine void will become a mine lake but the filling of the mine needs to be done in a controlled and measured way over many years. There are a number of significant uncertainties that need to be resolved before a mine closure plan and rehabilitation plan can be finalised.

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<sup>44</sup> *Australian Conservation Foundation v Minister for Planning* [2004] VCAT 2029.

<sup>45</sup> Hazelwood West Field EES Latrobe Planning Scheme Amendment C32, Final Panel Report (2005), p 203.



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Despite these uncertainties, [International Power Hazelwood] needs to provide an adequate Mine Closure Plan and a Rehabilitation Plan, or agreement on a process to reach this.’<sup>46</sup>

- 4.22 The Hazelwood West Field EES Panel noted requirements for mine closure at state and Commonwealth level and commented on the special characteristics of the land, surrounding environment, the need to stabilise the land, returning agricultural land to close to its state before mining and the potential for long-term degradation.
- 4.23 In 2008, the licensee filed a rehabilitation plan in accordance with the Hazelwood West Field EES Panel and the Minister for Planning’s assessment of environmental effects. The former DSDBI’s analysis of the plan raised concerns that the rehabilitation plan overstated the capacity of the licensee to fill the mine with water upon mine closure and provided for insufficient rehabilitation of worked out mine batters and the mine floor on a progressive basis.
- 4.24 The licensee amended the rehabilitation plan to address these concerns and in 2009, the Department Head’s delegate approved a variation to the work plan for the Hazelwood Coal Mine to allow mining for coal in the new Western Field, which included the varied rehabilitation plan. This 2009 variation now governs rehabilitation of the mine.

**Approved 2009 work plan and rehabilitation plan variation**

- 4.25 The 2009 work plan variation goal for rehabilitation of the mine is to:
- ‘Provide a technically feasible, safe stable and sustainable landscape that reflects the aspirations of stakeholders within the practical constraints of rehabilitation for the mine’.<sup>47</sup>
- 4.26 The goal requires the following objectives to be met:
- a safe and stable self-supporting structure
  - to maximise the opportunities for establishment of a self-sustaining ecosystem
  - to minimise the use of natural resources
  - to minimise the cost of recovery of resources.<sup>48</sup>
- 4.27 The rehabilitation plan identified seven issues for consideration in its development and implementation:
- mine stability
  - natural equilibrium
  - batter stability
  - infrastructure
  - rehabilitation material/ecosystem function
  - resource recovery
  - public safety.<sup>49</sup>

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<sup>46</sup> Ibid p 206-207.

<sup>47</sup> *Work Plan Variation Mining Licence 5004 Phase 2 of the West Field Development of Hazelwood Mine*, April 2009 at 6-1.

<sup>48</sup> Ibid p 6-1.

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- 4.28 The main features of the rehabilitation plan are:<sup>50</sup>
- partially filling the mine pit void in order to create a lake
  - the placement of high-magnesium ash into the Hazelwood Ash Retention Area
  - reshaping overburden and coal batters
  - removing mine infrastructure
  - allowing public access following closure, if it would be safe to do so
  - revegetating rehabilitated areas in a manner that is ecologically sound in light of the absence of sufficient quantities of topsoil.
- 4.29 The work plan variation notes that revegetation is to be carried out in accordance with a code of practice approved as part of the work plan. This code of practice was included in the work plan variation approved on 11 May 2009 and assists in the selection of plant species for revegetation programs for the Hazelwood Coal Mine.
- 4.30 The rehabilitation plan noted that the lack of availability of overburden is a constraint on rehabilitation. To manage this constraint, the plan identified four stages for the placement of overburden in order to:
- provide fire protection and a nutrient base to support plant growth that in turn provides long-term batter stability
  - assist with counterbalancing aquifer pressures.<sup>51</sup>
- 4.31 Following the completion of the first Inquiry, the Minister varied the mining licences for the three Latrobe Valley coal mines. The variation requires the licensee to prepare and implement a risk assessment and management plan, due for submission to the Minister on 30 June 2015.<sup>52</sup>
- 4.32 The risk assessment and management plan for Hazelwood has been received and is currently being assessed by ERR.

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<sup>49</sup> Ibid p 6-1 to 6-2.

<sup>50</sup> Ibid p 6-2 to 6-3.

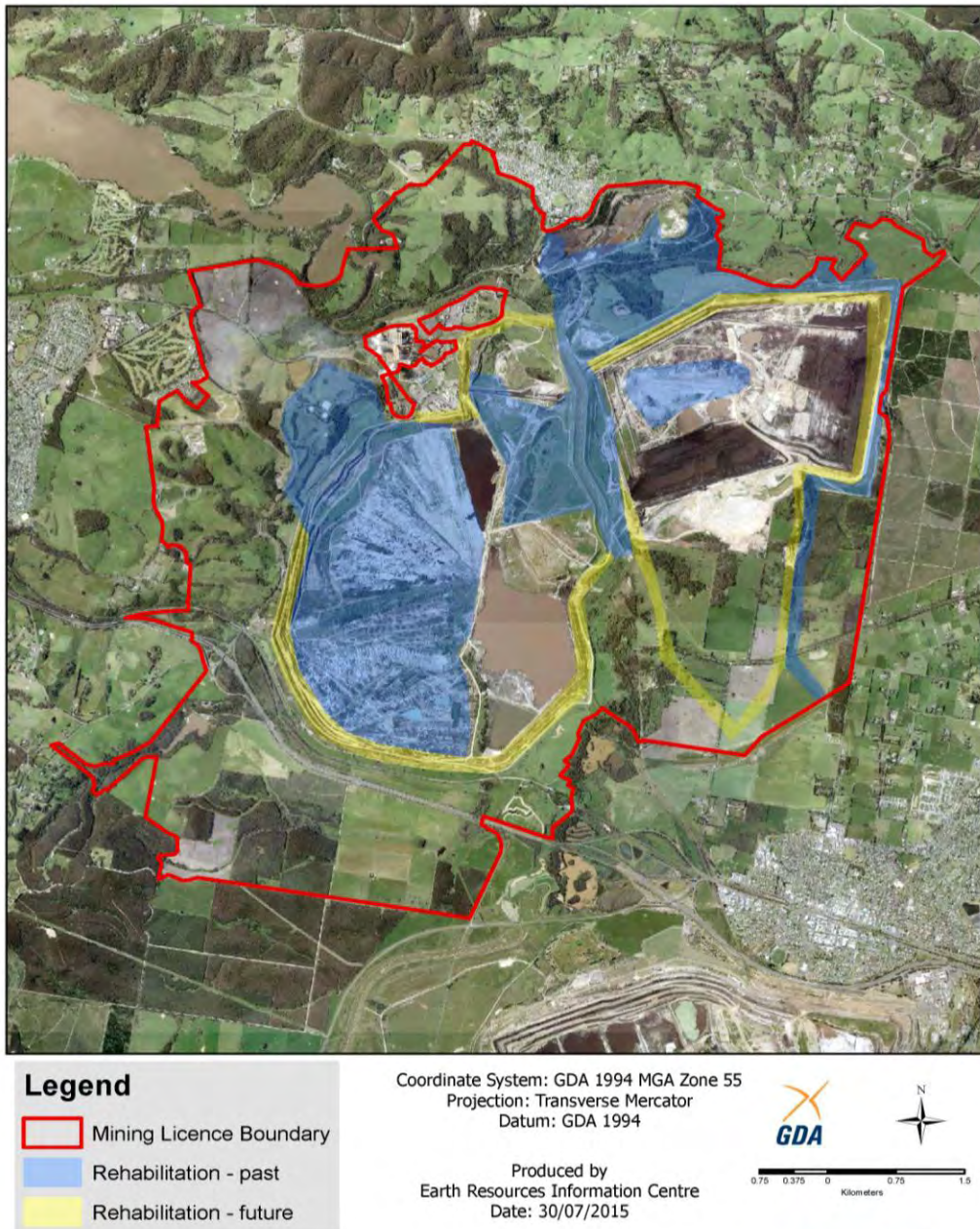
<sup>51</sup> Ibid p 6-3.

<sup>52</sup> MR(SD), Instrument of Variation and Addition of Licence Conditions, Condition 1A.6.

## Yallourn Coal Mine

- 4.33 **Figure 8** provides a visual explanation of the rehabilitation activities at Yallourn Coal Mine for the purposes of the Inquiry.

### Yallourn Rehabilitation



**Figure 8: Yallourn rehabilitation map**

#### Disclaimer

This plan depicts those areas where the Department considers that work may lawfully be carried out pursuant to the approved work plan for the mine and where rehabilitation work may need to be undertaken in accordance with the approved rehabilitation plan for the mine. This plan was prepared for the express purpose of assisting the Board of Inquiry to ascertain the scope of its jurisdiction under TOR 8.

The Department makes no warranty as to the accuracy of the plan and accepts no responsibility for any errors or omissions on the plan or any loss or damage that may be caused by its use.

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## Licensing

- 4.34 The Governor in Council granted mining licence 5003 to Yallourn Energy Ltd on 9 April 1996. The licence has general conditions and also a schedule of conditions. The general conditions were varied on 30 October 2002 to add condition 6.
- 4.35 The schedule of conditions that was attached to the original licence was varied by the Minister on 20 January 2015.
- 4.36 Condition 1 of the schedule of conditions governs the connection between the licence, the work plan and the rehabilitation plan. It states that the licensee must comply with the MR(SD) Act and act in accordance with the approved work plan, Supplementary Report to the EES (2001) and the Assessment Report (2001).
- 4.37 It also requires the licensee to prepare a rehabilitation plan (as part of the work plan) and an environmental management plan addressing (but not limited to) the following issues:
- a) protection of the Morwell and Latrobe Rivers and underground aquifers from any deleterious discharges;
  - b) progressive rehabilitation;
  - c) measures to control and contain noise, dust and other discharges to air from and within the mining licence;
  - d) measures to control and monitor residual chemical levels in any discharge to disposal areas;
  - e) proposals for monitoring noise, dust, surface and groundwater quality, erosion and other environmental parameters as may be determined from time to time;
  - f) identification and monitoring for any leakage of any toxicants in ground and surface waters adjacent to stockpiles; water and tailings storage areas; and the sampling procedure to apply;
  - g) a Conservation Management Plan;
  - h) any other environmental issues requiring management'.<sup>53</sup>
- 4.38 Conditions 18 and 19 of the schedule of conditions govern rehabilitation and are set out in Appendix 1.

### 1996 work plan and rehabilitation plan

- 4.39 The approved work plan relevantly provided:

'6. ENVIRONMENT AND REHABILITATION

The mine's policy for land rehabilitation is to progressively and at the earliest opportunity appropriately shape, landscape, revegetate and return disturbed land to an appropriate agricultural or silvicultural use. Design is undertaken within the parameters of a rehabilitation master plan which has been presented to a consultative forum on rehabilitation.

The policy includes:

- rehabilitation planning integral with the mine planning
- public consultation

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<sup>53</sup> Yallourn Energy Ltd, Instrument of Variation and Addition of Licence Conditions, 20 January 2015.

- compliance with the guidelines of relevant GenVic manuals, Government department guideline documents and legislation'.<sup>54</sup>
- 4.40 The work plan noted that the land rehabilitation master plan vision focused on final flooding to form a deep lake covering both the township and East Fields, to a level equivalent to the adjacent Morwell River level with flow connections to both the Morwell and Latrobe Rivers.<sup>55</sup>
- 4.41 Even though a deep lake is envisaged as the final plan, the work plan notes that rehabilitation planning must remain flexible, and keep a view forward for the possible range of works required for the final result.
- 4.42 The work plan confirmed that land rehabilitation would be planned over a rolling three-year time frame:
- ‘Land rehabilitation is implemented through a works program integrated with the Mine Plan. Rehabilitation of disturbed mine land is planned 3 years in advance and in accord[ance] with the long term Rehabilitation Master Plan. The annual works program includes rehabilitation construction of disturbed land and land maintenance.’<sup>56</sup>
- 4.43 Subsequent variations to the work plan reviewed the rehabilitation provisions, most notably the 2000 and 2011 work plan variations.

**Environment Effects Statement and Maryvale Coal Field and Yallourn Coal Development (2000 work plan variation)**

- 4.44 In 1999, the licensee proposed to develop the Maryvale Coal Field, incorporating a diversion of the Morwell River.<sup>57</sup> The subsequent work plan variation included the preparation of an EES and in 1999 the then Minister for Planning issued an Assessment under the EE Act to inform approval decisions for the project.
- 4.45 Relevant findings and recommendations of the EES Panel include that DEDJTR examines how best the studies for a final rehabilitation option are scoped, overseen and publicly exhibited, with the view of determining the likely water management regime for final rehabilitation, so that progressive mine rehabilitation can be undertaken with some surety that it will conform with the final water level design requirements.<sup>58</sup>
- 4.46 The variation was approved by a delegate of the Minister in 2000.
- 4.47 In the Maryvale Coal Field Development Report of the Panel, the analysis of the rehabilitation plan found that the relationship between rehabilitation and fire risk was satisfactory. However, it was noted that additional work was needed to firmly establish technical robustness of the flooding option.

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<sup>54</sup> *Yallourn Mining Licence Work Plan, Part A*, 1996, p 19.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Yallourn Mining Licence Work Plan Part B*, 1996 clause 1.1.

<sup>57</sup> The diversion of the Morwell River entailed diverting the Morwell River from its then current course between the existing mine and the Maryvale Field to a new course to the south and east of the majority of the coal reserves of the Maryvale Field. The purpose of the river diversion was to enable the mining of the coal under the current river and enable the easier transfer of plant into the Maryvale Field.

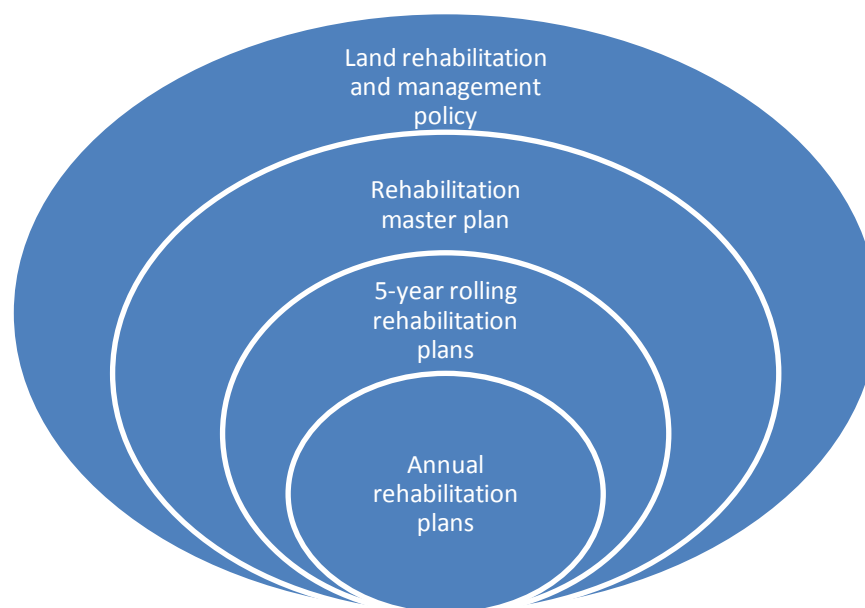
<sup>58</sup> Yallourn EES Panel Report August 1999, Recommendation 6.



- 4.48 Following the approval of the 2000 work plan variation for the Maryvale Coal Field Development, an alternative development option was revealed as the Yallourn Coal Field Development Project. The then Minister for Planning required that a supplementary report be prepared in order to assess the environmental effects of the proposed variation.
- 4.49 In 2001, a supplementary EES was developed to outline the variations and enable relevant authorities to assess and review the environmental effects of the proposed changes to the project. Following public submissions, the then Minister for Planning provided an assessment of the project to the then Minister for Energy and Resources in November 2001.
- 4.50 On 23 January 2002 a delegate of the Minister approved a variation to the schedule of conditions for the mining licence.

### Rehabilitation Master Plan

- 4.51 The RMP outlines the hierarchy of land rehabilitation planning.
- 4.52 **Figure 9** demonstrates the hierarchy of land rehabilitation planning for the Yallourn Coal Mine.<sup>59</sup>



**Figure 9: Yallourn hierarchy of land rehabilitation planning**

- 4.53 The RMP commits Yallourn Energy to rehabilitation that provides stability of landform, soil structure and vegetation and provides for sustainable long-term land use following mine closure. Further, it commits Yallourn Energy to a Land Rehabilitation and Management Policy that ensures:
- i. land rehabilitation and land management activities are conducted in accordance with legal requirements and signed Industry Code of Practice,
  - ii. land rehabilitation is integrated with mine planning and operations to ensure optimum business and community benefit,

<sup>59</sup> *Yallourn Energy Pty Ltd Mine Rehabilitation Master Plan (2000) p 19.*

- 
- iii. the land asset is managed to ensure an optimum return is generated in a sustainable manner,
  - iv. that land rehabilitation and management practices are demonstrated to play a part in the business' commitment to environmental improvement, consistent with the Environmental Management Policy.<sup>60</sup>

4.54 The RMP set objectives to design a landform that:

- protects the safety and health of the public by ensuring mining hazards and residual environmental impacts are minimised
- is compatible with the surrounding natural and altered landscape
- is sustainable and requires minimal ongoing maintenance
- expresses, where practicable, the land uses and ecological values that existed on this site prior to mining, within the limits of final land capability
- supports future beneficial uses.<sup>61</sup>

4.55 The RMP focused on mine flooding to form a large lake with interconnection to local rivers after removal of unwanted infrastructure. Remaining lands would be used for public recreation, conservation, grazing and forestry, with additional wetland and heritage features. The RMP notes that research studies have commenced to demonstrate that the lake option is practicable and sustainable.

#### **2011 work plan and approved rehabilitation plan variation**

4.56 In 2011, Yallourn Energy applied to vary its work plan, amending the area at the Maryvale Field where mining could take place. The variation detailed rehabilitation at Yallourn Coal Mine and confirmed that the licensee would continue to conduct progressive rehabilitation in accordance with current approvals – such as those outlined in the 2000 work plan variation.

4.57 It was a condition of the work plan variation that the licensee conduct a review of the rehabilitation plan. This review was provided to ERR in 2012.

4.58 Following the completion of the first Inquiry, the Minister varied the mining licences for the three Latrobe Valley coal mines. Yallourn Coal Mine's variation requires the licensee to prepare and implement risk assessment and management plans, due on 31 August 2015, to be incorporated into the work plan.<sup>62</sup>

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<sup>60</sup> *Yallourn Energy Pty Ltd Mine Rehabilitation Master Plan (2000)* p 4.

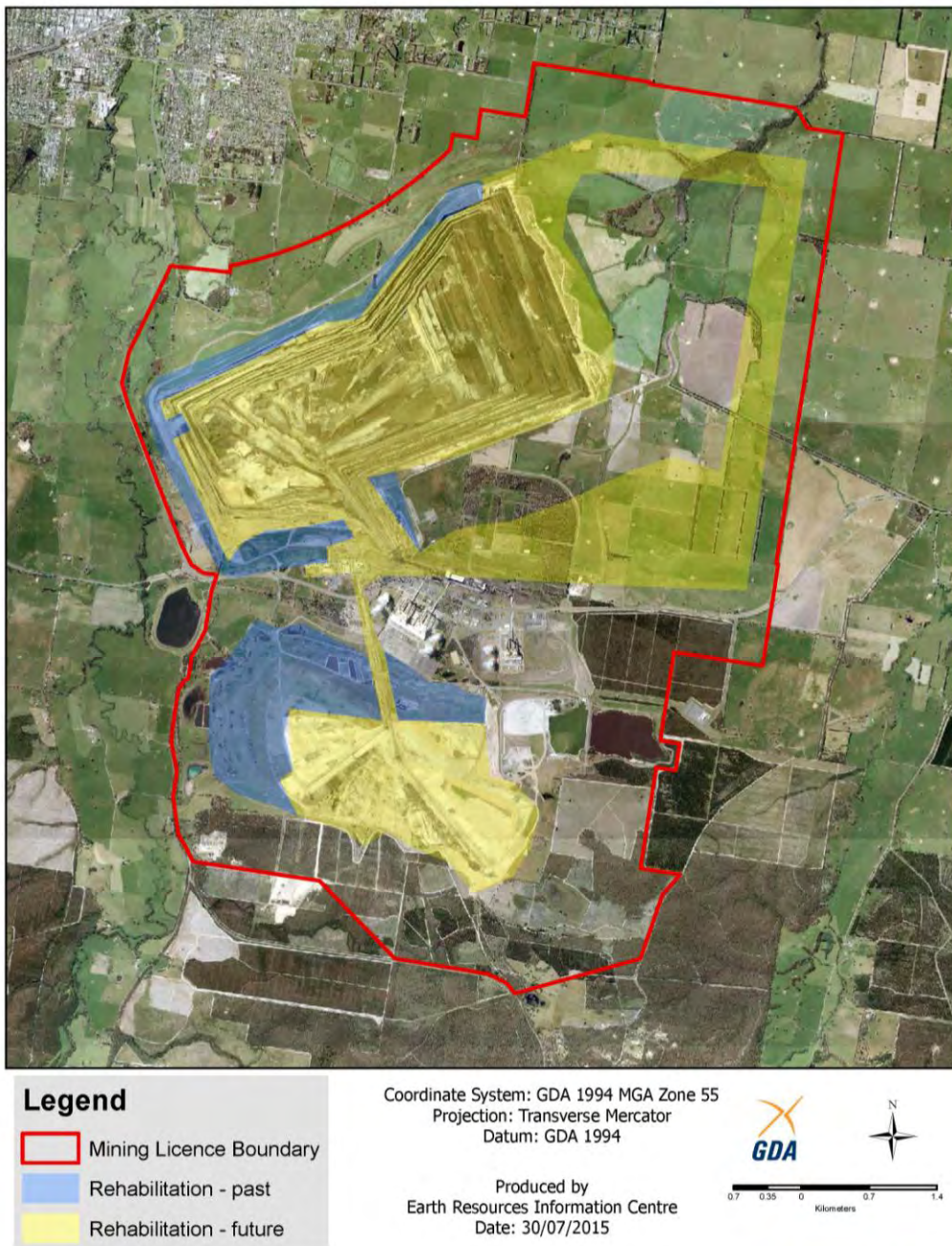
<sup>61</sup> *Ibid* p 4.

<sup>62</sup> MR(SD) Act, Instrument of Variation and Addition of Licence Conditions, Condition 1A.6.

## Loy Yang Coal Mine

4.59 **Figure 10** provides a visual explanation of the rehabilitation activities at Loy Yang Coal Mine for the purposes of the Inquiry.

### Loy Yang Rehabilitation



**Figure 10: Loy Yang rehabilitation map**

#### Disclaimer

This plan depicts those areas where the Department considers that work may lawfully be carried out pursuant to the approved work plan for the mine and where rehabilitation work may need to be undertaken in accordance with the approved rehabilitation plan for the mine. This plan was prepared for the express purpose of assisting the Board of Inquiry to ascertain the scope of its jurisdiction under TOR 8.

The Department makes no warranty as to the accuracy of the plan and accepts no responsibility for any errors or omissions on the plan or any loss or damage that may be caused by its use.



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## Licensing

- 4.60 On 6 May 1997 the Governor in Council granted mining licence 5189 to Loy Yang Power Ltd. The licence has general conditions and also a schedule of conditions. The general conditions have not been varied.
- 4.61 Condition 1 of the schedule of conditions provides that work will be carried out in accordance with an approved work plan, which incorporates a rehabilitation plan and that when requested, the licensee must submit reports on the status of work.
- 4.62 Conditions 15 and 16 of the schedule of conditions govern rehabilitation (set out in Appendix 1).

### 1997 work plan and rehabilitation plan

- 4.63 Rehabilitation is addressed in both the work plan and the rehabilitation plan.
- 4.64 The work plan outlines Loy Yang's policy intentions for rehabilitation and identifies an annual rehabilitation works program.<sup>63</sup>
- 4.65 The rehabilitation plan is set out in Part 2 of the work plan. It provides the background to rehabilitation activities at the mine:

'The Rehabilitation Master Plan comprises concept plans, for the open cut and external overburden dump. These plans contain landscape, land-use, and rehabilitation concepts for the project with enough information to guide the preparation of detail plans on an ongoing basis. The general aim of the Rehabilitation Master Plan and associated 5 Year Rolling Plans are detailed in the Rehabilitation Policy document.'<sup>64</sup>

- 4.66 It was proposed that the mine be gradually flooded at the end of operations to form a lake for community recreation purposes. Overburden dump areas would be reverted to grazing land and recreational areas.<sup>65</sup>
- 4.67 The work plan for Loy Yang has been varied five times since it was first approved; however, none of these variations impacted on the area where work could be done or the rehabilitation plan.

### Proposed work plan variation

- 4.68 The licensee recently made an application to vary the work plan. ERR is currently assessing the application, which includes changes to the rehabilitation plan.
- 4.69 Following the completion of the first Inquiry, the Minister varied the mining licences for the Latrobe Valley coal mines. Loy Yang's licence variation requires the licensee to prepare and implement risk assessment and management plans, due on 31 October 2015, to be incorporated into the work plan.<sup>66</sup>

### Loy Yang Complex Agreement

- 4.70 The contract for privatisation of Loy Yang coal mine imposes additional obligations on the licensee regarding site rehabilitation.

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<sup>63</sup> *Loy Yang Power Ltd MRDA Work Plan (1996)* p 29.

<sup>64</sup> *Ibid* p 34.

<sup>65</sup> *Mining Licence Application Work Plan Submission Part 2 – Rehabilitation Plan*, clause 2.

<sup>66</sup> MR(SD) Act, Instrument of Variation and Addition of Licence Conditions, Condition 1A.6.

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4.71 The relevant clauses of the Loy Yang Complex Agreement are:

**‘5.1 Rehabilitation**

Whichever Party owns the Loy Yang Site when it shuts down, so that Coal and Infrastructure Services cease to be supplied from the Loy Yang Site (including the provision of Services by any Party to itself), shall rehabilitate the Site in accordance with the Mining Licence, other Licences and applicable laws. The Site Rehabilitation Expenses shall be met by each of the Parties in proportion to the amounts of Coal used by the Parties during the life of the Loy Yang Mine. The parties may draw on the Fund to meet the Site Rehabilitation Expenses.

**5.2 Trust Fund**

- a) LYP and EME shall, on 30 June 2023, establish an appropriate trust fund (the Fund) for the purpose of accumulating moneys to meet Loy Yang Site Rehabilitation Expenses. Loy Yang Site Rehabilitation Expenses shall include, without limitation, all costs and expenses incurred by the trustee of the Fund, taxes relating to the Fund and other reasonable expenses incidental to the maintenance of the Fund.
- b) If a facility utilising (directly or indirectly) brown Coal fuel is constructed on the Bench, SECV shall contribute to the Fund an equitable amount agreed upon by the Parties on the basis of its rate of usage of Coal and years usage of the Services on the Bench.

**5.3 Contributions**

- a) Each Party shall, on 30 June 2023 and each 30 June thereafter until 30 June 2032, pay into the Fund one-tenth of their contributions calculated in accordance with clause 5.1.
- b) The Parties shall open a bank account with a trading bank in the joint names of all parties and shall pay all contributions into that account or the Parties shall provide an irrevocable standby letter of credit acceptable in form and substance to the other Parties, denominated in Australian dollars and issued or supported by a bank acceptable to the other Parties, in its or their reasonable discretion.
- c) Any interest, dividends or other proceeds of any nature whatsoever earned on the Fund shall be added to and form part of the Fund.’

4.72 Clause 1.1 of the Loy Yang Complex Agreement provides the following definitions relevant to clauses 5.1 – 5.3:

‘Bench’ is the area marked as such on Attachment 1A [to the Loy Yang Complex Agreement].

‘Coal’ means run of mine brown coal from deposits in the Loy Yang Mine.

‘Mining Licence’ means the mining licence issued or to be issued by LYP under section 47A of the *Electricity Industry Act 1993* and which contains a condition that LYP supply Coal in accordance with the [Coal Procurement Agreement made between EME and LYP]..

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‘Loy Yang Site’ means the Loy Yang Mine and the Service Assets.

‘Licences’ means every licence, permit, approval, consent, authority, exemption or other form of approval required by law to be given by any person or Authority from time to time, whether held by a Party, another person or any one or more of them.

‘Party’ means EME, LYP, SECV, and each of their successors and assigns, including any person which becomes a Party to this agreement under Part 27 and any one or more of them as the context requires.

‘Services’ means each of the services, facilities, systems, plant and equipment provided by LYP and consumables utilised in the operation of the LYB Power Station and the Bench, supplied by LYP and the acceptance of discharges from the LYB Power Station and the Bench by LYP.

‘Site Rehabilitation Expenses’ means, in relation to Loy Yang Mine, the net present value at the date when the value of the Mining Liabilities is to be determined, of the cost of rehabilitating the Loy Yang Mine in accordance with the Mining Licence, any other Licences and any other applicable laws. The net present value shall be determined using as the discount rate the weighted average cost of capital of companies listed on the Australian Stock Exchange which are engaged in large scale mining activities, and in relation to the Service Assets, means the cost of rehabilitating the Ash Disposal Facility, the Ash Dumps and Settling Pond in compliance with the Licenses and any other applicable laws.

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## 5. Current rehabilitation bonds, rehabilitation liability assessments and the bond review project

### Current rehabilitation bonds

5.1 Rehabilitation bonds have been registered against each of the Latrobe Valley coal mine licensees in accordance with section 80 of the MR(SD) Act.

5.2 Rehabilitation bonds are currently held for the following amounts:

Yallourn	\$11,460,500
Hazelwood	\$15,000,000
Loy Yang	\$15,000,000

### Rehabilitation liability assessments

5.3 The Latrobe Valley coal mine licensees have been required to report annually on the current rehabilitation liability for each mine. In April 2015, each of the licensees provided the current rehabilitation liability assessment for each mine as follows:<sup>67</sup>

Yallourn <sup>68</sup>	\$46,000,000 to \$91,000,000
Hazelwood	\$73,800,000
Loy Yang	\$53,700,000

### Rehabilitation bond policy reviews

5.4 Concerns about the commercial impact of rehabilitation bonds on industry and about the costs to government of setting and reviewing rehabilitation bonds, have led to several bond policy review initiatives.<sup>69</sup>

5.5 The 2002 Rehabilitation Bond Discussion Paper sets out the aims of the rehabilitation bond policy review and sought feedback on options for reform.

5.6 The aims of the rehabilitation bond policy review were:

- to determine how impacts on the extractive and mining operations could be reduced while still maintaining a high degree of assurance that rehabilitation costs would not ultimately be borne by the wider community
- to determine how DEDJTR systems for management of bonds could be changed to reduce the amount of government resources required without incurring increased financial risk to the community.

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<sup>67</sup> Rehabilitation liability assessments were provided by the Latrobe Valley coal mine licensees as part of the 2014 Annual Activity and Expenditure Return.

<sup>68</sup> The licensee's assessment range depends upon whether particular batter stabilisation works would be required.

<sup>69</sup> 2002 Rehabilitation Bond Discussion Paper at p 1.

5.7 The 2004 Rehabilitation Bond Position Paper set out DPI’s response to submissions received on the 2002 Rehabilitation Bond Discussion Paper, including.

- fundamental principles
- conclusions on rehabilitation bond proposals.

5.8 The following fundamental principles form the basis for the conclusions identified in the report:

- ‘bonds must ensure the cost of rehabilitation is borne by the company
- bonds must cover the actual and foreseeable liability based on the works required by the approved work plan
- bonds should be reviewed as appropriate to ensure they are adequate
- bonds should encourage good environmental performance and progressive rehabilitation
- bonds must encourage operators to fulfil their legal responsibility to undertake adequate rehabilitation
- bonds must be secure and easily retrievable
- bond policies should be applied consistently
- bonds should be appropriate to the liability at a site and therefore should be assessed on a site-by-site basis wherever possible
- bond policies should wherever practical be consistent with other interstate jurisdictions’.

5.9 **Figure 11** summarises the reform options canvassed in the 2002 Rehabilitation Bond Discussion Paper and the DPI’s response in the 2004 Rehabilitation Bond Position Paper.

2002 Rehabilitation Bond Discussion Paper Options for reform	2004 Rehabilitation Bond Position Paper Conclusions
<p><b>Quarry v mining</b></p> <p>Should there should be a different bond approach for mining compared to extractive industries?</p>	<p>[DPI] should adopt separate practices for management of extractive industry bonds as opposed to mining. Key areas of differentiation should be:</p> <ul style="list-style-type: none"> <li>• reduced frequency of review for extractive industry sites</li> <li>• increased allowance for variation between assessed liability and actual bonds</li> <li>• implementation of a staged start-up bond for suitable extractive industry proposals</li> </ul>
<p><b>Exploration</b></p> <p>Is there a need to change how bonds are set or the standard bond amount for exploration?</p>	<p>The consultation requirements of the <i>MR(SD) Act</i> should be reviewed when the opportunity arises to make revision of exploration bond amounts more practicable in future</p> <p>A new standard bond amount for exploration licences</p>



<b>2002 Rehabilitation Bond Discussion Paper</b> <b>Options for reform</b>	<b>2004 Rehabilitation Bond Position Paper</b> <b>Conclusions</b>
	<p>should be applied to new applications and renewals as they arise. It is proposed to increase the standard amount to \$10,000</p>
<p><b>Private land v Crown land</b></p> <p>Should different strategies apply depending upon whether the land in question is private or Crown land?</p>	<p>[DPI]'s policy should remain non-discriminatory with respect to land tenure</p>
<p><b>Bond alternatives</b></p> <p>Are there alternatives to the use of bonds, such as an insurance scheme, government levy or an industry fund?</p>	<p>Disconnection of the bond assessment from the liability by use of discounts is undesirable and could reduce incentives for good rehabilitation. [DPI] should retain current policies in this respect.</p> <p>[DPI] has not been able to identify any good working model for an industry based insurance or levy scheme at present. It is recognised that there is interest in further developing such concepts and further consideration will be given to any practical proposal put forward by industry in the future.</p>
<p><b>Types of bond</b></p> <p>Should the type of bond continue to be a bank guarantee or cash?</p>	<p>[DPI] should continue to require provision of bonds in the form of bank guarantees (subject to the further recommendation in relation to cash bonds).</p> <p>[DPI] should implement a more detailed evaluation of the practicability and cost of re-introduction of cash bonds. If appropriate the [DPI] should then develop a project plan for establishment of a cash bond system.</p> <p>In line with current cost recovery principles, any proposal for cash bonds should include measures to ensure cost recovery. The exact nature of any fees or charges and their amount should be determined by a specific costing exercise in consultation with the DEDJTR's finance group. (It is recognised that it may not be possible to set fees until an opportunity arises for amendment of Regulations).</p> <p>If implemented, the proposed cash bond facility should be planned so as to minimise the impact on [DPI] administration. This could be achieved by ensuring existing licensees are permitted to change from a bank guarantee to cash only at the time of amendment of the current bond or at the next anniversary of grant of the licence or work authority</p>

2002 Rehabilitation Bond Discussion Paper Options for reform	2004 Rehabilitation Bond Position Paper Conclusions
	(whichever is earlier).
<p><b>Method of calculation</b></p> <p>Should a minimum bond for new operations be imposed?</p> <p>Is there a need for more than one bond setting method?</p> <p>Which bond setting methods are most suitable for mines and quarries in Victoria?</p> <p>Are there other bond setting methods that could be applied for mines and quarries in Victoria?</p>	<p>[DPI] should continue to set the initial bond for all mining and extractive industry operations based on the work to be undertaken prior to the first review</p> <p>New [DPI] guidelines for establishment of rehabilitation liability by mining and extractive industry title holders should be completed as a matter of priority as the reporting proposals cannot be fully implemented until these guidelines are available. These guidelines should include a simple assessment method for use by small mining licensees</p>
<p><b>Bond reviews</b></p> <p>When should bonds be reviewed?</p> <p>Who should conduct assessments?</p>	<p>[DPI] should develop a schedule of requirements for assessors of rehabilitation liability. DEDJTR should monitor the quality of assessments through targeted audits of licensee returns and provider records.</p> <p>[DPI] should require mining licensees to provide their annual rehabilitation liability in accordance with DEDJTR guidelines. These reports should be provided either by an independent assessor or (in the case of small mines) using a DEDJTR assessment tool. Extractive industry work authority holders should be permitted to use the self-assessment approach if they wish. This should significantly reduce the need for DEDJTR reviews of rehabilitation bonds</p>

**Figure 11: Summary of 2002 Rehabilitation Bond Discussion Paper and 2004 Rehabilitation Bond Position Paper**

- 5.10 The 2004 Rehabilitation Bond Position Paper led to the publication of the 2007 Draft Environmental Guidelines, which:
- explained the DPI’s directions in determining rehabilitation bonds, to involve industry self-assessment of rehabilitation liability
  - outlined the administrative and consultative process for the establishment, review and retirement of rehabilitation bonds (Part A)
  - described rehabilitation liability estimation methods for use by both the DEDJTR and industry (Part B) – specifically the use of a rehabilitation bond calculator and the use of standard rates for simple operations ( $\leq 5$  ha disturbed and  $\leq 5$  m deep).
- 5.11 The 2007 Draft Environmental Guidelines provided that the rehabilitation bond calculator would be used for sites that did not contain ‘simple operations’. The three Latrobe Valley coal mines fell into this category. This would require application of prescribed ‘default

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rehabilitation rates’ as set in the calculator, plus the cost of infrastructure removal and management, contingency and rehabilitation monitoring costs.

- 5.12 The 2007 Draft Environmental Guidelines anticipated periodic bond reviews, and emphasised the importance of annual rehabilitation liability returns. The guidelines sought to reassure licensees that ‘annual self-assessment will not be used by DEDJTR as an automatic trigger for a bond adjustment. In cases where there is a significant discrepancy between the held bond amount and the self-assessment, DEDJTR may consider rescheduling the next bond review.’
- 5.13 The 2010 Rehabilitation Bond Policy replicates the 2007 Draft Environmental Guidelines. The 2010 Rehabilitation Bond Policy is the current policy guidance.

### **Parliamentary inquiry into greenfields mineral exploration and project development**

- 5.14 The effectiveness of rules governing the assessment and payment of rehabilitation bonds were reviewed as part of the Economic Development and Infrastructure Committee of Parliament’s inquiry into greenfields mineral exploration and project development in Victoria in 2012.
- 5.15 The Greenfield’s Inquiry Report stated that:
- ‘A commonly held view in submissions, particularly those from the extractives industry, was that rehabilitation bonds are considered deterrents to investment in mineral and extractive developments in Victoria.
- ...
- In contrast, Environment Victoria’s (EV) submission claimed the current system of rehabilitation bonds for exploration licences does not reflect the true costs of land remediation and rehabilitation, describing bond levels as ‘extremely low and inadequate to carry out remediation works’.<sup>70</sup>
- 5.16 As a consequence of these and other submissions, the committee made the following recommendation:

‘Recommendation 15: That the Victorian Government reviews the current rehabilitation bond system in comparison with alternative existing mechanisms, taking into account the end-of-mine-life environmental legacies, whilst honouring obligations for rehabilitation of specific sites.’

- 5.17 The Greenfield’s Inquiry Report did not make any further recommendation on the topic because (then) DPI was undertaking stage 2 of the departmental review of the MR(SD) Act, which was concerned with provisions governing rehabilitation bonds.

### **Stage 2 review of the MR(SD) Act**

- 5.18 In 2011, DPI commissioned KPMG to prepare a report canvassing options for the Stage 2 review of the MR(SD) Act
- 5.19 The KPMG Report relied on a working group to explore options for bond reform comprising the Mining Council of Australia, Cement Concrete and Aggregates Australia (CCAA), the Construction Material Processors Association (CMPA), EPA, DSE and DPI.

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<sup>70</sup> Greenfield’s Inquiry Report, at p 143 and p 144.

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- 5.20 KPMG devised 10 principles to guide the structure and operation of any system to provide security for default of a licensee's rehabilitation:
- the system should reflect the fact that a rehabilitation failure rate of 100 per cent is unlikely
  - the system should avoid creating moral hazard (i.e. the licensee avoiding discharging rehabilitation obligations without penalty)
  - the system should reward past good behaviour
  - the system should also encourage future good behaviour and discourage future bad behaviour
  - the system should be based on risk management principles
  - the system should avoid cross subsidies
  - the system should attempt to avoid large and uncertain increases in the amount of financial assurance
  - the government will seek to manage its financial risks to minimise any budgetary impact
  - any new model should, where possible, not materially increase the administrative burden
  - financial assurance should be readily converted into cash.
- 5.21 The KPMG Report noted that other jurisdictions relied upon one or more of the following models:
- bank guarantee
  - trust fund
  - insurance
  - sinking fund.
- 5.22 The KPMG Report explored six alternative models for the rehabilitation assurance system that could be used in Victoria:
- the current system (rehabilitation bond)
  - discounted performance bond system (rehabilitation bond discounted to reflect past performance)
  - government-owned site rehabilitation sinking fund system (rehabilitation bond discounted to reflect licensee's contribution into a state-wide government rehabilitation sinking fund)
  - industry-owned site rehabilitation bond pool system (rehabilitation bond discounted to reflect licensee's contribution into a state-wide industry rehabilitation bond pool)
  - predefined liability proportion performance bond system (rehabilitation bond, with contributions to the bond made over the life of the mine). This is described as the two-track model and
  - insurance-based system (all licensees required each to take out an insurance policy against the risk of default of their respective rehabilitation liabilities)

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5.23 None of the six models fully satisfied all of the 10 principles relied upon by KPMG.

#### **2014 Rehabilitation bond policy reform package**

5.24 The Greenfields Inquiry Report and the Stage 2 review of the MR(SD) Act have informed a rehabilitation bond policy reform package, prepared by DEDJTR in 2014.

5.25 The rehabilitation bond policy reform package expressly excludes high-risk sites, including coal mines.

5.26 The rehabilitation bond policy reform package recommends:

- a two-track bond model, involving:
  - 25 per cent bond discount for operations that meet the eligibility criteria throughout production
  - once operation ceases production, full bond (100 per cent) must be provided
  - if operations on the scheme fail to meet any eligibility criteria at any time, they will be required to provide full bond (100 per cent)
  - start-up bond scheme (for new operations) – 50 per cent bond discount for new operations over first five years that meet the eligibility criteria. After year five of operation, full bond must be provided
- cash bonds - allowing cash payment (instead of bank guarantee) for bonds up to \$20,000.

5.27 Implementation of the rehabilitation bond reform package is underway by DEDJTR.

#### **Rehabilitation bond review project**

5.28 The 2015 Rehabilitation Bond Review Project plan was finalised on 24 June 2015.

5.29 The objective of the project is to understand and to estimate the rehabilitation liabilities for the three Latrobe Valley coal mines. DEDJTR proposes to achieve this objective by obtaining the following advice from URS:<sup>71</sup>

‘The following action items are proposed for each of the three brown coal mines separately as a component of this project:

- i. Undertake a desktop review of the approved work plans, rehabilitation plans and current status of rehabilitation works for the three brown coal mines.
- ii. Calculate the current rehabilitation liabilities for the three brown coal mines against the relevant approved work plans.
  - desktop review the existing work plans (and rehabilitation plans) to ascertain the extent of the current operation and progressive rehabilitation to-date
  - calculate the current rehabilitation liability for each site.
- iii. Review key stages of progressive rehabilitation and critical rehabilitation objectives over the approved life of the mine, and calculate the costings to

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<sup>71</sup> Ibid at p 4.



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achieve mine closure as required by the rehabilitation plan at the end of the approved mine life.

- identify and describe the scope of works that will need to be undertaken to implement the requirements of the rehabilitation plan, and include milestones. Such works may include, but not be limited to, type, location, timing and extent of work to be undertaken.
- calculate the costs related to achieving key rehabilitation milestones (which may include, for example, final landform, revegetation requirements, among others).'

5.30 The project plan includes Victorian Government consultation with the Latrobe Valley coal mine licensees.

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## 6. Reforms following the 2014 Inquiry Report

### Early introduction of risk-based work plans

- 6.1 In response to Recommendation 4 of the 2014 Inquiry Report, the Victorian Government committed to bring forward the commencement date of section 16 of the MR(SD) Amendment 2014 to 31 December 2015. When proclaimed, section 16 will facilitate a requirement that approved work plans specifically address fire prevention, mitigation and suppression.
- 6.2 On 20 January 2015 the Minister varied the mining licences for the Latrobe Valley coal mines to require the licensees to prepare and implement a RAMP.<sup>72</sup>
- 6.3 Under the licence conditions, a RAMP must be provided to the Department Head according to the following schedule, ahead of the 2015/16 fire season:
- Hazelwood Coal Mine due 30 June 2015
  - Yallourn Coal Mine due 31 August 2015
  - Loy Yang Coal Mine due 31 October 2015.
- 6.4 GDF Suez submitted its RAMP for Hazelwood Coal Mine on 30 June 2015 as required. The RAMP is currently being assessed.
- 6.5 Licence condition 1A.5 provides that a licensee's RAMP must be to the satisfaction of the Department Head. DEDJTR has prepared policy guidance on the content of a RAMP.<sup>73</sup>
- 6.6 A RAMP must comprehensively assess risks to the environment and public safety arising as a result of operation of the mine and must describe how the licensee will manage the risk.<sup>74</sup>
- 6.7 Risk assessment must have regard to fire risks, particularly to controls for prevention, mitigation and suppression of fire, irrespective of the source and location of a fire.<sup>75</sup>
- 6.8 A RAMP must also include an implementation plan outlining details of how and when each control action will be implemented into the operation of the mines.<sup>76</sup>
- 6.9 Following approval of a RAMP by the Department Head, licensees must submit risk-based work plan variations within three months. The work plan variation must provide the information required by the risk-based work plan guidelines and include relevant documents that support the actions to be carried out in the RAMP (for example the Mine Fire Service Policy and Code of Practice, ground control management plan and other key mine policies and procedures).<sup>77</sup>
- 6.10 If the RAMP is not to the satisfaction of the Department Head, the licensee will be given two months to submit a revised RAMP.

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<sup>72</sup> Instrument of Variation and Addition of Licence Conditions for each of the mines, condition 1A.

<sup>73</sup> DEDJTR, *Requirements for Compliance with Risk Management Conditions*, (2015).

<sup>74</sup> *Ibid* p 2.

<sup>75</sup> *Requirements for Compliance with Risk Management Conditions*, DEDJTR 2015, p 4

<sup>76</sup> *Ibid*, p 9.

<sup>77</sup> *Ibid* p 8.

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## Resources Legislation Amendment Bill 2015

- 6.11 On 4 August 2015, the Victorian Government introduced the Resources Legislation Amendment Bill 2015, to support introduction of risk-based work plans across mining and extractive industries by:
- amending the objectives of the MR(SD) Act to make them consistent with a risk-based approach
  - broadening the range of risks that must be addressed in work plans to include risks to infrastructure, in addition to risks to the environment, the public, land and property
  - giving the Minister power to set, vary or add conditions on licences to address elimination of such risks
  - amending Schedule 9 of the MR(SD) Act (savings and transitional provisions) to provide that licensees can be directed to bring their work plans into compliance with the risk-based work plan provisions.
- 6.12 The Resources Legislation Amendment Bill 2015 also facilitates public reporting of activities on mines and quarries, including rehabilitation works.
- 6.13 The Resources Legislation Amendment Bill 2015 will amend the MR(SD) Act to enable the Minister to require licensees to publish annual reports on work undertaken, including rehabilitation work. The Resources Legislation Amendment Bill 2015 provides for a licence condition requiring licensees to submit a report on work undertaken and to publish that report. The Minister will be able to apply this condition after consulting with the licensee and issuing a notice in writing.
- 6.14 Non-compliance with the reporting requirement would be a breach of the mine licence condition and may incur up to 200 penalty units for an individual and 1,000 penalty units for a corporation.

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## 7. Other laws relevant to mine rehabilitation

- 7.1 In addition to the requirements of the MR(SD) Act, rehabilitation of the Latrobe Valley coal mines may be subject to a number of other laws. Examples include:

### Land use planning

- 7.2 The Latrobe Valley coal mines are subject to the PE Act, which provides a framework for the use and development of land. The Latrobe Planning Scheme applies to the Latrobe Valley coal mines and Latrobe City Council is the responsible authority under the PE Act.

### Environmental protection

- 7.3 The EP Act aims to prevent pollution and environmental damage and establishes a system of licensing, approvals and abatement notices, which is administered by EPA.
- 7.4 The EE Act establishes a process for environment impact assessments for works with potentially significant environmental effects.

### Native title and traditional owner settlement agreements

- 7.5 The Gunaikurnai people hold native title over much of Gippsland following a 2010 determination under the NT Act. The Victorian Government has entered into an agreement with the Gunaikurnai people under the TOS Act. Both the agreement and the native title determination only affect Crown land within this area. The agreement does not affect existing rights and interests on Crown land within the area, such as leases and licences. These rights and interests are protected for their full term.

### Aboriginal cultural heritage

- 7.6 The AH Act links the protection of Aboriginal cultural heritage in Victoria with planning and land development processes.
- 7.7 Section 41AD(2) of the MR(SD) Act provides that if an approved cultural heritage management plan (within the meaning of the AH Act) is required under the AH Act or regulations made under the AH Act in respect of work on land to which an area work plan relates, an area work plan schedule is taken not to have been submitted under subsection (1) unless the area work plan schedule is accompanied by a copy of the approved cultural heritage management plan.

### Heritage Act

- 7.8 The Heritage Act establishes a legislative framework for heritage protection in Victoria. It identifies and protects heritage places and objects that are of significance to Victoria, including historic archaeological sites and artefacts and historic buildings, structures and precincts. It is administered by Heritage Victoria.

### Water regulation

- 7.9 The Water Act provides the legal framework for water management and use across Victoria, including the issuing and allocation of water entitlements and the provision of water services by state-owned water corporations and catchment management authorities.

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- 7.10 A works licence is required to construct, operate, alter, decommission or remove works associated with the extraction of water (such as bores, pumps and dams). Each licence is subject to conditions set by the Minister and specified on the licence.

### **Occupational health and safety**

- 7.11 Mine operators are subject to occupational health and safety laws including the OHS Act and Workplace Injury Rehabilitation and Compensation Act. The purpose of occupational health and safety laws is to secure the health, safety and welfare of employees and other persons at work and to eliminate risks to the health, safety or welfare of employees and other persons at work. This legalisation would apply to rehabilitation work being undertaken in the Latrobe Valley coal mines.
- 7.12 Mine operators may also be subject to dangerous goods laws including the Dangerous Goods Act, which regulates the manufacture, storage, sale, transport, use, disposal and importation into Victoria of dangerous goods (such as explosives) to prevent fatalities, injuries and accidents resulting from their use.



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## 8. Appendix 1: Rehabilitation licence conditions

### Hazelwood (Conditions 15 and 16) and Loy Yang (Conditions 15 and 16) Licences

‘15. PROGRESSIVE REHABILITATION

- 15.1 Progressive rehabilitation will be conducted as per the Rehabilitation Plan. In addition, any further rehabilitation work will be carried out at the direction of an Inspector.
- 15.2 As and when directed by an Inspector of Mines, despite any compensation agreements between the licensee and the owner of any private land in the licence, the licensee shall undertake progressive reclamation of land on the area subject to surface disturbance.

16. FINAL REHABILITATION

- 16.1 Final reclamation will be in accordance with the Rehabilitation Plan and any additional requirements as directed by an Inspector.
- 16.2 Failure to complete works in accordance with the Rehabilitation Plan or in accordance with the directions of an Inspector, shall constitute grounds upon which the rehabilitation bond may be forfeited either in whole or in part in accordance with Section 83 of the MRD Act.’

### Yallourn Coal Mine (Conditions 18 and 19) Licence

‘18. PROGRESSIVE REHABILITATION

- 18.1 Progressive reclamation shall be conducted in accordance with the Work Plan, the Rehabilitation Master Plan and Five-year Rehabilitation plans. In addition, any further rehabilitation work will be carried out at the direction of the DEDJTR.
- 18.2 In consultation with the ERC, the licensee shall prepare Annual Rehabilitation Plans and undertake rehabilitation in accordance with such plans.
- 18.3 As and when directed by the Chief Inspector, despite any compensation agreements between the licensee and the owner of any private land in the lease, the licensee shall undertake progressive reclamation of land on the area subject to surface disturbance.
- 18.3 The license holder must report annually to the public and the ERC on the progress of rehabilitation.

19. FINAL REHABILITATION

- 19.1 Final rehabilitation will be in accordance with the Work Plan and any additional requirements as directed by the DNRE. The final rehabilitation concept should give priority to the water management regime and landform.

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- 19.2 In consultation with the ERC the licensee shall conduct research work to establish the feasibility and desirability of alternative final landforms of the mine area and its interconnection with surface and groundwater systems.
  - 19.3 A review of the rehabilitation bond held against this lease can be carried out at any time by the DNRE.
  - 19.4 After the expiration of the final term of the licence or if the licence is cancelled for any reason whatsoever, the licensee shall continue to be bound by the rehabilitation provision of the licence and the Work Plan.
  - 19.5 Failure to complete works in accordance with the Work Plan or in accordance with the directions of the Chief Inspector shall constitute grounds upon which the bond may be forfeited either in whole or in part in accordance with section 83 of the MRSD Act.'

