NSW GOVERNMENT Crown Solicitor's Office

Your Ref:
My Ref: T01 201801001
Kiri Mattes (Principal Solicitor) **Tel:** (02) 8093-5538
Fax: (02) 9224-5222
crownsol@cso.nsw.gov.au

29 July 2019

Ms Georgina Woods
Lock the Gate Alliance Limited
PO Box 290
NEWCASTLE NSW 2300

By email: georgewoods79@gmail.com

Dear Ms Woods

Shenhua Watermark Coal v Department of Planning & Environment - NCAT proceedings 2018/87555

I refer to my previous correspondence of 18 April 2018, by which I informed you of the above-named proceedings, and of the right of Lock the Gate Alliance to appear and be heard. I note that the Alliance did not go on to play an active role in the proceedings.

On 17 June 2019, the Tribunal handed down its decision in these proceedings: *Shenhua Watermark Coal Pty Limited v Department of Planning and Environment* [2019] NSWCATAD 119. The Tribunal made orders varying the Department's decision to provide for the redaction of certain personal information from the documents in issue, but otherwise affirming the Department's decision to release information in response to your application.

Accordingly, please now find enclosed the documents that remained in issue in these proceedings, which are provided to you in response to your access application under the *Government Information (Public Access) Act 2009* of 18 July 2017.

Please do not hesitate to contact Kiri Mattes on (02) 8093-5538 if you have any queries in relation to this matter.

Yours faithfully

Kiri Mattes
Principal Solicitor
for Crown Solicitor

Encl.

Schedule of Documents

No.	Description of record	Location of record in agency	Decision	Objection by third party
1.	Application to renew EL7223	Resources & Geoscience	Partial Release 3(a)(b)	Y - partial
2.	Email between Shenhua and Department 2/6/17	Resources & Geoscience	Partial Release 3(a)	Y - partial
3.	Email between Shenhua and Department 29/6/17	Resources & Geoscience	Partial Release 3(a)	Y - partial
4.	Map	Resources & Geoscience	Release	Y- partial
5.	Coordinates	Resources & Geoscience	Refused 4(c)(d)	Y – whole document
6.	Renewal Justification Statement September 2016	Resources & Geoscience	Partial Release 4(c)(d)	Y- partial
7.	Prospecting Work Program	Resources & Geoscience	Refused 4(c)(d)	Y – whole document
8.	Email between Shenhua and Department 30/6/17	Resources & Geoscience	Partial Release 3(a)(b)	Y-whole document
9.	Email between Shenhua and Department 30/6/17	Resources & Geoscience	Partial Release 3(a)(b)	Y - partial
10.	Email between Shenhua and Department 29/6/17	Resources & Geoscience	Partial Release 3(a)(b)	Y - whole document
11.	Prospecting Title Work Program	Resources & Geoscience	Refused 4(c)(d)	Y – whole document
12.	Email between Shenhua and Department 3/5/17	Resources & Geoscience	Partial Release 3(a)	Y - partial
13.	Statements of Corporate Compliance, Environmental Performance History and Financial Capability	Resources & Geoscience	Partial Release 3(a)	Y - partial
14.	Rehabilitation Cost Estimate Tool	Resources & Geoscience	Partial Release 4(c)(d)	Y - partial

15.	Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate	Resources & Geoscience	Partial Release 3(a)(b), 4(c)(d)	Y - partial
16.	Attachment A – Summary of exploration activities and rehabilitation status June 2017	Resources & Geoscience	Refused 4(c)(d)	Y – whole document
17.	Attachment B Rehabilitation Objectives and Completion Criteria June 2017	Resources & Geoscience	Release	Y – whole document
18.	Letter from Department to Shenhua 16/1/17	Resources & Geoscience	Release	Y - partial
19.	Map – Completed boreholes by stage	Resources & Geoscience	Refuse 4(c)(d)	Y – whole document
20.	Email between Shenhua and Department 25.7.17	Resources & Geoscience	Release	Y - partial
21.	Email between Shenhua and Department 31/5/17	Resources & Geoscience	Release	Y - partial
22.	Email between Shenhua and Department 31/5/17	Resources & Geoscience	Release	Y - partial

DOCUMENT 1

Form EL5 Application to renew an EL

Further redactions required

NSW MAKING IT HAPPEN

NSW GOVERNMENT

Form EL5

Application to renew an exploration licence

Mining Act 1992

April 2017 | v4.7

More information

For help with lodging this application, or for more information about authorisations in New South Wales, contact:

Division of Resources and Geoscience

Titles Customer Assistance Line

Phone +61 2 4931 6500

titles.services@industry.nsw.gov.au

Privacy statement

This information is collected by the NSW Department of Planning and Environment for the purposes of assessing an application for an authorisation or associated with an authority as required by the *Mining Act 1992* or *Mining Regulation 2016.*

This information may also be used by the department to confirm applicant details in the event that subsequent applications are made, and may also be used to establish and maintain databases to assist the department with its work generally.

Except for purposes required by law, the information will not be accessed by any third parties in a way that would identify the person without the consent of that person.

You may apply to the department to access and correct any information the department holds if that information is inaccurate, incomplete, not relevant or out of date.

When to use this form

Complete this form if you are applying to renew an exploration licence under the *Mining Act 1992* in New South Wales.

This form has been prepared in accordance with Section 113 of the *Mining Act 1992* and Clause 18 of the *Mining Regulation 2016*. The form and associated templates are approved in accordance with Section 382 of the *Mining Act 1992*. The information requested in this form may not be specifically referenced in the *Mining Act 1992* or the *Mining Regulation 2016* however its inclusion in the approved form validates the authority of the NSW Department of Planning and Environment (the department) to request it.

If you require more information regarding exploration licences, refer to the Industry guidelines: exploration licences for groups 1-8, 9A 10 and 11 (non-coal minerals).

If there is insufficient room in any of the fields please provide the information as an attachment.

Important notes

Any information or template that is required to accompany this application should be lodged within **10 business days of the lodgement date**. Failure to supply the information within this timeframe may be considered as grounds for refusing the application according to Schedule 1B, Clause 6(d) of the *Mining Act 1992*.

If this application is lodged by any party other than the applicant/s (ie. an agent), the department may seek confirmation of that authority and any limits of that authority given to that other party by the applicant (Section 163F of the *Mining Act 1992* and Clause 97 of the *Mining Regulation 2016*). The agent will need to complete the declaration at the end of this form and supply evidence of their appointment, if not already supplied to the department.

You must lodge your renewal application within the period of **two months prior up to midnight on the expiry date** of the exploration licence.

How to submit this form

- **By email:** Send an electronic copy of the form including any attachments and proof of payment to titles.services@industry.nsw.gov.au
- **By mail:** Mail your form, any attachments and proof of payment to Division of Resources and Geoscience, Titles Services, PO Box 344, Hunter Region Mail Centre NSW 2310.
- **In person:** Submit your application in person at the Division of Resources and Geoscience's Titles Services office, 516 High Street, Maitland, New South Wales. Office hours are 9.30am to 4.30pm.

How this application will be processed

Once your application has been registered and checked, it will be assessed by the department. The Minister for Resources (or their delegate) will consider the department's recommendation and all relevant information, and may propose to grant or refuse the application.

The target processing time for applications for renewals is 45 business days.

1 Exploration licence details

EL number	7223	Act	Mining Act 1992
Licence expiry date	22/2/2016		

2 Term for which licence is sought

Years sought	5	Note the maximum term is six (6) years.

3 Exploration licence holder details

Provide the full name of authority holder/s and if applicable, the ACN or ARBN (for foreign companies).

Name	Shenhua Watermark Coal Pty Ltd
ACN / ARBN	133264230
Registered street address	368-370 Conadilly Street Gunnedah NSW
Postal address	☒ Same as above Enter here if different

Name	
ACN / ARBN	
Registered street address	
Postal address	☐ Same as above Enter here if different

Name	
ACN / ARBN	
Registered street address	
Postal address	☐ Same as above Enter here if different

Additional authority holders

Provide the full name, ACN or ARBN (for foreign companies), registered street address and postal address details of additional holders.

4 Licence holders seeking renewal

Information about licence holders and renewal applications can be found in Section 116 of the *Mining Act 1992*.

4.1 Where the exploration licence is held by more than one holder, are all holders seeking renewal?

☐ Yes

☐ No. Provide written confirmation from the party who is not seeking renewal.
Check the box below to indicate you have attached this confirmation to your application.

☐ I have attached confirmation from the party who is not seeking renewal.

5 Contact for this application

Any correspondence in relation to this application will be sent to this person.

Contact name
Position held
Company
Postal address
Phone (inc. area code)
Mobile
Email

[redacted]

Your preferred contact method

☒ Email (For companies – provide a generic company email address which is regularly monitored rather than an individual employee's email address.)

☐ Mail

6 Groups of mineral/s

Are you seeking renewal for **all of the groups** you currently hold?

☐ Yes.

☒ No. If no, select the group/s you wish to retain.

Note that any group 9 exploration licences granted before 18 December 2015 will continue to include groups 9 and 9A unless requested by the exploration licence holder/s.

- ☐ Group 1 (Metallic minerals)
- ☐ Group 2 (Non-metallic minerals)
- ☐ Group 3 (Semi-precious stones)
- ☐ Group 4 (Marine aggregate)
- ☐ Group 5 (Clay minerals)
- ☐ Group 6 (Corundum, diamond, ruby and sapphire)
- ☐ Group 7 (Opal)
- ☐ Group 8 (Geothermal energy)
- ☒ Group 9 (Coal)
- ☐ Group 9A (Oil shale)
- ☐ Group 10 (Mineral sands)
- ☐ Group 11 (Uranium and thorium)

Proposed area for renewal

This help text relates to **Questions 7-12**.

You need to identify the land to be renewed. Note that:

- you can only renew up to half of the existing exploration licence area, unless you can justify that there are special circumstances supporting renewal over a larger area
- the maximum number of parts of an exploration area you can apply to renew is five (5)
- you can only apply to renew an area of land held at the time this renewal application was lodged (you cannot apply for area you did not hold prior to the expiry date).

For details on the area that can be renewed read the department's licence renewal policy and see Part 7 Division 1 of the *Mining Act 1992* and Clause 18 of the *Mining Regulation 2016*.

For more information on special circumstances read the department's Policy on renewal of exploration licences for minerals and Policy on renewal of exploration licences for coal.

7 Percentage of area to be renewed

You can only renew up to half of the existing exploration licence area, unless you can justify that there are special circumstances existing to support renewal over a larger area.

Indicate the portion of area you are applying to renew.

☒ **I am applying to renew 50% or less of the licence area.**

Provide justification for renewal by completing a renewal justification statement (Question 11) and identify the renewal area:

- For groups 1-8, 10-11 ▸ **Go to Question 8**
- For group 9 (coal) ▸ **Go to Question 9**
- For group 9A (oil shale) ▸ **Go to Question 10**

☐ **I am applying to renew more than 50% and less than 100% of the licence area.**

Provide justification for renewal and special circumstances by completing a renewal justification statement (Question 11) and identify the renewal area:

- For groups 1-8, 10-11 ▸ **Go to Question 8**
- For group 9 (coal) ▸ **Go to Question 9**
- For group 9A (oil shale) ▸ **Go to Question 10**

☐ **I am applying to renew 100% of the licence area.**

Provide justification for renewal and special circumstances by completing a renewal justification statement. ▸ **Go to Question 11**

8 Proposed area for part renewal – for mineral groups 1-8 and 10-11 only

Complete this question if you are applying to renew **part** of the licence area. You **do not** need to provide a standard map.

For groups 1-8, 10 or 11 minerals, identify the name of the 1:1,000,000 map sheet (e.g. Sydney), the block number and unit references as described in Schedule 4 of the *Mining Regulation 2016*.

Use **Option A** (the free text field) or **Option B** (the table) below to identify the proposed exploration area.

☐ **Option A:** Identify the map sheet, block number, unit and total number of units you are applying for.

E.g. Sydney, 2222, abcdxyz total units=7

☐ **Option B:** Enter data in the table, as shown in the example below.

Name of map sheet	Block number	Unit letter/s applied for (list from a to z except 'i')	Total units per block
Sydney	1111	a b c d x y z	7
Sydney	2222	g h l m n o	6
Sydney	3333	p q r s t u v w x y	10

EXAMPLE ONLY

Name of map sheet	Block number	Unit letter/s applied for (list from a to z except 'i')	Total units per block
Total number of units applied for			

9 Proposed area for part renewal – for mineral group 9 only (coal)

9.1 Standard map for mineral group 9 (coal)

Provide a standard map, as described in Clause 9 of the *Mining Regulation 2016*, which shows the alignment of the proposed licence boundaries relative to the Map Grid of Australia, showing co-ordinates of all the points where there is a change in direction of the boundaries of the land.

Indicate whether you have inserted your map in the field below or attached it separately.

☒ I have attached a standard map.

☐ I have inserted my standard map below.

9.2 Co-ordinates of the proposed exploration area

Attach the co-ordinates as a separate document in a CSV format.

☒ I have attached the co-ordinates to this application

Total area	9500	☐ m^2	☒ ha	☐ km^2
Surface area	9500	☐ m^2	☒ ha	☐ km^2

9.3 Depth of surface exception in metres

Indicate the area of surface and soil below the surface **not** applied for.

☐ Whole area _____ metres

☐ Part (must be shown on the map)

☐ Various parts (must be shown on the map)

☒ Nil

9.4 Depth restriction sought

Indicate the depth to which you require the licence to extend. Note that for group 9 the maximum depth that any licence will be granted is 900 metres below zero Australian Height Datum.

☒ Whole area 900 metres

☐ Part (must be shown on the map)

☐ Various parts (must be shown on the map)

☐ Nil

10 Proposed area for part renewal of the licence area – for mineral group 9A (oil shale)

10.1 Standard map for mineral group 9A (oil shale)

Provide a standard map, as described in Clause 9 of the *Mining Regulation 2016*, which shows the alignment of the proposed licence boundaries relative to the Map Grid of Australia, showing co-ordinates of all the points where there is a change in direction of the boundaries of the land.

Indicate whether you have attached your map or inserted it into the field below.

☐ I have attached a standard map.

☐ I have inserted my standard map below.

10.2 Co-ordinates of the proposed exploration area

Provide the co-ordinates below or attach the co-ordinates as a separate document in a CSV format.

☐ I have attached the co-ordinates to this application

☐ I have entered the co-ordinates in the field below.

Total area		☐ m^2	☐ ha	☐ km^2
Surface area		☐ m^2	☐ ha	☐ km^2

10.3 Depth of surface exception in metres

Indicate the area of surface and soil below the surface **not** applied for.

☐ Whole area ____ metres

☐ Part (must be shown on the map)

☐ Various parts (must be shown on the map)

☐ Nil

10.4 Depth restriction sought

Indicate the depth to which you require the licence to extend.

☐ Whole area ____ metres

☐ Part (must be shown on the map)

☐ Various parts (must be shown on the map)

☐ Nil

11 Renewal justification statement

Complete and attach a renewal justification statement, as described in Clause 18(1)l of the *Mining Regulation 2016.* Before completing the template, read the Guide to completing a renewal justification statement. Check the box below to indicate you have attached it to this application.

☒ Yes, I have attached a renewal justification statement.

12 Prospecting title work program

Complete and attach a Prospecting title work program (note that it is mandatory to use this form available on the Division of Resources and Geoscience website). Before completing the form, read the Exploration guideline: work programs for prospecting titles. Check the box below to indicate you have attached it to this application.

☒ Yes, I have attached a prospecting title work program using the approved form.

13 Technical advice

Nominate an exploration technical manager who will be responsible for supervising prospecting operations and (geoscientific) exploration reporting.

The person is expected to be a geoscientist or mining engineer with relevant experience in exploration.

You must provide the person's contact details and confirmation of their acceptance of the role. Note that this does not make the person liable for any other matters relating to this application.

You can attach the contact details and acceptance as a letter or enter the information below.

☐ I have attached documentation with the exploration technical manager details and acceptance of the role.

OR

☒ I have entered the exploration technical manager details and authorisation below.

Contact details

Name [redacted]

Position

Company

Phone

Email

Professional associations: Provide the name and member number of any relevant professional associations (e.g. AusIMM, AIG) to which the technical manager belongs, or list relevant qualifications and experience.

[redacted]

Signature: Provide the signature of the nominated exploration technical manager to support their acceptance of the role.

[redacted]

14 Statements of corporate compliance, environmental performance history and financial capability

The applicant must provide Statements of corporate compliance, environmental performance history and financial capability. Complete and attach the Statements template and check the box below to indicate you have attached it to this application.

☒ Yes, I have attached the statements of corporate compliance, environmental performance history and financial capability.

15 Activity approvals

15.1 Approved Category 2, Category 3 or 'Assessable prospecting operations'

Any prospecting operations which are **not** defined as 'Exempt Development' under Clause 10 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* require approval before they commence. Refer to the guideline ESG5: Assessment requirements for exploration activities for more information on activities.

15.1.1 Are there any Category 2, Category 3 or 'Assessable prospecting operations' that have been approved and are continuing into the new term of the authorisation?

☐ **Yes.** There are Category 2, Category 3 or 'Assessable prospecting operations' that have been approved and are continuing into the new term of the authorisation. (Enter the activity approval numbers below).
Approved activity numbers

☒ **No**

16 Rehabilitation cost estimate

All authority holders must provide an estimate of rehabilitation costs. This estimate will be considered by the department when determining the security deposit amount.

Before answering the following questions, read the Rehabilitation cost estimate guidelines.

The department is responsible for ensuring that the people of NSW do not incur a financial liability as a result of coal, mineral and petroleum exploration and production activities. All authority holders engaged in these activities are, therefore, required to lodge a security deposit.

The security deposit must cover the Government's full costs for rehabilitation in the event of default by the authority holder.

The rehabilitation cost estimate is an estimate of all rehabilitation liabilities which currently exist on the authority, including approved prospecting operations and those prospecting operations defined as exempt development.

16.1 What is the total rehabilitation cost estimate across the entire authorisation?

The estimate should cover the rehabilitation for **all** prospecting operations.

Total rehabilitation cost estimate

$ 130,695.78

16.1.1 What method have you used to calculate the rehabilitation cost estimate? Attach your cost calculation to this application.

☒ Department's rehabilitation cost calculation tool.

☐ Other – attach your calculations or use the field below to describe the tool or cost guide you have used.

16.1.2 What approvals/plans have you based the rehabilitation cost estimate on?

Provide date of approval letter(s) or reference where possible

☐ Exploration Activity Approvals

EL 7223 Shenhua Watermark
Note: Activity Approvals for the activities proposed during the proposed renewal term have not yet been granted.

☐ Mining Project Approval/Development Consent

☐ Mining Operations Plan/Rehabilitation Management Plan

16.2 What period is covered by the estimate?

Current disturbance at date of application; or	maximum disturbance 'snapshot' at the end of 2017 Note: under section 3.2 of ESG1: Rehabilitation Cost Estimate Guidelines, the Department will accept a RCE calculated as a 'snapshot' of all current liability for the title at the date of application, or liabilities for the title as a snapshot at a time in the future. The maximum disturbance for the EL renewal will occur at the end of 2017 following the completion of 31 boreholes.	
Period covered by the Estimation	insert date	insert date

16.3 What security is currently held by the department?

Current security held by the department

$ 250,000

16.4 Does this rehabilitation cost estimate propose a reduced rehabilitation liability for the authorisation?

If the rehabilitation has been completed and the liability has been reduced, you may claim for a reduction in the security deposit amount.

☐ Yes. Ensure you have completed **Question 17**.

☒ No.

17 Completion of rehabilitation

17.1 Has rehabilitation been completed and/or deemed satisfactory?

Rehabilitation of prospecting operations is deemed 'satisfactory' when:

- a *Form ESF2 – Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate* is submitted to the department by the authority holder, and
- the department has formally notified the authority holder that the rehabilitation is satisfactory.

☐ Has rehabilitation (including any progressive/partial rehabilitation) already been completed and deemed satisfactory by the department?

Provide details of correspondence including department references below

☒ Has rehabilitation been completed and you would like to seek formal confirmation from the department that rehabilitation has been successful, **without seeking a reduction in the security deposit**?

If **yes**, ensure you have completed and attached *Form ESF2 – Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate* to this application.

☐ Has rehabilitation been completed and you would like to seek formal confirmation from the department that rehabilitation has been successful, **and you are seeking a reduction in the security deposit**?

If **yes**, ensure you have completed and *Form ESF2 – Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate* to this application.

☐ Rehabilitation has **not** been completed.

18 Environmental and rehabilitation reporting

Depending on the authority conditions, you may need to submit an Environmental and Rehabilitation Compliance Report prepared in accordance with ESG4: Guideline for preparing an Environmental and Rehabilitation Compliance Report for exploration. An 'Environmental and Rehabilitation Compliance Report' is referred to using varying terms depending upon the authority conditions and includes: *Environmental Management Report*; *Environmental and Rehabilitation Report*; *Compliance and Rehabilitation Report*; *Environmental and Rehabilitation Compliance Report*.

18.1 Do the authority conditions require an Environmental and Rehabilitation Compliance Report?

☐ No.

☒ Yes, I have attached the required report.

19 Fee payment

Payment, proof of payment or details that allow the payment to be made must accompany this application form. Refer to Schedule 9 of the *Mining Regulation 2016* for a list of legislated fees.

Fees and fee calculation

- The application fee amount is $2,000.
- The area fee is $12.50 per unit per year for the first group; $6.25 per unit per year for additional groups; or $2.00 per hectare or part hectare per year for group 9 and 9A. Note that group 9 was split into two groups on 18 December 2015. Group 9 includes coal only and group 9A includes oil shale only. If you are renewing an exploration licence for group 9 you also retain the rights to explore for group 9A, however you only need to pay the area fee for one group.

Below are sample calculations.

EXAMPLE 1

You have applied for two groups e.g. Groups 1 and 2.
The area is 5 units and the term is 6 years.

Application fee	*$2,000.00*
Unit fee: 5 units @ $12.50 each x 6 years	*375.00*
Additional unit fee: 5 units @ $6.25 x 6 years	*$187.50*
Total fee	*$2,562.50*

EXAMPLE 2

You have applied for one group only – Group 9A.
The area is 2.3 hectares and the term is 6 years.

Application fee	*$2,000.00*
Area fee: 2.4 hectares @ $2.00 each x 6 years*	*$36.00*
Total fee	*$2,036.00*

***Note figure is rounded up**

Select your payment method

☐ **Direct deposit**

Account name: DPT Planning & Environment – Resources & Energy
BSB: 032001
Account number: 180732
Reference: REN [authority identifier and number] (e.g. REN EL 1234)

Direct deposits will require a copy of the deposit receipt issued by the banking authority as evidence to accompany the application form.

☐ **Cheque** made payable to 'DPT Planning & Environment – Resources & Energy'

☐ **Credit card** (enter details below)

Payment amount	$
Type of card	Select card type...
Cardholder's name:	
Card number:	
Expiry date (mm/yy):	mm / yy

20 Checklist of items to be included with this application

Item		Reference
Written confirmation from licence holder not seeking renewal (if applicable)	☐	Question 4
For groups 9 or 9A applications only – co-ordinates of the exploration area (if applicable)	☒	Question 9 Question 10
For groups 9 or 9A applications only – a standard map of the proposed exploration area (if applicable)	☒	Question 9 Question 10
Renewal justification statement	☒	Question 11
Prospecting title work program	☒	Question 12
Technical advice support documentation	☐	Question 13
Statements of corporate compliance, environmental performance history and financial capability	☒	Question 14
Rehabilitation cost estimate (attach calculations to evidence how the rehabilitation cost estimate is derived)	☒	Question 16
Form ESF2 – Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate (if applicable)	☒	Question 17
Environmental and Rehabilitation Compliance Report (if applicable)	☒	Question 18
For payments made by direct deposit – proof of payment	☐	Question 19
For agents only – evidence of appointment as agent, if this has not been previously supplied to the department	☐	Question 21

20.1 Have you lodged all the required information with this form?

☒ Yes

☐ No. I will provide outstanding information within 10 business days of lodging this application.

21 Declaration

This form should be signed by the applicant/s (in the case of a company a duly authorised officer) or an agent authorised to act on behalf of the applicant/s.

I/We declare that the information provided in this application is true and correct. I/We understand that under Part 5A of the *Crimes Act 1900*, knowingly giving false or misleading information is a serious offence; and under Section 378C of the *Mining Act 1992* any person who provides information that the person knows to be false or misleading is guilty of an offence, for which they may be subject to prosecution.

Applicant/s

Name	[redacted]
Position/title	
Date	29/6/2017
Signature	[redacted]

Name	
Position/title	
Date	
Signature	

Name	
Position/title	
Date	
Signature	

OR

Agent authorised to act for this applicant/s

Evidence of appointment is required if this has not been previously supplied to the department.

Name	
Position/title	
Date	
Signature	

Office use only

Application received:

Time: Date:

Application fee amount: $2000 (per authority)

Fee amount $ ☐ NREM3095-1 Coal or Oil Shale GL: Z4014
☐ NREM3096-3 Minerals

Area fee amount: Area Fee is $12.50/unit/year for the first group, $6.25/unit/year for additional groups or $2.00/ha/year or part hectare for group 9 or 9A

Area fee amount $ ☐ FINM46-1 Coal or Oil Shale GL: Z4010
☐ FINM46-3 Minerals

Total amount **$** **Receipt number:**

Received under delegation from the Secretary

Name

Signature

For credit cards

Following confirmation of payment, remove the first eight (8) digits of the credit card number from this form. Ensure that any saved copy does not include full credit card details.

Document control

Authorised by: Director Titles Services

RM8 Reference: PUB16/101 INT16/16102 (V15/5289#12)

Amendment schedule

Date	Version #	Amendment
01 March 2016	4.0	Legislation update, new template
06 March 2016	4.1	Hyperlinks updated, minor edits
31 March 2016	4.2	Minor edits
10 June 2016	4.3	Added note to 'fee payment' re group 9/9A
02 December 2016	4.4	Amendments to address the requirements for the statements of corporate compliance, environmental performance history and financial capability, rehabilitation and coordinates
17 March 2017	4.5	Minor formatting fixes
1 April 2017	4.6	Update bank details, project codes, dept name, map format (csv only)

26 April 2017	4.7	Update Division name, minor administrative changes.

DOCUMENT 8

Email providing 5-year work program

Objection to release of whole document

Chris Berry

From: [redacted]
Sent: Friday, 30 June 2017 8:48 AM
To: adrian delany
Cc: [redacted]
Subject: Re: Re: Shenhua Watermark Coal Pty Ltd - Application to Renew an Exploration Licence (final version)
Attachments: f) Question 12_Mineral-Prospecting-Title-Work-Program-Form - EL7223pdf.pdf

Hi Adrian,

The Five year work program attached as you required.

The applied five period of the title is from 23 February 2016. From this July there is only 4 years left (3.5 year) for Shenhua to conduct its exploration activites so there is no Year 5 for Shenhua to execute its prospecting activities.

We change the work program by shift some of activites of Year 2 to the Year 5 and that fully consistent with the 5 year term we applied.

Please do not hesitate to contact us if you have any questions.

--

[redacted]

[redacted]

[redacted] Re: Shenhua Watermark Coal Pty Ltd - Application to Renew an Exploration Licence (final version)

All

The attached f) Question 12_Mineral-Prospecting-Title-Work-Program-Form - EL7223pdf document has been revised following comments from DRG, but I note that no work program has been provided for year 5. Given Shenhua is seeking a 5 year renewal a work program consistent with the term is required.

Regards

Adrian Delany
Manager Strategic Services
Division of Resources and Mining
516 High Street Maitland NSW| 2320
T 02 4931 6437 M 0438 175 240

NSW GOVERNMENT | Planning & Environment

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On 29 June 2017 at 17:12, [redacted] wrote:

Hi there,

Please find attached final version of Shenhua Watermark Coal Pty Ltd's Application to Renew an Exploration Licence.

Please do not hesitate to contact us if you have any questions.

Kind regards,

[redacted]

[redacted]

[redacted]

368-370 Conadilly Street
Gunnedah NSW, 2380
Australia
www.shenhuaaustralia.com

DOCUMENT 10

Email requesting 5-year work program

Objection to release of whole document

Chris Berry

From: Adrian Delany
Sent: Thursday, 29 June 2017 9:54 PM
To: [redacted]
Cc: Titles Services; [redacted]
Subject: Re: Shenhua Watermark Coal Pty Ltd - Application to Renew an Exploration Licence (final version)
Attachments: f) Question 12_Mineral-Prospecting-Title-Work-Program-Form - EL7223pdf.pdf

All

The attached f) Question 12_Mineral-Prospecting-Title-Work-Program-Form - EL7223pdf document has been revised following comments from DRG, but I note that no work program has been provided for year 5. Given Shenhua is seeking a 5 year renewal a work program consistent with the term is required.

Regards

Adrian Delany
Manager Strategic Services
Division of Resources and Mining
516 High Street Maitland NSW| 2320
T 02 4931 6437 M 0438 175 240

NSW GOVERNMENT | Planning & Environment

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On 29 June 2017 at 17:12, [redacted] wrote:

Hi there,

Please find attached final version of Shenhua Watermark Coal Pty Ltd's Application to Renew an Exploration Licence.

Please do not hesitate to contact us if you have any questions.

Kind regards,

[redacted]

[redacted]

[redacted]

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Gunnedah NSW, 2380
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DOCUMENT 14

Rehabilitation Cost Estimation Tool
RCE Tool June 2017 – EL7223

Further redactions required

NSW GOVERNMENT Planning & Environment

Rehabilitation Cost Estimation Tool

The *Mining Act 1992* and the *Petroleum (Onshore) Act 1991* allow the Minister for Resources (or delegate) to impose and vary a security deposit condition on authorisations or titles granted under these Acts. The **security deposit** is required for the fulfilment of obligations under the authorisation or title (hereon in referred to as an authority), including those related to rehabilitation, and obligations that may arise in the future. Authority holders are required to submit a Rehabilitation Cost Estimate (RCE) whenever a potential change in rehabilitation liability occurs and at other key points throughout the tenure of an authority. The RCE is used by the NSW Department of Planning and Environment, Division of Resources and Geoscience (DRG) to assist in determining the amount of the security deposit required for an authority.

The objective of the Rehabilitation Cost Estimation Tool (the RCE Tool) is to provide exploration, mining and petroleum operators with guidance on calculating an appropriate RCE for their operations by assisting in the assessment and quantification of rehabilitation risks and liabilities pursuant to the *Mining Act 1992 and Petroleum (Onshore) Act 1991*.

Please Note: The RCE Tool does not apply to the sealing of petroleum wells associated with exploration and production activities under the Petroleum (Onshore) Act 1991. Petroleum title holders can use the RCE Tool for guidance on calculating an appropriate RCE for disturbance associated with their activities. However, it is the expectation that a separate estimate is submitted for the sealing of petroleum wells, with the RCE prepared by a suitably qualified expert in consideration of the scale, nature, risks and age associated with petroleum wells specific to the petroleum title. For petroleum production use the Open Cut Button. For petroleum exploration use the Exploration Button.

Prior to calculating a RCE, authority holders using the RCE Tool should refer to the *Rehabilitation Cost Estimate Tool Handbook* which provides guidance information about, and step by step instructions on how to use, the RCE Tool. The Handbook is available at the following location on the Department's website: http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/rules-and-forms/pgf

Calculating a RCE

The framework of the RCE Tool has been developed in accordance with a tiered risk-based approach to calculating rehabilitation costs whereby the outcome of the estimation will be based on the nature, size, scale and complexity of the operation. While the authority holder has the opportunity to nominate unit rates* which are not the same as those in the RCE Tool, any other unit rate proposed by the authority holder must be based on a third party cost as it is assumed that if the authority holder defaults on their responsibility to rehabilitate the mine or exploration operation(s), a contractor will be engaged by the Government to carry out the required rehabilitation works.

Select Type of Mining/Exploration Operations from Buttons Below

By selecting the relevant type of mining/petroleum/exploration operation (below), followed by the **ENTER** button, the worksheet

*Note: DRG may regularly make changes and updates to the spreadsheet as necessary. All authorisation holders are encouraged to use the most recent version of the spreadsheet, available on the DRG website.

Site Registration

Date June 2017

Complete the following fields prior to calculating the security deposit.

Exploration Authorisation Number	EL 7223
Exploration Authorisation Holder Name	Shenua Watermark Coal Pty Ltd
Expiry of Authorisation	22/2/2016
Current Security	$250,000
Date of last Security Deposit review	1/02/2016
RCE Contact	[redacted]
Position	Environment Manager - Shenhua Watermark Coal Pty Ltd
Address	368-370 Conadilly Street Gunnedah NSW, 2380
Phone	[redacted]
Email	[redacted]

Site Description

The following site specific information is requested to provide background information in the context of calculating the security deposit.

Summary of Exploration Activities

Authorisation area (ha): Hectares 19,500

Exploration Activity (Assessable Prospecting Operations) Approval references for activities which have not been rehabilitated to the satisfaction* of the Department.

1 09/3485 Approval to und
2 09/3485-2 Extension of S
3 11/2521 Approval to und
4 OUT12/13232 Approval

Rehabilitation of prospecting operations is deemed 'satisfactory' when:

• a Form ESF2 – Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate is submitted to the Department by the authority holder, and
• the Department has formally notified the authority holder that the rehabilitation is satisfactory.

NSW GOVERNMENT | Planning & Environment

Exploration Summary Rehabilitation Cost Estimation

Note: Sections of this page are automatically filled in from the registration page

Exploration Authorisation Number	EL 7223
Exploration Authorisation Holder Name	Shenua Watermark Coal Pty Ltd
Expiry of Authorisation	22/02/2016
Current Security	$250,000
Date of Last Security Deposit Review	1/02/2016
RCE Contact	[redacted]
Position	[redacted]
Address	[redacted]
Phone	[redacted]
Email	[redacted]

Domain		Security Deposit
Exploration 1		$113,649
Exploration 2		
Exploration 3		
Subtotal (Domains and Sundry Items)		**$113,648.60**
Contingency	10%	$11,364.85
Post Closure Environmental Monitoring	5%	$5,682.43
Total Security Deposit for the Project (excl. of GST)		**$130,695.78**

Note: GST is not included in the above calculation or as part of rehabilitation security deposits required by the Department.

☐ Alterations have been made to unit prices within this spreadsheet. (Attach a separate sheet providing details of changes).

This Registration Form, Summary Report and calculation pages are to be printed and attached as an appendix to the RCE.

This security calculation has been estimated using the best available information at the time.
It is a true and accurate reflection of the total rehabilitation liability held by the authorisation holder/s for the exploration authorisation/s concerned.

Authorisation Representative's Name _____ **Date:** _____

Authorisation Representative's Role / Responsibility _____ **Signature** _____

Exploration

Domain 1a: All Rehabilitation Activities

Total Cost for all Rehabilitation Activities $113,649

Additional **Assumptions:** *Record any relevant assumptions to this domain below:*

Assumes maximum disturbance at the end of 2017 of 1.875 hectares (following the completion of 50 boreholes for a total metreage of 3325 metres)	
Assumes the only ground disturbance will be associated with drilling activities (i.e. no additional formed accesses, hardstands, etc.)	
Disturbance area per borehole assumed to be 0.0375ha (375m2)	

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	1.88
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Termination of Services and Demolition Works	Disconnect and terminate services at remote areas (i.e. pump stations, remote workshops, sewage treatment plant etc.)	N		allow	$5,500				Used for infrastructure remote from primary connection. Can also be used for small mines / quarries that do not have dedicated supplies from supply authorities such as steel lattice power lines
	Removal of low/medium voltage powerlines including disconnection, rolling up the wires and removing the poles - does not include the removal of substations	N		km	$15,000				Applies to power lines on stobie, concrete or similar poles.
	Demolish and/or remove substations (assumes they are in a closed building). Dispose of waste material on-site/locally	N		m2	$600.00				Simple structure to demolish. Assumes single story building and segregation of contents for scrap as applicable
	Demolish and remove switchyard. Dispose of waste material on-site/locally	N		m2	$65.00				Includes demolition and removal of all switchgear and transformers etc. and segregation of contents for scrap as applicable
	Demolish and remove demountable structures on concrete stumps. Assumes not being re-used	N		m2	$40.00				Crib huts, temporary offices and other 'non permanent' structures. Does not include transport to regional disposal facility or equivalent
	Demolish and remove small buildings/tanks (admin buildings, single story accommodation etc) and disposal on-site/locally	N		m2	$65.00				Simple structure to demolish, assumes no greater than 2 stories high. Does not include transport to regional disposal facility or equivalent
	Demolish and remove light industrial buildings and disposal on-site/locally	N		m2/floor	$115.00				Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent
	Remove small underground pipe and disposal on-site/locally	N		m	$25.00				For example: 300 mm pipes - 0.5 m deep, does not include transport to regional disposal facility or equivalent
	Remove medium underground pipe and disposal on-site/locally	N		m	$60.00				For example: 500 mm pipes - 1 m deep, does not include transport to regional disposal facility or equivalent
	Remove large underground pipe and disposal on-site/locally	N		m	$165.00				For example: 1 m pipes - 2 m deep.
	Remove above ground pipe (supported) and disposal on-site/locally	N		m	$12.00				~300 mm pipes and assumes pipes are in close proximity to infrastructure areas. Does not include transport to regional disposal facility or equivalent
	Remove surface pipelines (unsupported) and disposal on-site/locally	N		m	$15.00				~300 mm pipes and assumes pipes are used for water transfer between pits (or similar) and remotely located. Does not include transport to regional disposal facility or equivalent
	Remove bitumen (car park and access roads) and dispose on-site/locally	N		m2	$10.00				Scalp bitumen and stabilised material. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport
	Remove concrete pads & footings (<300 mm thickness) and disposal on-site/locally	N		m2	$37.00				Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport
	Crush concrete to make road aggregate - 75 mm	N		tonne	$17.00				Does not include haulage of materials - assumes crushing plant is readily available
	Crush concrete to make road aggregate - 50 mm	N		tonne	$20.00				Does not include haulage of materials - assumes crushing plant is readily available
	Crush concrete to make road aggregate - 30 mm	N		tonne	$22.00				Does not include haulage of materials - assumes crushing plant is readily available
	Remove fence (cyclone/wire fence) and disposal on-site/locally	N		m	$20.00				Roll up fence and remove posts.
					Termination of Services and Demolition Works Subtotal		$0		
Contaminated Materials	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required	N		Cluster	$16,000				The preliminary investigation would include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method A cluster may include: - Mine infrastructure (i.e., fuel / chemical store, workshop, vehicle wash-down, sewage treatment etc.) - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.) - Remote pit-top facilities (i.e., vehicle re-fuel, sewage treatment, secondary workshop, chemical storage etc.)
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	N		L	$0.35				Cost for recent sump clean-up from resource activity - requires specialists to treat
	Load, cart and dispose of High Level contaminated material off site to a licensed landfill. Assumes cartage to a licensed landfill	N		m3	$700.00				Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add $50/m3 for cartage to regional landfill	N		m3	$200.00				Includes load, haul and dump fees to a licensed facility.
	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	N		m3	Select from List			Select Volume Here	Spreading of contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up to 24 months.
	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc.) contaminated soil treatment	N		Item	$150,000				Required if treatment of hydrocarbon contamination is required to be fast tracked.
	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	N		m3	$165.00				Additional cost as the treatment process is fast tracked
	Remove and dispose of asbestos (<750 m2)	N		m2	$60.00				Where an assessment/estimation has been made to confirm the volume of asbestos to be removed
	Treatment of known Acid Sulfate Soils	N		ha	$2,680				Assumes ASS is treatable via neutralisation and does not require capping and isolation
	Removal and disposal of plastic liner (i.e. dam, leach pad, sump etc.)	N		m2	$1.00				Provisional sum for cutting using ripping tynes and on-site disposal of the liner
					Contaminated Materials Subtotal		$0		
Boreholes	**Option 1** Exploration boreholes – rehabilitate boreholes and drill pads as required (all inclusive rate)	Y	2115	depth (m)	$40.00		$84,600		Where multiple boreholes exist, this is the rate for the total cumulative depth of all boreholes (e.g. two boreholes at 100m depth each = 200m). Assumes a per metre drilling rate of ~$150 / m of which ~25 - 30% is for rehabilitation which may include a variety of works (i.e., cut casing and install cap, install poly pipe to facilitate back-filling, grout preparation, grouting and capping, reshaping / ripping the drill pad, amelioration / seeding etc.)
	Option 2 Exploration boreholes – grout and cap open bore holes (all inclusive rate)	N		allow	$7,950				Includes grouting and capping 100 - 200 m exploration boreholes to meet the requirements of EP001
	Option 3 Exploration boreholes – backfill open bore holes with cuttings	N		allow	$300				May include cutting of casing, installation of a casing cap, and/or manually backfilling the hole with drill cuttings. Does not include reshaping / ripping the drill pad, amelioration / seeding etc.
					Boreholes Subtotal		$84,600		

Roads and Tracks	Unsealed roads / vehicle park-up areas – minor works including deep rip and trim	N		ha	$880.00				D7 Rip at ~$205 / hr, 12 hr day, ~2.5 ha / day
	Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim	N		ha	$1,500				D7 Rip at ~$205 / hr, 12 hr day, ~1.6 ha / day
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip and seed (pasture grass)	N		ha	$3,698				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - pasture grass seed.
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	N		ha	$4,486				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - tree/shrub seed.
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (pasture grass)	N		ha	$3,820				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - pasture grass seed.
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	N		ha	$4,595				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - tree/shrub seed.
	Remove stabilised material (blue metal, aggregate etc) from roadways and disposal on-site/locally (Select Haul Distance from list)	N		m3	Select from List			Select Haul Distance Here	This item includes the scraping and removal of the volume of stabilised material from the road, laydown or other surface using an excavator, dozer and grader to enable the establishment of rehabilitation.
						Roads and Tracks Subtotal	$0		
Earthworks / Structural Works (Landform Establishment)	Minor reshaping and pushing - this may include backfilling costeans, bulk samples, camp areas etc	N		ha	$3,900				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation)
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	N		ha	$1,600				Combination of dozer and excavator work. Small dozer (D6 or similar) @ ~$200 per hour plus grader @ $212 per hour for ~4 hours each per ha
	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring backfill using an excavator and scraper to fill the void and enable the establishment of rehabilitation.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	N		ha	$960.00				Grader @ $212 per hour - ripping in 1 direction only
	Deep rip hard stand / lay down areas	N		ha	$960.00				D7 Rip at ~$205 / hr, 12 hr day, ~2.5 ha / day
						Earthworks / Structural Works (Landform Establishment) Subtotal	$0		
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring load and haul using an excavator, truck and dozer to enable the establishment of rehabilitation.
	Planting mature trees (>15 cm)	N		allow	$20.00				4 m centres.
	Planting tube stock (<15 cm)	N		allow	$10.00				4 m centres.
	Direct seeding / fertiliser (pasture grass species)	N		ha	$1,240				Rate can fluctuate however this is a suitable standard rate
	Direct seeding / fertiliser (tree or native grass species)	N		ha	$2,065				Rate can fluctuate however this is a suitable standard rate
	Hydro-seeding with straw mulching and bitumen tack	N		m2	$1.80				Rate can fluctuate however this is a suitable standard rate
	Single application of fertiliser (pasture)	N		ha	$420.00				Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate
	Single application of fertiliser (trees)	N		ha	$140.00				These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate
	Spoil amelioration (adding lime / gypsum etc)	N		ha	$880.00				Assumes 2.5 t / ha as an average application rate.
	growth media amelioration with biosolids	N		ha	$1,015				Recent experience with agronomy projects
	Construct no-climb stock fence around rehabilitated areas	N		m	$9.80				Standard rate for no-climb stock fencing
	Construct standard stock fence around rehabilitated areas	N		m	$4.00				Standard rate for standard stock fencing
	Purchase and erect warning signs	N		allow	$250.00				Compliance with AS 1319-1994 - Safety signs for the occupational environment - installed every 25 m.
						Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment) Subtotal	$0		
Water Management	Exploration sump decommissioning	N		m3	$180.00				Rate based on capacity of sump developed for borehole. Includes filling of sump.
	Water / mud disposal from sump	N		L	$0.30				Disposal of non-contaminated sediments removed from sump.
	Clean water dams to be retained after decommissioning – make safe and minor earthworks	N		allow	$2,600				Provisional sum for earthworks and revegetation required to rehabilitate dam batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~$200 per hour and pasture grass
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring removal using an excavator, truck and dozer to clean out the dam.
						Water Management Subtotal	$0		
Maintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y	1.165	ha	$900.00		$1,049	Assumed disturbance area of 0.0375ha per borehole (31 boreholes proposed during 2017)	Rehabilitation maintenance might include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include major repair works
	Existing rehabilitation repair - minor	N		ha	$1,200				Areas requiring minor repair - rills, minor growth media replacement
	Existing rehabilitation repair - moderate	N		ha	$1,700				Areas requiring moderate repair - rills, significant growth media replacement
	Existing rehabilitation repair - major	N		ha	$2,600				Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management
	Existing rehabilitation repair - total failure of landform	N		ha	$40,000				Areas that require extensive rehabilitation repair - re-design and re-construction of landform.
						Maintenance of Rehabilitated Areas Subtotal	$1,049		
Maintenance of Other Land	Pest management on buffer lands, non-disturbed, and rehabilitated areas	N		ha	$160.00				Feral animal baiting programs if required and waste materials required to be removed
	Land management of undisturbed areas (rehabilitation, weeds, ferals, erosion and sediment control works)	N		ha	$400.00				Undisturbed areas within the lease boundary that require land management activities.
						Maintenance of Other Land Subtotal	$0		
Heritage Items	The restoration and care and maintenance of items that have heritage significance	N		allow	Use alternate rate cell				Item for the redistribution of Aboriginal artefacts, preservation of European heritage items or a combination of activities.
						Heritage Items Subtotal	$0		
Sundry Items	DRG tender preparation and assessment, stakeholder consultation, risk assessment facilitation and management, statutory reporting and instruments, permitting and compliance requirements, document and data management	N		allow	Use alternate rate cell				Provisional sum for the NSW Government to prepare tender documentation (i.e. demolition, waste disposal, earthworks, environmental management etc) manage stakeholders and establish permitting and compliance requirements for closure.
	Additional fees for accessing State, Crown or other public lands for rehabilitation/remediation activities	N		allow	Use alternate rate cell				Provisional sum
						Sundry Items Subtotal	$0		
Third Party Project Management	Mobilisation & Demobilisation for exploration programs	Y	4	Item	$7,000		$28,000	Based on 31 boreholes proposed during 2017	Assumes an exploration program of 10 or fewer holes and local contractors within 250 km are available to undertake rehabilitation of disturbance generated by dedicated exploration companies. Apply once per exploration pad.
						Third Party Project Management Subtotal	$28,000		
Additional Items	Other 1 <insert>	N			This is				This item includes <<to be added by the operator>>
	Other 2 <insert>	N			deliberately				This item includes <<to be added by the operator>>

	Other 3 <insert>	N			left blank			This item includes <<to be added by the operator>>
					Additional Items Subtotal		$0	
	Total Cost for all Rehabilitation Activities						$113,649	

Exploration

Domain 1b: All Rehabilitation Activities

Total Cost for all Rehabilitation Activities $0

Additional **Assumptions:** *Record any relevant assumptions to this domain below:*

	Key Rehabilitation Area Data for Domain	Enter data below manually
	Total Landform Establishment:	
	Total Growth Media Development:	
	Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Termination of Services and Demolition Works	Disconnect and terminate services at remote areas (i.e. pump stations, remote workshops, sewage treatment plant etc.)	N		allow	$6,500				Used for infrastructure remote from primary connection. Can also be used for small mines / quarries that do not have dedicated supplies from supply authorities such as steel lattice power lines
	Removal of low/medium voltage powerlines including disconnection, rolling up the wires and removing the poles - does not include the removal of substations	N		km	$15,000				Applies to power lines on stobie, concrete or similar poles
	Demolish and/or remove substations (assumes they are in a closed building). Dispose of waste material on-site/locally	N		m2	$600.00				Simple structure to demolish. Assumes single story building and segregation of contents for scrap as applicable
	Demolish and remove switchyard. Dispose of waste material on-site/locally	N		m2	$55.00				Includes demolition and removal of all switchgear and transformers etc. and segregation of contents for scrap as applicable
	Demolish and remove demountable structures on concrete stumps. Assumes not being re-used	N		m2	$40.00				Crib huts, temporary offices and other 'non permanent' structures. Does not include transport to regional disposal facility or equivalent
	Demolish and remove small buildings/tanks (admin buildings, single story accommodation etc) and disposal on-site/locally	N		m2	$65.00				Simple structure to demolish, assumes no greater than 2 stories high. Does not include transport to regional disposal facility or equivalent
	Demolish and remove light industrial buildings and disposal on-site/locally	N		m2/floor	$115.00				Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent
	Remove small underground pipe and disposal on-site/locally	N		m	$25.00				For example: 300 mm pipes - 0.5 m deep, does not include transport to regional disposal facility or equivalent
	Remove medium underground pipe and disposal on-site/locally	N		m	$60.00				For example: 500 mm pipes - 1 m deep, does not include transport to regional disposal facility or equivalent
	Remove large underground pipe and disposal on-site/locally	N		m	$165.00				For example: 1 m pipes - 2 m deep.
	Remove above ground pipe (supported) and disposal on-site/locally	N		m	$12.00				~300 mm pipes and assumes pipes are in close proximity to infrastructure areas. Does not include transport to regional disposal facility or equivalent
	Remove surface pipelines (unsupported) and disposal on-site/locally	N		m	$15.00				~300 mm pipes and assumes pipes are used for water transfer between pits (or similar) and remotely located. Does not include transport to regional disposal facility or equivalent
	Remove bitumen (car park and access roads) and dispose on-site/locally	N		m2	$10.00				Scalp bitumen and stabilised material. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
	Remove concrete pads & footings (<300 mm thickness) and disposal on-site/locally	N		m2	$37.00				Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
	Crush concrete to make road aggregate - 75 mm	N		tonne	$17.00				Does not include haulage of materials - assumes crushing plant is readily available
	Crush concrete to make road aggregate - 50 mm	N		tonne	$20.00				Does not include haulage of materials - assumes crushing plant is readily available
	Crush concrete to make road aggregate - 30 mm	N		tonne	$22.00				Does not include haulage of materials - assumes crushing plant is readily available
	Remove fence (cyclone/wire fence) and disposal on-site/locally	N		m	$20.00				Roll up fence and remove posts
					Termination of Services and Demolition Works Subtotal		$0		
Contaminated Materials	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	N		Cluster	$15,000				The preliminary investigation would include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. A cluster may include: - Mine infrastructure (i.e., fuel / chemical store, workshop, vehicle wash-down, sewage treatment etc.) - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.) - Remote pit-top facilities (i.e., vehicle re-fuel, sewage treatment, secondary workshop, chemical storage etc.)
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	N		L	$0.35				Cost for recent sump clean-up from resource activity - requires specialists to treat
	Load, cart and dispose of High Level contaminated material off site to a licensed landfill. Assumes cartage to a licensed landfill	N		m3	$700.00				Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add $50/m3 for cartage to regional landfill	N		m3	$200.00				Includes load, haul and dump fees to a licensed facility.
								Select Volume Here	

	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	N		m3	Select from List				Spreading of contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up to 24 months
	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc.) contaminated soil treatment	N		Item	$150,000				Required if treatment of hydrocarbon contamination is required to be fast tracked.
	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	N		m3	$165.00				Additional cost as the treatment process is fast tracked
	Remove and dispose of asbestos (<750 m2)	N		m2	$50.00				Where an assessment/estimation has been made to confirm the volume of asbestos to be removed
	Treatment of known Acid Sulfate Soils	N		ha	$2,580				Assumes ASS is treatable via neutralisation and does not require capping and isolation
	Removal and disposal of plastic liner (i.e. dam, leach pad, sump etc.)	N		m2	$1.00				Provisional sum for cutting using ripping tynes and on-site disposal of the liner
					Contaminated Materials Subtotal		$0		
Boreholes	**Option 1** Exploration boreholes – rehabilitate boreholes and drill pads as required (all inclusive rate)	N		depth (m)	$40.00				Where multiple boreholes exist, this is the rate for the total cumulative depth of all boreholes (e.g. two boreholes at 100m depth each = 200m). Assumes a per metre drilling rate of ~$150 / m of which ~25 - 30% is for rehabilitation which may include a variety of works (i.e., cut casing and install cap, install poly pipe to facilitate back-filling, grout preparation, grouting and capping, reshaping / ripping the drill pad, amelioration / seeding etc.)
	Option 2 Exploration boreholes – grout and cap open bore holes (all inclusive rate)	N	0	allow	$7,950				Includes grouting and capping 100 - 200 m exploration boreholes to meet the requirements of EDG01
	Option 3 Exploration boreholes – backfill open bore holes with cuttings	N		allow	$300				May include cutting of casing, installation of a casing cap, and/or manually backfilling the hole with drill cuttings. Does not include reshaping / ripping the drill pad, amelioration / seeding etc
					Boreholes Subtotal		$0		
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor works including deep rip and trim	N		ha	$960.00				D7 Rip at ~$205 / hr, 12 hr day, ~2.5 ha / day
	Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim	N		ha	$1,800				D7 Rip at ~$205 / hr, 12 hr day, ~1.6 ha / day
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip and seed (pasture grass)	N		ha	$3,686				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - pasture grass seed
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	N		ha	$4,486				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - tree/shrub seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (pasture grass)	N		ha	$3,620				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - pasture grass seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	N		ha	$4,595				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - tree/shrub seed.
	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	N		m3	Select from List			Select Haul Distance Here	This item includes the scraping and removal of the volume of stabilised material from the road, laydown or other surface using an excavator, dozer and grader to enable the establishment of rehabilitation
					Roads and Tracks Subtotal		$0		
Earthworks / Structural Works (Landform Establishment)	Minor reshaping and pushing - this may include backfilling costeans, bulk samples, camp areas etc.	N		ha	$3,900				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation)
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	N		ha	$1,800				Combination of dozer and excavator work. Small dozer (D6 or similar) @ ~$200 per hour plus grader @ $212 per hour for ~4 hours each per ha
	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring backfill using an excavator and scraper to fill the void and enable the establishment of rehabilitation.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	N		ha	$960.00				Grader @ $212 per hour - ripping in 1 direction only
	Deep rip hard stand / lay down areas	N		ha	$960.00				D7 Rip at ~$205 / hr, 12 hr day, ~2.5 ha / day
					Earthworks / Structural Works (Landform Establishment) Subtotal		$0		
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring load and haul using an excavator, truck and dozer to enable the establishment of rehabilitation.
	Planting mature trees (>15 cm)	N		allow	$20.00				4 m centres.
	Planting tube stock (<15 cm)	N		allow	$10.00				4 m centres.
	Direct seeding / fertiliser (pasture grass species)	N		ha	$1,240				Rate can fluctuate however this is a suitable standard rate.
	Direct seeding / fertiliser (tree or native grass species)	N		ha	$2,095				Rate can fluctuate however this is a suitable standard rate.
	Hydro-seeding with straw mulching and bitumen tack	N		m2	$1.80				Rate can fluctuate however this is a suitable standard rate.
	Single application of fertiliser (pasture)	N		ha	$420.00				Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Single application of fertiliser (trees)	N		ha	$140.00				These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Spoil amelioration (adding lime / gypsum etc.)	N		ha	$860.00				Assumes 2.5 t / ha as an average application rate
	growth media amelioration with biosolids	N		ha	$1,015				Recent experience with agronomy projects
	Construct no-climb stock fence around rehabilitated areas	N		m	$9.50				Standard rate for no-climb stock fencing
	Construct standard stock fence around rehabilitated areas	N		m	$4.00				Standard rate for standard stock fencing

	Purchase and erect warning signs	N		allow	$280.00				Compliance with AS 1319-1994 - Safety signs for the occupational environment - installed every 25 m
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment) Subtotal							$0		
Water Management	Exploration sump decommissioning	N		m3	$180.00				Rate based on capacity of sump developed for borehole. Includes filling of sump
	Water / mud disposal from sump	N		L	$0.30				Disposal of non-contaminated sediments removed from sump
	Clean water dams to be retained after decommissioning – make safe and minor earthworks	N		allow	$2,500				Provisional sum for earthworks and revegetation required to rehabilitate dam batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~$200 per hour and pasture grass
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring removal using an excavator, truck and dozer to clean out the dam
Water Management Subtotal							$0		
Maintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	N		ha	$900.00				Rehabilitation maintenance might include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include major repair works
	Existing rehabilitation repair - minor	N		ha	$1,200				Areas requiring minor repair - rills, minor growth media replacement
	Existing rehabilitation repair - moderate	N		ha	$1,700				Areas requiring moderate repair - rills, significant growth media replacement
	Existing rehabilitation repair - major	N		ha	$2,500				Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management
	Existing rehabilitation repair - total failure of landform	N		ha	$40,000				Areas that require extensive rehabilitation repair - re-design and re-construction of landform
Maintenance of Rehabilitated Areas Subtotal							$0		
Maintenance of Other Land	Pest management on buffer lands, non-disturbed, and rehabilitated areas	N		ha	$180.00				Feral animal baiting programs if required and waste materials required to be removed.
	Land management of undisturbed areas (rehabilitation, weeds, ferals, erosion and sediment control works)	N		ha	$400.00				Undisturbed areas within the lease boundary that require land management activities
Maintenance of Other Land Subtotal							$0		
Heritage Items	The restoration and care and maintenance of items that have heritage significance	N		allow	Use alternate rate cell				Item for the redistribution of Aboriginal artefacts, preservation of European heritage items or a combination of activities
Heritage Items Subtotal							$0		
Sundry Items	DRG tender preparation and assessment, stakeholder consultation, risk assessment facilitation and management, statutory reporting and instruments, permitting and compliance requirements, document and data management	N		allow	Use alternate rate cell				Provisional sum for the NSW Government to prepare tender documentation (i.e. demolition, waste disposal, earthworks, environmental management etc.) manage stakeholders and establish permitting and compliance requirements for closure
	Additional fees for accessing State, Crown or other public lands for rehabilitation/remediation activities	N		allow	Use alternate rate cell				Provisional sum
Sundry Items Subtotal							$0		
Third Party Project Management	Mobilisation & Demobilisation for exploration programs	N		Item	$7,000				Assumes an exploration program of 10 or fewer holes and local contractors within 250 km are available to undertake rehabilitation of disturbance generated by dedicated exploration companies. Apply once per exploration pad
Third Party Project Management Subtotal							$0		
Additional Items	Other 1 <insert>	N			This is				This item includes <<to be added by the operator>>
	Other 2 <insert>	N			deliberately				This item includes <<to be added by the operator>>
	Other 3 <insert>	N			left blank				This item includes <<to be added by the operator>>
Additional Items Subtotal							$0		
Total Cost for all Rehabilitation Activities							$0		

Exploration

Domain 1c: All Rehabilitation Activities

Total Cost for all Rehabilitation Activities $0

Additional **Assumptions:** *Record any relevant assumptions to this domain below:*

	Key Rehabilitation Area Data for Domain	Enter data below manually
	Total Landform Establishment:	
	Total Growth Media Development:	
	Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Termination of Services and Demolition Works	Disconnect and terminate services at remote areas (i.e. pump stations, remote workshops, sewage treatment plant etc.)	N		allow	$5,500				Used for infrastructure remote from primary connection. Can also be used for small mines / quarries that do not have dedicated supplies from supply authorities such as steel lattice power lines.
	Removal of low/medium voltage powerlines including disconnection, rolling up the wires and removing the poles - does not include the removal of substations	N		km	$15,000				Applies to power lines on stobie, concrete or similar poles
	Demolish and/or remove substations (assumes they are in a closed building). Dispose of waste material on-site/locally	N		m2	$600.00				Simple structure to demolish. Assumes single story building and segregation of contents for scrap as applicable
	Demolish and remove switchyard. Dispose of waste material on-site/locally	N		m2	$55.00				Includes demolition and removal of all switchgear and transformers etc and segregation of contents for scrap as applicable
	Demolish and remove demountable structures on concrete stumps. Assumes not being re-used	N		m2	$40.00				Crib huts, temporary offices and other 'non permanent' structures. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove small buildings/tanks (admin buildings, single story accommodation etc) and disposal on-site/locally	N		m2	$85.00				Simple structure to demolish, assumes no greater than 2 stories high. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove light industrial buildings and disposal on-site/locally	N		m2/floor	$115.00				Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Remove small underground pipe and disposal on-site/locally	N		m	$25.00				For example: 300 mm pipes - 0.5 m deep, does not include transport to regional disposal facility or equivalent
	Remove medium underground pipe and disposal on-site/locally	N		m	$60.00				For example: 500 mm pipes - 1 m deep, does not include transport to regional disposal facility or equivalent
	Remove large underground pipe and disposal on-site/locally	N		m	$165.00				For example: 1 m pipes - 2 m deep.
	Remove above ground pipe (supported) and disposal on-site/locally	N		m	$12.00				~300 mm pipes and assumes pipes are in close proximity to infrastructure areas. Does not include transport to regional disposal facility or equivalent
	Remove surface pipelines (unsupported) and disposal on-site/locally	N		m	$15.00				~300 mm pipes and assumes pipes are used for water transfer between pits (or similar) and remotely located. Does not include transport to regional disposal facility or equivalent
	Remove bitumen (car park and access roads) and dispose on-site/locally	N		m2	$10.00				Scalp bitumen and stabilised material. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
	Remove concrete pads & footings (<300 mm thickness) and disposal on-site/locally	N		m2	$37.00				Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
	Crush concrete to make road aggregate - 75 mm	N		tonne	$17.00				Does not include haulage of materials - assumes crushing plant is readily available
	Crush concrete to make road aggregate - 50 mm	N		tonne	$20.00				Does not include haulage of materials - assumes crushing plant is readily available
	Crush concrete to make road aggregate - 30 mm	N		tonne	$22.00				Does not include haulage of materials - assumes crushing plant is readily available
	Remove fence (cyclone/wire fence) and disposal on-site/locally	N		m	$20.00				Roll up fence and remove posts
					Termination of Services and Demolition Works Subtotal		$0		
Contaminated Materials	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	N		Cluster	$15,000				The preliminary investigation would include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. A cluster may include: - Mine infrastructure (i.e., fuel / chemical store, workshop, vehicle wash-down, sewage treatment etc.) - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.) - Remote pit-top facilities (i.e., vehicle re-fuel, sewage treatment, secondary workshop, chemical storage etc.)
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	N		L	$0.35				Cost for recent sump clean-up from resource activity - requires specialists to treat
	Load, cart and dispose of High Level contaminated material off site to a licensed landfill. Assumes cartage to a licensed landfill	N		m3	$700.00				Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add $50/m3 for cartage to regional landfill	N		m3	$200.00				Includes load, haul and dump fees to a licensed facility.
								Select Volume Here	

	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	N		m3	Select from List				Spreading of contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up to 24 months
	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc) contaminated soil treatment	N		Item	$150,000				Required if treatment of hydrocarbon contamination is required to be fast tracked.
	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	N		m3	$165.00				Additional cost as the treatment process is fast tracked
	Remove and dispose of asbestos (<750 m2)	N		m2	$50.00				Where an assessment/estimation has been made to confirm the volume of asbestos to be removed
	Treatment of known Acid Sulfate Soils	N		ha	$2,880				Assumes ASS is treatable via neutralisation and does not require capping and isolation.
	Removal and disposal of plastic liner (i.e. dam, leach pad, sump etc.)	N		m2	$1.00				Provisional sum for cutting using ripping tynes and on-site disposal of the liner
						Contaminated Materials Subtotal	$0		
Boreholes	Option 1 Exploration boreholes – rehabilitate boreholes and drill pads as required (all inclusive rate)	N		depth (m)	$40.00				Where multiple boreholes exist, this is the rate for the total cumulative depth of all boreholes (e.g. two boreholes at 100m depth each = 200m). Assumes a per metre drilling rate of ~$150 / m of which ~25 - 30% is for rehabilitation which may include a variety of works (i.e., cut casing and install cap, install poly pipe to facilitate back-filling, grout preparation, grouting and capping, reshaping / ripping the drill pad, amelioration / seeding etc.)
	Option 2 Exploration boreholes – grout and cap open bore holes (all inclusive rate)	N		allow	$7,950				Includes grouting and capping 100 - 200 m exploration boreholes to meet the requirements of EDG01
	Option 3 Exploration boreholes – backfill open bore holes with cuttings	N		allow	$300				May include cutting of casing, installation of a casing cap, and/or manually backfilling the hole with drill cuttings. Does not include reshaping / ripping the drill pad, amelioration / seeding etc
						Boreholes Subtotal	$0		
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor works including deep rip and trim	N		ha	$960.00				D7 Rip at ~$205 / hr, 12 hr day, ~2.5 ha / day
	Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim	N		ha	$1,600				D7 Rip at ~$205 / hr, 12 hr day, ~1.6 ha / day
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip and seed (pasture grass)	N		ha	$3,698				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - pasture grass seed
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	N		ha	$4,485				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - tree/shrub seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (pasture grass)	N		ha	$3,820				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - pasture grass seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	N		ha	$4,595				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation) - tree/shrub seed.
	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	N		m3	Select from List			Select Haul Distance Here	This item includes the scraping and removal of the volume of stabilised material from the road, laydown or other surface using an excavator, dozer and grader to enable the establishment of rehabilitation.
						Roads and Tracks Subtotal	$0		
Earthworks / Structural Works (Landform Establishment)	Minor reshaping and pushing - this may include backfilling costeans, bulk samples, camp areas etc.	N		ha	$3,900				D7 Dozer @ $205 per hour and Grader @ $212 per hour (50% utilisation)
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	N		ha	$1,600				Combination of dozer and excavator work. Small dozer (D6 or similar) @ ~$200 per hour plus grader @ $212 per hour for ~4 hours each per ha.
	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring backfill using an excavator and scraper to fill the void and enable the establishment of rehabilitation.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	N		ha	$960.00				Grader @ $212 per hour - ripping in 1 direction only
	Deep rip hard stand / lay down areas	N		ha	$960.00				D7 Rip at ~$205 / hr, 12 hr day, ~2.5 ha / day
						Earthworks / Structural Works (Landform Establishment) Subtotal	$0		
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring load and haul using an excavator, truck and dozer to enable the establishment of rehabilitation.
	Planting mature trees (>15 cm)	N		allow	$20.00				4 m centres.
	Planting tube stock (<15 cm)	N		allow	$10.00				4 m centres.
	Direct seeding / fertiliser (pasture grass species)	N		ha	$1,240				Rate can fluctuate however this is a suitable standard rate
	Direct seeding / fertiliser (tree or native grass species)	N		ha	$2,095				Rate can fluctuate however this is a suitable standard rate
	Hydro-seeding with straw mulching and bitumen tack	N		m2	$1.80				Rate can fluctuate however this is a suitable standard rate
	Single application of fertiliser (pasture)	N		ha	$420.00				Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate
	Single application of fertiliser (trees)	N		ha	$140.00				These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate
	Spoil amelioration (adding lime / gypsum etc.)	N		ha	$860.00				Assumes 2.5 t / ha as an average application rate
	Growth media amelioration with biosolids	N		ha	$1,015				Recent experience with agronomy projects.
	Construct no-climb stock fence around rehabilitated areas	N		m	$9.50				Standard rate for no-climb stock fencing
	Construct standard stock fence around rehabilitated areas	N		m	$4.00				Standard rate for standard stock fencing

	Purchase and erect warning signs	N		allow	$260.00				Compliance with AS 1319-1994 - Safety signs for the occupational environment - installed every 25 m
	Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment) Subtotal						$0		
Water Management	Exploration sump decommissioning	N		m3	$180.00				Rate based on capacity of sump developed for borehole. Includes filling of sump
	Water / mud disposal from sump	N		L	$0.30				Disposal of non-contaminated sediments removed from sump
	Clean water dams to be retained after decommissioning – make safe and minor earthworks	N		allow	$2,500				Provisional sum for earthworks and revegetation required to rehabilitate dam batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~$200 per hour and pasture grass
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	N		m3	Select from List			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring removal using an excavator, truck and dozer to clean out the dam
	Water Management Subtotal						$0		
Maintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	N		ha	$900.00				Rehabilitation maintenance might include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include major repair works
	Existing rehabilitation repair - minor	N		ha	$1,200				Areas requiring minor repair - rills, minor growth media replacement
	Existing rehabilitation repair - moderate	N		ha	$1,700				Areas requiring moderate repair - rills, significant growth media replacement
	Existing rehabilitation repair - major	N		ha	$2,500				Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management
	Existing rehabilitation repair - total failure of landform	N		ha	$40,000				Areas that require extensive rehabilitation repair - re-design and re-construction of landform
	Maintenance of Rehabilitated Areas Subtotal						$0		
Maintenance of Other Land	Pest management on buffer lands, non-disturbed, and rehabilitated areas	N		ha	$150.00				Feral animal baiting programs if required and waste materials required to be removed
	Land management of undisturbed areas (rehabilitation, weeds, ferals, erosion and sediment control works)	N		ha	$400.00				Undisturbed areas within the lease boundary that require land management activities
	Maintenance of Other Land Subtotal						$0		
Heritage Items	The restoration and care and maintenance of items that have heritage significance	N		allow	Use alternate rate cell				Item for the redistribution of Aboriginal artefacts, preservation of European heritage items or a combination of activities
	Heritage Items Subtotal						$0		
Sundry Items	DRG tender preparation and assessment, stakeholder consultation, risk assessment facilitation and management, statutory reporting and instruments, permitting and compliance requirements, document and data management	N		allow	Use alternate rate cell				Provisional sum for the NSW Government to prepare tender documentation (i.e. demolition, waste disposal, earthworks, environmental management etc.) manage stakeholders and establish permitting and compliance requirements for closure
	Additional fees for accessing State, Crown or other public lands for rehabilitation/remediation activities	N		allow	Use alternate rate cell				Provisional sum.
	Sundry Items Subtotal						$0		
Third Party Project Management	Mobilisation & Demobilisation for exploration programs	N		Item	$7,000				Assumes an exploration program of 10 or fewer holes and local contractors within 250 km are available to undertake rehabilitation of disturbance generated by dedicated exploration companies Apply once per exploration pad
	Third Party Project Management Subtotal						$0		
Additional Items	Other 1 <insert>	N			This is				This item includes <<to be added by the operator>>
	Other 2 <insert>	N			deliberately				This item includes <<to be added by the operator>>
	Other 3 <insert>	N			left blank				This item includes <<to be added by the operator>>
	Additional Items Subtotal						$0		
	Total Cost for all Rehabilitation Activities						$0		

Assumptions and rehabilitation requirements

List or record any assumptions made when completing this tool:

Assumes maximum disturbance at the end of 2017 of 1.1625 hectares (following the completion of 31 boreholes
Assumes the only ground disturbance will be associated with drilling activities (i.e. no additional formed
Disturbance area per borehole assumed to be 0.0375ha (375m2)

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Justification for Change of Rates in the DRG's Rehabilitation Cost Estimation Tool

Domain	Activity	DRG unit/rate	Adopted Rates	Justification

In completing the Rehabilitation Cost Estimation, we are seeking an adjustment to the rates currently utilised in the DRG Rehabilitation Cost Estimation Tool. A justification for the rate change by a third party has been included and I confirm that only the rates identified in the above table have been altered in the Rehabilitation Cost Estimation Tool.

Authrorisation Representatives Name _____ **Date** _____

Authorisation Representatives Role / Responsibility _____ **Signature** _____

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Definitions for the DRG Rehabilitation Cost Estimation Tool

Term	Meaning
adit	Entrance to an underground mine which is horizontal or nearly horizontal, by which the mine can be entered, drained of water and ventilated
amelioration	Addition of materials to change physical or chemical properties or soil, tailings, or other materials.
aquifer	Has the same meaning as it has in the *Water Management Act 2000*.
armouring	Application of a self-sustaining mechanism for erosion control typically utilising rock.
authority	Means an exploration licence, an assessment lease or a mining lease granted under the *Mining Act 1992*.
authorisation	Means an authority, a small-scale title or an environmental assessment permit granted under section 252 in force under the *Mining Act 1992*.
backfill	The act of placing material to refill an excavation or void (such as an open cut or dam).
ballast (rail)	A free draining coarse aggregate or metallurgical slag used to support railway tracks and allow for drainage.
batters	Slopes manufactured during mining and/or excavation activities.
borehole	A hole made by drilling or boring, but excludes sampling and coring using hand held equipment; and petroleum wells.
capillary break	A layer of coarse material placed between finer-textured materials to prevent the vertical movement of water (and associated salts) by surface tension from the lower, finer-textured material into the upper finer-textured material (such as topsoil or growth media). It can also function to limit root penetration into the underlying seal and more than one capillary break can be present within a cover design.
capping / sealing	The act of applying material (such as clay) in a usually engineered design to seal off underlying material (such as waste, contaminated soil or spoil) in order to prevent exposure of this material to the environment and outside conditions.
CHPP	Coal Handling and Processing Plant - A plant used to upgrade the quality of coal including crushing, sizing washing and drying.
Clearing of vegetation	Any one or more of the following: • cutting down, felling, thinning, lopping, logging or removing vegetation • killing, destroying, poisoning, ringbarking, uprooting or burning vegetation.
contaminated	Condition or state where there is/are potentially hazardous substance(s) at concentrations above background or recommended land use levels and where assessment shows it poses, or is likely to pose, an immediate or long-term hazard to human health or the environment.
contour banks	Earthen structures constructed across cultivated slopes.
crusher/crushing plant	Equipment that crushes ore or rock - also referred to as a mill
demountable	A transportable prefabricated structure/building produced off site and transported to site, designed to be movable rather than permanently located.
Department	The Division of Resources and Geosciences within the NSW Department of Planning and Environment.
desiccation	Process of removing moisture or extreme drying.
de-water	Removal or draining groundwater or surface water from a structure by pumping or evaporation.
diversion	A drain or channel that diverts stormwater runoff around a site or landform.
earthworks	Equipment activity involving the placement and working of large amounts of earth to engineering or other design specification (such as cut and fill operations for roads, dams, landforms, etc.).
evaporation fans	Fans used to evaporate water as an alternative to discharging water off-site.
excavation	The removal of the surface layer of land to a depth greater than 500 mm from the natural surface level of that land.

exploration	Has the same meaning as it has in the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.
gas drainage	A method of reducing the in-situ gas content of the seam to within acceptable limits by drilling holes into the seam or surrounding strata ahead of mining.
goaf	The space remaining following extraction of the mineral.
groundwater	Water that occurs beneath the ground surface in the saturated zone.
hardstand	A hard-surfaced area on which heavy vehicles can be parked and equipment can be stored.
haul road	Roads used to transport mine materials (product and waste).
HAZMAT	Anything that, when produced, stored, moved, used or otherwise dealt with without adequate safeguards to prevent it from escaping, may cause injury or death or damage to life, property or the environment.
Item of heritage significance	Means: • any heritage items listed in one or more of the following: — the Commonwealth Heritage List — the World Heritage List — the National Heritage List — the State Heritage Register — an Environmental Planning Instrument • any relic (being any deposit, object or material evidence which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and which is 50 or more years old) • within State Conservation Areas: — items that are listed on the DECC Historic Heritage Information Management System — in all other circumstances, any deposit, object or material evidence relating to the settlement or occupation of New South Wales or a part of New South Wales (not being Aboriginal settlement or occupation) if the deposit, object or material evidence is more than 25 years old at the date of the interference or removal.
leach	Dissolution and removal of a soluble substance from a substrate.
mine subsidence	Movement of strata resulting from the extraction of coal, metals or minerals and incorporates vertical ground movement (strain) and differential vertical movement (tilt).
open cut	Open-cut mining occurs where mineral deposits are close to the surface and typically involves blasting and removing surface layers of soil and rock to reach the mineral deposit. Also referred to as open-pit, or open-cast mining.
overburden	Top soil/strata overlying a coal seam.
petroleum title	means an exploration licence, assessment lease, production lease or special prospecting authority in force under the *Petroleum (Onshore) Act 1991*.
petroleum well	Means a hole made by drilling or boring in connection with prospecting for petroleum or operations for the recovery of petroleum, but excludes: • sampling and coring using hand held equipment • a hole constructed and operated for the following purposes where the operation of that hole does not involve fracture stimulation or the recovery of petroleum: — stratigraphic definition — seismic (for example shot holes, geophone, tilt meters bores)

DRG Schedule of Rehabilitation Costs

Reference Data V4

NSW GOVERNMENT Planning & Environment

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
Termination of Services and Demolition Works				
1.01	Disconnect and terminate all services (Water, electricity, gas etc at point of attachment to site)	allow	$ 35,000	For disconnection of all services, at building boundaries, physical cut at the point of attachment or distribution location. If infrastructure is not consolidated (i.e., administration, camp and workshops are in separate places), consider multiple disconnection fees.
1.02	Disconnect and terminate services at remote areas (i.e. pump stations, remote workshops, sewage treatment plant etc.)	allow	$ 5,500	Used for infrastructure remote from primary connection. Can also be used for small mines / quarries that do not have dedicated supplies from supply authorities such as steel lattice power lines.
1.03	Removal of low/medium voltage powerlines including disconnection, rolling up the wires and removing the poles - does not include the removal of substations	km	$ 15,000	Applies to power lines on stobie, concrete or similar poles.
1.04	Removal of power lines on tower or lattice structures (this includes disconnection, rolling up the wires and removing the structures) - does not include the removal of substations	km	$ 100,000	Applies to power lines on steel tower and steel lattice structures assuming 3 towers / km.
1.05	Remove significant rail, road, water course overpass - manage potential interuptions and demolish and remove bridge supports/pylons/bridge structure etc. and dispose of waste material on-site/locally	Item	$ 350,000	Major structures constructed for the purposes of mining related works - does not include transport to regional disposal facility or equivalent.
1.06	Demolish and/or remove substations (assumes they are in a closed building). Dispose of waste material on-site/locally	m^2	$ 600.00	Simple structure to demolish. Assumes single story building and segregation of contents for scrap as applicable.
1.07	Demolish and remove switchyard. Dispose of waste material on-site/locally	m^2	$ 55.00	Includes demolition and removal of all switchgear and transformers etc. and segregation of contents for scrap as applicable.
1.08	Demolish and remove demountable structures on concrete stumps. Assumes not being re-used	m^2	$ 40.00	Crib huts, temporary offices and other 'non permanent' structures. Does not include transport to regional disposal facility or equivalent.
1.09	Demolish and remove small buildings/tanks (admin buildings, single story accommodation etc) and disposal on-site/locally	m^2	$ 65.00	Simple structure to demolish, assumes no greater than 2 stories high. Does not include transport to regional disposal facility or equivalent.
1.10	Demolish and remove light industrial buildings and disposal on-site/locally	m^2/floor	$ 115.00	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
1.11	Demolish and remove industrial buildings (workshops tyre change and servicing area etc **not CHPP/process plant**) and disposal on-site/locally	m^2/floor	$ 180.00	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
1.12	Demolish and remove CHPP/process plant (**include the area of each floor of the structure**) and disposal on-site/locally	m^2/floor	$ 265.00	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
1.13	Collapse, demolish and remove washery, crushers, hoppers, mills, furnaces, agglomeration, electrowinning, floatation, sizing stations, rotary breakers, etc (include the area of each floor of the structure) and disposal on-site/locally	m^2/floor	$ 265.00	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
1.14	Collapse, demolish and remove **stacker OR reclaimer (radial or luffing etc. with maneuverability for stockpile control)** and disposal on-site/locally	allow	$ 1,000,000	Cost for removal of stacker or reclaim unit only. Does not include terminate services, remove rails and ballast etc. Does not include transport to regional disposal facility or equivalent.
1.15	Collapse, demolish and remove **bucket wheel stacker/reclaimer** and disposal on-site/locally	allow	$ 2,500,000	Cost for just removal of the bucket wheel stacker/reclaim units. Does not include terminate services, remove rails and ballast etc. Does not include transport to regional disposal facility or equivalent.
1.16	Remove stacker/reclaimer rails and ballast and demolish and remove concrete footings etc and disposal on-site/locally	m	$ 75.00	Includes both rails, does **not** include the conveyor system. Does not include transport to regional disposal facility or equivalent.
1.17	Collapse, Cut and Remove 5000T coal silo and disposal on-site/locally	allow	$ 100,000	Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
1.18	Collapse, Cut and Remove 3000 T coal silo and disposal on-site/locally	allow	$ 85,000	Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
1.19	Collapse, Cut and Remove 1250 T coal silo and disposal on-site/locally	allow	$ 65,000	Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
1.20	Collapse, Cut and Remove rail loading bins and disposal on-site/locally	allow	$ 65,000	Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
1.21	Demolish and remove **onground** conveyors, transfer stations & gantries (scrap only – does not include dismantling for reuse at another site) and disposal on-site/locally	m	$ 210.00	Estimate for on-ground conveyor including anything up to 10 m off the ground. Does not include transport to regional disposal facility or equivalent.
1.22	Demolish and remove **elevated** conveyors, transfer stations & gantries (scrap only, does not include dismantling for reuse at another site) and disposal on-site/locally	m	$ 370.00	Estimate for elevated conveyor up to ~10 m off the ground. Does not include transport to regional disposal facility or equivalent.
1.23	Demolish and remove **overhead** conveyors, transfer stations & gantries (scrap only, does not include dismantling for reuse at another site) and disposal on-site/locally. **This may include small scale fixed material stacking infrastructure**	m	$ 1,200	Estimate for overhead conveyor including conveyors that are >10 m off the ground that require a crane to remove. Does not include transport to regional disposal facility or equivalent.
1.24	Demolish reclaim tunnel, cut reo and expose reclaim conveyor, then **collapse into the reclaim tunnel void** (Does **not** include excavation to expose reclaim tunnel, removal of conveyor or backfilling void)	m^2	$ 80.00	Does not include conveyor removal or backfill.
1.25	Remove and demolish conveyor from reclaim tunnel (Does **not** include excavation and demolition of reclaim tunnel roof)	m	$ 150.00	Due to no canopy or infrastructure attached.
1.26	Demolition of reclaim tunnel concrete (Assumes complete removal and **dumping in mine pit void**)	m	$ 950.00	Assumes this area will be used for another land-use that requires the structure to be dug up and re-buried somewhere else.
1.27	Demolition and removal of vent raise fans, electrical substation and winch and disposal on-site/locally	allow	$ 25,000	Does **not** include filling and capping the shaft. Does not include transport to regional disposal facility or equivalent.
1.28	Demolish and remove small tank **clean** (Thickener etc 3 - 9 m diameter) and disposal on-site/locally	allow	$ 10,000	Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
1.29	Demolish and remove medium tank **clean** (Thickener etc 10 - 15 m diameter) and disposal on-site/locally	allow	$ 30,000	Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
1.30	Demolish and remove large tank **clean** (Thickener etc 15 - 30 m diameter) and disposal on-site/locally	allow	$ 45,000	Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
1.31	Demolish and remove extra large tank **clean** (Thickener etc >30 m diameter) and disposal on-site/locally	allow	$ 85,000	Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
1.32	Demolish and remove tank **clean** (Thickener etc) **>50 m diameter** and disposal on-site/locally	allow	$ 100,000	Estimate only - may require a detailed assessment from demolition expert due to specialised equipment required for removal. Does not include transport to regional disposal facility or equivalent.
1.33	Removal of UG tank <5000 L - including pipes, bunds etc. and disposal on-site/locally	allow	$ 21,000	Assume tank is clean (contents removed), does not include transport to regional disposal facility or equivalent.
1.34	Removal of UG tank 5000 L - 15000 L - including pipes, bunds etc. and disposal on-site/locally	allow	$ 30,000	Assume tank is clean (contents removed), does not include transport to regional disposal facility or equivalent.
1.35	Remove small underground pipe and disposal on-site/locally	m	$ 25.00	For example: 300 mm pipes - 0.5 m deep, does not include transport to regional disposal facility or equivalent.

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
1.36	Remove medium underground pipe and disposal on-site/locally	m	$ 60.00	For example: 500 mm pipes - 1 m deep, does not include transport to regional disposal facility or equivalent.
1.37	Remove large underground pipe and disposal on-site/locally	m	$ 165.00	For example: 1 m pipes - 2 m deep.

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
1.38	Remove above ground pipe (supported) and disposal on-site/locally	m	$ 12.00	~300 mm pipes and assumes pipes are in close proximity to infrastructure areas. Does not include transport to regional disposal facility or equivalent.
1.39	Remove surface pipelines (unsupported) and disposal on-site/locally	m	$ 15.00	~300 mm pipes and assumes pipes are used for water transfer between pits (or similar) and remotely located. Does not include transport to regional disposal facility or equivalent.
1.40	Remove pump and pontoon from a lake or dam including pipes and electrical supply or diesel tank/s and disposal on-site/locally	allow	$ 150,000	Assumes infrastructure is moored and requires barge mobilisation to sever the mooring and / or is a significant fixed structure for controlled release of water. Does not include transport to regional disposal facility or equivalent.
1.41	Remove bitumen (car park and access roads) and dispose on-site/locally	m^2	$ 10.00	Scalp bitumen and stabilised material. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
1.42	Remove bitumen (airstrip) and dispose on-site/locally	m^2	$ 20.00	Scalp bitumen and stabilised material. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
1.43	Remove concrete pads & footings (<300 mm thickness) and disposal on-site/locally	m^2	$ 37.00	Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
1.44	Remove concrete pads & footings (>300 mm thickness) and disposal on-site/locally	m^2	$ 75.00	Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be $0.60 - $1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add $0.90 / km for transport.
1.45	Crush concrete to make road aggregate - **75 mm**	tonne	$ 17.00	Does not include haulage of materials - assumes crushing plant is readily available.
1.46	Crush concrete to make road aggregate - **50 mm**	tonne	$ 20.00	Does not include haulage of materials - assumes crushing plant is readily available.
1.47	Crush concrete to make road aggregate - **30 mm**	tonne	$ 22.00	Does not include haulage of materials - assumes crushing plant is readily available.
1.48	Remove fence (cyclone/wire fence) and disposal on-site/locally	m	$ 20.00	Roll up fence and remove posts.
Rail Infrastructure				
2.01	Remove rail loop and spur, ballast etc. and disposal on-site/locally	m	$ 60.00	Remove all materials to allow area to be reshaped and rehabilitated - does not include transport to regional disposal facility or equivalent.
2.02	Remove train loading facilities and disposal on-site/locally	m^2	$ 265.00	Remove rail load point infrastructure including gantries and control structures. Does not include transport to regional disposal facility or equivalent.
2.03	Reshape rail spur and load out areas. Does not include growth media and revegetation	ha	$ 2,500	D10 Dozer @ $332 per hour and 16H Grader @ $212 per hour (50% utilisation).
Contaminated Materials				
3.01a	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	Cluster	$ 15,000	The preliminary investigation would include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. A cluster may include: - Mine infrastructure (i.e., fuel / chemical store, workshop, vehicle wash-down, sewage treatment etc.) - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.) - Remote pit-top facilities (i.e., vehicle re-fuel, sewage treatment, secondary workshop, chemical storage etc.)
3.01b	Undertake an intrusive site investigation. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	Cluster	$ 100,000	The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contamination has occurred (i.e. underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oil/water separators etc.) and further field work is required involving intrusive investigation.
3.02	Removal and disposal of contaminated water from tanks, bunded areas and sumps	L	$ 0.35	Cost for recent sump clean-up from resource activity - requires specialists to treat.
3.03-	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (Select Haul Distance from list)	m^3	Select from List	This item includes scraping and removal of the volume of carbonaceous material using dozer, grader etc. to make safe an area and enable the establishment of rehabilitation.
3.03a	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (haul distance < 1km)	m^3	$ 3.90	D10 Rip and push into void at $270/hr, 0.2ha/hr, 150mm deep. 657 Scrapers cut to spoil at $430/hr, 150BCM/hr/machine, Ancillary watercart and grader at $0.75c/m3
3.03b	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (haul distance >1 km but <2 km)	m^3	$ 5.31	D10 Rip and push into void at $270/hr, 0.2ha/hr, 150mm deep. 657 Scrapers cut to spoil at $430/hr, 130BCM/hr/machine, Ancillary watercart and grader at $0.75c/m3
3.03c	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (haul distance >2 km but <5 km)	m^3	$ 6.67	D10 Rip and push into stockpile at $270/hr, 0.2ha/hr, 150mm deep. Excavator ($220/hr) load Artic Trucks (90c/km)
3.03d	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (haul distance >5 km)	m^3	$ 8.92	As above, generally overhaul rates will be 60c-$1.2, depending on truck fleet, loaders etc. - assumed 7.5 km. If haul distance is greater than 7.5 km, alternate rate option should be used - $8.92 + additional km x $0.90.
3.04	Load, cart and dispose of High Level contaminated material off site to a licensed landfill. Assumes cartage to a licensed landfill	m^3	$ 700.00	Includes load, haul and dump fees to a licensed facility.
3.05	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add $50/$m^3$ for cartage to regional landfill	m^3	$ 200.00	Includes load, haul and dump fees to a licensed facility.
3.06-	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	m^3	Select from List	Spreading of contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up to 24 months.
3.06a	Onsite remediation of hydrocarbon contaminated soils (<50 m^3) - manual land farming	m^3	$ 55.00	Current rates still adequate and recommend continue to allow for economies of scale.
3.06b	Onsite remediation of hydrocarbon contaminated soils (>50 m^3 but <100 m^3) - manual land farming	m^3	$ 44.00	Current rates still adequate and recommend continue to allow for economies of scale.
3.06c	Onsite remediation of hydrocarbon contaminated soils (>100 m^3 but <500 m^3) - manual land farming	m^3	$ 33.00	Current rates still adequate and recommend continue to allow for economies of scale.
3.06d	Onsite remediation of hydrocarbon contaminated soils (>500 m^3) - manual land farming	m^3	$ 30.00	Current rates still adequate and recommend continue to allow for economies of scale.
3.07	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc.) contaminated soil treatment	Item	$ 150,000	Required if treatment of hydrocarbon contamination is required to be fast tracked.
3.08	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	m^3	$ 165.00	Additional cost as the treatment process is fast tracked.

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
3.09	Remove and dispose of asbestos (<750 m^2)	m^2	$ 50.00	Where an assessment/estimation has been made to confirm the volume of asbestos to be removed.
3.10	Remove and dispose of asbestos (>750 m^2)	m^2	$ 40.00	Where an assessment/estimation has been made to confirm the volume of asbestos to be removed.
3.11	Remove and dispose of asbestos	tonne	$ 2,400	6 mm asbestos sheet approx. 15 kg / m^2 = ~70 m^2 per ton. Allowing $20 / m^2 for removal, 4 hours trucking @$125 and $100 / t disposal plus 20% OHP = $2,400 / t.
3.12	Treatment of known Acid Sulfate Soils	ha	$ 2,580	Assumes ASS is treatable via neutralisation and does not require capping and isolation.
3.13	Removal and disposal of plastic liner (i.e. dam, leach pad, sump etc.)	m^2	$ 1.00	Provisional sum for cutting using ripping tynes and on-site disposal of the liner.

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
Vents, Shafts and Boreholes				
4.01	Seal portals / drifts (width >3 m) – backfill the access for at least 50 m against a concrete bulk head with drainage slots. The rate includes some reshaping of batters around the adit entrance. If concrete bulk head not required, reduce rate by 25%	allow	$ 250,000	Cost estimated from planned and executed works programs in NSW from multiple sites. Rate accounts for a range of factors including variations in depth and size, accessability limitations, requirements for extra roof and/or rib support, equipment transport into the underground etc.
4.02	Seal small adits (width <3 m) – install 0.5 concrete plug 3 m back from adit and backfill with appropriate material. The rate includes some reshaping of the batter around the entrance of the adit	allow	$ 25,000	Cost estimated from planned and executed works programs in NSW from multiple sites. Rate assumes standard works program with suitable access, and additional roof and rib stabilisation works etc. is not required.
4.03	Seal and rehabilitate ventilation fans shafts - **allows for works in a remote location**	allow	$ 150,000	Cost estimated from planned and executed works programs in NSW from multiple sites. Rate accounts for a range of factors including variations in depth and size, accessability limitations, equipment transport to the shaft etc.
4.04	Maintenance and monitoring of sealed adits/portals and shafts (for a total of 5 years)	allow	$ 25,000	Estimate to undertake periodic inspections by a qualified person and provide a completions report for DRG sign-off.
4.05	Install gate or grill over the adit (Where site might be used by bats)	Item	$ 200,000	Rate accounts for a range of factors including establishing clear access, and/or working in remote locations without services, and/or stabilisation works to prevent the entry collapsing and compromising the gate etc.
4.06a	Exploration boreholes – rehabilitate boreholes and drill pads as required	depth (m)	$ 40.00	Where multiple boreholes exist, this is the rate for the total cumulative depth of all boreholes (e.g. two boreholes at 100m depth each = 200m). Assumes a per metre drilling rate of ~$150 / m of which ~25 - 30% is for rehabilitation which may include a variety of works (i.e., cut casing and install cap, install poly pipe to facilitate back-filling, grout preparation, grouting and capping, reshaping / ripping the drill pad, amelioration / seeding etc.)
4.06b	Exploration boreholes – backfill open bore holes with cuttings	allow	$ 300.00	May include cutting of casing, installation of a casing cap, and/or manually backfilling the hole with drill cuttings. Does not include reshaping / ripping the drill pad, amelioration / seeding etc.
4.07	Exploration boreholes – grout and cap open bore holes	allow	$ 7,950	Includes grouting and capping 100 - 200 m exploration boreholes to meet the requirements of EDG01.
4.08	Boreholes – cap and seal open bore holes with steel casing (i.e., goaf drainage etc.)	allow	$ 6,960	Holes deeper than 100 m - includes cutting steel collar 6 m below surface, grouting and capping.
4.09	Boreholes – cap and seal open bore holes - surface-to-in-seam gas drainage	allow	$ 15,000	Surface-to-in-seam gas drainage boreholes.
4.10	Boreholes – cap and seal open bore holes - vertical gas drainage	allow	$ 16,000	Vertical gas drainage boreholes.
4.11	Boreholes – grout (with concrete) cap and seal bore holes (i.e. where sealing aquifers)	allow	$ 35,000	Includes multi skin sleaves to prevent aquifer mixing.
4.12	Boreholes – cap and seal service boreholes for UG operations	allow	$ 45,000	Includes large diameter boreholes used for supplying electricity (66kV), compressed air, water, solsenic etc.
Roads and Tracks				
5.01	Unsealed roads / vehicle park-up areas – minor works including deep rip and trim	ha	$ 960	Assumes ~6 m road width - 16H Grader @ $212 per hour.
5.02	Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim	ha	$ 1,500	Assumes ~20 m road width - D10 Dozer @ $332 per hour.
5.03	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip and seed (pasture grass)	ha	$ 3,698	D10 Dozer @ $332 per hour and 16H Grader @ $212 per hour (50% utilisation) - pasture grass seed.
5.04	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	ha	$ 4,485	D10 Dozer @ $332 per hour and 16H Grader @ $212 per hour (50% utilisation) - tree/shrub seed.
5.05	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (pasture grass)	ha	$ 3,820	D10 Dozer @ $332 per hour and 16H Grader @ $212 per hour (50% utilisation) - pasture grass seed.
5.06	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	ha	$ 4,595	D10 Dozer @ $332 per hour and 16H Grader @ $212 per hour (50% utilisation) - tree/shrub seed.
5.07-	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	m^3	Select from List	This item includes the scraping and removal of the volume of stabilised material from the road, laydown or other surface using an excavator, dozer and grader to enable the establishment of rehabilitation.
5.07a	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (haul distance < 1km)	m^3	$ 4.45	D10 Rip and push into void at $270/hr, 0.2ha/hr, 150mm deep. 657 Scrapers cut to spoil at $430/hr, 150BCM/hr/machine, Ancillary watercart and grader at $0.75c/m3
5.07b	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (haul distance >1 km but <2 km)	m^3	$ 5.64	D10 Rip and push into void at $270/hr, 0.2ha/hr, 150mm deep. 657 Scrapers cut to spoil at $430/hr, 130BCM/hr/machine, Ancillary watercart and grader at $0.75c/m3
5.07c	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (haul distance >2 km but <5 km)	m^3	$ 7.20	D10 Rip and push into stockpile at $270/hr, 0.2ha/hr, 150mm deep. Excavator ($220/hr) load Artic Trucks (90c/km)
5.07d	Remove stabilised material (blue metal, aggregate etc.) from roadways and dump in a void on-site (haul distance >5 km)	m^3	$ 9.45	Generally overhaul rates will be 60c-$1.2, depending on truck fleet, loaders etc. - assumed 7.5 km. If haul distance is greater than 7.5 km, alternate rate option should be used - $9.45 + additional km x $0.90.
Open Cut				
6.01	Active pit area – benches blasted and doze to acceptable grade	Lm	$ 1.70	Blasting at 90c/m3, D11 push at $350 and 375 bcm/hr (80c/m3).
6.02	Drill & blast faces to make safe	m^3	$ 0.90	Bulk Drilling say 8*9 pattern, assuming a stem height of 6 m, charge length of 19 m, explosive density of 0.9, diameter of 229 mm, explosives at 665.3 kg/hole with a powder factor of 0.37 with an approximate bench height of 25 m will allow drilling and blasting at $0.90/bcm.
6.03	High wall treatment – (trench and safety berm)	m	$ 90.00	D10 Dozer @ $332 per hour and 16H Grader @ $212 per hour including revegetation with pasture grass.
Earthworks / Structural Works				
7.01-	Major bulk pushing to achieve grades nominated in the approval/permit – **Select Push Length**	m^3	Select from List	Major bulk pushing to achieve grades nominated in the approval/permit
7.01a	Major bulk pushing to achieve grades nominated in the approval/permit – 50 m push length	m^3	$ 0.80	D11 push at $350 and 400 bcm/hr
7.01b	Major bulk pushing to achieve grades nominated in the approval/permit – 50 m-75 m push length	m^3	$ 1.14	D11 push at $350 and 375 bcm/hr
7.01c	Major bulk pushing to achieve grades nominated in the approval/permit – 75 m-100 m push length)	m^3	$ 1.42	D11 push at $350 and 250 bcm/hr
7.01d	Major bulk pushing to achieve grades nominated in the approval/permit – 150 m push length)	m^3	$ 1.89	D11 push at $350 and 175 bcm/hr
7.02	Minor reshaping and pushing	ha	$ 3,900	D10 Dozer @ $332 per hour and 16H Grader @ $212 per hour (50% utilisation).
7.03	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	ha	$ 1,600	Combination of dozer and excavator work. Small dozer (D6 or similar) @ ~$200 per hour plus grader @ $212 per hour for ~4 hours each per ha.
7.04	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	m^2	$ 35.00	Installation of on-site rock material (rip-rap) where managing water run-off from disturbed land and/or upon entry to water courses - prevents erosion of gully head (assumes competent material is locally available).
Mine Waste				
8.01	Reshaping, capping / sealing of a structure unlikely to present difficulties due to chemistry – reactive materials (ARD / AMD / PAF / NMD / carbonaceous / saline), and physical properties (i.e., shear strength, etc.) - where the mine waste stream is geochemically benign and / or the strength condition within the upper 4 - 6 m meets the target shear strength profile.	ha	$ 81,000	This includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximately 1 m including growth media. Water quality from runoff, seepage etc. meets site-specific environment water quality values.
8.01a	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	allow	Use alternate rate cell	Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
8.01b	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	allow	Use alternate rate cell	Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
8.02	Reshaping, capping / sealing of structure likely to present moderate difficulties due to chemistry – reactive materials (ARD / AMD / PAF / NMD / carbonaceous / saline), or physical properties – shear strength, etc. limiting equipment choice.	ha	$ 108,000	This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities where the tailings or rejects base is at a strength that enables economically efficient construction methods with small plant. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximately 2 m including growth media. This may require additional materials (such as capillary breaks, geofabric, etc.), specific material types (e.g. acid neutralising / consuming materials, competent rock etc.) , and associated activities (i.e., load / haul / place / crush / screen / borrow etc.). Costs for haulage of specialised materials must be added separately if required.
8.02a	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	allow	Use alternate rate cell	Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
8.02b	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	allow	Use alternate rate cell	Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
8.03	Reshaping, capping / sealing of structure likely to present considerable difficulties due to reactive materials (ARD / AMD / PAF / NMD / carbonaceous / saline), and / or physical properties (low shear strength greatly limiting equipment selection for material placement etc.)	ha	$ 170,000	This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities of high geochemical risk, and / or low shear strength that prohibits economically efficient construction methods. This rate assumes suitable capping material/s are available on site within 10 km, and an average cap thickness of approximately 2.5 m including growth media. This may require additional materials (i.e., capillary breaks, geofabric, etc.), specific material types (e.g. acid neutralising / consuming materials, competent rock etc.), and associated activities (i.e., load / haul / place / crush / screen / borrow etc.). Costs for haulage of specialised materials must be added separately if required.
8.03a	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	allow	Use alternate rate cell	Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
8.03b	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	allow	Use alternate rate cell	Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
Rehabilitation				
9.01-	Source, cart and spread growth media (Select Haul Distance from List)	m^3	Select from List	If topsoil is not available on-site, then Virgin Excavated Natural Material (VENM) may need to be externally sourced.
9.01a	Source, cart and spread growth media - haul distance <1 km	m^3	$ 3.26	610 m3/hr with 4 x 657 scrapers at $430/hr, D10 trimming at $270/hr 3ha/day at 150mm depth
9.01b	Source, cart and spread growth media - haul distance >1 km but <2 km	m^3	$ 3.91	550 m3/hr with 4 x 657 scrapers at $430/hr, D10 trimming at $270/hr 3ha/day at 150mm depth
9.01c	Source, cart and spread growth media - haul distance >2 km but <5 km	m^3	$ 5.97	D10 (2ha/day) pushing from stockpiled material from 80t exc and artic trucks.
9.01d	Source, cart and spread growth media - haul distance >5 km	m^3	$ 8.22	Plus 90c/km - assumed 7.5 km. If haul distance is greater than 7.5 km, alternate rate option should be used - $9.50 + additional km x $0.90.
9.02-	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	m^3	Select from List	This item includes the volume of material requiring backfill using an excavator and scraper to fill the void and enable the establishment of rehabilitation.
9.02a	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (haul distance <1 km)	m^3	$ 3.90	D10 push over soft material at $270/hr 657 Scrapers cut to spoil at $430/hr, 150BCM/hr/machine, Ancillary watercart and grader at $0.75c/m3
9.02b	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (haul distance >1 km but <2 km)	m^3	$ 5.22	D10 push over soft material at $270/hr 657 Scrapers cut to spoil at $430/hr, 130BCM/hr/machine, Ancillary watercart and grader at $0.75c/m3
9.02c	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (haul distance >2 km but <5 km)	m^3	$ 6.88	D10 Rip and push into stockpile at $270/hr, 0.2ha/hr, 150mm deep. Excavator ($220/hr) load Artic Trucks (90c/km)
9.02d	Fill dams, voids etc. - Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (haul distance >5 km)	m^3	$ 9.13	Generally overhaul rates will be 60c-$1.2, depending on truck fleet, loaders etc. If haul distance is greater than 7.5 km, alternate rate option should be used - $9.13 + additional km x $0.90
9.03	Shotcrete application on cuttings and steep slopes	m^2	$ 185.00	This rate is used to rehabilitate steep slopes of weathered rock, roadway cuttings, etc that cannot be cut back and stabilised.
9.04	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	ha	$ 960.00	16H Grader @ $212 per hour - ripping in 1 direction only.
9.05	Deep rip hard stand / lay down areas	ha	$ 960.00	D10 dozer @ $332 per hour - deep rip in 2 directions @ 5 m spacing ~3 hr per hectare.
9.06	Planting mature trees (>15 cm)	allow	$ 20.00	4 m centres.
9.07	Planting tube stock (<15 cm)	allow	$ 10.00	4 m centres.
9.08	Direct seeding / fertiliser (pasture grass species)	ha	$ 1,240	Rate can fluctuate however this is a suitable standard rate.
9.09	Direct seeding / fertiliser (tree or native grass species)	ha	$ 2,095	Rate can fluctuate however this is a suitable standard rate.
9.10	Hydro-seeding with straw mulching and bitumen tack	m^2	$ 1.80	Rate can fluctuate however this is a suitable standard rate.
9.11	Single application of fertiliser (pasture)	ha	$ 420.00	Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
9.12	Single application of fertiliser (trees)	ha	$ 140.00	These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
9.13	Spoil amelioration (adding lime / gypsum etc.)	ha	$ 860.00	Assumes 2.5 t / ha as an average application rate.
9.14	growth media amelioration with biosolids	ha	$ 1,015	Recent experience with agronomy projects.
9.15	Security fence around steep section of high wall	m	$ 55.00	Class 1 cyclone wire (or similar) security fence @ 2.1 m with 3-4 m post spacing - complying with AS1725-2010 - Chain-link fabric security fences and gates.
9.16	Construct **no-climb** stock fence around rehabilitated areas	m	$ 9.50	Standard rate for no-climb stock fencing.
9.17	Construct **standard** stock fence around rehabilitated areas	m	$ 4.00	Standard rate for standard stock fencing.
9.18	Purchase and erect warning signs	allow	$ 250.00	Compliance with AS 1319-1994 - Safety signs for the occupational environment - installed every 25 m.
9.19	Supply from external sources virgin excavated natural material (VENM) for growth media.	m^3	$ 80.80	D7 to spread material at $205/hr, Excavator ($220/hr) load Artic Trucks (90c/km) from imported stockpile - allow nominal rate of $70/m3 for imported fill material.
9.20	Supply from external sources a combination of virgin excavated natural material (VENM) and spoil from large excavation for filing voids and/or capping etc.	m^3	$ 72.50	D10 push into void at $270/hr, Excavator ($220/hr) load Artic Trucks (90c/km) from imported stockpile - allow nominal rate of $60/m3 for imported fill material.
Water Management				
10.01	On-site treatment of contaminated water due to high salt (includes removal of metals etc, brine disposal and cost of mobile water treatment unit)	ML	$ 3,600	Rate can fluctuate depending on treatment type however this is a suitable standard rate for current programs at mining operations.
10.02	On-site treatment of contaminated water due to low pH (incudes removal of metals etc, neutralisation treatments and cost of mobile water treatment unit	ML	$ 1,500	Rate can fluctuate depending on treatment type however this is a suitable standard rate for current programs at mining operations.
10.03	Clean water dams to be retained after decommissioning – make safe and minor earthworks	allow	$ 2,500	Provisional sum for earthworks and revegetation required to rehabilitate dam batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~$200 per hour and pasture grass.
10.04-	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	m^3	Select from List	This item includes the volume of contaminated sediment requiring removal using an excavator, truck and dozer to clean out the dam.
10.04a	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (haul distance <1km)	m^3	$ 3.55	80t excavator and 90c/m3 haul with artic trucks, 220m3/hr, two trucks required for short distance + 75c ancillary - excludes any stockpile treatment: no dozer (add 90c/m3 if required).
10.04b	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (haul distance >1km but <2km)	m^3	$ 4.45	80t excavator and 90c/m3 haul with artic trucks, 220m3/hr, three trucks required for short distance + 75c ancillary - excludes any stockpile treatment: no dozer (add 90c/m3 if required).
10.04c	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (haul distance >2km but <5km)	m^3	$ 7.25	80t excavator and 90c/m3 haul with artic trucks, 220m3/hr, five trucks required for short distance + 75c ancillary - excludes any stockpile treatment: no dozer (add 90c/m3 if required).
10.04d	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (haul distance >5km)	m^3	$ 9.50	If haul distance is greater than 7.5 km, alternate rate option should be used - $9.50 + additional km x $0.90.
10.05	Removal of evaporation fans and/or other water transfer and management infrastructure	allow	$ 25,000	Provisional sum for removal of water management infrastructure.
10.06	Exploration sump decommissioning	m^3	$ 180.00	Rate based on capacity of sump developed for borehole. Includes filling of sump.
10.07	Water / mud disposal from sump	L	$ 0.30	Disposal of non-contaminated sediments removed from sump.

Item	Activity Description	Unit	Unit Prices	Justification and Assumptions for Proposed Rates
Creek Diversions				
11.01	Repairs and/or stabilisation of new or compromised water course diversion	m	$ 2,500	Assumes material is suitable for revegetating and has a reasonable chance of stabilising.
11.02	Long term maintenance of water course diversion – Channel constructed through backfilled material	m	$ 1,500	Assumes maintenance has been kept up and significant works are not required.
11.03	Long term maintenance of water course diversion – Channel constructed through competent material	m	$ 750.00	Assumes maintenance has been kept up and significant works are not required.
11.04	Installation of rock armouring	m^2	$ 6.00	Assumes competent material is locally available - multiply costs by 2 for sourcing and transporting from offsite location.
Maintenance of Rehabilitated Areas				
12.01	Maintenance of areas that have been shaped and seeded and **revegetation has been 'successful'**	ha	$ 900	Rehabilitation maintenance might include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include major repair works.
12.02	Pest management on buffer lands, non-disturbed, and rehabilitated areas	ha	$ 150.00	Feral animal baiting programs if required and waste materials required to be removed.
12.03	Land management of undisturbed areas (rehabilitation, weeds, ferals, erosion and sediment control works)	ha	$ 400.00	Undisturbed areas within the lease boundary that require land management activities.
12.04a	Minor stabilisation works and maintenance of mine subsidence areas - ripping etc.	ha	$ 1,500	D8 Dozer @ $240 per hour and/or grader @ $160 per hour.
12.04b	Crack filling to repair subsidence impacts	m	$ 1,485	Undertake more substantial works to backfill cracks and/or sink holes (e.g., filling with mulch prior to grouting, grouting, etc.)
12.05a	Water course restoration to repair subsidence impacts	allow	Use alternate rate cell	Undertake more substantial works to remediate water courses (e.g., channel bed repairs, rock bar repairs, swamp stabilisation etc.)
12.05b	Create cut-through to re-establish natural water courses/drainage channels following subsidence	allow	$ 3,000	Includes all earthworks and revegetation required to re-establish the natural drainage profile of the subsided area.
12.06	Existing rehabilitation repair - minor	ha	$ 1,200	Areas requiring minor repair - rills, minor growth media replacement.
12.07	Existing rehabilitation repair - moderate	ha	$ 1,700	Areas requiring moderate repair - rills, significant growth media replacement.
12.08	Existing rehabilitation repair - major	ha	$ 2,500	Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management.
12.09	Existing rehabilitation repair - total failure of landform	ha	$ 40,000	Areas that require extensive rehabilitation repair - re-design and re-construction of landform.
Heritage Items				
13.01	The restoration and care and maintenance of items that have heritage significance	allow	Use alternate rate cell	Item for the redistribution of Aboriginal artefacts, preservation of European heritage items or a combination of activities.
Sundry Items				
14.01-	Development of an 'Unplanned' Project Closure Plan - for either State Significant or Non State Significant Developments	allow	Select from List	Provisional sum to be used to refine the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities.
14.01a	Development of an 'Unplanned' Project Closure Plan - State Significant Development	allow	$ 100,000	Provisional sum to be used to refine the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities.
14.01b	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development	allow	$ 40,000	Provisional sum to be used to refine the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities.
14.02	DRG tender preparation and assessment, stakeholder consultation, risk assessment facilitation and management, statutory reporting and instruments, permitting and compliance requirements, document and data management	allow	Use alternate rate cell	Provisional sum for the NSW Government to prepare tender documentation (i.e. demolition, waste disposal, earthworks, environmental management etc.) manage stakeholders and establish permitting and compliance requirements for closure.
14.03	Site security during closure	yr.	$ 75,000	Provisional sum for site security measures required during closure. This includes nightly patrols and first response in the event of an out of hours incident.
14.04	HAZMAT Clean-up - cleaning and decontaminating plant and equipment, chemical storage locations, oil and grease traps, tanks, vessels, and pipe work etc	allow	$ 100,000	Provisional sum to perform the site clean-up and ensuring the demolition program is not interrupted due to potential contamination of waste streams.
14.05	Removal and disposal of radiation devices	each	$ 25,000	Provisional sum for removal and disposal of monitoring devices on conveyors using a radiation source (i.e., Americium – 241, Plutonium – 238, Caesium - 137 etc).
14.06	Additional fees for accessing State, Crown or other public lands for rehabilitation/remediation activities	allow	Use alternate rate cell	Provisional sum.
Third Party Project Management and Contingencies				
15.00	Mobilisation & Demobilisation for exploration programs	Item	$ 7,000	Assumes an exploration program of 10 or fewer holes and local contractors within 250 km are available to undertake rehabilitation of disturbance generated by dedicated exploration companies. Apply once per exploration pad.
15.00a	Mobilisation & Demobilisation for small mine or quarry	Item	$ 40,000	May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
15.01	Mobilisation & Demobilisation (Distance to site <150 km)	item	$ 100,000	May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
15.02	Mobilisation & Demobilisation (Distance to site >150 km but <500 km)	item	$ 150,000	May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
15.03	Mobilisation & Demobilisation (Distance to site >500 km but <1000 km)	item	$ 300,000	May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
15.04	Mobilisation & Demobilisation (Distance to site >1000 km)	item	$ 500,000	May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
15.05	Contingency	Total	X%	A contingent amount to account for "unkown unknowns" and areas were data / details of rehabilitation methods are uncertain.
15.06	Post Closure Environmental Monitoring	Total	X%	Includes all monitoring post closure execution works and compilation of all monitoring and maintenance data into a final rehabilitation report and submission for regulatory sign-off.
15.07	Project Management and Surveying	Total	X%	Includes all costs for project management of the closure execution works and post closure management requirements until land and/or tenure relinquishment.

DOCUMENT 15

Form ESF2 Rehabilitation Completion
and/or Review of Rehabilitation Costs Estimate

Objection to release of whole document

Form ESF2

Rehabilitation Completion and/or Review of Rehabilitation Cost Estimate

Mining Act 1992 and *Petroleum (Onshore) Act 1991*

December 2016 | v1.0

More information

For help with lodging this form, or for more information, contact:

Division of Resources and Energy
Environmental Sustainability Unit
Phone +61 2 4931 6590
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Privacy statement

This information is collected by the Department of Industry, Skills & Regional Development (NSW Industry, Skills & Regional Development) for the purposes of assessing an application for an authorisation or associated with an authority/title as required by the *Mining Act 1992*, *Mining Regulation 2016, Petroleum (Onshore) Act 1991 and Petroleum (Onshore) Regulation 2016*.

This information may also be used by the department to confirm applicant details in the event that subsequent applications are made, and may also be used to establish and maintain databases to assist the department with its work generally.

Except for purposes required by law, the information will not be accessed by any third parties in a way that would identify the person without the consent of that person.

You may apply to the department to access and correct any information the department holds if that information is inaccurate, incomplete, not relevant or out of date.

When to use this form

This form is to be used by holders of authorisations issued under the *Mining Act 1992* or titles issued under the *Petroleum (Onshore) Act 1991*. In this form, an authorisation or title is referred to collectively as an authority.

This form is to be used by authority holders to:

- **Seek formal confirmation from the department that rehabilitation has been successful** (i.e. complies with the authority conditions; has met the rehabilitation objectives and completion criteria; and that the landholder is satisfied with the standard of rehabilitation). This can include partial/progressive rehabilitation or the completion of all rehabilitation activities (regardless of whether or not a change to the associated security deposit is also sought).
- **Seek a review of the security deposit which is required to be provided and maintained to secure funding for the fulfilment of obligations under the authority, including obligations under the authority that may arise in the future**. This can include any increase or decrease in security (e.g. where rehabilitation has been partially or fully completed and a partial or full return of the security deposit is sought). *(Note: A security deposit is required to be provided and maintained to secure funding for the fulfilment of obligations under the authority, including obligations under the authority that may arise in the future. For further information refer to the department's Rehabilitation Cost Estimate Guidelines).*

This form has been prepared and approved in accordance with the *Mining Act 1992*, *Mining Regulation 2016*, *Petroleum (Onshore) Act 1991* and *Petroleum (Onshore) Regulation 2016*. The information requested in this form may not be specifically referenced in the *Mining Act 1992*, *Mining Regulation 2016*, *Petroleum (Onshore) Act 1991* and *Petroleum (Onshore) Regulation 2016,* however its inclusion in the approved form validates the authority of the NSW Department of Industry, Division of Resources and Energy (the department) to request it.

If there is insufficient room in the fields please provide the information as an attachment.

When not to use this form

This form **must not be** used by authority holders to:

- **Seek a review of security that is associated with an application for the renewal/part renewal, transfer or cancellation/part cancellation of an authority**. In such case the review of security will be sought in the Rehabilitation Cost Estimate section of the relevant application form. However, this form (**Question 5**) can be used where rehabilitation associated with an authority has been partially/fully completed and/or a partial/full return of the security deposit is sought.
- **Seek a review of security that is associated with a new Exploration Activity**. In such cases the review of security will be sought in the Rehabilitation Cost Estimate section of *ESF4: Exploration Activities Application*. However, this form (**Question 5**) can be used where rehabilitation associated with an exploration activity has been partially/fully completed and/or a partial/full return of the security deposit is sought.

Further information regarding rehabilitation objectives and completion criteria

Further information regarding rehabilitation objectives and completion criteria for **exploration** is available in the Exploration Code of Practice: Rehabilitation.

Further information regarding rehabilitation objectives and completion criteria for **mining** is available in ESG3: Mining Operations Plan (MOP) Guidelines.

Important notes

Any information or template that is required to accompany this application should be lodged within **10 business days of the lodgement date**.

If this application is lodged by any party other than the authority holder (ie. an agent), the department may seek confirmation of that authority and any limits of that authority given to that other party by the authority holder (*Mining Act 1992* section 163F and section 97F of the *Petroleum (Onshore) Act 1991*). The agent will need to complete the declaration at the end of this form and supply evidence of their appointment, if not already supplied to the department.

How to submit this form

- **By email:** Send an electronic copy of the form including any attachments to minres.environment@industry.nsw.gov.au
- **By mail:** Mail your form and any attachments to: Division of Resources and Energy, Environmental Sustainability Unit, PO Box 344, Hunter Region Mail Centre NSW 2310.
- **In person:** Submit your application in person at the Division of Resources and Energy's, Environmental Sustainability Unit office, 516 High Street, Maitland, New South Wales. Office hours are 9.30am to 4.30pm.

How this application will be processed

Once your application has been registered and checked, it will be assessed by the department.

The department will utilise the information provided in this form to determine whether rehabilitation is to the satisfaction of the department, and that it complies with your authority conditions. The department will also utilise the information provided to determine whether the associated security deposit is adequate, including whether the security deposit (or part thereof) can be returned (where relevant). This process may occur following the completion of progressive rehabilitation or at the completion of rehabilitation activities.

1 Authority details

Authority holders may wish to attach a separate table where there are multiple authorities.

Authority type and number (e.g. ML123, EL123)	EL 7223	Act authority granted under	eg. Mining Act 1992
Expiry date	22 February 2016		

Additional authority details

Provide the authority type and number; Act authority was granted under and expiry date of any additional authorities.

Nil

2 Authority holder details

Provide the full name of authority holder/s and if applicable, the ACN or ARBN (for foreign companies). Authority holders may wish to attach a separate table where there are multiple authorities.

Name	Shenhua Watermark Coal Pty Ltd
ACN / ABN / ARBN	21 133 264 230
Registered street address	368-370 Conadilly Street, Gunnedah NSW 2380
Postal address	☐ Same as above ☒ PO Box 1026 Gunnedah NSW 2380

Name	
ACN / ABN / ARBN	
Registered street address	
Postal address	☐ Same as above ☐ Enter here if different

Additional authority holders

Provide the full name, ACN/ABN or ARBN (for foreign companies), registered street address and postal address details of additional authority holders.

3 Contact for this application

Any correspondence in relation to this application will be sent to this person. Correspondence may also be issued to the authority holder as well as the authorised agent.

Contact name	[redacted]
Position held	Environment Manager
Company	Shenhua Watermark Coal Pty Ltd
Postal address	PO 2016 Gunnedah NSW 2380
Landline phone (inc. area code)	[redacted]
Mobile	
Email	

Your preferred contact method

☒ **Email** (For companies – consider the suitability of providing a generic company email address which is regularly monitored rather than an individual employee's email address.)

☐ **Mail**

Do not use this form to:

- **Seek a review of security that is associated with an application for the renewal/part renewal, transfer or cancellation/part cancellation of an authority**. In such case the review of security will be sought in the Rehabilitation Cost Estimate section of the relevant application form. However, this form (**Question 5**) can be used where rehabilitation associated with an authority has been partially/fully completed and/or a partial/full return of the security deposit is sought.
- **Seek a review of security that is associated with a new Exploration Activity**. In such cases the review of security will be sought in the Rehabilitation Cost Estimate section of Form ESF4: Application to conduct exploration activities. However, this form can be used where rehabilitation associated with an exploration activity has been partially/fully completed and/or a partial/full return of the security deposit is sought. However, this form (**Question 5**) can be used where rehabilitation associated with an exploration activity has been partially/fully completed and/or a partial/full return of the security deposit is sought

4 Identify the trigger for submission

Note that multiple boxes may be ticked

☒ Application for confirmation that rehabilitation (including partial/progressive rehabilitation or the completion of all rehabilitation) has been successfully completed to the satisfaction of the department / Secretary / Minister (refer to **Question 5**)

☐ Application for review of a security deposit (e.g. an increase, decrease or where no change is proposed (refer to **Question 6**)

5 Completion of rehabilitation

Only complete this section to seek formal confirmation from the department that rehabilitation has been successfully completed to the satisfaction of the department (i.e. complied with authority conditions; has met the rehabilitation objectives and completion criteria; and that the landholder is satisfied with the standard of rehabilitation). This can include partial/progressive rehabilitation or the completion of all rehabilitation activities on the authority (regardless of whether or not a change to the associated security deposit is also sought).

5.1 What approvals/plans is the completed rehabilitation associated with?

☒ **Exploration Activity Approval**

Exploration Activity Approval details (include dates/reference numbers/project name)

EL 7223 Watermark Coal Project:
09/3485 Approval to undertake Category 2 or 3 exploration activity, 5 June 2009 - Stage 1 drilling, Stage 2 drilling, Stage 3 drilling
09/3485-2 Extension of Stage 3 Exploration Drilling, 12 July 2010 - Stage 3A drilling
11/2521 Approval to undertake Stage 4 Exploration Drilling and Associated Activities, 11 May 2011 - part of Stage 4 drilling
OUT12/13232 Approval to undertake Shenhua Watermark Exploration Project, 18 June 2012 - remainder of Stage 4 drilling

Indicate the type of rehabilitation

☐ Partial/Progressive Rehabilitation
☒ Completion of Rehabilitation

Age of Rehabilitation Completed

4 to 7 years

Total Area of Disturbance of Activity Approval

353,625 m2

Total Area of Completed Rehabilitation

353,625 m2

☐ **Mining Operations Plan/Petroleum Operations Plan/Rehabilitation Management Plan**

Planning Approval/ Development Consent details (include dates/reference numbers/project name)

Mining/Petroleum Operations/Rehabilitation Management Plan Details (include dates/reference numbers/project name)

Indicate the type of rehabilitation

☐ Partial/Progressive Rehabilitation
☐ Completion of Rehabilitation

Age of Rehabilitation Completed

Total Area of Disturbance of Plan

Total Area of Completed Rehabilitation

5.2 Provide plans

Plans/maps must be provided showing location of rehabilitation activities and areas rehabilitated. As a minimum plans/maps should include authority boundaries; landholder boundaries; land use and location of each rehabilitation area.

Reference No.	Name/Title of plan	Date
Figure 1	Completed Bores by Stage and Type	9 June 2017

5.3 Provide photographs

Photographs of all rehabilitation sites must be provided, including a plan illustrating where the photograph was taken from and its aspect. Photographs should show evidence of: condition of the receiving environment prior to disturbance; activities during operations; rehabilitation activities performed; and progress/completion of rehabilitation.

Plan Reference No.	Name of Plan illustrating where photos were taken	Date
Figure 1	Completed Bores by Stage and Type	9 June 2017

Photo Reference No.	Name/Title of photo and aspect	Date
Refer to Attachment A for a summary of each rehabilitated borehole and the accompanying CD for a copy of the rehabilitation completion checklist and photographic evidence.		

5.4 What rehabilitation has been undertaken?

5.4.1 Rehabilitation of surface disturbance activity

Provide below or attach a written statement outlining the rehabilitation activities undertaken for each surface disturbing activity (for example, revegetation; sealing of boreholes; management of access tracks; water and waste management and disposal; reshaping works and soil management; weed control; erosion management; ongoing maintenance and monitoring).

The surface disturbing activities conducted in EL7223 was undertaken in 4 stages of exploration that consisted of drilling HQ cored and non-cored boreholes, line of oxidation (LOX) non-cored shallow boreholes, and large diameter cored boreholes. The rehabilitation activities undertaken consisted of sealing all boreholes with cement grout mixture in accordance with Departmet of Trade and Investments EDG01: Borehole Sealing Requirements on Land: Coal Exploratiion (April 2012), with the exception of constructing selected boreholes into groundwater monitoring bores or piezometers which have been licenced with the NSW Office of Water. The final landform was shaped where required by bobcat/backhoe to mimic the pre-exploration landform to ensure it is safe, stable and non-polluting. All disturbed areas were revegetated and seeded using species consistent with the local environment and suitable for future land use (ie agriculture). All equipment, samples, rubbish, drilling water/slurry and drill cuttings were collected and removed offsite. Surface water control structures to minimise the potential for erosion and sedimentation were installed where appropriate and rehabilitated upon borehole completion. All formed tracks were reshaped and seeded where required.

5.4.2 Evidence of meeting rehabilitation objectives and completion criteria

Provide evidence describing how the rehabilitation has met each of the rehabilitation objectives and completion criteria[#] of the relevant exploration/mining/petroleum approvals and the rehabilitation conditions of the authority (Rehabilitation Objectives and Completion Criteria and associated verification* should be attached).

Refer to Attachment B

[#]Further information regarding rehabilitation objectives and completion criteria for exploration is available in the Exploration Code of Practice: Rehabilitation. Further information regarding rehabilitation objectives and completion criteria for mining is available in ESG3: Mining Operations Plan (MOP) Guidelines.
** Verification may require the attachment of specialist reports/advice confirming that specific aspects of the completion criteria have been met. Examples may include ecological, geotechnical and site remediation reports.*

5.5 Has borehole/petroleum well sealing and/or backfilling been undertaken?

☐ Not applicable. Proceed to **Question 5.6**.

☐ No. Provide justification/further details below (append separate documents/reports as required).

☒ Yes. Complete details below and attach reports as relevant.

Provide details of contractors engaged to seal/backfill boreholes/petroleum wells.

Contractor Name	Refer to Attachment A and the supporting CD.
Address	
Telephone	

Provide details of sealing and/or backfilling works undertaken (append separate documents/reports as required).

Refer to Attachment A

5.6 Is the landholder/s satisfied with the rehabilitation?

*While not mandatory, landholder satisfaction with completed rehabilitation may assist the department's assessment. The Landholder Rehabilitation Statement provided in **Appendix A** can be used for this purpose. Notwithstanding, rehabilitation obligations, completion and performance must also be to the satisfaction of the department and in accordance with the conditions of the authority.*

☒ Yes

☐ No

Provide any further details below.

All disturbance activities have been undertaken on land owned by Shenhua Watermark Coal Pty Ltd.

Indicate if a Landholder Rehabilitation Statement (refer to Appendix A) is attached:

Property Details	Landholder / Contact	Telephone	Attached?
			☐
			☐
			☐
			☐

6 Rehabilitation cost estimate

Only complete this section to seek a review of the security deposit.

Do <u>not</u> complete Section 6 of this form in the following circumstances:

1. ***If you are seeking formal confirmation from the department that rehabilitation has been successful and no change to the security deposit is being sought.***
2. ***If you are seeking a review of security that is associated with a Renewal/Part Renewal, Transfer, Cancellation or Part Cancellation of an authority.*** *In such cases the review of security will be sought in the Rehabilitation Cost Estimate section of the relevant Renewal/Part Renewal, Transfer, Cancellation or Part Cancellation Application Form.*
3. ***If you are seeking a review of security that is associated with a new Exploration Activity.*** *In such cases the review of security will be sought in the Rehabilitation Cost Estimate section of Form ESF4: Exploration Activities Application.*

All authority holders must provide an estimate of rehabilitation costs. This estimate will be considered by

The department is responsible for ensuring that the people of NSW do not incur a financial liability as a result of coal, mineral and petroleum exploration and production activities. Under 12A of the Mining Act 1992, and Part 10A of the Petroleum (Onshore) Act 1991, all authority holders engaged in these activities are, therefore, required to lodge a security deposit.

The security deposit must cover the Government's full costs for rehabilitation in the event of default by the authority holder

the department when determining the security deposit amount.

Before answering this question, read the Rehabilitation cost estimate guidelines and note the following:

6.1 What is the total rehabilitation cost estimate?

The estimate should cover the rehabilitation for **all** exploration/mining/petroleum production operations.

Total rehabilitation cost estimate	$

6.1.1 What method have you used to calculate the rehabilitation cost estimate? Attach your cost calculation to this application.

☐ Department's rehabilitation cost calculation tool.

☐ Other – use the field below to describe the tool or cost guide you have used.

6.1.2 What approvals/plans have you based the rehabilitation cost estimate on?

(Provide date of Approval Letter(s) and Reference where possible)

Note that multiple boxes may be ticked

☐ Exploration Activity Approvals

☐ Mining Project Approval/Development Consent

☐ Mining/Petroleum Operations Plan/Rehabilitation Management Plan

6.1.3 What period is covered by the estimate?

Current disturbance at date of application; or	insert date (e.g snapshot in time)
Period covered by the Estimation	insert start/end date (e.g. period of maximum distrubance)

6.2 What security is currently held by the department?

Current security held by the department	$

6.3 Does this rehabilitation cost estimate propose a reduced rehabilitation liability for the authority?

If the rehabilitation liability has been reduced, you may claim for a reduction in the security deposit amount.

☐ Yes. Rehabilitation liability has been reduced due to completion of rehabilitation. Ensure you have completed Section 5 of this form.

☐ Yes. Rehabilitation liability has been reduced due to other reasons. Provide further details below.

☐ No

7 Checklist of items to be included with this application

List any supporting documentation attached to this application in the table below:

Item		Reference
Evidence of Rehabilitation Completion as per list below:		Question 5
Plans/maps showing location of rehabilitation activities and areas rehabilitated. Plans/maps to include: • authority boundaries • landholder boundaries • land use • location of each rehabilitation area	☐	Question 5
Photographs of all rehabilitation sites to evidence: • condition of the receiving environment prior to disturbance • rehabilitation activities performed • progress/completion of rehabilitation	☐	Question 5
A written statement outlining the rehabilitation activities undertaken for each surface disturbance (for example, sealing of boreholes; management of access tracks; water and waste management and disposal; reshaping works and soil management; weed control; erosion management; ongoing maintenance and monitoring).	☐	Question 5
Written evidence as to how the rehabilitation has met each of the rehabilitation objectives and completion criteria of the relevant exploration/mining/production approvals and the rehabilitation conditions of authority (This may require the attachment of specialist reports/advice confirming that specific aspects of the completion criteria have been met. Examples may include ecological, geotechnical and site remediation reports).	☐	Question 5
Landholder Rehabilitation Statement (where applicable)	☐	Question 5 and Appendix A
Rehabilitation Cost Estimate documentation (Calculations to evidence how the rehabilitation cost estimate is derived)	☐	Question 6
For agents only – evidence of appointment as agent by the authority holder/s	☐	Question 8
Additional information such as specialist verification reports (provide list below)	☐	
	☐	
	☐	
	☐	
	☐	
	☐	
	☐	
	☐	

8 Declaration

This form should be signed by the authority holder/s or an authorised representative.

I/We certify that the information provided in this application is true and correct. I/We understand that under Part 5A of the *Crimes Act 1900*, that knowingly giving false or misleading information is a serious offence; and under Section 378C of the *Mining Act 1992* or Section 135 of the *Petroleum (Onshore) Act 1991*, any person who provides information that the person knows to be false or misleading is guilty of an offence, for which they may be subject to prosecution.

Declaration by authority holder/s

Authority Holder Name	[redacted]
Position/title	
Date	29/6/2017
Signature	[redacted]

Authority Holder Name	
Position/title	
Date	
Signature	

Authority Holder Name	
Position/title	
Date	
Signature	

Or

Declaration by agent authorised to act for this authority holder

Provide evidence of appointment by the authority holder.

Name	
Position/title	
Date	
Signature	

Document control

Authorised by: Group Director, Operations and Programs

RM8 Reference: PUB16/541

Amendment schedule

Date	Version #	Amendment
1 December 2016	1.0	This new form merges two previous forms know as *Form ESF2: Rehabilitation Cost Estimate Submission* and *Form EDG13: Exploration Rehabilitation and Relinquishment Report.* Deletion of separate Statutory Declaration from Form EDG13.

Appendix A: Landholder Rehabilitation Statement

When signed, this statement confirms that land disturbed during the course of exploration/mining/petroleum production activities has been rehabilitated to the satisfaction of the affected landholder/occupier.

Provided that the authority holder has rehabilitated the exploration/mining/petroleum production disturbance on your property to your satisfaction, sign and return this form to the authority holder. The authority holder will attach it to the submission form required by the Department. The information will be used by the department, along with other relevant information, to determine the authority holder's compliance with the obligations of the exploration/mining/petroleum production authority.

If rehabilitation is **not** to your satisfaction, **do not** sign this form, and discuss outstanding issues with the authority holder. If you cannot reach agreement or you have any queries, contact the department.

1 For authority holder to complete

Authority Details	
Authority number (e.g. EL01, ML02, PEL03)	
Name of authority holder	*List all holders of the authority in full - organisation name and ACN/ABN.* *List all holders of the authority in full - individual details: Title, Given Name/s and Family Name*
ACN/ARBN	
Contact Name	
Registered Street Address	
Postal Address	
Site Name	Insert Site Name of the exploration / mining / production area
Affected Property Name:	Insert affected property name(s)
Affected Property Address/Description:	Insert property address/Lot and DP No's.

2 For landholder to complete

☐ **I am satisfied with the state in which the authority holder has left my property and the standard of rehabilitation which has been achieved.**

Additional Comments:			
Landholder/Occupier Name:			
Property Name:	Insert affected property name(s)		
Property Address/Description	Insert property address/Lot and DP No's.		
Telephone:		Email:	
Signed:			
Date:			

DOCUMENT 17

Attachment B – EL7223 Rehabilitation Objectives and Completion Criteria June 2017

Objection to release of whole document

Table 1 EL7223 rehabilitation objectives and completion criteria

LAND USE GOAL	OBJECTIVES*	COMPLETION CRITERIA	COMMENTS
Native Ecosystem or Agricultural Landuse	(a) The exploration licence holder must rehabilitate any land (including water) disturbed by, or as a result of, prospecting operations under this exploration licence to a stable and permanent form so that:	N/a	N/a
	(i) There is no adverse environmental effect outside the disturbed area	There is no evidence of adverse environmental effects outside the disturbance footprint of the exploration program	There is no evidence of adverse environmental effects outside the disturbance footprint of the exploration program
	(ii) The land is properly drained and protected from soil erosion	There is: • Minimal erosion that would require moderate to significant ongoing care and maintenance works • No areas of active gully areas • No evidence of excessive sediment build-up (from sheet erosion) at the base of slopes • No evidence of tunnel erosion • No active rilling and rill erosion is limited to isolated areas of up to 200 mm deep • No active scouring where the runoff from rehabilitation areas discharges into	All exploration borehole sites and former temporary accesses have been inspected and are at negligible risk of erosion. All sites are stable and there is no evidence of sheet, rill, gully or tunnel erosion.

LAND USE GOAL	OBJECTIVES*	COMPLETION CRITERIA	COMMENTS
		natural channels.	
	(iii) The land is not a potential source of pollution	Vegetation cover is adequate to reduce the risk of soil erosion	Post-rehabilitation inspections have confirmed that vegetation cover at each rehabilitated borehole site is consistent with the surrounding vegetation and is adequate to reduce the risk of soil erosion. No visible signs of erosion have been observed at any boreholes sites or former temporary accesses.
	(iv) The land is compatible with the surrounding land use requirements	• The re-established topsoil/subsoil substrate is capable of supporting the targeted pasture/cropping regime on a sustained basis. • Cropping/pasture establishment is consistent with the range of species utilized within the region. • Cropping/pasture establishment is in good health and provides adequate cover.	The re-established topsoil/subsoil substrate is consistent with the surrounding environment and observations of revegetation indicate that each borehole site and former temporary access is capable of supporting pasture and cropping species consistent with the current land use (grazing and cereal cropping).
	(v) The landforms, soils, hydrology and flora require no greater maintenance than that in, or on, the surrounding land	• There is no significant weed infestation, such that weeds do not comprise a significant portion of species in any stratum • Topsoil or a suitable alternative has been applied in a manner to maximize viability of revegetation substrate.	• No significant weed infestations have been observed at any of the exploration boreholes sites or along former temporary accesses. • No erosion issues are present. • Vegetation is well established throughout the disturbance areas.
	(vi) The land does not pose a threat to public safety	• There are no exposed voids or boreholes that would pose a threat to public safety. • There is no infrastructure remaining that would post a threat to public safety.	• All boreholes and been sealed and rehabilitated and do not pose any threat to public safety. • Infrastructure remaining is limited to

LAND USE GOAL	OBJECTIVES*	COMPLETION CRITERIA	COMMENTS
			piezometers and locked groundwater monitoring monuments, which do not pose a threat to public safety. • There are no open voids or boreholes, nor is there any infrastructure that poses a threat to public safety.
	(vii) In cases where vegetation has been removed or damaged: (A) where previous vegetation was native, species used for revegetation are endemic to the area; or (B) where the previous vegetation was not native, species used for revegetation are appropriate to the area; and (C) any revegetation is of an appropriate density and diversity, to the satisfaction of the Director-General.	• Revegetation areas contain flora species assemblages characteristics of species found within the region and will provide fauna habitat value in the future.	• Post-rehabilitation inspections indicate that the flora species characteristics at rehabilitated borehole sites are generally consistent with those found in the surrounding environment. Rehabilitated borehole sites are expected to provide fauna habitat value in the future.
	(b) Any topsoil that is temporarily removed from an area of prospecting operations must be stored, maintained and	• Topsoil or a suitable alternative has been applied in a manner to maximize the viability of revegetation substrate.	Topsoil has been applied to all rehabilitated boreholes sites and vegetation is well established within the reinstated topsoil.

LAND USE GOAL	OBJECTIVES*	COMPLETION CRITERIA	COMMENTS
	returned as soon as possible in a manner acceptable to the Director-General.		
	(c) Any shafts, drill holes and excavations, that have been abandoned as a result of previous mining or prospecting operations, and which have been opened up or used by the exploration licence holder are subject to the conditions of the exploration licence as if the shafts, drill holes and excavations were created by the holder of this exploration licence.	• All abandoned drill holes or excavations have been rehabilitated	All abandoned boreholes and excavations have been rehabilitated.
	(d) All rehabilitation of surface disturbance resulting from prospecting operations under this exploration licence must be completed before the expiry of this exploration licence or immediately following cancellation of this exploration licence.	• Rehabilitation of surface disturbance has been completed prior to expiry of the exploration licence or immediately following cancellation of the exploration licence.	Rehabilitation of boreholes was completed in 2012. EL7223 expired in 2016.

**rehabilitation objectives have been derived from Condition 21 of EL7223*