

# Environment Protection Licence

Licence - 20055

## Licence Details

Number:	20055
Anniversary Date:	06-January

## Licensee

OCEANIC COAL AUSTRALIA LIMITED.

PO BOX 4186

EDGEWORTH NSW 2285

## Premises

GREAT GRETA COLLIERY

CRANKY CORNER ROAD

GLENDONBROOK NSW 2330

## Scheduled Activity

Contaminated groundwater treatment

## Fee Based Activity

Contaminated groundwater treatment

## Scale

Any annual handling capacity

## Contact Us

NSW EPA

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10 Darcy Street

PARRAMATTA NSW 2150

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# Environment Protection Licence

Licence - 20055

<b>INFORMATION ABOUT THIS LICENCE</b>	<b>4</b>
Dictionary	4
Responsibilities of licensee	4
Variation of licence conditions	4
Duration of licence	4
Licence review	4
Fees and annual return to be sent to the EPA	4
Transfer of licence	5
Public register and access to monitoring data	5
<b>1 ADMINISTRATIVE CONDITIONS</b>	<b>6</b>
A1 What the licence authorises and regulates	6
A2 Premises or plant to which this licence applies	6
A3 Information supplied to the EPA	6
<b>2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND</b>	<b>7</b>
P1 Location of monitoring/discharge points and areas	7
<b>3 LIMIT CONDITIONS</b>	<b>8</b>
L1 Pollution of waters	8
L2 Concentration limits	8
L3 Volume and mass limits	8
L4 Waste	9
L5 Noise limits	9
L6 Hours of operation	10
<b>4 OPERATING CONDITIONS</b>	<b>10</b>
O1 Activities must be carried out in a competent manner	10
O2 Maintenance of plant and equipment	10
O3 Dust	10
O4 Emergency response	11
O5 Waste management	11
O6 Other operating conditions	11
<b>5 MONITORING AND RECORDING CONDITIONS</b>	<b>12</b>
M1 Monitoring records	12
M2 Requirement to monitor concentration of pollutants discharged	12
M3 Testing methods - concentration limits	13
M4 Weather monitoring	13
M5 Recording of pollution complaints	13



# Environment Protection Licence

Licence - 20055

M6	Telephone complaints line	-----14
M7	Requirement to monitor volume or mass	-----14
<b>6</b>	<b>REPORTING CONDITIONS</b>	----- 14
R1	Annual return documents	-----14
R2	Notification of environmental harm	-----15
R3	Written report	-----15
R4	Other reporting conditions	-----16
<b>7</b>	<b>GENERAL CONDITIONS</b>	----- 16
G1	Copy of licence kept at the premises or plant	-----16
G2	Signage	-----17
<b>8</b>	<b>SPECIAL CONDITIONS</b>	----- 17
E1	Permeable Reactive Barrier Monitoring and Reporting	-----17
E2	Macroinvertebrate Monitoring Program	-----17
E3	Water Quality Characterisation Monitoring	-----18
E4	Ecotoxicological Assessment	-----18
E5	Permeable Reactive Barrier	-----19
<b>DICTIONARY</b>		----- 20
	General Dictionary	-----20

# Environment Protection Licence

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Licence - 20055

## Information about this licence

### Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

### Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

### Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

### Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

### Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

### Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).



# Environment Protection Licence

Licence - 20055

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

## Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

## Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

## This licence is issued to:

**OCEANIC COAL AUSTRALIA LIMITED.**

**PO BOX 4186**

**EDGEWORTH NSW 2285**

subject to the conditions which follow.

# Environment Protection Licence

Licence - 20055

## 1 Administrative Conditions

### A1 What the licence authorises and regulates

- A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Contaminated groundwater treatment	Contaminated groundwater treatment	Any annual handling capacity

### A2 Premises or plant to which this licence applies

- A2.1 The licence applies to the following premises:

Premises Details
GREAT GRETA COLLIERY
CRANKY CORNER ROAD
GLENDONBROOK
NSW 2330
LOT 171 DP 604996
PREMISES DEFINED BY PLAN TITLED "SURFACE WATER EPL MONITORING LOCATIONS" EPA REFERENCE DOC22/377685

### A3 Information supplied to the EPA

- A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

## 2 Discharges to Air and Water and Applications to Land

# Environment Protection Licence

Licence - 20055

## P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

### *Water and land*

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge to waters; Water quality monitoring	Discharge to waters; Water quality monitoring	Pipe discharge at co-ordinates (350062, 6400705) from Bottom Dam to existing lower drainage channel - Post PBR shown as EPA1 on Figure 1.
2	Discharge to waters, Water quality monitoring, Volumetric monitoring	Discharge to waters, Water quality monitoring, Volumetric monitoring	Wetland discharge at co-ordinates (350272, 6400368) post PBR treatment in existing upper drainage channel - Emergency Wet Weather Release shown as EPA2 on Figure 1.
3	Ambient water quality monitoring		Eui Creek at co-ordinates (350333, 6400130) upstream of licensed water discharge points shown as EPA3 on Figure 1.
4	Ambient water quality monitoring		Eui Creek at co-ordinates (350140, 6400919) downstream of licensed water discharge points shown as EPA4 on Figure 1.
5	Ambient water quality monitoring		Eui Creek at co-ordinates (348699, 6402064) above Webbers Creek Causeway shown as EPA4 on Figure 1.
6	Ambient water quality monitoring		Webbers Creek Causeway at co-ordinates (347614, 6401488) below junction with Eui Creek shown as EPA6 on Figure 1.

P1.3 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

### *Noise/Weather*

EPA identification no.	Type of monitoring point	Location description
9	Meteorological Station	Rain gauge at co-ordinates (350116, 6400491), shown as EPA9 on Figure 1.

# Environment Protection Licence

Licence - 20055

- P1.4 In regards to Conditions P1.2 Figure 1 refers to the plan titled "Surface Water EPL Monitoring Locations" EPA Reference DOC21/1092058.

## 3 Limit Conditions

### L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

### L2 Concentration limits

- L2.1 For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.
- L2.4 Water and/or Land Concentration Limits

#### POINT 1,2

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Conductivity	microsiemens per centimetre				6000
pH	pH				6.0-9.0
TSS	milligrams per litre				80

### L3 Volume and mass limits

- L3.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
- liquids discharged to water; or;
  - solids or liquids applied to the area;
- must not exceed the volume/mass limit specified for that discharge point or area.



# Environment Protection Licence

Licence - 20055

Point	Unit of Measure	Volume/Mass Limit
1,2	kilolitres per day	Special Limit 1

- L3.2 Special Limit 1 in condition L3.1 is to be applied as a combined limit for the EPA discharge points 1 and 2 meaning the overall volume limit authorised to be discharged on any given day is limited to 10,000 kilolitres per day.
- L3.3 The volume limits specified in condition L3.2 of the Licence may be revised by the EPA based on the outcome of monitoring programs after commissioning of the permeable reactive barrier.

## L4 Waste

- L4.1 The Licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal, except as expressly permitted by any condition of this Licence.
- L4.2 The Licensee must not dispose of any waste on the premises that is generated on the premises, except as expressly permitted by any condition of this Licence.

## L5 Noise limits

### Work Generating High Noise

- L5.1 The Licensee must not permit construction activities, except as may be expressly provided in any other condition of the Licence, that generates high noise level, unless the work is undertaken between the hours of:
- 9:00am and 5:00pm Monday to Friday; or
  - 9:00am and 1:00pm Saturday.

The Licensee must not permit construction activities, except as may be expressly provided in any other condition of the Licence, that generates high noise levels to occur at any time in continuous blocks or more than 3 hours, without at least a 1 hour respite between each block of activity, where the location of the activity is likely to impact the same sensitive receiver.

For the purposes of this condition:

- High noise levels* are defined as exceeding 75 dB(A) using the L Aeq 15 minute noise descriptor at the most affected sensitive receiver.
- Continuous blocks* includes any period during which there is less than a 1 hour respite between the ceasing and recommencing of the activity subject of this condition.

Any noise modelling or monitoring undertaken to determine noise compliance with this condition must be undertaken in accordance with the requirements of the *Interim Construction Noise Guideline* (Department of Environment and Climate Change NSW, 2009) and the *Noise Policy for Industry* (Environment Protection Authority 2017).

# Environment Protection Licence

Licence - 20055

## L6 Hours of operation

L6.1 The Licensee must restriction construction activities, except as may be expressly provided by any other condition of this Licence, to between the hours of:

- a) 7:00am and 6:00pm Monday to Friday; and
- b) 8:00am and 1:00pm Saturday.

The Licensee must not undertaken any construction activities on Sundays or Public holidays, except as may be expressly provided in any other condition of this Licence.

### Out of Hours Work

L6.2 The Licensee must not undertake construction activities outside the hours specified in Condition L4.1 and L4.2 except for:

- a) the delivery of oversized plant or structures that police or other authorised authorities determine that special arrangements are required to transport along public roads; or
- b) emergency work to avoid loses of lives or property, or to prevent environmental harm; or
- c) as may be expressly provided in any other condition of this Licence;
- d) work that causes noise levels at the most affected noise sensitive receiver, that do not exceed;
  - (i) 5db(A) above the Rating Background Level (RBL) using the  $L_{Aeq\ 15\ minute}$  noise descriptor; and
  - (ii) 15db(A) above the RBL using the  $L_{AF, Max}$  noise descriptor.

To avoid any doubt, the Licensee must implement all reasonable and feasible noise and vibration mitigation and management measures in accordance with the requirements of *Interim Construction Noise Guideline* (Department of Environment and Climate Change NSW 2009) and *Assessing Vibration: a technical guideline* (Department of Environment and Conservation 2006) as part of the requirements of this condition.

## 4 Operating Conditions

### O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

### O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

### O3 Dust

# Environment Protection Licence

Licence - 20055

- O3.1 The premises must be maintained in a condition which prevents or minimises the emission of air impurities, including dust, from the premises.
- O3.2 All operations and activities occurring at the premises must be carried out in a manner that prevents or minimises the emission of air impurities, including dust, from the premises.

Note: Air impurity is defined in the dictionary of the *Protection of the Environment Operations Act 1997*.

## O4 Emergency response

Note: The Licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises in accordance with Part 5.7A of the *Protection of the Environment Operations Act 1997* and Chapter 4 of the Protection of the Environment Operations (General) Regulation 2022.

## O5 Waste management

- O5.1 The Licensee must, as far as possible, follow the waste hierarchy principles contained in the *Waste Avoidance and Resource Recovery Act 2001* when dealing with any waste generated at the premises.
- O5.2 The Licensee must assess and classify any waste generated at the premises in accordance with the EPA's *Waste Classification Guidelines - Part 1: Classifying Waste*, as in force from time to time, and manage this waste in a lawful manner.

## O6 Other operating conditions

- O6.1 The Licensee must store and handle all liquid chemicals and hazardous materials used at the premises within bunded areas that are constructed and maintained in accordance with the following:
- any relevant Australian Standards for the liquids being stored;
  - within a bunded area with a minimum bund capacity of 110% of the volume of the largest single stored vessel within the bund;
  - the Storing and Handling Liquids: Environmental Protection Participants Manual (DEC,2007); and where any conflict exists between these requirements, the most stringent requirements apply.
- O6.2 For the purpose of Condition O7, any tanks or other storage vessels that are interconnected and may distribute their contents either by gravity or automated pumps must be considered a single vessel.
- O6.3 Prior to commencement of any surface disturbance and/or construction activities, the Licensee must install and maintain appropriate erosion and sediment control measures at the premises in accordance with *Managing Urban Stormwater: Soils and Construction - Volume 1* (Landcom 2004) and *Managing Urban Stormwater Soils and Construction - Volume 2A, Installation of Services* (DECC 2008).

# Environment Protection Licence

Licence - 20055

## 5 Monitoring and Recording Conditions

### M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least 4 years after the monitoring or event to which they relate took place; and
- produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- the date(s) on which the sample was taken;
- the time(s) at which the sample was collected;
- the point at which the sample was taken; and
- the name of the person who collected the sample.

### M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/ or Land Monitoring Requirements

#### POINT 1,2

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	Daily during any discharge	Grab sample
pH	pH	Daily during any discharge	Grab sample
TSS	milligrams per litre	Daily during any discharge	Grab sample

#### POINT 1,2,3,4,5,6

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium (dissolved)	milligrams per litre	Weekly during any discharge	Grab sample
Iron (dissolved)	milligrams per litre	Weekly during any discharge	Grab sample
Total aluminium	milligrams per litre	Weekly during any discharge	Grab sample

# Environment Protection Licence

Licence - 20055

Total Iron	milligrams per litre	Weekly during any discharge	Grab sample
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## M3 Testing methods - concentration limits

M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

## M4 Weather monitoring

M4.1 At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively.

### POINT 9

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Rainfall	AM-4	millimetres per hour	15 minutes	Continuous

## M5 Recording of pollution complaints

M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M5.2 The record must include details of the following:

- the date and time of the complaint;
- the method by which the complaint was made;
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- the nature of the complaint;
- the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by the licensee, the reasons why no action was taken.

M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

# Environment Protection Licence

Licence - 20055

## M6 Telephone complaints line

- M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M6.3 The preceding two conditions do not apply until after 3 months the date of the issue of this licence.

## M7 Requirement to monitor volume or mass

- M7.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- the volume of liquids discharged to water or applied to the area;
  - the mass of solids applied to the area;
  - the mass of pollutants emitted to the air;
- at the frequency and using the method and units of measure, specified below.

POINT 1,2

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	kilolitres per day	In line instrumentation

## 6 Reporting Conditions

### R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
- a Statement of Compliance,
  - a Monitoring and Complaints Summary,
  - a Statement of Compliance - Licence Conditions,
  - a Statement of Compliance - Load based Fee,
  - a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
  - a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
  - a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

# Environment Protection Licence

Licence - 20055

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a) the licence holder; or
- b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

## R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

## R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
- b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.



# Environment Protection Licence

Licence - 20055

- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
- a) the cause, time and duration of the event;
  - b) the type, volume and concentration of every pollutant discharged as a result of the event;
  - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
  - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
  - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
  - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
  - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

## R4 Other reporting conditions

### Water Quality Monitoring Report

- R4.1 The Licensee must provide the EPA with its Annual Return an annual water quality monitoring report prepared by an appropriate qualified and experienced person that includes the following:
- a) for the monitoring required by the Licence during the reporting period to which the Annual Return relates:
    - (i) a summary of results for all ambient water quality monitoring required by the Licence at condition M2.2 and M7.1 of the Licence in graphical form;
    - (ii) total daily rainfall records from the premises rainfall collection device required by the Licence in table form and graphical form; and
    - (iii) a plan of the monitoring locations.
  - b) a graphical representation of the trends of monitoring results required by the Licences for the for reporting period to which the annual return relates and the existing data for the period of record the Licensee has monitoring results for the Licence monitoring location.

## 7 General Conditions

### G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.



# Environment Protection Licence

Licence - 20055

- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

## G2 Signage

- G2.1 Each monitoring and discharge monitoring point on the Licensed premises or on land owned by the Licensee must be clearly marked by a sign that indicates the EPA point identification number.

## 8 Special Conditions

### E1 Permeable Reactive Barrier Monitoring and Reporting

- E1.1 The Licensee must implement a permeable reactive barrier (PRB) monitoring program, undertaken by an appropriately qualified and experience person.

The monitoring program must be consistent with the document titled *Permeable Reactive Barrier Performance Monitoring Program Great Greta Colliery Final July 2021*, prepared by Umwelt (Australia) Pty Limited. EPA Reference DOC21/663077.

- E1.2 The Licensee must provide an annual report with the Annual Return to the EPA that includes:

- a) a summary of the monitoring program results;
- b) an assessment of the PRB performance with comparison to predicted PRB performance with respect to effluent water quality, hydraulic capacity and PRB longevity;
- c) recommendations for revision to the PRB monitoring program, if required, to ensure it is fit for purpose.

### E2 Macroinvertebrate Monitoring Program

- E2.1 The Licensee must undertake macroinvertebrate monitoring that is designed to monitor the impact site of Eui Creek and compare the results against a control site. For the purpose of this condition "control" means a waterway reach of the same Riverstyle TM (Brierly and Fryirs) as Eui Creek Monitoring Reaches, without the impact of mining discharges.

The monitoring must be undertaken by a suitable qualified and experience person and include macroinvertebrate monitoring twice a year during both Autumn and Spring at the following locations:

- a) in Eui Creek above the Eui Creek discharge points;
- b) at the Eui Creek spring and downstream of the Eui Creek Spring;
- c) in Webbers Creek above the confluence with Eui Creek;
- d) in Webbers Creek below the confluence with Eui Creek; and
- e) at control reaches with the same Riverstyle TM (Brierly and Fryirs) as Eui Creek.

The monitoring must be consistent with the document titled *Macroinvertebrate Plan Great Greta Colliery Final May 2021* prepared by Umwelt (Australia) Pty Limited. EPA Reference DOC21/436383

# Environment Protection Licence

Licence - 20055

- E2.2 The Licensee must provide an annual report to the EPA, prepared by an appropriately qualified and experienced person, on the outcomes of the monitoring required by Condition E2.1 with the Annual Return. The Report must include analysis of the macroinvertebrate assemblages based on a beyond before and after control impact (Beyond BACI) style assessment. The analysis must compare impacted and control sites and include assessment of macroinvertebrate assemblage dissimilarity between impacts and control sites highlighting taxa / impact responsible for the majority of dissimilarity.

The report must include any existing data, obtained from previous years to assess temporal changes and must include rainfall data for the period.

## E3 Water Quality Characterisation Monitoring

- E3.1 The Licensee must undertake a water quality monitoring program to characterise the Eui Creek Spring water quality against the groundwater discharge from the mine adit, discharge post permeable reactive barrier (PRB) treatment from the premises against background quality of waters in Eui Creek, Webbers Creek and Billy Brook.

The monitoring program must include:

- a) quarterly sampling unless otherwise approved in writing by the EPA;
- b) sampling from a groundwater sample representative of the underground workings, a sample of post PRB and wetland treated effluent, a sample from the Eui Creek spring, a sample of Eui Creek upstream of the discharge, and a sample of Webbers Creek upstream of the Eui Creek confluence (or at locations required in writing by the EPA).
- c) analysis for electrical conductivity, pH, total suspended solids, anions, cations, alkalinity (caCO<sub>3</sub>) bicarbonate, a full suite of total and dissolved metals (or analytes required by the EPA in writing) and
- d) sampling during wet and dry climatic periods to appropriately characterise the nature of the groundwater and surface water through these periods.

The monitoring program must be consistent with the document titled *Water Characterisation Monitoring Program Great Greta Colliery* Final May 2021 prepared by Umwelt (Australia) Pty Limited. EPA Reference DOC21/436383

- E3.2 The Licensee must provide an annual report with the Annual Return on the results of the water quality characterisation program to the EPA. The report must be prepared by an appropriately qualified and experience person and include monitoring results and any existing data to assess temporal changes, including rainfall data for the period, in any analysis.

## E4 Ecotoxicological Assessment

- E4.1 Upon review of the analysis and reporting required by conditions E1, E2, and E3 of the Licence, the EPA may require the Licensee to undertake an ecotoxicological assessment on the permeable reactive barrier treated

# Environment Protection Licence

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Licence - 20055

discharge to Eui Creek. The purpose of this assessment would be to evaluate whether the characteristics of the discharge meet s120 of the Protection *of the Environment Operations Act 1997* under the National Water Quality Management Strategy Framework. The EPA may revise discharge concentration and volume limits based on this assessment.

## **E5 Permeable Reactive Barrier**

E5.1 The licensee must install a permeable reactive barrier (PRB) and wetland consistent with Development Application Number 8.2019.2471.1 dated 19 March 2021. The works must be undertaken by appropriately qualified and experienced persons and completed by 1 December 2025.

Prior to installation of the PRB, the licensee must undertake monitoring required by licence conditions E2.1 and E3.1 to gather sufficient data before construction.

# Environment Protection Licence

Licence - 20055

## Dictionary

### General Dictionary

<b>3DGM [in relation to a concentration limit]</b>	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
<b>Act</b>	Means the Protection of the Environment Operations Act 1997
<b>activity</b>	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
<b>actual load</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>AM</b>	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
<b>AMG</b>	Australian Map Grid
<b>anniversary date</b>	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
<b>annual return</b>	Is defined in R1.1
<b>Approved Methods Publication</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>assessable pollutants</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>BOD</b>	Means biochemical oxygen demand
<b>CEM</b>	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
<b>COD</b>	Means chemical oxygen demand
<b>composite sample</b>	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
<b>cond.</b>	Means conductivity
<b>environment</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>environment protection legislation</b>	Has the same meaning as in the Protection of the Environment Administration Act 1991
<b>EPA</b>	Means Environment Protection Authority of New South Wales.
<b>fee-based activity classification</b>	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
<b>general solid waste (non-putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

# Environment Protection Licence

Licence - 20055

<b>flow weighted composite sample</b>	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
<b>general solid waste (putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>grab sample</b>	Means a single sample taken at a point at a single time
<b>hazardous waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>licensee</b>	Means the licence holder described at the front of this licence
<b>load calculation protocol</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>local authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>material harm</b>	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
<b>MBAS</b>	Means methylene blue active substances
<b>Minister</b>	Means the Minister administering the Protection of the Environment Operations Act 1997
<b>mobile plant</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>motor vehicle</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>O&amp;G</b>	Means oil and grease
<b>percentile [in relation to a concentration limit of a sample]</b>	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
<b>plant</b>	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
<b>pollution of waters [or water pollution]</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>premises</b>	Means the premises described in condition A2.1
<b>public authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>regional office</b>	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
<b>reporting period</b>	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
<b>restricted solid waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>scheduled activity</b>	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
<b>special waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>TM</b>	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

# Environment Protection Licence

Licence - 20055

<b>TSP</b>	Means total suspended particles
<b>TSS</b>	Means total suspended solids
<b>Type 1 substance</b>	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
<b>Type 2 substance</b>	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
<b>utilisation area</b>	Means any area shown as a utilisation area on a map submitted with the application for this licence
<b>waste</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>waste type</b>	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste
<b>Wellhead</b>	Has the same meaning as in Schedule 1 to the Protection of the Environment Operations (General) Regulation 2021.

Ms Rebecca Scrivener

Environment Protection Authority

(By Delegation)

Date of this edition: 06-January-2012

## End Notes

2	Licence varied by notice	1505638 issued on 14-May-2012
3	Licence varied by notice	1509952 issued on 06-Dec-2012
4	Licence varied by notice	1610687 issued on 09-Dec-2021
5	Licence varied by notice	1616521 issued on 10-Feb-2022
6	Licence varied by notice	1618926 issued on 06-Sep-2022
7	Licence varied by notice	1630142 issued on 10-Jul-2023
8	Licence varied by notice	1642457 issued on 27-Sep-2024