

Notice

Environmental Protection Act 1994

Environmental Evaluation

Notice to conduct or commission an environmental evaluation

This notice to conduct or commission an environmental evaluation is issued by the administering authority pursuant to 326B of the Environmental Protection Act 1994.

Abbot Point Bulkcoal Pty Ltd
Level 25, 10 Eagle Street
BRISBANE QLD 4000

Your reference: EPPR00577113

Our reference: STAT1193

31 October 2017

Take notice: that under the *Environmental Protection Act 1994* (the Act) a notice to conduct or commission an environmental investigation is issued to Abbot Point Bulkcoal Pty Ltd ACN 010 183 534 (you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Heritage Protection (the department).

This notice replaces the notice to conduct or commission an environmental evaluation that was issued on 18 September 2017 and that original notice is no longer in effect. This notice is issued as a result of the internal review that you applied for on 3 October 2017 where a decision was made to vary the original notice.

This notice to conduct or commission an environmental investigation is issued in respect of the activities of Abbot Point Bulkcoal Pty Ltd at Abbot Point Coal Terminal on land described as Lot 48 on SP243724, Lot 49 on SP243724, Lot 50 on SP243721, Lot 51 on SP243721, Lot 52 on SP243721, Lot 3 on SP227557, Lot 4 on SP227557, Lot 58 on SP240224 and Lot 49 on SP185904 (the premises).

A. Grounds

The notice to conduct or commission an environmental investigation is issued on the following grounds:

1. In accordance with section 326B(1)(b) of the *Environmental Protection Act 1994*, the department is satisfied on reasonable grounds that the authorised activity being undertaken by APBC (the bulk material handling activity) is causing or is likely to cause environmental harm in high intensity rainfall events.
2. Environmental harm is defined in section 14 of the Act as follows:

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- (1) *Environmental harm is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.*
- (2) *Environmental harm may be caused by an activity—*
- (a) *whether the harm is a direct or indirect result of the activity; or*
- (b) *whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.*
3. An environmental value is defined in section 9 of the Act as follows:
- (a) *A quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or*
- (b) *Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.*
4. The department considers that coal fines have been released to the Caley Valley Wetlands as a result of the authorised activity during high rainfall events, either under the TEL or during historical releases to the wetland.
5. The department considers that the presence of coal fines in the Caley Valley Wetlands (either during the period of the TEL or due to historical releases) has the potential cause impacts on the receiving environment, primarily due to smothering.
6. The department considers that the release of coal particles into the Caley Valley Wetland and the associated build up in sediments may result in an adverse effect/s or a potential adverse effect/s on the environmental values of the wetland.

The facts and circumstances forming the basis for these grounds are:

1. Abbot Point Bulkcoal Pty Ltd (APBC) holds environmental authority (EA) EPPR00577113 which authorises the following environmentally relevant activities (ERA):
 - a) ERA 50 1(a) – Bulk material handling – loading or unloading 100t or more of minerals in a day or stockpiling 50,000t or more of minerals within 5km of the highest astronomical tide or 1km of a watercourse; and
 - b) ERA 63 (1b)(i) – Sewage treatment – operating sewage treatment works, other than no-release works, with a total daily peak design capacity of more than 100 but not more than 1500EP, if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme.
2. Under the *Environmental Protection (Water) Policy 2009* (Water EPP), all Queensland waters have environmental values to be enhanced or protected.
3. The Caley Valley Wetlands are adjacent to the premises and are nationally important wetlands covering an area of about 5154 hectares and the wetlands are listed in the Directory of Important Wetlands in Australia.
4. The Caley Valley Wetlands are a Matter of State Environmental Significance, providing habitat for large numbers of waterbirds, including threatened and migratory birds, with up to 48,000 waterbirds observed during high use times.
5. The department considers that the relevant environmental values for the Caley Valley Wetlands include aquatic ecosystem, recreational use and the cultural and spiritual values of the water.

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6. APBL notified the department of historical releases to the Caley Valley Wetlands from their premises which occurred on the following dates:
 - a) 28 December 2010;
 - b) 8 to 10 February 2012; and
 - c) 20 March 2012.
7. On 28 March 2017, the department approved a temporary emissions licence ENEL07198317 (TEL) for APBC due to predictions of a major rainfall event associated with Tropical Cyclone Debbie which occurred from 27 – 30 March 2017. The TEL permitted a temporary increase of the EA release limit for total suspended solids (TSS) from 30mg/L to 100mg/L at release points W1(into the Caley Valley Wetland) and W2 (into the marine environment).
8. On 6 April 2017, the department became aware of aerial imagery taken post Tropical Cyclone Debbie that showed a colour variation at release point W1 and the adjacent Caley Valley Wetland.
9. The department immediately commenced an investigation into APBC's compliance with the TEL and the potential release of coal fines into the Caley Valley Wetland.
10. APBC provided monitoring results from sampling conducted 30 March 2017, which indicated that releases into the Caley Valley Wetland were in compliance with the TEL conditions.
11. The Department of Science, Information Technology and Innovation (DSITI) were engaged to undertake a preliminary site assessment of the impacts to the Caley Valley Wetland in relation to releases from the Abbot Point Coal Terminal.
12. On 27 and 28 April 2017, DSITI and the department took *in situ* monitoring, sediment samples and water samples across seven (7) sites in the Caley Valley Wetland to determine the state of the relevant areas and the contribution of releases from the terminal.
13. On 28 July 2017, DSITI provided the document titled '*Caley Valley Wetlands, Assessment of impacts to Caley Valley Wetlands from Abbot Point Coal Terminal post Tropical Cyclone Debbie*'. The document outlined the key findings of the wetland assessment:
 - a) sampling across the wetlands indicated trace levels (<1%) of coal in sediment samples;
 - b) coal fines were only visually observed at a site immediately downstream of release point W1, consistent with sediment samples from this location, which indicated that coal composed approximately 10% of the sample;
 - c) minor concentrations (<2%) of coal fines were measured in sediment samples downstream of release point W1;
 - d) coal fines do not appear to have caused widespread impacts in the wetland. It is likely that any impacts from the release from W1 under the temporary emissions licence (TEL) were mitigated by the large amount of water flowing naturally through the wetland; and
 - e) further assessment is required to accurately delineate the potentially affected area and to monitor the ongoing impact of releases from the Abbot Point Coal Terminal to the Caley Valley Wetland.
14. The environmental risk to the receiving environment from total suspended solids (TSS) loads containing elevated levels of coal fines cannot be quantified, however DSITI provided the following information in their report on 28 July 2017:
 - a) there is a risk that fine coal particles have greater potential than inorganic sediments (of a similar size range) to interfere with feeding and other processes (breathing, breeding etc.) in aquatic organisms due to physical impacts (i.e. smothering). This is the primary risk;

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- b) coal particles will tend to persist in the aquatic environment (slow biodegradation), and therefore, any potential impacts associated with such discharges (i.e. leaching of contaminants from coal) could also persist;
 - c) the degree of integration of fine coal particles into local sediments as a consequence of historical discharges from the coal terminal is poorly understood and hence the impact of the recent release is difficult to determine. However, the presence of coal particles in the wetland downstream of the authorised discharge point (W1) was identified following an authorised release at the site during sampling post Tropical Cyclone Debbie; and
 - d) the diffusion profile and residence time of fine coal particles in the local ecosystem after a discharge event is unknown.
15. The department considers that an environmental evaluation is appropriate to identify any changes or impacts to the flora and fauna in the Caley Valley Wetlands as a consequence of stormwater discharge events and the addition of coal fines to the wetlands. This includes the identification and evaluation of the extent of the coal discharge and any adverse impacts from the coal to recognised environmental values.

B. Requirements

The report on the environmental investigation must address the following relevant matters:

1. Conduct a review of the APBC water management strategy, including:
 - a) establish a method to accurately determine rainfall at the premises;
 - b) assess the water infrastructure's ability to effectively treat stormwater to reduce the amount of contaminants being released in high intensity rainfall events with reference to a suitable design standard;
 - c) identify a suitable method to determine release quality and quantity in high flow events;
 - d) conduct a review of monitoring and release practices to identify the scope for remote control/operation in the event of site evacuation; and
 - e) Revise the APBC water management strategy and other associated documents.
2. By **22 December 2017** provide to the department a report which includes the review of the water management strategy and proposed actions, including timeframes, required to address any recommendations of the review of the water management strategy (addressed in accordance with requirement 1).
3. Develop and implement a Receiving Environment Monitoring Program (REMP) to monitor, identify and describe any adverse impacts to the environmental values of the Caley Valley Wetland due to activities conducted at the premises.
4. The REMP must specify the methodology and analytical methods to be used to identify and/or address the following:
 - a) the condition or state of the receiving environment, including upstream conditions, spatially within the Caley Valley Wetland, considering background water quality characteristics based on accurate and reliable monitoring data that takes into consideration temporal variation (e.g. seasonality);
 - b) a description of the potential impacts coal fines may have on receiving waters/environment including key flora and fauna communities;

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- c) determine contaminants of concern through the review of historical data and relevant literature. The contaminant review must consider the environmental concentrations of the following:
 - i) Metals, metalloids and organic compounds: analysis of all trace elements known to be present in coal;
 - ii) Salts: major cations and anions;
 - iii) Physical properties: particle size distribution of fine coal particles being discharged;
 - iv) Organics: coal hydrocarbon and benzene-ring derivatives that are considered potentially toxic to marine biota and/or carcinogenic to humans. (Examples of relevant organic compounds are Aromatic Hydrocarbons (benzene, toluene, ethylbenzene, xylenes), Polycyclic Aromatic Hydrocarbons (naphthalene, anthracene, phenanthrene, fluoranthene, benzo(a)pyrene), nitrobenzene, 2,4-dinitrotoluene, and 2,4,6-trinitrotoluene.); and
 - v) If specific contaminants are not considered to be applicable for this investigation, then justification for their omission must be included in the REMP.
- d) Assessment of the potential for contaminants in the coal fines to leach into the surrounding environment and the potential for adverse impacts to the Caley Valley Wetland;
- e) An assessment of stormwater releases from W1 including:
 - i) monitoring of fine coal particles being released from the authorised discharge point (W1), including particle size distribution;
 - ii) monitoring of discharge profiles (i.e. data logging of discharge per unit time – m³/s) and reporting of total discharge volumes released from the authorised discharge point (ML/day); and
 - iii) monitoring of the identified contaminants of concern relevant to the release frequency.
- f) Assessment of the receiving environment:
 - i) monitoring or modelling of the receiving environment's hydrology during discharge events and times with no discharge;
 - ii) the determination of the extent (depth and area) of coal fines in sediment in the Caley Valley Wetland;
 - iii) identification of potentially affected flora and fauna and ecological communities within the Caley Valley Wetland. This should include invertebrates in the sediment as an important food source for resident and migratory birds, and likely to be impacted by smothering;
 - iv) monitoring must include Lake Caley as an important dry season habitat;
 - v) monitoring of the contaminants of concern in the water column and sediment of the Caley Valley Wetland; and
 - vi) the determination of the residence time of fine coal particles from stormwater discharges into the Caley Valley Wetland, to include creek bed and aqueous phase.
- g) General REMP design document content requirements:
 - i) monitoring point locations using geographical coordinates (GDA 94) and suitable map(s);

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- ii) specify sampling and analysis methods and quality assurance and control to be undertaken as part of the REMP;
 - iii) any historical data to be relied upon; and
 - iv) description of the statistical basis on which conclusions are drawn.
5. A report on the REMP findings, including all monitoring results and interpretations must be prepared and submitted to the department by **31 October 2018**.
 6. If the REMP report demonstrate a high level of risk to the receiving environment from coal fines in stormwater discharges to Caley Valley wetlands, an investigation must be undertaken to assess impacts to the sediment from exposures from the coal fines. If contaminants such as metals and organics are found to be chemicals of concern, an assessment must be undertaken using direct toxicity assessments (DTA) methodology as presented in the ANZECC/ARMCANZ (2000) guidelines for fresh and marine water quality, utilising benthic and filter-feeding marine organisms comparable to those that are found within the receiving environment of Caley Valley.
 7. The REMP report must include a determination of whether a direct toxicity assessment is required.
 8. If a direct toxicity assessment is required, a report on the direct toxicity assessment findings must be prepared and submitted to the department by **11 January 2019**.

The environmental investigation must be carried out, and any environmental reports prepared, by a suitably qualified person.

As the recipient of this notice, you are also required to provide a statutory declaration in the form attached, to accompany the environmental reports submitted to the department. The suitably qualified person who prepares the environmental reports must also provide a statutory declaration in the form attached to accompany the environmental reports submitted to the department.

You can view an electronic version of the statutory declaration for a recipient using the following search term ([ESR/2016/1997](#)).¹

An electronic version of the statutory declaration for a suitably qualified person form is available using the search term ([ESR/2016/2266](#)).

Take notice:

- the requirements of the notice to conduct or commission an environmental investigation take effect immediately upon service of this notice;
- this notice remains in force until further notice from the department; and
- you are responsible for meeting the costs of conducting or commissioning the environmental evaluation, preparing the environmental report and providing any further information as requested by the department.

C. Reviews and appeals

The provisions regarding reviews of decisions and appeals are found in sections 519 to 539 of the Act.

¹ This is the publication number. The publication number can be used as a search term to find the latest version of a publication at <www.ehp.qld.gov.au>.

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Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the review decision.

A person whose interests are or would be adversely affected by a decision of the department may also be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*.

For further information about reviews and appeals see the:

- Information sheet - internal review and appeal to the Planning and Environment Court ([ESR/2015/1572](#)).
- Information sheet - internal review and appeal to the Land Court ([ESR/2015/1742](#)).


You may have other legal rights or obligations and should seek your own legal advice.

D. Penalty

Failure to comply with a notice to conduct or commission an environmental evaluation is an offence.

- The maximum penalty for an individual is 300 penalty units, totalling \$37,845.
- The maximum penalty for a corporation is 1500 penalty units, totalling \$189,225.

Should you have any queries in relation to this notice, please contact Alisha Stewart of the department on telephone number (07) 4999 6883.



Signature

31 October 2017

Date

Kate Harbert
Manager (Compliance)
Delegate of the Chief Executive
Department of Environment and Heritage Protection
Environmental Protection Act 1994

Enquiries:

Level 1, 22-30 Wood Street, Mackay QLD
Ph: (07) 4999 6863
Email: cwes_mackay@ehp.qld.gov.au