Permit

Environmental Protection Act 1994

Environmental authority EPPR00961413

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPR00961413

Environmental authority takes effect on 26 July 2023

The anniversary date of this environmental authority is 21 July each year.

Environmental authority holder(s)

Name(s)	Registered address
BRAEMAR POWER PROJECT PTY LTD	C/- Alinta Servco Pty Limited Grosvenor Place Level 13, 225 George Street, SYDNEY NSW 2000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 14 - Electricity generation - 1 - Generating electricity by using gas at a rated capacity of 10MW electrical or more	128/SP214053

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

ABN 46 640 294 485

Queensland Government

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days)

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority - on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

The anniversary day of this environmental authority is the same day each year as the original take effect date unless you apply to change the anniversary day. The payment of the annual fee will be due each year on this day.

	**26 July 2023**
Signature	Date

Rachel Copp
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Energy and Extractive Resources Busines Centre
GPO Box 2454, BRISBANE QLD 4001
Phone: (07) 3330 5715
Email: EnergyandExtractive@des.qld.gov.au

Privacy statement

Pursuant to section 540 of the EP Act, the Department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold

documents or information required to be kept on the public register. For more information on the Department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

This environmental authority consists of the following schedules:

- Schedule A – Activity
- Scgedule B – Air
- Schedule C – Water
- Schedule D – Noise and Vibration
- Schedule E – Waste
- Schedule F – Land
- Schedule G – Regulated Dams
- Schedule H – Community
- Schedule I – Definitions

Conditions of environmental authority

Agency interest: Schedule A - Activity	
Condition number	**Condition**
(A1)	**Prevent and/or minimise likelihood of environmental harm** In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this approval. NOTE: This approval authorises the environmentally relevant activity. It does not authorise environmental harm unless a condition contained within this approval explicitly authorises that harm. Where there is no condition or the approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.
(A2)	**Maintenance of measures, plant and equipment** The holder must: a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; and b) maintain such measures, plant and equipment in a proper and efficient condition; and c) operate such measures, plant and equipment in a proper and efficient manner.
(A3)	**Site Based Management Plan** From commencement of the activity, a Site Based Management Plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all Environmentally Relevant Activities that are carried out. The site based management plan must address the following matters: a) Environmental commitments - a commitment by senior management to achieve environmental goals. b) Identification of environmental issues and potential impacts. c) Control measures for routine operations to minimise likelihood of environmental harm. d) Contingency plans and emergency procedures for non-routine situations. e) Organisational structure and responsibility. f) Effective communication. g) Monitoring of the contaminant releases.

	h) Conducting environmental impact assessments. i) Staff training. j) Record keeping. k) Periodic review of environmental performance and continual improvement.
(A4)	**Report submission** The holder of this approval must ensure that the results of all monitoring performed in accordance with this approval for the period covered by the return are submitted with the Annual Return.
(A5)	**Incident recording** A record must be maintained of at least the following events: a) the time, date and duration of equipment malfunctions where the failure of the equipment resulted in the release of contaminants reasonably likely to cause environmental harm; b) any uncontrolled release of contaminants reasonably likely to cause environmental harm; and c) any emergency involving the release of contaminants reasonably likely to cause material or serious environmental harm requiring the use of firefighting equipment.
(A6)	An appropriately qualified person(s) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
(A7)	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses. The only exception to this condition is the in situ monitoring of turbidity, pH, electrical conductivity and dissolved oxygen.
(A8)	When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate a complaint of environmental nuisance arising from the activity. The monitoring results must be provided within 14 business days to the administering authority upon its request.
Agency interest: Schedule B - Air	
Condition number	**Condition**
(B1)	**The release of contaminants to the atmosphere** The release of contaminants to the atmosphere from a point source must only occur from those release points identified in Appendix 1 – *Figure 1 – Map illustration of release points in the operational area* and be released in accordance with the parameters listed in Schedule B – *Table 1 - Point source air release limits*.

Schedule B – Table 1 – Point source air release limits

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Monitoring frequency
Release Point number	**Minimum Release height**	**Minimum velocity (m/sec)** Until the commissioning of the combined cycle gas turbines	**Minimum velocity (m/sec)** From the commissioning of the combined cycle gas turbines	**Contaminant release**	**Maximum release limit[2 & 3]**	
150MW Gas Fired Unit GT11 Turbine Stack	30	25 (normal operating conditions)	16 (normal operating conditions)	[1]NOx	25ppmv (51 mg/Nm^3 @15% O_2	During commissioning of the power plant and annually thereafter.
150MW Gas Fired Unit GT12 Turbine Stack	30	25 (normal operating conditions)	16 (normal operating conditions)	[1]NOx	25ppmv (51 mg/Nm^3 @15% O_2	
150MW Gas Fired Unit GT21 Turbine Stack	30	25 (normal operating conditions)	16 (normal operating conditions)	[1]NOx	25ppmv (51 mg/Nm^3 @15% O_2	
Emergency Diesel Generator	3	40	40	CO	10ppmv (100ppmv start up / shutdown)	

[1] NOx refers to total oxides of nitrogen (reported as Nitrogen Dioxide).
[2] The release limits are to be referenced to the following conditions - dry gas at standard temperature and pressure and at 15% oxygen.
[3] NOx emission limit of 25 ppmv @ 15% O_2 is not applicable when the unit is operating at a load of less than 90 MW in total of 500 hours per 12 months rolling over period. This limit of 500 hours per 12 months rolling over period hours is applied to each unit separately and does not include start up and shutdown cycles of the unit.

(B2) The release of contaminants from all point sources in condition B1 must be directed vertically upwards without any impedance or hindrance.

(B3)	From the date of this approval until the commissioning of the combined cycle gas turbines the release of contaminants to air must comply with Column 3 of Schedule B – *Table 1 - Point source air release limits.*
(B4)	From the commissioning of the combined cycle gas turbines the release of contaminants to air must comply with Schedule B – *Table 1 - Point source air release limits,* Column 4.
(B5)	The sulphur content of diesel fuel burned in the emergency diesel generator is not to exceed 10ppm in weight.
(B6)	The only type of fuel to be burnt for commercial power generation under normal operating conditions is natural gas.
(B7)	The sulphur content of natural gas fuel burned for power generation is not to exceed 40ppm in weight.
(B8)	**Monitoring** Monitoring must be undertaken for each release authorised under condition B1: a) at the frequency in Schedule B – *Table 1 - Point source air release limits.*; b) for the contaminants specified in Schedule B – Table 1 - Point source air release limits.; and c) when emissions are expected to be representative of normal process operating conditions for the plant.
(B9)	Monitoring position for the release points listed in Schedule B – *Table 1 - Point source air release limits* must comply with the most current edition of Australian Standard AS 4323.1 - 1995 "Stationary source emissions Method 1: Selection of sampling positions".
(B10)	The following must be recorded for each sample collected in accordance with Schedule B – *Table 1 – Point source air release limits*: (a) gas velocity and volume flow rate; (b) temperature and oxygen content; (c) water vapour concentration; (d) plant throughput rate at the time of sampling; and (e) any typical factors that may influence air pollutant emissions.
(B11)	On or before the commencement of the power station, the holder of this approval must submit to the administering authority an air quality monitoring protocol that must address at least the following: a) sampling practices and procedures for contaminant testing; b) the selection of sampling locations to demonstrate that samples collected will be representative of the air quality of the area; c) the frequency of sampling to be undertaken at each location including the number of samples to be taken, the time spent in collecting samples (the sampling time); and d) meteorological data collection including at least the wind speed and wind direction during the air quality monitoring program the monitoring locations.

(B12)	The holder of this approval must have due regard to comments made by the administering authority regarding the submitted air quality monitoring protocol as required by condition (B11).
(B13)	On or before one year after commencement of the power station, the holder of this approval must conduct a study to determine the ground level concentration of nitrogen dioxide of the neighbouring environment and compare results with the model predictions specified in the report entitled: "Wambo Power Ventures Pty Ltd, Impact assessment study for the proposed development of a gas turbine power station located at Graham Road, Kogan" and lodge a report on the study with the administering authority. This monitoring must be conducted over a period to obtain a representative number of samples.

Agency interest: Schedule C - Water

Condition number	Condition
(C1)	**Contaminants to waters** Contaminants must not be released from the site to any waters or the bed and banks of any waters, except for discharge as authorised under condition (C2).
(C2)	**Stormwater management** Release of stormwater that has been in contact with any contaminants, to any waters must be in accordance with criteria listed in Schedule C – *Table 1 - Stormwater discharge criteria*.
(C3)	The holder of this approval must record and make available to the administering authority and the nearest downstream user upon request the following information: a) Date and time of release/s b) Duration of release/s c) Quantity of contaminated stormwater released d) Quality of stormwater released
(C4)	Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering any ponds or other structures used for the storage or treatment of contaminants or wastes.
(C5)	**Stormwater pond conditions**

Schedule C – Table 1 Stormwater discharge criteria

Discharge Point	Quality Characteristic	Release Limit	Limit Type
Overflow from Oily Water Separator to Culvert -27.10992 ° Lat, 150.90481° Long	Electrical Conductivity	1500 micro Siemens/cm	Maximum
	pH	6.5-9.0	Range
	Total Petroleum Hydrocarbons	10 mg/L	Maximum

<table>
<tr><td></td><td>Ponds used for the storage or treatment of contaminated stormwater must be constructed, installed and maintained:
a) so as to minimise the likelihood of any release of effluent through the bed or banks of the pond to any waters (including ground water);
b) so that a freeboard of not less than 0.2 metres is maintained at all times, except in emergencies; and
c) so as to ensure the stability of the ponds' construction.</td></tr>
<tr><td>(C6)</td><td>Monitoring of the water levels of all ponds used for the storage and treatment of contaminants must be conducted at weekly intervals and following significant rainfall events. The records are to be made available to the administrating authority upon request.</td></tr>
<tr><td colspan="2">Agency interest: Schedule D – Noise and Vibration</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>(D1)</td><td>Noise from activities must not cause an environmental nuisance at any noise affected premises.</td></tr>
<tr><td>(D2)</td><td>All noise from activities must not exceed the levels specified in Schedule D - Table 1 Noise Limits at any noise affected premises.
Schedule D – Table 1 - Noise limits
<table>
<tr><td>Noise level
dB(A) measured as</td><td colspan="3">Monday to Saturday</td><td colspan="3">Sundays and Public holidays</td></tr>
<tr><td colspan="7">Noise measured at ‘Noise sensitive place’</td></tr>
<tr><td></td><td>7am – 6pm</td><td>6pm – 10pm</td><td>10pm – 7am</td><td>9am – 6pm</td><td>6pm – 10pm</td><td>10pm – 9am</td></tr>
<tr><td>LA10, adj, 10 min</td><td>35</td><td>33</td><td>33</td><td>33</td><td>33</td><td>33</td></tr>
</table>
The above noise limits are applicable during all times except combined cycle start-up and in emergency circumstances when rapid venting of steam is required for safety reasons. The start-up duration in combined cycle mode is not to exceed 3 hours. The maximum noise level during combined cycle start-up is not to exceed the limits set in Schedule D — Table 1 by more than 5db(A).</td></tr>
<tr><td>(D3)</td><td>Noise monitoring
When requested by the Administering Authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:
a) $L_{A\ 10,\ adj,\ 10\ mins}$</td></tr>
</table>

	b) $L_{A\ 1,\ adj,\ 10\ mins}$ c) the level and frequency of occurrence of impulsive or tonal noise; d) atmospheric conditions including wind speed and direction; e) effects due to extraneous factors such as traffic noise; and f) location, date and time of recording.
(D4)	The method of measurement and reporting of noise levels must comply with the latest edition of the Queensland Government's Noise Measurement Manual.
(D5)	In order to evaluate noise modelling predictions, the holder of this approval shall monitor noise levels and meteorological conditions over a representative number of samples, during the first 12 months after the commissioning of the combined cycle power station operations.
Agency interest: Schedule E - Waste	
Condition number	**Condition**
(E1)	**Waste handling** All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
Agency interest: Schedule F - Land	
Condition number	**Condition**
(F1)	**Preventing contaminant release to land** Contaminants must not be released to land with the exception of releases in accordance with condition C2.
(F2)	Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm. NOTE: All petroleum product storage's must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.
Agency interest: Schedule G – Regulated Dams	
Condition number	**Condition**
(G1)	**Waste acceptance** The only waste authorised for disposal at the authorised place are:

<table>
<tr><td></td><td>a) waste from on-site water treatment plant (backwash, reject, CIP chemicals and waste brine); and
b) evaporative cooler and Heat Recovery Steam Generator (HRSG) blowdown.
This waste is to be disposed of in the regulated evaporation dam as identified in conditions G6 and G7.</td></tr>
<tr><td>(G2)</td><td>The hazard category of each dam must be determined by a suitably qualified and experienced person prior to its construction and at least once in each year thereafter.</td></tr>
<tr><td>(G3)</td><td>The holder of this approval must not commence construction of any dam determined to be in the significant or high hazard category, unless the location, basic details and hydraulic performance of that dam are specifically referenced in this environmental authority.</td></tr>
<tr><td>(G4)</td><td>The holder of this approval must not abandon any dam but must decommission each dam so as to avoid any environmental harm.</td></tr>
<tr><td>(G5)</td><td>As a minimum, decommissioning must be conducted such that each dam is either:
a) converted to a stable landform, that no longer contains flowable substances, or
b) approved or authorised under relevant legislation for a beneficial use, or
c) is a void authorised by the administering authority to remain after decommissioning; and,
d) compliant with the decommissioning and rehabilitation requirements of this environmental authority</td></tr>
<tr><td>(G6)</td><td>The following regulated dams must be located within the control points defined in Schedule G Table 1– Location of regulated Dams, below.
Schedule G – Table 1 – Location of regulated Dams
<table>
<tr><th></th><th>Evaporation Pond Set-out</th><th>Latitude (N) (GDA 94)</th><th>Longitude (E) (GDA 94)</th></tr>
<tr><td rowspan="4">Braemar Power Station 1 - Evaporation Pond 1</td><td>North West corner (A)</td><td>6999706.490</td><td>292161.488</td></tr>
<tr><td>North East corner (B)</td><td>6999692.426</td><td>292284.371</td></tr>
<tr><td>South West corner (C)</td><td>6999630.218</td><td>292276.857</td></tr>
<tr><td>South East Corner (D)</td><td>6999648.672</td><td>29153.291</td></tr>
<tr><td rowspan="4">Braemar Power Station 1 - Evaporation Pond 2</td><td>South West corner (A)</td><td>6999457.221</td><td>292535.39</td></tr>
<tr><td>North West corner (B)</td><td>6999715.086</td><td>292568.91</td></tr>
<tr><td>North East corner (C)</td><td>6999709.182</td><td>292614.20</td></tr>
<tr><td>South East corner (D)</td><td>6999451.343</td><td>292580.585</td></tr>
<tr><td rowspan="3">Braemar Power Station 1 - Evaporation Pond 3</td><td>North West corner (A)</td><td>6999764.626</td><td>291931.426</td></tr>
<tr><td>North East corner (B)</td><td>6999737.933</td><td>292157.687</td></tr>
<tr><td>South West corner (C)</td><td>6999582.806</td><td>291919.787</td></tr>
</table></td></tr>
</table>

	South East Corner (D)	6999555.590	292096.257
	East Corner (E)	6999451.343	292580.585

(G7) The following regulated dams must conform to the basic details in Schedule G *Table 2 Basic Details of Regulated Dams* below.

Schedule G – Table 2 – Basic Details of Regulated Dams

Name of Regulated Dam	Hazard Category	Maximum surface area of dam (ha)	Maximum operational volume of dam (ML)	Maximum depth of dam (m)	Use of dam
Braemar 1 Power Station Evaporation Pond 1	High	0.50	6.3	2.2	Disposal of: waste from on-site water treatment plant (backwash, reject, CIP chemicals and waste brine); and evaporative cooler and HRSG blowdown.
Braemar 1 Power Station Evaporation Pond 2	High	0.60	9.3	2.5	Disposal of: waste from on-site water treatment plant (backwash, reject, CIP chemicals and waste brine); and evaporative cooler and HRSG blowdown.
Braemar 1 Power Station Evaporation Pond 3	High	2.70	45.7	2.5	Disposal of: waste from on-site water treatment plant (backwash, reject, CIP chemicals and waste brine); and

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<tr><td></td><td></td><td></td><td></td><td></td><td>evaporative cooler and HRSG blowdown.</td></tr>
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</td></tr>
<tr><td>(G8)</td><td>The following regulated dams must meet the hydraulic performance criteria specified in Schedule G - Table 3 Hydraulic Performance of Regulated Dams, below.

Schedule G – Table 3 – Hydraulic Performance of Regulated Dams
<table>
<tr><th>Name of Regulated Dam</th><th>Spillway Capacity of Diversion Capacity AEP</th><th>Design Storage Allowance AEP</th><th>Mandatory Reporting Level AEP</th></tr>
<tr><td>Braemar 1 Power Station Evaporation Pond 1,2 and 3</td><td>AEP 1:50,000</td><td>AEP 1:100*</td><td>AEP 1:100</td></tr>
</table>
*hydrological analysis and method of monthly deciles

NOTE: For each entry in the table for Design Storage Allowances, the method of calculation (either full hydrological analysis' or 'method of monthly deciles') must be specified in conjunction with the AEP level applicable to the hazard category and method of calculation - as indicated in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams, maintained and published by the Department of Environment and Resource Management on its website.</td></tr>
<tr><td>(G9)</td><td>Certification and operation

The holder of this environmental authority must not commence construction of a regulated dam unless:

a) the holder has submitted to the administering authority two copies of a design plan, together with the certification of a suitably qualified and experienced person that the design of the regulated dam will deliver the performance stated in the design plan and that it will be compliant in all respects with this environmental authority;

b) at least 30 business days have passed since the receipt of those documents, or the administering authority notifies the holder that a design plan and certification, has been received; and

c) the holder has given due regard to the comments made by the administering authority with regards to the submission of the design plan and certification of the design person.</td></tr>
<tr><td>(G10)</td><td>When construction of any regulated dam is complete, and within 20 business days of construction completion, the holder of this environmental authority must submit to the administering authority two copies of a set of 'as constructed' drawings, together with the certification of a suitably qualified and experienced person that the dam 'as constructed' will deliver the performance stated in the certification and it is compliant in all respects with this environmental authority.</td></tr>
<tr><td>(G11)</td><td>A regulated dam that is proposed to, at any time, contain saline water of volume more than 2 megalitres at an electrical conductivity in excess of 4,000 microsiemens per centimetre, must be</td></tr>
</table>

	designed to have either a suitable synthetic or a compacted clay liner, such that the saline wetting front is not expected to progress through the liner during the lifetime of the dam.
(G12)	An operational plan must be kept current for each regulated dam.
(G13)	Where an operational plan covers decommissioning and rehabilitation, those operations are to be consistent with the design plan for the dam and the rehabilitation requirements of this environmental authority.
(G14)	The holder of this environmental authority must notify the administering authority immediately when the level in any regulated dam reaches the mandatory reporting level (MRL), and immediately act to prevent or minimize any actual or potential environmental harm.
(G15)	**Annual inspection and report** Each regulated dam must be inspected annually by a suitably qualified and experienced person.
(G16)	At each annual inspection, the condition and adequacy of each regulated dam must be assessed for dam safety and against the necessary structural, geotechnical and hydraulic performance criteria.
(G17)	At each annual inspection, if a mandatory reporting level is required, it must be determined and marked on each regulated dam.
(G18)	A final assessment of adequacy of available storage in each regulated dam must be based on a dam level observed within the month of October and result in an estimate of the level in that dam as at 1 November annually.
(G19)	For each annual inspection, two copies of a report on the condition and adequacy of each regulated dam, certified by the suitably qualified and experienced person and including any recommended actions to be taken to ensure the integrity of each regulated dam; must be provided to the administering authority by 1 December annually.
(G20)	The holder of this environmental authority must, upon receipt of the annual inspection report, consider the report and its recommendations, and take action to ensure that each regulated dam safely performs its intended functions.
(G21)	**Decommissioning Regulated Dams** Prior to decommissioning any regulated dam authorised under this authority, the scope of work for decommissioning shall be developed and agreed to with the administering authority.
(G22)	A dam that at any time has contained saline water of volume more than 2 megalitres at an electrical conductivity in excess of 4000 microsiemens per centimetre, must on decommissioning be tested to determine the extent of progress of the saline wetting front and consequent contamination of land by salinity associated with operation of that dam.
(G23)	Any land that is contaminated by the operation of the dam referred to in condition G6, in excess of typical background salinity levels for the area or in excess of the level of salinity for sustainable growth of native vegetation, must be removed from site to a place lawfully able to receive that

<table>
<tr><td></td><td>material and replaced by land capable of supporting sustainable growth of native vegetation to the satisfaction of the administering authority.</td></tr>
<tr><td>(G24)</td><td>Groundwater Monitoring

A groundwater monitoring network of at least four bores must be installed for each of the evaporation ponds.

The network must be:

a) installed and maintained by a person possessing appropriate qualifications and experience in the fields of hydrogeology and groundwater monitoring program design to be able to competently make recommendations about these matters; and
b) include a sufficient number of 'bore(s) of compliance' that are located no more than 150 metres from the evaporation pond or the flood bund boundary whichever is the closer, to provide the following:
1. representative ground water samples from the uppermost aquifer;
2. background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by any release of contaminants to groundwater; and
3. the quality of groundwater down gradient of any release of contaminants to groundwater including groundwater passing the relevant bore(s) of compliance.

c) the holder of this approval must advise the administering authority in writing of the location of the four bores within 2 months of the start of the monitoring program.</td></tr>
<tr><td>(G25)</td><td>Within two months of an evaporation pond being commissioned, groundwater monitoring must be conducted in accordance with Schedule G Table 4 - Groundwater Monitoring Program and records kept of contaminant releases to ground waters. All determinations of contaminant releases must be:

a) made in accordance with methods prescribed in the latest edition of the Department of Environment and Resource Management Water Quality Sampling Manual;
b) conducted at least at a monthly frequency and locations determined by the groundwater monitoring network;
c) followed by assessment whether or not there has been any statistically significant adverse changes compared to previous data at locations hydraulically down gradient of the dams.

Schedule G – Table 4 – Groundwater Monitoring Program

<table>
<tr><th>Monitoring bores</th><th>Quality characteristics and Units</th><th>Frequency</th></tr>
<tr><td>Braemar 1 Power Station Groundwater Monitoring Bores</td><td>Conductivity (in µS/cm) and pH</td><td>Monthly</td></tr>
</table>
</td></tr>
<tr><td>(G26)</td><td>Waste records

Records of the volumes, composition and fate of all waste materials removed from a regulated dam must be kept and maintained.</td></tr>
<tr><td colspan="2">Agency interest: Schedule H - Community</td></tr>
<tr><td>Condition</td><td>Condition</td></tr>
</table>

number	
(H1)	All complaints received must be recorded including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.
(H2)	In consultation with the administering authority, cooperate with and participate in any community environmental liaison committee established in respect of either the site specifically, or the industrial estate where the site is located.

Schedule I - Definitions

Key terms and/or phrases used in this document are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

"administering authority" means Department of Environment and Science or its successor.

"AEP" means the Annual Exceedance Probability, which is the probability that at least one event in excess of a particular magnitude will occur in any given year.

"annual return" means the return required by the annual notice (under section 316 of the Environment Protection Act, 1994) for the section 86(2) licence that applies to the development approval.

"approval" means 'notice of development application decision' or 'notice of concurrence agency response' under the Sustainable Planning Act (2009).

"assessment, assessed or assess" by a suitably qualified and experienced person in relation to a hazard assessment of a dam, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

a) exactly what has been assessed and the precise nature of that assessment;
b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;
c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

"associated works" in relation to a dam, means:

a) operations of any kind and all things constructed, erected or installed for that dam; and
b) any land used for those operations

"certification" or **"certified"** by a suitably qualified and experienced person in relation to a design plan or an annual report regarding dams, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

a) exactly what has been assessed and the precise nature of that assessment;
b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;
c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

"design plan" is the documentation required to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, and the criteria to be used for operating the dam. The documents must include all investigation and design reports, plans and specifications sufficient to hand to a contractor, and planned decommissioning and rehabilitation outcomes; so as to address all hazard scenarios that would be identified by a properly conducted hazard assessment for the structure. Documentation must be such that a `suitable qualified and experienced person' could conduct an independent review without seeking further information from the designer.

"design storage allowance" or **"DSA"** means the minimum storage required in a dam at 1 November each year in order to meet the hydraulic performance requirements.

"hazard" in relation to a dam as defined, means the potential for environmental harm resulting from the collapse or failure of the dam to perform its primary purpose of containing, diverting or controlling flowable substances.

"hazard category" means a category, either low significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland (DME 1995).

"hydraulic performance" means the capacity of a regulated dam to contain or safely pass flowable substances based on a probability (AEP) of performance failure specified for the relevant hazard category in the current version of the Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland (DME 1995).

"mandatory reporting level" or **"MRL"** means a warning and reporting level determined in accordance with the current version of Site Water Management Technical Guideline for Environmental Management of Exploration and Mining in Queensland (DME 1995).

"normal operating conditions" is the normal operating state of a unit, and means that the unit is operating "at, or above, a load of 110 MW".

"nuisance sensitive place" includes -

a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
b) a motel, hotel or hostel; or
c) a kindergarten, school, university or other educational institution; or
d) a medical centre or hospital; or
e) a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
f) a public thoroughfare, park or gardens; or
g) a place used as a workplace, an office or for business or commercial purposes. and includes a place within the curtilage of such a place reasonably used by persons at that place.

"operational plan" means a document that amongst other things sets out procedures and criteria to be used for operating a dam during a particular time period. The operational plan as defined herein may form part of a plan of operations or plan otherwise required in legislation.

"LA 10, adj, 10 mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

"land" in the **"land schedule"**of this document means land excluding waters and the atmosphere.

"regulated dam" means any dam in the significant or high hazard category as assessed using the current version of the Manual for assessing Hazard Categories and Hydraulic Performance of Dams published or updated on the DERM website.

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the Environmental Protection Regulation 1998 (whether or not it has been treated or immobilised), and includes:

a) for an element - any chemical compound containing the element; and
b) anything that has contained the waste.

"suitably qualified and experienced person" in relation to dams means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the Professional Engineers Act 2002, or at the relevant time holds a 'deemed registration' within the meaning of the Mutual Recognition (Queensland) Act 1992; and has knowledge, suitable experience and demonstrated expertise in relevant fields, as set out below:

a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and
b) a total of five years of suitable experience and demonstrated expertise in the geomechanics of dams with particular emphasis on stability, geology and geochemistry, and
c) a total of five years of suitable experience and demonstrated expertise each, in three of the following categories:
    1. investigation and design of dams.
    2. Construction, operation and maintenance of dams.
    3. hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology.
    4. hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes.
    5. hydrogeology with particular reference to seepage, groundwater.
    6. solute transport processes and monitoring thereof.
    7. dam safety.

"spillway" means a weir, channel, conduit, tunnel, gate or other structure designed to permit discharges from the dam, normally under flood conditions or in anticipation of flood conditions.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part-thereof.

Appendix 1 – Map illustration of release points in the operational area



Appendix 1 – Table 1 – GPS coordinates of the air release points in the operational area

Unit	Stack coordinates	
	Latitude	Longitude
GT11	27.1105	150.9056
GT12	27.1109	150.9055
GT21	27.1112	150.9055

END OF ENVIRONMENTAL AUTHORITY