Permit

Environmental Protection Act 1994

Environmental authority EPPR00749313

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

Environmental authority number: EPPR00749313

Environmental authority takes effect on 28 September 2018

Environmental authority holder(s)

Name(s)	Registered address
MORETON BAY REGIONAL COUNCIL	2 Haskings Street CABOOLTURE QLD 4510

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (g) more than 100,000t but not more than 200,000t	Lot 453/SP180811
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (g) more than 100,000t but not more than 200,000t	Lot 448/SP169564
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (b) more than 2000t but not more than 5000t	Lot 460/CG4553
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (b) more than 2000t but not more than 5000t	Lot 365/CG670
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (c) more than 5000t but not more than 10,000t	Lot 111/CG3679
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (g) more than 100,000t but not more than 200,000t	Lot 11/SP125678
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the	LOT 2/SP291254

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Queensland Government

Environmentally relevant activity/activities	Location(s)
following quantity of waste mentioned in subsection (1) (b), (f) more than 50,000t but not more than 100,000t	
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (f) more than 50,000t but not more than 100,000t	LOT 3/SP291254
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (f) more than 50,000t but not more than 100,000t	LOT 1/SP300228
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (f) more than 50,000t but not more than 100,000t	Lot 437/SP150726
Prescribed ERA, ERA 60 - Waste disposal, 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1) (b), (f) more than 50,000t but not more than 100,000t	Lot 1/SP167738

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:

- 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’.

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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.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Dorota Rosiak
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 28 September 2018

Enquiries:
Heritage, Utilities and Government Assessment
Department of Environment and Science
Phone: 1300 130 372
Email: palm@des.qld.gov.au

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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)

Legislative Requirements and Conditions of Environmental Authority

Legislative Requirements

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.

Obligations under the *Mining and Quarrying Safety and Health Act 1999*

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation contact Mine Safety and Health at www.dnrm.qld.gov.au, or phone 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Science to ensure that you have the most current version of the environmental authority relating to this site.

Conditions of Environmental Authority

Part 1 – General Conditions

Environmentally relevant activities	Locations	
60-(2c) Waste disposal >5000t but <10000t yr (1)(b)	1532-1536 Bribie Island Road, NINGI QLD 4511	Lot 111 Plan CG3679
60-(2g) Waste disposal >100000t but 200000t yr (1)(b)	2-98 McNaught Road, CABOOLTURE QLD 4510	Lot 11 Plan SP125678, Lot 448 Plan SP169564, Lot 453 Plan SP180811
60-(2f) Waste disposal >50000t but <100000t yr (1)(b)	Bunya Road BUNYA QLD 4055	1/SP167738 and 3/SP291254, 2/SP291254 and 1/SP300228
60-(2f) Waste disposal >50000t but <100000t yr (1)(b)	Dakabin Landfill, 336 Old Gympie Road DAKABIN QLD 4503	Lot 437 Plan SP150726
60-(2b) Waste disposal >2000t but <5000t yr (1)(b)	Woodford Waste Disposal Facility, 365 Golf Course Road WOODFORD QLD 4514	Lot 365 Plan CG670, Lot 460 Plan CG4553

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

Agency interest: General	
Condition number	**Condition**
G1-1	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
G1-2	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
G1-3	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
G1-4	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.
G1-5	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
G1-6	**You** must record the following details for all environmental complaints received: 1. date and time complaint was received 2. name and contact details of the complainant 3. nature of the complaint 4. investigations undertaken 5. conclusions formed 6. actions taken.
G1-7	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine **operations**, closure and an emergency 2. establish and maintain control **measures** that minimise the potential for environmental harm 3. ensure **plant, equipment and measures** are maintained in a proper and effective condition 4. ensure **plant, equipment and measures** are operated in a proper and effective manner 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994* 6. ensure that reviews of environmental performance are undertaken at least annually.
G1-8	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
G1-9	All reasonable and practicable **measures** must be taken to contain litter within the waste **operations** area, and retrieve litter released.
G1-10	**Leachate** and stormwater runoff which has been in contact with waste materials in the **landfill unit**, must be collected in the **leachate** storage facility and be: 1. treated in the **leachate** treatment plant and discharged to sewer in accordance with the requirements of the relevant water utility, or 2. recirculated through waste disposed in the **landfill unit**, or 3. treated by alternative technologies agreed by the **administering authority** for offsite disposal, discharge, or on-site reuse, or 4. disposed of at a facility that is approved to receive such waste.

G1-11	All reasonable and practicable **measures** must be taken to exclude vectors and pest species to the extent necessary to prevent: 1. nuisance to occupiers of neighbouring premises 2. any danger or risk to the health of any persons.
Agency interest: Air	
Condition number	**Condition**
A1-1	Odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any sensitive place or commercial place.
Agency interest: Water	
Condition number	**Condition**
WT1-1	Other than as permitted within this environmental authority, contaminants must not be released to any waters.
Agency interest: Noise	
Condition number	**Condition**
N1-1	Other than as permitted within this environmental authority, noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.
Agency interest: Land	
Condition number	**Condition**
L1-1	Other than as permitted within this environmental authority, contaminants must not be released to land.
Agency interest: Waste	
Condition number	**Condition**
W1-1	Excepting combustion of landfill gas, waste must not be burnt.

Part 2 – Site specific conditions

Environmentally relevant activity	Location	
60-(2c) Waste disposal >5000t but <10000t yr (1)(b)	1532-1536 Bribie Island Road, NINGI QLD 4511	Lot 111 Plan CG3679

In addition to Part 1 the environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G2-1	Any landfill liner design and **leachate** management system must be developed by a person possessing appropriate qualifications and experience in the field of waste management including hydrogeology and geotechnical engineering to be able to competently make recommendations about these matters.
G2-2	A receiving environment monitoring program must be designed and implemented by an **appropriately qualified person**(s) to monitor the effects of the **activity** on groundwater and air shed.
G2-3	The receiving environment monitoring program must include at least the following: 1. the type and location of all environmental monitoring facilities 2. monitoring frequencies 3. sampling and monitoring procedures 4. clear and understandable explanation of the methodology to be used in the assessment of the monitoring results (including statistical tests to be used in the interpretation of data collected in the groundwater quality monitoring program), and 5. the proposed responses in the event of detection by the environmental monitoring program of any release of **contaminants** not likely to be in accordance with the conditions of this environmental authority.
G2-4	Any monitoring data compiled, collected or recorded as required by conditions of this approval must be evaluated, summarised and reported to the **administering authority** on an annual basis in a clear format as follows: 1. results of the required determinations of any groundwater quality reporting period must be reported: (i) in a tabular format, showing: (a) date sampled (b) any statistically shown differences in groundwater quality (compared to baseline data) as detected from the **groundwater monitoring system** results, and (ii) graphically showing data referred to in part (i)(b) of this condition versus time.
Agency interest: Air	
Condition number	**Condition**
A2-1	The following materials must not be used for dust suppression purposes: 1. any leachate 2. any landfill gas condensate 3. waste oil, and 4. stormwater that has become contaminated following contact with waste.

A2-2	When it is estimated that 250 000 tonnes or more of waste is disposed in a **landfill unit**(s) at the approved place, the registered operator must develop and implement a landfill gas monitoring program to ensure that the **landfill facility** complies with methane standards referred to in condition A2-4 of this approval.
A2-3	Determination of all the methane gas levels must be performed as often as necessary to ensure protection of human health, having regard to: 1. the likely landfill gas generation rate 2. any previous levels of methane gas detected by the monitoring program 3. proximity of the **landfill facility** to any premises or persons likely to be adversely affected by landfill gas 4. the effectiveness of **measures** implemented to minimise any lateral migration of landfill gas, and 5. atmospheric pressure.
A2-4	Landfill gas must not exceed the following limits: 1. 25% of the **lower explosive limit** of the landfill **site boundary** when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and **leachate** collection system components) 2. the **lower explosive limit** in subsurface geology at or beyond the landfill **site boundary**.
A2-5	If methane gas levels exceeding methane standards referred to in this approval are detected or it is estimated that 500 000 tonnes or more of waste is disposed in a **landfill unit**(s) at the approved place, the registered operator must: 1. take all necessary steps to ensure protection of human health, and 2. install a collection system for landfill gas to effectively: a) minimise the likelihood of any subsurface migration of landfill gas from the **landfill unit**, and b) prevent or minimise any uncontrolled emission of landfill gas.
A2-6	Landfill gas collected by any collection system must be released into the atmosphere or reused in a proper and efficient manner to prevent any adverse effect on people living in or using the surrounding area.
Agency interest: Water	
Condition number	**Condition**
WT2-1	**Leachate** and any landfill gas condensate must not be released to any surface **waters**, the bed or banks of any such **waters** or to any sedimentation pond used for the treatment and/or storage of stormwater runoff.
WT2-2	Any ponds used for the storage or treatment of **contaminants** or waste must be installed and maintained so that a **freeboard** of not less than 0.5 metres is maintained at all times.
WT2-3	The registered operator must submit to the **administering authority** up to date documentation detailing the practices and procedures implemented to ensure compliance with the conditions of this approval in relation to release of **leachate** to groundwater and surface **waters** at this approved place.
WT2-4	The registered operator must monitor and record quality of groundwater to detect any possible release(s) of **contaminants** in accordance with the Detection Groundwater Monitoring Program. The Detection Groundwater Monitoring Program must be undertaken for, at least, the water quality characteristics prescribed in *Table WT2-4 - Detection Groundwater Monitoring*.

Table WT2-4 - Detection Groundwater Monitoring

Quality Characteristic	Frequency
Ammonia (as N)	
Bicarbonate(HCO3)	

	<table><tr><td>Calcium</td><td rowspan="12">As often as is necessary to check compliance with the conditions of this approval but not less frequently than every six (6) months</td></tr><tr><td>Chloride</td></tr><tr><td>Iron (total)</td></tr><tr><td>Lead</td></tr><tr><td>Nitrate (as N)</td></tr><tr><td>pH</td></tr><tr><td>Potassium</td></tr><tr><td>Sodium</td></tr><tr><td>Sulphate</td></tr><tr><td>specific conductance</td></tr><tr><td>Total Organic Carbon (TOC)</td></tr><tr><td>Zinc</td></tr></table> **Associated monitoring requirements** 1. On any occasion that samples are obtained, the registered operator must measure and record standing groundwater levels in metres, accurate to 0.01 metre. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy of 0.005 metres. 2. Measurement of groundwater levels must be undertaken prior to any disturbance by sampling, and must be reported as the depth in metres from the established reference point to the water surface within the bore. 3. All determinations of the quality of groundwater must be performed by a person or body possessing appropriate experience and qualifications to perform the required determinations. 4. Monitoring must be in accordance with the methods prescribed in the current edition of the **administering authority's** *Water Quality Sampling Manual*. 5. Each groundwater monitoring bore must be fitted with a locked cap at all times other than at the time of sampling.
WT2-5	The registered operator must determine whether or not there has been any statistically significant increase over background values at locations hydraulically down-gradient of the landfill unit for any water quality characteristic required to be monitored under the Detection Groundwater Monitoring Program referred to in condition WT2-4.
Agency interest: Noise	
Condition number	**Condition**
N2-1	In the event of a complaint about noise that constitutes a nuisance noise being made to the **administering authority**, that the **administering authority** considers is not frivolous or vexatious, then the emission of noise from the approved place must not result in levels greater than those specified in *Table N2-1 – Noise limits*. **Table N2-1 – Noise limits** <table><tr><td colspan="2">NOISE LIMITS AT A NOISE **SENSITIVE PLACE**</td></tr><tr><td>***Period***</td><td>***Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax\ adj,\ T}$</td></tr><tr><td>7 am - 6 pm</td><td>**Background noise level** plus 5 dB(A)</td></tr><tr><td>6 pm - 10 pm</td><td>**Background noise level** plus 5 dB(A)</td></tr><tr><td>10 pm - 7 am</td><td>**Background noise level** plus 3 dB(A)</td></tr><tr><td colspan="2">NOISE LIMITS AT A **COMMERCIAL PLACE**</td></tr><tr><td>***Period***</td><td>***Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax\ adj,\ T}$</td></tr><tr><td>7 am - 6 pm</td><td>**Background noise level** plus 10 dB(A)</td></tr><tr><td>6 pm - 10 pm</td><td>**Background noise level** plus 10 dB(A)</td></tr></table>

10 pm - 7 am	**Background noise level** plus 8 dB(A)

Associated monitoring requirements
1. All monitoring devices must be correctly calibrated and maintained.
2. Any monitoring must be in accordance with the most recent version of the **administering authority's** *Noise Measurement Manual.*
3. Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in **operation**.
4. In conjunction with the measurement and recording of noise, the following parameters and conditions must be recorded: location, date and time of recording.

Agency interest: Land

Condition number	Condition
L2-1	**Land** that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: 1. suitable species of vegetation for the location are established and sustained for earthen surfaces 2. potential for erosion is minimised 3. potential for environmental nuisance caused by dust is minimised 4. the final landform is stable and protects public safety 5. access to areas awaiting rehabilitation or being rehabilitated must be restricted by suitable barriers to prevent disturbance of these areas.
L2-2	The registered operator must develop and provide to the **administering authority** a draft post closure landfill management program for review and comment at least two (2) months before the expected final receipt of waste in the **landfill unit**.
L2-3	The post closure landfill management program must include details of at least the following: 1. total waste volumes or tonnage of the **landfill unit** being closed 2. the design of a final cover system including thickness and permeability of cover layers and any drainage layers 3. landform relief plan including stormwater drainage pathways and controls 4. the erosion prevention system including the installation of a final cover system that is terraced and/or graded to prevent water ponding on the final cover system 5. the revegetation program for the landfill to minimise final cover erosion and final cover species root penetration to the waste pile 6. any proposed nuisance or wildlife control procedures 7. an estimated cost of the rehabilitation and closure activities over the expected post closure period 8. the proposed land use at the approved place during and after the rehabilitation program, and 9. the expected date the registered operator intends to begin rehabilitation activities and expected timelines to implement the program.
L2-4	The post closure landfill management program must be effective in preventing and/or minimising the likelihood of environmental harm being caused or allowed. The program must include **measures** to: 1. maintain the structural integrity and effectiveness of the final cover system 2. maintain and operate any stormwater management system 3. maintain and operate any **leachate** collection system 4. maintain any surface water or receiving water or **groundwater monitoring system** and monitor the quality of water at a frequency sufficient to detect any release of **contaminants** to water resources, and 5. maintain and operate any landfill gas monitoring and collection system.

Agency interest: Waste

Condition number	Condition
W2-1	The only waste accepted for disposal within any **landfill unit** must be **general waste** excluding the following waste: 1. any liquescent waste (other than any **leachate** or landfill gas condensate generated within a **landfill unit**) 2. any **regulated waste** or sludges (other than a **regulated waste** or sludge that may be disposed at a specific licensed place as permitted by this environmental authority) 3. any **putrescible waste**, except for minor amounts and only from domestic premises that have no access to a municipal collection service 4. chemically impregnated timber with the exception of minor amounts of chemically impregnated timber commingled with other waste 5. metals with the exception of minor amounts of metals incidental to or commingled with other waste 6. plasterboard, paper and/or cardboard with the exception of minor amounts of plasterboard, paper and/or cardboard incidental to or commingled with other waste 7. paper product sludges 8. garden and/or green waste with the exception of minor amounts of garden and/or green waste incidental to or commingled with other waste, and 9. textiles including carpets and carpet underlay with the exception of minor amounts of carpets and carpet underlay incidental to or commingled with other waste.
W2-2	The only waste to be accepted at the **landfill facility** must be a waste transported to the facility by any of the following persons or classes of persons: 1. the holder of this permit 2. contractors acting on behalf of the registered operator 3. another person or class of persons specifically authorised by the registered operator to dispose of the type of waste carried by that person, and 4. if the waste accepted is a **regulated waste**, the registered operator must only accept the **regulated waste** from a person who holds a current registration certificate to transport such wastes under the provisions of the *Environmental Protection Act 1994* or otherwise the registered operator must provide in writing to the **administering authority** within seven days (7) the following information: a) the name of the waste transporter b) the date, quantity and type of waste accepted c) the details from the registration label on the transport vehicle, and d) the name of the waste generator.
W2-3	In the event of the registered operator becoming aware of prohibited waste being commingled in any waste stream the registered operator must: 1. cease the depositing of such waste 2. remove the prohibited waste and store in a proper and efficient manner 3. notify the person who sent the prohibited waste to the approved place of the detection of prohibited waste in the waste received 4. as soon as practicable arrange for a person who can lawfully transport such waste to collect such waste 5. arrange for the person transporting the prohibited waste to transport such waste to a facility that can lawfully accept such waste 6. produce the following records: (a) type of prohibited waste (b) quantity of prohibited waste (c) date of disposal (d) name and address of the person(s) transporting the prohibited waste to the facility (e) name and address of the person(s) who generated the prohibited waste (if such person(s) can be reasonably identified).

	*For the purpose of this condition, "prohibited waste" means a waste that is not permitted to be accepted at that **landfill facility** by a condition of this approval.*
W2-4	**Regulated waste** must not be released to the environment, stored, transferred or disposed of contrary to any condition of this approval.
W2-5	Where **regulated waste** is removed from the approved place (other than by a release as permitted under another condition of this approval), the registered operator must monitor and keep records of the following: 1. the date, quantity and type of waste removed 2. name of the waste transporter and/or disposal operator that removed the waste, and 3. the intended treatment/disposal destination of the waste. *NOTE: Records of documents maintained in compliance with a waste tracking system established under the* Environmental Protection Act 1994 *or any other law for **regulated waste** will be deemed to satisfy this condition.*
W2-6	Any waste containers that have contained **regulated waste** must not contain any **regulated waste** residues in quantities or concentrations which cause or are likely to cause environmental harm when accepted for disposal. *NOTE: An example of an appropriate cleaning procedure may be a triple rinse method and subsequent treatment of rinsate by a licensed operator at an approved place.*
W2-7	Deposited waste must be covered as soon as practicable to limit stormwater **infiltration**, prevent exposure of waste and prevent issues arising from vectors and pest species.
W2-8	The registered operator must only accept and temporarily store the following waste at the waste disposal facilities: 1. oils 2. vehicle batteries 3. waste paint residues 4. chemicals and pesticides, and 5. tyres (stored for no longer than 10 weeks and covered from incident rainfall). For the purpose of this condition: (a) the waste must be sourced from domestic premises (b) separate and secure waste containers or containment areas must be available at all times waste listed in this condition is accepted at the approved place (c) the waste must be temporarily stored in a proper and efficient manner including stormwater segregation from the waste and provision of bunding for waste containers or containment areas, and (d) temporarily stored waste must be directed to another facility that can lawfully accept such waste as soon as practicable.
W2-9	The registered operator must record at least the following information in relation to wastes to be deposited at the waste disposal facility and provide a summary in the annual report: 1. the type, date and quantity of waste deposited (including any **regulated waste**) deposited at the approved place by Council contractors and commercial operators; and 2. an estimation of the quantity of other **general waste** deposited at the approved place.
W2-10	The registered operator must conduct yearly waste composition surveys to cover at least 10 hours within a period of 5 consecutive days and to check compliance with the waste acceptance criteria for the approved place prescribed in condition W2-1.
W2-11	The waste acceptance surveys must provide for the monitoring and recording of at least the following information in relation to wastes to be deposited at the waste disposal facility: 1. type of waste (if a mixed waste load is received and waste type(s) cannot be reasonably identified, the waste should recorded as "mixed waste") 2. quantity of waste 3. date of disposal 4. class of the person(s) transporting the waste to the facility, and

	5. class of person(s)/**activity** that generated the waste (if such person(s)/**activity** can be reasonably identified).
W2-12	The registered operator must submit a summary of the waste composition surveys to the administering authority with annual returns.
W2-13	Records required to be kept in relation to **special burial of waste** or deposited waste at the approved place must be kept for the post closure care period.

Part 3 – Site specific conditions

Environmentally relevant activity	Location	
60-(2g) Waste disposal >100000t but 200000t yr (1)(b)	2-98 McNaught Road, CABOOLTURE QLD 4510	Lot 11 Plan SP125678, Lot 448 Plan SP169564, Lot 453 Plan SP180811

In addition to Part 1 the environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G3-1	A record of all waste must be kept detailing the following information: 1. date of pickup of waste 2. description of waste 3. quantity of waste 4. origin of the waste, and 5. destination of the waste. *NOTE: Trackable wastes as listed in Schedule 1 of the* Environmental Protection (Waste Management) Regulation 2000 *are not covered by this condition. Trackable wastes have similar recording requirements to this condition in accordance with a waste tracking system established under the above Regulation.*
Agency interest: Air	
Condition number	**Condition**
A3-1	The following materials must not be used for dust suppression purposes: 1. **leachate** or landfill gas condensate 2. waste oil or other hydrocarbons.
A3-2	Dust and particulate matter must not exceed the following levels when measured at any **nuisance sensitive** or **commercial place**: 1. dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions) or 2. a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, at a **nuisance sensitive** or **commercial place** downwind of the **site**, when monitored in accordance with: (a) Australian Standard AS 3580.9.6 of 2003 (or more recent editions) *'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method'* or (b) any alternative method of monitoring PM10 which may be permitted by the *'Air Quality*

	Sampling Manual' as published from time to time by the **administering authority**.
A3-3	When requested by the **administering authority**, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the **administering authority** following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control **sites** and must include: 1. for a complaint alleging dust nuisance, dust deposition, and 2. for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere over a 24hr averaging time.
A3-4	The release of landfill gas must not cause environmental harm.
A3-5	Landfill gas is not considered to cause environmental harm if: 1. a landfill gas collection system is installed and maintained when the **landfill unit** is sufficiently elevated to allow adequate drainage of gas lines, and 2. landfill gas monitoring shows that the release of methane does not exceed the following limits: (a) 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the **landfill unit** (b) 25 percent of the **lower explosive limit** when measured in facility structures (but excluding facility structures used for landfill gas control and landfill gas recovery system components), and (c) the **lower explosive limit** at or beyond the **landfill facility boundary**, and (d) no adverse effects of are caused by subsurface gas to vegetation within Lagoon Creek, Tea Tree Lagoon and the 200 metre riparian buffer zone from the top bank of these **waters**.
A3-6	The assessment of compliance with the methane limit at a height of 50mm above the final and intermediate cover surface of the **landfill unit** prescribed by A3-5 must be undertaken at the following locations: 1. on a grid pattern where the grid lines are no more than 30 metres apart if using a passive venting system or 50 metres apart if active system installed, and 2. at any other locations where visual observations indicate potentially elevated concentrations of landfill gas, for example cracks, seeps in cover and distressed vegetation.
A3-7	A landfill gas monitoring network must be installed for each **landfill unit** to assess compliance with methane limits for facility structures, vegetation protection and at the **boundary** prescribed by A3-5. The network must consist of gas monitoring devices, such as monitoring bores and be developed by a person possessing appropriate qualifications and experience in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.
A3-8	Conduct and keep records of landfill gas monitoring which is performed at the following frequencies: 1. at least every six (6) months initially and then every three (3) months following completion of the first stage of land filling on lot 453 SP180811, Lot 448 SP169564 or Lot 11 SP125678 the to assess compliance with the methane limit at a height of 50mm above the cover surface of the **landfill unit** prescribed by A3-5, 2. at least every six (6) months initially and then every three (3) months following completion of the first stage of land filling on lot 453 SP180811, Lot 448 SP169564 or Lot 11 SP125678 to assess compliance with methane limits for facility structures, vegetation protection and at the **boundary** prescribed by A3-5, and 3. at least monthly visual checks on health of vegetation in riparian buffer zones mentioned in A3-5.
A3-9	A collection system for landfill gas must be installed and maintained to efficiently minimise: 1. any likelihood of any subsurface migration of landfill gas from the **landfill unit**, and 2. any uncontrolled emission of landfill gas.

A3-10	Landfill gas collected by the gas collection system must be incinerated prior to release to the atmosphere or provided or used as a fuel source or collected and stored in a proper and efficient manner for later use.
A3-11	The landfill gas collection system must be installed and maintained when each **landfill unit** is either sufficiently elevated for collection or when an area has been completed.

Agency interest: Water

Condition number	Condition
WT3-1	The only **contaminants** to be released to surface **waters** are settled treated stormwater runoff **waters** from areas of the **site** not likely to be contaminated with waste materials to **waters** described in accordance with *Table WT3-1—Surface water release limits* and the associated monitoring requirements.

Table WT3-1—Surface water release limits

QUALITY CHARACTERISTICS	RELEASE POINT	RELEASE LIMIT	LIMIT TYPE	MONITORING FREQUENCY
pH (pH Units)	W1	6.5 – 8.0	**Range**	Each release event and once per quarter if no release occurs.
Iron (Filtered 45<µm (**µg/L**))	W1	The **median** of three samples of the discharge must not exceed the reference value* Until then, 300 **µg/L** is an indicative working level	**Maximum**	
Aluminium (Filtered 45<µm (**µg/L**)) If pH < 6.5	W1	0.8	**Maximum**	
Aluminium (Filtered 45<µm (**µg/L**)) (where pH = or > 6.5)	W1	The greater of: (1) 55 or (2) If a reference value has been established, the **median** of three samples of the discharge must not exceed the reference value*	**Maximum**	
Specific Conductance. (**µS/cm**)	W1	1500	**Maximum**	
		630	Annual **Median**	
Dissolved Oxygen. (**mg/L**)	W1	6	**Minimum**	
Total Organic Carbon (**mg/L**)	W1	20 or 20% greater than contemporaneous upstream concentration if this background exceeds 20 **mg/L**	**Maximum**	
Zinc ((Filtered 45<µm (**µg/L**))	W1	8	**Maximum**	
Lead ((Filtered 45<µm (**µg/L**))	W1	3.4	**Maximum**	
Copper (Filtered 45<µm (**µg/L**))	W1	1.4	**Maximum**	
Ammonia Nitrogen as N (**mg/L**)	W1	0.9	**Maximum**	
Suspended Solids (**mg/L**)	W1	50	**Maximum**	
Turbidity (NTU)	W1	50	**Maximum**	
All remaining water quality indicators listed in condition W8	W1	No limit stated (for interpretation purposes)	No limit stated	

A reference value is a value equivalent to the 80th percentile, calculated using excel spreadsheet function, of at least twelve (12) months of monthly water quality sample results in accordance with "Procedures for deriving regional or sub-regional guidelines for aquatic ecosystem protection" described in the* Queensland Water Quality Guidelines 2009*, published by the **administering authority. (NOTE: an interim initial value commences once eight (8) samples are obtained).*

Associated monitoring requirements

1. Release point W1 – settled/treated stormwater runoff **waters** from areas of the **site** where contamination of stormwater by waste materials is unlikely via the discharge structure, being the overflow spillway of the final element of the existing sediment control system that collects drainage and stormwater runoff contaminated by sediment at the premises to which this approval relates, to **waters** described as Lagoon Creek at a point on the northern **boundary** of Lot 11 SP125678 as shown on '*Figure 1.3 **Site** layout Proposed sediment pond discharge drain'* dated 11/12/12 Draft rev B in Schedule 1, Attachment 3.

<table>
<tr><td></td><td>NOTE: The existing Release Point W1 is to be relocated in future stages as shown on 'Figure 1.3 Site layout Proposed sediment pond discharge drain' dated 11/12/12 Draft rev B in Schedule 1, Attachment 3.
2. Monitoring must be in accordance with the methods prescribed in the current edition of the administering authority's Water Quality Sampling Manual.
3. Samples must be taken using representative samples.
4. Monitoring must be undertaken during a release as per the frequency stated.
5. All monitoring devices must be correctly calibrated and maintained.</td></tr>
<tr><td>WT3-2</td><td>In addition to WT3-1, the release to waters must not:
1. have any other properties at a concentration that is capable of causing environmental harm
2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.</td></tr>
<tr><td>WT3-3</td><td>The environmentally relevant activity must be carried out in such a manner that it does not directly or indirectly cause breach of the riparian water quality objective performance codes or riparian buffer zones prescribed for Lagoon Creek, as provided in the document Environmental Protection (Water) Policy 2009 "Caboolture River environmental values and water quality objectives Basin No. 142 (part), including all tributaries of Caboolture River July 2010" published by the administering authority.</td></tr>
<tr><td>WT3-4</td><td>The registered operator must monitor and keep records of the quality of surface water in Lagoon Creek at points upstream and downstream of the landfill activity and evaluate whether water quality in Lagoon Creek complies with corresponding water quality objectives under the Environmental Protection Water Policy 2009 and assess potential impacts and influences of the release on the receiving environment.</td></tr>
<tr><td>WT3-5</td><td>The registered operator must monitor and keep records of the quality of releases and potential releases from the settlement via W1 and of the surface water in Lagoon Creek at points upstream and downstream of the landfill activity and evaluate whether water quality in Lagoon Creek complies with corresponding water quality objectives under the Environmental Protection Water Policy 2009 and assess potential impacts and influences of the release on the receiving environment. Monitoring must be undertaken for at least the following water quality characteristics:
<table>
<tr><th>Water quality characteristic</th><th>Frequency</th></tr>
<tr><td>Aluminium (total and filtered <45 µm) (µg/L)</td><td rowspan="20">at least quarterly and during or as soon as practicable after every release from any sedimentation dam to waters</td></tr>
<tr><td>pH (pH units)</td></tr>
<tr><td>Carbonate & bicarbonate (mg/L)</td></tr>
<tr><td>Dissolved oxygen (mg/L and % saturation)</td></tr>
<tr><td>Electrical conductivity (µS/cm)</td></tr>
<tr><td>Suspended solids (mg/L)</td></tr>
<tr><td>Temperature (degrees C)</td></tr>
<tr><td>Ammonia (as N) (mg/L)</td></tr>
<tr><td>Calcium (mg/L)</td></tr>
<tr><td>Chloride (mg/L)</td></tr>
<tr><td>Copper (total and filtered <45 µm) (µg/L)</td></tr>
<tr><td>Hardness (calculated mg/L as CaCO3)</td></tr>
<tr><td>Iron (total and filtered <45 µm) (mg/L)</td></tr>
<tr><td>Lead (total and filtered <45 µm) (µg/L)</td></tr>
<tr><td>Magnesium (mg/L)</td></tr>
<tr><td>Manganese (total) (mg/L)</td></tr>
<tr><td>Nitrate & Nitrite (as N) (mg/L)</td></tr>
<tr><td>Nitrogen (total as N) (mg/L)</td></tr>
<tr><td>Phosphorus (total) (mg/L)</td></tr>
</table></td></tr>
</table>

	<table><tr><td>Potassium (**mg/L)**</td></tr><tr><td>Sodium (**mg/L**)</td></tr><tr><td>Sulphate (**mg/L**)</td></tr><tr><td>Total Organic Carbon (**mg/L**)</td></tr><tr><td>Turbidity (NTU)</td></tr><tr><td>Zinc (total and filtered <45) (**µg/L**)</td></tr><tr><td>Colour (degrees Hazen) (only in Lagoon Creek)</td></tr><tr><td>Chlorophyll 'a' (**µg/L**)</td></tr></table> *NOTE: for filtered metal samples: Filtered samples for aluminium, iron, copper, lead and zinc shall be taken contemporaneously with total samples for these water quality indicators and the samples preserved. Analysis for Al, Cu, Pb and Zn is only required if the analytical result, exceeds the corresponding toxicant trigger value for 95% species protection in the* Australian Water Quality Guidelines (2009) *allowing for any hardness adjustment.*
WT3-6	The stormwater runoff from disturbed areas, generated by (up to and including) a 24 hour storm event with an average recurrence interval of 1 in 10 years must be retained on **site** or managed to remove **contaminants** before release.
WT3-7	All ponds used for the storage or treatment of **contaminants** or wastes at or on the **authorised place** must be constructed, installed and maintained: 1. 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) 2. so that a **freeboard** of not less than 0.5 metres is maintained at all times, except in emergencies, and 3. so as to ensure the stability of the ponds construction.
WT3-8	The release of any **contaminants** to groundwater must be minimised by **measures** such as use of liner systems, minimising height of **leachate** over liners, diversion of run on stormwater, use of water shedding cover over waste and must not cause environmental harm.
WT3-9	The release of **contaminants** to groundwater must not: 1. cause surface expression of any **leachate** that may be released to any surface **waters** or stormwater drains, or 2. exceed the limits for the quality characteristics prescribed in *Table WT3-14b - Ground Water Quality Limits* at or beyond the edge of the groundwater attenuation zone delineated by the bores of compliance in condition WT3-13.
WT3-10	The holder must monitor groundwater quality for the quality characteristics in *Table WT3-14a - Groundwater Quality Trigger Levels for Early Warning Indicator Monitoring* in aquifers potentially affected by the **activity** in bores hydraulically down gradient of the land-filled waste for deviations in groundwater quality trending away from that monitored in corresponding hydraulically up-gradient or background locations, as required under condition WT3-13 (termed early warning indicator monitoring).
WT3-11	For the purposes of complying with condition WT3-10, the holder must make comparisons, for the quality characteristics in *Table WT3-14b - Ground Water Quality Limits*, between **median** groundwater quality in aquifers potentially affected by the **activity** in bores hydraulically down gradient of the land-filled waste (test **site** statistic) against the 80th percentile of monitoring results (trigger level) for groundwater quality in corresponding hydraulically up-gradient or background locations.
WT3-12	In the event that comparison in condition WT3-11 shows that any groundwater quality trigger levels prescribed in *Table WT3-14a - Groundwater Quality Trigger Levels for Early Warning Indicator Monitoring* have been exceeded, then the holder must carry out the following actions: 1. report the breach of the early warning trigger level(s) to the **administering authority** 2. review of **leachate** management practices at the landfill for effectiveness in minimising **leachate** formation and escape 3. implement more frequent monitoring, for example monthly, of the relevant water quality indicator(s) at the relevant **leachate** detection **site(**s) until the issue is resolved

	4. evaluate potential causes of the monitored levels, for example, evaluate **leachate** quality monitoring results for any relevant trends 5. consider whether monitoring at the **leachate** detection **site**(s) of a broader suite of relevant and associated landfill **leachate** indicators is desirable, and implement that monitoring if it is considered desirable, to investigate potential environmental harm (for example, zinc is considered an indicator of metal contamination and detection of elevated zinc should institute actions to investigate concentrations of broader relevant metal suite) 6. carry out monitoring at relevant environmentally sensitive receptors to ensure environmental harm is not being caused by the release, or, if environmental harm is discovered, implement prompt remedial actions 7. assess whether public safety risks from potential landfill gas migration through soils need to be re-evaluated, and 8. any other investigative option considered appropriate by the holder and agreed to by the **administering authority**, and 9. promptly report actions taken and results of monitoring and assessments to the administering authority, but in no case more than 14 days after actions have been taken or additional monitoring has been conducted, as the case may be. *NOTE 1: In the event that the exceedance is considered to constitute a continuation of a elevation in monitored **leachate** indicators in groundwater already being addressed by ongoing remedial actions already notified to the **administering authority**, then the holder need only report the result under clause 1, the fact that the exceedance relates to an issue currently being remediated and any further actions (if any) to resolve the issue and minimise the likelihood of environmental harm.* *NOTE 2; an investigative option in clause 8 may substitute one or more actions action in clauses 2 to 6 if agreed to by the **administering authority**.*
WT3-13	Groundwater monitoring network must be installed for each **landfill unit.** The network must be: 1. 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 2. include a sufficient number of 'bore(s) of compliance' that are located not more than 150 metres from the **landfill unit** or the **boundary** of the **landfill facility** whichever is the closer and up-gradient of wetland ecosystems on and adjacent to the **site**, and provides the following: (a) representative groundwater samples from the **uppermost aquifer** (b) background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by any release of **contaminants** to groundwaters *NOTE: these may be off-site where necessary to obtain representative background samples.* (c) the quality of groundwater down gradient of any release of **contaminants** to groundwater including groundwater passing the relevant bore(s) of compliance.
WT3-14	Conduct monitoring and keep records of **contaminant** releases to groundwaters. All determinations of **contaminant** releases must be: 1. made in accordance with methods prescribed in the latest edition of the of Environment and Heritage Protection *Water Quality Sampling Manual* 2. conducted at least at the frequency every three (3) months, locations determined by the groundwater monitoring network and for, water quality characteristics in *Table WT3-14a - Groundwater Quality Trigger Levels for Early Warning Indicator Monitoring* 3. undertaken before, during, after deposition of waste in the **landfill unit** 4. followed by assessment whether groundwater investigation trigger levels or limits mentioned in this approval have been breached for each groundwater quality characteristic in *Table WT3-14a - Groundwater Quality Trigger Levels for Early Warning Indicator Monitoring* and *Table WT3-14b - Groundwater Quality Limits.* **Table WT3-14a – Groundwater Quality Trigger Levels for Early Warning Indicator Monitoring** **Quality Characteristic** | **Test Site Statistic** | **Trigger Level**

Ammonia (as N) (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Aluminium (**dissolved)** (**µg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Carbonate/Bicarbonate (CO_3/HCO_3) (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Calcium (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Copper (total) (**µg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Chloride (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Iron (total) (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Total lead (total) (**µg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Manganese (**dissolved)** (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Nitrate + Nitrite (as N) (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Total Nitrogen (as N) (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
pH (field measured)	**Median** of test **site**[1]	80th percentile of background[2] 20th percentile of background[3]
Potassium (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Sodium (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Sulphate (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Specific conductance (**µS/cm**)	**Median** of test **site**[1]	80th percentile of background[2]
Total Organic Carbon (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Zinc (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]
Magnesium (**mg/L**)	**Median** of test **site**[1]	80th percentile of background[2]

NOTE:

*1 - "**median** of test **site**" means the running **median** value for the hydraulically down-gradient test **site**, calculated from the most recent 8 quarterly groundwater monitoring results as required under this approval. If less than 8 results are available, it is the running **median** is to be calculated once two or more consecutive results are available, using available data, until the full 8 results are available.*

*2 - "80th percentile of background" means the running 80th percentile value for the relevant hydraulically up-gradient or background monitoring **site** calculated from the most recent 8 quarterly groundwater monitoring results as required under this approval. If less than 8 results are available, it is the running **median** is to be calculated once two or more consecutive results are available, using available data, until the full 8 results are available.*

3 - "20th percentile of background" means the running 20th percentile value calculated from of the same data set used to calculate the 80th percentile of background value.

Table WT3-14b – Groundwater Quality Limits

Quality Characteristic	Limit	Limit Type
Aluminium **(dissolved**) (**µg/L**)	120% of highest background value[1]	
Ammonia (as N) (**mg/L**)	120% of highest background value[1]	**Maximum**
Copper (total) (**µg/L**)	120% of highest background value[1]	
Iron (total) (**mg/L**)	120% of highest background value[1]	**Maximum**
Lead (total)(**µg/L**)	120% of highest background value[1]	**Maximum**
Manganese (**dissolved**) (**µg/L**)	120% of highest background value[1]	**Maximum**
Nitrate + Nitrite (**mg/L**)	120% of highest background value[1]	**Maximum**
pH (field measured)	0.5 pH units more than the highest background value[1]	**Maximum**

	<table><tr><td></td><td>0.5 pH units less than the highest background value[1]</td><td>**Maximum**</td></tr><tr><td>Sulphate (**mg/L**)</td><td>120% of highest background value[1]</td><td>**Maximum**</td></tr><tr><td>Specific conductance (**µS/cm**)</td><td>120% of highest background value[1]</td><td>**Maximum**</td></tr><tr><td>Total Organic Carbon (**mg/L**)</td><td>120% of highest background value[1]</td><td>**Maximum**</td></tr><tr><td>Zinc (**mg/L**)</td><td>120% of highest background value[1]</td><td>**Maximum**</td></tr></table> *NOTE:* *1"Highest background value" means the highest monitored value of the water quality characteristic, measured in that aquifer from the last eight quarterly sampling results at the corresponding hydraulically up-gradient or background monitoring **site** in the **groundwater monitoring system**, as required under this approval.*
WT3-15	A liner system must be installed and maintained to: 1. prevent release of **contaminants**, including leachate, to land and **waters**, and 2. prevent subsurface migration of landfill gas from the **landfill unit**.
WT3-16	A **leachate** collection system must be installed and maintained to effectively and efficiently: 1. collect **leachate** generated in the **landfill unit**(s), and 2. convey the collected **leachate** out of the **landfill unit**(s) to an appropriate **leachate** storage facility, and 3. minimise the height of the **leachate** above the floor of any **landfill unit** such that the height of **leachate** above the upper most surface of the landfill liner or base of any cell is not more than 0.3 metres (excluding over any **leachate** sump).
WT3-17	The registered operator must carry out a **leachate** quality and quantity monitoring program of the **leachate** generated and recirculated at the approved place subject to: 1. **leachate** quality monitoring must be undertaken at least once annually in the event of any **leachate** recirculation 2. the quantity of recirculated **leachate** must be measured and recorded annually, and 3. the Leachate Monitoring Program must be undertaken for, at least, the following water quality characteristics: Ammonia (as N) (**mg/L**) Calcium (**mg/L**) Chloride (**mg/L**) Iron (total) (**mg/L)** Lead (total µg/L) Nitrate + Nitrite (as N) (**mg/L**) pH (pH units) Potassium (**mg/L**) Sodium (**mg/L** Sulphate (**mg/L**) specific conductance (**µS/cm**) Total Organic Carbon (TOC) (**mg/L**) Zinc (total **µg/L**) Aluminium (total **µg/L**). Carbonate and bicarbonate (**mg/L**) Magnesium (**mg/L**) Total nitrogen (**mg/L**) Copper (total **µg/L**) Lead (total **µg/L**)
Agency interest: Noise	
Condition number	**Condition**

<table>
<tr><td>N3-1</td><td>Noise from the activity must not exceed the levels identified in Table N3-1—Noise limits when measured in accordance with the associated monitoring requirements.
Table N3-1—Noise limits
<table>
<tr><td rowspan="2">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>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></td><td colspan="6">Noise measured at a 'Noise sensitive place'</td></tr>
<tr><td>$L_{A10,\ adj,\ 15\ mins}$</td><td>Bkg + 5</td><td>Bkg + 5</td><td>Bkg + 0</td><td>Bkg + 5</td><td>Bkg + 5</td><td>Bkg + 0</td></tr>
<tr><td>Max $L_{pA,\ 15\ mins}$</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td></tr>
<tr><td></td><td colspan="6">Noise measured at a 'Commercial place'</td></tr>
<tr><td>$L_{A10,\ adj,\ 15\ mins}$</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td><td>Bkg + 10</td><td>Bkg + 10</td><td>Bkg + 5</td></tr>
<tr><td>$L_{Amax,\ adj,\ 15\ mins}$</td><td>Bkg + 15</td><td>Bkg + 15</td><td>Bkg + 10</td><td>Bkg + 15</td><td>Bkg + 15</td><td>Bkg + 10</td></tr>
</table>
Associated monitoring requirements
1. All monitoring devices must be correctly calibrated and maintained.
2. Any monitoring must be in accordance with the most recent version of the administering authority's Noise Measurement Manual.
3. Any monitoring of noise emissions from the activity must be undertaken when the activity is in operation.</td></tr>
<tr><td>N3-2</td><td>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:
1. $L_{A\ 10,\ adj,\ 15\ mins}$ or its equivalent $L_{\ Amax,\ adj,\ 15\ mins}$
2. Background noise as $L_{A\ 90,\ adj,\ 15\ mins}$
3. Max $L_{pA,\ 15\ mins}$
4. the level and frequency of occurrence of any impulsive or tonal noise
5. atmospheric conditions including wind speed and direction
6. any effects due to extraneous factors such as traffic noise, and
7. location, date and time of recording.</td></tr>
<tr><td colspan="2">Agency interest: Land</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>L3-1</td><td>A buffer zone, vegetated with native riparian species, and not less than 200 metres in width from the top bank of Lagoon Creek and 200 metres from Tea Tree Swamp must be provided and maintained.</td></tr>
<tr><td>L3-2</td><td>Within twelve (12) months of the issue of this permit, the area shown in 'Figure 1.1 Site Layout and monitoring network' in Schedule 1, Attachment 2 as "reserve area" shall be permanently transferred to Moreton Bay Regional Council for environmental protection and drainage purposes in accordance with Council requirements.</td></tr>
<tr><td>L3-3</td><td>Within two (2) months of the date of this permit, you must develop and implement a weed control/rehabilitation plan that provides for the following as a minimum:
1. weed control works in buffer areas to reduce existing infestations and minimise likelihood of new weeds establishing,
2. undertake revegetation works for disturbed areas and/or measures to promote natural regeneration including of reseeding plan based on soil types and endemic native species,
3. avoiding use of herbicides adjacent to wetlands or where such may be released to wetlands, and
4. provide for regular monitoring of retained vegetation and buffer areas to assess the effectiveness of natural revegetation and regeneration works in restoring natural riparian vegetation.</td></tr>
</table>

L3-4	All reasonable and practicable **measures** must be implemented to avoid environmental harm due to disturbance of dispersive soils. Such **measures** shall include but not be limited to: 1. investigation of potential for dispersion in all soils disturbed on **site** or brought onto the **site** for use, including monitoring of relevant indicators of dispersion such as Exchangeable Sodium Percentage and Emerson Class to determine presence and location of any dispersive soils 2. avoiding disturbance of dispersive soils or use wherever practicable, and 3. where disturbance or use is unavoidable, management **measures** such as burial or effective treatment to ensure avoid potential environmental harm such as breach of the water quality limits in *Table WT3-1—Surface water release limits* of this permit for suspended solids, turbidity and salinity, and any failure of cover systems or revegetation **measures**.
L3-5	All reasonable and practicable **measures** must be implemented to avoid environmental harm due to disturbance of acid soils. Such **measures** shall include but not be limited to: 1. investigation of presence and location of any acid soils (whether due to acid sulfate soils or other non-acid sulfate soils) in accordance with recognised analytical and sampling **measures** 2. determining the magnitude of the acidity inherently present in such soils 3. avoiding any disturbance of acid soils that are high risk acid soils or use wherever practicable 4. where disturbance or use is unavoidable, management **measures** such as burial or effective treatment to ensure avoid potential environmental harm such as breach of the water quality limits in *Table WT3-1—Surface water release limits* of this permit for iron, aluminium, and pH, any aquatic toxicity due to dissolution of other metals or metalloids from soil or waste, and from any soil use or adverse effect on revegetation **measures.** *NOTE: High risk acid soils include soils that show test result of pH $_{KCl}$ is <4.5 using test methods described in* Queensland Government QASSIT Acid Sulfate Soils Laboratory Methods Guidelines.
L3-6	When the deposition of waste to the **landfill unit** ceases, a final capping system to the **landfill unit** must be designed by an **appropriately qualified person** and installed to minimise: 1. **infiltration** of water into the **landfill unit** and water ponding on the surface, and 2. the likelihood of any erosion occurring to either the final capping system or the landfilled materials. A final capping system is not required where the deposition of waste to a **landfill unit** ceases temporarily for the purpose of using an alternative working face.
L3-7	Following cessation of deposition of waste in the **landfill unit**, post-closure care of the **landfill unit** must be conducted for a period of 30 years or until the **administering authority** determines, on the basis of correct information, that the **landfill unit** and surrounding **site** are stable and that no release of waste materials, leachate, landfill gas or other **contaminants** that may cause environmental harm is likely.
L3-8	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of environmental harm being caused. The program must include **measures** to: 1. maintain the structural integrity and effectiveness of the final capping system 2. maintain and operate the **leachate** collection system 3. maintain the **groundwater monitoring system** and monitor quality of groundwater at a frequency sufficient to detect any release of **contaminants** to groundwater 4. maintain and operate the landfill gas monitoring system, and 5. maintain and operate the landfill gas collection system.
L3-9	A **site** management plan pursuant to Chapter 7, Part 8, Division 5 of the *Environmental Protection Act 1994* must be developed and provided to the **administering authority** at least twelve (12) months before the expected final receipt of waste in the **landfill unit**. The **site** management plan must include, but is not to be limited to, the future **land** use and actions intended to taken for compliance with the closure and post-closure care requirements of this approval.
Agency interest: Waste	

<table>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>W3-1</td><td>Notwithstanding any condition of this approval, the following waste materials are not permitted or allowed to be deposited in the landfill unit:
1. liquid or semiliquid waste other than liquid or semiliquid waste which has been produced in carrying out the ERA
2. hot ash
3. material that is smouldering or aflame
4. material containing a substance which is ignitable, corrosive, reactive or toxic (other than materials containing a toxic substance from domestic premises) unless this material is to be deposited into a dedicated monocell approved in writing by the administering authority
5. all radioactive wastes, unless otherwise approved under the Radiation Safety Act 1999 or contaminated soil in accordance with A1WS4
6. an explosive
7. ammunition, other than ammunition that no longer contains explosives, pyrotechnics or propellants apart from trace residues that are no longer capable of supporting combustion or an explosive reaction, and
8. whole scrap tyres at the rate exceeding 10,000 equivalent passenger-tyre units (EPU) per annum.</td></tr>
<tr><td>W3-2</td><td>Regulated waste and contaminated soil to be disposed of at the approved place must be restricted to the following waste streams:
1. asbestos (all chemical forms)
2. infectious substances or quarantine waste that has been rendered non-infectious
3. dewatered fish processing waste
4. dewatered food processing waste
5. dewatered poultry processing waste
6. dewatered treatment tank sludges and residues (from sewage treatment works and municipal water treatment plants) that are limited to 10 000 tonnes deposited in one year
7. tyres (each tyre to be segregated from other tyres and not overlapping) and
8. contaminated soil which complies with the maximum contaminant levels and the allowable leaching contaminant levels as per Table W3-2a - Maximum Contaminant Levels and Table W3-2b - Allowable Leaching Contaminant Levels.
Table W3-2a - Maximum Contaminant Levels
<table>
<tr><th>CONTAMINANT</th><th>mg/kg</th></tr>
<tr><td>Monocyclic Aromatic Hydrocarbons (MAH)</td><td>mg/kg</td></tr>
<tr><td>Benzene</td><td>10</td></tr>
<tr><td>Ethyl Benzene</td><td>500</td></tr>
<tr><td>Toluene</td><td>300</td></tr>
<tr><td>Xylene</td><td>250</td></tr>
<tr><td>Total MAH</td><td>500</td></tr>
<tr><td>Polycyclic Aromatic Hydrocarbons(PAH)</td><td>mg/kg</td></tr>
<tr><td>Total PAH</td><td>500</td></tr>
<tr><td>Phenolic Contaminants</td><td>mg/kg</td></tr>
<tr><td>Non halogenated compounds:</td><td></td></tr>
<tr><td>Phenol</td><td>100</td></tr>
<tr><td>m-cresol</td><td>250</td></tr>
<tr><td>o-cresol</td><td>250</td></tr>
<tr><td>p-cresol</td><td>250</td></tr>
<tr><td>Total non halogenated phenol</td><td>250</td></tr>
<tr><td>Halogenated phenol:</td><td></td></tr>
<tr><td>Chlorophenol</td><td>1</td></tr>
<tr><td>Trichlorophenol</td><td>5</td></tr>
<tr><td>Pentachlorophenol</td><td>5</td></tr>
<tr><td>Total halogenated phenol</td><td>5</td></tr>
</table></td></tr>
</table>

Chlorinated Hydrocarbons	**mg/kg**
Chlorinated Aliphatic Compounds:	
Carbon tetrachloride	5
1,2 Dichloroethane	10
l,1 Dichloroethene	1
Tetrachloroethene	10
Trichloroethene	25
Total chlorinated aliphatic cpds	50
Chlorinated Aromatic Compounds:	
Chlorobenzene	100
Hexachlorobenzene	1
Total Chlorinated Aromatic cpds	100
Non scheduled solid polychlorinated biphenyls (PCBs)	2
Pesticides	**mg/kg**
Total organochlorine	5
Total herbicides	25
Total carbamates	25
Total organophosphorus	10
Petroleum Hydrocarbons	**mg/kg**
Total petroleum hydrocarbons(C6-C9)	500
Total petroleum hydrocarbons(C10-C14)	5 000
Total petroleum hydrocarbons(C15-C28)	10 000
Total petroleum hydrocarbons(C28-C36)	10 000

Table W3-2b - Allowable Leaching Contaminant Levels

CONTAMINANT	**mg/L**
Non Specific Contaminants	**mg/L**
Biochemical Oxygen Demand	20 000
Total 0rganic Carbon	10 000
Petroleum Hydrocarbons	25
Microtox LC50	** No levels set at this time*
Metals/Non-Metals	**mg/L**
Antimony	0.5
Arsenic	0.5
Barium	10.0
Cadmium	0.05
Chromium	0.5
Cobalt	0.5
Copper	10.0
Lead	0.5
Mercury	0.01
Molybdenum	0.1
Nickel	0.5
Selenium	0.1
Silver	0.5
Thallium	0.1
Tin	0.3
Vanadium	0.5
Zinc	50.0
Inorganic Anions	**mg/L**
Bromide	5.0
Chloride	6 000
Cyanide (total)	1.0
Fluoride	15.0
Sulphate	2 500
Nitrate	100.0
Monocyclic Aromatic Hydrocarbon(MAH)	**mg/L**
Benzene	0.1
Ethyl benzene	5.0

Toluene	3.0
Xylene	2.0
Total MAH	5.0
Polycyclic Aromatic Hydrocarbons(PAH)	**mg/L**
Anthracene	0.07
Benz (a) anthracene	0.005
Benz (c) phenanthrene	0.005
Benzo (a) pyrene	0.002
Benzo (b) fluoranthene	0.005
Benzo (k) fluoranthene	0.005
Chrysene	0.10
Dibenz (a,h) anthracene	0.002
Dibenz (a,h) pyrene	0.01
Dimethylbenz (a) anthracene	0.005
Fluoranthene	0.02
Indeno (1,2,3-cd) pyrene	0.01
Naphthalene	0.07
Phenanthrene	0.01
Pyrene	0.07
Total PAH	0.1
CONTAMINANT ANALYSIS	**mg/L**
Phenolic Contaminants	**mg/L**
Non haloqenated compounds:	
Phenol	1.0
m-Cresol	2.0
o-Cresol	2.0
p-Cresol	2.0
Halogenated phenols:	
Chlorophenol	0.01
Trichlorophenol	0.1
Pentachlorophenol	0.1
Chlorinated Hydrocarbons	**mg/L**
Chlorinated Aliphatic Compounds:	
Carbon tetrachloride	0.03
1,2 Dichloroethane	0.1
1,1 Dichloroethene	0.003
Tetrachloroethene	0.1
Trichloroethene	0.3
Chlorinated Aromatic Compounds:	
Chlorobenzene(total)	1.0
Hexachlorobenzene	0.002
Pesticides	**mg/L**
Organochlorine:	
Aldrin	0.001
Chlordane	0.006
Chlorpyrifos	0.01
Dieldrin	0.001
DDT	0.003
Endrin	0.001
Heptachlor	0.003
Lindane	0.1
Methoxychlor	0.1
Toxaphene	0.005
Herbicides:	
2,4-D	0.1
2,4-DB	0.2
MCPA	0.2
2,4,6-T	0.002
Carbamates:	

	<table><tr><td>Carbaryl</td><td>0.06</td></tr><tr><td>Carbofuran</td><td>0.03</td></tr><tr><td>*Organophosphorus:*</td><td></td></tr><tr><td>Diazinon</td><td>0.01</td></tr><tr><td>Parathion</td><td>0.03</td></tr><tr><td>Methyl Parathion</td><td>0.006</td></tr><tr><td>*Triazines:*</td><td></td></tr><tr><td>Atrazine</td><td>0.01</td></tr><tr><td>Simazine</td><td>0.01</td></tr></table> *NOTE to Table W3-2b: Allowable Leaching Levels top be determined using TCLP procedure mentioned in U.S. Environmental Protection Agency (EPA), Washington, DC (2008). "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" Document no. SW-846*. 3rd Edition or more recent editions or supplements to that procedure as they become available.*
W3-3	If and when contaminated soil is used as coverage material it must not exceed the **maximum** concentration limits in *Table W3-3 – **Maximum Contaminant** levels for Coverage Material* and must not include any soil that is contaminated due to the concentration of monocyclic aromatic hydrocarbons, polycyclic aromatic hydrocarbons, chlorinated hydrocarbons, pesticides, or petroleum hydrocarbons. **Table W3-3 – Maximum Contaminant levels for Coverage Material** <table><tr><th>Contaminant</th><th>Maximum total contaminant level (mg/kg)</th></tr><tr><td>Arsenic (total)</td><td>200</td></tr><tr><td>Beryllium</td><td>40</td></tr><tr><td>Cadmium</td><td>40</td></tr><tr><td>Chromium (iii)</td><td>240 000</td></tr><tr><td>Chromium (vi)</td><td>200</td></tr><tr><td>Copper</td><td>2 000</td></tr><tr><td>Lead</td><td>600</td></tr><tr><td>Manganese</td><td>3 000</td></tr><tr><td>Mercury (inorganic)</td><td>30</td></tr><tr><td>Methyl Mercury</td><td>20</td></tr><tr><td>Nickel</td><td>600</td></tr><tr><td>Zinc</td><td>14 000</td></tr></table>
W3-4	Notwithstanding condition W3-2, minor amounts of the **regulated waste** not specifically permitted to be deposited at the approved place provided: 1. the **regulated waste** is incidental to and commingled with the general domestic waste stream 2. the quantity and concentration of the **regulated waste** (both individually and aggregate) is insignificant 3. it is impractical to segregate the **regulated waste** from the other waste that is permitted to be deposited 4. if the source of the waste is known, the person who deposited the **regulated waste** is advised that such waste must not be included in the waste stream sent to this facility and practical steps are taken to prevent any recurrence of such deposition 5. the deposition of the **regulated waste** is not likely to cause any risk of fire, explosion, public health danger, nuisance or environmental harm, and 6. all practical steps are taken to inform persons using the facility that such waste must not be included in the waste stream sent to this facility.
W3-5	The only soil contaminated by radioactive material that may be disposed of at the **authorised place** is contaminated soil that has enhanced radiation levels due to activities (such as mineral sand processing) provided that the radiation levels of the material to be disposed of are less than or equal to 0.2 micro Sieverts per hour above natural background levels measured at the **site** where the material is being removed from.

W3-6	Notwithstanding the above condition W3-5, the **administering authority** may approve, on a case by case basis, the disposal of soil contaminated with radioactive material that has radiation levels greater than 0.2 micro Sieverts per hour above natural background levels.
W3-7	All waste that is likely to cause environmental harm when placed in an exposed position, for example asbestos or extremely odorous putrescibles waste, must be handled and disposed of as a special burial.
W3-8	Records of the source, volumes and composition of all waste materials accepted at the **landfill facility,** recyclable materials recovered, fate of recyclable materials (e.g. transported off **site** for reuse / recycling, reused / recycled on **site** or stored on **site**), calculated percentage diversion rates for the materials must be kept and maintained and reported, in a specified format, to the **administering authority** by 31 August each year. *NOTE: The submission of these values in an annual report for the local government's waste management strategic plan or otherwise required by the **administering authority** will be deemed to satisfy the reporting requirement of this condition.*
W3-9	Investigation into Alternative Waste Management Practices For the purpose of minimising the disposal of recyclable waste to landfill, in accordance with the waste management hierarchy and principles of the *Environmental Protection (Waste Management) Policy 2000*, **you** must implement a Waste Management Plan that addresses at least the following matters: 1. waste management practices that will ensure that recyclables are diverted from landfill 2. procedures for identifying and implementing opportunities to improve the waste management practices employed including information and education packages for waste generators to assist in maximising the diversion of recyclable materials from landfill 3. details of any accredited management system employed, or planned to be employed, to implement the waste management practices 4. training programs and guidance for waste transport contractors in the identification and source separation of recyclable materials 5. procedures for auditing waste loads to identify material to be removed for recycling 6. how often the performance of the waste management practices will be assessed (at least annually) 7. the indicators or other criteria, taking into account economic, social and environmental factors on which the performance of the waste management practices will be assessed 8. the recovery of energy from any methane collected in a landfill gas collection system, and 9. annual reporting by 31 August each year any new **measures** adopted or materials newly diverted from landfill disposal. *NOTE: The development of the local government's waste management strategic plan in accordance with the* Environmental Protection (Waste Management) Policy 2000 *which addresses the above matters will be deemed to satisfy the requirements of this condition.*
W3-10	The final landform height must not exceed 29 metres above natural ground level.
W3-11	The depth of excavation for the purpose of land-filling (including any sub-base and for liner installation) must not exceed 2 metres below current ground level, in no case below 3 metres AHD. Records must be kept of the depth of excavation (as relative level in metres) for each area excavated.
W3-12	No land filling or ancillary activities to waste acceptance, processing or disposal shall occur outside the areas marked as "The **Site**" and delineated on '*Figure 1.1 Site Layout and monitoring network'* in Schedule 1, Attachment 2.
W3-13	A landfill liner must be installed comprising: 1. an engineered earthen liner 1 of at least 0.6m thickness, placed in at least two layers, achieving a maximum permeability of not greater than 1 x $10^{-9m/s}$, and 2. a flexible membrane liner consisting of high density polyethylene (HDPE) 2 of at least 1.5mm thickness, installed above the engineered earthen liner and in direct and uniform contact with these layers.

	*NOTE 1: The engineered earthen liner may be replaced with an alternative medium, equivalent or better in limiting **infiltration** such as a geo-synthetic clay liner (GCL) material.* *NOTE 2: The HDPE membrane can also be replaced by other synthetic membranes of equivalent or better seepage prevention and durability.*
W3-14	Deposited waste must be covered: 1. with earthen material to a thickness of at least 0.2 metres, or 2. with the alternate cover materials ConCover/Proguard to a thickness of at least 1mm, or 3. other dense and incombustible alternative material of sufficient thickness and nature to ensure that there is no exposure of waste. For the purpose of this condition, the use of any cover alternative material must initiate a trial for a period of three (3) months, such that potential environmental harm (e.g. odour, vermin breeding) is assessed and reported to the **administering authority** upon completion.

Part 4 – Site specific conditions – Bunya landfill – active area

Environmentally relevant activity	Location	
60-(2f) Waste disposal >50000t but <100000t yr (1)(b)	Bunya Road BUNYA QLD 4055	Lot 1 Plan SP167738 and 3/SP291254

In addition to Part 1 the environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G4-1	Activities under this environmental authority must be conducted in accordance with the following limitations: 1. The relevant activity is permitted to be undertaken only in the area identified as the active landfill area in *Attachment 4 – Bunya landfill footprint*.
G4-2	Any landfill liner design and **leachate** management system must be developed by a person possessing appropriate qualifications and experience in the field of waste management including hydrogeology and geotechnical engineering to be able to competently make recommendations about these matters.
G4-3	The holder of this approval must develop and implement an effective environmental monitoring program as required by this approval for **leachate** monitoring, groundwater monitoring, receiving surface water monitoring and landfill gas monitoring.
G4-4	The environmental monitoring program required by condition G4-2 must address at least: 1. the type and location of all environmental monitoring facilities 2. monitoring frequencies 3. sampling and monitoring procedures 4. clear and understandable explanation of the methodology to be used in the assessment of the monitoring results (including statistical tests to be used in the interpretation of data collected in the groundwater quality monitoring program), and 5. the proposed responses in the event of detection by the environmental monitoring program of any release of **contaminants** not likely to be in accordance with the conditions of this approval.
G4-5	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**.

Agency interest: Air	
Condition number	**Condition**
A4-1	A collection system for landfill gas must be installed and maintained to effectively: 1. minimise likelihood of any subsurface migration of landfill gas from any **landfill unit**, and 2. prevent any uncontrolled emission of landfill gas. The collection system for landfill gas must be installed not later than prior to closure of the **landfill unit.**
A4-2	Landfill gas must not exceed the following limits: 1. 25% of the **lower explosive limit** of the landfill **site boundary** when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and **leachate** collection system components) 2. the **lower explosive limit** in subsurface geology at or beyond the landfill **site boundary**.
A4-3	If methane gas levels exceeding methane standards referred to in this approval are detected, the holder of the approval must: 1. take all necessary steps to ensure protection of human health, and 2. install a collection system for landfill gas to effectively: (a) minimise the likelihood of any subsurface migration of landfill gas from the **landfill unit,** and (b) prevent or minimise any uncontrolled emission of landfill gas.
A4-4	Landfill gas collected by any collection system must be released into the atmosphere or reused in a proper and efficient manner to prevent any adverse effect on people living in or using the surrounding area.
A4-5	The holder of the approval must develop and implement a landfill gas monitoring program to ensure that the **landfill facility** complies with methane standards referred to in condition A4-2. Determination of all the methane gas levels must be performed as often as necessary to ensure protection of human health, having regard to: 1. the likely landfill gas generation rate 2. any previous levels of methane gas detected by the monitoring program 3. proximity of the **landfill facility** to any premises or persons likely to be adversely affected by landfill gas 4. the effectiveness of **measures** implemented to minimise any lateral migration of landfill gas, and 5. the atmospheric pressure.
A4-6	Groundwater monitoring wells must not be used for the purposes for monitoring of landfill gas concentrations.
A4-7	Exceedence of any of the following levels when measured at any dust sensitive place is an environmental nuisance for the purposes of condition A1: 1. dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991, and 2. a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, at a dust sensitive place downwind of the **site** when monitored in accordance with: (a) Australian Standard AS 3580.9.6 *'Ambient air – Particulate matter – Determination of suspended particulate PM10 high-volume sampler with size-selective inlet – Gravimetric method*', or (b) any alternative method of monitoring PM10 which may be permitted by the *Air Quality Sampling Manual* as published from time to time by the **administering authority**

A4-8	When requested by the **administering authority**, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the **administering authority** following completion of monitoring. Monitoring must include: 1. for a complaint alleging dust nuisance – dust deposition 2. for a complaint alleging adverse health effects caused by dust – the concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, and 3. must be carried out a place(s) relevant to the potentially affected dust sensitive places and upwind control **sites**.
A4-9	The following materials must not be used for dust suppression purposes or be released on rehabilitated areas or areas being rehabilitated: 1. **leachate** or landfill gas condensate 2. waste oil or other hydrocarbons, and 3. stormwater that has become contaminated following contact with waste. For the purpose of this condition, collected stormwater, that may be contaminated, can be applied for dust suppression purposes upon current **landfill unit**(s). Application should be by a low pressure method(s) (any spray no higher than one (1) metre) that maintains a buffer distance of at least fifty (50) metres between any waterbody, **watercourse** or landfill footprint **boundary** and the point of application. Stored stormwater volumes should be minimised as much as practicable to enable maximum holding capacity for the next rainfall event.

Agency interest: Water

Condition number	Condition
WT4-1	A liner system must be installed and maintained in each **landfill unit** to effectively: 1. minimise the likelihood of any release of **contaminants** to groundwaters, and 2. minimise the height of the **leachate** above the liner system.
WT4-2	A **leachate** collection system must be installed and maintained to effectively and efficiently: 1. collect **leachate** generated in the **landfill unit**(s) 2. convey the collected **leachate** out of the **landfill unit**(s) to an appropriate **leachate** storage facility, and 3. minimise the height of the **leachate** above the floor of any **landfill unit**
WT4-3	**Leachate** and stormwater runoff which has been in contact with waste materials in any **landfill unit** must be collected in **leachate** storage facility and be recirculated through waste disposed in the **landfill unit**.
WT4-4	The holder of this approval must carry out a **leachate** quality and quantity monitoring program for the **leachate** generated and recirculated at the **site** subject to: 1. **leachate** quality monitoring must be undertaken at least once annually in the event of any **leachate** recirculation 2. the quantity of recirculated **leachate** must be measured and recorded annually 3. the height of the **leachate** above the floor of any **landfill unit** must be measured and recorded on a daily basis if the **leachate** level is greater than 0.3 metres above the liner floor or at least weekly at other times 4. daily rainfall or rainfall events (if an event is longer than daily) must be measured and recorded for the **site**, and 5. the Leachate Monitoring Program must be undertaken for, at least, the following water quality characteristics: Ammonia (as N) — pH Bicarbonate (HCO3) — Potassium

<table>
<tr><td></td><td>
<table>
<tr><td>Calcium
Chloride
Iron (total)
Lead
Nitrate (as N)</td><td>Sodium
Sulphate
Specific conductance
Total Organic Carbon (TOC)
Zinc</td></tr>
</table>
For the purpose of this condition, leachate must be recirculated or treated at the site so that the height of leachate above the liner system exceeds 0.3 metres for no longer than one (1) week.
</td></tr>
<tr><td>WT4-5</td><td>Landfill gas condensate must be disposed of to sewer or recirculated through wastes disposed of in a landfill unit by a method other than spray irrigation.</td></tr>
<tr><td>WT4-6</td><td>Contaminated wastewater generated from washing and/or degreasing of any vehicles, any plant and any equipment must be collected and:
1. treated and disposed of to sewer with the approval of the relevant Local Government in accordance with a trade waste permit, or
2. transported for disposal, recycled, reprocessed or treated at a facility that can lawfully accept such waste, or
3. used for dust suppression at the working face of any landfill unit in a manner to prevent the wastewater infiltration or runoff outside the working face.</td></tr>
<tr><td>WT4-7</td><td>A groundwater monitoring network must be designed and implemented for the site. The network must be:
1. 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
2. include a sufficient number of “bore(s) of compliance” that are located not more than 150 metres from the landfill unit or the boundary of the landfill facility, whichever is the closer, and provides the following:
(a) representative groundwater samples from the uppermost aquifer
(b) background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by any release of contaminants to groundwaters, and
(c) the quality of groundwater down gradient of any release of contaminants to groundwater including groundwater passing the relevant bore(s) of compliance.</td></tr>
<tr><td>WT4-8</td><td>Locations referred to in condition WT4-7 for groundwater monitoring facilities must be given with reference to horizontal coordinates of such facilities accurate to 1.0 metre.</td></tr>
<tr><td>WT4-9</td><td>The holder of this approval must monitor and record quality of groundwater to detect any possible release(s) of contaminants in accordance with the Detection Groundwater Monitoring Program. The Detection Groundwater Monitoring Program must be undertaken for, at least, the water quality characteristics prescribed in Table WT4-9 - Detection Groundwater Monitoring Program.
Table WT4-9 - Detection Groundwater Monitoring Program
<table>
<tr><th>Quality Characteristic</th><th>Frequency</th></tr>
<tr><td>Ammonia (as N)</td><td rowspan="13">As often as is necessary but not less frequently than every three (3) months</td></tr>
<tr><td>Bicarbonate (HCO3)</td></tr>
<tr><td>Calcium</td></tr>
<tr><td>Chloride</td></tr>
<tr><td>Iron (total)</td></tr>
<tr><td>Manganese (dissolved)</td></tr>
<tr><td>Nitrate (as N)</td></tr>
<tr><td>pH (field measured)</td></tr>
<tr><td>Potassium</td></tr>
<tr><td>Sodium</td></tr>
<tr><td>Sulphate</td></tr>
</table>
</td></tr>
</table>

	specific conductance Total Organic Carbon (TOC) Zinc **Associated monitoring requirements** 1. On any occasion that samples are obtained, the registered operator must measure and record standing groundwater levels in metres, accurate to 0.01 metre. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy of 0.005 metres. 2. Measurement of groundwater levels must be undertaken prior to any disturbance by sampling, and must be reported as the depth in metres from the established reference point to the water surface within the bore. 3. All determinations of the quality of groundwater must be performed by a person or body possessing appropriate experience and qualifications to perform the required determinations. 4. Monitoring must be in accordance with the methods prescribed in the current edition of the **administering authority's** *Water Quality Sampling Manual*. 5. All determination of **contaminant** releases must be undertaken before, during and after deposition of waste in the **site**. 6. All determination of **contaminant** releases must be followed by assessment whether or not there has been any statistically significant adverse change compared to background values at locations hydraulically down gradient of the landfill for each quality characteristic. 7. Each groundwater monitoring bore must be fitted with a locked cap at all times other than at the time of sampling.
WT4-10	Baseline groundwater water quality monitoring for at least water quality characteristics required in the Detection Groundwater Monitoring Program must be undertaken prior to use of any **landfill unit**. The baseline groundwater quality must be determined at those locations and those depths which comprise the **groundwater monitoring system** established for that **landfill unit**.
WT4-11	The stormwater runoff from disturbed areas, generated by (up to and including) a 24 hour storm event with an average recurrence interval of 1 in 10 years must be retained on **site** or managed to remove **contaminants** before release.
WT4-12	All ponds used for the storage or treatment of **contaminants** or wastes must be installed and maintained so that a **freeboard** of not less than 0.5 metre is maintained at all times except in emergencies or adverse weather conditions. The sedimentation pond must be constructed and maintained to ensure that the relevant release limits are complied with.
WT4-13	The release of any **contaminants** from the sedimentation pond(s) to **waters** must not: 1. have any other properties at a concentration that is capable of causing environmental harm 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.
WT4-14	The quality of stormwater released from the **site** via the sediment control system must meet the following quality characteristics: 1. the pH value must be not less than 6.5 and not more than 9 2. the concentration of Dissolved Oxygen must be not less than 6 milligrams per litre, and 3. the concentration of suspended solids must not exceed 50 milligrams per litre.
WT4-15	The holder of this approval must monitor and record quality of surface water at upstream and downstream monitoring positions of the **landfill facility** to detect any possible release(s) of **contaminants** in accordance with the Detection Surface Water Environmental Monitoring Program. The Detection Surface Water Environmental Monitoring Program must be undertaken for, at least, the water quality characteristics prescribed in *Table WT4-15 – Detection Surface Water Environmental Program*. **Table WT4-15 – Detection Surface Water Environmental Program** **Quality Characteristic** / **Frequency** Ammonia (as N) Bicarbonate (HCO3) Calcium Chloride Iron (total) Manganese (**dissolved**) Nitrate (as N) As often as is necessary but not less frequently than every three (3) months

	pH (field measured) Phosphorus (total) Potassium Sodium Specific conductance Sulphate Suspended Solids Total Organic Carbon (TOC) Zinc **Associated monitoring requirements** 1. Monitoring must be in accordance with the methods prescribed in the current edition of the **administering authority's** *Water Quality Sampling Manual*. 2. All determinations of the quality of the receiving surface **waters** must be performed by a person or body possessing appropriate experience and qualifications to perform the required determinations.
WT4-16	Baseline surface water quality monitoring for at least water quality characteristics required in the Detection Surface Water Environmental Monitoring Program must be undertaken prior to use of any **landfill unit**.

Agency interest: Noise

Condition number	Condition
N4-1	In the event of a complaint about noise that constitutes an **intrusive noise** being made to the **administering authority**, that the **administering authority** considers is not frivolous or vexatious, then the emission of noise from the **site** must not result in levels greater than those specified in *Table N4-1 - Noise Limits*.

Table N4-1 - Noise Limits

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
$L_{A10, adj, 10 mins}$	50	45	35	50	45	35
$L_{A1, adj, 10 mins}$	55	50	40	55	50	40
	Noise measured at a 'Commercial place'					
$L_{A10, adj, 10 mins}$	55	50	40	55	50	40
$L_{A1, adj, 10 mins}$	60	55	45	60	55	45

Associated monitoring requirements
1. All monitoring devices must be correctly calibrated and maintained.
2. Any monitoring must be in accordance with the most recent version of the **administering authority's** *Noise Measurement Manual.*
3. Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in **operation**.

N4-2	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: 1. $L_{A10, adj 10 min}$ 2. $L_{A1, adj, 10 min}$ 3. the level and frequency of occurrence of impulsive or tonal noise 4. atmospheric conditions including wind speed and direction 5. effects due to extraneous factors such as traffic noise, and

	6. location, date and time of recording.
Agency interest: Land	
Condition number	**Condition**
L4-1	**Land** that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: 1. suitable species of vegetation for the location are established and sustained for earthen surfaces 2. potential for erosion is minimised 3. potential for environmental nuisance caused by dust is minimised 4. the final landform is stable and protects public safety 5. access to areas awaiting rehabilitation or being rehabilitated must be restricted by suitable barriers to prevent disturbance of these areas.
L4-2	When the deposition of waste to the **landfill unit** ceases, a final capping system to the **landfill unit** must be designed by an **appropriately qualified person** and installed to minimise: 1. **infiltration** of water into the **landfill unit**, and 2. the likelihood of any erosion occurring to either the final cover system or the landfilled materials, and 3. uncontrolled release of landfill gas.
L4-3	The final cover system must include at least: 1. a layer of material of sufficiently low permeability to minimise **infiltration**, and 2. an upper layer of earthen material that is capable of sustaining native plant growth.
L4-4	The final cover system must be graded to such an extent that water does not pond on the final cover system.
L4-5	The holder of this approval must develop and provide to the **administering authority** a draft landfill post closure management program for review and comment at least six (6) months before the expected final receipt of waste in the **landfill facility**.
L4-6	The landfill post closure management program must include details of at least the following: 1. the total waste volumes or tonnage of the **landfill unit** being closed 2. a landform relief plan including the extent of the landfill footprint 3. the design of a final cover system including thickness and permeability of cover layers and any lateral drainage layers 4. the erosion prevention system that is designed with effective drainage systems to minimise erosion and to minimise water ponding 5. the revegetation and stabilisation program for the landfill to minimise final cover erosion and final cover species root penetration through to the waste pile 6. the procedures for maintaining and operating any stormwater management system 7. the procedures for maintaining and operating any **leachate** collection system 8. the procedures for maintaining and operating any landfill gas collection system 9. any proposed nuisance or wildlife control procedures 10. the proposed land use at the licensed place during and after the rehabilitation program, and 11. the expected date the holder of this approval intends to begin rehabilitation activities and the expected timelines to implement the program. For the purpose of this condition, the landfill post closure management program must be effective in preventing and/or minimising the likelihood of environmental harm being caused or allowed. The program must include **measures** and schedule timeframes to: 1. monitor and maintain the structural integrity and effectiveness of the final cover system, particularly for erosion and subsidence of the cover system 2. maintain and operate the **leachate** collection system 3. monitor any leachate, surface water, receiving water and **groundwater monitoring system** at

	a frequency sufficient to detect any release of **contaminants** to water resources 4. maintain and operate the landfill gas monitoring system, and 5. monitor any landfill gas management system.
L4-7	Following cessation of deposition of waste in the **landfill unit**, post-closure care of the **landfill unit** must be conducted for a period of 30 years or until the **administering authority** determines, on the basis of correct information, that the **landfill unit** and surrounding **site** are stable and that no release of waste materials, leachate, landfill gas or other **contaminants** that may cause environmental harm is likely.
L4-8	A **site** management plan pursuant to Chapter 7, Part 8, Division 5 of *the Environmental Protection Act 1994* must be developed and provided to the **administering authority** at least twelve (12) months before the expected final receipt of waste in the **landfill unit.** The **site** management plan must include, but is not to be limited to, the future land use and actions intended to taken for compliance with the closure and post-closure care requirements of this approval.
L4-9	The holder of this approval must have due regard to any comments made by the **administering authority** on the landfill post-closure management plan.
L4-10	The holder of this approval must begin closure activities of the **landfill unit** no later than 28 days after the date on which the **landfill unit** receives the known final receipt of wastes.
Agency interest: Waste	
Condition number	**Condition**
W4-1	Waste must not be released to the environment, stored, transferred or disposed of contrary to any condition of this approval.
W4-2	Where a no-cost recycling service is available, reasonable and practicable steps must be taken to ensure recyclable waste is not deposited in the **general waste** stream. Such steps may include, but not be limited to provisions of receptacles; suitable signage; and promotion of awareness of the recycling service.
W4-3	The only waste permitted to be disposed of at the **site** is **general waste** and limited **regulated waste** as defined by Schedule 9 of the *Environmental Protection Regulation 1998*. Pursuant to Section 6A of the *Environmental Protection Regulation 1998* the holder of the approval must ensure the limited **regulated waste** received at each waste disposal facility is not more than 10% of the waste received at the facility in the year.
W4-4	Notwithstanding condition W4-3,limited amounts of the **regulated waste** not specifically permitted to be accepted may be deposited at the **site** provided that: 1. the **regulated waste** is incidental to and commingled with the **general waste** stream 2. the quantity and concentration of the **regulated waste** (both individually and in aggregate) is insignificant 3. it is impracticable to segregate the **regulated waste** from other waste which is permitted to be deposited 4. if the source of the **regulated waste** is known, the person who deposited the **regulated waste** is advised that such waste must not be included in the waste stream sent to this facility and practicable steps are taken to prevent any recurrence of such deposition 5. the deposition of the **regulated waste** is not likely to cause any risk of fire, explosion, public health danger, nuisance or environmental harm, and 6. all practicable steps are taken to inform persons using the facility that such wastes must not be included in the waste stream sent to this facility.

W4-5

The quality of any treated or reprocessed wastes used as a daily cover at the waste disposal facilities must comply with the soil quality characteristics specified in *Table W4-5a - Soil Quality Characteristic Limits* and allowable leaching **contaminant** levels when measured in accordance with **Toxicity Characteristic Leaching Procedures (TCLP)** in *Table W4-5b - Allowable Leaching **Contaminant** Levels.*

Table W4-5a - Soil Quality Characteristic Limits

QUALITY CHARACTERISTIC	SOIL QUALITY CHARACTERISTIC LIMIT (mg/kg dry weight of soil)
Arsenic (total)	200
Beryllium	40
Cadmium	40
Chromium (iii)	240 000
Chromium (vi)	200
Copper	2000
Lead	600
Manganese	3000
Methyl Mercury	20
Mercury (inorganic)	30
Nickel	600
Zinc	14000

Table W4-5b - Allowable Leaching Contaminant Levels

QUALITY CHARACTERISTIC	LEACHING QUALITY CHARACTERISTIC LIMITS (mg/L)
Non Specific Contaminants	
Biochemical Oxygen Demand	20 000
Total 0rganic Carbon	10 000
Petroleum Hydrocarbons	25
Microtox LC50	* No levels set at this time
Metals/Non-Metals	
Antimony	0.5
Arsenic	0.5
Barium	10.0
Cadmium	0.05
Chromium	0.5
Cobalt	0.5
Copper	10.0
Lead	0.5
Mercury	0.01
Molybdenum	0.1
Nickel	0.5
Selenium	0.1
Silver	0.5
Thallium	0.1
Tin	0.3
Vanadium	0.5
Zinc	50.0
Inorganic Anions	
Bromide	5.0
Chloride	6 000
Cyanide (total)	1.0
Fluoride	15.0
Sulphate	2 500
Nitrate	100.0
Monocyclic Aromatic Hydrocarbon (MAH)	
Benzene	0.1
Ethyl benzene	5.0
Toluene	3.0
Xylene	2.0

Total MAH	5.0
Polycyclic Aromatic Hydrocarbons (PAH)	
Anthracene	0.07
Benz (a) anthracene	0.005
Benz (c) phenanthrene	0.005
Benzo (a) pyrene	0.002
Benzo (b) fluoranthene	0.005
Benzo (k) fluoranthene	0.005
Chrysene	0.10
Dibenz (a,h) anthracene	0.002
Dibenz (a,h) pyrene	0.01
Dimethylbenz (a) anthracene	0.005
Fluoranthene	0.02
Indeno (1,2,3-cd) pyrene	0.01
Naphthalene	0.07
Phenanthrene	0.01
Pyrene	0.07
Total PAH	0.1
Phenolic Contaminants	
Non haloqenated compounds:	
Phenol	1.0
m-Cresol	2.0
o-Cresol	2.0
p-Cresol	2.0
Halogenated phenols:	
Chlorophenol	0.01
Trichlorophenol	0.1
Pentachlorophenol	0.1
Chlorinated Hydrocarbons	
Chlorinated Aliphatic Compounds:	
Carbon tetrachloride	0.03
1,2 Dichloroethane	0.1
1,1 Dichloroethene	0.003
Tetrachloroethene	0.1
Trichloroethene	0.3
Chlorinated Aromatic Compounds:	
Chlorobenzene (total)	1.0
Hexachlorobenzene	0.002
Pesticides	
Organochlorine:	
Aldrin	0.001
Chlordane	0.006
Chlorpyrifos	0.01
Dieldrin	0.001
DDT	0.003
Endrin	0.001
Heptachlor	0.003
Lindane	0.1
Methoxychlor	0.1
Toxaphene	0.005
Herbicides:	
2,4-D	0.1
2,4-DB	0.2
MCPA	0.2
2,4,6-T	0.002
Carbamates:	
Carbaryl	0.06

	<table><tr><td>Carbofuran</td><td>0.03</td></tr><tr><td>*Organophosphorus:*</td><td></td></tr><tr><td>Diazinon</td><td>0.01</td></tr><tr><td>Parathion</td><td>0.03</td></tr><tr><td>Methyl Parathion</td><td>0.006</td></tr><tr><td>*Triazines:*</td><td></td></tr><tr><td>Atrazine</td><td>0.01</td></tr><tr><td>Simazine</td><td>0.01</td></tr></table>
W4-6	The only waste to be accepted at the **landfill facility** must be a waste transported to the facility by any of the following persons or classes of persons: 1. the holder of this approval 2. contractors acting on behalf of the holder of this approval, and 3. another person specifically authorised by the holder of this approval to transport the type of waste carried by that person.
W4-7	In the event of the holder of this approval becoming aware of the prohibited wastes being commingled in the waste stream the holder of this approval must: 1. cease the depositing of such waste if depositing of such waste is occurring 2. remove the prohibited waste and store in a proper and efficient manner 3. notify the person who sent the prohibited waste to the **site** of the detection of prohibited waste in the waste received 4. as soon as practicable arrange for a person who can lawfully transport such waste to collect such waste 5. arrange for the person transporting the prohibited waste to transport such waste to a facility that can lawfully accept such waste 6. produce the following records: (a) type of prohibited waste (b) quantity of prohibited waste (c) collector and generator of prohibited waste, and (d) disposer of prohibited waste and date of disposal. *For the purpose of this condition, "*prohibited waste*" means a waste that is not permitted to be accepted at that **landfill facility** by a condition of this approval.*
W4-8	The following waste must be handled and disposed of as a **special burial of waste**: 1. all **putrescible waste** (other than **putrescible waste** from domestic premises), and 2. waste, which if not buried as soon as practicable, would be likely to cause environmental harm when placed in an exposed position.
W4-9	The holder of the approval must record at least the following information in relation to the **special burial of wastes**: 1. type of waste 2. quantity of waste 3. date of deposition 4. source of waste, and 5. if the waste is fibrous asbestos and/or mixed asbestos waste.
W4-10	All wastes must be deposited in lifts not exceeding a vertical height of three (3) metres except as deposition is carried out in the following circumstances: 1. an "*alternative material*" is used as coverage material in accordance with conditions W4-13 and W4-14 of this approval, and 2. the holder of this approval complies with all other conditions of this approval.
W4-11	The working face of the **landfill unit** must be kept to the smallest size practicable and must not at any time exceed 450 square metres in area.
W4-12	Deposited waste must be covered: 1. with earthen material to a thickness of at least 0.2 metres, or 2. with the alternate cover materials ConCover/Proguard to a thickness of at least 1mm, or

	3. other dense and incombustible alternative material of sufficient thickness and nature to ensure that there is no exposure of waste. For the purpose of this condition, the use of any cover alternative material must initiate a trial for a period of three (3) months, such that potential environmental harm (e.g. odour, vermin breeding) is assessed and reported to the **administering authority** upon completion.
W4-13	Coverage of deposited waste must take place: 1. at least at the end of every operating day, and 2. at more frequent intervals if **putrescible waste** is deposited at that frequency necessary to ensure that such waste is not left in an exposed state.
W4-14	Where **regulated waste** is removed from any **site** (other than by a release as permitted under another schedule of this approval), the holder of this t approval must monitor and keep records of the following: 1. the date, quantity and type of waste removed 2. name of the waste transporter and/or disposal operator that removed the waste, and 3. the intended treatment/disposal destination of the waste. *NOTE: Records of documents maintained in compliance with a waste tracking system established under the* Environmental Protection Act 1994 *or any other law for **regulated waste** will be deemed to satisfy this condition.*

Part 5 – Site specific conditions – Bunya landfill – post closure area

Environmentally relevant activity	Location	
60-(2f) Waste disposal >50000t but <100000t yr (1)(b)	Bunya Road BUNYA QLD 4055	Lot 2 Plan SP291254 and Lot 1 Plan SP300228

In addition to Part 1 the environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G5-1	Activities under this environmental authority must be conducted in accordance with the following limitations: 1. The relevant activity is permitted to be undertaken only in the area identified as the post closure landfill area in *Attachment 4 – Bunya landfill footprint*. 2. The facility must be maintained in **post closure care**.
G5-2	The holder of this approval must develop and implement an effective environmental monitoring program as required by this approval for **leachate** monitoring, groundwater monitoring, receiving surface water monitoring and landfill gas monitoring.
G5-3	The environmental monitoring program required by condition G4-2 must address at least: 1. the type and location of all environmental monitoring facilities 2. monitoring frequencies 3. sampling and monitoring procedures 4. clear and understandable explanation of the methodology to be used in the assessment of the monitoring results (including statistical tests to be used in the interpretation of data collected in the groundwater quality monitoring program), and 5. the proposed responses in the event of detection by the environmental monitoring program of any release of **contaminants** not likely to be in accordance with the conditions of this approval.

G5-4	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**.

Agency interest: Air	
Condition number	**Condition**
A5-1	A collection system for landfill gas must be installed and maintained to effectively: 1. minimise likelihood of any subsurface migration of landfill gas from any **landfill unit**, and 2. prevent any uncontrolled emission of landfill gas.
A5-2	Landfill gas must not exceed the following limits: 1. 25% of the **lower explosive limit** of the landfill **site boundary** when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and **leachate** collection system components) 2. the **lower explosive limit** in subsurface geology at or beyond the landfill **site boundary**.
A5-3	If methane gas levels exceeding methane standards referred to in this approval are detected, the holder of the approval must: 1. take all necessary steps to ensure protection of human health, and 2. install a collection system for landfill gas to effectively: (a) minimise the likelihood of any subsurface migration of landfill gas from the **landfill unit,** and (b) prevent or minimise any uncontrolled emission of landfill gas.
A5-4	Landfill gas collected by any collection system must be released into the atmosphere or reused in a proper and efficient manner to prevent any adverse effect on people living in or using the surrounding area.
A5-5	The holder of the approval must develop and implement a landfill gas monitoring program to ensure that the **landfill facility** complies with methane standards referred to in condition A4-2. Determination of all the methane gas levels must be performed as often as necessary to ensure protection of human health, having regard to: 1. the likely landfill gas generation rate 2. any previous levels of methane gas detected by the monitoring program 3. proximity of the **landfill facility** to any premises or persons likely to be adversely affected by landfill gas 4. the effectiveness of **measures** implemented to minimise any lateral migration of landfill gas, and 5. the atmospheric pressure.
A5-6	Groundwater monitoring wells must not be used for the purposes for monitoring of landfill gas concentrations.
A5-7	Exceedence of any of the following levels when measured at any dust sensitive place is an environmental nuisance for the purposes of condition A1: 1. dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991, and 2. a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, at a dust sensitive place downwind of the **site** when monitored in accordance with: (a) Australian Standard AS 3580.9.6 *'Ambient air – Particulate matter – Determination of suspended particulate PM10 high-volume sampler with size-selective inlet – Gravimetric method*', or (b) any alternative method of monitoring PM10 which may be permitted by the *Air Quality Sampling Manual* as published from time to time by the **administering authority**

A5-8	When requested by the **administering authority**, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the **administering authority** following completion of monitoring. Monitoring must include: 1. for a complaint alleging dust nuisance – dust deposition 2. for a complaint alleging adverse health effects caused by dust – the concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, and 3. must be carried out a place(s) relevant to the potentially affected dust sensitive places and upwind control **sites**.
Agency interest: Water	
Condition number	**Condition**
WT5-1	A liner system must be installed and maintained in each **landfill unit** to effectively: 1. minimise the likelihood of any release of **contaminants** to groundwaters, and 2. minimise the height of the **leachate** above the liner system.
WT5-2	A **leachate** collection system must be installed and maintained to effectively and efficiently: 1. collect **leachate** generated in the **landfill unit**(s) 2. convey the collected **leachate** out of the **landfill unit**(s) to an appropriate **leachate** storage facility, and 3. minimise the height of the **leachate** above the floor of any **landfill unit**
WT5-3	**Leachate** and stormwater runoff which has been in contact with waste materials in any **landfill unit** must be collected in **leachate** storage facility and be recirculated through waste disposed in the **landfill unit**.
WT5-4	The holder of this approval must carry out a **leachate** quality and quantity monitoring program for the **leachate** generated and recirculated at the **site** subject to: 1. **leachate** quality monitoring must be undertaken at least once annually in the event of any **leachate** recirculation 2. the quantity of recirculated **leachate** must be measured and recorded annually 3. the height of the **leachate** above the floor of any **landfill unit** must be measured and recorded on a daily basis if the **leachate** level is greater than 0.3 metres above the liner floor or at least weekly at other times 4. daily rainfall or rainfall events (if an event is longer than daily) must be measured and recorded for the **site**, and 5. the Leachate Monitoring Program must be undertaken for, at least, the following water quality characteristics: Ammonia (as N) / pH Bicarbonate (HCO3) / Potassium Calcium / Sodium Chloride / Sulphate Iron (total) / Specific conductance Lead / Total Organic Carbon (TOC) Nitrate (as N) / Zinc For the purpose of this condition, **leachate** must be recirculated or treated at the **site** so that the height of **leachate** above the liner system exceeds 0.3 metres for no longer than one (1) week.
WT5-5	Landfill gas condensate must be disposed of to sewer or recirculated through wastes disposed of in a **landfill unit** by a method other than spray irrigation.
WT5-7	A groundwater monitoring network must be designed and implemented for the **site**. The network must be:

<table>
<tr><td></td><td>1. 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
2. include a sufficient number of “bore(s) of compliance” that are located not more than 150 metres from the landfill unit or the boundary of the landfill facility, whichever is the closer, and provides the following:
(a) representative groundwater samples from the uppermost aquifer
(b) background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by any release of contaminants to groundwaters, and
(c) the quality of groundwater down gradient of any release of contaminants to groundwater including groundwater passing the relevant bore(s) of compliance.</td></tr>
<tr><td>WT5-8</td><td>Locations referred to in condition WT4-7 for groundwater monitoring facilities must be given with reference to horizontal coordinates of such facilities accurate to 1.0 metre.</td></tr>
<tr><td>WT5-9</td><td>The holder of this approval must monitor and record quality of groundwater to detect any possible release(s) of contaminants in accordance with the Detection Groundwater Monitoring Program. The Detection Groundwater Monitoring Program must be undertaken for, at least, the water quality characteristics prescribed in Table WT4-9 - Detection Groundwater Monitoring Program.

Table WT4-9 - Detection Groundwater Monitoring Program
<table>
<tr><th>Quality Characteristic</th><th>Frequency</th></tr>
<tr><td>Ammonia (as N)</td><td rowspan="14">As often as is necessary but not less frequently than every three (3) months</td></tr>
<tr><td>Bicarbonate (HCO3)</td></tr>
<tr><td>Calcium</td></tr>
<tr><td>Chloride</td></tr>
<tr><td>Iron (total)</td></tr>
<tr><td>Manganese (dissolved)</td></tr>
<tr><td>Nitrate (as N)</td></tr>
<tr><td>pH (field measured)</td></tr>
<tr><td>Potassium</td></tr>
<tr><td>Sodium</td></tr>
<tr><td>Sulphate</td></tr>
<tr><td>specific conductance</td></tr>
<tr><td>Total Organic Carbon (TOC)</td></tr>
<tr><td>Zinc</td></tr>
</table>
Associated monitoring requirements
1. On any occasion that samples are obtained, the registered operator must measure and record standing groundwater levels in metres, accurate to 0.01 metre. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy of 0.005 metres.
2. Measurement of groundwater levels must be undertaken prior to any disturbance by sampling, and must be reported as the depth in metres from the established reference point to the water surface within the bore.
3. All determinations of the quality of groundwater must be performed by a person or body possessing appropriate experience and qualifications to perform the required determinations.
4. Monitoring must be in accordance with the methods prescribed in the current edition of the administering authority’s Water Quality Sampling Manual.
5. All determination of contaminant releases must be undertaken before, during and after deposition of waste in the site.
6. All determination of contaminant releases must be followed by assessment whether or not there has been any statistically significant adverse change compared to background values at locations hydraulically down gradient of the landfill for each quality characteristic.
7. Each groundwater monitoring bore must be fitted with a locked cap at all times other than at the time of sampling.</td></tr>
<tr><td>WT5-10</td><td>Baseline groundwater water quality monitoring for at least water quality characteristics required in the Detection Groundwater Monitoring Program must be undertaken prior to use of any landfill unit. The baseline groundwater quality must be determined at those locations and those depths which comprise the groundwater monitoring system established for that landfill unit.</td></tr>
</table>

Agency interest: Noise	
Condition number	**Condition**
N5-1	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: 1. **$L_{A10, adj\ 10\ min}$** 2. **$L_{A1, adj, 10\ min}$** 3. the level and frequency of occurrence of impulsive or tonal noise 4. atmospheric conditions including wind speed and direction 5. effects due to extraneous factors such as traffic noise, and 6. location, date and time of recording.
Agency interest: Land	
Condition number	**Condition**
L5-1	**Land** that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: 1. suitable species of vegetation for the location are established and sustained for earthen surfaces 2. potential for erosion is minimised 3. potential for environmental nuisance caused by dust is minimised 4. the final landform is stable and protects public safety 5. access to areas awaiting rehabilitation or being rehabilitated must be restricted by suitable barriers to prevent disturbance of these areas.
L5-2	When the deposition of waste to the **landfill unit** ceases, a final capping system to the **landfill unit** must be designed by an **appropriately qualified person** and installed to minimise: 1. **infiltration** of water into the **landfill unit**, and 2. the likelihood of any erosion occurring to either the final cover system or the landfilled materials, and 3. uncontrolled release of landfill gas.
L5-3	The final cover system must include at least: 1. a layer of material of sufficiently low permeability to minimise **infiltration**, and 2. an upper layer of earthen material that is capable of sustaining native plant growth.
L5-4	The final cover system must be graded to such an extent that water does not pond on the final cover system.
L5-5	The holder of this approval must develop and provide to the **administering authority** a draft landfill post closure management program for review and comment at least six (6) months before the expected final receipt of waste in the **landfill facility**.
L5-6	The landfill post closure management program must include details of at least the following: 1. the total waste volumes or tonnage of the **landfill unit** being closed 2. a landform relief plan including the extent of the landfill footprint 3. the design of a final cover system including thickness and permeability of cover layers and any lateral drainage layers 4. the erosion prevention system that is designed with effective drainage systems to minimise erosion and to minimise water ponding 5. the revegetation and stabilisation program for the landfill to minimise final cover erosion and final cover species root penetration through to the waste pile 6. the procedures for maintaining and operating any stormwater management system

	7. the procedures for maintaining and operating any **leachate** collection system 8. the procedures for maintaining and operating any landfill gas collection system 9. any proposed nuisance or wildlife control procedures 10. the proposed land use at the licensed place during and after the rehabilitation program, and 11. the expected date the holder of this approval intends to begin rehabilitation activities and the expected timelines to implement the program. For the purpose of this condition, the landfill post closure management program must be effective in preventing and/or minimising the likelihood of environmental harm being caused or allowed. The program must include **measures** and schedule timeframes to: 1. monitor and maintain the structural integrity and effectiveness of the final cover system, particularly for erosion and subsidence of the cover system 2. maintain and operate the **leachate** collection system 3. monitor any leachate, surface water, receiving water and **groundwater monitoring system** at a frequency sufficient to detect any release of **contaminants** to water resources 4. maintain and operate the landfill gas monitoring system, and 5. monitor any landfill gas management system.
L5-7	Following cessation of deposition of waste in the **landfill unit**, post-closure care of the **landfill unit** must be conducted for a period of 30 years or until the **administering authority** determines, on the basis of correct information, that the **landfill unit** and surrounding **site** are stable and that no release of waste materials, leachate, landfill gas or other **contaminants** that may cause environmental harm is likely.
L5-9	The holder of this approval must have due regard to any comments made by the **administering authority** on the landfill post-closure management plan.
L5-10	The holder of this approval must begin closure activities of the **landfill unit** no later than 28 days after the date on which the **landfill unit** receives the known final receipt of wastes.

Agency interest: Waste	
Condition number	**Condition**
W5-1	All waste generated in carrying out the **activity** must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.

Part 6 – Site specific conditions

Environmentally relevant activity	**Location**	
60-(2f) Waste disposal >50000t but <100000t yr (1)(b)	Dakabin Landfill, 336 Old Gympie Road DAKABIN QLD 4503	Lot 437 Plan SP150726

In addition to Part 1 the environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**

G6-1	The registered operator of this approval must develop and implement an effective environmental monitoring program as required by this approval for **leachate** monitoring, groundwater monitoring, receiving surface water monitoring and landfill gas monitoring.
G6-2	The environmental monitoring program required by condition G6-1 must address at least: 1. the type and location of all environmental monitoring facilities 2. monitoring frequencies 3. sampling and monitoring procedures 4. clear and understandable explanation of the methodology to be used in the assessment of the monitoring results (including statistical tests to be used in the interpretation of data collected in the groundwater quality monitoring program), and 5. the proposed responses in the event of detection by the environmental monitoring program of any release of **contaminants** not likely to be in accordance with the conditions of this approval.
G6-3	The registered operator of this approval must lodge a proposed environmental monitoring program and any technical documentation necessary to assess its appropriateness, with the **administering authority** for its review and comment and have due regard to that comment in the finalisation of the environmental monitoring program.
G6-4	The registered operator 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**.
Agency interest: Air	
Condition number	**Condition**
A6-1	A collection system for landfill gas must be installed and maintained to effectively: 1. minimise likelihood of any subsurface migration of landfill gas from any **landfill unit**, and 2. prevent any uncontrolled emission of landfill gas. The collection system for landfill gas must be not later than prior to closure of the **landfill unit**.
A6-2	Landfill gas must not exceed the following limits: 1. 25% of the **lower explosive limit** of the landfill **site boundary** when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and **leachate** collection system components) 2. the **lower explosive limit** in subsurface geology at or beyond the landfill **site boundary**.
A6-3	If methane gas levels exceeding methane standards referred to in condition A6-2 of this approval are detected, the registered operator of the approval must: 1. take all necessary steps to ensure protection of human health, and 2. install a collection system for landfill gas to effectively: (a) minimise the likelihood of any subsurface migration of landfill gas from the **landfill unit**, and (b) prevent or minimise any uncontrolled emission of landfill gas.
A6-4	Landfill gas collected by any collection system must be released into the atmosphere or reused in a proper and efficient manner to prevent any adverse effect on people living in or using the surrounding area.
A6-5	The registered operator of this approval must develop and implement a landfill gas monitoring program to ensure that the **landfill facility** complies with methane standards referred to in condition A6-2.
A6-6	Determination of all the methane gas levels must be performed as often as necessary to ensure protection of human health, having regard to: 1. the likely landfill gas generation rate 2. any previous levels of methane gas detected by the monitoring program 3. proximity of the **landfill facility** to any premises or persons likely to be adversely affected by

	landfill gas 4. the effectiveness of **measures** implemented to minimise any lateral migration of landfill gas, and 5. the atmospheric pressure.
A6-7	Groundwater monitoring wells must not be used for the purposes for monitoring of landfill gas concentrations.
A6-8	The following materials must not be used for dust suppression purposes or be released on rehabilitated areas or areas being rehabilitated: 1. any leachate 2. any landfill gas condensate 3. waste oil, and 4. stormwater that has become contaminated following contact with waste. For the purpose of this condition, collected stormwater, that may be contaminated, can be applied for dust suppression purposes upon current **landfill unit**(s). Application should be by a low pressure method(s) (any spray no higher than one (1) metre) that maintains a buffer distance of at least fifty (50) metres between any waterbody, **watercourse** or landfill footprint **boundary** and the point of application. Stored stormwater volumes should be minimised as much as practicable to enable maximum holding capacity for the next rainfall event.
Agency interest: Water	
Condition number	**Condition**
WT6-1	**Leachate** and stormwater runoff which has been in contact with waste materials in the **landfill unit(**s), and any landfill gas condensate collected must not be released to any surface **waters**, the bed or banks of any such **waters**.
WT6-2	With the exception of the **landfill unit** referred to as Dakabin Landfill Stage 1 in the original application for the approval a liner system must be installed and maintained in each **landfill unit** to effectively: 1. minimise the likelihood of any release of **contaminants** to groundwaters, and 2. minimise the height of the **leachate** above the liner system.
WT6-3	A **landfill** liner and **leachate** collection system must be designed by an **appropriately qualified person** and installed and maintained to: 1. collect **leachate** generated in the **landfill unit** 2. convey the collected **leachate** out of the **landfill unit** to an appropriate **leachate** storage facility, and 3. minimise the height of the **leachate** above the floor of any **landfill unit**.
WT6-4	The registered operator of this approval must carry out a **leachate** quality and quantity monitoring program for the **leachate** generated and recirculated at the approved place subject to: 1. **leachate** quality monitoring must be undertaken at least once annually in the event of any **leachate** recirculation 2. the quantity of recirculated **leachate** must be measured and recorded annually 3. the height of the **leachate** above the floor of any **landfill unit** must be measured and recorded on a daily basis if the **leachate** level is greater than 0.3 metres above the liner floor or at least weekly at other times 4. daily rainfall or rainfall events (if an event is longer than daily) must be measured and recorded for the approved place, and 5. the Leachate Monitoring Program must be undertaken for, at least, the following water quality characteristics: • Ammonia (as N) • Bicarbonate (HCO3) • pH • Potassium

	<table><tr><td>• Calcium • Chloride • Iron (total) • Lead • Nitrate (as N)</td><td>• Sodium • Sulphate • specific conductance • Total Organic Carbon (TOC) • Zinc.</td></tr></table> For the purpose of this condition, **leachate** must be recirculated or treated at an approved facility so that the height of **leachate** above the liner system exceeds 0.3 metres for no longer than one (1) week.
WT6-5	Landfill gas condensate must be disposed of to sewer or recirculated through wastes disposed of in a **landfill unit** by a method other than spray irrigation.
WT6-6	Contaminated wastewater generated from washing and/or degreasing of any vehicles, any plant and any equipment must be collected and: 1. treated and disposed of to sewer with the approval of the relevant Local Government in accordance with a tradewaste permit, or 2. transported for disposal, recycled, reprocessed or treated at a facility that can lawfully accept such waste, or 3. used for dust suppression at the working face of any **landfill unit** in a manner to prevent the wastewater **infiltration** or runoff outside the working face.
WT6-7	Except as otherwise provided by the stormwater management conditions and the water conditions of this approval, the environmentally relevant **activity** must be carried out by such practicable means necessary to prevent and/or minimise the release or likelihood of release of contaminated runoff from the approved place to any stormwater drain or **waters** or the bed or banks of any such **waters**. *"Contaminated runoff" for the purposes of this condition means stormwater and/or stormwater runoff that contains **contaminants** that may cause environmental harm.*
WT6-8	All ponds used for the storage or treatment of **contaminants** or wastes must be installed and maintained so that a **freeboard** of not less than 0.5 metre is maintained at all times except in emergencies or adverse weather conditions. The sedimentation pond must be constructed and maintained to ensure that the relevant release limits are complied with.
WT6-9	The quality of **contaminants** in the stormwater released from the approved places via the sediment control system (for example any sedimentation pond when measured at the overflow point from the sedimentation pond) must meet the following quality characteristics: 1. the pH value must be not less than 6.5 and not more than 9, 2. the concentration of Dissolved Oxygen must be not less than 6 milligrams per litre, and 3. the concentration of Total Organic Carbon (TOC) must not exceed 20 milligrams per litre.
WT6-10	In addition to condition number WT6-9, the concentration of suspended solids of **contaminants** released from any sedimentation ponds must not exceed 50 milligrams per litre at the point of discharge.
WT6-11	The release to **waters** must not: 1. have any other properties at a concentration that is capable of causing environmental harm 2. produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.
WT6-12	A **groundwater monitoring system** must be installed for each **landfill unit**. The system must include a sufficient number of wells installed at locations and depths which yield representative groundwater samples from the **uppermost aquifer** and that establish: 1. background groundwater quality in hydraulically up-gradient or background well(s) that have not been affected by any potential leakage of **contaminants** to groundwater from the approved place, and 2. quality of groundwater down-gradient of any potential leakage of **contaminants** to groundwater from the approved place including groundwater passing the relevant point(s) of compliance referred to in condition WT6-15.

<table>
<tr><td>WT6-13</td><td>Locations referred to in condition WT6-12 for groundwater monitoring facilities must be given with reference to horizontal coordinates of such facilities accurate to 1.0 metre.</td></tr>
<tr><td>WT6-14</td><td>The point(s) of compliance referred to in condition WT6-12 for the groundwater monitoring system must be situated not more than 150 metres from the landfill unit or the boundary of the landfill facility whichever is the closest.</td></tr>
<tr><td>WT6-15</td><td>The holder of this approval must monitor and record quality of groundwater to detect any possible release(s) of contaminants in accordance with the Detection Groundwater Monitoring Program. The Detection Groundwater Monitoring Program must be undertaken for, at least, the water quality characteristics prescribed in Table WT6-15 - Detection Groundwater Monitoring Program
Table WT6-15 - Detection Groundwater Monitoring Program
Associated monitoring requirements
<table>
<tr><th>Quality Characteristic</th><th>Frequency</th></tr>
<tr><td>Ammonia (as N)</td><td rowspan="14">As often as is necessary but not less frequently than every three (3) months</td></tr>
<tr><td>Bicarbonate (HCO3)</td></tr>
<tr><td>Calcium</td></tr>
<tr><td>Chloride</td></tr>
<tr><td>Iron (total)</td></tr>
<tr><td>Manganese (dissolved)</td></tr>
<tr><td>Nitrate (as N)</td></tr>
<tr><td>pH (field measured)</td></tr>
<tr><td>Potassium</td></tr>
<tr><td>Sodium</td></tr>
<tr><td>Sulphate</td></tr>
<tr><td>specific conductance</td></tr>
<tr><td>Total Organic Carbon (TOC)</td></tr>
<tr><td>Zinc</td></tr>
</table>
1. On any occasion that samples are obtained, the registered operator of this approval must measure and record standing groundwater levels in metres, accurate to 0.01 metres. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy of 0.005 metres.
2. Measurement of groundwater levels must be undertaken prior to any disturbance by sampling, and must be reported as the depth in metres from the established reference point to the water surface within the bore.
3. All determinations of the quality of groundwater must be performed by a person or body possessing appropriate experience and qualifications to perform the required determinations.
4. Monitoring must be in accordance with the methods prescribed in the current edition of the administering authority's Water Quality Sampling Manual.
5. Each groundwater monitoring bore must be fitted with a locked cap at all times other than at the time of sampling.</td></tr>
<tr><td>WT6-16</td><td>Baseline groundwater water quality monitoring for at least water quality characteristics required in the Detection Groundwater Monitoring Program must be undertaken prior to use of any landfill unit. The baseline groundwater quality must be determined at those locations and those depths which comprise the groundwater monitoring system established for that landfill unit.</td></tr>
<tr><td>WT6-17</td><td>The registered operator of this approval must determine whether or not there has been any statistically significant increase over background values at locations hydraulically down-gradient of the landfill unit for any water quality characteristic required to be monitored under the Detection Groundwater Monitoring Program referred to in condition WT6-15.</td></tr>
<tr><td>WT6-18</td><td>The holder of this approval must monitor and record quality of surface water at upstream and downstream monitoring positions of the landfill facility to detect any possible release(s) of contaminants in accordance with the Detection Surface Water Monitoring Program. The Detection Surface Water Monitoring Program must be undertaken for, at least, the water quality characteristics prescribed in Table WT6-18 – Detection Surface Water Program
Table WT6-18 – Detection Surface Water Program
<table>
<tr><th>Quality Characteristic</th><th>Frequency</th></tr>
<tr><td>Ammonia (as N)</td><td></td></tr>
</table></td></tr>
</table>

	<table><tr><td>Bicarbonate (HCO3)</td><td rowspan="15">As often as is necessary but not less frequently than every 3 months</td></tr><tr><td>Calcium</td></tr><tr><td>Chloride</td></tr><tr><td>Iron (total)</td></tr><tr><td>Manganese (**dissolved**)</td></tr><tr><td>Nitrate (as N)</td></tr><tr><td>pH (field measured)</td></tr><tr><td>Phosphorus (total)</td></tr><tr><td>Potassium</td></tr><tr><td>Sodium</td></tr><tr><td>Specific conductance</td></tr><tr><td>Sulphate</td></tr><tr><td>Suspended Solids</td></tr><tr><td>Total Organic Carbon (TOC)</td></tr><tr><td>Zinc</td></tr></table> **Associated monitoring requirements** 1. Monitoring must be in accordance with the methods prescribed in the current edition of the **administering authority's** *Water Quality Sampling Manual*. 2. All determinations of the quality of the receiving surface **waters** must be performed by a person or body possessing appropriate experience and qualifications to perform the required determinations.
WT6-19	Baseline surface water quality monitoring for at least water quality characteristics required in the Detection Surface Water Monitoring Program must be undertaken prior to use of any **landfill unit**.
Agency interest: Noise	
Condition number	**Condition**
N6-1	Noise from the **activity** must not exceed the levels identified in *Table N6-1 — Noise limits* when measured in accordance with the associated monitoring requirements. **Table N6-1 — Noise limits** <table><tr><th colspan="2">NOISE LIMITS AT A NOISE SENSITIVE PLACE</th></tr><tr><td>***Period***</td><td>***Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax, adj T}$</td></tr><tr><td>7 am - 6 p.m.</td><td>**Background noise level** plus 5 dB(A)</td></tr><tr><td>6 p.m. - 10 p.m.</td><td>**Background noise level** plus 5 dB(A)</td></tr><tr><td>10 p.m. - 7 am</td><td>**Background noise level** plus 3 dB(A)</td></tr><tr><th colspan="2">NOISE LIMITS AT A COMMERCIAL PLACE</th></tr><tr><td>***Period***</td><td>***Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax, adj T}$</td></tr><tr><td>7 am - 6 p.m.</td><td>**Background noise level** plus 10 dB(A)</td></tr><tr><td>6 p.m. - 10 p.m.</td><td>**Background noise level** plus 10 dB(A)</td></tr><tr><td>10 p.m. - 7 am</td><td>**Background noise level** plus 8 dB(A)</td></tr></table> **Associated monitoring requirements**

	1. All monitoring devices must be correctly calibrated and maintained. 2. Any monitoring must be in accordance with the most recent version of the **administering authority's** *Noise Measurement Manual*. 3. Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in **operation**.
N6-2	For the purposes of checking compliance with condition N6-1, monitoring and recording of the noise levels from the **activity**/activities must be undertaken for the following descriptors, characteristics and conditions: 1. $\mathbf{L_{Amax,\ adj\ T}}$ 2. $L_{Abg,\ T}$ or $L_{A90,\ T}$ 3. $L_{AN,\ T}$ (where N equals statistical levels of 1, 10, 50, 90 and 99) 4. the level and frequency of occurrence of impulsive or tonal noise 5. atmospheric conditions including temperature, relative humidity and wind speed and direction and 6. effects due to extraneous factors such as traffic noise 7. location, date and time of recording.

Agency interest: Land

Condition number	Condition
L6-1	All filled areas must be stabilised as soon as practicable, but not longer than three (3) months, after completion of waste disposal **operations**. For the purpose of this condition, stabilising **measures** may include provision of effective drainage systems, mulching and revegetation.
L6-2	**Land** that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: 1. suitable species of vegetation for the location are established and sustained for earthen surfaces 2. potential for erosion is minimised 3. potential for environmental nuisance caused by dust is minimised 4. the final landform is stable and protects public safety 5. access to areas awaiting rehabilitation or being rehabilitated must be restricted by suitable barriers to prevent disturbance of these areas.
L6-3	When the deposition of waste to the **landfill unit** ceases, a final capping system to the **landfill unit** must be designed by an **appropriately qualified person** and installed to minimise: 1. **infiltration** of water into the **landfill unit** and water ponding on the surface, and 2. the likelihood of any erosion occurring to either the final capping system or the landfilled materials. A final capping system is not required where the deposition of waste to a **landfill unit** ceases temporarily for the purpose of using an alternative working face.
L6-4	The registered operator of this approval must develop and provide to the **administering authority** a draft landfill post closure management program for review and comment at least six (6) months before the expected final receipt of waste in the **landfill facility**.
L6-5	The landfill post closure management program must include details of at least the following: 1. the total waste volumes or tonnage of the **landfill unit** being closed 2. a landform relief plan including the extent of the landfill footprint 3. the design of a final cover system including thickness and permeability of cover layers and any lateral drainage layers 4. the erosion prevention system that is designed with effective drainage systems to minimise erosion and to minimise water ponding 5. the revegetation and stabilisation program for the landfill to minimise final cover erosion and final cover species root penetration through to the waste pile 6. the procedures for maintaining and operating any stormwater management system

	7. the procedures for maintaining and operating any **leachate** collection system 8. the procedures for maintaining and operating any landfill gas collection system 9. any proposed nuisance or wildlife control procedures 10. the proposed land use at the approved place during and after the rehabilitation program, and 11. the expected date the registered operator of this approval intends to begin rehabilitation activities and the expected timelines to implement the program. For the purpose of this condition, the landfill post closure management program must be effective in preventing and/or minimising the likelihood of environmental harm being caused or allowed. The program must include **measures** and schedule timeframes to: 1. monitor and maintain the structural integrity and effectiveness of the final cover system, particularly for erosion and subsidence of the cover system 2. maintain and operate the **leachate** collection system 3. monitor any leachate, surface water, receiving water and **groundwater monitoring system** at a frequency sufficient to detect any release of **contaminants** to water resources 4. maintain and operate the landfill gas monitoring system, and 5. monitor any landfill gas management system.
L6-6	Following cessation of deposition of waste in the **landfill unit**, post-closure care of the **landfill unit** must be conducted for a period of 30 years or until the **administering authority** determines, on the basis of correct information, that the **landfill unit** and surrounding **site** are stable and that no release of waste materials, leachate, landfill gas or other **contaminants** that may cause environmental harm is likely.
L6-7	The registered operator of this approval must have due regard to any comments made by the **administering authority** on the landfill post-closure management plan.
L6-8	The registered operator of this approval must begin closure activities of the **landfill unit** no later than twenty-eight (28) days after the date on which the **landfill unit** receives the known final receipt of wastes.
L6-9	Where **regulated waste** is removed from any approved place (other than by a release as permitted under another schedule of this approval), the registered operator of this approval must monitor and keep records of the following: 1. the date, quantity and type of waste removed 2. name of the waste transporter and/or disposal operator that removed the waste, and 3. the intended treatment/disposal destination of the waste. *(NOTE: Records of documents maintained in compliance with a waste tracking system established under the* Environmental Protection Act 1994 *or any other law for **regulated waste** will be deemed to satisfy this condition.)*

Agency interest: Waste

Condition number	Condition
W6-1	Waste must not be released to the environment, stored, transferred or disposed of contrary to any condition of this approval.
W6-2	The registered operator of this approval must not: 1. allow waste to burn or be burnt at or on the approved place, nor 2. remove waste from the approved place and burn such waste elsewhere.
W6-3	Where a no-cost recycling service is available, reasonable and practicable steps must be taken to ensure recyclable waste is not deposited in the **general waste** stream. Such steps may include, but not be limited to provisions of receptacles; suitable signage; and promotion of awareness of the recycling service.

W6-4	The only waste permitted to be disposed of at the approved place are **general waste** and **limited regulated waste** as defined by Schedule 9 of the *Environmental Protection Regulation 1998*. Pursuant to Section 6A of the *Environmental Protection Regulation 1998* the registered operator of the approval must ensure the **limited regulated waste** received at each waste disposal facility is not more than ten percent (10%) of the waste received at the facility in the year.
W6-5	Notwithstanding condition W6-4, minor amounts of the **regulated waste** not specifically permitted to be accepted may be deposited at the approved place provided that: 1. the **regulated waste** is incidental to and commingled with the **general waste** stream 2. the quantity and concentration of the **regulated waste** (both individually and in aggregate) is insignificant 3. it is impracticable to segregate the **regulated waste** from other waste which is permitted to be deposited 4. if the source of the **regulated waste** is known, the person who deposited the **regulated waste** is advised that such waste must not be included in the waste stream sent to this facility and practicable steps are taken to prevent any recurrence of such deposition 5. the deposition of the **regulated waste** is not likely to cause any risk of fire, explosion, public health danger, nuisance or environmental harm, and 6. all practicable steps are taken to inform persons using the facility that such wastes must not be included in the waste stream sent to this facility.
W6-6	The quality of any treated or reprocessed wastes used as a daily cover at the waste disposal facilities must comply with the soil quality characteristics specified in *Table W6-6a - Soil Quality Characteristic Limits* and allowable leaching **contaminant** levels when measured in accordance with **Toxicity Characteristic Leaching Procedures (TCLP)** in *Table W6-6b – Allowable Leaching **Contaminant** Levels.*

Table W6-6a - Soil Quality Characteristic Limits

QUALITY CHARACTERISTIC	SOIL QUALITY CHARACTERISTIC LIMIT (mg/kg dry weight of soil)
Arsenic (total)	200
Beryllium	40
Cadmium	40
Chromium (iii)	240 000
Chromium (vi)	200
Copper	2000
Lead	600
Manganese	3000
Methyl Mercury	20
Mercury (inorganic)	30
Nickel	600
Zinc	14000

Table W6-6b – Allowable Leaching Contaminant Levels

QUALITY CHARACTERISTIC	LEACHING QUALITY CHARACTERISTIC LIMITS (mg/L)
Non Specific Contaminants	
Biochemical Oxygen Demand	20 000
Total 0rganic Carbon	10 000
Petroleum Hydrocarbons	25
Microtox LC50	* No levels set at this time
Metals/Non-Metals	
Antimony	0.5
Arsenic	0.5
Barium	10.0
Cadmium	0.05
Chromium	0.5
Cobalt	0.5
Copper	10.0
Lead	0.5

	Mercury	0.01
	Molybdenum	0.1
	Nickel	0.5
	Selenium	0.1
	Silver	0.5
	Thallium	0.1
	Tin	0.3
	Vanadium	0.5
	Zinc	50.0
	Inorganic Anions	
	Bromide	5.0
	Chloride	6 000
	Cyanide (total)	1.0
	Fluoride	15.0
	Sulphate	2 500

Nitrate	100.0
Monocyclic Aromatic Hydrocarbon (MAH)	
Benzene	0.1
Ethyl benzene	5.0
Toluene	3.0
Xylene	2.0
Total MAH	5.0
Polycyclic Aromatic Hydrocarbons (PAH)	
Anthracene	0.07
Benz (a) anthracene	0.005
Benz (c) phenanthrene	0.005
Benzo (a) pyrene	0.002
Benzo (b) fluoranthene	0.005
Benzo (k) fluoranthene	0.005
Chrysene	0.10
Dibenz (a,h) anthracene	0.002
Dibenz (a,h) pyrene	0.01
Dimethylbenz (a) anthracene	0.005
Fluoranthene	0.02
Indeno (1,2,3-cd) pyrene	0.01
Naphthalene	0.07
Phenanthrene	0.01
Pyrene	0.07
Total PAH	0.1
Phenolic Contaminants	
Non haloqenated compounds:	
Phenol	1.0
m-Cresol	2.0
o-Cresol	2.0
p-Cresol	2.0
Halogenated phenols:	
Chlorophenol	0.01
Trichlorophenol	0.1
Pentachlorophenol	0.1
Chlorinated Hydrocarbons	
Chlorinated Aliphatic Compounds:	
Carbon tetrachloride	0.03
1,2 Dichloroethane	0.1
1,1 Dichloroethene	0.003
Tetrachloroethene	0.1
Trichloroethene	0.3
Chlorinated Aromatic Compounds:	
Chlorobenzene (total)	1.0
Hexachlorobenzene	0.002
Pesticides	
Organochlorine:	
Aldrin	0.001
Chlordane	0.006
Chlorpyrifos	0.01
Dieldrin	0.001
DDT	0.003
Endrin	0.001
Heptachlor	0.003
Lindane	0.1
Methoxychlor	0.1
Toxaphene	0.005
Herbicides:	
2,4-D	0.1

	<table><tr><td>2,4-DB</td><td>0.2</td></tr><tr><td>MCPA</td><td>0.2</td></tr><tr><td>2,4,6-T</td><td>0.002</td></tr><tr><td>*Carbamates:*</td><td></td></tr><tr><td>Carbaryl</td><td>0.06</td></tr><tr><td>Carbofuran</td><td>0.03</td></tr><tr><td>*Organophosphorus:*</td><td></td></tr><tr><td>Diazinon</td><td>0.01</td></tr><tr><td>Parathion</td><td>0.03</td></tr><tr><td>Methyl Parathion</td><td>0.006</td></tr><tr><td>*Triazines:*</td><td></td></tr><tr><td>Atrazine</td><td>0.01</td></tr><tr><td>Simazine</td><td>0.01</td></tr></table>
W6-7	The only waste to be accepted at the **landfill facility** must be a waste transported to the facility by any of the following persons or classes of persons: 1. the registered operator of this approval 2. contractors acting on behalf of the registered operator of this approval, and 3. another person specifically authorised by the registered operator of this environmental authority to transport the type of waste carried by that person.
W6-8	In the event of the registered operator of this approval becoming aware of the prohibited wastes being commingled in the waste stream the registered operator of this approval must: 1. cease the depositing of such waste if depositing of such waste is occurring 2. remove the prohibited waste and store in a proper and efficient manner 3. notify the person who sent the prohibited waste to the approved place of the detection of prohibited waste in the waste received 4. as soon as practicable arrange for a person who can lawfully transport such waste to collect such waste 5. arrange for the person transporting the prohibited waste to transport such waste to a facility that can lawfully accept such waste 6. produce the following records: (a) type of prohibited waste (b) quantity of prohibited waste (c) collector and generator of prohibited waste, and (d) disposer of prohibited waste and date of disposal. *For the purpose of this condition, "prohibited waste" means a waste that is not permitted to be accepted at that **landfill facility** by a condition of this approval.*
W6-9	The following waste must be handled and disposed of as a **special burial of waste**: 1. all **putrescible waste** (other than **putrescible waste** from domestic premises), and 2. waste, which if not buried as soon as practicable, would be likely to cause environmental harm when placed in an exposed position.
W6-10	The registered operator of the approval must record at least the following information in relation to the **special burial of wastes**: 1. type of waste 2. quantity of waste 3. date of deposition 4. source of waste, and 5. if the waste is fibrous asbestos and/or mixed asbestos waste.
W6-11	Exposed wastes must be limited to the working face of the **landfill unit** and the area of exposure must be minimised to the greatest extent practicable.
W6-12	Waste must not be deposited beyond the boundaries of the **landfill unit**.
W6-13	All wastes must be deposited in lifts not exceeding a vertical height of three (3) metres except as deposition is carried out in the following circumstances:

	1. an “alternative material” is used as coverage material in accordance with conditions W6-15 and W6-16 of this approval, and 2. the registered operator of this approval complies with all other conditions of this approval.
W6-14	The working face of the **landfill unit** must be kept to the smallest size practicable and must not at any time exceed 450 square metres in area.
W6-15	Deposited waste must be covered: 1. with earthen material to a thickness of at least 0.2 metres, or 2. with the alternate cover materials ConCover/Proguard to a thickness of at least 1mm, or 3. other dense and incombustible alternative material of sufficient thickness and nature to ensure that there is no exposure of waste. For the purpose of this condition, the use of any cover alternative material must initiate a trial for a period of three (3) months, such that potential environmental harm (eg. odour, vermin breeding) is assessed and reported to the **administering authority** upon completion.
W6-16	Coverage of deposited waste must take place: 1. at least at the end of every operating day, and 2. at more frequent intervals if **putrescible waste** is deposited at that frequency necessary to ensure that such waste is not left in an exposed state.

Part 7 -– Site specific conditions

Environmentally relevant activity	Location	
60-(2b) Waste disposal >2000t but <5000t yr (1)(b)	Woodford Waste Disposal Facility, 365 Golf Course Road WOODFORD QLD 4514	Lot 365 Plan CG670, Lot 460 Plan CG4553

In addition to Part 1 the environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G7-1	Any landfill liner design and **leachate** management system must be developed by a person possessing appropriate qualifications and experience in the field of waste management including hydrogeology and geotechnical engineering to be able to competently make recommendations about these matters.
G7-2	The registered operator must maintain an effective environmental monitoring program as required by this approval for any groundwater monitoring, any receiving surface water monitoring and any landfill gas monitoring.
G7-3	The environmental monitoring program required by condition G7-2 must address at least: 1. the type and location of all environmental monitoring facilities 2. monitoring frequencies 3. sampling and monitoring procedures 4. clear and understandable explanation of the methodology to be used in the assessment of the monitoring results (including statistical tests to be used in the interpretation of data collected in the groundwater quality monitoring program), and 5. the proposed responses in the event of detection by the environmental monitoring program of any release of **contaminants** not likely to be in accordance with the conditions of this

	environmental authority.

Agency interest: Air	
Condition number	**Condition**
A7-1	When it is estimated that 250 000 tonnes or more of waste is disposed in a **landfill unit**(s) at the approved place, the registered operator must develop and implement a landfill gas monitoring program to ensure that the **landfill facility** complies with methane standards referred to in condition A7-3 of this schedule in this approval.
A7-2	Determination of all the methane gas levels must be performed as often as necessary to ensure protection of human health, having regard to: 1. the likely landfill gas generation rate 2. any previous levels of methane gas detected by the monitoring program 3. proximity of the **landfill facility** to any premises or persons likely to be adversely affected by landfill gas 4. the effectiveness of **measures** implemented to minimise any lateral migration of landfill gas, and 5. atmospheric pressure.
A7-3	Landfill gas must not exceed the following limits: 1. 25% of the **lower explosive limit** of the landfill **site boundary** when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and **leachate** collection system components), or 2. the **lower explosive limit** in subsurface geology at or beyond the landfill **site boundary**.
A7-4	If methane gas levels exceeding methane standards referred to in this approval are detected or it is estimated that 500 000 tonnes or more of waste is disposed in a **landfill unit**(s) at the approved place, the registered operator must: 1. take all necessary steps to ensure protection of human health, and 2. install a collection system for landfill gas to effectively: (a) minimise the likelihood of any subsurface migration of landfill gas from the **landfill unit**, and (b) prevent or minimise any uncontrolled emission of landfill gas.
A7-5	Landfill gas collected by any collection system must be released into the atmosphere or reused in a proper and efficient manner to prevent any adverse effect on people living in or using the surrounding area.
A7-6	The following materials must not be used for dust suppression purposes or be released on rehabilitated areas or areas being rehabilitated: 1. **leachate** or landfill gas condensate 2. waste oil or other hydrocarbons, and 3. stormwater that has become contaminated following contact with waste.

Agency interest: Water	
Condition number	**Condition**
WT7-1	No waste must be deposited into water at any time.
WT7-2	**Leachate** and any landfill gas condensate must not be released to any surface **waters**, the bed or banks of any such **waters** or to any sedimentation pond used for the treatment and/or storage of stormwater runoff.
WT7-3	Any ponds used for the storage or treatment of **contaminants** or waste must be installed and maintained so that a **freeboard** of not less than 0.5 metres is maintained at all times.

Agency interest: Noise

Condition number	Condition
N7-1	Noise from the **activity** must not exceed the levels identified in *Table N7-1 — Noise limits* when measured in accordance with the associated monitoring requirements.

Table N7-1 — Noise limits

NOISE LIMITS AT A NOISE SENSITIVE PLACE	
Period	***Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax, adj T}$
7 am - 6 p.m.	**Background noise level** plus 5 dB(A)
6 p.m. - 10 p.m.	**Background noise level** plus 5 dB(A)
10 p.m. - 7 am	**Background noise level** plus 3 dB(A)
NOISE LIMITS AT A COMMERCIAL PLACE	
Period	***Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax, adj T}$
7 am - 6 p.m.	**Background noise level** plus 10 dB(A)
6 p.m. - 10 p.m.	**Background noise level** plus 10 dB(A)
10 p.m. - 7 am	**Background noise level** plus 8 dB(A)

Associated monitoring requirements

1. All monitoring devices must be correctly calibrated and maintained.
2. Any monitoring must be in accordance with the most recent version of the **administering authority's** *Noise Measurement Manual*.
3. Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in **operation**.
4. In conjunction with the measurement and recording of noise, the following parameters and conditions must be recorded: location, date and time of recording.

Agency interest: Land

Condition number	Condition
L7-1	**Land** that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: 1. suitable species of vegetation for the location are established and sustained for earthen surfaces 2. potential for erosion is minimised 3. potential for environmental nuisance caused by dust is minimised 4. the final landform is stable and protects public safety 5. access to areas awaiting rehabilitation or being rehabilitated must be restricted by suitable barriers to prevent disturbance of these areas.
L7-2	The registered operator must develop and provide to the **administering authority** a draft post closure landfill management program for review and comment at least two (2) months before the expected final receipt of waste in the **landfill unit**.
L7-3	The post closure landfill management program must include details of at least the following:

	1. total waste volumes or tonnage of the **landfill unit** being closed 2. the design of a final cover system including thickness and permeability of cover layers and any drainage layers 3. landform relief plan including stormwater drainage pathways and controls 4. the erosion prevention system including the installation of a final cover system that is terraced and/or graded to prevent water ponding on the final cover system 5. the revegetation program for the landfill to minimise final cover erosion and final cover species root penetration to the waste pile 6. any proposed nuisance or wildlife control procedures 7. an estimated cost of the rehabilitation and closure activities over the expected post closure period 8. the proposed land use at the approved place during and after the rehabilitation program, and 9. the expected date the registered operator intends to begin rehabilitation activities and expected timelines to implement the program.
L7-4	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of environmental harm being caused. The program must include **measures** to: 1. maintain the structural integrity and effectiveness of the final capping system 2. maintain and operate the **leachate** collection system 3. maintain the **groundwater monitoring system** and monitor quality of groundwater at a frequency sufficient to detect any release of **contaminants** to groundwater 4. maintain and operate the landfill gas monitoring system, and 5. maintain and operate the landfill gas collection system.
Agency interest: Waste	
Condition number	**Condition**
W7-1	The only waste accepted for disposal within any **landfill unit** must be **general waste** excluding the following waste: 1. any liquescent waste (other than any **leachate** or landfill gas condensate generated within a **landfill unit**) 2. any **regulated waste** or sludges (other than a **regulated waste** or sludge that may be disposed at a specific licensed place as permitted by this environmental authority) 3. any **putrescible waste**, except for minor amounts and only from domestic premises that have no access to a municipal collection service 4. chemically impregnated timber with the exception of minor amounts of chemically impregnated timber commingled with other waste 5. metals with the exception of minor amounts of metals incidental to or commingled with other waste 6. plasterboard, paper and/or cardboard with the exception of minor amounts of plasterboard, paper and/or cardboard incidental to or commingled with other waste 7. paper product sludges 8. garden and/or green waste with the exception of minor amounts of garden and/or green waste incidental to or commingled with other waste, and 9. textiles including carpets and carpet underlay with the exception of minor amounts of carpets and carpet underlay incidental to or commingled with other waste.
W7-2	The only waste to be accepted at the **landfill facility** must be a waste transported to the facility by any of the following persons or classes of persons: 1. the holder of this permit 2. contractors acting on behalf of the registered operator 3. another person or class of persons specifically authorised by the registered operator to dispose of the type of waste carried by that person, and 4. if the waste accepted is a **regulated waste**, the registered operator must only accept the

	regulated waste from a person who holds a current registration certificate to transport such wastes under the provisions of the *Environmental Protection Act 1994* or otherwise the registered operator must provide in writing to the **administering authority** within seven days (7) the following information: (a) the name of the waste transporter (b) the date, quantity and type of waste accepted (c) the details from the registration label on the transport vehicle, and (d) the name of the waste generator.
W7-3	The registered operator must record at least the following information in relation to wastes to be deposited at the waste disposal facility and provide a summary in the annual report: 1. the type, date and quantity of waste deposited (including any **regulated waste**) deposited at the approved place by the registered operator, contractors and commercial operators, and 2. an estimation of the quantity of other **general waste** deposited at the approved place.
W7-4	In the event of the registered operator becoming aware of prohibited waste being commingled in any waste stream the registered operator must: 1. cease the depositing of such waste 2. remove the prohibited waste and store in a proper and efficient manner 3. notify the person who sent the prohibited waste to the approved place of the detection of prohibited waste in the waste received 4. as soon as practicable arrange for a person who can lawfully transport such waste to collect such waste 5. arrange for the person transporting the prohibited waste to transport such waste to a facility that can lawfully accept such waste 6. produce the following records: (a) type of prohibited waste (b) quantity of prohibited waste (c) date of disposal (d) name and address of the person(s) transporting the prohibited waste to the facility; (e) name and address of the person(s) who generated the prohibited waste (if such person(s) can be reasonably identified). *For the purpose of this condition, "prohibited waste" means a waste that is not permitted to be accepted at that **landfill facility** by a condition of this approval.*
W7-5	Exposed waste must be limited to the working face of any **landfill unit** and the area of exposure must be minimised to the greatest extent practicable. For the purpose of this condition, no waste must be deposited beyond the boundaries of the **landfill unit**(s).
W7-6	**Regulated waste** must not be released to the environment, stored, transferred or disposed of contrary to any condition of this approval.
W7-7	Any waste containers that have contained **regulated waste** must not contain any **regulated waste** residues in quantities or concentrations which cause or are likely to cause environmental harm when accepted for disposal. *NOTE: An example of an appropriate cleaning procedure may be a triple rinse method and subsequent treatment of rinsate by a licensed operator at an approved place.*
W7-8	Where **regulated waste** is removed from any **site** (other than by a release as permitted under another schedule of this approval), the holder of this t approval must monitor and keep records of the following: 1. the date, quantity and type of waste removed 2. name of the waste transporter and/or disposal operator that removed the waste, and 3. the intended treatment/disposal destination of the waste. *NOTE: Records of documents maintained in compliance with a waste tracking system established under the* Environmental Protection Act 1994 *or any other law for **regulated waste** will be deemed to satisfy this condition.*

W7-9	The registered operator must only accept and temporarily store the following waste at the waste disposal facilities: 1. oils 2. vehicle batteries 3. waste paint residues 4. chemicals and pesticides, and 5. tyres (stored for no longer than 10 weeks and covered from incident rainfall). For the purpose of this condition: (a) the waste must be sourced from domestic premises (b) separate and secure waste containers or containment areas must be available at all times waste listed in this condition is accepted at the approved place (c) the waste must be temporarily stored in a proper and efficient manner including stormwater segregation from the waste and provision of bunding for waste containers or containment areas, and (d) temporarily stored waste must be directed to another facility that can lawfully accept such waste as soon as practicable.
W7-10	The registered operator must conduct yearly waste composition surveys to cover at least 10 hours within a period of 5 consecutive days and to check compliance with the Waste Acceptance Criteria for the approved place.
W7-11	The waste acceptance surveys must provide for the monitoring and recording of at least the following information in relation to wastes to be deposited at the waste disposal facility: 1. type of waste (if a mixed waste load is received and waste type(s) cannot be reasonably identified, the waste should recorded as “mixed waste") 2. quantity of waste 3. date of disposal 4. class of the person(s) transporting the waste to the facility, and 5. class of person(s)/**activity** that generated the waste (if such person(s)/**activity** can be reasonably identified).
W7-12	The registered operator must submit a summary of the waste composition surveys to the **administering authority** with **annual returns**.
W7-13	Records required to be kept in relation to **special burial of waste** or deposited waste at the approved place must be kept for the post closure care period.

Definitions

Key terms and/or phrases bolded in this environmental authority 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.

activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

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

annual return means the return required by the annual notice under section 308 of the *Environment Protection Act 1994*.

appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

authorised place means the place authorised under this approval for the carrying out of the specified environmentally relevant activities.

background noise level means either:
- $L_{A90, T}$ being the A-weighted sound pressure level exceeded for 90 percent of the time period not less than 15 minutes, using Fast response, or
- $L_{Abg, T}$ being the arithmetic average of the minimum readings measured in the absence of the noise under investigation during a representative time period of not less than 15 minutes, using Fast response.

boundary means within one metre of the cadastral boundary of the site.

contaminant as defined in Section 11 of the *Environmental Protection Act 1994.*

commercial place means 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.

Department of Environment and Heritage Protection means the department or agency (whatever called) administering the *Environmental Protection Act 1994*.

dewatered means the material does not yield free liquid and “free liquid” means liquid which readily separates from the solid portion of a waste under ambient temperature and pressure as determined by Method 9095 (Paint Filter Liquids Test) described in “U.S. EPA: Free Liquids (Paint Filter)” Federal Register, Vol. 50, No. 83, page 18370, April 30, 1985.

dissolved in relation to water samples means filtered <45 µm.

freeboard means the distance between the water surface and overflow point.
general waste means waste other than regulated waste.

groundwater monitoring system means a system of groundwater monitoring devices, such as monitoring bores, used to provide data in respect to the level and quality of groundwater in the uppermost aquifer where the location of the groundwater monitoring devices is such that comparisons of groundwater quality and groundwater level can be made between groundwater flowing from beneath the site (down-gradient flow) of the activity and groundwater flowing towards the site of the activity (up-gradient flow).

infiltration means all flows entering a sewage reticulation system other than those flows that are legally permitted to enter the sewage reticulation system. Infiltration may be from:
- stormwater/groundwater inflows; or
- illegal connections.

intrusive noise means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration :
- is clearly audible to, or can be felt by, an individual; and
- annoys the individual.
- in determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to

Australian Standard 1055.2 – 1997 *Acoustics – Description and Measurement of Environmental Noise* Part 2 – Application to Specific Situations.

$L_{A\ 10,\ adj,\ 15\ mins}$ 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.

$L_{A,\ max\ adj,\ T}$ means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 15 minute period, using Fast response.

land does not include waters.

landfill facility means land and structures at the licensed place used for the disposal of solid waste.

landfill unit means a discrete area of land or an excavation that receives solid waste

leachate means a liquid that has passed through, over or emerged from, or is likely to have passed through, over or emerged from, a waste material stored, processed or disposed of at the place to which this development approval related that contains soluble, suspended or miscible contaminants likely to have been derived from contact with the waste material.

limited regulated waste means any of the following regulated wastes - asbestos, infectious substances or quarantine waste that has been rendered non-infectious, contaminated soil, fish processing waste, food processing waste, poultry processing waste, tyres or treatment tank sludge or residue produced in sewage treatment or water treatment plants.

lower explosive limit means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25^{o}C and atmospheric pressure.

Max $L_{pA,\ 15\ mins}$ means the maximum A-weighted sound pressure level measured over any 15 minute period, using Fast response.

mg/L means milligrams per litre.

µg/L means micrograms per litre.

µS/cm means microSiemens per centimetre

maximum means that the measured value of the quality characteristic or contaminant must not be greater than the limit stated.

Measures has the broadest interpretation and includes plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.

median means the middle value, where half the data, when ranked, are smaller, and half the data are larger. If the number of data points is even, the median is the arithmetic average of the two middle values when the data are ranked.

minimum means that the measured value of the quality characteristic or contaminant must not be less than the limit stated.

noxious means harmful or injurious to health or physical well-being.

nuisance sensitive place includes:
- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- 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.

offensive means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or

repulsive.

post closure care refers to a waste disposal facility that is closed, no longer accepts waste for the purpose of disposal, and has had the final capping installed in accordance with the requirements of the relevant environmental authority.

plant, equipment and measures includes:
- any plant, equipment and measures used to prevent and/or minimise the likelihood of environmental harm being caused;
- any devices and structures to contain foreseeable escapes of contaminants and waste;
- any vehicles used to transport waste;
- any device or structure used to store, handle, treat or dispose of waste;
- any sediment and erosion control measures;
- any monitoring equipment and associated alarms; and
- any backup systems that act in the event of failure of a primary system.

putrescible waste means waste food or waste animal matter (including dead animals and animal parts), and includes any mixtures of such waste.

range means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor less than the lower release limit stated.

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

site means land or tidal waters on or in which it is proposed to carry out the development approved under this approval.

special burial of waste means a disposal method where earth moving equipment pushes the waste to the bottom of the working face or into an excavated hole, and immediately covers it with earth or other waste material.

Toxicity Characteristic Leaching Procedure (TCLP) means the test described in "*U.S. EPA: Toxicity Characteristic Leaching Procedure (TCLP)"* Federal Register, 40 CFR, Vol. 51, No. 286, Appendix 2, Part 268, page 40643 or as modified to reflect non-acidic leaching procedures suitable for waste characteristic assessment where co-disposal with putrescible wastes will not occur.

uppermost aquifer means the geologic formation nearest to the natural ground surface that is an aquifer. The term includes any aquifers that are likely to be hydraulically interconnected with this aquifer within the landfill facility property boundary.

watercourse means a river, creek or stream in which water flows permanently or intermittently:
- in a natural channel, whether artificially improved or not; or
- in an artificial channel that has changed the course of the watercourse.

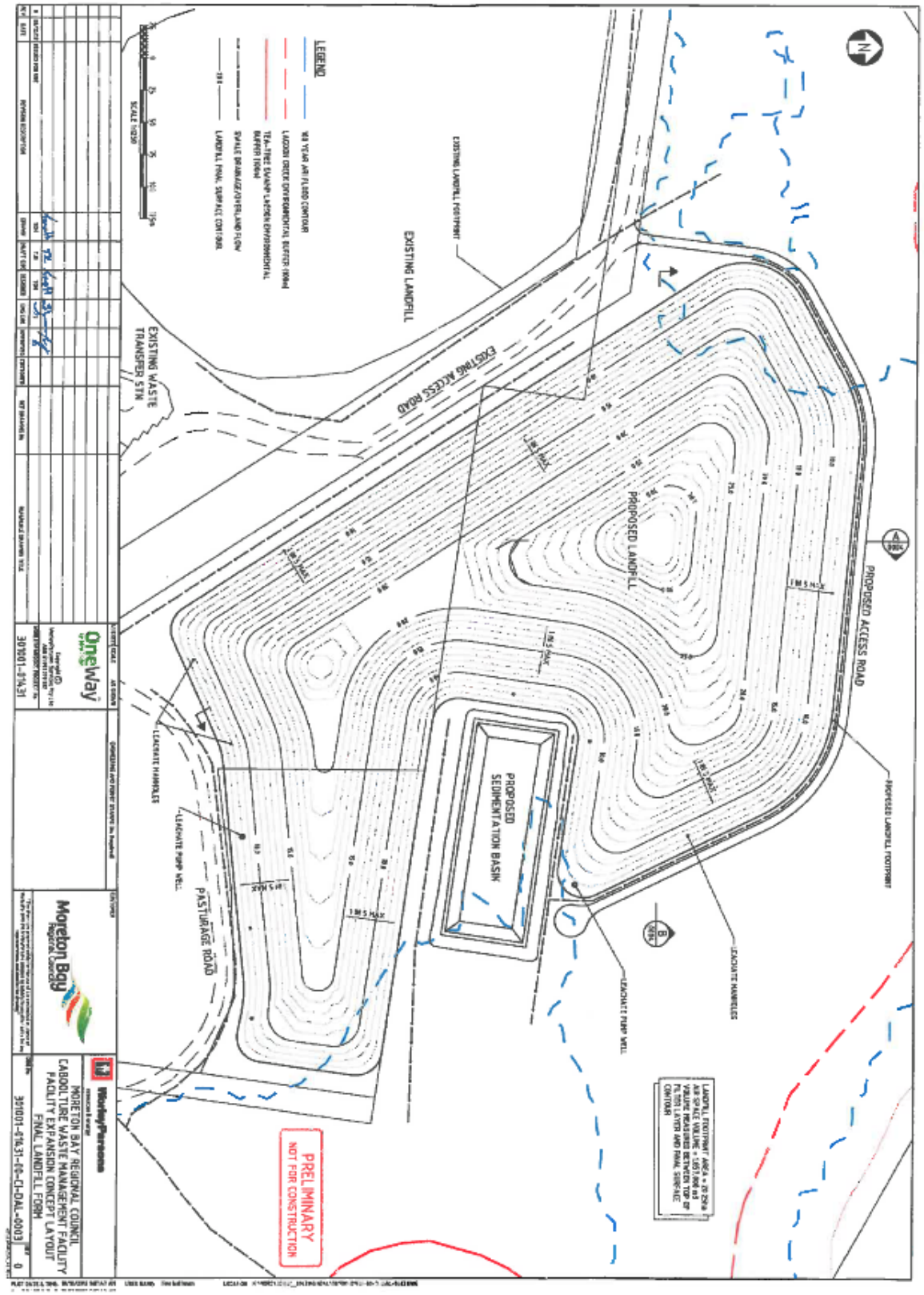
waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off,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

works or **operation** means the development approved under this development approval.

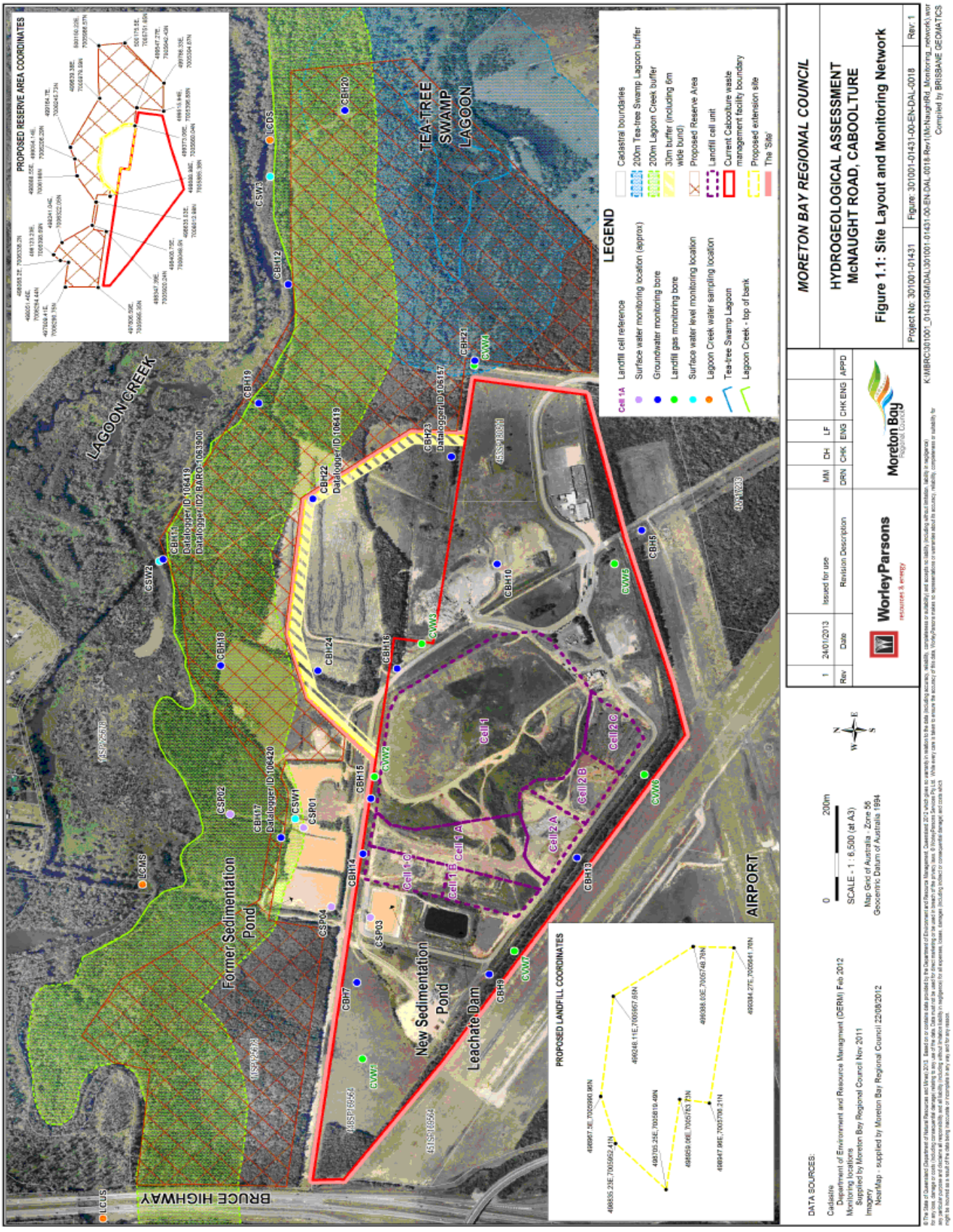
you means the holder of this approval or owner / occupier of the land which is the subject of this approval.

Schedule 1—Approved plans

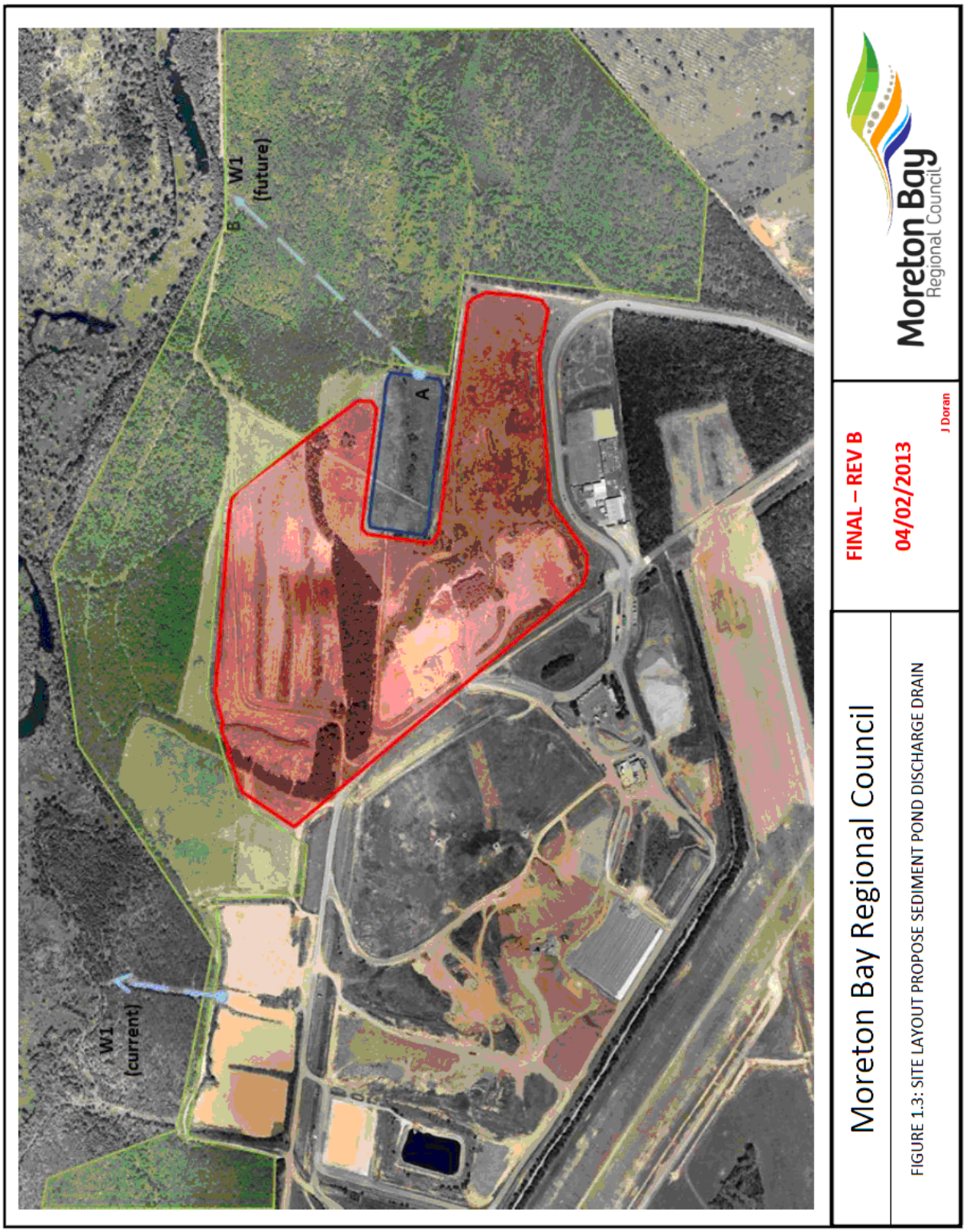
Attachment 1



Attachment 2



Attachment 3 – Discharge location W1 to Lagoon Creek



Attachment 4 – Bunya landfill footprint



Post closure landfill area is outlined in **yellow**.

Active landfill area is identified as Cells 1 through 7 outlined in **blue**, except for the area in Cell 1 that is located within the post closure landfill area.

END OF ENVIRONMENTAL AUTHORITY