

# Permit

## Environmental Protection Act 1994

### Environmental authority EPPR00829313

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

#### Environmental authority number: EPPR00829313

#### Environmental authority takes effect on the day it is signed by the delegate.

The anniversary date of this environmental authority remains as **02 August**. The payment of the annual fee will be due each year on this day.

#### Environmental authority holder

Name	Registered address
GOLD COAST CITY COUNCIL	135 Bundall Road SURFERS PARADISE QLD 4217

#### Environmentally relevant activity and location details

Environmentally relevant activities	Locations
60-(2h) Waste disposal >200000t yr (1)(b) 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186
60-(4) Maintaining a decommissioned waste disposal facility	<b>Arundel Landfill</b> Captain Cook Drive, Arundel - Suntown Waste Disposal Lot 3/SP217040 and Lot 10/RP210089
60-(2e) Waste disposal >20000t but <50000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Molendinar Landfill</b> Old Coach Road, Molendinar Part of Lot 11/SP129405
60-(2b) Waste disposal >2000t to 5000t yr (1)(b)	<b>Jacobs Well Landfill</b> 79 Behms Road, Jacobs Well



Environmentally relevant activities	Locations
	Lot 477/SP136098
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Tugun Landfill</b> Boyd Street, Tugun Lot 1/SP348582 Lot 2/ SP348582 Lot 3/SP348582 Lot 4/SP348582
60-(2h) Waste disposal >200000t yr (1)(b) 16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085
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### 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](http://www.qld.gov.au), using the search term 'duty to notify'.

#### Take effect

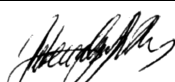
Please note that, in accordance with section 200 of the EP Act, an EA has effect:

- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
- b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
- c) otherwise- one 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.



Signature

Rebecca Griffiths  
Department of the Environment, Tourism, Science  
and Innovation  
Delegate of the administering authority  
*Environmental Protection Act 1994*

02/12/2024

Date

**Enquiries:**  
Utilities and Government Organisations  
Assessment  
Department of the Environment, Tourism, Science  
and Innovation  
Phone: 1300 130 372  
Email: [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Obligations under the *Environmental Protection Act 1994***

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

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

**Other permits required**

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

**Contents:**

<b>PART 1 - COMMON CONDITIONS</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2h) Waste disposal >200000t yr (1)(b) 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186
60-(2e) Waste disposal >20000t but <50000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Molendinar Landfill</b> Old Coach Road, Molendinar Part of Lot 11/SP129405
60-(2b) Waste disposal >2000t to 5000t yr (1)(b)	<b>Jacobs Well Landfill</b> 79 Behms Road, Jacobs Well Lot 477/SP136098
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Tugun Landfill</b> Boyd Street, Tugun Lot 1/SP348582 Lot 2/ SP348582 Lot 3/SP348582 Lot 4/SP348582
60-(2h) Waste disposal >200000t yr (1)(b) 16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085
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<b>PART-2 - COMMON CONDITIONS FOR LANDFILL ACTIVITIES</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2h) Waste disposal >200000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186
60-(2e) Waste disposal >20000t but <50000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Molendinar Landfill</b> Old Coach Road, Molendinar Part of Lot 11/SP129405
60-(2b) Waste disposal >2000t to 5000t yr (1)(b)	<b>Jacobs Well Landfill</b> 79 Behms Road, Jacobs Well Lot 477/SP136098
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Tugun Landfill</b> Boyd Street, Tugun Lot 1/SP348582 Lot 2/ SP348582 Lot 3/SP348582 Lot 4/SP348582
60-(2h) Waste disposal >200000t yr (1)(b) 16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085
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<b>PART-3 - COMMON CONDITIONS FOR QUARRY AND CRUSHING ACTIVITIES</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186

16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085
16-(2c) Extractive >1000000t yr 16-(3c) Screening >1000000t yr 16-(3c) Screening >1000000t yr	<b>Burleigh Heads Landfill</b> 45 Hutchinson Street, Burleigh Heads Lot 1/SP287365
<b>PART 4 - SITE SPECIFIC CONDITIONS – STAPYLTON LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2h) Waste disposal >200000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186
<b>PART 5 - ARUNDEL LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(4) Maintaining a decommissioned waste disposal facility	<b>Arundel Landfill</b> Captain Cook Drive, Arundel - Suntown Waste Disposal Lot 3/SP217040 and Lot 10/RP210089
<b>PART 6 - SITE SPECIFIC CONDITIONS – MOLENDINAR LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2e) Waste disposal >20000t but <50000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Molendinar Landfill</b> Old Coach Road, Molendinar Part of Lot 11/SP129405
<b>PART 7 - SITE SPECIFIC CONDITIONS – REEDY CREEK LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2h) Waste disposal >200000t yr (1)(b) 16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085

<b>PART 8 - SITE SPECIFIC CONDITIONS – BURLEIGH HEADS LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 60-(2f) Waste disposal >50000t but <100000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Burleigh Heads Landfill</b> 45 Hutchinson Street, Burleigh Heads Lot 1/SP287365
<b>PART 9 - SITE SPECIFIC CONDITIONS – QUARRY AND CRUSHING ACTIVITIES AT BURLEIGH HEADS LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
16-(2c) Extractive>1000000t yr 16-(3c) Screening >1000000t yr	<b>Burleigh Heads Landfill</b> 45 Hutchinson Street, Burleigh Heads Lot 1/SP287365
<b>PART 10 - SITE SPECIFIC CONDITIONS – JACOBS WELL LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2b) Waste disposal >2000t to 5000t yr (1)(b)	<b>Jacobs Well Landfill</b> 79 Behms Road, Jacobs Well Lot 477/SP136098
<b>PART 11 - SITE SPECIFIC CONDITIONS – TUGUN LANDFILL</b>	
<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Tugun Landfill</b> Boyd Street, Tugun Lot 1/SP348582 Lot 2/ SP348582 Lot 3/SP348582 Lot 4/SP348582

**Conditions of environmental authority**

**Part 1 - Common Conditions for All Activities (except ERA 60-(4) Maintaining a decommissioned waste disposal facility)**

Environmentally relevant activities	Locations
60-(2h) Waste disposal >200000t yr (1)(b) 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186
60-(2e) Waste disposal >20000t but <50000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Molendinar Landfill</b> Old Coach Road, Molendinar Part of Lot 11/SP129405
60-(2b) Waste disposal >2000t to 5000t yr (1)(b)	<b>Jacobs Well Landfill</b> 79 Behms Road, Jacobs Well Lot 477/SP136098
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Tugun Landfill</b> Boyd Street, Tugun Lot 1/SP348582 Lot 2/ SP348582 Lot 3/SP348582 Lot 4/SP348582
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The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: General	
Condition number	Condition
P1-G1	All reasonable and practicable <u>measures</u> must be taken to minimise the likelihood of environmental harm being caused.
P1-G2	Any breach of a condition of this environmental authority must be reported to the <u>administering authority</u> as soon as practicable, or at most, within 24 hours of <u>you</u> becoming aware of the breach. <u>Records</u> must be kept including full details of the breach and any subsequent actions undertaken.
P1-G3	Other than as permitted by this environmental authority, the <u>release of a contaminant into the environment</u> must not occur.
P1-G4	All information and <u>records</u> 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 <u>records</u> required by the conditions of this environmental authority must be provided to the <u>administering authority</u> upon request.
P1-G5	An <u>appropriately qualified person(s)</u> 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.
P1-G6	All analyses required under this environmental authority must be carried out by a laboratory that has <u>NATA</u> certification, or an equivalent certification, for such analyses.
P1-G7	When required by the <u>administering authority</u> , monitoring must be undertaken in the manner prescribed by the <u>administering authority</u> , to investigate a complaint that is not considered by the <u>administering authority</u> to be frivolous or vexatious, of <u>environmental nuisance</u> arising from the <u>activity</u> . The monitoring results must be provided to the <u>administering authority</u> upon request.
P1-G8	<p>The <u>activity</u> must be undertaken in accordance with written procedures that:</p> <ol style="list-style-type: none"> <li>1) identify potential risks to the environment from the <u>activity</u> during routine operations, closure and an emergency;</li> <li>2) establish and maintain control <u>measures</u> that minimise the potential for <u>environmental harm</u>;</li> <li>3) ensure plant, equipment and <u>measures</u> are maintained in a proper and effective condition;</li> <li>4) ensure plant, equipment and <u>measures</u> are operated in a proper and effective manner;</li> <li>5) ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and</li> <li>6) ensure that reviews of environmental performance are undertaken at least annually.</li> </ol> <p>The written procedures must be developed and implemented by 31/12/2018. Site-specific requirements for Integrated Environmental Systems and/or Site Based Management Plans under the superseded environmental authority EPPR00829313 issued 25 November 2014, remain in effect until 01 December 2018, at which point all requirements of this condition take effect for all sites under this environmental authority.</p>

Agency interest: Air	
Condition number	Condition
P1-A1	Odours or airborne contaminants which are <u>noxious</u> or <u>offensive</u> or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any <u>sensitive place</u> or <u>commercial place</u> .
P1-A2	For the period 19 March 2018 to 20 April 2018, noise generated by the Stapylton, Molendinar and Reedy Creek waste disposal facilities are not subject to the requirements of conditions P4-N1 (previously N4 – 1), P6-N1 (previously N6 – 1) and P7-N1 (previously N7 – 1). <u>You</u> must take all reasonable and practicable <u>measures</u> to avoid, mitigate or minimise noise nuisance.
Agency interest: Land	
Condition number	Condition
P1-L1	<p><u>Land</u> that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that:</p> <ol style="list-style-type: none"> <li>1) suitable species of vegetation for the location are established and sustained for earthen surfaces;</li> <li>2) potential for erosion is minimised;</li> <li>3) the quality of <u>water</u>, including seepage, released from the site does not cause environmental harm;</li> <li>4) potential for <u>environmental nuisance</u> caused by dust is minimised;</li> <li>5) the water quality of any residual water body does not have potential to cause environmental harm; and</li> <li>6) the final landform is stable and protects public safety.</li> </ol>

**Part 2 - Common Conditions for Landfill Activities (except 60-(4) Maintaining a decommissioned waste disposal facility)**

<b>Environmentally relevant activities</b>	<b>Locations</b>
60-(2h) Waste disposal >200000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186
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60-(2b) Waste disposal >2000t to 5000t yr (1)(b)	<b>Jacobs Well Landfill</b> 79 Behms Road, Jacobs Well Lot 477/SP136098
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Tugun Landfill</b> Boyd Street, Tugun Lot 1/SP348582 Lot 2/ SP348582 Lot 3/SP348582 Lot 4/SP348582
60-(2h) Waste disposal >200000t yr (1)(b) 16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085
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The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

<b>Agency interest: General</b>	
<b>Condition number</b>	<b>Condition</b>

P2-G1	All reasonable and practicable <u>measures</u> must be taken to contain litter within the <u>waste operations area</u> , and retrieve litter released.
P2-G2	In addition to any site-specific requirements, all <u>landfill units</u> commenced after 1 January 2018, must include a <u>leachate</u> collection system designed by an <u>appropriately qualified person</u> and installed and maintained to: <ol style="list-style-type: none"> <li>1) collect <u>leachate</u> generated in the <u>landfill unit</u>;</li> <li>2) convey the collected <u>leachate</u> out of the <u>landfill unit</u> to an appropriate <u>leachate</u> storage facility; and</li> <li>3) restrict the height of the <u>leachate</u> above the liner system to a <u>maximum</u> level of 300mm or another value with equivalent <u>leachate</u> minimisation performance as agreed with the <u>administering authority</u>.</li> </ol>
P2-G3	The <u>leachate</u> collection system requirements of condition P2-G2 also apply to <u>landfill units</u> constructed after 1998 for the following landfill sites: <ol style="list-style-type: none"> <li>1) Staplyton</li> <li>2) Molendinar</li> <li>3) Reedy Creek</li> <li>4) Burleigh Heads</li> </ol> <p>Note: Molendinar and Burleigh Heads sites must comply with condition P2-G2 points 1 and 2 only.</p>
P2-G4	<u>Leachate</u> and stormwater runoff which has been in contact with waste materials in the <u>landfill unit</u> , must be collected in the <u>leachate</u> storage facility and be: <ol style="list-style-type: none"> <li>1) treated in the <u>leachate</u> treatment plant and discharged to sewer in accordance with the requirements of the relevant water utility; or</li> <li>2) recirculated through waste disposed in the <u>landfill unit</u>; or</li> <li>3) treated by alternative technologies agreed by the <u>administering authority</u> for offsite disposal, discharge, or on-site reuse; or</li> <li>4) disposed of at a facility that is approved to receive such waste.</li> </ol>
P2-G5	All reasonable and practicable <u>measures</u> must be taken to exclude vectors and <u>pest species</u> to the extent necessary to prevent: <ol style="list-style-type: none"> <li>1) nuisance to occupiers of neighbouring premises</li> <li>2) any danger or risk to the health of any persons.</li> </ol>
<b>Agency interest: Air</b>	
<b>Condition number</b>	<b>Condition</b>
P2-A1	The following materials must not be used for dust suppression purposes: <ol style="list-style-type: none"> <li>1) <u>leachate</u> generated in the landfill or landfill gas condensate; or</li> <li>2) waste oil or other hydrocarbons.</li> </ol>
<b>Agency interest: Water</b>	

Condition number	Condition
P2-WT1	The stormwater runoff from <u>disturbed areas</u> , generated by (up to and including) a <u>24 hour storm event with an average recurrence interval of 1 in 10 years</u> must be retained on site or managed to remove contaminants before release.
P2-WT2	The controlled release of treated/settled stormwater must be conducted in a way and at a rate that does not cause: <ol style="list-style-type: none"> <li>1) re-suspension of particles; or</li> <li>2) erosion of bed or banks or receiving <u>waters</u>; or</li> <li>3) landscaping damage; or</li> <li>4) ponding of the water; or</li> <li>5) vegetation damage.</li> </ol>
P2-WT3	All batteries, <u>liquid</u> chemicals, fuels, and other <u>liquid</u> substances with potential to cause environmental harm must be stored within a secondary containment system that is impervious to the materials stored within it and must be managed to prevent the release of contaminants to <u>waters</u> or <u>land</u> .
P2-WT4	In addition to any site specific requirements, all new <u>landfill units</u> commenced after 1 January 2018 must have a liner system installed and maintained to: <ol style="list-style-type: none"> <li>1) prevent release of contaminants, including <u>leachate</u>, to <u>land</u> and <u>waters</u>; and</li> <li>2) prevent subsurface migration of landfill gas from the <u>landfill unit</u>.</li> </ol>
P2-WT5	The liner system requirements of condition P2-WT4 also apply to <u>landfill units</u> constructed after 1998 for the following landfill sites: <ol style="list-style-type: none"> <li>1) Staplyton</li> <li>2) Reedy Creek</li> </ol>
<b>Agency interest: Waste</b>	
Condition number	Condition
P2-W1	The following waste streams must not be permitted to be placed at the landfill facility at any time: <ol style="list-style-type: none"> <li>1) <u>liquid</u> or semiliquid waste, other than:               <ol style="list-style-type: none"> <li>a. <u>liquid</u> or semi-liquid waste which has been produced in the carrying out of the <u>activity</u>;</li> <li>b. <u>liquid</u> or semi-liquid waste that is incidental to, and commingled with, the permitted waste streams.</li> </ol> </li> <li>2) hot ash;</li> <li>3) material that is smouldering or aflame;</li> <li>4) material containing a substance which is ignitable, corrosive, reactive or <u>toxic material</u> (other than materials containing a toxic substance from domestic premises) unless this material is to be deposited into a dedicated monocell with a written approval of the <u>administering authority</u>;</li> </ol>

	<p>5) all radioactive wastes, unless otherwise approved under the <i>Radiation Safety Act 1999</i> or approved contaminated soil;</p> <p>6) an explosive; and</p> <p>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.</p>
P2-W2	Deposited waste must be covered as soon as practicable to limit stormwater infiltration, prevent exposure of waste and prevent issues arising from vectors and <u>pest</u> species.
P2-W3	Excepting combustion of landfill gas, waste must not be burnt.
<b>Agency interest: Land</b>	
<b>Condition</b>	
P2-L1	<p>When the deposition of waste to the <u>landfill unit</u> ceases, a final capping system to the <u>landfill unit</u> must be designed by an <u>appropriately qualified person</u> and installed to minimise:</p> <ol style="list-style-type: none"> <li>1) infiltration of water into the <u>landfill unit</u> and water ponding on the surface; and</li> <li>2) the likelihood of any erosion occurring to either the final capping system or the landfilled materials.</li> </ol> <p>A final capping system is not required where the deposition of waste to a <u>landfill unit</u> ceases temporarily for the purpose of using an alternative working face.</p>
P2-L2	In addition to the requirement of condition P2-L1, <u>land</u> that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that the contaminant concentrations within the final capping layer are appropriate for the final land use and in accordance with the 'National Environmental Protection (Assessment of Soil Contamination) Measure 1999.'
P2-L3	Following cessation of deposition of waste in the <u>landfill unit</u> , post-closure care of the <u>landfill unit</u> must be conducted for a period of 30 years or until the <u>administering authority</u> determines, on the basis of correct information, that the <u>landfill unit</u> and surrounding site are stable and that no release of waste materials, <u>leachate</u> , landfill gas or other contaminants that may cause environmental harm is likely.
P2-L4	<p>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 <u>measures</u> to:</p> <ol style="list-style-type: none"> <li>1) maintain the structural integrity and effectiveness of the final capping system;</li> <li>2) maintain and operate the <u>leachate</u> collection system (where required to be installed);</li> <li>3) maintain the <u>groundwater monitoring system</u> (where required to be installed) and monitor quality of <u>groundwater</u> at a frequency sufficient to detect any release of contaminants to <u>groundwater</u>;</li> <li>4) maintain and operate the landfill gas monitoring system (where required to be installed); and</li> <li>5) maintain and operate the landfill gas collection system (where required to be installed).</li> </ol>
P2-L5	A site management plan pursuant to Chapter 7, Part 8, Division 5 of the <i>Environmental Protection Act 1994</i> must be developed and provided to the <u>administering authority</u> at least

	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 be taken for compliance with the closure and post-closure care requirements of this environmental authority.
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**Part 3 - Common Conditions for Quarry and Crushing Activities**

Environmentally relevant activities	Locations
54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186
16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085
16-(2c) Extractive >1000000t yr 16-(3c) Screening >1000000t yr	<b>Burleigh Heads Landfill</b> 45 Hutchinson Street, Burleigh Heads Lot 1/SP287365

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: Air	
Condition number	Condition
P3-A1	Dust and particulate matter emissions must not exceed the following concentrations at any <u>sensitive place</u> or <u>commercial place</u> : <ol style="list-style-type: none"> <li>1) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or</li> <li>2) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (<math>\mu\text{m}</math>) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions).</li> </ol>
P3-A2	Dust and particulate matter monitoring requested by the <u>administering authority</u> must: <ol style="list-style-type: none"> <li>1) be undertaken over a period of at least three consecutive thirty day periods; and</li> <li>2) be carried out at places relevant to the potentially affected <u>sensitive place</u> or <u>commercial place</u> and at suitable representative reference site(s) unlikely to be affected by the <u>activity</u>; and</li> <li>3) be carried out at a sufficient number of monitoring points to enable compliance assessment with condition P3-A1 above; and</li> <li>4) take into account:</li> </ol>

	<ul style="list-style-type: none"> <li>a. locations of dust and particulate sources; and</li> <li>b. locations of persons or sites potentially affected by any release of dust or particulate matter from the <u>activity</u>; and</li> </ul> <p>5) be carried out in accordance with the latest edition of the <u>administering authority's Air Quality Sampling Manual</u>; and</p> <p>6) be undertaken in conjunction with the recording of precipitation, wind speed and direction in accordance with the requirements of the relevant standards within AS3580.</p>
<b>Agency interest: Water</b>	
<b>Condition number</b>	<b>Condition</b>
P3-WT1	The stormwater runoff from <u>disturbed areas</u> , generated by (up to and including) a <u>24 hour storm event with an average recurrence interval of 1 in 5 years</u> must be retained on site or managed to remove contaminants before release.
<b>Agency interest: Waste</b>	
<b>Condition number</b>	<b>Condition</b>
P3-W1	All waste generated in carrying out the <u>activity</u> must be reused, recycled or removed to a facility that can lawfully accept the waste.
<b>Agency interest: Land</b>	
<b>Condition</b>	
P3-L1	Treatment and management of acid sulfate soils must comply with the current edition of the Queensland Acid Sulfate Soil Technical Manual.
P3-L2	Rehabilitation of <u>disturbed areas</u> required under condition P1-L1, must take place progressively as works are staged and new areas of extraction are commenced.

**Part 4 - Site Specific Conditions – Stapylton Landfill**

Environmentally relevant activity	Locations
60-(2h) Waste disposal >200000t yr (1)(b) 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Stapylton landfill</b> 32 Rossmanns Road Stapylton Lot 2/RP153665, Lot 2/RP209307, Lot 3/RP209307, Lot 1/RP6936, and Lot 466/W312186

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: General	
Condition number	Condition
P4-G1	Activities conducted under this environmental authority must not be conducted contrary to the following limitation:  For cells 5, 6, 7, 8 and 9, the base of the landfill liner must not be installed any deeper than 2 metres above the uppermost expected <u>groundwater</u> level beneath or immediately adjacent to the deposited waste.
Agency interest: Air	
Condition number	Condition
P4-A1	Landfill gas is not considered to cause environmental harm if: <ol style="list-style-type: none"> <li>1) a landfill gas collection system is installed and maintained when the <u>landfill unit</u> is sufficiently elevated to allow adequate drainage of gas lines; and</li> <li>2) landfill gas monitoring shows that the release of methane does not exceed the following limits: <ol style="list-style-type: none"> <li>a. 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the <u>landfill unit</u>;</li> <li>b. 25 percent of the <u>lower explosive limit</u> when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and <u>leachate</u> collection system components);</li> <li>c. the <u>lower explosive limit</u> at or beyond the landfill site <u>boundary</u>; and</li> </ol> </li> <li>3) landfill gas collected is reused or efficiency flared in a manner that avoids environmental harm.</li> </ol>
P4-A2	A landfill gas monitoring network must be installed for each <u>landfill unit</u> to measure methane levels in facility structures and at the landfill site <u>boundary</u> , as prescribed by condition P4-A1. The network must consist of gas monitoring devices, such as monitoring bores and be developed by an <u>appropriately qualified person</u> in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.

P4-A3	If methane gas levels exceeding methane standards referred to in condition P4-A1 are detected, all necessary steps must immediately be taken to ensure protection of human health.																				
<b>Agency interest: Water</b>																					
<b>Condition number</b>	<b>Condition</b>																				
P4-WT1	<p>The only contaminants to be released to surface <u>waters</u> are settled /treated stormwater runoff from release points STSW1 and STSW2 to waters described as the un-named creek line to the south-eastern side of the site flowing to Sandy Creek and Logan River in accordance with <i>Table 4-1—Surface water release limits</i> and the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table 4-1 – Surface water release limits</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Quality Characteristic Determination (See Notes)</th> <th>Release Points and Receiving Water Reference Points</th> <th>Release Limits</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Suspended Solids</td> <td>STSW1 &amp; STSW2<sup>a</sup></td> <td>Max 50 mg/L</td> <td rowspan="5" style="text-align: center;">Quarterly upon release</td> </tr> <tr> <td>pH</td> <td>STSW1 &amp; STSW2</td> <td>Min 6.5 Max 9.0</td> </tr> <tr> <td>Specific Conductance</td> <td>STSW1 &amp; STSW2</td> <td>Max 1500 µS/cm</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>STSW1 &amp; STSW2</td> <td>Min 6 mg/L</td> </tr> <tr> <td>Total Organic Carbon</td> <td>STSW1 &amp; STSW2</td> <td>Max 30 mg/L</td> </tr> </tbody> </table> <p>Notes</p> <p><sup>a</sup> Release point STSW1 and STSW2 refer to settled/treated stormwater runoff via the discharge structure, being either the drain from or overflow spillway of the final element of sediment control system that collects drainage and stormwater runoff contaminated by sediment at the premises to which this environmental authority relates, as depicted in Attachment 1 – Stormwater Release Points and Monitoring Locations from the Gold Coast City Council Staplyton Landfill Stormwater Management Plan prepared by ATC Williams Pty Ltd, dated May 2013</p> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's Water Quality Sampling Manual</u>.</li> <li>2) Samples must be taken using representative samples.</li> <li>3) All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.</li> <li>4) Monitoring must be undertaken during a release as per the frequency stated.</li> <li>5) All monitoring devices must be correctly calibrated and maintained.</li> </ol>	Quality Characteristic Determination (See Notes)	Release Points and Receiving Water Reference Points	Release Limits	Frequency	Suspended Solids	STSW1 & STSW2 <sup>a</sup>	Max 50 mg/L	Quarterly upon release	pH	STSW1 & STSW2	Min 6.5 Max 9.0	Specific Conductance	STSW1 & STSW2	Max 1500 µS/cm	Dissolved Oxygen	STSW1 & STSW2	Min 6 mg/L	Total Organic Carbon	STSW1 & STSW2	Max 30 mg/L
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P4-WT2	Monitoring of contaminant releases to <u>waters</u> must be undertaken in accordance with condition P4-WT1 and <u>records</u> of the results must be kept.																				

P4-WT3	<p>In addition to P4-WT2, the release to <u>waters</u> must not:</p> <ol style="list-style-type: none"> <li>1) have any properties at a concentration that is capable of causing environmental harm; and</li> <li>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.</li> </ol>																																
P4-WT4	<p>The release of contaminants to <u>groundwater</u> as a result of the <u>activity</u> must:</p> <ol style="list-style-type: none"> <li>1) be monitored from the <u>uppermost aquifer</u> at locations hydraulically up-gradient and down-gradient of the landfilled waste; and</li> <li>2) not cause environmental harm; or</li> <li>3) not exceed the limits for the quality characteristics prescribed in Table 4-2—<u>Groundwater</u> quality limits—Detection monitoring, when measured in accordance with the table.</li> </ol> <p style="text-align: center;"><b>Table 4-2 – <u>Groundwater</u> quality limits – Detection monitoring</b></p> <table border="1" data-bbox="363 869 1385 1910"> <thead> <tr> <th data-bbox="363 869 683 936">Quality Characteristic</th> <th data-bbox="683 869 1106 936">Limit</th> <th data-bbox="1106 869 1385 936">Limit Type</th> </tr> </thead> <tbody> <tr> <td data-bbox="363 936 683 1037">Aluminium mg/L</td> <td data-bbox="683 936 1106 1037">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 936 1385 1037"><u>Maximum</u></td> </tr> <tr> <td data-bbox="363 1037 683 1137">Ammonia (as N) mg/L</td> <td data-bbox="683 1037 1106 1137">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 1037 1385 1137"><u>Maximum</u></td> </tr> <tr> <td data-bbox="363 1137 683 1238">Iron (total) mg/L</td> <td data-bbox="683 1137 1106 1238">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 1137 1385 1238"><u>Maximum</u></td> </tr> <tr> <td data-bbox="363 1238 683 1339">Manganese (dissolved) mg/L</td> <td data-bbox="683 1238 1106 1339">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 1238 1385 1339"><u>Maximum</u></td> </tr> <tr> <td data-bbox="363 1339 683 1429" rowspan="2">pH (field measured)</td> <td data-bbox="683 1339 1106 1429">0.5 pH units more than the highest background value<sup>1</sup></td> <td data-bbox="1106 1339 1385 1429"><u>Maximum</u></td> </tr> <tr> <td data-bbox="683 1429 1106 1518">0.5 pH units less than the lowest background value<sup>2</sup></td> <td data-bbox="1106 1429 1385 1518"><u>Minimum</u></td> </tr> <tr> <td data-bbox="363 1518 683 1619">Sulphate mg/L</td> <td data-bbox="683 1518 1106 1619">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 1518 1385 1619"><u>Maximum</u></td> </tr> <tr> <td data-bbox="363 1619 683 1720">Specific conductance µS/cm</td> <td data-bbox="683 1619 1106 1720">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 1619 1385 1720"><u>Maximum</u></td> </tr> <tr> <td data-bbox="363 1720 683 1821">Total Organic Carbon mg/L</td> <td data-bbox="683 1720 1106 1821">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 1720 1385 1821"><u>Maximum</u></td> </tr> <tr> <td data-bbox="363 1821 683 1910">Zinc mg/L</td> <td data-bbox="683 1821 1106 1910">120% of highest background value<sup>1</sup></td> <td data-bbox="1106 1821 1385 1910"><u>Maximum</u></td> </tr> </tbody> </table> <p data-bbox="316 1977 387 2000">Notes</p> <p data-bbox="316 2022 1433 2080">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</p>	Quality Characteristic	Limit	Limit Type	Aluminium mg/L	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Ammonia (as N) mg/L	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Iron (total) mg/L	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Manganese (dissolved) mg/L	120% of highest background value <sup>1</sup>	<u>Maximum</u>	pH (field measured)	0.5 pH units more than the highest background value <sup>1</sup>	<u>Maximum</u>	0.5 pH units less than the lowest background value <sup>2</sup>	<u>Minimum</u>	Sulphate mg/L	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Specific conductance µS/cm	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Total Organic Carbon mg/L	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Zinc mg/L	120% of highest background value <sup>1</sup>	<u>Maximum</u>
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	<p>up-gradient or background monitoring site in the <u>groundwater monitoring system</u>, as required under this environmental authority.</p> <p>2. “Lowest background value” means the lowest 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 <u>groundwater monitoring system</u>, as required under this environmental authority.</p> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's Water Quality Sampling Manual</u>.</li> <li>2) Monitoring frequency – every three months.</li> </ol>																																									
<b>Agency interest: Noise</b>																																										
<b>Condition number</b>	<b>Condition</b>																																									
P4-N1	<p>Noise from the <u>activity</u> must not exceed the levels identified in Table N4-1—Noise limits when measured in accordance with the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table N4-1—Noise limits</b></p> <table border="1" data-bbox="400 954 1347 1458"> <thead> <tr> <th rowspan="2">Noise level measured in dB(A)</th> <th colspan="3">Monday to Saturday</th> <th colspan="3">Sunday and Public Holidays</th> </tr> <tr> <th>6am-6pm</th> <th>6pm-10pm</th> <th>10pm-6am</th> <th>6am-6pm</th> <th>6pm-10pm</th> <th>10pm-6am</th> </tr> </thead> <tbody> <tr> <td></td> <td colspan="6" style="text-align: center;">Noise measured at a noise sensitive place</td> </tr> <tr> <td>L<sub>Aeq, adj, 1 hour</sub></td> <td>62</td> <td>57</td> <td>47</td> <td>62</td> <td>57</td> <td>47</td> </tr> <tr> <td></td> <td colspan="6" style="text-align: center;">Noise measured at a commercial place</td> </tr> <tr> <td>L<sub>Aeq, adj, 1 hour</sub></td> <td>64</td> <td>59</td> <td>49</td> <td>64</td> <td>59</td> <td>49</td> </tr> </tbody> </table> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) All monitoring devices must be correctly calibrated and maintained.</li> <li>2) Any monitoring must be in accordance with the most recent version of the <u>administering authority's Noise Measurement Manual</u>.</li> <li>3) Any monitoring of noise emissions from the <u>activity</u> must be undertaken when the <u>activity</u> is in operation.</li> </ol>	Noise level measured in dB(A)	Monday to Saturday			Sunday and Public Holidays			6am-6pm	6pm-10pm	10pm-6am	6am-6pm	6pm-10pm	10pm-6am		Noise measured at a noise sensitive place						L <sub>Aeq, adj, 1 hour</sub>	62	57	47	62	57	47		Noise measured at a commercial place						L <sub>Aeq, adj, 1 hour</sub>	64	59	49	64	59	49
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	Noise measured at a commercial place																																									
L <sub>Aeq, adj, 1 hour</sub>	64	59	49	64	59	49																																				
P4-N2	<p>When required by the <u>administering authority</u>, noise monitoring must be undertaken in accordance with the associated monitoring requirements of Table N4-1—Noise limits, and the results notified within 14 days to the <u>administering authority</u>. Monitoring must include:</p> <ol style="list-style-type: none"> <li>1) L<sub>Aeq, adj, T</sub>;</li> <li>2) <u>Background noise (Background)</u> as L<sub>A 90, adj, T</sub>;</li> <li>3) <u>MaxL<sub>pA, T</sub></u>;</li> <li>4) the level and frequency of occurrence of any impulsive or tonal noise;</li> </ol>																																									

	<ul style="list-style-type: none"> <li>5) atmospheric conditions including wind speed and direction;</li> <li>6) effects due to extraneous factors such as traffic noise; and</li> <li>7) location, date and time of recording.</li> </ul>
<b>Agency interest: Waste</b>	
<b>Condition number</b>	<b>Condition</b>
P4-W1	<p>Minor amounts of the <u>regulated waste</u> not specifically permitted to be accepted may be deposited at the <u>approved place</u> provided:</p> <ul style="list-style-type: none"> <li>1) the <u>regulated waste</u> is incidental to and commingled with the <u>general waste</u> stream;</li> <li>2) the quantity and concentration of the <u>regulated waste</u> (both individually and in aggregate) is insignificant;</li> <li>3) it is impracticable to segregate the <u>regulated waste</u> from other waste which is permitted to be deposited;</li> <li>4) that if the source of the <u>regulated waste</u> is known, the person who deposited the <u>regulated waste</u> is advised that such waste must not be included in the waste stream sent to this <u>landfill facility</u> and practicable steps are taken to prevent any recurrence of such deposition; and</li> <li>5) the deposition of the <u>regulated waste</u> is not likely to cause any risk of fire, explosion, public health danger, nuisance, or environmental harm; and</li> <li>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 <u>landfill facility</u>.</li> </ul>
P4-W2	All chemical forms of asbestos wastes must be contained within the <u>landfill unit</u> at a minimum distance of two (2) metres from the surface and flanks of the <u>landfill unit</u> , excluding any final cover system required as a condition of this environmental authority.
P4-W3	<p>The following waste must be handled and disposed of as a special burial of waste:</p> <ul style="list-style-type: none"> <li>1) fibrous asbestos and mixed asbestos (all chemical forms);</li> <li>2) bonded asbestos (all chemical forms) when in quantities greater than 250kg;</li> <li>3) all <u>putrescible waste</u> (other than any <u>putrescible waste</u> from domestic collection service); and</li> <li>4) waste, which if not buried as soon as practicable, would be likely to cause environmental harm when placed in an exposed position.</li> </ul>
P4-W4	<p>The holder of this environmental authority must record at least the following information in relation to the special burial of wastes:</p> <ul style="list-style-type: none"> <li>1) type of waste;</li> <li>2) quantity of waste;</li> <li>3) date of deposition;</li> <li>4) source of waste; and</li> <li>5) if the waste is fibrous asbestos and/or <u>mixed asbestos waste</u>, the accurate location of each deposit and depth of each deposit.</li> </ul>
P4-W5	

Contaminated soil disposed of at the premises to which this environmental authority relates must:

- 1) be accepted subject to the registered operator of this environmental authority effectively implementing risk assessment practices and procedures for contaminant testing that ensure that the material accepted complies with the maximum contaminant levels and the allowable leaching contaminant levels prescribed in Tables W4-1 and W4-2 respectively; and
- 2) if the contaminated soil is used as coverage material, contaminant levels must not exceed the maximum concentration limits in Table W4-3.

**Table W4-1 Maximum Contaminant Levels in Soils**

Contaminant	<u>Maximum</u> contaminant level for <u>clay lined</u> landfills (mg/kg)	<u>Maximum</u> contaminant level for <u>double lined</u> landfills (mg/kg)
<b>Monocyclic aromatic hydrocarbons (MAH)</b>		
Benzene	10	20
Ethyl Benzene	500	1 000
Toluene	300	600
Xylene	250	500
Total MAH	500	1 000
<b>Polycyclic aromatic hydrocarbons (PAH)</b>		
Total PAH	500	1 000
<b>Phenolic contaminants</b>		
<i>Non halogenated compounds:</i>		
Phenol	100	250
m-cresol	250	500
o-cresol	250	500
p-cresol	250	500
Total non halogenated phenol	250	500
<i>Halogenated phenol:</i>		
Chlorophenol	1	5
Trichlorophenol	5	20
Total halogenated phenol	5	20

<b>Chlorinated Hydrocarbons</b>		
<i>Chlorinated aliphatic compounds:</i>		
Carbon tetrachloride	5	10
1,2 Dichloroethane	10	20
1,1 Dichloroethene	1	1
Tetrachloroethene	10	20
Trichloroethene	25	25
Total chlorinated aliphatic compounds	50	50
<i>Chlorinated aromatic compounds:</i>		
Chlorobenzene	100	200
Hexachlorobenzene	1	1
Total chlorinated aromatic compounds	100	200
Non-scheduled solid polychlorinated biphenyls (PCBs)	2	50
<b>Pesticides</b>		
Total organochlorine	5	50
Total herbicides	25	50
Total carbamates	25	50
<b>Petroleum hydrocarbons</b>	10	50
Total petroleum hydrocarbons (C <sub>6</sub> -C <sub>9</sub> )	500	1 000
Total petroleum hydrocarbons (C <sub>10</sub> -C <sub>14</sub> )	5 000	10 000
Total petroleum hydrocarbons (C <sub>15</sub> -C <sub>28</sub> )	10 000	50 000
Total petroleum hydrocarbons (C <sub>29</sub> -C <sub>36</sub> )	10 000	50 000

**Table W4-2 Allowable Leaching Contaminant Levels**

	Allowable leaching contaminant levels (TCLP) for <u>clay lined</u> landfills (mg/l)	Allowable leaching contaminant levels (TCLP) for <u>double lined</u> landfills (mg/l)
<b>Non-specific contaminants</b>		
Biochemical oxygen demand	20 000	20 000
Total organic carbon	10 000	10 000
Petroleum hydrocarbons	25	50
<b>Metals/non-metals</b>		
Antimony	0.5	5
Arsenic	0.5	5
Barium	10	100
Cadmium	0.05	0.5
Chromium	0.5	5
Cobalt	0.5	5
Copper	10	100
Lead	0.5	5
Mercury	0.01	0.1
Molybdenum	0.1	5
Nickel	0.5	5
Selenium	0.1	1
Silver	0.5	5
Thallium	0.1	1
Tin	0.3	3
Vanadium	0.5	5
Zinc	50	500
<b>Inorganic anions</b>		
Bromide	5	50

Chloride	6 000	6 000
Cyanide (total)	1	5
Fluoride	15	150
Nitrate	100	1 000
Sulphate	2 500	4 000
<b>Monocyclic aromatic hydrocarbon (MAH)</b>		
Benzene	0.1	1
Ethyl benzene	5	50
Toluene	3	30
Xylene	2	20
Total MAH	5	50
<b>Polycyclic aromatic hydrocarbons (PAH)</b>		
Anthracene	0.07	0.7
Benz (a) anthracene	0.005	0.05
Benz (c) phenanthrene	0.005	0.05
Benzo (a) pyrene	0.002	0.02
Benzo (b) fluoranthene	0.005	0.05
Benzo (k) fluoranthene	0.005	0.05
Chrysene	0.01	0.1
Dibenz (a,h) anthracene	0.002	0.02
Dibenz (a,h) pyrene	0.01	0.1
Dimethylbenz (a) anthracene	0.005	0.05
Fluoranthene	0.02	0.2
Indeno (1,2,3-cd) pyrene	0.01	0.1
Naphthalene	0.07	0.7
Phenanthrene	0.01	0.1

Pyrene	0.07	0.7
Total PAH	0.1	1
<b>Phenolic contaminants</b>		
<i>Non halogenated compounds:</i>		
Phenol	1	10
m-cresol	2	20
o-cresol	2	20
p-cresol	2	20
<i>Halogenated phenols:</i>		
Chlorophenol	0.01	0.1
Pentachlorophenol	0.1	1
Trichlorophenol	0.1	1
<b>Chlorinated hydrocarbons</b>		
<i>Chlorinated aliphatic compounds:</i>		
Carbon tetrachloride	0.03	0.3
1,2 Dichloroethane	0.1	1
1,1 Dichloroethene	0.003	0.03
Tetrachloroethene	0.1	1
Trichloroethene	0.3	3
<i>Chlorinated aromatic compounds:</i>		
Chlorobenzene (total)	1	10
Hexachlorobenzene	0.002	0.02
<b>Pesticides</b>		
<i>Organochlorine:</i>		
Aldrin	0.001	0.01
Chlordane	0.006	0.06

Chlorpyrifos	0.01	0.03
Dieldrin	0.001	0.01
DDT	0.003	0.03
Endrin	0.001	0.01
Heptachlor	0.003	0.03
Lindane	0.1	1
Methoxychlor	0.1	1
Toxaphene	0.005	0.05
<b>Herbicides</b>		
2,4-D	0.1	1
2,4-DB	0.2	2
2,4,5 -T	0.002	0.02
MCPA	0.2	2
<i>Carbamates:</i>		
Carbaryl	0.06	0.6
Carbofuran	0.03	0.3
<i>Organophosphorus:</i>		
Diazinon	0.01	0.1
Methyl Parathion	0.006	0.06
Parathion	0.03	0.3
<i>Triazines:</i>		
Atrazine	0.01	0.03
Simazine	0.01	0.03
<p>For any soil contaminated by radioactive material:  the gross alpha and gross beta activity concentration in the <u>Toxicity Characteristic Leaching Procedure (TCLP)</u> extracts from the material are no more than one hundred (100) times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the current edition of NHMRC ARMCANZ <i>Australian Drinking Water Guidelines</i>.</p>		

**Table W4-3 Maximum total contaminant levels in soils used as cover material**

<b>Contaminant</b>	<b><u>Maximum</u> total contaminant levels in soils used as cover material (mg/kg)</b>
Arsenic (total)	200
Beryllium	40
Cadmium	40
Chromium (iii)	240 000
Chromium (vi)	200
Copper	2 000
Lead	600
Manganese	3 000
Mercury (inorganic)	30
Methyl Mercury	20
Nickel	600
Zinc	14 000

**Part 5 - Arundel Landfill**

Environmentally relevant activity	Locations
60-(4) Maintaining a decommissioned waste disposal facility	<b>Arundel Landfill</b> Captain Cook Drive, Arundel - Suntown Waste Disposal; Lot 3/SP217040 and Lot 10/RP210089

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: General	
Condition number	Condition
P5-G1	<u>Activities</u> under this environmental authority must be conducted in accordance with the following limitations: 1. Waste must not be accepted for disposal or disposed of at the site, depicted in Attachment 2 Arundel Landfill Plan.
P5-G2	All reasonable and practicable <u>measures</u> must be taken to prevent or minimise environmental harm caused by the <u>activities</u> .
P5-G3	Any breach of a condition of this environmental authority must be reported to the <u>administering authority</u> as soon as practicable within 24 hours of becoming aware of the breach. <u>Records</u> must be kept including full details of the breach and any subsequent actions undertaken.
P5-G4	Other than as permitted by this environmental authority, the <u>release of a contaminant into the environment</u> must not occur.
P5-G5	All information and <u>records</u> required by the conditions of this environmental authority must be kept for a minimum of five years with the exception of environmental monitoring results, which must be kept until surrender of this environmental authority. All information and <u>records</u> required by the conditions of this environmental authority must be provided to the <u>administering authority</u> upon request and in the format requested.
P5-G6	An <u>appropriately qualified person(s)</u> 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.
P5-G7	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities ( <u>NATA</u> ) certification, or an equivalent certification, for such analyses.
P5-G8	When required by the <u>administering authority</u> , monitoring must be undertaken in the manner prescribed by the <u>administering authority</u> , to investigate a complaint of <u>environmental nuisance</u> arising from the <u>activity</u> . The monitoring results must be provided within 10 business days to the <u>administering authority</u> upon its request.
P5-G9	The <u>activity</u> must be undertaken in accordance with written procedures that: 1) identifies potential risks to the environment from the <u>activity</u> during routine operations, closure and an emergency; and 2) establish and maintain control <u>measures</u> that minimise the potential for <u>environmental harm</u> ; and

	<p>3) ensure plant, equipment and <u>measures</u> are maintained in a proper and effective condition; and</p> <p>4) ensure plant, equipment and <u>measures</u> are operated in a proper and effective manner; and</p> <p>5) ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and</p> <p>6) ensure that reviews of environmental performance are undertaken at least annually.</p>
P5-G10	<p>All reasonable and practicable <u>measures</u> must be taken to exclude vectors and pest species to the extent necessary to prevent:</p> <p>1) <u>environmental nuisance</u> to occupiers of neighbouring premises; and</p> <p>2) any danger or risk to the health of any persons.</p>
<b>Agency interest: Waste</b>	
<b>Condition number</b>	<b>Condition</b>
P5-W1	All waste generated in carrying out the <u>activity</u> must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
<b>Agency interest: Acoustic</b>	
<b>Condition number</b>	<b>Condition</b>
P5-N1	Noise generated by the <u>activity</u> must not cause <u>environmental nuisance</u> to any <u>sensitive place</u> or <u>commercial place</u> .
<b>Agency interest: Air</b>	
<b>Condition number</b>	<b>Condition</b>
P5-A1	<p>The holder of this environmental authority must ensure that dust and/or particulate matter must not exceed any of the following levels when measured at any nuisance sensitive or commercial place –</p> <p>1) Dust disposition of 120 milligrams per square metre per day over a thirty (30) day averaging period, when monitored in accordance with the latest edition of Australian Standard AS 3580.10.1; or</p> <p>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.</p> <p>The concentration of particulate matter as stated above must be monitored in accordance with Australian Standard AS 3580.9.6 of 2003 (or the latest edition);</p> <p>1) 'Ambient air – Particulate matter – Determination of suspended particulate PM10 high-volume sampler with size-selective inlet – Gravimetric method'; or</p> <p>2) any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published by the administering authority.</p>

	For any one year period, five (5) separate single day (24hr) exceedances are lawful for compliance with condition A4-1(b). The five (5) single day exceedances allowance for any one year period is based on natural events such as bushfires and dust storms.
P5-A2	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause <u>environmental nuisance</u> to any <u>sensitive place</u> or <u>commercial place</u> .
P5-A3	Landfill gas measured as methane must not exceed: <ol style="list-style-type: none"> <li>1) 500ppm at 50mm above the surface cover of the site (including batter slopes);</li> <li>2) 12,500ppm (1.25% v/v of the <u>LEL</u>) in on-site facility structures (excluding structures associated with landfill gas control and recovery);</li> <li>3) 50,000ppm (5% v/v of the <u>LEL</u>) in subsurface geology at or beyond the boundary of the site; and</li> <li>4) 12,500ppm (1.25% v/v of the <u>LEL</u>) in service pits, service trenches, stormwater drains or other structures beyond the site boundary.</li> </ol>
P5-A4	Landfill gas collected is reused or efficiently flared in a manner that avoids environmental harm.
P5-A5	A landfill gas monitoring network must be installed for each <u>landfill unit</u> to measure methane levels in facility structures and at the landfill site <u>boundary</u> , as prescribed by condition P5-A3. The network must consist of gas monitoring devices, such as monitoring bores and be developed by an <u>appropriately qualified person</u> in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.
P5-A6	Monitoring referred to in condition P5-A3 must be undertaken for at least the following parameters: <ol style="list-style-type: none"> <li>1) methane; and</li> <li>2) oxygen; and</li> <li>3) carbon dioxide; and</li> <li>4) hydrogen sulphide (boundary and offsite only) ; and</li> <li>5) atmospheric pressure (boundary and offsite only); and</li> <li>6) differential pressure (boundary and offsite locations only).</li> </ol>
P5-A7	If methane gas levels exceeding methane standards referred to in condition P5-A3 are detected, all necessary steps to ensure protection of human health must be taken. Such steps must be appropriate to the assessed level of health risk, including but not limited to supplementary continuous monitoring.
<b>Agency interest: Land</b>	
<b>Condition number</b>	<b>Condition</b>
P5-L1	Land that has been disturbed for <u>activities</u> conducted under this environmental authority must be rehabilitated in a manner such that: <ol style="list-style-type: none"> <li>1. suitable species of vegetation for the location are established and sustained for earthen surfaces; and</li> <li>2. potential for erosion is minimised; and</li> </ol>

	<ol style="list-style-type: none"> <li>3. the quality of water, including seepage, released from the site does not cause environmental harm; and</li> <li>4. potential for <u>environmental nuisance</u> caused by dust is minimised; and</li> <li>5. the water quality of any residual water body does not have potential to cause environmental harm; and</li> <li>6. the final landform is stable and protects public safety; and</li> <li>7. the contaminant concentrations within the final capping layer are appropriate for the final land use and in accordance with the 'National Environmental Protection (Assessment of Soil Contamination) Measure 1999.'</li> </ol>												
P5-L2	Following cessation of deposition of waste in the <u>landfill unit</u> , post-closure care of the <u>landfill unit</u> must be conducted for a period of 30 years or until the <u>administering authority</u> determines, on the basis of correct information, that the <u>landfill unit</u> and surrounding site are stable and that no release of waste materials, <u>leachate</u> , landfill gas or other contaminants that may cause environmental harm is likely.												
P5-L3	<p>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 <u>measures</u> to:</p> <ol style="list-style-type: none"> <li>1. maintain the structural integrity and effectiveness of the final capping system; and</li> <li>2. maintain and operate the <u>leachate</u> collection system; and</li> <li>3. maintain the <u>groundwater monitoring system</u> and monitor quality of <u>groundwater</u> at a frequency sufficient to detect any release of contaminants to <u>groundwater</u>; and</li> <li>4. maintain and operate the landfill gas monitoring system; and</li> <li>5. maintain and operate the landfill gas collection system.</li> </ol>												
<b>Agency interest: Water</b>													
<b>Condition number</b>	<b>Condition</b>												
P5-WT1	<p>The only contaminants to be released to surface <b>waters</b> are settled treated stormwater runoff waters from areas of the site not likely to be contaminated with waste materials in accordance with <i>Table - Surface water release limits</i> and the associated monitoring requirements.</p> <p><b>Table P5-WT1 Surface water release limits</b></p> <table border="1"> <thead> <tr> <th>Quality Characteristic</th> <th>Release Limit</th> <th>Sampling Point</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>6.5 to 9.0</td> <td>Overflow from sedimentation control system</td> <td>Quarterly – if and when a release occurs</td> </tr> <tr> <td>Dissolved Oxygen</td> <td><u>Minimum</u> 6 mg/L</td> <td>Overflow from sedimentation control system</td> <td>Quarterly – if and when a release occurs</td> </tr> </tbody> </table>	Quality Characteristic	Release Limit	Sampling Point	Frequency	pH	6.5 to 9.0	Overflow from sedimentation control system	Quarterly – if and when a release occurs	Dissolved Oxygen	<u>Minimum</u> 6 mg/L	Overflow from sedimentation control system	Quarterly – if and when a release occurs
Quality Characteristic	Release Limit	Sampling Point	Frequency										
pH	6.5 to 9.0	Overflow from sedimentation control system	Quarterly – if and when a release occurs										
Dissolved Oxygen	<u>Minimum</u> 6 mg/L	Overflow from sedimentation control system	Quarterly – if and when a release occurs										

	Suspended Solids	<u>Maximum</u> 50 mg/L or <u>maximum</u> 10% above concentration at an up-current point <sup>1</sup> (whichever is the greater)	Overflow from sedimentation control system	Quarterly – if and when a release occurs
	Total Organic Carbon	<u>Maximum</u> 20 mg/L	Overflow from sedimentation control system	Quarterly – if and when a release occurs
	<b>OR ELSE IF NO RELEASE OCCURS – for all the above parameters</b>		Representative sample from sedimentation control system	Annually – in the event of no release, (unless that sedimentation control system remains dry for that annual reporting period)
	<p>Notes</p> <p><sup>1</sup>An up-current point is any sampling point in the receiving waters situation between 20 and 40 metres distant from the confluence of a pond overflow and the discharge watercourse in the upstream direction. Samples taken at the up-current point and from the pond overflow and the discharge watercourse must be made within one (1) hour of one another.</p> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's Monitoring and Sampling Manual</u>.</li> <li>2) Samples must be taken using representative samples.</li> <li>3) All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.</li> <li>4) Monitoring must be undertaken during a release as per the frequency stated.</li> <li>5) All monitoring devices must be correctly calibrated and maintained.</li> </ol>			
P5-WT2	Monitoring of contaminant releases to <u>waters</u> must be undertaken in accordance with condition P5-WT1 and records of the results must be kept.			
P5-WT3	<p>In addition to P5-WT2, the release to <u>waters</u> must not:</p> <ol style="list-style-type: none"> <li>1) have any other properties at a concentration that is capable of causing environmental harm; and</li> <li>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.</li> </ol>			
P5-WT4	The holder of this environmental authority must monitor, and record <u>groundwater</u> quality as often as is necessary to check compliance with the conditions of this environmental authority but not less frequently than every six (6) months.			

P5-WT5	<p>A <u>groundwater monitoring system</u> must be installed. The system must include a sufficient number of wells installed and maintained at locations and depths that yield representative <u>groundwater</u> samples from the <u>uppermost aquifer</u> and that establish:</p> <ol style="list-style-type: none"> <li>1) background <u>groundwater</u> quality in hydraulically up-gradient or <u>background</u> well(s) that have not been affected by any potential leakage of contaminants to groundwater from the <u>approved place</u>; and</li> <li>2) quality of <u>groundwater</u> down-gradient of any potential leakage of <u>contaminants</u> to <u>groundwater</u> from the <u>approved place</u> including <u>groundwater</u> passing the point(s) of compliance that must be situated not more than 150 metres from the <u>landfill unit</u> or the boundary of the landfill facility, whichever is the closest.</li> </ol>		
P5-WT6	<p>The <u>groundwater monitoring system</u> must be developed by a person possessing appropriate qualifications and experience in the fields of hydrogeology and <u>groundwater</u> monitoring program design to be able to competently make recommendations about these matters.</p>		
P5-WT7	<p>Except as otherwise provided, the holder of this environmental authority must monitor and record quality of <u>groundwater</u> to detect any possible release(s) of contaminants in accordance with a monitoring program known as the Detection <u>Groundwater</u> Monitoring Program. The Detection <u>Groundwater</u> Monitoring Program must be undertaken for, at least, the following water quality characteristics:</p> <table border="1" data-bbox="320 1048 1062 1317"> <tr> <td data-bbox="320 1048 644 1317"> <ul style="list-style-type: none"> <li>• Ammonia (as N)</li> <li>• Bicarbonate (HC03)</li> <li>• Calcium</li> <li>• Chloride</li> <li>• Iron (total)</li> <li>• Lead</li> <li>• Nitrate (as N)</li> </ul> </td> <td data-bbox="649 1048 1062 1317"> <ul style="list-style-type: none"> <li>• pH</li> <li>• Potassium</li> <li>• Sodium</li> <li>• Sulphate</li> <li>• Specific conductance</li> <li>• Total Organic Carbon (TOC)</li> <li>• Zinc.</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>• Ammonia (as N)</li> <li>• Bicarbonate (HC03)</li> <li>• Calcium</li> <li>• Chloride</li> <li>• Iron (total)</li> <li>• Lead</li> <li>• Nitrate (as N)</li> </ul>	<ul style="list-style-type: none"> <li>• pH</li> <li>• Potassium</li> <li>• Sodium</li> <li>• Sulphate</li> <li>• Specific conductance</li> <li>• Total Organic Carbon (TOC)</li> <li>• Zinc.</li> </ul>
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P5-WT8	<p>The holder of this environmental authority must determine whether or not there has been any statistically significant increase over background values at locations hydraulically down-gradient of the <u>landfill unit</u> for any water quality characteristic required to be monitored under the Detection <u>Groundwater</u> Monitoring Program.</p>		
P5-WT9	<p>All <u>landfill units</u> must have a liner system installed and maintained to:</p> <ol style="list-style-type: none"> <li>1) prevent release of contaminants, including <u>leachate</u>, to <u>land</u> and <u>waters</u>; and</li> <li>2) prevent subsurface migration of landfill gas from the <u>landfill unit</u>.</li> </ol>		
P5-WT10	<p>All <u>landfill units</u> must include a <u>leachate</u> collection system designed by an <u>appropriately qualified person</u> and installed and maintained to:</p> <ol style="list-style-type: none"> <li>1) collect <u>leachate</u> generated in the <u>landfill unit</u>;</li> <li>2) convey the collected <u>leachate</u> out of the <u>landfill unit</u> to an appropriate <u>leachate</u> storage facility; and</li> <li>3) restrict the height of the <u>leachate</u> above the liner system to a <u>maximum</u> level of 300mm or another value with equivalent <u>leachate</u> minimisation performance as agreed with the <u>administering authority</u>.</li> </ol>		
P5-WT11	<p><u>Leachate</u> and stormwater runoff which has been in contact with waste materials in the <u>landfill unit</u>, must be collected in the <u>leachate</u> storage facility and be:</p>		

	<ol style="list-style-type: none"> <li>1) treated in the <u>leachate</u> treatment plant and discharged to sewer in accordance with the requirements of the relevant water utility; or</li> <li>2) recirculated through waste disposed in the <u>landfill unit</u>; or</li> <li>3) treated by alternative technologies agreed by the <u>administering authority</u> for offsite disposal, discharge, or on-site reuse; or</li> <li>4) disposed of at a facility that is approved to receive such waste.</li> </ol>		
<p>P5-WT12</p>	<p>The holder of this environmental authority must carry out a <u>leachate</u> quality and quantity monitoring program for the <u>leachate</u> generated at the <u>approved place</u> subject to:</p> <ol style="list-style-type: none"> <li>1) <u>leachate</u> quality monitoring must be undertaken at least once annually;</li> <li>2) the quantity of <u>leachate</u> discharged from the site must be recorded;</li> <li>3) the height of the <u>leachate</u> above the floor of any <u>landfill unit</u> must be measured and recorded on a daily basis if the <u>leachate</u> level is greater than RL 6.4 m when measured in <u>leachate</u> sump SULE 4 or RL 4.37 m when measured in <u>leachate</u> sump SULE 5, or at least weekly at other times. For the purpose of this condition, the <u>leachate</u> height above the floor of any <u>landfill unit</u> may be deduced by measuring the height of <u>leachate</u> in any <u>leachate</u> collection sump relative to the floor of the <u>landfill unit</u> adjoining the sump;</li> <li>4) daily rainfall or rainfall events (if an event is longer than daily) must be measured and recorded for the <u>approved place</u>; and</li> <li>5) the <u>Leachate</u> Monitoring Program must be undertaken for, at least, the following water quality characteristics:</li> </ol> <table border="1" data-bbox="320 1234 1062 1496"> <tr> <td> <ul style="list-style-type: none"> <li>• Ammonia (as N)</li> <li>• Bicarbonate (HC03)</li> <li>• Calcium</li> <li>• Chloride</li> <li>• Iron (total)</li> <li>• Lead</li> <li>• Nitrate (as N)</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• pH</li> <li>• Potassium</li> <li>• Sodium</li> <li>• Sulphate</li> <li>• Specific conductance</li> <li>• Total Organic Carbon (TOC)</li> <li>• Zinc.</li> </ul> </td> </tr> </table> <p>For the purpose of this condition, <u>leachate</u> must be disposed of in accordance with condition P2-G4 to ensure that the height of <u>leachate</u> above the landfill floor does not exceed 0.3 metres for a period of longer than 1 week when measured in any <u>leachate</u> collection sump.</p> <p><u>Leachate</u> sump's SULE 4 &amp; SULE 5 are depicted in Attachment 3: Arundel (Suntown) Landfill Environmental Evaluation Investigation and Monitoring/Sample Locations.</p>	<ul style="list-style-type: none"> <li>• Ammonia (as N)</li> <li>• Bicarbonate (HC03)</li> <li>• Calcium</li> <li>• Chloride</li> <li>• Iron (total)</li> <li>• Lead</li> <li>• Nitrate (as N)</li> </ul>	<ul style="list-style-type: none"> <li>• pH</li> <li>• Potassium</li> <li>• Sodium</li> <li>• Sulphate</li> <li>• Specific conductance</li> <li>• Total Organic Carbon (TOC)</li> <li>• Zinc.</li> </ul>
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**Part 6 - Site Specific Conditions – Molendinar Landfill**

Environmentally relevant activity	Location
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Molendinar Landfill</b> Old Coach Road, Molendinar Part of Lot 11/SP129405
62-1(b) Resource recovery and transfer facility operation, general waste	
62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste	
62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	
54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr	

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: Air	
Condition number	Condition
P6-A1	<p>Landfill gas must not exceed the following limits:</p> <ol style="list-style-type: none"> <li>1) 25% of the <u>lower explosive limit</u> of the landfill site <u>boundary</u> when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and <u>leachate</u> collection system components)</li> <li>2) the <u>lower explosive limit</u> in subsurface geology at or beyond the landfill site <u>boundary</u>;</li> <li>3) landfill gas collected is reused or efficiently flared in a manner that avoids environmental harm; and</li> <li>4) 25% of the <u>lower explosive limit</u> within service pits, service trenches, stormwater drains or other structures beyond the landfill site <u>boundary</u>.</li> </ol>
P6-A2	<p>A landfill gas monitoring network must be installed for each <u>landfill unit</u> to measure methane levels in facility structures and at the landfill site <u>boundary</u>, as prescribed by condition P6-A1. The network must consist of gas monitoring devices, such as monitoring bores and be developed by an <u>appropriately qualified person</u> in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.</p>
P6-A3	<p>If methane gas levels exceeding methane standards referred to in condition P6-A1 are detected, all necessary steps must immediately be taken to ensure protection of human health.</p>
P6-A4	<p>Dust and particulate matter emissions must not exceed the following concentrations at any <u>sensitive place</u> or <u>commercial place</u>:</p> <ol style="list-style-type: none"> <li>1) Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or</li> </ol> <p>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, when monitored in accordance with Australian Standard AS3580.9.6 (or more recent editions).</p>
P6-A5	<p>Dust and particulate matter monitoring requested by the <u>administering authority</u> must:</p> <ol style="list-style-type: none"> <li>1) be undertaken over a period of at least three consecutive thirty day periods; and</li> </ol>

	<p>2) be carried out at places relevant to the potentially affected <u>sensitive place</u> or <u>commercial place</u> and at suitable representative reference site(s) unlikely to be affected by the <u>activity</u>; and</p> <p>3) be carried out at a sufficient number of monitoring points to enable compliance assessment with condition P6-A4; and</p> <p>4) take into account:</p> <ol style="list-style-type: none"> <li>a. locations of dust and particulate sources; and</li> <li>b. locations of persons or sites potentially affected by any release of dust or particulate matter from the activity; and</li> </ol> <p>5) be carried out in accordance with the latest edition of the <u>administering authority's Air Quality Sampling Manual</u>; and</p> <p>be undertaken in conjunction with the recording of precipitation, wind speed and direction in accordance with the requirements of the relevant standards within AS3580.</p>																				
<b>Agency interest: Water</b>																					
<b>Condition number</b>	<b>Condition</b>																				
P6-WT1	<p>The only contaminants to be released to surface <u>waters</u> are settled treated stormwater runoff waters from areas of the site not likely to be contaminated with waste materials in accordance with Table WT6-1 – surface water release limits and the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table WT6-1 Surface water release limits</b></p> <table border="1" data-bbox="352 1234 1394 1962"> <thead> <tr> <th data-bbox="352 1234 587 1350">Quality Characteristic</th> <th data-bbox="587 1234 874 1350">Release Limit</th> <th data-bbox="874 1234 1102 1350">Sampling Point</th> <th data-bbox="1102 1234 1394 1350">Frequency</th> </tr> </thead> <tbody> <tr> <td data-bbox="352 1350 587 1480">pH.</td> <td data-bbox="587 1350 874 1480">6.5 to 9.0</td> <td data-bbox="874 1350 1102 1480">Overflow from sedimentation control system</td> <td data-bbox="1102 1350 1394 1480">Quarterly – if and when a release occurs</td> </tr> <tr> <td data-bbox="352 1480 587 1610">Dissolved Oxygen</td> <td data-bbox="587 1480 874 1610"><u>Minimum</u> 6mg/l</td> <td data-bbox="874 1480 1102 1610">Overflow from sedimentation control system</td> <td data-bbox="1102 1480 1394 1610">Quarterly – if and when a release occurs</td> </tr> <tr> <td data-bbox="352 1610 587 1839">Suspended Solids</td> <td data-bbox="587 1610 874 1839"><u>Maximum</u> 50mg/l or <u>maximum</u> 10% above concentration at an up-current point<sup>1</sup> (whichever is the greater)</td> <td data-bbox="874 1610 1102 1839">Overflow from sedimentation control system</td> <td data-bbox="1102 1610 1394 1839">Quarterly – if and when a release occurs</td> </tr> <tr> <td data-bbox="352 1839 587 1962">Total Organic Carbon</td> <td data-bbox="587 1839 874 1962"><u>Maximum</u> 30mg/l</td> <td data-bbox="874 1839 1102 1962">Overflow from sedimentation control system</td> <td data-bbox="1102 1839 1394 1962">Quarterly – if and when a release occurs</td> </tr> </tbody> </table>	Quality Characteristic	Release Limit	Sampling Point	Frequency	pH.	6.5 to 9.0	Overflow from sedimentation control system	Quarterly – if and when a release occurs	Dissolved Oxygen	<u>Minimum</u> 6mg/l	Overflow from sedimentation control system	Quarterly – if and when a release occurs	Suspended Solids	<u>Maximum</u> 50mg/l or <u>maximum</u> 10% above concentration at an up-current point <sup>1</sup> (whichever is the greater)	Overflow from sedimentation control system	Quarterly – if and when a release occurs	Total Organic Carbon	<u>Maximum</u> 30mg/l	Overflow from sedimentation control system	Quarterly – if and when a release occurs
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	<p><b>OR ELSE IF NO RELEASE OCCURS – for all the above parameters</b></p>		<p>Representative sample from sedimentation control system</p>	<p>Annually – in the event of no release, (unless that sedimentation control system remains dry for that annual reporting period)</p>
<p>Notes</p> <p><sup>1</sup>An up-current point is any sampling point in the receiving waters situated between 20 and 40 metres distant from the confluence of a pond overflow and the discharge watercourse in the upstream direction. Samples taken at the up-current point and from the pond overflow and the discharge watercourse must be made within one (1) hour of one another.</p> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) Monitoring must be undertaken as necessary at the locations shown in Attachment 6 – Water Quality Monitoring Locations, Molendinar Waste and Recycling Centre.</li> <li>2) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's Water Quality Sampling Manual</u>.</li> <li>3) Samples must be taken using representative samples.</li> <li>4) All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.</li> <li>5) Monitoring must be undertaken during a release as per the frequency stated or annually if no release occurs.</li> <li>6) All monitoring devices must be correctly calibrated and maintained.</li> </ol>				
P6-WT2	<p>Monitoring of contaminant releases to <u>waters</u> must be undertaken in accordance with condition P6-WT1 and <u>records</u> of the results must be kept.</p>			
P6-WT3	<p>In addition to P6-WT1, the release to <u>waters</u> must not:</p> <ol style="list-style-type: none"> <li>1) Have any other properties at a concentration that is capable of causing environmental harm; and</li> <li>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.</li> </ol>			
P6-WT4	<p>The release of contaminants to <u>groundwater</u> as a result of the <u>activity</u> must:</p> <ol style="list-style-type: none"> <li>1) be monitored from the <u>uppermost aquifer</u> at locations hydraulically up-gradient and down-gradient of the landfilled waste; and</li> <li>2) not cause environmental harm; or</li> <li>3) not be statistically significantly greater over background values at locations hydraulically down-gradient of the <u>landfill unit</u> for the quality characteristics prescribed in Table WT6-2 - <u>Groundwater quality characteristics - Detection monitoring</u>, at or beyond the edge of the <u>groundwater</u> attenuation zone.</li> </ol> <p><b>Table WT6-2 – <u>Groundwater</u> quality characteristics – Detection monitoring</b></p>			

		<ul style="list-style-type: none"> <li>• Ammonia (as N)</li> <li>• Bicarbonate(HCO<sub>3</sub>)</li> <li>• Calcium</li> <li>• Chloride</li> <li>• Iron (total)</li> <li>• Lead</li> <li>• Nitrate (as N)</li> </ul>	<ul style="list-style-type: none"> <li>• pH</li> <li>• Potassium</li> <li>• Sodium</li> <li>• Sulphate</li> <li>• specific conductance</li> <li>• Total Organic Carbon (TOC)</li> <li>• Zinc.</li> </ul>																									
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<ol style="list-style-type: none"> <li>1) The <u>groundwater monitoring system</u> must be developed by an <u>appropriately qualified person</u>.</li> <li>2) Monitor and record <u>groundwater</u> quality as often as is necessary to check compliance with the conditions of this environmental authority but not less frequently than every six (6) months.</li> <li>3) All determinations of the quality of contaminants released to <u>waters</u> must be made in accordance with methods prescribed in the current edition of the <u>administering authority's Environmental Protection Agency Water Quality Sampling Manual</u>.</li> </ol>																												
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<p>P6-N1</p>	<p>Noise from the <u>activity</u> must not exceed the levels identified in Table N6-1—Noise limits when measured in accordance with the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table N6-1 – Noise limits</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #e0e0e0;">NOISE LIMITS AT A NOISE SENSITIVE PLACE</th> </tr> <tr> <th style="text-align: left;"><i>Period</i></th> <th style="text-align: left;"><i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i></th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;"><i>L<sub>Amax, adj T</sub></i></td> </tr> <tr> <td>7 am - 6 p.m.</td> <td><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td>6 p.m. - 10 p.m.</td> <td><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td>10 p.m. - 7 am</td> <td><u>Background</u> noise level plus 3 dB(A)</td> </tr> <tr> <th colspan="2" style="background-color: #e0e0e0;">NOISE LIMITS AT A COMMERCIAL PLACE</th> </tr> <tr> <th style="text-align: left;"><i>Period</i></th> <th style="text-align: left;"><i>Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level</i></th> </tr> <tr> <td></td> <td style="text-align: center;"><i>L<sub>Amax, adj T</sub></i></td> </tr> <tr> <td>7 am - 6 p.m.</td> <td><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td>6 p.m. - 10 p.m.</td> <td><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td>10 p.m. - 7 am</td> <td><u>Background</u> noise level plus 8 dB(A)</td> </tr> </tbody> </table>				NOISE LIMITS AT A NOISE SENSITIVE PLACE		<i>Period</i>	<i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i>		<i>L<sub>Amax, adj T</sub></i>	7 am - 6 p.m.	<u>Background</u> noise level plus 5 dB(A)	6 p.m. - 10 p.m.	<u>Background</u> noise level plus 5 dB(A)	10 p.m. - 7 am	<u>Background</u> noise level plus 3 dB(A)	NOISE LIMITS AT A COMMERCIAL PLACE		<i>Period</i>	<i>Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level</i>		<i>L<sub>Amax, adj T</sub></i>	7 am - 6 p.m.	<u>Background</u> noise level plus 10 dB(A)	6 p.m. - 10 p.m.	<u>Background</u> noise level plus 10 dB(A)	10 p.m. - 7 am	<u>Background</u> noise level plus 8 dB(A)
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	<p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) All monitoring devices must be correctly calibrated and maintained.</li> <li>2) Any monitoring must be in accordance with the most recent version of the <u>administering authority's Noise Measurement Manual</u>.</li> <li>3) Any monitoring of noise emissions from the <u>activity</u> must be undertaken when the <u>activity</u> is in operation</li> </ol>
P6-N2	<p>When required by the <u>administering authority</u>, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of <i>Table N6-1—Noise limits</i>, and the results notified within 14 days to the <u>administering authority</u>. Monitoring must include:</p> <ol style="list-style-type: none"> <li>1) <u>LAeq, adj, T</u>;</li> <li>2) <u>Background</u> noise (<u>Background</u>) as LA 90, adj, T;</li> <li>3) <u>MaxLpA,T</u> ;</li> <li>4) the level and frequency of occurrence of any impulsive or tonal noise;</li> <li>5) atmospheric conditions including wind speed and direction;</li> <li>6) effects due to extraneous factors such as traffic noise; and</li> <li>7) location, date and time of recording.</li> </ol>
<b>Agency interest: Waste</b>	
<b>Condition number</b>	<b>Condition</b>
P6-W1	<p>The holder of this environmental authority must only accept and temporarily store the following waste at the waste disposal facilities:</p> <ol style="list-style-type: none"> <li>1) oils;</li> <li>2) vehicle batteries;</li> <li>3) liquid waste paint and solvent residues;</li> <li>4) chemicals and pesticides;</li> <li>5) tyres (stored for no longer than ten (10) weeks and covered from incident rainfall);</li> <li>6) green waste;</li> <li>7) concrete;</li> <li>8) recyclable metal; and</li> <li>9) other recyclable material.</li> </ol> <p>For the purpose of this condition:</p> <ol style="list-style-type: none"> <li>1) the waste must be sourced from domestic premises;</li> <li>2) separate and secure waste containers or containment areas must be available at all times waste listed in this condition is accepted at the <u>approved place</u>;</li> <li>3) 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</li> <li>4) temporarily stored waste must be directed to another facility that can lawfully accept such waste as soon as practicable.</li> </ol>

P6-W2	<p>Contaminated soil to be disposed of at these <u>approved place(s)</u> must be accepted subject to the holder of this environmental authority effectively implementing risk assessment practices and procedures for contaminant testing that ensure that the material accepted complies with the <u>maximum</u> contaminant levels and the allowable leaching contaminant levels prescribed in Tables W6-1 and W6-2 respectively.</p> <p style="text-align: center;"><b>Table W6-1 maximum contaminant levels in soil</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><b>SUBSTANCE</b></th> <th style="text-align: left;"><b>mg/kg</b></th> </tr> </thead> <tbody> <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>2000</td></tr> <tr><td>Lead</td><td>600</td></tr> <tr><td>Manganese</td><td>3000</td></tr> <tr><td>Methyl Mercury</td><td>20</td></tr> <tr><td>Mercury (inorganic)</td><td>30</td></tr> <tr><td>Nickel</td><td>600</td></tr> <tr><td>Zinc</td><td>14000</td></tr> <tr> <td><b>CONTAMINANT ANALYSIS</b></td> <td><b>mg/kg</b></td> </tr> <tr> <td><b>Monocyclic Aromatic Hydrocarbons(MAH)</b></td> <td><b>mg/kg</b></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><b>Polycyclic Aromatic Hydrocarbons(PAH)</b></td> <td><b>mg/kg</b></td> </tr> <tr><td>Total PAH</td><td>500</td></tr> </tbody> </table>	<b>SUBSTANCE</b>	<b>mg/kg</b>	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	<b>CONTAMINANT ANALYSIS</b>	<b>mg/kg</b>	<b>Monocyclic Aromatic Hydrocarbons(MAH)</b>	<b>mg/kg</b>	Benzene	10	Ethyl Benzene	500	Toluene	300	Xylene	250	Total MAH	500	<b>Polycyclic Aromatic Hydrocarbons(PAH)</b>	<b>mg/kg</b>	Total PAH	500
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Copper	2000																																												
Lead	600																																												
Manganese	3000																																												
Methyl Mercury	20																																												
Mercury (inorganic)	30																																												
Nickel	600																																												
Zinc	14000																																												
<b>CONTAMINANT ANALYSIS</b>	<b>mg/kg</b>																																												
<b>Monocyclic Aromatic Hydrocarbons(MAH)</b>	<b>mg/kg</b>																																												
Benzene	10																																												
Ethyl Benzene	500																																												
Toluene	300																																												
Xylene	250																																												
Total MAH	500																																												
<b>Polycyclic Aromatic Hydrocarbons(PAH)</b>	<b>mg/kg</b>																																												
Total PAH	500																																												

	<b>Phenolic Contaminants</b>	<b>mg/kg</b>
	<i>Non halogenated compounds:</i>	.
	Phenol	100
	m-cresol	250
	o-cresol	250
	p-cresol	250
	Total non-halogenated phenol	250
	<i>Halogenated phenol:</i>	.
	Chlorophenol	1
	Trichlorophenol	5
	Pentachlorophenol	5
	Total halogenated phenol	5
	<b>Chlorinated Hydrocarbons</b>	<b>mg/kg</b>
	<i>Chlorinated Aliphatic Compounds:</i>	.
	Carbon tetrachloride	5
	1,2 Dichloroethane	10
	L,1 Dichloroethene	1
	Tetrachloroethene	10
	Trichloroethene	25
	Total chlorinated aliphatic cpds	50
	<i>Chlorinated Aromatic Compounds:</i>	.
	Chlorobenzene	100
	Hexachlorobenzene	1
	Total Chlorinated Aromatic cpds	100
	<b>Pesticides</b>	<b>mg/kg</b>
	Total organochlorine	5
	Total herbicides	25

Total carbamates	25
Total organophosphorus	10
<b>Petroleum Hydrocarbons</b>	<b>mg/kg</b>
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 W6-2 Allowable leaching contaminant levels

<b>CONTAMINANT ANALYSIS</b>	<b>mg/L</b>
<b>Non Specific Contaminants</b>	<b>mg/L</b>
Biochemical Oxygen Demand	20 000
Total Organic Carbon	10 000
Petroleum Hydrocarbons	25
Microtox LC50	<i>* No levels set at this time</i>
<b>Metals/Non-Metals</b>	<b>mg/L</b>
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
<b>Inorganic Anions</b>	<b>mg/L</b>
Bromide	5.0
Chloride	6 000
Cyanide (total)	1.0
Fluoride	15.0
Sulphate	2 500
Nitrate	100.0
<b>Monocyclic Aromatic Hydrocarbon(MAH)</b>	<b>mg/L</b>
Benzene	0.1
Ethyl benzene	5.0
Toluene	3.0
Xylene	2.0
Total MAH	5.0
<b>Polycyclic Aromatic Hydrocarbons(PAH)</b>	<b>mg/L</b>
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
<b>CONTAMINANT ANALYSIS</b>	<b>mg/L</b>
<b>Polycyclic Aromatic Hydrocarbons</b>	<b>mg/L</b>
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
<b>Phenolic Contaminants</b>	<b>mg/L</b>
<i>Non haloqenated compounds:</i>	.
Phenol	1.0
m-Cresol	2.0
o-Cresol	2.0
p-Cresol	2.0
<i>Halogenated phenols:</i>	.
Chlorophenol	0.01
Trichlorophenol	0.1
Pentachlorophenol	0.1
<b>Chlorinated Hydrocarbons</b>	<b>mg/L</b>
<i>Chlorinated Aliphatic Compounds:</i>	.
Carbon tetrachloride	0.03
1,2 Dichloroethane	0.1

1,1 Dichloroethene	0.003
Tetrachloroethene	0.1
Trichloroethene	0.3
<i>Chlorinated Aromatic Compounds:</i>	.
Chlorobenzene(total)	1.0
Hexachlorobenzene	0.002
<b>Pesticides</b>	<b>mg/L</b>
<i>Organochlorine:</i>	.
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
<i>Herbicides:</i>	.
2,4-D	0.1
2,4-DB	0.2
MCPA	0.2
2,4,6-T	0.002
<b>CONTAMINANT ANALYSIS</b>	<b>mg/L</b>
<b>Pesticides</b>	<b>mg/L</b>
<i>Carbamates:</i>	
Carbaryl	0.06

	<table border="1"> <tbody> <tr> <td>Carbofuran</td> <td>0.03</td> </tr> <tr> <td><i>Organophosphorus:</i></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><i>Triazines:</i></td> <td>.</td> </tr> <tr> <td>Atrazine</td> <td>0.01</td> </tr> <tr> <td>Simazine</td> <td>0.01</td> </tr> </tbody> </table>	Carbofuran	0.03	<i>Organophosphorus:</i>	.	Diazinon	0.01	Parathion	0.03	Methyl Parathion	0.006	<i>Triazines:</i>	.	Atrazine	0.01	Simazine	0.01
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P6-W3	<p>Regulated waste to be disposed of at the <u>approved place</u> must be restricted to the following waste streams:</p> <ol style="list-style-type: none"> <li>1) asbestos (all chemical forms);</li> <li>2) <u>dewatered</u> municipal water treatment plant; and</li> <li>3) tyres (only accepted from domestic premises and each tyre to be segregated from other tyres and not overlapping).</li> </ol>																
P6-W4	<p>Notwithstanding condition P6-W3, minor amounts of <u>regulated waste</u> not specifically permitted to be accepted may be deposited at the <u>approved place</u> provided:</p> <ol style="list-style-type: none"> <li>1) the <u>regulated waste</u> is incidental to and commingled with the general domestic waste stream;</li> <li>2) the quantity and concentration of the <u>regulated waste</u> (both individually and aggregate) is insignificant;</li> <li>3) it is impracticable to segregate the <u>regulated waste</u> from other waste that is permitted to be deposited;</li> <li>4) if the source of the regulated waste is known, the person who deposited the <u>regulated waste</u> 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;</li> <li>5) the deposition of the <u>regulated waste</u> is not likely to cause any risk of fire, explosion, public health danger, nuisance, or environmental harm; and</li> <li>6) all practicable steps are taken to inform persons using the facility that such waste must not be included in the waste stream sent to this facility.</li> </ol>																
P6-W5	<p>No regulated wastes must be deposited at the <u>landfill facility</u> which exhibit any of the hazard characteristics listed in Table W6-3.</p> <p style="text-align: center;"><b>Table W6-3</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">HAZARD CHARACTERISTIC</th> <th style="text-align: center;">DESCRIPTION OF THE HAZARD CHARACTERISTIC</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> </tr> </tbody> </table>	HAZARD CHARACTERISTIC	DESCRIPTION OF THE HAZARD CHARACTERISTIC														
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	<b>Ignitability</b>	Regulated wastes that are capable of causing a fire when ignited through friction, absorption of moisture, or spontaneous chemical changes under standard temperature and pressure.
	<b>Corrosivity</b>	Regulated wastes which on dissolution exhibit a pH of 2 or less or 12.5 or greater.
	<b>Reactivity</b>	Regulated wastes if they have any of the following properties: <ol style="list-style-type: none"> <li>1) react violently with water; and/or</li> <li>2) form potentially explosive mixtures with water and other substances likely to be disposed of in the <u>landfill facility</u>; and/or</li> <li>3) generate toxic gases, vapours, or fumes dangerous to human health or the environment when mixed with water and other substances likely to be disposed of in the <u>landfill facility</u>; and/or</li> <li>4) contain substances which generate toxic gases, vapours or fumes when exposed to Ph conditions between 2 and 12.5; and/or</li> <li>5) are capable of detonation or explosive reaction when subjected to a strong initiating source or if heated under confinement; and/or are readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.</li> </ol>
	<b>Toxicity</b>	Regulated wastes if they have: <ol style="list-style-type: none"> <li>1) contaminant concentrations in the waste exceeding the allowable levels in Table W6-1; or</li> <li>2) leaching contaminant levels in the waste when measured in accordance with Toxicity Characteristic Leaching Procedure (TCLP), exceeding the concentrations prescribed in Table W6-2.</li> </ol> For any soil contaminated by radioactive material: <ol style="list-style-type: none"> <li>1) the gross alpha and gross beta activity concentration in the Toxicity Characteristic Leaching Procedure (TCLP) extracts from the material are no more than one hundred (100) times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the most recent edition of INHMRCARMCANZ <i>Australian Drinking Water Guidelines</i>.</li> </ol>
P6-W6	In addition to condition P6-W5 and P2-W1, the following waste streams must not be permitted to be placed at the <u>landfill facility</u> at any time: <ol style="list-style-type: none"> <li>1) any liquescent waste (other than any <u>leachate</u> or landfill gas condensate generated within a <u>landfill unit</u>) and other than a liquescent waste that may be disposed at a specific <u>approved place</u> as permitted by this environmental authority);</li> <li>2) infectious wastes which have not been subjected to a proper and effective treatment process to render them non-infectious;</li> <li>3) material or equipment contaminated with infectious substances which have not been</li> </ol>	

	<p>subjected to a proper and effective treatment process to render them non-infectious;</p> <ol style="list-style-type: none"><li>4) cytotoxic wastes;</li><li>5) substances listed under Schedule 8 of the Poisons Regulations 1978;</li><li>6) soils contaminated by radioactive material, unless it meets the requirements specified in section 82(3) of the Radioactive Substances Regulation 1961 an any condition in this environmental authority;</li><li>7) pyrophoric wastes, where co-disposed with other potentially combustible materials; and</li><li>8) explosives and ammunition (excepting spent ammunition cartridges which no longer contain explosives, pyrotechnics, or propellants, apart from trace residues which are no longer capable of supporting combustion or an explosive reaction).</li></ol>
P6-W7	The amount of <u>putrescible waste</u> accepted for disposal must be recorded and not exceed 250, 000 tonnes.

**Part 7 - Site Specific Conditions – Reedy Creek Landfill**

Environmentally relevant activities	Location
60-(2h) Waste disposal >200000t yr (1)(b) 16-(2a) Extractive >5000t but <100000t yr 16-(3b) Screening >100000t but <1000000t yr 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Reedy Creek Landfill</b> Reedy Creek Waste Disposal Facility, Reedy Creek Lot 1/SP316085

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: General	
Condition number	Condition
P7-G1	The holder of this environmental authority must install an on-site meteorological station that shall be sited, operated and maintained in accordance with the requirements of the latest version of Australian Standard AS3580 14.2014, <i>Ambient Air - Guide for Measurement of Horizontal Wind for Air Quality Applications</i> .
P7-G2	The on-site meteorological station must make daily representative measurements of: <ol style="list-style-type: none"> <li>1) temperature;</li> <li>2) barometric pressure;</li> <li>3) wind speed and direction;</li> <li>4) relative humidity; and</li> <li>5) precipitation.</li> </ol>
P7-G3	At the request of the <u>administering authority</u> meteorological data obtained in accordance with condition P7-G1 must be provided to the <u>administering authority</u> .
P7-G4	Pyritic rock must be managed in a way so that contaminants (including acidic <u>waters</u> ) are not directly or indirectly released to any <u>waters</u> , including surface and <u>groundwater</u> .
Agency interest: Air	
Condition number	Condition
P7-A1	Landfill gas collected is reused or efficiently flared in a manner that avoids environmental harm and must not exceed the following limits: <ol style="list-style-type: none"> <li>1) 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the <u>landfill unit</u>;</li> <li>2) 25% of the <u>lower explosive limit</u> of the landfill site <u>boundary</u> when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and <u>leachate</u> collection system components);</li> <li>3) the <u>lower explosive limit</u> in subsurface geology at or beyond the landfill site <u>boundary</u>; <u>and</u></li> </ol>

	4) 25% of the <u>lower explosive limit</u> within service pits, service trenches, stormwater drains or other structures beyond the landfill site <u>boundary</u> .																												
P7-A2	A landfill gas monitoring network must be installed for each <u>landfill unit</u> to measure methane levels in facility structures and at the landfill site <u>boundary</u> , as prescribed by condition P7-A1. The network must consist of gas monitoring devices, such as monitoring bores and be developed by an <u>appropriately qualified person</u> in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.																												
P7-A3	If methane gas levels exceeding methane standards referred to in condition P7-A1 are detected, all necessary steps must immediately be taken to ensure protection of human health.																												
<b>Agency interest: Water</b>																													
<b>Condition number</b>	<b>Condition</b>																												
P7-WT1	<p>The only contaminants to be released to surface <u>waters</u> are settled treated stormwater runoff waters from areas of the site not likely to be contaminated with waste materials in accordance with Table WT7-1 – Surface water release limits and the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table WT7-1 – Surface water release limits</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">QUALITY CHARACTERISTIC DETERMINATION</th> <th style="text-align: center;">RELEASE POINTS AND RECEIVING WATER REFERENCE POINTS</th> <th style="text-align: center;">RELEASE LIMITS</th> <th style="text-align: center;">FREQUENCY</th> </tr> </thead> <tbody> <tr> <td>Suspended Solids</td> <td>Release point R1 and R2</td> <td>50 <u>mg/L</u></td> <td>Quarterly upon release</td> </tr> <tr> <td>pH</td> <td>Release point R1 and R2</td> <td>6.5 – 9.0</td> <td>Quarterly upon release</td> </tr> <tr> <td>Specific Conductance</td> <td>Release point R1 and R2</td> <td>1500 <math>\mu</math>S/cm</td> <td>Quarterly upon release</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>Release point R1 and R2</td> <td>6 <u>mg/L</u></td> <td>Quarterly upon release</td> </tr> <tr> <td>Total Organic Carbon</td> <td>Release point R1 and R2</td> <td>30 <u>mg/L</u></td> <td>Quarterly upon release</td> </tr> <tr> <td><b>OR ELSE IF NO RELEASE OCCURS - for all the above parameters</b></td> <td>Representative sample from sedimentation pond</td> <td colspan="2">In the event of no release - once six monthly (unless that sedimentation pond remains dry for that reporting period)</td> </tr> </tbody> </table> <p><b>Associated Monitoring Requirements:</b></p>	QUALITY CHARACTERISTIC DETERMINATION	RELEASE POINTS AND RECEIVING WATER REFERENCE POINTS	RELEASE LIMITS	FREQUENCY	Suspended Solids	Release point R1 and R2	50 <u>mg/L</u>	Quarterly upon release	pH	Release point R1 and R2	6.5 – 9.0	Quarterly upon release	Specific Conductance	Release point R1 and R2	1500 $\mu$ S/cm	Quarterly upon release	Dissolved Oxygen	Release point R1 and R2	6 <u>mg/L</u>	Quarterly upon release	Total Organic Carbon	Release point R1 and R2	30 <u>mg/L</u>	Quarterly upon release	<b>OR ELSE IF NO RELEASE OCCURS - for all the above parameters</b>	Representative sample from sedimentation pond	In the event of no release - once six monthly (unless that sedimentation pond remains dry for that reporting period)	
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	<ol style="list-style-type: none"> <li>1) Release point <u>R1</u> and <u>R2</u> – namely settled/treated stormwater runoff via the discharge structure, being either the drain from or overflow spillway of the final element of sediment control system that collects drainage and stormwater runoff contaminated by sediment at the premises to which this environmental authority relates, as depicted in Attachment 4 - Release (surface) water monitoring locations - described as Reedy Creek and Stoney Creek.</li> <li>2) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's Water Quality Sampling Manual</u>.</li> <li>3) Samples must be taken using representative samples.</li> <li>4) All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.</li> <li>5) Monitoring must be undertaken during a release as per the frequency stated.</li> <li>6) All monitoring devices must be correctly calibrated and maintained.</li> </ol>																		
P7-WT2	Monitoring of contaminant releases to <u>waters</u> must be undertaken in accordance with condition P7-WT1 and <u>records</u> of the results must be kept.																		
P7-WT3	In addition to P7-WT2, the release to <u>waters</u> must not: <ol style="list-style-type: none"> <li>1) have any other properties at a concentration that is capable of causing environmental harm;</li> <li>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.</li> </ol>																		
P7-WT4	<p>The release of contaminants to <u>groundwater</u> as a result of the <u>activity</u> must:</p> <ol style="list-style-type: none"> <li>1) be monitored from the <u>uppermost aquifer</u> at locations hydraulically up-gradient and down-gradient of the landfilled waste; and</li> <li>2) not cause environmental harm; or</li> <li>3) not exceed the limits for the quality characteristics prescribed in <i>Table WT7-2—Groundwater quality limits—Detection monitoring</i>, when measured in accordance with the table.</li> </ol> <p style="text-align: center;"><b>Table WT7-2 – <u>Groundwater</u> quality limits – Detection monitoring</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Quality Characteristic</th> <th style="text-align: center;">Limit</th> <th style="text-align: center;">Limit Type</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Ammonia (as N) <u>mg/L</u></td> <td style="text-align: center;">120% of highest background value<sup>1</sup></td> <td style="text-align: center;"><u>Maximum</u></td> </tr> <tr> <td style="text-align: center;">Iron (total) <u>mg/L</u></td> <td style="text-align: center;">120% of highest background value<sup>1</sup></td> <td style="text-align: center;"><u>Maximum</u></td> </tr> <tr> <td style="text-align: center;">Manganese (dissolved) <u>mg/L</u></td> <td style="text-align: center;">120% of highest background value<sup>1</sup></td> <td style="text-align: center;"><u>Maximum</u></td> </tr> <tr> <td style="text-align: center;">pH (field measured)</td> <td style="text-align: center;">0.5 pH units more than the highest background value<sup>1</sup></td> <td style="text-align: center;"><u>Maximum</u></td> </tr> <tr> <td></td> <td style="text-align: center;">0.5 pH units less than the lowest background value<sup>2</sup></td> <td style="text-align: center;"><u>Minimum</u></td> </tr> </tbody> </table>	Quality Characteristic	Limit	Limit Type	Ammonia (as N) <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Iron (total) <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>	Manganese (dissolved) <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>	pH (field measured)	0.5 pH units more than the highest background value <sup>1</sup>	<u>Maximum</u>		0.5 pH units less than the lowest background value <sup>2</sup>	<u>Minimum</u>
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	<p>Notes:</p> <p><sup>1</sup>“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 <u>groundwater monitoring system</u>, as required under this environmental authority.</p> <p><sup>2</sup>“Lowest background value” means the lowest 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 <u>groundwater monitoring system</u>, as required under this environmental authority.</p> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) The monitoring system must be installed and maintained by an <u>appropriately qualified person</u>.</li> <li>2) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's Water Quality Sampling Manual</u>.</li> </ol>																																										
<b>Agency interest: Noise</b>																																											
<b>Condition number</b>	<b>Condition</b>																																										
P7-N1	<p>Noise from the <u>activity</u> must not exceed the levels identified in Table N7-1—Noise limits when measured in accordance with the associated monitoring requirements.</p> <p><b>Table N7-1 – Noise limits</b></p> <table border="1"> <thead> <tr> <th rowspan="3">Noise level dB(A) measured as</th> <th colspan="7">Noise measured at a 'Noise sensitive place'</th> </tr> <tr> <th colspan="4">Monday to Saturday</th> <th colspan="3">Sundays and public holidays</th> </tr> <tr> <th>6am – 7am</th> <th>7am - 6pm</th> <th>6pm - 10pm</th> <th>10pm - 6am</th> <th>9am - 6pm</th> <th>6pm - 10pm</th> <th>10pm - 9am</th> </tr> </thead> <tbody> <tr> <td>L<sub>Aeq</sub>, adj, T</td> <td>54</td> <td>63</td> <td>63</td> <td>49</td> <td>63</td> <td>63</td> <td>49</td> </tr> <tr> <td>L<sub>A10</sub>, adj, T</td> <td>57</td> <td>66</td> <td>66</td> <td>52</td> <td>66</td> <td>66</td> <td>52</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">Noise measured at a '<u>Commercial place</u>'</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Noise level dB(A) measured as	Noise measured at a 'Noise sensitive place'							Monday to Saturday				Sundays and public holidays			6am – 7am	7am - 6pm	6pm - 10pm	10pm - 6am	9am - 6pm	6pm - 10pm	10pm - 9am	L <sub>Aeq</sub> , adj, T	54	63	63	49	63	63	49	L <sub>A10</sub> , adj, T	57	66	66	52	66	66	52	Noise measured at a ' <u>Commercial place</u> '			
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L <sub>Aeq</sub> , adj, T	56	65	65	51	65	65	51
L <sub>A10</sub> , adj, T	59	68	68	54	68	68	54
<p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) All monitoring devices must be correctly calibrated and maintained.</li> <li>2) Any monitoring must be in accordance with the most recent version of the <u>administering authority's Noise Measurement Manual</u>.</li> <li>3) Any monitoring of noise emissions from the <u>activity</u> must be undertaken when the <u>activity</u> is in operation.</li> </ol>							
P7-N2	<p>When required by the <u>administering authority</u>, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of <i>Table N7-1—Noise limits</i>, and the results notified within 14 days to the <u>administering authority</u>. Monitoring must include:</p> <ol style="list-style-type: none"> <li>1) <u>L<sub>Aeq</sub>, adj, T</u>;</li> <li>2) <u>Background</u> noise (<u>Background</u>) as LA 90, adj, T;</li> <li>3) <u>MaxLpA,T</u>;</li> <li>4) the level and frequency of occurrence of any impulsive or tonal noise;</li> <li>5) atmospheric conditions including wind speed and direction;</li> <li>6) effects due to extraneous factors such as traffic noise; and</li> <li>7) location, date and time of recording.</li> </ol>						
<b>Agency interest: Waste</b>							
Condition number	Condition						
P7-W1	<p>Waste to be deposited at the 'select waste disposal area' and the existing 'Reedy creek landfill' area as depicted in Attachment 5 – Delineation of Select Waste Disposal Cell and between Existing and new landfills; must be limited to:</p> <ol style="list-style-type: none"> <li>1) <u>General waste</u>, not including <u>putrescible waste</u> unless incidental and comingled with other waste loads.</li> <li>2) <u>Records</u> kept of wastes deposited in this area are to be provided to the <u>administering authority</u> upon request.</li> </ol>						
P7-W2	<p>All chemical forms of asbestos wastes must be contained within the <u>landfill unit</u> at a minimum distance of two (2) metres from the surface and flanks of the <u>landfill unit</u>, excluding any final cover system required as a condition of this environmental authority.</p>						
P7-W3	<p>The following waste must be handled and disposed of as a special burial of waste:</p> <ol style="list-style-type: none"> <li>1) fibrous asbestos and mixed asbestos (all chemical forms);</li> <li>2) bonded asbestos (all chemical forms) when in quantities greater than 250kg;</li> <li>3) all <u>putrescible waste</u> (other than any <u>putrescible waste</u> from domestic collection</li> </ol>						

	<p>service); and</p> <p>4) waste, which if not buried as soon as practicable, would be likely to cause environmental harm when placed in an exposed position.</p>																								
P7-W4	<p>The holder of the environmental authority must record at least the following information in relation to the special burial of wastes:</p> <ol style="list-style-type: none"> <li>1) type of waste;</li> <li>2) quantity of waste;</li> <li>3) date of deposition;</li> <li>4) source of waste; and</li> <li>5) if the waste is fibrous asbestos and/or <u>mixed asbestos waste</u>, the accurate location of each deposit and depth of each deposit.</li> </ol>																								
P7-W5	<p>Contaminated soil to be disposed of at the <u>approved place(s)</u> in the <u>double lined</u> waste cells must:</p> <ol style="list-style-type: none"> <li>1) be accepted subject to the registered operator of this environmental authority effectively implementing risk assessment practices and procedures for contaminant testing that ensure that the material accepted complies with the <u>maximum</u> contaminant levels and the allowable leaching contaminant levels prescribed in Tables W7-1 and W7-2 respectively; and</li> <li>2) if the contaminated soil is used as coverage material, contaminant levels must not exceed the <u>maximum</u> concentration limits in Table W7-3.</li> </ol> <p style="text-align: center;"><b>Table W7-1 - <u>Maximum</u> Contaminate Levels in Soils</b></p> <table border="1"> <thead> <tr> <th>Contaminant</th> <th><u>Maximum</u> contaminant level for <u>clay lined</u> landfills (mg/kg)</th> </tr> </thead> <tbody> <tr> <td colspan="2">Monocyclic aromatic hydrocarbons (MAH)</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 colspan="2">Polycyclic aromatic hydrocarbons (PAH)</td> </tr> <tr> <td>Total PAH</td> <td>500</td> </tr> <tr> <td colspan="2">Phenolic contaminants</td> </tr> <tr> <td colspan="2"><i>Non halogenated compounds:</i></td> </tr> <tr> <td>Phenol</td> <td>100</td> </tr> </tbody> </table>	Contaminant	<u>Maximum</u> contaminant level for <u>clay lined</u> landfills (mg/kg)	Monocyclic aromatic hydrocarbons (MAH)		Benzene	10	Ethyl Benzene	500	Toluene	300	Xylene	250	Total MAH	500	Polycyclic aromatic hydrocarbons (PAH)		Total PAH	500	Phenolic contaminants		<i>Non halogenated compounds:</i>		Phenol	100
Contaminant	<u>Maximum</u> contaminant level for <u>clay lined</u> landfills (mg/kg)																								
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Phenol	100																								

m-cresol	250
o-cresol	250
p-cresol	250
Total non-halogenated phenol	250
<i>Halogenated phenol:</i>	
Chlorophenol	1
Pentachlorophenol	5
Trichlorophenol	5
Total halogenated phenol	5
Chlorinated Hydrocarbons	
<i>Chlorinated aliphatic compounds:</i>	
Carbon tetrachloride	5
1,2 Dichloroethane	10
1,1 Dichloroethene	1
Tetrachloroethene	10
Trichloroethene	25
Total chlorinated aliphatic compounds	50
<i>Chlorinated aromatic compounds:</i>	
Chlorobenzene	100
Hexachlorobenzene	1
Total chlorinated aromatic compounds	100
<i>Non-scheduled solid polychlorinated biphenyls (PCBs)</i>	2
Pesticides	
Total organochlorine	5
Total herbicides	25
Total carbamates	25

Total organophosphorus	10
Petroleum hydrocarbons	
Total petroleum hydrocarbons (C <sub>6</sub> -C <sub>9</sub> )	500
Total petroleum hydrocarbons (C <sub>10</sub> -C <sub>14</sub> )	5 000
Total petroleum hydrocarbons (C <sub>15</sub> -C <sub>28</sub> )	10 000
Total petroleum hydrocarbons (C <sub>29</sub> -C <sub>36</sub> )	10 000

Table W7-2 - Allowable leaching Contaminate Levels

Contaminant	Allowable leaching contaminant levels (TCLP) for <u>clay lined</u> landfills (mg/l)	Allowable leaching contaminant levels (TCLP) for <u>double lined</u> landfills (mg/l)
Non-specific contaminants		
Biochemical oxygen demand	20 000	20 000
Total organic carbon	10 000	10 000
Petroleum hydrocarbons	25	50
Metals/non-metals		
Antimony	0.5	5
Arsenic	0.5	5
Barium	10	100
Cadmium	0.05	0.5
Chromium	0.5	5
Cobalt	0.5	5
Copper	10	100
Lead	0.5	5
Mercury	0.01	0.1
Molybdenum	0.1	5
Nickel	0.5	5

Selenium	0.1	1
Silver	0.5	5
Thallium	0.1	1
Tin	0.3	3
Vanadium	0.5	5
Zinc	50	500
Inorganic anions		
Bromide	5	50
Chloride	6 000	6 000
Cyanide (total)	1	5
Fluoride	15	150
Nitrate	100	1 000
Sulphate	2 500	4 000
Monocyclic aromatic hydrocarbon (MAH)		
Benzene	0.1	1
Ethyl benzene	5	50
Toluene	3	30
Xylene	2	20
Total MAH	5	50
Polycyclic aromatic hydrocarbons (PAH)		
Anthracene	0.07	0.7
Benz (a) anthracene	0.005	0.05
Benz (c) phenanthrene	0.005	0.05
Benzo (a) pyrene	0.002	0.02
Benzo (b) fluoranthene	0.005	0.05
Benzo (k) fluoranthene	0.005	0.05

Chrysene	0.01	0.1
Dibenz (a,h) anthracene	0.002	0.02
Dibenz (a,h) pyrene	0.01	0.1
Dimethylbenz (a) anthracene	0.005	0.05
Fluoranthene	0.02	0.2
Indeno (1,2,3-cd) pyrene	0.01	0.1
Naphthalene	0.07	0.7
Phenanthrene	0.01	0.1
Pyrene	0.07	0.7
Total PAH	0.1	1
Phenolic contaminants		
<i>Non halogenated compounds:</i>		
Phenol	1	10
m-cresol	2	20
o-cresol	2	20
p-cresol	2	20
<i>Halogenated phenols:</i>		
Chlorophenol	0.01	0.1
Pentachlorophenol	0.1	1
Trichlorophenol	0.1	1
Chlorinated hydrocarbons		
<i>Chlorinated aliphatic compounds:</i>		
Carbon tetrachloride	0.03	0.3
1,2 Dichloroethane	0.1	1
1,1 Dichloroethene	0.003	0.03
Tetrachloroethene	0.1	1

Trichloroethene	0.3	3
<i>Chlorinated aromatic compounds:</i>		
Chlorobenzene (total)	1	10
Hexachlorobenzene	0.002	0.02
Pesticides		
<i>Organochlorine:</i>		
Aldrin	0.001	0.01
Chlordane	0.006	0.06
Chlorpyrifos	0.01	0.03
Dieldrin	0.001	0.01
DDT	0.003	0.03
Endrin	0.001	0.01
Heptachlor	0.003	0.03
Lindane	0.1	1
Contaminant	Allowable leaching contaminant levels (TCLP) for <u>clay lined</u> landfills (mg/l)	Allowable leaching contaminant levels (TCLP) for <u>double lined</u> landfills (mg/l)
Methoxychlor	0.1	1
Toxaphene	0.005	0.05
Herbicides:		
2,4-D	0.1	1
2,4-DB	0.2	2
2,4,5 -T	0.002	0.02
MCPA	0.2	2
<i>Carbamates:</i>		
Carbaryl	0.06	0.6
Carbofuran	0.03	0.3

*Organophosphorus:*

Diazinon	0.01	0.1
Methyl Parathion	0.006	0.06
Parathion	0.03	0.3

*Triazines*

Atrazine	0.01	0.03
Simazine	0.01	0.03

For any soil contaminated by radioactive material:

the gross alpha and gross beta activity concentration in the Toxicity Characteristic Leaching Procedure (TCLP) extracts from the material are no more than one hundred (100) times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the NHMRCARMCANZ Australian Drinking Water Guidelines, 2000.

**Table W7-3 - Maximum total contaminant levels in soils used as cover material**

Contaminant	<u>Maximum</u> total contaminant levels in soils used as cover material (mg/kg)
Arsenic (total)	200
Beryllium	40
Cadmium	40
Chromium (iii)	240 000
Chromium (vi)	200
Copper	2 000
Lead	600
Contaminant	<u>Maximum</u> total contaminant levels in soils used as cover material (mg/kg)
Manganese	3 000
Mercury (inorganic)	30
Methyl Mercury	20
Nickel	600

	Zinc	14 000	
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**Part 8 - Site Specific Conditions – Burleigh Heads Landfill**

Environmentally relevant activity	Location
60-(2f) Waste disposal >50000t but <100000t yr (1)(b) 54-(1) Mechanical waste reprocessing inert, non-putrescible or green waste >5000t yr 62-1(b) Resource recovery and transfer facility operation, general waste 62-1(c) Resource recovery and transfer facility operation, category 2 regulated waste 62-1(d) Resource recovery and transfer facility operation, category 1 regulated waste	<b>Burleigh Heads Landfill</b> 45 Hutchinson Street, Burleigh Heads Lot 1/SP287365

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: Water																					
Condition number	Condition																				
P8-WT1	<p>The only contaminants to be released to surface <u>waters</u> are settled treated stormwater runoff <u>waters</u> from areas of the site not likely to be contaminated with waste materials in accordance with Table WT8-1 —Surface water release limits and the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table WT8-1 —Surface water release limits</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">QUALITY CHARACTERISTIC DETERMINATION</th> <th style="text-align: left;">RELEASE POINTS</th> <th style="text-align: left;">RELEASE LIMITS</th> <th style="text-align: left;">FREQUENCY</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>Pumped discharge from sedimentation pond</td> <td>6.5 – 9.1</td> <td>Quarterly –if and when release occurs</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>Pumped discharge from sedimentation pond</td> <td>6 <u>mg/L</u> min.</td> <td>Quarterly –if and when release occurs</td> </tr> <tr> <td>Total Organic Carbon</td> <td>Pumped discharge from sedimentation pond</td> <td>20 <u>mg/L</u> max.</td> <td>Quarterly –if and when release occurs</td> </tr> <tr> <td>Suspended Solids</td> <td>Pumped discharge from sedimentation pond</td> <td>50 <u>mg/L</u> max.</td> <td>Quarterly –if and when release occurs</td> </tr> </tbody> </table>	QUALITY CHARACTERISTIC DETERMINATION	RELEASE POINTS	RELEASE LIMITS	FREQUENCY	pH	Pumped discharge from sedimentation pond	6.5 – 9.1	Quarterly –if and when release occurs	Dissolved Oxygen	Pumped discharge from sedimentation pond	6 <u>mg/L</u> min.	Quarterly –if and when release occurs	Total Organic Carbon	Pumped discharge from sedimentation pond	20 <u>mg/L</u> max.	Quarterly –if and when release occurs	Suspended Solids	Pumped discharge from sedimentation pond	50 <u>mg/L</u> max.	Quarterly –if and when release occurs
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	<p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's Water Quality Sampling Manual</u>.</li> <li>2) Samples must be taken using representative samples.</li> <li>3) All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.</li> <li>4) Monitoring must be undertaken during a release as per the frequency stated.</li> <li>5) All monitoring devices must be correctly calibrated and maintained.</li> </ol>														
P8-WT2	Monitoring of contaminant releases to <u>waters</u> must be undertaken in accordance with condition P8-WT1 and <u>records</u> of the results must be kept.														
P8-WT3	In addition to P8-WT1, the release to <u>waters</u> must not: <ol style="list-style-type: none"> <li>1) have any other properties at a concentration that is capable of causing environmental harm; and</li> <li>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.</li> </ol>														
P8-WT4	A <u>groundwater monitoring system</u> must be installed and maintained at the <u>approved place</u> . The system must include a sufficient number of wells installed at locations and depths that yield representative <u>groundwater</u> samples from the <u>uppermost aquifer</u> and that establish: <ol style="list-style-type: none"> <li>1) background <u>groundwater</u> quality in hydraulically up-gradient or background well(s) that have not been affected by any potential leakage of contaminants to <u>groundwater</u> from the <u>approved place</u>; and</li> <li>2) quality of <u>groundwater</u> down-gradient of any potential leakage of contaminants to <u>groundwater</u> from the <u>approved place</u> including <u>groundwater</u> passing the point(s) of compliance that must be situated not more than fifty (50) metres from the <u>landfill unit</u> or the <u>boundary</u> of the <u>landfill facility</u>, whatever is the closest.</li> </ol>														
P8-WT5	<p>Except as otherwise provided, the holder of this environmental authority must monitor and record quality of <u>groundwater</u> to detect any possible release(s) of contaminants in accordance with the Detection <u>Groundwater</u> Monitoring Program. The Detection <u>Groundwater</u> Monitoring Program must be undertaken for, at least, the following water quality characteristics:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>(1) Ammonia (as N)</td> <td>(7) Nitrate (as N)</td> </tr> <tr> <td>(2) Bicarbonate (HCO<sub>3</sub>)</td> <td>(8) pH</td> </tr> <tr> <td>(3) Calcium</td> <td>(9) Sodium</td> </tr> <tr> <td>(4) Chloride</td> <td>(10) Sulphate</td> </tr> <tr> <td>(5) Copper</td> <td>(11) Specific conductance</td> </tr> <tr> <td>(6) Iron (total)</td> <td>(12) Total Organic Carbon (TOC)</td> </tr> <tr> <td>(7) Lead</td> <td>(13) Zinc</td> </tr> </table>	(1) Ammonia (as N)	(7) Nitrate (as N)	(2) Bicarbonate (HCO <sub>3</sub> )	(8) pH	(3) Calcium	(9) Sodium	(4) Chloride	(10) Sulphate	(5) Copper	(11) Specific conductance	(6) Iron (total)	(12) Total Organic Carbon (TOC)	(7) Lead	(13) Zinc
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(6) Iron (total)	(12) Total Organic Carbon (TOC)														
(7) Lead	(13) Zinc														
P8-WT6	All determinations of the quality of <u>groundwater</u> , contaminants released to surface <u>waters</u> or recirculated <u>leachate</u> must be made in accordance with methods prescribed in the most recent edition of <u>administering authority's Water Quality Sampling Manual</u> .														

P8-WT7	The holder of this environmental authority must monitor, and record <u>groundwater</u> quality as often as is necessary to check compliance with the conditions of this environmental authority but not less frequently than every six (6) months.																				
<b>Agency interest: Noise</b>																					
<b>Condition number</b>	<b>Condition</b>																				
P8-N1	<p>Noise from the <u>activity</u> must not exceed the levels identified in Table N8-1—Noise limits when measured in accordance with the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table N8-1 – Noise limits</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" data-bbox="347 701 1390 768"><b>NOISE LIMITS AT A NOISE SENSITIVE PLACE</b></th> </tr> <tr> <th data-bbox="347 779 659 920"><b><i>Period</i></b></th> <th data-bbox="667 779 1390 920"><b><i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i></b>  <i>L<sub>Amax, adj T</sub></i></th> </tr> </thead> <tbody> <tr> <td data-bbox="347 931 659 987">7 am – 6 p.m.</td> <td data-bbox="667 931 1390 987"><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td data-bbox="347 999 659 1055">6 p.m. – 10 p.m.</td> <td data-bbox="667 999 1390 1055"><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td data-bbox="347 1066 659 1122">10 p.m. – 7 am</td> <td data-bbox="667 1066 1390 1122"><u>Background</u> noise level plus 3 dB(A)</td> </tr> <tr> <th colspan="2" data-bbox="347 1133 1390 1200"><b>NOISE LIMITS AT A <u>COMMERCIAL PLACE</u></b></th> </tr> <tr> <th data-bbox="347 1211 659 1352"><b><i>Period</i></b></th> <th data-bbox="667 1211 1390 1352"><b><i>Noise Level at a <u>Commercial Place</u> measured as the Adjusted Maximum Sound Pressure Level</i></b>  <i>L<sub>Amax, adj T</sub></i></th> </tr> <tr> <td data-bbox="347 1364 659 1420">7 am – 6 p.m.</td> <td data-bbox="667 1364 1390 1420"><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td data-bbox="347 1431 659 1487">6 p.m. – 10 p.m.</td> <td data-bbox="667 1431 1390 1487"><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td data-bbox="347 1498 659 1554">10 p.m. – 7 am</td> <td data-bbox="667 1498 1390 1554"><u>Background</u> noise level plus 8 dB(A)</td> </tr> </tbody> </table> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) All monitoring devices must be correctly calibrated and maintained.</li> <li>2) Any monitoring must be in accordance with the most recent version of the <u>administering authority's</u> Noise Measurement Manual.</li> <li>3) Any monitoring of noise emissions from the <u>activity</u> must be undertaken when the <u>activity</u> is in operation</li> </ol>	<b>NOISE LIMITS AT A NOISE SENSITIVE PLACE</b>		<b><i>Period</i></b>	<b><i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i></b>  <i>L<sub>Amax, adj T</sub></i>	7 am – 6 p.m.	<u>Background</u> noise level plus 5 dB(A)	6 p.m. – 10 p.m.	<u>Background</u> noise level plus 5 dB(A)	10 p.m. – 7 am	<u>Background</u> noise level plus 3 dB(A)	<b>NOISE LIMITS AT A <u>COMMERCIAL PLACE</u></b>		<b><i>Period</i></b>	<b><i>Noise Level at a <u>Commercial Place</u> measured as the Adjusted Maximum Sound Pressure Level</i></b>  <i>L<sub>Amax, adj T</sub></i>	7 am – 6 p.m.	<u>Background</u> noise level plus 10 dB(A)	6 p.m. – 10 p.m.	<u>Background</u> noise level plus 10 dB(A)	10 p.m. – 7 am	<u>Background</u> noise level plus 8 dB(A)
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P8-N2	<p>When required by the <u>administering authority</u>, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of <i>Table N8-1—Noise limits</i>, and the results notified within 14 days to the administering authority. Monitoring must include:</p> <ol style="list-style-type: none"> <li>1) <u>L<sub>Aeq, adj, T</sub></u>;</li> <li>2) <u>Background</u> noise (<u>Background</u>) as LA 90, adj, T;</li> <li>3) <u>MaxL<sub>pA, T</sub></u>;</li> </ol>																				

	<ol style="list-style-type: none"> <li>4) the level and frequency of occurrence of any impulsive or tonal noise;</li> <li>5) atmospheric conditions including wind speed and direction;</li> <li>6) effects due to extraneous factors such as traffic noise; and</li> <li>7) location, date and time of recording.</li> </ol>										
<b>Agency interest: Waste</b>											
<b>Condition number</b>	<b>Condition</b>										
P8-W1	<p>In addition to condition P2-W1, the only waste accepted for disposal at the <u>landfill facility</u> must be <u>general waste</u> excluding the following waste:</p> <ol style="list-style-type: none"> <li>1) any liquescent waste (other than any <u>leachate</u> generated within a <u>landfill unit</u>);</li> <li>2) any <u>regulated waste</u> except minor amounts of chemically impregnated timber commingled with other <u>general waste</u>;</li> <li>3) any <u>regulated waste</u> except shredded or chipped tyres commingled with other <u>general waste</u>;</li> <li>4) any <u>putrescible waste</u>, except for minor amounts from industrial and commercial premises in quantities of no more than five percent (5%) by volume in any one load;</li> <li>5) metals with the exception of minor amounts of metals incidental to or commingled with other waste;</li> <li>6) paper product sludges except those with a moisture content of less than thirty percent (30%);</li> <li>7) garden and/or green waste with the exception of less than five percent (5%) by volume of garden and/or green waste incidental to or commingled with other waste;</li> <li>8) textiles including carpets and carpet underlay with the exception of less than five percent (5%) by volume of carpets and carpet underlay incidental to or commingled with other waste in any one load;</li> <li>9) plastic products with the exception of minor amounts of plastics incidental to or commingled with other waste.</li> </ol>										
P8-W2	<p>Contaminated soil to be disposed of at the <u>approved place(s)</u> must be low level contaminated soils (that may be used for cover material upon <u>landfill units</u>) and must:</p> <ol style="list-style-type: none"> <li>1) not exceed the <u>maximum</u> concentration limits in Table W8-1; and</li> <li>2) not exceed leaching contaminant levels in the waste prescribed in Table W8-2 when measured in accordance with <u>Toxicity Characteristic Leaching Procedures (TCLP)</u>.</li> </ol> <p style="text-align: center;"><b>Table W8-1 <u>Maximum</u> contaminant levels in soils</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><b><i>SUBSTANCE</i></b></th> <th><b><i>mg/kg</i></b></th> </tr> </thead> <tbody> <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> </tbody> </table>	<b><i>SUBSTANCE</i></b>	<b><i>mg/kg</i></b>	Arsenic (total)	200	Beryllium	40	Cadmium	40	Chromium (iii)	240 000
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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
<b>Monocyclic Aromatic Hydrocarbons(MAH)</b>	<b>mg/kg</b>
Benzene	10
Ethyl Benzene	500
Toluene	300
Xylene	250
Total MAH	500
<b>Polycyclic Aromatic Hydrocarbons(PAH)</b>	<b>mg/kg</b>
Total PAH	500
<b>Phenolic Contaminants</b>	<b>mg/kg</b>
<i>Non halogenated compounds:</i>	.
Phenol	100
m-cresol	250
o-cresol	250
p-cresol	250
Total non-halogenated phenol	250
<i>Halogenated phenol:</i>	.
Chlorophenol	1
Trichlorophenol	5
Pentachlorophenol	5

Total halogenated phenol	5
<b>Chlorinated Hydrocarbons</b>	<b>mg/kg</b>
<i>Chlorinated Aliphatic Compounds:</i>	.
Carbon tetrachloride	5
<b>Chlorinated Hydrocarbons</b>	<b>mg/kg</b>
1,2 Dichloroethane	10
1,1 Dichloroethene	1
Tetrachloroethene	10
Trichloroethene	25
<b>Chlorinated Hydrocarbons</b>	<b>mg/kg</b>
Total chlorinated aliphatic cpds	50
<i>Chlorinated Aromatic Compounds:</i>	.
Chlorobenzene	100
Hexachlorobenzene	1
Total Chlorinated Aromatic cpds	100
<b>Pesticides</b>	<b>mg/kg</b>
Total organochlorine	5
Total herbicides	25
Total carbamates	25
Total organophosphorus	10
<b>Petroleum Hydrocarbons</b>	<b>mg/kg</b>
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 W8-2 – Allowable leaching contaminant levels**

<b>CONTAMINANT ANALYSIS</b>	<b><u>mg/L</u></b>
<b>Non Specific Contaminants</b>	<b><u>mg/L</u></b>
Biochemical Oxygen Demand	20 000
Total Organic Carbon	10 000
Petroleum Hydrocarbons	25
Microtox LC50	<i>* No levels set at this time</i>
<b>Metals/Non-Metals</b>	<b><u>mg/L</u></b>
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
<b>Inorganic Anions</b>	<b><u>mg/L</u></b>
Bromide	5.0
<b>Inorganic Anions</b>	<b><u>mg/L</u></b>

Chloride	6 000
Cyanide (total)	1.0
Fluoride	15.0
Sulphate	2 500
Nitrate	100.0
<b>Monocyclic Aromatic Hydrocarbon(MAH)</b>	<b><u>mg/L</u></b>
Benzene	0.1
Ethyl benzene	5.0
Toluene	3.0
Xylene	2.0
Total MAH	5.0
<b>Polycyclic Aromatic Hydrocarbons(PAH)</b>	<b><u>mg/L</u></b>
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
<b>Polycyclic Aromatic Hydrocarbons</b>	<b><u>mg/L</u></b>
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
<b>Phenolic Contaminants</b>	<b><u>mg/L</u></b>
<i>Non haloenated compounds:</i>	
Phenol	1.0
m-Cresol	2.0
o-Cresol	2.0
p-Cresol	2.0
<i>Halogenated phenols:</i>	.
Chlorophenol	0.01
Trichlorophenol	0.1
Pentachlorophenol	0.1
<b>Chlorinated Hydrocarbons</b>	<b><u>mg/L</u></b>
<i>Chlorinated Aliphatic Compounds:</i>	.
Carbon tetrachloride	0.03
1,2 Dichloroethane	0.1
1,1 Dichloroethene	0.003
Tetrachloroethene	0.1
Trichloroethene	0.3
<i>Chlorinated Aromatic Compounds:</i>	.
Chlorobenzene(total)	1.0
Hexachlorobenzene	0.002
<b>Pesticides</b>	<b><u>mg/L</u></b>
<i>Organochlorine:</i>	.
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
<i>Herbicides:</i>	.
2,4-D	0.1
2,4-DB	0.2
MCPA	0.2
2,4,6-T	0.002
<b>Pesticides</b>	<b><u>mg/L</u></b>
<i>Carbamates:</i>	
Carbaryl	0.06
Carbofuran	0.03
<i>Organophosphorus:</i>	.
Diazinon	0.01
Parathion	0.03
Methyl Parathion	0.006
<i>Triazines:</i>	.
Atrazine	0.01
Simazine	0.01

**Part 9 - Site Specific Conditions – Quarry and Crushing Activities at Burleigh Heads Landfill**

Environmentally relevant activities	Location
16-(2c) Extractive >1000000t yr 16-(3c) Screening >1000000t yr	<b>Burleigh Heads Landfill</b> 45 Hutchinson Street, Burleigh Heads Lot 1/SP287365

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: Noise																					
Condition number	Condition																				
P9-N1	<p>Noise from the <u>activity</u> must not exceed the levels identified in Table N9-1—Noise limits when measured in accordance with the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table N9-1 – Noise limits</b></p> <table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2">NOISE LIMITS AT A NOISE SENSITIVE PLACE</th> </tr> <tr> <th><i>Period</i></th> <th><i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i> <math>L_{Amax, adj T}</math></th> </tr> </thead> <tbody> <tr> <td>7 am - 6 p.m.</td> <td><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td>6 p.m. - 10 p.m.</td> <td><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td>10 p.m. - 7 am</td> <td><u>Background</u> noise level plus 3 dB(A)</td> </tr> <tr> <th colspan="2">NOISE LIMITS AT A <u>COMMERCIAL PLACE</u></th> </tr> <tr> <th><i>Period</i></th> <th><i>Noise Level at a <u>Commercial Place</u> measured as the Adjusted Maximum Sound Pressure Level</i> <math>L_{Amax, adj T}</math></th> </tr> <tr> <td>7 am - 6 p.m.</td> <td><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td>6 p.m. - 10 p.m.</td> <td><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td>10 p.m. - 7 am</td> <td><u>Background</u> noise level plus 8 dB(A)</td> </tr> </tbody> </table> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) All monitoring devices must be correctly calibrated and maintained.</li> <li>2) Any monitoring must be in accordance with the most recent version of the <u>administering authority's</u> Noise Measurement Manual.</li> <li>3) Any monitoring of noise emissions from the <u>activity</u> must be undertaken when the <u>activity</u> is in operation</li> </ol>	NOISE LIMITS AT A NOISE SENSITIVE PLACE		<i>Period</i>	<i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i> $L_{Amax, adj T}$	7 am - 6 p.m.	<u>Background</u> noise level plus 5 dB(A)	6 p.m. - 10 p.m.	<u>Background</u> noise level plus 5 dB(A)	10 p.m. - 7 am	<u>Background</u> noise level plus 3 dB(A)	NOISE LIMITS AT A <u>COMMERCIAL PLACE</u>		<i>Period</i>	<i>Noise Level at a <u>Commercial Place</u> measured as the Adjusted Maximum Sound Pressure Level</i> $L_{Amax, adj T}$	7 am - 6 p.m.	<u>Background</u> noise level plus 10 dB(A)	6 p.m. - 10 p.m.	<u>Background</u> noise level plus 10 dB(A)	10 p.m. - 7 am	<u>Background</u> noise level plus 8 dB(A)
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P9-N2	<p>When required by the <u>administering authority</u>, noise monitoring must be undertaken in accordance with the associated monitoring requirements of <i>Table N9-1—Noise limits</i>, and the results notified within 14 days to the <u>administering authority</u>. Monitoring must include:</p> <ol style="list-style-type: none"> <li>1) LAeq, adj, T;</li> <li>2) <u>Background</u> noise (<u>Background</u>) as LA 90, adj, T;</li> <li>3) <u>MaxLpA,T</u>;</li> <li>4) the level and frequency of occurrence of any impulsive or tonal noise;</li> <li>5) atmospheric conditions including wind speed and direction;</li> <li>6) effects due to extraneous factors such as traffic noise; and</li> <li>7) location, date and time of recording.</li> </ol>
P9-N3	<p>All <u>blasting</u> must be carried out in a proper manner by a person or company possessing appropriate experience and qualifications to perform the <u>blasting</u>, in accordance with best practice environmental management, to minimise the likelihood of adverse effects being caused by the impact of airblast overpressure and ground borne vibrations on premises and people living in or using the surrounding area.</p>
P9-N4	<p>Noise emanating from <u>blasting</u> operations must not exceed an airblast overpressure level of 115 dB (linear peak) when measured outside the most exposed part of an affected <u>noise sensitive place</u> for four (4) out of any five (5) consecutive blasts initiated.</p>
P9-N5	<p>Noise emanating from <u>blasting</u> operations must not exceed an airblast over-pressure level of 120 dB (linear peak) at any time when measured outside the most exposed part of an affected <u>noise sensitive place</u> or <u>commercial place</u>.</p>
P9-N6	<p>Ground vibration for vibrations of more than 35 HZ, caused by <u>blasting</u> operations must not exceed a peak particle velocity of 25 millimetres per second ground vibration, peak particle velocity when measured outside the most exposed part of an affected <u>noise sensitive place</u>.</p>
P9-N7	<p>Ground vibration for vibrations of not more than 35 HZ, caused by <u>blasting</u> operations must not exceed a peak particle velocity of 10 millimetres per second ground vibration, peak particle velocity when measured outside the most exposed part of an affected <u>noise sensitive place</u>.</p>
P9-N8	<p>The instrument used to measure the ground borne vibration (e.g.: ground vibration transducer [or array]) must be effectively and securely coupled to the ground to ensure that it effectively <u>measures</u> the ground vibration from <u>blasting</u> at the <u>approved place(s)</u> in accordance with Australian Standard AS2187.2-1993 "Part 2: Explosives – Storage, transport and use. Use of explosives."</p>
P9-N9	<p><u>Blasting</u> must be conducted between the hours of 9 am to 5 pm, Monday to Saturday, unless otherwise directed or allowed in the interests of health or safety, by an inspector, under the provisions of the <i>Mines Regulation Act 1964</i>.</p>

**Part 10 – Site Specific Conditions – Jacobs Well Landfill**

Environmentally relevant activity	Location
60-(2b) Waste disposal >2000t to 5000t yr (1)(b)	<b>Jacobs Well Landfill</b> 79 Behms Road, Jacobs Well Lot 477/SP136098

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: General	
Condition number	Condition
P10-G1	The holder of this environmental authority must cause reasonable and practicable steps to be taken to ensure recyclable waste is not deposited in the <u>general waste</u> stream.
Agency interest: Air	
Condition number	Condition
P10-A1	Landfill gas collected is reused or efficiently flared in a manner that avoids environmental harm and must not exceed the following limits: <ol style="list-style-type: none"> <li>1) 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the <u>landfill unit</u>;</li> <li>2) 25% of the <u>lower explosive limit</u> of the landfill site <u>boundary</u> when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and <u>leachate</u> collection system components);</li> <li>3) the <u>lower explosive limit</u> in subsurface geology at or beyond the landfill site <u>boundary</u>; <u>and</u></li> <li>4) 25% of the <u>lower explosive limit</u> within service pits, service trenches, stormwater drains or other structures beyond the landfill site <u>boundary</u>.</li> </ol>
P10-A2	When it is estimated that 250 000 tonnes or more of waste is disposed in a <u>landfill unit(s)</u> at the <u>approved place</u> a landfill gas monitoring network must be installed for the <u>landfill unit</u> to measure methane levels in facility structures and at the landfill site <u>boundary</u> , as prescribed by condition P10-A1. The network must consist of gas monitoring devices, such as monitoring bores and be developed by an <u>appropriately qualified person</u> in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.
P10-A3	Determination of all the methane gas levels must be performed as often as necessary to ensure protection of human health, having regard to: <ol style="list-style-type: none"> <li>1) the likely landfill gas generation rate;</li> <li>2) any previous levels of methane gas detected by the monitoring program;</li> <li>3) proximity of the <u>landfill facility</u> to any premises or persons likely to be adversely affect by landfill gas;</li> <li>4) the effectiveness of <u>measures</u> implemented to minimise any lateral migration of landfill gas; and</li> <li>5) atmospheric pressure.</li> </ol>

P10-A4	If methane gas levels exceeding methane standards referred to in condition P10-A1 are detected, all necessary steps must immediately be taken to ensure protection of human health.																								
<b>Agency interest: Water</b>																									
<b>Condition number</b>	<b>Condition</b>																								
P10-WT1	<p>The only contaminants to be released to surface <u>waters</u> are settled treated stormwater runoff <u>waters</u> from areas of the site not likely to be contaminated with waste materials in accordance with Table WT10-1 —Surface water release limits and the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table WT10-1 —Surface water release limits</b></p> <table border="1"> <thead> <tr> <th>QUALITY CHARACTERISTIC DETERMINATION</th> <th>RELEASE POINTS</th> <th>RELEASE LIMITS</th> <th>FREQUENCY</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>Overflow from the sedimentation control system</td> <td>6.5 – 9.0</td> <td>Quarterly –if and when release occurs</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>Overflow from the sedimentation control system</td> <td>6 <u>mg/L</u> min.</td> <td>Quarterly –if and when release occurs</td> </tr> <tr> <td>Suspended Solids</td> <td>Overflow from the sedimentation control system</td> <td>50 <u>mg/L</u> max. or &lt;110% of concentration at up-current point.</td> <td>Quarterly –if and when release occurs</td> </tr> <tr> <td>Total Organic Carbon</td> <td>Overflow from the sedimentation control system</td> <td>20 <u>mg/L</u> max.</td> <td>Quarterly –if and when release occurs</td> </tr> <tr> <td><b>OR ELSE IF NO RELEASE OCCURS – for all the above parameters</b></td> <td>Overflow from the sedimentation control system</td> <td>Per above parameters.</td> <td>Annually – in the event of no release, (unless that sedimentation control system remains dry for that annual reporting period)</td> </tr> </tbody> </table> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) Monitoring must be in accordance with the methods prescribed in the current edition of the <u>administering authority's</u> Water Quality Sampling Manual.</li> <li>2) Samples must be taken using representative samples.</li> </ol>	QUALITY CHARACTERISTIC DETERMINATION	RELEASE POINTS	RELEASE LIMITS	FREQUENCY	pH	Overflow from the sedimentation control system	6.5 – 9.0	Quarterly –if and when release occurs	Dissolved Oxygen	Overflow from the sedimentation control system	6 <u>mg/L</u> min.	Quarterly –if and when release occurs	Suspended Solids	Overflow from the sedimentation control system	50 <u>mg/L</u> max. or <110% of concentration at up-current point.	Quarterly –if and when release occurs	Total Organic Carbon	Overflow from the sedimentation control system	20 <u>mg/L</u> max.	Quarterly –if and when release occurs	<b>OR ELSE IF NO RELEASE OCCURS – for all the above parameters</b>	Overflow from the sedimentation control system	Per above parameters.	Annually – in the event of no release, (unless that sedimentation control system remains dry for that annual reporting period)
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	<p>3) All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.</p> <p>4) Monitoring must be undertaken during a release as per the frequency stated.</p> <p>5) All monitoring devices must be correctly calibrated and maintained.</p>		
P10-WT2	Monitoring of contaminant releases to <u>waters</u> must be undertaken in accordance with condition P10-WT1 and <u>records</u> of the results must be kept.		
P10-WT3	In addition to P10-WT1, the release to <u>waters</u> must not: <ol style="list-style-type: none"> <li>1) have any other properties at a concentration that is capable of causing environmental harm; and</li> <li>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.</li> </ol>		
P10-WT4	A <u>groundwater monitoring system</u> must be installed. The system must include a sufficient number of wells installed and maintained at locations and depths that yield representative <u>groundwater</u> samples from the <u>uppermost aquifer</u> and that establish: <ol style="list-style-type: none"> <li>1) background <u>groundwater</u> quality in hydraulically up-gradient or background well(s) that have not been affected by any potential leakage of contaminants to <u>groundwater</u> from the <u>approved place</u>; and</li> <li>2) quality of <u>groundwater</u> down-gradient of any potential leakage of contaminants to <u>groundwater</u> from the <u>approved place</u> including <u>groundwater</u> passing the point(s) of compliance that must be situated not more than 150 metres from the <u>landfill unit</u> or the <u>boundary</u> of the <u>landfill facility</u>, whichever is the closest.</li> </ol>		
P10-WT5	<p>Except as otherwise provided, the holder of this environmental authority must monitor and record quality of <u>groundwater</u> to detect any possible release(s) of contaminants in accordance with a monitoring program known as the Detection <u>Groundwater</u> Monitoring Program. The Detection <u>Groundwater</u> Monitoring Program must be undertaken for, at least, the following water quality characteristics:</p> <table border="1" data-bbox="485 1420 1264 1774"> <tr> <td> <ul style="list-style-type: none"> <li>• Ammonia (as N)</li> <li>• Bicarbonate(HCO<sub>3</sub>)</li> <li>• Calcium</li> <li>• Chloride</li> <li>• Iron (total)</li> <li>• Lead</li> <li>• Nitrate (as N)</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• pH</li> <li>• Potassium</li> <li>• Sodium</li> <li>• Sulphate</li> <li>• specific conductance</li> <li>• Total Organic Carbon (TOC)</li> <li>• Zinc.</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>• Ammonia (as N)</li> <li>• Bicarbonate(HCO<sub>3</sub>)</li> <li>• Calcium</li> <li>• Chloride</li> <li>• Iron (total)</li> <li>• Lead</li> <li>• Nitrate (as N)</li> </ul>	<ul style="list-style-type: none"> <li>• pH</li> <li>• Potassium</li> <li>• Sodium</li> <li>• Sulphate</li> <li>• specific conductance</li> <li>• Total Organic Carbon (TOC)</li> <li>• Zinc.</li> </ul>
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P10-WT6	The holder of this environmental authority must determine whether or not there has been any statistically significant increase over <u>background</u> values at locations hydraulically down-gradient of the <u>landfill unit</u> for any water quality characteristic required to be monitored under the Detection <u>Groundwater</u> Monitoring Program.		
P10-WT7	All determinations of the quality of contaminants released to <u>waters</u> must be made in accordance with methods prescribed in the most recent edition of <u>administering authority's Water Quality Sampling Manual</u> .		

Agency interest: Noise																									
Condition number	Condition																								
P10-N1	<p>Noise from the <u>activity</u> must not exceed the levels identified in Table N10-1—Noise limits when measured in accordance with the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table N10-1 – Noise limits</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">NOISE LIMITS AT A NOISE SENSITIVE PLACE</th> </tr> <tr> <th style="text-align: center;"><i>Period</i></th> <th style="text-align: center;"><i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i></th> </tr> <tr> <td></td> <td style="text-align: center;"><math>L_{Amax, adj T}</math></td> </tr> </thead> <tbody> <tr> <td style="text-align: center;">7 am - 6 p.m.</td> <td style="text-align: center;"><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td style="text-align: center;">6 p.m. - 10 p.m.</td> <td style="text-align: center;"><u>Background</u> noise level plus 5 dB(A)</td> </tr> <tr> <td style="text-align: center;">10 p.m. - 7 am</td> <td style="text-align: center;"><u>Background</u> noise level plus 3 dB(A)</td> </tr> <tr> <th colspan="2" style="text-align: center;">NOISE LIMITS AT A <u>COMMERCIAL PLACE</u></th> </tr> <tr> <th style="text-align: center;"><i>Period</i></th> <th style="text-align: center;"><i>Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level</i></th> </tr> <tr> <td></td> <td style="text-align: center;"><math>L_{Amax, adj T}</math></td> </tr> <tr> <td style="text-align: center;">7 am - 6 p.m.</td> <td style="text-align: center;"><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td style="text-align: center;">6 p.m. - 10 p.m.</td> <td style="text-align: center;"><u>Background</u> noise level plus 10 dB(A)</td> </tr> <tr> <td style="text-align: center;">10 p.m. - 7 am</td> <td style="text-align: center;"><u>Background</u> noise level plus 8 dB(A)</td> </tr> </tbody> </table> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) All monitoring devices must be correctly calibrated and maintained.</li> <li>2) Any monitoring must be in accordance with the most recent version of the <u>administering authority's</u> Noise Measurement Manual.</li> <li>3) Any monitoring of noise emissions from the <u>activity</u> must be undertaken when the <u>activity</u> is in operation</li> </ol>	NOISE LIMITS AT A NOISE SENSITIVE PLACE		<i>Period</i>	<i>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level</i>		$L_{Amax, adj T}$	7 am - 6 p.m.	<u>Background</u> noise level plus 5 dB(A)	6 p.m. - 10 p.m.	<u>Background</u> noise level plus 5 dB(A)	10 p.m. - 7 am	<u>Background</u> noise level plus 3 dB(A)	NOISE LIMITS AT A <u>COMMERCIAL PLACE</u>		<i>Period</i>	<i>Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level</i>		$L_{Amax, adj T}$	7 am - 6 p.m.	<u>Background</u> noise level plus 10 dB(A)	6 p.m. - 10 p.m.	<u>Background</u> noise level plus 10 dB(A)	10 p.m. - 7 am	<u>Background</u> noise level plus 8 dB(A)
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P10-N2	<p>When required by the <u>administering authority</u>, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of <i>Table N4-1—Noise limits</i>, and the results notified within 14 days to the <u>administering authority</u>. Monitoring must include:</p> <ol style="list-style-type: none"> <li>1) <math>L_{Aeq, adj, T}</math>;</li> <li>2) <u>Background</u> noise (<u>Background</u>) as LA 90, adj, T;</li> <li>3) <math>MaxLpA, T</math>;</li> <li>4) the level and frequency of occurrence of any impulsive or tonal noise;</li> <li>5) atmospheric conditions including wind speed and direction;</li> </ol>																								

	<p>6) effects due to extraneous factors such as traffic noise; and</p> <p>7) location, date and time of recording.</p>
<b>Agency interest: Waste</b>	
<b>Condition number</b>	<b>Condition</b>
P10-W1	<p>All chemical forms of asbestos waste must be:</p> <ol style="list-style-type: none"> <li>1) disposed to a designated asbestos <u>landfill unit</u> that is separate to other landfill units;</li> <li>2) confined to a designated asbestos <u>landfill unit</u> where no excavation takes place following the initial disposal of asbestos waste within that designated asbestos <u>landfill unit</u>;</li> <li>3) placed at the bottom of the working face in the designated asbestos <u>landfill unit</u> and immediately covered with a minimum of 200mm of consolidated earth or equivalent cover material; and (For the purpose of this clause, equivalent cover material may include a temporary tarpaulin or sheeting such that the waste is covered by soil at least weekly.)</li> <li>4) contained within a final designated asbestos <u>landfill unit</u> at a minimum distance of two (2) metres from the surface and flanks of the final <u>landfill unit</u>, excluding any final cover system required as a condition of this environmental authority (where final designated asbestos <u>landfill unit</u> means that deposition to the <u>landfill unit</u> has ceased); and</li> <li>5) managed so that in relation to the deposition of asbestos waste, the holder of the environmental authority <u>records</u> the accurate location (accuracy not less than 0.5 metre for depth and area coordinates) of the designated asbestos <u>landfill unit(s)</u>.</li> </ol>
P10-W2	<p>The holder of this environmental authority must only accept and temporarily store the following waste at the waste disposal facilities:</p> <ol style="list-style-type: none"> <li>1) oils;</li> <li>2) vehicle batteries;</li> <li>3) <u>liquid</u> waste paint and solvent residues;</li> <li>4) chemicals and pesticides; and</li> <li>5) tyres (stored for no longer than ten (10) weeks and covered from incident rainfall).</li> </ol> <p>For the purpose of this condition:</p> <ol style="list-style-type: none"> <li>1) the waste must be sourced from domestic premises;</li> <li>2) separate and secure waste containers or containment areas must be available at all times waste listed in this condition is accepted at the <u>approved place</u>;</li> <li>3) 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</li> <li>4) temporarily stored waste must be directed to another facility that can lawfully accept such waste as soon as practicable.</li> </ol>
P10-W3	<p>Waste and any contaminated soil disposed of at the premises to which this environmental authority relates must be accepted subject to effectively implementing risk assessment</p>

practices and procedures for contaminant testing that ensure that the material accepted complies with the maximum contaminant levels and the allowable leaching contaminant levels prescribed in Table W10-1—Maximum contaminant levels in soils and Table W10-2—Allowable leaching contaminant levels respectively.

**Table W10-1—Maximum contaminant levels in soils**

<b><i>SUBSTANCE</i></b>	<b><i>mg/kg</i></b>
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
<b>CONTAMINANT ANALYSIS</b>	<b>mg/kg</b>
<b>Monocyclic Aromatic Hydrocarbons(MAH)</b>	<b>mg/kg</b>
Benzene	10
Ethyl Benzene	500
Toluene	300
Xylene	250
Total MAH	500
<b>Polycyclic Aromatic Hydrocarbons(PAH)</b>	<b>mg/kg</b>
Total PAH	500

	<b>Phenolic Contaminants</b>	<b>mg/kg</b>
	<i>Non halogenated compounds:</i>	.
	Phenol	100
	m-cresol	250
	o-cresol	250
	p-cresol	250
	Total non-halogenated phenol	250
	<i>Halogenated phenol:</i>	.
	Chlorophenol	1
	Trichlorophenol	5
	Pentachlorophenol	5
	Total halogenated phenol	5
	<b>Chlorinated Hydrocarbons</b>	<b>mg/kg</b>
	<i>Chlorinated Aliphatic Compounds:</i>	.
	Carbon tetrachloride	5
	1,2 Dichloroethane	10
	L,1 Dichloroethene	1
	Tetrachloroethene	10
	Trichloroethene	25
	Total chlorinated aliphatic cpds	50
	<i>Chlorinated Aromatic Compounds:</i>	.
	Chlorobenzene	100
	Hexachlorobenzene	1
	Total Chlorinated Aromatic cpds	100
	<b>Pesticides</b>	<b>mg/kg</b>
	Total organochlorine	5
	Total herbicides	25

Total carbamates	25
Total organophosphorus	10
<b>Petroleum Hydrocarbons</b>	<b>mg/kg</b>
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 W10-2 Allowable leaching contaminant levels**

<b>CONTAMINANT ANALYSIS</b>	<b><u>mg/L</u></b>
<b>Non Specific Contaminants</b>	<b><u>mg/L</u></b>
Biochemical Oxygen Demand	20 000
Total Organic Carbon	10 000
Petroleum Hydrocarbons	25
Microtox LC50	<i>* No levels set at this time</i>
<b>Metals/Non-Metals</b>	<b><u>mg/L</u></b>
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
<b>Inorganic Anions</b>	<b><u>mg/L</u></b>
Bromide	5.0
Chloride	6 000
Cyanide (total)	1.0
Fluoride	15.0
Sulphate	2 500
Nitrate	100.0
<b>Monocyclic Aromatic Hydrocarbon(MAH)</b>	<b><u>mg/L</u></b>
Benzene	0.1
Ethyl benzene	5.0
Toluene	3.0
Xylene	2.0
Total MAH	5.0
<b>Polycyclic Aromatic Hydrocarbons(PAH)</b>	<b><u>mg/L</u></b>
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
<b>Phenolic Contaminants</b>	<b><u>mg/L</u></b>
Non halogenated 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
<b>Chlorinated Hydrocarbons</b>	<b><u>mg/L</u></b>
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
<b>Pesticides</b>	<b><u>mg/L</u></b>
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
Carbofuran	0.03
Organophosphorus:	.
Diazinon	0.01
Parathion	0.03
Methyl Parathion	0.006

	Triazines:	.									
	Atrazine	0.01									
	Simazine	0.01									
P10-W4	<p><u>Regulated waste</u> to be disposed of at the <u>approved place</u> must be restricted to the following waste streams:</p> <ol style="list-style-type: none"> <li>1) asbestos (all chemical forms);</li> <li>2) <u>dewatered</u> municipal water treatment plant; and</li> <li>3) tyres (only accepted from domestic premises and each tyre to be segregated from other tyres and not overlapping).</li> </ol>										
P10-W5	<p>Notwithstanding condition P10-W4, minor amounts of the <u>regulated waste</u> not specifically permitted to be accepted may be deposited at the <u>approved place</u> provided:</p> <ol style="list-style-type: none"> <li>1) the <u>regulated waste</u> is incidental to and commingled with the general domestic waste stream;</li> <li>2) the quantity and concentration of the regulated waste (both individually and aggregate) is insignificant;</li> <li>3) it is impracticable to segregate the <u>regulated waste</u> from other waste that is permitted to be deposited;</li> <li>4) if the source of the <u>regulated waste</u> is known, the person who deposited the <u>regulated waste</u> 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;</li> <li>5) the deposition of the <u>regulated waste</u> is not likely to cause any risk of fire, explosion, public health danger, nuisance, or environmental harm; and</li> <li>6) all practicable steps are taken to inform persons using the facility that such waste must not be included in the waste stream sent to this facility.</li> </ol>										
P10-W6	<p>No regulated wastes must be deposited at the <u>landfill facility</u> which exhibit any of the hazard characteristics listed in Table W10-3 – Regulated waste hazard characteristics.</p> <p style="text-align: center;"><b>Table W10-3 – Regulated waste hazard characteristics</b></p> <table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">HAZARD CHARACTERISTIC</th> <th style="text-align: center;">DESCRIPTION OF THE HAZARD CHARACTERISTIC</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>Ignitability</b></td> <td><u>Regulated wastes</u> that are capable of causing a fire when ignited through friction, absorption of moisture, or spontaneous chemical changes under standard temperature and pressure.</td> </tr> <tr> <td style="text-align: center;"><b>Corrosivity</b></td> <td><u>Regulated wastes</u> which on dissolution exhibit a pH of 2 or less or 12.5 or greater.</td> </tr> <tr> <td style="text-align: center;"><b>Reactivity</b></td> <td> <u>Regulated wastes</u> if they have any of the following properties: <ol style="list-style-type: none"> <li>1) react violently with water; and/or</li> <li>2) form potentially explosive mixtures with water and other substances likely to be disposed of in the <u>landfill facility</u>;</li> </ol> </td> </tr> </tbody> </table>			HAZARD CHARACTERISTIC	DESCRIPTION OF THE HAZARD CHARACTERISTIC	<b>Ignitability</b>	<u>Regulated wastes</u> that are capable of causing a fire when ignited through friction, absorption of moisture, or spontaneous chemical changes under standard temperature and pressure.	<b>Corrosivity</b>	<u>Regulated wastes</u> which on dissolution exhibit a pH of 2 or less or 12.5 or greater.	<b>Reactivity</b>	<u>Regulated wastes</u> if they have any of the following properties: <ol style="list-style-type: none"> <li>1) react violently with water; and/or</li> <li>2) form potentially explosive mixtures with water and other substances likely to be disposed of in the <u>landfill facility</u>;</li> </ol>
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<b>Corrosivity</b>	<u>Regulated wastes</u> which on dissolution exhibit a pH of 2 or less or 12.5 or greater.										
<b>Reactivity</b>	<u>Regulated wastes</u> if they have any of the following properties: <ol style="list-style-type: none"> <li>1) react violently with water; and/or</li> <li>2) form potentially explosive mixtures with water and other substances likely to be disposed of in the <u>landfill facility</u>;</li> </ol>										

		<p>and/or</p> <ol style="list-style-type: none"> <li>3) generate toxic gases, vapours, or fumes dangerous to human health or the environment when mixed with water and other substances likely to be disposed of in the <u>landfill facility</u>; and/or</li> <li>4) contain substances which generate toxic gases, vapours or fumes when exposed to pH conditions between 2 and 12.5; and/or</li> <li>5) are capable of detonation or explosive reaction when subjected to a strong initiating source or if heated under confinement; and/or are readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.</li> </ol>
	<b>Toxicity</b>	<p><u>Regulated wastes</u> if they have:</p> <ol style="list-style-type: none"> <li>1) contaminant concentrations in the waste exceeding the allowable levels in Table W10-2; or</li> <li>2) leaching contaminant levels in the waste when measured in accordance with <u>Toxicity Characteristic Leaching Procedure (TCLP)</u>, exceeding the concentrations prescribed in Table W9-2.</li> </ol> <p>For any soil contaminated by radioactive material:</p> <ol style="list-style-type: none"> <li>1) the gross alpha and gross beta activity concentration in the <u>Toxicity Characteristic Leaching Procedure (TCLP)</u> extracts from the material are no more than one hundred (100) times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the most recent edition of NHMRCARMCANZ <i>Australian Drinking Water Guidelines</i>.</li> </ol>
P10-W7	<p>In addition to P2-W1, the only waste accepted for disposal within any <u>landfill unit</u> must be <u>general waste</u> excluding the following waste:</p> <ol style="list-style-type: none"> <li>1) any <u>regulated waste</u> or sludges (other than a <u>regulated waste</u> or sludge that may be disposed at a specific <u>approved place</u> as permitted by this environmental authority);</li> <li>2) any <u>putrescible waste</u>, except for minor amounts and only from domestic premises that have no access to a municipal collection service;</li> <li>3) chemically impregnated timber with the exception of minor amounts of chemically impregnated timber commingled with other waste;</li> <li>4) metals with the exception of minor amounts of metals incidental to or commingled with other waste;</li> <li>5) paper and/or cardboard with the exception of minor amounts of paper and/or cardboard incidental to or commingled with other waste;</li> <li>6) paper product sludges; and</li> <li>7) garden and/or green waste with the exception of minor amounts of garden and/or green waste incidental to or commingled with other waste</li> </ol>	

**Part 11 - Site Specific Conditions**

Environmentally relevant activity	Location
60-(2e) Waste disposal >20000t but <50000t yr (1)(b)	<b>Tugun Landfill</b> Boyd Street, Tugun Lot 1/SP348582 Lot 2/ SP348582 Lot 3/SP348582 Lot 4/SP348582

The environmentally relevant activities conducted at all of the locations approved under this environmental authority must be conducted in accordance with the following conditions of this environmental authority.

Agency interest: Air	
Condition number	Condition
P11-A1	Dust and particulate matter emissions must not exceed the following concentrations at any <u>sensitive place</u> or <u>commercial place</u> : <ol style="list-style-type: none"> <li>1) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or</li> <li>2) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (<math>\mu\text{m}</math>) (<math>\text{PM}_{10}</math>) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions).</li> </ol>
P11-A2	Landfill gas collected is reused or efficiently flared in a manner that avoids environmental harm and must not exceed the following limits: <ol style="list-style-type: none"> <li>1) 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the <u>landfill unit</u>;</li> <li>2) 25% of the <u>lower explosive limit</u> of the landfill site <u>boundary</u> when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and <u>leachate</u> collection system components);</li> <li>3) the <u>lower explosive limit</u> in subsurface geology at or beyond the landfill site <u>boundary</u>; <u>and</u></li> <li>4) 25% of the <u>lower explosive limit</u> within service pits, service trenches, stormwater drains or other structures beyond the landfill site <u>boundary</u>.</li> </ol>
P11-A3	A landfill gas monitoring network must be installed for each <u>landfill unit</u> to measure methane levels in facility structures and at the landfill site <u>boundary</u> , as prescribed by condition P11-A2. The network must consist of gas monitoring devices, such as monitoring bores and be developed by an <u>appropriately qualified person</u> in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.
P11-A4	If methane gas levels exceeding methane standards referred to in condition P11-A2 are detected, all necessary steps must immediately be taken to ensure protection of human health.
Agency interest: Water	

Condition number	Condition																																
P11-WT1	<p>The only contaminants to be released to surface <u>waters</u> are settled treated stormwater runoff <u>waters</u> from areas of the site not likely to be contaminated with waste materials in accordance with Table WT11-1—Surface water release limits and the associated monitoring requirements.</p> <p style="text-align: center;"><b>Table WT11-1 – Surface water release limits</b></p> <table border="1" data-bbox="320 622 1385 2054"> <thead> <tr> <th data-bbox="320 622 587 801">QUALITY CHARACTERISTIC DETERMINATION</th> <th data-bbox="595 622 890 801">RELEASE POINTS AND RECEIVING WATER REFERENCE POINTS</th> <th data-bbox="898 622 1090 801">RELEASE LIMITS</th> <th data-bbox="1098 622 1385 801">FREQUENCY</th> </tr> </thead> <tbody> <tr> <td data-bbox="320 813 587 902">(a) Suspended Solids</td> <td data-bbox="595 813 890 902">Release point TSW1A<sup>1,2</sup> and TSW2A<sup>2</sup></td> <td data-bbox="898 813 1090 902">50 <u>mg/L</u></td> <td data-bbox="1098 813 1385 902">Quarterly upon release</td> </tr> <tr> <td data-bbox="320 913 587 1003">(b) pH</td> <td data-bbox="595 913 890 1003">Release point TSW1A and TSW2A</td> <td data-bbox="898 913 1090 1003">6.5 – 9.0</td> <td data-bbox="1098 913 1385 1003">Quarterly upon release</td> </tr> <tr> <td data-bbox="320 1014 587 1104">(c) Specific Conductance</td> <td data-bbox="595 1014 890 1104">Release point TSW1A and TSW2A</td> <td data-bbox="898 1014 1090 1104">1500 <math>\mu</math>S/cm</td> <td data-bbox="1098 1014 1385 1104">Quarterly upon release</td> </tr> <tr> <td data-bbox="320 1115 587 1205">(d) Dissolved Oxygen</td> <td data-bbox="595 1115 890 1205">Release point TSW1A and TSW2A</td> <td data-bbox="898 1115 1090 1205">not below 6 <u>mg/L</u></td> <td data-bbox="1098 1115 1385 1205">Quarterly upon release</td> </tr> <tr> <td data-bbox="320 1216 587 1305">(e) Total Organic Carbon</td> <td data-bbox="595 1216 890 1305">Release point TSW1A and TSW2A</td> <td data-bbox="898 1216 1090 1305">30 <u>mg/L</u></td> <td data-bbox="1098 1216 1385 1305">Quarterly upon release</td> </tr> <tr> <td data-bbox="320 1317 587 1529"><b>OR ELSE IF NO RELEASE OCCURS - for all the above parameters</b></td> <td data-bbox="595 1317 890 1529">Representative sample from sedimentation pond</td> <td data-bbox="898 1317 1090 1529"></td> <td data-bbox="1098 1317 1385 1529">In the event of no release - once six monthly (unless that sedimentation pond remains dry for that reporting period)</td> </tr> <tr> <td data-bbox="320 1541 587 2054">Ammonia (as N) Nitrate (as N) Bicarbonate(HCO<sub>3</sub>) Calcium Chloride Iron (total) Lead Manganese (dissolved) Potassium Sodium</td> <td data-bbox="595 1541 890 2054">Release point TSW1A and TSW2A<sup>1</sup></td> <td data-bbox="898 1541 1090 2054">Not specified</td> <td data-bbox="1098 1541 1385 2054">Once six monthly</td> </tr> </tbody> </table>	QUALITY CHARACTERISTIC DETERMINATION	RELEASE POINTS AND RECEIVING WATER REFERENCE POINTS	RELEASE LIMITS	FREQUENCY	(a) Suspended Solids	Release point TSW1A <sup>1,2</sup> and TSW2A <sup>2</sup>	50 <u>mg/L</u>	Quarterly upon release	(b) pH	Release point TSW1A and TSW2A	6.5 – 9.0	Quarterly upon release	(c) Specific Conductance	Release point TSW1A and TSW2A	1500 $\mu$ S/cm	Quarterly upon release	(d) Dissolved Oxygen	Release point TSW1A and TSW2A	not below 6 <u>mg/L</u>	Quarterly upon release	(e) Total Organic Carbon	Release point TSW1A and TSW2A	30 <u>mg/L</u>	Quarterly upon release	<b>OR ELSE IF NO RELEASE OCCURS - for all the above parameters</b>	Representative sample from sedimentation pond		In the event of no release - once six monthly (unless that sedimentation pond remains dry for that reporting period)	Ammonia (as N) Nitrate (as N) Bicarbonate(HCO <sub>3</sub> ) Calcium Chloride Iron (total) Lead Manganese (dissolved) Potassium Sodium	Release point TSW1A and TSW2A <sup>1</sup>	Not specified	Once six monthly
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	Sulphate Zinc Chemical Oxygen Demand Biological Oxygen Demand redox potential temperature Total Dissolved Solids Total Organic Halogen				
<p><sup>1</sup> Monitoring at point TSW1A may cease upon completion and implementation of the "Further Stormwater Management Considerations", ATC Williams Pty Ltd (September 2012), only when the results of three consecutive monitoring events, undertaken at the frequency stated in Table WT11-1, demonstrate compliance with the release limits.</p> <p>Note.</p> <p><sup>2</sup>Release point <u>TSW1A</u> and <u>TSW2A</u> – namely settled/treated stormwater runoff via the discharge structure, being either the drain from or overflow spillway of the final element of sediment control system that collects drainage and stormwater runoff contaminated by sediment at the premises to which this environmental authority relates, as depicted in Attachment 7 Tugun Landfill Environmental Monitoring.</p>					
P11-WT2	Monitoring of contaminant releases to <u>waters</u> must be undertaken in accordance with condition P11-WT1 and <u>records</u> of the results must be kept.				
P11-WT3	<p>In addition to P11-WT2, the release to <u>waters</u> must not:</p> <ol style="list-style-type: none"> <li>1) have any other properties at a concentration that is capable of causing environmental harm; and</li> <li>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.</li> </ol>				
P11-WT4	<p>The controlled release of treated/settled stormwater must be conducted in a way and at a rate that does not cause:</p> <ol style="list-style-type: none"> <li>1) re-suspension of particles; or</li> <li>2) erosion of bed or banks of receiving <u>waters</u>; or</li> <li>3) landscape damage; or</li> <li>4) ponding of the water; or</li> <li>5) vegetation damage.</li> </ol>				
P11-WT5	<p>A <u>groundwater</u> monitoring network must be installed for each <u>landfill unit</u>. The network must:</p> <ol style="list-style-type: none"> <li>1) be installed and maintained by a person possessing appropriate qualifications and experience in the fields of hydrogeology and <u>groundwater</u> monitoring program design, and be able to competently make recommendations about these matters;</li> </ol>				

	<p>and</p> <ol style="list-style-type: none"> <li>2) include a sufficient number of bore(s) including 'background bores', 'early warning bores' and 'compliance bores' that are located not more than 150 metres from the <u>landfill</u> unit or the <u>boundary</u> of the <u>landfill facility</u> whichever is the closer (except as provide by subclause (d)), and provides the following: <ol style="list-style-type: none"> <li>a. representative <u>groundwater</u> samples from the <u>uppermost aquifer</u>;</li> <li>b. background <u>groundwater</u> quality in hydraulically up-gradient or background bore(s) that have not been affected by any release of contaminants to <u>groundwaters</u> from the approved <u>activity</u>;</li> <li>c. the quality of <u>groundwater</u> at locations down gradient of the approved <u>activity</u>.</li> <li>d. locations for groundwater monitoring bore must be given with reference to horizontal coordinates accurate to 1.0 metre; and</li> </ol> </li> <li>3) include compliance bores that may be located outside the boundary of the landfill facility where there is no intervening use of the groundwater between the landfill property boundary and the bore nor any surface expression of such groundwater in that area.</li> </ol>
P11-WT6	<p>Conduct monitoring and keep <u>records</u> of contaminant releases and potential impacts to <u>groundwaters</u>. All determinations of contaminant releases and potential impacts must be:</p> <ol style="list-style-type: none"> <li>1) made in accordance with methods prescribed in the latest edition of the <u>administering authority's Water Quality Sampling Manual</u>;</li> <li>2) conducted at least at the frequency of every three (3) months, at locations determined by the <u>groundwater</u> monitoring network;</li> <li>3) assessed to determine whether or not there has been any likely release of contaminants from the carrying out of the approved <u>activity</u> to <u>groundwater</u> to or beyond the edge of the <u>groundwater</u> attenuation zone that exceeds limits prescribed in this environmental authority at Compliance Bores, taking account of the quality of <u>groundwater</u> hydraulically up-gradient from the <u>activity</u>; and</li> <li>4) presented in a form that facilitates interpretation of the assessment, for example, incorporating figures showing inferred potentiometric surfaces and <u>groundwater</u> flow directions in relation to monitoring bores and any water storage structures on site that may recharge <u>groundwater</u>, and graphical representation of proportions of common anions and cations in <u>groundwater</u> as compared to those monitored in <u>leachate</u> or any water storages on site.</li> </ol>
P11-WT7	<p>The release of contaminants to <u>groundwater</u> as a result of the approved <u>activity</u> must not:</p> <ol style="list-style-type: none"> <li>1) cause environmental harm except where authorised by this environmental authority; or</li> <li>2) cause surface expression of any <u>leachate</u> that may be released to any surface <u>waters</u> or stormwater drains; or</li> <li>3) exceed the limits for the quality characteristics prescribed in Table WT11-2 at or beyond the edge of the <u>groundwater</u> attenuation zone delineated by the Compliance Bores.</li> </ol>

Table WT11-2 – Groundwater quality limits

QUALITY CHARACTERISTIC	LIMIT	LIMIT TYPE
Ammonia (as N) <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>
Iron (total) <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>
Manganese (dissolved) <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>
pH (field measured)	0.5 pH units more than the highest background value <sup>1</sup>	<u>Maximum</u>
	0.5 pH units less than the lowest background value <sup>2</sup>	<u>Minimum</u>
Sulphate <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>
Specific conductance <u>µS/cm</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>
Total Organic Carbon <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>
Zinc <u>mg/L</u>	120% of highest background value <sup>1</sup>	<u>Maximum</u>

**Associated Requirements**

- 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 environmental authority.
- 2) “Lowest background value” means the lowest 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 environmental authority.

**Agency interest: Noise****Condition number****Condition**

P11-N1

Noise from the activity must not exceed the levels identified in Table N11-1—Noise limits when measured in accordance with the associated monitoring requirements.

Table N11-1 – Noise limits

Noise level dB(A) measured as	Monday to Sunday & Public Holidays		
	6 am – 7 am	7 am – 6 pm	6 pm – 6 am
	Noise measured at a ‘Noise sensitive place’		

	LA10, adj 15min	Bkg + 0	Bkg + 5	Bkg + 0
	LA,eq adj 15min	Bkg + 0	Bkg + 3	Bkg + 0
<b>Noise measured at a 'Commercial place'</b>				
	LA10, adj 15min	Bkg + 3	Bkg + 8	Bkg + 3
	LA,eq adj 15min	Bkg + 3	Bkg + 6	Bkg + 3
	<p><b>* Notes:</b></p> <p>Bkg means- <u>background</u> noise level.</p> <p>"<u>Background</u> noise level" means either:</p> <p>L<sub>A90,T</sub> being the A-weighted sound pressure level exceeded for 90 percent of the time period not less than 15 minutes, using Fast response measured in the absence of the noise under investigation; or</p> <p>L<sub>Abg,T</sub> being the arithmetic average of the minimum readings measure in the absence of the noise under investigation during a representative time period of not less than 15 minutes using Fast response</p> <p><b>Associated monitoring requirements:</b></p> <ol style="list-style-type: none"> <li>1) All monitoring devices must be correctly calibrated and maintained.</li> <li>2) Any monitoring must be in accordance with the most recent version of the <u>administering authority's</u> Noise Measurement Manual.</li> <li>3) Any monitoring of noise emissions from the <u>activity</u> must be undertaken when the <u>activity</u> is in operation.</li> </ol>			
P11-N2	<p>When required by the <u>administering authority</u>, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of <i>Table N7-1—Noise limits</i>, and the results notified within 14 days to the administering authority. Monitoring must include:</p> <ol style="list-style-type: none"> <li>1) <u>L</u>Aeq, adj, T;</li> <li>2) <u>Background</u> noise (<u>Background</u>) as LA 90, adj, T;</li> <li>3) <u>MaxLpA,T</u>;</li> <li>4) the level and frequency of occurrence of any impulsive or tonal noise;</li> <li>5) atmospheric conditions including wind speed and direction;</li> <li>6) effects due to extraneous factors such as traffic noise; and</li> <li>7) location, date and time of recording.</li> </ol>			
<b>Agency interest: Waste</b>				
<b>Condition number</b>	<b>Condition</b>			
P11-W1	The only waste to be disposed of at the <u>approved place</u> must be restricted to <u>general waste</u> including domestic clean up waste, commercial waste or industrial waste that excludes the			

	<p>following wastes, unless the putrescible, green waste, recyclable waste and concrete is comingled with <u>general waste</u> and is impractical to separate:</p> <ol style="list-style-type: none"> <li>1) <u>putrescible waste</u>;</li> <li>2) green waste;</li> <li>3) recyclable waste;</li> <li>4) concrete;</li> <li>5) interceptor waste;</li> <li>6) hazardous waste; and</li> <li>7) <u>regulated waste</u> (other than asbestos).</li> </ol>	
P11-W2	<p>Notwithstanding Condition P11-W1, <u>regulated waste</u> and green waste not specifically permitted to be accepted may be deposited at the <u>approved place</u> provided:</p> <ol style="list-style-type: none"> <li>1) the <u>regulated waste</u> and/or green waste is incidental to and comingled with the <u>general waste</u> stream;</li> <li>2) the quantity and concentration of the <u>regulated waste</u> and/or green waste (both individually and in aggregate) is less than 10% of the total amount of waste received at the facility per annum;</li> <li>3) it is impracticable to segregate the <u>regulated waste</u> and/or green waste from other waste which is permitted to be deposited;</li> <li>4) that if the source of the <u>regulated waste</u> and/or green waste is known, the person who deposited the <u>regulated waste</u> and/or green waste is advised that such waste must not be included in the waste stream sent to this <u>landfill facility</u> and practicable steps are taken to prevent any recurrence of such deposition; and</li> <li>5) the deposition of the <u>regulated waste</u> and/or green waste is not likely to cause any risk of fire, explosion, public health danger, nuisance, or environmental harm; and</li> <li>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 <u>landfill facility</u>.</li> </ol>	
P11-W3	<p>All chemical forms of asbestos wastes must be contained within the <u>landfill unit</u> at a minimum distance of two (2) metres from the surface and flanks of the <u>landfill unit</u>, excluding any final cover system required as a condition of this environmental authority.</p>	
P11-W4	<p>The holder of the environmental authority must only accept and temporarily store the following waste at the <u>approved place</u>:</p> <ol style="list-style-type: none"> <li>1) oils;</li> <li>2) vehicle batteries;</li> <li>3) <u>liquid waste</u> paint and solvent residues;</li> <li>4) chemicals and pesticides; and</li> <li>5) tyres (store for no longer than ten (10) weeks and covered from incident rainfall).</li> </ol>	
P11-W5	<p>No <u>regulated wastes</u> must be deposited at the <u>landfill facility</u> that exhibit any of the hazard characteristics listed Table W11-1.</p> <p style="text-align: center;"><b>Table W11-1 – Regulated waste hazard characteristics</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #cccccc;">Description of the hazard characteristic</th> </tr> </thead> </table>	Description of the hazard characteristic
Description of the hazard characteristic		

	<p><u>Regulated wastes</u> that are capable of causing a fire when ignited through friction, absorption of moisture, or spontaneous chemical changes under standard temperature and pressure.</p> <p><u>Regulated wastes</u> which on dissolution exhibit a pH of 2 or less or 12.5 or greater.</p> <p><u>Regulated wastes</u> if they have any of the following properties:</p> <ol style="list-style-type: none"> <li>1) react violently with water; and/or</li> <li>2) form potentially explosive mixtures with water and other substances likely to be disposed of in the <u>landfill facility</u>; and/or</li> <li>3) generate toxic gases, vapours, or fumes dangerous to human health or the environment when mixed with water and other substances likely to be disposed of in the <u>landfill facility</u>; and/or</li> <li>4) contain substances which generate toxic gases, vapours or fumes when exposed to Ph conditions between 2 and 12.5; and/or</li> <li>5) are capable of detonation or explosive reaction when subjected to a strong initiating source or if heated under confinement; and/or are readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.</li> </ol> <p><u>Regulated wastes</u> if they have:</p> <ol style="list-style-type: none"> <li>1) contaminant concentrations in the waste exceeding the allowable levels in Table W10-2; or</li> <li>2) leaching contaminant levels in the waste when measured in accordance with <u>Toxicity Characteristic Leaching Procedure (TCLP)</u>, exceeding the concentrations prescribed in Table W10-3.</li> </ol> <p>For any soil contaminated by radioactive material:</p> <ol style="list-style-type: none"> <li>1) the gross alpha and gross beta activity concentration in the <u>Toxicity Characteristic Leaching Procedure (TCLP)</u> extracts from the material are no more than one hundred (100) times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the current edition of the NHMRC/ARMCANZ <i>Australian Drinking Water Guidelines</i>.</li> </ol>	
P11-W6	<p>Contaminated soil to be disposed of at the premises to which this environmental authority relates must:</p> <ol style="list-style-type: none"> <li>1) be accepted subject to the holder of this environmental authority effectively implementing risk assessment practices and procedures for contaminant testing that ensure that the material accepted complies with the <u>maximum</u> contaminant levels and the allowable leaching contaminant levels prescribed in Tables W11-2 and W11-3 respectively; and</li> <li>2) if and when the contaminated soil is used as coverage material, contaminant levels must not exceed the <u>maximum</u> concentration limits in Table W11-4.</li> </ol>	

**Table W11-2 - Maximum Contaminant Levels in Soils**

Contaminant	<u>Maximum</u> contaminant level for <u>clay lined</u> landfills (mg/kg)
<b>Monocyclic aromatic hydrocarbons (MAH)</b>	
Benzene	10
Ethyl Benzene	500
Toluene	300
Xylene	250
Total MAH	500
<b>Polycyclic aromatic hydrocarbons (PAH)</b>	
Total PAH	500
<b>Phenolic contaminants</b>	
<i>Non halogenated compounds:</i>	
Phenol	100
m-cresol	250
o-cresol	250
p-cresol	250
Total non-halogenated phenol	250
<i>Halogenated phenol:</i>	
Chlorophenol	1
Pentachlorophenol	5
Trichlorophenol	5
Total halogenated phenol	5
<b>Chlorinated Hydrocarbons</b>	
<i>Chlorinated aliphatic compounds:</i>	
Carbon tetrachloride	5
1,2 Dichloroethane	10

I,1 Dichloroethene	1
Tetrachloroethene	10
Trichloroethene	25
Total chlorinated aliphatic compounds	50
<i>Chlorinated aromatic compounds:</i>	
Chlorobenzene	100
Hexachlorobenzene	1
Total chlorinated aromatic compounds	100
<i>Non-scheduled solid polychlorinated biphenyls (PCBs)</i>	2
<b>Pesticides</b>	
Total organochlorine	5
Total herbicides	25
Total carbamates	25
Total organophosphorus	10
<b>Petroleum hydrocarbons</b>	
Total petroleum hydrocarbons (C <sub>6</sub> -C <sub>9</sub> )	500
Total petroleum hydrocarbons (C <sub>10</sub> -C <sub>14</sub> )	5 000
Total petroleum hydrocarbons (C <sub>15</sub> -C <sub>28</sub> )	10 000
Total petroleum hydrocarbons (C <sub>29</sub> -C <sub>36</sub> )	10 000
<b>Table W11-3 – Allowable leaching contaminant levels</b>	
<b>Contaminant</b>	<b>Allowable leaching contaminant levels (TCLP) (mg/l)</b>
Biochemical oxygen demand	20 000
Total organic carbon	10 000
Petroleum hydrocarbons	25

Antimony	0.5
Arsenic	0.5
Barium	10
Cadmium	0.05
Chromium	0.5
Cobalt	0.5
Copper	10
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
Bromide	5
Chloride	6 000
Cyanide (total)	1
Fluoride	15
Nitrate	100

**Table W11-4 - Maximum total contaminant levels in soils used as cover material**

<b>Contaminant</b>	<b><u>Maximum</u> total contaminant levels in soils used as cover material (mg/kg)</b>
Arsenic (total)	200

	Beryllium	40	
	Cadmium	40	
	Chromium (iii)	240 000	
	Chromium (vi)	200	
	Copper	2 000	
	Lead	600	
	Contaminant	<u>Maximum</u> total contaminant levels in soils used as cover material (mg/kg)	
	Manganese	3 000	
	Mercury (inorganic)	30	
	Methyl Mercury	20	
	Nickel	600	
	Zinc	14 000	
P11-W7	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.		
P11-W8	Notwithstanding the above condition P11-W7, the <u>administering authority</u> 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.		
P11-W9	The following waste must be handled and disposed of as a special burial of waste: <ol style="list-style-type: none"> <li>1) fibrous asbestos and mixed asbestos (all chemical forms);</li> <li>2) bonded asbestos (all chemical forms) when in quantities greater than 250kg; and</li> <li>3) waste, which if not buried as soon as practicable, would be likely to cause environmental harm when placed in an exposed position.</li> </ol>		

## Definitions

Note that 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.

Note that 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.

24 hour storm event with an average recurrence interval of 1 in 5 years means the maximum rainfall depth from a 24-hour duration precipitation event with an average recurrence interval of once in 5 years. For example, an Intensity–Frequency–Duration table for a 24-hour duration event with an average recurrence interval of 1 in 5 years, identifies a rainfall intensity of 8.2mm/hour. The rainfall depth for this event is therefore 24 hour x 8.2mm/hour = 196.8mm.

24 hour storm event with an average recurrence interval of 1 in 10 years means the maximum rainfall depth from a 24-hour duration precipitation event with an average recurrence interval of once in 10 years. For example, an Intensity–Frequency–Duration table for a 24-hour duration event with an average recurrence interval of 1 in 10 years, identifies a rainfall intensity of 8.2mm/hour. The rainfall depth for this event is therefore 24 hour x 8.2mm/hour = 196.8mm.

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

Administering authority means the Department of the Environment, Tourism, Science and Innovation or its successors or predecessors.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and experience relevant to the EA requirement and can give authoritative assessment, advice and analysis in relation to the EA requirement using the relevant protocols, standards, methods or literature.

Approved place means the place authorised under this environmental authority for the carrying out of the specified environmentally relevant activities.

Background means noise, measured in the absence of the noise under investigation, as  $L_{A90,T}$  being the A-weighted sound pressure level exceeded for 90% of the time period of not less than 15 minutes, using Fast response.

Blasting is the use of explosives to fracture:

- 1) rock, coal and other minerals for later recovery; or
- 2) structural components or other items to facilitate removal from a site or for reuse.

Boundary means within 1m of the cadastral boundary of the approved place.

Clay lined means a landfill lined with compacted clay at least 600mm thick achieving a maximum permeability of  $1 \times 10^{-9}$  metres per second or alternative such as engineered geosynthetic agree in writing as equivalent in performance by administering authority.

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.

Dewatered means the material does not yield free liquid and "free liquid" means 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.

Disturbed areas include areas:

- 1) that are susceptible to erosion;
- 2) that are contaminated by the activity; and/or
- 3) upon which stockpiles of soil or other materials are located.

Double lined means a landfill lined with compacted clay at least 600mm thick achieving a maximum permeability of  $1 \times 10^{-9}$  metres per second overlain with 1.5mm HDPE synthetic liner or alternate double liner system agreed in writing as equivalent in performance by the administering authority.

Dwelling means a building or part of a building used or capable of being used as a residence.

Environmental nuisance as defined in Chapter 1 of the *Environmental Protection Act 1994*.

General Waste means waste other than regulated waste.

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

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).

HDPE means high density polyethylene.

$L_{A1 \text{ adj, T}}$  means the A weighted sound pressure level, adjusted for tonal character or impulsiveness, which is exceeded for 1% of a continuous time period when measured using tone weighting 'F'.

$L_{Aeq \text{ adj, 1 hour}}$  means the A-weighted equivalent continuous sound pressure level measures on fast response, adjusted for tonality and impulsiveness, during the time period of 1 hour, when the activity is causing a steady state noise.

$L_{Aeq \text{ adj, 1 hour}}$  means an A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, which within a continuous time period has the same mean square sound pressure of a sound that varies with time.

$L_{Amax \text{ adj, T}}$  means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.

$L_{Amax \text{ adj, T}}$  means the average maximum A-weighted sounds pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.

Land does not include waters.

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

Landfill facility means land and structures at the site approved used for the disposal of solid waste.

Leachate means a liquid that has passed through, emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the site that contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

LEL see lower explosive limit.

Liquid means any substance that:

- 1) has an angle of repose of less than five degrees; or

- 2) becomes free flowing at or below 60 degrees Celsius or when it is transported; or
- 3) is not generally capable of being picked up by a spade or shovel.

Lower explosive limit means a concentration of methane gas in air that of 5 percent by volume measured at 25 degrees Celsius and atmospheric pressure, being that concentration which will explode or produce a flash of fire when an ignition source is present.

Maximum means that the measured value of the quality characteristics or contaminant must not be greater than the release limit stated.

Max<sub>LPA,T</sub> means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

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

Mg/L means milligram per litre.

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

Mixed asbestos waste means an asbestos waste which is a mixture of fibrous and bonded asbestos.

NATA means National Association of Testing Authorities.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- 1) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- 2) a motel, hotel or hostel; or
- 3) a kindergarten, school, university or other educational institution; or
- 4) a medical centre or hospital; or
- 5) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- 6) a public park or garden; or
- 7) for noise, a place defined as a sensitive receptor for the purposes of the *Environmental Protection (Noise) Policy 2019*.

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

Offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

Pest as mentioned in Schedule 3 of the *Pest Management Act 2001*.

ppm means parts per million.

Putrescible waste means waste food or waste animal matter (including dead animals and animal parts) and includes any mixture of such waste.

Records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

Regulated waste is waste that:

- 1) is commercial waste or industrial waste; and
- 2) is of a type, or contains a constituent of a type, mentioned in Schedule 9, part 1, column 1 of the Environmental Protection Regulation 2019.

Release of a contaminant into the environment means to:

- 1) deposit, discharge, emit or disturb the contaminant; and
- 2) cause or allow the contaminant to be deposited, discharged, emitted or disturbed; and
- 3) fail to prevent the contaminant from being deposited, discharged emitted or disturbed; and
- 4) allow the contaminant to escape; and
- 5) fail to prevent the contaminant from escaping.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- 1) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- 2) a motel, hotel or hostel; or
- 3) a kindergarten, school, university or other educational institution; or
- 4) a medical centre or hospital; or
- 5) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- 6) a public park or garden; or
- 7) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

Tank means any individual container for holding a chemical and having a capacity of more than 250 litres.

TCLP means toxicity characteristic leaching procedure.

Toxic material means:

- 1) cytotoxic wastes;
- 2) drugs and poisons as cited in the Standards for Uniform Scheduling of Drugs and Poisons (Schedules 8 and 9 drugs as per the Poisons (Health and Drugs) Regulation 1996); and
- 3) any other material that:
  - a. has contaminant concentrations in the waste exceeding the allowable levels in Table - Maximum contaminant levels in soils; or
  - b. has leaching contaminant levels in the waste when measured in accordance with toxicity characteristic leaching procedure (TCLP), exceeding the concentrations prescribed in Table - Allowable leaching contaminant levels.

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.

v/v means volume per volume.

Waste operations area means the following areas:

- 1) waste receiving
- 2) sorting
- 3) treating
- 4) recycling
- 5) disposal.

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.

You means the holder of the environmental authority.

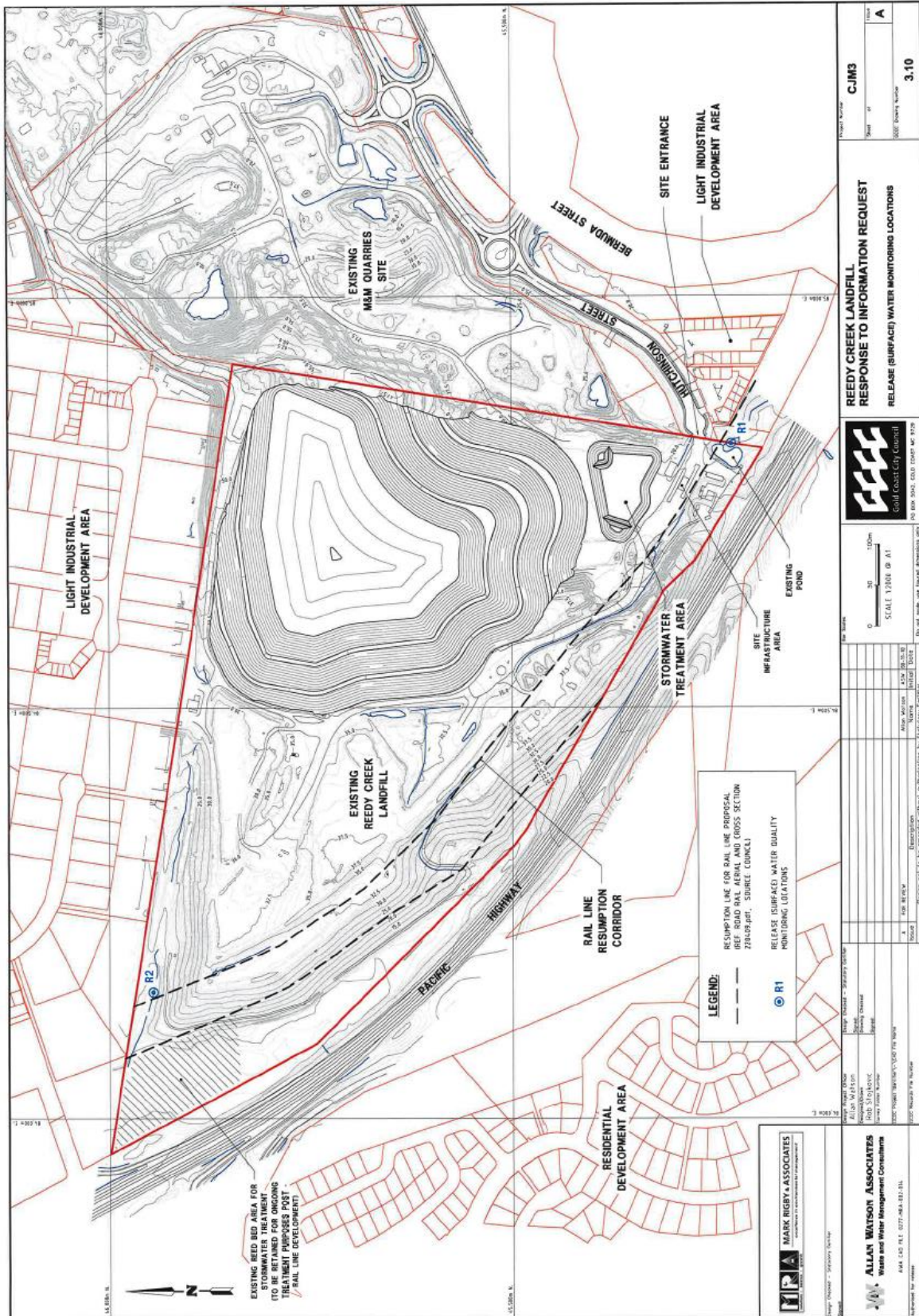


Attachment 2 - Arundel Landfill Plan (from IPDE00943008)

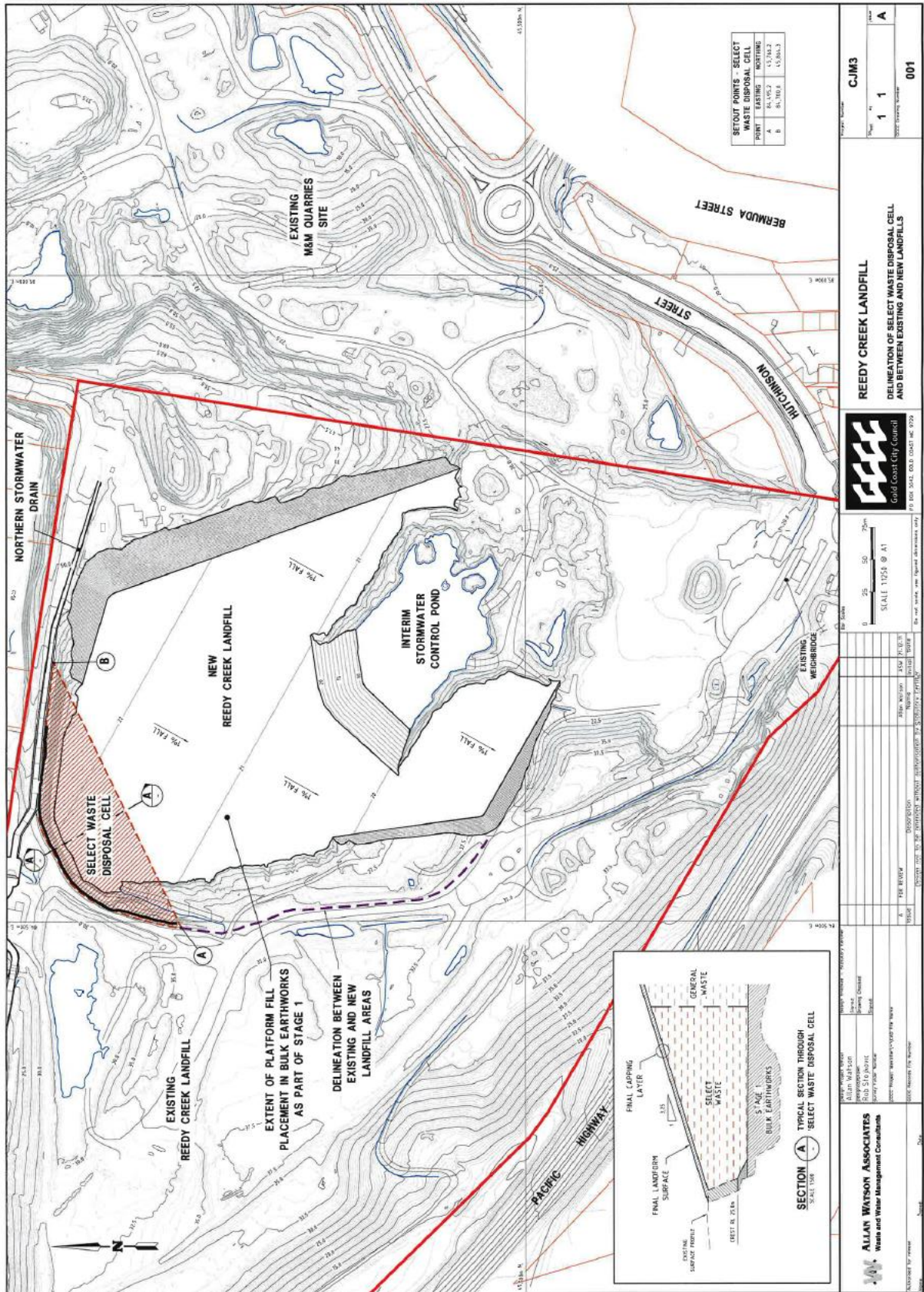




Attachment 4 - Figure 3.10 Release (surface) water monitoring locations - described as Reedy Creek and Stoney Creek



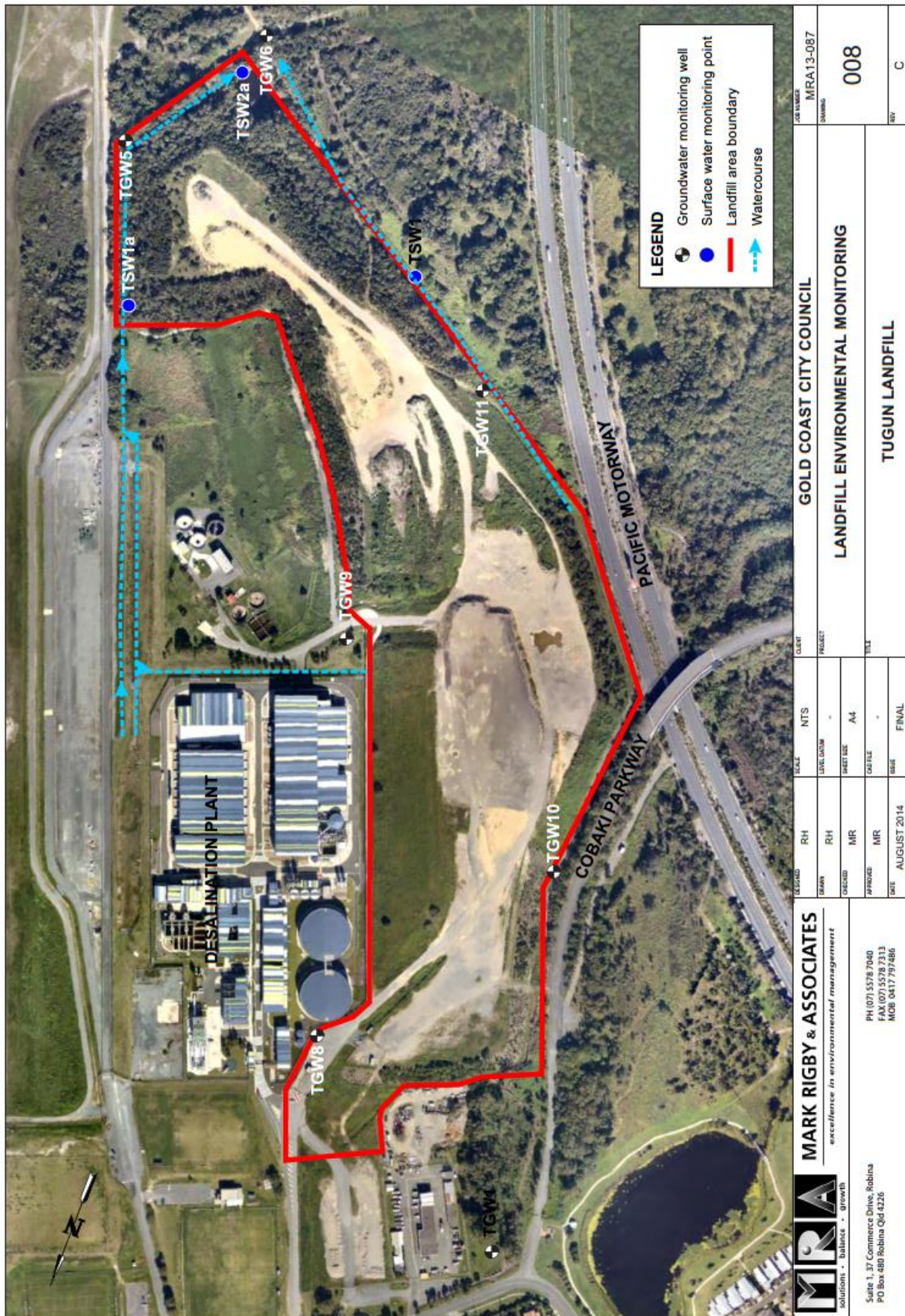
Attachment 5 - Delineation of Select Waste Disposal Cell and between Existing and new landfills (from IPDE01644209)



Attachment 6 - Water Monitoring Locations - Molendinar Waste and Recycling Centre



Attachment 7 - Tugun Landfill Environmental Monitoring



END OF ENVIRONMENTAL AUTHORITY