

Permit

Environmental Protection Act 1994

Environmental authority EPPR00626313

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

Environmental authority number: EPPR00626313

Environmental authority takes effect on the date issued.

The anniversary day of this environmental authority remains 29 June. The payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name(s)	Registered address
Rockhampton Regional Council	243 Bolsover Street Rockhampton QLD 4700

Environmentally relevant activity and location details

Environmentally relevant activities	Locations
60-(2a) Waste disposal >50t but <2000t yr (1)(b)	Bruce Highway - Marmor - Lot 54 Plan DS416 Inslay Avenue - Bouldercombe - Lot 70 Plan LN2826 Ridgelands Road - Alton Downs - Lot 100 Plan CP886609
60-(2f) Waste disposal >50000t but <100000t yr (1)(b)	Lakes Creek Road - North Rockhampton - Lot 1 Plan SP316492
54-(1) - Operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	
62-(1) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing (b) general waste	
62-(1) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing (c) category 2 regulated waste	
60-(2c) Waste disposal >5000t but <10000t yr (1)(b)	Lucas Street - Gracemere – Lot 100 Plan SP320067
54-(1) - operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	

61-(1) Waste incineration & thermal treatment	
60-(2c) Waste disposal >5000t but <10000t yr (1)(b)	Racecourse Road - Mount Morgan - Lot 100 Plan RN835073

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

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

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

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

Take effect

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

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

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

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

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



Liz Clarke
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 1 June 2021

Enquiries:

Utilities and Government Organisations Assessment
Department of Environment and Science

Phone: 1300 130 372
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Obligations under the *Environmental Protection Act 1994*

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

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

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.

Development Approval

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

Conditions of environmental authority

Part 1: Common conditions

Environmentally relevant activities	Locations
60-(2a) Waste disposal >50t but <2000t yr (1)(b)	Bruce Highway - Marmor - Lot 54 Plan DS416 Inslay Avenue - Bouldercombe - Lot 70 Plan LN2826 Ridgelands Road - Alton Downs - Lot 100 Plan CP886609
60-(2f) Waste disposal >50000t but <100000t yr (1)(b) 54-(1) - operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only 62-(1) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing (b) general waste	Lakes Creek Road - North Rockhampton - Lot 1 Plan SP316492

62-(1) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing (c) category 2 regulated waste	
60-(2c) Waste disposal >5000t but <10000t yr (1)(b) 54-(1) - operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	Lucas Street - Gracemere - Lot 100 Plan SP320067
60-(2c) Waste disposal >5000t but <10000t yr (1)(b)	Racecourse Road - Mount Morgan - Lot 100 Plan RN835073

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

Agency interest: General	
Condition number	Condition
G1-1	All reasonable and practicable measures must be taken to minimise the likelihood of environmental harm being caused.
G1-2	Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable, or at most, within 24 hours of you becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
G1-3	Other than as permitted by this environmental authority, the release of a contaminant into the environment must not occur.
G1-4	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the administering authority upon request.
G1-5	An appropriately qualified person(s) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
G1-6	When required by the administering authority , monitoring must be undertaken in the manner prescribed by the administering authority , to investigate a complaint that is not considered by the administering authority to be frivolous or vexatious, of environmental nuisance arising from the activity . The monitoring results must be provided to the administering authority upon request.
G1-7	The activity must be undertaken in accordance with written procedures that: <ol style="list-style-type: none"> 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency; and

	<ol style="list-style-type: none"> 2. establish and maintain control measures that minimise the potential for environmental harm; and 3. ensure plant, equipment and measures are maintained in a proper and effective condition; and 4. ensure plant, equipment and measures are operated in a proper and effective manner; 5. ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and 6. ensure that reviews of environmental performance are undertaken at least annually.
G1-8	All reasonable and practicable measures must be taken to contain litter within the waste operations area , and retrieve litter released.
G1-9	<p>You must record the following details for all environmental complaints received:</p> <ol style="list-style-type: none"> 1. date and time complaint was received; and 2. name and contact details of the complainant; and 3. nature of the complaint; and 4. investigations undertaken; and 5. conclusions formed; and 6. actions taken.
G1-10	<p>All reasonable and practicable measures must be taken to exclude vectors and pest species to the extent necessary to prevent:</p> <ol style="list-style-type: none"> 1. nuisance to occupiers of neighbouring premises; and 2. any danger or risk to the health of any persons.

Agency interest: Air

Condition number	Condition
A1-1	Odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any sensitive place or commercial place .

Agency interest: Noise

Condition number	Condition
N1-1	Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place .

Agency interest: Land

Condition number	Condition
L1-1	<p>When the deposition of waste to the landfill unit ceases, a final capping system to the landfill unit must be designed by an appropriately qualified person and installed to minimise:</p> <ol style="list-style-type: none"> 1. infiltration of water into the landfill unit and water ponding on the surface; and 2. the likelihood of any erosion occurring to either the final capping system or the landfilled materials.

	A final capping system is not required where the deposition of waste to a landfill unit ceases temporarily for the purpose of using an alternative working face.
L1-2	<p>Land 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"> 1. suitable species of vegetation for the location are established and sustained for earthen surfaces; and 2. potential for erosion is minimised; and 3. the quality of water, including seepage, released from the site does not cause environmental harm; and 4. potential for environmental nuisance caused by dust is minimised; and 5. the water quality of any residual water body does not have potential to cause environmental harm; and 6. the final landform is stable and protects public safety; and 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.'
L1-3	Following cessation of deposition of waste in the landfill unit , post-closure care of the landfill unit must be conducted for a period of 30 years or until the administering authority determines, on the basis of correct information, that the landfill unit and surrounding site are stable and that no release of waste materials, leachate , landfill gas or other contaminants that may cause environmental harm is likely.
L1-4	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 administering authority 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 approval.

Agency interest: Waste

Condition number	Condition
W1-1	All waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
W1-2	Incompatible wastes must not be mixed in the same container or waste storage area.
W1-3	Deposited waste must be covered as soon as practicable to limit stormwater infiltration, prevent exposure of waste and prevent issues arising from vectors and pest species.
W1-4	Excepting combustion of landfill gas, waste must not be burnt.

Part 2: Site specific conditions

Environmentally relevant activity	Location
60-(2c) Waste disposal >5000t but <10000t yr (1)(b) 54(1) - operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	Lucas Street - Gracemere - Lot 100 Plan SP320067

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

Agency interest: General															
Condition number	Condition														
G2-1	The only mechanical reprocessing permitted is greenwaste processing.														
Agency interest: Noise															
Condition number	Condition														
N2-1	<p>In the event of a complaint about noise that the administering authority considers is reasonable, then the emission of noise from the activity must not result in level greater than those specified in <i>Table 1 – Noise Limits</i> until the circumstances which gave rise to the complaint are resolved.</p> <p style="text-align: center;">Table 1 – Noise limits</p> <table border="1"> <thead> <tr> <th>Noise level at a noise sensitive place measured as the adjusted maximum sound pressure level $L_{Amax\ adj, T}$</th> <th>Period</th> </tr> </thead> <tbody> <tr> <td>Background noise level plus 5dB(a)</td> <td>7am – 6pm</td> </tr> <tr> <td>Background noise level plus 5dB(a)</td> <td>6pm – 10pm</td> </tr> <tr> <td>Background noise level plus 3dB(a)</td> <td>10pm – 7am</td> </tr> <tr> <th>Noise limits at a Commercial place measured as the adjusted maximum sound pressure level $L_{Amax\ adj, T}$</th> <th>Period</th> </tr> <tr> <td>Background noise level plus 10dB(A)</td> <td>7am – 6pm</td> </tr> <tr> <td>Background noise level plus 10dB(a)</td> <td>6pm – 10pm</td> </tr> </tbody> </table> <p>N2-2 When required by the administering authority, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of <i>Table 1 - Noise limits</i> in condition N2-1, and the results notified within 14 days to the administering authority. Monitoring must include:</p> <ol style="list-style-type: none"> 1. $L_{Aeq, adj, T}$ 2. Background noise (Background) as $L_A 90, adj, T$ 3. Max$L_{pA,T}$ 4. the level and frequency of occurrence of any impulsive or tonal noise 	Noise level at a noise sensitive place measured as the adjusted maximum sound pressure level $L_{Amax\ adj, T}$	Period	Background noise level plus 5dB(a)	7am – 6pm	Background noise level plus 5dB(a)	6pm – 10pm	Background noise level plus 3dB(a)	10pm – 7am	Noise limits at a Commercial place measured as the adjusted maximum sound pressure level $L_{Amax\ adj, T}$	Period	Background noise level plus 10dB(A)	7am – 6pm	Background noise level plus 10dB(a)	6pm – 10pm
Noise level at a noise sensitive place measured as the adjusted maximum sound pressure level $L_{Amax\ adj, T}$	Period														
Background noise level plus 5dB(a)	7am – 6pm														
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Noise limits at a Commercial place measured as the adjusted maximum sound pressure level $L_{Amax\ adj, T}$	Period														
Background noise level plus 10dB(A)	7am – 6pm														
Background noise level plus 10dB(a)	6pm – 10pm														

	<ol style="list-style-type: none">5. atmospheric conditions including wind speed and direction6. effects due to extraneous factors such as traffic noise7. location, date and time of recording.
N2-3	<p>Mechanical reprocessing activities must meet the following requirements:</p> <ol style="list-style-type: none">1. The activities can only be carried out from 7am to 6pm on business days; and2. The activities cannot be carried out for more than three consecutive days; and3. The activities can only be conducted within the designated area shown in Attachment 2 – Location of Greenwaste Processing Activities; and4. Reprocessing equipment must be located at the furthermost end from the nearest residential premises within the designated area shown in Attachment 2 – Location of Greenwaste Processing Activities.
Agency interest: Water	
Condition number	Condition
WT2-1	Contaminants must not be released to any waters .
WT2-2	Mechanical reprocessing activities, including stockpiling, must only be carried out on a hardstand area .

Part 3: Site specific conditions

Environmentally relevant activities	Location
<p>60-(2f) Waste disposal >50000t but <100000t yr (1)(b)</p> <p>54-(1) - operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only</p> <p>62-(1) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing (b) general waste</p> <p>62-(1) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing (c) category 2 regulated waste</p>	Lakes Creek Road - North Rockhampton - Lot 1 Plan SP316492

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

Agency interest: Water							
Condition number	Condition						
WT3-1	<p>The only contaminants to be released to surface waters are settled treated stormwater runoff waters from areas of the site not likely to be contaminated with waste materials to waters described as Frenchman's Creek and the Fitzroy River in accordance with <i>Table 2—Release quality characteristics limits</i> and the associated monitoring requirements.</p>						
Table 2 – Release quality characteristics limits							
Release/Monitoring Point Number	Quality Characteristics	Release Limit	Limit Type	Monitoring Frequency			
B1 and C1 As per Attachment 1: Monitoring Locations Lakes Creek Road Landfill (Project No 15014; 03 May 2018)	Specific Conductance ($\mu\text{S}/\text{cm}$)	50,000	Maximum	Upon release and thereafter weekly during release			
	Aluminium ($\mu\text{g}/\text{L}$)	8.0 (if pH is 6.5) and 55 (if pH is greater than 6.5)	Maximum				
	Iron ($\mu\text{g}/\text{L}$)	300	Maximum				
	Manganese ($\mu\text{g}/\text{L}$)	1,900	Maximum				
	Zinc ($\mu\text{g}/\text{L}$)	8	Maximum				
	Ammonia ($\mu\text{g}/\text{L}$)	900	Maximum				
	Note:						

	<p>All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Limits apply to dissolved metals/metalloids monitoring results.</p> <p>Associated monitoring requirements</p> <ol style="list-style-type: none"> 1. Monitoring location OR release points/areas must be in accordance Attachment 1: Monitoring Locations Lakes Creek Road Landfill (Project No 15014; 03 May 2018). 2. Monitoring must be in accordance with the methods prescribed in the current edition of the Department of Environment and Heritage Protection Water Quality Sampling Manual.
WT3-2	Monitoring of contaminant releases to waters must be undertaken in accordance with condition WT3-1 and records of the results must be kept.
WT3-3	In addition to WT3-2, the release to waters must not: <ol style="list-style-type: none"> 1. have any other properties at a concentration that is capable of causing environmental harm; or 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.
WT3-4	The holder of this environmental authority must develop and implement an environmental monitoring program which consists of groundwater monitoring as required by this environmental authority, and that includes: <ol style="list-style-type: none"> 1. the type and location of all environmental monitoring facilities; and 2. monitoring frequencies; and 3. sampling and monitoring procedures; and 4. a clear and understandable explanation of the methodology to be used in the assessment of the monitoring results including statistical tests; and 5. the monitoring response proposals (Investigation Monitoring Program) for the detection of any unauthorised release of contaminants or exceedance on any standards as prescribed in this environmental authority.
WT3-5	A groundwater monitoring system must be installed for any landfill unit. The system must include a sufficient number of wells installed at locations and depths which yield representative groundwater samples from the uppermost aquifer that establish: <ol style="list-style-type: none"> 1. background groundwater quality in hydraulically up-gradient or background well(s) that have not been affected by any potential leakage of contaminants to groundwater; and 2. quality of groundwater down-gradient of any potential leakage of contaminants to groundwater.
WT3-6	Locations referred to in condition WT3-5 must be given with reference to horizontal co-ordinates of such facilities accurate to 1.0 metre.
WT3-7	The point(s) of compliance referred to in condition WT3-6 must be situated not more than 150 metres from any landfill unit or the boundary of the landfill facility whichever is closest.
WT3-8	The holder of the environmental authority must monitor the quality of groundwater at least quarterly to detect any possible release(s) for at least the following water quality characteristics: <ol style="list-style-type: none"> 1. Ammonia (as N) 2. Calcium 3. Chloride 4. Iron (total)

	<ol style="list-style-type: none"> 5. Manganese (dissolved) 6. Nitrate (as N) 7. pH (field measured) 8. Sodium 9. Conductivity 10. Total Organic Carbon 11. Total Organic Halogen 12. Zinc
WT3-9	The stormwater runoff from disturbed areas, generated by (up to and including) a 24 hour storm event with an average recurrence interval of 1 in 10 years must be retained on site or managed to remove contaminants before release.
WT3-10	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"> 1. re-suspension of particles; or 2. erosion of bed or banks of receiving waters; or 3. landscape damage; or 4. ponding of the water; or 5. vegetation damage.
WT3-11	All batteries, liquid chemicals, fuels, and other liquid 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 waters or land.
WT3-12	Mechanical reprocessing activities, including stockpiling, must only be carried out on a hardstand area .
WT3-13	Mechanical reprocessing activities must only be conducted in the areas identified as <i>Dale Park, Greenwaste Processing Area, and Construction and Demolition Waste Processing Area</i> in Attachment 1, Figure 4 - Mechanical reprocessing locations.

Agency interest: Waste

Condition number	Condition
WA3-1	<p>Filling of waste is only permitted within the:</p> <ol style="list-style-type: none"> 1. Lined landfill area of the Lakes Creek Road landfill (Stage 1 described as existing landfill site on <i>Attachment 1 Figure 2</i> (Drawing number 87000904-100 dated 18 March 2004)) in accordance with the Lakes Creek Road Landfill Closure Strategy dated 26 March 2004; 2. Unlined landfill area (stage 2 described as landfill closure area 1 on <i>Attachment 1 Figure 2</i> (Drawing number 87000904-100 dated 18 March 2004)) in accordance with the Lakes Creek Road Landfill Closure Strategy dated 26 March 2004; and 3. Stage 3 as described on <i>Attachment 1 Figure 3</i> (Drawing number 013 Lakes Creek Road Landfill Piggy Back Concept Design: Top of Cap Layout Plan).
WA3-2	The holder of this environmental authority must cease accepting waste for disposal at the Lakes Creek Road landfill facility (the licensed place) on or before 31 December 2036 or the final Stage 3 landform is reached whichever is later.

WA3-3	<p>The following waste streams must not be permitted to be placed at the landfill facility at any time:</p> <ol style="list-style-type: none"> 1. liquid or semiliquid waste, other than: <ol style="list-style-type: none"> a. liquid or semi-liquid waste which has been produced in the carrying out of the activity; b. liquid or semi-liquid waste that is incidental to, and commingled with, the permitted waste streams. 2. hot ash; 3. material that is smouldering or aflame; 4. material containing a substance which is ignitable, corrosive, reactive or toxic material (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 administering authority; 5. all radioactive wastes, unless otherwise approved under the <i>Radiation Safety Act 1999</i> or approved contaminated soil; 6. an explosive; 7. ammunition, other than ammunition that no longer contains explosives, pyrotechnics or propellants apart from trace residues that are no longer capable of supporting combustion or an explosive reaction.
WA3-4	<p>Waste and any contaminated soil disposed of at the premises to which this environmental authority relates:</p> <ol style="list-style-type: none"> 1. must be accepted subject to 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 <i>Table 3 - Maximum contaminant levels in soils</i> and <i>Table 4 - Allowable leaching contaminant levels</i> respectively; and 2. if the contaminated soil is used as coverage material, contaminant levels must not exceed the maximum concentration limits in <i>Table 5 - Maximum total contaminant levels in soils used as cover material (mg/kg)</i>, must not cause contaminated stormwater release and must not include any soil that is contaminated due to the concentration of monocyclic aromatic hydrocarbons, polycyclic aromatic hydrocarbons, chlorinated hydrocarbons, pesticides, or petroleum hydrocarbons.

Table 3 - Maximum contaminant levels in soils

Contaminant	Maximum contaminant level for clay lined landfills (mg/kg)	Maximum contaminant level for double lined landfills (mg/kg)
<i>Monocyclic aromatic hydrocarbons (MAH)</i>		
Benzene	10	20
Ethyl Benzene	500	1,000
Toluene	300	600
Xylene	250	500
Total MAH	500	1,000
<i>Polycyclic aromatic hydrocarbons (PAH)</i>		
Total PAH	500	1,000
<i>Phenolic contaminants</i>		

<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
Pentachlorophenol	5	20
Trichlorophenol	5	20
Total halogenated phenol	5	20
<i>Chlorinated Hydrocarbons</i>		
<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
<i>Pesticides</i>		
Total organochlorine	5	50
Total herbicides	25	50
Total carbamates	25	50
Total organophosphorus	10	50
<i>Petroleum hydrocarbons</i>		
Total petroleum hydrocarbons (C ₆ -C ₉)	500	1,000
Total petroleum hydrocarbons (C ₁₀ -C ₁₄)	5,000	10,000
Total petroleum hydrocarbons (C ₁₅ -C ₂₈)	10,000	50,000
Total petroleum hydrocarbons (C ₂₉ -C ₃₆)	10,000	50,000

Table 4 - Allowable leaching contaminant levels

Contaminant	Allowable leaching contaminant levels (TCLP*) for clay lined landfills (mg/l)	Allowable leaching contaminant levels (TCLP) for double lined landfills (mg/l)
<i>Non specific contaminants</i>		
Biochemical oxygen demand	20,000	20,000
Total organic carbon	10,000	10,000
Petroleum hydrocarbons	25	50
<i>Metals/non-metals</i>		
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
<i>Inorganic anions</i>		
Bromide	5	50
Chloride	6,000	6,000
Cyanide (total)	1	5
Fluoride	15	150
Nitrate	100	1,000
Sulphate	2,500	4,000
<i>Monocyclic aromatic hydrocarbon (MAH)</i>		
Benzene	0.1	1

Ethyl benzene	5	50
Toluene	3	30
Xylene	2	20
Total MAH	5	50
<i>Polycyclic aromatic hydrocarbons (PAH)</i>		
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
<i>Phenolic contaminants</i>		
<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
<i>Chlorinated hydrocarbons</i>		
<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
<i>Pesticides</i>		
<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
<i>Herbicides</i>		
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
<i>Fluorinated organic compounds</i>		
Total fluorinated organic compounds (if leachate reused on or off-site)	0.0003	0.0003
Total fluorinated organic compounds (if leachate not reused on or off-site)	0.05	0.05
For any waste or 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 100 times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines, 2011.

*Allowable leaching levels to be determined using the **TCLP** procedure mentioned in United States Environmental Protection Agency (EPA), Washington DC (2008) "Test methods for evaluating solid waste, physical/chemical methods" Document number SW 846. 3rd Edition or more recent editions or supplement to that procedure as they become available.

Table 5 - Maximum total contaminant levels in soils used as cover material (note: this material is not suitable for final capping)

Contaminant	Maximum 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
Manganese	3,000
Mercury (inorganic)	30
Methyl Mercury	20
Nickel	600
Zinc	14,000
PFOS (Perfluoro-octane sulfonate)	6
PFOA (Perfluoro-octanoic acid)	16
Total fluorinated organic compounds	10 (not including PFOS & PFOA)

WA3-5	Contaminated soils and sewage sludge shall only be accepted for disposal into clay lined or double lined cells.
WA3-6	All chemical forms of asbestos wastes must be contained within the landfill unit at a minimum of two metres from the surface and flanks of the landfill unit , excluding any final cover system required as a condition of this environmental authority.
WA3-7	The only waste accepted for disposal at the unlined landfill area to the South-West of the lined landfill area is inert construction and demolition waste.
WA3-8	The holder of this environmental authority may store sewage sludge from Rockhampton Regional Councils sewage treatment plants.
WA3-9	The holder of this environmental authority may only accept the sewage sludge for storage subject to the following: - <ol style="list-style-type: none"> 1. sewage sludge is dewatered to produce a firm cohesive consistency; and 2. subject to the holder of this environmental authority effectively implementing risk assessment practices and procedures for contaminant testing that ensure that the material accepted for storage complies with the maximum contaminant levels and the allowable leaching contaminant levels prescribed in <i>Table 3 - Maximum contaminant levels in soils</i> and <i>Table 4 - Allowable leaching contaminant levels</i> respectively.
WA3-10	The landfill cells must go no closer than 60m to Frenchman's Creek and the Fitzroy River.

WA3-11	Putrescible wastes or domestic wastes must be deposited at least 2.0 metres above the highest water table or as otherwise approved by the administering authority, such approval to be based on the liner design and groundwater monitoring network.
Agency interest: Air	
Condition number	Condition
A3-1	<p>The holder of this environmental authority must adopt such practices and procedures as necessary to ensure that the concentration of landfill gas (methane standards) generated does not exceed:</p> <ol style="list-style-type: none"> 1. 25% of the lower explosive limit for methane in facility structures (i.e. 1.25% methane v/v) excluding gas control or recovery system components; and 2. the lower explosive limit for methane at the landfill facility boundary (i.e. 5% methane v/v).
A3-2	<p>The holder of this environmental authority must develop and implement an environmental monitoring program which consists of landfill gas monitoring as required by this environmental authority and that includes:</p> <ol style="list-style-type: none"> 1. the type and location of all environmental monitoring facilities; and 2. monitoring frequencies; and 3. sampling and monitoring procedures; and 4. a clear and understandable explanation of the methodology to be used in the assessment of the monitoring results including statistical tests; and 5. the monitoring response proposals (Investigation Monitoring Program) for the detection of any unauthorised release of contaminants or exceedance on any standards as prescribed in this environmental authority.

Part 4: Site specific conditions

Environmentally relevant activity	Location
61-(1) Waste incineration & thermal treatment	Lucas Street - Gracemere - Lot 100 Plan SP320067

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

Agency interest: Waste	
Condition	
WA4-1	A copy of this approval shall be kept in a location readily accessible to personnel carrying out the pit burning activity and shall be made available for inspection upon request of an authorised officer.
WA4-2	Pitburning shall only be carried out at the Gracemere General Waste Disposal Facility and in pitburner built to approved specifications, including the top blower and bottom blower methods.

WA4-3	An elevated position for the pit location shall be avoided to minimise the influence of strong winds disturbing the over fire air curtain and causing smoke emissions.
WA4-4	The long axis of the pit shall be orientated at ninety degrees to the prevailing winds.
WA4-5	Due consideration shall be given to meteorological condition to minimise environmental nuisance. Prior to commencing pitburning, current and expected meteorological conditional should be obtained from the Bureau of Meteorology or alike.
WA4-6	During pit burning, the holder of this permit shall do things necessary to ensure a clean burn, including: <ol style="list-style-type: none"> 1. stack and leave lying all vegetation for as long as practicable to allow sufficient drying out of timber and foliage die off; and 2. remove excess soil from all tree roots; and 3. split large tree roots as required to improve combustion.
WA4-7	The pit shall be located at the furthermost possible distance from adjacent residential premises, but in no case shall the pit be located within 300 metres of an existing dwelling or commercial premises
WA4-8	Incineration and operation of the pit burner air blowers, motors and associated machinery utilised in the charging, stoking or cleaning of the pit burner shall not commence operation before 7.00am Monday to Saturday.
WA4-9	The pit burner shall not be 'loaded' after 2:00pm.
WA4-10	All combustion within the pit burner shall cease no later than 6.00pm of any day.
WA4-11	The pit burner shall be used to incinerate natural land clearing wastes only and shall not be used for the indiscriminate incineration of builders rubbish, plastics, glass or any other material or substance which may give rise to the discharge into the atmosphere of any toxic or otherwise harmful gases.
WA4-12	The use of the pit burner shall not create a nuisance, the sole arbiter of which shall be an authorised officer, by whose action this approval may be revoked, suspended or conditions hereto amended.
WA4-13	Extinguishing of the pit burner shall be carried out so as to not allow any subsequent smouldering.
WA4-14	In order to ensure the health and safety of all persons who may be on site, prior to commencing burning, the pit shall be surrounded by a secure barrier which satisfies the following requirements: <ol style="list-style-type: none"> 1. cannot be climbed through; and 2. is sufficiently high enough to cause difficulty in climbing over; and 3. has access which can be readily secured; and 4. contains warning signs clearly notifying of the danger and nature of the it; and 5. located at least two (2) metres from the pit to prevent heat damage.

WA4-15	The approval holder shall cause a fully trained person to be on the site to supervise the incineration operation. This supervisor shall have on their person this environmental authority.
WA4-16	The pit burner supervisor shall keep complete records of light up times, stocking times and extinguishing time. These records shall be kept available for presentation to any authorised officer.

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should 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.

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

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

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

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 per cent of the time period of not less than 15 minutes, using Fast response.

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

Clay lined means a landfill lined with compacted clay at least 600 mm thick achieving a maximum permeability of 1×10^{-9} metres per second or alternate such as an engineered geosynthetic agreed in writing as equivalent in performance by the **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.

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

NOTE: The alternate double liner system described as the piggyback lining system in the Golder Associates Document no. 1656575-039-L-Rev0, dated 22 December 2017, consisting of a reinforcing geotextile, 200 mm thick base soil material, 400 mm thick low permeability clay, geosynthetic clay liner, 2.0 mm thick LLDPE geomembrane, cushion geotextile, 300 mm thick leachate aggregate and filter geotextile, is considered to meet the definition of **double lined**.

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).

Hardstand area means an area that has a constructed low-permeability surface.

$L_{Aeq,adj,T}$ means the adjusted A weighted equivalent continuous sound pressure level **measures** on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the **activity** is causing a steady state noise, and no shorter than one hour when the approved **activity** is causing an intermittent noise.

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 or 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.

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.

Max_{LpA, T} 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, bunding, containment systems, monitoring, procedures, actions, directions and competency.

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.

Release of a contaminant into the environment means to:

1. deposit, discharge, emit or disturb the contaminant; or
2. cause or allow the contaminant to be deposited, discharged, emitted or disturbed; or
3. fail to prevent the contaminant from being deposited, discharged emitted or disturbed; or
4. allow the contaminant to escape; or
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 thoroughfare, park or gardens; or
7. for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

TCLP means a 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 4; 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 5.

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 8.2 mm/hour. The rainfall depth for this event is therefore 24 hour x 8.2 mm/hour = 196.8 mm.*

Waste operations area means the following areas:

1. waste receiving; or
2. sorting; or
3. treating; or
4. recycling; or
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 1 – Lakes Creek Road Landfill - Approved Plans

Figure 1

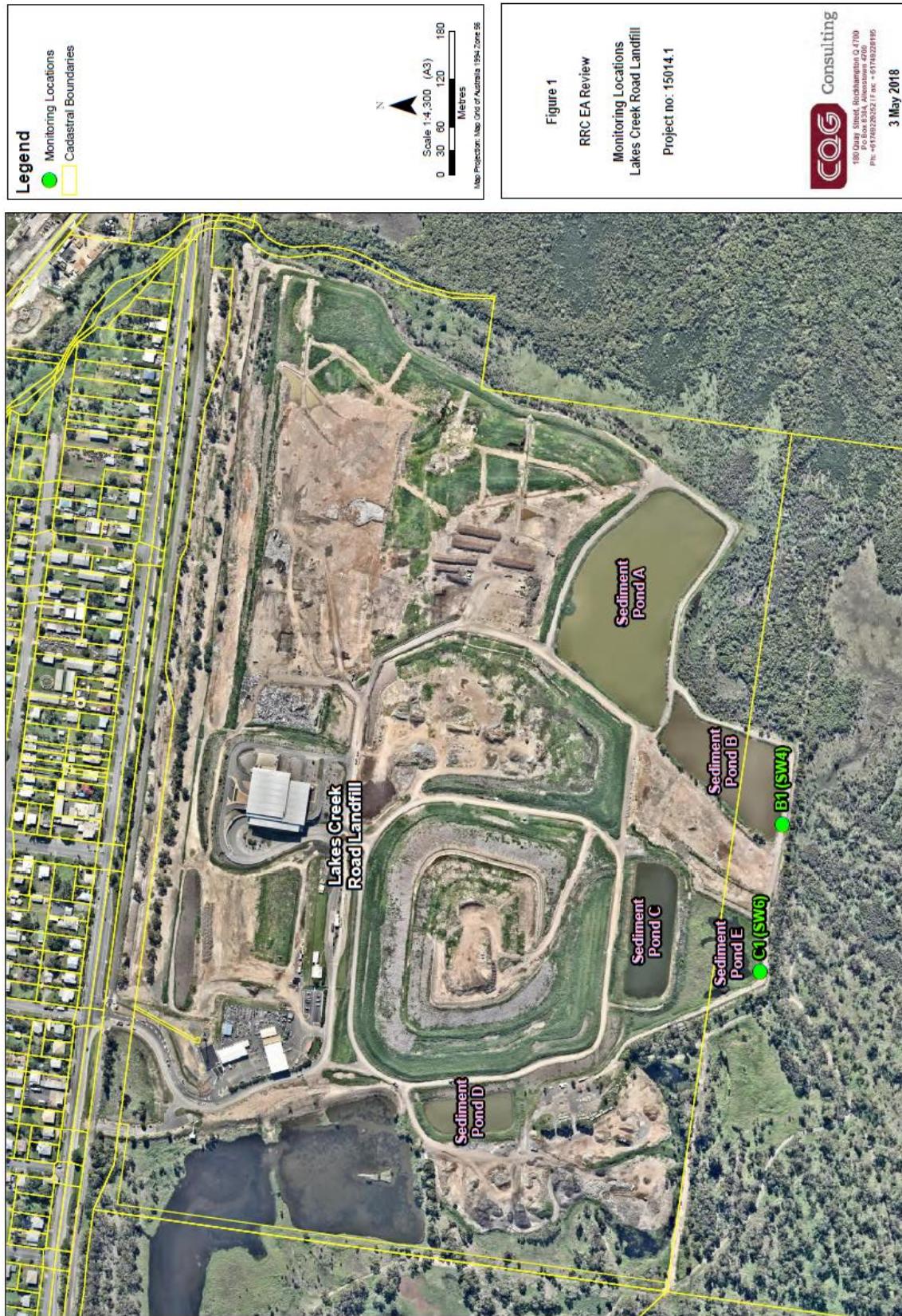


Figure 2

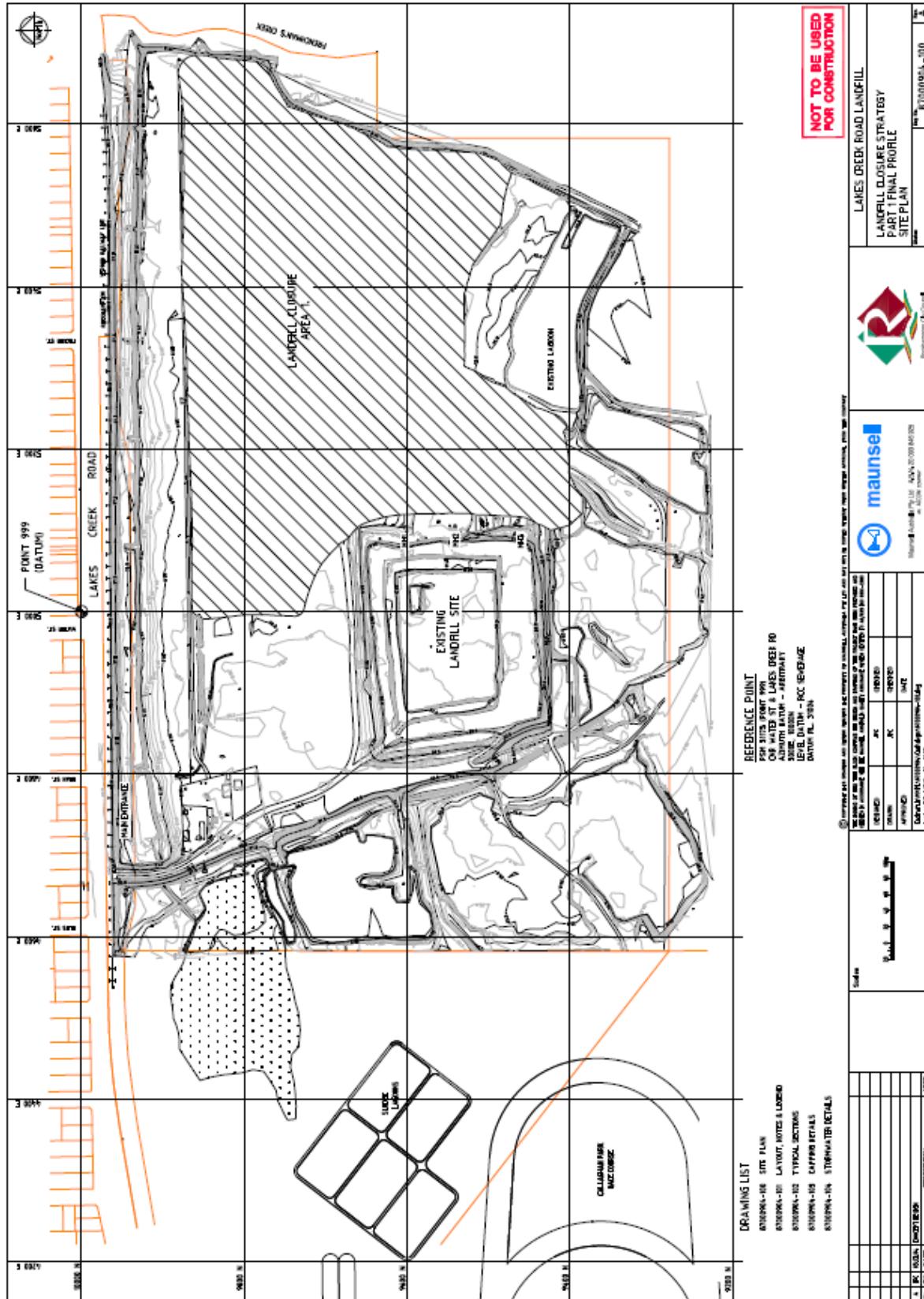


Figure 3

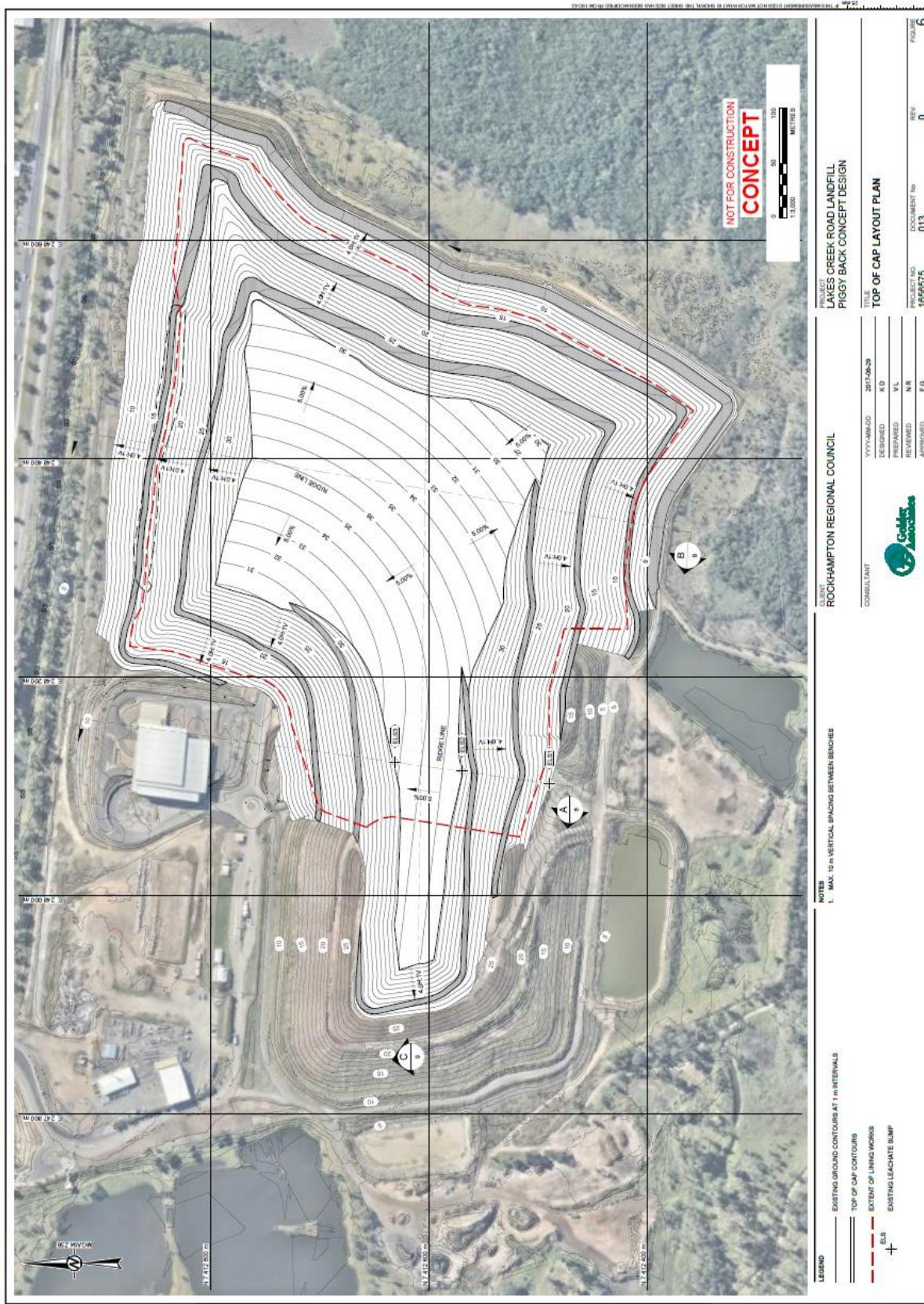


Figure 4 – Mechanical reprocessing locations



Figure 4. Construction and demolition waste processing activities can only occur within the Dale Park boundary and within the area designated Construction & Demolition Waste Processing Area. Greenwaste processing activities can only occur within the Greenwaste Processing Area.

Attachment 2 – Gracemere Landfill – Location of Greenwaste Processing Activities



END OF PERMIT