

218/172747



Annual Return

WOLLONGONG CITY COUNCIL
Licence 5862

A. Statement of Compliance - Licence Details

ALL Licence holders must check that the Licence details in Section A are correct.

If there are changes to any of these details, **you must advise Environment Protection Authority (EPA) and apply as soon as possible for a variation to your Licence or for a Licence transfer.**

Licence variation and transfer application forms are available on the EPA website at <http://www.epa.nsw.gov.au/licensing-and-regulation/licensing> or from regional offices of the EPA, or by contacting by telephone 02 9995 5700.

If you are applying to vary or transfer your Licence, you must still complete and submit this Annual Return.

A1. Licence holder

Licence number : 5862
Licence holder : WOLLONGONG CITY COUNCIL
Trading name (if applicable) :
ABN : 63 139 525 939
ACN :
Reporting period : From: 29-5-2017 To: 28-5-2018

A2. Premises to which Licence Applies (if applicable)

Common name (if any) : WHYTES GULLY WASTE DISPOSAL FACILITY
Premises : REDDALLS ROAD KEMBLA GRANGE 2526 NSW

A3. Activities to which Licence Applies

Waste disposal (application to land)

A4. Other Activities (if applicable)

A5. Fee-Based Activity Classifications

Note that the fee based activity classification is used to calculate the administrative fee.

Fee-based activity	Activity scale	Unit of measure
Waste disposal by application to land	> 0.00	capacity

A6. Assessable Pollutants (if applicable)

Note that the identification of assessable pollutants is used to calculate the **load-based fee**.
The following assessable pollutants are identified for the fee-based activity classifications in the licence:

B. Monitoring and Complaints Summary

B1. Number of Pollution Complaints

Pollution Complaint Category	Complaints
Air	12
Water	0
Noise	0
Waste	0
Other	0
Total complaints recorded by the licensee during the reporting period	12

B2. Concentration Monitoring Summary

For each concentration monitoring point identified in your licence, details are displayed below. If concentration monitoring is not required by your licence, **no data** will appear below.
If data was provided from an uploaded file, the file name will be displayed below instead of any data.
Note that this does not exclude the need to conduct appropriate concentration monitoring of assessable pollutants as required by load-based licensing (if applicable).

Discharge & Monitoring Point 1

Stormwater monitoring and discharge point, Outlet at Reddalls Road - Monitoring point labelled 1 on Figure 13 titled "Proposed Surface Water Monitoring Locations" dated 26 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297777 N6183972

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Sulfate	milligrams per litre					
Potassium	milligrams per litre					
Filterable iron	milligrams per litre					
Sodium	milligrams per litre					
Calcium	milligrams per litre					
Temperature	degrees Celsius					

Chloride	milligrams per litre					
Magnesium	milligrams per litre					
Conductivity	microsiemens per centimetre					
Total suspended solids	milligrams per litre					
Total Phenolics	milligrams per litre					
Alkalinity (as calcium carbonate)	milligrams per litre					
Fluoride	milligrams per litre					
Nitrate	milligrams per litre					
Total organic carbon	milligrams per litre					
Ammonia	milligrams per litre					
pH	pH					
Dissolved Oxygen	milligrams per litre					

Monitoring Point 10

Groundwater quality monitoring, Monitoring point labelled GMW103 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298470.2 N6184603

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					

Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					

Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 11

Groundwater quality monitoring, Monitoring point labelled GMW104 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297597.9 N6184508

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					

Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 12

Groundwater quality monitoring, Monitoring point labelled GMW105 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV), E298433.3 N6184397

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					

Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 13

Groundwater quality monitoring, Monitoring point labelled GMW106 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298356.8 N6184294

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					

Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					

Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 14

Groundwater quality monitoring, Monitoring point labelled GMW108S on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297870.2 N6184262

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					

Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 15

Groundwater quality monitoring, Monitoring point labelled GMW108D on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297871.4 N6184262

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					

Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 16

Groundwater quality monitoring, Monitoring point labelled GMW1095 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297605.7 N6184068

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					

Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					

Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 17

Groundwater quality monitoring, Monitoring point labelled GMW110 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297572.6 N8184266

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					

Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					

Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 18

Groundwater quality monitoring, Monitoring point labelled GMW111 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297588.6 N6184385

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					

Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 19

Groundwater quality monitoring, Monitoring point labelled GMW109D on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297604.9 N6184068

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					

Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 20

Groundwater quality monitoring, Monitoring point labelled BH6 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297807.4 N6184052

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					

Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					

Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 21

Subsurface gas monitoring, Monitoring point labelled LFG MW1 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298084
N6184278

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 22

Subsurface gas monitoring, Monitoring point labelled LFG MW2 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298202
N6184228

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 23

Subsurface gas monitoring, Monitoring point labelled LFG MW3 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298297
N6184244

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 24

Subsurface gas monitoring, Monitoring point labelled LFG MW4 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298376 N6184303

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 25

Subsurface gas monitoring, Monitoring point labelled LFG MW5 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298438 N6184381

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 26

Subsurface gas monitoring, Monitoring point labelled LFG MW6 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298376 N6184303

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 27

Subsurface gas monitoring, Monitoring point labelled LFG MW7 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298470
N6184553

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 28

Subsurface gas monitoring, Monitoring point labelled LFG MW8 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298376
N6184303

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 29

Subsurface gas monitoring, Monitoring point labelled LFG MW9 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298465
N6184645

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 3

Surface gas monitoring, Areas where intermediate or final cover has been placed.

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 30

Subsurface gas monitoring, Monitoring point labelled LFG MW10 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298448 N6184684

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 31

Subsurface gas monitoring, Monitoring point labelled LFG MW11 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298400 N6184695

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 32

Subsurface gas monitoring, Monitoring point labelled LFG MW12 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E298351 N6184701

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 33

Stormwater monitoring point, Downstream monitoring point labelled 4 on Figure 13 titled "Proposed Surface Water Monitoring Locations" dated 26 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297767 N6183396

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Sulfate	milligrams per litre					
Potassium	milligrams per litre					
Filterable iron	milligrams per litre					
Sodium	milligrams per litre					
Calcium	milligrams per litre					
Temperature	degrees Celsius					
Chloride	milligrams per litre					
Magnesium	milligrams per litre					
Conductivity	microsiemens per centimetre					
Total suspended solids	milligrams per litre					
Total Phenolics	milligrams per litre					
Alkalinity (as calcium carbonate)	milligrams per litre					
Fluoride	milligrams per litre					
Nitrate	milligrams per litre					
Total organic carbon	milligrams per litre					
Ammonia	milligrams per litre					
pH	pH					
Dissolved Oxygen	milligrams per litre					

Monitoring Point 34

Stormwater monitoring point, Upstream monitoring point labelled 6 on Figure 13 titled "Proposed Surface Water Monitoring Locations" dated 26 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV).
E297495 N6184504

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Sulfate	milligrams per litre					
Potassium	milligrams per litre					
Filterable iron	milligrams per litre					
Sodium	milligrams per litre					
Calcium	milligrams per litre					
Temperature	degrees Celsius					
Chloride	milligrams per litre					
Magnesium	milligrams per litre					
Conductivity	microsiemens per centimetre					
Total suspended solids	milligrams per litre					
Total Phenolics	milligrams per litre					
Alkalinity (as calcium carbonate)	milligrams per litre					
Fluoride	milligrams per litre					
Nitrate	milligrams per litre					
Total organic carbon	milligrams per litre					
Ammonia	milligrams per litre					
pH	pH					
Dissolved Oxygen	milligrams per litre					

Monitoring Point 4

Gas accumulation monitoring, Inside all buildings within 250 metres of deposited waste.

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume					

Monitoring Point 5

Groundwater quality monitoring , Monitoring point labelled GABH02 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297754.9 N6184377

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					

Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 9

Groundwater quality monitoring, Monitoring point labelled GMW102 on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297952.6 N6184807

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Nitrogen (ammonia)	milligrams per litre					
Copper	milligrams per litre					
Conductivity	microsiemens per centimetre					
pH	pH					
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					
Benzene	milligrams per litre					
Cadmium	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Chromium (hexavalent)	milligrams per litre					
Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					

Nitrite	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					
Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total Phenolics	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Name of the uploaded file containing point data ▼
Whytes Gully Annual Return B2 Concentration Monitoring Summary.xlsx

B3. Volume or Mass Monitoring Summary

For each volume or mass monitoring point identified in your licence, details are displayed below. If volume or mass monitoring is not required by your licence, no data will appear below.

If data was provided from an uploaded file, the file name will be displayed below instead of any data.

Note that this does not exclude the need to conduct appropriate volume or mass monitoring of assessable pollutants are required by load-based licensing (if applicable).

C. Statement of Compliance - Licence Conditions

C1. Compliance with Licence Conditions

Were all conditions of the licence complied with (including monitoring and reporting requirements)?	Yes
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D. Statement of Compliance - Load Based Fee Calculation

If you are not required to monitor assessable pollutants by your licence, no data will appear below.

If assessable pollutants have been identified on your licence, the following worksheets for each assessable pollutant will determine your load based fee for the licence fee period to which this Annual Return relates.

Loads of assessable pollutants must be calculated using any of the methods provided in EPA's Load Calculation Protocol for the relevant activity. A Load Calculation Protocol would have been already sent to you with your licence. If you require additional copies, you can download the Protocol from the EPA's website or you can contact us on telephone 02 9995 5700.

You are required to keep all records used to calculate licence fees for four years after the licence fee was paid or became payable, whichever is the later date.

E. Statement of Compliance - Requirement to Prepare PIRMP

Have you prepared a Pollution Incident Response Management Plan (PIRMP) as required under section 153A of the Protection of the Environment Operations (POEO) Act 1997?	Yes
Is the PIRMP available at the premises?	Yes
Is the PIRMP available in a prominent position on a publicly accessible website?	Yes
Address of the web page where the PIRMP can be accessed ▼	
http://www.wollongong.nsw.gov.au/services/household/Pages/wastesitesanalyticalmonitoringdata.aspx	
Has the PIRMP been tested?	Yes
The PIRMP was last tested on	17-1-2018
Has the PIRMP been updated?	Yes
The PIRMP was last updated on	8-2-2018
Number of times the PIRMP was activated in this reporting period?	1
The PIRMP was activated on	24/12/2017

F. Statement of Compliance - Requirement to Publish Pollution Monitoring Data

Are there any conditions attached to your licence that require pollution monitoring to be undertaken as required under section 66(6) of the Protection of the Environment Operations (POEO) Act 1997?	Yes
Do you operate a website?	Yes

Is the pollution monitoring data published on your website in accordance with the EPA's written requirements for publishing pollution monitoring data?	Yes
Address of the web page where the pollution monitoring data can be accessed ▼	
http://www.wollongong.nsw.gov.au/services/household/Pages/wastesitesanalyticalmonitoringdata.aspx	

G. Statement of Compliance - Environment Management System and Practices

Do you have an ISO 14001 certified Environmental Management System (EMS) OR any other system that EPA considers is equivalent to the accountability, procedures, documentation and record keeping requirements of an ISO 14001 certified EMS?	No
Have you conducted an assessment of your activities and operations to identify the aspects that have a potential to cause environmental impacts and implemented operational controls to address these aspects?	Yes
Have you established and implemented an operational maintenance program, including preventative maintenance?	Yes
Do you keep records of regular inspections and maintenance of plant and equipment?	Yes
Do you conduct regular site audits to assess compliance with environmental legal requirements and assess conformance to the requirements of any documented environmental practices, procedures and systems in place?	Yes
Are the audits of documented environmental practices, procedures and systems undertaken by a third party?	No
Have you established and implemented an environmental improvement or management plan?	Yes
Do you train staff in environmental issues that may arise from your activities and operations and keep records of this	Yes

H. Signature and Certification

This Annual Return may only be signed by person(s) with legal authority to sign it as set out in following categories: an Individual, a Company, a Public authority or a Local council.

It is an offence to supply any information in this form that is false or misleading in a material respect, or to certify a statement that is false or misleading in a material respect. There is a maximum penalty of \$250,000 for a corporation and \$120,000 for an individual.

I/We

- declare that the information in the Monitoring and Complaints Summary in Section B of this Annual Return application is correct and not false or misleading in a material respect, and
- certify that the information in the Statement and Compliance in sections A, C, D, E, F, G and H and any other pages attached to Section C is correct and not false or misleading in a material respect.



Annual Return

WOLLONGONG CITY COUNCIL
Licence 5862

Signature	
Name	Greg Doyle
Position	General Manager (Acting)
Date	27 ' 7 ' 18.
Declaration I declare that the information in the Monitoring and Complaints Summary in section B of this Annual Return is correct and not false or misleading in a material respect, and I certify that the information in the Statement of Compliance in section A, C, D, E, F and G and any pages attached to Section C is correct and not false or misleading in a material respect.	

For each monitoring point identified in your licence complete all the details for each pollutants listed in the tables provided below

Discharge & Monitoring Point 1						
Stormwater monitoring and discharge point, Outlet at Reddalls Road - Monitoring point labelled 1 on Figure 13 titled 'Proposed Surface Water Monitoring Locations' dated 26 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV) E297777 N6183972						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	1	1	216	216	216
Ammonia	milligrams per litre	1	1	0.01	0.01	0.01
Calcium	milligrams per litre	1	1	13	13	13
Chloride	milligrams per litre	1	1	223	223	223
Conductivity	microsiemens per centimeter	1	1	1110	1110	1110
Dissolved Oxygen	milligrams per litre	1	1	9.6	9.6	9.6
Filterable Iron	milligrams per litre	1	1	<0.05	<0.05	<0.05
Fluoride	milligrams per litre	1	1	0.5	0.5	0.5
Magnesium	milligrams per litre	1	1	24	24	24
Nitrate	milligrams per litre	1	1	<0.01	<0.01	<0.01
pH	pH	1	1	9.7	9.7	9.7
Potassium	milligrams per litre	1	1	18	18	18
Sodium	milligrams per litre	1	1	168	168	168
Sulfate	milligrams per litre	1	1	41	41	41
Temperature	milligrams per litre	1	1	25.8	25.8	25.8
Total Organic Carbon	milligrams per litre	1	1	12	12	12
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Total suspended solids	milligrams per litre	1	1	16	16	16

note: No discharge when annual sampling conducted. Standing water sample only

Monitoring Point 10						
Groundwater quality monitoring, Monitoring point labelled GMW103 on Figure 15 titled "Current Site Investigation Locations" dated 8						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	180	342	450
Aluminium	milligrams per litre	1	1	5.62	5.62	5.62
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.041	0.041	0.041
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	162	180.5	197
Chloride	milligrams per litre	4	4	389	428	455
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.009	0.009	0.009
Cobalt	milligrams per litre	1	1	0.01	0.01	0.01
Conductivity	microsiemens per centimeter	4	4	2130	2217.5	2290
Copper	milligrams per litre	1	1	0.016	0.016	0.016
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.4	0.4	0.4
Lead	milligrams per litre	1	1	0.014	0.014	0.014
Magnesium	milligrams per litre	4	4	58	62.5	66
Manganese	micrograms per litre	1	1	0.452	0.452	0.452
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001

Nitrate	milligrams per litre	1	1	0.1	0.1	0.1
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.03	0.045	0.08
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	7	7.075	7.2
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	1	1
Sodium	milligrams per litre	4	4	172	175.5	180
Standing Water Level	meters	4	4	7.69	7.7725	7.95
Sulfate	milligrams per litre	4	4	122	136	151
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	1240	1325	1400
Total organic carbon	milligrams per litre	4	4	1	1.75	3
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	1	0.035	0.035	0.035

Monitoring Point 11						
Groundwater quality monitoring, Monitoring point labelled GMW104 on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	349	457.25	504
Aluminium	milligrams per litre	1	4	0.44	7.0325	12.5
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	4	0.014	0.03325	0.044
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	4	0.0001	0.0001	0.0001
Calcium	milligrams per litre	4	4	50	56	62
Chloride	milligrams per litre	4	4	78	111.25	131
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	4	0.001	0.005	0.009
Cobalt	milligrams per litre	1	4	0.001	0.0045	0.007
Conductivity	microsiemens per centimeter	4	4	1060	1287.5	1410
Copper	milligrams per litre	1	4	0.001	0.0105	0.016
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.7	0.7	0.7
Lead	milligrams per litre	1	4	0.001	0.00425	0.008
Magnesium	milligrams per litre	4	4	31	35.75	42
Manganese	micrograms per litre	1	4	0.374	0.41	0.47
Mercury	milligrams per litre	1	4	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.02	0.02	0.02
Nitrite	milligrams per litre	1	1	0.02	0.02	0.02
Nitrogen (ammonia)	milligrams per litre	4	4	0.02	0.03	0.04
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	7.2	7.325	7.5
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	<1	<1	<1
Sodium	milligrams per litre	4	4	140	170	183
Standing Water Level	meters	4	4	7.45	7.88	8.65
Sulfate	milligrams per litre	4	4	46	66	76
Toluene	milligrams per litre	1	1	<2	<2	<2

Total dissolved solids	milligrams per litre	4	4	578	695.25	765
Total organic carbon	milligrams per litre	4	4	2	2	2
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1			
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	4	0.005	0.0255	0.046

Monitoring Point 12

Groundwater quality monitoring, Monitoring point labelled GMW105 on Figure 15 titled "Current Site Investigation Locations" dated 6

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	34	34	34
Aluminium	milligrams per litre	1	1	Dry	Dry	Dry
Arsenic	milligrams per litre	1	1	Dry	Dry	Dry
Barium	milligrams per litre	1	1	Dry	Dry	Dry
Benzene	milligrams per litre	1	1	Dry	Dry	Dry
Cadmium	milligrams per litre	1	1	Dry	Dry	Dry
Calcium	milligrams per litre	4	4	7	7.5	8
Chloride	milligrams per litre	4	4	39	44.5	50
Chromium (hexavalent)	milligrams per litre	1	1	Dry	Dry	Dry
Chromium (total)	milligrams per litre	1	1	Dry	Dry	Dry
Cobalt	milligrams per litre	1	1	Dry	Dry	Dry
Conductivity	microsiemens per centimeter	4	4	276	277	278
Copper	milligrams per litre	1	1	Dry	Dry	Dry
Ethyl benzene	micrograms per litre	1	1	Dry	Dry	Dry
Fluoride	milligrams per litre	1	1	Dry	Dry	Dry
Lead	milligrams per litre	1	1	Dry	Dry	Dry
Magnesium	milligrams per litre	4	4	4	4	4
Manganese	micrograms per litre	1	1	Dry	Dry	Dry
Mercury	milligrams per litre	1	1	Dry	Dry	Dry
Nitrate	milligrams per litre	1	1	Dry	Dry	Dry
Nitrite	milligrams per litre	1	1	Dry	Dry	Dry
Nitrogen (ammonia)	milligrams per litre	4	4	0.02	0.06	0.1
Organochlorine pesticides	milligrams per litre	1	1	Dry	Dry	Dry
Organophosphate pesticides	milligrams per litre	1	1	Dry	Dry	Dry
pH	pH	4	4	5.8	5.8	5.8
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	Dry	Dry	Dry
Potassium	milligrams per litre	4	4	1	1	1
Sodium	milligrams per litre	4	4	36	38.5	41
Standing Water Level	meters	4	4	10.8	11.25	11.7
Sulfate	milligrams per litre	4	4	14	14	14
Toluene	milligrams per litre	1	1	Dry	Dry	Dry
Total dissolved solids	milligrams per litre	4	4	217	217	217
Total organic carbon	milligrams per litre	4	4	2	4	6
Total petroleum hydrocarbons	milligrams per litre	1	1	Dry	Dry	Dry
Total Phenolics	milligrams per litre	1	1	Dry	Dry	Dry
Xylene	milligrams per litre	1	1	Dry	Dry	Dry
Zinc	milligrams per kilogram	1	1	Dry	Dry	Dry

Monitoring Point 13

Groundwater quality monitoring, Monitoring point labelled GMW106 on Figure 15 titled "Current Site Investigation Locations" dated 6

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
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Alkalinity (as calcium carbonate)	milligrams per litre	4	4	Dry	Dry	Dry
Aluminium	milligrams per litre	1	1	Dry	Dry	Dry
Arsenic	milligrams per litre	1	1	Dry	Dry	Dry
Barium	milligrams per litre	1	1	Dry	Dry	Dry
Benzene	milligrams per litre	1	1	Dry	Dry	Dry
Cadmium	milligrams per litre	1	1	Dry	Dry	Dry
Calcium	milligrams per litre	4	4	Dry	Dry	Dry
Chloride	milligrams per litre	4	4	Dry	Dry	Dry
Chromium (hexavalent)	milligrams per litre	1	1	Dry	Dry	Dry
Chromium (total)	milligrams per litre	1	1	Dry	Dry	Dry
Cobalt	milligrams per litre	1	1	Dry	Dry	Dry
Conductivity	microsiemens per centimeter	4	4	Dry	Dry	Dry
Copper	milligrams per litre	1	1	Dry	Dry	Dry
Ethyl benzene	micrograms per litre	1	1	Dry	Dry	Dry
Fluoride	milligrams per litre	1	1	Dry	Dry	Dry
Lead	milligrams per litre	1	1	Dry	Dry	Dry
Magnesium	milligrams per litre	4	4	Dry	Dry	Dry
Manganese	micrograms per litre	1	1	Dry	Dry	Dry
Mercury	milligrams per litre	1	1	Dry	Dry	Dry
Nitrate	milligrams per litre	1	1	Dry	Dry	Dry
Nitrite	milligrams per litre	1	1	Dry	Dry	Dry
Nitrogen (ammonia)	milligrams per litre	4	4	Dry	Dry	Dry
Organochlorine pesticides	milligrams per litre	1	1	Dry	Dry	Dry
Organophosphate pesticides	milligrams per litre	1	1	Dry	Dry	Dry
pH	pH	4	4	Dry	Dry	Dry
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	Dry	Dry	Dry
Potassium	milligrams per litre	4	4	Dry	Dry	Dry
Sodium	milligrams per litre	4	4	Dry	Dry	Dry
Standing Water Level	meters	4	4	Dry	Dry	Dry
Sulfate	milligrams per litre	4	4	Dry	Dry	Dry
Toluene	milligrams per litre	1	1	Dry	Dry	Dry
Total dissolved solids	milligrams per litre	4	4	Dry	Dry	Dry
Total organic carbon	milligrams per litre	4	4	Dry	Dry	Dry
Total petroleum hydrocarbons	milligrams per litre	1	1	Dry	Dry	Dry
Total Phenolics	milligrams per litre	1	1	Dry	Dry	Dry
Xylene	milligrams per litre	1	1	Dry	Dry	Dry
Zinc	milligrams per kilogram	1	1	Dry	Dry	Dry

Monitoring Point 14						
Groundwater quality monitoring, Monitoring point labelled GMW108S on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	144	402.5	534
Aluminium	milligrams per litre	1	1	19.9	19.9	19.9
Arsenic	milligrams per litre	1	1	0.002	0.002	0.002
Barium	milligrams per litre	1	1	0.231	0.231	0.231
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	20	93.5	134
Chloride	milligrams per litre	4	4	42	450.25	679
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.017	0.017	0.017
Cobalt	milligrams per litre	1	1	0.017	0.017	0.017
Conductivity	microsiemens per centimeter	4	4	479	2269.75	3370
Copper	milligrams per litre	1	1	0.042	0.042	0.042
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2

Fluoride	milligrams per litre	1	1	0.5	0.5	0.5
Lead	milligrams per litre	1	1	0.014	0.014	0.014
Magnesium	milligrams per litre	4	4	10	67	97
Manganese	micrograms per litre	1	1	0.385	0.385	0.385
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.01	0.01	0.01
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.04	0.0725	0.1
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	6.8	6.925	7.1
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	2.25	4
Sodium	milligrams per litre	4	4	61	292.5	439
Standing Water Level	meters	4	4	2.91	2.985	3.09
Sulfate	milligrams per litre	4	4	25	130	191
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	382	1300.5	1810
Total organic carbon	milligrams per litre	4	4	4	8.25	13
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	1	0.056	0.058	0.056

Monitoring Point 15

Groundwater quality monitoring. Monitoring point labelled GMW108D on Figure 15 titled "Current Site Investigation Locations" dated 6

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	223	371.75	614
Aluminum	milligrams per litre	1	1	0.39	0.39	0.39
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.022	0.022	0.022
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	46	82.75	119
Chloride	milligrams per litre	4	4	49	389	663
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.001	0.001	0.001
Cobalt	milligrams per litre	1	1	<0.001	<0.001	<0.001
Conductivity	microsiemens per centimeter	4	4	568	2024.5	3230
Copper	milligrams per litre	1	1	0.002	0.002	0.002
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.6	0.6	0.6
Lead	milligrams per litre	1	1	<0.001	<0.001	<0.001
Magnesium	milligrams per litre	4	4	14	50.75	79
Manganese	micrograms per litre	1	1	0.021	0.021	0.021
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.17	0.17	0.17
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.02	0.0725	0.14
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	7	7.2	7.3
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	6	12

Sodium	milligrams per litre	4	4	40	264.5	439
Standing Water Level	meters	4	4	2.42	2.515	2.6
Sulfate	milligrams per litre	4	4	18	108.25	177
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	348	1127	1720
Total organic carbon	milligrams per litre	4	4	2	8.25	16
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	1	0.01	0.01	0.01

Monitoring Point 16						
Groundwater quality monitoring, Monitoring point labelled GMW109S on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	215	255.75	304
Aluminium	milligrams per litre	1	4	0.42	3.6075	6.02
Arsenic	milligrams per litre	1	1	0.004	0.004	0.004
Barium	milligrams per litre	1	4	0.158	0.2025	0.268
Benzene	milligrams per litre	1	1	0.288	0.288	0.288
Cadmium	milligrams per litre	1	4	0.0001	0.000125	0.0002
Calcium	milligrams per litre	4	4	56	65	70
Chloride	milligrams per litre	4	4	268	277.5	288
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	4	0.001	0.00475	0.008
Cobalt	milligrams per litre	1	4	0.027	0.031	0.034
Conductivity	microsiemens per centimeter	4	4	1420.00	1450.00	1490
Copper	milligrams per litre	1	4	0.003	0.014	0.025
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.1	0.1	0.1
Lead	milligrams per litre	1	4	0.001	0.0065	0.012
Magnesium	milligrams per litre	4	4	38	41	44
Manganese	micrograms per litre	1	4	3.19	3.58	3.97
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.03	0.03	0.03
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.38	0.6	0.82
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	6.2	6.325	6.5
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	1.75	2
Sodium	milligrams per litre	4	4	142	154.75	162
Standing Water Level	meters	4	4	2.88	3.4375	3.93
Sulfate	milligrams per litre	4	4	74	87	95
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	721	800	912
Total organic carbon	milligrams per litre	4	4	6	7.5	10
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	4	0.022	0.07025	0.165

Monitoring Point 17						
Groundwater quality monitoring, Monitoring point labelled GMW110 on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	564	598.75	628
Aluminium	milligrams per litre	1	1	3.43	3.43	3.43
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.018	0.018	0.018
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	172	197.5	216
Chloride	milligrams per litre	4	4	822	900.5	988
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.003	0.003	0.003
Cobalt	milligrams per litre	1	1	0.003	0.003	0.003
Conductivity	microsiemens per centimeter	4	4	4180	4310	4460
Copper	milligrams per litre	1	1	0.005	0.005	0.005
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.04	0.04	0.04
Lead	milligrams per litre	1	1	0.002	0.002	0.002
Magnesium	milligrams per litre	4	4	147	159	177
Manganese	micrograms per litre	1	1	0.151	0.151	0.151
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.52	0.52	0.52
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.01	0.015	0.02
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	6.7	6.775	6.9
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	1.25	2
Sodium	milligrams per litre	4	4	460	484	511
Standing Water Level	meters	4	4	4.23	4.3675	4.46
Sulfate	milligrams per litre	4	4	282	311.25	338
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	2120	2490	2690
Total organic carbon	milligrams per litre	4	4	2	2.25	3
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	1	0.018	0.018	0.018

Monitoring Point 18						
Groundwater quality monitoring, Monitoring point labelled GMW111 on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	527	555	578
Aluminium	milligrams per litre	1	1	4.19	4.19	4.19
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.034	0.034	0.034
Benzene	milligrams per litre	1	1	1	1	1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	113	120.75	126
Chloride	milligrams per litre	4	4	671	699	739

Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.002	0.002	0.002
Cobalt	milligrams per litre	1	1	0.004	0.004	0.004
Conductivity	microsiemens per centimeter	4	4	3390	3475	3560
Copper	milligrams per litre	1	1	0.008	0.008	0.008
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.4	0.4	0.4
Lead	milligrams per litre	1	1	0.004	0.004	0.004
Magnesium	milligrams per litre	4	4	97	100.5	104
Manganese	micrograms per litre	1	1	0.303	0.303	0.303
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.02	0.02	0.02
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.01	0.025	0.05
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	6.8	7.06	7.4
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	1	1
Sodium	milligrams per litre	4	4	422	459	504
Standing Water Level	meters	4	4	6.28	6.5175	6.62
Sulfate	milligrams per litre	4	4	196	215.75	257
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	1750	1850	2090
Total organic carbon	milligrams per litre	4	4	1	1.5	2
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	1	0.022	0.022	0.022

Monitoring Point 19						
Groundwater quality monitoring, Monitoring point labelled GMW109D on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	209	227.25	243
Aluminium	milligrams per litre	1	1	0.21	0.21	0.21
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.139	0.139	0.139
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	76	84.75	90
Chloride	milligrams per litre	4	4	413	442.5	480
Chromium (hexavalent)	milligrams per litre	1	1	<0.1	<0.1	<0.1
Chromium (total)	milligrams per litre	1	1	<0.001	<0.001	<0.001
Cobalt	milligrams per litre	1	1	<0.001	<0.001	<0.001
Conductivity	microsiemens per centimeter	4	4	1750	1802.5	1830
Copper	milligrams per litre	1	1	0.002	0.002	0.002
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.4	0.4	0.4
Lead	milligrams per litre	1	1	0.001	0.001	0.001
Magnesium	milligrams per litre	4	4	45	46.5	48
Manganese	micrograms per litre	1	1	0.832	0.832	0.832
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.11	0.11	0.11
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.02	0.0575	0.08

Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	6.9	7	7.1
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	1	1
Sodium	milligrams per litre	4	4	185	194.25	206
Standing Water Level	meters	4	4	3.07	3.2425	3.47
Sulfate	milligrams per litre	4	4	23	24.25	26
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	868	969.25	1080
Total organic carbon	milligrams per litre	4	4	1	1	1
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	1	0.014	0.014	0.014

Monitoring Point 20

Groundwater quality monitoring, Monitoring point labelled BH6 on Figure 15 titled "Current Site Investigation Locations" dated 6 March

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	658	735.75	799
Aluminium	milligrams per litre	1	1	1.12	1.12	1.12
Arsenic	milligrams per litre	1	1	0.003	0.003	0.003
Barium	milligrams per litre	1	1	0.068	0.068	0.068
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	98	112	121
Chloride	milligrams per litre	4	4	1000	1095	1200
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.002	0.002	0.002
Cobalt	milligrams per litre	1	1	0.015	0.015	0.015
Conductivity	microsiemens per centimeter	4	4	4780	5017.5	5190
Copper	milligrams per litre	1	1	0.003	0.003	0.003
Ethyl benzene	micrograms per litre	1	1	2	2	2
Fluoride	milligrams per litre	1	1	0.9	0.9	0.9
Lead	milligrams per litre	1	1	0.009	0.009	0.009
Magnesium	milligrams per litre	4	4	115	120.75	130
Manganese	micrograms per litre	1	1	2.83	2.83	2.83
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.04	0.04	0.04
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.24	0.265	0.28
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	6.8	6.875	7
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	1	1	1
Sodium	milligrams per litre	4	4	747	812.5	866
Standing Water Level	meters	4	4	1.55	1.7475	1.8
Sulfate	milligrams per litre	4	4	213	255	281
Toluene	milligrams per litre	1	1	<2	<2	<2

solids	milligrams per litre	4	4	2600	2825	2960
total organic carbon	milligrams per litre	4	4	9	9.5	11
Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<0.05	<0.05	<0.05
Xylene	milligrams per litre	1	1	<1	<1	<1
Zinc	milligrams per kilogram	1	1	0.01	0.01	0.01

Monitoring Point 21

Subsurface gas monitoring, Monitoring point labelled LFG MW1 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0001	0.000268667	0.0006

Monitoring Point 22

Subsurface gas monitoring, Monitoring point labelled LFG MW2 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0001	0.000241667	0.0006

Monitoring Point 23

Subsurface gas monitoring, Monitoring point labelled LFG MW3 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0	0.000191667	0.0007

Monitoring Point 24

Subsurface gas monitoring, Monitoring point labelled LFG MW4 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0001	0.000275	0.0008

Monitoring Point 25

Subsurface gas monitoring, Monitoring point labelled LFG MW5 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0001	0.000375	0.0008

Monitoring Point 26

Subsurface gas monitoring, Monitoring point labelled LFG MW6 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0002	0.000458333	0.0009

Monitoring Point 27

Subsurface gas monitoring, Monitoring point labelled LFG MW7 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0004	0.00145	0.0067

Monitoring Point 28

Subsurface gas monitoring, Monitoring point labelled LFG MW8 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0002	0.000841667	0.0018

Monitoring Point 29

Subsurface gas monitoring, Monitoring point labelled LFG MW9 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated

Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0003	0.001041667	0.0027

Monitoring Point 3						
Surface Gas Monitoring. Areas where intermediate or final cover has been placed						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.2	5.87	144

Monitoring Point 30						
Subsurface gas monitoring. Monitoring point labelled LFG MW10 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0001	0.001254545	0.0066

Monitoring Point 31						
Subsurface gas monitoring. Monitoring point labelled LFG MW11 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0001	0.00063	0.0018

Monitoring Point 32						
Subsurface gas monitoring. Monitoring point labelled LFG MW12 on Figure 14 titled "Proposed Landfill Gas Monitoring Locations" dated						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.0002	0.00054	0.001

Monitoring Point 33						
Stormwater monitoring point, Downstream monitoring point labelled 4 on Figure 13 titled "Proposed Surface Water Monitoring						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	1	1	270	270	270
Ammonia	milligrams per litre	1	1	1.82	1.82	1.82
Calcium	milligrams per litre	1	1	44	44	44
Chloride	milligrams per litre	1	1	54	54	54
Conductivity	microsiemens per centimeter	1	1	686	686	686
Dissolved Oxygen	milligrams per litre	1	1	2.82	2.82	2.82
Filterable Iron	milligrams per litre	1	1	0.52	0.52	0.52
Fluoride	milligrams per litre	1	1	0.2	0.2	0.2
Magnesium	milligrams per litre	1	1	21	21	21
Nitrate	milligrams per litre	1	1	0.01	0.01	0.01
pH	pH	1	1	7.5	7.5	7.5
Potassium	milligrams per litre	1	1	8	8	8
Sodium	milligrams per litre	1	1	57	57	57
Sulfate	milligrams per litre	1	1	1	1	1
Temperature	milligrams per litre	1	1	22.5	22.5	22.5
Total Organic Carbon	milligrams per litre	1	1	27	27	27
Total Phenolics	milligrams per litre	1	1	0.05	0.05	0.05
Total suspended solids	milligrams per litre	1	1	76	76	76

Monitoring Point 34						
Stormwater monitoring point, Upstream monitoring point labelled 6 on Figure 13 titled "Proposed Surface Water Monitoring Locations"						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	1	1	287	287	287
Ammonia	milligrams per litre	1	1	0.18	0.18	0.18
Calcium	milligrams per litre	1	1	64	64	64
Chloride	milligrams per litre	1	1	69	69	69
Conductivity	microsiemens per centimeter	1	1	768	768	768
Dissolved Oxygen	milligrams per litre	1	1	3.45	3.45	3.45

Filterable Iron	milligrams per litre	1	1	0.11	0.11	0.11
Fluoride	milligrams per litre	1	1	0.2	0.2	0.2
Magnesium	milligrams per litre	1	1	25	25	25
Nitrate	milligrams per litre	1	1	0.01	0.01	0.01
pH	pH	1	1	7.6	7.6	7.6
Potassium	milligrams per litre	1	1	4	4	4
Sodium	milligrams per litre	1	1	47	47	47
Sulfate	milligrams per litre	1	1	4	4	4
Temperature	milligrams per litre	1	1	23.9	23.9	23.9
Total Organic Carbon	milligrams per litre	1	1	5	5	5
Total Phenolics	milligrams per litre	1	1	0.05	0.05	0.05
Total suspended solids	milligrams per litre	1	1	23	23	23

Monitoring Point 4						
Gas accumulation monitoring, Inside all buildings within 250 meters of deposited waste						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Methane	percent by volume	12	12	0.9	1.74	4.4

Monitoring Point 5						
Groundwater quality monitoring , Monitoring point labelled GABH02 on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	1100	1147.5	1210
Aluminium	milligrams per litre	1	1	4.09	4.09	4.09
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.015	0.015	0.015
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Calcium	milligrams per litre	4	4	232.00	288.00	324
Chloride	milligrams per litre	4	4	1040.00	1107.50	1170
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.004	0.004	0.004
Cobalt	milligrams per litre	1	1	<0.001	<0.001	<0.001
Conductivity	microsiemens per centimeter	4	4	5330	5495	5730
Copper	milligrams per litre	1	1	0.008	0.008	0.008
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.5	0.5	0.5
Lead	milligrams per litre	1	1	0.004	0.004	0.004
Magnesium	milligrams per litre	4	4	155.00	183.25	196
Manganese	micrograms per litre	1	1	0.07	0.07	0.07
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	0.02	0.02	0.02
Nitrite	milligrams per litre			<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	0.01	0.0275	0.04
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<0.5	<0.5
pH	pH	4	4	6.50	6.68	6.8
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<1	<1	<1
Potassium	milligrams per litre	4	4	2.00	2.25	3
Sodium	milligrams per litre	4	4	543.00	618.25	696
Standing Water Level	meters	4	4	5.26	5.48	5.6
Sulfate	milligrams per litre	4	4	147.00	166.00	177
Toluene	milligrams per litre	1	1	2	2	2
Total dissolved solids	milligrams per litre	4	4	2960.00	3220.00	3490
Total organic carbon	milligrams per litre	4	4	6.00	7.00	8

Total petroleum hydrocarbons	milligrams per litre	1	1	<50	<50	<50
Total Phenolics	milligrams per litre	1	1	<2	<2	<2
Xylene	milligrams per litre	1	1	<2	<2	<2
Zinc	milligrams per kilogram	1	1	0.027	0.027	0.027

Monitoring Point 9						
Groundwater quality monitoring, Monitoring point labelled GMW102 on Figure 15 titled "Current Site Investigation Locations" dated 6						
Pollutant	Unit of Measure	No of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre	4	4	113	235.5	358
Aluminium	milligrams per litre	1	1	Dry	Dry	Dry
Arsenic	milligrams per litre	1	1	Dry	Dry	Dry
Barium	milligrams per litre	1	1	Dry	Dry	Dry
Benzene	milligrams per litre	1	1	Dry	Dry	Dry
Cadmium	milligrams per litre	1	1	Dry	Dry	Dry
Calcium	milligrams per litre	4	4	26	64	102
Chloride	milligrams per litre	4	4	26	35	44
Chromium (hexavalent)	milligrams per litre	1	1	Dry	Dry	Dry
Chromium (total)	milligrams per litre	1	1	Dry	Dry	Dry
Cobalt	milligrams per litre	1	1	Dry	Dry	Dry
Conductivity	microsiemens per centimeter	4	4	354	571	788
Copper	milligrams per litre	1	1	Dry	Dry	Dry
Ethyl benzene	micrograms per litre	1	1	Dry	Dry	Dry
Fluoride	milligrams per litre	1	1	Dry	Dry	Dry
Lead	milligrams per litre	1	1	Dry	Dry	Dry
Magnesium	milligrams per litre	4	4	10	20.5	31
Manganese	micrograms per litre	1	1	Dry	Dry	Dry
Mercury	milligrams per litre	1	1	Dry	Dry	Dry
Nitrate	milligrams per litre	1	1	Dry	Dry	Dry
Nitrite	milligrams per litre	1	1	Dry	Dry	Dry
Nitrogen (ammonia)	milligrams per litre	4	4	0.02	0.05	0.08
Organochlorine pesticides	milligrams per litre	1	1	Dry	Dry	Dry
Organophosphate pesticides	milligrams per litre	1	1	Dry	Dry	Dry
pH	pH	4	4	6.8	6.95	7.1
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	Dry	Dry	Dry
Potassium	milligrams per litre	4	4	1	1	1
Sodium	milligrams per litre	4	4	28	34	40
Standing Water Level	meters	4	4	8.18	10.24	12.3
Sulfate	milligrams per litre	4	4	12	21	30
Toluene	milligrams per litre	1	1			
Total dissolved solids	milligrams per litre	4	4	342	508	670
Total organic carbon	milligrams per litre	4	4	2	2.5	3
Total petroleum hydrocarbons	milligrams per litre	1	1	Dry	Dry	Dry
Total Phenolics	milligrams per litre	1	1	Dry	Dry	Dry
Xylene	milligrams per litre	1	1	Dry	Dry	Dry
Zinc	milligrams per kilogram	1	1	Dry	Dry	Dry