



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: 29-5-2022 To: 28-5-2023

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)



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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	22
Water	15
Noise	0
Waste	0
Other	0
Total complaints recorded by the licensee during the reporting period	37

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 identified at E297772 N6184025.

Pollutant	Unit of measure	No. of samples required	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Alkalinity (as calcium carbonate)	milligrams per litre					
Ammonia	milligrams per litre					
Calcium	milligrams per litre					
Chloride	milligrams per litre					
Conductivity	microsiemens per centimetre					
Dissolved Oxygen	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Filterable iron	milligrams per litre					
Fluoride	milligrams per litre					
Magnesium	milligrams per litre					
Nitrate	milligrams per litre					
pH	pH					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Sulfate	milligrams per litre					
Temperature	degrees Celsius					
Total organic carbon	milligrams per litre					
Total Phenolics	milligrams per litre					
Total suspended solids	milligrams per litre					

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 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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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
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					
Conductivity	microsiemens per centimetre					
Copper	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					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Nitrite	milligrams per litre					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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					
Conductivity	microsiemens per centimetre					
Copper	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					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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

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
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					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Chromium (total)	milligrams per litre					
Cobalt	milligrams per litre					
Conductivity	microsiemens per centimetre					
Copper	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					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Total Phenolics	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
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					
Conductivity	microsiemens per centimetre					
Copper	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Magnesium	milligrams per litre					
Manganese	micrograms per litre					
Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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
Alkalinity (as calcium carbonate)	milligrams per litre					
Aluminium	milligrams per litre					
Arsenic	milligrams per litre					
Barium	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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					
Conductivity	microsiemens per centimetre					
Copper	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					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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
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					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Conductivity	microsiemens per centimetre					
Copper	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					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	milligrams per litre					
Xylene	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Zinc	milligrams per kilogram					
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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
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					
Conductivity	microsiemens per centimetre					
Copper	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	milligrams per litre					
Xylene	milligrams per litre					
Zinc	milligrams per kilogram					

Monitoring Point 16

Groundwater quality monitoring, Monitoring point labelled GMW109S on Figure 15 titled "Current Site Investigation Locations" dated 6 March 2012 (Whytes Gully New Landfill Cell EA - Volume IV). E297605.7 N6184068



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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 N6184266

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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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					
Conductivity	microsiemens per centimetre					
Copper	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					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
Polycyclic aromatic hydrocarbons	milligrams per litre					
Potassium	milligrams per litre					
Sodium	milligrams per litre					
Standing Water Level	metres					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Sulfate	milligrams per litre					
Toluene	milligrams per litre					
Total dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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
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					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Conductivity	microsiemens per centimetre					
Copper	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					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	milligrams per litre					
Xylene	milligrams per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Zinc	milligrams per kilogram					
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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
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					
Conductivity	microsiemens per centimetre					
Copper	milligrams per litre					
Ethyl benzene	micrograms per litre					
Fluoride	milligrams per litre					
Lead	milligrams per litre					
Magnesium	milligrams per litre					
Manganese	micrograms per litre					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Mercury	milligrams per litre					
Nitrate	milligrams per litre					
Nitrite	milligrams per litre					
Nitrogen (ammonia)	milligrams per litre					
Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Organochlorine pesticides	milligrams per litre					
Organophosphate pesticides	milligrams per litre					
pH	pH					
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 dissolved solids	milligrams per litre					
Total organic carbon	milligrams per litre					
Total petroleum hydrocarbons	milligrams per litre					
Total Phenolics	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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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					



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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

Name of the uploaded file containing point data T

Whytes Gully Return 2023.pdf

B2 Concentration Monitoring Comments

44 non-compliances were recorded this reporting period mostly attributed to catastrophic weather conditions.



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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)?	No
---	----

C2. Details of Non-Compliance with Licence

Licence condition number not complied with
L2
Summary of particulars of the non-compliance
Exceedance of pH and TSS at Monitoring Point 1 on 15 occasions during catastrophic rainfall conditions.
Further details on particulars of non-compliance, if required
Incident Reports provided to the EPA detailing each incident and control measures.
Number of times occurred
15
Date(s) when the non-compliance occurred, if applicable
Incident Reports provided to the EPA.
Cause of non-compliance
Declared Natural Disasters that lead to catastrophic rainfall conditions
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
Incident Reports provided to the EPA detailing each incident and control measures.
Action taken or that will be taken to prevent a recurrence of the non-compliance
Council working closely with the EPA to implement the Stormwater Improvement Program.
Uploaded Document Name
Uploaded Document Description

Licence condition number not complied with



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

L4.1
Summary of particulars of the non-compliance T
15 complaints were received via the EPA to investigate potential offensive odour from Whytes Gully Landfill.
Further details on particulars of non-compliance, if required T
Incident Reports were sent to the EPA on each occasion.
Number of times occurred T
15
Date(s) when the non-compliance occurred, if applicable T
Incident Reports were sent to the EPA on each occasion.
Cause of non-compliance T
Potential odour from Whytes Gully or surrounding industrial catchment.
Action taken or that will be taken to mitigate any adverse effects of the non-compliance T
Investigations undertaken on each occasion and measures taken were provided in Incident Reports to the EPA.
Action taken or that will be taken to prevent a recurrence of the non-compliance T
Investigations undertaken on each occasion and measures taken provided in Incident Reports to the EPA. Council working closely with the EPA.
Uploaded Document Name T
Uploaded Document Description T

Licence condition number not complied with
M2
Summary of particulars of the non-compliance
Exceedance of surface gas (methane) at 7 locations within transacts on 7 occasions during heavy rainfall conditions.
Further details on particulars of non-compliance, if required
Number of times occurred
7
Date(s) when the non-compliance occurred, if applicable
See attached Annual Report.
Cause of non-compliance
Catastrophic rainfall conditions.
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
A monthly report was provided to the EPA outlining control measures and milestones against the Odour Mitigation Action Plan. This includes trialing a biocover at the active tipface to reduce the methane concentration.



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

Action taken or that will be taken to prevent a recurrence of the non-compliance
A monthly report was provided to the EPA outlining control measures and milestones against the Odour Mitigation Action Plan.
Uploaded Document Name
Uploaded Document Description
Licence condition number not complied with
M2.3
Summary of particulars of the non-compliance
Testing of bores not completed as per licence conditions due to reasons listed below.
Further details on particulars of non-compliance, if required
<ul style="list-style-type: none"> Monitoring Point 1 – Temperature not recorded on one occasion during the reporting period. The sampling company missed the in-situ testing at the time of sampling. Monitoring Point 5 - ground water bore (GABH02) was damaged. Therefore, sampling and testing could not be completed for 1x Annual test and 1x quarterly test during the reporting period. Monitoring Point 9 - ground water bore (GMW102) was dry on the proposed annual sampling and therefore no sample was available for testing. Monitoring Point 13 - ground water bore (GMW106) was dry on the proposed sampling days and therefore no sample was available for testing on 3 of the 4 quarters (Including annual sample and testing) during the reporting period.
Number of times occurred
7
Date(s) when the non-compliance occurred, if applicable
14/6/2023 – Monitoring Point 1 17/8/2022 (Quarterly Test) - Monitoring Point 13 8/11/2022 (Quarterly Test) - Monitoring Point 13 2/2/2023 (Annual testing) – Monitoring Point 5, Monitoring Point 9, Monitoring Point 13 16/5/2023 (Quarterly Test) - Monitoring Point 5
Cause of non-compliance
Monitoring Point 1 – Stormwater discharge point – Temperature result not submitted or recorded. Monitoring Point 5 – ground water bore (GABH02) was damaged during the reporting period. Monitoring Point 9 – ground water bore (GMW102) was dry in February 2023. Monitoring Point 13 – ground water bore (GMW106) was dry.
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
Non-compliance raised against sampling contractor. Develop electronic system to ensure all data is received in accordance with EPL 5862. Re-locate Ground water bore (GABH02) from the operational area. Conduct annual test suite during any quarter within the report period to ensure compliance with EPL 5862. Update this in the new contract that is planned to commence by October 2023. Investigate relocating Monitoring Point 13 (GMW106) or decommissioning the bore.



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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 T		
https://wollongong.nsw.gov.au/your-council/plans-and-reports/waste-site-reports		
Has the PIRMP been tested?		Yes
The PIRMP was last tested on	23-8-2022	
Has the PIRMP been updated?		Yes
The PIRMP was last updated on	25-8-2022	
Number of times the PIRMP was activated in this reporting period?		0
The PIRMP was activated on	n/a	



Annual Return

WOLLONGONG CITY COUNCIL

Licence 5862

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 T	
https://wollongong.nsw.gov.au/your-council/plans-and-reports/waste-site-reports	

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 (at least yearly) environmental audits at the premises that are conducted by a competent and independent person?	Yes
Have you undertaken an independent environmental audit covering documented environmental practices, procedures and systems in place during the annual return period?	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 at the premises and keep records of this?	Yes

H. Signature and Certification



Annual Return

WOLLONGONG CITY COUNCIL

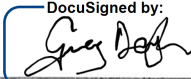
Licence 5862

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 under section 66 of the Protection of the Environment Operations Act 1997 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.

Signature	DocuSigned by:  225E1B59CB53435...
Name	Greg Doyle
Position	General Manager
Date	25 August 2023
Declaration	
<p>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</p> <p>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.</p>	

WG Concentration
Monitoring Summary
29/5/2022-28/5/2023

B2

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	36	36	192	312.28	423
Ammonia	milligrams per litre	36	36	5.94	13.08	27.4
Calcium	milligrams per litre	36	36	33	45.33	90
Chloride	milligrams per litre	36	36	79	130.39	319
Conductivity	microsiemens per centimeter	36	36	130	1071.43	1720
Dissolved Oxygen	milligrams per litre	36	36	3.66	7.39	10.1
Filterable Iron	milligrams per litre	36	36	<0.05	0.22	0.55
Fluoride	milligrams per litre	36	36	0.2	0.25	0.4
Magnesium	milligrams per litre	36	36	14	21.50	41
Nitrate	milligrams per litre	36	36	<0.01	0.38	4.86
pH	pH	36	36	7.4	8.19	8.8
Potassium	milligrams per litre	36	36	21	34.33	44
Sodium	milligrams per litre	36	36	78	123.19	181
Sulfate	milligrams per litre	36	36	15	26.67	54
Temperature	milligrams per litre	36	35	10	15.09	21.1
Total Organic Carbon	milligrams per litre	36	36	2	33.36	47
Total Phenolics	milligrams per litre	36	36	<0.05	<0.05	<0.05
Total suspended solids	milligrams per litre	36	36	8	31.89	89

Monitoring Point 10						
Groundwater quality monitoring, Monitoring point labelled GMW103 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	528	576.75	617
Aluminium	milligrams per litre	1	1	1.36	1.36	1.36
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.017	0.017	0.017
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	102	124	134
Chloride	milligrams per litre	4	4	74	149.25	232
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	0.002	0.002	0.002
Conductivity	microsiemens per centimeter	4	4	1370	1492.5	1740
Copper	milligrams per litre	1	1	0.006	0.006	0.006
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	42	45	46
Manganese	micrograms per litre	1	1	0.133	0.133	0.133
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	<0.01	0.01	0.02
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	7.1	7.275	7.7
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	<1	1.75	6
Sodium	milligrams per litre	4	4	144	153.75	166
Standing Water Level	meters	4	4	5.18	6.555	7.65
Sulfate	milligrams per litre	4	4	62	75.5	100
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	761	864.75	920
Total organic carbon	milligrams per litre	4	4	1	3	5
Total petroleum hydrocarbons	milligrams per litre	1	1	<100	<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 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	144	222.25	325
Aluminium	milligrams per litre	1	4	2.50	11.3225	20.9
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	4	0.011	0.036	0.060
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	34	41.75	56
Chloride	milligrams per litre	4	4	80	109.5	130
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	4	0.002	0.0068	0.012
Cobalt	milligrams per litre	1	4	0.002	0.0088	0.016
Conductivity	microsiemens per centimeter	4	4	721	774.5	829
Copper	milligrams per litre	1	4	0.011	0.0213	0.032
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	0.002	0.0075	0.013
Magnesium	milligrams per litre	4	4	22	24.25	29
Manganese	micrograms per litre	1	4	0.254	0.9275	2.03
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	<0.01	0.0125	0.02
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.7	7.1	7.6
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	<1	0.25	1
Sodium	milligrams per litre	4	4	74	87.5	107
Standing Water Level	meters	4	4	6.07	6.5025	7.05
Sulfate	milligrams per litre	4	4	33	36.25	40
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	370	459	608
Total organic carbon	milligrams per litre	4	4	4	4.25	5
Total petroleum hydrocarbons	milligrams per litre	1	1	<100	<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	0.015	0.035	0.061

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	44.25	64
Aluminium	milligrams per litre	1	1	7.36	7.36	7.36
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.024	0.024	0.024
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	5	8	11
Chloride	milligrams per litre	4	4	32	41.25	54
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	200	241.25	302
Copper	milligrams per litre	1	1	0.013	0.013	0.013
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.2	0.2	0.2
Lead	milligrams per litre	1	1	0.004	0.004	0.004
Magnesium	milligrams per litre	4	4	2	3.5	5
Manganese	micrograms per litre	1	1	0.141	0.141	0.141
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	1.17	1.17	1.17
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	<0.01	0.01	0.02
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	5.7	5.9	6.0
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	<1	<1	<1
Sodium	milligrams per litre	4	4	32	36.25	41
Standing Water Level	meters	4	4	8.68	9.735	10.8
Sulfate	milligrams per litre	4	4	12	13.25	15
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	182	227	286
Total organic carbon	milligrams per litre	4	4	2	2.5	4
Total petroleum hydrocarbons	milligrams per litre	1	1	<100	<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	0.019	0.019	0.019

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
Alkalinity (as calcium carbonate)	milligrams per litre	4	1	929	929	929
Aluminium	milligrams per litre	1	Dry	Dry	Dry	Dry
Arsenic	milligrams per litre	1	Dry	Dry	Dry	Dry
Barium	milligrams per litre	1	Dry	Dry	Dry	Dry
Benzene	milligrams per litre	1	Dry	Dry	Dry	Dry
Cadmium	milligrams per litre	1	Dry	Dry	Dry	Dry
Calcium	milligrams per litre	4	1	168	168	168
Chloride	milligrams per litre	4	1	1230	1230	1230
Chromium (hexavalent)	milligrams per litre	1	Dry	Dry	Dry	Dry
Chromium (total)	milligrams per litre	1	Dry	Dry	Dry	Dry
Cobalt	milligrams per litre	1	Dry	Dry	Dry	Dry
Conductivity	microsiemens per centimeter	4	1	6390	6390	6390
Copper	milligrams per litre	1	Dry	Dry	Dry	Dry
Ethyl benzene	micrograms per litre	1	Dry	Dry	Dry	Dry
Fluoride	milligrams per litre	1	Dry	Dry	Dry	Dry
Lead	milligrams per litre	1	Dry	Dry	Dry	Dry
Magnesium	milligrams per litre	4	1	127	127	127
Manganese	micrograms per litre	1	Dry	Dry	Dry	Dry
Mercury	milligrams per litre	1	Dry	Dry	Dry	Dry
Nitrate	milligrams per litre	1	Dry	Dry	Dry	Dry
Nitrite	milligrams per litre	1	Dry	Dry	Dry	Dry
Nitrogen (ammonia)	milligrams per litre	4	Dry	Dry	Dry	Dry
Organochlorine pesticides	milligrams per litre	1	Dry	Dry	Dry	Dry
Organophosphate pesticides	milligrams per litre	1	Dry	Dry	Dry	Dry
pH	pH	4	1	6.8	6.8	6.8
Polycyclic aromatic hydrocarbons	milligrams per litre	1	Dry	Dry	Dry	Dry
Potassium	milligrams per litre	4	1	2	2	2
Sodium	milligrams per litre	4	1	1030	1030	1030
Standing Water Level	meters	4	1	8.22	8.22	8.22
Sulfate	milligrams per litre	4	1	757	757	757
Toluene	milligrams per litre	1	Dry	Dry	Dry	Dry
Total dissolved solids	milligrams per litre	4	1	3810	3810	3810
Total organic carbon	milligrams per litre	4	1	19	19	19
Total petroleum hydrocarbons	milligrams per litre	1	Dry	Dry	Dry	Dry
Total Phenolics	milligrams per litre	1	Dry	Dry	Dry	Dry
Xylene	milligrams per litre	1	Dry	Dry	Dry	Dry
Zinc	milligrams per kilogram	1	Dry	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	212	283.25	406
Aluminium	milligrams per litre	1	1	0.43	0.43	0.43
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.264	0.264	0.264
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	26	46	80
Chloride	milligrams per litre	4	4	29	205.5	524
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	0.008	0.008	0.008
Conductivity	microsiemens per centimeter	4	4	474	1048	2100
Copper	milligrams per litre	1	1	<0.001	<0.001	<0.001
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	12	31.75	72
Manganese	micrograms per litre	1	1	1.3	1.3	1.3
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	0.0925	0.12
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.6	6.875	7.1
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	2	2.25	3
Sodium	milligrams per litre	4	4	64	153.5	318
Standing Water Level	meters	4	4	2	2.14	2.25
Sulfate	milligrams per litre	4	4	6	54.5	144
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	266	657	1350
Total organic carbon	milligrams per litre	4	4	<1	4.5	7
Total petroleum hydrocarbons	milligrams per litre	1	1	<100	<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	<0.005	<0.005	<0.005

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	418.00	470	531
Aluminium	milligrams per litre	1	1	0.38	0.38	0.38
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.08	0.084	0.084
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	130.00	142.25	165
Chloride	milligrams per litre	4	4	608.00	676.75	747
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	0.00	0.004	0.004
Conductivity	microsiemens per centimeter	4	4	2550.00	2755	3080
Copper	milligrams per litre	1	1	<0.001	<0.001	<0.001
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.50	0.5	0.5
Lead	milligrams per litre	1	1	<0.001	<0.001	<0.001
Magnesium	milligrams per litre	4	4	82.00	86.5	92
Manganese	micrograms per litre	1	1	1.61	1.61	1.61
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	0.20	0.36	0.51
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.40	6.725	6.9
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	3.00	3.75	4
Sodium	milligrams per litre	4	4	324.00	357	409
Standing Water Level	meters	4	4	1.48	1.61	1.73
Sulfate	milligrams per litre	4	4	147.00	172.75	196
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	1450.00	1615	1750
Total organic carbon	milligrams per litre	4	4	3.00	5.25	8
Total petroleum hydrocarbons	milligrams per litre	1	1	<100	<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	0.016	0.016	0.016

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	217	559.75	1030
Aluminium	milligrams per litre	1	4	0.85	3.42	8.35
Arsenic	milligrams per litre	1	1	0.002	0.00	0.002
Barium	milligrams per litre	1	4	0.13	0.20	0.298
Benzene	milligrams per litre	1	1	<1	<1	<1
Cadmium	milligrams per litre	1	4	<0.0001	0.00	0.0004
Calcium	milligrams per litre	4	4	63	168.25	319
Chloride	milligrams per litre	4	4	138	191.50	261
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	4	0.001	0.00	0.009
Cobalt	milligrams per litre	1	4	0.022	0.03	0.03
Conductivity	microsiemens per centimeter	4	4	936	1788.75	2960
Copper	milligrams per litre	1	4	0.006	0.02	0.04
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.1	0.10	0.1
Lead	milligrams per litre	1	4	0.003	0.01	0.027
Magnesium	milligrams per litre	4	4	39	69.00	104
Manganese	micrograms per litre	1	4	3.1	8.86	16.3
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	0.37	0.57	0.75
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.2	6.60	6.9
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	1	2.00	3
Sodium	milligrams per litre	4	4	79	152.00	233
Standing Water Level	meters	4	4	3.11	3.25	3.42
Sulfate	milligrams per litre	4	4	97	249.50	461
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	519	1113.75	1940
Total organic carbon	milligrams per litre	4	4	6	30.25	73
Total petroleum hydrocarbons	milligrams per litre	1	1	<100	<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	0.024	0.06	0.12

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	643	654.75	681
Aluminium	milligrams per litre	1	1	1.26	1.26	1.26
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.006	0.01	0.006
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	168	189.75	205
Chloride	milligrams per litre	4	4	892	909.25	924
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.001	0.00	0.001
Cobalt	milligrams per litre	1	1	<0.001	<0.001	<0.001
Conductivity	microsiemens per centimeter	4	4	3560	3812.50	4110
Copper	milligrams per litre	1	1	0.002	0.00	0.002
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.5	0.50	0.5
Lead	milligrams per litre	1	1	<0.001	<0.001	<0.001
Magnesium	milligrams per litre	4	4	132	155.00	168
Manganese	micrograms per litre	1	1	0.057	0.06	0.057
Mercury	milligrams per litre	1	1	<0.0001	<0.0001	<0.0001
Nitrate	milligrams per litre	1	1	3.98	3.98	3.98
Nitrite	milligrams per litre	1	1	<0.01	<0.01	<0.01
Nitrogen (ammonia)	milligrams per litre	4	4	<0.01	0.01	0.04
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.4	6.63	6.9
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	1	1.50	2
Sodium	milligrams per litre	4	4	456	478.50	519
Standing Water Level	meters	4	4	3.58	3.71	3.8
Sulfate	milligrams per litre	4	4	306	338.25	365
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	2380	2507.50	2750
Total organic carbon	milligrams per litre	4	4	<1	2.50	6
Total petroleum hydrocarbons	milligrams per litre	1	1	<100	<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	0.006	0.01	0.006

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	566	688	761.00
Aluminium	milligrams per litre	1	1	2.97	2.97	2.97
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.048	0.048	0.05
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	133	150.25	164.00
Chloride	milligrams per litre	4	4	886	916.75	972.00
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.002	0.002	0.00
Cobalt	milligrams per litre	1	1	0.002	0.002	0.00
Conductivity	microsiemens per centimeter	4	4	3840	4092.5	4350.00
Copper	milligrams per litre	1	1	0.005	0.005	0.01
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.5	0.5	0.50
Lead	milligrams per litre	1	1	0.003	0.003	0.00
Magnesium	milligrams per litre	4	4	128	139.5	149.00
Manganese	micrograms per litre	1	1	1.21	1.21	1.21
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	0.03	0.0875	0.16
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.6	6.875	7.10
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	2	2	2.00
Sodium	milligrams per litre	4	4	573	601.75	662.00
Standing Water Level	meters	4	4	5.98	6.1	6.24
Sulfate	milligrams per litre	4	4	354	375.5	409.00
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	2430	2550	2830.00
Total organic carbon	milligrams per litre	4	4	2	6.75	10.00
Total petroleum hydrocarbons	milligrams per litre	1	12	<100	<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	0.02

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 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	210	232.5	241.00
Aluminium	milligrams per litre	1	1	0.06	0.06	0.06
Arsenic	milligrams per litre	1	1	<0.001	<0.001	<0.001
Barium	milligrams per litre	1	1	0.149	0.149	0.15
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	86	104.5	115.00
Chloride	milligrams per litre	4	4	539	550.5	559.00
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	0.002	0.002	0.00
Conductivity	microsiemens per centimeter	4	4	1800	1910	2030.00
Copper	milligrams per litre	1	1	<0.001	<0.001	<0.001
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.4	0.4	0.40
Lead	milligrams per litre	1	1	<0.001	<0.001	<0.001
Magnesium	milligrams per litre	4	4	52	56	62.00
Manganese	micrograms per litre	1	1	0.76	0.76	0.76
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	0.06	0.0975	0.12
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.6	6.8	7.00
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	1	1.25	2.00
Sodium	milligrams per litre	4	4	192	200	218.00
Standing Water Level	meters	4	4	2.62	2.77	2.94
Sulfate	milligrams per litre	4	4	24	24.25	25.00
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	1130	1287.5	1610.00
Total organic carbon	milligrams per litre	4	4	<1	0.5	2.00
Total petroleum hydrocarbons	milligrams per litre	1	12	<100	<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	<0.005	<0.005	<0.005

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	240	410.25	606.00
Aluminium	milligrams per litre	1	1	0.47	0.47	0.47
Arsenic	milligrams per litre	1	1	0.002	0.002	0.00
Barium	milligrams per litre	1	1	0.084	0.084	0.08
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	25	57.25	83.00
Chloride	milligrams per litre	4	4	155	399.75	621.00
Chromium (hexavalent)	milligrams per litre	1	1	<0.01	<0.01	<0.01
Chromium (total)	milligrams per litre	1	1	0.001	0.001	0.00
Cobalt	milligrams per litre	1	1	0.007	0.007	0.01
Conductivity	microsiemens per centimeter	4	4	881	1847.75	2750.00
Copper	milligrams per litre	1	1	0.003	0.003	0.00
Ethyl benzene	micrograms per litre	1	1	<2	<2	<2
Fluoride	milligrams per litre	1	1	0.6	0.6	0.60
Lead	milligrams per litre	1	1	0.002	0.002	0.00
Magnesium	milligrams per litre	4	4	16	45.25	75.00
Manganese	micrograms per litre	1	1	1.31	1.31	1.31
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	0.09	0.2925	0.45
Organochlorine pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
Organophosphate pesticides	milligrams per litre	1	1	<0.5	<2.0	<2.0
pH	pH	4	4	6.6	6.825	7.00
Polycyclic aromatic hydrocarbons	milligrams per litre	1	1	<0.5	<0.5	<0.5
Potassium	milligrams per litre	4	4	2	2	2.00
Sodium	milligrams per litre	4	4	158	291.75	421.00
Standing Water Level	meters	4	4	1.08	1.4225	2.30
Sulfate	milligrams per litre	4	4	11	37.25	51.00
Toluene	milligrams per litre	1	1	<2	<2	<2
Total dissolved solids	milligrams per litre	4	4	452	1120.5	1630.00
Total organic carbon	milligrams per litre	4	4	6	13.5	17.00
Total petroleum hydrocarbons	milligrams per litre	1	12	<100	<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 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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	8574	<0.00001	0.001682	0.4

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	<0.1	<0.1	<0.1

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	36	36	46	85.5833	162.00
Ammonia	milligrams per litre	36	36	0.04	0.4972	1.79
Calcium	milligrams per litre	36	36	11	21.4167	37.00
Chloride	milligrams per litre	36	36	21	39.5278	79.00
Conductivity	microsiemens per centimeter	36	36	194	336.6944	630.00
Dissolved Oxygen	milligrams per litre	36	36	5.64	9.7394	11.50
Filterable Iron	milligrams per litre	36	36	<0.05	0.0961	0.24
Fluoride	milligrams per litre	36	36	<0.1	0.0861	0.20
Magnesium	milligrams per litre	36	36	5	10.1667	16.00
Nitrate	milligrams per litre	36	36	0.03	0.4272	2.39
pH	pH	36	36	6.7	7.4444	7.80
Potassium	milligrams per litre	36	36	2	3.9444	11.00
Sodium	milligrams per litre	36	36	19	29.2222	59.00
Sulfate	milligrams per litre	36	36	7	16.6667	25.00
Temperature	milligrams per litre	36	36	9.3	14.5611	26.70
Total Organic Carbon	milligrams per litre	36	36	3	5.2222	13.00
Total Phenolics	milligrams per litre	36	36	<0.05	<0.05	<0.05
Total suspended solids	milligrams per litre	36	36	<5	30.75	487.00

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	36	36	26	85.9167	164.00
Ammonia	milligrams per litre	36	36	<0.01	0.0164	0.08
Calcium	milligrams per litre	36	36	8	25.0556	48.00
Chloride	milligrams per litre	36	36	14	41.7222	64.00
Conductivity	microsiemens per centimeter	36	36	119	349.75	566.00
Dissolved Oxygen	milligrams per litre	36	36	7.91	10.9631	13.60
Filterable Iron	milligrams per litre	36	36	<0.05	0.0569	0.36
Fluoride	milligrams per litre	36	36	<0.1	0.0833	0.20
Magnesium	milligrams per litre	36	36	4	11.4722	17.00
Nitrate	milligrams per litre	36	36	<0.01	0.2239	0.61
pH	pH	36	36	7	7.6306	8.50
Potassium	milligrams per litre	36	36	2	2.6667	5.00
Sodium	milligrams per litre	36	36	11	27.2778	41.00
Sulfate	milligrams per litre	36	36	1	21.25	35.00
Temperature	milligrams per litre	36	36	9.1	42.8528	1040.00
Total Organic Carbon	milligrams per litre	36	36	2	3.9444	10.00
Total Phenolics	milligrams per litre	36	36	<0.05	<0.05	<0.05
Total suspended solids	milligrams per litre	36	36	<5	42.1111	394.00

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	894	<0.00001	0.000403	0.00283

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	2	1100	1160	1220.00
Aluminium	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Arsenic	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Barium	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Benzene	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Cadmium	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Calcium	milligrams per litre	4	2	295	308.5	322.00
Chloride	milligrams per litre	4	2	1130	1130	1130.00
Chromium (hexavalent)	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Chromium (total)	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Cobalt	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Conductivity	microsiemens per centimeter	4	2	5090	5135	5180.00
Copper	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Ethyl benzene	micrograms per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Fluoride	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Lead	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Magnesium	milligrams per litre	4	2	172	183.5	195.00
Manganese	micrograms per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Mercury	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Nitrate	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Nitrite	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Nitrogen (ammonia)	milligrams per litre	4	2	0.16	0.175	0.19
Organochlorine pesticides	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Organophosphate pesticides	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
pH	pH	4	2	6.4	6.7	7.00
Polycyclic aromatic hydrocarbons	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Potassium	milligrams per litre	4	2	8	9	10.00
Sodium	milligrams per litre	4	2	551	592	633.00
Standing Water Level	meters	4	2	4	4.06	4.12
Sulfate	milligrams per litre	4	2	136	143	150.00
Toluene	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Total dissolved solids	milligrams per litre	4	2	3030	3080	3130.00
Total organic carbon	milligrams per litre	4	2	9	9.5	10.00
Total petroleum hydrocarbons	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Total Phenolics	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Xylene	milligrams per litre	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			
Zinc	milligrams per kilogram	1	* Bore GABH02 damaged and no annual samples taken 2/2/2023			

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	3	115	121	132.00
Aluminium	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Arsenic	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2024			
Barium	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2025			
Benzene	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2026			
Cadmium	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2027			
Calcium	milligrams per litre	4	3	21	25.6667	32.00
Chloride	milligrams per litre	4	3	12	15.6667	19.00
Chromium (hexavalent)	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Chromium (total)	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Cobalt	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Conductivity	microsiemens per centimeter	4	3	267	299	326.00
Copper	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Ethyl benzene	micrograms per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Fluoride	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Lead	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Magnesium	milligrams per litre	4	3	6	6.6667	8.00
Manganese	micrograms per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Mercury	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Nitrate	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Nitrite	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Nitrogen (ammonia)	milligrams per litre	4	3	0.01	0.0167	0.02
Organochlorine pesticides	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Organophosphate pesticides	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
pH	pH	4	3	6.5	6.5667	6.70
Polycyclic aromatic hydrocarbons	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Potassium	milligrams per litre	4	3	<1	<1	<1
Sodium	milligrams per litre	4	3	20	22.3333	24.00
Standing Water Level	meters	4	3	5.34	6.72	7.42
Sulfate	milligrams per litre	4	3	10	13	15.00
Toluene	milligrams per litre	1				
Total dissolved solids	milligrams per litre	4	3	136	208.6667	252.00
Total organic carbon	milligrams per litre	4	3	3	3.3333	4.00
Total petroleum hydrocarbons	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Total Phenolics	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Xylene	milligrams per litre	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			
Zinc	milligrams per kilogram	1	* Bore GMW102 dry and no annual samples taken 2/2/2023			