


Facility Information Summary	
AER Reporting Year	2016
Licence Register Number	W0121-02
Name of site	Murphy Environmental Hollywood
Site Location	Hollywood Great, Nag's Head, Naul, Co. Dublin
NACE Code	3821
Class/Classes of Activity	As W0129-02: Disposal Classes 1, 5, 13; Recovery Classes 3, 4, 13
National Grid Reference (6E, 6 N)	E315723 N258073
A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.	<p>The principal activity carried out on site is the deposition of inert waste into engineered landfill cells. Only inert waste is accepted, and is subject to strict Waste Acceptance Procedures as follows: (i) Level 1 Basic Characterisation Testing, (ii) Level 2 "1 in 100" Compliance Testing , and (iii) Level 3 On-Site Verification Testing.</p> <p>Tonnage recieved in 2016 was approx. 2.5 times higher than 2015. Input tonnage to the site continues to steadily increase as a result of increased construction/development activity nationally.</p> <p>The facility maintains an active Environmental Management System. No significant infrastructure/development works were undertaken during the reporting year.</p> <p>In relation to environmental monitoring during the reporting year, there were a number of breaches of trigger levels, as detailed in the 'Complaints-Incidents' tab - all were reported as 'minor incidents' to the EPA. No upward trends in monitoring results have been noted.</p>

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

 Environmental Consultant (or nominated, suitably qualified and experienced deputy)	16.02.17 Date
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AIR-summary template Lic No: W0121-02 Year 2016

Answer all questions and complete all tables where relevant

Additional information

1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

SELECT	Ambient dust monitoring was conducted at 4 monitoring locations twice during the reporting year - there were no breaches of the dust deposition ELV.
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Periodic/Non-Continuous Monitoring

2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below

SELECT	
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3 Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? [Basic air monitoring checklist](#) [AGN2](#)

SELECT	
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Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		

Note 1: Volumetric flow shall be included as a reportable parameter

Continuous Monitoring

4 Does your site carry out continuous air emissions monitoring?
If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)

SELECT	
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5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below

SELECT	
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6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?

SELECT	
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7

Did your site experience any abatement system bypasses? If yes please detail them in table A3 below

SELECT

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
	SELECT			SELECT	SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table

[Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

SELECT

Table A4: Solvent Management Plan Summary	Solvent regulations	Please refer to linked solvent regulations to complete table 5 and 6
Total VOC Emission limit value		

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision thereof	Compliance
					SELECT
					SELECT

Table A5: Solvent Mass Balance summary								
	(I) Inputs (kg)	(O) Outputs (kg)						
Solvent	(I) Inputs (kg)	Organic solvent emission in waste	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g.	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)

Lic No:

W0121-02

Year

2016

Additional information

1 Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you **do not have** licensed emissions you **only** need to complete table W1 and or W2 for storm water analysis and visual inspections

Yes

There are 7 No. licensed Surface Water Discharge points: SWD-1 to SWD-7. SWD2 to SWD7 were previously surface water discharge points from surface water pumping associated with quarrying operations. The water pumping activities have been suspended; therefore any water/flow now observed at these locations is sourced from surface water run-off from non-landfill areas. The norm is that these locations are dry; however this is verified during each surface water sampling event.

2 Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising **only any evidence of contamination noted during visual inspections**

Yes

Visual inspections of surface water discharges and watercourses are carried out during weekly site inspection at the facility. No evidence of contamination has been recorded at these points.

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Comments
SW-1	upstream	SELECT	Ammonia (as N)	27/04/2016 06/12/2016	N/A	N/A	0.2	mg/l NH4-N	yes	
SW-1	upstream	SELECT	Calcium	27/04/2016 06/12/2016	N/A	N/A	110.3	mg/L	yes	
SW-1	upstream	SELECT	COD	27/04/2016 06/12/2016	N/A	N/A	7	mg/L	yes	
SW-1	upstream	SELECT	Chloride	27/04/2016 06/12/2016	N/A	N/A	34.5	mg/L	yes	
SW-1	upstream	SELECT	Conductivity	27/04/2016 06/12/2016	N/A	N/A	0.7	µS/cm@25oC	yes	
SW-1	upstream	SELECT	Dissolved Oxygen	27/04/2016 06/12/2016	N/A	N/A	8.5	mg/L	yes	
SW-1	upstream	SELECT	Magnesium	27/04/2016 06/12/2016	N/A	N/A	14	mg/L	yes	
SW-1	upstream	SELECT	Manganese (as Mn)	27/04/2016 06/12/2016	N/A	N/A	2.274	mg/L	yes	
SW-1	upstream	SELECT	Ortho-phosphate (as P)	27/04/2016 06/12/2016	N/A	N/A	0.07	mg/L	yes	
SW-1	upstream	SELECT	Phosphate	27/04/2016 06/12/2016	N/A	N/A	0.12	mg/L	yes	
SW-1	upstream	SELECT	pH	27/04/2016 06/12/2016	N/A	N/A	8.1	pH units	yes	
SW-1	upstream	SELECT	Sodium	27/04/2016 06/12/2016	N/A	N/A	17.2	mg/L	yes	
SW-1	upstream	SELECT	Sulphate	27/04/2016 06/12/2016	N/A	N/A	85.3	mg/L	yes	
SW-1	upstream	SELECT	Temperature	27/04/2016 06/12/2016	N/A	N/A	9	degrees C	yes	
SW-1	upstream	SELECT	Total Alkalinity	27/04/2016 06/12/2016	N/A	N/A	224	mg/L	yes	
SW-1	upstream	SELECT	Suspended Solids	27/04/2016 06/12/2016	N/A	N/A	35	mg/L	yes	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)				Lic No:	W0121-02	Year	2016			
SW-2	downstream	SELECT	Ammonia (as N)	27/04/2016 06/12/2016	N/A	N/A	0.035	mg/l NH4-N	yes	
SW-2	downstream	SELECT	Calcium	27/04/2016 06/12/2016	N/A	N/A	144.6	mg/L	yes	
SW-2	downstream	SELECT	COD	27/04/2016 06/12/2016	N/A	N/A	9	mg/L	yes	
SW-2	downstream	SELECT	Chloride	27/04/2016 06/12/2016	el in licence or any	N/A	33.05	mg/L	yes	
SW-2	downstream	SELECT	Conductivity	27/04/2016 06/12/2016	N/A	N/A	0.8355	mg/L	yes	
SW-2	downstream	SELECT	Dissolved Oxygen	27/04/2016 06/12/2016	N/A	N/A	10	mg/L	yes	
SW-2	downstream	SELECT	Magnesium	27/04/2016 06/12/2016	N/A	N/A	11.2	mg/L	yes	
SW-2	downstream	SELECT	Manganese (as Mn)	27/04/2016 06/12/2016	N/A	N/A	0.02	mg/L	yes	
SW-2	downstream	SELECT	Ortho-phosphate (as P)	27/04/2016 06/12/2016	N/A	N/A	0.1	mg/L	yes	
SW-2	downstream	SELECT	Phosphate	27/04/2016 06/12/2016	N/A	N/A	0.106	mg/L	yes	
SW-2	downstream	SELECT	pH	27/04/2016 06/12/2016	N/A	N/A	8.35	mg/L	yes	
SW-2	downstream	SELECT	Sodium	27/04/2016 06/12/2016	N/A	N/A	16.3	mg/L	yes	
SW-2	downstream	SELECT	Sulphate	27/04/2016 06/12/2016	N/A	N/A	173.67	mg/L	yes	
SW-2	downstream	SELECT	Temperature	27/04/2016 06/12/2016	N/A	N/A	8.5	mg/L	yes	
SW-2	downstream	SELECT	Total Alkalinity	27/04/2016 06/12/2016	N/A	N/A	208	mg/L	yes	
SW-2	downstream	SELECT	Suspended Solids	27/04/2016 06/12/2016	N/A	N/A	196	mg/L	yes	
SWD-1	onsite	SELECT	Ammonia (as N)	27/04/2016 06/12/2016	N/A	N/A	0.03	mg/l NH4-N	yes	
SWD-1	onsite	SELECT	Calcium	27/04/2016 06/12/2016	N/A	N/A	101.6	mg/L	yes	
SWD-1	onsite	SELECT	COD	27/04/2016 06/12/2016	N/A	N/A	13	mg/L	yes	
SWD-1	onsite	SELECT	Chloride	27/04/2016 06/12/2016	N/A	N/A	33.8	mg/L	yes	
SWD-1	onsite	SELECT	Conductivity	27/04/2016 06/12/2016	N/A	N/A	0.68	mg/L	yes	
SWD-1	onsite	SELECT	Dissolved Oxygen	27/04/2016 06/12/2016	N/A	N/A	11	mg/L	yes	
SWD-1	onsite	SELECT	Magnesium	27/04/2016 06/12/2016	N/A	N/A	12.1	mg/L	yes	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)				Lic No:	W0121-02	Year	2016			
SWD-1	onsite	SELECT	Manganese (as Mn)	27/04/2016 06/12/2016	N/A	N/A	0.523	mg/L	yes	
SWD-1	onsite	SELECT	Ortho-phosphate (as P)	27/04/2016 06/12/2016	N/A	N/A	0.1	mg/L	yes	
SWD-1	onsite	SELECT	Phosphate	27/04/2016 06/12/2016	N/A	N/A	8	mg/L	yes	
SWD-1	onsite	SELECT	pH	27/04/2016 06/12/2016	N/A	N/A	0.55	mg/L	yes	
SWD-1	onsite	SELECT	Sodium	27/04/2016 06/12/2016	N/A	N/A	21.1	mg/L	yes	
SWD-1	onsite	SELECT	Sulphate	27/04/2016 06/12/2016	N/A	N/A	91.17	mg/L	yes	
SWD-1	onsite	SELECT	Temperature	27/04/2016 06/12/2016	N/A	N/A	10	mg/L	yes	
SWD-1	onsite	SELECT	Total Alkalinity	27/04/2016 06/12/2016	N/A	N/A	7.7	mg/L	yes	
SWD-1	onsite	SELECT	Suspended Solids	27/04/2016 06/12/2016	N/A	N/A	200	mg/L	yes	

*trigger values may be agreed by the Agency outside of licence conditions

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
		No Contamination	SELECT		
			SELECT		

Licensed Emissions to water and /or wastewater(sewer)-periodic monitoring (non-continuous)

3 Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below

Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box

4

[External/Internal Lab Quality checklist](#) [Assessment of results checklist](#)

SELECT Additional information

Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

Emission reference no:	Emission released to	Parameter/SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision therof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

Continuous monitoring

5 Does your site carry out continuous emissions to water/sewer monitoring?

If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

6 Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

SELECT Additional Information

SELECT

SELECT

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: W0121-02 Year 2016

8 Did abatement system bypass occur during the reporting year? If yes please complete table W5 below

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
	SELECT	SELECT		SELECT	SELECT	SELECT					
	SELECT	SELECT		SELECT	SELECT	SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

Bund testing

dropdown menu click to see options

Additional information

Bund testing is stipulated in W0129-02; however fuel is no longer stored in the diesel tanks in the banded area on site (the plant items which required diesel are no longer on site). Bund testing has, therefore, not been required (diesel tanks are empty). The only diesel currently stored on site is in the self-contained mobile fuel bowser which is stored in the garage building.

Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

- 1
 - 2 Please provide integrity testing frequency period
 - Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
 - 4 How many bunds are on site?
 - 5 How many of these bunds have been tested within the required test schedule?
 - 6 How many mobile bunds are on site?
 - 7 Are the mobile bunds included in the bund test schedule?
 - 8 How many of these mobile bunds have been tested within the required test schedule?
 - 9 How many sumps on site are included in the integrity test schedule?
 - 10 How many of these sumps are integrity tested within the test schedule?
- Please list any sump integrity failures in table B1**
- 11 Do all sumps and chambers have high level liquid alarms?
 - 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
 - 13 Is the Fire Water Retention Pond included in your integrity test programme?

SELECT	
SELECT	
SELECT	
SELECT	
SELECT	
SELECT	
SELECT	

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
	SELECT					SELECT			SELECT	SELECT		SELECT		
	SELECT					SELECT			SELECT	SELECT		SELECT		

* Capacity required should comply with 25% or 110% containment rule as detailed in your licence

Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BSS8007/EPA Guidance?

- 15 Are channels/transfer systems to remote containment systems tested?
- 16 Are channels/transfer systems compliant in both integrity and available volume?

Commentary

SELECT	
SELECT	
SELECT	

Pipeline/underground structure testing

- Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all
- 1 underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**
 - 2 Please provide integrity testing frequency period
- *please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

SELECT	
SELECT	

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT				SELECT

Please use commentary for additional details not answered by tables/ questions above

Groundwater/Soil monitoring template	Lic No: W0121-02	Year: 2016
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		Comments
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes
2	Are you required to carry out soil monitoring as part of your licence requirements?	no
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	no
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	N/A
7	Please specify the proposed time frame for the remediation strategy	N/A
8	Is there a licence condition to carry out/update ELRA for the site?	N/A
9	Has any type of risk assessment been carried out for the site?	N/A
10	Has a Conceptual Site Model been developed for the site?	N/A
11	Have potential receptors been identified on and off site?	N/A
12	Is there evidence that contamination is migrating offsite?	N/A

Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretation as an additional section in this AER

Groundwater is monitored on a quarterly basis and a quarterly report submitted to the Agency. Results were generally in conformance with relevant limit values and the EPA trigger levels set for the site. There were a number of breaches of trigger levels/ELVs reported to the Agency as minor incidents during the reporting year (detailed in 'Incidents' tab). Exceedances relative to trigger levels/ELVs are thought to be largely related to external sources, and not as a result of the operation of the subject facility.

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.05	0.04	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Arsenic	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Barium	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Calcium	Lab analysis	Quarterly	65.80	60.33	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Chloride	Lab analysis	Quarterly	20.20	18.17	mg/l	75	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Conductivity	Field analysis	Quarterly	0.53	0.47	mS/cm	1	DWS	No
02/03/2016	BH-5	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Dissolved Oxygen	Lab analysis	Quarterly	8.00	7.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Level, Water	Field analysis	Quarterly	112.91	105.76	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Manganese	Lab analysis	Quarterly	0.20	0.13	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	pH	Field analysis	Quarterly	9.50	7.80	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Phenols, Total	Lab analysis	Quarterly	0.10	0.04	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Manganese	Lab analysis	Quarterly	0.20	0.13	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	pH	Field analysis	Quarterly	9.50	7.80	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Phenols, Total	Lab analysis	Quarterly	0.10	0.04	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Potassium	Lab analysis	Quarterly	3.90	2.30	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template					Lic No:	W0121-02	Year	2016		
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Sodium	Lab analysis	Quarterly	53.70	47.07	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Sulphate	Lab analysis	Quarterly	59.10	54.03	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Temperature	Field analysis	Quarterly	18.20	11.73	oC	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Total Organic Carbon	Lab analysis	Quarterly	2.00	2.00	mg/l	50	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-5	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.40	0.33	mg/l	N/A	DWS	No
02/03/2016	BH-5	Boron	Lab analysis	Annually	0.02	0.02	mg/l	N/A	DWS	No
02/03/2016	BH-5	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No
02/03/2016	BH-5	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-5	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-5	Coliforms, Total	Lab analysis	Annually	4.00	4.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-5	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-5	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-5	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-5	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-5	Magnesium	Lab analysis	Annually	6.20	6.20	mg/l	N/A	DWS	No

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02/03/2016	BH-5	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-5	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No
02/03/2016	BH-5	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-5	Phosphorus, Total	Lab analysis	Annually	5.90	5.90	mg/l	N/A	DWS	No
02/03/2016	BH-5	Total Solids	Lab analysis	Annually	400.00	400.00	mg/l	N/A	DWS	No
02/03/2016	BH-5	Zinc	Lab analysis	Annually	0.13	0.13	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.30	0.20	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Arsenic	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Barium	Lab analysis	Quarterly	0.06	0.03	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Calcium	Lab analysis	Quarterly	100.50	69.17	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Chloride	Lab analysis	Quarterly	29.60	23.40	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Conductivity	Field analysis	Quarterly	0.76	0.62	mS/cm	1	DWS	No
02/03/2016	BH-6	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Dissolved Oxygen	Lab analysis	Quarterly	6.00	4.33	mg/l	N/A	DWS	No

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02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Level, Water	Field analysis	Quarterly	119.45	118.48	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Manganese	Lab analysis	Quarterly	0.27	0.18	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	pH	Field analysis	Quarterly	8.80	7.90	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Phenols, Total	Lab analysis	Quarterly	0.10	0.04	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Potassium	Lab analysis	Quarterly	6.40	5.63	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Sodium	Lab analysis	Quarterly	103.10	46.23	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Sulphate	Lab analysis	Quarterly	33.81	29.19	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Temperature	Field analysis	Quarterly	17.90	11.87	oC	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Total Organic Carbon	Lab analysis	Quarterly	2.00	1.67	mg/l	50	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-6	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.40	0.27	mg/l	N/A	DWS	No
02/03/2016	BH-6	Boron	Lab analysis	Annually	0.08	0.08	mg/l	N/A	DWS	No
02/03/2016	BH-6	Cadmium	Lab analysis	Annually	0.01	0.01	mg/l	0.004	DWS	No
02/03/2016	BH-6	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No

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02/03/2016	BH-6	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-6	Coliforms, Total	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-6	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-6	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-6	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-6	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-6	Magnesium	Lab analysis	Annually	17.70	17.70	mg/l	N/A	DWS	No
02/03/2016	BH-6	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-6	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No
02/03/2016	BH-6	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-6	Phosphorus, Total	Lab analysis	Annually	0.13	0.13	mg/l	N/A	DWS	No
02/03/2016	BH-6	Total Solids	Lab analysis	Annually	522.00	522.00	mg/l	N/A	DWS	No
02/03/2016	BH-6	Zinc	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16	BH-8A	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.03	0.03	mg/l NH4-N	N/A	DWS	No
06/12/16 02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Arsenic	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template					Lic No:	W0121-02	Year	2016		
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Barium	Lab analysis	Quarterly	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Calcium	Lab analysis	Quarterly	111.30	107.23	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Chloride	Lab analysis	Quarterly	37.50	35.75	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Conductivity	Field analysis	Quarterly	0.66	0.64	mS/cm	1	DWS	No
02/03/2016	BH-8A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Dissolved Oxygen	Lab analysis	Quarterly	9.00	7.75	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Level, Water	Field analysis	Quarterly	109.17	106.98	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Manganese	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	pH	Field analysis	Quarterly	7.60	7.38	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Phenols, Total	Lab analysis	Quarterly	0.10	0.06	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Potassium	Lab analysis	Quarterly	2.30	2.20	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Sodium	Lab analysis	Quarterly	12.40	11.68	mg/l	80	DWS	No

Groundwater/Soil monitoring template					Lic No:	W0121-02	Year	2016		
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Sulphate	Lab analysis	Quarterly	19.56	15.87	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Temperature	Field analysis	Quarterly	14.20	11.28	oC	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Total Organic Carbon	Lab analysis	Quarterly	2.00	2.00	mg/l	50	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-8A	Total Oxidized Nitrogen	Lab analysis	Quarterly	13.40	12.28	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No
02/03/2016	BH-8A	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-8A	Coliforms, Total	Lab analysis	Annually	4.00	4.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-8A	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-8A	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-8A	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Magnesium	Lab analysis	Annually	4.10	4.10	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/2016	BH-8A	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No
02/03/2016	BH-8A	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Phosphorus, Total	Lab analysis	Annually	0.83	0.83	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Total Solids	Lab analysis	Annually	827.00	827.00	mg/l	N/A	DWS	No
02/03/2016	BH-8A	Zinc	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.12	0.07	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Arsenic	Lab analysis	Quarterly	0.01	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Barium	Lab analysis	Quarterly	0.05	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Calcium	Lab analysis	Quarterly	109.90	107.48	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Chloride	Lab analysis	Quarterly	30.10	29.03	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Conductivity	Field analysis	Quarterly	0.64	0.62	mS/cm	1	DWS	No
02/03/2016	BH-9	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Dissolved Oxygen	Lab analysis	Quarterly	8.00	5.25	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Level, Water	Field analysis	Quarterly	109.09	106.89	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Manganese	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	pH	Field analysis	Quarterly	7.90	7.50	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Phenols, Total	Lab analysis	Quarterly	0.01	0.01	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Potassium	Lab analysis	Quarterly	0.70	0.70	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Sodium	Lab analysis	Quarterly	17.50	16.03	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Sulphate	Lab analysis	Quarterly	77.50	71.89	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Temperature	Field analysis	Quarterly	15.10	10.93	oC	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Total Organic Carbon	Lab analysis	Quarterly	4.00	2.50	mg/l	50	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-9	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.20	0.20	mg/l	N/A	DWS	No
02/03/2016	BH-9	Boron	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-9	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No
02/03/2016	BH-9	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-9	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/2016	BH-9	Coliforms, Total	Lab analysis	Annually	6.00	6.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-9	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-9	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-9	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-9	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-9	Magnesium	Lab analysis	Annually	5.40	5.40	mg/l	N/A	DWS	No
02/03/2016	BH-9	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-9	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No
02/03/2016	BH-9	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-9	Phosphorus, Total	Lab analysis	Annually	0.46	0.46	mg/l	N/A	DWS	No
02/03/2016	BH-9	Total Solids	Lab analysis	Annually	399.00	399.00	mg/l	N/A	DWS	No
02/03/2016	BH-9	Zinc	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.23	0.18	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Arsenic	Lab analysis	Quarterly	0.03	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Barium	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Calcium	Lab analysis	Quarterly	101.50	99.10	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Chloride	Lab analysis	Quarterly	24.80	24.05	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Conductivity	Field analysis	Quarterly	0.65	0.62	mS/cm	1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Dissolved Oxygen	Lab analysis	Quarterly	8.00	5.25	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Level, Water	Field analysis	Quarterly	98.67	98.56	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Manganese	Lab analysis	Quarterly	0.41	0.39	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	pH	Field analysis	Quarterly	7.70	7.30	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Phenols, Total	Lab analysis	Quarterly	0.10	0.06	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Potassium	Lab analysis	Quarterly	2.00	2.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Sodium	Lab analysis	Quarterly	17.00	16.30	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Sulphate	Lab analysis	Quarterly	13.31	11.68	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Temperature	Field analysis	Quarterly	15.10	10.95	oC	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Total Organic Carbon	Lab analysis	Quarterly	2.00	2.00	mg/l	50	DWS	Yes
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.30	0.23	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-11A	Boron	Lab analysis	Annually	0.02	0.02	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No
02/03/2016	BH-11A	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-11A	Coliforms, Total	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-11A	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-11A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Fluoride	Lab analysis	Annually	0.40	0.40	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-11A	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Magnesium	Lab analysis	Annually	12.50	12.50	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/2016	BH-11A	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Phosphorus, Total	Lab analysis	Annually	0.06	0.06	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Total Solids	Lab analysis	Annually	360.00	360.00	mg/l	N/A	DWS	No
02/03/2016	BH-11A	Zinc	Lab analysis	Annually	0.02	0.02	mg/l	N/A	DWS	No

where average indicates arithmetic mean

m measured concentration from all monitoring results produced during the reporting year

Downgradient Groundwater monitoring results

02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.12	0.08	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Arsenic	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Barium	Lab analysis	Quarterly	0.02	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Calcium	Lab analysis	Quarterly	102.90	73.70	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Chloride	Lab analysis	Quarterly	26.70	23.30	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Conductivity	Field analysis	Quarterly	0.63	0.60	mS/cm	1	DWS	No
02/03/2016	BH-4A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Dissolved Oxygen	Lab analysis	Quarterly	6.00	3.33	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Iron	Lab analysis	Quarterly	0.04	0.03	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Level, Water	Field analysis	Quarterly	93.77	93.60	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Manganese	Lab analysis	Quarterly	0.33	0.21	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	pH	Field analysis	Quarterly	7.90	7.50	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Phenols, Total	Lab analysis	Quarterly	0.10	0.04	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Potassium	Lab analysis	Quarterly	3.90	2.30	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Sodium	Lab analysis	Quarterly	111.30	46.97	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Sulphate	Lab analysis	Quarterly	61.40	40.60	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Temperature	Field analysis	Quarterly	12.20	9.65	oC	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Total Organic Carbon	Lab analysis	Quarterly	2.00	2.00	mg/l	50	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-4A	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.20	0.20	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Boron	Lab analysis	Annually	0.02	0.02	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No
02/03/2016	BH-4A	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/2016	BH-4A	Coliforms, Total	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-4A	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-4A	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-4A	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Magnesium	Lab analysis	Annually	8.80	8.80	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No
02/03/2016	BH-4A	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Phosphorus, Total	Lab analysis	Annually	4.91	4.91	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Total Solids	Lab analysis	Annually	682.00	682.00	mg/l	N/A	DWS	No
02/03/2016	BH-4A	Zinc	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.03	0.03	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Arsenic	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Barium	Lab analysis	Quarterly	0.01	0.01	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Calcium	Lab analysis	Quarterly	144.70	139.23	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Chloride	Lab analysis	Quarterly	58.40	53.68	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Conductivity	Field analysis	Quarterly	0.90	0.87	mS/cm	1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Dissolved Oxygen	Lab analysis	Quarterly	9.00	8.75	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Level, Water	Field analysis	Quarterly	102.73	101.37	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Manganese	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	pH	Field analysis	Quarterly	8.20	7.88	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Phenols, Total	Lab analysis	Quarterly	0.10	0.06	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Potassium	Lab analysis	Quarterly	2.60	2.50	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Sodium	Lab analysis	Quarterly	30.40	27.15	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Sulphate	Lab analysis	Quarterly	269.33	247.66	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Temperature	Field analysis	Quarterly	14.80	11.73	oC	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Total Organic Carbon	Lab analysis	Quarterly	2.00	2.00	mg/l	50	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-10A	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.50	0.33	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Boron	Lab analysis	Annually	0.02	0.02	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No
02/03/2016	BH-10A	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-10A	Coliforms, Total	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-10A	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-10A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-10A	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Magnesium	Lab analysis	Annually	10.10	10.10	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/2016	BH-10A	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Phosphorus, Total	Lab analysis	Annually	0.26	0.26	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Total Solids	Lab analysis	Annually	854.00	854.00	mg/l	N/A	DWS	No
02/03/2016	BH-10A	Zinc	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Ammoniacal Nitrogen	Lab analysis	Quarterly	1.95	0.51	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Arsenic	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Barium	Lab analysis	Quarterly	0.02	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Calcium	Lab analysis	Quarterly	95.30	43.53	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Chloride	Lab analysis	Quarterly	23.10	8.43	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Conductivity	Field analysis	Quarterly	0.75	0.33	mS/cm	1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Dissolved Oxygen	Lab analysis	Quarterly	7.00	5.75	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Iron	Lab analysis	Quarterly	0.06	0.03	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Level, Water	Field analysis	Quarterly	102.75	101.98	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Manganese	Lab analysis	Quarterly	0.29	0.07	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	pH	Field analysis	Quarterly	8.20	7.43	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Phenols, Total	Lab analysis	Quarterly	0.10	0.06	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Potassium	Lab analysis	Quarterly	3.10	2.60	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Sodium	Lab analysis	Quarterly	10.60	5.75	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Sulphate	Lab analysis	Quarterly	39.50	15.17	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Temperature	Field analysis	Quarterly	14.00	11.73	oC	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Total Organic Carbon	Lab analysis	Quarterly	5.00	2.75	mg/l	50	DWS	Yes
02/03/16 27/04/16 14/09/16 06/12/16	BH-12	Total Oxidized Nitrogen	Lab analysis	Quarterly	1.50	0.88	mg/l	N/A	DWS	No
02/03/2016	BH-12	Boron	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-12	Cadmium	Lab analysis	Annually	0.01	0.01	mg/l	0.004	DWS	No
02/03/2016	BH-12	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-12	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-12	Coliforms, Total	Lab analysis	Annually	6.00	6.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-12	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/2016	BH-12	Cyanide	Lab analysis	Annually	0.02	0.02	mg/l	N/A	DWS	No
02/03/2016	BH-12	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-12	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-12	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-12	Magnesium	Lab analysis	Annually	1.00	1.00	mg/l	N/A	DWS	No
02/03/2016	BH-12	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-12	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	No
02/03/2016	BH-12	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No
02/03/2016	BH-12	Phosphorus, Total	Lab analysis	Annually	0.41	0.41	mg/l	N/A	DWS	No
02/03/2016	BH-12	Total Solids	Lab analysis	Annually	402.00	402.00	mg/l	N/A	DWS	No
02/03/2016	BH-12	Zinc	Lab analysis	Annually	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.05	0.05	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Arsenic	Lab analysis	Quarterly	0.01	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Barium	Lab analysis	Quarterly	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Calcium	Lab analysis	Quarterly	64.60	52.28	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Chloride	Lab analysis	Quarterly	47.10	43.98	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Conductivity	Field analysis	Quarterly	0.48	0.40	mS/cm	1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Dissolved Oxygen	Lab analysis	Quarterly	10.00	10.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Level, Water	Field analysis	Quarterly	115.50	112.63	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Manganese	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	pH	Field analysis	Quarterly	8.30	7.43	pH	6<pH<9	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Phenols, Total	Lab analysis	Quarterly	0.10	0.06	mg/l	0.1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Potassium	Lab analysis	Quarterly	2.40	2.08	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Sodium	Lab analysis	Quarterly	19.10	18.55	mg/l	80	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Sulphate	Lab analysis	Quarterly	15.04	12.32	mg/l	150	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Temperature	Field analysis	Quarterly	15.80	10.75	oC	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Total Organic Carbon	Lab analysis	Quarterly	2.00	2.00	mg/l	50	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-13	Total Oxidized Nitrogen	Lab analysis	Quarterly	13.70	12.78	mg/l	N/A	DWS	No
02/03/2016	BH-13	Boron	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-13	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No
02/03/2016	BH-13	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-13	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-13	Coliforms, Total	Lab analysis	Annually	14.00	14.00	cfus/100ml	N/A	DWS	No
02/03/2016	BH-13	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No
02/03/2016	BH-13	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-13	Fluoride	Lab analysis	Annually	0.30	0.30	mg/l	N/A	DWS	No
02/03/2016	BH-13	Lead	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/2016	BH-13	List I and II Substances	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-13	Magnesium	Lab analysis	Annually	4.80	4.80	mg/l	N/A	DWS	No
02/03/2016	BH-13	Mercury	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No
02/03/2016	BH-13	Orthophosphates	Lab analysis	Annually	0.16	0.16	mg/l	N/A	DWS	No
02/03/2016	BH-13	PAHs (Total 17)	Lab analysis	Annually	0.10	0.10	mg/l	N/A	DWS	No

Groundwater/Soil monitoring template				Lic No:	W0121-02	Year	2016			
02/03/2016	BH-13	Phosphorus, Total	Lab analysis	Annually	3.08	3.08	mg/l	N/A	DWS	No
02/03/2016	BH-13	Total Solids	Lab analysis	Annually	2882.00	2882.00	mg/l	N/A	DWS	No
02/03/2016	BH-13	Zinc	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.05	0.04	mg/l NH4-N	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Arsenic	Lab analysis	Quarterly	0.00	0.00	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Barium	Lab analysis	Quarterly	0.05	0.03	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Calcium	Lab analysis	Quarterly	26.60	25.38	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Chloride	Lab analysis	Quarterly	35.60	32.65	mg/l	75	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Colour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Conductivity	Field analysis	Quarterly	0.28	0.25	mS/cm	1	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Dissolved Oxygen	Lab analysis	Quarterly	8.00	7.50	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Level, Water	Field analysis	Quarterly	100.47	99.77	mOD	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Manganese	Lab analysis	Quarterly	0.04	0.02	mg/l	N/A	DWS	No
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Odour	Field analysis	Quarterly	0.00	0.00	N/A	N/A	DWS	No

Groundwater/Soil monitoring template					Lic No:	W0121-02	Year	2016			
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	pH	Field analysis	Quarterly	7.30	6.68	pH	6<pH<9	DWS	No	
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Phenols, Total	Lab analysis	Quarterly	0.10	0.03	mg/l	0.1	DWS	No	
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Potassium	Lab analysis	Quarterly	5.10	3.48	mg/l	N/A	DWS	No	
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Sodium	Lab analysis	Quarterly	16.20	12.05	mg/l	80	DWS	No	
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Sulphate	Lab analysis	Quarterly	19.13	14.66	mg/l	150	DWS	No	
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Temperature	Field analysis	Quarterly	15.20	10.90	oC	N/A	DWS	No	
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Total Organic Carbon	Lab analysis	Quarterly	7.00	4.50	mg/l	50	DWS	Yes	
02/03/16 27/04/16 14/09/16 06/12/16	BH-14	Total Oxidized Nitrogen	Lab analysis	Quarterly	11.20	8.28	mg/l	N/A	DWS	No	
02/03/2016	BH-14	Boron	Lab analysis	Annually	0.04	0.04	mg/l	N/A	DWS	Yes	
02/03/2016	BH-14	Cadmium	Lab analysis	Annually	0.00	0.00	mg/l	0.004	DWS	No	
02/03/2016	BH-14	Chromium, Total	Lab analysis	Annually	0.00	0.00	mg/l	N/A	DWS	No	
02/03/2016	BH-14	Coliforms, Faecal	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No	
02/03/2016	BH-14	Coliforms, Total	Lab analysis	Annually	1.00	1.00	cfus/100ml	N/A	DWS	No	
02/03/2016	BH-14	Copper	Lab analysis	Annually	0.01	0.01	mg/l	0.5	DWS	No	
02/03/2016	BH-14	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	No	

Groundwater/Soil monitoring template	Lic No: W0121-02	Year: 2016
---------------------------------------------	------------------	------------

**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)

[Groundwater](#) [Drinking water](#)
[Surface water EQS](#) [regulations](#) [\(private supply\)](#) [Drinking water \(public supply\) standards](#) [Interim Guideline Values \(IGV\)](#)

Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Where additional detail is required please enter it here in 200 words or less

Environmental Liabilities template

Lic No:

W0121-02

Year

2016

[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

		Commentary	
1	ELRA initial agreement status	Submitted and agreed by EPA	Jan-17
2	ELRA review status	Review required and completed	ELRA reviewed in 2016
3	Amount of Financial Provision cover required as determined by the latest ELRA	€358,227.00	
4	Financial Provision for ELRA status	Submitted and not agreed by EPA;	
5	Financial Provision for ELRA - amount of cover	TBC	
6	Financial Provision for ELRA - type	bond	
7	Financial provision for ELRA expiry date	TBC	ELRA to be reviewed annually.
8	Closure plan initial agreement status	Closure plan submitted and agreed by EPA	
9	Closure plan review status	Review required and completed	CRAMP reviewed in 2016
10	Financial Provision for Closure status	Submitted and not agreed by EPA;	
11	Financial Provision for Closure - amount of cover	TBC	
12	Financial Provision for Closure - type	bond	
13	Financial provision for Closure expiry date	TBC	CRAMP reviewed annually.

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	W0121-02	Year	2016
-------------------------------------------------------------------------------------	--	---------	----------	------	------

Highlighted cells contain dropdown menu click to view		Additional Information	
1	Do you maintain an Environmental Management System (EMS) for the site. If yes, please detail in additional information	Yes	
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes	
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes	

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Groundwater protection	Ongoing monitoring and measurement - water	100	Monitoring completed	Individual	Improved Environmental Management Practices
Noise reduction	Ongoing monitoring and measurement - noise	100	Monitoring completed	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Ongoing monitoring and measurement - energy	100	Monitoring completed	Individual	Improved Environmental Management Practices
Reduction of emissions to Air	Ongoing monitoring and measurement - dust	100	Monitoring completed	Individual	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: W0121-02

Year

2016

1 Was noise monitoring a licence requirement for the AER period?

If yes please fill in table N1 noise summary below

Yes

2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?

Noise
Guidance
note NG4

Yes

3 Does your site have a noise reduction plan

No

4 When was the noise reduction plan last updated?

Enter date

5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

No

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is <u>site</u> compliant with noise limits (day/evening/night)?
12/05/2016	Day-time		N4	53	45	53	78.2	No	No	Occasional traffic, aircraft, birdsong, leaf rustle, distant motorway	Yes
12/05/2016	Day-time		N5	60	46	57	83	No	No		Yes
12/05/2016	Day-time		N6	54	45	54	77.6	No	No		Yes
12/05/2016	Day-time		N7	62	47	58	83.2	No	No		Yes
12/05/2016	Day-time		N8	65	49	60	87.3	No	No		Yes
12 -13/05/2016	Night-time		N4	47	38	48	73.4	No	No		Yes
12 -13/05/2016	Night-time		N5	48	41	48	77	No	No		Yes
12 -13/05/2016	Night-time		N6	47	41	49	74.1	No	No		Yes
12 -13/05/2016	Night-time		N7	50	40	47	80.8	No	No		Yes
12 -13/05/2016	Night-time		N8	54	42	46	83	No	No		Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

SELECT

** please explain the reason for not taking action/resolution of noise issues?

Any additional comments? (less than 200 words)

Resource Usage/Energy efficiency summary

Lic No:

W0121-02

Year

2016

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)					

Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
			SELECT					
			SELECT					
			SELECT					

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry) please complete the following information

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology					
Primary Fuel					
Thermal Efficiency					
Unit Date of Commission					
Total Starts for year					
Total Running Time					
Total Electricity Generated (GWH)					
House Load (GWH)					
KWH per Litre of Process Water					
KWH per Litre of Total Water used on Site					

Complaints and Incidents summary template Lic No: W0121-02 Year 2016

Complaints		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below		No

Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action < 20 words	Resolution status	Resolution date	Further information
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year							
Total new complaints received during reporting year							
Total complaints closed during reporting year							
Balance of complaints end of reporting year							

Incidents		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below		Yes

*For information on how to report and what constitutes an incident [What is an incident](#)

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
28/04/2016 22/06/2016 31/12/2016	Trigger level reached	BH-10A	1. Minor	No Uncontrolled release	Not related to site activities	Geological conditions in area	Normal activities	EPA EDEN	Recurring	None	None	Complete	28/04/2016 22/06/2016 31/12/2016	Medium
28/04/2016	Trigger level reached	BH-12	1. Minor	No Uncontrolled release	Not related to site activities	Sewage or Agriculture	Normal activities	EPA EDEN	New	None	None	Complete	28/04/2016	Medium
22/06/2016 31/12/2016	Breach of ELV	Licensed discharge point (SW-2)	1. Minor	No Uncontrolled release	Not related to site activities	Approx. 3km D.S. from MEHL. Likely agricultural or as a result of neighbouring commercial activities.	Normal activities	EPA EDEN	Recurring	None	None	Complete	22/06/2016 31/12/2016	Medium
22/06/2016	Trigger level reached	BH-6	1. Minor	No Uncontrolled release	Not related to site activities	Sewage or Agriculture	Normal activities	EPA EDEN	Recurring	None	None	Complete	22/06/2016	Medium
31/12/2016	Breach of ELV	Licensed discharge point (SW-1)	1. Minor	No Uncontrolled release	Not related to site activities	U.S. from MEHL. Likely agricultural source.	Normal activities	EPA EDEN	Recurring	None	None	Complete	31/12/2016	Medium

WASTE SUMMARY	Lic No: W0121-02	Year: 2016
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES	PRTR facility logon	dropdown list click to see options

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility? (waste generated within your boundaries is to be captured through PRTR reporting)

If yes please enter details in table 1 below

Additional Information	
Yes	

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

Yes	Loads which were subject to "1 in 100" Level 2 compliance testing but which were found to have chemical parameters above the WAC for the site were rejected and removed from the facility.
-----	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

No	
----	--

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWG code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWG code European Waste Catalogue EWG codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%) - only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
500,000	170101	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Mixture of concrete, bricks, tiles & ceramics	14,325.92	0	100%	Market Demand		D5- Specially engineered landfill	0	
500,000	170202	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Glass	288.02	128.24	55%	Market Demand		D5- Specially engineered landfill	0	
500,000	170504	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Soil & Stones	143,531.48	64,177.80	55%	Market Demand		D5- Specially engineered landfill	0	
500,000	190902	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Sludges from water clarification	1886.06	1062.02	44%	Market Demand		D5- Specially engineered landfill	0	
500,000	191205	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Glass	9.26	160.44	-1632%	Market Demand		D5- Specially engineered landfill	0	

SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite

N/A	
-----	--

5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site

N/A	
-----	--

6 Does your facility have relevant nuisance controls in place?

N/A	
-----	--

7 Do you have an odour management system in place for your facility? If no why?

N/A	
-----	--

8 Do you maintain a sludge register on site?

N/A	
-----	--

WASTE SUMMARY

Lic No:

W0121-02

Year

2016

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m.3)	Comments
Inert Waste	500,000	160,041	3,995,116	Void survey carried out in 2016, slight adjustment on 2015 remaining void.

Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
W0129-02 Cell 4B		2003 Ongoing	Yes	Private	Inert	Dependant on input and relevant planning requirements	No	No	No	30,650m2	30,650m3	0 (further areas of quarry to be developed as lined cells in line with phased restoration of the site).	Inert landfill liner in accordance with Landfill Directive 1999

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments
Yes	Yes	No landfill gas on site	Yes	Yes	Yes	Yes	Yes	

+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT	0 3600m2	n/a	n/a	Subsoil and topsoil	

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant?

SELECT

10 Is leachate released to surface water? If yes please complete leachate mass load information below

SELECT

Volume of leachate in reporting year(m.3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured & Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	



Environmental Protection Agency

| PRTR# : W0129 | Facility Name : Murphy Environmental Hollywood Limited | Filename : W0129_2016 PRTR.xls | Return Year : 2016 |

16/02/2017 09:28

[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1:19

REFERENCE YEAR	2016
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Murphy Environmental Hollywood Limited
Facility Name	Murphy Environmental Hollywood Limited
PRTR Identification Number	W0129
Licence Number	W0129-02

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Hollywood Great
Address 2	Nags Head
Address 3	The Naul
Address 4	
	Dublin
Country	Ireland
Coordinates of Location	-9.09708 52.6126
River Basin District	IEEA
NACE Code	3900
Main Economic Activity	Remediation activities and other waste management services
AER Returns Contact Name	Kerstie Flanagan
AER Returns Contact Email Address	kerstief@pateltonra.com
AER Returns Contact Position	Environmental Consultant
AER Returns Contact Telephone Number	018020527
AER Returns Contact Mobile Phone Number	0879718085
AER Returns Contact Fax Number	018020525
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	www.mehi.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(d)	Landfills
5(d)	Landfills
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption?	No
If applicable which activity class applies (as per Schedule 2 of the regulations)?	
Is the reduction scheme compliance route being used?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities)?	Yes
-----------------------------------------------------------------------------------------------------------	-----

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR#: W0129 | Facility Name : Murphy Environmental Hollywood Limited | Filename: W0129_2016 PRTR.xls | Return Year : 2016 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			Please enter all quantities in this section in KGs				
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	QUANTITY			
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		METHOD			Please enter all quantities in this section in KGs				
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	QUANTITY			
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

POLLUTANT		METHOD			Please enter all quantities in this section in KGs				
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	QUANTITY			
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:	Murphy Environmental Hollywood Limited				
Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Code	Designation or Description	Facility Total Capacity m3 per hour
	Total estimated methane generation (as per site model)	0.0			N/A
	Methane flared	0.0			0.0 (Total Flaring Capacity)
	Methane utilised in engine/s	0.0			0.0 (Total Utilising Capacity)
	Net methane emission (as reported in Section A above)	0.0			N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : W0129 | Facility Name : Murphy Environmental Hollywood Limited | Filename : W0129_2016 PRTR.xls | Return Year : 2016 |

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SECTION A - SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

RELEASES TO WATERS						Please enter all quantities in this section in KGs			
POLLUTANT		METHOD USED				QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B - REMAINING PRTR POLLUTANTS

RELEASES TO WATERS						Please enter all quantities in this section in KGs			
POLLUTANT		METHOD USED				QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C - REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS						Please enter all quantities in this section in KGs			
POLLUTANT		METHOD USED				QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0129 | Facility Name : Murphy Environmental Hollywood Limited | Filename : W0129_20

16/02/2017 09:28

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

[PRTR# : W0129 | Facility Name : Murphy Environmental Hollywood Limited | Filename : W0129_2016 PRTR.xls | Return Year : 2016]

16/02/2017 09:28

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0129 | Facility Name : Murphy Environmental Hollywood Limited | Filename : W0129_2016 PRTR.xls | Return Year : 2016 |

16/02/2017 09:28

Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						Non	Non		M/C/E	Method Used		
Within the Country	20 03 01	No	0.426	mixed municipal waste	D15	C	Volume Calculation	Offsite in Ireland	Panda,W0140-03	Beauparc,Navan,Co. Meath,0,Ireland	Beauparc,Navan,Co. Meath,0,Ireland	
Within the Country	20 03 01	No	0.337	mixed municipal waste	R3	C	Volume Calculation	Offsite in Ireland	Panda,W0140-03	Beauparc,Navan,Co. Meath,0,Ireland	Beauparc,Navan,Co. Meath,0,Ireland	

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)

[Link to Waste Guidance](#)