Facility Information	Summary		
AER Reporting Year	2013		
Licence Register Number	W0048-01		
Name of site		Marrak	esh Ltd.
Site Location	Kimurry South Landfill	, Kilmurry S	outh, Kilmacanogue, Bray, Co.
NACE Code		38	21
Class/Classes of Activity		D1, D15, R	3, R5, R13

C&D materials (e.g. Soil & Stones, Concrete, Bituminous Mixtures) are accepted at the facility for screening, segregation, sorting and grading and sold as product for re-use purposes.

During 2013, no material was landfilled at the facility. Any materials which were not sold from the facility are temporarily stored on site pending sale.

The facility continues to suffer from the collapse of the construction/demolition sector, with incoming tonnages significantly lower than a number of years ago.

There were no infrastructural or other significant changes during the reporting year.

53.1506, -6.13329

Annual monitoring was conducted for: noise, LF gas, dust, surface water and groundwater. Noise - compliant; LF gas -CH4 - compliant, reference limit value exceeded for CO2; dust - compliant; surface water - pH was marginally in exceedance of the Salmonid Water limit value in SW-2; groundwater - non-compliances for faecal and total coliforms in BH-3 and for total coliforms in PW-3.

Declaration:

water, noise.

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.

14/03/2014

Environmental Consultant, Patel Tonra Ltd.

National Grid Reference (6E, 6 N)

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 <u>listing all</u> exceedances of licence limits (where

applicable) and what they relate to e.g. air,

Date

(or nominated, suitably qualified and experienced deputy)

AIR-summary template	Lic No:	W0048-01	Year	2013
Answer all questions and complete all tables where relevant		Additional	information	
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		Dust deposition monitoring w monitoring locations in Sep-O the EPA Waste Licence limit va	ct 2013 - results were below	
Daviddia/Nan Cantinuous Manitanina				

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 3 Was all monitoring carried out in accordance with EPA guidance monitoring checklist? Checklist AGN2 SELECT SELECT

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

Emission	Parameter/ Substance	Frequency of	ELV in licence or any revision therof	Licence Compliance criteria		Compliant with	Method of analysis	Annual mass	Comments - reason for change in % mass load from previous year if applicable
		J						(1.6)	
	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

	AIR-summary t	template				Lic No:	W0048-01		Year	2013		
		Continuous N	lonitoring									
4	•	ry out continuous air emiss	· ·	ho non inod fiolds h	pelow in Table A2 and compare	SELECT						
	if yes please revie	•		•	below in Table A2 and compare							
5	it to its relevant Emission Limit Value (ELV) Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below					SELECT						
6	Do you have a proa	active service agreement fo	or each piece of conti	nuous monitoring e	quipment?	SELECT						
7	•	ite experience any abatem mary of average emi	them in table A3 below	SELECT								
	Emission reference no:	Parameter/ Substance		Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	_	Number of ELV exceedences in	Comments	
			CIV in licence or						downtime (hours)	current		

SELECT SELECT

SELECT

SELECT

SELECT

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

SELECT

SELECT SELECT

SELECT

SELECT

Table A3: Abatement system bypass reporting table

SELECT

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

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

any revision therof

^{**} 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

	AIR-summary t	template				Lic No:	W0048-01		Year	2013
	Solvent	use and manageme	nt on site							
8	Table A4: Solve	ent Management Pla		Solvent	s please fill out tables A4 and A5 Please refer to linked solven	t regulations to	1	No		
	Total VOC Emis	ssion limit value		<u>regulations</u>	complete table 5	and 6				
	Reporting year	Total solvent input on site (kg)	emissions to Air		Total Emission Limit Value (ELV) in licence or any revision therof	Compliance				
						SELECT				
						SELECT				
	Table A5:	Solvent Mass Baland	ce summary							1
		(I) Inputs (kg)			(0)	Outputs (kg)				
	Solvent	(I) Inputs (kg)		Solvents lost in water (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: W0048-01 Year 2013 Additional information Patel Tonra Ltd. conducted sampling of surface water on 18th September Does your site have licensed emissions direct to surface water or direct to sewer? If yes 2013. Samples were obtained from surface water monitoring point SW-2. please complete table W2 and W3 below for the current reporting year and answer SW-1 and SW-3 were dry at the time of sampling. Results were largely in further questions. If **you do not have** licenced emissions you <u>only</u> need to complete table compliance with reference limit values. pH was marginally in exceedance of the Salmonid Water limit value in SW-2, indicating slightly alkaline water W1 and or W2 for storm water analysis and visual inspections conditions. Was it a requirement of your licence to carry out visual inspections on any surface water 2 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 No requirement to complete Table W2 Table W1 Storm water monitoring ELV or trigger Location Licence Location Licenced Monitoring level in licence Unit of Compliant with elative to site PRTR Parameter Compliance Measured value Comments reference Parameter date or any revision measurement licence activities criteria thereof* SELECT *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 Date of Source of Reference inspection Description of contamination contamination Corrective action NOT APPLICABLE 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 NOT APPLICABLE comment section of Table W3 below FLECT Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring External /Internal Data Reported to the EPA? If no please detail what areas Lab Quality Assessment of SELECT require improvement in additional information box results checklist Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1		Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision therof ^{Note 2}	Licence Compliance criteria	Measured value		Compliant with licence		Procedural	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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No:	W0048-01		Year	2013				
Castings		•								
Continuous monitoring			Additional Information		1					
Does your site carry out continuous emissions to water/sewer monitoring?	No									
		•			•					
If yes please summarise your continuous monitoring data below in Table W4 and compare it to										
its relevant Emission Limit Value (ELV)										
Did continuous monitoring equipment experience downtime? If yes please record downti	me in				1					
table W4 below										
	SELECT		NOT APPLICABLE		ļ	1				
7 Do you have a proactive service contract for each piece of continuous monitoring equipment site?			NOT ADDUCAT							
Did abatement system bypass occur during the reporting year? If yes please complete tab	SELECT		NOT APPLICAE	BLE						
bid abatement system bypass occur during the reporting year? If yes please complete tab	SELECT		NOT APPLICAE	n.c						
Table W4: Summary of average emissions -continuous monitoring	SELECT		NOT APPLICAL	DLE		1				
Table W4: Summary of average emissions -continuous monitoring										
ELV or trigger				% change +/- from						
values in licence					Monitoring	Number of ELV				
Emission Emission or any revision Averag	ing Compliance	Units of	Annual Emission for current		Equipment	exceedences in				
reference no: released to Parameter/ Substance thereof Period	Criteria		reporting year (kg)	1	downtime (hours)		Comments			
	LECT SELECT	measurement SELECT	reporting year (kg)		downtime (nours)	reporting year	Comments			
	LECT SELECT	SELECT		 						
SELECT SELECT SE	SELECT SELECT	SELECT		ļ						

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

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant	Reason for	Corrective	Was a report	When was this report submitted?
			emissions	bypass	action*	submitted to the	
						EPA?	
NOT APPLICABLE						SELECT	

^{*}Measures taken or proposed to reduce or limit bypass frequency

Capacity required should comply with 25% or 10% containment rule as detailed in your kience Has integrity testing been carried out in accordance with licence requirements and are all structures tested in bunding and storage guidelines 5 fine with BS8007/EPA Guidance? 6 Are channels/transfer systems to remote containment systems tested? 7 Are channels/transfer systems compliant in both integrity and available volume? 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 withing the integrity test period as specified 2 Please provide integrity testing frequency period *please note integrity testing frequency period *please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence) Table B2: Summary details of pipeline/underground structures integrity test Does this structure have Structure ID Type system Material of construction: Secondary containment? Type integrity testing	W0048-01		Year	201	3			
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) 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) How many bunds are on site? How many of these bunds have been tested within the required test schedule? How many of these bunds have been tested within the required test schedule? How many of these mobile bunds have been tested within the required test schedule? How many of these mobile bunds have been tested within the required test schedule? How many of these mobile bunds have been tested within the required test schedule? How many sumps on site are included in the integrity test schedule? How many of these sumps are integrity tested within the test schedule? How many of these sumps are integrity tested within the test schedule? How many of these sumps are integrity tested within the test schedule? Please list any sump integrity failures in table 81. Do all sumps and chambers have high level liquid alarms? If yes to Q11 are these failaide systems included in a maintenance and testing programme? It she fire Water Retention Pool included in your integrity test programme? Table 81: Summary details of bund /containment structure integrity test *Capacity required* *Lister* *Capacity required* *Actual capacity *Capacity required* *Actu		Additional information	-					
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) How many bunds are on site? How many of these bunds have been tested within the required test schedule? How many of these bunds have been tested within the required test schedule? How many of these mobile bunds have been tested within the required test schedule? How many of these mobile bunds have been tested within the required test schedule? How many of these sumps are included in the integrity test schedule? How many of these sumps are integrity tested within the rest schedule? How many of these sumps are integrity tested within the test schedule? How many of these sumps are integrity tested within the test schedule? How many of these sumps are integrity tested within the test schedule? Please list any sump integrity failures in table 81. Do all sumps and chambers have high level liquid alarms? If yes to Q11 are these failsafe systems included in a maintenance and testing programme? If yes to Q11 are these failsafe systems included in a maintenance and testing programme? Table B1: Summary details of bund /containment structure integrity test ### SELECT ** **Specify Other type Product containment Actual capacity Capacity required** **SELECT **		Fuel is stored in a double-skinned tank, within a metal container. Marrakesh t.dt. consider that the tank's location on site, and within a container unit, are adequate mitigation against potential vehicular damage. Bund testing not						
tow many sumps on site are included in the integrity test schedule? Idow many of these sumps are included in the integrity test dwithin the test schedule? Idow many of these sumps are integrity failures in table B1 Ioal sumps and chambers have high level liquid alarms? Is the Fire Water Retention Pond included in your integrity test programme? Is the Fire Water Retention Pond included in your integrity test programme? It tructure ID SELECT SELECT SELECT SELECT Select Se	Yes SELECT SELECT SELECT	applicable in this instance.						
Select Select Select Select Capacity required by Select Capacity required sould comply with 25% or 110% containment rule as detailed in your licence that integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BSB007/PRA Guidance? Pipelline/underground structures to remote containment systems tested? Are channels/transfer systems to remote containment systems tested? Are channels/transfer systems compliant in both integrity and available volume? Pipelline/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 underground structures and pipelines on site which failed the integrity test and all which have not been tested withing the integrity test period as specified release provide integrity testing frequency period release provide integrity testing frequency period release provide integrity testing frequency period. Table 82: Summary details of pipeline/underground structures integrity test. Type of secondary containment Type integrity testing Type integrity testing Type integrity testing	SELECT SELECT SELECT							
SELECT SELECT				Integrity reports		Integrity test failure		Scheduled date
Capacity required should comply with 25% or 130% containment rule as detailed in your licence Has integrify testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance? Are channels/transfer systems to remote containment systems tested? Are channels/transfer systems compliant in both integrity and available volume? 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 underground structures and pipelines on site which failed the integrity test and all which have not been tested withing the integrity test period as specified Please provide integrity testing frequency period *Table B2: Summary details of pipeline/underground structures integrity test Type of secondary containment Does this structure have Structure ID Type system Material of construction: Secondary containment? Type integrity testing	Type of integrity test	Other test type	Test date	site?	Results of test	explanation <50 words	Corrective action taken	for retest
Capacity required about comply with 25% or 10% containment out as detailed in your know. As integrifty testing been carried out in accordance with licence requirements and are all structures tested in ine with BS8007/EPA Guidance? Are channels/transfer systems to remote containment systems tested? Are channels/transfer systems compliant in both integrity and available volume? 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 underground structures and pipelines on site which failed the integrity test and all which have not been tested withing the integrity test period as specified release provide integrity testing frequency period release provide integrity testing means water tightness testing for process and foul pipelines (as required under your licence) Table B2: Summary details of pipeline/underground structures integrity test Does this structure have Structure ID Type system Material of construction: Secondary containment? Type integrity testing	SELECT SELECT			SELECT	SELECT		SELECT SELECT	
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 underground structures and pipelines on site which failed the integrity test and all which have not been tested withing the integrity test period as specified Please provide integrity testing frequency period please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence) Table B2: Summary details of pipeline/underground structures integrity test Type of secondary containment Does this structure have Structure ID Type system Material of construction: Secondary containment? Type integrity testing	SELECT SELECT SELECT	Commentary						
Type of secondary containment Does this structure have Structure ID Type system Material of construction: Secondary containment? Type integrity testing	SELECT SELECT							
Containment Does this structure have Structure ID Type system Material of construction: Secondary containment? Type integrity testing							1	
	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		<u> </u>		SELECT		
							-	
								

Groundwater/Soil monitoring template	Lic No:	W0048-01	Year	2013	
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Comments 1 Are you required to carry out groundwater monitoring as part of your licence requirements? Please provide an interpretation of groundwater monitoring data in the ves 2 Are you required to carry out soil monitoring as part of your licence requirements? no interpretation box below or if you require additional space please Do you extract groundwater for use on site? If yes please specify use in comment section include a groundwater/contaminated land monitoring results no interpretaion as an additional section in this AER Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is 4 there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Groundwater Report (link in cell G8) and submit separately through ALDER as monitoring a licensee return AND answer questions 5-12 below. template $_{\mbox{\scriptsize 5}}$ Is the contamination related to operations at the facility (either current and/or historic) SELECT NOT APPLICABLE 6 Have actions been taken to address contamination issues?If yes please summarise NOT APPLICABLE remediation strategies proposed/undertaken for the site NOT APPLICABLE SELECT 7 Please specify the proposed time frame for the remediation strategy SELECT NOT APPLICABLE 8 Is there a licence condition to carry out/update ELRA for the site? SELECT NOT APPLICABLE Analytical results were compared against the Drinking Water Directive 9 Has any type of risk assesment been carried out for the site? SELECT NOT APPLICABLE (98/83/EC). Results were generally in compliance with relevant 10 Has a Conceptual Site Model been developed for the site? SELECT NOT APPLICABLE guideline limit values. There were non-compliances for faecal and total SELECT NOT APPLICABLE 11 Have potential receptors been identified on and off site? coliforms in BH-3 and for total coliforms in PW-3 (PW-3 is not used as a 12 Is there evidence that contamination is migrating offsite? SELECT NOT APPLICABLE drinking water source).

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance		Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data
18/09/2013	BH-6	Aluminium	Lab analysis	Annually	0.017	0.017	mg/l	0.2	DWS	No
18/09/2013	BH-6	Ammoniacal Nitrogen	Lab analysis	Annually	<0.2	<0.2	mg/l	0.39	DWS	No
18/09/2013	BH-6	Arsenic	Lab analysis	Annually	<0.0001	<0.0001	mg/l	0.01	DWS	No
18/09/2013	BH-6	Barium	Lab analysis	Annually	0.012	0.012	mg/l	-	DWS	No
18/09/2013	BH-6	Boron	Lab analysis	Annually	0.015	0.015	mg/l	1	DWS	No
18/09/2013	BH-6	Cadmium	Lab analysis	Annually	<0.0001	<0.0001	mg/l	0.005	DWS	No
18/09/2013	BH-6	Calcium	Lab analysis	Annually	2.94	2.94	mg/l	-	DWS	No
18/09/2013	BH-6	Chloride	Lab analysis	Annually	10.8	10.8	mg/l	250	DWS	No
18/09/2013	BH-6	Chromium	Lab analysis	Annually	< 0.003	< 0.003	mg/l	0.05	DWS	No
18/09/2013	BH-6	Copper	Lab analysis	Annually	<0.0009	<0.0009	mg/l	2	DWS	No
18/09/2013	BH-6	Cyanide	Lab analysis	Annually	< 0.05	<0.05	mg/l	0.05	DWS	No
18/09/2013	BH-6	Electrical conductivity	On-site analysis	Annually	0.09	0.09	mS/cm	2.5	DWS	No
18/09/2013	BH-6	Faecal Coliforms	Lab analysis	Annually	0	0	cfus/ 100ml		DWS	No
18/09/2013	BH-6	Fluoride	Lab analysis	Annually	<0.5	<0.5	mg/l	1.5	DWS	No

Groundwa	ter/Soil mo	nitoring ten	nplate		Lic No:	W0048-01		Year	2013	
		Groundwater								
18/09/2013	BH-6	Level	On-site analysis	Annually	6.9	6.9	m bgl	-	DWS	No
18/09/2013	BH-6	Iron	Lab analysis	Annually	<0.019	<0.019	mg/l	0.2	DWS	No
		Kjeldahl								
18/09/2013	BH-6	Nitrogen		Annually	<1	<1	mg/l	-	DWS	No
18/09/2013	BH-6	Lead	•	Annually	0.0001	0.0001	mg/l	0.01	DWS	No
18/09/2013	BH-6	Magnesium		Annually	2.08	2.08	mg/l	-	DWS	No
18/09/2013	BH-6	Manganese	Lab analysis	Annually	0.017	0.017	mg/l	0.05	DWS	No
18/09/2013	BH-6	Mercury	Lab analysis	Annually	<0.00001	<0.00001	mg/l	0.001	DWS	No
18/09/2013	BH-6	Mineral Oils	Lab analysis	Annually	<0.01	<0.01	mg/l	-	DWS	No
18/09/2013	BH-6	Nickel	Lab analysis	Annually	0.0015	0.0015	mg/l	0.02	DWS	No
18/09/2013	BH-6	Nitrate	Lab analysis	Annually	7.4	7.4	mg/l	50	DWS	No
18/09/2013	BH-6	Nitrite	Lab analysis	Annually	<0.05	< 0.05	mg/l	0.5	DWS	No
		Orthophosph								
18/09/2013	BH-6	ate		Annually	<0.05	<0.05	mg/l	-	DWS	No
18/09/2013	BH-6	pН	Lab analysis	Annually	6.9	6.9	pH units	6.5-9.5	DWS	No
40/00/0040	DI I O	Phosphorous,	1 .1	A II	0.000	0.000			DIMO	
18/09/2013	BH-6	Total		Annually	<0.020	<0.020	mg	- 0.0004	DWS	No
18/09/2013	BH-6	PAHs (16)	Lab analysis	Annually	<0.0002	<0.0002	mg/l	0.0001		No
18/09/2013	BH-6	Potassium	Lab analysis	Annually	<1.00	<1.00	mg/l	-	DWS	No
18/09/2013	BH-6	Selenium	Lab analysis	Annually	<0.0004	<0.0004	mg/l	0.01	DWS	No
18/09/2013	BH-6	Silver	Lab analysis	Annually	<0.0015	<0.0015	mg/l	-	DWS	No
18/09/2013	BH-6	Sodium	Lab analysis	Annually	7.19	7.19	mg/l		DWS	No
18/09/2013	BH-6	Sulphate	Lab analysis	Annually	4.2	4.2	mg/l	250	DWS	No
40/00/0040	DILLO	Total	lah asahais	A	7	7			DWS	
18/09/2013	BH-6	Alkalinity Total	Lab analysis	Annually	/	/	mg/l	<u> </u>	DWS	No
18/09/2013	BH-6	Coliforms	Lab analysis	Annually	0	0	cfus/ 100ml	0	DWS	No
10/00/2010	B11 0	Total	Lab analysis	rundany			crusy 100mm	<u> </u>	DWG	140
		Organic								
18/09/2013	BH-6	Carbon	Lab analysis	Annually	<3	<3	mg/I	-	DWS	No
		Total								
		Oxidised			1					
18/09/2013	BH-6	Nitrogen		Annually	1.7	1.7	mg/l	-	DWS	No
18/09/2013	BH-6	Total Solids	,	Annually	214	214	mg/l	-	DWS	No
18/09/2013	BH-6	Zinc	Lab analysis	Annually	0.015	0.015	mg/l	-	DWS	No
							SELECT			SELECT

^{.+} where average indicates arithmetic mean

Table 2: Downgradient Groundwater monitoring results

										Upward trend in
										yearly average
										pollutant
	Sample									concentration
Date of	location	Parameter/		Monitoring	Maximum	Average				over last 5 years
sampling	reference	Substance	Methodology	frequency	Concentration	Concentration	unit	GTV's*	SELECT**	of monitoring data
18/09/2013	BH-2	Aluminium	Lab analysis	Annually	<0.0029	<0.0029	mg/l	0.2	DWS	No
		Ammoniacal								
18/09/2013	BH-2	Nitrogen	Lab analysis	Annually	<0.2	<0.2	mg/l	0.39	DWS	No
18/09/2013	BH-2	Arsenic	Lab analysis	Annually	0.0003	0.0003	mg/l	0.01	DWS	No
18/09/2013	BH-2	Barium	Lab analysis	Annually	0.015	0.015	mg/l	-	DWS	No
18/09/2013	BH-2	Boron	Lab analysis	Annually	0.015	0.015	mg/l	1	DWS	No

^{.++} maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

<u> iroundwat</u>	er/Soil mo	onitoring ter	nplate		Lic No:	W0048-01		Year	2013	
18/09/2013	BH-2	Cadmium	Lab analysis	Annually	<0.0001	<0.0001	mg/l	0.005	DWS	No
8/09/2013	BH-2	Calcium	Lab analysis	Annually	118	118	mg/l	-	DWS	No
8/09/2013	BH-2	Chloride	Lab analysis	Annually	20	20	mg/l	250	DWS	No
8/09/2013	BH-2	Chromium	Lab analysis	Annually	0.005	0.005	mg/I	0.05	DWS	No
8/09/2013	BH-2	Copper	Lab analysis	Annually	<0.0009	<0.0009	mg/l	2	DWS	No
8/09/2013	BH-2	Cyanide	Lab analysis	Annually	< 0.05	< 0.05	mg/l	0.05	DWS	No
		Electrical								
18/09/2013	BH-2	conductivity	On-site analysis	Annually	0.68	0.68	mS/cm	2.5	DWS	No
0/00/0040	5.1.0	Faecal							514/0	
8/09/2013	BH-2	Coliforms	Lab analysis	Annually	<100	<100	cfus/ 100ml	0	DWS	No
8/09/2013	BH-2	Fluoride Groundwater	Lab analysis	Annually	<0.5	<0.5	mg/l	1.5	DWS	No
8/09/2013	BH-2	Level	On-site analysis	Annually	3.77	3.77	m bgl	_	DWS	No
8/09/2013	BH-2	Iron	Lab analysis	Annually	<0.02	<0.02	mg/l	0.2	DWS	No
10/00/2010	DITE	Kjeldahl	Lab analysis	rundany	10.02	10.02	1116/1	0.2	56	140
8/09/2013	BH-2	Nitrogen	Lab analysis	Annually	<1	<1	mg/l	-	DWS	No
8/09/2013	BH-2	Lead	Lab analysis	Annually	<0.00002	<0.00002	mg/l	0.01	DWS	No
8/09/2013	BH-2	Magnesium	Lab analysis	Annually	5.89	5.89	mg/l	-	DWS	No
8/09/2013	BH-2	Manganese	Lab analysis	Annually	0.00007	0.00007	mg/l	0.05	DWS	No
8/09/2013	BH-2	Mercury	Lab analysis	Annually	<0.00001	<0.00001	mg/l	0.001	DWS	No
8/09/2013	BH-2	Mineral Oils	Lab analysis	Annually	<0.01	<0.01	mg/l	-	DWS	No
8/09/2013	BH-2	Nickel	Lab analysis	Annually	0.002	0.002	mg/l	0.02	DWS	No
8/09/2013	BH-2	Nitrate	Lab analysis	Annually	7.1	7.1	mg/l	50	DWS	No
8/09/2013	BH-2	Nitrite	Lab analysis	Annually	<0.05	<0.05	mg/l	0.5	DWS	No
		Orthophosph	, , , , , , , , , , , , , , , , , , ,	,			8/			
18/09/2013	BH-2	ate	Lab analysis	Annually	< 0.05	< 0.05	mg/l	-	DWS	No
8/09/2013	BH-2	рН	Lab analysis	Annually	8.8	8.8	pH units	6.5-9.5	DWS	No
		Phosphorous,								
18/09/2013	BH-2	Total	Lab analysis	Annually	0.078	0.078	mg	-	DWS	No
8/09/2013	BH-2	PAHs (16)	Lab analysis	Annually	<0.0002	<0.0002	mg/l	0.0001	DWS	No
8/09/2013	BH-2	Potassium	Lab analysis	Annually	<1.00	<1.00	mg/l	-	DWS	No
8/09/2013	BH-2	Selenium	Lab analysis	Annually	0.0008	0.0008	mg/l	0.01	DWS	No
8/09/2013	BH-2	Silver	Lab analysis	Annually	<0.0015	<0.0015	mg/l	-	DWS	No
8/09/2013	BH-2	Sodium	Lab analysis	Annually	12.1	12.1	mg/l	200	DWS	No
8/09/2013	BH-2	Sulphate	Lab analysis	Annually	51.3	51.3	mg/l	250	DWS	No
19/00/2012	BH-2	Total	Lob opolypic	Annually	275	275	ma /I		DWS	NI -
8/09/2013	DH-2	Alkalinity Total	Lab analysis	Annually	2/5	2/5	mg/l	-	DVVO	No
8/09/2013	BH-2	Coliforms	Lab analysis	Annually	<100	<100	cfus/ 100ml	0	DWS	No
0,00,00		Total			1100	1100	0.007 200			.,,
		Organic								
18/09/2013	BH-2	Carbon	Lab analysis	Annually	<3	<3	mg/l	-	DWS	No
		Total								
0/00/0040	DILLO	Oxidised		A	4.04	4.04			DWG	
8/09/2013	BH-2	Nitrogen	Lab analysis	Annually	1.61	1.61	mg/l	-	DWS	No
8/09/2013	BH-2	Total Solids	Lab analysis	Annually	586	586	mg/l	-	DWS	No
8/09/2013	BH-2	Zinc	Lab analysis	Annually	0.0034	0.0034	mg/l	-	DWS	No
8/09/2013	B	_	 		0	0		_	514.5	
8/09/2013	BH-3	Aluminium	Lab analysis	Annually	<0.003	<0.003	mg/l	0.2	DWS	No
18/09/2013	BH-3	Ammoniacal	Lab apolysis	Annually	<0.2	<0.2	ma /I	0.39	DWS	NI -
8/09/2013		Nitrogen	Lab analysis	Annually	<0.2 0.0004		mg/l	0.39	DWS	No
	BH-3	Arsenic	Lab analysis	Annually		0.0004	mg/l	0.01		No
8/09/2013	BH-3	Barium	Lab analysis	Annually	0.024	0.024	mg/l	-	DWS	No
18/09/2013	BH-3	Boron	Lab analysis	Annually	0.019	0.019	mg/l	1	DWS	No

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18/09/2013	BH-3	Cadmium	,	Annually	<0.0001	<0.0001	mg/l	0.005		No
18/09/2013	BH-3	Calcium	Lab analysis	Annually	97	97	mg/l	-	DWS	No
18/09/2013	BH-3	Chloride	Lab analysis	Annually	17	17	mg/l	250	DWS	No
18/09/2013	BH-3	Chromium	Lab analysis	Annually	0.027	0.027	mg/l	0.05	DWS	No
18/09/2013	BH-3	Copper	Lab analysis	Annually	<0.0009	<0.0009	mg/l	2		No
18/09/2013	BH-3	Cyanide	Lab analysis	Annually	<0.05	<0.05	mg/l	0.05	DWS	No
18/09/2013	BH-3	Electrical conductivity	On-site analysis	Annually	0.59	0.59	mS/cm	2.5	DWS	No
18/09/2013	BH-3	Faecal Coliforms	Lab analysis	Annually	18	18	cfus/ 100ml	0	DWS	No
18/09/2013	BH-3	Fluoride	Lab analysis	Annually	<0.5	<0.5	mg/l	1.5	DWS	No
10/03/2013	ыгэ	Groundwater	Lab arialysis	Ailidally	VO.3	V 0.5	IIIg/I	1.5	DWS	INO
18/09/2013	BH-3	Level	On-site analysis	Annually	6.98	6.98	m bgl	-	DWS	No
18/09/2013	BH-3	Iron	Lab analysis	Annually	<0.02	<0.02	mg/l	0.2	DWS	No
	DILO	Kjeldahl			_				DIMO	
18/09/2013	BH-3	Nitrogen	Lab analysis	Annually	<1	<1	mg/l	-	DWS	No
18/09/2013	BH-3	Lead	Lab analysis	Annually	<0.00002	<0.00002	mg/l	0.01	DWS	No
18/09/2013	BH-3	Magnesium	Lab analysis	Annually	5.91	5.91	mg/l	-	DWS	No
18/09/2013	BH-3	Manganese	Lab analysis	Annually	0.00007	0.00007	mg/l	0.05	DWS	No
18/09/2013	BH-3	Mercury	Lab analysis	Annually	<0.00001	<0.00001	mg/l	0.001	DWS	No
18/09/2013	BH-3	Mineral Oils	Lab analysis	Annually	<0.01	<0.01	mg/l	-	DWS	No
18/09/2013	BH-3	Nickel	Lab analysis	Annually	0.002	0.002	mg/l	0.02	DWS	No
18/09/2013	BH-3	Nitrate	Lab analysis	Annually	4.46	4.46	mg/l	50	DWS	No
18/09/2013	BH-3	Nitrite	Lab analysis	Annually	<0.05	<0.05	mg/l	0.5	DWS	No
18/09/2013	BH-3	Orthophosph ate	Lab analysis	Annually	<0.05	<0.05	mg/l		DWS	No
18/09/2013	BH-3	pH	Lab analysis	Annually	7.9	7.9	pH units	6.5-9.5	DWS	No
10/03/2013	BIT 5	Phosphorous,	Lab analysis	Airidally	7.5	7.5	pri utilits	0.0 0.0	DWO	NO
18/09/2013	BH-3	Total	Lab analysis	Annually	0.79	0.79	mg	-	DWS	No
18/09/2013	BH-3	PAHs (16)	Lab analysis	Annually	<0.0002	<0.0002	mg/l	0.0001	DWS	No
18/09/2013	BH-3	Potassium	Lab analysis	Annually	<1.00	<1.00	mg/l	-	DWS	No
18/09/2013	BH-3	Selenium	Lab analysis	Annually	0.0017	0.0017	mg/l	0.01	DWS	No
18/09/2013	BH-3	Silver	Lab analysis	Annually	<0.002	< 0.002	mg/l	-	DWS	No
18/09/2013	BH-3	Sodium	Lab analysis	Annually	11.4	11.4	mg/l	200	DWS	No
18/09/2013	BH-3	Sulphate	Lab analysis	Annually	43	43	mg/l	250	DWS	No
18/09/2013	BH-3	Total Alkalinity	Lab analysis	Annually	305	305	mg/l		DWS	No
10/00/2010	Biro	Total	Lab analysis	randany	000	000	1116/1		Divid	140
18/09/2013	BH-3	Coliforms	Lab analysis	Annually	18	18	cfus/ 100ml	0	DWS	No
18/09/2013	BH-3	Total Organic Carbon	Lab analysis	Annually	<3	<3	mg/l	_	DWS	No
	-	Total	.,	<u> </u>	-		5,			
18/09/2013	BH-3	Oxidised Nitrogen	Lab analysis	Annually	1.01	1.01	mg/l		DWS	No
18/09/2013	BH-3	Total Solids	Lab analysis	Annually	2450	2450	mg/l	1_	DWS	No
18/09/2013	BH-3	Zinc	Lab analysis	Annually	0.0009	0.0009	mg/l	-	DWS	No
18/09/2013	Dirio	ZIIIC	Lab analysis	, unidally	0.0009	0.0009	1116/1		DWO	INU
18/09/2013	BH-7	Aluminium	Lab analysis	Annually	-	-	mg/l	0.2	DWS	No
		Ammoniacal		, a mainy	-	_	1116/1		_	140
18/09/2013	BH-7	Nitrogen	Lab analysis	Annually	-	-	mg/l	0.39		No
18/09/2013	BH-7	Arsenic	Lab analysis	Annually	-	-	mg/l	0.01	DWS	No
18/09/2013	BH-7	Barium	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	BH-7	Boron	Lab analysis	Annually	-	-	mg/l	1	DWS	No

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8/09/2013	BH-7	Cadmium	Lab analysis	Annually	-	-	mg/l	0.005	DWS	No
8/09/2013	BH-7	Calcium	Lab analysis	Annually	-	-	mg/l	-	DWS	No
8/09/2013	BH-7	Chloride	Lab analysis	Annually	-	-	mg/l	250	DWS	No
8/09/2013	BH-7	Chromium	Lab analysis	Annually	-	-	mg/l	0.05	DWS	No
8/09/2013	BH-7	Copper	Lab analysis	Annually	-	-	mg/l	2	DWS	No
8/09/2013	BH-7	Cyanide	Lab analysis	Annually	-	-	mg/l	0.05	DWS	No
		Electrical	-							
8/09/2013	BH-7	conductivity	On-site analysis	Annually	0.97	0.97	mS/cm	2.5	DWS	No
_ , ,		Faecal								
8/09/2013	BH-7	Coliforms	Lab analysis	Annually	-	-	cfus/ 100ml	0	DWS	No
8/09/2013	BH-7	Fluoride	Lab analysis	Annually	-	-	mg/l	1.5	DWS	No
8/09/2013	BH-7	Groundwater Level	On-site analysis	Annually	4.45	4.45	m hal		DWS	No
8/09/2013	BH-7	Iron	Lab analysis	Annually	4.45	4.43	m bgl mg/l	0.2	DWS	No
0/09/2013	ВП-1	Kjeldahl	Lab analysis	Armuany	-	<u> </u>	IIIg/I	0.2	DW3	INO
8/09/2013	BH-7	Nitrogen	Lab analysis	Annually	_	_	mg/l	_	DWS	No
8/09/2013	BH-7	Lead	Lab analysis	Annually	-	-	mg/l	0.01	DWS	No
8/09/2013	BH-7	Magnesium	Lab analysis	Annually	_	_	mg/l	-	DWS	No
8/09/2013	BH-7	Manganese	Lab analysis	Annually	-	-	mg/l	0.05	DWS	No
8/09/2013	BH-7	Mercury	Lab analysis	Annually	_	_	mg/l	0.001	DWS	No
8/09/2013	BH-7	Mineral Oils	Lab analysis	Annually	_	_	mg/l	-	DWS	No
8/09/2013	BH-7	Nickel	Lab analysis	Annually	_	_	mg/l	0.02	DWS	No
8/09/2013	BH-7	Nitrate	Lab analysis	Annually	-	_	mg/l	50	DWS	No
8/09/2013	BH-7	Nitrite	Lab analysis	Annually	-	_	mg/l	0.5	DWS	No
0/03/2013	Di I-7	Orthophosph	Lab analysis	Armuany	-	-	mg/i	0.5	DWS	INO
8/09/2013	BH-7	ate	Lab analysis	Annually	_	_	mg/l	_	DWS	No
8/09/2013	BH-7	pН	Lab analysis	Annually	8	8	pH units	6.5-9.5	DWS	No
		Phosphorous,			-	-	pri dines			140
8/09/2013	BH-7	Total	Lab analysis	Annually	-	-	mg	-	DWS	No
8/09/2013	BH-7	PAHs (16)	Lab analysis	Annually	-	-	mg/l	0.0001	DWS	No
8/09/2013	BH-7	Potassium	Lab analysis	Annually	-	-	mg/l	-	DWS	No
8/09/2013	BH-7	Selenium	Lab analysis	Annually	-	-	mg/l	0.01	DWS	No
8/09/2013	BH-7	Silver	Lab analysis	Annually	-	-	mg/l	-	DWS	No
8/09/2013	BH-7	Sodium	Lab analysis	Annually	-	-	mg/l	200	DWS	No
8/09/2013	BH-7	Sulphate	Lab analysis	Annually	-	-	mg/l	250	DWS	No
		Total	-							
8/09/2013	BH-7	Alkalinity	Lab analysis	Annually	-	-	mg/l	-	DWS	No
_ , ,		Total								
8/09/2013	BH-7	Coliforms	Lab analysis	Annually	-	-	cfus/ 100ml	0	DWS	No
		Total Organic								
8/09/2013	BH-7	Carbon	Lab analysis	Annually	_	_	mg/l	_	DWS	No
0/03/2013	DIT-7	Total	Lab analysis	Aimaaiy			mg/i		DWO	140
		Oxidised								
8/09/2013	BH-7	Nitrogen	Lab analysis	Annually	-	-	mg/l	-	DWS	No
8/09/2013	BH-7	Total Solids	Lab analysis	Annually	-	-	mg/l	-	DWS	No
8/09/2013	BH-7	Zinc	Lab analysis	Annually	-	-	mg/l	-	DWS	No
8/09/2013					0	0	<u> </u>			
8/09/2013	BH-8	Aluminium	Lab analysis	Annually	0.004	0.004	mg/l	0.2	DWS	No
	-	Ammoniacal		, ,			Gr ·			
8/09/2013	BH-8	Nitrogen	Lab analysis	Annually	<0.2	<0.2	mg/l	0.39	DWS	No
8/09/2013	BH-8	Arsenic	Lab analysis	Annually	0.0006	0.0006	mg/l	0.01	DWS	No
8/09/2013	BH-8	Barium	Lab analysis	Annually	0.013	0.013	mg/l	-	DWS	No
			,	, ,	0.022		Ur.	1		

<u>irounawa</u>	ter/Soil mo	onitoring ter	nplate		Lic No:	W0048-01		Year	2013	
18/09/2013	BH-8	Cadmium	Lab analysis	Annually	<0.0001	<0.0001	mg/l	0.005	DWS	No
18/09/2013	BH-8	Calcium	Lab analysis	Annually	135	135	mg/l	-	DWS	No
18/09/2013	BH-8	Chloride	Lab analysis	Annually	22.3	22.3	mg/l	250	DWS	No
18/09/2013	BH-8	Chromium	Lab analysis	Annually	0.019	0.019	mg/l	0.05	DWS	No
18/09/2013	BH-8	Copper	Lab analysis	Annually	<0.0009	<0.0009	mg/l	2	DWS	No
8/09/2013	BH-8	Cyanide	Lab analysis	Annually	< 0.05	< 0.05	mg/l	0.05	DWS	No
		Electrical	-				-			
18/09/2013	BH-8	conductivity	On-site analysis	Annually	0.7	0.7	mS/cm	2.5	DWS	No
		Faecal						_		
18/09/2013	BH-8	Coliforms	Lab analysis	Annually	<100	<100	cfus/ 100ml	0	DWS	No
18/09/2013	BH-8	Fluoride	Lab analysis	Annually	<0.5	<0.5	mg/l	1.5	DWS	No
18/09/2013	BH-8	Groundwater Level	On-site analysis	Annually	2.96	2.96	m hal		DWS	No
18/09/2013	BH-8	Iron	Lab analysis	Annually	<0.019	<0.019	m bgl mg/l	0.2	DWS	No
10/09/2013	Di I-0	Kjeldahl	Lab arialysis	Armuany	20.019	Q0.019	IIIg/I	0.2	DWS	INU
18/09/2013	BH-8	Nitrogen	Lab analysis	Annually	<1	<1	mg/l	-	DWS	No
8/09/2013	BH-8	Lead	Lab analysis	Annually	0.00002	0.00002	mg/l	0.01	DWS	No
8/09/2013	BH-8	Magnesium	Lab analysis	Annually	7.41	7.41	mg/l	-	DWS	No
8/09/2013	BH-8	Manganese	Lab analysis	Annually	0.0005	0.0005	mg/l	0.05	DWS	No
8/09/2013	BH-8	Mercury	Lab analysis	Annually	<0.00001	<0.00001	mg/l	0.001	DWS	No
18/09/2013	BH-8	Mineral Oils	Lab analysis	Annually	<0.01	<0.01	mg/l	-	DWS	No
8/09/2013	BH-8	Nickel	Lab analysis	Annually	0.003	0.003	mg/l	0.02	DWS	No
8/09/2013	BH-8	Nitrate	Lab analysis	Annually	5.2	5.2	mg/l	50	DWS	No
8/09/2013	BH-8	Nitrite	Lab analysis	Annually	<0.05	<0.05	mg/l	0.5	DWS	No
10/00/2010	Biro	Orthophosph	Lab analysis	rundany	10.00	10.00	1118/1	0.0	5.1.0	INO
18/09/2013	BH-8	ate	Lab analysis	Annually	<0.05	<0.05	mg/l	-	DWS	No
18/09/2013	BH-8	pН	Lab analysis	Annually	8.2	8.2	pH units	6.5-9.5	DWS	No
		Phosphorous,	,	,			p			
18/09/2013	BH-8	Total	Lab analysis	Annually	0.62	0.62	mg	-	DWS	No
18/09/2013	BH-8	PAHs (16)	Lab analysis	Annually	<0.0002	< 0.0002	mg/l	0.0001	DWS	No
18/09/2013	BH-8	Potassium	Lab analysis	Annually	<1.00	<1.00	mg/l	-	DWS	No
18/09/2013	BH-8	Selenium	Lab analysis	Annually	0.001	0.001	mg/l	0.01	DWS	No
18/09/2013	BH-8	Silver	Lab analysis	Annually	<0.0015	<0.0015	mg/I	i-	DWS	No
18/09/2013	BH-8	Sodium	Lab analysis	Annually	14.2	14.2	mg/l	200	DWS	No
8/09/2013	BH-8	Sulphate	Lab analysis	Annually	64.1	64.1	mg/l	250	DWS	No
		Total					-			
18/09/2013	BH-8	Alkalinity	Lab analysis	Annually	280	280	mg/l	-	DWS	No
	5	Total			400				514/0	
18/09/2013	BH-8	Coliforms Total	Lab analysis	Annually	<100	<100	cfus/ 100ml	0	DWS	No
		Organic								
18/09/2013	BH-8	Carbon	Lab analysis	Annually	<3.0	<3.0	mg/l	_	DWS	No
.0,00,2010	20	Total	Lab analysis	rundany	10.0	10.0	1116/1		20	110
		Oxidised	1							
18/09/2013	BH-8	Nitrogen	Lab analysis	Annually	1.19	1.19	mg/l	-	DWS	No
18/09/2013	BH-8	Total Solids	Lab analysis	Annually	1720	1720	mg/I	-	DWS	No
18/09/2013	BH-8	Zinc	Lab analysis	Annually	<0.0004	<0.0004	mg/l	-	DWS	No
18/09/2013					0	0	-			
18/09/2013	PW-2	Aluminium	Lab analysis	Annually	-	-	mg/l	0.2	DWS	No
		Ammoniacal	1	,			<i>J</i> ,			
18/09/2013	PW-2	Nitrogen	Lab analysis	Annually	-	-	mg/l	0.39	DWS	No
8/09/2013	PW-2	Arsenic	Lab analysis	Annually	-	-	mg/I	0.01	DWS	No
8/09/2013	PW-2	Barium	Lab analysis	Annually	-	-	mg/l	-	DWS	No
8/09/2013	PW-2	Boron	Lab analysis	Annually	1 -	i -	mg/l	1	DWS	No

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		nitoring ter			Lic No:	W0048-01	-	Year	2013	
18/09/2013	PW-2	Cadmium	,	Annually	-	-	mg/l	0.005		No
18/09/2013	PW-2	Calcium	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	PW-2	Chloride	Lab analysis	Annually	-	-	mg/l	250	DWS	No
18/09/2013	PW-2	Chromium	Lab analysis	Annually	-	-	mg/l	0.05	DWS	No
18/09/2013	PW-2	Copper	Lab analysis	Annually	-	-	mg/l	2		No
18/09/2013	PW-2	Cyanide	Lab analysis	Annually	-	-	mg/l	0.05	DWS	No
18/09/2013	PW-2	Electrical conductivity	On-site analysis	Annually	-	-	mS/cm	2.5	DWS	No
10/00/0010	DIM 0	Faecal	1.1	A II					DIMO	
18/09/2013 18/09/2013	PW-2 PW-2	Coliforms Fluoride	Lab analysis	Annually	-	-	cfus/ 100ml	0	DWS DWS	No
18/09/2013	PVV-2	Groundwater	Lab analysis	Annually	-	-	mg/l	1.5	DWS	No
18/09/2013	PW-2	Level	On-site analysis	Annually	-	-	m bgl	-	DWS	No
18/09/2013	PW-2	Iron	Lab analysis	Annually	-	-	mg/l	0.2	DWS	No
		Kjeldahl	·				11.6/1			
18/09/2013	PW-2	Nitrogen	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	PW-2	Lead	Lab analysis	Annually	-	-	mg/l	0.01	DWS	No
18/09/2013	PW-2	Magnesium	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	PW-2	Manganese	Lab analysis	Annually	-	-	mg/l	0.05	DWS	No
18/09/2013	PW-2	Mercury	Lab analysis	Annually	-	-	mg/l	0.001	DWS	No
18/09/2013	PW-2	Mineral Oils	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	PW-2	Nickel	Lab analysis	Annually	-	-	mg/l	0.02	DWS	No
18/09/2013	PW-2	Nitrate	Lab analysis	Annually	-	-	mg/l	50	DWS	No
18/09/2013	PW-2	Nitrite	Lab analysis	Annually	-	-	mg/l	0.5	DWS	No
10/00/0010	DIA O	Orthophosph		A II					DIMO	
18/09/2013	PW-2 PW-2	ate	Lab analysis	Annually	-	-	mg/l	-	DWS DWS	No
18/09/2013	PVV-2	pH Phosphorous,	Lab analysis	Annually	-	-	pH units	6.5-9.5	DWS	No
18/09/2013	PW-2	Total	Lab analysis	Annually	-	-	mg	-	DWS	No
18/09/2013	PW-2	PAHs (16)	Lab analysis	Annually	-	-	mg/l	0.0001	DWS	No
18/09/2013	PW-2	Potassium	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	PW-2	Selenium	Lab analysis	Annually	-	-	mg/l	0.01	DWS	No
18/09/2013	PW-2	Silver	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	PW-2	Sodium	Lab analysis	Annually	-	-	mg/l	200	DWS	No
18/09/2013	PW-2	Sulphate	Lab analysis	Annually	-	-	mg/l	250	DWS	No
		Total								
18/09/2013	PW-2	Alkalinity	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	PW-2	Total Coliforms	Lab analysis	Annually	-	_	cfus/ 100ml	0	DWS	No
		Total		,					_	
		Organic								
18/09/2013	PW-2	Carbon	Lab analysis	Annually	-	-	mg/l	-	DWS	No
		Total								
18/09/2013	PW-2	Oxidised Nitrogen	Lab analysis	Annually	_	_	mg/l		DWS	No
18/09/2013	PW-2	Total Solids	Lab analysis	Annually			mg/I	1_	DWS	No
18/09/2013	PW-2	Zinc	Lab analysis	Annually	-	-	mg/l	-	DWS	No
18/09/2013	1 **-2	21110	Lab analysis		0	0	1116/1		5.70	140
18/09/2013	PW-3	Aluminium	Lab analysis	Annually	<0.003	<0.003	mg/l	0.2	DWS	No
.3,30,2010	, 0	Ammoniacal	analysis		10.000	15.000	6/ '	U.Z.	2.10	110
18/09/2013	PW-3	Nitrogen	Lab analysis	Annually	<0.2	<0.2	mg/l	0.39	DWS	No
18/09/2013	PW-3	Arsenic	Lab analysis	Annually	0.0002	0.0002	mg/l	0.01	DWS	No
18/09/2013	PW-3	Barium	Lab analysis	Annually	0.0008	0.0008	mg/l	-	DWS	No
18/09/2013	PW-3	Boron	Lab analysis	Annually	0.019	0.019	mg/l	1	DWS	No

Groundwa	ter/Soil mo	nitoring ter	nplate		Lic No:	W0048-01		Year	2013	
18/09/2013	PW-3	Cadmium	Lab analysis	Annually	<0.0001	<0.0001	mg/l	0.005	DWS	No
18/09/2013	PW-3	Calcium	Lab analysis	Annually	37.1	37.1	mg/l	-	DWS	No
18/09/2013	PW-3	Chloride	Lab analysis	Annually	15	15	mg/l	250	DWS	No
18/09/2013	PW-3	Chromium	Lab analysis	Annually	< 0.003	< 0.003	mg/l	0.05	DWS	No
18/09/2013	PW-3	Copper	Lab analysis	Annually	0.003	0.003	mg/l	2	DWS	No
18/09/2013	PW-3	Cyanide	Lab analysis	Annually	< 0.05	<0.05	mg/l	0.05	DWS	No
18/09/2013	PW-3	Electrical conductivity	On-site analysis	Annually	0.36	0.36	mS/cm	2.5	DWS	No
18/09/2013	PW-3	Faecal Coliforms	Lab analysis	Annually	0	0	cfus/ 100ml	0	DWS	No
18/09/2013	PW-3	Fluoride	Lab analysis	Annually	<0.5	<0.5	mg/l	1.5	DWS	No
18/09/2013	PW-3	Iron	Lab analysis	Annually	<0.019	<0.019	mg/l	0.2	DWS	No
18/09/2013	PW-3	Kjeldahl Nitrogen	Lab analysis	Annually	<1	<1	mg/l	-	DWS	No
18/09/2013	PW-3	Lead	Lab analysis	Annually	<0.00002	<0.00002	mg/l	0.01	DWS	No
18/09/2013	PW-3	Magnesium	Lab analysis	Annually	15.6	15.6	mg/l	- 0.01	DWS	No
18/09/2013	PW-3	Manganese	Lab analysis	Annually	0.00006	0.00006	mg/l	0.05	DWS	No
18/09/2013	PW-3	Mercury	Lab analysis	Annually	<0.0001	<0.0001	mg/l	0.001	DWS	No
18/09/2013	PW-3	Mineral Oils	Lab analysis	Annually	<0.01	<0.01	mg/l	-	DWS	No
18/09/2013	PW-3	Nickel	Lab analysis	Annually	0.0008	0.0008	mg/l	0.02	DWS	No
18/09/2013	PW-3	Nitrate	Lab analysis	Annually	2.98	2.98	mg/l	50	DWS	No
18/09/2013	PW-3	Nitrite	Lab analysis	Annually	<0.05	<0.05	mg/l	0.5	DWS	No
		Orthophosph	·	,			Or .			
18/09/2013	PW-3	ate	Lab analysis	Annually	<0.05	<0.05	mg/l	-	DWS	No
18/09/2013	PW-3	рН	Lab analysis	Annually	8	8	pH units	6.5-9.5	DWS	No
18/09/2013	PW-3	Phosphorous, Total	Lab analysis	Annually	<0.02	<0.02	mg	_	DWS	No
18/09/2013	PW-3	PAHs (16)	Lab analysis	Annually	<0.0002	<0.0002	mg/l	0.0001	DWS	No
18/09/2013	PW-3	Potassium	Lab analysis	Annually	<1.0	<1.0	mg/l	-	DWS	No
18/09/2013	PW-3	Selenium	Lab analysis	Annually	<0.0004	<0.0004	mg/l	0.01	DWS	No
18/09/2013	PW-3	Silver	Lab analysis	Annually	<0.0015	<0.0015	mg/l	_	DWS	No
18/09/2013	PW-3	Sodium	Lab analysis	Annually	14	14	mg/l	200	DWS	No
18/09/2013	PW-3	Sulphate	Lab analysis	Annually	10.7	10.7	mg/l	250	DWS	No
18/09/2013	PW-3	Total Alkalinity	Lab analysis	Annually	150	150	mg/l	-	DWS	No
18/09/2013	PW-3	Total Coliforms	Lab analysis	Annually	14	14	cfus/ 100ml	0	DWS	No
18/09/2013	PW-3	Total Organic Carbon	Lab analysis	Annually	<3	<3	mg/l	-	DWS	No
18/09/2013	PW-3	Total Oxidised Nitrogen	Lab analysis	Annually	0.7	0.7	mg/l	-	DWS	No
18/09/2013	PW-3	Total Solids	Lab analysis	Annually	201	201	mg/l	-	DWS	No
18/09/2013	PW-3	Zinc	Lab analysis	Annually	0.009	0.009	mg/l	-	DWS	No
							SELECT			SELECT

*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed

Groundwater monitoring template

More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see

<u>Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013).</u>

the link in G31)

Groundwater/Soil monitoring template	Lic No:	W0048-01		Year	2013			
**Depending on location of the site and proximity to other sensitive receptors alternate	tive Receptor based	Water Quality standards should b	e used in addition to		Groundwater	Drinking water		
the GTV e.g. if the site is close to surface water compare to Surface Water Environment	tal Quality Standards	(SWEQS), If the site is close to a	Irinking water supply	<u>Surface</u>	<u>regulations</u>	(private supply)	Drinking water (public	Interim Guideline
compare results to the Drinking W	Vater Standards (DW	/S)		water EQS	GTV's	<u>standards</u>	supply) standards	Values (IGV)

Groundwater/Soil monitoring template Lic No: W0048-01 Year 2013	Groundwater/Soil monitoring template	Lic No:	W0048-01	Year 2013
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Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	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: W0048-01 Year 2013

Click here to access EPA guidance on Environmental Liabilities and Financial provision

			Commentary
1	ELRA initial agreement status	Required but not submitted	
2	ELRA review status	SELECT	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	
4	Financial Provision for ELRA status	SELECT	
5	Financial Provision for ELRA - amount of cover	Specify	
6	Financial Provision for ELRA - type	SELECT	
7	Financial provision for ELRA expiry date	Enter expiry date	
8	Closure plan initial agreement status	SELECT	
9	Closure plan review status	SELECT	
10	Financial Provision for Closure status	SELECT	
11	Financial Provision for Closure - amount of cover	Specify	
12	Financial Provision for Closure - type	SELECT	
13_	Financial provision for Closure expiry date	Enter expiry date	

	Environmental Management Programme/Continuous Improvement Programme	template	Lic No:	W0048-01	Year	2013
	Highlighted cells contain dropdown menu click to view		Additional Information		_	
1	Do you maintain an Environmental Mangement 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	No				
	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance					
3	with the licence requirements	Yes				
	Do you maintain an environmental documentation/communication system to inform the public on					
4		Yes				

Environmental Management Program	me (EMP) report				
Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Waste reduction/Raw material usage efficiency	Maximise recovery of incoming wastes	100		Individual	Improved Environmental Management Practices
Groundwater protection	Ongoing monitoring and measurement - water	100		Individual	Improved Environmental Management Practices
Noise reduction	Ongoing monitoring and measurement - noise	100		Individual	Improved Environmental Management Practices
Reduction of emissions to Air	Ongoing monitoring and measurement - dust and landfill gas	100		Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No):	W0048-01	Year	2013	
1 Was noise monitoring a licence requirement for the AER period?		ſ	Yes	1		•
If yes please fill in table N1 noise summary below		L	163	J -		
2. Was noted monitoring control out using the EDA Cuidance noted including completion of the "Cl	Noise		Yes			
2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Ch for noise measurement report" included in the guidance note as table 6?	hecklist <u>Guida</u> note N		res			
3 Does your site have a noise reduction plan			No			
4 When was the noise reduction plan last updated?		l l	Enter date			
Have there been changes relevant to site noise emissions (e.g. plant or operational changes) survey?	since the last no	oise	No			
Table N1: Noise monitoring summary						

Table N1: Nois	able 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)?
18/09/2013	10:30 - 11:00		NSL1	45	37	45	67	No	No	vicinity of the Kilmurry South	Yes
18/09/2013	12:16 - 12:46		NSL1	44	37	44	70	No	No	Landfill site is not significantly	Yes
18/09/2013	14:52 – 15:22		NSL1	44	39	45	66	No	No	affected during operational hours	Yes
18/09/2013	09:49 - 10:19		NSL2	52	49	53	73	No	No	by plant on the site. The noise	Yes
18/09/2013	11:39 – 12:09		NSL2	53	49	54	76	No	No	measurements were below the EPA	Yes
18/09/2013	14:17 - 14:47		NSL2	52	49	53	66	No	No	guidance values for LAeq of 55dBA	Yes
18/09/2013	09:14 - 09:44		NSL3	64	61	66	72	No	No	for daytime noise levels at NSL1	Yes
18/09/2013	11:05 – 11:35		NSL3	61	58	64	75	No	No	and NSL2. However noise levels at	Yes
18/09/2013	12:55 – 13:25		NSL3	61	58	63	76	No	No	NSL3, which exceeded the guidance value, can be attributed	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

** 1	
** 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: W0048-01 Year 2013

Additional information

Cells D10 and E10

Not Applicable

No audit completed

SELECT

other than ongoing monitoring of usage by licensee.

1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below

SEAI - Large

other than ongoing monitoring of usage by licensee.

10.169kWh/litre of by licensee.

diesel

Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information Network (LIEN)

3

Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Table R1 Energy usag	e on site			
Energy Use	Previous year	Current year	compared to previous reporting	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	386	344.02	-10.88%	
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (N	1WHrs)			
Electricity Consumption (MWHrs)	4.699	5.058	7.64%	
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)	37.5	33.333	-11.11%	
Light Fuel Oil (m3)				
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

* where consumption of energy 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

Table R2 Water usage	Table R2 Water usage on site					issions Water Consumption		
						Volume used i.e not		
			Production +/- %	Energy		discharged to		
			compared to	Consumption +/- %	Volume Discharged	environment e.g.		
	Water extracted	Water extracted	previous reporting	vs overall site	back to	released as steam		
Water use	Previous year m3/yr.	Current year m3/yr.	year**	production*	environment(m³yr):	m3/yr	Unaccounted for Water:	
Groundwater								
Surface water								
Public supply								
Recycled water								
Total								

^{*} 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

Resource Usage/Energy efficiency summary Lic No: W0048-01 Year 2013

Table R3 Waste Stream					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)	44.68	8.88		35.8	

Table R4: Energy Au	Table R4: Energy Audit finding recommendations						
Date of audit		Description of Measures proposed	Origin of measures	Predicted energy	Implementation date	Responsibility	Status and comments
			SELECT			, and the same of	
			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:	W0048-01	Year	2013	
Complaints						
		Additional informa	ation			
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					

Table	1 Complaints summary						
			Brief description of complaint (Free txt <20	Corrective action< 20			Further
Date	Category	Other type (please specify)	words)	words	Resolution status	Resolution date	information
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
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 report				
year in Tab	le 2 below	-	No	
*For information on how to report and what				
constitutes an incident	What is an incident			

incidents previous year % reduction/ increase

Table 2 Incidents sur	mmary]											
						Other	Activity in				Preventative			
			Incident category*please			cause(please	progress at time			Corrective action<20	action <20		Resolution	Likelihood of
Date of occurrence	Incident nature	Location of occurrence	refer to guidance	Receptor	Cause of incident	specify)	of incident	Communication	Occurrence	words	words	Resolution status	date	reoccurence
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
Total number of														
incidents current														
year														
Total number of														

WASTE SUMMARY					Lic No:	W0048-01		Year	2013		
_	ON SITE WASTE TREATMENT AND	WASTE TRANSFERS TAB-	TO BE COMPLETED B	Y ALL IPPC AND WA		PRTR facility logo	<u>n</u>		st click to see options		
						,					
						_					
SECTION B- WASTE	ACCEPTED ONTO SITE-TO BE CO	MPLETED BY ALL IPPC AN	D WASTE FACILITIES				Additional Information				
							Additional information	Ī			
							C&D materials (Soil &				
							Stones, Concrete, Bituminous Mixtures, Mixed				
							C&D Waste) are accepted at				
							the facility for screening, segregation, sorting and				
							grading and sold as product				
							for re-use purposes. During 2013, no material was				
							landfilled at the facility. Any				
							materials which were not sold from the facility are				
	ted onto your site for recovery or disposal tured through PRTR reporting)	or treatment prior to recovery of	or disposal within the boun	daries of your facility ?; (waste generated within your	Yes	temporarily stored on site pending sale.				
If yes please enter detail						163	penung sale.	1			
								Ī			
2 Did your site have any n	ejected consignments of waste in the curr	ent reporting year? If yes please	give a brief explanation in	the additional information	ın	SELECT		-			
3 Was w	vaste accepted onto your site that was ger	nerated outside the Republic of I	reland? If yes please state	the quantity in tonnes in	additional information	SELECT					
Table 1 Details of	of waste accepted onto your	site for recovery, disp			vastes generated at your si		vill have been report	 	vorkbook)		
Licenced annual tonnage limit for your	EWC code	Source of waste accepted	Description of waste accepted	Quantity of waste accepted in current	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over	Reason for reduction/ increase from previous	Packaging Content (%)- only applies if the	Disposal/Recovery or treatment operation carried	Quantity of waste	Comments -
site (total			Please enter an	reporting year (tonnes)	previous reporting year (tornies)	previous year +/	reporting year	waste has a packaging	out at your site and the	remaining on	
tonnes/annum)			accurate and detailed description - which			%		component	description of this operation	site at the end of reporting	
			applies to relevant EWC							year (tonnes)	
	European Waste Catalogue EWC codes		code European Waste								
			Catalogue EWC codes								
									" () "		
									R5-Recycling/reclamation or other inorganic materials		Qty remaining
		17- CONSTRUCTION AND DEMOLITION WASTES							which includes soil celaning		on site is the
		(INCLUDING EXCAVATED SOIL							resuling in recovery of the soil and recycling of inorganic		difference of material IN vs.
10000	17 01 01	FROM CONTAMINATED SITES)	concrete	18,941	21,791.43	-13%	Market demand	0%	construction materials	2,246	OUT for 2013
									R5-Recycling/reclamation or		
		17- CONSTRUCTION AND							other inorganic materials which includes soil celaning		Qty remaining on site is the
		DEMOLITION WASTES							resuling in recovery of the soil		difference of
10000	17 05 04	(INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	soil & stones	16,801	15,946.05	5%	Market demand	0%	and recycling of inorganic construction materials	5,779	material IN vs. OUT for 2013
									R5-Recycling/reclamation or other inorganic materials		Qty remaining
		17- CONSTRUCTION AND							which includes soil celaning		on site is the
		DEMOLITION WASTES (INCLUDING EXCAVATED SOIL							resuling in recovery of the soil and recycling of inorganic		difference of material IN vs.
100000	17 03 02	FROM CONTAMINATED SITES)	Bituminous Mixtures	3,548	2,962.89	20%	Market demand	0%	construction materials	1,479	OUT for 2013
SECTION C-TO BE C	COMPLETED BY ALL WASTE FACIL	TIES (waste transfer stati	ons, Composters, Ma	nterial recovery facil	ities etc) EXCEPT LANDFILL SITE	S					

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

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

SELECT

SELECT

WASTE SUMMARY	Lic No:	W0048-01	Year	2013
6 Does your facility have relevant nuisance controls in place?		SELECT	•	

7 Do you have an odour management system in place for your facility? If no why?
8 Do you maintain a sludge register on site?

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 (m3)	Comments
C&D	100,000	0		
			1	

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 pern		Licence permits asbestos	Is there a separate cell for asbestos?	area occupied by	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
E	ntire LF	2000	N/A	No	Private	Inert		No					Not lined

WASTE SUMMARY					Lic No:	W0048-01		Year	2013	
able 4 Environme	ntal monitoring-landfill only	Landfill Manual-Monitoring Star	dards			•	•	•		
	Was leachate monitored in compliance with LD standard in reporting year	compliance with LD standard in	Was SW monitored in compliance with LD standard in reporting year		Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under SS3(A)(5) of WMA been submitted in reporting year	Comments		
es	N/A	Yes	Yes	No	No	No	No	No change in levels since	previous topo survey	
piease reiei to Lanuin	I Manual linked above for relevant Landfi									
Table 5 Capping-La		To be controlled in Standards					-			
Area uncapped*		Area with final cap to LD	Area cannot other	Area with waste that should be permanently capped to date under	What materials are used in the con-	Comments				
Area uncapped*	ndfill only Area with temporary cap		Area capped other	should be permanently	What materials are used in the cap	Comments				
Area uncapped*	ndfill only Area with temporary cap SELECT UNIT	Area with final cap to LD	Area capped other	should be permanently capped to date under	What materials are used in the cap	Comments				
Area uncapped* SELECT UNIT	Area with temporary cap SELECT UNIT es daily cover area	Area with final cap to LD	Area capped other	should be permanently capped to date under	What materials are used in the cap	Comments				
Area uncapped* SELECT UNIT *please note this include Table 6 Leachate-Li	Area with temporary cap SELECT UNIT es daily cover area	Area with final cap to LD Standard m2 ha, a	Area capped other	should be permanently capped to date under	What materials are used in the cap	Comments				

Volume of leachate in reporting year(m3)	,	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	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

	rable / Landilli Gas	-Landilli 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
[Not applicable			SELECT	



Guidance to completing the PRTR workbook

AER Returns Workbook

REFERENCE YEAR 2013 1. FACILITY IDENTIFICATION
Parent Company Name | Marrakesh Limited | Facility Name | Kilmury South |
PRTR Identification Number | W0046 |
Licence Number | W0049-01 3.13 Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

4.13 Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

4.2 Revolting or reclamation of organic substances which are not used as solvents (including compositing and other biological transformation processes).

4.4 Recycling or reclamation of other inorganic materials.

Address 1 Bray

Address 2 Co. Wicklow

Address 3

Address 4

Address 3

Address 4 Waste or IPPC Classes of Activity

No. | class_name

3.1 | Deposit on, in or under land (including landfill). ACR Returns Contact Fani Mumber

AER Returns Contact Fani Mumber

AER Returns Contact Teal position

Fundormental Consultant

AER Returns Contact Teal position

AER Returns Contact Teal Number of Operating Hours in Year Number of Employees User Feedback/Comments Web Address 2. PRTR CLASS ACTIVITIES
Activity Number Activity Name
Landfills
Installations for the disposal of non-hazardous waste Installation
5.0.1 Example 3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)
In 8 appointabler? 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

Guidance on waste imported/accepted onto site

SECTION A: SECTOR SPECIFIC PRTR POLLUTANTS

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

Link to previous years emissions data

SECTION B: REMAINING PRTR POLLUTANTS

	RELEASES TO AIR				Please enter all quantities	in this section in KO	3s		
POLLUTANT				METHOD	QUANTITY				
				Method Used					
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 AIR				Please enter all quantities in this section in KGs				
PC	DLLUTANT		ME	THOD	QUANTITY				
				Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accident	tal) 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: Kilmurry South

Landini.	Taillary Court				=	
Please enter summary data on the quantities of methane flared and / or utilised			Meth	nod Used		
				Designation or	Facility Total Capacity m3	
	T (Total) kg/Year	M/C/E	Method Code	Description	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	(Total Utilising Capacity)
Net methane emission (as reported in Section						
A above)	0.0				N/A	

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

SECTION AT SECTION OF ESTITION WHITE SE	O PARTO	Data on an	indicine informationing of	Stormsunder water or groundwar	ici, conducted as part of your nec	nec requirements, should h	OT DC Submitted under ALICT	ittit itoporting as tins on			
	RELEASES TO WATERS		Please enter all quantities in this section in KGs								
PO	LUTANT				QUANTITY						
			Method Used								
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

Link to previous years emissions data

SECTION B: REMAINING PRTR POLLUTANTS

	RELEASES TO WATERS				Please enter all quantities	in this section in KG	S	
	POLLUTANT		QUANTITY					
				Method Used				
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

^{*} 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					
PO	LLUTANT						QUANTITY	
				Method Used				
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

SECTION A: PRTR POLLUTANTS

OF	FFSITE TRANSFER OF POLLUTANTS DESTINED F	OR WASTE-WATER TRE	EATMENT OR SEWE	ER .	Please enter all quantities				
	POLLUTANT		ME ⁻	THOD	QUANTITY				
				Method Used					
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	

^{*} 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)

DECTION D. REMAINING DEED PAIN EIN	Joio No (as required in your Electice)					_				
OFFSITE TRAN	Please enter all quantities in this section in KGs									
PO	LLUTANT		METHO)D	QUANTITY					
			Met	hod Used						
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accide	ntal) 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# : W0048 | Facility Name : Kilmurry South | Filename : W0048_PRTR 2013.xls | Return Year : 2013 |

14/03/2014 10:47

SECTION A: PRTR POLLUTANTS

		RELEASES TO LAND				Please enter all quantities	is		
	PO	LLUTANT		METHO	D			QUANTITY	
				Method Used					
	No. Annex II	Name	M/C/E	Method Code	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 quantiti	Gs		
PC	LLUTANT	METHOD				QUANTI	TY	
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accide	ental) 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

			Please enter a	II quantities on this sheet in Tonnes								0
	European Waste		Quantity (Tonnes per Year)		Waste Treatment		Method Used	Location of	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	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)
Transfer Destination	Code	Hazardous		Description of Waste	Operation	M/C/E	Method Used	Treatment				
									Multimetals,WFP-WW-09-	Bollarney,The Murrough,Wicklow		
Within the Country	19 12 02	No	35.8	ferrous metal	R4	М	Weighed	Offsite in Ireland	0014-01	Town,0,ireland Fassaroe,Bray,Co		
Within the Country	20 03 01	No	8.88	mixed municipal waste	D15	М	Weighed	Offsite in Ireland	Greenstar,W0053-03	Wicklow,.,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