

Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	W0222-01
Name of site	AES Lusk
Site Location	Coldwinters, Blakescross, Lusk Co. Dublin
NACE Code	3832
Class/Classes of Activity	Classes 11, 12 & 13 of the Third schedule of the WMA 1996-2011; Classes 2, 3, 4, and 13, of the forth Schedule of the WMA act
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 <b>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.</b>	<p>AES Lusk opened in July 2014 when the Waste Licence (W0222-01) was transferred to Advanced Environmental Solutions (Ireland) Ltd. The facility is primarily a waste processing facility for Commercial and Industrial and Construction and Demolition Wastes. In addition mixed municipal wastes (inc recyclables) from households, municipal sources and retail and industrial sources is accepted. This material is unloaded, and stored pending bulk transfer to onward waste processing destinations with Ireland. C&amp;D and C&amp;I wastes are unloaded and any items that unacceptable wastes and are unsuitable for processing are removed. Wastes are then loaded into a hopper and passed via conveyor over a magnet prior to being passed through a trommel (50mm screen). small materials are passed over a star screen where fine particulate granular material is separated from larger light material (Paper, plastic, tiles, ceramics, stones, etc). further mechanical separation separates small clean construction rubble from light paper and plastics suitable for SRF production. The oversize material from the trommelling process is passed through a manual sorting room where concrete, wood, plastic, and metals are sorted. After passing over another overband magnet the remaining residual wastes are bulked for transfer to landfill or sent for energy recovery as low grade RDF. There were no reportable complaints or incidents to the Agency in 2018. The Agency carried out a site visit in April 2018. One non-compliance was recorded during this site inspection relating to non completion of bund testing on a temporary bund. 5 No observations was also made in relation to site procedures, bunding and drainage infrastructure</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.

	8th April 2019
CHARLOTTE GREENE Environmental Officer (or nominated, suitably qualified and experienced deputy)	Date

**AIR-summary template** Lic No: W0222-01 Year 2018

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

No	
----	--

**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 [note AG2](#) and using the basic air monitoring checklist? [AGN2](#)

SELECT	
--------	--

**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

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<b>AIR-summary template</b>		Lic No:	W0222-01	Year	2018
<b>Continuous Monitoring</b>					

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)

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

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

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

SELECT	
SELECT	
SELECT	
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

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<b>AIR-summary template</b>		Lic No: W0222-01	Year: 2018	
<b>Solvent use and management on site</b>				
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	
<b>Table A4: Solvent Management Plan Summary</b> <b>Total VOC Emission limit value</b>		<a href="#">Solvent regulations</a> Please refer to linked solvent regulations to complete table 5 and 6		
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 therof	
			Compliance	
			SELECT	
			SELECT	
<b>Table A5: Solvent Mass Balance summary</b>				
	(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
				Total emission of Solvent to air (kg)
				Total

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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** licenced emissions you **only** need to complete table W1 and or W2 for storm water analysis and visual inspections

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**

No	Storm water was tankered offsite in 2018. The facility was unsuccessful in meeting the Emission limit values which would facilitate discharge of stormwater from the site to the local watercourse. The licensee shall continue to tanker storm water until such time as the water quality of the storm water improves.
Yes	No discharge in 2018 so not applicable

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
SW1	upstream	SELECT	BOD	02/10/2018	High Status: 2.2 Good Status: ≤2.6	N/A	<2	mg/L	SELECT	
SW1	upstream	SELECT	COD	02/10/2018	-	N/A	11	mg/L	SELECT	
SW1	upstream	SELECT	Ammonia (as N)	02/10/2018	High Status: ≤0.04 Good Status: ≤0.065	N/A	<0.02	mg/L	SELECT	
SW1	upstream	SELECT	Chlorides (as Cl)	02/10/2018	-	N/A	47	mg/L	SELECT	
SW1	upstream	SELECT	Suspended Solids	02/10/2018	-	N/A	7	mg/L	SELECT	
SW1	upstream	SELECT	Boron	02/10/2018	-	N/A	37	µg/L	SELECT	
SW1	upstream	SELECT	Beryllium	02/10/2018	-	N/A	<1	µg/L	SELECT	
SW1	upstream	SELECT	Aluminium	02/10/2018	-	N/A	29.3	µg/L	SELECT	
SW1	upstream	SELECT	Chromium	02/10/2018	-	N/A	<3	µg/L	SELECT	
SW1	upstream	SELECT	Manganese	02/10/2018	-	N/A	28.7	µg/L	SELECT	
SW1	upstream	SELECT	Cobalt	02/10/2018	-	N/A	<0.5	µg/L	SELECT	
SW1	upstream	SELECT	Nickel	02/10/2018	-	N/A	1.84	µg/L	SELECT	
SW1	upstream	SELECT	Copper	02/10/2018	5 or 30 <sup>Note2</sup>	N/A	1.38	µg/L	SELECT	
SW1	upstream	SELECT	Zinc	02/10/2018	8 or 50 or 100 <sup>Note3</sup>	N/A	12.1	µg/L	SELECT	
SW1	upstream	SELECT	Arsenic	02/10/2018	25	N/A	2.35	µg/L	SELECT	
SW1	upstream	SELECT	Selenium	02/10/2018	-	N/A	<1	µg/L	SELECT	
SW1	upstream	SELECT	Silver	02/10/2018	-	N/A	<0.5	µg/L	SELECT	
SW1	upstream	SELECT	Cadmium	02/10/2018	-	N/A	<0.5	µg/L	SELECT	
SW1	upstream	SELECT	Tin	02/10/2018	-	N/A	<0.5	µg/L	SELECT	
SW1	upstream	SELECT	Antimony	02/10/2018	-	N/A	<4	µg/L	SELECT	
SW1	upstream	SELECT	Barium	02/10/2018	-	N/A	37.3	µg/L	SELECT	
SW1	upstream	SELECT	Lead	02/10/2018	-	N/A	<1	µg/L	SELECT	
SW1	upstream	SELECT	Mercury	02/10/2018	-	N/A	<0.02	µg/L	SELECT	
SW1	upstream	SELECT	Sodium	02/10/2018	-	N/A	26.4	mg/L	SELECT	
SW1	upstream	SELECT	Magnesium	02/10/2018	-	N/A	10.9	mg/L	SELECT	
SW1	upstream	SELECT	Potassium	02/10/2018	-	N/A	8.01	mg/L	SELECT	
SW1	upstream	SELECT	Calcium	02/10/2018	-	N/A	150	mg/L	SELECT	
SW1	upstream	SELECT	Iron	02/10/2018	-	N/A	0.0659	mg/L	SELECT	
SW1	upstream	SELECT	Total Coliforms	02/10/2018	-	N/A	20	CFU/100ml	SELECT	
SW1	upstream	SELECT	E-Coli	02/10/2018	-	N/A	340	CFU/100ml	SELECT	
SW2	downstream	SELECT	BOD	02/10/2018	High Status: 2.2 Good Status: ≤2.6	N/A	<2	mg/L	SELECT	
SW2	downstream	SELECT	COD	02/10/2018	-	N/A	<10	mg/L	SELECT	
SW2	downstream	SELECT	Ammonia (as N)	02/10/2018	High Status: ≤0.04 Good Status: ≤0.065	N/A	0.02	mg/L	SELECT	
SW2	downstream	SELECT	Chlorides (as Cl)	02/10/2018	-	N/A	46	mg/L	SELECT	
SW2	downstream	SELECT	Suspended Solids	02/10/2018	-	N/A	<5	mg/L	SELECT	
SW2	downstream	SELECT	Boron	02/10/2018	-	N/A	37.9	µg/L	SELECT	
SW2	downstream	SELECT	Beryllium	02/10/2018	-	N/A	<1	µg/L	SELECT	
SW2	downstream	SELECT	Aluminium	02/10/2018	-	N/A	59.1	µg/L	SELECT	
SW2	downstream	SELECT	Chromium	02/10/2018	-	N/A	<3	µg/L	SELECT	
SW2	downstream	SELECT	Manganese	02/10/2018	-	N/A	62.5	µg/L	SELECT	
SW2	downstream	SELECT	Cobalt	02/10/2018	-	N/A	<0.5	µg/L	SELECT	

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SW2	downstream	SELECT	Nickel	02/10/2018	-	N/A	2.43	µg/L	SELECT	
SW2	downstream	SELECT	Copper	02/10/2018	5 or 30 <sup>Note2</sup>	N/A	1.21	µg/L	SELECT	
SW2	downstream	SELECT	Zinc	02/10/2018	8 or 50 or 100 <sup>Note3</sup>	N/A	13.2	µg/L	SELECT	
SW2	downstream	SELECT	Arsenic	02/10/2018	25	N/A	2.43	µg/L	SELECT	
SW2	downstream	SELECT	Selenium	02/10/2018	-	N/A	1.02	µg/L	SELECT	
SW2	downstream	SELECT	Silver	02/10/2018	-	N/A	<1	µg/L	SELECT	
SW2	downstream	SELECT	Cadmium	02/10/2018	-	N/A	<0.5	µg/L	SELECT	
SW2	downstream	SELECT	Tin	02/10/2018	-	N/A	<3	µg/L	SELECT	
SW2	downstream	SELECT	Antimony	02/10/2018	-	N/A	<4	µg/L	SELECT	
SW2	downstream	SELECT	Barium	02/10/2018	-	N/A	<0.5	µg/L	SELECT	
SW2	downstream	SELECT	Lead	02/10/2018	-	N/A	<1	µg/L	SELECT	
SW2	downstream	SELECT	Mercury	02/10/2018	-	N/A	<0.02	µg/L	SELECT	
SW2	downstream	SELECT	Sodium	02/10/2018	-	N/A	26.8	mg/L	SELECT	
SW2	downstream	SELECT	Magnesium	02/10/2018	-	N/A	10.6	mg/L	SELECT	
SW2	downstream	SELECT	Potassium	02/10/2018	-	N/A	7.93	mg/L	SELECT	
SW2	downstream	SELECT	Calcium	02/10/2018	-	N/A	149	mg/L	SELECT	
SW2	downstream	SELECT	Iron	02/10/2018	-	N/A	0.0925	mg/L	SELECT	
SW2	downstream	SELECT	Total Coliforms	02/10/2018	-	N/A	50	CFU/100ml	SELECT	
SW2	downstream	SELECT	E-Coli	02/10/2018	-	N/A	120	CFU/100ml	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 Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
SW3	NA	NA - No Discharge			
			SELECT		

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

Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below	No	Additional information
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	Yes	Results below are receiving waters from the Ballough River upstream and downstream of the facility

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

Emission reference no:	Emission released to	Parameter/ Substance <sup>Note 1</sup>	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof <sup>Note 2</sup>	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
SW-3	Water	ph	discrete	Quarterly	weekly	6.0 – 9.0	All values < ELV	8.4	pH units	No	pH Meter (Electrode)	APHA / AWWA "Standard Methods"	Method 4500 H+B		
SW-3	Water	Conductivity	discrete	Quarterly	weekly	1000		780.5	µS/cm @20°C	No	Conductivity Meter (Electrode)	APHA / AWWA "Standard Methods"	2510B		
SW-3	Water	COD	discrete	Quarterly	weekly	30	All values < ELV	52.4	mg/L	No	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	5220D, Closed Reflux, colourimetric method		
SW-3	Water	Chloride	discrete	Quarterly	weekly	-		28.8	mg/l	No	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	Method 4500-CL-E		
SW-3	Water	Suspended Solids	discrete	Quarterly	Quarterly	25	All values < ELV	28	mg/L	No	Gravimetric analysis	APHA / AWWA "Standard Methods"	2540D		

SW-3	Water	Ammonia as N	discrete	Quarterly	Quarterly	-		6.9	mg/L	No	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	4500-NH3
SW-3	Water	Total Nitrogen	discrete	Quarterly	Quarterly	-		14.4	mg/L	No	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	4500-NO2B
SW-3	Water	Oils Fats & Greases	discrete	Quarterly	Quarterly	10	All values < ELV	4	mg/L	No	Gravimetric analysis	APHA / AWWA "Standard Methods"	5520-B

Note 1: European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009).

Note 2: EPA Environmental Quality Standard for Surface Waters

Note 3: Water Quality Standard = 1988 Statutory Instrument No. 293, European Communities (Quality of Salmonid Waters) Regulations 1988.

If yes please summarise your continuous monitoring data below in Table W4 and compare it to

Did continuous monitoring equipment experience downtime? If yes please record downtime in

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

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

SELECT	
SELECT	
SELECT	

Table W4: Summary of average emissions -continuous monitoring

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

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)

Yes	
3 years	
Yes	
3	
1	Bunds were tested in 2016. additional bunds introduced to the site in 2017 scheduled for testing in 2018.
2	
Yes	
0	
0	
Yes	
N/A	
N/A	

- 2 Please provide integrity testing frequency period
- 3 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?

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)
Bund 1 Steel Oil Bund	other (Steel)	Steel Bunded Container	Oil and Waste garage oils	1,152 L	1,100 L	Hydraulic test		06/03/2017	Yes	Pass				
	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 BS8007/EPA Guidance?

[bundling and storage guidelines](#)

SELECT	
SELECT	
SELECT	

- 15 Are channels/transfer systems to remote containment systems tested?
- 16 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 within the integrity test period as specified**

Yes	
3 years	Completed January 2017

- 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)

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)
Storm water Pipeline	Storm	pvc	No		CCTV	Yes	Pass			2019	SELECT
Storm water Interceptor 1	Storm	Fibreglass Klargestor	No		Hydraulic	Yes	Pass			2019	
Storm Water Interceptor 2	Storm	concrete	No		Hydraulic	Yes	Pass			2019	

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

		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 <a href="#">Groundwater monitoring template</a>	No	
5	Is the contamination related to operations at the facility (either current and/or historic)	Yes	Historic
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	Yes	
7	Please specify the proposed time frame for the remediation strategy	N/A	Completed
8	Is there a licence condition to carry out/update ELRA for the site?	Yes	
9	Has any type of risk assessment been carried out for the site?	Yes	TIER III Risk Assessment completed and submitted to the Agency
10	Has a Conceptual Site Model been developed for the site?	Yes	TIER III Risk Assessment completed and submitted to the Agency
11	Have potential receptors been identified on and off site?	Yes	
12	Is there evidence that contamination is migrating offsite?	No	

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

Remediation works commenced in November 2016 and the completed site handover file was submitted to the Agency in 2017. Details on the site remediation are retained on file on site and have been lodged to the Eden portal. The Compliance Investigation raised by the Agency to encourage the site to progress the remediation actions has been closed by the Agency. Results of quarterly monitoring over the course of 2018 indicated that the in situ treatment of residual contamination is taking effect and it is anticipated that over the course of 2019 further improvements in residual concentrations will be evident

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTVs*	IGV	Upward trend in pollutant concentration over last 5 years of monitoring data
02/10/2018	GW-1	pH	APHA 2012 4500 H&B	Annual	8.3	8.3	pH units	6.5-9.5	6.5-9.5	no
02/10/2018	GW-1	Conductivity @ 25°C	APHA 2012 2510B	Annual	482	482.0	µS/cm	800-2975	1,000	no
02/10/2018	GW-1	COD	APHA, 2012 5220D	Annual	<10	<10	mg/l	-	-	no
02/10/2018	GW-1	Ammonia NH3-N	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.03	0.03	mg/l	-	-	no
02/10/2018	GW-1	Ammonium as NH4	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.038571429	0.038571429	mg/l	0.065-0.175	0.15	no
02/10/2018	GW-1	Nitrate	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	18	18	mg/l	37.5	25	yes
02/10/2018	GW-1	Total Nitrogen	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	20	20	mg/l	-	-	yes
02/10/2018	GW-1	Chloride	APHA 2012 4500-CL-E	Annual	45	45	mg/l	187.5	30	no
02/10/2018	GW-1	Boron (dissolved)	ICP-MS	Annual	47.1	47.1	µg/l	750	1000	no
02/10/2018	GW-1	Beryllium (diss)	ICP-MS	Annual	<0.1	<0.1	µg/l	-	-	no
02/10/2018	GW-1	Aluminium (diss)	ICP-MS	Annual	<10	<10	µg/l	150	200	no
02/10/2018	GW-1	Chromium (diss)	ICP-MS	Annual	<1	<1	µg/l	37.5	30	no
02/10/2018	GW-1	Manganese (diss)	ICP-MS	Annual	<3	<3	µg/l	-	50	no
02/10/2018	GW-1	Cobalt (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	no
02/10/2018	GW-1	Nickel (diss)	ICP-MS	Annual	0.817	0.817	µg/l	15	20	no
02/10/2018	GW-1	Copper (diss)	ICP-MS	Annual	0.392	0.392	µg/l	1500	30	no
02/10/2018	GW-1	Zinc (diss)	ICP-MS	Annual	2.14	2.14	µg/l	-	100	no
02/10/2018	GW-1	Arsenic (diss)	ICP-MS	Annual	0.928	0.928	µg/l	7.5	10	no
02/10/2018	GW-1	Selenium (diss)	ICP-MS	Annual	1.47	1.47	µg/l	-	-	no
02/10/2018	GW-1	Silver (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	no
02/10/2018	GW-1	Cadmium (diss)	ICP-MS	Annual	<0.08	<0.08	µg/l	3.75	5	no
02/10/2018	GW-1	Tin (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	no
02/10/2018	GW-1	Antimony (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	no
02/10/2018	GW-1	Barium (diss)	ICP-MS	Annual	120	120	µg/l	-	100	no
02/10/2018	GW-1	Lead (diss)	ICP-MS	Annual	<0.2	<0.2	µg/l	18.75	10	no
02/10/2018	GW-1	Sodium (diss)	ICP-MS	Annual	21.2	21.2	µg/l	150	150	no
02/10/2018	GW-1	Magnesium (diss)	ICP-MS	Annual	9.33	9.33	µg/l	-	50	no
02/10/2018	GW-1	Potassium (diss)	ICP-MS	Annual	5.15	5.15	mg/l	-	5	no
02/10/2018	GW-1	Calcium (diss)	ICP-MS	Annual	146	146	mg/l	-	200	no
02/10/2018	GW-1	Iron (diss)	ICP-MS	Annual	<0.019	<0.019	mg/l	-	0.2	no
02/10/2018	GW-1	Mercury (diss)	ICP-MS	Annual	<0.01	<0.01	µg/l	0.75	-	no
02/10/2018	GW-1	E. Coli	MTM025	Annual	<1	<1	cfu/100ml	-	0	no
02/10/2018	GW-1	Coliforms	MTM025	Annual	<1	<1	cfu/100ml	-	0	no
02/10/2018	GW-1	US EPA	GC-FID, GC-MS based on USEPA 524.2 method	Annual	<1	<1	µg/l	-	-	no
02/10/2018	GW-1	Dichloromethane		Annual	<3	<3	µg/l	-	-	no
02/10/2018	GW-1	Chloroform		Annual	<1	<1	µg/l	-	12	no

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++ maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

+ where average indicates arithmetic mean

++ maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

**Table 2: Downgradient Groundwater monitoring results**

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTVs*	IGV	Upward trend in pollutant concentration over last 5 years of monitoring data
02/10/2018	GW-2A	pH	APHA 2012 4500 H&B	Annual	7.6	7.6	pH units	6.5-9.5	6.5-9.5	no
02/10/2018	GW-2A	Conductivity @ 25°C	APHA 2012 2510B	Annual	773	773	µS/cm	800-1875	1,000	no
02/10/2018	GW-2A	COD	APHA,2012 5220D	Annual	<10	<10	mg/l	-	-	no
02/10/2018	GW-2A	Ammonia NH3-N	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.08	0.08	mg/l	-	-	no
02/10/2018	GW-2A	Ammonium as NH4	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.102857143	0.102857143	mg/l	0.065-0.175	0.15	no
02/10/2018	GW-2A	Nitrate	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	6.6	6.6	mg/l	37.5	25	no
02/10/2018	GW-2A	Total Nitrogen	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	6.6	6.6	mg/l	-	-	no
02/10/2018	GW-2A	Chloride	APHA 2012 4500-CL-E	Annual	56	56	mg/l	187.5	30	no
02/10/2018	GW-2A	Boron (dissolved)	ICP-MS	Annual	29.2	29.2	µg/l	750	1000	no
02/10/2018	GW-2A	Beryllium (diss)	ICP-MS	Annual	<0.1	<0.1	µg/l	-	-	no
02/10/2018	GW-2A	Aluminium (diss)	ICP-MS	Annual	<10	<10	µg/l	150	200	no
02/10/2018	GW-2A	Chromium (diss)	ICP-MS	Annual	<1	<1	µg/l	37.5	30	no
02/10/2018	GW-2A	Manganese (diss)	ICP-MS	Annual	<3	<3	µg/l	-	50	no
02/10/2018	GW-2A	Cobalt (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	no
02/10/2018	GW-2A	Nickel (diss)	ICP-MS	Annual	1.58	1.58	µg/l	15	20	no
02/10/2018	GW-2A	Copper (diss)	ICP-MS	Annual	0.754	0.754	µg/l	1500	30	no
02/10/2018	GW-2A	Zinc (diss)	ICP-MS	Annual	<1	<1	µg/l	-	100	no
02/10/2018	GW-2A	Arsenic (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	7.5	-	no
02/10/2018	GW-2A	Selenium (diss)	ICP-MS	Annual	1.08	1.08	µg/l	-	-	no
02/10/2018	GW-2A	Silver (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	no
02/10/2018	GW-2A	Cadmium (diss)	ICP-MS	Annual	<0.08	<0.08	µg/l	8.75	5	no
02/10/2018	GW-2A	Tin (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	no
02/10/2018	GW-2A	Antimony (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	no
02/10/2018	GW-2A	Barium (diss)	ICP-MS	Annual	116	116	µg/l	-	100	no
02/10/2018	GW-2A	Lead (diss)	ICP-MS	Annual	<0.2	<0.2	µg/l	18.75	10	no
02/10/2018	GW-2A	Sodium (diss)	ICP-MS	Annual	32.4	32.4	µg/l	150	150	no
02/10/2018	GW-2A	Magnesium (diss)	ICP-MS	Annual	14.7	14.7	µg/l	-	50	no
02/10/2018	GW-2A	Potassium (diss)	ICP-MS	Annual	4.17	4.17	µg/l	-	5	no
02/10/2018	GW-2A	Calcium (diss)	ICP-MS	Annual	110	110	µg/l	-	200	no
02/10/2018	GW-2A	Iron (diss)	ICP-MS	Annual	<0.019	<0.019	µg/l	-	0.2	no
02/10/2018	GW-2A	Mercury (diss)	ICP-MS	Annual	<0.01	<0.01	µg/l	0.75	-	no
02/10/2018	GW-2A	E. Coli	MTM025	Annual	<1	<1	cfu/100ml	-	0	no
02/10/2018	GW-2A	Coliforms	MTM025	Annual	1100	1100	cfu/100ml	-	0	no
02/10/2018	GW-2A	US EPA	GC-FID, GC-MS based on USEPA 524.2 method	Annual	<1	<1	µg/l	-	-	no
02/10/2018	GW-2A	Dichloromethane	GC-FID, GC-MS based on USEPA 524.2 method	Annual	<3	<3	µg/l	-	-	no
02/10/2018	GW-2A	Chloroform	GC-FID, GC-MS based on USEPA 524.2 method	Annual	<1	<1	µg/l	-	12	no

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Groundwater/Soil monitoring template										
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Year 2018										
Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
02/10/2018	GW-3	pH	APHA 2012 4500 H&B	Annual	7.4	7.4	pH units	6.5-9.5	6.5-9.5	data not available
02/10/2018	GW-3	Conductivity @ 25°C	APHA 2012 2510B	Annual	705	705	µS/cm	800-1875	1,000	data not available
02/10/2018	GW-3	COD	APHA,2012 5220D	Annual	<10	<10	mg/l	-	-	data not available
02/10/2018	GW-3	Ammonia NH3-N	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.48	0.48	mg/l	-	-	data not available
02/10/2018	GW-3	Ammonium as NH4	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.62	0.62	mg/l	0.065-0.175	0.15	data not available
02/10/2018	GW-3	Nitrate	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	<0.02	<0.02	mg/l	37.5	25	data not available
02/10/2018	GW-3	Total Nitrogen	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	<1.00	<1.00	mg/l	-	-	data not available
02/10/2018	GW-3	Chloride	APHA 2012 4500-CL-E	Annual	42	42	mg/l	187.5	30	data not available
02/10/2018	GW-3	Boron (dissolved)	ICP-MS	Annual	33.9	33.9	µg/l	750	1000	data not available
02/10/2018	GW-3	Beryllium (diss)	ICP-MS	Annual	<0.1	<0.1	µg/l	-	-	data not available
02/10/2018	GW-3	Aluminium (diss)	ICP-MS	Annual	<10	<10	µg/l	150	200	data not available
02/10/2018	GW-3	Chromium (diss)	ICP-MS	Annual	<1	<1	µg/l	37.5	30	data not available
02/10/2018	GW-3	Manganese (diss)	ICP-MS	Annual	<3	<3	µg/l	-	50	data not available
02/10/2018	GW-3	Cobalt (diss)	ICP-MS	Annual	1.08	1.08	µg/l	-	-	data not available
02/10/2018	GW-3	Nickel (diss)	ICP-MS	Annual	13.6	13.6	µg/l	15	20	data not available
02/10/2018	GW-3	Copper (diss)	ICP-MS	Annual	0.489	0.489	µg/l	1500	30	data not available
02/10/2018	GW-3	Zinc (diss)	ICP-MS	Annual	5.23	5.23	µg/l	-	100	data not available
02/10/2018	GW-3	Arsenic (diss)	ICP-MS	Annual	2.41	2.41	µg/l	7.5	10	data not available
02/10/2018	GW-3	Selenium (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-3	Silver (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	data not available
02/10/2018	GW-3	Cadmium (diss)	ICP-MS	Annual	0.0927	0.0927	µg/l	3.75	5	data not available
02/10/2018	GW-3	Tin (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-3	Antimony (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-3	Barium (diss)	ICP-MS	Annual	186	186	µg/l	-	100	data not available
02/10/2018	GW-3	Lead (diss)	ICP-MS	Annual	<0.2	<0.2	µg/l	18.75	-	data not available
02/10/2018	GW-3	Sodium (diss)	ICP-MS	Annual	24.6	24.6	µg/l	150	150	data not available
02/10/2018	GW-3	Magnesium (diss)	ICP-MS	Annual	12.2	12.2	µg/l	-	50	data not available
02/10/2018	GW-3	Potassium (diss)	ICP-MS	Annual	2.72	2.72	mg/l	-	5	data not available
02/10/2018	GW-3	Calcium (diss)	ICP-MS	Annual	110	110	mg/l	-	200	data not available
02/10/2018	GW-3	Iron (diss)	ICP-MS	Annual	0.0384	0.0384	mg/l	-	0.2	data not available
02/10/2018	GW-3	Mercury (diss)	ICP-MS	Annual	<0.01	<0.01	µg/l	0.75	-	data not available
02/10/2018	GW-3	E. Coli	MTM025	Annual	25	25	cfu/100ml	-	0	data not available
02/10/2018	GW-3	Coliforms	MTM025	Annual	42	42	cfu/100ml	-	0	data not available
02/10/2018	GW-3	US EPA	GC-FID, GC-MS based on USEPA 524.2 method	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-3	Dichloromethane		Annual	<3	<3	µg/l	-	-	data not available
02/10/2018	GW-3	Chloroform		Annual	<1	<1	µg/l	-	12	data not available

  

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration+++	Average Concentration+	unit	GTV's*	IGV	Upward trend in pollutant concentration over last 5 years of monitoring data
02/10/2018	GW-4	pH	APHA 2012 4500 H&B	Annual	7.6	7.6	pH units	6.5-9.5	6.5-9.5	data not available
02/10/2018	GW-4	Conductivity @ 25°C	APHA 2012 2510B	Annual	483	483	µS/cm	800-1875	1,000	data not available
02/10/2018	GW-4	COD	APHA,2012 5220D	Annual	27	27	mg/l	-	-	data not available
02/10/2018	GW-4	Ammonia NH3-N	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	2	2	mg/l	-	-	data not available
02/10/2018	GW-4	Ammonium as NH4	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	2.57	2.57	mg/l	0.065-0.175	0.15	data not available
02/10/2018	GW-4	Nitrate	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	<0.02	<0.02	mg/l	37.5	25	data not available
02/10/2018	GW-4	Total Nitrogen	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	3.1	3.1	mg/l	-	-	data not available
02/10/2018	GW-4	Chloride	APHA 2012 4500-CL-E	Annual	35	35	mg/l	187.5	30	data not available
02/10/2018	GW-4	Boron (dissolved)	ICP-MS	Annual	56.4	56.4	µg/l	750	1000	data not available
02/10/2018	GW-4	Beryllium (diss)	ICP-MS	Annual	<0.1	<0.1	µg/l	-	-	data not available
02/10/2018	GW-4	Aluminium (diss)	ICP-MS	Annual	<10	<10	µg/l	150	200	data not available

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02/10/2018	GW-4	Chromium (diss)	ICP-MS	Annual	<1	<1	µg/l	37.5	30	data not available
02/10/2018	GW-4	Manganese (diss)	ICP-MS	Annual	190	190	µg/l	-	50	data not available
02/10/2018	GW-4	Cobalt (diss)	ICP-MS	Annual	1.27	1.27	µg/l	-	-	data not available
02/10/2018	GW-4	Nickel (diss)	ICP-MS	Annual	20.5	20.5	µg/l	15	20	data not available
02/10/2018	GW-4	Copper (diss)	ICP-MS	Annual	8.66	8.66	µg/l	1500	30	data not available
02/10/2018	GW-4	Zinc (diss)	ICP-MS	Annual	15.8	15.8	µg/l	-	100	data not available
02/10/2018	GW-4	Arsenic (diss)	ICP-MS	Annual	33.5	33.5	µg/l	7.5	10	data not available
02/10/2018	GW-4	Selenium (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-4	Silver (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	data not available
02/10/2018	GW-4	Cadmium (diss)	ICP-MS	Annual	0.442	0.442	µg/l	3.75	5	data not available
02/10/2018	GW-4	Tin (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-4	Antimony (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-4	Barium (diss)	ICP-MS	Annual	32	32	µg/l	-	100	data not available
02/10/2018	GW-4	Lead (diss)	ICP-MS	Annual	<0.2	<0.2	µg/l	18.75	10	data not available
02/10/2018	GW-4	Sodium (diss)	ICP-MS	Annual	30.1	30.1	µg/l	150	150	data not available
02/10/2018	GW-4	Magnesium (diss)	ICP-MS	Annual	2.83	2.83	µg/l	-	50	data not available
02/10/2018	GW-4	Potassium (diss)	ICP-MS	Annual	13.1	13.1	mg/l	-	5	data not available
02/10/2018	GW-4	Calcium (diss)	ICP-MS	Annual	61.9	61.9	mg/l	-	200	data not available
02/10/2018	GW-4	Iron (diss)	ICP-MS	Annual	0.404	0.404	mg/l	-	0.2	data not available
02/10/2018	GW-4	Mercury (diss)	ICP-MS	Annual	<0.01	<0.01	µg/l	0.75	-	data not available
02/10/2018	GW-4	E. Coli	MTM025	Annual	<1	<1	cfu/100ml	-	0	data not available
02/10/2018	GW-4	Coliforms	MTM025	Annual	9900	9900	cfu/100ml	-	0	data not available
02/10/2018	GW-4	US EPA		Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-4	Dichloromethane	GC-FID, GC-MS Based on USEPA 524.2 method	Annual	<3	<3	µg/l	-	-	data not available
02/10/2018	GW-4	Chloroform		Annual	<1	<1	µg/l	-	12	data not available

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTVs*	IGV	Upward trend in pollutant concentration over last 5 years of monitoring data
02/10/2018	GW-5	pH	APHA 2012 4500 H8B	Annual	7.5	7.5	pH units	6.5-9.5	6.5-9.5	data not available
02/10/2018	GW-5	Conductivity @ 25°C	APHA 2012 2510B	Annual	485	485	µS/cm	800-1875	1000	data not available
02/10/2018	GW-5	COD	APHA 2012 5220D	Annual	21	21	mg/l	-	-	data not available
02/10/2018	GW-5	Ammonia NH3-N	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	2.6	2.6	mg/l	-	-	data not available
02/10/2018	GW-5	Ammonium as NH4	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	3.34	3.34	mg/l	0.065	0.15	data not available
02/10/2018	GW-5	Nitrate	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	<0.02	<0.02	mg/l	37.5	25	data not available
02/10/2018	GW-5	Total Nitrogen	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	3.5	3.5	mg/l	-	-	data not available
02/10/2018	GW-5	Chloride	APHA 2012 4500-CL-E	Annual	51	51	mg/l	187.5	30	data not available
02/10/2018	GW-5	Boron (dissolved)	ICP-MS	Annual	41.1	41.1	µg/l	750	1000	data not available
02/10/2018	GW-5	Beryllium (diss)	ICP-MS	Annual	<0.1	<0.1	µg/l	-	-	data not available
02/10/2018	GW-5	Aluminium (diss)	ICP-MS	Annual	<10	<10	µg/l	150	200	data not available
02/10/2018	GW-5	Chromium (diss)	ICP-MS	Annual	<1	<1	µg/l	37.5	30	data not available
02/10/2018	GW-5	Manganese (diss)	ICP-MS	Annual	284	284	µg/l	-	50	data not available
02/10/2018	GW-5	Cobalt (diss)	ICP-MS	Annual	6.38	6.38	µg/l	-	-	data not available
02/10/2018	GW-5	Nickel (diss)	ICP-MS	Annual	29.1	29.1	µg/l	15	20	data not available
02/10/2018	GW-5	Copper (diss)	ICP-MS	Annual	1.51	1.51	µg/l	1500	30	data not available
02/10/2018	GW-5	Zinc (diss)	ICP-MS	Annual	6.67	6.67	µg/l	-	100	data not available
02/10/2018	GW-5	Arsenic (diss)	ICP-MS	Annual	9.08	9.08	µg/l	7.5	10	data not available
02/10/2018	GW-5	Selenium (diss)	ICP-MS	Annual	1.04	1.04	µg/l	-	-	data not available
02/10/2018	GW-5	Silver (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	data not available
02/10/2018	GW-5	Cadmium (diss)	ICP-MS	Annual	0.328	0.328	µg/l	3.75	5	data not available
02/10/2018	GW-5	Tin (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-5	Antimony (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-5	Barium (diss)	ICP-MS	Annual	49.8	49.8	µg/l	-	100	data not available
02/10/2018	GW-5	Lead (diss)	ICP-MS	Annual	<0.2	<0.2	µg/l	18.75	10	data not available
02/10/2018	GW-5	Sodium (diss)	ICP-MS	Annual	36	36	µg/l	150	150	data not available
02/10/2018	GW-5	Magnesium (diss)	ICP-MS	Annual	0.752	0.752	µg/l	-	50	data not available
02/10/2018	GW-5	Potassium (diss)	ICP-MS	Annual	12.5	12.5	mg/l	-	5	data not available
02/10/2018	GW-5	Calcium (diss)	ICP-MS	Annual	51.8	51.8	mg/l	-	200	data not available
02/10/2018	GW-5	Iron (diss)	ICP-MS	Annual	0.195	0.195	mg/l	-	0.2	data not available
02/10/2018	GW-5	Mercury (diss)	ICP-MS	Annual	<0.01	<0.01	µg/l	0.75	-	data not available
02/10/2018	GW-5	E. Coli	MTM025	Annual	<1	<1	cfu/100ml	-	0	data not available
02/10/2018	GW-5	Coliforms	MTM025	Annual	>10000	>10000	cfu/100ml	-	0	data not available
02/10/2018	GW-5	US EPA		Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-5	Dichloromethane	GC-FID, GC-MS Based on USEPA 524.2 method	Annual	<3	<3	µg/l	-	-	data not available
02/10/2018	GW-5	Chloroform		Annual	<1	<1	µg/l	-	12	data not available

Groundwater/Soil monitoring template										
Lic No: W0222-01										
Year 2018										
Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	IGV	Upward trend in pollutant concentration over last 5 years of monitoring data
02/10/2018	GW-6	pH	APHA 2012 4500 H&B	Annual	7.7	7.7	pH units	6.5-9.5	6.5-9.5	data not available
02/10/2018	GW-6	Conductivity @ 25°C	APHA 2012 2510B	Annual	965	965	µS/cm	800-1875	1,000	data not available
02/10/2018	GW-6	COD	APHA,2012 5220D	Annual	<10	<10	mg/l	-	-	data not available
02/10/2018	GW-6	Ammonia NH3-N	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.4	0.4	mg/l	-	-	data not available
02/10/2018	GW-6	Ammonium as NH4	APHA 2012 4500-NH3 and bluebook Ammonia in waters 1981	Annual	0.51	0.51	mg/l	0.065-0.175	0.15	data not available
02/10/2018	GW-6	Nitrate	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	2.7	2.7	mg/l	37.5	25	data not available
02/10/2018	GW-6	Total Nitrogen	APHA 2012 4500-NO3-B, Colorimetric Method	Annual	3.4	3.4	mg/l	-	-	data not available
02/10/2018	GW-6	Chloride	APHA 2012 4500-CL-E	Annual	78	78	mg/l	187.5	30	data not available
02/10/2018	GW-6	Boron (dissolved)	ICP-MS	Annual	53.4	53.4	µg/l	750	1000	data not available
02/10/2018	GW-6	Beryllium (diss)	ICP-MS	Annual	<0.1	<0.1	µg/l	-	-	data not available
02/10/2018	GW-6	Aluminium (diss)	ICP-MS	Annual	<10	<10	µg/l	150	200	data not available
02/10/2018	GW-6	Chromium (diss)	ICP-MS	Annual	<1	<1	µg/l	37.5	30	data not available
02/10/2018	GW-6	Manganese (diss)	ICP-MS	Annual	2840	2840	µg/l	-	50	data not available
02/10/2018	GW-6	Cobalt (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	data not available
02/10/2018	GW-6	Nickel (diss)	ICP-MS	Annual	2.98	2.98	µg/l	15	20	data not available
02/10/2018	GW-6	Copper (diss)	ICP-MS	Annual	1.21	1.21	µg/l	1500	30	data not available
02/10/2018	GW-6	Zinc (diss)	ICP-MS	Annual	3.71	3.71	µg/l	-	100	data not available
02/10/2018	GW-6	Arsenic (diss)	ICP-MS	Annual	2.4	2.4	µg/l	7.5	10	data not available
02/10/2018	GW-6	Selenium (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-6	Silver (diss)	ICP-MS	Annual	<0.5	<0.5	µg/l	-	-	data not available
02/10/2018	GW-6	Cadmium (diss)	ICP-MS	Annual	0.189	0.189	µg/l	3.75	5	data not available
02/10/2018	GW-6	Tin (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-6	Antimony (diss)	ICP-MS	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-6	Barium (diss)	ICP-MS	Annual	238	238	µg/l	-	100	data not available
02/10/2018	GW-6	Lead (diss)	ICP-MS	Annual	<0.2	<0.2	µg/l	18.75	10	data not available
02/10/2018	GW-6	Sodium (diss)	ICP-MS	Annual	35.6	35.6	µg/l	150	50	data not available
02/10/2018	GW-6	Magnesium (diss)	ICP-MS	Annual	9.77	9.77	µg/l	-	50	data not available
02/10/2018	GW-6	Potassium (diss)	ICP-MS	Annual	14.4	14.4	mg/l	-	5	data not available
02/10/2018	GW-6	Calcium (diss)	ICP-MS	Annual	156	156	mg/l	-	200	data not available
02/10/2018	GW-6	Iron (diss)	ICP-MS	Annual	<0.019	<0.019	mg/l	-	0.2	data not available
02/10/2018	GW-6	Mercury (diss)	ICP-MS	Annual	<0.01	<0.01	µg/l	0.75	-	data not available
02/10/2018	GW-6	E. Coli	MTM025	Annual	<1	<1	cfu/100ml	-	0	data not available
02/10/2018	GW-6	Coliforms	MTM025	Annual	3400	3400	cfu/100ml	-	0	data not available
02/10/2018	GW-6	US EPA	GC-FID, GC-MS based on USEPA 524.2 method	Annual	<1	<1	µg/l	-	-	data not available
02/10/2018	GW-6	Dichloromethane		Annual	<3	<3	µg/l	-	-	data not available
02/10/2018	GW-6	Chloroform		Annual	<1	<1	µg/l	-	12	data not available

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**Groundwater/Soil monitoring template** Lic No: W0222-01 Year 2018

\*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 by the EPA. [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 the link in G31). [Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\)](#)

\*\* 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). [Surface water EQS](#) [Groundwater regulations/ GTV's](#) [Drinking water \(private supply\) standards](#)

Table 3: Soil results

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

GW2 was lost during site recommissioning . A new replacement groundwater monitoring well (GW-2A) was installed following approval by the Agency in February 2015.

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Environmental Liabilities template		Lic No:	W0222-01	Year	2018
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[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

		Commentary	
1	ELRA initial agreement status	Submitted and agreed by EPA	
2	ELRA review status	Review required and completed	ELRA agreed in 2014, Review carried out following remediation works completion
3	Amount of Financial Provision cover required as determined by the latest ELRA	€459,482.40	Under Review subject to agreement with the Agency 2018
4	Financial Provision for ELRA status	Submitted and agreed by EPA	Under Review subject to agreement with the Agency 2018
5	Financial Provision for ELRA - amount of cover	See above	Under Review subject to agreement with the Agency 2018
6	Financial Provision for ELRA - type	Bond	Under Review subject to agreement with the Agency 2018
7	Financial provision for ELRA expiry date	30/06/2017	Under Review subject to agreement with the Agency 2018
8	Closure plan initial agreement status	Closure plan submitted and agreed by EPA	Under Review subject to agreement with the Agency 2018
9	Closure plan review status	Review required and completed	Under Review subject to agreement with the Agency 2018
10	Financial Provision for Closure status	Submitted and agreed by EPA	Under Review subject to agreement with the Agency 2018
11	Financial Provision for Closure - amount of cover	€419,103.10	Under Review subject to agreement with the Agency 2018
12	Financial Provision for Closure - type	bond	Under Review subject to agreement with the Agency 2018
13	Financial provision for Closure expiry date	30/06/2017	Under Review subject to agreement with the Agency 2018

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Environmental Management Programme/Continuous Improvement Programme template		Lic No:	W0222-01	Year	2018
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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	The Licensee holds a NSAI accredited Integrated Management System incorporating Environmental (to ISO 14001:2015), Health & Safety (OHSAS 18001:2007) and Quality (ISO9001:2015). These management systems are maintained through onsite cooperation with the compliance officers and dedicated systems coordinators. They are audited at a minimum on a bi-annual basis internally and externally on an annual basis.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	Yes an aspects register is maintained on site and updated on an annual review basis
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes	Objectives and targets are set on an annual basis and progress against targets is reviewed quarterly
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	A file is available to view by members of the public at the facility if requested

#### Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Air	Improve air quality with the Operations buildings	100	Repair the existing Dust suppression system within the buildings	Section Head	Reduced emissions
Reduction of emissions to Air	Improve air quality with the Operations buildings	100	Install new Roller shutter doors in Shed 1	Individual	Reduced emissions
Groundwater protection	Remediate identified contaminated land to the southeastern corner of the site.	97	Remedial Action plan was implemented in Autumn 2016, residual contamination is being treated in situ. Quarterly monitoring was carried out in 2017, 2018 and will continue in 2019. 2 rounds of in situ treatment to completed in 2017.	Section Head	Remediation of contamination on site.
Groundwater protection	Carry out interim repairs to yard hard stand.	75	Ongoing maintenance of yard hardstand onsite to ensure no new damage to yard surface	Section Head	Increased compliance with licence conditions
Energy Efficiency/Utility conservation	Route Optimisation Project	50	Carry out a detailed review of all waste collection routes at AES lusk to ensure efficiencies in energy consumption. Re	Individual	Reduced emissions
Reduction of emissions to Wastewater	Obtain suitable storm water quality to allow the site to discharge directly to the Ballough river	50	Carry out review of storm water network onsite and carryout yard/materials handing improvements to ensure water quality is not affected	Individual	Increased compliance with licence conditions
Waste reduction/Raw material usage efficiency	Increase Recovery rates onsite to 99% (were 97% by end 2018)	80	Carry out review of waste processing infrastructure to improve recovery rates and improve the quality of C & D fines material	Individual	Improved Environmental Management Practices

<b>Noise monitoring summary report</b>	Lic No: W0222-01	Year	2018
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- 1 Was noise monitoring a licence requirement for the AER period?  
If yes please fill in table N1 noise summary below
- 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](#)
- 3 Does your site have a noise reduction plan
- 4 When was the noise reduction plan last updated?
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

Yes
Yes
No
No
No

**Table N1: Noise monitoring summary**

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA <sub>eq</sub>	LA <sub>10</sub>	LA <sub>90</sub>	LA <sub>max</sub>	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 site compliant with noise limits (day/evening/night)?
29/05/2018	30min	N1		63	65	57	73	No	No	Site – Humm of operations from inside reception shed. Rattling of metal from shed was audible throughout round 1. Reversing alarms from plant machinery within reception shed occasionally audible. Lorrie sounding Horn (LAFmax) Lorries moving within the site loading and unloading skips. Background – Passing road traffic on the R132 (60m) continuous and dominant during round 3. Crows and birds in overhead trees.	Yes
29/05/2018	30min	N1		64	67	61	77	No	No		
29/05/2018	30min	N1		63	66	55	78	No	No		
29/05/2018	30min	N2		67	71	55	91	No	No	Site –Traffic entering/exiting site and passing close to monitoring position (15m). Trucks idling at the weighbridge. Reversing alarms, activity within reception shed (50/100m) faintly audible. Yard sweeper in operation during round 3. Background – Road traffic on R132 (50m) audible – continuous. People talking in neighbouring yard during round 3.	Yes
29/05/2018	30min	N2		64	67	57	78	No	No		
29/05/2018	30min	N2		66	69	57	90	No	No		

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29/05/2018	30min	N3		68	72	63	88	No	No	Site – Waste segregation operations within reception shed (10m). Truck loading and offloading skips in front yard and traffic moving about with intermittent reversing alarms. Yard sweeper in use during round 2. Background – Traffic faintly audible. Birds singing and crows overhead. Pump in use during rounds 2 and 3.	Yes
27/06/2018	30min	N3		68	71	63	82	No	No		
27/06/2018	30min	N3		71	73	64	94	No	No		
29/05/2018	30min	N4		67	72	56	80	No	No	Site – Traffic entering/exiting site (45-50m). Loud screech from lorry dragging trailer on ground followed by loud bang (LAFmax) - once off. Loading/unloading of skips. Power washer in use during round 3. Yard sweeper in use during round 1. Background – Large volumes of passing traffic nearby (15m) R132 road – dominant. Birds chirping and crows cawing.	Yes
29/05/2018	30min	N4		66	70	55	86	No	No		
27/06/2018	30min	N4		72	76	59	83	No	No		
29/05/2018	30min	NSL	NSL	73	78	53	95	No	No	Site – No audible site activity. Background – Passing road traffic and HGV's on the R132 (5-10m) – dominant. Dogs barking, hedge cutting and works in Tobermore during rounds 1 and 2. Horn sounding (LAFmax).	Yes
29/05/2018	30min	NSL	NSL	72	76	53	94	No	No		
27/06/2018	30min	NSL	NSL	67	72	50	84	No	No		

\*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?

nothing\*\*

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

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- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below  
Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI [SEAI - Large Industry Energy Network \(LIEN\)](#)
- 2 programme linked to the right? If yes please list them in additional information
- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Additional information	
Not yet completed	AES is currently carrying out an Energy Review in order to progress the implementation of a group Energy Management System to accredited ISO50001 standard
No	
SELECT	Not Applicable

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	3544.03	4040.76		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	261.66	239		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	433.12	487.58		
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

Conversion		
Kerosene	0.00262	MWh/ltr
Gasoil	0.01016	MWh/ltr
Light FO	0.01076	MWh/ltr
DERV	0.01016	MWh/ltr
Petrol	0.00926	MWh/ltr

	2017	2018
Light Fuel Oil (m3)	433.12	487.58
Gas Oil (m3)	109481	112324
Kerosene (litres)	850	1500
Light Fuel Oil (MWh)	4604.65	4967.7
Gas Oil (MWh)	1113.33	1141.2
Kerosene (MWh)	8.35	14.7
	4604.65	4967.7

Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Water Emissions	Water Consumption	
					Volume Discharged back to environment(m <sup>3</sup> yr):	Volume used i.e not discharged to environment e.g. released as steam 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

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

**Resource Usage/Energy efficiency summary** Lic No: W0222-01 Year 2018

Table R4: Energy Audit finding recommendations								
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					

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**Complaints and Incidents summary template** Lic No: W0222-01 Year 2018

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

Table 1 Complaints summary							
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		
Total complaints open at start of reporting year				0			
Total new complaints received during reporting year				0			
Total complaints closed during reporting year				0			
Balance of complaints end of reporting year				0			

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	No

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

Table 2 Incidents summary														
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
	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 incidents previous year														
% reduction/ increase														

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WASTE SUMMARY		Lic No:	W0222-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility login		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 1 boundaries is to be captured through PRTR reporting)

If yes please enter details in table 1 below

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

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

Additional information	
Yes	
No	
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)**

Licenced annual tonnage limit for your site (total tonnes/annum)	EWC code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant LoW code	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
			European Waste Catalogue EWC codes								
	02 02 03	02- WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING	Materials Unsuitable for consumption or processing	41.68	0.00	100%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		
	03 01 05	03- WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD	Sawdust, shavings, cuttings, wood, particle board and veneer	5.76	0.00	100%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		
	11 01 10	11- WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY	Sludges and filter cakes other than those mentioned in 11 01 09	0.00	398.62	-100%	Waste stream did not enter facility in 2018	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		
	15 01 01	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Paper and Cardboard Packaging	106.06	71.36	33%	Increased waste intake from customer	100%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		
	15 01 02	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Plastic Packaging	199.54	16.20	92%	Decrease in waste intake to site	100%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		
	15 01 03	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Wooden Packaging	572.70	271.88	53%	increased commercial activity	100%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		
	15 01 04	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Metallic Packaging	0.00	176.82	#DIV/0!	New waste stream	100%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		
	15 01 05	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Composite packaging	43.96	28.64	-100%	Waste stream did not enter facility	100%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)		

WASTE SUMMARY			Lic No: W0222-01		Year		2018	
15 01 06	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Mixed Packaging	1.98	0.84	58%	New waste stream	100%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
15 01 07	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Commercial Glass Packaging	0.00	21.90	-100%	Waste type reclassified to 20 01 02	100%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
16 01 03	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	End-of-Life Tyres	805.70	206.90	74%	AES are part of the Repak ELT tyres collectors scheme	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
16 01 99	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	Spent Rubber from LUAS trams	3.86	0.00	100%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
16 02 14	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	WEEE	0.10	0.00	100%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 01 01	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Concrete	819.86	41.64	95%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 01 07	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Mixture of concrete bricks tiles and ceramics	87.94	33.94	-304%	waste diverted from site	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials
17 02 01	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Wood from C&D sources	259.2	217.62	16%	Increased Source Segregation	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 02 02	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Glass from C & D	0.00	17.50	-100%	Waste stream not accepted in 2018	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 04 02	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Aluminium *from C & D sources	0.00	1.44	-100%	Waste stream not accepted in 2018	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 04 07	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Mixed C & D Metals	15.96	10.62	33%	better source segregation	0%	R4- Recycling/reclamation of metals and metal compounds
17 04 11	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Metal Cable	0.00	2.06	-100%	Waste stream did not enter facility in 2018	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 05 04	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Soil and Stones	891.68	1297.14	-45%	Waste stream diverted from site to final destination facility	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)

WASTE SUMMARY			Lic No: W0222-01		Year		2018	
17 06 04	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Insulation materials (Non-hazardous)	7.28	0.00	100%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 08 02	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Gypsum-Based Construction Materials	34.96	47.62	-36%	Increased waste intake from customer	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
17 09 04	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Mixed C & D Wastes	47442.53	43858.58	8%	Increased waste intake	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials
19 08 01	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	Screenings from WWTP	281.50	0.00	100%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
19 09 05	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	Spent resin from Ion Exchange	3.54	0.00	100%	New waste stream	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
19 12 02	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	Ferrous Metal from mechanical processing of waste	3.18	2.20	31%	New waste outlet sent waste to AES Lusk	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
19 12 09	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	Minerals	334.92	389.78	-15%	reduced waste intake	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials
19 12 12	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	C&D Fines Inert	113.47	425.38	-275%	waste diverted from site	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials
19 12 12	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	C & D fines for Disposal	101.08	0.00	100%	New waste outlet sent waste to AES Lusk	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
19 12 12	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	Waste from Mechanical treatment of ELVs	172.42	0.00	100%	New waste outlet sent waste to AES Lusk	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
20 01 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Municipal Paper and Cardboard	5.72	24.34	-326%	waste diverted from site	45%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
20 01 02	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Municipal Glass (Commercial)	27.28	48.40	-100%	waste diverted from site	90%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)
20 01 08	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Commercial Biodegradable Kitchen and Canteen Waste	58.56	93.00	-59%	waste diverted from site	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)

WASTE SUMMARY			Lic No:	W0222-01		Year		2018	
20 01 36	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Non-Hazardous WEEE	23.66	3.86	84%	Increased waste intake from customer	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)	
20 01 38	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Municipal Wood	358.90	309.20	14%	Increased waste intake from customer	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)	
20 01 39	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Municipal Plastic	10.38	16.92	-63%	increased customer numbers	65%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)	
20 01 40	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Municipal Metals	56.03	168.60	-201%	increased customer numbers	10%	R4- Recycling/reclamation of metals and metal compounds	
20 02 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Garden and Park Wastes	544.46	30.08	94%	Waste stream diverted to AES Lusk	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)	
20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Commercial Mixed Dry Recyclables	823.38	866.00	-5%	no significant change	30%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)	
20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Commercial Mixed Municipal Waste	14729.67	15793.12	-7%	waste stream diverted to third party facility	15%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	
20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Domestic Mixed Dry Recyclables	0.00	9.86	#DIV/0!	Waste Stream did not enter facility	75%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)	
20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Domestic Mixed Municipal Waste	2581.70	1630.52	37%	Panda Waste household customers (panda use Lusk as a transfer Station)	25%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)	

WASTE SUMMARY			Lic No:	W0222-01		Year				2018	
20 03 03	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Street-Cleansing residues	2334.20	2867.04	-23%	reduced waste intake	0%	R4- Recycling/reclamation of metals and metal compounds			
20 03 06	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Waste from Sewage Cleaning	409.80	162.36	60%	Increased waste intake from customer	0%	R13-Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage)			
20 03 07	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Bulky waste	18918.39	14220.78	25%	increased customer numbers	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)			

**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

Yes	Yes. Fire water retention wall scheduled to be built in June 2016
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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

Yes	
-----	--

6 Does your facility have relevant nuisance controls in place?

Yes	
-----	--

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

Yes	
-----	--

8 Do you maintain a sludge register on site?

Yes	
-----	--

**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

**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	
Cell 8													

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**WASTE SUMMARY** Lic No: W0222-01 Year 2018

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

meterological monitoring in compliance with Landfill Directive (LD) standard in	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

+ 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 m <sup>2</sup> 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					

\*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?

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

Volume of leachate in reporting year(m <sup>3</sup> )	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 m <sup>3</sup>	Power generated (MW / kWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

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Waste Outgoing 2018							AES Lusk	W0222-01
LoW Code	Material	Hazardous Yes/No	Treatment Type	Hauler Name & Permit No.	Destination & EPA/Permit No.	Destination Address	Location of Treatment	Total
150102	Plastic Packaging	No	R3	Damian Fitzsimons; NWCP0-15-11612-01	Lenviron Ltd., TA Leinster Environmentals, WFP-LH-11-0002-02	Clermont Business Park, Haynestown TD, Haggardstown, Dundalk, Co Louth	Offsite in Ireland	4.16
<b>150102 Total</b>								<b>4.16</b>
150103	Wooden Packaging	No	R12/R3	D&F Cargo Limited, NWCP0-12-11030-02	McKinstry Skip Hire Ltd., LN/16/16	Lisduff, Carnbane Business Park, Newry, Co Down	Abroad	105.18
150103	Wooden Packaging	No	R12/R3	Macroom Haulage Ltd, NWCP0-10-04751-02	McKinstry Skip Hire Ltd., LN/16/16	Lisduff, Carnbane Business Park, Newry, Co Down	Abroad	2339.52
<b>150103 Total</b>								<b>2444.70</b>
160103	End-of-Life Tyres	No	R13	Advanced Environmental Solutions (Ireland) Ltd., NWCP0-08-10601-06	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	46.90
160103	End-of-Life Tyres	No	R13	Gaughran Bros Ltd.; NWCP0-13-11218-01	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	10.56
160103	End-of-Life Tyres	No	R5	Advanced Environmental Solutions (Ireland) Ltd., NWCP0-08-10601-06	AES Drogheda; WFP-LH-15-0002-02	Donore Road, Drogheda, Co Louth	Offsite in Ireland	727.78
160103	End-of-Life Tyres	No	R5	Gaughran Bros Ltd.; NWCP0-13-11218-01	AES Drogheda; WFP-LH-15-0002-02	Donore Road, Drogheda, Co Louth	Offsite in Ireland	10.72
160103	End-of-Life Tyres	No	R5	Killacroy Logistics Ltd.; NWCP0-15-11641-01	AES Drogheda; WFP-LH-15-0002-02	Donore Road, Drogheda, Co Louth	Offsite in Ireland	20.74
<b>160103 Total</b>								<b>816.70</b>
160505	Outbound Gas Cylinders	No	R12	Calor Gas, WCP Not required	Calor Gas, NA Not a Waste Facility	(blank)	Offsite in Ireland	4.44
<b>160505 Total</b>								<b>4.44</b>
160601	Lead batteries	No	R13/R4	Goggins Transport Company Ltd., NWCP0-08-10579-03	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Kiffagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	0.74
160601	Lead batteries	No	R13/R4	St Margarets Recycling & Transfer Centre Ltd., NWCP0-12-11045-02	St. Margaret's Recycling & Transfer Centre Limited, WFP-FG-13-0002-02	Sandyhill, St. Margaret's Co Dublin	Offsite in Ireland	0.96
160601	Lead batteries	No	R13/R4	Wilton Waste Recycling Ltd.; NWCP0-12-11001-05	Wilton Waste Recycling Ltd.; WFP-CN-15-0003-01	Kiffagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	3.10
<b>160601 Total</b>								<b>4.80</b>
161002	Waste Water from a Transfer Station	No	D8	Boyne Waste Services Ltd.; NWCP0-09-06398-02	Ringsend WWTP., D0034-01	Pigeon House Road, Ringsend, Dublin 1	Offsite in Ireland	577.62
<b>161002 Total</b>								<b>577.62</b>
170101	Concrete C&D	No	R5	Advanced Environmental Solutions (Ireland) Ltd., NWCP0-08-10601-06	Integrated Materials Solutions Limited Partnership, W0129-02	Hollywood Great, Nags Head, The Naul, Dublin	Offsite in Ireland	75.52
<b>170101 Total</b>								<b>75.52</b>
170904	Outbound Mixed C&D	No	R12/R4	M McGuire Haulage Ltd. NWCP0-10-04791-02	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	26.22
170904	Outbound Mixed C&D	No	R12/R4	Macroom Haulage Ltd, NWCP0-10-04751-02	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	338.04
<b>170904 Total</b>								<b>364.26</b>
191202	Ferrous metal	No	R13/R4	Advanced Environmental Solutions (Ireland) Ltd., NWCP0-08-10601-06	St. Margaret's Recycling & Transfer Centre Limited, WFP-FG-13-0002-02	Sandyhill, St. Margaret's Co Dublin	Offsite in Ireland	84.96
191202	Ferrous metal	No	R13/R4	The Hammond Lane Metal Company Ltd., WFP-DS-14-0012-02	The Hammond Lane Metal Company Ltd., WFP-DS-14-0012-02	Crag Avenue, Clondalkin, Dublin 22	Offsite in Ireland	3.64
191202	Ferrous metal	No	R13/R4	St Margarets Recycling & Transfer Centre Ltd., NWCP0-12-11045-02	St. Margaret's Recycling & Transfer Centre Limited, WFP-FG-13-0002-02	Sandyhill, St. Margaret's Co Dublin	Offsite in Ireland	307.18
191202	Ferrous metal	No	R13/R4	Tag-a-Bin Ltd.; NWCP0-10-01303-03	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Kiffagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	21.70
191202	Ferrous metal	No	R13/R4	The Hammond Lane Metal Co. Ltd., NWCP0-09-01184-03	The Hammond Lane Metal Company Ltd., WFP-DS-14-0012-02	Crag Avenue, Clondalkin, Dublin 22	Offsite in Ireland	1.52
191202	Ferrous metal	No	R13/R4	Wilton Waste Recycling Ltd.; NWCP0-12-11001-05	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Kiffagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	1984.56
<b>191202 Total</b>								<b>2403.56</b>
191203	Non-ferrous metal	No	R13/R4	Advanced Environmental Solutions (Ireland) Ltd., NWCP0-08-10601-06	St. Margaret's Recycling & Transfer Centre Limited, WFP-FG-13-0002-02	Sandyhill, St. Margaret's Co Dublin	Offsite in Ireland	14.22
191203	Non-ferrous metal	No	R13/R4	St Margarets Recycling & Transfer Centre Ltd., NWCP0-12-11045-02	St. Margaret's Recycling & Transfer Centre Limited, WFP-FG-13-0002-02	Sandyhill, St. Margaret's Co Dublin	Offsite in Ireland	29.06
191203	Non-ferrous metal	No	R13/R4	Wilton Waste Recycling Ltd.; NWCP0-12-11001-05	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Kiffagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	131.34
<b>191203 Total</b>								<b>174.62</b>
191207	Outbound Wood 191207	No	R12/R3	D&F Cargo Limited, NWCP0-12-11030-02	Starrus Eco Holdings Limited (Fassaroe), W0053-03	Bray Depot, la Vallee House, Fassaroe, Bray, Wicklow	Offsite in Ireland	120.98
191207	Outbound Wood 191207	No	R12/R3	Gaughran Bros Ltd.; NWCP0-13-11218-01	Starrus Eco Holdings Limited (Fassaroe), W0053-03	Bray Depot, la Vallee House, Fassaroe, Bray, Wicklow	Offsite in Ireland	4.88
191207	Outbound Wood 191207	No	R12/R3	Macroom Haulage Ltd, NWCP0-10-04751-02	McKinstry Skip Hire Ltd., LN/16/16	Lisduff, Carnbane Business Park, Newry, Co Down	Abroad	69.84
191207	Outbound Wood 191207	No	R12/R3		Starrus Eco Holdings Limited (Fassaroe), W0053-03	Bray Depot, la Vallee House, Fassaroe, Bray, Wicklow	Offsite in Ireland	4247.34
<b>191207 Total</b>								<b>4443.04</b>
191212	Outbound C&D Fines Inert (191212)	No	R12/R5	M McGuire Haulage Ltd. NWCP0-10-04791-03	Skips R Us Ltd., LN/16/12	132a Concession Road, Crossmaglen, Newry, Co Down, BT35 5JE, Northern Ireland	Abroad	3411.14
191212	Outbound C&D Fines Inert (191212)	No	R12/R5	Skips R Us Ltd., NWCP0-13-11171-03	Skips R Us Ltd., LN/16/12	132a Concession Road, Crossmaglen, Newry, Co Down, BT35 5JE, Northern Ireland	Abroad	2304.10
191212	Outbound C&D Fines Inert (191212)	No	R5	M McGuire Haulage Ltd. NWCP0-10-04791-03	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	19964.54
191212	Outbound C&D Fines Inert (191212)	No	R5	D&F Cargo Limited, NWCP0-12-11030-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	313.56

191212	Outbound C&D Fines Inert (191212)	No	R5	D&P Mahon Transport Ltd., NWCPO-12-11078-03	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	29.88
191212	Outbound C&D Fines Inert (191212)	No	R5	Killacroy Logistics Ltd.; NWCPO-15-11641-01	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	691.46
191212	Outbound C&D Fines Inert (191212)	No	R5	Macroom Haulage Ltd. NWCPO-10-04751-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	660.52
191212	Outbound C&D Fines Inert (191212)	No	R5	Martin Ryan Haulage, NWCPO-09-05596-03	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	52.80
191212	Outbound C&D Fines Inert (191212)	No	R5	McKenna Haulage Ltd., NWCPO-14-11290-01	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	119.40
191212	Outbound Clean Construction Rubble - 19 12 12 (L)	No	R5	M McGuire Haulage Ltd. NWCPO-10-04791-03	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	11449.88
191212	Outbound Clean Construction Rubble - 19 12 12 (L)	No	R5	Killacroy Logistics Ltd.; NWCPO-15-11641-01	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	122.14
191212	Outbound Clean Construction Rubble - 19 12 12 (L)	No	R5	Macroom Haulage Ltd. NWCPO-10-04751-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	29.16
191212	Outbound Clean Construction Rubble - 19 12 12 (L)	No	R5	McKenna Haulage Ltd., NWCPO-14-11290-01	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	29.72
191212	Outbound Rubble	No	R12/R5	M McGuire Haulage Ltd. NWCPO-10-04791-03	Skips R Us Ltd., LN/16/12	132a Concession Road, Crossmaglen, Newry, Co Down, BT35 9JE, Northern Ireland	Abroad	554.42
191212	Outbound Rubble	No	R12/R5	Skips R Us Ltd., NWCPO-13-11171-03	Skips R Us Ltd., LN/16/12	132a Concession Road, Crossmaglen, Newry, Co Down, BT35 9JE, Northern Ireland	Abroad	6962.74
191212	Outbound WZE Waste from mechanical treatment	No	R1	D&F Cargo Limited, NWCPO-12-11030-02	Indaver Ireland Limited, W0167-03	Carranstown, Duleek, Co Meath	Offsite in Ireland	23.00
191212	Outbound WZE Waste from mechanical treatment	No	R1	D&F Cargo Limited, NWCPO-12-11030-02	Dublin Waste to Energy Ltd. (Covanta), W0232-01	Pigeon House Road, Pooibeg Peninsula, Dublin 4	Offsite in Ireland	16.36
191212	Outbound WZE Waste from mechanical treatment	No	R1	Macroom Haulage Ltd. NWCPO-10-04751-02	Indaver Ireland Limited, W0167-03	Carranstown, Duleek, Co Meath	Offsite in Ireland	104.02
191212	Outbound Waste from Mechanical Treatment 191212	No	R13	Macroom Haulage Ltd. NWCPO-10-04751-02	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	20.32
191212	Outbound Waste from Mechanical Treatment 191212	No	R13	Panda Waste Services, NWCPO-14-11326-04	Starrus Eco Holdings Limited (millennium Park), W0183-01	Millennium Business Park, Grange, Ballycoolin, Dublin 11	Offsite in Ireland	610.54
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Advanced Environmental Solutions (Ireland) Ltd., NWCPO-08-10601-06	Padraig Thornton Waste Disposal Limited, W0044-02	Killeen Road, Ballyfermot, Dublin 10	Offsite in Ireland	17.32
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Advanced Environmental Solutions (Ireland) Ltd., NWCPO-08-10601-06	Pacon Waste & Recycling Ltd., P1014-01	Stephenstown Business Park, Balbriggan, Co Dublin	Offsite in Ireland	152.38
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	D&F Cargo Limited, NWCPO-12-11030-02	Padraig Thornton Waste Disposal Limited, W0044-02	Killeen Road, Ballyfermot, Dublin 10	Offsite in Ireland	1057.16
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Damian Fitzsimons; NWCPO-15-11614-01	Pacon Waste & Recycling Ltd., P1014-01	Stephenstown Business Park, Balbriggan, Co Dublin	Offsite in Ireland	30.28
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Gaughran Bros Ltd.; NWCPO-08-11214-01	Pacon Waste & Recycling Ltd., P1014-01	Stephenstown Business Park, Balbriggan, Co Dublin	Offsite in Ireland	81.18
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Macroom Haulage Ltd. NWCPO-10-04751-02	Padraig Thornton Waste Disposal Limited, W0044-02	Killeen Road, Ballyfermot, Dublin 10	Offsite in Ireland	4282.88
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Martin Ryan Haulage, NWCPO-09-05596-03	Pacon Waste & Recycling Ltd., P1014-01	Stephenstown Business Park, Balbriggan, Co Dublin	Offsite in Ireland	14.80
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Padraig Thornton Waste Disposal Ltd., NWCPO-09-01190-05	Padraig Thornton Waste Disposal Limited, W0044-02	Killeen Road, Ballyfermot, Dublin 10	Offsite in Ireland	31.20
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Padraig Thornton Waste Disposal Ltd., NWCPO-09-01190-05	Padraig Thornton Waste Disposal Limited, W0044-02	Killeen Road, Ballyfermot, Dublin 10	Offsite in Ireland	1835.90
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R12	Tarrant International Transport Ltd., NWCPO-15-11603-02	Padraig Thornton Waste Disposal Limited, W0044-02	Killeen Road, Ballyfermot, Dublin 10	Offsite in Ireland	41.48
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R13	Macroom Haulage Ltd. NWCPO-10-04751-02	Starrus Eco Holdings Limited., (Formerly Nuredale,Slane) W0140-04	Rathdrinagh, Beaparc, Navan, Co Meath	Offsite in Ireland	536.92
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R13/R4	M McGuire Haulage Ltd. NWCPO-10-04791-03	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Killagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	500.34
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R13/R4	D&F Cargo Limited, NWCPO-12-11030-02	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Killagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	37.92
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R13/R4	D&P Mahon Transport Ltd., NWCPO-12-11078-03	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Killagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	17.52
191212	Outbound Waste from Mechanical Treatment C&I Recovery	No	R13/R4	Killacroy Logistics Ltd.; NWCPO-15-11641-01	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Killagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	309.88

191212	Outbound Waste from Mechanical Treatment & Recovery	No	R13/R4	Wilton Waste Recycling Ltd.; NWCPO-12-11001-05	Wilton Waste Recycling Ltd., WFP-CN-15-0003-01	Kiffagh, Crosserlough, Ballyjamesduff, Co Cavan	Offsite in Ireland	68.14
191212	Outbound Waste from Mechanical Treatment Landfill	No	D5	D&F Cargo Limited, NWCPO-12-11030-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	868.66
191212	Outbound Waste from Mechanical Treatment Landfill	No	D5	Macroom Haulage Ltd, NWCPO-10-04751-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	943.42
191212	Outbound Waste from Mechanical Treatment Landfill	No	D5	Martin Ryan Haulage, NWCPO-09-05596-03	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	59.88
<b>191212 Total</b>								<b>5836.96</b>
200139	Municipal Plastic	No	R12/R3	Advanced Environmental Solutions (Ireland) Ltd., NWCPO-08-10601-06	Cloughwater Plastics Ireland Limited, WFP-FG-08-0002-04	Rosemount Business Park, Ballycoolin Road, Blanchardstown, Dublin 15	Offsite in Ireland	37.32
200139	Municipal Plastic	No	R12/R3	St Margarets Recycling & Transfer Centre Ltd., NWCPO-12-11045-02	Cloughwater Plastics Ireland Limited, WFP-FG-08-0002-04	Rosemount Business Park, Ballycoolin Road, Blanchardstown, Dublin 15	Offsite in Ireland	1.92
200139	Municipal Plastic	No	R3	Damian Fitzsimons; NWCPO-15-11612-01	Lenviron Ltd., TA Leinster Environmentals, WFP-LH-11-0002-02	Clermont Business Park, Haynestown TD, Haggardstown, Dundalk, Co Louth	Offsite in Ireland	4.20
<b>200139 Total</b>								<b>43.44</b>
200201	Biodegradable Waste (from Gardens & Parks)	No	R3	D&F Cargo Limited, NWCPO-12-11030-02	Enrich Environmental Ltd.; P1013-01	Larch Hill Stud, Newtownrathganley, Kilcock, Co Meath	Offsite in Ireland	24.24
200201	Biodegradable Waste (from Gardens & Parks)	No	R3	Macroom Haulage Ltd, NWCPO-10-04751-02	Enrich Environmental Ltd.; P1013-01	Larch Hill Stud, Newtownrathganley, Kilcock, Co Meath	Offsite in Ireland	638.18
200201	Biodegradable Waste (from Gardens & Parks)	No	R3	Padraig Thornton Waste Disposal Ltd., NWCPO-09-01190-05	Kilmainhamwood Compost (Padraig Thornton Waste Disposal Ltd), W0195-02	Ballynurlagan, Kilmainhamwood, Kells, Co Meath	Offsite in Ireland	28.04
<b>200201 Total</b>								<b>690.46</b>
200301	Mixed Municipal Waste	No	R1	D&F Cargo Limited, NWCPO-12-11030-02	Indaver Ireland Limited, W0167-03	Carranstown, Duleek, Co Meath	Offsite in Ireland	88.78
200301	Mixed Municipal Waste	No	R1	D&F Cargo Limited, NWCPO-12-11030-02	Dublin Waste to Energy Ltd. (Covanta), W0232-01	Pigeon House Road, Poolbeg Peninsula, Dublin 4	Offsite in Ireland	46.66
200301	Mixed Municipal Waste	No	R1	Macroom Haulage Ltd, NWCPO-10-04751-02	Indaver Ireland Limited, W0167-03	Carranstown, Duleek, Co Meath	Offsite in Ireland	1289.92
200301	Mixed Municipal Waste	No	R1	Macroom Haulage Ltd, NWCPO-10-04751-02	Dublin Waste to Energy Ltd. (Covanta), W0232-01	Pigeon House Road, Poolbeg Peninsula, Dublin 4	Offsite in Ireland	227.74
200301	Mixed Municipal Waste	No	R1	Martin Ryan Haulage, NWCPO-09-05596-03	Indaver Ireland Limited, W0167-03	Carranstown, Duleek, Co Meath	Offsite in Ireland	48.66
200301	Mixed Municipal Waste	No	R1	Panda Waste Services, NWCPO-14-11326-04	Indaver Ireland Limited, W0167-03	Carranstown, Duleek, Co Meath	Offsite in Ireland	164.98
200301	Mixed Municipal Waste	No	R1	Panda Waste Services, NWCPO-14-11326-04	Dublin Waste to Energy Ltd. (Covanta), W0232-01	Pigeon House Road, Poolbeg Peninsula, Dublin 4	Offsite in Ireland	106.56
200301	Mixed Municipal Waste	No	R12	Panda Waste Services, NWCPO-14-11326-04	Stena Eco Holdings Limited (millennium Park), W0183-01	Millennium Business Park, Grange, Ballycoolin, Dublin 11	Offsite in Ireland	3272.72
200301	Mixed Municipal Waste	No	R12	Ronstar Ltd /TA Conroy Transport, NWCPO-17-11935-01	Stenus Eco Holdings Limited (millennium Park), W0183-01	Millennium Business Park, Grange, Ballycoolin, Dublin 11	Offsite in Ireland	24.02
200301	Mixed Recyclable Material	No	R12	Advanced Environmental Solutions (Ireland) Ltd., NWCPO-08-10601-06	Irish Packaging Recycling Ltd., W0263-01	Ballymount Road, Walkinstown, Dublin 12,	Offsite in Ireland	2.02
200301	Mixed Recyclable Material	No	R12	D&F Cargo Limited, NWCPO-12-11030-02	Padraig Thornton Waste Disposal Ltd. T/A Thomtons Recycling MDR Facility, WFP-DC-11-0023-02	Unit 6 S3B Henry Road, Park West Business Park, Dublin 12	Offsite in Ireland	94.56
200301	Mixed Recyclable Material	No	R12	Macroom Haulage Ltd, NWCPO-10-04751-02	Padraig Thornton Waste Disposal Ltd. T/A Thomtons Recycling MDR Facility, WFP-DC-11-0023-02	Unit 6 S3B Henry Road, Park West Business Park, Dublin 12	Offsite in Ireland	829.20
200301	Mixed Recyclable Material	No	R12	Martin Ryan Haulage, NWCPO-09-05596-03	Padraig Thornton Waste Disposal Ltd. T/A Thomtons Recycling MDR Facility, WFP-DC-11-0023-02	Unit 6 S3B Henry Road, Park West Business Park, Dublin 12	Offsite in Ireland	23.92
<b>200301 Total</b>								<b>6219.74</b>
200303	Outbound Street Cleaning Residues Landfill	No	D5	M McGuire Haulage Ltd, NWCPO-10-04791-03	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	61.94
200303	Outbound Street Cleaning Residues Landfill	No	D5	D&F Cargo Limited, NWCPO-12-11030-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	6301.62
200303	Outbound Street Cleaning Residues Landfill	No	D5	D&F Cargo Limited, NWCPO-12-11030-02	Knockharley Landfill Ltd., W0146-02	Knockharley, Navan, Co Meath	Offsite in Ireland	227.08
200303	Outbound Street Cleaning Residues Landfill	No	D5	Macroom Haulage Ltd, NWCPO-10-04751-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	7416.38
200303	Outbound Street Cleaning Residues Landfill	No	D5	Macroom Haulage Ltd, NWCPO-10-04751-02	Knockharley Landfill Ltd., W0146-02	Knockharley, Navan, Co Meath	Offsite in Ireland	784.90
200303	Outbound Street Cleaning Residues Landfill	No	D5	Martin Ryan Haulage, NWCPO-09-05596-03	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	313.80
200303	Outbound Street Cleaning Residues Landfill	No	D5	Martin Ryan Haulage, NWCPO-09-05596-03	Knockharley Landfill Ltd., W0146-02	Knockharley, Navan, Co Meath	Offsite in Ireland	23.58
200303	Outbound Street Cleaning Residues Landfill	No	D5	Tarrant International Transport Ltd., NWCPO-15-11603-02	Drehid Waste Facility; W0201-03	Killinagh Upper, Carbury, Co Kildare	Offsite in Ireland	104.72
<b>200303 Total</b>								<b>15234.02</b>
200307	Outbound Bulky Waste (Mattresses for Processing)	No	R13	M McGuire Haulage Ltd, NWCPO-10-04791-03	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	16.18
200307	Outbound Bulky Waste (Mattresses for Processing)	No	R13	Advanced Environmental Solutions (Ireland) Ltd., NWCPO-08-10601-06	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	18.46
200307	Outbound Bulky Waste (Mattresses for Processing)	No	R13	Macroom Haulage Ltd, NWCPO-10-04751-02	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	130.04
200307	Outbound Bulky Waste (Mattresses for Processing)	No	R13	Macroom Haulage Ltd, NWCPO-10-04751-02	AES Navan, W0131-02	Proudstown Road, Clonmagadden, Co Meath	Offsite in Ireland	9.18
<b>200307 Total</b>								<b>173.86</b>
<b>Grand Total</b>								<b>92031.90</b>