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Aled Zachary
Natural Resources Wales

Our ref: 2601.1.POT.SDB.JDM.A0
12 May 2016

Dear Aled,

Re: Bryn Posteg Landfill Site, Permit Number BU7766IC (Variation Notice Number EPR/BU7766IC/V004) – Quarterly Monitoring Review (January – March 2016)

In respect of Permit condition 4.2.2, a report of the monitoring and assessment carried out between the 1st of January and the 31st of March 2016 is enclosed.

The monitoring data required by permit conditions 3.6.1, for leachate in tables S4.1 and S4.9, point source emissions specified in tables S4.2, S4.3 and S4.4, groundwater specified in tables S4.5 and S4.11, landfill gas specified in tables S4.6, S4.7 and S4.8 and particulate matter in table S4.10 is submitted. This data comprises:

- Daily data for treated leachate discharge;
- Weekly data for landfill gas in peripheral monitoring boreholes and groundwater levels;
- Monthly data for landfill gas in collection wells, groundwater quality, leachate levels, leachate quality, leachate discharge quality and surface water;
- Quarterly data for groundwater quality and particulate matter.

Please do not hesitate to contact me should you require any further information.

Yours sincerely,

Jim McClymont
Principal Environmental Scientist
On behalf of Caulmert Ltd

CAULMERT LIMITED

Engineering, Environmental & Planning
Consultancy Services

Bryn Posteg Landfill Site

Potters Waste Management

Quarterly Monitoring Review

January – March 2016

Prepared by:

Caulmert Limited
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Doc ref: 2601.1.POT.SDB.JDM.A0

May 2016

APPROVAL RECORD

Site:	**Bryn Posteg Landfill**
Client:	**Potters Waste Management**
Document Title:	**Quarterly Monitoring Review, January – March 2016**
Document Ref:	**2601.1.POT.SDB.JDM**
Report Status:	**A0**
Project Director:	**Mike Caulfield**
Project Manager:	**Jim McClymont**
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Author	Sean O'Brien	**Date**	12.05.2016
Reviewer	Jim McClymont	**Date**	12.05.2016
Approved	Jim McClymont	**Date**	12.05.2016

DISCLAIMER

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DRAWING

APPENDICES

1.0 INTRODUCTION

1.1 Background

1.1.1 This report has been compiled in compliance with the Environmental Permit (EP) BU7766, Variation Notice Number EPR/BU7766IC/V004 for Bryn Posteg Landfill Site, which requires that the monitoring data collected at the site is reviewed quarterly. The data reviewed by this report was collected between the 1st of January to the 31st of March 2016.

1.1.2 This report records and reviews monitoring data for landfill gas, leachate, groundwater and surface water and discusses this data in relation to emission limits set in the latest EP variation. The data will also be included in an Annual Monitoring Review, as required by the EP.

1.2 Site Location and Surrounding Land-use

1.2.1 Bryn Posteg Landfill Site is located approximately 3 km south east of Llanidloes in Powys and is centered at National Grid Reference SN 971 822.

1.2.2 The landfill site was developed from the surface void of a former lead mine. Controlled land filling has taken place since 1982.

1.2.3 The site is accessed via the B4518, Llanidloes to Tylwch road. The B4518 runs parallel with the western site boundary.

1.2.4 Bryn Posteg is situated amongst predominantly agricultural land. There are four residential receptors located within approximately 325 m of the waste mass, these are:

- Valley View, 200 m to the north west;
- Rhoswen, 250 m to the east;
- Pant, 260 m to the east; and
- Penbryn Du, 325 m to the north.

2.0 LANDFILL GAS

2.1 Summary of Monitoring Results

2.1.1 Routine landfill gas (LFG) monitoring is required to be carried out on a weekly basis at 36 boreholes situated around the site perimeter. All boreholes have the prefix 'G' in the monitoring data. Concentrations of methane (CH_4) and carbon dioxide (CO_2) are measured alongside oxygen (O_2), relative pressure and atmospheric pressure on each visit.

2.1.2 CH_4 concentrations exceeded the trigger level value of 1.0 %[1] on at least one occasion at all 36 monitoring locations. The maximum concentration was 93.4 %, detected at G-12. This increase in exceedance across the site may be due to an instrument error as the gas analyzer was not accurately zeroed. A new gas analyzer has been made available to Site while the faulty unit is repaired and re-calibrated.

2.1.3 CO_2 concentrations exceeded the trigger level value of 1.5 % on at least one occasion at 28 monitoring locations – G-01, 02, 03, 07, 09, 10, 11, 12, 14, 15, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 35, 36, 37, 38, 40 and 41. The maximum detected concentration was 34.6 % in G-19.

2.1.4 Summary tables displaying all CH_4, CO_2 and O_2 monitoring data collected during this period are included in Appendix 1.

2.2 Gas Collection Compound Data

2.2.1 Daily gas collection data is included in Appendix 1.

[1] All gas concentrations are expressed as % v/v

3.0 GROUNDWATER

3.1 Summary of Monitoring Results

3.1.1 Groundwater is sampled at locations W1 – W11. W10 cannot currently be sampled and location W11 was dry throughout the review period. Samples were tested for a monthly suite of parameters and once, in March, for a larger quarterly suite. All monitoring data is included in Appendix 2.

3.1.2 Concentrations of all monthly and quarterly parameters were below their respective trigger levels, except chloride at location W1 only. The maximum chloride concentration in W1 was 513 mg/l, which is higher than the maximum found in W1 during the last review period, which was 498 mg/l.

3.1.3 A full quarterly suite was undertaken in March 2016. None of the quarterly parameter trigger limits were exceeded.

3.2 Groundwater Levels

3.2.1 Groundwater levels were recorded weekly. The results indicated that groundwater elevation remained relatively stable over the review period. Groundwater levels were higher during this review period compared to that of the previous review at all locations. This is expected given the period of high rainfall at the start of 2016.

4.0 LEACHATE

4.1 Summary of Monitoring Results

Monitoring of leachate sumps

4.1.1 Leachate levels are measured monthly in Sump 1, Sump 2, Sump 4, Sump 5, Sump 9c and Sump 9d. Sump 3, RLMP9A and RLMP9B are sealed to improve the gas management on site. The EP limit for the liquid level within the sumps is 1 m above base. All monitoring data can be found in Appendix 3.

4.1.2 Leachate levels remained at or below the 1 m trigger level in Sumps 1 & 2. The leachate level in Sumps 4, 5, 9C and 9D exceeded the trigger level during the review period, with maximum leachate levels of 8.7 m, 6.9 m, 8 m and 8 m respectively. Leachate levels above base are provided as an estimate only for cells 9C and 9D as the area was flooded during January and February. Dip levels in March are only available in meters below ground level (mBGL) as no current cover level in meters above ordinance datum (mAOD) is available. As reflected by the higher groundwater levels, leachate levels were likely higher during this review due to the period of high rainfall at the start of 2016.

4.1.3 Leachate samples were analysed in January, February and March for pH and ammoniacal nitrogen.

4.1.4 pH remained neutral to slightly alkaline throughout the review period, ranging between 6.8 and 8.9 while ammoniacal nitrogen ranged between 71 mg/l in LC4 and 2660 mg/l in LC2.

Treated leachate

4.1.5 Treated leachate (final discharge) was tested monthly for pH, ammoniacal nitrogen, suspended solids, COD, Total Petroleum Hydrocarbons (C6 – C40), sulphate and dissolved methane.

4.1.6 Sulphate concentration remained below the EP limit throughout the review period. pH remained within the trigger range of 6 – 10.

4.1.7 Ammoniacal nitrogen concentration exceeded the 150 mg/l trigger level during January, February and March with concentrations of 508 mg/l, 404 mg/l and 656 mg/l respectively.

4.1.8 Suspended solids concentration exceeded the 500 mg/l trigger level during January, February and March with concentrations of 1470 mg/l, 744 mg/l and 936 mg/l respectively.

4.1.9 COD concentration was above the 1000 mg/l trigger level in January and March, at 2490 mg/l and 1240 mg/l respectively.

4.1.10 TPH concentrations exceeded the trigger level of 'nil' in January, February and March at 1320 µg/l, 510 µg/l and 1070 µg/l respectively.

4.1.11 Low concentrations of dissolved methane were detected in January, February and March, at 0.84 mg/l, 0.37 mg/l and 0.01 mg/l respectively.

4.1.12 Potters Waste Management also undertakes daily in-situ testing of treated leachate in order to assess its suitability for discharge. Daily discharge volumes for this review period are included in Appendix 3. A total of 3136 m^3 of treated leachate was discharged between the 1st of January and the 31st of March 2016.

4.1.13 Additionally, leachate was removed from site by tanker for offsite treatment during this quarter. An estimated 3379 m^3 was tankered between January and March.

4.1.14 In total, 6515 m^3 of leachate was produced from the Site between January and March 2016, including discharge after treatment and tankering for offsite treatment. Comparatively, during the first quarter of 2015, 3934 m^3 of leachate was treated and discharged from the Site, with no tankering carried out. This shows a significant increase in leachate production at the Site during 2016.

5.0 SURFACE WATER

5.1 Summary of Monitoring Results

5.1.1 The permit requires monthly monitoring at monitoring points P1, P2 and SW3.

5.1.2 SW3 is the discharge point for the proposed reed bed which has not yet been commissioned, hence monitoring has not commenced.

5.1.3 Surface water samples were collected at SW1 (P1) and SW2 (P2) during the review period. A summary table displaying surface water monitoring data is enclosed in Appendix 4.

5.1.4 Ammoniacal nitrogen was detected above the 0.25 mg/l trigger level once in SW1 in March, at a concentration of 13.6 mg/l, and twice in SW2 in January and February at 0.47 mg/l and 0.33 mg/l respectively.

5.1.5 Suspended solids concentration remained below the 50 mg/l trigger level at SW1 throughout the review period. Suspended solid concentration in SW2 was above the trigger level in January only, at 304 mg/l.

5.1.6 pH ranged between 6.7 and 7.4 in SW1, and 7.0 and 8.0 in SW2.

5.1.7 Electrical conductivity fluctuated in both locations, ranging between 95 µS/cm and 459 µS/cm in SW1, and between 101 µS/cm and 1250 µS/cm in SW2.

5.1.8 Chloride concentrations ranged between 10.5 mg/l and 55.3 mg/l in SW1, and between 11.7 mg/l and 115 mg/l in SW2.

5.1.9 BOD ranged between <1 mg/l and 10 mg/l in SW1, and between <1 mg/l and 2 mg/l in SW2.

5.1.10 Petroleum hydrocarbons were detected in SW2 in January and February only, with total petroleum hydrocarbons (EH >C6-C40) concentrations of 43 µg/l and 25 µg/l respectively.

6.0 DUST

6.1 Monitoring Results

6.1.1 Dust monitoring was undertaken between the 19th of January 2016 and the 18th of February 2016 at locations BP1, BP2 and BP3. The dust monitoring results, as supplied by the subcontracted laboratory, are summarised in Table 2 below. A Certificate of Analysis is enclosed in Appendix 5.

Table 2: Dust Monitoring Results

Period	19/01/2016 – 18/02/2016		
Location	Mass of Undissolved Solids Mg	Result mg/m²/day	Trigger Level mg/m²/day
BP 1	22.7	19	200
BP 2	781	640	200
BP 3	43.7	36	200

6.1.2 Dust concentrations remained significantly below the trigger level outlined in the EP at BP1 and BP3. Dust concentration was above the trigger level at BP2. Drilling operations were carried out during the sample period near this location, likely resulting in the high result. Concentrations have not historically been exceeded and this occurrence is therefore considered circumstantial, rather than due to typical site activities.

7.0 SUMMARY

7.1 Landfill gas

7.1.1 The CH_4 trigger level was exceeded at all 36 locations, this may be due to instrument error and the CO_2 trigger level was exceeded at 28 locations on a number of occasions during the monitoring period.

7.2 Groundwater

7.2.1 Groundwater levels remained relatively stable over the review period, but were higher across all locations than previously recorded.

7.2.2 Similar to the last quarterly review, the concentrations of all parameters were below their respective trigger levels, except chloride in GW1.

7.3 Leachate

7.3.1 Leachate levels were below the trigger limit of 1.0 m in Sumps 1 and 2 throughout the review period. The trigger limit was exceeded in Sumps 4, 5, 9c and 9d during this review period, likely due to the period of high rainfall at the start of the year.

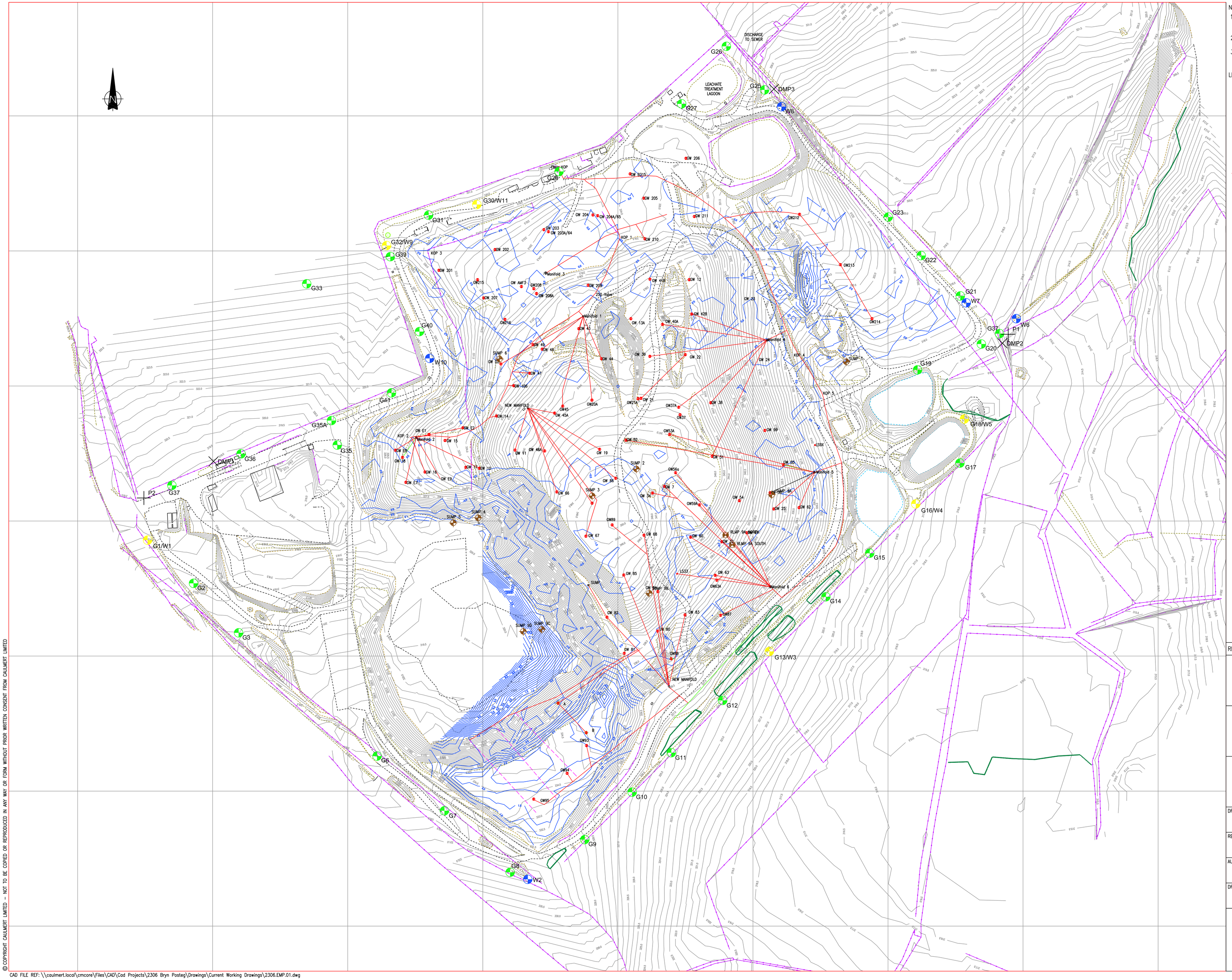
7.3.2 In the final discharge (treated leachate) quality data, exceedances of the trigger levels for ammoniacal nitrogen, suspended solids, COD and TPH were recorded.

7.4 Surface Water

7.4.1 Surface water samples were collected at SW1 and SW2 during the review period. Trigger level exceedances were recorded for ammoniacal nitrogen in SW1 and SW2, and total suspended solids in SW2 only.

7.5 Dust

7.5.1 Dust concentration exceeded the 200 mg/m^2/day trigger level at BP2 only. This is likely due to landfill drilling operations in the area.



NOTES

1. SURVEY INFORMATION PROVIDED BY POTTERS WASTE MANAGEMENT. SURVEY DATED 12.01.2016
2. ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.
3. DO NOT SCALE FROM THIS DRAWING

LEGEND

- IN WASTE GAS WELL
- GAS MONITORING BOREHOLE
- GROUNDWATER MONITORING BOREHOLE
- GAS MONITORING BOREHOLE WITH GROUNDWATER MONITORING BOREHOLE
- EXISTING LEACHATE COLLECTION POINT
- IN WASTE GAS WELL
- APPROXIMATE POSITION OF SURFACE WATER MONITORING POINT
- APPROXIMATE POSITION OF DUST MONITORING POINT

SURFACE WATER MONITORING POINTS

P1 NANT-Y-BRADNANT

P2 AFON DULAS

DUST MONITORING POINTS

DMP1 VALLEY VIEW

DMP2 RHOSWEN AND PANT

DMP3 PENBRYNDU

REV	MODIFICATIONS	BY	RE	AP	DATE

POTTERS WASTE MANAGEMENT

BRYN POSTEG LANDFILL SITE

ENVIRONMENTAL MONITORING PLAN

DRAWN BY	DATE	
RWG	12.02.2016	
REVIEWED BY	SCALE @ A1	
JMC	1:1250	
AUTHORISED BY	ISSUE	REVISION
JMC	P	P1

DRAWING NUMBER

2601.EMP.01

Caulmert
Engineering, Environmental and Planning

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Appendix 1

APPENDIX 1 – LANDFILL GAS

Table 1: Landfill Gas Monitoring Data (exceedances highlighted yellow)

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G01	06/01/2016	6.6	2.4	13.7
	14/01/2016	0.2	0.2	20.0
	21/01/2016	3.9	2.6	14.3
	11/02/2016	-	0.6	18.7
	03/03/2016	-	4.1	19.7
	10/03/2016	3.4	0.5	18.5
	17/03/2016	0.9	0.6	20.0
	25/03/2016	0.9	1.9	17.6
G02	06/01/2016	0.2	2.9	19.3
	14/01/2016	0.2	3.3	19.2
	21/01/2016	0.9	0.2	20.6
	11/02/2016	11.2	0.0	20.0
	03/03/2016	5.4	0.0	20.1
	10/03/2016	1.1	0.3	20.0
	17/03/2016	0.9	0.4	20.6
	25/03/2016	0.9	0.3	20.2
G03	06/01/2016	0.2	3.0	8.1
	14/01/2016	0.2	3.0	8.5
	21/01/2016	0.9	2.5	14.0
	11/02/2016	1.1	2.0	13.6
	03/03/2016	1.1	0.1	20.2
	10/03/2016	1.1	0.7	19.5
	25/03/2016	0.9	0.6	19.1

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G07	06/01/2016	0.2	3.6	17.2
	14/01/2016	0.2	3.7	17.0
	21/01/2016	0.9	3.7	16.7
	11/02/2016	1.2	3.1	17.5
	03/03/2016	1.2	0.0	20.4
	10/03/2016	1.1	0.1	20.4
	18/03/2016	0.9	1.5	20.2
	25/03/2016	0.9	1.7	19.9
G08	06/01/2016	0.2	0.0	20.8
	14/01/2016	0.2	0.0	21.3
	14/01/2016	0.2	0.0	21.2
	21/01/2016	0.9	0.0	21.2
	11/02/2016	1.2	0.0	20.7
	03/03/2016	1.2	0.0	20.9
	10/03/2016	1.1	0.0	20.7
	18/03/2016	0.9	0.0	20.9
	25/03/2016	0.9	0.0	20.7
G09	06/01/2016	0.2	0.1	20.9
	14/01/2016	0.2	0.2	21.4
	21/01/2016	0.9	2.1	20.9
	11/02/2016	1.2	0.1	20.8
	03/03/2016	1.2	1.0	20.7
	10/03/2016	1.1	1.0	20.5
	18/03/2016	0.9	0.3	20.9
	25/03/2016	0.9	0.1	20.7

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G10	06/01/2016	0.2	0.2	20.9
	14/01/2016	0.2	0.2	21.5
	21/01/2016	0.9	0.9	20.9
	11/02/2016	1.2	0.0	20.9
	03/03/2016	1.2	1.7	19.4
	10/03/2016	1.1	0.0	20.8
	18/03/2016	0.9	2.6	17.5
	25/03/2016	0.9	4.0	14.5
G11	06/01/2016	0.2	0.0	21.0
	14/01/2016	0.2	0.1	21.6
	21/01/2016	0.9	0.8	21.2
	11/02/2016	1.2	0.0	20.9
	03/03/2016	1.2	0.4	20.9
	10/03/2016	1.1	0.2	20.9
	18/03/2016	0.9	0.4	21.0
	25/03/2016	0.9	1.6	20.1
G12	06/01/2016	82.5	4.7	0.7
	14/01/2016	80.5	4.7	1.0
	21/01/2016	91.2	4.7	0.3
	11/02/2016	93.4	4.9	0.7
	03/03/2016	92.4	4.8	0.9
	10/03/2016	68.9	4.3	5.1
	18/03/2016	68.5	4.0	5.1
	25/03/2016	85.1	4.4	2.0

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G13	06/01/2016	0.2	0.0	21.0
	14/01/2016	0.2	0.0	21.7
	21/01/2016	1.0	0.0	21.6
	11/02/2016	1.2	0.0	21.0
	03/03/2016	1.2	0.0	21.1
	10/03/2016	1.1	0.0	21.1
	18/03/2016	0.9	0.0	21.2
	25/03/2016	0.9	0.0	20.8
G14	06/01/2016	0.2	3.0	17.5
	14/01/2016	0.2	3.4	17.8
	21/01/2016	0.9	3.8	17.4
	11/02/2016	1.2	2.5	18.0
	03/03/2016	1.2	2.8	17.2
	10/03/2016	1.1	3.5	16.8
	18/03/2016	0.9	3.2	17.9
	25/03/2016	0.9	3.9	16.2
G15	06/01/2016	0.2	2.2	17.3
	14/01/2016	0.2	2.1	18.0
	21/01/2016	0.9	3.6	14.8
	11/02/2016	1.2	4.5	10.6
	03/03/2016	1.2	4.8	10.3
	10/03/2016	1.1	4.0	11.8
	18/03/2016	0.9	2.1	17.4
	25/03/2016	0.9	1.8	17.5

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G16	06/01/2016	0.2	0.0	21.1
	14/01/2016	0.2	0.0	21.8
	21/01/2016	0.9	0.0	21.7
	11/02/2016	1.2	0.0	21.1
	03/03/2016	1.2	0.0	21.0
	10/03/2016	1.1	0.0	21.1
	18/03/2016	0.9	0.0	21.3
	25/03/2016	0.9	0.0	20.8
G17	06/01/2016	0.2	0.0	21.2
	14/01/2016	0.2	0.0	21.9
	21/01/2016	0.9	0.0	21.8
	11/02/2016	1.2	0.0	21.2
	03/03/2016	1.2	0.0	21.0
	10/03/2016	1.1	0.0	21.1
	18/03/2016	0.9	0.0	21.4
	25/03/2016	0.9	0.0	20.9
G18	06/01/2016	0.2	0.0	21.2
	14/01/2016	0.2	0.0	21.9
	21/01/2016	0.9	0.0	21.8
	11/02/2016	1.2	0.0	21.2
	03/03/2016	1.2	0.0	21.0
	10/03/2016	1.1	0.0	21.1
	18/03/2016	0.9	0.0	21.4
	25/03/2016	0.9	0.0	20.9

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G19	06/01/2016	73.9	32.0	0.2
	14/01/2016	72.1	31.1	0.9
	21/01/2016	79.5	34.5	0.4
	11/02/2016	80.6	34.6	0.2
	03/03/2016	52.4	19.4	2.5
	10/03/2016	60.2	22.8	0.8
	18/03/2016	83.0	30.3	0.2
	25/03/2016	80.0	29.4	0.5
G20	06/01/2016	80.7	23.2	0.4
	14/01/2016	75.9	15.0	3.9
	21/01/2016	90.6	19.0	0.3
	11/02/2016	62.1	8.4	1.5
	03/03/2016	82.9	26.2	0.1
	10/03/2016	48.1	25.2	2.1
	18/03/2016	54.3	27.5	0.2
	25/03/2016	77.9	32.3	0.1
G21	06/01/2016	63.3	14.2	0.1
	14/01/2016	71.0	16.2	0.3
	21/01/2016	78.7	17.5	0.1
	11/02/2016	1.2	0.0	21.2
	03/03/2016	49.9	14.7	2.0
	10/03/2016	2.2	1.3	20.0
	18/03/2016	39.4	14.1	0.5
	25/03/2016	27.3	8.7	11.7

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G22	06/01/2016	75.4	27.7	0.1
	14/01/2016	69.5	25.8	0.7
	21/01/2016	82.0	26.7	0.1
	11/02/2016	51.2	21.1	0.1
	03/03/2016	29.0	8.8	12.2
	10/03/2016	29.9	14.5	4.6
	18/03/2016	40.6	18.3	0.1
	25/03/2016	51.5	18.4	0.3
G23	06/01/2016	1.5	7.1	0.5
	14/01/2016	1.7	7.2	1.0
	21/01/2016	1.8	8.8	0.7
	11/02/2016	2.8	5.8	1.4
	03/03/2016	4.3	7.1	0.1
	10/03/2016	9.2	7.3	3.5
	18/03/2016	2.6	9.4	0.2
	25/03/2016	2.6	9.3	0.3
G24	06/01/2016	17.3	4.2	12.1
	14/01/2016	13.1	3.7	14.8
	21/01/2016	12.6	3.1	15.7
	11/02/2016	1.1	1.9	20.7
	11/02/2016	1.3	1.8	20.0
	03/03/2016	1.2	0.5	20.9
	10/03/2016	1.1	0.7	20.9
	18/03/2016	0.9	0.8	21.2
	25/03/2016	0.9	0.7	20.8

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G25	06/01/2016	41.0	15.0	0.8
	14/01/2016	35.9	13.8	1.0
	21/01/2016	38.3	15.3	0.3
	11/02/2016	41.6	13.4	0.4
	03/03/2016	41.7	15.1	0.1
	10/03/2016	43.6	14.6	0.4
	18/03/2016	38.6	9.2	0.2
	25/03/2016	38.0	8.7	0.2
G26	06/01/2016	0.2	1.9	18.5
	14/01/2016	0.2	2.6	17.9
	21/01/2016	0.9	3.1	16.9
	11/02/2016	1.2	2.6	17.3
	03/03/2016	1.2	2.9	17.3
	10/03/2016	1.1	2.5	17.8
	18/03/2016	0.9	2.9	18.2
	25/03/2016	0.9	2.8	18.7
G27	06/01/2016	0.5	18.2	2.3
	14/01/2016	0.3	7.5	14.5
	21/01/2016	0.9	7.2	14.5
	11/02/2016	42.0	15.1	7.4
	03/03/2016	8.7	7.3	13.2
	18/03/2016	0.9	0.1	21.5

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G29	06/01/2016	0.2	0.1	20.2
	14/01/2016	0.2	0.4	20.9
	21/01/2016	0.9	0.1	21.5
	11/02/2016	1.2	0.7	19.9
	03/03/2016	1.2	0.0	21.1
	10/03/2016	1.1	0.1	21.1
	18/03/2016	1.7	0.7	20.6
	25/03/2016	0.9	0.0	21.0
	25/03/2016	0.9	0.0	21.0
G30	06/01/2016	23.8	2.6	13.1
	14/01/2016	3.2	1.0	20.1
	21/01/2016	3.3	2.1	18.7
	11/02/2016	15.6	2.3	15.6
	03/03/2016	16.9	3.6	12.6
	10/03/2016	8.6	1.8	17.7
	18/03/2016	0.9	0.4	21.1
	25/03/2016	15.7	4.6	10.4
G31	06/01/2016	0.3	3.5	19.5
	14/01/2016	0.2	1.3	21.2
	21/01/2016	0.9	0.7	21.2
	11/02/2016	1.1	1.9	20.2
	03/03/2016	1.2	0.7	20.4
	10/03/2016	1.1	0.3	20.9
	25/03/2016	0.9	2.2	17.8

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G32	06/01/2016	0.2	0.4	20.9
	14/01/2016	0.2	0.4	21.7
	21/01/2016	0.9	0.5	21.5
	11/02/2016	1.1	0.2	21.2
	03/03/2016	1.1	0.0	21.2
	10/03/2016	1.1	0.0	21.2
	10/03/2016	1.1	0.0	21.2
	18/03/2016	0.9	0.1	21.4
	25/03/2016	0.9	0.1	21.1
G35	06/01/2016	0.3	1.8	20.6
	14/01/2016	0.3	1.6	21.3
	21/01/2016	15.2	17.2	1.7
	11/02/2016	6.3	3.6	19.3
	03/03/2016	2.0	1.0	19.8
	10/03/2016	10.6	5.2	16.4
	18/03/2016	0.9	1.2	20.3
	25/03/2016	1.2	0.7	20.6
G36	06/01/2016	0.2	1.4	19.1
	14/01/2016	0.2	1.0	20.7
	21/01/2016	0.9	0.7	21.0
	11/02/2016	1.1	0.9	20.3
	03/03/2016	1.1	2.6	18.4
	10/03/2016	1.1	1.2	19.4
	18/03/2016	0.9	0.4	21.0
	25/03/2016	0.9	0.3	20.8

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G37	06/01/2016	0.2	0.0	21.2
	14/01/2016	0.2	2.2	21.0
	21/01/2016	0.9	2.6	20.6
	11/02/2016	1.1	1.5	20.8
	03/03/2016	1.1	2.4	20.0
	10/03/2016	1.0	2.2	20.1
	18/03/2016	0.9	1.9	20.6
	25/03/2016	0.9	2.2	20.0
G38	06/01/2016	74.9	27.2	0.1
	06/01/2016	74.8	27.2	0.5
	14/01/2016	67.0	26.9	0.2
	21/01/2016	81.1	30.4	0.3
	11/02/2016	73.5	29.1	0.3
	03/03/2016	1.2	0.0	21.1
	10/03/2016	1.1	0.1	21.0
	18/03/2016	25.5	12.5	0.3
	25/03/2016	68.2	23.5	0.2
G39	06/01/2016	0.2	0.0	21.0
	06/01/2016	0.2	1.4	19.8
	14/01/2016	0.2	1.3	20.5
	21/01/2016	0.9	1.4	20.6
	11/02/2016	1.1	0.8	20.5
	03/03/2016	1.1	1.2	18.9
	03/03/2016	1.2	1.4	19.5
	10/03/2016	1.1	1.4	19.8
	18/03/2016	0.9	1.4	20.8
	25/03/2016	0.9	0.7	20.1

APPENDIX 1 – LANDFILL GAS

Borehole	Date	Methane	Carbon Dioxide	Oxygen
		% v/v	% v/v	% v/v
		Trigger - 1.0	Trigger - 1.5	N/A
G40	06/01/2016	0.4	18.1	3.1
	14/01/2016	0.6	17.7	4.1
	21/01/2016	0.9	15.9	2.6
	11/02/2016	1.3	16.6	2.9
	03/03/2016	1.1	2.8	12.3
	10/03/2016	1.1	1.8	19.0
	18/03/2016	0.9	7.3	9.4
	25/03/2016	0.9	0.4	20.6
G41	06/01/2016	0.2	4.3	7.1
	14/01/2016	0.2	4.5	9.5
	21/01/2016	0.9	4.0	16.8
	11/02/2016	1.1	3.1	8.0
	10/03/2016	1.0	3.4	11.7
	18/03/2016	0.9	2.8	18.6
	25/03/2016	0.9	1.9	19.5
G42	06/01/2016	0.2	0.3	21.2
	14/01/2016	0.2	0.2	21.7
	21/01/2016	0.9	0.2	21.6
	11/02/2016	1.1	0.1	21.4
	03/03/2016	1.1	0.0	21.3
	10/03/2016	1.1	0.1	21.1
	18/03/2016	0.9	0.1	21.5
	25/03/2016	0.9	0.4	21.1

APPENDIX 1 – LANDFILL GAS

Table 2: Daily gas collection monitoring data

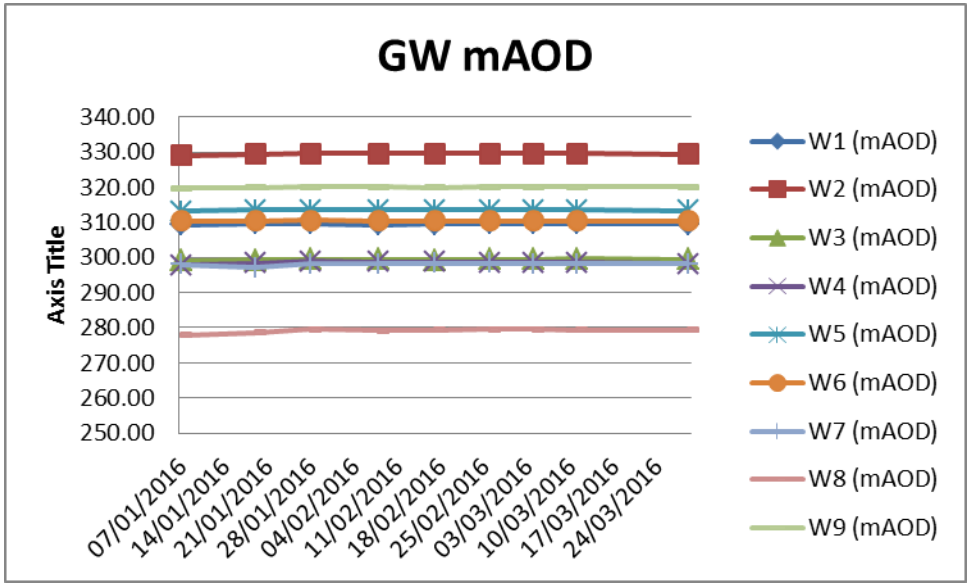
	HRS RUN	TEMP	CUBIC MTS	CH4=	O2=
04-Jan-16	22087	247	580	58.9%	0.33%
05-Jan-16	22111	228	580	58.7%	0.37%
06-Jan-16	22135	239	580	58.0%	0.59%
11-Jan-16	22255	242	590	58.9%	0.48%
12-Jan-16	22072	140	580	56.4%	0.88%
13-Jan-16	22303	173	600	58.9%	1.16%
14-Jan-16	22327	155	580	56.1%	0.73%
15-Jan-16	22351	803	780	52.6%	1.33%
18-Jan-16	22423	590	510	59.7%	0.18%
19-Jan-16	22447	762	450	60.7%	0.23%
20-Jan-16	22471	970	530	58.2%	0.72%
21-Jan-16	22494	247	680	55.2%	1.10%
09-Feb-16	22947	204	580	57.8%	0.48%
10-Feb-16	22763	162	580	56.5%	0.69%
11-Feb-16	22995	165	590	55.6%	0.95%
12-Feb-16	23019	217	600	56.2%	0.65%
15-Feb-16	23091	164	640	52.2%	1.73%
16-Feb-16	23107	868	1.43	60.9%	0.23%
17-Feb-16	23131	330	640	55.5%	0.82%
19-Feb-16	23179	227	600	56.2%	0.56%
22-Feb-16	23251	152	560	57.3%	0.43%
23-Feb-16	23275	223	580	56.1%	0.90%
24-Feb-16	23299	181	610	54.3%	1.39%
25-Feb-16	23323	159	630	54.1%	1.28%
26-Feb-16	23140	115	610	54.3%	1.05%
29-Feb-16	23419	103	610	52.6%	1.37%
01-Mar-16	23443	83	570	56.3%	0.54%
02-Mar-16	23466	140	570	57.2%	0.68%
03-Mar-16	23492	150	580	57.3%	0.78%
04-Mar-16	23517	174	560	57.6%	0.68%
07-Mar-16	23587	149	640	53.9%	1.64%
08-Mar-16	23612	173	600	54.2%	1.24%
09-Mar-16	23636	144	590	56.7%	0.85%
10-Mar-16	23659	173	660	51.2%	2.23%
11-Mar-16	23683	135	650	52.3%	1.72%
14-Mar-16	23731	140	650	52.1%	1.12%
15-Mar-16	23778	193	650	50.6%	1.76%
16-Mar-16	23802	384	630	48.7%	2.14%
17-Mar-16	23825	358	670	48.7%	1.48%
18-Mar-16	23849	142	680	47.7%	1.72%
21-Mar-16	23921	131	690	47.4%	1.72%
22-Mar-16	23945	300	770	47.9%	1.51%
23-Mar-16	23969	353	830	46.7%	1.86%
24-Mar-16	23993	313	680	47.5%	1.61%
25-Mar-16	24017	345	980	46.7%	1.97%
29-Mar-16	24112	293	770	48.6%	1.85%
30-Mar-16	24136	195	750	48.3%	1.87%
31-Mar-16	24160	159	660	48.1%	2.03%

Appendix 2

APPENDIX 2 – GROUNDWATER

Table 1: Weekly level data (measured as metres above ordinance datum)

Date	W1 (mAOD)	W2 (mAOD)	W3 (mAOD)	W4 (mAOD)	W5 (mAOD)	W6 (mAOD)	W7 (mAOD)	W8 (mAOD)	W9 (mAOD)
07/01/2016	309.29	329.09	299.14	297.88	313.09	310.31	297.94	277.85	319.66
19/01/2016	309.64	329.40	299.30	298.31	313.46	310.39	297.09	278.68	319.90
28/01/2016	309.69	329.49	299.52	298.82	313.55	310.54	298.21	279.45	320.12
08/02/2016	309.21	329.53	299.37	298.68	313.49	310.48	298.16	279.15	320.04
17/02/2016	309.52	329.57	299.33	298.69	313.54	310.43	298.27	279.37	319.95
26/02/2016	309.66	329.61	299.37	298.50	313.42	310.37	298.26	279.56	319.98
04/03/2016	309.59	329.59	299.52	298.48	313.48	310.41	298.16	279.49	320.07
11/03/2016	309.62	329.48	299.58	298.58	313.54	310.34	298.13	279.34	320.09
29/03/2016	309.52	329.46	299.37	298.16	313.27	310.39	298.18	279.39	319.98



APPENDIX 2 – GROUNDWATER

Table 2: Groundwater Monthly monitoring data

Parameter	Trigger Limit	Date	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8	W 9
Ammoniacal Nitrogen (mg/l)	2	Jan-16	<0.41	<0.41	<0.41	0.87	<0.41	<0.41	<0.41	<0.41	<0.41
		Feb-16	<0.41	<0.41	<0.41	1.11	<0.41	<0.41	<0.41	<0.41	<0.41
		Mar-16	<0.41	<0.41	<0.41	1.01	<0.41	<0.41	<0.41	<0.41	<0.41
Chloride (mg/l)	69	Jan-16	513.0	38.6	12.5	18.9	16.5	14.8	15.3	18.1	22.0
		Feb-16	451.0	46.8	11.1	16.7	12.6	10.6	11.2	13.8	18.6
		Mar-16	373.0	40.9	13.3	18.0	13.5	11.7	13.7	15.1	16.7
Electrical Conductivity (µS/cm)	-	Jan-16	1630	192	277	320	192	73	315	284	175
		Feb-16	1390	215	280	320	183	119	314	288	176
		Mar-16	1100	204	274	303	183	120	310	279	151
Cyanide (mg/l)	-	Jan-16	0.013	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
		Feb-16	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
		Mar-16	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
pH	-	Jan-16	6.1	7.4	7.4	7.1	5.9	6.5	7.7	7.0	6.5
		Feb-16	6.9	7.4	8.2	7.3	6.1	7.0	8.3	8.0	7.4
		Mar-16	6.0	8.6	7.4	6.9	5.7	6.4	7.5	7.1	6.6
Sulphate (mg/l)	-	Jan-16	11.4	8.4	28.3	42.1	49.5	7.9	34.1	33.1	36.7
		Feb-16	18.7	<4.4	11.1	39.6	42.0	<4.4	26.3	24.7	32.6
		Mar-16	23.3	<4.4	10.6	38.3	42.3	4.4	25.0	23.1	27.2

Key: Above Permit Limit

APPENDIX 2 – GROUNDWATER

Table 3: Groundwater Quarterly monitoring data

Reference	Unit	Trigger	W1	W2	W3	W4	W5	W6	W7	W8	W9
Ammoniacal Nitrogen	**mg/l**	**2**	<0.41	<0.41	<0.41	1.01	<0.41	<0.41	<0.41	<0.41	<0.41
Cadmium , Total as Cd	**mg/l**	**0.0056**	0.0020	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Nickel , Total as Ni	**mg/l**	**0.12**	0.015	0.004	0.008	0.012	0.022	0.009	0.004	0.007	0.005
Toluene	**µg/l**	**4**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total Xylenes	**µg/l**	**3**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Zinc, Total as Zn	**mg/l**	**0.85**	0.21	<0.018	<0.018	0.04	0.09	0.02	<0.018	0.02	0.08
Ethyl Benzene	**µg/l**	**1**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Mecoprop	**µg/l**	**0.1**	<0.04	<0.04	<0.04	0.07	0.04	<0.04	<0.04	<0.04	<0.04
2,4 - D	**µg/l**	**0.1**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

APPENDIX 2 – GROUNDWATER

Table 4: Groundwater Quarterly monitoring data (no EP trigger levels)

Reference	Unit	W1	W2	W3	W4	W5	W6	W7	W8	W9
Acenaphthene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Acenaphthylene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Alkalinity as CaCO3	mg/l	14.6	42	121	103	9.5	36.9	124	105	13
Anthracene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Antimony Ultra Low Total as Sb	mg/l	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
Arsenic, Ultra Low Total as As	mg/l	0.023	0.0015	0.022	0.021	0.0015	0.025	0.0018	0.0033	<0.0010
Benzene	ug/l	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo (a) anthracene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Benzo (a) pyrene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Benzo (b) fluoranthene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Benzo (g,h,i) perylene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Benzo (k) fluoranthene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Bicarbonate Alkalinity	mg/l	14.6	42	121	103	9.5	36.9	124	105	13
Calcium , Total as Ca	mg/l	16.3	8.8	37.9	40.3	13.1	12.4	42	38.4	9.97
Chloride as Cl	mg/l	373	40.9	13.3	18	13.5	11.7	13.7	15.1	16.7
Chromium , Total as Cr	mg/l	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chrysene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Conductivity- Electrical 20C	uS/cm	1100	204	274	303	183	120	310	279	151
Copper, Total as Cu	mg/l	0.015	<0.009	<0.009	<0.009	0.038	<0.009	0.1	<0.009	<0.009
Cyanide, Total as CN	mg/l	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Dibenz (a,h) anthracene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Dissolved Oxygen, Fixed	mg/l	1.3	2.3	3.4	2	1.8	3.3	1.6	1.4	<0.5
Fluoranthene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Fluorene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Indeno (1,2,3) cd pyrene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Iron , Total as Fe	mg/l	3.4	<0.23	4.25	7.1	0.59	9.61	0.68	1.46	<0.23
Lead , Total as Pb	mg/l	0.011	<0.006	0.082	<0.006	<0.006	<0.006	0.021	0.011	<0.006
m&p Xylene	ug/l	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Magnesium, Total as Mg	mg/l	5.6	1.5	9.5	9.5	3.9	3.1	6.9	9.9	3
Manganese , Total as Mn	mg/l	1.2	0.02	2.57	3.9	1.78	2.18	0.759	0.981	0.153
Mercury, Total as Hg	mg/l	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Naphthalene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Nitrate as N	mg/l	<0.7	<0.7	<0.7	<0.7	2.5	<0.7	8.9	2.7	1.8
o-Xylene	ug/l	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

APPENDIX 2 – GROUNDWATER

Reference	Unit	W1	W2	W3	W4	W5	W6	W7	W8	W9
PAH, Total	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
pH	pH units	6	8.6	7.4	6.9	5.7	6.4	7.5	7.1	6.6
Phenanthrene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Phenols Mono (Phenol Index)	mg/l	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium , Total as K	mg/l	2.05	1.98	1.56	2.02	1.78	0.62	2.75	1.26	1.02
Pyrene	ug/l	<0.04	<0.04	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Selenium Ultra Low Total as Se	mg/l	<0.0008	<0.0008	0.0012	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Silver , Total as Ag	mg/l	<0.0007	<0.0007	0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007
Sodium , Total as Na	mg/l	188	30.1	9	10.2	9.88	5.58	18.9	9.4	11.9
Sulphate as SO4	mg/l	23.3	<4.4	10.6	38.3	42.3	4.4	25	23.1	27.2

Appendix 3

APPENDIX 3 – LEACHATE

Table 1: Monthly leachate level data

Location	Sump 1			Sump 2			Sump 4			Sump 5		
	Cover Level (mAOD)		318.9	Cover Level (mAOD)		350	Cover Level (mAOD)		324.91	Cover Level (mAOD)		321.9
	Base (mAOD)		313.4	Base (mAOD)		310.9	Base (mAOD)		310.75	Base (mAOD)		310.75
Date	Dip (mBGL)	Level (mAOD)	Leachate Head (m)	Dip (mBGL)	Level (mAOD)	Leachate Head (m)	Dip (mBGL)	Level (mAOD)	Leachate Head (m)	Dip (mBGL)	Level (mAOD)	Leachate Head (m)
Jan-16	4.54	314.32	0.9	Dry	-	0.0	5.85	319.1	8.3	4.26	317.6	6.9
Feb-16	4.50	314.36	1.0	Dry	-	0.0	5.50	319.4	8.7	4.48	317.4	6.7
Mar-16	4.62	314.24	0.8	Dry	-	0.0	9.54	315.4	4.6	8.37	313.5	2.8
Trigger Level			1			1			1			1

Location	Sump 9C			Sump 9D		
	Cover Level (mAOD)		-	Cover Level (mAOD)		-
	Base (mAOD)		307	Base (mAOD)		307
Date	Dip (mBGL)	Level (mAOD)	Leachate Head (m)	Dip (mBGL)	Level (mAOD)	Leachate Head (m)
Jan-16	Flooded	-	-	Flooded	-	-
Feb-16	Flooded	-	-	Flooded	-	-
Mar-16	2.00	-	8*	1.80	-	8*
EP Limit			1			1

***Estimated figure**

APPENDIX 3 – LEACHATE

Table 2: Monthly leachate monitoring data

LOCATION	DATE	pH	Ammoniacal Nitrogen as N
		pH units	mg/l
Leachate 1	Jan-16	7.3	141
	Feb-16	7.2	126
	Mar-16	7.5	227
Leachate 2	Jan-16	8.1	2660
	Feb-16	8.8	2090
	Mar-16	8.9	1370
Leachate 4	Jan-16	7.8	203
	Feb-16	7.0	283
	Mar-16	7.8	71
Leachate 5	Jan-16	7.2	637
	Feb-16	7.5	74
	Mar-16	7.2	170
Leachate 6	Jan-16	7.5	637
	Feb-16	6.8	353
	Mar-16	7.1	172

APPENDIX 3 – LEACHATE

Table 4: Final discharge monthly monitoring data (EP exceedances highlighted)

LOCATION	DATE	pH	Ammoniacal Nitrogen as N	Suspended Solids	COD (1 hr settled)	Total TPH (EH>C6 - C40)	Sulphate as SO4	Dissolved Methane
		pH units	mg/l	mg/l	mg/l	µg/l	mg/l	mg/l
Trigger Levels		**6 - 10**	**150**	**500**	**1000**	**nil**	**1000**	**N/A**
Treated Leachate	**Jan-16**	8.0	508	1470	2490	1320	280	0.84
	Feb-16	8.3	404	744	880	510	174	0.37
	Mar-16	8.2	656	936	1240	1070	143	0.01

APPENDIX 3 – LEACHATE

Table 4: Final discharge daily discharge data

DATE	Actual Discharge (m3)
04-Jan-16	121
05-Jan-16	142
06-Jan-16	134
07-Jan-16	128
08-Jan-16	160
11-Jan-16	4
12-Jan-16	124
13-Jan-16	121
14-Jan-16	130
15-Jan-16	27
18-Jan-16	0
19-Jan-16	0
20-Jan-16	0
21-Jan-16	16
22-Jan-16	86
25-Jan-16	0
26-Jan-16	41
27-Jan-16	23
28-Jan-16	0
29-Jan-16	0
01-Feb-16	0
02-Feb-16	0
03-Feb-16	0
04-Feb-16	0
05-Feb-16	0
08-Feb-16	0
09-Feb-16	81
10-Feb-16	115
11-Feb-16	279
12-Feb-16	53
15-Feb-16	106
16-Feb-16	105
17-Feb-16	106
18-Feb-16	75
19-Feb-16	24
22-Feb-16	38
23-Feb-16	112
24-Feb-16	12
25-Feb-16	201
26-Feb-16	88
29-Feb-16	0

APPENDIX 3 – LEACHATE

DATE	Actual Discharge (m3)
01-Mar-16	0
02-Mar-16	0
03-Mar-16	0
04-Mar-16	0
07-Mar-16	16
08-Mar-16	34
09-Mar-16	0
10-Mar-16	0
11-Mar-16	94
14-Mar-16	129
15-Mar-16	0
16-Mar-16	0
17-Mar-16	0
18-Mar-16	0
21-Mar-16	0
22-Mar-16	211
23-Mar-16	0
24-Mar-16	0
25-Mar-16	0
29-Mar-16	0
30-Mar-16	0
31-Mar-16	0

Appendix 4

APPENDIX 4 – SURFACE WATER

Table 1: Monthly monitoring data

LOCATION	DATE	pH	Conductivity-Electrical 20C	Ammoniacal Nitrogen as N (LL)	Chloride as Cl	Total Suspended Solids	BOD + ATU (5 day)	EH >C6 - C40	EH >C6 - C8	EH >C8 - C10	EH >C16 - C24	EH >C24 - C40	EH >C10 - C16
		pH units	µS/cm	mg/l	mg/l	mg/l	mg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l
Trigger Level		**6 - 9**	**N/A**	**0.25**	**N/A**	**50**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
SW 1	**Jan-16**	6.9	95	<0.06	10.9	11	<1	<10	<10	<10	<10	<10	<10
	Feb-16	7.4	99	<0.06	10.5	20	<1	<10	<10	<10	<10	<10	<10
	Mar-16	6.7	459	13.6	55.3	30	10	<10	<10	<10	<10	<10	<10
SW 2	**Jan-16**	8.0	1250	0.47	115.0	304	<1	43	<10	<10	20	22	<10
	Feb-16	8.0	1020	0.33	74.0	45	2	25	<20	<20	25	<20	<20
	Mar-16	7.0	101	<0.06	11.7	5	1	<10	<10	<10	<10	<10	<10

Appendix 5

C 1259793 Potters Waste Management: Waste Water Analysis

Laboratory Number			**15134402**	**15134403**	**15134404**
Customer Sample Ref.			**BP1**	**BP2**	**BP3**
Sample Date/Time					
Sample Matrix			**Dust**	**Dust**	**Dust**
Description of Dust	74	Text	SEE A/C	SEE A/C	SEE A/C
Date In	74	dd/mm/yy	18/02/2016	18/02/2016	18/02/2016
Date Out	74	dd/mm/yy	19/01/2016	19/01/2016	19/01/2016
Number of Days Exposed	74/77		30	30	30
Mass of Undissolved Solids	74	mg	22.7	781	43.7
Deposited Dust, Total, Calc.	74	mg/m2/day	19	640	36
Frisbee Diameter	74	mm	228	228	228

Key
N/S - Not Scheduled
I/S - Insufficient Sample
To Follow - analysis incomplete (interim reports only)

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