

Introduction

This document provides information required under items (h), (i) and (j) of Section 4.2 of the Bryn Pica Landfill Site PPC Permit (No. DP3732SQ), which states:

A report or reports on the performance of the Activities over the previous year shall be submitted to the Agency by the 31st January (or other date agreed in writing by the Agency) each year. The reports shall include as a minimum:

- (h) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographic survey (i.e. the additional volume of the landfill void that is occupied by waste);
- (i) an assessment of the settlement behaviour of the landfill body based on the difference survey for the areas of the landfill which did not receive waste between the surveys;
- (j) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey.

Item h – Volumetric Difference

The volumetric difference calculated between the topographical surveys taken at Bryn Pica in February 2018 and November 2018 gives a fill volume during that period of **28,268 cubic meters**.

Item i – Settlement Behaviour

The table on the next page an assessment of the settlement behaviour of the landfill body based on the difference between annual topographical surveys. Also please find Drawing No.AC2019/ENG/03/002 (included in settlement Behaviour Table attached) to demonstrated the settlement behaviour.

Item j – Calculation of the Remaining Void Space

The remaining capacity of the landfill is based on the February 2018 Phase 4B void survey, and the proposed basal design as submitted in the PPC, compared with the agreed Pre settlement Waste Contours prepared for the PPC.

The remaining void calculated for the Bryn Pica Landfill Site is **2,895,945 cubic meters**.

Settlement Behaviour Table

		Restored Waste Cell Areas					
		Phase 4A	Phase 3B	Phase 3A	Phase 2C	Phase 2B	Phase 2A
2018	Average Waste Level	317.493	316.284	310.985	307.145	299.376	286.158
	Average Waste Thickness	45.112	45.572	39.192	34.380	25.579	11.439
	Percentage Difference	0.4	0.1	0.1	0.2	0.2	0.1
2017	Average Waste Level	317.672	316.331	311.022	307.214	299.419	286.169
	Average Waste Thickness	45.29	45.62	39.23	34.45	25.62	11.45
	Percentage Difference	0.5	0.2	0.3	0.2	0.3	0.4
2016	Average Waste Level	317.89	316.43	311.13	307.28	299.49	286.21
	Average Waste Thickness	45.51	45.72	39.33	34.52	25.70	11.49
	Percentage Difference	0.5	0.5	-2.3	0.3	0.4	0.2
Feb-15	Average Waste Level	317.89	316.67	310.26	307.39	299.61	286.23
	Average Waste Thickness	45.51	45.96	38.46	34.62	25.81	11.52
	Percentage Difference	1.2	0.5	-0.9	0.2	0.1	-0.3
Mar-14	Average Waste Level	318.46	316.89	309.90	307.46	299.64	286.20
	Average Waste Thickness	46.08	46.18	38.11	34.70	25.84	11.48
	Percentage Difference		0.8	0.0	0.4	0.4	0.6
Mar-13	Average Waste Level		317.27	309.91	307.60	299.74	286.27
	Average Waste Thickness		46.55	38.12	34.83	25.95	11.55
	Percentage Difference			2.0	0.3	0.4	0.2
Feb-12	Average Waste Level			310.69	307.71	299.84	286.30
	Average Waste Thickness			38.89	34.94	26.04	11.58
	Percentage Difference			1.0	0.4	0.2	-0.6
Jan-11	Average Waste Level			311.06	307.86	299.90	286.23
	Average Waste Thickness			39.27	35.10	26.10	11.51
	Percentage Difference			0.9	0.4	0.1	0.5
Jan-10	Average Waste Level			311.43	307.99	299.92	286.29
	Average Waste Thickness			39.64	35.23	26.13	11.57
	Percentage Difference			1.5	1.0	1.3	0.8
Dec-09	Average Waste Level			312.02	308.36	300.26	286.38
	Average Waste Thickness			40.23	35.59	26.47	11.67
	Percentage Difference			1.8	-3.3	0.2	21.0
Jan-08	Average Waste Level			312.75	307.22	300.32	289.48
	Average Waste Thickness			40.96	34.46	26.52	14.76
	Percentage Difference				4.4	1.4	-1.3
Jan-07	Average Waste Level				308.80	300.69	289.29
	Average Waste Thickness				36.04	26.89	14.58
	Percentage Difference					3.1	-0.4
Jan-06	Average Waste Level					301.55	289.23
	Average Waste Thickness					27.75	14.51
	Percentage Difference					2.4	2.8

Jan-05	Average Waste Level					302.24	289.65
	Average Waste Thickness					28.44	14.93
	Percentage Difference					-9.1	-12.3
Feb-04	Average Waste Level					299.86	288.02
	Average Waste Thickness					26.1	13.3
Overall Difference		-0.97	-0.98	-1.767	-1.656	-2.863	-3.490
Assumed Difference (Average Base Level)		272.381	270.712	271.793	272.765	273.797	274.719



Average level omitted for Phase 4A permanent capping works haulage road.

Level prior to restoration.

Restored level.