



Pen Y Bont Landfill Site (Chirk)

Annual Environmental 4.2.2 Reporting

**25/01/19
FCC Environment
Pen-Y-Bont Landfill Site
Pentre
Wrexham
LL1 5AR**

Introduction

This report provides the additional information required to be reported to Natural Resources Wales in accordance with condition 4.2.1 of PPC permit GP3830BG, variation number PP3032LN.

Condition 4.2.1 (a) – Annual monitoring data review

This will be provided in a separate report on the agreed submission date of the 31st March 2020.

Condition 4.2.1 (b) – Energy consumption

Table S4.3 Performance Parameters			
Parameter	Frequency of assessment	Annual total	Unit
Energy used (including for leachate treatment)	Annually	589,024.415	MWh of electricity

Condition 4.2.1 (c) – Annual production/treatment

Table S4.2: Annual production/treatment	
Leachate:	Cubic metres/year
Disposed of off site;	8381.00
Disposed of to any on-site effluent treatment plant;	0.00
Recirculated into the waste mass.	0.00
Surface water and/or groundwater:	Cubic metres/year
Disposed of off site;	0.00
Disposed of to any on-site effluent treatment plant;	0.00
Landfill gas:	Normalised cubic metres/year
Combustion in flares;	252.458.00
Combustion in gas engines;	5,195,946.00
Other methods of gas utilisation.	0.00

Condition 4.2.1 (d) – Topographical survey (Annual Site Plan)

See Appendix 1 for plan.

Condition 4.2.1 (e) – Volumetric difference between topographical surveys

0.0m³ the site closed in November 2016.

Condition 4.2.1 (f) – Assessment of settlement behavior

Settlement monitoring points have been established on the restored areas of the site to ensure settlement behaviour of the waste on the landfill site is recorded.

Chirk Landfill Site

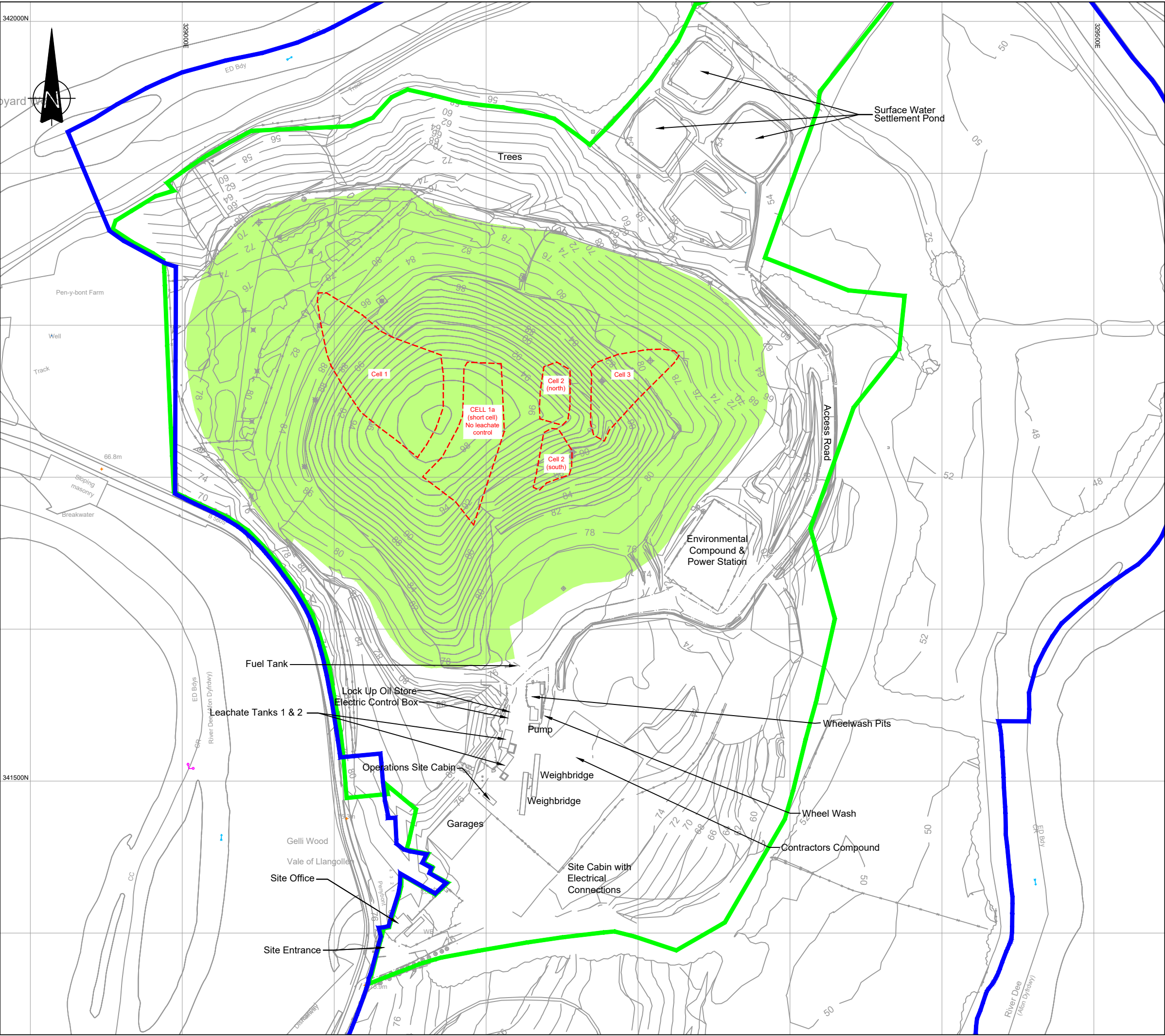
Settlement Monitoring Information for 2019 Annual Monitoring Plan :Permit Returns

Chirk Landfill Site							
Settlement Monitoring Information for 2019 Annual Monitoring Plan :Permit Returns							
Point ID	Eastings	Northings	Height	Height	Ht Diff	Type of marker	Notes
	m	m	m	m	m		
			11/11/18	27/01/20			
466SM1	329047.016	341727.68	80.101	80.113	0.012	Spot Level	
466SM2	329060.646	341765.532	80.93	80.916	-0.014	Spot Level	
466SM3	329069.895	341793.69	80.197	80.179	-0.018	Spot Level	
466SM4	329088.879	341822.771	78.496	78.472	-0.024	Spot Level	
466SM5	329117.599	341861.085	75.48	75.477	-0.003	Spot Level	
466SM6	329192.028	341833.751	83.5	83.455	-0.045	Spot Level	
466SM7	329146.008	341822.027	85.501	85.384	-0.117	Spot Level	
466SM8	329098.845	341771.488	87.016	86.962	-0.054	Spot Level	
466SM9	329084.911	341696.764	86.668	86.601	-0.067	Spot Level	
466SM10	329114.452	341667.828	85.240	85.139	-0.101	Spot Level	
466SM11	329144.626	341627.709	81.739	81.711	-0.028	Spot Level	
466SM12	329168.095	341590.696	80.171		-80.171	Spot Level	Stockpile over point
466SM13	329189.06	341721.986	95.658	95.129	-0.529	Spot Level	
466SM14	329213.915	341766.875	93.702	93.205	-0.497	Spot Level	
466SM15	329167.728	341786.361	93.266	92.970	-0.296	Spot Level	
466SM16	329131.087	341752.139	94.185	93.763	-0.422	Spot Level	
466SM17	329181.694	341670.295	90.145	89.769	-0.376	Spot Level	

The survey levels recorded for 2019 show that there has been no significant fluctuations in settlement behavior.

See Appendix 2 for plan.

Appendix 1



- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.
 2. DO NOT SCALE FROM THIS DRAWING.
 3. ANY ANOMALIES IDENTIFIED WITH THE DETAILS SHOWN ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF FCC ENVIRONMENT (UK) LIMITED PRIOR TO CONSTRUCTION WORKS COMMENCING.

- LEGEND:
- Ownership Boundary
 - PPC Boundary
 - Open Waste Area
 - Proposed Area
 - Temporary Capped Area
 - Permanently Capped
 - Construction Area
 - Latest Available Ground Contours
 - As-built Cell Footprint

Revision:	Date:	Description:	By:	Chk:
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

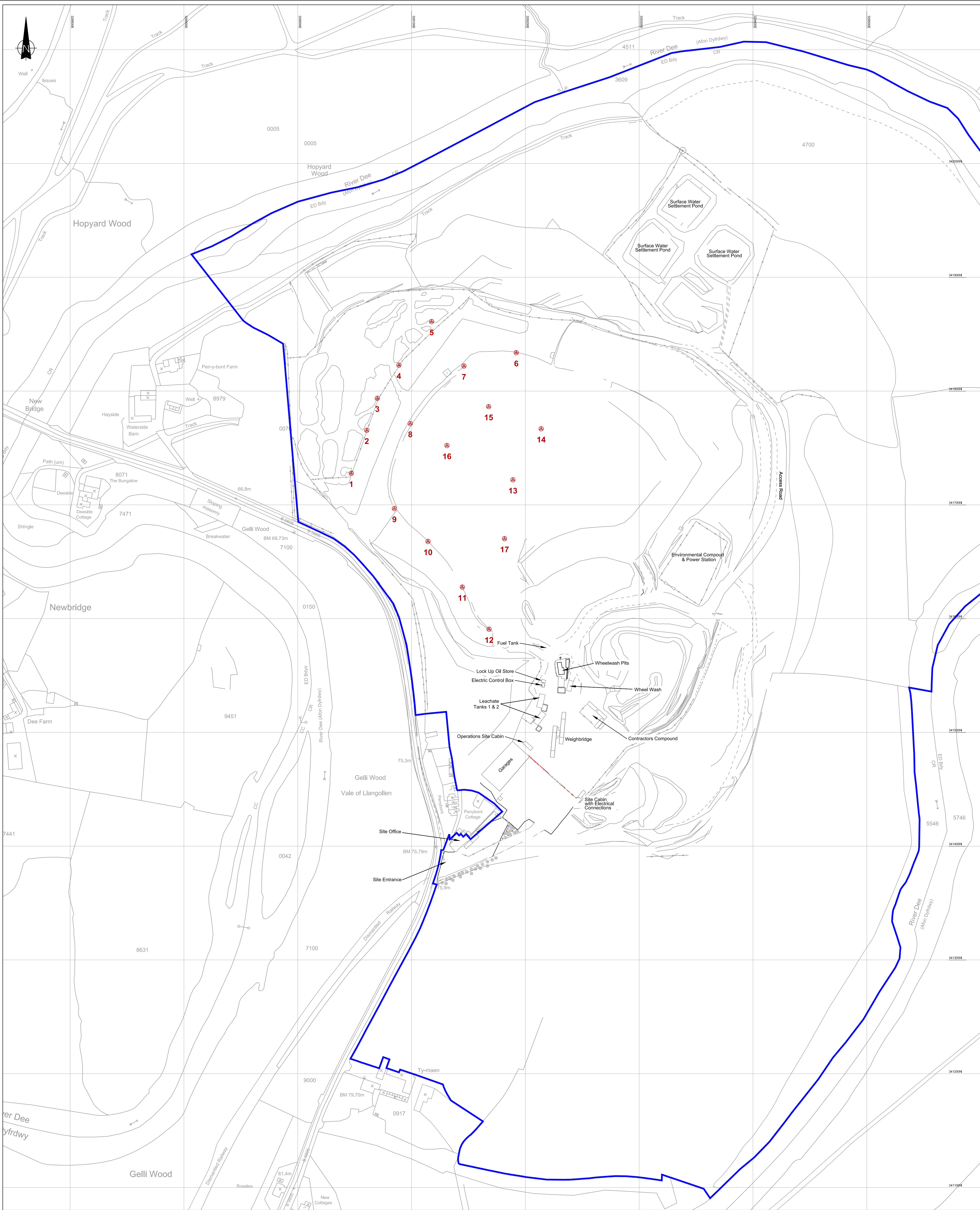
Reference files:
Information taken from plans;
Site Survey: 466A1436
Areas Model: 466A1432

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Site:		CHIRK LANDFILL SITE		
Drawing Title:		Annual Site Plan 2020		
Drawn By: LH	Checked By: LH	Date: 30.01.20	Scale: 1:2500	Paper Size: A3
Status: FINAL	Revision: -	Drawing No: 466A274	Plan Number: PLAN 2	

Appendix 2



LEGEND:

- | Ownership Boundary | | Cell Boundary | |
|--------------------|--|---------------|-----------------------------------|
| | | | |
| | Landfill Gas Monitoring Borehole | | Groundwater Monitoring Borehole |
| | Landfill Gas Surface Monitoring Point | | Groundwater Pumping Point |
| | Combined Gas/ Groundwater Monitoring Point | | Surface Water Monitoring Point |
| | Gas Flare Stack | | Leachate Collection Point |
| | Landfill Gas Extraction/ Leachate Monitoring Point | | Leachate Monitoring Point |
| | Condensate Unit (Knock-out Pot) | | Leachate Recirculation Point |
| | | | Gas Manifold |
| | | | Leachate Collection Sump |
| | | | Leachate Discharge Sampling Point |
| | | | Leachate Detection Point |
| | | | Underdrainage Monitoring Point |
| | | | Settlement Monitoring Point |
| | | | Drain/ Dewatering Tank |
| | | | Valve |

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Revision	Date	Description	By:	CHK:
1	11/11/11	1	1	1
2	11/11/11	2	2	2
3	11/11/11	3	3	3

Reference files:	
Information taken from plans:	
Site Survey:	466W1425
Settlement Monitoring:	466M1374

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Site: **CHIRK
LANDFILL SITE**

Drawing Title: **Settlement Monitoring Plan**

Drawn By: BS	Checked By: LH	Date: 23.01.18	Scale: 1:1500	Paper Size: A1
Status: FINAL	Revision: -	Drawing No: 466M269		Plan Number: PLAN 4B