



**EEL.7700.R03.003**

**Isle of Anglesey County Council**

**PENHESGYN GORS LANDFILL SITE**

**ENVIRONMENTAL PERMIT VARIATION APPLICATION 2020**

**SUPPORTING STATEMENT**

**AUGUST 2020**

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**Prepared for**

**Isle of Anglesey County Council  
LLANGEFNI  
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LL77 7TW**

**Prepared by**

**Egniol Consulting Ltd.  
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**Document Review**

<b>Version No.</b>	<b>Date of Review</b>	<b>Prepared By</b>	<b>Reviewed By</b>	<b>Approved By</b>
-	07/07/2020	Anna Cole	David Wolstencroft	David Wolstencroft
A	24/08/2020	Anna Cole	David Wolstencroft	David Wolstencroft

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## **1. INTRODUCTION**

### **1.1 Application Context**

Isle of Anglesey County Council (hereafter referred to as the 'Operator') own and manages Penhesgyn Gors closed non-hazardous landfill (The Site). The site is regulated under two extant environmental permits: EPR/KP3994FG (formerly EAW ML/37083 (mod. 2005) for Area 3 Engineered Landfill) and EPR/CP3694FW (formally EAWML/37129 (mod. 2006) Dilute and Disperse Area 2).

The Site is located in Llansadwrn, Menai Bridge, Ynys Môn, LL59 5RY at National Grid Reference SH 532 740. The landfill site covers an area of approximately 12ha. The updated site layout plan is shown on Drawing EEL.7700.D13.001.

The Site has been fully closed and restored since 2008 and is currently in its 13<sup>th</sup> year of aftercare management. The Site Closure Report<sup>1</sup> is in place and has been agreed with Natural Resources Wales (NRW). key management activities undertaken by the Operator include:

1. Operation and maintenance of landfill gas extraction system;
2. Treatment and utilisation of extracted landfill gas;
3. Operation and maintenance of leachate extraction system; extraction and tankering of excess leachate off site for treatment and disposal;
4. Maintenance of landfill cap to ensure its integrity and to minimise fugitive emissions of landfill gas, and
5. Regular environmental monitoring of landfill gas, leachate, groundwater and surface water, and reporting to NRW.

This Supporting Statement is a signposting document for an application to NRW to i) consolidate the above environmental permits for Landfill Areas 2 and 3 into one landfill site permit, and to ii) add a condition to the permit to ensure that the new updated Site Closure Plan is to be used.

The variation proposals have been discussed with NRW Regional Team and the National Permitting Team as part of a pre-application consultation. The consultation correspondence with NRW is enclosed in Appendix 1.

### **1.2 Document Structure**

This document has been prepared to provide supporting information and references to the information required in Part C2 and Part C3 Application Forms. The information in this Statement is structured in the same order as in the Application forms to aid cross-referencing between various documents.

## **2. SUPPORTING INFORMATION**

### **2.1 Non-technical Summary (Part C2, 2b)**

This stand-alone document is enclosed with this Supporting Statement, as Appendix 2.

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<sup>1</sup> Penhesgyn Landfill Site. Section A Closure Report. Entec UK Limited, 30 May 2008

## 2.2 Technical Ability (Part C2, 3b1)

The site manager holds a relevant qualification under the CIWM/WAMITAB scheme for technical competence to manage the Site.

The certificate of technical competence for the Operator's technically competent managers are presented in Appendix 3.

## 2.3 Financial Provision (Part C2, 3c)

The Financial Provision for the site aftercare management was agreed with the Environment Agency (EA) in May 2007. The Bonded Sum is based on a 30-year aftercare period (2008 - 2037).

In line with EA's guidance relating to Financial Provision, the current expenditure plan covers the costs relating to appropriate pollution prevention and control measures, and aftercare monitoring, and is based on the Site Closure Report (2008), as follows:

**Table 1: Expenditure Plan**

Item	Annual Budget (£)
<b>1. GENERAL MAINTENANCE</b>	4,000
<b>2. TREATMENT OF DIFFERENTIAL SETTLEMENT</b>	4,000
<b>3. GAS MANAGEMENT SYSTEM</b>	29,000
<b>4. REPLACEMENT WELLS</b>	11,680
<b>5. LEACHATE EXTRACTION, DISPOSAL AND RECIRCULATION</b>	51,640
<b>6. EP COMPLIANCE MONITORING</b>	37,000
<b>7. AFTERCARE PERSONNEL</b>	6,000
<b>8. ENVIRONMENTAL PERMIT SUBSISTENCE CHARGE</b>	1,580
<b>9. INSURANCES</b>	5,000
<b>10. SURVEYING</b>	2,000
<b>11. TECHNICAL CONSULTANCY</b>	5,000
<b>TOTAL</b>	<b>156,900</b>

The Operator carried out 5-year reviews of the Expenditure Plan in 2014 and again in 2019 to inform the value of the renewed Bonded Sum.

## 2.4 Environmental Management System (Part C2, 3d3)

As a waste operator the County Council has adopted a set of management procedures for all their waste facilities. Penhesgyn Landfill site is managed according to the Site Environmental Management Plan (SEMP) which covers all relevant management procedures for the permitted activities, environmental monitoring plans and reporting requirements, amenity related controls and accident response action plan. All such information is documented. Staff training and competences are also included in the Plan.

The document is reviewed regularly and updated in order to implement changes and corrective actions. The last review of the Plan was completed in July 2020. A copy of the SEMP is held at the Site Manager's office and is available for inspection by NRW.

In general, there will be no changes to the existing technical standards for undertaking of aftercare management of the Site, as a result of the variation proposals. Appropriate operational control of this closed landfill site will continue to be achieved through implementation of risk based environmental management plans, staff training and adherence to the written procedures of the management system.

## 2.5 Site Layout Plan (Part C2, 5a)

The Landfill is closed, and the operator will not seek to increase the footprint of the Site. The landfill site layout used in the Closure Report remain valid. The enclosed drawing EEL.7700.D13.001 is an updated site layout plan and shows the Site in the context of the adjacent infrastructure. Other drawings which are relevant to this application, are enclosed with the revised environmental risk assessments and management plans.

## 2.6 Environmental Risk Assessment (Part C2, 6; Part C3, 3b; Part C3, 4b)

For this permit variation application, risk assessments of landfill gas, leachate and the hydrogeological risk assessment, were revised. The updated assessment reports are included with the Application, as follows:

**Table 2: Environmental Risk Assessments**

Risk Assessment	Report reference
Hydrogeological Risk Assessment (HRA)	Review of latest HRA (fc37224, June 2020)
Landfill Gas	Revised Landfill Gas Management Plan (EEL.7700.R03.001, June 2020)
Leachate	Revised Leachate Management Plan (EEL.7700.R03.002, June 2020)

Once approved by the Regulator these reports will replace the earlier versions of the documents in the Site Closure Report.

### Landfill Gas

Landfill gas continues to be actively extracted from both operational areas of the landfill and utilised in the gas combustion engines or treated in the gas plant. Gas extraction wells and pipework are regularly inspected for faults and other signs of compromised integrity which are then rectified at an earliest opportunity. Landfill cap is regularly inspected and repaired as required to minimise fugitive emissions of the gas. These provisions are key for reducing potential environmental risks.

In-waste gas monitoring is carried out as part of the regular balancing of the gas collection system (gas wells, manifolds etc strategic points on the gas system). A network of 115 in-waste gas wells has been installed in both landfill areas. As part of the variation application it is proposed to reduce the current fortnightly gas monitoring of the gas extraction system to four-weekly monitoring. This proposal is based on no apparent benefit of the current regime in terms of both, controlling risks of gas migration off site and adjustment to the

gas wells. The landfill site is closed and therefore there is no upward trend in landfill gas generation. Risks of lateral migration are low to none.

External gas monitoring is carried out in 33 monitoring points. It is proposed to reduce the frequency of this gas monitoring from monthly to quarterly. This variation proposal has been risk assessed based on a review of long-term monitoring data which showed that there is no lateral migration of methane from the waste mass under normal operational conditions. Furthermore, it is proposed to set up borehole specific assessment levels for carbon dioxide for certain monitoring points to take into account background concentrations of the gas.

#### Landfill Leachate

A leachate collection and extraction system are installed in landfill Area 3 and there is no leachate management provisions in the older Area 2 which was constructed using a Dilute and Disperse principle. Each cell in Area 3 has a leachate collection and extraction system installed above the basal liner comprising, a drainage layer and collection pipework. The leachate is pumped to two holding tanks before being collected and tankered offsite for treatment and disposal.

This management approach will remain unchanged under the revised Leachate Management Plan, which have been updated for this permit variation application. The updated Plan reflects the current understanding of the hydrogeology and landfill construction. The plan provides up-to-date management procedures and responsibilities. In addition, an outlined site completion plan has been added to provide a completion approach and completion criteria for landfill leachate at the site.

Leachate monitoring regime and control and trigger levels were assessed in terms of environmental risks to surface and groundwater, as part of the revised Hydrogeological Risk Assessment (HRA report fc37224, June 2020). The risk assessment reviewed all relevant monitoring data since 2002 and updated the conceptual site model for assessment of potential risks posed to the groundwater environment. Based on the revised HRA, it is proposed to amend leachate monitoring schedule as per Table I and to amend the leachate control and trigger levels as per Table M, in the revised HRA report.

#### Landfill Stability

The permit variation proposals will not have implications on waste stability, therefore the Stability Risk Assessment in the Site Closure Report (2008) has not been updated. However, final restoration levels are routinely surveyed to monitor progress of settlement and to ensure that no adverse stability issues arise.

The latest topographic survey of the Site was carried out in November 2019. The extent of the updated survey included the restoration contours of the Site up to the edge of landfill boundary. Based on this topographical survey, an isopachyte level difference check was undertaken to illustrate the settlement in restoration contours between 2016 and 2019 (drawing EEL.7700.D02.002 included with the Application).

### **3.0 ACTIVITIES AND OPERATING TECHNIQUES**

#### **3.1 Variation Activities (Part C3, 1a)**

Refer to Section 1.1.

### **3.2 Emissions to air, water and land (Part C3, 2)**

There will be no change in emissions to air as a result of the proposed variations. Landfill gas will continue to be extracted and utilised in the gas engines and/or treated in the gas flare. Refer to LFG Management Plan for further details.

There are no point sources of emissions to surface water from the site which are regulated in terms of quantity of discharge and chemical composition. Surface water management system allows the rainwater from the landfill cap to drain into the perimeter drainage ditches and the wetland site. The local groundwater quality continues to be monitored as part of the provisions of the Site Closure Report. The revised HRA (report fc37224, June 2020) updates the conceptual site model and risks.

There are no point sources of emissions to groundwater from the site which are regulated by the landfill permit. Landfill Area 3 is engineered to the industry containment standards aimed to prevent leachate migration off site. Landfill Area 2 is an unlined landfill which provides a continuity with the surrounding groundwater. Any produced leachate produced is assumed to percolate through the strata where it will be subject to natural attenuation processes (sorption and biodegradation) and infiltrate groundwater. Groundwater monitoring upgradient and downgradient of the site is a provision of the Site Closure Report. It is proposed to incorporate the relevant conclusions to the revised HRA (report fc37224, June 2020) into the future monitoring schedule.

There are no point sources of emissions to sewer nor emissions to land.

### **3.3 Technical Standards (Part C3, 3a)**

As mentioned in Section 2.4, there will be no changes to the existing technical standards of aftercare management of the Site, as a result of the monitoring variation proposals. Appropriate operational control of this closed landfill site will continue to be achieved through implementation of risk based environmental management plans, as well as adherence to the written procedures of the Site Management Plan.

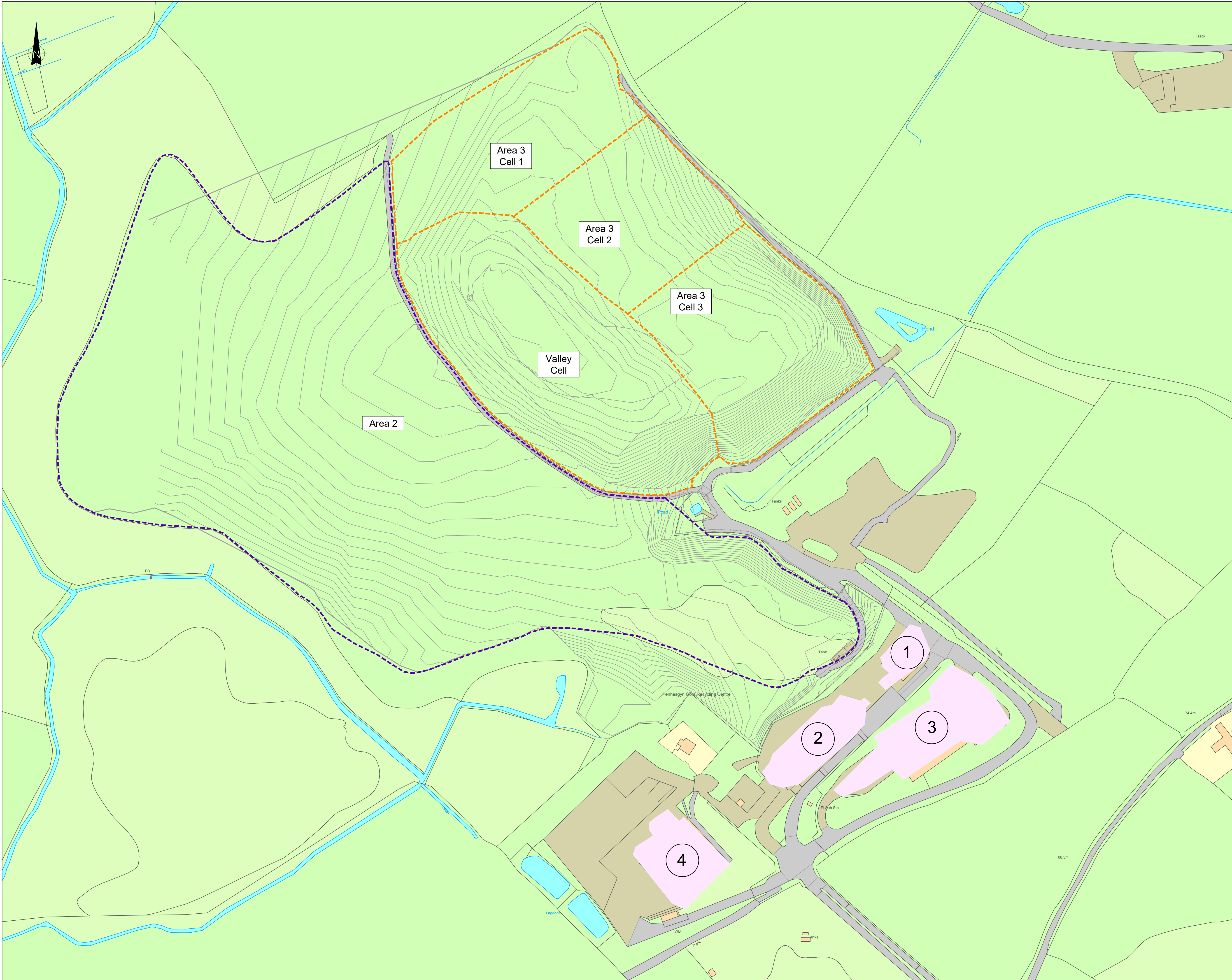
### **3.4 Environmental Monitoring (Part C3, 4a)**

Refer to revised environmental risk assessments and management plans (Table 2 above) which are included with the Application.

Environmental monitoring points are shown in Drawing 5379.SURV.D03.

Monitoring works are carried out by the site operator and external environmental monitoring technicians. The works comply with monitoring methods for assessing quality of leachate, groundwater and surface water as set out in the Technical Guidance LFTGN02: Monitoring of landfill leachate, groundwater and surface water.





Notes

1. Survey information by Egniol Environmental Ltd.
2. All levels in metres above ordnance datum.
3. Do not scale from this drawing.
4. Any anomalies on this drawing should be brought to the attention of Egniol Environmental Ltd.

Key:

Landfill Area 2

Landfill Area 3

1

Site Offices

2

HWRC

3

Transfer Station

4

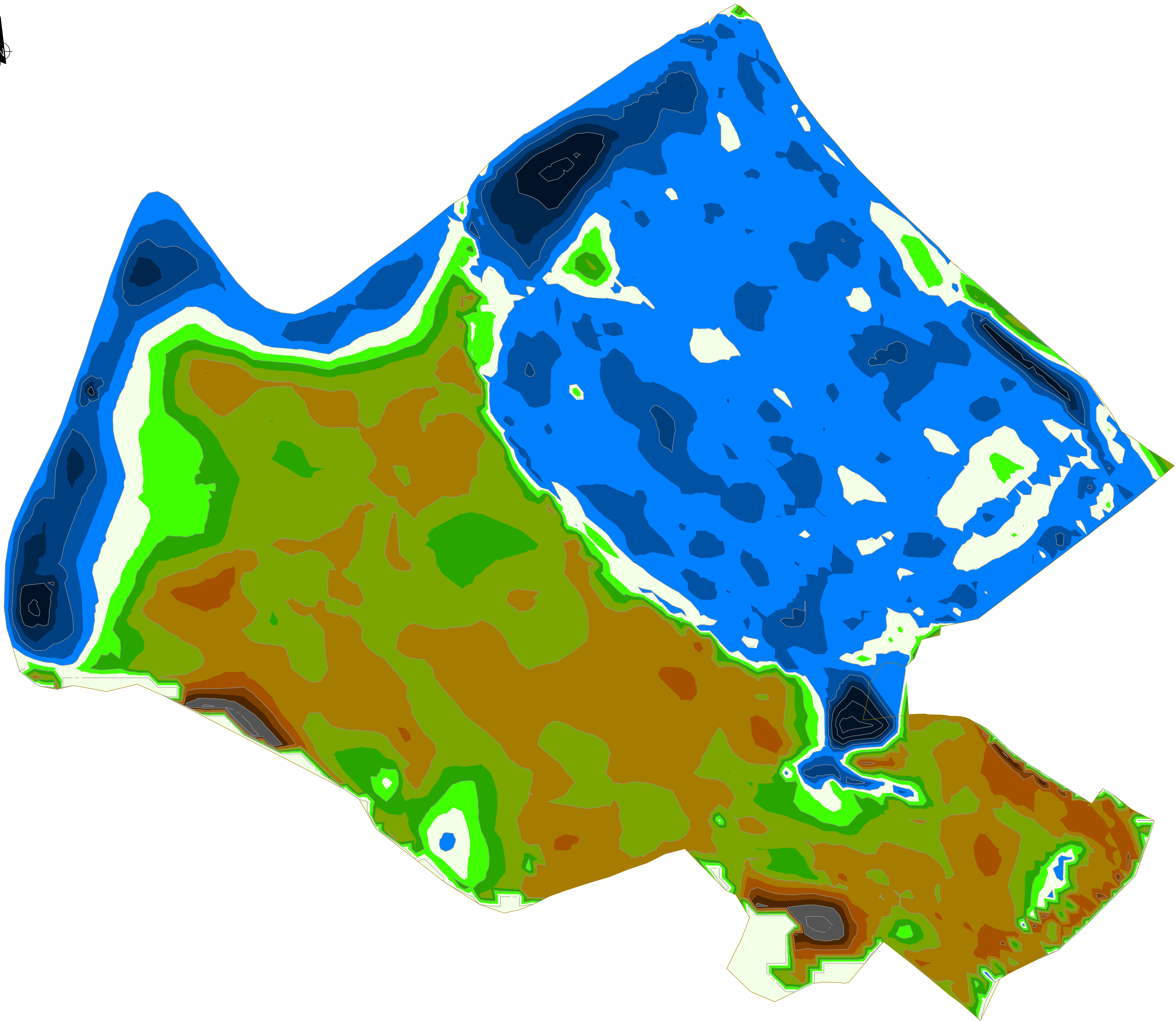
Compost Plan

Rev	Modification	By	Chk	App	Date																								
<div><div></div><div>Egniol Environmental Limited Unit 7 Llys Onnen, Ffordd y Llyn, Parc Menai, Bangor, LL57 4DF Telephone: 01248 355996 Email: info@egniol.com</div></div> <div><div></div><div>Penhesgyn Closed Landfill Site</div></div> <div><div>Landfill Site Layout</div><div><table><tr><td>Drawn by</td><td>Checked by</td><td>Approved by</td></tr><tr><td>JB</td><td>AC</td><td>AC</td></tr><tr><td>Date</td><td>Date</td><td>Date</td></tr><tr><td>17/03/20</td><td>17/03/20</td><td>17/03/20</td></tr><tr><td>Status</td><td colspan="2">Scale @ A1</td></tr><tr><td>Information</td><td colspan="2">1:1250</td></tr><tr><td colspan="2">Drawing Number</td><td>Revision</td></tr><tr><td colspan="2">EEL.7700.D13.001</td><td>-</td></tr></table></div></div>						Drawn by	Checked by	Approved by	JB	AC	AC	Date	Date	Date	17/03/20	17/03/20	17/03/20	Status	Scale @ A1		Information	1:1250		Drawing Number		Revision	EEL.7700.D13.001		-
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Notes

1. Survey information by Egniol Environmental Ltd.
2. All levels in metres above ordnance datum.
3. Do not scale from this drawing.
4. Any anomalies on this drawing should be brought to the attention of Egniol Environmental Ltd.
5. Height ranges (m)

2.00	
1.75	
1.50	
1.25	
1.00	
0.75	
0.50	
0.25	
0.00	
-0.25	
-0.50	
-0.75	
-1.00	

Rev	Modification	By	Chk	App	Date
<div><p>Egniol Environmental Limited Unit 7 Llys Onnen, Ffordd y Llyn, Parc Menai, Bangor, LL57 4DF Telephone: 01248 355996 Email: info@egniol.com</p></div>					
<div><p>CYNGOR SIR YNYS MÔN ISLE OF ANGLESEY COUNTY COUNCIL</p></div>					
<p>Penhesgyn Closed Landfill Site</p>					
<p>Topographical Site Survey November 2019 Isopachyte</p>					
Drawn by GOJR		Checked by OB		Approved by AC	
Date 28.11.2019		Date 28.11.2019		Date 28.11.2019	
Status <b>Information</b>				Scale @ A1 1:1000	
Drawing Number <b>EEL.7700.D02.002</b>					Revision -

CAD File Ref:M:\CAD Projects\7700 Penhesgyn Topo Nov 2019\Drawings\Current Working Drawings\EEL 7700.D02.002.dwg

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NOTES

1. All Survey information provided by Egniol Environmental Ltd.

2. All dimensions in millimetres and all levels in metres above ordnance datum.

3. Do not scale from this drawing.

4. Any anomalies on this drawing should be brought to the attention of Egniol Environmental Ltd.

Key

6.0

Topographical Contours

BH9

Borehole Monitoring Point

BH9

Water Monitoring Point

Fence Line

Top of Batter

Bottom of Batter

All Monitoring Borehole and Water Sample Locations are to Local Grid Co-ordinates.

Monitoring Borehole Locations		
Borehole I.D.'s	Easting	Northing
BH1	5157.906	5303.375
BH2	5228.768	5380.112
BH3	5279.349	5439.864
BH4	5318.808	5492.211
BH5	5407.673	5432.536
BH6	5485.657	5388.465
BH7	5578.167	5358.108
BH9	5792.651	5357.339
BH10	5750.574	5276.982
BH11	5716.254	5201.142
BH12	5680.675	5136.870
BH13	5666.004	5085.401
BH14	5621.109	5053.065
BH15	5594.390	5032.218
BH15A	5581.081	5027.513
BH16	5577.030	5040.875
BH16A	5571.972	5031.738
BH17	5547.380	5047.918
BH18	5549.903	5033.564
BH19	5527.912	5028.782
BH20	5516.558	5018.116
BH21	5507.075	5007.594
BH22	5383.099	4955.481
BH23	5553.714	5024.058
BH24	5577.413	5012.530
BH25	5588.479	5018.988
BH27	5580.989	5042.940
BH28	5605.268	5035.938
BH29	5576.516	5001.116
BH30	5564.091	5000.899
BH31	5560.940	5001.924
BH50	5175.062	5601.238
BH51	5087.428	5486.804
BH52	5051.609	5392.980
BH53	5860.992	5197.072
BH54	5839.241	5142.462
BHHOUSE	5568.490	5009.009

Water Sample Locations		
Water Sample I.D.'s	Easting	Northing
SW1	5041.936	5388.239
SW2	4963.347	5304.715
SW3	4996.475	5055.871
SW4	5007.627	5060.869
SW5	5214.581	5041.517
SW6	5630.914	5331.117
SW7	5540.404	5191.359
SW8	5457.929	5022.281
SW9	5063.947	4707.944
SW10	4730.794	4396.464
BH1	4984.649	5292.405
BH2	5018.043	5071.678
BH96B	5118.544	4875.527
L1	5050.756	5296.104
L4	5080.621	5071.335
L5	5285.330	5049.782
L6	5370.160	5025.942
L7	5457.527	5079.782
LV	5593.760	5189.176

REV	MODIFICATIONS	BY	CH	AP	DATE
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Penhesgyn Landfill Site

Monitoring Locations

DRAWN BY DMD	CHECKED BY GOJR	APPROVED BY IR
DATE 07.01.2015	SCALE @ A1 1:1250	REVISION -

Information

DRAWING NUMBER  
5379.SURV.D03

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CAD FILE REF: M:\CAD Projects\5379 Penhesgyn Landfill Site\5379\Drawings\Current Working Drawings\5379.SURV.D03.dwg

## **APPENDICES**

**Appendix 1 Pre-application Consultations with NRW**

**Appendix 2 Non-Technical Summary**

**Appendix 3 Certificate Of Technical Competence**

## **Appendix 1 Pre-application Consultations with NRW**

## Anna Cole

---

**From:** Roberts, Anthony <Anthony.Roberts@cyfoethnaturiolcymru.gov.uk>  
**Sent:** 03 July 2020 07:52  
**To:** Anna Cole; Davies, Huw  
**Cc:** Meirion P. Edwards  
**Subject:** RE: 7700 - Penhesgyn Environmental Permit Variation Application

Good Morning Anna and Huw,

I can confirm that I am the Lead Officer dealing with Penhesgyn Landfill and that I have assessed these proposal and agreed their contents. This is confirmed in my latest e-mail to you Anna and the e-mail from Huw reproduced in the e-mail string below. Therefore the only stage remaining is the permit variation following the agreement of the fees and charges for the application.

Please CC me in to all future correspondence.

Best wishes

Tony

---

**From:** Anna Cole <anna.cole@egniol.com>  
**Sent:** 02 July 2020 16:55  
**To:** Davies, Huw <Huw.Davies@cyfoethnaturiolcymru.gov.uk>  
**Cc:** Roberts, Anthony <Anthony.Roberts@cyfoethnaturiolcymru.gov.uk>  
**Subject:** FW: 7700 - Penhesgyn Environmental Permit Variation Application  
**Importance:** High

Good afternoon Huw,

I hope that you are well and manage to continue working under the new rules.  
We at Egniol have been working from home since March.

I had a conversation with Ynys Mon CC and Tony Roberts to discuss this permit variation application.  
We have now prepared all supporting documentation.

The list of the application proposals has evolved somewhat, as we were updating relevant risk assessments.  
The updated list is as follows:

Current EP Condition	Description	Variation Proposal
Z6.9	External LFG monitoring and sampling programme	<ol style="list-style-type: none"><li>1. To reduce the frequency of landfill gas monitoring in-waste from fortnightly to 4-weekly (Table 4 LFG Extraction System – Proposed Monitoring Requirements, Landfill Gas Management Plan. Egniol report EEL.7268.R03.002, June 2020).</li><li>2. To reduce the frequency of perimeter gas monitoring from monthly to quarterly in reference to conclusions of the revised LFGRA (Table 7 Landfill gas in perimeter monitoring boreholes – proposed limits and monitoring frequency, LFGMP ref EEL.7268.R03.002).</li><li>3. To amend trigger level for CO<sub>2</sub> in perimeter boreholes from 1.5%v/v to borehole specific Action Levels in reference to conclusions of the revised LFGRA (Table 6 Proposed CO<sub>2</sub> Action Levels in perimeter boreholes, LFGMP, ref EEL.7268.R03.002).</li></ol>



Current EP Condition	Description	Variation Proposal
None but covered in the Site Closure Report	Groundwater, surface water and leachate sampling	<ol style="list-style-type: none"> <li>1. Vary leachate monitoring schedule and compliance levels in reference to conclusions of the revised Hydrogeological Risk Assessment (Table I, Table L and Table M. Report ref fc37224).</li> <li>2. Vary groundwater compliance values in reference to conclusions of the revised Hydrogeological Risk Assessment (Table N. Report ref fc37224).</li> </ol>

For this application we have prepared up to date Landfill Gas Risk Assessment/Management Plan, Hydrogeological Risk Assessment and Leachate Management Plan.

Tony Roberts has reviewed these documents and ok'ed them.

Having reread your earlier consultation advice, I understand that we should submit these revised management plans for a review by NRW North Operations team before replacing the original versions [of these plans] in the Site Closure Report.

Who is the officer in that team we need to liaise with?

Vanessa Laing?

We also need to check with NRW if the above variation proposals still meet the criteria for a 'minor technical' variation?

Can NRW advise what the relevant fee needs to be paid with this application?

Many thanks,

**Anna Cole**

MSc (Hons), CEnv, MCIWM

Principal Environmental Scientist

**Egniol Environmental Ltd**

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---

**From:** Davies, Huw <[Huw.Davies@cyfoethnaturiolcymru.gov.uk](mailto:Huw.Davies@cyfoethnaturiolcymru.gov.uk)>

**Sent:** 07 August 2019 16:02

**To:** Anna Cole <[anna.cole@egniol.com](mailto:anna.cole@egniol.com)>

**Subject:** 7700 - Penhesgyn Environmental Permit Variation Application

Good afternoon Anna,

I have discussed the issued with Anthony Roberts and can now provide the following advice

Anthony is happy with the risk assessment and as such the monitoring requirements can be reduced as he has specified. You can update your closure plan and submit it to NRW North Operations, with an accompanying cover letter, this will be assessed by an NRW Officer.

Once this is agreed you can submit a 'minor technical variation', requesting a condition is added to the permit to ensure that the new updated closure plan is to be used

Further detail can be found at the following link:

<https://naturalresources.wales/permits-and-permissions/?lang=en>

Our fees and charges can be found at the following link:

<https://naturalresources.wales/about-us/what-we-do/how-we-regulate-you/our-charges/?lang=en>

Regards

Huw Davies

Arweinydd Tim Trwyddedu (Gwastraff) / Permitting Team Leader (Waste)

Cyfoeth Naturiol Cymru / Natural Resources Wales

03000 653186

Ty Cambria, Caerdydd / Ty Cambria, Cardiff

Dysgwyr Cymraeg / Welsh Learner

[www.cyfoethnaturiol.cymru](http://www.cyfoethnaturiol.cymru) / [www.naturalresources.wales](http://www.naturalresources.wales)

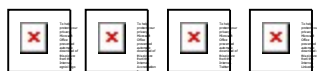
**Yn falch o arwain y ffordd at ddyfodol gwell i Gymru trwy reoli'r amgylchedd ac adnoddau naturiol yn gynaliadwy.**

**Proud to be leading the way to a better future for Wales by managing the environment and natural resources sustainably.**



**Croesewir gohebiaeth yn Gymraeg a byddwn yn ymateb yn Gymraeg, heb i hynny arwain at oedi**

**Correspondence in Welsh is welcomed, and we will respond in Welsh without it leading to a delay**



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## **Appendix 2 Non-Technical Summary**

## **APPENDIX 2: NON-TECHNICAL SUMMARY**

### **1. INTRODUCTION**

This Environmental Permit Variation application seeks, in accordance with the Environmental Permitting Landfill Regulations 2016, permission to i) consolidate the above environmental permits for Landfill Areas 2 and 3 into one landfill site permit, and to ii) add a condition to the permit to ensure that the new updated Site Closure Plan is to be used.

The variation proposals have been discussed with NRW Regional Team and the National Permitting Team as part of a pre-application consultation.

The Site is located in Llansadwrn, Menai Bridge, Ynys Môn, LL59 5RY at National Grid Reference SH 532 740. The landfill site covers an area of approximately 12ha. The Site has been fully closed and restored since 2008 and is currently in its 13<sup>th</sup> year of aftercare management.

The landfill is managed according to the landfill permit and the Site Closure Plan which has been agreed with Natural Resources Wales. The key management responsibilities of the Ynys Mon County Council as the site operator include:

1. Operation and maintenance of the landfill gas extraction system;
2. Treatment and utilisation of the extracted landfill gas;
3. Operation and maintenance of the leachate extraction system; extraction and tankering of excess leachate off site for treatment and disposal;
4. Maintenance of the landfill cap to ensure its integrity and to minimise fugitive emissions of landfill gas, and
5. Regular environmental monitoring of landfill gas, leachate, groundwater and surface water, and reporting to NRW.

There will be no changes to the existing technical standards for undertaking of aftercare management of the Site, as a result of the variation proposals. Appropriate operational control of the closed landfill site will continue to be achieved through implementation of risk based environmental management plans, staff training and adherence to the written procedures of the management system.

The site manager is a technically competent person and holds a Certificate of Technical Competence issued by WAMITAB. The Site Environmental Management Plan covers management procedures and includes an accident response action plan.

## **2. NEED FOR AND BENEFITS OF THE VARIATION PROPOSALS**

### **2.1 Permit Consolidation**

The two extant permits EPR/KP3994FG and EPR/CP3694FW are based on waste management licences EAWML/37083 (mod. 2005) for Area 3 Engineered Landfill) and EAWML/37129 (mod. 2006) Dilute and Disperse Area 2. At the same time the Site Closure Plan covers both Areas and provides integrated management measures and monitoring requirements. Therefore, it is pertinent to consolidate the two permits into one modern style document which reflects the provisions of the Closure Plan.

### **2.2 Updates to the Closure Plan**

The original Site Closure Plan was prepared at the time of the landfill site closure in 2008. The Plan was based on the site infrastructure and pollution control measures on site, at that time. The Plan has not been reviewed during the 13-year aftercare period and is out of date.

For this permit variation application, risk assessments for landfill gas, leachate and the hydrogeological risk assessment, were revised. The risk assessments showed that after thirteen years since the site closure, the assumptions of the original conceptual site model remain valid which means that the site continues to be managed according to the predicted levels of potential risks to human health and the environment.

Furthermore, it is seen that this closed landfill site has a progressively depleting gas field and considerably weaker strength leachate. Thus, the potential risks to local controlled waters, human health and ecological receptors remain low and are diminishing.

Based on the findings of the revised risk assessments the following documents in the Site Closure Plan, have been updated:

1. Landfill Gas Management Plan
2. Leachate Management Plan
3. Hydrogeological Risk Assessment (incl. Surface Water and Groundwater Monitoring Plans).

This permit variation application seeks to supersede the original versions of these Plans, with the updated documents, in the Site Closure Plan.

## **3. SUMMARY**

In summary, the site operator will benefit from the proposed variation of the site permit by relying on the updated risk assessments to guide the management and monitoring requirements for this closed landfill site.

In addition, as mentioned earlier it is pertinent to consolidate the two permits into one modern style regulatory document which reflects the provisions of the Closure Plan.

The scope of the supporting documents was guided by consultations with Natural Resources Wales ahead of the submission of this application.

## **Appendix 3 Certificate Of Technical Competence**





## Continuing Competence Certificate

This certificate confirms that

Meirion Edwards

Has met the relevant requirements of the Continuing Competence scheme for the following award(s) which will remain current for two years from 03/02/2020

LNH	Landfill - Non Hazardous Waste
TSH	Transfer - Hazardous Waste
TMNH	Treatment - Non Hazardous Waste

Expiry Date:  
03/02/2022

Verification date: 31/01/2020

Authorised:

WAMITAB Chief Executive Officer

Learner ID: 8253

Certificate No.: 5159525

Date of Issue: 03/02/2020

CIWM Chief Executive Officer



The Chartered Institution  
of Wastes Management



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