

Gwynedd Council

Llwyn Isaf Landfill

Application to Vary an Environmental Permit

15 October 2013

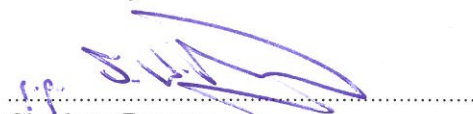
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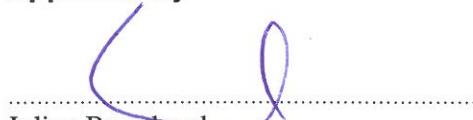
Report for

Medwyn Williams
Waste Treatment Services
Gwynedd Council
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Gwynedd Council**Llwyn Isaf Landfill**

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AMEC Environment & Infrastructure
UK Limited

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Document Revisions

No.	Details	Date
i1	Draft for Client	3 October 2013
i2	Final Report	15 October 2013

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1. Introduction

1.1 Background

Gwynedd Council has appointed AMEC Environment & Infrastructure (UK) Ltd (AMEC) to prepare and submit an application to vary Environmental Permit YP3138UJ issued on 10 October 2008 for the Llwyn Isaf Landfill Site. Gwynedd Council wishes to move the landfill towards definitive closure under the Landfill Directive (Council Directive 1999/31/EC). A Closure Report has been produced in support of this (AMEC Report ref S28587rr754i2) and can be found at Appendix A.

1.2 Purpose of this Report

An Environmental Permit is required, under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) (EPR), to operate:

- Installations that carry out Schedule 1 activities;
- Specified waste activities; and/or
- Mobile plant.

The Environmental Permitting Regulations originally came into force in England and Wales on 6 April 2008. The purpose of these regulations is to provide a consolidated framework for Environmental Permits and exemptions for industrial activities (including some waste operations) previously regulated by the Pollution Prevention and Control (PPC) Regime and all other waste operations previously regulated under the Waste Management Licensing regime.

Where any changes are proposed to the Environmental Permit, a variation is required. As part of moving the landfill towards definitive closure and in accordance with the Environment Agency Guidance 'How to comply with your environmental permit – Closing your landfill The Landfill Sector (EPR 5.02)' (Draft version dated March 2013), an application to vary the permit is required to remove operational conditions and include aftercare conditions to regulate the site during the aftercare phase and for NRW to assess the closure report.

1.3 Types of Variation

Depending on the proposed change to a Permit, it is necessary to apply for one of the following variations:

- An administrative only change (free of charge);
- A minor technical change;
- A normal variation;
- A substantial variation (applies to installations or mining waste facilities);
- Conversion of a bespoke permit to become a standard permit.

Section 2.6, Table 1 of the Environment Agency Guidance 'How to comply with your environmental permit – Closing your landfill The Landfill Sector (EPR 5.02)' (Draft version dated March 2013) states sites ceasing to accept waste after April 2010 are required to apply to vary the permit to progress to aftercare and that this requires a 'normal variation'.

1.4 Charging Scheme

NRW has confirmed it will continue to use the Environment Agency (EA) document 'Environmental Permitting Charging Scheme and Guidance' to determine the appropriate charges for the facilities it regulates until 2015, therefore as part of this application, reference has been made to the aforementioned scheme.

The EA's charging scheme is based on the Unified Charging Framework which has three tiers which are linked to the relative risks of an activity:

- Tier 1 - low risk facilities where the EA/NRW only need to record basic details such as the nature of the activity being undertaken, the operator's name and location;
- Tier 2 - medium risk facilities, in most cases based on standard rules;
- Tier 3 - more complex and high risk facilities that require more detailed and individually tailored permits.

Llwyn Isaf Landfill Site comprises a Tier 3 waste facility and the subsistence charges have been calculated using the Operational risk appraisal (Opra) tool. The Opra score for the site is 99 and the multiplier for a normal variation is 55 making the application fee £5 544.00. A copy of the Opra profile is provided at Appendix B.

2. Operations

2.1 Overview

The following completed application forms are presented as Appendix C:

- Part A - About you;
- Part C2 - General - varying a bespoke permit;
- Part C3 - Variation to a bespoke Installation permit; and
- Part F1 - Opra, charges and declarations.

2.2 Closure Report

Gwynedd Council wishes to move the landfill towards definitive closure under the Landfill Directive (Council Directive 1999/31/EC). The site is divided into four areas as follows:

- **Area 1** comprises the weighbridge, disused site control office, the disused waste reception and pulveriser building which also houses the former site welfare offices. Part of Area 1 was subject to a partial surrender application in 2012/2013. The application was accepted and a Notice of Surrender was issued on 7 February 2013 (Reference YP3138UJ/S004). The area surrendered houses the Anaerobic Digestion facility operated by Biogen UK Limited. Area 1 now covers an area of approximately 0.55 ha;
- **Area 2** is a closed landfill site that received waste between 1986 and 2000 and was capped and restored over ten years ago;
- **Area 3** comprises the current landfill which was operated as a non hazardous landfill under the requirements of the Landfill Directive (Council Directive 1999/31/EC). It covers an area of approximately 2.34 ha. The landfill is operated on the principle of engineered containment. The three cells have been developed from south to north. Landfilling in Area 3 commenced in Cell 1 in January 2009. Waste filling in Cell 1 was completed at the end 2009; filling of Cell 2 was completed in March 2011 and Cell 3 was completed in March 2012;

Cell 1 and part of Cell 2 were capped in 2011 and the remainder of Cell 2 and Cell 3 were capped in 2012 with work being completed by August 2012. Construction Quality Assurance (CQA) Reports were submitted to the Environment Agency in 2013 (AMEC Report references 28587rr153i2 dated May 2013 and 28587rr670i1 dated 31 January 2013).

- **Area 4** lies to the east of Areas 1 and 3 and is separated from the rest of the installation by a public road. It was the subject of two variation applications (YP3138UJ/V002 and YP3138UJ/V002) in 2011/2012 and comprises the surface water management system for Areas 1 and 3 collecting surface water runoff from the site and discharging it to the Afon Desach via an oil interceptor and two infiltration/attenuation lagoons.

Part of Area 1 and all of Area 3 and Area 4 are within the installation boundary for the permit YP3138UJ.

A Closure Report has been produced (AMEC Report ref S28587rr754i3) and is submitted in support of this variation application at Appendix A. The Closure Report has been prepared in accordance with current Natural Resources Wales/Environment Agency (NRW/EA) Guidance as follows:

- Environmental Permitting Regulations (England and Wales 2010) Regulatory Guidance Series, No LFD 1 – Understanding the Landfill Directive. Environment Agency, March 2010 (V2);
- Additional guidance for Landfill (EPR 5.02) How to comply with your environmental permit - Closing your landfill, Consultation Document March 2013.

2.3 Proposed Changes to the Permit

As part of the process of moving towards ‘definitive closure’, this variation seeks an update to the permit to remove operational conditions and include aftercare conditions to regulate the site during the aftercare phase as set out in the landfill aftercare permit template.

Appendix A Closure Report

61 Pages

Gwynedd Council

Llwyn Isaf Landfill

Closure Report

15 October 2013

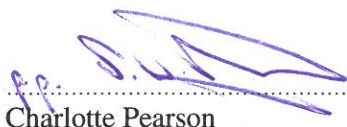
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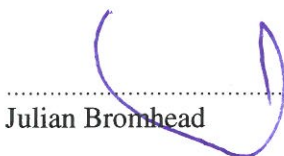
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Gwynedd Council

Llwyn Isaf Landfill

Closure Report

15 October 2013

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Document Revisions

No.	Details	Date
1	Draft for Client Comment	14 August 2013
2	Final Report	15 October 2013

Purpose of this Report

Gwynedd Council has appointed AMEC Environment & Infrastructure (UK) Ltd (AMEC) to prepare and submit a Closure Report for Llwyn Isaf Landfill (Environmental Permit No EPR/YP3138UJ\V003). This report is produced in accordance with the current Natural Resources Wales/Environment Agency (NRW/EA) guidance (LFD 1 v2, March 2010) and Landfill Closure Report Template V3. The Closure Report has been produced so that the site can move towards definitive closure under the Landfill Directive (Council Directive 1999/31/EC).

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1. Introduction

1.1 Report Context and Purpose

Gwynedd Council wishes to apply to Natural Resources Wales (NRW) to progress the Llwyn Isaf Landfill Site to 'definite closure'. This Closure Report has been prepared in accordance with current Natural Resources Wales/Environment Agency (NRW/EA) Guidance¹.

The site is divided into four areas as follows:

Area 1 comprises the weighbridge, disused site control office, the disused waste reception and pulveriser building which also houses the former site welfare offices. Part of Area 1 was subject to a partial surrender application in 2012/2013. The application was accepted and a Notice of Surrender was issued on 7 February 2013 (Reference YP3138UJ/S004). The area surrendered houses the Anaerobic Digestion facility operated by Biogen UK Limited. Area 1 now covers an area of approximately 0.55 ha.

Area 2 is a closed landfill site that received waste between 1986 and 2000 and was capped and restored over ten years ago.

Area 3 comprises the current landfill which was operated as a non hazardous landfill under the requirements of the Landfill Directive (Council Directive 1999/31/EC). It covers an area of approximately 2.34 ha. The landfill is operated on the principle of engineered containment. The three cells have been developed from south to north. Landfilling in Area 3 commenced in Cell 1 in January 2009. Waste filling in Cell 1 was completed at the end 2009; filling of Cell 2 was completed in March 2011 and Cell 3 was completed in March 2012.

Cell 1 and part of Cell 2 were capped in 2011 and the remainder of Cell 2 and Cell 3 were capped in 2012 with work being completed by August 2012. Construction Quality Assurance (CQA) Reports were submitted to the Environment Agency in 2013 (AMEC Report references 28587rr153i2 dated May 2013 and 28587rr670i1 dated 31 January 2013).

Area 4 lies to the east of Areas 1 and 3 and is separated from the rest of the installation by a public road. It was the subject of two variation applications (YP3138UJ/V002 and YP3138UJ/V002) in 2011/2012 and comprises the surface water management system for Areas 1 and 3 collecting surface water runoff from the site and discharging it to the Afon Desach via an oil interceptor and two infiltration/attenuation lagoons.

Part of Area 1 and all of Area 3 and Area 4 are within the installation boundary for the permit YP3138UJ.

¹ Environmental Permitting Regulations (England and Wales 2010) Regulatory Guidance Series, No LFD 1 – Understanding the Landfill Directive. Environment Agency, March 2010 (V2).

Additional guidance for Landfill (EPR 5.02) How to comply with your environmental permit -Closing your landfill, Consultation Document March 2013.

1.2 Installation Details

1.2.1 Location and Access

The Llwyn Isaf site is located approximately 17 km to the southwest of Caernarfon at National Grid Reference (NGR) SH 450 488. Access to the site is from a private road off the A487 which was constructed across agricultural land in 2008 which joins a minor public road immediately to the east of the site entrance.

The location is shown on Figure 1.

1.2.2 Site Topography and Setting

The site is located on a shallow slope. The surface falls from 145 m AOD in the south south-west to 131 m AOD in the north of the site. It is bordered mostly by trees and shrubs. There is a bund in place to the south east, east and north east of the building in Area 1 which shields it from the road. Area 3 is bound to the east by the closed landfill (Area 2) and to the north by Area 1. To the south there are some trees and shrubs beyond which is agricultural land. To the east of Areas 1 and 3 there is a road and beyond that, Area 4 and the surface water lagoons for the site. Area 4 is bound to the north, east and south by trees, shrubs and agricultural land. An anaerobic digestion (AD) plant has recently been constructed between Areas 1 and 3 which is operated by Biogen UK Limited and is permitted separately.

There is a property located to the eastern boundary of Area 3 which was acquired by Gwynedd Council and is not used as a domestic residence.

Land uses within 500 m of the proposed installation boundary are detailed in Table 1.1.

Table 1.1 Land Uses Within 500 m of the Site

Monitoring Location	Frequency	Parameters
North	Agricultural land and Llyn AONB.	
East	Agricultural land.	
South	Several domestic properties (nearest 475 m), agricultural land and Cors Gyfelog SSSI/Corsydd Eifionydd SAC (20 m).	
West	Closed landfill immediately adjacent. Agricultural land.	

1.3 Report Structure

In general accordance with current NRW/EA Landfill Closure Report Template provided as an Appendix to the draft guidance 'Additional Guidance for Landfill (EPR 5.02) How to comply with your environmental permit - Closing your landfill, Consultation Document March 2013' the structure of this Closure Report is as follows:

- Section 2: Area of the site progressing to definitive closure;
- Section 3: Waste stability;
- Section 4: Site Infrastructure;

- Section 5: Monitoring;
- Section 6: Reporting;
- Section 7: Habitats.

2. Area of Closure

2.1 Area of the Site Progressing to Definitive Closure

The areas of Llwyn Isaf Landfill Gwynedd Council wish to progress to definitive closure are Area 1, Area 3 and Area 4 of the installation as shown in Figure 2 of this Closure Report.

Figure 3 identifies the locations of the monitoring infrastructure across the Llwyn Isaf Site.

3. Waste Stability

3.1 Basal Subgrade and Side Slopes

The three cells at the site were formed by excavation into the reworked gravelly and sandy silty made ground below the site which was a product of backfill from previous aggregate quarrying operations. The base of each cell was formed either within the made ground or underlying natural silty sand and gravelly soils. The side slopes to the excavations were formed at a slope of 1:2.5. The basal and side slope lining system comprised 0.5 m of bentonite enhanced soil (BES) overlain by a 2 mm textured HDPE geomembrane overlain by a protection geotextile and a leachate collection layer. The base of all cells is above groundwater levels. Specific geosynthetics stability analysis was undertaken for each cell and this information is provided in the various design reports as follows:

- Design Report, Specification and CQA Plan for construction of Cell 1, AMEC report ref: 18846rr216 dated May 2008;
- Design Report, Specification and CQA Plan for construction of Cell 2, AMEC report ref: 18846rr651i1 dated 20 July 2009; and
- Design report, Specification and CQA Plan for construction of Cell 3, AMEC report ref: 18846rr855i1 dated 20 August 2010.

All of the analyses demonstrated adequate factors of safety. No instability was noted during basal and sideslope liner construction. The lining system was installed under CQA procedures and verification reports are as follows:

- CQA Validation Report for the construction of Cell 1, AMEC report ref: 18846rr522i1 dated 4 December 2008;
- CQA Validation Report for the construction of Cell 2, AMEC report ref: 18846rr747i1 dated 2 December 2009; and
- CQA Validation Report for the construction of Cell 3, AMEC report ref: 18846rr969i1 dated 24 March 2011.

The cells have been infilled with waste which has increased the confining pressure on the basal and sidewall liner. This will have further increased the factor of safety compared to the construction stage analysis.

3.2 Capping System

All three cells have been capped. The capping system comprises a regulating layer over the waste which is in turn overlain by a 1 mm textured LLDPE geomembrane, geocomposite drainage layer and restoration soils. The finished profiles of the site are shown on the survey in Appendix B. The capping was completed in two phases comprising Cell 1/Cell 2 south and Cell 2 north/Cell 3.

Specific pre-construction geosynthetics stability analysis was undertaken for each cell and this information is provided in the various design reports as follows:

- Design Report, Specification and CQA Plan for the Construction of the Permanent Restoration capping to Cell 1 and Part of Cell 2; AMEC Report ref 28587rr018i1 dated 21 December 2010; and
- Design Report, Specification and CQA Plan for the Construction of the Permanent Restoration capping to Cell 3 and Part of Cell 2; AMEC Report ref 28587rr448i1 dated 12 April 2012.

CQA validation reports were also completed for each phase of capping as follows:

- CQA Completion Report for the Construction of the Permanent Restoration Capping to Cell 1 and Part of Cell 2, AMEC Report ref 28587rr153i2 dated May 2013; and
- CQA Completion report for the Construction of the Permanent Restoration Capping to Cell 3 and Part of Cell 2, AMEC Report ref 28587rr670i1 dated 31 January 2013.

The site survey (Appendix B) identifies the steepest slopes to the capping to be on the eastern margin of cell 3 and western margin of cell 1. The capping slopes are typically 1:2.8 or flatter but locally up to 1:2.4 in part.

The same capping materials were used in the construction of the cap to Cell 3 at Ffridd Rasus landfill in 2013. This site also used restoration soils derived from Llwyn Isaf. Site specific geosynthetics interface testing was undertaken on the materials used at Ffridd Rasus. These values have been input into a post construction interface stability calculation for a 1:2.4 slope at Llwyn Isaf (Appendix A) which gives a factor of safety of sliding of the cover soil of 1.97 which is satisfactory.

3.3 Stability Monitoring

The site (Area 3) will continue to be monitored for evidence of instability when topographical surveys are carried out to assess the settlement of the waste mass. Cells 2 north and 3 were last surveyed in August 2012 following cap completion. Cells 1 and 2 south were last surveyed following capping completion in May 2011. The consolidated topographical survey of the site is included as Appendix B to this Closure Report.

4. Site Infrastructure

4.1 Leachate Infrastructure

Calculations for leachate generation at for Area 3 during filling, following capping and after cap degradation are provided in the Environmental Setting and Design (ESID) report submitted in support of the permit application (AMEC report reference 18846rr091i1(ESID) dated October 2007).

Leachate infrastructure for all 3 cells of Area 3 comprises the following:

- A leachate drainage layer at a thickness of 300 mm over the base and the side slopes of each cell;
- A network of HDPE slotted pipework installed within the leachate drainage layer;
- Two HDPE leachate extraction up slope risers installed in the north/north western corner of each cell and connected to the pipework within the drainage layer;
- Each riser is fitted with a pump to remove the leachate to the leachate collection tank sited to the north of Cell 3;
- Two leachate monitoring points within each cell at opposite sides of the cell.

Leachate is stored in a 30 000 litre (30 m³) bunded leachate storage tank in a leachate compound situated to the north of Area 3 as shown on the site survey in Appendix B. Relocation of the leachate storage tank was agreed with Environment Agency Wales (now NRW) and took place in late 2012. It was moved from its former location in Area 1 due to the construction of the Anaerobic Digestion facility in that area. The tank comprises a polypropylene vessel shell with a draw off valve at the base. The tank, which is cylindrical, is approximately 6 m high with a diameter of 3.8 m. The tank is fitted with a level alarm and bund alarm. The tank is located on a concrete plinth and is double skinned. The capacity of the bund is 10% of the capacity of the tank giving a 110% capacity in accordance with best practice. The tanker filling point is located over a contained concrete area. Leachate from the holding tank is tankered off-site to a suitably licensed wastewater treatment plant.

A full description of the Leachate Management System (for Cell 1 but applies to all of Area 3) is given in the Llwyn Isaf Leachate Management Plan (AMEC report reference 18846n529i2 dated 12 December 2008). The leachate management system is shown on Figure 3.

A Construction Quality Assurance Plan, a Design Report, Specification and Construction Quality Assurance Plan and a Construction Quality Assurance Validation Report for each cell was produced and submitted to the Environment Agency Wales (now NRW) for approval (see Section 3.1).

4.2 Leachate Infrastructure Maintenance

An inspection audit of the leachate infrastructure will be carried out by Gwynedd Council on an annual basis. All aspects of the infrastructure will involve a careful check for signs of damage which may result in the system not working effectively and for issues such as access. The

annual inspection will also include an assessment of the leachate monitoring data with the results compared with the conceptual model and the objectives of the monitoring plan. Any inconsistencies found will be investigated in consultation with NRW and the conceptual model and the Leachate Management Plan will be updated.

In addition to the annual planned inspection, all infrastructure will be checked as part of the routine monitoring undertaken in the aftercare period. Leachate monitoring frequency is described in Section 5.1. This will be carried out by Gwynedd Council. During each visit, Gwynedd Council will inspect the monitoring and abstraction points to ensure they do not fall into disrepair and to identify if any maintenance is required.

As part of the routine inspection Gwynedd will perform the following checks:

- All leachate abstraction and monitoring points remain safe and clear to access and are clearly identified;
- All leachate abstraction and monitoring points are clearly visible and free from damage which could prevent monitoring or abstraction taking place;
- The depth to the base of all leachate monitoring points will be recorded and checked against previous readings to check for evidence of silting or blocking.

Records will be kept of each site visit and all information gathered will be recorded on the monitoring record sheets.

Where remedial work is minor (for example repair to leachate pumps) Gwynedd Council will either complete the required work or employ suitable qualified personnel to make the required repairs as soon as practicably possible.

Where it is determined damaged infrastructure requires major remedial work (for example cleaning or unblocking an upslope riser or leachate monitoring point) or replacement the following contingency plan will be initiated:

- An assessment of the work required will be made by Gwynedd Council to determine the most suitable means of repair/replacement and set the timescales for the work to be undertaken and completed and NRW informed;
- Any replacement monitoring or extraction points which are required will be sited having regard for the guidance given in the EA Technical Guidance Note 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (TGN02);
- Any redundant leachate abstraction or monitoring point will be sealed and capped to remove a potential pathway for fugitive emission of landfill gas. Any required work will be agreed with NRW beforehand but it is likely that abandoned monitoring points will be sealed with cement-based grout or bentonite and capped in a manner that prevents any confusion with active monitoring points;
- A Construction Quality Assurance (CQA) Plan will be drawn up for the required work and forwarded to NRW for approval;
- Gwynedd Council will employ suitably qualified personnel to undertake the remedial work in accordance with the CQA Plan. All work will be independently assessed by a qualified CQA Assessor;

- A CQA Completion Report will be submitted to NRW detailing all the activities carried out on site and where appropriate, the materials used including any testing undertaken;
- All site infrastructure drawings and monitoring reports will be updated to reflect any changes made.

4.3 Landfill Gas Infrastructure

In-waste Gas Extraction System

Within the landfill body there are a total of 20 gas extraction wells installed across the 3 cells of Area 3 (identified on Figure 3) and are summarised as follows:

- Gas extraction wells GW1 to GW4 were installed in Cell 1, to depths of between 6 m below ground level (bgl) and 8 m bgl, on 17 June 2010;
- Gas extraction well GW5 was installed in Cell 1 and GW6 to GW11 were installed in Cell 2 between 8 and 10 March 2011. Gas extraction wells GW5 to GW11 were drilled to depths of between 5.3 m bgl and 12.8 m bgl; and
- Gas extraction wells GW12 and GW17 were installed in Cell 2 and GW 13 to GW20 (excluding GW17) were installed in Cell 3 to depths 6.0 m bgl and 10.3 m bgl between 20 and 22 March 2012.

The gas extraction wells were installed through the landfilled wastes prior to installation of the landfill cap. The gas extraction wells are shown on Figure 3 and details of the wells are presented in Table 2.1.

Table 2.1 Gas Well Details

Gas Well	Top of Waste (m AOD)	Drill Depth (m)
GW1	144.232	6.0
GW2	146.013	8.0
GW3	145.070	6.5
GW4	145.257	7.5
GW5	143.665	5.3
GW6	148.284	11.5
GW7	148.817	12.8
GW8	143.639	7.1
GW9	143.907	6.5
GW10	143.273	7.8
GW11	147.082	10
GW12	142.15	6.6
GW13	142.13	6.2

Table 2.1 (continued) Gas Well Details

Gas Well	Top of Waste (m AOD)	Drill Depth (m)
GW14	141.53	7.0
GW15	143.52	10.3
GW16	144.19	8.8
GW17	143.67	6.0
GW18	141.40	7.5
GW19	142.77	7.4
GW20	142.42	6.8

The gas wells were drilled with a 450 mm continuous flight auger. They comprise a plain 160 mm diameter MDPE well casing for the first 2.1 m below existing ground level, with the remainder of the well consisting of slotted 160 mm diameter MDPE casing with a gravel surround (non calcareous 20 mm single sized gravel pack) installed to 2.0 m below ground level, with the plain pipe surrounded by a pre mixed bentonite seal to proposed final ground levels.

The following CQA documents describe the design and the installation of the gas extraction system for Area 3:

- Cell 2 Gas Extraction CQA plan, AMEC report ref 28587rr074i1 dated 11 February 2011;
- CQA Plan for the Construction of Gas Wells for Cell 3 at Llwyn Isaf landfill, AMEC Report ref 28587rr447i1; and
- CQA Plan for Ring Main Installation prepared by Envirocare Europe Ltd dated 18 June 2013.

As part of the capping works each well pipe was oversleaved with a 250 mm HDPE pipe to which a geomembrane skirt was welded. The annulus between the two pipes was sealed with a flexiseal coupler. Each individual gas extraction well is fitted with a valve to allow the balancing of the system.

The wells were reconnected to the temporary extraction system on completion of the capping works. Cell 1 and part of Cell 2 were capped in 2011 and the remainder of Cell 2 and Cell 3 were capped in 2012 with work being completed by August 2012. A new perimeter gas collection ring main, associated well connections and dewatering (condensate) drains is under construction in August 2013 and a CQA verification report will be made available on completion.

Landfill Gas Flare

The gas extraction system is connected via a series of pipework to a high temperature (HT) ground flare with automatic flame temperature control rated at 200 cubic meters per hour and a combustion chamber temperature of 1000°C minimum when methane concentration is above 28%. Full details of the flare and associated equipment are provided at Appendix C. This permanent unit was installed early August 2012 and replaced a hired open flare and is located in

the compound to the north of Cell 3 adjacent to the haul road as shown on the site survey in Appendix B.

External Landfill Gas Boreholes

A total of 7 landfill gas boreholes external to the engineered cells have been installed around the periphery of the landfill area as shown on Figure 3. Boreholes G1 to G7 were installed in 2008. G1 was replaced by G1A in 2012 when the original borehole was lost during landscaping works for the AD facility at the site. The external boreholes are monitored to enable the effectiveness of the on-site landfill gas management and control systems in preventing lateral migration of landfill gas to be assessed. The external gas monitoring boreholes are spaced at intervals in excess of the guideline spacing of 50 m (LFTGN 03 EA guidance on the management of landfill gas). However the Landfill Gas Management Plan produced for the site (AMEC report ref: 28587rr366i2 Llwyn Isaf Landfill Site – Landfill Gas Management Plan dated 19 March 2012) demonstrated this is considered to be sufficient given the relatively uniform nature of the strata and the distance to sensitive receptors.

Additional Landfill Gas Control Measures

During the aftercare period there may be insufficient gas to support continual combustion. In these circumstances the results of the routine system monitoring which will provide data on the gas flows and concentrations within the different parts of the site will be used to determine the most appropriate operational regime both in respect of the suction applied to the wells and the operational sequence of the flare, with the objective of ensuring that extraction and gas utilisation are optimised.

If the situation arises where there is insufficient methane to support combustion, other measures will be considered to control the landfill gas flare. These may include one or more of the following:

- Use of support fuel to be injected into the flare intermittently (on demand) or continuously;
- Intermittent extraction and flaring;
- Use of low calorific flares; and
- Biological methane oxidation.

4.4 Landfill Gas Infrastructure Maintenance

An inspection audit of the landfill gas management infrastructure will be carried out by Gwynedd Council on an annual basis. All aspects of the landfill gas management infrastructure will involve a careful check for signs of damage which may result in the system not working effectively and for issues such as access. The annual inspection will also include an assessment of the landfill gas monitoring data with the results compared with the conceptual model and the requirements of the gas management plan. Any inconsistencies found will be investigated in consultation with NRW and the conceptual model and the Gas Management Plan will be updated.

In addition to the annual planned inspection, all infrastructure will be checked as part of the routine monitoring undertaken in the aftercare period. Landfill gas monitoring is described in Section 5.2. This will be carried out by CH4 Consultants as current landfill gas management

contractors and during each visit, they will inspect the monitoring and abstraction points to ensure they do not fall into disrepair and to identify if any maintenance is required.

Planned maintenance and that which has been identified through inspections will be carried out by suitably experienced CH4 personnel. An experienced CH4 engineer is available on standby should the need arise for maintenance outside normal operational hours.

As part of the above inspections, Gwynedd Council or their gas management contractors will perform the following checks:

- All in waste extraction wells and external monitoring points remain safe and clear to access and are clearly identified;
- All in waste extraction wells and external monitoring points are clearly visible and free from damage;
- The depth to the base of all external monitoring points will be recorded and checked against previous readings to check for evidence of silting or blocking;
- The flare is in working order.

Where it is determined damaged infrastructure requires major remedial work (for example replacement of a gas well) an assessment of the work required will be made by Gwynedd Council to determine the most suitable means of repair/replacement and set the timescales for the work to be undertaken and completed and will inform NRW. Repairs and maintenance will be undertaken as needed and as soon as practicable.

If an occurrence such as the significant ingress of air or leakage of gas is detected, the system will be shut down automatically or manually by a qualified member of staff following documented shut down procedures. It will not be restarted until the ingress or leak has been identified and repaired.

Where required a Construction Quality Assurance (CQA) Plan will be drawn up for the required work and forwarded to NRW for approval. Gwynedd Council will employ suitably qualified personnel to undertake the remedial work in accordance with the CQA Plan. All work will be independently assessed by a qualified CQA Assessor. A CQA Completion Report will be submitted to NRW detailing all the activities carried out on site and where appropriate, the materials used including any testing undertaken.

All site infrastructure drawings and monitoring reports will be updated to reflect any changes made.

The flare will be maintained by the suppliers, ASF, for the first three years after installation (2012) and will be inspected by ASF every 4 months. Maintenance of the flare will be carried out in accordance with the Manufacturer's recommendations to ensure that the flare runs efficiently at all times.

The flare is inspected visually during each monitoring visit for signs of faults and deterioration. If any faults are apparent, they will be rectified by the ASF engineer. If the ASF engineer is unable to rectify the fault then a suitable contractor will be used to trace and repair the fault. The operation and maintenance manuals will be kept at the site office.

Any faults will be recorded in a site log. The site log will be made available for inspection on request. NRW will be informed immediately, where practicable or unless agreed with them, in

the event of detection of a failure of the landfill gas flare or of damage to any of its components. There may be some circumstances where it is not possible to inform NRW immediately, for example if the failure occurs outside normal office hours. In such cases, NRW will be notified as soon as practicably possible.

Performance indicators such as differential pressure gauge and flow meter readings will permit a gas field technician to identify problems between scheduled services and often before they become a significant issue. The performance of the flare, when in operation, will be assessed regularly by the monitoring and logging of the following parameters:

- Field vacuum (mb);
- Stability of vacuum readings;
- Delivery pressure;
- Stability of gas pressure readings;
- Gas quality CH₄, CO₂, O₂;
- Differential pressure across fine filter (mb);
- Differential pressure across flame arrestor (mb);
- Flow rate through plant;
- Temperature of combustion; and
- Valve positions.

Interim maintenance will be carried out following the identification of a problem from this data. A copy of the latest Service Sheet completed by ASF is provided at Appendix C.

In the event of unplanned down time, e.g. flare failure, ASF would be notified immediately. They would hold all of the essential components in stock for repair. If it is considered, based on a risk assessment of site-specific circumstances, that repair of the flare could not occur in time to prevent significant build up of gas within the site, which could result in significant fugitive emissions, a temporary flare would be hired to control the landfill gas until the necessary repairs were affected.

A record of the problem and any remediation, repairs or maintenance undertaken will be kept on site and available for review by the NRW. Where the identified problem is considered to pose a risk to the environment or human health, NRW will be notified immediately.

4.5 Groundwater Infrastructure

As the base of the landfill is above the groundwater table there is no groundwater management at the site.

There are a number of up gradient and down gradient boreholes for monitoring the landfill site (Areas 2 and 3). Of these the following boreholes are used to monitor groundwater quality in the vicinity of Area 3 in accordance with Environment Agency Guidance Technical Guidance Note 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (TGN02):

- M47, GW2 and GW5 located up gradient of the site;
- GW3, GW4, M17 and M36, located downgradient of the site;
- DAS is located on the eastern margin of the closed landfill (Area 2).

The location of the groundwater monitoring points is shown on Figure 3. Borehole logs were provided at Appendix ESID 3 to the ESID report (AMEC report 18846rr091i1 dated October 2007) produced in support of the application for the environmental permit and a borehole log for GW5 is included in the Technical Note produced to comply with Improvement Condition No6 of Table S1.3 of the Environmental Permit (AMEC Report reference 28587n665i2 dated 21 August 2009).

4.6 Groundwater Infrastructure Maintenance

An inspection audit of the groundwater monitoring infrastructure will be carried out by Gwynedd Council on an annual basis. All aspects of the infrastructure will involve a careful check for signs of damage which may result in the system not working effectively and for issues such as access. The annual inspection will also include an assessment of the groundwater quality monitoring data with the results compared with the conceptual model and the objectives of the monitoring plan. Any inconsistencies found will be investigated in consultation with the NRW. The annual environmental report for the site will review groundwater data and consider this in the context of the Hydrogeological Risk Assessment (HRA). The HRA is due a formal update in 2014.

In addition to the annual planned inspection, all infrastructure will be checked as part of the routine monitoring undertaken in the aftercare period. Groundwater quality monitoring frequency is described in Section 5.3. This will be carried out by Gwynedd Council. During each visit, Gwynedd Council will inspect the monitoring points to ensure they do not fall into disrepair and to identify if any maintenance is required.

As part of the routine inspection Gwynedd will perform the following checks:

- All monitoring points remain safe and clear to access and are clearly identified;
- All monitoring points are clearly visible and free from damage which could prevent monitoring taking place;
- The depth to the base of all monitoring points will be recorded and checked against previous readings to check for evidence of silting or blocking.

Records will be kept of each site visit and all information gathered will be recorded on the monitoring record sheets.

Where remedial work is minor (for example damage to above ground external casing or access) Gwynedd Council will either complete the required work or employ suitable qualified personnel to make the required repairs as soon as practicably possible. NRW will be informed above of any work undertaken including the reasons why and the action taken.

Where it is determined damaged infrastructure requires major remedial work (for example cleaning or unblocking a borehole) or replacing the following contingency plan will be initiated:

- An assessment of the work required will be made by Gwynedd Council to determine the most suitable means of repair/replacement and set the timescales for the work to be undertaken and completed;
- Any replacement boreholes which are required will be sited having regard for the guidance given in the Environment Agency Technical Guidance Note 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (TGN02);
- Any redundant borehole will be sealed and capped to remove a potential pathway for the contamination. Any required work will be agreed with NRW beforehand but it is likely that abandoned boreholes will be sealed with cement-based grout or bentonite and capped in a manner that prevents any confusion with active monitoring points;
- A Construction Quality Assurance (CQA) Plan will be drawn up for the required work and forwarded to the NRW for approval.

4.7 Surface Water Infrastructure

The surface water infrastructure at Llwyn Isaf landfill site is described in the following documents:

- Surface Water Management Plan (Revised) (AMEC report ref: 18846n591i1 dated 30 April 2009);
- Environmental Permit Variation Application for the installation of a new surface water management system (AMEC report ref: 28587rr143i2 dated 27 June 2011); and
- Environmental Permit Variation Application to amend proposed location of surface water lagoon (AMEC report ref: 28587n383i1 dated 23 January 2012).

The surface water management system will collect surface water runoff from the site and discharge it to the Afon Desach via an attenuation lagoon. Surface water from part of Area 3 is discharged to an infiltration basin north east of Area 3. Some runoff from Areas 1 and 2 is discharged to a soakaway in the northern part of Area2 as shown on the survey plan in Appendix B.

The surface water drainage system within Area 3 comprises a series of surface water drains constructed in the restoration soils to collect surface flows from the geocomposite drainage layer within the restoration capping system. The capping system is profiled so that water is shed to the perimeter where surface water drainage ditches will direct the flow to the nearby surface water ditches located to the south and west of Cell 1 and to the north and west of Cell 3. Surface water then drains from these ditches via a series of pipework to an attenuation lagoon to the north-north east of the landfill and via pipework to a smaller infiltration lagoon to the east of the landfill as shown on Figure 3. The lagoons have been sized to allow for a 1 in 100 year storm event with a 20% uplift for climate change in accordance with Planning Policy Statement 25 and EA recommendations.

From the attenuation lagoon, surface water discharges via a Hydrobrake flow control device to the Afon Desach. The system has been designed to discharge a maximum flow of 20 l/s into the river regardless of head in the attenuation lagoon to ensure that surface water input to the Afon

Desach does not exceed that of the green field runoff rate for the site. The infiltration lagoon performs as a soakaway to ground.

There are a number of surface water sample points and these are shown on Figure 3 and described below:

- Sample point B is located to the north of the site on a small tributary which feeds into the Afon Desach;
- Sample point C is located to the north east of the site in the Afon Desach and is the downstream sample point;
- Sample point D is the permitted discharge from the surface water attenuation lagoon into the Afon Desach. Sampling commenced in September 2012 following commissioning of the attenuation lagoon;
- Sample point D2 is located in a lake to the north of the site;
- Sample point E is located approximately 300 m downstream from sample point C on Afon Desach (off Figure 3);
- Sample point W is located to the east of the site on the Afon Desach downgradient of the infiltration basin; and
- Sample point Y is situated to the south east of the site in Afon Desach and is the upstream sample point.

Surface water quality monitoring is described in Section 5.4.

4.8 Surface Water Infrastructure Maintenance

An inspection audit of the surface water infrastructure will be carried out by Gwynedd Council on an annual basis. All aspects of the infrastructure will involve a careful check for signs of damage which may result in the system not working effectively and for issues such as blockages. The annual inspection will also include an assessment of the surface water monitoring data with the results compared with the conceptual model and the objectives of the monitoring plan. Any inconsistencies found will be investigated in consultation with NRW and the conceptual model and the Surface Water Management Plan will be updated.

In addition to the annual planned inspection, all infrastructure will be checked as part of the routine monitoring undertaken in the aftercare period. This will be carried out by Gwynedd Council. During each visit, Gwynedd Council will inspect the surface water drainage ditches and the infiltration and attenuation ponds to ensure they do not fall into disrepair and to identify if any maintenance, such as desilting is required.

As part of the routine inspection Gwynedd will perform the following checks:

- All surface water drainage ditches and the infiltration and attenuation ponds will be checked for blockages;
- All monitoring points are clearly visible and accessible to ensure monitoring can be carried out.

Records will be kept of each site visit and all information gathered will be recorded on the monitoring record sheets.

Where remedial work is minor (for example clearing a ditch or access) Gwynedd Council will either complete the required work or employ suitable qualified personnel to make the required repairs as soon as practicably possible.

Where it is determined damaged infrastructure requires major remedial work (for example replacement of surface water drains or culverts the following contingency plan will be initiated:

- An assessment of the work required will be made by Gwynedd Council to determine the most suitable means of repair/replacement and set the timescales for the work to be undertaken and completed;
- A Construction Quality Assurance (CQA) Plan will be drawn up for the required work and forwarded to NRW for approval;
- Gwynedd Council will employ suitably qualified personnel to undertake the remedial work in accordance with the CQA Plan. All work will be independently assessed by a qualified CQA Assessor;
- A CQA Completion Report will be submitted to NRW detailing all the activities carried out on site and where appropriate, the materials used including any testing undertaken;
- All site infrastructure drawings and monitoring reports will be updated to reflect any changes made.

4.9 Cap Maintenance

The following documents describe the installation of the cap for Area 3:

- Design Report, Specification and CQA for the Construction of the Permanent Restoration Capping System to Cell 1 and Part of Cell 2, AMEC Report ref: 28587rr018i1 dated 21 December 2010;
- CQA Completion Report for the Construction of the Permanent Restoration Capping to Cell 1 and Part of cell 2, AMEC Report ref: 28587rr153i2 dated May 2013;
- Design Report, Specification and CQA for the Construction of the Permanent Restoration Capping System to Cell3 and Part of Cell2, AMEC Report ref: 28587rr448i1 dated 12 April 2012; and
- CQA Completion report for the Construction of the Permanent Restoration Capping to Cell 3 and Part of Cell 2, AMEC Report ref: 28587rr670i1 dated 31 January 2013.

The final surface levels were surveyed on completion of capping of cells 2 (north) and 3 with the last survey being carried out in August 2012. Cells 1 and 2 south were last topographically surveyed in May 2011 and are due for resurvey. Future topographical surveys will be carried out annually up to 2018, and then every two years thereafter.

An inspection audit of the cap will be carried out by Gwynedd Council on an annual basis to check for signs of damage or changes which may compromise the performance of the cap. The annual inspection will also include an assessment of the topographical survey with the results compared against the previous survey to identify any areas which may need further investigation. As part of the routine inspection Gwynedd will perform the following checks:

- No large trees or shrubs that may penetrate the cap are present on the cap;
- There is no evidence of soil erosion on the cap or in adjacent areas;
- There are no noticeable depressions or ponded water present;
- There is no noticeable sliding, slope failure or large cracks in the soil cover;
- The geomembrane is not exposed or torn; and
- There are no large areas of bare of vegetation.

Records will be kept of each site visit and all information gathered will be recorded on the audit sheets.

Where remedial work is minor (for example clearing trees and bushes) Gwynedd Council will either complete the required work or employ suitable qualified personnel to make the required repairs as soon as practicably possible.

Where it is determined that there is damage to the cap that requires major remedial work (for example exposed or damaged geomembrane) the following contingency plan will be initiated:

- An assessment of the work required will be made by Gwynedd Council to determine the most suitable means of repair/replacement and set the timescales for the work to be undertaken and completed;
- A Construction Quality Assurance (CQA) Plan will be drawn up for the required work and forwarded to NRW for approval;
- Gwynedd Council will employ suitably qualified personnel to undertake the remedial work in accordance with the CQA Plan. All work will be independently assessed by a qualified CQA Assessor;
- A CQA Completion Report will be submitted to NRW detailing all the activities carried out on site and where appropriate, the materials used including any testing undertaken.

5. Monitoring During the Aftercare Phase

The current leachate, landfill gas, groundwater and surface water monitoring infrastructure at the Llwyn Isaf Landfill Site is shown on Figure 3. The monitoring infrastructure is described in Sections 4.1, 4.3, 4.5 and 4.7 of this report.

The existing and replacement monitoring infrastructure, as described above, is considered adequate in accordance with Annex III of the Landfill Directive², which requires the following:

- Sampling of leachate from representative points;
- Sampling of groundwater with at least one measuring point in the groundwater inflow region and two in the outflow region;
- Sampling of surface water from at least two representative points – one upstream and one downstream of the landfill; and
- Gas monitoring representative of each section of the landfill.

All monitoring for the Aftercare Phase will be carried out in accordance with Annex III to the Landfill Directive.

In determining the monitoring frequencies for leachate, groundwater, surface water and landfill gas for the Aftercare Phase, a review of the results of the previous 12 months monitoring at the site has been carried out to establish long term trends and any seasonal variation. The following Quarterly Monitoring Reports have been referred to:

- AMEC report ref: 28587rr648i2 dated 27 November 2012 covering the period July to September 2012;
- AMEC report ref: 28587rr695i2 dated 13 February 2013 covering the period October to December 2012;
- AMEC report ref: 28587rr6732i2 dated 7 May 2013 covering the period January to March 2013; and
- AMEC report ref: 28587rr780i2 dated 1 August 2013 covering the period April to June 2013.

5.1 Leachate Monitoring

5.1.1 Current Leachate Monitoring Regime

Leachate quality and level monitoring is currently, and will continue to be, undertaken by Gwynedd Council with samples sent to ALS Environmental Ltd for analysis.

As of March 2013, samples of leachate have been collected individually from each of the three cells. Leachate levels are monitored at the monitoring points within each of the cells and leachate samples are collected from the riser pipe within each cell. Leachate head

² Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste.

measurements are currently taken weekly and are in compliance with the requirements of the Environmental Permit. Leachate samples are analysed on a quarterly basis for key determinands, with annual extended analytical suites including additional metals and organic contaminants. These frequencies are more often than the permit requirements which are identified in Table 5.1.

Table 5.1 Leachate Monitoring Regime as per Environmental Permit

Monitoring Location	Frequency	Parameters
All leachate monitoring points	Monthly	Level
All leachate wells/abstraction wells/sumps identified on drawing ESID7 of the permit application documents	Quarterly	Level, EC, Cl, NH ₄ -N, pH, mecoprop, toluene, COD, BOD, Ca, Mg, K, Na, Cd, Alk, TOC, SO ₄ , TON and phenol
	Annually	quarterly plus: Cr, Cu, Fe, Pb, Mn, Ni, Zn and List I suite

Control Levels and Compliance Limits

Control levels and Compliance limits for leachate levels were proposed within the Hydrogeological Risk Assessment (HRA) for the original permit application (AMEC report reference 18846rr095i1 dated October 2007) at 1.0 m and 1.5 m respectively. A limit of 1.5 m leachate head above the base of the cell is specified in Table S4.1 of the current Environmental Permit.

5.1.2 Leachate Monitoring Regime During the Aftercare Phase

Leachate monitoring data for the previous 12 months, reviewed quarterly by AMEC on behalf of Gwynedd Council, shows:

- No significant variability in leachate levels within and across the cells;
- All leachate levels measured during the last 12 months were below the EP compliance limit of 1.5 m above base;
- Leachate quality monitoring of the two key indicators, chloride and ammoniacal nitrogen, shows some variation in concentrations for both parameters over the 12 month period with no apparent link in the increases and decreases to seasonal variation. Overall concentrations of both parameters are higher in Cell 3 as would be expected due to Cell 3 having the most recently deposited waste. For both parameters, there were no spikes in concentration and no overall increase in concentrations was detected;
- The majority of determinands from the annual extended suite were found at concentrations below the laboratory detection limits. Organic determinands above the detection limits in the leachate were not detected at significant concentrations.

Filling and capping of the site is now complete and this in turn will reduce the incidence of leachate generation in the long term. It is therefore expected that leachate levels will continue to remain below the compliance level of 1.5 m. Given that leachate quality monitoring data shows no significant variability over the previous 12 months, groundwater quality monitoring data (see Section 5.3.2) demonstrates no unacceptable impact from Area 3 and the 2009 HRA

predicts no future impact on groundwater quality, it is proposed to reduce leachate level monitoring from monthly to quarterly and reduce the quality monitoring frequency from quarterly to six monthly during the aftercare phase (Table 5.2).

Table 5.2 Leachate Monitoring Regime During the Aftercare Phase

Monitoring Location	Frequency	Parameters
LM1/1, 1/2, 2/1, 3/1 and 3/2	Quarterly	Level
Leachate Riser Pipes within each cell	Six Monthly	EC, Cl, NH ₄ -N, pH, mecoprop, toluene, COD, BOD, Ca, Mg, K, Na, Cd, Alk, TOC, SO ₄ , TON and phenol
	Annually	As monthly/quarterly plus: Cr, Cu, Fe, Pb, Mn, Ni, Zn and List I suite

The leachate monitoring schedule set out in Table 5.2 meets the suggested frequencies set out in Annex III of the Landfill Directive, which requires monitoring of leachate volume and composition every six months during the aftercare phase but only where leachate collection takes place.

5.1.3 Contingency Arrangements

Control and compliance limits for leachate levels were proposed within the Hydrogeological Risk Assessment (HRA) for the original permit application (AMEC report Reference 18846rr095i1 dated October 2007) at 1.0 m and 1.5 m respectively. A limit of 1.5 m leachate head above the base of each cell is specified in Table S4.1 of the current Environmental Permit.

The control limits are set to identify trends and prompt contingency actions prior to compliance limits being exceeded. Data from quarterly and annual reports produced for the site show leachate levels in all Cells 1 and 3 are consistently below the Environmental Permit compliance limit of 1.5 m above base. There have been occasional exceedances in Cell 2.

It is proposed that the exceedance of the compliance limit on a single occasion will require action. The outline course of action is as follows:

- Site management will be advised immediately;
- NRW will be advised within 48 hours;
- Repeat monitoring at the affected leachate monitoring points within 1 week;
- An inspection of the leachate management and monitoring infrastructure and capping will be undertaken to identify any signs of damage which may lead to the change on levels recorded within one week;
- Any remedial action required will be carried out in accordance with the programme set out in Section 4.2;
- Review monitoring data;
- Re-evaluate the risks;

- Initiate remedial action or re-evaluate assessment criteria (depending on risks) within 6 months.

Any proposed changes to the leachate compliance levels as a result of the revaluation assessment would be discussed with NRW and, if agreed, an application to vary the Environmental Permit would be sought at that time.

5.2 Landfill Gas Monitoring

5.2.1 Current Landfill Gas Monitoring

In-waste landfill gas monitoring is currently and will continue to be undertaken by CH4 Consultants. Perimeter boreholes are monitored by Gwynedd Council. Monitoring in perimeter and in-waste boreholes for Area 3 is currently carried out monthly for peripheral boreholes and twice monthly for in waste boreholes for the parameters set out in the Environmental Permit and in accordance with the EA's 'Guidance on the Management of Landfill Gas' (LFTGN03 2004). Trace gas analysis is carried out annually in accordance with the EA's 'Guidance for monitoring trace components in landfill gas' (LFTGN04 v3 201). The gas monitoring regime required by the Environmental Permit is identified in Table 5.3.

Table 5.3 Gas Monitoring Regime as per Environmental Permit

Monitoring Location	Frequency	Measurement/Determinand
Peripheral gas monitoring boreholes G1A*, G2, G3, G4, G5, G6 and G7.	Monthly	Methane, carbon dioxide, oxygen, atmospheric pressure, differential pressure, temperature and meteorological data.
In-waste monitoring boreholes (at least two monitoring wells within each cell).	Monthly	Methane, carbon dioxide, oxygen, carbon monoxide, atmospheric pressure, differential pressure and meteorological data.
Representative sample taken from the extraction line prior to disposal system.	Annual	Trace Gas Analysis in accordance with Environment Agency Document LFTGN04.

Note: * G1A is a replacement for G1, which was lost to construction work for the new AD plant in July 2012.

Control Levels and Compliance Limits

The control levels and compliance limits for methane and carbon dioxide for the external monitoring boreholes were agreed with the Environment Agency Wales (now NRW) based on the results of fourteen monitoring rounds undertaken between 7 October 2008 and 25 June 2009 (with the exception of G1A where limits were set in June 2013) as set out in Table 5.4.

Table 5.4 Landfill Gas Control and Compliance Levels for External Monitoring Boreholes

Borehole Reference	G1A		G2		G3		G4		G5		G6		G7	
Parameter	CH ⁴	CO ²	CH ⁴	CO ²	CH ⁴	CO ²	CH ⁴	CO ²	CH ⁴	CO ²	CH ⁴	CO ²	CH ⁴	CO ²
Control Limit	0.8	4.7	0.8	1.9	0.8	4.5	0.8	2.0	2.1	5.0	/	/	/	/
Compliance Level	1.0	5.9	1.0	2.3	1.0	5.7	1.0	2.5	2.6	6.2	/	/	/	/

Surface Emissions Monitoring

Surface emissions monitoring will be undertaken in accordance with the EA's 'Guidance on monitoring landfill gas surface emissions' (LFTGN07 v2 2010) and the requirements of the Environmental Permit. The overall process will include a walkover survey with a TDL 500. Should elevated emissions be detected then a schedule of works to investigate the source of the emissions will be drawn up and will be likely to include:

- The removal of overlying restoration soils;
- Inspection of underlying capping works for damage.

Where it is determined damaged infrastructure requires major remedial work the contingency plan in Section 4.9 (Cap Maintenance) will be initiated.

A surface emissions monitoring schedule for the site during the aftercare phase is presented in Table 5.5.

Flare Emission Monitoring

Emissions monitoring of the landfill gas flare will be undertaken in accordance with the EA's 'Guidance for monitoring enclosed landfill gas flares' (LFTGN05 v2 2010) and the requirements of the Environmental Permit.

5.2.2 Landfill Gas Monitoring for the Aftercare Phase

Landfill gas monitoring data for the previous 12 months, reviewed quarterly by AMEC on behalf of Gwynedd Council, shows:

- Methane and carbon dioxide concentrations in the perimeter boreholes during this reporting period were consistent and any exceedances of compliance limits have been isolated occurrences and not significant;
- Methane and carbon dioxide have been detected at elevated concentration in borehole G6 on 8 occasions out of the 13 monitoring rounds undertaken. However this borehole is located between Area 3 and the unlined closed landfill (Area 2) which suggests that methane and carbon dioxide are likely to be derived from Area 2. Monitoring at borehole G7 which is also within this location has detected low concentrations of methane on two occasions (0.1% v/v and 0.5% v/v) and elevated concentrations of carbon dioxide of 8.4% v/v and 4.7% v/v for the same monitoring period. No control levels and compliance limits are set on these boreholes;

- For all other external monitoring boreholes methane and carbon dioxide concentrations remained consistently low with no exceedance of the compliance limits set for methane recorded. For carbon dioxide concentrations, there were four exceedances, however these were not significant and were isolated occurrences with no trend being identified;
- Methane and carbon dioxide concentrations recorded at the in-waste monitoring boreholes have remained consistent across the twelve month period with concentrations of methane around 60% v/v and carbon dioxide concentrations around 30% v/v as would be expected with gas from biodegradable landfills where degradation is occurring.

Filling and capping of the site is now complete and a landfill gas collection system (including extraction wells, collector pipework and condensate knockout pots) is in operation across all cells and connected to the high temperature (HT) ground flare located in the compound to the north of Cell 3. During the aftercare period for Area 3, the gas extraction system will be routinely monitored to ensure extraction and gas utilisation are optimised and landfill gas does not migrate from the site. Given that perimeter borehole landfill gas monitoring data shows no significant variability over the previous 12 months and gas extraction will continue during the aftercare phase, it is proposed to reduce landfill gas monitoring of the external boreholes and the in waste boreholes from monthly to quarterly (Table 5.5).

Table 5.5 Landfill Gas Monitoring Regime During the Aftercare Phase

Monitoring Location	Frequency ¹	Parameter
Landfill surface	Annually as required (see footnote to Table S4.6 of Environmental Permit)	Methane Atmospheric pressure General surface type and condition Meteorological data
Landfill Gas Flare	Annually	Oxides of nitrogen Carbon monoxide Total VOCs Operational Temperature Gas flow rate
Peripheral gas monitoring boreholes G1A*, G2, G3, G4, G5, G6 and G7	Quarterly	Methane Carbon dioxide Oxygen Atmospheric pressure Differential pressure Meteorological data
In-waste monitoring boreholes (at least two monitoring wells within each cell)	Quarterly	Methane Carbon dioxide Oxygen Carbon monoxide Atmospheric pressure Differential pressure Meteorological data
Representative sample taken from the extraction line prior to disposal system	Annually	Trace gas analysis

¹ These frequencies may be reduced over time if agreed with NRW.

The landfill gas monitoring schedule set out in Table 5.5 exceeds the suggested frequencies set out in Annex III of the Landfill Directive, which requires monitoring representative of each section of the landfill for potential gas emissions and atmospheric pressure every six months during the aftercare phase. The Directive also requires the efficiency of the gas extraction system to be checked regularly and this is covered in Section 4.4.

5.2.3 Contingency Arrangements

Compliance levels are set in the Environmental Permit for the flare (Table S4.2), external landfill gas monitoring boreholes (Table S4.5) and for surface emissions (Table S4.6). In the event of a confirmed exceedance of the compliance limits specified in the permit, the appropriate actions (specified below) will be instigated.

Combustion Emissions

In the event that compliance limits set out in Table S4.2 of the Environmental Permit for flare emissions are exceeded the following contingency action plan will be implemented, as follows:

- The results will be notified to NRW within 24 hours of the elevated concentration being detected. The results will be confirmed in writing within 10 working days of the monitoring;
- An assessment of previous data will be undertaken to determine whether the exceedance is consistent with established or predicted trends;
- The gas field will be re-balanced;
- Further sampling and analysis will be undertaken within 2 months of reporting of the initial results;
- If the repeat analysis is compliant no further action will be taken;
- If the repeat analysis is not compliant then further remedial action will be taken, as agreed with NRW;
- Following remediation, repeat sampling will be undertaken to ensure compliance with emission standards.

Lateral Emission – Action Plan

In the event of a compliance limit for methane or carbon dioxide set out in Table S4.5 of the Environmental Permit being exceeded the following procedures will be implemented:

- The results will be notified to NRW within 24 hours of the elevated concentration being detected. The results will be confirmed in writing within 10 working days of the monitoring;
- An assessment of previous data will be undertaken to determine whether the exceedance is consistent with established or predicted trends;
- Should a compliance level continue to be exceeded, gas samples may be taken from the boreholes and submitted for laboratory analysis to investigate the source of the elevated gas concentrations. The method and frequency will be agreed with NRW on an incident specific basis, as will the appropriate action to be taken.

In response to the above, the following remedial actions may be taken:

- The frequency of monitoring will be increased to determine whether the elevated concentrations are sustained. The increased frequency will be based on an assessment of the risks associated with the elevated concentrations. The risk assessment will include consideration of the location of the borehole, the bulk gas composition, the location of the nearest receptors to the borehole, previous monitoring results for that borehole and other boreholes and by how much the trigger level is exceeded. Monitoring at the increased frequency may include other boreholes in the area. Monitoring at the increased frequency will continue until the gas concentrations recorded in the borehole are consistently below the trigger level, or unless otherwise agreed with NRW;
- If the gas recorded is attributable to landfill gas migration from the site the gas extraction system will be adjusted as appropriate to improve gas control. Monitoring at the increased frequency described above will continue to determine the effectiveness of the system and allow consideration of the action to be taken;
- If necessary, additional gas extraction wells or gas monitoring boreholes will be installed to improve the control or monitoring of landfill gas.

Surface Emission – Action Plan

In the event that the compliance limit for permanently capped areas set out in Table S4.6 of the Environmental Permit are exceeded. The following procedures will be implemented:

- The results will be notified to NRW within 24 hours of the elevated concentration being detected. The results will be confirmed in writing within 10 working days of the monitoring;
- An assessment of previous data will be undertaken to determine whether the exceedance is consistent with established or predicted trends;
- A report on surface emissions flux will form the basis for proposals on remediation through the gas management plan. The operator will identify the most appropriate remedial actions on an incident specific basis and these will be agreed with NRW;
- Remedial actions may consist of:
 - Rectification of fissures and/or defects in the capping system as set out in Section 4.9;
 - Extension of the gas extraction system;
 - Undertaking an improved monitoring procedure for subsequent surveys on areas where the current survey showed variability in the cap and uncertainty in the value for the flux.
- Following remediation, repeat sampling will be undertaken to ensure compliance with emissions standards.

5.3 Groundwater Monitoring

Groundwater quality and level monitoring is currently, and will continue to be, undertaken by Gwynedd Council in accordance with the requirements of the Environmental Permit, with samples sent to ALS Environmental Ltd for analysis.

5.3.1 Current Groundwater Monitoring Regime

Groundwater levels are monitored manually on a quarterly basis (frequency reduced from monthly on the basis that the data showed no significant variability). Groundwater samples are analysed on quarterly basis in Area 3 for key determinands, with an annual extended analytical suite. The groundwater sampling regime is outlined in Table 5.6.

Monitoring boreholes GW2, GW5 and M47 are upgradient of the landfill, borehole DAS lies between Area 2 and Area3 and boreholes GW3, GW4, M17 and M36 lie downgradient of the landfill. Monitoring locations are shown on Figure 3.

Table 5.6 Groundwater Monitoring Regime as per Environmental Permit

Monitoring Location	Frequency	Measurement/ Determinand
M17, M36, M47, DAS, GW2, GW3 and GW4.	Monthly*	Level.
M17, M36, M47, DAS, GW2, GW3, GW4 and GW5.	Quarterly	EC, DO, Cl, NH ₄ -N, Hg, Zn, mecoprop Ca, Mg, K, Na, Cd, Alk, TOC, SO ₄ , TON and phenol.
M17, M36, M47, DAS, GW2, GW3, GW4 and GW5.	Annually	As quarterly plus: Cr, Cu, Fe, Pb, Mn, Ni, Zn, hazardous (List I) suite (as for leachate, or selected parameters) – not required if hazardous (List I) substances are absent in leachate.

Notes: * Monitoring frequency was reduced from monthly to quarterly in April 2009 for M47, in April 2010 for GW2, GW3, GW4, GW5, M17 and M36 and in May 2013 for DAS on the basis that monthly water level for these boreholes showed no significant variability.

Control Levels and Compliance Limits

Control levels and Compliance limits for groundwater quality at boreholes GW3, GW4 and M36 were proposed within the Hydrogeological Risk Assessment (HRA) for the original permit application (AMEC report Reference 18846rr095i1 dated October 2007). Limits were set for Ammoniacal-N, Chloride, Zinc, Mercury and Mecoprop and compliance limits for these parameters at these borehole locations were set in Table S4.4 of the Environmental Permit.

A reappraisal of the conceptual HRA was completed in 2009 using actual site data in response to improvement condition No.6 of Table S1.3 of the Environmental Permit (AMEC Report reference 28587n665i2 dated 21 August 2009). The report concluded the conceptual model for the site produced in the original HRA remains valid and no changes to the compliance limits was proposed. More recently a technical note was produced by AMEC (AMEC Report reference 28587n745i1 dated 20 June 2013) on behalf of Gwynedd Council to review the groundwater compliance limits for mercury specified in the Environmental Permit (0.05 µg/l without specifying if it refers to total or dissolved forms). Review of monitoring data for the period January 2012 to April 2013 showed that total mercury concentrations continued to show variability and occasional exceedances of the compliance limit whilst dissolved mercury

concentrations were consistently below the compliance limit. As dissolved mercury is the most mobile form, and therefore the most relevant for assessing the risks to controlled waters, it was recommended that the compliance limit of 0.05 µg/l refers specifically to the dissolved form of mercury and that future measurements of mercury in groundwater are taken of dissolved form only.

5.3.2 Groundwater Monitoring Regime During the Aftercare Phase

Groundwater levels and quality are currently monitored on a quarterly basis. Groundwater monitoring data, reviewed quarterly by AMEC on behalf of Gwynedd Council, show:

- Seasonal variation in groundwater levels with no discernible long term trends;
- No significant variability in groundwater quality downgradient of Area 3; and
- No unacceptable impact from Area 3 on groundwater quality and no exceedances of the Environmental Permit compliance limits (assuming mercury limit refers to the dissolved form).

Given that filling and capping of the site is complete, monitoring data show no significant variability and no unacceptable impact from Area 3, and the 2009 HRA predicts no future impact on groundwater quality, it is proposed to continue groundwater level monitoring on a quarterly basis and reduce the quality monitoring frequency from quarterly to six monthly during the aftercare phase (Table 5.7). In accordance with the requirements of the Environmental Permit, the HRA for the site will be reviewed every 4 years and this will include an assessment of monitoring data to confirm if the original conceptual model remains valid.

Table 5.7 Groundwater Monitoring Regime during the Aftercare Phase

Monitoring Location	Frequency	Measurement/Determinand
M17, M36, M47, DAS, GW2, GW3 and GW4.	Quarterly	Level.
M17, M36, M47, DAS, GW2, GW3, GW4 and GW5.	Six-monthly	EC, DO, Cl, NH ₄ -N, Hg, Zn, mecoprop Ca, Mg, K, Na, Cd, Alk, TOC, SO ₄ , TON and phenol.
M17, M36, M47, DAS, GW2, GW3, GW4 and GW5.	Annually	As six-monthly plus: Cr, Cu, Fe, Pb, Mn, Ni, Zn, hazardous (List I) suite (as for leachate, or selected parameters) – not required if hazardous (List I) substances are absent in leachate.

No changes are proposed to the current groundwater compliance limits set in Table S4.4 of the Environmental Permit (subject to mercury being read as ‘dissolved’ rather than ‘total’).

5.3.3 Contingency Arrangements

Control levels and compliance limits for downgradient groundwater monitoring boreholes GW3, GW4 and M36 were proposed within the HRA for the original permit application (AMEC report Reference 18846rr095i1 dated October 2007) and with the exception of an amendment to how mercury is reported, they remain valid. Compliance Limits for these boreholes are set in Table S4.4 of the Environmental Permit.

The control levels are set to identify trends and prompt contingency actions prior to compliance limits being exceeded. Data from quarterly reports produced for the site show groundwater quality in the down gradient boreholes to be consistently below the compliance limits set in the Environmental Permit.

It is proposed that control levels lead to action once they have been exceeded for three consecutive monitoring rounds and the exceedance of the compliance limit on a single occasion will require action. The outline course of action is as follows:

- Site management will be advised immediately;
- NRW will be advised within 24 hours of receipt of monitoring results;
- Confirm by repeat sampling and analysis at boreholes where exceedences are recorded within 1 week;
- Review existing monitoring data within 14 days of receipt of results;
- Review site management and operations, and implement actions to prevent future failure of a compliance limit within 21 days of receipt of results;
- Review the assumptions incorporated into the conceptual site model within 1 month of receipt of results;
- Consider reviewing existing control and compliance limits within 1 month of receipt of results;
- If risks are unacceptable, set in place procedures for implementing corrective measures in consultation with NRW within 3 months of receipt of results.

5.4 Surface Water Monitoring

Surface Water quality monitoring is currently, and will continue to be, undertaken by Gwynedd Council in accordance with the requirements of the Environmental Permit, with samples sent to ALS Environmental Ltd for analysis.

5.4.1 Current Surface Water Monitoring Regime

Surface water quality is monitored on a monthly basis in accordance with the requirements of the Environmental Permit as set out in Table 5.8.

Table 5.8 Surface Water Monitoring Regime as per Environmental Permit

Monitoring Location	Frequency	Measurement/Determinand
Infiltration Basin.	Monthly*	EC, pH, Cl, NH ₄ -N, Cd.
SWW and SWY (upstream) SWB, SWC, SWD2 and SWE (downstream) SWD* (discharge from the new attenuation lagoon).	Monthly	EC, pH, Alk, Cl, NH ₄ -N, TOC, BOD, COD, DO. Plus suspended solids for SWD.
SWW and SWY (upstream) SWB, SWC, SWD2 and SWE (downstream) SWD* (discharge from the new attenuation lagoon).	Quarterly	As monthly plus: Ca, Mg, K, Na, SO ₄ , NO ₃ , NO ₂ , TON, Cd, Cu, Fe, Pb, Mn, Ni and Zn.

Notes: SWD is in operation since September 2012 following construction of the attenuation lagoon.

* Subject to there being a flow from this location.

Control Levels and Compliance Limits

Control levels and Compliance limits for point source emissions to surface water were proposed within the Hydrogeological Risk Assessment (HRA) for the original permit application (AMEC report Reference 18846rr095i1 dated October 2007) for Ammoniacal Nitrogen, Dissolved Oxygen, BOD and pH. As part of an application to vary the Environmental Permit to include a new surface water management system (AMEC Report reference 28587rr143i2 dated 27 June 2011), revised limits were proposed for the surface water discharge to the Afon Desach and these were supported assessment of the impact of a future discharge to surface water from Llwyn Isaf Landfill site, in accordance with the Environment Agency Horizontal Guidance note H1 Annex D (Environment Agency, 2010) (Appendix D of AMEC Report reference 28587rr143i2 dated 27 June 2011). Revised limits were proposed for Ammoniacal Nitrogen, Dissolved Oxygen, BOD, Suspended Solids and pH for Discharge point D (discharge point from Surface water attenuation lagoon into the Afon Desach). These revised limits were transposed into Table S4.3 of the Environmental Permit through Variation number EPR/YP3138UJ/V002 dated 12 September 2011.

5.4.2 Surface Water Monitoring Regime During the Aftercare Phase

Surface water quality is currently monitored on a quarterly basis. Surface water monitoring data, reviewed quarterly by AMEC on behalf of Gwynedd Council, show:

- Low ammoniacal nitrogen and chloride concentrations continue to be recorded at most monitored locations and generally show no impact from Area 3;
- The highest chloride concentrations continue to be detected at D2 and combined with detectable concentrations of ammoniacal nitrogen are likely to represent a slight impact from the nearby closed landfill (Area 2);
- No unacceptable impact from Area 3 on surface water quality and no exceedances of the Environmental Permit compliance limits (emission limits set for sample point D) with the exception of suspended solids in April and May 2013. Measures for reducing suspended solids in the attenuation lagoon have been implemented (installation of straw bales to filter inflow and reduce re-suspension of fine particles in May 2013 and removal of silts from the base in June 2013).

Given that filling and capping of the site is complete, monitoring data show no significant variability and no unacceptable impact from Area 3, it is proposed to reduce the monitoring for the point source emission at Sampling Point SWD from monthly to every two months subject to there being a flow from the lagoons to this point and to reduce the quality monitoring frequency from monthly to six monthly and from quarterly to annually during the aftercare phase (Table 5.9).

Table 5.9 Surface Water Monitoring Regime During the Aftercare Phase

Monitoring Location	Frequency	Measurement/Determinand
SWD (discharge from the new attenuation lagoon).	Every two Months*	NH ₄ -N, DO, BOD, Suspended solids, pH.
Infiltration Basin*.	Six Monthly*	EC, pH, Cl, NH ₄ -N, Cd.
SWW and SWY (upstream) SWB, SWC, SWD2 and SWE (downstream) SWD* (discharge from the new attenuation lagoon).	Six Monthly	EC, pH, Alk, Cl, NH ₄ -N, TOC, BOD, COD, DO. (Plus suspended solids for SWD).
SWW and SWY (upstream) SWB, SWC, SWD2 and SWE (downstream) SWD* (discharge from the new attenuation lagoon).	Annually	As six monthly plus: Ca, Mg, K, Na, SO ₄ , NO ₃ , NO ₂ , TON, Cd, Cu, Fe, Pb, Mn, Ni and Zn.

* Subject to there being a flow from this location.

5.4.3 Contingency Arrangements

No changes are proposed to the compliance limits set in Table S4.3 of the Environmental Permit only to the frequency of monitoring as set out in Table 5.9 above.

Control and Compliance limits for point source emissions to surface water were proposed within the Hydrogeological Risk Assessment (HRA) for the original permit application and updated as part of the application to vary the permit when the new surface water management system was installed. The control limits (where identified) are set to identify trends and prompt contingency actions prior to compliance limits being exceeded. Data from quarterly reports produced for the site show for sample point SWD the compliance limits have not been exceeded with the exception of suspended solids in April and May 2013 (AMEC Report reference 28587rr780i2 dated 1 August 2013). Measures for reducing suspended solids in the attenuation lagoon have recently been implemented (installation of straw bales to filter inflow and reduce re-suspension of fine particles in May 2013 and removal of silts from the base in June 2013).

It is proposed that control limits lead to action once they have been exceeded for three consecutive monitoring rounds and the exceedance of the compliance limit on a single occasion will require action. The outline course of action is as follows:

- Site management will be advised immediately;
- NRW will be advised within 48 hours of receipt of monitoring results;
- Confirm by repeat sampling and analysis at locations where exceedances are recorded within 1 week;

- Review existing monitoring data within 14 days of receipt of results;
- Review site management and operations, and implement actions to prevent future failure of a compliance limit within 21 days of receipt of results;
- Review the assumptions incorporated into the conceptual site model within 1 month of receipt of results;
- Consider reviewing existing control and compliance limits within 1 month of receipt of results;
- If risks are unacceptable, set in place procedures for implementing corrective measures in consultation with NRW within 3 months of receipt of results.

5.5 Restored Surface Monitoring

Restored surface monitoring at the site during the aftercare phase will be carried out in accordance with Annex III of the Landfill Directive which requires a yearly recording of the settling behaviour of the level of the landfill body during the aftercare phase.

Regular monitoring of the gas extraction system will be undertaken to ensure that the system is operating as designed and that no gas build up occurs below the cap.

The surface levels of the completed landfill will be surveyed on an (initially) annual basis to monitor progress of the settlement.

6. Reporting

6.1 Significant Environmental Effects

The reporting of 'significant environmental effects' will be required during the aftercare phase for the Llwyn Isaf landfill. For groundwater quality, the compliance limits should be reported in accordance with Annex III of the Landfill Directive, which is used as the basis for reporting significant environmental effects. The Directive states:

'Significant adverse environmental effects, as referred to in Articles 12 and 13 of this Directive, should be considered to have occurred in the case of groundwater, when an analysis of a groundwater sample shows a significant change in water quality. A trigger level must be determined taking account of the specific hydrogeological formations in the location of the landfill and groundwater quality'.

The Landfill Directive makes no reference to what constitutes a significant adverse environmental effect for landfill gas or leachate quality. NRW/EA Guidance *'How to comply with your environmental permit -Closing your landfill'* (Consultation Document March 2013) states for leachate and landfill gas:

'a significant adverse environmental effect will include any increase above an established baseline level.'

6.1.1 Leachate

Compliance limits have been set for leachate levels within the landfill. A contingency plan for leachate is presented at Section 5.1.3 of this report. It is proposed that exceedance of the compliance limit on a single occasion will require action.

If a compliance limit is exceeded, the results will be notified to the NRW within 48 hours.

6.1.2 Landfill Gas

Contingency action plans for surface, lateral and combustion emissions are presented in Section 5.2.3 of this report. It is proposed that the exceedance of the compliance limit set in the Environmental permit on a single occasion will require action.

If a compliance limit is exceeded the results will be notified to the NRW within 48 hours.

6.1.3 Groundwater

Control levels and compliance limits have been set for groundwater quality on downgradient boreholes. A contingency plan for groundwater is presented in Section 5.3.3 of this report. It is proposed that the exceedance of the compliance limit on a single occasion will require action.

If a compliance limit is exceeded, the results will be notified to the NRW within 48 hours.

6.1.4 Surface Water

Control levels and compliance limits have been set for surface water quality on the discharge point from the attenuation lagoon into the Afon Desach. A contingency plan for groundwater is presented in Section 5.4.3 of this report. It is proposed that the exceedance of the compliance

limit on a single occasion will require action.

If a compliance limit is exceeded, the results will be notified to the NRW within 48 hours.

6.1.5 Stability/Settlement

The final surface levels will be annually surveyed to monitor progress of settlement and to ensure that no adverse stability issues arise. Details on cap maintenance are presented in Section 4.9 of this report. If significant irregularities are noted in the capping system, such as depressions or large cracks in the cap, NRW will be notified within a week.

7. Habitats

7.1 Habitats

A Habitats Risk Assessment (AMEC Report Reference 18846n097i1 dated October 2007) was submitted in support of the original PPC application.

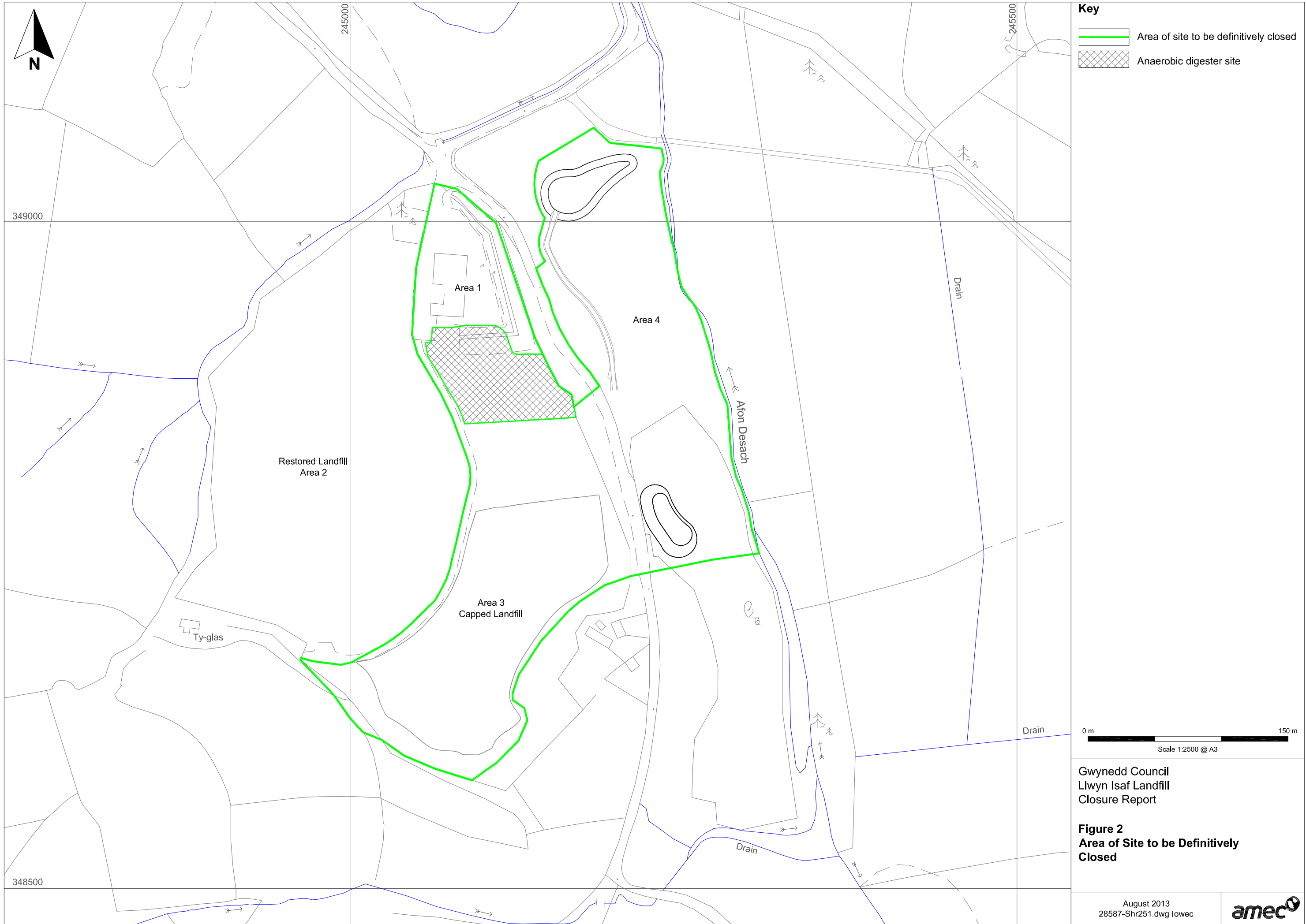
The site is within 5 km of a European Site. A European site is any site that has been designated as a site of international nature conservation importance either as a Special Protection Area (SAC), a Special Area of Conservation (SAC) or a Ramsar Site. The nearest European Site is Corsydd Eifionydd SAC is located approximately 0.02 km to the south east of the installation and covers an area of approximately 144.32 ha. It is designated a SAC due to the presence of transition mires, quaking bogs, slender green feather moss and the marsh fritillary butterfly. Corsydd Eifionydd cSAC comprise 3 Sites of Special Scientific Interest (SSSIs) namely Cors Llanllyfni, Cors Y Wlad and Cors Gyfelog.

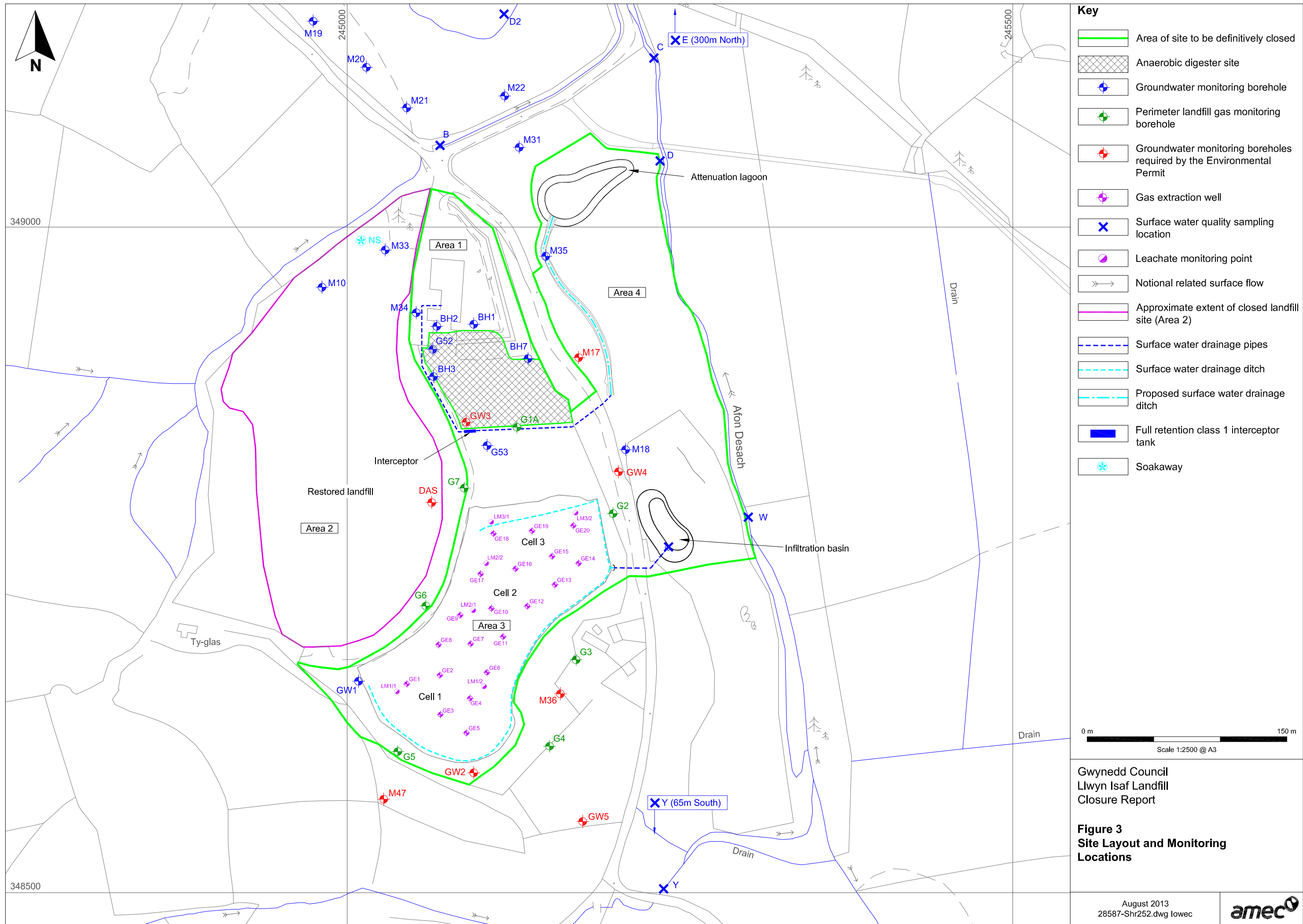
The site is not hydraulically connected to the European site.

The risk assessment concluded that the landfill would have no adverse effects on the integrity of the SAC. It is considered the conclusions drawn in the original assessment remain valid and the closure of the site and the aftercare phase will not have any adverse effect on the integrity of the SAC.

Figures







- Key**
- Area of site to be definitively closed
 - Anaerobic digester site
 - Groundwater monitoring borehole
 - Perimeter landfill gas monitoring borehole
 - Groundwater monitoring boreholes required by the Environmental Permit
 - Gas extraction well
 - Surface water quality sampling location
 - Leachate monitoring point
 - Notional related surface flow
 - Approximate extent of closed landfill site (Area 2)
 - Surface water drainage pipes
 - Surface water drainage ditch
 - Proposed surface water drainage ditch
 - Full retention class 1 interceptor tank
 - Soakaway

0 m 150 m
Scale 1:2500 @ A3

Gwynedd Council
Llwyn Isaf Landfill
Closure Report

Figure 3
Site Layout and Monitoring Locations

Based upon the Ordnance Survey Map with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright. 100001776.

Appendix A

Post Construction Capping Stability

Calculation

1 Page

Slope with uniform cover thickness

Gas Pressure

ASSUMED PLANT DETAILS (D6 Dozer)

projects\28587 Llwyn Isaf & Ffridd Rasmus Consultancy Support\Calcs\LI Cell 3 stability - w lab values- post construction - Uniform Cover to Slopes

		Slope angle calculator	
Vertical			1
Horizontal			2.4
Slope			22.62

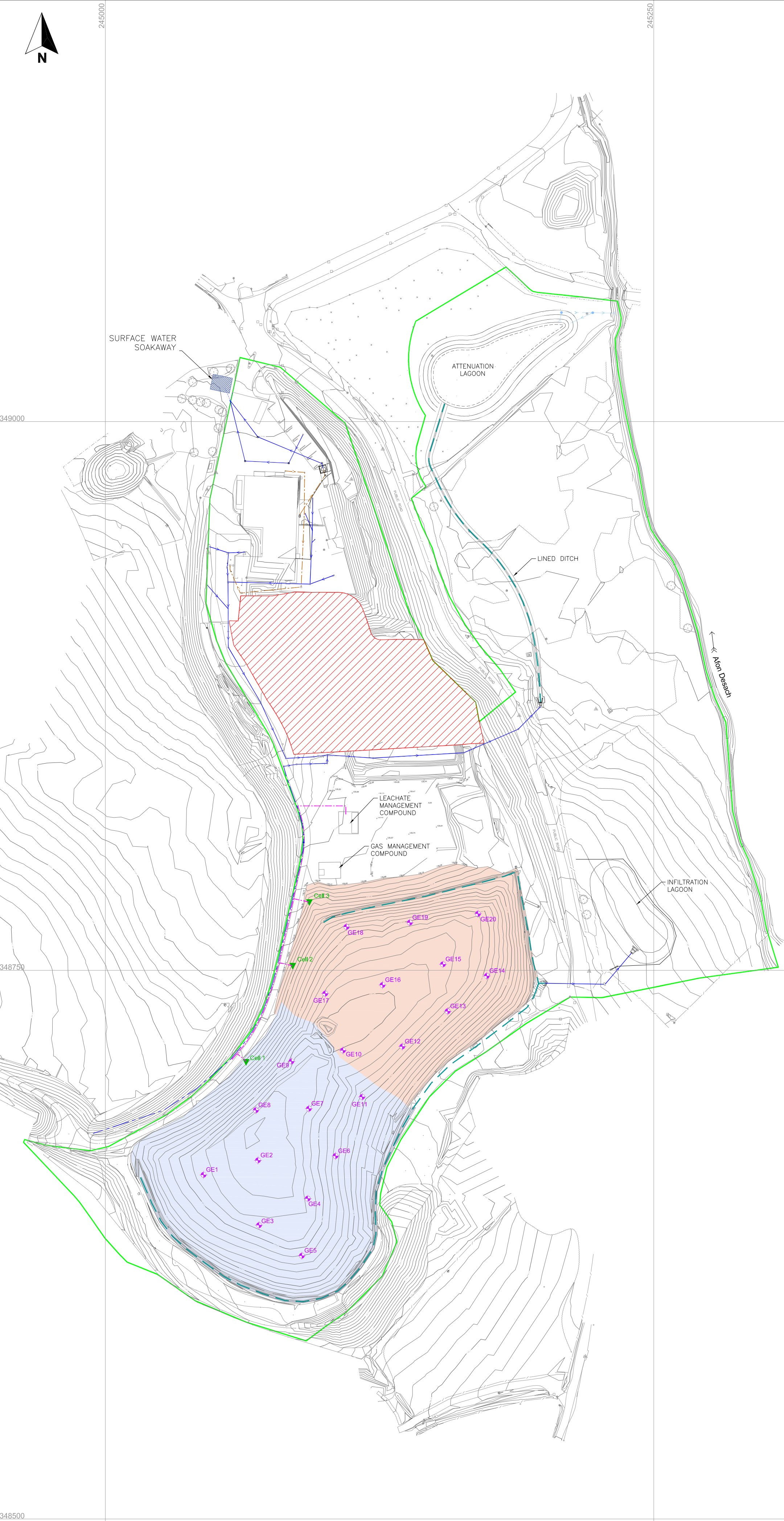
		Description of Layers	
Cover		Soil	
Geo-syn-thetics	1	GDL	
	2	Geomembrane	
	3		
Underlying		Soil	

 = actual values from site specific testing

Appendix B

Site Survey

1 Drawing



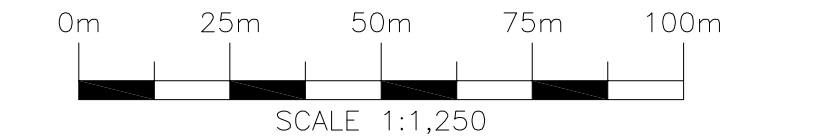
DESCRIPTION							
REV A	DATE 13/08 2013	FIRST ISSUE		DWN AB	CHK JB	APP JB	
REVISIONS							
REV	DATE				DWN	CHK	APP

NOTES:

1. Location of Attenuation Lagoon & associated surface water ditch taken from design drawings.

2. Locations of surface water pipes & chambers taken from as built information.

- LEGEND:
- Are of site to be definitively closed
 - Area occupied by AD Plant
 - Existing surface water drain
 - Existing surface water drainage ditch
 - Existing land drain
 - Existing foul/leachate pipe
 - Existing leachate main
 - Existing leachate upslope riser
 - Existing gas well
 - Approximate extent of capping to landfill – completed June 2011
 - Approximate extent of capping to landfill – completed August 2012



SCALES: 1:1250 @ A2

PROJECT TITLE:
LLWYN ISAF LANDFILL

DRAWING TITLE:
DRAWING 1
GENERAL ARRANGEMENT

CLIENT:
GWYNEDD COUNCIL
WASTE TREATMENT SERVICE
SIAMBRAU BANC BARCLAYS
5-7 STRYD BANGOR
CAERNARFON
GWYNEDD LL55 1AT

REF:

CANON COURT, ABBEY LAWN, ABBEY FOREGATE,
SHREWSBURY SY2 5DE.
TEL: (01743) 342000 FAX: (01743) 342010

DRAWING No.
28587/SHR/253

Appendix C

Gas Flare and Maintenance Details

7 Pages

SERVICE SHEET Page No 1	JOB NO 1832	Automatic Flare Systems Ltd Unit 8, Ensign Business Centre Coventry CV4 8JA United Kingdom Tel: +44 (0)24 7647 4877 Fax: +44 (0)24 7647 4834 www.afs-group.co.uk
SITE: LLwyn Isaf Landfill, Wales		DATE: 4.6.13
HEALTH AND SAFETY NOTICE WEAR A HEAD HAT AND REFLECTIVE VEST OR JACKET ON OPERATIVE SITES WEAR A PROTECTIVE FACE MASK WHEN WORKING IN AN AREA WHERE THERE IS ANY POSSIBILITY OF BREATHING IN CERAMIC INSULATING DUST		
TO BE COMPLETED FOR ALL HIRE INSTALLATION, SERVICE AND REPAIR VISITS 1. RECORD ALL INSTRUMENT READINGS AND VALVE SETTINGS ON ARRIVAL 2. RECORD ALL CHANGES AND REPAIRS MADE 3. RECORD ALL PARTS, MATERIALS & COMPONENTS FITTED OR USED 4. CHECK THAT PRESSURE AND VACUUM GAUGES ARE ZEROED 5. RECORD ALL INSTRUMENT READINGS AND VALVE SETTINGS ON DEPARTURE 6. LEAVE SITE CLEAN AND TIDY 7. NOTE FUTURE REMEDIAL ACTION NEEDED AND SEE THAT IT IS CARRIED OUT		
ENGINEERS NAME	Steve Willacy	
ARRIVAL RECORD		
HOURS RUN	BOOSTER 1	6439
	BOOSTER 2	N/A
	CH4	36
	O2	0.7
	CO2	31.3
	PRESSURE	18
INLET VALVE SETTING % OPEN		
NO 1	F/0	NO 2
	F/0	NO 3
	N/A	NO 4
	N/A	NO 5
	N/A	NO 6
	N/A	
MAIN CONTROL VALVE SETTING % OPEN		
INLET VACUUM GAUGE READINGS STARING SIDE NEAREST KNOCKOUT POT		
NO 1	-28	NO 2
	N/A	NO 3
	N/A	NO 4
	N/A	NO 5
	N/A	NO 6
	N/A	
INLET TEMP	32°C	INLET VACUUM PRIOR TO KO POT FILTER
VACUUM AFTER KO POT FILTER	N/A	VACUUM AFTER INLET FLAME ARRESTER
OUTLET PRESSURE AFTER GAS BOOSTER	80MBAR	OUTLET GAS TEMP
PRESSURE AFTER SLAM SHUT	N/A	PRESSURE AFTER OUTLET FLAME ARRESTER
OTHER		BLOWER SPEED
FLOW RATE	124M³/hr	MEASURING INSTRUMENT
FLAME TEMP	1030	MOTOR TEMP
FLAME QUALITY	OK	AMBIENT TEMP
MANOMETER LIQUID LEVEL WITH RIG SHUT DOWN		AMBIENT PRESSURE TOTAL FLOW 878,916 M³/hr
TYPE OF LIQUID: PERFLOW		
RED SG - 0.8	N/A	EMISSIONS ANALYSER CO CELL
	N/A	EMISSIONS ANALYSER NOX CELL
	N/A	

SHEET		1832				United Kingdom Tel: +44 (0)24 7647 4877 Fax: +44 (0)24 7647 4834			
Page No 2									
CHECK FOR LEAKS WITH GAS DETECTOR				OK					
CONDENSATE DRAIN SYSTEM CHECK				Yes					
DRAINS CORRECTLY		Yes		KNOCKOUT POT FILTER CLEAN		N/A			
COMMENTS									
BOOSTER MODEL AND SERIAL NO - GX 34-3 BH 675/2									
MOTOR & FAN SEAL GREASED		Yes		BOOSTER CORRECT ROTATION		Yes			
NOTE: USE SHELL ALVANIA 3, GREASE EVERY SERVICE <u>IMPORTANT DO NOT OVERGREASE</u>									
BOOSTER OIL CHANGED (EVERY 5000 HOURS, USE 20W50 ENGINE OIL IN DONKIN V50						N/A			
BOOSTER FLEXIBLE CONNECTORS		OK	MOUNTINGS		OK	BEARING NOISE		OK	
BOLTS TIGHT		OK	SLAMSHUT SPRING		OK		GAUGES ZEROED		YES
FLAME ARRESTER INLET		OK	OUTLET		OK		PILOT		OK
PILOT LIGHT FUNCTION		OK	UV SENSOR FUNCTION		OK		EXTERIOR LIGHT		N/A
INTERIOR LIGHT		N/A	ELECTRICAL CONNECTIONS CHECKED FOR TIGHTNESS					YES	
ALL INDICATOR BULBS FUNCTION		YES							
HINGES & VALVES LUBRICATED		YES							
PRESSURE SWITCH FUNCTION									
SUCTION	OK	SETTING	1 MBAR	VENT	N/A	SETTING	N/A		
BOOSTER	OK	SETTING	120 MBAR	OTHER (specify)	N/A	SETTING	N/A		
BURNER	N/A	SETTING	N/A			SETTING			
COMMENTS									

Page No 3

1832



Unit 8, Ensign Business Centre
Coventry CV4 8JA
United Kingdom
Tel: +44 (0)24 7647 4877
Fax: +44 (0)24 7647 4834

[illegible]

SERVICE SHEET Page No 4		Job No 1832	 Automatic Flare Systems Ltd Unit 8, Ensign Business Centre Coventry CV4 8JA United Kingdom Tel: +44 (0)24 7647 4877 Fax: +44 (0)24 7647 4834	
REPORT ANY FURTHER REPAIRS OR ACTION NEEDED:				
Checked Txt messaging system on Hi Temp, texts received				
Checked auto re-start mains failure – on power up, not enough time for inverter to start up – goes off on blower failure. Need to add 45 seconds time delay for ABB to boot up				
Need UPS – to keep 24V live on mains failure.				
DEPARTURE REPORT:				
HOURS RUN:		RUN RIG FOR 30 MINUTES BEFORE TAKING READINGS		
CH4	51	CO2	33	O2 N/A 0.8 H2S 19ppm
INLET VALVE SETTING % OPEN				
NO 1	F/O	NO 2	F/O	NO 3 N/A NO 4 N/A NO 5 N/A NO 6 N/A
MAIN CONTROL VALVE SETTING % OPEN				
INLET VACUUM GAUGE READINGS STARTING SIDE NEAREST KNOCKOUT POT				(mbarg)
NO 1	-20	NO 2	N/A	NO 3 N/A NO4 N/A NO 5 N/A NO 6 N/A
INLET TEMP	35	INLET VACUUM PRIOR TO KO POT FILTER		-20
VACUUM AFTER KO POT FILTER	N/A	VACUUM AFTER INLET FLAME ARRESTER		N/A
OUTLET PRESSURE AFTER GAS BOOSTER	80	OUTLET GAS TEMP		41
80	N/A	PRESSURE AFTER OUTLET FLAME ARRESTER		79
OTHER	BLOWER SPEED % 95			
	MANOMETER READING: 0			
FLOW RATE	136	FLAME QUALITY		OK
FLAME TEMP	1025	HAS RIG & COMPOUND BEEN LEFT CLEAN		Yes
NAMES OF ALL AFS & SUB CONTRACTOR STAFF CARRYING OUT WORK				
REPORT WRITER	STEVE WILLACY			
SIGNATURE				
DATE	4.6.13			



SPECIFICATION FOR A 200M3/HR HT FLARE

Date: 25 May 2012

Our ref: 1832

HIGH TEMPERATURE (HT) LOW EMISSIONS GROUND FLARE UNIT FOR LANDFILL GAS RATED AT 200 CUBIC METRES PER HOUR

EQUIPMENT SUPPLY DETAILS

The scope of supply includes a skid-mounted package of equipment with a connected HT Range ground flare stack. This will assist with the installation of the unit and will provide a tidier solution to the construction of the equipment involved. By skid mounting the unit and carrying out final assembly on site it is possible to carry out pre-delivery tests in our factory. The HT Range offers good control over combustion air to facilitate elevated temperatures, whilst ensuring complete combustion. Such units will meet current EPA and European Standards for emissions. The equipment supply briefly comprises:

- Item 1 A condensate knockout pot, located prior to the entry of the gas booster with an attached 6" DN150 PN16 single entry from the gas field. It contains a polypropylene dewatering filter which ensures that no airborne liquids can pass into the gas booster. The condensate pot will be manufactured from stainless steel.
- Item 2 A 7.5kW ExN ATEX electric motor, with a direct-drive arrangement to the gas booster, capable of delivering 250 cubic metres per hour with a total head of approximately 150 mbar (60" WG). The booster will be fitted with a stainless steel impeller and will be ATEX rated inside and out.
- Item 3 A pressure switch on the gas booster outlet to detect no flow situations.
- Item 4 The booster motor will be fitted with a star delta starter.
- Item 5 A 3" DN80 PN16 manual trim valve for flow rate adjustment on feed to flare.
- Item 6 A 3" DN80 PN16 ATEX flame arrester with a stainless steel element on the gas booster outlet. The outlet flame arrester will be fitted with a flashback sensor.
- Item 7 A HT Range ground flare with automatic flame temperature control rated at 200 cubic metres per hour. This will burn with a combustion chamber temperature of 1000°C minimum when the methane concentration is above 28%. It will burn cooler than this temperature with a lower methane concentration, down to 22% methane. Minimum residence time will be 0.3 seconds. The turn down ration will be 5:1, ie the minimum flow rate will be approximately 40 cubic metres per hour.



It is important to note that this flare is in accord with current thinking in terms of the technology required to meet present emissions standards. The height from ground level to the top of the shroud will be 6m.

- Item 8 Flame temperature readout.
- Item 9 Automatic flame temperature control, including a PID controller, a combustion air louvre and an 80 second actuator.
- Item 10 An ATEX LFG pilot line complete with a pilot solenoid valve, a flame arrester and a gate valve.
- Item 11 Electric ignition, automatic upon start up. The flare sequence is controlled by a PLC and the ignition sequencing can be adjusted to suit local requirements. It should be noted that it is not simply a question of a spark. Items of equipment involved in the start sequence involve the igniters, a UV sensor to detect the flame and a secondary air damper. The location of the secondary air damper is mechanically set during start up and then reverts to PID control to maintain the correct flame temperatures.
- Item 12 Suction and pressure gauges.
- Item 13 A 3" DN80 PN16 Orifice plate flow meter with a manometer.
- Item 14 Stainless steel 2" dial vacuum gauges on the inlet line with isolation valves.
- Item 15 Temperature gauges on the inlet and outlet to the gas booster.
- Item 16 The design of the flare stack will:
 - satisfy structural wind loading codes of practice
 - the fixing of the flare stack to the concrete base will comply with relevant British Standards
 - the radiation levels at ground level will be within acceptable levels
- Item 17 Four lifting eyes.
- Item 18 Sample points and drainage cocks will be located in the normal places in the pipework.
- Item 19 Operator selection of continue running on flame out or shut down on flame out.



- Item 20 All pipework will be manufactured from 304 stainless steel.
- Item 21 Control panel weather proofed to IP66.
- Item 22 A 21/2" DN65 PN16 ATEX electric slam-shut valve controlling flow to the burner.
- Item 23 UV sensor for flame detection.
- Item 24 Flame temperature readout with an S type ceramic thermocouple.
- Item 25 Built on an integral skid assembly. The skid will be galvanised to BS729.
- Item 26 The chimney will be galvanised to BS729 with a stainless steel top section.
- Item 27 The chimney will be lined with 5" thick pyro-bloc modules and pinned to the inside of the chimney. This system is the best available on the market.
- Item 28 The supply includes a copy of the instruction manual and one year's parts warranty (excludes consumable items).
- Item 29 Delivery, installation and commissioning.

PRICE : [REDACTED]

- Item 30 The Allen Bradley PLC will be fitted with a telemetry unit for automatic dial out on alarm status via SMS text messaging.

E/O: [REDACTED]

- Item 31 A data logger for all monitoring parameters including ambient air pressure and temperature, CH₄, CO₂, O₂, CO, flow, line pressure and flame temperature.

E/O: [REDACTED]

- Item 32 A fully enclosed weather proof walk-in canopy over the control panel.

E/O: [REDACTED]

- Item 33 ABB Inverter drive for flow control and energy saving.

E/O: [REDACTED]

- Item 34 3 year all inclusive maintenance contract

E/O: [REDACTED]

TOTAL PRICE : [REDACTED]

DELIVERY : 8 WEEKS FROM RECEIPT OF ORDER

Standard terms and conditions of trading will apply.

Appendix B

Opra Profile

21 Pages

Operational Risk Appraisal (Opra) for Installations under EPR



Organisation Name **Gwynedd Council**

Case Number **YP3138UJ**

Version **3.8**

Opra Scheme Version **3.8**

Full instructions for the use of this spreadsheet are contained in the accompanying documentation.
It is recommended that the user fills in the spreadsheet following the order of worksheets listed below (click on the appropriate tab at the bottom of the screen).
Not all worksheets require input, for those that do, the fields that may require input have no background colour.
The sequence of worksheets is divided into two sections Sheets 1 to 11 are concerned with the input of data. Sheet 12 is the summary for the Opra Scores and Sheet 13 displays the charges.
If you cannot see the whole of this box or it is very small, please click 'View' and adjust 'Zoom' level.

1 Listed Activities

Please refer to the Opra Scheme for Installations for the look-up tables and guidance.
Use abbreviated descriptions, select the Schedule 1 references and bands from the pick lists provided.

2 Other Activities

Please enter Part A(2), Part B and aggregated activities onto this sheet.

3 Complexities

Summary of complexities and rules applied

4 Emissions to Air

5 Emissions to Water

6 Emissions to Land

7 Emissions to Sewer

8 Emissions to Waste

9 Emissions Summary

No input is required. Output screen only. Summary of emissions.

10 Location

11 Operational Management

12 Opra Summary

No input is required. Output screen only. The emissions are shown separately.

13 Calculation

No input is required. Charges with separate emissions totals. It is possible to clear the scores and recalculate the charges to include any amendments.

For queries about the scheme or the operation of the spreadsheet, please contact the Environment Agency by email:
opra@environment-agency.gov.uk

For EA Use

☐ Consolidated Permit

Listed Activities - Complexity Attribute

Organisation:	Gwynedd Council
Case Number:	YP3138UJ

	Description of Activity	Schedule 1 Reference	Regulatory Complexity
1	Landfill	5.2 Part A (1) a)	C
2	Pulveriser	5.4 Part A (1) a) (ii)	A
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

Totals before any rules are applied	
A	1
B	0
C	1
D	0
E	0

If there is insufficient space
please attach a paper record

If Rule 4 applies - please complete Other Activities sheet

Aggregation and Schedule1 Part A(2) and Part B Activities

Organisation Name:	Gwynedd Council	If there is insufficient space please attach a paper record
Case Number:	YP3138UJ	

Schedule 1 Part A(1) - Rule 4 Aggregation Details

	Aggregation Group	Description	Schedule 1 Ref	Complexity
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Rule 4	Not Applied
--------	-------------

List of Schedule 1 Part (A) 2 and Part B Activities included in the Installation

	Enter description of Activity	Schedule 1 Reference
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

EPR- Installations Charging Scheme Complexity - Application of Rules

Company	Gwynedd Council
Permit	YP3138UJ

	Description / Aggregation Group	Schedule 1 Ref	Complexity	Rule 3 Capping	Rule 5 not applied	Rule 6 not applied	Rule 7 Not Applied
1	Landfill	5.2 Part A (1) a)	C	C	C	C	C
2	Pulveriser	5.4 Part A (1) a) (ii)	A	A	A	A	A
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Summary of Rules Applied	
Rule 3	No
Rule 4	No
Rule 5	No
Rule 6	No
Rule 7	No

These totals will be carried forward and used to calculate the Opra Risk Summary and Calculation of Charges

Scores after Rules applied (Used for calculation of Charges)			
Complexity	First 6 Complexities	Remaining complexities	Total
A	1	0	1
B	0	0	0
C	1	0	1
D	0	0	0
E	0	0	0
Capped	0	0	0

Scores before rules applied (Used for summary of Risk)
1
0
1
0
0

Emissions Attribute - Releases to Air

Organisation Name:	Gwynedd Council
Case Number:	YP3138UJ

Please check that the data is entered in the correct units.
The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this sheet is applicable ☐

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Oxides of Sulphur	Tonnes Year	10		0	
Oxides of Nitrogen	Tonnes Year	10		0	
Carbon Monoxide	Tonnes Year	1000		0	
Beryllium	Kg year	1		0	
Cadmium	Kg year	1		0	
Lead	Kg year	1		0	
Mercury	Kg year	1		0	
Antimony	Kg year	10		0	
Arsenic	Kg year	10		0	
Chromium	Kg year	10		0	
Nickel	Kg year	10		0	
Selenium	Kg year	10		0	
Other Metals Specify					
	Kg year	100		0	
	Kg year	100		0	
	Kg year	100		0	
	Kg year	100		0	
	Kg year	100		0	
Organic Compounds					
Dioxins and Furans	mg TEQ year	0.1		0	
PCBs	mg TEF year	0.1		0	
PAHs as benzo(a)pyrene	Kg year	1		0	
Phosgene	Kg year	1		0	
Isocyanates	Kg year	1		0	
Di-ethyl sulphate	Kg year	1		0	
Di-methyl sulphate	Kg year	1		0	
Acrylonitrile	Kg year	10		0	
Aniline	Kg year	10		0	
Benzene	Kg year	10		0	
Benzyl Chloride	Kg year	10		0	
1-chloro-2,3-epoxypropane	Kg year	10		0	
Chloroform	Kg year	10		0	
Cyanamide	Kg year	10		0	
Ethylene oxide	Kg year	10		0	
Formaldehyde	Kg year	10		0	
Maleic anhydride	Kg year	10		0	
Nitrobenzene	Kg year	10		0	
Allyl alcohol	Kg year	10		0	
Acetaldehyde	Kg year	100		0	
Acetonitrile	Kg year	100		0	
Benzene-1,2,4-tricarboxylic acid,1,2-anhydride	Kg year	100		0	
1,3-butadiene	Kg year	100		0	
Chloroethene	Kg year	100		0	
1,2-dichloroethane	Kg year	100		0	
Dimethylformamide	Kg year	100		0	
1,4-dioxane	Kg year	100		0	
2-ethoxyethanol	Kg year	100		0	
2-ethoxyethylacetate	Kg year	100		0	
Ethyl acrylate	Kg year	100		0	
Iodomethane	Kg year	100		0	
Methylamine	Kg year	100		0	
2-nitropropane	Kg year	100		0	
Phenol	Kg year	100		0	
Propylene oxide	Kg year	100		0	
HFC's	Kg year	100		0	

Emissions to Air

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
HCFC's	Kg year	100		0	
PFC's	Kg year	100		0	
	Kg year				
Benzaldehyde	Kg year	500		0	
Benzo(a)pyrene	Kg year	500		0	
Butene	Kg year	500		0	
Chloromethane	Kg year	500		0	
1,4-dichlorobenzene	Kg year	500		0	
Dichloromethane	Kg year	500		0	
Ethyl toluene	Kg year	500		0	
Ethylene	Kg year	500		0	
i-butylaldehyde	Kg year	500		0	
Methyl bromide	Kg year	500		0	
Pentene	Kg year	500		0	
Propene	Kg year	500		0	
Styrene	Kg year	500		0	
Tetrachloroethane	Kg year	500		0	
Tetrachloroethene	Kg year	500		0	
Toluene diamine	Kg year	500		0	
1,1,1-trichloroethane	Kg year	500		0	
Trichloroethylene	Kg year	500		0	
Trichlorotoluene	Kg year	500		0	
Trimethylbenzene	Kg year	500		0	
Xylene	Kg year	500		0	
Other VOCs specify					
	Kg year	1000		0	
	Kg year	1000		0	
	Kg year	1000		0	
	Kg year	1000		0	
	Kg year	1000		0	
Inorganics					
Fluorine	Kg year	10		0	
Chlorine	Kg year	10		0	
Bromine	Kg year	10		0	
Iodine	Kg year	10		0	
Hydrogen Fluoride	Kg year	10		0	
Hydrogen Bromide	Kg year	10		0	
Hydrogen Iodide	Kg year	10		0	
Hydrogen Chloride	Kg year	1000		0	
Hydrogen Sulphide	Kg year	10		0	
Ammonia	Kg year	100		0	
Carbon Disulphide	Kg year	100		0	
Particulates	Kg year	100		0	
Other inorganic compounds specify					
Table A1 Substances	Kg year	0.1		0	
Table A2 Substances	Kg year	1		0	
Table A3 Substances	Kg year	10		0	
Table A4 Substances	Kg year	100		0	
Table A5 Substances	Kg year	1000		0	
Commercial in Confidence					
If you need to use these entries please contact your local EA office					
				0	
				0	
				0	
				0	
			Total	0	

Emissions Attribute - Releases to Water

Organisation Name:	Gwynedd Council	Please check that the data is entered in the correct units.
Case Number:	YP3138UJ	The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this sheet is applicable ☐

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Aldrin	Kg year	0.001		0	
Azinphos-ethyl	Kg year	0.001		0	
DDT all isomers	Kg year	0.001		0	
Endosulfan	Kg year	0.001		0	
Endrin	Kg year	0.001		0	
Fenitrothion	Kg year	0.001		0	
Fenthion	Kg year	0.001		0	
Isodrin	Kg year	0.001		0	
Malathion	Kg year	0.001		0	
Parathion	Kg year	0.001		0	
Azinphos-methyl	Kg year	0.01		0	
Chlorfenvinphos	Kg year	0.01		0	
Diazinon	Kg year	0.01		0	
Dieldrin	Kg year	0.01		0	
Hexachlorobenzene	Kg year	0.01		0	
Hexachlorocyclohexanes	Kg year	0.01		0	
Hexachlorobutadiene	Kg year	0.01		0	
Mevinphos	Kg year	0.01		0	
Omethoate	Kg year	0.01		0	
Parathion methyl	Kg year	0.01		0	
Permethrin	Kg year	0.01		0	
Polychlorinated biphenyls	Kg year	0.01		0	
Triazophos	Kg year	0.01		0	
Tributyltin compounds	Kg year	0.01		0	
Trifluralin	Kg year	0.01		0	
Triphenyltin compounds	Kg year	0.01		0	
Atrazin	Kg year	0.1		0	
Pentachlorophenol and its compound	Kg year	0.1		0	
Simazine	Kg year	0.1		0	
Trichlorobenzene all isomers	Kg year	0.1		0	
Benzene	Kg year	1		0	
Bentazone	Kg year	1		0	
Biphenyl	Kg year	1		0	
Carbon Tetrachloride	Kg year	1		0	
Chloroform	Kg year	1		0	
Chloronitrotoluenes	Kg year	1		0	
4-Chloro-3-Methylphenol	Kg year	1		0	
2-Chlorophenol	Kg year	1		0	
2,4 D non-ester	Kg year	1		0	
2,4 D ester	Kg year	1		0	
Demeton	Kg year	1		0	
1,2-Dichloroethane	Kg year	1		0	
Dimethoate	Kg year	1		0	
Linuron	Kg year	1		0	
Mecoprop	Kg year	1		0	
Napthalene	Kg year	1		0	
Tetrachloroethylene	Kg year	1		0	
1,1,1-Trichloroethane	Kg year	1		0	
1,1,2-Trichloroethane	Kg year	1		0	
Cadmium	Kg year	1		0	
Mercury	Kg year	1		0	
Nonylphenol Ethoxylate	Kg year	20		0	
Nonylphenols	Kg year	20		0	
Octylphenols	Kg year	20		0	
Toluene	Kg year	20		0	
Trichloroethylene	Kg year	20		0	
Xylenes	Kg year	20		0	
Arsenic	Kg year	20		0	
Chromium	Kg year	20		0	
Copper	Kg year	20		0	
Lead	Kg year	20		0	
Nickel	Kg year	20		0	
Zinc	Kg year	20		0	
All consented substances not listed above specify					
Table W1 Substances	Kg year	0.01		0	
Table W2 Substances	Kg year	0.1		0	
Table W3 Substances	Kg year	1		0	
Table W4 Substances	Kg year	20		0	
Table W5 Substances	Kg year	100		0	
	Kg year			0	
	Kg year			0	
	Kg year			0	
Commercial in Confidence					
If you need to use these entries please contact your local EA office					
				0	
				0	
				0	
				0	
				0	
			Total	0	

Emissions Attribute Releases to Land

Organisation Name: Gwynedd Council
Case Number: YP3138UJ

Please check that the data is entered in the correct units.
 The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this
 sheet is applicable ☒

Substance/Landfill Type	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Inert waste	Tonnes year	1000	5000	5	
Non hazardous waste (non biodegradable)	Tonnes year	350		0	
Hazardous waste	Tonnes year	100		0	
Non hazardous waste (biodegradable)	Tonnes year	100	40000	400	
			Total	405	

Emissions Attribute - Off-site Disposals to Sewer

Organisation Name:	Gwynedd Council	Please check that the data is entered in the correct units.
Case number:	YP3138U1	The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this sheet is applicable ☐

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Aldrin	Kg year	0.001		0	
Azinphos-ethyl	Kg year	0.001		0	
DDT all isomers	Kg year	0.001		0	
Endosulfan	Kg year	0.001		0	
Endrin	Kg year	0.001		0	
Fenitrothion	Kg year	0.001		0	
Fenthion	Kg year	0.001		0	
Isodrin	Kg year	0.001		0	
Malathion	Kg year	0.001		0	
Parathion	Kg year	0.001		0	
	Kg year				
Azinphos-methyl	Kg year	0.01		0	
chlorfenvinphos	Kg year	0.01		0	
Diazinon	Kg year	0.01		0	
Dieldrin	Kg year	0.01		0	
Hexachlorobenzene	Kg year	0.01		0	
Hexachlorocyclohexanes	Kg year	0.01		0	
Hexachlorobutadiene	Kg year	0.01		0	
Mevinphos	Kg year	0.01		0	
Omethoate	Kg year	0.01		0	
Parathion methyl	Kg year	0.01		0	
Permethrin	Kg year	0.01		0	
Polychlorinated biphenyls	Kg year	0.01		0	
Triazophos	Kg year	0.01		0	
Tributyltin compounds	Kg year	0.01		0	
Trifluralin	Kg year	0.01		0	
Triphenyltin compounds	Kg year	0.01		0	
Atrazin	Kg year	0.1		0	
Pentachlorophenol and its compound	Kg year	0.1		0	
Simazine	Kg year	0.1		0	
Trichlorobenzene all isomers	Kg year	0.1		0	
Benzene	Kg year	1		0	
Bentazone	Kg year	1		0	
Biphenyl	Kg year	1		0	
Carbon Tetrachloride	Kg year	1		0	
Chloroform	Kg year	1		0	
Chloronitrotoluenes	Kg year	1		0	
4-Chloro-3-Methylphenol	Kg year	1		0	
2-Chlorophenol	Kg year	1		0	
2,4 D non-ester	Kg year	1		0	
2,4 D ester	Kg year	1		0	
Demeton	Kg year	1		0	
1,2-Dichloroethane	Kg year	1		0	
Dimethoate	Kg year	1		0	
Linuron	Kg year	1		0	
Mecoprop	Kg year	1		0	
Napthalene	Kg year	1		0	
Tetrachloroethylene	Kg year	1		0	
1,1,1-Trichloroethane	Kg year	1		0	
1,1,2-Trichloroethane	Kg year	1		0	
Cadmium	Kg year	1		0	
Mercury	Kg year	1		0	
Nonylphenol Ethoxylate	Kg year	20		0	
Nonylphenols	Kg year	20		0	
Octylphenols	Kg year	20		0	
Toluene	Kg year	20		0	
Trichloroethylene	Kg year	20		0	
Xylenes	Kg year	20		0	
Arsenic	Kg year	20		0	
Chromium	Kg year	20		0	
Copper	Kg year	20		0	
Lead	Kg year	20		0	
Nickel	Kg year	20		0	
Zinc	Kg year	20		0	
All consented substances not listed above specify					
Chemical Oxygen Demand	Kg year	10000		0	
Suspended Solids	Kg year	10000		0	
Table S1 Substances	Kg year	0.01		0	
Table S2 Substances	Kg year	0.1		0	
Table S3 Substances	Kg year	1		0	
Table S4 Substances	Kg year	20		0	
Table S5 Substances	Kg year	100		0	
	Kg year			0	
Commercial in Confidence					
If you need to use these entries please contact your local EA office					
				0	
				0	
				0	
				0	
		Total		0	(Weighting factor = 0.33)
		Weighting Factor			
		Weighted Total		0	

Emissions Attribute - Off-site Disposals of Waste

Organisation Name:	Gwynedd Council
Case Number:	YP3138UJ

Please check that the data is entered in the correct units.
The Emission Index will only show if the data entered exceeds the threshold.

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Inert waste	Tonnes year	1000		0	
Non hazardous waste (non biodegradable)	Tonnes year	350		0	
Hazardous waste	Tonnes year	100		0	
Non hazardous waste (biodegradable)	Tonnes year	100	8465	85	Leachate off site disposal data for Jan to Dec 2012
		Total		85	(Weighting factor = 0.33)
		Weighting Factor			
		Weighted Total		28	

Emissions Attribute - Off-site Recovery, Recycling, Re-use of Waste

Company	Gwynedd Council
Permit	YP3138UJ

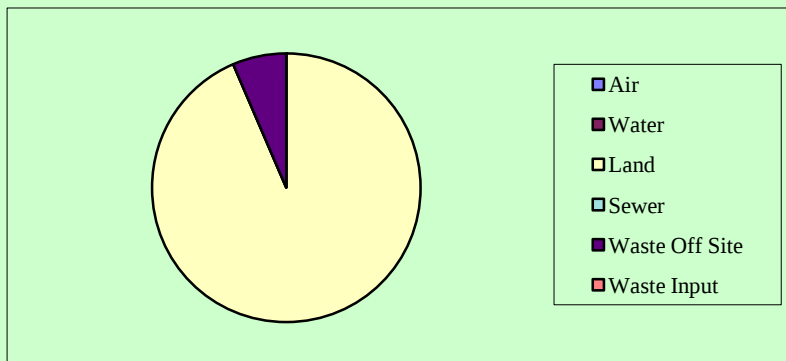
Please check that the data is entered in the correct units.
The Emission Index will only show if the data entered exceeds the threshold.

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Inert waste	Tonnes year	1000		0	
Non hazardous waste (non biodegradable)	Tonnes year	350		0	
Hazardous waste	Tonnes year	100		0	
Non hazardous waste (biodegradable)	Tonnes year	100		0	
		Total		0	(Weighting factor = 0.1)
		Weighting Factor			
		Weighted Total		0	
Off-Site Total				28	

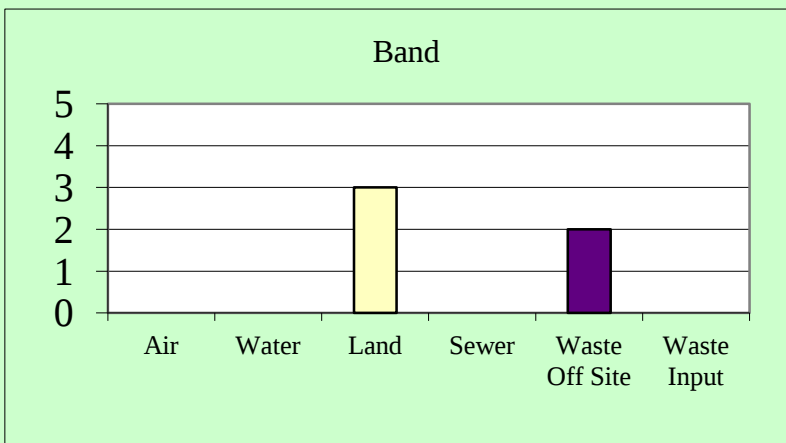
Emissions Attribute Summary Sheet

Organisation:	Gwynedd Council
Case Number:	YP3138UJ

Pathway	Overall Emission Index
Air	0
Water	0
Land	405
Sewer	0
Waste Off Site	28
Waste Input	0



Pathway	Band	
Air	0	-
Water	0	-
Land	3	C
Sewer	0	-
Waste Off Site	2	B
Waste Input	0	-

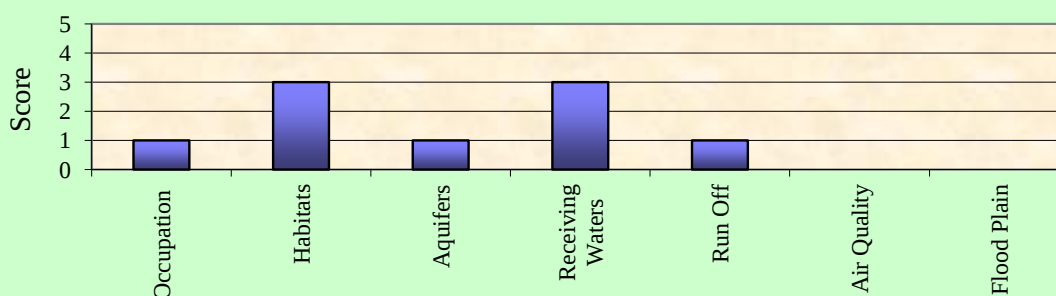


Location Attribute

Organisation Name:	Gwynedd Council
Case Number:	YP3138UJ

Parameter	Yes/No	Available	Score
Human Occupation/Presence:			
a) if within 50m of the boundary	No	5	1
or:			
b) if greater than 50m but less than 250m of boundary	No	3	
or:			
c) if greater than 250m but less than 1km of boundary	Yes	1	
Statutory sites designated under Habitats Directive or CROW Act 2000:			
a) if "relevant" under Habitats Directive	Yes	3	3
or			
b) if CROW Act 2000 assessment required	Yes	2	
a) if on an aquifer and within a Groundwater Protection Zone	No	2	1
or			
b) if on an aquifer and not within a Groundwater Protection Zone	Yes	1	
Sensitivity of receiving waters (information available from Agency's "What's in your backyard" webpages), if:			
a) grade 5	No	1	3
b) river category grade 4 or 3	No	2	
c) river category grade 2 or 1 or estuarine	Yes	3	
a) If there is direct runoff from the site without interceptors or other active control measures	No	2	1
or			
b) If as above but there are interceptors or active control measures	Yes	1	
a) If within an Air Quality Management Zone (AQMZ) and emit pollutant that has been declared for that AQMZ	No	3	0
or			
b) If within 2km of an Air Quality Management Zone (AQMZ) and emit pollutant that has been declared for that AQMZ	No	2	
or			
c) as a) except do not emit pollutants that have be declared for the AQMZ	No	1	
If within a flood plain	No	2	0
Maximum Score = 20			Total
Band A = 0 - 4, B = 5 - 8, C = 9 - 12, D = 13 - 17 and E = 18 - 20			Band
			9
			C

Location Attribute Profile



Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
Operations and Maintenance section - 20%						
Effective operational and prev maintenance systems shall be employed on all aspects of the process where any failure could impact on the environment.						
1	Are there documented operating procedures for operations that may have an adverse impact on the environment?	Yes	2.0	2.0		
2	Is there a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative maintenance regime is appropriate?	Yes	2.0	2.0		
3	Are there documented procedures for monitoring emissions or impacts?	Yes	2.0	2.0		
4	Is there a preventative maintenance programme for those items of plant whose failure could lead to impact on the environment?	Yes	1.0	1.0		
5	Does the preventative maintenance programme include regular checks and formal inspections of 'static' items such as tanks, pipework, retaining walls, bunds and ducts?	Yes	1.0	1.0		
6	Do the operations and maintenance systems include auditing environmental performance?	Yes	2.0	2.0		
7	Are the reports, results and recommendations arising from audits made available to senior management on a regular basis?	Yes	2.0	2.0		
8	In the last two years, has there been any notifiable incident or release for which lack of maintenance was a contributory cause ?	No	-2.0	0.0		
9	In the last two years, has there been any notifiable incident or release for which the root cause could not be identified?	No	-3.0	0.0		
Operations and Maintenance Total			12.0	12.0	100.0%	2.0

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
Competence and Training - 20%						
The Operator shall ensure that all relevant management and operational staff (including contractors and those responsible for purchasing equipment and materials) receive adequate training with regard to their responsibilities under the Permit. Particular attention should be given to the following: ☐ Minimisation of all potential environmental effects from operation under normal, abnormal, start up and shut down circumstances; ☐ Prevention of accidental emissions and action to be taken when accidental emissions occur; and ☐ The need to report deviation from the permit.						
1	Has a training needs assessment been carried out which: ☐ Identifies all posts for which specific environmental awareness training is required; and ☐ Identifies the scope and level to which such training is to be given?	Yes	3.0	3.0		
2	Are training systems in place for all relevant staff that cover the following factors:					
	☐ the regulatory requirements associated with the Permit as they affect their work activities and responsibilities;	Yes	2.0	2.0		
	☐ likely potential environmental impacts which may be caused by plant under their control. This should cover both normal and abnormal circumstances;	Yes	2.0	2.0		
	☐ reporting procedures to inform supervisors or managers of deviations from permit conditions;	Yes	1.0	1.0		
	☐ procedures to be used by supervisors or managers and for the reporting of deviations from permit conditions to the Agency; and	Yes	2.0	2.0		
	☐ prevention of accidental emissions and action to be taken when accidental emissions occur?	Yes	2.0	2.0		
3	Are the skills and competencies necessary for key posts documented and are records of training needs and training received maintained?	Yes	1.0	1.0		
4	Do the key posts include contractors, those responsible for liaising with contractors and those purchasing equipment and materials?	Yes	1.0	1.0		
5	Do you assess the potential environmental risks posed by the work of contractors and provide instructions to contractors about protecting the environment while working on site?	Yes	1.0	1.0		
6	In the last 2 years, have there been any notifiable incidents or releases, which it has been identified that lack of training was a contributory cause ?	No	-2.0	0.0		
7	Are there industry standards for training in this sector (e.g. WAMITAB) and if so do you apply them? (If no industry standards please leave blank)	Yes	-2.0	0.0		
8	Are individual and organisational training needs reviewed on a regular (e.g. annual) basis?	Yes	2.0	2.0		
Competence Training Total			17.0	17.0		

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
Emergency planning - 20%						
	The Operator shall maintain an accident management plan which identifies potential events or failures which might lead to an environmental impact. The plan shall identify: ☐ the likelihood of, and the actions to be taken to minimise, these potential occurrences; ☐ the environmental consequences and an action plan to deal with such occurrences; ☐ The Operator shall have a written procedure for handling, investigating, communicating and reporting of incidents and actual or potential non-compliance with permit conditions including taking action to mitigate any impacts caused and for initiating and completing corrective action. ☐ In the case of abnormal emissions the operator shall; ☐ investigate and undertake remedial action immediately; ☐ promptly record the events and actions taken; and ☐ ensure the Regulator is made aware, as soon as practicable.					
1	Is there an accident plan that complies with guidance covering the following aspects of foreseeable scenarios: likelihood, consequences, actions to prevent, action to take in the event it occurs?	Yes	4.0	4.0		
2	Has the plan identified areas where improvement is needed?	Yes	1.0	1.0		
3	Where improvement has been identified, does the plan include an implementation programme with acceptable timescales to the Agency? If not, 2 points will be deducted.	Yes	-2.0	0.0		
4	Are there written procedures for handling, investigating, communicating and reporting actual or potential non compliance with operating procedures or emission limits?	Yes	1.0	1.0		
5	Are there written procedures for handling, investigating, communicating and reporting environmental complaints?	Yes	1.0	1.0		
6	Are there written procedures for investigating incidents, (and near-misses) including identifying suitable corrective action and following up implementation of that action?	Yes	2.0	2.0		
7	In the last 2 years, have there been any notifiable incidents or releases for which it has been identified that lack of emergency planning was a contributory cause ?	No	-2.0	0.0		
8	Are there audit records of investigations into non compliance, complaints and incidents? Does the audit cover follow up actions? Do the audit reports go to senior managers?	Yes	3.0	3.0		
Emergency planning Total			12.0	12.0		

Operator Performance

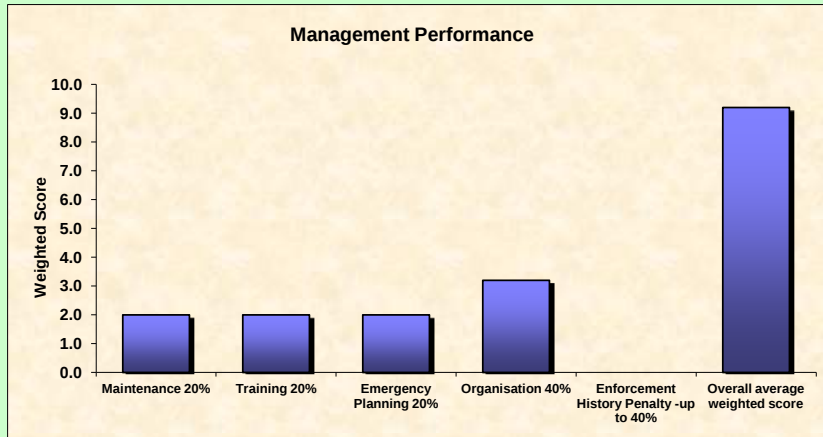
		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
Organisation - 40%						
The following aspects of site management procedures and controls may not be in the permit conditions but are likely to have an impact on the Agency resources required to apply the Env Permitting Regulations.						
1	Do you operate an externally audited environment management system, if so answer one of the following questions. N.B Please enter your Certificate Number, Name of certification body and their UKAS Registration Number in the space for document reference.					
1.1	Is your Environmental Management System EMAS registered? If yes select Y and go to question 4.	No	20	0		
1.2	Is your Environmental Management System certified to ISO 14001? If yes enter Y and go to questions 3 and 4.	Yes	15	15		
1.3	Is your system an Environmental Management System subject to external audit through a third party audit programme with a published methodology (excludes in-house company audit programme). If yes enter and go to questions 3 and 4.	Yes	12	12		
Sub Total			Max 20	15.00		
2	If you do not operate an externally audited environmental management system then assess your system against the criteria below:					
2.1	Has your company adopted an environmental policy and programme which :					
	☐ includes a commitment to continual improvement and prevention of pollution?	Yes	1.0	1.0		
	☐ includes a commitment to comply with relevant legislation, and with other requirements that the organisation subscribes to?	Yes	1.0	1.0		
	☐ identifies, sets, monitors and reviews environmental objectives, independently of the permit?	Yes	1.0	1.0		
2.2	Are there procedures that incorporate environmental issues into the following areas (as supported by demonstrable evidence e.g. written procedures):					
	☐ the control of process change on the installation;	Yes	1.0	1.0		
	☐ design and review of new facilities (including provision for their decommissioning), engineering and other capital	Yes	1.0	1.0		
	☐ capital approval;	Yes	1.0	1.0		
	☐ purchasing policy;	Yes	1.0	1.0		
2.3	Are there audits, at least annually, to check that all activities are being carried out in conformity with the above requirements?	Yes	1.0	1.0		
2.4	Are they independent? (name the auditing body)	Yes	2.0	2.0	BSI Assurance UK Ltd	
2.5	Are there reports annually on environmental performance, objectives and targets, future planned improvements and or facilitate (participate in) local community liaison meetings?	Yes	1.0	1.0		
3	Does your company produce a public environmental statement? You may score in this box for ISO 14001 and industry systems but not for EMAS as this is a requirement for EMAS.	Yes	1.0	1.0		
4	Within the past 5 years have you failed to meet an improvement condition either set by the Agency in a Permit or Variation by the due date, without prior agreement? (minus 2 for each failure). ADD NUMBER OF FAILURES NOT Y OR N	0	-2.0	0.0		
Organisational Totals			20.0	16.00		

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)	
Enforcement History (0 to -40% weighting)							
					Notice etc	Date Issued	Date Spent
1	Enforcement , Improvement, Works, Compliance or Restoration Notices issued in the past year by the Environment Agency under any legislation, by the Health and Safety Executive relevant to the COMAH Regulations or by local authorities under Part I of the Environmental Protection Act 1990 or relevant notice or Abatement Notices issued by local authorities or magistrates courts under Part III of the Environmental Protection Act 1990	1	None 0 1st - 5 2nd -10 3rd or more -40	Spent	Notice	06-Jan-06	06-Jan-08
2	Formal cautions, Enforcement Undertakings or Fixed Monetary Penalties issued by the Environment Agency in respect of offences under any legislation in the last 3 years.	1	None 0 1st - 5 2nd -10 3rd or more -40	Spent	Caution	06-Jan-06	06-Jan-08
3	Prohibition, Stop, Suspension or Revocation Notices issued by the Environment Agency under any legislation, by the Health and Safety Executive relevant to the COMAH Regulations or by local authorities under Part I of the Environmental Protection Act 1990 in the last 3 years	1	None 0 1st - 10 2nd or more -40	Spent	Notice	06-Jan-08	06-Jan-08
4	Convictions on prosecutions brought by the Environment Agency under any legislation, by the Health and Safety Executive relevant to the COMAH regulations or by local authorities (in respect of offences under Parts I or III of the Environmental Protection Act 1990) in last 5 years (10 years where imprisonment was imposed). Or any Variable Monetary Penalty. [NB each individual offence counts separately].	0	None 0 1st - 15 2nd or more -40				
Enforcement History Total							
		Entered	Spent	Extant	Score		
1	Enforcement etc Notices	1	1	0	0		
2	Formal Cautions etc	1	1	0			
3	Prohibition etc Notices	1	1	0			
4	Convictions on Prosecutions etc	0	0	0			
Enforcement History Total (min -40)					0		

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
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Band E= less than 2
D= 2 to 3.99, C= 4 to 5.99, B= 6 to 7.99 , A= 8 to 11

BAND=

A

Company : Gwynedd Council

Permit: YP3138UJ

Data calculations generating the above graph

Summary	Max	Score from above	Normalised to scale out of 10	Weighting	Weighted score
Maintenance 20%	12.00	12.00	10.00	20.00	2.0
Training 20%	17.00	17.00	10.00	20.00	2.0
Emergency Planning 20%	12.00	12.00	10.00	20.00	2.0
Organisation 40%	20.00	16.00	8.00	40.00	3.2
Enforcement History Penalty -up to 40%	-40.00	0.00	0.00	40.00	0.0
Overall average weighted score					9.2

Opra Banded Profile

Organisation Name:	Gwynedd Council
Case Number:	YP3138UJ

Attribute		Profile before any rules or capping applied		Opra Banded Profile used for charging	
		Number	Band	Number	Band
Complexity		1	A	1	A
		0	B	0	B
		1	C	1	C
		0	D	0	D
		0	E	0	E
Emissions	Air		-		-
	Water		-		-
	Land		C		C
	Sewer		-		-
	Waste Off Site		B		B
	Waste Input		-		-
Location			C		C
Operator Performance			A		A

Organisation Name: Gwynedd Council Case Number: YP3138UJ

EPR Installations Application Charge Calculation

(excludes Compliance Rating)

Scoring Summary - Financial



Attribute	Band	Score	Total Score
Complexity	A	1	2
	B	0	0
	C	1	45
	D	0	0
	E	0	0
Emissions to Air	-		0
Emissions to Water	-		0
Emissions to Land	C		20
Emissions to Sewer	-		0
Emissions to Off-site Waste	B		2
Emissions - Waste Input	-		0
Location	C		20
Operator Performance	A		10
Total Opra charging score			99.00

Indicative Fees & Charges

Application Fee	£	19,899.00
Subsistence Charge*	£	9,702.00
Substantial Variation	£	10,890.00
Standard Variation	£	5,544.00
Partial Surrender	£	9,504.00
Full Surrender	£	12,276.00
Closure	£	-

Part A(2) and Part B Activities

Please ensure that you have completed these entries in the Listed Activities sheet. The charge shown will not include any charges associated with Local Authority Part A (2) or Part B activities that form part of the installation.
Refer to Installations Charging Scheme for further details.

Opra Charge Multipliers	
Application	201
Subsistence	98
Substantial Variation	110
Standard Variation	56
Partial Surrender	96
Full Surrender	124
Closure (Landfill only)	

* Does not take into account Compliance Rating

Compliance Rating

Breach Category*	Events	Score per event	Total
1	0	60	0
2	0	31	0
3	0	4	0
4	0	0.1	0
		Compliance Index	0

Compliance Rating Band	A
------------------------	---

Compliance Rating Multiplier	95%
-------------------------------------	------------

* Under Compliance Classification Scheme (CCS)

Opra Score

Without Compliance Rating	99
Including Compliance Rating	94.05

Subsistence Fee:	£ 9,216.90
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Appendix C

Application Forms

46 Pages

Application for an environmental permit – Part C2 – General – varying a bespoke permit



Fill in this part of the form, together with part A and the relevant parts of C3 to C7 and part F1 or F2, if you are applying to vary (change) the conditions or any other part of the permit. Please check that this is the latest version of the form available from our website.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or changing existing ones).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please read through this form and the guidance notes that came with it. Please write clearly in the answer spaces.

It will take less than two hours to fill in this form.

Contents

- 1 About the permit
- 2 About your proposed changes
- 3 Your ability as an operator
- 4 Consultation
- 5 Supporting information
- 6 Environmental risk assessment
- 7 How to contact us

Appendix 1 – Low impact installation checklist

1 About the permit

Note: If you are applying to convert your existing permit to a standard permit or add a standard facility you need to fill out form C1.

1a Customer reference number

What is your customer reference number?

If you do not have a customer reference number, you may leave this blank.

The customer reference number is a unique identification number which tells us who you are. It is always made up of one letter and nine numbers in this order A111111111.

1b Discussions before your application

If you have had discussions with us before your application, provide the case reference number or details on a separate sheet and tell us below the reference you have given the document.

Case or document reference

1c Permit number

What is the permit number that this application relates to?

1d Site details

What is the name, address and postcode of the site?

Site name

Address

Postcode

2 About your proposed changes

2a Type of variation

What type of variation are you applying for? (Please tick)

Standalone water discharge activity or point source groundwater activity

☐

Minor technical

☐

Normal variation

☐

Substantial

☐

2 About your proposed changes, continued

2b Changes or additions to existing activities

Please give us brief details in the box below. More detailed information can be given in Table 1 below.

--

Fill in Table 1 with details of all the proposed changes to current activities. In the final column of the table, give us the document reference for the proposed changes and send them to us with your filled in application form.

Fill in a separate table for each activity you are applying to vary or add. Use a separate sheet if you have a long list and send it to us with your application form. Tell us below the reference you have given this document.

Document reference

--

You only need to fill in one table for your mining waste operations.

If your proposed change is to modernise (update) your permit, now answer 2c1 otherwise go to 2d.

If your proposed change is to consolidate (combine) a number of permits, now answer 2c2 otherwise go to 2d.

Note: In both cases we may require additional information from you about, for example your management system. Therefore we would always advise you to talk to us before you submit any application to modernise or consolidate permits.

2c Consolidating existing permits

2c1 Do you want to have a modern style permit?

No ☐

Yes ☐

2c2 Identify all the permits you want to consolidate by listing the permit numbers in Table 2 below.

Table 2 – Permit numbers

2d Treating batteries

Are you proposing to treat batteries?

No ☐

Yes ☐ Tell us how you will do this and send us a copy of your explanation

Document reference for the explanation

--

2e Low impact installations (installations only)

Will any changes mean that any of the regulated facilities will become low impact installations?

No ☐ Now go to section 3

Yes ☐

If yes, tell us how you meet the conditions for a low impact installation (see the guidance in appendix 1).

Document reference for the explanation

--

Tick the box to confirm you have filled in the low impact installation checklist in appendix 1 for each regulated facility. ☐

Now go to section 3

Table 1 – Changes to existing activities

Name	Installation schedule 1 references	Description of the installation activity	Description of waste operation	Description of the mining waste operations	Description of water discharge activity	Description of groundwater activity	Proposed changes document reference
i.e. name of installation, waste operation, mining waste operation, water discharge activity or groundwater activity							
Example – Effluent unique name					Example – treated sewage effluent		
If you do not have enough room, go to the line below or send a separate document and give us the document reference here							

3 Your ability as an operator

If you are applying to add waste installations or waste operations to a permit that has not previously had them, you need to fill in all of section 3.

If you are applying to consolidate two or more permits or have an updated permit you must fill in question 3d.

This section does not apply for applications to surrender a permit.

3a Relevant offences (installations and waste operations only – see the guidance notes on part C2)

Have you, or any other relevant person, been convicted of any relevant offence?

No ☐ Now go to question 3b

Yes ☐ Please give details below

Name of the relevant person

Title (Mr, Mrs, Miss and so on)

First name

Last name

Date of birth (DD/MM/YYYY)

Position at the time of the offence

Name of the court

Date of the conviction (DD/MM/YYYY)

Offence and penalty set

Date any appeal against the conviction will be heard

(DD/MM/YYYY)

If necessary, use a separate sheet to give us details of other relevant offences (and post conviction plans if relevant) and tell us below the reference number you have given the extra sheet.

Document reference of the extra sheet

Have you sent us a post conviction plan for this offence?

No ☐ You must send us a post conviction plan with this application and give us the document reference below

Document reference

Yes ☐ Please give us the reference for the post conviction plan you have sent and the date sent in

Post conviction plan reference

Date sent in (DD/MM/YYYY)

Now go to question 3b

3b Technical ability (specified waste management activities and waste operations only – see the guidance notes on part C2)

Please tick the scheme you are using to show you have the suitable technical skills and knowledge to manage your facility.

CIWM/WAMITAB ☐

ESA/EU ☐

Please send in a registration letter from your scheme as above ☐

Now go to question 3c

3c Finances (installations, waste operations and mining waste operations – see the guidance notes on part C2)

Do you or any relevant person have current or past bankruptcy or insolvency proceedings against you?

No ☐

Yes ☐ Please give details below, including the required set-up costs (including infrastructure), maintenance and clean up costs for the proposed facility against which a credit check may be assessed.

We may want to contact a credit reference agency for a report about your business's finances.

3 Your ability as an operator, continued

Landfill, Category A mining waste facilities and mining waste facilities for hazardous waste only

How do you plan to make financial provision (to operate a landfill or a mining waste facility you need to show us that you are financially capable of meeting the obligations of closure and aftercare)?

- Bonds ☐
- Escrow account ☐
- Trust fund ☐
- Lump sum ☐
- Other ☐

Provide a plan of your estimated expenditure on each phase of the landfill or mining waste facility.

Give the document plan reference number

Now go to question 3d

3d Management systems

You can find guidance on management systems in both 'How to Comply' and 'Horizontal Guidance Note 6 – Environmental Management Systems'. We have also developed environmental management toolkits for some business sectors which you can use to produce your own management system. You can get these by calling 0300 065 3000 or by downloading them from the Environment Agency website <http://www.environment-agency.gov.uk>.

Does your management system meet the conditions set out in our guidance?

No ☐

Yes ☐

What management system will you provide for your regulated facility?

- EC Eco-Management and Audit Scheme (EMAS) ☐
- ISO 14001 ☐
- BS 8555 (Phases 1–5) ☐
- Green Dragon ☐
- Own management system ☐

You must send us a summary of your management system with your application.

Document reference or references for this summary

4 Consultation (fill in 4a to 4c for installations and waste operations and 4d for installations only)

Could the waste operation or installation involve releasing any substance into any of the following?

4a A sewer managed by a sewerage undertaker?

No ☐

Yes ☐ Please name the sewerage undertaker

4b A harbour managed by a harbour authority?

No ☐

Yes ☐ Please name the harbour authority

4c Directly into relevant territorial waters or coastal waters within the sea fisheries district of a local fisheries committee?

No ☐

Yes ☐ Please name the fisheries committee

4 Consultation (fill in 4a to 4c for installations and waste operations and 4d for installations only), continued

4d Is the installation on a site for which

4d1 a nuclear site licence is needed under section 1 of the Nuclear Installations Act 1965?

No ☐

Yes ☐

4d2 a policy document for preventing major accidents is needed under regulation 5 of the Control of Major Accident Hazards Regulations 1999, or a safety report is needed under regulation 7 of those regulations?

No ☐

Yes ☐

5 Supporting information

5a Provide a plan or plans for the site (see the guidance notes on part C2 for what needs to be marked on the plan)

Document plan reference or references

5b Do any of the variations you plan to make need extra land to be included in the permit?

No ☐

Yes ☐ Please provide a site report for the extra land.

Document report reference or references

5c Provide a non-technical summary of your application

Document reference

5d Adding an installation

If you are applying to add an installation, tick the box to confirm that you have sent in a baseline report and provide a reference.

☐

Document reference of the report

6 Environmental risk assessment (if you need one – see the guidance notes on part C2)

Provide an assessment of the risks each of your proposed activities cause to the environment. The risk assessment must use H1 or an equal method.

Document reference of the assessment

7 How to contact us

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General enquiries: 0300 065 3000 (Monday to Friday, 8am to 6pm)

Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

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How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

For Natural Resources Wales use only

Date received (DD/MM/YYYY)

Our reference number

Payment received?

No ☐

Yes ☐

Amount received

£ _____

Plain English Campaign's Crystal Mark does not apply to appendix 1.**Appendix 1 – Low impact installation checklist**

Installation reference				
Condition	Response			Do you meet this?
A – Management techniques	Provide references to show how your application meets A.			Yes ☐
	References			No ☐
B – Aqueous waste	Effluent created		m ³ /day	Yes ☐ No ☐
C – Abatement systems	Provide references to show how your application meets C.			Yes ☐
	References			No ☐
D – Groundwater	Do you plan to release any hazardous substances or non-hazardous pollutants into the ground?		Yes ☐ No ☐	Yes ☐ No ☐
E – Producing waste	Hazardous waste		Tonnes per year	Yes ☐
	Non-hazardous waste		Tonnes per year	No ☐
F – Using energy	Peak energy consumption		MW	Yes ☐ No ☐
G – Preventing accidents	Do you have appropriate measures to prevent spills and major releases of liquids? (See 'How to comply'.)		Yes ☐ No ☐	Yes ☐ No ☐
	Provide references to show how your application meets G.			
	References			
H – Noise	Provide references to show how your application meets H.			Yes ☐
	References			No ☐
I – Emissions of polluting substances	Provide references to show how your application meets I.			Yes ☐
	References			No ☐
J – Odours	Provide references to show how your application meets J.			Yes ☐
	References			No ☐
K – History of keeping to the regulations	Say here whether you have been involved in any enforcement action as described in Compliance History Appendix 1 explanatory notes.		Yes ☐ No ☐	

Application for an environmental permit

Part A – About you



You will need to fill in this part A if you are applying for a new permit, applying to change an existing permit or want to transfer an existing permit to yourself. Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that came with it. Please write clearly in the answer spaces.

Note: if you believe including information on a public register would not be in the interests of national security you must tick the box in section 5 of F1 or F2 and enclose a letter telling us that you have told the Welsh ministers. We will not include the information in the public register unless directed otherwise.

It will take less than one hour to fill in this part of the application form.

Where you see the term 'document reference' on the form, give the document references and send the documents with the application form when you've completed it.

Contents

- 1 About you
- 2 Applications from an individual
- 3 Applications from an organisation of individuals
- 4 Applications from public bodies
- 5 Applications from companies
- 6 Your address
- 7 Contact details
- 8 How to contact us

1 About you

Are you applying as an individual, an organisation of individuals (for example, a partnership), a company (this includes Limited Liability Partnerships) or a public body?

An individual

An organisation of individuals (for example, a partnership)

A public body

A registered company or other corporate body

☐ Now go to section 2

☐ Now go to section 3

☐ Now go to section 4

☐ Now go to section 5

2 Applications from an individual

2a Please give us the following details

Name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Date of birth (DD/MM/YYYY)

Now go to section 6

3 Applications from an organisation of individuals

3a Type of organisation

For example, a charity, a partnership, a group of individuals or a club

3b Details of the organisation

If you are an organisation of individuals, please give the details of the main representative below. If relevant, provide details of other members (please include their title Mr, Mrs and so on) on a separate sheet and tell us the document reference you have given this sheet.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

3 Applications from an organisation of individuals, continued

Last name

Date of birth (DD/MM/YYYY)

Now go to section 6

4 Applications from public bodies

4a Type of public body

For example, NHS trust, local authority, English county council

4b Name of the public body

4c Please give us the following details of the executive

An officer of the public body authorised to sign on your behalf

Name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Position

Now go to section 6

5 Applications from companies or corporate bodies

5a Name of the company

5b Company registration number

Date of registration (DD/MM/YYYY)

If you are applying as a corporate organisation that is not a limited company, please provide evidence of your status and tell us below the reference you have given the document containing this evidence.

Document reference

Now go to section 6

6 Your address

6a Your main (registered office) address

For companies this is the address on record at Companies House.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

6 Your address, continued

For an organisation of individuals every partner needs to give us their details, including their title Mr, Mrs and so on. So, if necessary, continue on a separate sheet and tell us below the reference you have given the sheet.

Document reference for the extra sheet

6b Main UK business address (if different from above)

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

Now go to section 7

7 Contact details

7a Who can we contact about your application?

This can be someone acting as a consultant or an 'agent' for you.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

7 Contact details, continued

7b Who can we contact about your operation (if different from question 7a)?

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

7c Who can we contact about your billing or invoice?

As in question 7a

☐

As in question 7b

☐

Please give details below if different from question 7a or 7b.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

8 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

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Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

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How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

For Natural Resources Wales use only

Date received (DD/MM/YYYY)

Our reference number

Payment received?

No ☐

Yes ☐

Amount received

£

Application for an environmental permit – Part C2 – General – varying a bespoke permit



Fill in this part of the form, together with part A and the relevant parts of C3 to C7 and part F1 or F2, if you are applying to vary (change) the conditions or any other part of the permit. Please check that this is the latest version of the form available from our website.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or changing existing ones).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please read through this form and the guidance notes that came with it. Please write clearly in the answer spaces.

It will take less than two hours to fill in this form.

Contents

- 1 About the permit
- 2 About your proposed changes
- 3 Your ability as an operator
- 4 Consultation
- 5 Supporting information
- 6 Environmental risk assessment
- 7 How to contact us

Appendix 1 – Low impact installation checklist

1 About the permit

Note: If you are applying to convert your existing permit to a standard permit or add a standard facility you need to fill out form C1.

1a Customer reference number

What is your customer reference number?

If you do not have a customer reference number, you may leave this blank.

The customer reference number is a unique identification number which tells us who you are. It is always made up of one letter and nine numbers in this order A111111111.

1b Discussions before your application

If you have had discussions with us before your application, provide the case reference number or details on a separate sheet and tell us below the reference you have given the document.

Case or document reference

1c Permit number

What is the permit number that this application relates to?

1d Site details

What is the name, address and postcode of the site?

Site name

Address

Postcode

2 About your proposed changes

2a Type of variation

What type of variation are you applying for? (Please tick)

Standalone water discharge activity or point source groundwater activity

☐

Minor technical

☐

Normal variation

☐

Substantial

☐

2 About your proposed changes, continued

2b Changes or additions to existing activities

Please give us brief details in the box below. More detailed information can be given in Table 1 below.

--

Fill in Table 1 with details of all the proposed changes to current activities. In the final column of the table, give us the document reference for the proposed changes and send them to us with your filled in application form.

Fill in a separate table for each activity you are applying to vary or add. Use a separate sheet if you have a long list and send it to us with your application form. Tell us below the reference you have given this document.

Document reference

--

You only need to fill in one table for your mining waste operations.

If your proposed change is to modernise (update) your permit, now answer 2c1 otherwise go to 2d.

If your proposed change is to consolidate (combine) a number of permits, now answer 2c2 otherwise go to 2d.

Note: In both cases we may require additional information from you about, for example your management system. Therefore we would always advise you to talk to us before you submit any application to modernise or consolidate permits.

2c Consolidating existing permits

2c1 Do you want to have a modern style permit?

No ☐

Yes ☐

2c2 Identify all the permits you want to consolidate by listing the permit numbers in Table 2 below.

Table 2 – Permit numbers

2d Treating batteries

Are you proposing to treat batteries?

No ☐

Yes ☐ Tell us how you will do this and send us a copy of your explanation

Document reference for the explanation

--

2e Low impact installations (installations only)

Will any changes mean that any of the regulated facilities will become low impact installations?

No ☐ Now go to section 3

Yes ☐

If yes, tell us how you meet the conditions for a low impact installation (see the guidance in appendix 1).

Document reference for the explanation

--

Tick the box to confirm you have filled in the low impact installation checklist in appendix 1 for each regulated facility. ☐

Now go to section 3

Table 1 – Changes to existing activities

Name	Installation schedule 1 references	Description of the installation activity	Description of waste operation	Description of the mining waste operations	Description of water discharge activity	Description of groundwater activity	Proposed changes document reference
i.e. name of installation, waste operation, mining waste operation, water discharge activity or groundwater activity							
Example – Effluent unique name					Example – treated sewage effluent		
If you do not have enough room, go to the line below or send a separate document and give us the document reference here							

3 Your ability as an operator

If you are applying to add waste installations or waste operations to a permit that has not previously had them, you need to fill in all of section 3.

If you are applying to consolidate two or more permits or have an updated permit you must fill in question 3d.

This section does not apply for applications to surrender a permit.

3a Relevant offences (installations and waste operations only – see the guidance notes on part C2)

Have you, or any other relevant person, been convicted of any relevant offence?

No ☐ Now go to question 3b

Yes ☐ Please give details below

Name of the relevant person

Title (Mr, Mrs, Miss and so on)

First name

Last name

Date of birth (DD/MM/YYYY)

Position at the time of the offence

Name of the court

Date of the conviction (DD/MM/YYYY)

Offence and penalty set

Date any appeal against the conviction will be heard

(DD/MM/YYYY)

If necessary, use a separate sheet to give us details of other relevant offences (and post conviction plans if relevant) and tell us below the reference number you have given the extra sheet.

Document reference of the extra sheet

Have you sent us a post conviction plan for this offence?

No ☐ You must send us a post conviction plan with this application and give us the document reference below

Document reference

Yes ☐ Please give us the reference for the post conviction plan you have sent and the date sent in

Post conviction plan reference

Date sent in (DD/MM/YYYY)

Now go to question 3b

3b Technical ability (specified waste management activities and waste operations only – see the guidance notes on part C2)

Please tick the scheme you are using to show you have the suitable technical skills and knowledge to manage your facility.

CIWM/WAMITAB ☐

ESA/EU ☐

Please send in a registration letter from your scheme as above ☐

Now go to question 3c

3c Finances (installations, waste operations and mining waste operations – see the guidance notes on part C2)

Do you or any relevant person have current or past bankruptcy or insolvency proceedings against you?

No ☐

Yes ☐ Please give details below, including the required set-up costs (including infrastructure), maintenance and clean up costs for the proposed facility against which a credit check may be assessed.

We may want to contact a credit reference agency for a report about your business's finances.

3 Your ability as an operator, continued

Landfill, Category A mining waste facilities and mining waste facilities for hazardous waste only

How do you plan to make financial provision (to operate a landfill or a mining waste facility you need to show us that you are financially capable of meeting the obligations of closure and aftercare)?

- Bonds ☐
- Escrow account ☐
- Trust fund ☐
- Lump sum ☐
- Other ☐

Provide a plan of your estimated expenditure on each phase of the landfill or mining waste facility.

Give the document plan reference number

Now go to question 3d

3d Management systems

You can find guidance on management systems in both 'How to Comply' and 'Horizontal Guidance Note 6 – Environmental Management Systems'. We have also developed environmental management toolkits for some business sectors which you can use to produce your own management system. You can get these by calling 0300 065 3000 or by downloading them from the Environment Agency website <http://www.environment-agency.gov.uk>.

Does your management system meet the conditions set out in our guidance?

No ☐

Yes ☐

What management system will you provide for your regulated facility?

- EC Eco-Management and Audit Scheme (EMAS) ☐
- ISO 14001 ☐
- BS 8555 (Phases 1–5) ☐
- Green Dragon ☐
- Own management system ☐

You must send us a summary of your management system with your application.

Document reference or references for this summary

4 Consultation (fill in 4a to 4c for installations and waste operations and 4d for installations only)

Could the waste operation or installation involve releasing any substance into any of the following?

4a A sewer managed by a sewerage undertaker?

No ☐

Yes ☐ Please name the sewerage undertaker

4b A harbour managed by a harbour authority?

No ☐

Yes ☐ Please name the harbour authority

4c Directly into relevant territorial waters or coastal waters within the sea fisheries district of a local fisheries committee?

No ☐

Yes ☐ Please name the fisheries committee

4 Consultation (fill in 4a to 4c for installations and waste operations and 4d for installations only), continued

4d Is the installation on a site for which

4d1 a nuclear site licence is needed under section 1 of the Nuclear Installations Act 1965?

No ☐

Yes ☐

4d2 a policy document for preventing major accidents is needed under regulation 5 of the Control of Major Accident Hazards Regulations 1999, or a safety report is needed under regulation 7 of those regulations?

No ☐

Yes ☐

5 Supporting information

5a Provide a plan or plans for the site (see the guidance notes on part C2 for what needs to be marked on the plan)

Document plan reference or references

5b Do any of the variations you plan to make need extra land to be included in the permit?

No ☐

Yes ☐ Please provide a site report for the extra land.

Document report reference or references

5c Provide a non-technical summary of your application

Document reference

5d Adding an installation

If you are applying to add an installation, tick the box to confirm that you have sent in a baseline report and provide a reference.

☐

Document reference of the report

6 Environmental risk assessment (if you need one – see the guidance notes on part C2)

Provide an assessment of the risks each of your proposed activities cause to the environment. The risk assessment must use H1 or an equal method.

Document reference of the assessment

7 How to contact us

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How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

For Natural Resources Wales use only

Date received (DD/MM/YYYY)

Our reference number

Payment received?

No ☐

Yes ☐

Amount received

£

Plain English Campaign's Crystal Mark does not apply to appendix 1.**Appendix 1 – Low impact installation checklist**

Installation reference				
Condition	Response			Do you meet this?
A – Management techniques	Provide references to show how your application meets A.			Yes ☐
	References			No ☐
B – Aqueous waste	Effluent created		m ³ /day	Yes ☐ No ☐
C – Abatement systems	Provide references to show how your application meets C.			Yes ☐
	References			No ☐
D – Groundwater	Do you plan to release any hazardous substances or non-hazardous pollutants into the ground?		Yes ☐ No ☐	Yes ☐ No ☐
E – Producing waste	Hazardous waste		Tonnes per year	Yes ☐
	Non-hazardous waste		Tonnes per year	No ☐
F – Using energy	Peak energy consumption		MW	Yes ☐ No ☐
G – Preventing accidents	Do you have appropriate measures to prevent spills and major releases of liquids? (See 'How to comply'.)		Yes ☐ No ☐	Yes ☐ No ☐
	Provide references to show how your application meets G.			
	References			
H – Noise	Provide references to show how your application meets H.			Yes ☐
	References			No ☐
I – Emissions of polluting substances	Provide references to show how your application meets I.			Yes ☐
	References			No ☐
J – Odours	Provide references to show how your application meets J.			Yes ☐
	References			No ☐
K – History of keeping to the regulations	Say here whether you have been involved in any enforcement action as described in Compliance History Appendix 1 explanatory notes.		Yes ☐ No ☐	

Application for an environmental permit

Part C3 – Variation to a bespoke installation permit



Fill in this part of the form, together with part A, part C2 and part F1, if you are applying to vary (change) the conditions or any other part of the permit. Please check that this is the latest version of the form available from our website.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or making changes to existing ones).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please read through this form and the guidance notes that came with it. Please write clearly in the answer spaces.

It will take less than three hours to fill in this part of the application form.

Contents

- 1 What activities are you applying to vary?
- 2 Emissions to air, water and land
- 3 Operating techniques
- 4 Monitoring
- 5 Environmental impact assessment
- 6 Resource efficiency and climate change
- 7 How to contact us

Appendix 1 – Specific questions for the combustion sector

Appendix 2 – Specific questions for the chemical sector

Appendix 3 – Specific questions for the intensive farming sector

Appendix 4 – Specific questions for the clinical waste sector

Appendix 5 – Specific questions for the hazardous and non-hazardous waste recovery and disposal sector

Appendix 6 – Specific questions for the waste incineration sector

Appendix 7 – Specific questions for the landfill sector

1 What activities are you applying to vary?

Fill in Table 1a below with details of all the activities listed in schedule 1 of the Environmental Permitting Regulations (EPR) and all directly associated activities (DAAs) (in separate rows), that you propose to carry out at the installation.

Fill in a separate table for each installation you are applying to vary. Use a separate sheet if you have a long list and send it to us with your application form. Tell us below the reference you have given the document.

Document reference

Table 1a – Types of activities

Schedule 1 listed activities						
Installation name	Schedule 1 references (See note 1)	Description of the Activity (See note 2)	Activity capacity (See note 3)	Annex IIA or IIB (disposal and recovery) codes and descriptions	Hazardous waste treatment capacity (if this applies) (See note 3)	Non-hazardous waste treatment capacity (if this applies) (See note 3)
Add extra rows if you need them. If you do not have enough room, go to the line below or send a separate document and give us the document reference here	Put your main activity first			For installations that take waste only	For installations that take waste only	For installations that take waste only
Directly associated activities (See note 4)						
Name of DAA		Description of the DAA (please identify the schedule 1 activity it serves)				
Add extra rows if you need them						
For installations that take waste		Total storage capacity (See note 5 below)				
		Annual throughput (tonnes each year)				

1 What activities are you applying to vary?, continued

Notes

- 1 Quote the section number, part A1 or A2 or B, then paragraph and sub paragraph number as shown in part 2 of schedule 1 to the regulations.
- 2 Use the description from schedule 1 of the regulations. Include any extra detail that you think would help to accurately describe what you want to do.
- 3 By 'capacity', we mean:
 - the total incineration capacity (tonnes every hour) for waste incinerators;
 - the total landfill capacity (cubic metres) for landfills;
 - the total treatment capacity (tonnes each day) for waste treatment;
 - the total storage capacity (tonnes) for waste storage operations;
 - the processing and production capacity for manufacturing operations; or
 - the thermal input capacity for combustion activities.
- 4 Fill this in as a separate line and give an accurate description of any other activities associated with your schedule 1 activities. You cannot have DAAs as part of a mobile plant application.
- 5 By 'total storage capacity', we mean the maximum amount of waste, in tonnes, you store on the site at any one time.

Types of waste accepted

For those installations that take waste, for each line in Table 1a (including DAAs), fill in a separate document to list those wastes you will accept on to the site for that activity. Give the List of Wastes catalogue code and description. If you need to exclude waste from your activity or facility by restricting the description, quantity, physical nature, hazardous properties, composition or characteristic of the waste, include these in the document. Send it to us with your application form.

Please provide the reference for each document

You can use Table 1b as a template.

If you want to accept any wastes with a code ending in 99, you must give us more information and a full description.

Document reference for this extra information

Table 1b – Template example – types of waste accepted and restrictions

Waste code	Description of waste
Example 02 01 08*	Example Agrochemical waste containing dangerous substances
06 01 02*	Hydrochloric acid

2 Emissions to air, water and land

Fill in Table 2 below with details of the emissions that result from the operating techniques at each of your installations.

Fill in one table for each installation.

Table 2 – Emissions

Installation name				
Point source emissions to air				
Emission point reference and location	Source	Parameter	Quantity	Unit

2 Emissions to air, water and land, continued

Table 2 – Emissions, continued

Point source emissions to water (other than sewers)				
Emission point reference and location	Source	Parameter	Quantity	Unit
Point source emissions to sewers, effluent treatment plants or other transfers off site				
Emission point reference and location	Source	Parameter	Quantity	Unit
Point source emissions to land				
Emission point reference and location	Source	Parameter	Quantity	Unit

Supporting information

3 Operating techniques

3a Technical standards

Fill in Table 3 for each activity, at the installation you have referred to in Table 1a above. List the relevant technical guidance note (TGN) or notes you are planning to use. If you are planning to use the standards set out in the TGN, there is no need to justify using them.

You must justify your decisions in a separate document if:

- there is no technical standard;
- the technical guidance provides a choice of standards; or
- you plan to use another standard.

This justification could include a reference to the Environmental Risk Assessment provided in section 7 of part C2 (general bespoke permit) of the application form.

The documents you have referenced in Table 3 should summarise the main measures you use to control the main issues identified in the H1 assessment or technical guidance. For each of the activities listed in Table 3, describe the type of operation and the options you have chosen for controlling emissions from your process.

3 Operating techniques, continued

Table 3 – Technical standards

Fill in a separate table for each activity at the installation.

Installation name		
Description of the schedule 1 activity or directly associated activity	Relevant technical guidance note or Best available techniques as described in BAT conclusions under IED (see footnote below. You will need to refer to 'How to comply' for all permits)	Document reference (if appropriate)
	'How to comply'	

*Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)

If appropriate, use block diagrams to help describe the operation and process. Provide the references for the description.

Document reference for the diagram or description

3b General requirements

Fill in a separate Table 4 for each installation.

Table 4 – General requirements

Name of the installation	
If the TGN or H1 assessment shows that emissions of substances not controlled by emission limits are an important issue, send us your plan for managing them	Document reference or references
Where the TGN or H1 assessment shows that odours are an important issue, send us your odour management plan	Document reference or references
If the TGN or H1 assessment shows that noise or vibration are important issues, send us your noise or vibration management plan (or both)	Document reference or references

3c Types and amounts of raw materials

Fill in Table 5 for all schedule 1 activities. Fill in a separate table for each installation.

Table 5 – Types and amounts of raw materials

Name of the installation				
Capacity (See note 1 below)				
Schedule 1 activity	Description of raw material and composition	Maximum amount (tonnes) (See note 2 below)	Annual throughput (tonnes each year)	Description of the use of the raw material including any main hazards (include safety data sheets)

Notes

1 By 'capacity', we mean the total storage capacity (tonnes) or total treatment capacity (tonnes each day).

2 By 'maximum amount', we mean the maximum amount of raw materials on the site at any one time.

3 Operating techniques, continued

Use a separate sheet if you have a long list of raw materials, and send it to us with your application form. Please also provide the reference for this extra sheet.

Document reference for the sheet

3d Information for specific sectors

For some of the sectors, we need more information to be able to set appropriate conditions in the permit. This is as well as the information you may provide in sections 5, 6 and 7. For those activities listed below, you must answer the questions in the related document.

Table 6 – Questions for specific sectors

Sector	Appendix
Combustion	See the questions in appendix 1
Chemicals	See the questions in appendix 2
Intensive farming	See the questions in appendix 3
Clinical waste	See the questions in appendix 4
Hazardous and non-hazardous waste recovery and disposal	See the questions in appendix 5
Incinerating waste	See the questions in appendix 6
Landfill	See the questions in appendix 7

General information

4 Monitoring

4a Describe the measures you use for monitoring emissions by referring to each emission point in Table 2 above

You should also describe any environmental monitoring. Tell us:

- how often you use these measures;
- the methods you use; and
- the procedures you follow to assess the measures.

Document reference

4b Point source emissions to air only

Provide an assessment of the sampling locations used to measure point source emissions to air. The assessment must use M1.

Document reference of the assessment

5 Environmental impact assessment

5a Have your proposals been the subject of an environmental impact assessment under Council Directive 85/337/EEC of 27 June 1985 [Environmental Impact Assessment]?

No ☐

Yes ☐ Please provide a copy of the environmental statement and, if the procedure has been completed:

- a copy of the planning permission; and
- the committee report and decision on the EIA.

Document reference for the copy

6 Resource efficiency and climate change

If the site is a landfill, you only need to fill in this section if the application includes landfill gas engines.

6a Describe the basic measures for improving how energy efficient your activities are

Document reference for the description

6b Provide a breakdown of any changes to the energy your activities use up and create

Document reference for the description

6c Have you entered into, or will you enter into, a climate change levy agreement?

No ☐ Describe the specific measures you use for improving your energy efficiency.

Document reference for the description

6 Resource efficiency and climate change, continued

Yes ☐ Please give the date you entered (or the date you expect to enter) into the agreement. Please also provide documents that prove you are taking part in the agreement (DD/MM/YYYY)

Document reference of proof

6d Explain and justify the raw and other materials, other substances and water that you will use

Document reference of the justification

6e Describe how you avoid producing waste in line with Council Directive 2006/12/EC on waste

If you produce waste, describe how you recover it. If it is technically and financially impossible to recover the waste, describe how you dispose of it while avoiding or reducing any effect it has on the environment.

Document reference of the description

7 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 0300 065 3000 (Monday to Friday, 8am to 6pm)

Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

For Natural Resources Wales use only

Date received (DD/MM/YYYY)

Our reference number

Payment received?

No ☐

Yes ☐

Amount received

£ _____

Plain English Campaign's Crystal Mark does not apply to appendices 1 to 7.**Appendix 1 – Specific questions for the combustion sector****1 Identify the type of fuel burned in your combustion units (including when your units are started up, shut down and run as normal). If your units are dual fuelled (that is, use two types of fuel), list both the fuels you use**

Fill in a separate table for each installation.

Installation reference			
Type of fuel	When run as normal	When started up	When shut down
Coal			
Gas oil			
Heavy fuel oil			
Natural gas			
WID waste			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Other			

Notes

1 Not covered by Industrial Emissions Directive 2010/75/EU.

2 'Biomass' is referred to in www.opsi.gov.uk/si/si2002/20020914.htm.

Give extra information if it helps to explain the fuel you use.

Document reference

2 Give the composition range of any fuels you are currently allowed to burn in your combustion plant

Fill in a separate table for each installation.

Fuel use and analysis					
Installation reference					
Parameter	Unit	Fuel 1	Fuel 2	Fuel 3	Fuel 4
Maximum percentage of gross thermal input	%				
Moisture	%				
Ash	% wt/wt dry				
Sulphur	% wt/wt dry				
Chlorine	% wt/wt dry				
Arsenic	% wt/wt dry				
Cadmium	% wt/wt dry				
Carbon	% wt/wt dry				
Chromium	% wt/wt dry				
Copper	% wt/wt dry				
Hydrogen	% wt/wt dry				
Lead	% wt/wt dry				
Mercury	% wt/wt dry				
Nickel	% wt/wt dry				
Nitrogen	% wt/wt dry				
Oxygen	% wt/wt dry				
Vanadium	mg/kg dry				
Zinc	mg/kg dry				
Net calorific value	MJ/kg				

Appendix 1 – Specific questions for the combustion sector, continued**3 If NO_x factors are necessary for reporting purposes (that is, if you do not need to monitor emissions), please provide the factors associated with burning the relevant fuels**

Fill in a separate table for each installation.

Installation reference	
Fuel	NO _x factor (kg t ⁻¹)
Fuel 1	
Fuel 2	
Fuel 3	
Fuel 4	

Note: kg t⁻¹ means kilograms of nitrogen oxides released for each tonne of fuel burned.**4 Will your combustion plant be subject to Chapter III of the Industrial Emissions Directive 2010/75/EU? (see Government Guidance)**No ☐ Now fill in part FYes ☐**5 Is your plant**an existing plant (a plant licensed before 1 July 1987)? ☐a new plant (a plant licensed on or after 1 July 1987 but before 27 November 2002, or a plant for which an application was made before 27 November 2002 and which was put into operation before 27 November 2003)? ☐

or

a new-new plant (a plant for which an application was made on or after 27 November 2002)? ☐**6 If you run more than one type of plant or a number of the same type of plant on your installation, please list them in the table below**

Fill in a separate table for each installation.

Installation reference	
Type of plant	Number within installation
Existing	
New	
New-new	
Gas turbine (group A)	
Gas turbine (group B)	

7 If you run an existing plant, have you submitted a declaration for the ‘limited life derogation’ set out in Article 33 of Chapter III of the Industrial Emissions Directive?No ☐ Now go to section 9Yes ☐**8 Have you subsequently withdrawn your declaration?**No ☐Yes ☐**9 List the existing large combustion plants (LCPs) which have annual mass allowances under the National Emission Reduction Plan (NERP), and those with emission limit values (ELVs) under the LCPD**

Installation reference	
LCPs under NERP	LCPs with ELVs

Appendix 1 – Specific questions for the combustion sector, continued

10 Do you meet the monitoring requirements of Chapter III of the Industrial Emissions Directive?

Yes ☐

Document reference number

Appendix 2 – Specific questions for the chemical sector

1 Please provide a technical description of your activities

The description should be enough to allow us to understand:

- the process;
- the main plant and equipment used for each process;
- all reactions, including significant side reactions (that is, the chemistry of the process);
- the material mass flows (including by products and side streams) and the temperatures and pressures in major vessels;
- the all emission control systems (both hardware and management systems), for situations which could involve releasing a significant amount of emissions – particularly the main reactions and how they are controlled;
- a comparison of the indicative BATs and benchmark emission levels standards in Technical Guidance Notes (TGNs) EPR 4.01, EPR 4.02 and EPR 4.03 and chemical sector BREFs.

Document reference

2 If you are applying for a multi-purpose plant, do you have a multi-product protocol in place to control the changes?

No ☐

Yes ☐ Provide a copy of your protocol to accompany this application

Document reference

3 Does Chapter V of the Industrial Emissions Directive (IED) apply to your activities?

No ☐

Yes ☐ Fill in the following

3a List the activities which are controlled under the IED

Installation reference	
Activities	

3b Describe how the list of activities in question 3a above meets the requirements of the IED

Document reference

Appendix 3 – Specific questions for the intensive farming sector

1 For each type of livestock, tell us the number of animal places you are applying for

Installation reference	
Type of livestock	Number of places

2 Is manure or slurry exported from the site?

No ☐

Yes ☐

3 Is manure or slurry spread on the site?

No ☐

Yes ☐

Appendix 4 – Specific questions for the clinical waste sector

If you are applying for an activity covered by the Waste Incineration Directive and wish to accept clinical waste you should fill in questions 1, 2 and 3 of this appendix.

Note: If your procedures are fully in line with the standards set out in EPR5.07 then you should tick the ‘yes’ box and provide the procedure reference. There is no need for you to supply a copy of the procedure.

1 Are pre-acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.2 of EPR 5.07 and which are used to assess a waste enquiry before it is accepted at the installation?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

2 Are waste acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.2 of EPR 5.07, and which are used to cover issues such as loads arriving and being inspected, sampling waste, rejecting waste, and keeping records to track waste?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

3 Are waste storage, handling and dispatch procedures, and infrastructure in place that are fully in line with the appropriate measures set out in section 3.2 of EPR 5.07?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

4 Are monitoring procedures in place that are fully in line with the appropriate measures set out in section 3.3 of EPR 5.07?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

5 Are you proposing to either

- accept an additional waste not included in Table 2.1 of section 2.1 of EPR 5.07, or
- apply a permitted activity to a waste other than that identified for that waste in Table 2.1?

No ☐

Yes ☐ Provide justification

Document reference

6 Please provide a summary description of the treatment activities undertaken on the installation. This should cover the general principles set out in section 2.1.4 of EPR 5.07

Document reference

7 Please provide layout plans detailing the location of each treatment plant and main plant items and process flow diagrams for the treatment plant

Document reference

Appendix 5 – Specific questions for the hazardous and non-hazardous waste recovery and disposal sector

Note: If your procedures are fully in line with the standards set out in SGN 5.06 then you should tick the 'yes' box and provide the procedure reference. There is no need for you to supply a copy of the procedure.

1 Are pre-acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.1.1 of SGN 5.06, and which are used to assess a waste enquiry before it is accepted at the installation?

No ☐ Provide justification for departure from SGN 5.06 and submit a copy of the procedures

Document reference _____

Yes ☐ Document reference _____

2 Are waste acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.1.2 of SGN 5.06, and which are used to cover issues such as loads arriving and being inspected, sampling waste, rejecting waste, and keeping records to track waste?

No ☐ Provide justification for departure from SGN 5.06 and submit a copy of the procedures

Document reference _____

Yes ☐ Document reference _____

3 Are waste storage procedures and infrastructure in place that are fully in line with the appropriate measures set out in section 2.1.3 of SGN 5.06?

No ☐ Provide justification for departure from SGN 5.06 and submit a copy of the procedures

Document reference _____

Yes ☐ Document reference _____

4 Provide a layout plan giving details of where the installation is based, the infrastructure in place (including areas and structures for separately storing types of waste which may be dangerous to store together) and capacity of waste storage areas and structures

Document reference _____

5 Provide a summary of the treatment activities carried out on the installation. This should cover the general principles set out in section 2.1.4 of SGN 5.06 and the specific principles set out in sections 2.1.5 to 2.1.15 as appropriate of SGN 5.06

Document reference _____

6 Provide layout plans giving details of where each treatment plant is based, the main items at each plant, and process flow diagrams for the treatment plant

Document reference or references _____

Appendix 6 – Specific questions for the waste incineration sector

If you are proposing to accept clinical waste please also fill in questions 1, 2 and 3 of appendix 4 above.

1a Do you run incineration plants as defined by Chapter IV of the Industrial Emissions Directive (IED)?

No ☐ You do not need to answer any other questions in this appendix

Yes ☐ WID applies

1b Are you subject to IED as an incinerator or co-incinerator?

As an incinerator ☐

As a co-incinerator ☐

2 Do any of the installations contain more than one incineration line?

No ☐ Now go to section 4

Yes ☐

3 How many incineration lines are there within each installation?

Fill in a separate table for each installation

Installation reference	
Number of incineration lines within the installation	
Reference identifiers for each line	

You must provide the information we ask for in questions 4, 5 and 6 below in separate documents. The information must at least include all the details set out in section 2 ('Key Issues') of TGN S5.01 (under the sub heading 'European legislation and your application for an EP Permit').

You must answer questions 7 to 13 on the form below.

4 Describe how the plant is designed, equipped and will be run to make sure it meets the requirements of IED, taking into account the categories of waste which will be incinerated

Document reference

5 Describe how the heat created during the incineration and co-incineration process is recovered as far as possible (for example, through combined heat and power, creating process steam or district heating)

Document reference

6 Describe how you will limit the amount and harmful effects of residues and describe how they will be recycled where this is appropriate

Document reference

For each line identified in question 3, answer questions 7 to 13 below

Question 3 identifier, if necessary

7 Do you want to take advantage of the Article 45 (1)(f) allowance (see below) if the particulates, CO or TOC continuous emission monitors (CEM) fail?

No ☐

Yes ☐ This allows 'abnormal operation' of the incineration plant under certain circumstances when the CEM for releases to air have failed. Annex VI, Part 3(2) sets maximum half hourly average release levels for particulates (150mg/m³), CO (normal ELV) and TOC (normal ELV) during abnormal operation.

Describe the other system you use to show you keep to the requirements of Article 13(4) (for example, using another CEM, providing a portable CEM to insert if the main CEM fails, and so on).

Appendix 6 – Specific questions for the waste incineration sector, continued

8 Do you want to replace continuous HF emission monitoring with periodic hydrogen fluoride (HF) emission monitoring by relying on continuous hydrogen chloride (HCl) monitoring as allowed by IED Annex VI, Part 6 (2.3)?

Under this you do not have to continuously monitor emissions for hydrogen fluoride if you control hydrogen chloride and keep it to a level below the HCl ELVs.

No ☐

Yes ☐ Please give reasons for doing this

9 Do you want to replace continuous water vapour monitoring with pre-analysis drying of exhaust gas samples, as allowed by IED Annex VI, Part 6 (2.4)?

Under this you do not have to continuously monitor the amount of water vapour in the air released if the sampled exhaust gas is dried before the emissions are analysed.

No ☐

Yes ☐ Please give your reasons for doing this

10 Do you want to replace continuous hydrogen chloride (HCl) emission monitoring with periodic HCl emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for hydrogen chloride if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No ☐

Yes ☐ Please give your reasons for doing this

Appendix 6 – Specific questions for the waste incineration sector, continued

11 Do you want to replace continuous HF emission monitoring with periodic HF emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for hydrogen fluoride if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No ☐

Yes ☐ Please give your reasons for doing this

12 Do you want to replace continuous SO₂ emission monitoring with periodic sulphur dioxide (SO₂) emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for sulphur dioxide if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No ☐

Yes ☐ Please give your reasons for doing this

13 If your plant uses fluidised bed technology, do you want to apply for a derogation of the CO WID ELV to a maximum of 100 mg/m³ as an hourly average, as allowed by IED Annex VI, Part 3?

No ☐

Does not apply ☐

Yes ☐ Please give your reasons for doing this

Appendix 7 – Specific questions for the landfill sector

1 Provide your Environmental Setting and Installation Design (ESID) report

Document reference

2 Provide your hydrogeological risk assessment (HRA) for the site

Document reference

3 Provide your stability risk assessment (SRA) for the site

Document reference

4 Provide your landfill gas risk assessment (LFGRA) for the site

Document reference

We have developed templates for these four reports which can be found within H1 – Landfill Annex.

5 Provide your proposed plan for closing the site and your procedures for looking after the site once it has closed

Document reference

It will take less than two hours to fill in this part of the application form.

- 1 Working out charges
- 2 Opra
- 3 Payment
- 4 The Data Protection Act 1998
- 5 Confidentiality and national security
- 6 Declaration
- 7 Application checklist
- 8 How to contact us
- 9 Where to send your application

Table 1 – Working out charges

Type of application				
	Summary of charges			
Tier 2 facilities (including Part A(2) and Part B; see guidance notes on part F1)	Charge identifier	Number of facilities	Charge for each facility (£)	Charges due (£)
Tier 3 facilities				
Total Opra charging score for installations		× charge multiplier		=
Total Opra charging score for waste operations		× charge multiplier		=
Total Opra charging score for mining waste facilities		× charge multiplier		=
Other charges				
Total charges due				

2 Opra (does not apply to standard facilities, any other tier 2 permit applications (e.g. groundwater land spreading activities), or water-discharge or groundwater point source discharge activities)

If you are submitting a bespoke application, you must include a completed electronic copy in Excel of the current Opra spreadsheet.

For variations, full and partial surrenders you will need to submit a copy of your current Opra profile based on your existing profile, not any new profile following the variation or surrender.

For transfers you will need to submit a revised Opra profile to include your own operator performance. Note: this will not change the set transfer fee.

Tick this box to confirm that you have included the OPRA spreadsheet

☐

3 Payment

Tick below to show how you have paid.

Cheque

☐

Postal order

☐

Cash

☐ Tick below to confirm you are enclosing cash with the application

Credit or debit card

☐

Electronic transfer (for example, BACS)

☐ Remittance number
☐ Date paid (DD/MM/YYYY)

How to pay

Paying by cheque, postal order or cash

Cheque details

Cheque made payable to

Cheque number

Amount

£

You should make cheques or postal orders payable to Natural Resources Wales and make sure they have 'A/c Payee' written across them if it is not already printed on.

Please write the name of your company and application reference number on the back of your cheque or postal order.

We will not accept cheques with a future date on them.

We do not recommend sending cash through the post. If you cannot avoid this, please use a recorded delivery postal service and enclose your application reference details. Please tick the box below to confirm you are enclosing cash.

I have enclosed cash with my application

☐

Paying by credit or debit card

If you are paying by credit or debit card, either we can call you or you can fill in the separate form CC1 and enclose it with the application. We will destroy your card details once we have processed your payment. We can accept payments by Visa, MasterCard or Maestro card only.

Please call me to arrange payment by debit or debit card

☐

I have enclosed form CC1 with my application

☐

Paying by electronic transfer BACS reference

Applying for a permit in Wales?

If you choose to pay by electronic transfer and you are applying for a permit in the EA Wales region, you will need to use the following information to make your payment.

Company name: Natural Resources Wales

Company address: Income Dept., Cambria House, 29 Newport Road, Cardiff CF24 0TP

Bank: Citigroup Centre

Canada Square, London, E14 5LB

Sort code: 08-33-00

Account number: 12800578

Payment reference number: PSCAPPXXXXYYY

You need to create your own reference number. It should begin with PSCAPP (to reflect that the application is for a permitted activity) and it should include the first five letters of the company name (replacing the X's in the above reference number) and a unique numerical identifier (replacing the Y's in the above reference number). The reference number that you supply will appear on our bank statements.

3 Payment, continued

You should also email your payment details and a reference number to online@naturalresourceswales.gov.uk / arlein@cyfoethnaturiolcymru.gov.uk or fax it to 02920 466 404.

If you are making your payment from outside the United Kingdom, it must be in sterling. Our IBAN number is GB48 CITI0833 0012 8005 78 and our SWIFTBIC number is CITI GB2LXXX.

If you do not quote your reference number, there may be a delay in processing your payment and application.

Now read section 4 below.

4 The Data Protection Act 1998

We, the Natural Resources Body for Wales (hereafter “Natural Resources Wales”), will process the information you provide so that we can:

- deal with your application;
- make sure you keep to the conditions of the licence, permit or registration;
- process renewals; and
- keep the public registers up to date.

We may also process or release the information to:

- offer you documents or services relating to environmental matters;
- consult the public, public organisations and other organisations (for example, the Health and Safety Executive, local authorities, the emergency services, the Department for Environment, Food and Rural Affairs) on environmental issues;
- carry out research and development work on environmental issues;
- provide information from the public register to anyone who asks;
- prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken, and take any action that is needed;
- assess whether customers are satisfied with our service, and to improve our service; and
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows). We may pass the information on to our agents or representatives to do these things for us.

Now read section 5 below.

5 Confidentiality and national security

We will normally put all the information in your application on a public register of environmental information. However, we may not include certain information in the public register if this is in the interests of national security, or because the information is confidential.

You can ask for information to be made confidential by enclosing a letter with your application giving your reasons. If we agree with your request, we will tell you and not include the information in the public register. If we do not agree with your request, we will let you know how to appeal against our decision, or you can withdraw your application.

Only tick the box below if you wish to claim confidentiality for your application

Please treat the information in my application as confidential ☐

National security

You can tell the Welsh ministers that you believe including information on a public register would not be in the interests of national security. You must enclose a letter with your application telling us that you have told the Welsh ministers and you must still include the information in your application. We will not include the information in the public register unless the Welsh ministers decides that it should be included.

You can find guidance on national security in ‘Core Environmental Permitting Guidance’ published by Defra and available via the Environment Agency website <http://www.environment-agency.gov.uk>.

You cannot apply for national security via this application.

Now go to section 6

6 Declaration

If you knowingly or carelessly make a statement that is false or misleading to help you get an environmental permit (for yourself or anyone else), you may be committing an offence under the Environmental Permitting (England and Wales) Regulations 2013.

A relevant person should make the declaration (see guidance notes on part F1). An agent acting on behalf of an applicant is NOT a relevant person.

Each individual (or individual trustee) who is applying for their name to appear on the permit must complete this declaration. You will have to print a separate copy of this page for each additional individual to complete.

If you are transferring all or part of your permit, both you and the person receiving the permit must make the declaration.

6 Declaration, continued

Note: If you are unable to trace one or more of the current permit holders please see below under the transfers declaration.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

If you deliberately make a statement that is false or misleading in order to get approval you may be prosecuted.

I confirm that my standard facility will fully meet the rules that I have applied for (this only applies if the application includes standard facilities)

☐

Tick this box to confirm that you understand and agree with the declaration above, then fill in the details below

☐

Tick this box to confirm that you have no issue with us using information from any ecological survey that you have supplied with your application (for further information please see the guidance notes on part F1)

☐

Name

Title (Mr, Mrs, Miss and so on)

First name

Last name

on behalf of (if relevant; for example, a company or organisation and so on)

Position (if relevant; for example, in a company or organisation and so on)

Today's date (DD/MM/YYYY)

For transfers only – declaration for person receiving the permit

A relevant person should make the declaration (see guidance notes on part F1).

I declare that the information in this application to transfer an environmental permit to me is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

Note: If you cannot trace a person or persons holding the permit you may be able to transfer the permit without their declaration as above. Please contact us to discuss this and supply evidence in your application to confirm you are unable to trace one or all of the permit holders.

If you deliberately make a statement that is false or misleading in order to get approval you may be prosecuted.

Tick this box to confirm that you understand and agree with the declaration above

☐

Name

Title (Mr, Mrs, Miss and so on)

First name

Last name

on behalf of (if relevant; for example, a company or organisation and so on)

Position (if relevant; for example, in a company or organisation and so on)

Today's date (DD/MM/YYYY)

Now go to section 7

☐ Tick the box to say you have included the fee

Document reference

[illegible]

8 How to contact us

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

9 Where to send your application (for how many copies to send see the guidance note on part F1)

Please send your filled in application form to:

Permit Receipt Centre (Cardiff)
Natural Resources Wales
29 Newport Road
Cambria House
Cardiff
CF24 0TP

Canolfan Derbyn Tryddedau
Ty Cambria
29 Heol Casnewydd
Caerdydd
CF24 0TP

Do you want all information to be sent to you by email?

Please tick this box if you wish to have all communication about this application sent via email (we will use the details provided in Part A) ☐

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please ☐

No thank you ☐



For Natural Resources Wales use only

Date received (DD/MM/YYYY)

Our reference number

Payment received?

No ☐

Yes ☐

Amount received

£