

Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Bryn Posteg Landfill Site

Sundorne Products (Llanidloes) Limited

Environmental Permit Variation Application

Non-Technical Summary

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BRYN POSTEG LANDFILL SITE ENVIRONMENTAL PERMIT VARIATION APPLICATION

NON-TECHNICAL SUMMARY

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1.0 INTRODUCTION

1.1 Variation Application Context

1.1.1 Bryn Posteg Landfill Site (the 'Site') in Llanidloes, Powys is operated by Sundorne Products (Llanidloes) Limited, trading as Potters Waste Management ('the Operator') under Environmental Permit ref. EPR/BU7766IC/V009.

1.1.2 Caulmert Limited have been appointed by the Operator to prepare a normal variation application to vary the existing landfill permit (EPR/BU7766IC) for the following reasons:

- To provide information on a new surface water treatment process at the Site, in accordance with Improvement Condition (IC) 11 of the Permit;
- To formalise an increase in the Chloride compliance limit for groundwater monitoring point G1/W1, from 69mg/l to 500mg/l (as agreed with Natural Resources Wales);
- To add one waste code 20 03 01 to the list of waste codes in Table S2.4 of the Permit for physico-chemical treatment (Section 5.4 Part A (1)(a)(ii));
- To add two waste codes 19 08 05 and 19 08 12 to Table S2.3 of the Permit for leachate storage and treatment (Section 5.4 Part A(1)(a)(i) - specifically restricting the use of these wastes to reseedling of leachate in the existing leachate treatment plant on-site;
- To add waste code 19 05 99 to Table S2.3 of the Permit for leachate storage and treatment (Section 5.4 Part A(1)(a)(i) - specifically for composting liquor waste generated from the existing composting activity on-site, to be sent into the leachate treatment plant on-site; and,
- To add two waste codes 02 01 03 and 02 01 06 to Table S1.1 of the Permit for the incineration of straw wastes in the existing biomass plant on-site (Section 5.1 Part B (a)(v)).

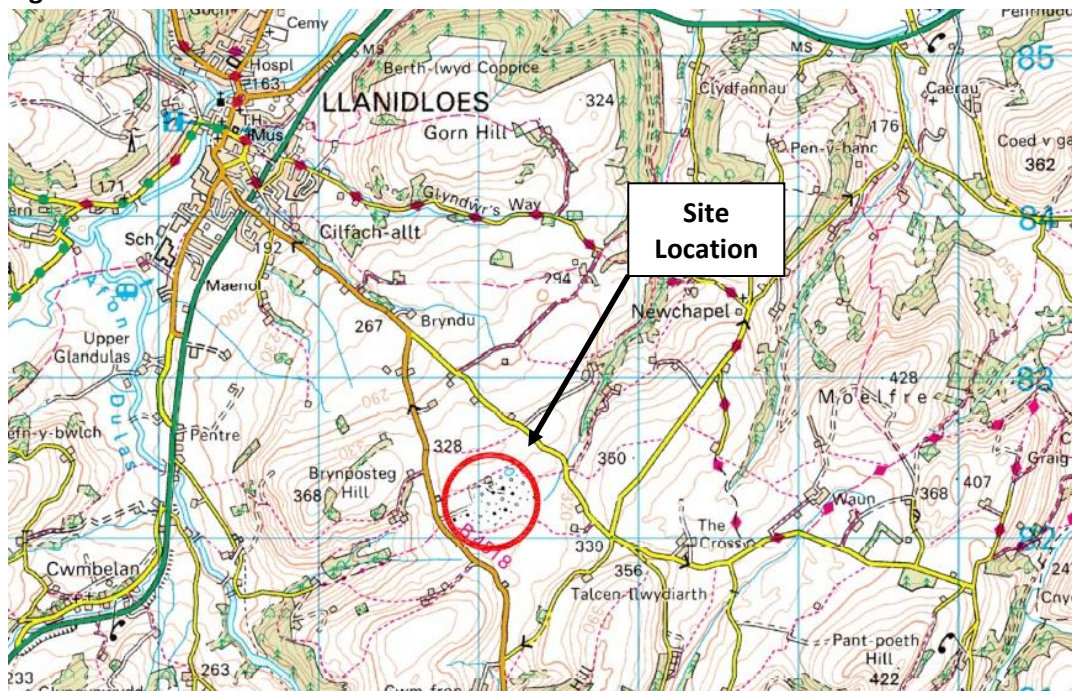
1.1.3 This document is the Non-Technical Summary of these proposed changes, as part of the bespoke environmental permit variation application for the Site.

2.0 SITE LOCATION

2.1 Bryn Posteg Landfill Site

- 2.1.1 Bryn Posteg Landfill Site is located approximately 2.8 km south east of Llanidloes, Powys, at NGR SN970822. The Site is operated by Sundorne Products (trading as Potters Waste Management). The Site is accessed via the B4518, the Llanidloes to Tylwch Road. The Site location is indicated within the red circle in Figure 1 below.
- 2.1.2 The Site is situated amongst predominantly agricultural land. It is bound to the west by the B4518 road. Few residential properties are situated within close-proximity to the Site.

Figure 1 - Location of Site



3.0 SITE HISTORY

3.1 Landfill Site History

- 3.1.1 Bryn Posteg Landfill Site is located at the site of a former lead mine. The landfill site has been developed over a number of years with the first waste being accepted into Phase 1 in 1982. The landfill site is currently divided into 9 Phases which, in turn, are divided into sub-cells. The current tipping operations are continuing in Phase 9c and 9d. The landfill site phases are: 1, 2, 3A, 3B, 3C, 4A, 4B, 5, 6, 7, 8, 9A, 9B, 9C, 9D, 9E. Waste is currently accepted in Cell 9D and Cell 9E; all other cells are complete. Cells 1 to 9B are all capped.
- 3.1.2 Phases 1-5 were operated by Montgomeryshire, later Powys County Council, between 1982 and 1997. Evans Logistics Ltd operated Phases 6 – 8. Potters acquired the site in 2005. Phases 9A-9E have been developed in the southern part of the site. Between 2008 and 2017 additional tipping was also ‘piggy-backing’ onto the existing site (Phases 3A, 3B, 4A and 4B).
- 3.1.3 As a result of significant over-tipping, predominantly over the central part of the site (now mostly complete and capped) a revised final restoration profile has been developed to account for the over-tipping and to enable the satisfactory completion of the site.

3.2 Surface Water Management History

- 3.2.1 The surface water management system at Bryn Posteg Landfill Site is divided into two different sub-catchment areas, the eastern and western catchments. Surface water in the eastern catchment is directed to and discharged at surface water point P1 (into the Nant y Bradnant stream) on the eastern boundary. Surface water from the western catchment is collected and discharged at surface water point P2 (into the Afon Dulas stream).
- 3.2.2 Historically, there were no positive means of treating surface water runoff from either catchment. Any water treatment was undertaken passively, achieved by a combination of flow attenuation provided by slope angle and vegetation, and by accumulation that affords some solids settlement. There was also a degree of ground infiltration should there be a favourable hydraulic gradient between surface flow and subterranean groundwater pipework.
- 3.2.3 There are three surface water storage lagoons located on the eastern edge of the eastern catchment. The two primary lagoons, Lagoon 1 and Lagoon 2, were established as outfall points from an earlier (now decommissioned) surface water treatment facility. These lagoons allowed surface water to settle post-treatment, promoting the settlement of suspended solids by gravity. A surface water ‘supernatant’ with a lower suspended solids content was allowed to outfall to the Nant y Bradnant headwater. Lagoon 3 was created sometime after the first two lagoons, formed in an excavation created by a borrow pit.

4.0 PROPOSED CHANGES

4.1 Surface Water Treatment

- 4.1.1 This normal permit variation is to upgrade the current surface water treatment process at the Bryn Posteg Landfill Site to chemically treat surface water captured in Lagoon 3 of the site to reduce suspended solids concentrations in the surface water, to within permit compliance limits prior to discharge off-site via discharge point P1.
- 4.1.2 The Environmental Permit for the Site (ref. BU7766IC/V009) relates to the installation, which is Bryn Posteg Landfill along with its related activities, which includes surface water management. The permit controls the landfill as a 'stationary technical unit' and 'directly associated activities' serving the landfill.
- 4.1.3 In response to Improvement Condition 11 of the Environmental Permit, Natural Resources Wales (NRW) have requested that the Operator submit a normal permit variation to cover the treatment aspects of the surface water management scheme at the site and its ultimate discharge off-site, including details on infrastructure and specifics on the treatment process. Further technical details on the proposed surface water treatment process can be found in the Operating Techniques/Process Description document ref. 4299-CAU-XX-XX-RP-V-0303, included as part of this application.
- 4.1.4 Currently Bryn Posteg Landfill Site is divided into two different sub-catchments areas, the eastern and western catchments, a consequence of its geography and engineered landform. Surface water in the eastern catchment is directed to lagoons on the site and then discharged at surface water point P1 into the Nant y Bradnant watercourse. Surface water from the western catchment is discharged at point P2 into the Afon Dulas watercourse.
- 4.1.5 It is proposed to amend this activity to chemically treat the surface water that has been collected into Lagoon 3 from the eastern and western catchments via a dosing structure to encourage settling out of suspended solids and reduce levels in surface water down to within suspended solids compliance limits, before being discharged from site.
- 4.1.6 The risk assessments submitted as part of this permit variation considers the environmental implications of the proposed scheme. Consequently, the operation of the proposed surface water treatment and discharge process within this application is considered to be the environmentally acceptable option, compared with continuing to use the current passive scheme.
- 4.1.7 Additional technical assessment and modelling has been undertaken to assess the potential impact of the updated surface water treatment and discharge system and these reports are as follows:
- Surface Water Pollution Risk Assessment ref. 3400-CAU-XX-XX-RP-O-0302;
 - Amenity and Accidents Risk Assessment ref. 4299-CAU-XX-XX-RP-V-0302.

- 4.1.8 Bryn Posteg Landfill and the associated activities on Site are managed by the Operator in accordance with a management system. The Operator has implemented an environmental management system across the company to control the sites-specific operations at the Site.

4.2 Revised Chloride Compliance Limit - Groundwater Monitoring Point G1/W1

- 4.2.1 As part of this permit variation, in addition to the above surface water treatment, it is also proposed to amend Table S3.5 of the Environmental Permit to increase the Chloride compliance limit of groundwater monitoring point G1/W1 only, located just inside the site entrance.
- 4.2.2 NRW have agreed with the Operator's conclusions presented in the Potters report ref. 'Bryn Posteg Chloride Report 2020' (with reference to investigations undertaken by Caulmert in report ref. 3428-CAU-XX-XX-CO-V-9101), that the groundwater quality in monitoring point G1/W1 is affected by seasonal fluctuations of road salt from the adjacent B4518 Llanidloes to Twylch Road and therefore the current compliance limit of 69mg/l for G1/W1 is not suitable.
- 4.2.3 In the NRW's Compliance Assessment Report (CAR) form ref. NRW0037617, NRW agree to formalising in a permit variation the increase of the Chloride compliance limit for monitoring point G1/W1 from 69mg/l up to 500mg/l. This is for monitoring point G1/W1 only and does not apply to any other monitoring points at the site. The NRW CAR form, Operator's 2020 report on Chloride and Caulmert's report are all attached to this variation application within the Supporting Document.

4.3 Addition of Waste Codes

- 4.3.1 The Operator also wishes to add three new waste codes to the landfill permit as part of this normal variation application, as follows:
- Waste code 20 03 01 (mixed municipal waste) to be added to Table S2.4 of the Permit for physico-chemical treatment (Section 5.4 Part A (1)(a)(ii)) – this waste is already accepted onto Site under the Environmental Permit ref. WML 47120 for the Material Recycling Facility (MRF) on Site and therefore a risk assessment is not considered necessary;
 - Two waste codes 19 08 05 (Sludge from treating waste water) and 19 08 12 (Sludge from biologically treating industrial waste water not containing hazardous substances) to be added to Table S2.3 of the Permit for leachate storage and treatment (Section 5.4 Part A (1)(a)(i)) - specifically restricting the use of these wastes to reseedling of leachate in the existing leachate treatment plant on Site only;
 - Waste code 19 05 99 (wastes from aerobic treatment of solid wastes – wastes not otherwise specified) to be added to Table S2.3 of the Permit for leachate storage and treatment (Section 5.4 Part A(1)(a)(i)) - specifically for composting liquor waste generated from the existing composting activity on-site, to be sent into the leachate treatment plant on-site; and,

- Waste codes 02 01 03 (plant-tissue waste) and 02 01 06 (including spoiled straw) to Table S1.1 of the Permit for the incineration of straw wastes in the existing biomass plant on-site (Section 5.1 Part B (a)(v)).



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