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FCC Waste Services (UK) Ltd Decision Document

Application for a Substantial Variation

The application number is: PAN-019015

The variation number is: EPR/BU8819IV/V012

The applicant / operator is: FCC Waste Services (UK) Ltd

The Installation is located at: Pwllfawatkin Landfill Site, Rhydyfro, Pontardawe, Swansea, SA8 4RX

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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Key issues of the decision

1. Outline of the application

1.1 Description of the existing installation

Pwllfawtakin Landfill is located in Neath Porth Talbot, 15km north east of Swansea and 5km north west of Pontardawe (at National Grid Reference SN 269817 208799). The landfill has been active since 1970s. The landfill is formed of 3 former coal spoil tips of the former Abernant Colliery and occupies an area of approximately 25 hectares.

The 3 tips (“891”, “890” and “871”) are split into Phase 1 and 2. Phase 1 consists of Tip 871, which is located to the south of the Baran Road which intercepts the site. This tip has been restored but is used as a source of engineering material for Tip 890. Phase 2 consists of Tip 891 and Tip 890, located north of Baran Road. Tip 891 has been restored. Tip 890 is the active landfill for non-hazardous waste at the site. This tip is currently divided into further phases (1-4), with each phase being divided into numerous sub-cells.

A landfill gas control system is in place throughout the whole site, collecting gas and combusting it in a 1064 KW landfill gas engine located along the south-eastern boundary of the site.

Leachate is collected and stored prior to disposal off-site and uncontaminated surface water is discharged into the Upper Clydach river via a single discharge point.

The Installation is subject to the EPR because it carries out an activity listed in Part 1 of Schedule 1 of the EPR:

- Section 5.2 Part A(1) (a), The disposal of waste in a landfill

An installation may also comprise “directly associated activities”, which at this Installation includes:

- Burning waste as a fuel (landfill gas)
- Leachate management

- Landfill gas flaring
- Discharges of site drainage from the landfill
- Storage of fuel for operation of plant and equipment

The facility also includes the following Waste Activities relating to waste storage and treatment:

- R13 - Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)
- R3 – Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)
- R5 – Recycling/reclamation of other inorganic compounds

1.2 Proposed changes

The operator has applied to change the following aspects of the permit:

1. Increase the groundwater compliance limits for ammoniacal nitrogen at BH11B, BH12B, and BH17B
2. Add a breach condition (relating to how limit exceedances are reported) to BH11B, BH12B, BH17B and BH05B
3. Reduce the groundwater sampling frequency from monthly to quarterly for all groundwater monitoring points listed in the permit
4. Remove all requirements in the permit for monitoring the groundwater sumps at the site
5. Remove the requirement (and associated compliance limits) in the permit to monitor for tributyl tin and pentachlorophenol in both leachate and groundwater
6. Increase leachate level compliance limits in Phase 2 wells
7. Reduce the frequency of fortnightly leachate level monitoring for Phase 1 leachate wells to monthly, in line with current Phase 2 leachate monitoring frequencies at the site
8. Add new leachate monitoring point 'LMW1BR' to the monitoring and sampling regime in the permit
9. Add a new surface water discharge point at (PWDP1)

10. To remove the carbon dioxide (CO₂) compliance limits for all perimeter gas monitoring points from the permit and to instead use proposed Action Levels, to be included in the Landfill Gas Management Plan for the site
11. Update the permit's Environmental Monitoring Plan
12. Revise the site's permitted restoration contours

The applicant has also requested that the permit be consolidated into a modern style permit.

Please see section 9 for full technical description of proposed changes.

The application originally also included a proposed new waste recovery activity. However this aspect was removed from the scope of the application before the application was duly made. This was confirmed by the operator via email on 13/03/2023.

2. Our decision

Based on the information available to us we are minded to grant, in part, the variation. There are 2 aspects of the variation we have decided to refuse. The operator also withdrew one aspect of the variation during the determination. The below table summarises the aspects of the variation we are refusing and those which we are granting. See section 9 of this document for further information on our decision.

	Requested variation	Decision
1	Increase the groundwater compliance limits for ammoniacal nitrogen at BH11B, BH12B, and BH17B	Withdrawn during determination
2	Add a breach condition (relating to how limit exceedances are reported) to BH11B, BH12B, BH17B and BH05B	Refused

3	Reduce the groundwater sampling frequency from monthly to quarterly for all groundwater monitoring points listed in the permit	Refused
4	Remove the requirements (and associated compliance limits) in the permit to monitor for tributyl tin and pentachlorophenol in groundwater and leachate	Granted
5	Remove all requirements in the permit for monitoring the groundwater sumps at the site	Granted
6	Reduce the frequency of fortnightly leachate level monitoring for Phase 1 leachate wells to monthly, in line with current Phase 2 leachate monitoring frequencies at the site	Granted
7	Increase leachate level compliance limits in Phase 2 wells	Granted
8	Add new leachate monitoring point 'LMW1BR' to the monitoring and sampling regime in the permit	Granted
9	Add a new surface water discharge point (PWDP1)	Granted
10	Remove the carbon dioxide (CO ₂) compliance limits for all perimeter gas monitoring points from the permit and to instead use proposed Action Levels to be included in the Landfill Gas Management Plan for the site	Granted

11	Update the permits Environmental Monitoring Plan	Granted
12	Revise the site's permitted restoration contours	Granted

We consider that, in reaching this decision, we have taken into account all relevant considerations and legal requirements and that the permit will ensure that a high level of protection is provided for the environment and human health.

The permit contains many conditions taken from our standard Environmental Permit template for landfills. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations, the Landfill Directive and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the permit, we have considered the application and accepted the details are sufficient and satisfactory to make the standard conditions appropriate.

This document should be read in conjunction with the application, supporting information and permit.

3. Receipt of the Application

The application was received on 15/08/2022. In order for us to be able to consider the application duly made, we needed more information. A letter requesting this information was sent to the applicant on 09/02/2023 and the requested information was provided on the 13/03/2023. Upon receipt of this information, we were able to consider the application duly made. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

The applicant made no claim for commercial confidentiality. We have not received information in relation to the application that appears to be confidential in relation to any party.

4. Requests for further information

Further information was requested during determination by way of a Schedule 5 Notice requiring the applicant to provide further information relating to the proposed revised pre-settlement contours. The Schedule 5 Notice was sent on 17/05/2023 with a response date of 07/06/2023. The applicant's initial response to the Schedule 5 Notice was provided on 05/06/2023. The additional information supplied did not satisfy the requirements of the Schedule 5 Notice and so the Notice was re-issued on 30/06/2023 with additional annotations explaining why the information provided was not sufficient. The response date was extended to 14/07/2023. The applicant provided further information on 11/07/2023 which we considered satisfied the request of the Schedule 5 Notice (see section 9.12 for more information).

A second Schedule 5 Notice was sent requesting further information relating to the proposed new groundwater ammoniacal nitrogen limits on 28/07/2023 with a response date of 11/08/2023. The applicant provided a response on 11/08/2023. The additional information provided did not satisfy the request of the Schedule 5 Notice. We advised the applicant of what information would be required to proceed. Due to the time required to obtain this information, on 12/09/2023, the applicant decided to withdraw the aspect of the variation the Schedule 5 Notice request related to (see section 9.1 for more information). It was on this date that we considered the Schedule 5 Notice closed (i.e. the clock restarted on determination).

We also queried the groundwater Tributyl Tin results contained in the Hydrogeological Risk Assessment Review (HRAR) with the applicant via an informal information request. Further information relating to these results and a revised HRAR was provided on 07/06/2023.

A copy of the information notices and e-mails requesting further information, and the responses received, have been placed on our public register.

5. Consultation on the Application

We carried out consultation on the application in accordance with the Environment Permitting Regulations (EPR) and our statutory Public Participation Statement (PPS).

A copy of the application and all other documents relevant to our determination were made available for the public to view. Anyone wishing to see these documents could access them via the online public register or arrange for copies to be made.

An advert was placed on our website indicating that a public consultation on the application had commenced. The consultation started on 17/03/2023 and ended on 18/04/2023.

We also consulted with the following bodies on 24/04/2023:

- Public Health Wales
- Health and Safety Executive
- Neath Port Talbot County Borough Council – planning department
- Neath Port Talbot County Borough Council – environmental health department

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly. These consultations ended on 24/05/2023.

A summary of consultation comments and our response to these can be found in Annex 1. We have taken all relevant comments into consideration in reaching our decision.

6. The Legal Framework

The variation has been issued under Regulation 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- a landfill as described by the Landfill Directive
- subject to aspects of the Well-Being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016 which have also been addressed.

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that this decision is consistent with its general purpose of pursuing the sustainable management of natural resources (SMNR) in relation to Wales, and applying the principles of SMNR. In particular, NRW acknowledges that it

is a principle of sustainable management to take action to prevent significant damage to ecosystems. We consider that, in granting the variation, a high level of protection will be delivered for the environment and human health through the operation of the Installation in accordance with the permit conditions. NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

7. Operation of the Installation – general issues

7.1 Administrative issues

There is no proposed change to the operator as part of this variation. We are satisfied that the operator is the person who will have control over the operation of the Installation if the variation were to be granted, and that they will be able to operate the Installation so as to comply with the conditions included in the permit, if issued.

As part of this variation, the registered office address of the operator has been updated from Ground Floor West, 900 Pavilion Drive, Northampton Business Park, Northampton, NN4 7RG to 3 Sidings Court, White Rose Way, Doncaster, England, DN4 5NU.

7.2 Technical Ability

The variation does not include any changes which require the operator to demonstrate they have appropriate technical management in place. Nevertheless, as part of the application, they have confirmed they have an existing relevant qualification in place in the form of a Competence Management System. A copy of the 'Certificate of Approval' has been provided as evidence.

7.3 Relevant Convictions

No relevant convictions have been declared. NRW's COLINS (Contravention Offence Legal Information Notification System) Database has been checked and no relevant convictions were found.

7.4 Financial Provision

The operator has confirmed there is no current or past bankruptcy or insolvency proceedings against any relevant person or the company to date.

The operator has an overarching agreement, dated 01/11/2017, with NRW which covers Pwllfawatkin Landfill along with Chirk Landfill, Llandulas Landfill and Rosset Landfill. This agreement is not affected by this variation although the permit has been updated to reference this most recent performance agreement (see condition 1.2.1).

7.5 Management System

The applicant has stated in the application that have in place an Environmental Management System (EMS) that meets the requirements for an EMS in our “*How to comply with your environmental permit guidance*”. The management system is ISO 14001 certified and will continue to be in place following the variation.

We are satisfied that appropriate management systems and management structures will be in place following the permit variation and that sufficient resources are available to the operator to ensure compliance with all the permit conditions.

8. The Site and its protection

The application does not include any changes which involve adding additional installation activities or land to the permit. Therefore the applicant was not required to submit a Site Condition Report. However, a Site Condition Report was provided with the application detailing the condition of the land at the time of submitted the application to vary the permit, providing an updated condition of the site.

9. Technical assessment of proposed changes

9.1 Increase the groundwater compliance limits for ammoniacal nitrogen at BH11B, BH12B, and BH17B

Following a review of monitoring data collected during the review period (2018 – 2022), the operator proposed the following changes to the permit’s groundwater Ammoniacal Nitrogen limits, as follows:

Monitoring point reference	Existing limit	Proposed limit
WBH11B	1.0 mg/l	4.0 mg/l
WBH12B	1.8 mg/l*	1.5 mg/l

WBH17B	1.5 mg/l	2.0mg/l
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*note that in the application the applicant incorrectly quoted the limit for WBH12B at 1.0 mg/l; this is discussed in more detail below

WBH11B

Ammoniacal nitrogen at WBH11B has been recorded as exceeding the existing limit of 1.0 mg/l.

Data from the review period (2018 – 2022) has therefore been reviewed by the applicant as part of the Hydrological Risk Assessment Risk (HRAR) to propose a new limit based upon a recorded mean concentration of 1.94 mg/l and a standard deviation of 0.9 mg/l. The proposed new limit is 4 mg/l, based on the mean record plus two times the recorded standard deviation.

The operator has stated in their application that the source of elevated concentrations of ammoniacal nitrogen in this borehole is a nearby mine adit. However, based on the evidence provided in the application, we were not confident that the mine adit was the source. We requested (by way of Schedule 5 Notice, see section 4) further evidence from the applicant to demonstrate the adit was causing the elevated concentrations in order for us to grant this aspect of the variation.

In response to the Notice, on 11/08/2023, the applicant provided the following further information:

- A map showing the location of the borehole in relation to the mine adit discharge which indicates the flow of water to be towards the borehole
- Data from WBH11B which shows ammoniacal nitrogen levels to peak sporadically, rather than showing a continuous increase in concentrations, which the applicant concluded was evidence that the ammoniacal nitrogen was not as a result of a breakthrough of a leachate plume
- Statements confirming that there have been no other increases in concentration of leachate indicator species associated with the peaks shown in ammoniacal nitrogen within the borehole. To back this statement up, data for Chloride concentrations within the borehole was provided. Potassium and mecoprop concentrations were also stated to remain low, although no data for these parameters were provided

NRW reviewed the additional information provided and concluded it does not sufficiently demonstrate the exceedances could be related to the mine adit. Reasons for this decision include:

- WBH11B is located on the eastern side of the landfill whilst the adit discharge is located on the western side of the landfill approx 300m away, upgradient to the borehole (with the landfill in between). This has not been discussed in the evidence provided by the applicant
- The ammoniacal nitrogen data provided by the applicant indicate the trend in concentrations to be generally increasing overtime. No justification for this trend has been provided by the applicant.

In order to justify this aspect of the variation and satisfy the Schedule 5 Notice request, we advised the operator that sampling from the mine adit was required. The applicant considered this request and decided to withdraw this part of the application on 12/09/2023. We agreed that this change could be included in the next variation application which will allow the operator time to obtain appropriate sampling data, and we will effectively pick up determination from where it had been left here under this application.

WBH12B

The application stated that records indicate that ammoniacal nitrogen has been recorded as exceeding the existing limit of 1.0 mg/l and a revised limit of 1.5 mg/l was proposed. However, the existing permitted limit is actually 1.8 mg/l which has been previously agreed by NRW via completion of Improvement Condition 12 (on 11/07/2013). Therefore, it was confirmed with the applicant that the request for this change will no longer be considered, and the limit will remain at 1.8 mg/l.

WBH17B

Ammoniacal nitrogen has been recorded as exceeding the existing limit of 1.5 mg/l.

In their HRAR, the operator reviewed data from the period 2018 – 2022 for Ammoniacal Nitrogen in borehole WBH17B, and proposed a new limit of 2.0 mg/l based upon a recorded mean concentration of 0.72 mg/l and a standard deviation of 0.61 mg/l. The proposed new limit is the mean record plus two times the recorded standard deviation. No reasoning for the elevated levels of ammoniacal nitrogen was

provided in the application and we decided that this aspect of the variation could not be granted based on the initial information provided. Further evidence was requested by way of Schedule 5 Notice (see section 4 of this document for more information). The applicant responded to the request by providing information that attempted to attribute the elevated ammoniacal nitrogen concentrations to the same mine adit referred above. We assessed this new information and concluded that the evidence provided did not sufficiently demonstrate the exceedances could be related to the mine adit.

In order to justify this aspect of the variation, we advised the applicant that sampling from the mine adit was required. As with the request to vary limits at WBH11B, on 12/09/2023 the applicant requested to withdraw this aspect of the variation and indicated their intention to apply for the change as part of a subsequent variation.

9.2. Add a breach condition to WBH11B, WBH12B, WBH17B and WBH05B

For the monitoring points discussed above in section 9.1 (WBH11B, WBH12B, WBH17B), and WBH05B, the operator also applied to add a breach condition whereby the ammoniacal nitrogen limit is only recorded as being breached when the limit is exceeded 3 or more times on a consecutive basis.

An additional breach condition is proposed for all other groundwater emission limits (see Table S3.4), whereby a breach is only recorded when two or more of the parameters exceed their respective limits on one occasion.

We have considered the request for this change but do not consider it appropriate. Our guidance for compliance scoring does allow for compliance scoring of limit breaches to be consolidated in certain circumstances but we do not consider it suitable to incorporate this approach with a bespoke condition on this permit specifically. We have therefore refused this aspect of the variation.

9.3 Reduce the groundwater sampling frequency from monthly to quarterly for all groundwater monitoring points listed in the permit

The operator has proposed the following changes to the groundwater sampling frequency:

Monitoring point reference*	Parameter*	Existing monitoring frequency	Proposed monitoring frequency
WBH5A, WBH5B, WBH10A, WBH10B, WBH11A, WBH12A, WBH16A, WBH16B and all subsequent new monitoring points installed	Ammoniacal Nitrogen	Monthly	Quarterly
	Chloride		
	Cadmium	Quarterly	
	Naphthalene		
WBH11B, WBH12B	Ammoniacal Nitrogen	Monthly	
	Chloride		
	Cadmium	Quarterly	
	Naphthalene		
WBH17B	Ammoniacal Nitrogen	Monthly	
	Chloride		
	Cadmium	Quarterly	
	Naphthalene		

*note that groundwater sump monitoring points and Phenol and Tributyl Tin have not been included in the above table in line with the applicant's proposal to remove these requirements entirely (see section 9.4 and 9.5).

The applicant has justified this change by reduced risk following the capping of operational areas. However, at the time of the application being made, waste was still being accepted on site in Phase 2. Ammoniacal nitrogen and Chloride are key indicators of leachate breakthrough and we consider it reasonable to expect monthly monitoring of these whilst the landfill is operational, during permanent capping and potentially for a short timeframe after. We are therefore refusing this aspect of the variation. We do however note that this can be reviewed when the operator applies to vary the permit to a full closed landfill permit.

9.4 Remove all requirements in the permit for monitoring the groundwater sumps at the site

The existing permit requires that groundwater level (mAOD) is monitored weekly at the site's groundwater sumps 'GW Sump 1', 'GW Sump 2', 'GW Sump 3' and 'GW Sump 4'. The permit also includes limits on the groundwater level at these monitoring points, as follows:

- Control level: 0.35m below the base of the engineered liner

- Trigger level: an elevation equivalent to the base of the engineered liner

The site is managed on the principle of hydraulic containment, whereby groundwater levels were historically managed to ensure piezometric pressure of groundwater outside of the landfill was higher than the leachate levels. These sumps were previously used to abstract groundwater to manage groundwater levels and help achieve an inward groundwater gradient. Hydraulic containment has now been achieved and groundwater management has stopped. On this basis the HRAR submitted with the application recommends that the requirement to monitor groundwater levels and quality at the sumps is now removed from the permit.

We have reviewed the evidence provided and consider this change has been sufficiently justified. All requirements to monitor the 4 sumps have been removed from the permit as part of this variation.

9.5 Remove the requirement (and associated compliance limits) in the permit to monitor for tributyl tin and pentachlorophenol in leachate and groundwater

The operator has applied to remove the requirement to monitor for Phenol and Tributyl Tin for all leachate monitoring points where the HRAR identified that levels have consistently been at laboratory detection limits during the review period (2018-2022), thereby indicating the absence of these substances within the leachate at any significant level.

In line with this requested change, the applicant has also applied to remove the requirement to monitor for these parameters in groundwater also.

We have reviewed the evidence provided and consider this change has been sufficiently justified. The requirement to monitor these parameters in leachate and groundwater has been removed from the permit as part of this variation.

9.6. Increase leachate level compliance limits in Phase 2 wells

The operator has proposed to change the permitted leachate level compliance limits for Phase 2 to match the limits in the permit given for the non-operational Phase 1:

Monitoring point reference	Existing Level limit	Proposed Level Limit
Phase 2: All leachate monitoring points to the western side of the landfill	1.5m above cell base	0.5m below the minimum surrounding groundwater level
Phase 2: All leachate monitoring points to the eastern side of the landfill	2m above the cell base	

The HRAR submitted includes data and discussion on why the change is justifiable. The existing permit also included a provision for the Phase 2 leachate levels to be revised once hydraulic containment has been achieved.

As discussed in section 9.4, hydraulic containment has now been achieved and groundwater management has now ceased. Despite the proposed leachate levels being higher than that currently permitted, the proposed limits will still ensure hydraulic containment is maintained.

We consider this change acceptable. However, the current wording of the proposed limit (i.e., the wording currently used for the Phase 1 leachate level limit), “0.5m below the minimum surrounding groundwater level” could be improved and hence the varied permit will word the limit, for all phases in Table S3.1, as follows; “A minimum of 0.5m below the minimum surrounding groundwater level” with a note stating that leachate levels (mAOD) are to be compared to groundwater levels (mAOD) using monitoring required from Table S3.7 (groundwater level) and Table S3.9 (leachate level).

9.7. Reduce the frequency of fortnightly leachate level monitoring for Phase 1 leachate wells to monthly, in line with current Phase 2 leachate monitoring frequencies at the site

The operator has proposed the following changes to the leachate level monitoring frequency in the Phase 1 non-operational cells:

Monitoring point reference	Existing Monitoring Frequency	Proposed Monitoring Frequency
Phase 1: Leachate monitoring points PZC1C-2, PZC1C-1, PZC2A-	Every 2 weeks (unless otherwise agreed with Natural Resources Wales)	Monthly

1, LW82, LW91 and LW101 (2 per basal cell), or as otherwise agreed with Natural Resources Wales		
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The proposed change will bring the monitoring frequency in line with the existing permitted leachate level monitoring frequency for Phase 2.

The HRAR justifies this change by demonstrating the consistency between the monitoring results from Phase 1 and 2 during the review period, which indicates level in Phase 1 are stable. Furthermore, results have shown Phase 1 to be consistently compliant with the permitted limits. Therefore, it is anticipated there is a low chance of rapid change going forward and hence reduced monitoring is appropriate.

We have reviewed the evidence provided and consider this change has been sufficiently justified. The monitoring frequency for Phase 1 leachate limits will be reduced to monthly as part of this variation.

9.8. Add new leachate monitoring point ‘LMW1BR’ to the monitoring and sampling regime in the permit.

The operator has applied to add a new leachate monitoring point to the permit (Table S3.1) for Phase 2. The new borehole, “LMW1BR”, was added after existing monitoring point “LMW1B” was found to have foaming issues and casing deformation in 2016. The new borehole therefore replaced this borehole as a monitoring point when it was installed in 2020.

NRW consider this acceptable. The permit does not specify the monitoring points specifically for Phase 2 but the environmental monitoring plan (drawing reference 478M408 “Environmental Monitoring Plan”, dated 27/02/2023), which has been updated as part of this variation to add this monitoring point, has been referenced in the permit.

9.9. Add a new surface water discharge point at (PWDP1)

The operator has applied to add a new surface water discharge point, “PWDP1”, to the permit (to what was previously referred to as Table S4.3, but is now referred to as

Table S3.3 following the modernisation of the permit completed as part of this variation).

The new, additional surface water discharge point (PWDP1) will direct surface water run-off to the Upper Clydach River and will complement the site's existing surface water discharge point (WP13), which already directs surface water run-off from the capped and closed areas of the landfill to the Upper Clydach. PWDP1 will allow surface water run-off at the site to be managed more effectively, reducing reliance on pumped water transfer, particularly when the site has closed. A series of new drainage ditches will be installed which will connect to existing surface water lagoons. The revised surface water system has also been developed to account for the proposed revised restoration contours (see section 9.4). There will be no change in the composition and overall volume of surface water discharged from the site associated with this new discharge point.

NRW consider this acceptable and the additional discharge/monitoring point, "PWDP1" has been added to Table S3.3 of the permit. The discharge point will be subject to the same limits and monitoring requirements as the existing discharge point, as follows:

- pH: 6-9
- Suspended solids: 40 mg/l
- Visible oil or grease: none visible
- Monitoring frequency: monthly

The monitoring point has been added to the updated environmental monitoring plan provided with the application, which has been included in the permit.

9.10 To remove the carbon dioxide (CO₂) compliance limits for all perimeter gas monitoring points from the permit and to instead use proposed Action Levels to be included in the Landfill Gas Management Plan for the site

The operator has applied to remove the Carbon Dioxide limits for all external monitoring points on the permit (in Table S3.5) and replace these with "action levels" which will be included in the site's Landfill Gas Management Plan (LGMP). An Industry Code of Practice (ICoP) review has been provided with the application which assesses the extent to which the external boreholes are influenced by Carbon Dioxide

concentrations from natural sources within the ground. The application contained no request to change landfill gas Methane monitoring requirements.

The proposed changes to the limits are as shown below:

Monitoring Reference	Point	Existing Limits	Permitted	Proposed Action Levels (LGMP)
PWGP0017				2.4% v/v
PWGP0018				1.5% v/v
PWGP0019				1.5% v/v
PWGP0020				1.5% v/v
PWGP0021				1.5% v/v
PWGP0022				2.0% v/v
PWGP0023				1.5% v/v
PWGP0024		1.0% v/v		2.5% v/v
PWGP0025				2.1% v/v
WBH20				2.3 % v/v
GBH A				1.5% v/v
GBH B				3.3% v/v
GBH C				1.5% v/v
GBH D				5.5% v/v
GBH E				4.5% v/v
PWGP0016		8.1 % v/v		13.7% v/v

We have reviewed the Industry Code of Practice (ICoP) review provided with the application and consider the requested change acceptable. All Carbon Dioxide limits for all external monitoring points on the permit have been removed (from Table S3.5) and the revised Landfill Gas Management Plan has been incorporated into the permit's Operating Techniques.

9.11. Revise the permit's Environmental Monitoring Plan (EMP)

The operator has provided an updated EMP (drawing reference 478M408 "Environmental Monitoring Plan", dated 27/02/2023) as part of this variation application which includes the new emission points and monitoring points discussed in the sections above. This new plan has been referenced throughout the varied permit.

9.12. Revise the site's permitted restoration contours

The operator has applied to vary the permitted restoration contours. We have focused our assessment on the proposed pre-settlement contours as it is these which are referenced in the permit.

The current permitted pre-settlement contours (as detailed on drawing S2003/PW/PPC17, received during the original permit application) are no longer appropriate for Phase 2 due to short falls in the site's expected waste inputs. The operator wishes to close the site in October 2023 and start restoration.

The proposal contained in the application for new pre-settlement contours revises the contours for Phase 2 only, covering a reduced area and profile when compared to that already consented. A dome-shaped profile is proposed, which will allow surface water to naturally drain off the cap under gravity to surrounding surface water ditches.

Phase 2 was intended to have 5 containment cells across what is referred to as "Tip 890" (Phase 2 also consists of "Tip 891"). The applicant has proposed to no longer fill Cell 5 and instead the footprint of this cell will be graded to tie into surrounding levels using remaining in situ materials and soils.

The revised pre-settlement contours, as detailed on drawing WR7816/12/04 (dated 02/11/2021), were assessed and it was determined we could not accept the request for the variation based on the initial information provided. Reasons included (but are not limited to):

- the drawing not being clear as to what the different coloured contour lines represent
- the drawing showing unexplained diagonal straight lines within the contours and contours touching in places
- it not being clear how future settlement has been taken into account when determining the proposed pre-settlement contours

Further information on the drawing was requested from the applicant by way of Schedule 5 Notice. As discussed in section 4, the initial response to this request was insufficient and the Schedule 5 Notice was hence re-issued. A second response, which we deemed acceptable, was then provided which included a revised pre-settlement contour drawing (drawing reference WR7816/12/04, dated 02/11/2021 and revised 10/07/2023). The applicant also confirmed that projected settlement and current site topography has been taken into account when deriving the proposed pre-settlement

contours with the aim of ensuring there are no significant steps in the restored landform.

The revised pre-settlement contours have been incorporated into the permit via condition 2.7.8. This condition limits the waste accepted on site to the levels shown in the drawing. It is noted this drawing is for Phase 2 only, but pre-settlement contours are not required for Phase 1 in the current permit as this phase is currently non-operational.

10. Environmental Risk Assessment

Further to the environmental considerations discussed above in section 9, we have also considered the likelihood of risk to the environment and human health from odour, noise and vibration, accidents, fugitive emissions to air and water. Based on the information in the application we do not consider the proposal to pose an increased risk of pollution from any of these.

11. Impact upon the National Site Network, Sites of Scientific Interest (SSSI) and non-statutory conservation sites

11.1 National Site Network

A Habitats Regulations Assessment (HRA) is not required because there is no conceivable impact pathway to any National Site Network Site (i.e. Special Area of Conservation, Special Area of Protection or Ramsar Site).

11.2. SSSI

The proposed permission is not likely to damage any of the flora, fauna or geological or physiological features which are of special interest of any SSSI as there is no pathway for the features to be affected.

11.3. Non-statutory Sites

The proposed variation is not anticipated to have a negative environmental impact on any surrounding non-statutory sites due to there being no impact pathways from the changes proposed.

12. The Permit Conditions

12.1 Updating permit conditions during consolidation

The original permit has had 10 variations without consolidation. The operator has applied to consolidate and modernise the permit as part of this variation. We have updated previous permit conditions to those in the landfill permit template as part of permit consolidation.

12.2 Incorporating the variation

Section 9 discusses how we have considered the applicant's proposed changes to the permits limits and monitoring and reporting requirements.

We have specified that the applicant must operate the permit in accordance with descriptions in the application. These are specified in the Operating Techniques table in the permit. As part of the consolidation and modernisation of the permit we have also reviewed and updated the permit's Operating Techniques.

12.3 Waste Types

We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility in the consolidated permit in Tables S2.1, S2.2 and S2.3. No new waste types have been added as part of this variation.

13. OPRA (Operational Risk Appraisal)

The operator has provided an updated OPRA spreadsheet as part of this variation with a revised score of 198 (was 163). We have reviewed this and agree with the updated score. This will form the basis for ongoing subsistence fees.

ANNEX 1: Consultation Responses

A) Advertising and Consultation on the Application

The application has been advertised and consulted upon in accordance with Natural Resources Wales Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our decision is summarised in this Annex. Copies of all consultation responses have been placed on Natural Resources Wales public register.

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from Public Health Wales	
Brief summary of issues raised:	Summary of action taken / how this has been covered
Emissions monitoring regime should seek to further safeguard the environment and public health by reducing or eliminating any off-site odours at nearby sensitive receptors.	<p>See section 9 of this document for full details on how we have assessed the impacts of the proposed changes to the permits monitoring requirements.</p> <p>As detailed in section 10, we do not consider the variation to pose any additional odour risk. Any existing odour issues on site relate to the ongoing compliance monitoring of the site and are not relevant to this permitting decision.</p> <p>Condition 3.3.1 in the permit will remain which require emissions from the permitted activities are free from odour at levels likely to cause pollution outside the site.</p>

<p>Subject to the recommendations discussed above and the assured application of Best Available Techniques (BAT) to control emissions including odour, then we would have no public health concerns.</p>	<p>BAT does not apply to Landfills. See section 9 of this document for details on how we have technically assessed the variation and how emissions will be monitored and controlled.</p>
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Response Received from Neath Port Talbot County Borough Council Planning	
Brief summary of issues raised:	Summary of action taken / how this has been covered
<p>There is a history of verified odour complaints at the site. A recent variation to the planning permission include additional conditions related to odour. Would object to the permit variation if there was an odour impact but do not have the technical landfill experience to assess the application proposal.</p>	<p>See section 9 of this document for full details on how we have assessed the impacts of the proposed changes to the permits monitoring requirements.</p> <p>As detailed in section 11.4, we do not consider the variation to pose any additional odour risk. Any existing odour issues on site relate to the ongoing compliance monitoring of the site and are not relevant to this permitting decision.</p> <p>Condition 3.3.1 in the permit will remain which require emissions from the permitted activities are free from odour at levels likely to cause pollution outside the site.</p>
<p>An Odour Management Plan has been agreed as part of the recent planning variation and if the variation</p>	<p>There has been no Odour Management Plan submitted as part of this variation application.</p>

should change this plan, a request was made to see this.	
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2) Consultation Responses from Members of the Public and Community Organisations

None received.

a) Representations from Local MP, Members of the Senedd (MS), Councillors and Parish / Town / Community Councils

None received.

b) Representations from Community and Other Organisations

None received.

c) Representations from Individual Members of the Public

None identified.