

Compliance Assessment Report CAR_NRW0040938

Permit being assessed: EP3698FL.

For: Nantycaws H C I Transfer & Treatment Facility, held by CWM Environmental Ltd
At: Nantycaws Landfill Site, Llanddarog Road, Nantycaws, Carmarthen, Carmarthenshire, SA32 8BG.

Type of assessment carried out: Audit, Reason: Routine.

On 17/11/2022 between 10:00 and 12:30.

Parts of permit assessed: 2.5 Improvement Programme

NRW Lead Officer: Michael Launder, accompanied by Geraint Harris.

Report sent to: Darren Sanders, Composting Site Manager on 12/01/2023.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Assessed (A)	
C4 - General Management - Storage, handling labelling and Segregation	Action only (X)	
C2 - General Management - Management system and operating procedures	Action only (X)	
C2 - General Management - Management system and operating procedures	Action only (X)	
C2 - General Management - Management system and operating procedures	Action only (X)	
C2 - General Management - Management system and operating procedures	Action only (X)	

Result types are explained in more detail in the 'Important Information' section below.

Total number of non-compliances recorded	Total non-compliance score
0	0

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

Criteria	Action needed	Complete by
C4	Operator to submit timetable for reduction of height and width of stacks of composting material.	Already completed
C2	Operator to amend Fire Prevention and Mitigation Plan, and Composting SOP to explicitly include the limits on stack height, width and separation distances outlined in GN16.	28/02/2023
C2	Operator to amend Fire Prevention and Mitigation Plan, and Composting SOP to explicitly include an upper limit of storage	28/02/2023

Criteria	Action needed	Complete by
	volume for the composting pad, above which further inputs of waste to be composted will be rejected.	
C2	Operator to submit document explicitly outlining actions to be taken if the key waste and process parameters identified in BAT 36 are out of specification in the context of environmental performance.	28/02/2023
C2	Operator to submit document explicitly outlining adaption of operations to meteorological conditions, to prevent and reduce diffuse emissions to air of dust, odour and bioaerosols.	28/02/2023

Action criteria codes are listed in the 'Important information' section below.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

At this time, we do not intend to take any further action.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

Introduction

This CAR form has been issued in response to the submission by Cwm Environmental of a suite of documents, collated to discharge eleven Improvement Conditions (ICs) relating to the IED Waste Treatment Best Available Techniques (BAT) Reference Documents (BREF) and associated BAT Conclusions. The technical review of the documents and site assessment are outlined below.

Waste Treatment BREF

The permit was varied in July 2021 to include the following ICs relating to Fire Prevention and Mitigation, and the BAT conclusions:

Reference	Requirement	Date
IC2	The operator shall submit an updated written Fire prevention and mitigation plan to Natural Resources Wales. The Fire prevention and mitigation plan must be produced in line with the standards set out in Fire prevention and mitigation plan guidance – Waste.	3 months after permit issue or otherwise agreed in writing with Natural Resources Wales
IC3	BAT 1 – EMS	17th

	The operator must submit an updated BAT conclusions document to Natural Resources Wales including the following: - The operator shall submit evidence of ISO 14001:2015 certification to Natural Resources Wales. - The operator is required to update the Environmental Management System to include the following procedures and to submit them to Natural Resources Wales: - Management commitment - Planning and implementing procedures and targets in conjunction with financial planning and investment - Communication - Employee involvement - Independent (where practicable) internal or external EMS auditing - Senior management review of the EMS - Following the development of cleaner technologies - Regular sectoral benchmarking - Waste stream management in line with BAT 2 - Inventory of waste gas stream in line with BAT 3 - Residues management plan In accordance with BAT 1 of the Waste Treatment BAT Conclusions	February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC4	BAT 2– Waste acceptance, tracking and management The operator shall submit to Natural Resources Wales written procedure(s) (including updates to existing procedures) in order to evidence compliance with BAT 2 (of the Waste Treatment BAT Conclusions): - Waste characterisation and pre-acceptance procedures (BAT 2 a)) - Waste acceptance procedures (BAT 2 b)) - Implementation of a waste tracking system and inventory (BAT 2 c)) - Output quality management system (BAT 2 d)) Sorting of incoming waste (BAT 2 e))	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC5	BAT 3 – Inventory of waste gas streams The operator shall submit to Natural Resources Wales information in order to evidence compliance with BAT 3 (of the Waste Treatment BAT Conclusions): - Performance of waste gas treatment i.e. biofilter (BAT 3 i)) - Information on the characteristics of the waste gas stream (BAT 3 (iii))	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC6	BAT 4 – Storage of waste The operator shall submit to Natural Resources Wales written procedure(s) (including updates to existing procedures) on reducing environmental risk associated with waste storage to evidence compliance with BAT 4 (of the Waste Treatment BAT Conclusions): Adequate storage capacity in particular how the quantity of waste stored is monitored against capacity (BAT 4 b))	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	

IC7	BAT 5 – Handling and transfer of waste The operator shall submit to Natural Resources Wales written procedure(s) (including updates to existing procedures) on reducing environmental risk associated with handling and transfer of waste to evidence compliance with BAT 5 (of the Waste Treatment BAT Conclusions): a. Procedure to ensure handling and transfer of wastes are duly documented, validated prior to execution and verified after execution Procedure to ensure measures are taken to prevent, detect and mitigate spills (existing spill procedure does not provide information on how to prevent and detect spills)	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC8	BAT 33 – Selection and suitability of waste input The operator shall submit to Natural Resources Wales written procedure(s) (including updates to existing procedures) on how odour emissions are reduced and overall environmental performance is improved, by selecting the waste input to ensure its suitability for biological treatment in line with BAT 33 (of the Waste Treatment BAT Conclusions).	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC9	BAT 35 – Emissions to water and water usage The operator must provide information to Natural Resources Wales to show compliance with BAT 35 c) detailing how the operator optimises the moisture content of the waste in order to minimise leachate generation.	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC10	BAT 36 – Emissions to air monitoring and control of key waste and process parameters The operator shall submit to Natural Resources Wales written procedure(s) (including updates to existing procedures) on how monitoring and/or controlling the following key waste and process parameters is implemented on site to reduce emissions to air and improve overall environmental performance in line with BAT 36 (of the Waste Treatment BAT Conclusions): a. waste input characteristics e.g. C to N ratio, particle size, windrow porosity, height and width	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC11	BAT 37 – Diffuse emissions to air The operator shall submit to Natural Resources Wales written procedure(s) (including updates to existing procedures) on how the following technique is implemented to reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps: adaptation of operations to meteorological conditions (BAT 37 b) (of the Waste Treatment BAT Conclusions)) in particular with reference to the direction of outdoor windrows in relation to prevailing wind direction	17th February 2022 or otherwise agreed in writing with Natural Resources Wales	
IC12	The Operator shall submit a written report to Natural Resources Wales for approval detailing how the site will implement the latest version of	17 February	

	'Technical Guidance Note M9 Environmental monitoring of bioaerosols at regulated facilities dated July 2018 Version 2'. This assessment should specifically consider channelled emissions to air from the biofilter and the potential for bioaerosol releases. If your biofilter (open and closed biofilters) is within 250 metres of a sensitive receptor you are required to undertake and submit a site specific bioaerosol risk assessment and any monitoring must be in line with 'M9: environmental monitoring of bioaerosols at regulated facilities'.	2022 or otherwise agreed in writing with Natural Resources Wales	
Following on from an agreed extension of time to submit, an e-mail was received from Dave Baldwin (Recogen) on 26 June 2022, acting on behalf of the operator Cwm Environmental, enclosing the following documents: 0 Cwm Environmental Ltd BAT IC Response 2022 1 Cwm Env – CA & Compost Fire Prevention Plan 2022 v 1-4 2 EMS Cert 02.11.21 – 02.10.2024 3 POL001 Environmental Policy January 2022 4 ENV001 R4 EMS Procedures 5 POL011 R3 Management Review Procedure 6 Cwm Env – Accident Management Plan – June 2022 7 PAS100 Certificate to 2023 8 SOP Cwm Env Green Waste Composting – Oct 2021 9 Cwm Env IED Non-Technical Summary & Flow Diagrams 2022 v4 The relation of each of these documents to requirements of the ICs was outlined in Doc 0 Cwm Environmental Ltd BAT IC Response 2022. A technical review of the IC submissions against the BAT Conclusions has been carried out, cross-referencing other guidance where required. The technical review of the documentation is outlined in a separate file note, and a number of ICs were followed up during a site visit on 17 November 2022. The site visit on 17 November 2022 was attended by Michael Launder (NRW Senior Industry Regulation Officer, South West) and Geraint Harris (NRW Senior Industry Regulation Officer, South Central). During the site visit, the officers met and were accompanied by Darren Sanders (Compost Site Manager, Cwm Environmental). During the visit, the operator confirmed that the closed vessel composting process (Permit Activity Reference A2), previously used to pre-treat food waste prior to addition to the open composting process, has been mothballed. This was confirmed by the officers inspecting the vessels, which were empty of food waste and are currently used for storage of local authority kerbside recycling materials. IC2 <u>Fire Prevention and Mitigation Plan</u>			

The submitted document broadly demonstrates compliance with the requirements of IC2, to submit an updated *Fire Prevention and Mitigation Plan* to the standards set out in *Guidance Note 16 Fire Prevention and Mitigation Plan Guidance – Waste Management*.

However, during the site visit, NRW officers observed composting piles exceeding 4 metres in height. To facilitate fire-fighting using standard equipment, the maximum stack height of loose waste should be no more than 4 metres high, as outlined in *GN16*.

Further to this, the width of the stack awaiting composting and shredding appeared to be beyond the 20 metre maximum outlined in *GN16* and was tight to the boundary of the pad/fence line. As with excessive height, the width of this stack could impede fire fighting efforts if the back of the stack cannot be reached.

ACTION: Operator to submit timetable for reduction of height and width of stacks.

ACTION: Operator to amend *Fire Prevention and Mitigation Plan*, and *Composting SOP* to explicitly include the limits on stack height, width and separation distances outlined in *GN16*.

The submitted documents do not demonstrate compliance with the requirements of IC2.

IC3

Environmental Management System (BAT 1)

A selection of documents from the operators Environmental Management System were included in the submission, including:

- *ISO14001:2015 Certificate* – confirming independent verification by BSI of Environmental Management System. The certification covers the permitted site and permitted activities.
- *Environmental Policy* - includes reference to permit compliance, continuous improvement & sectoral benchmarking, personnel training and stakeholder management.
- *Environmental Management System Procedures* – clearly outlines structure and responsibilities relative to the EMS (Section 2.4.1). The procedures also identify the requirement for management review on an annual basis (Section 4.6) and the process for this review.

The submitted documents demonstrate compliance with BAT 1 and IC3.

IC4

Waste acceptance, tracking and management (BAT 2)

The operator included the following documents as evidence for this IC:

- *PAS100:2018 Certificate* – confirming independent verification by OF&G of adherence to the PAS standard.
- *Compost Quality Management Standard Operating Procedure (SOP)* – which outlined the stages of characterisation and pre-acceptance, sorting and waste acceptance, waste tracking, and the Quality Management System.

IC5	The submitted documents demonstrate compliance with the requirements of BAT 2 and IC4. <u>Inventory of waste gas streams (BAT 3)</u> - There are no waste gas streams relevant to BAT 3 as the in-vessel composting process has been discontinued. No further action is required but if the in-vessel composting process resumes, this IC will need to be completed.
IC6	<u>Storage of waste (BAT 4b – Storage Capacity)</u> As evidence for this IC the operator provided a technical summary document of composting processes at the site. This document outlined the green waste material volumes, storage and flows through the process. This states that up to 4000 tonnes of green waste can be stored prior to processing, and annual throughput is up to 17,500 tonnes per year. During the site visit, NRW officers observed that the composting pad was at or near capacity for storage and treatment, and the operator confirmed that oversized piles had been used to accommodate a seasonal influx of green waste. Given the limits imposed on process/stockpile height, width and storage duration by <i>GN16</i> (as outlined above in IC2), the operator needs to implement an upper limit for the storage and treatment area, above which further inputs of waste to be composted will be rejected. ACTION: Operator to amend <i>Fire Prevention and Mitigation Plan</i>, and <i>Composting SOP</i> to explicitly include an upper limit of storage volume for the composting pad, above which further inputs of waste to be composted will be rejected. The submitted documents do not demonstrate compliance with the requirements of BAT4b and IC2.
IC7	<u>Handling and transfer of waste (BAT 5)</u> The handling and transfer of waste material for the composting process is detailed throughout the <i>Composting SOP</i>. The submitted documents demonstrate compliance with the requirements of BAT 5 and IC7.
IC8	<u>Selection and suitability of waste input (BAT 33 – Biological Treatment)</u> Also addressed in IC4 concerning waste acceptance, there are prescribed lists for input material which are used as a basis for pre-acceptance. This is detailed in Table 1 of the <i>Composting SOP</i>, including rejection criteria (i.e. presence of physical contamination, invasive non-native species, toxic plants and pesticides). The submitted documents demonstrate compliance with the requirements of BAT 33 and IC8.

IC9	<u>Emissions to water and water usage (BAT 35c – Biological Treatment)</u> As part of the quality control process, and to minimise the generation of leachate, the <i>Composting SOP</i> outlines the moisture monitoring procedures, including a quality index requiring that a squeeze test not generate excessive moisture. The document also outlines corrective actions to be taken if the squeeze test indicates excessive moisture generation in the pile. The composting piles inspected during the site visit appeared wet, with a dense structure. This may be a result of the finely shredded input material settling and reducing the porosity of the pile, preventing the shedding of water. The operator should consider including coarser, less fine material to reduce trapping of water and minimise the generation of leachate within the composting piles. The operator stated during the site visit that they had never been required to supplement the composting piles with water but specify in the <i>Composting SOP</i> the acceptable sources to be used if ever needed. During the site visit, it was observed by NRW officers that run-off from stockpiles is channelled from the composting pad into a leachate pond. The operator pointed out a missing kerb/speed bump at the edge of the composting pad, indicating it was intended to prevent run-off leaving the composting pad and was due to be replaced. The submitted documents demonstrate compliance with the requirements of BAT 33 and IC9.
IC10	<u>Emissions to air monitoring and control of key waste and process parameters (BAT 36 – Aerobic Treatment)</u> The operator referred to the <i>Composting SOP</i> as evidence for this IC. This document refers to the mixing of different types of green waste (wood/leaves) to balance the C:N ratio and moisture within the composting input material. Reference to particle size is presented in the context of final sorted grades for use and detail is included on monitoring the physical characteristics of the batch during the composting process, including temperature, moisture, porosity, and dimensions of the windrow. Although the key waste and process parameters from BAT 36 are included in the submitted documents as outlined above, they are not presented in the context of adverse environmental impacts that may arise from inappropriate management of these parameters e.g. high nitrogen leading to excess ammonia formation or low porosity creating anaerobic conditions within composting piles. ACTION: Operator to submit document explicitly outlining actions to be taken if the key waste and process parameters identified in BAT 36 are out of specification in the context of environmental performance. The submitted documents do not demonstrate compliance with the requirements of BAT36 and IC10.
IC11	<u>Diffuse emissions to air (BAT 37b – Aerobic Treatment)</u>

The *BAT IC Response Summary* provided by the operator states that “the procedures follow the layout pattern developed over several years . . . monitoring has shown the layout is optimal with regard to wind direction.”

There is further reference in the *Composting SOP* to weather monitoring and record keeping. Apart from watering to maintain moisture levels (for quality control) there is no indication of any corrective action that may be taken in adverse weather conditions e.g. spraying of composting piles and treatment pad to minimise dust generation or limiting the turning of piles during high winds.

ACTION: Operator to submit document explicitly outlining adaption of operations to meteorological conditions, to prevent and reduce diffuse emissions to air of dust, odour and bioaerosols.

The submitted documents do not demonstrate compliance with the requirements of BAT37b and IC11.

IC12

Implementation of ‘TGN M9 Environmental monitoring of bioaerosols’

The operator is currently monitoring bioaerosols using the TGN M9 procedure, as evidenced by previous permit compliance submissions and a recent summary as part of a requested to revise the frequency of bioaerosol monitoring.

Conclusion of Improvement Condition Technical Review

The submitted documents and subsequent site visit demonstrate compliance with IC3, IC4, IC7, IC8, IC9, IC12 and the associated BAT conclusions. Where actions are outlined under the requirements for IC2, IC6, IC10, IC11 and the associated BAT conclusions, further evidence is required to demonstrate compliance. The requirements of IC5 are not currently applicable but will need to be completed if in-vessel composting resumes.

Note that this review has been undertaken in the context of the submitted documents relevant to the waste treatment composting activity, and not the waste operations at the remainder of the site. These will be followed up separately.

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

What are suspended scores?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry and Waste action criteria (used in section 1 and 2):**A: Permitted activities**

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law
- assessing customer service satisfaction and improving our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within 20 working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 – 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.