

Compliance Assessment Report CAR_NRW0037066

Permit being assessed: AB3096CP.

For: Lamby Way Open Windrow Composting Facility, held by Welsh Water Organic Energy (Cardiff) Limited

At: Lamby Way, Rumney, Cardiff, CF3 4EQ.

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

On 17/09/2020 between 10:00 and 12:15.

Parts of permit assessed: Monitoring

NRW Lead Officer: Geraint Harris, accompanied by Julie Tate.

Report sent to: Adrian Thomas, Contract and Relationship Manager on 22/10/2020.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
F1 - Amenity - Odour	Assessed (A)	

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?

No action required.

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

Welsh Water Organic Energy

Permit EPR-AB3096CP

As a result of the significant number of odour complaints within the Rumney area over the

summer months, NRW have been conducting site visits of all the permitted facilities under their responsibility to try to ascertain the source.

On the 11th August 2020 there were several odour related complaints reported to the Incident Communication Centre of NRW. I invited Adrian Thomas of Welsh Water to accompany me on my investigation within the Rumney area. During the investigation we were able to notice a weak composting odour coming from the site. It is important to note that this was not the only odour noticed during the day with a stronger waste like odour more prevalent in the area. However, because the compost odour was noticed off the site boundary a review of the sites processes was required.

On Thursday 13th August I was invited by Welsh Water to attend the composting site to witness the turning of a windrow. Within the composting process it is the turning of windrows that has one of the greatest potentials to emit odorous emissions. It was therefore deemed important to witness this process at the site to gain a better understanding of the composting process and to eliminate the site as a source for the odour complaints in Rumney. During this visit there were no malodours identified, only those attributed to good composting processes. We then proceeded to walk the site perimeter. A very faint composting odour was noticed but very quickly dissipated. During the visit I did notice that the size of the windrows appeared to be far in excess of the guidance recommendations for open windrow composting. Following the site visit I requested more information about the composting process and procedures. Following a detailed reply from Welsh Water and Freeland Horticulture a meeting was arranged between NRW, Welsh Water and Freeland Horticulture.

The site visit commenced at 10:00 on the 17th September 2020. The following people were in attendance:

Karl Pascoe Freeland's Operational Manager

George Longmuir Managing Director Freeland Horticulture

Steve Holding Freeland Horticulture

Dr Eric Crouch Freeland Horticulture

Andrew Williamson Cardiff County Council

Adrian Thomas Contract and Relationship Manager

Adam Lang Freeland Horticulture

Julie Tate Senior Specialist Advisor Natural Resources Wales

Geraint Harris Senior Officer Natural Resources Wales

Julie Tate, a Senior Specialist Advisor for NRW with vast knowledge and experience of biological processes, was invited to attend the site to help undertake a review of the composting process. Following the brief introductions and prior to commencing the site tour Julie Tate reiterated the following points:

- It's important to understand that the permit and following industry guidance sets the

standards on site not the QP/PAS.

- The sites standard operating procedures is based on their PAS accreditation – the PAS is just the end product standard for compost. Although the site must align with the relevant quality protocol, these protocols main focus are not permit compliance. They are an end of waste status tool only. It is mainly the permitted waste types that align between permitted and those listed in the QP.
- Permits are managed based on applying all appropriate measures regardless of whether an issue occurs or not – as these are protective measures.

Steve Holding of Freeland Horticulture then led the tour of the site and went into detail about each process of their composting process at their Cardiff site. The following areas were discussed:

- Green waste acceptance, inspection and rejection processes
- Batch formation including time scales, windrow construction and content
- Carbon to Nitrogen ratios
- Monitoring routines
- Sanitation and stabilisation monitoring and identification
- Windrow width and Height
- Monitoring equipment
- Compost Manger
- Oxygen Levels.

Some of the more pertinent aspects discussed included the carbon to waste ratio where it was explained that they achieve a good mix through careful selection of the kerbside and CA based waste. It was explained that consistency with regards to carbon-nitrogen ratio and windrow/batch size is key to the open windrow composting process. The windrow dimensions were seen as a contentious issue since they exceeded the guidance recommended sizes. However, in Welsh Water's email response dated 20th August and during the site visit, Mr Holding reiterated Freeland's reasoning for larger windrow sizes. These were as follows:

- Windrow/batch sizes need to be substantial enough in size to maintain good insulation against the weather conditions across the seasons.
- In the wet and cold conditions the batch/windrow needs to be adequate enough in size to offer enough insulation to keep out the rain, prevent saturation and maintain the temperature and moisture levels required for consistent composting.
- In the hot and dry weather conditions the windrow/batch benefits from an adequate size. This helps prevent the compost material from drying out to quickly which in turn maintains moisture levels in particular and also the control of temperatures.
- Wet windrow/batch = high moisture levels/low temperature levels decreased O₂ levels/increased C₀₂ levels which would result in potential odour issues
- Dry windrow/batch = low moisture levels/inconsistent temperature levels impacting on sanitization, stabilization and the trend between O₂-C₀₂.

Freeland's were able to demonstrate good operational control and monitoring of the windrows and subsequent composting process that they have successfully mitigated the

issues relating to oversized windrows. However, they were told not to exceed the current windrow sizes on site (8metres wide, 4-5 metres high).

When asked whether they consider using oversized or wood chippings at the base of the windrow to support aeration Freeland's stated that they achieve good aeration via the creation of a homogeneous structure throughout the windrow. Additionally, any base layer would be destroyed upon commencement of the first windrow turning.

Freeland's have recently employed the use of Compost Manger to help them gain control of the composting process. As part of this process oxygen probes were used to measure the oxygen concentrations within the core of the windrows. Dr Eric Crouch explained the process and presented the oxygen probe on site. The new onsite probe is 1.2 metres in length, however there is the option of sourcing a larger 2.2 metre probe within the company. Once back in the office he was able to provide an oxygen/CO2 and temperature profile of a windrow up to a windrow depth of 2.2metres. The profile displayed a falling oxygen content towards the inner core of the windrow. This indicates that aerobic conditions are deteriorating and healthy oxygen levels are at risk of not being maintained towards the centre of the windrow. However, the oxygen content was seen to be very low at the maximum intrusion length and so it is essential that windrow sizes don't exceed their current dimensions.

NRW are pleased to see Freeland's have expanded their monitoring equipment onsite to include oxygen probes, compost manager and a weather station. Furthermore, the correct and most recent odour management plan was now onsite and being used. During the visit there were no offence odours witnessed and only a mild sweet compost like odour associated with good composting.

NRW received the latest Odour Management Plan from Welsh Water for the Compost facility at Lamby Way. The plan has been reviewed and accepted. Please ensure this is used at the site and is updated when anything on the site changes.

The quarterly returns (Q3) for WWOE Lamby way have been accepted.

End.

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.