

Compliance Assessment Report CAR_NRW0042514

Permit being assessed: LP3439HM.

For: Roath Dock Treatment and Recycling Centre NRW/EPR/LP3439HM/V003, **held by:** Castle Waste Services Limited

At: Roath Dock Transfer Station Old Clipper Road , Roath Dock, Cardiff, CF10 4LX.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 25/09/2023.

Parts of permit assessed: Emissions and monitoring, Waste Returns.

NRW Lead Officer: Dale Padfield.

Report sent to: Dave Humphriss, Technical Director, on 26/09/2023.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor (Suspended)	3.1.2
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IR4B - Information - Reporting	Assessed (A)	

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

Total non-compliances recorded	Total non-compliance score
5	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
IR3A	Ensure compliance with AOX ELV is achieved by August 2024.	31/08/2024
IR3A	Ensure compliance with Cr ELV is achieved by August 2024.	31/08/2024
IR3A	Ensure compliance with Ni ELV is achieved by August 2024.	31/08/2024
IR3A	Ensure compliance with Pb ELV is achieved by August 2024.	31/08/2024
IR3A	Ensure compliance with Cr(vi) ELV is achieved by August 2024.	31/08/2024

Compliance 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

Castle Waste Services

EPR/LP3439HM

This compliance assessment report (CAR) details the following:

- Castle's waste and sewer returns for quarter 2 (April – June) for 2023.
- An update regarding the emissions to sewer and associated monitoring

The waste returns were received on the 31st of July 2023. All accepted EWC codes were compliant with the permit. The waste returns are accepted.

Emissions to sewer Quarter two (April – June) 2023.

The results for parameters that were in breach of the BAT AELs are detailed in the table below. A schedule 5 notification was submitted alongside the S1 form. All other parameters were within the permitted ELVs.

Parameters/Substances	Result	BAT AEL
AOX	2.38 mg/l	1 mg/l
Cr	1.82 mg/l	0.3 mg/l

Ni	1.605 mg/l	1 mg/l
Pb	0.76 mg/l	0.3 mg/l
Cr(VI)	0.217 mg/l	0.1 mg/l

As stated within CAR_NRW0042048 NRW assess exceedances of different determinants separately and cannot consolidate them together. We do however consolidate into reporting quarters. Therefore, a noncompliance score is being issued for each of the parameters in exceedance of the BAT AEL and immediately suspended as agreed. Consequently **5 x Category 3 non-compliances are being issued against permit condition 3.1.2**. As mentioned in CAR Form CAR_NRW0040821 any exceedances of the BAT AEL's will be scored and suspended until August 2024 where, at this point, Castle will have made the necessary improvements to their treatment plant, or the suspension will be lifted.

Update regarding effluent monitoring

A virtual meeting was held on the 08th of August 2023, to discuss Castles progress with their effluent monitoring. Castle have been sending duplicate effluent samples for external metals analysis at a UKAS accredited laboratory. A comparison of the external analysis with the internal analysis has revealed some inconsistencies. Internal analysis is consistently providing higher results than those reported via the external lab. Castle believes that their internal analysis method is not providing accurate data due to interferences occurring during analysis via atomic absorption spectroscopy (ASS). Castle have stated that the external lab results (analysis conducted via ICP-MS, to BS EN 17492-2) indicate that the BAT AELS are being achieved for all metals. Currently, Castle are planning improvements on their ETP to ensure compliance with the BAT AELS by August 2024. This included a project to install a final 'polishing' step to the ETP. However, in light of the recent data, this may not be necessary due to current ETP meeting the BAT AEL requirements. Castle continued to duplicate samples during August 2023, a review of the data will be conducted to inform how best proceed. NRW have been invited to review the data, a site meeting has been organised for October 2023 and NRW are currently awaiting a preview of this data.

As discussed during the meeting, Castles proposal for the chromium monitoring was put forward to NRW's monitoring network for discussion. The initial discussion concluded that more information was required, namely the methods of analysis and to what standard, Castle were utilising for their Chromium (total and hexavalent) and metals analysis. This was provided by Castle and discussed within the monitoring network. This revealed that Castle were not using the standards required and stated within the permit.

As was discussed during the meeting, to accept the proposal for reduced chromium 6 (Cr vi) sampling – utilising results for total chromium in its place, NRW would need to be assured of the quality of the total chromium analysis. To achieve this, Castle would need to ensure total chromium is measured using one of the standards referenced within the permit.

Further to this, NRW would expect that any monitoring required by the permit, is at a minimum, conducted to one of the relevant BS EN standards as specified within the permit. Ideally, this should be done to MCERTs standards with certification and accreditation as appropriate, as required by permit condition 3.5.1. However, in-house monitoring may be accepted providing the methods used are based on the relevant standards, and quality control and quality assurance is demonstrated to an equivalent standard of that set out in ISO 17025. Any deviation from MCERTs should be formally assessed by NRW and where deviations are agreed, should be

varied into the operating techniques stated within the permit.

The only in-house monitoring being conducted by Castle is for the heavy metals, which is currently not being conducted to an approved standard. Castle are conducting in-house monitoring to help them achieve the daily monitoring frequency required by the permit. It's appreciated that to meet this frequency utilising external analysis is an onerous task, however, Castle themselves have identified that in-house analysis is not providing accurate data. As the regulator, NRW must ensure that any monitoring and subsequent data submitted as part of the permit is accurate and reliable and representative of actual emissions. This allows for an accurate assessment to be made against any emissions limits ensuring the environment is protected.

It is understood that during the initial effluent analysis assessment as part of the waste treatment BAT review, that Castle used in-house analysis to assess the concentrations and stability of the heavy metals within the effluent discharge. As the in-house analysis has now been found to be providing unreliable and inaccurate data, NRW proposes that a re-assessment of the heavy metals concentrations and stability is made. NRW may allow a reduced monitoring frequency in line with footnote (1) of BAT-7 ~ '(1) Monitoring frequencies may be reduced if the emission levels are proven to be sufficiently stable'. The results would also need to demonstrate that concentrations are sufficiently below the BAT-AELS, if the results are close to or exceed the BAT-AELS, no deviation from the frequency will be permitted.

To further support any decision on the frequency of monitoring, NRW request that Castle also calculate the annual load released to sewer for each metal. Further information on calculating annual loads can be found in the technical guidance note M18 ([M18: Monitoring of discharges to water and sewer \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)). This will contribute to NRW's assessment and further inform any decision to allow reduced monitoring frequencies for the permitted heavy metals. The data used for any calculations, including concentration stability, should be obtained using an accredited method and laboratory and should include a sufficient quantity of data points to ensure the figures obtained are truly representative and account for variability in on site operations, such as variability in waste streams treated etc.

It is understood that Castle have already had some external accredited heavy metals analysis conducted as part of an on-going investigation into discrepancies identified by castle between internal and external analysis. However, it's unclear how much data Castle have gathered as part of this investigation, and it may be that NRW require further data to be gathered to support any decision on reducing monitoring frequency. NRW will need to be satisfied that the risk of reducing the monitoring frequency is appropriately evaluated and supported with sufficient and robust evidence.

If Castle can demonstrate that heavy metal concentrations are sufficiently stable and low, and annual loads of released metals are reasonable, NRW will then consider relaxing the monitoring frequency for the heavy metals. Should Castle fail to meet the criteria for reducing the monitoring frequency of the heavy metals, further discussions will be held on the monitoring requirements and quality of monitoring expected by NRW.

Further to the above, as some short fallings have been identified with the monitoring, an operator monitoring assessment (OMA) will be organised to assess the quality and reliability of monitoring conducted on site. Further information will be provided on OMA's, including guidance on how to prepare and this will be discussed during the planned site visit in October 2023, after which, an assessment date will be agreed.

For NRW to make an assessment to reduce the monitoring frequency of the heavy metals, Castle are advised to;

1. Submit a proposal detailing the monitoring standards (including accreditation status), quantity of samples to be taken and the period of time these samples will be taken, with justification on how this

will provide representative data.

NRW will assess the suitability of this proposal, providing NRW agree with the proposal, Castle should then undertake the proposed monitoring.

2. Upon completion of the monitoring programme, Castle should present a report of their findings and for each parameter detail the stability, minimum and maximum concentrations detected, average concentrations, comparison of concentrations against the BAT-AELs and annual loads (expressed as Kg/year) along with any further supporting data.

NRW will then assess Castles findings and determine if a reduced monitoring frequency for heavy metals is appropriate.

Further points of discussion

Castle are planning to extend the permit boundary which will require a permit variation, this may also provide an opportunity to align the permitted monitoring frequencies with any newly agreed frequencies that have been approved by NRW since the last permit was issued.

Castle have sourced a UK based laboratory to conduct AOX analysis. Castle have stated that the analysis results so far look to be promising, with the BAT AELS being achieved. Further sampling was on-going during previous discussions held with NRW and this data will also be reviewed to assess as to whether a reduced monitoring frequency can be applied.

Castle are considering the purchase of an ICP-MS analyser which would be housed at their Ilkeston installation. This would allow Castle to adopt / implement analytical methods based on the standards stated within the permit for the metals analysis. If this project goes ahead, NRW may consider allowing Castle to report in-house analytical data, providing methods are based on the relevant standards, quality of data and quality control equivalence to that of an 17025 accredited laboratory can be demonstrated, this would also be subject to an OMA and if agreed may require variation into the operating techniques of the permit.

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.

If your assessment result in Section 1 is suspended, what does this mean?

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 compliance criteria (used in section 1 and 2):

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition 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 twenty 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 to 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.