

Compliance Assessment Report CAR_NRW0039332

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 carried out: Report/Data Review, Reason: Routine.

On 28/01/2022 between 09:00 and 12:00.

Parts of permit assessed: Operating Techniques and Reporting

NRW Lead Officer: Geraint Harris.

Report sent to: Dave Humphriss, Technical Director on 10/02/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
B5 - Infrastructure - Plant and equipment	Assessed (A)	
C3 - General Management - Materials acceptance	Assessed (A)	
C4 - General Management - Storage, handling labelling and Segregation	Action only (X)	
D2 - Incident Management - Accidents, emergency and incident planning	Assessed (A)	
E4 - Emissions - Sewer	Assessed (A)	
E5 - Emissions - Waste	Action only (X)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Assessed (A)	
H1 - Resource Efficiency - Efficient use of raw materials	Assessed (A)	
H2 - Resource Efficiency - Energy efficiency	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?

Criteria	Action needed	Complete by
C4	Castle should commence sticking non-hazardous empty stickers on these containers. Furthermore, they should either remove the old stickers or mark them in way that shows they	31/03/2022

Criteria	Action needed	Complete by
	are no longer applicable to those containers.	
E5	Provide NRW with evidence that the previously mentioned policy document regarding omitting certain EWC's from the permit has been created. Due 31st March 2022.	31/03/2022

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

Castle Waste Services Limited

EPR/LP3439HM

Castle Waste Services was visited by Senior Officer Geraint Harris of NRW on the 28th January 2022. The visit was undertaken for a number of reasons, these include:

- IC3 Fire Prevention and Mitigation Plan
- Improvement conditions including BAT AELs and indirect discharges
- HSE report (September 2021):
- Review of dust management at the site
- Site improvements
- Condition of the hardstanding
- Site tour and inspection

Site Improvements

Castle Waste have made several improvements to their site over the last year. The original filter press and its associated infrastructure have been removed. These two filter presses were obtained as part of the legacy infrastructure when Castle acquired the treatment site in 2010. These presses have been replaced with a new turnkey 1500x1500mm membrane filter press, complete with support (& access) gantry, rain cover, close coupled hydraulic power pack and close coupled control panel. Upon inspection of the new infrastructure, it was evident that the filter cake was considerably drier than what was previously obtained. In Castles own words "This improvement will mostly be delivered by a reduced moisture content provided by the increased efficiency of the process and the provision of membrane filter plates and the associated squeeze function. Further to that, the addition of "bomb doors" beneath the press will serve to prevent any liquid leaks from entering the cake bin. It is anticipated the filterpress could reduce the moisture content by up to 10%. A reduction in moisture content serves to deliver an environmental benefit by reducing the quantity of water (moisture) transported to and disposed by landfill."

Furthermore, the new system will improve the process efficiency since according to Castle "the new filterpress has a larger capacity for solids than the existing presses. Upgrades to the slurry delivery system will also

provide a reduced cycle time. It is also anticipated that the improved quality of the residues, and the automated discharge system will decrease the discharge time.” Furthermore, the new set up means that the filter cake is now captured within a skip and not on the hardstanding. Consequently, the site should see improvements with its housekeeping and dust management going forward.

In addition to the filterpress improvements, Castle have undertaken decommissioning and removal of the following infrastructure in Yard 1: old silo and slurry tank, Alibert Tank, Tank 9 and Tank 5. Consequently, the large shed used to house the majority of this infrastructure is predominantly empty. Upon visiting this area, the hardstanding will need attention in certain areas and Castle have stated that they have planned to address this soon. These improvements mean that there is more space to store the containerised waste destined for treatment at the Castle site. This should then have a benefit of providing more space in yard 3 for the segregation of other hazardous waste destined for off site disposal.

The new Filtrate Bath located near the new filter press was observed. Although this has overflow prevention, Castle were asked to install a bund around this bath to contain any future leaks that may occur. Going forward Castle plan on undertaking the following:

- Removal of additional legacy items in press house – electrical and out of use pipework
- Resurfacing of press house for container storage – Design work Feb 2022
- Removal of additional legacy infrastructure in tank farm Q1 2022
- Surface water harvesting

NRW are pleased to see the improvements made on site so far. The removal of legacy infrastructure has improved the housekeeping and with the ongoing improvements the operation should be more efficient and cleaner.

HSE Report

On the 6th September 2021 the Health and Safety Executive (HSE) visited Castle Waste to assess how the company was managing health and safety across its business. Following their visit, the HSE reached out to NRW over a few environment related observations. Prior to NRW’s visit in January 2022, Castle emailed the HSE with a response addressing and closing out the concerns highlighted by the HSE. It was therefore decided to both discuss and review the changes made as a result of the HSE’s intervention.

During my visit, we visited the Shed in Yard 1, this was an area highlighted by the HSE that needed some attention. Castle, have since removed the old tanks and infrastructure from this area as part of their ongoing site improvements. As already mentioned, Castle are planning on resurfacing the hardstanding within the shed in Yard 1 in 2022.

Castle were requested by the HSE, to produce a segregation policy for incompatible wastes received in containers that include IBCs, drums and any other transportable containers that arrive at their site. As a response Castle’s Storage and Segregation Procedure (2.3.1.5) has been revised and updated with the latest document, version 3, being issued to all site staff for training purposes.

This revised procedure details existing but temporary arrangements ahead of the relocation of the containerised storage area as detailed below. The design of the new storage area will take into account the storage and segregation requirements of the site. The procedure will be reviewed as part of the relocation process. The shed located in Yard 1 will serve to provide a suitable undercover store for containerised wastes. The containerised waste storage area will be purposely designed to deliver suitable storage bays with adequate segregation for the wastes accepted at the site in addition to providing a reception and quarantine area.

Signage has been designed for tanker offload points and containerised waste storage areas. This signage used chemical hazard diamonds to identify the types of chemicals stored or handled in particular locations. Signage requirements for containerised waste storage areas will continue to be revised as the redevelopment of the storage area in Yard 1 progresses. In addition, site boundary signage has also been reviewed in order to meet the requirements of The Dangerous Substances (Notification and Marking of Sites) Regulations 1990.

During their inspection, the HSE, found Yard 3 to contain numerous IBCs and drum wastes labelled oxidising chemical wastes. These were not adequately segregated from other flammable and corrosive wastes. According to Castle these drums /IBC's were not in fact flammable despite having flammable warning labelling. Castle do place their own labels (following lab identification analysis) onto waste containers, however according to the HSE these were small, faded and therefore difficult to read. According to Castle's revised Storage and Segregation procedure (2.3.1.5) the following processes are active:

- Castle currently operate under a self-imposed restriction whereby no waste material may be accepted to site with a flash point below 60°C. All waste enquires are screened at the pre-acceptance stage in line with company procedure. Any waste identified as flammable during waste acceptance analysis will immediately initiate company non-conformance and waste rejection procedures.
- Castle Environmental Cardiff facility is permitted to accept waste types which may assigned the flammable solids classification, at this time provision has not been made to facilitate a dedicated flammable storage area in line with current legislation and guidance. Hence, Castle currently operate under a self-imposed restriction whereby no waste material classified as flammable may be accepted to site.
- Wastes accepted at the Cardiff site are hazardous due to other properties, such as corrosivity (and are often classified as such for transport) and have oxidising properties but are not formally classified as oxidisers. In this instance the wastes are stored in accordance with their corrosive properties. Not all materials that are considered to be oxidisers will be compatible with each other. Therefore, further segregation may be provided based on the wastes acidic and/or alkaline nature.

Section 3 of Castle's Storage and Segregation Procedure (2.3.1.5) states: "All containers should be clearly labelled with suitable, accurate hazard warning signs such as those used for the transportation of dangerous goods. Where this is not the case labels should be applied before placing into storage. Prior to moving containers into storage all erroneous labelling is removed or struck out and the container is visually inspected to ensure it is in good condition and has well-fitting lids, caps or valves which are secure." It is important that such processes are abided by to ensure there are no storage, compatibility and transport issues going forward. **Both the acceptance of flammable material and the labelling of containers are an area that will be inspected by NRW on future site visits.**

In Yard 2, washed out empty containers are stored prior to reuse or disposal/recovery. During the site visit it was noticed that a lot of old hazardous labels were still on the containers. Castle stated that they like to keep the old stickers on the containers so that the onward sites can identify the types of material that the containers once stored. However, it is important that these containers are identified as empty.

Action: Castle should commence sticking non-hazardous empty stickers on these containers. Furthermore, they should either remove the old stickers or mark them in way that shows they are no longer applicable to those containers.

The HSE told Castle that "with the assistance of a competent person(s) produce a tank maintenance plan for all tanks located at the premises of Castle Environmental along with timescales for the examination of each including associated pipework, fittings as well as related access ladders and platforms". Castle have since produced written Schemes of Examinations (WSE) for Tanks 1-4 along with a schedule of inspections for the

coming years. These WSE's were compiled by Plant Reliability Solutions Ltd (PRSL) taking account of the relevant standards highlighted by the HSE. PRSL have also advised Castle on the inspection schedule. The inspection schedule is based upon the previous inspection data and initial inspections carried out by PRSL. An ultrasonic thickness examination was carried out on the following tanks that showed some corrosion and pitting Tank 1, Tank 2, Tank 3 and Tank 4. In addition to this Castle have also undertaken inspections and provided reports for the plastic acid tanks, TF13, 14 and 15. Plant Reliability Solutions Limited undertook each of these inspections and provided Castle with a series of recommendations. Upon my site visit Castle stated these have all been closed out. Castle must ensure that all inspection schedules are adhered to in the Tank inspection 5 year rolling plan.

Permit Variation and Improvement Conditions

A variation to the site permit was issued in 2021. This variation was completed as a result of the publication of the Waste Treatment Bref in 2018 which is due to come into effect in August 2022. This newly varied permit consists of numerous improvement conditions which have a February 2022 deadline. However, Improvement condition IC3 relating to the implementation of a fire prevention and mitigation plan had a 29th October 2021 deadline. NRW received this plan on the 29th October 2021.

IC3 - Fire prevention and mitigation plan

IC3 states that the Fire prevention and mitigation plan (FPMP) must be produced in line with the standards set out in FPMP guidance. Sections 2, 3 and 4 explain the scope and applicability of the FPMP. Castle have reviewed this guidance and have concluded that it does not apply to the activities carried out at the site. The applicability of the guidance was discussed with NRW's permitting officer during the determination of the recent variation. During these discussions it was stated that the IC3 would be applied to the permit due to a selection of waste types that the site is permitted to accept which could be combustible (as defined by EWC code). It was deemed reasonable that IC3 could be closed out by reviewing the list of wastes and providing a declaration that these would not be accepted until suitable controls were implemented and agreed to by NRW. The permit may be varied to remove the EWCs at a later stage where deemed appropriate. Castle have therefore reviewed the EWCs that are currently permitted to be accepted to the site under Environmental Permit LP3439HM. Table 1 in Appendix 1, at the end of this CAR Form details the EWCs that include wastes that are combustible. Castle are willing to undertake a voluntary exclusion of all the EWCs other than two which may be used for specific waste types. The two EWC codes are:

- 15 01 02 plastic packaging, and
- 15 01 05 composite packaging

These two codes are routinely used to describe empty containers such as Intermediary Bulk Containers and drums. These are a waste type that can be accepted to the site as part of a full load of other containerised wastes. In this event, the empty containers are stored at the site before being transferred to a suitably permitted facility for disposal or recycling. The containers are in a complete state. They do not undergo any waste treatment operations and are simply stored in lanes prior to removal. These containers, located in Yard 2, were observed during the site visit on the 28th January 2021 and found to show minimal fire risk. The empty containers generated from the site's own activities were seen being washed out in Yard 1 prior to being sent to Yard 2 for storage. Furthermore, Castle invited the fire service on site to give them a familiarisation of the site and to view the various wastes. During this visit there were no inconsistencies found by the fire service.

NRW will accept this proposal being suggested by Castle Waste, providing that they produce a policy document that states that the site will not accept the EWCs listed in Table 1, other than the two EWCs listed above and only under the above-mentioned restrictions.

Action: Provide NRW with evidence that the previously mentioned policy document has been created. Due

31st March 2022.

Dust Management

An incident where dust from Castle's site was found along Old Clipper Road on Thursday the 10th June 2021 is detailed in CAR_NRW0038432. During this most recent visit the area in question looked significantly better. Castle informed me that they have increased the use of a third-party road sweeper for the site and have increased the use of an inhouse water bowser to reduce off site dust emissions. Furthermore, Castle have developed a dust management plan for the site. This was received on the 31st January and has been reviewed and accepted by NRW.

Accident Management Plan

It was noticed during the site visit that several operations occur along Old Clipper Road. This is a private roadway without through traffic, located within the dock complex that connects Yards 1, 2 and 3 at the site. Such operations include the transport of containerised waste between yards 1 and 3 and the offloading of containerised waste from curtain sided lorries into yard 3. As it stands these operations occur outside of the Castle's permitted boundary. However, operating along this road has always occurred at the site due to the constraints within the permitted boundary. During the visit I wanted to ensure that in the absence of an alternative route, Castle, have adequate risk assessments and control procedures to prevent a spillage to sewer. As a consequence, Castle forwarded to NRW the following documents:

- 2.3.1.10 Accident prevention plan
- 2.3.1.14 Cardiff Spillage Procedure
- 1.9.1.3 Cardiff Waste Acceptance

Upon reading these documents it is essential that both spill kits are fully stocked, and all relevant staff are trained on how to use their contents. Please ensure all drains are covered when handling wastes in their vicinity. Castle must use BAT to ensure containment of "in-process" materials being moved along the road.

Groundwater Analysis

Permit condition 3.1.3

Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

The results of this monitoring were received on the 31st January 2022 as required from the above permit condition. The results and subsequent report will be reviewed in due course.

Returns

Q4 Sewer monitoring Returns

The results for Q4 sewer discharge monitoring are compliant with the permit. These results are accepted.

Waste returns Q4

Waste in = 4154.382 tonnes

Waste out = 1127.051 tonnes

Annual Returns

Energy:

Castle's primary electricity consumption has decreased significantly (25%) when compared to 2020.

However, when reported as a ratio against a specific output, in this case 100,000 hours worked, the 2021 figure (298.54MWh) is slightly higher than the 2020 figure (287.36MWh). According to Castle this is a result of less night-time operations over the year combined with reduced waste inputs. The reported primary energy from gas oil consumption is broadly similar to the previous year, although the volume consumed is higher. This is considered to be due to an erroneous conversion the previous year. Due to increased hours worked, the ratio against a specific output has increased in 2021.

Waste:

The total quantity of waste removed from the site in 2021 was 4544 Tonnes which is 16% below the 2020 quantity. This is due to the reduction in waste inputs into the site, in particular some wastes that were managed by the site transfer station.

Raw Materials and Water Consumption:

NRW are pleased to see that raw materials usage was zero for 2021, which is an improvement from 2020 (27.72 tonnes). Castle have achieved this by utilising wastes in place of raw materials such as hydrated lime. Water consumption for 2021 was estimated to be 4477.7m³. This value has been attained using the same assumptions as previous years. It represents a decrease from the previous year (5646m³). The decrease is effectively due to the reduced operation of the construction business. When expressed per unit of hours worked it represents an increase in the previous year consumption. However, Castle have employed measures to try to recycle water, including the use of liquid effluents as a replacement for water when making up alkaline slurries. Furthermore, A project to improve surface water harvesting will also be undergoing concept design with commencement in 2022/23.

Appendix 1 – Table 1 **List of EWC Codes to Be Removed From Castles Permit**

Table 1: EWC codes currently permitted by Environmental Permit LP3439HM which could be considered combustible.

EWC	Description
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 04	waste plastics (except packaging)
04 02	wastes from the textile industry
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres

07 02	wastes from the MFSU of plastics, synthetic rubber and man-made fibres
07 02 13	waste plastic
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 05	plastics shavings and turnings
15 01	packaging (including separately collected municipal packaging waste)
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 05	composite packaging
15 01 09	textile packaging
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 03	end-of-life tyres
16 01 04*	end-of-life vehicles
16 01 06	end-of-life vehicles, containing neither liquids nor other hazardous components
16 01 07*	oil filters
16 01 16	tanks for liquefied gas
16 01 19	plastic
16 02	wastes from electrical and electronic equipment
	Whole section
17 02	wood, glass and plastic
	Whole section
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard
19 12 04	plastic and rubber
19 12 06*	wood containing dangerous substances
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 10	combustible waste (refuse derived fuel)
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 33*	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 37*	wood containing dangerous substances
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 03 07	bulky waste

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.