

## Permitting Decisions- Variation

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We have decided to grant the variation for West Meadows Waste Recovery Facility operated by 2ZLF Limited.

The variation number is EPR/AB3904UQ/V005.

The permit was issued on 31/01/2025.

The variation is for an increase in the amount of hazardous waste that will be treated on site taking the treatment capacity above the threshold of 10 tonnes/day that requires the site to be permitted as an S5.3 activity. The site is moving from a waste operation to an installation.

The operator also applied for an S5.6 activity to store more than 50 tonnes of hazardous waste on site but withdrew that aspect of the application during the determination process.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

### Purpose of this document

This decision document provides a record of the decision-making process. It

- highlights key issues in the determination
- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account
- explains why we have also made an Environment Agency initiated variation
- shows how we have considered the consultation responses.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

## Key issues of the decision

### Scope of Application.

The environmental permit for the 2ZLF facility authorises the treatment of up to 65,000 tonnes per year of predominately non-hazardous wastes from street sweepings and road gully waste. It was estimated that approximately 5% of this waste would be hazardous in nature. The facility was permitted as a waste operation for the physical treatment of hazardous waste.

In environmental permit variation, EPR/BU3904UQ/V005, the operator has applied to increase the proportion of hazardous waste treated whilst retaining the overall limit of 65,000 tonnes of waste per year. The increase in hazardous waste treatment means that the operation will exceed the 10 tonnes/day threshold for hazardous waste treatment and require permitting as an EPR S5.3 scheduled activity. The site will move from being regulated as a waste operation to being regulated as an installation.

The operator also applied to store more untreated hazardous waste on-site which would exceed the 50 tonnes threshold requiring permitting as an S5.6 activity.

The operator therefore applied for two new scheduled activities:

- S5.3 A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment.
- S5.6 A(1)(a) Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in Sections 5.1, 5.2, 5.3 and paragraph (b) of this Section.

During the course of the determination, the operator withdrew the application for the S5.6 activity.

In accordance with the way we are currently linking in the permit (Table S1.1), the scheduled 5.3 (and S5.4) activities to their respective recovery/disposal codes, we have included two separate scheduled activities rather than one for the treatment of the hazardous waste:

- S5.3 Part A(1)(a)(ii): Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment.
  - o Relating to the R3 operation (Recycling/reclamation of organic substances which are not used as solvents).
- S5.3 Part A(1)(a)(vi): Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving recycling or reclamation of inorganic materials other than metals or metal compounds.
  - o Relating to the R5 operation (Recycling/reclamation of inorganic materials other than metals and metal compounds).

The application included no new waste streams. Only existing wastes will be treated within the facility. A number of the permitted waste streams have restrictions included in their descriptions such as "derived from highway maintenance and road sweeping only". The application also included a request to remove these restrictions.

The Environment Agency decided that removing these restrictions had the potential to significantly change the nature of these wastes and to greatly increase the potential sources of these wastes. We decided that this could not be carried out without a full and detailed assessment of the increased environmental risk from treatment of these wastes. There was the potential for additional controls to be required to manage these changed environmental risks.

During the course of the determination, the operator also withdrew the application to remove the restrictions on the origins of these wastes.

The Introductory Note to the waste operation permit stated that the operation of the site included the receipt and treatment of trommel fines. The operator was receiving trommel fines to site under the permitted 19 12 12 European Waste Catalogue (EWC) Code. In the existing environmental permit, that EWC code also had a restriction on it stating it was limited to “mineral residue from road sweeping and gully waste only”. This meant that trommel fines should not have been accepted onto site under EWC Code 19 12 12. As part of this variation, we have therefore removed the comment in the Introductory Note that the operator could accept trommel fines to site.

### **Compliance with Waste Treatment BAT-conclusions and Chemical waste: appropriate measures for permitted facilities.**

We have assessed the operator’s statements of compliance against the Waste Treatment BAT-Conclusions (referenced ongoing as ‘BAT-C’) and Chemical Waste Appropriate Measures for Permitted Facilities (referenced ongoing as ‘Appropriate Measures’).

As the environmental permit will now have an S5.3 activity for the treatment of hazardous waste, the operation must now comply with the requirements of the BAT-C. As this was not the case prior to this environmental permit variation, compliance against each BAT-C is recorded in this document.

#### Waste Treatment BAT-conclusions.

##### BAT1 (implementation and adherence to an environmental management system (EMS)).

Compliant - 2ZLF has an EMS in place, externally accredited to ISO14001 and that incorporates all of the requisite features.

##### BAT2 (improvement of the overall environmental performance of the plant).

Compliant – 2ZLF uses all the techniques required to improve environmental performance.

##### BAT3 (establish and maintain inventory of wastewater and waste gas streams).

Compliant – 2ZLF, as part of this permit variation application, has produced an inventory of wastewater composition. There are no point source emissions of waste gas to air.

##### BAT4 (use of defined techniques to reduce environmental risk associated with the storage of waste).

Compliant – 2ZLF uses, where applicable, all the defined techniques. Some of these, such as separate areas for storing packaged hazardous wastes are not applicable as 2ZLF does not receive waste in that form.

##### BAT5 (use of handling and transfer procedures to reduce environmental risk associated with these operations).

Compliant – 2ZLF operates procedures using technically competent persons to carry out these operations.

BAT6 (monitoring of key process parameters at key locations).

Compliant – 2ZLF has submitted monitoring data for defined parameters on waste water exiting the effluent treatment process.

BAT7 (monitoring of emissions to water with at least the frequency given and to the standards defined).

Compliant – 2ZLF has demonstrated that they can carry out the monitoring and the defined frequencies are included in Table S3.1 of the permit.

BAT8 (monitoring channelled emissions to air in accordance with defined standards).

Not Applicable – 2ZLF has no channelled emissions to air.

BAT 9 (monitoring diffuse emissions of organic compounds to air from regeneration of spent solvents and other defined operations).

Not Applicable – 2ZLF does not regenerate spent solids or carry out any of the defined operations.

BAT 10 (periodic monitoring of odour using defined methods).

Compliant – This requirement is restricted to cases where an odour nuisance at sensitive receptors is expected and/or been substantiated. 2ZLF has had no substantiated odour complaints during the lifetime of the environmental permit. Although the amount of hazardous waste being treated will increase due to this variation, the removal of the S5.6 storage activity from the application means no more untreated hazardous waste will be stored on site than currently permitted reducing the risk of odour arisings impacting off-site.

BAT11 (monitoring and reporting of annual consumption of water, energy, raw materials, residues generated, wastewater).

Compliant – 2ZLF will record and report annual consumptions as required. Energy and water usage reporting will be included in the environmental permit.

BAT12 (implementation and review of an odour management plan (OMP) to prevent or reduce odour emissions).

Compliant – 2ZLF have implemented an OMP although it would have been required only if odour nuisance at sensitive receptors was expected and/or substantiated.

BAT13 (use of one or more defined techniques to prevent or reduce odour emissions).

Compliant – 2ZLF does minimise residence times for waste and will process waste that is more odorous with priority.

BAT14 (use of an appropriate combination of defined techniques to prevent or reduce diffuse emissions to air – including dust, odour and organic compounds).

Compliant – 2ZLF implements dampening, windbreaks, minimisation of drop heights, enclosure of conveyers to reduce diffuse emissions of dust. Implementation of an OMP and minimisation of odour sources is used to minimise odour. There is further discussion on the minimisation of diffuse emissions of organic compounds under the section on compliance with 'Appropriate Measures' – particularly in reference to BAT14d, the use of "Containment, collection and treatment of .diffuse emissions". BAT14 notes that depending on the risk posed by the waste in terms of diffuse emissions to air, BAT14d is especially relevant.

BAT15/16 (use of flares and reduction of emissions from flares).

Not application – 2ZLF does not use flares or flaring on site.

BAT17 (implementation and review of a Noise Management Plan (NMP) to prevent or reduce noise (and vibration) emissions).

Compliant – 2ZLF has implemented a NMP (including the elements defined). This would have been required only if noise/vibration nuisance was expected and/or substantiated at sensitive receptors. There have been no substantiated noise complaints relating to 2ZLF site activities since it became operational in 2015. 2ZLF also carried out a Noise Impact Assessment to support their conclusion that noise was not an environmental issue at off-site receptors. This is discussed further in the later section on noise.

BAT18 (use of one or more defined techniques to prevent or reduce noise and vibration emissions).

Compliant – 2ZLF carry out operational measures to manage noise and vibration such as inspection/maintenance of equipment, operation of equipment by trained staff and avoidance of noisy activities at night (BAT18b) and they enclose potentially noisy processing operations within the process building (BAT18d).

BAT19 (use of an appropriate combination of defined techniques to optimise water consumption and reduce volume of wastewater).

Compliant – 2ZLF operates a water recirculation system on site to maximise the reuse of water and minimise its discharge as wastewater. Where possible wastewater is treated onsite so it is of suitable quality to be reused within the process or used as dust suppressant. Surface water runoff from the facility yard is reused for dust suppression and firefighting if required.

BAT20 (use of an appropriate combination of techniques for the treatment of wastewater).

Compliant – 2ZLF carries out physico-chemical treatment activities such as precipitation, cohesion and pH adjustment.

BAT21 (use of each defined technique to prevent or limit the environmental consequences of accidents and incidents).

Compliant – 2ZLF has provided an Accident Management Plan demonstrating how process and infrastructure are managed and controlled in order to prevent accidents. Mitigation plans are also in place to limit any environmental consequences should accidents/incidents occur.

BAT22 (substitution of materials with waste to use materials efficiently).

Not Applicable – there is no current opportunity to replace materials used in the process with waste.

BAT23 (use of defined techniques in order to use energy efficiently).

Compliant – 2ZLF will incorporate an energy efficiency management plan within their environmental management system. Energy recording will be used to audit energy use and set key performance indicators for energy use/reduction.

BAT24 (Reuse of packaging).

Not applicable – 2ZLF do not process waste arriving packaged. There is no packaging waste generated from the receipt of wastes onto site.

BAT25 (use of defined techniques to reduce emissions to air of dust, particulate-bound metals, PCDD/F and dioxin-like PCBs).

Compliant – 2ZLF uses screens, thickeners and centrifuges for filtration/separation of materials and reduction of fugitive emissions to air. There are no point source emissions to air where cyclones and fabric filters can be used.

BAT26-28 (mechanical treatment of metal wastes in shredders).

Not Applicable – 2ZLF does not treat metal waste in shredders.

BAT29-30 (treatment of WEEE containing VFCs and/or VHCs).

Not Applicable – 2ZLF does not treat WEEE waste.

BAT31 (mechanical treatment of waste with calorific value).

Not applicable – 2ZLF does not treat mechanically waste with calorific value.

BAT32 (reduction of mercury emissions to air from mechanical treatment of WEEE containing mercury).

Not Applicable - 2ZLF does not treat WEEE waste.

BAT33-35 (biological treatment of waste).

Not applicable – 2ZLF does not biologically treat waste.

BAT36-38 (aerobic treatment of waste).

Not applicable – 2ZLF does not carry out aerobic treatment of waste.

BAT39 (mechanical biological treatment of waste).

Not applicable – 2ZLF does not carry out mechanical biological treatment of waste.

BAT40 (monitor waste input as part of pre-acceptance and acceptance procedures prior to physico-chemical treatment).

Compliant – 2ZLF assesses the composition of incoming waste as part of pre-acceptance and acceptance procedures.

BAT41 (use of BAT14d and defined techniques to reduce emissions of dust, ammonia and organic compounds to air).

Compliant – 2ZLF has no point source emissions to air so abatement techniques defined in BAT41 are not required. In compliance with BAT14d, the processing of waste that may create diffuse emissions to air is carried out by equipment housed in the main process building.

BAT42-44 (re-refining of waste oil).

Not applicable – 2ZLF does not carry out re-refining of waste oil.

BAT45 (physico-chemical treatment of waste with calorific value).

Not applicable – 2ZLF does not carry out physico-chemical treatment of waste with calorific value.

BAT46-47 (regeneration of spent solvents).

Not applicable – 2ZLF does not carry out regeneration of spent solvents.

BAT48-49 (thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soils).

Not applicable – 2ZLF does not carry out this treatment.

BAT50 (reduction in emissions of dust and organic compounds to air from water washing of excavated contaminated soil).

Not Applicable – 2ZLF does not carry out this treatment.

BAT51 (decontamination of equipment containing PCBs).

Not Applicable – 2ZLF does not carry out this treatment.

BAT52 (to improve overall environmental performance for treatment of water-based liquid wastes, monitor waste input).

Compliant – 2ZLF monitors the waste input to site through pre-acceptance and acceptance procedures.

BAT53 (to reduce emissions of HCl, NH3 and organic compounds to air, use BAT14d and one or more defined techniques).

Compliant – 2ZLF carries out processing of waste with a potential for emissions of organic compounds within the process building. There are no point sources of emissions to air so the techniques proposed are not required.

Chemical Waste Appropriate Measures for Permitted Facilities.

The applicant has submitted an assessment of operation against these Appropriate Measures.

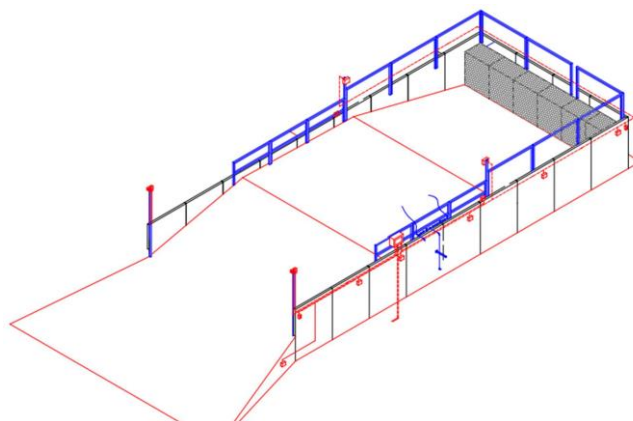
Due to the volume of requirements within these Appropriate Measures, only those where there were some questions over 2ZLF's compliance are noted in this document.

The most important of these was:

- Section 4 (Waste storage, segregation and handling appropriate measures) – Bulk Storage:
  - o Item 52 – “As a general rule, you must not use open topped tanks, containers, vessels or pits to store or treat hazardous or liquid wastes”.

This is also linked to compliance with Waste Treatment BAT-conclusions 14, particularly BAT14d, which was discussed previously.

There is a shallow reception pit at 2ZLF into which the arriving waste vehicles tip their gully and street cleaning wastes before on-site treatment.



It would appear that this offloading area, referenced within 2ZLF as the ‘wet waste unloading bay’, may constitute a storage pit which the Appropriate Measures say, as a rule, should not be used. The bay is not lined with any impermeable membrane.

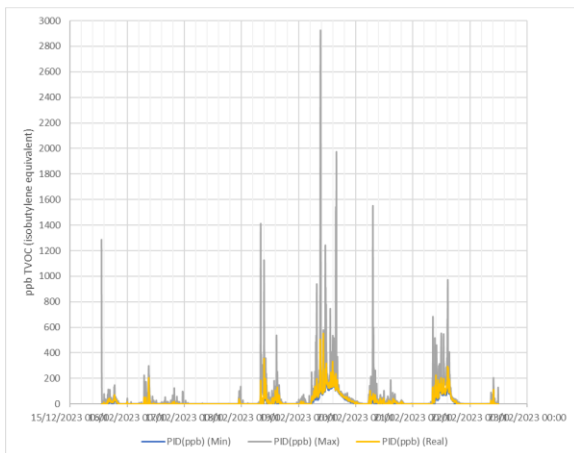
The risks from use of this pit would be diffuse emissions of volatile organic compounds (VOCs) which can cause odour.

The operator submitted further justification for the use of this pit during the determination of the application. They installed static monitors at a number of locations around the wet waste unloading bay. They also installed for a period of sampling, a continuous monitoring system for total VOCs.

The static monitoring system showed total VOCs to be significantly less than any appropriate occupational health standard. Whilst this standard is not an environmental standard, the comparison of total VOCs against this standard can be used to give a degree of significance to emissions from the unloading bay.

The continuous sampling and monitoring system indicated a number of very short-term peaks in total VOCs which corresponded to activities such as emptying tankers into the bay and mechanically handling the material within the bay.

We agree that these peaks are of low total VOC concentration – peaking at an instantaneous maximum of 2,927ppb total VOCs and a daily average maximum of 777ppb total VOCs, applicable to the same date on which the instantaneous maximum was recorded.



Based on these analyses, we have agreed that the operation of the unloading pit can continue. We have included an improvement condition, IC2, requiring 2ZLF to investigate the installation of leak detection in the bay to help prevent any releases of pollutants to soil and/or groundwater.

**Aqueous Effluent Discharge to Sewer (Severn Trent Water Limited).**

The process water generated at 2ZLF is reused on site as much as possible and that water which cannot be reused further is discharged to sewer under a trade effluent consent issued by Severn Trent Water Limited (008250V/002, revised 10/03/2024).

The on-site effluent treatment facility is used primarily to ensure the wastewater generated from the process can be recycled and reused. The wastewater is tested monthly for a range of pollutants that could affect its use either within the process or as dust suppression.

The tests carried out are – pH, suspended solids, chemical oxygen demand, biological oxygen demand, phosphorous, VOCs and whether there is any visible oil and grease.



The operator has submitted a H1 risk assessment of the impact of that discharge on the receiving waters, the River Derwent, following treatment by Severn Trent Water Limited.

The applicant has used a Q95 value of 4.64m<sup>3</sup>/s in the H1 assessment. We agree that this figure is appropriate, and it correlates with the National River Flow Archive data for the monitoring location specified as 'River Derwent at St. Mary's Bridge'.

Emissions of pollutants to sewer have been screened out as insignificant requiring no further modelling using average and instantaneous maximum flows from the 2ZLF trade effluent consent, average pollutant concentrations based on actual monitoring data and maximum pollution concentrations using maximum concentrations permitted in this permit variation application.

#### FRESHWATER – TEST 1:

Parameter	Annual Average EQS			Maximum Allowable EQS		
	Release (µg/l)	EQS (µg/l)	Release < 10% EQS	Release (µg/l)	MAC (µg/l)	Release < 10% EQS
As	5.55	50.0	FAIL	100	N/A	N/A
Benzene	15	10.0	FAIL	15	50	FAIL
Cd	0.7	0.15	FAIL	100	0.9	FAIL
Cr(III)	9.04	4.7	FAIL	100	32	FAIL
Cr(VI)	5.0	3.4	FAIL	100	N/A	N/A
Cu	11.24	1.0	FAIL	100	N/A	N/A
Pb	119.25	1.2	FAIL	200	14	FAIL
Hg	0.05	N/A	N/A	6.4	0.07	FAIL
Ni	51.83	4.0	FAIL	100	34	FAIL
Zn	326.5	10.0	FAIL	500	N/A	N/A

#### FRESHWATER – TEST 2:

Parameter	Annual Average EQS				MAC EQS			
	Annual Average EQS (µg/l)	PC (µg/l)	%PC of EQS	PC < 4% of EQS	MAC EQS (µg/l)	PC (µg/l)	%PC of MAC	PC < 4% of MAC
As	50	0.0012	0.00	PASS	N/A	0.0575	N/A	N/A
Benzene	10	<0.0001	0.00	PASS	50	<0.0001	0.00	PASS
Cd	0.15	0.0001	0.04	PASS	0.9	0.0239	2.66	PASS
Cr(III)	4.7	0.0004	0.01	PASS	32	0.0103	0.0324	PASS
Cr(VI)	3.4	0.0002	0.01	PASS	N/A	0.0103	N/A	N/A
Cu	1.0	0.0006	0.06	PASS	N/A	0.0136	N/A	N/A
Pb	1.2	0.0051	0.42	PASS	14	0.022	0.157	PASS
Hg	N/A	<0.0001	N/A	PASS	0.07	0.0028	3.96	PASS
Ni	4	0.0098	0.25	PASS	34	0.0491	0.145	PASS
Zn	10.9	0.0269	0.25	PASS	N/A	0.1066	N/A	N/A

## **Emission Limit Values, BAT-AEL Compliance and Monitoring Requirements.**

We have included new emission limit values (ELVs) and monitoring requirements for aqueous effluent discharged from site.

As the facility is now an installation with an S5.3 hazardous waste treatment activity, aqueous discharges must comply with the BAT-AELs in the Waste Treatment BAT-conclusions. Where the existing trade effluent consent has imposed tighter limits than the BAT-AELs, we have included those limits from the trade effluent consent.

The operator has confirmed that sampling of aqueous effluent to demonstrate compliance with emission limit values will be carried out on the discharge from the effluent treatment plant before there is any potential for other discharges such as rainwater or surface water to mix with, and possibly dilute, the process effluent.

We have based the ELVs on the following criteria:

- As, Cd, Hg, Cr(VI), Hydrocarbon oil index, adsorbable organically bound halogens (AOX) are based on BAT-AELs. These parameters are not included in the trade effluent consent.
- Cr, Cu, Pb, Ni, Zn are based on the operator's trade effluent consent as emission limit values are tighter than those in the Waste Treatment BREF BAT-AELs.
- COD, total dissolved solids are based on the operator's trade effluent consent as there are no BAT-AELs for indirect emissions of these parameters.
- pH is based on the operator's trade effluent consent as there is no pH BAT-AEL.

We have based the monitoring frequencies on those included in the Waste Treatment BAT-conclusions. Where there is no monitoring frequency in the BAT-AEL, but there is a limit in the trade effluent consent, we have set the monitoring frequency as that for the most appropriate parameter having a BAT-conclusion monitoring requirement.

Where the waste treatment BAT-conclusions state that the monitoring is only required when the substance is identified as relevant in the waste water inventory referenced in BAT3 and that monitoring frequencies may be reduced if the emission levels are proven to be sufficiently stable, we have included a note to Table S3.1 allowing the operator to demonstrate through Improvement Condition IC1 if these conditions are met and the monitoring frequency can be reduced. Although the operator has submitted a waste water inventory with analyses of these parameters, this applies to current permitted operation and a new inventory must be produced to reflect the increased hazardous waste treatment authorised through this permit variation.

## **Noise.**

The operator submitted in the application a Noise Impact Assessment (NIA) that stated the rating noise level above the background level at sensitive local receptors indicated no noise impact both during daytime and nighttime periods. Based on this, they proposed that no specific noise mitigation measures were required – although implementation of a Noise Management Plan was recommended.

At this point, the permitted period of site operation was stated to be 24/7 operation excluding public holidays as allowed by planning permission – although, in reality, the site did not operate for those hours.

We carried out an audit of the operator's NIA and did not support their conclusions.

We agreed that no impact due to noise emissions was likely during daytime operational periods, but we concluded that, if operations were to be undertaken during nighttime periods (both weekends and weekdays), significant adverse impact was predicted due to noise.

We outlined a series of additional measures that would be required to justify the nighttime operation, including further assessment of the impact of the increase in throughput on the noise levels and further improvements to the modelling including correcting the receptor heights and including the effect of buildings and topographical features. We asked the operator to review their mitigation measures.

Rather than update the noise modelling, the operator decided to restrict operation to the daytime period where we had concluded no adverse impact due to noise. The NMP was updated to indicate operation was permitted only from 6am to 6pm Monday to Friday and 7am to midday Saturday. There would be no operation on Sundays or public holidays.

Although this addressed most of our concerns regarding noise, we noted that the period of operation from 6am to 7am weekday constituted nighttime operation. We carried out an assessment ourselves for this period by modelling road traffic noise from the A52 highway on weekdays based on National Highways data. We broke these down into four 15-minute periods and compared against the worst-case residual sound level from the proposed site operations.

We concluded that operation of the site between 6am and 7am weekdays posed a low risk, so we did not require any additional background noise survey to cover this operating period.

There is no history of noise complaints relating to 2ZLF operation and, although the hazardous waste proportion of overall treatment will increase due to this variation, the overall site throughput will not change. However, new equipment is being installed to process this additional quantity of hazardous wastes.

The site has implemented a NMP and will operate in accordance with this.

### **Odour.**

There is no history of odour complaints from the operation of the 2ZLF site. There will be no increase in the total permitted annual throughput of waste and no new waste codes are added to those waste codes that can already be accepted to site for processing as a result of permit variation, EPR/AB3904UQ/V005.

The withdrawal, during determination of the variation application, of the request for an S5.6 activity, means that no additional quantity of untreated hazardous waste, which could cause odour, above that already permitted, can be stored on site at any one time.

This has the effect that odour detected off-site should not increase as a result of this permit variation.

The operator has established an Odour Management Plan to control potential impacts from odour although it would have been required only if odour nuisance at sensitive receptors was expected and/or substantiated – which is not the case.

The operator has an established procedure for acceptance of hazardous waste on site which includes a check on odour to ensure the waste conforms with the pre-acceptance originally agreed. Should the waste be designated as non-conforming, due to issues such as odour or presence of fuel or oil, it will be immediately returned to the waste supplier, if the vehicle transporting the waste still remains on site or directed to a waste quarantine area where decision on its treatment or removal from site will be managed. The operator will then contact the waste supplier to initiate investigation into the cause of the non-conforming waste (including any excessive odour levels).

The permit also includes the standard conditions for the site activities to be free from odour at levels likely to cause pollution outside the site boundary.

### **Dust.**

There is no history of dust complaints from the operation of the 2ZLF site. There will be no increase in the total permitted annual throughput of waste and no new waste codes are added to those waste codes that can already be accepted to site for processing as a result of permit variation, EPR/AB3904UQ/V005.

The withdrawal, during determination of the variation application, of the request for an S5.6 activity, means that no additional quantity of untreated hazardous waste, above that already permitted, can be stored on site at any one time.

The waste inputs to the site are not inherently dusty and are generally wet or damp in form. There is the facility to dampen the roadways and material stockpiles should dry weather result in an increased risk of dust generation.

An improvement condition, IC6, requires the operator to carry out a dust monitoring exercise to confirm the expected low levels of dust using an automated monitoring system that can determine both total particulate matter and the PM<sub>10</sub> particulate fraction. Should significant dust levels be detected, the operator must propose further dust monitoring and/or dust abatement.

The operator has established a Dust and Emissions Management Plan to control potential impacts from dust.

### **Effluent Treatment Plant.**

The facility operates an on-site effluent treatment plant to process the wastewater arising from the solid waste treatment activities. The operation of this waste treatment plant is not changing as a result of this current permit variation.

The site discharges treated wastewater to foul sewer under the trade effluent consent issued by Severn Trent Water Limited. That consent has a daily volume limit of 100m<sup>3</sup> maximum. There is a regulating valve on the exit from the effluent treatment plant which is physically locked in a position which would prevent 2ZLF exceeding the maximum flow rate in their trade effluent consent. They do not have an automated stop or alarm system should their daily discharge to sewer reach 100m<sup>3</sup>/day.

There is no limitation or restriction on the volume of wastewater directed to the effluent treatment plant other than this restriction on the discharge exiting that plant. The operator is therefore not able to confirm that the volume of treated effluent would not exceed the daily thresholds for S5.3 treatment of hazardous waste (10 tonnes/day) or S5.4 treatment of non-hazardous waste (50 tonnes/day) whichever is applicable.

We have included an improvement condition, IC4, in the permit requiring the operator to characterise the composition of the effluent input to the effluent treatment plant to determine if it is hazardous or non-hazardous. With this information, the operator may be required to apply for a further variation to the permit should they not be able to restrict treatment capacity to less than the S5.3 or S5.4 thresholds, as appropriate.

### **Improvement Conditions.**

IC1: Requiring the operator to submit a written report for Environment Agency assessment and approval that includes monitoring data of pollutants in aqueous effluents after increased treatment of quantities of hazardous wastes and an assessment of their impact on the environment. The report may also propose if any pollutants should not be regarded as 'relevant' or have emission levels which are proven to be 'sufficiently stable' and could have their monitoring ceased or their monitoring frequency reduced in Table S3.2 as detailed in the Waste Treatment BAT-conclusions.

IC2: Requiring the operator to submit a proposal, with timescales, for the implementation of a leak detection system at the wet waste reception bay to prevent releases through the flooring of the bay into ground or groundwater.

IC3: Requiring the operator to submit a written report for Environment Agency assessment and approval that includes an updated set of VOC monitoring results obtained at the wet waste reception bay after increased treatment of quantities of hazardous wastes and a programme, if required, for the enclosed containment of material handled within that bay.

IC4: Requiring the operator to submit analytical monitoring data of the composition of the effluent input to the on-site effluent treatment plant to ascertain if that waste is hazardous or non-hazardous in nature and if further assessment of the capacity of that treatment plant is required.

IC5: Requiring the operator to carry out an assessment of the water balance on site following increased treatment of quantities of hazardous wastes and to confirm that the existing site sealed drainage system is appropriate for any increased water content from that hazardous waste. If not, the operator must propose upgrade of site water management and drainage.

IC6: Requiring the operator to carry out a dust monitoring assessment, following increased treatment of quantities of hazardous wastes, using an automated system that can identify both total particulate matter and PM<sub>10</sub> particulate fraction. Should elevated levels of these be detected, the operator must propose further monitoring and/or dust abatement as appropriate.

## **Pre-Operational Condition.**

PO1: Because the operator intends to use the existing wall of the wet waste reception bay as one of the walls of the new bund around the new waste storage tanks, the operator must submit a report from a certified civil or structural engineer that this bund has delivered an acceptable level of integrity before wastes can be stored in the new storage tanks. This must be done in accordance with the requirements in 'CIRIA C736 - Containment Systems for the Prevention of Pollution - secondary, tertiary and other measures for industrial and commercial premises'.

PO2: The operator must submit a report demonstrating that, before any waste is stored in each of the new storage tanks, those tanks have been leak tested and inspected. This will allow the operator to bring each storage tank on-line separately or in combination.

## **Decision considerations**

### **Confidential information**

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

### **Identifying confidential information**

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

### **Consultation**

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The comments and our responses are summarised in the [consultation responses](#) section.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Derby City Council Environmental Health Department.
- Derby City Council Planning Department.
- Health and Safety Executive (HSE).
- UK Health Security Agency (UKHSA).
- Sewerage Authority (Severn Trent Water Limited).

The comments and our responses are summarised in the [consultation responses](#) section.

## The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1'.

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

## The site

The operator has provided a plan which we consider to be satisfactory.

These show the extent of the site of the facility.

The plan is included in the permit.

## Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is not within our screening distances for these designations.

## Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator's risk assessment is satisfactory.

## General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

See 'Key Issues' section for further discussion on the operator's compliance with Waste Treatment BAT-conclusions and guidance document, 'Chemical waste: appropriate measures for permitted facilities'.

## Operating techniques for emissions that screen out as insignificant

Emissions of the following pollutants have been screened out as insignificant, and so we agree that the applicant's proposed techniques are Best Available Techniques (BAT) for the installation:

- arsenic, cadmium, mercury, chromium (III), chromium (VI), copper, nickel, lead and zinc.

- benzene, toluene, ethylbenzene and xylene (screened out as benzene).

We consider that the emission limits included in the installation permit reflect the BAT for the sector.

## **Odour management**

We have reviewed the odour management plan in accordance with our guidance on odour management.

## **Noise and vibration management**

We have reviewed the noise and vibration management plan in accordance with our guidance on noise assessment and control.

## **Dust management**

We have reviewed the dust and emission management plan in accordance with our guidance on emissions management plans for dust.

## **Updating permit conditions during consolidation**

We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit.

## **Changes to the permit conditions due to an Environment Agency initiated variation**

We have varied the permit as stated in the variation notice.

See the 'Key Issues' section for further details.

## **Pre-operational conditions**

Based on the information in the application, we consider that we need to include pre-operational conditions.

1. The new bund, to be constructed to contain any leaks or spillages from the new waste storage tanks, will make use of an existing wall from the wet waste reception bay within its construction.

To ensure that this does not introduce an area of weakness to the bund, the operator is required to submit to the Environment Agency a report from a certified civil or structural engineer demonstrating that the incorporation of the wall from the wet waste reception bay into the bund structure delivers an acceptable level of integrity.

The report must be carried out in accordance with 'CIRIA C736 - Containment Systems for the Prevention of Pollution - secondary, tertiary and other measures for industrial and commercial premises'.



2. The operator must also submit a report that demonstrates all new waste storage tanks, pipework and secondary containment have been leak-tested before each storage tank is brought on-line. Reports must be submitted to the Environment Agency at least 4 weeks before the start of waste storage in the new waste storage tanks.

These requirements have been separated into two pre-operational conditions as the three waste storage tanks may not be commissioned and brought on-line at the same time.

## Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme.

We have included an improvement programme to ensure that there are no adverse environmental impacts due to the permitted changes.

See the 'Key Issues' section for further details.

## Emission limits

Emission Limit Values (ELVs) based on Best Available Techniques (BAT) have been added for the following substances:

- As, Cd, Hg, Cr(VI), Hydrocarbon oil index, adsorbable organically bound halogens (AOX)

Emission limits based on the operator's trade effluent consent have been added for the following substances:

- Cr, Cu, Pb, Ni, Zn, COD, total dissolved solids, pH.

We have included a stricter ELV than that required by BAT in respect of Cr, Cu, Pb, Ni, Zn. See key issues for more details.

We have included a limit on the volume of the discharge which is the volume limit in the operator's trade effluent consent.

## Monitoring

We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified:

- Maximum daily discharge volume, maximum rate of discharge.
- pH.
- Benzene, toluene, ethylbenzene, xylene (BTEX).
- PFOA (perfluorooctanoic acid), PFOS (perfluorooctanesulphonic acid).
- Hydrocarbon Oil Index, Adsorbable organically bound halogens (AOX).
- Free cyanide.
- Arsenic, cadmium, chromium, copper, lead, nickel, zinc, manganese, hexavalent chromium, mercury.

These monitoring requirements have been included in order to comply with the BAT-AELs in the Waste Treatment BAT-conclusions or the requirements in the operator's trade effluent consent for discharge to sewer (maximum daily discharge volume and pH).

We have not added monitoring for maximum rate of effluent discharge, COD and TSS which have limits within the operator's trade effluent consent.

Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate. Samples will be analysed at MCERTS accredited laboratories.

## Reporting

We have added reporting in the permit for the following parameters:

- pH.
- Benzene, toluene, xylene (BTEX).
- PFOA and PFAS.
- Hydrocarbon Oil Index and Adsorbable Organic Bound Halogens (AOX).
- Free cyanide.
- As, Cd, Cr, Cr(VI), Cu, Pb, Ni, Zn, Mn, Hg.

We made these decisions in accordance with the Waste Treatment BREF BAT-conclusions.

## Management system

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

## Technical competence

Technical competence is required for activities permitted.

The operator is a member of the CIWM/WAMITAB scheme

We are satisfied that the operator is technically competent.

## Previous performance

We have assessed operator competence. There is no known reason to consider the applicant will not comply with the permit conditions.

## Financial competence

There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.

## Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

## Consultation Responses

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

### Responses from organisations listed in the consultation section

Response received from: **Derby City Council Environmental Health Department.**

Brief summary of issues raised: Consultee requested further clarification on whether the overall waste capacity of the site will increase, or if the increase in waste proposed was solely to the capacity for hazardous waste but with the overall waste capacity remaining unchanged. The consultee believed there would be an overall increase in waste capacity for the site unless concurrently the amount of non-hazardous waste being treated would reduce.

The consultee was concerned that the operator may not be able to effectively manage an increase in waste throughput such that waste could accumulate on site at higher volumes and for longer periods.

The consultee was not convinced by the statement in the submitted documentation that “The site, or processes undertaken, does not emit any odours that are likely to extend beyond the site boundary”. However, the consultee also noted that they were not aware of any odour complaints relating to the site in recent years.

Summary of actions taken: The consultee was informed that the overall site throughput would not increase due to this variation application. The maximum annual throughput will remain 65,000 tonnes/year. Where the proportion of hazardous waste being treated increases, the proportion of non-hazardous waste being treated would decrease.

Furthermore, the operator’s withdrawal of their request to store more than 50 tonnes of untreated hazardous waste on site means that no additional quantities of untreated waste will be stored above that already permitted.

The risks of odour have been assessed during the permit determination and the applicant has submitted an Odour Management Plan.

Response received from: **UKHSA East Midlands Health Protection Team.**

Brief summary of issues raised: The consultee commented on whether there was the infrastructure in place to handle the proposed increase in hazardous waste treatment to ensure the site adhered to permitted storage and treatment limits.

The consultee noted that water treatment chemicals used were not listed and questioned whether input of these would increase as a result of the variation.

The consultee noted that particulate monitoring using a frisbee gauge was unlikely to capture the PM<sub>10</sub> particulate fraction. An Appendix ‘D’ referenced in the Dust Management Plan appeared not to be present.

Summary of actions taken: The operator has provided a list of the new equipment to be used on site to treat a greater proportion of hazardous wastes. The operator has withdrawn their request to increase the amount of untreated hazardous waste stored on site. Adherence to waste storage limits will be regulated at site inspections by the Environment Agency Area officer.

The operator submitted a list of chemicals used for water treatment and predicted usages following the proposed increase in the proportion of hazardous wastes to be treated.

The discrepancies in the documentation have been resolved.

The nature of the waste (gully and road cleanings) means that it is accepted to site in a wet, damp or moist form which reduces the risk of dust emissions. As the operator will not be permitted to store more hazardous waste on site than before, there is no increase in the risk of dust emissions from untreated hazardous waste storage.

An Improvement Programme condition, IC6, has been included in the permit requiring the operator to carry out a dust monitoring trial using appropriate equipment to detect and identify PM<sub>10</sub> fraction.

Response received from: **Severn Trent Water Limited**.

Brief summary of issues raised: The consultee noted that, although the operator had done a great deal to mitigate risk, Severn Trent Water Limited did have an abstraction point approximately 8km downstream from the 2ZLF site. The consultee highlighted that, in the event of any incidents that may pose a risk to the water quality of the River Derwent, the Environment Agency should be notified as quickly as possible. This would give Severn Trent Water Limited the opportunity to turn off their intake if required.

Summary of actions taken: Schedule 5 in the environment permit outlines a series of scenarios after which the operator must notify the Environment Agency:

- any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution.
- the breach of a limit.
- the breach of permit conditions not related to limits.
- the detection of any significant adverse environmental effect.