

Natural Resources Wales permitting decisions

**GLJ Recycling Limited, Lower
Chapel Bridge Yard, Decision
Document**

DRAFT

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New bespoke permit

The application number/the permit/variation number is: PAN-008083

The applicant is: GLJ Recycling Limited

The Installation is located at: Lower Chapel Yard, Cwmcarn, Cross Keys, Newport, Gwent, NP11 7NL

We have decided to grant the permit for Lower Chapel Yard operated by GLJ Recycling Limited.

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.

We have decided to issue the new bespoke permit for Lower Chapel Yard operated by GLJ Recycling Limited.

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:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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

Key issues of the decision

Receipt of application

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 commercial confidentiality.

Consultation

The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.

A copy of the Application and all other documents relevant to our determination (see below) are available for the public to view. Anyone wishing to see these documents could arrange for copies to be made.

We sent copies of the Application to the following bodies, which includes those with whom we have “Working Together Agreements”:

- **Caerphilly Council**
- **Health and Safety Executive**
- **Public Health Wales**
- **South Wales Fire Service**

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly.

The consultation started on 4 May 2020 and ended on 3 June 2020.

An advert was also placed on our website.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 3. We have taken all relevant representations into consideration in reaching our determination.

Operator

We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.

The facility

The decision on the facility was taken in accordance with RGN interpretation of installation.

The regulated facility is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations and the following waste operations.

- S5.4 A1 (b) iv Disposal, recovery or a mix of disposal and recovery of non-hazardous waste (b) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC (iv) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components
- vehicle storage, depollution & dismantling (authorised treatment) facility
- household, commercial and industrial waste transfer station with treatment
- waste electrical and electronic equipment authorised treatment facility (ATF) excluding ozone-depleting substances

Legislation

NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources

All applicable European directives have been considered in the determination of the application.

The site

The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility.

A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.

Site condition report

The operator has provided a description of the condition of the site.

We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports – guidance and templates (H5).

Biodiversity, Heritage, Landscape and Nature Conservation

The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.

A full assessment of the application and its potential to affect the site has been carried out as part of the permitting process. We consider that the application will not affect the features of the site.

Environmental Risk Assessment

Emission limits

We have decided that emission limits should be set for the parameters listed in the permit.

The installation has proposed to use bag filters as listed in the Best Available Techniques and the permit has set the appropriate BAT AEL for dust emissions.

Water

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water. The surface

of the yard is concrete, and the drainage is contained with rain water being collected and used on site. There is no emission point to ground or surface water.

Soil

The operator has provided a description of the condition of the site.

We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports – guidance and templates (H5).

Noise

The applicant supplied a detailed noise assessment as well as technical specifications for the proposed shredder to minimise noise. These have been reviewed in detail and the conclusion reached is that the proposed shredder will generate less noise than the shredder that it replaces. The applicant proposals include ongoing operational and management controls with regard to noise and the permit requires noise to be adequately controlled.

Fugitive emissions

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise fugitive emissions and to prevent pollution from fugitive emissions.

Monitoring

We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.

These monitoring requirements have been imposed in order to ensure that the point source emissions to air continue to meet the appropriate standards as detailed in the Best Available Techniques.

Reporting

We have specified reporting in the permit.

The reporting requires annual reports to provide the necessary confirmation of the monitoring results.

Operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.

We accept the operator's proposals for BAT relating to the infrastructure and operations for the installation.

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

The permit conditions

Waste types

We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility. This list does not include any wastes that were not already authorised under the 4 standard rules sets which this permit replaces.

Incorporating the application

We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.

These descriptions are specified in the Operating Techniques table in the permit.

Operator Competence

Environment management system

There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.

Technical competence

Technical competency is required for activities permitted.

The operator is a member of an agreed scheme.

Relevant convictions

Our Enforcement Database has been checked to ensure that all relevant convictions have been declared.

No relevant convictions were found.

The operator satisfies the criteria in RGN 5 on Operator Competence.

OPRA

The OPRA score at permit issue is 42.

Annex 1: Decision checklist regarding relevant BAT Conclusions

BAT Conclusions for the Waste Treatment Bref were published as Commission Implementing Decision EU 2018/1147 in the Official Journal of the EU on 17 August 2018. This checklist provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the consolidated variation notice.

All BAT Conclusions arising are listed by number in order below;

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant																		
OVERALL ENVIRONMENTAL PERFORMANCE																				
1	<p>Environment Management System (EMS) – <u>ALL</u> of the following:</p> <table border="1" data-bbox="322 647 1272 1361"> <tr> <td data-bbox="322 647 439 691">I.</td> <td data-bbox="439 647 1272 691">Management commitment</td> </tr> <tr> <td data-bbox="322 691 439 770">II.</td> <td data-bbox="439 691 1272 770">Environmental policy development including CI of performance</td> </tr> <tr> <td data-bbox="322 770 439 850">III.</td> <td data-bbox="439 770 1272 850">Planning and implementing procedures & targets in conjunction with financial planning & investment</td> </tr> <tr> <td data-bbox="322 850 439 1321" rowspan="9">IV.</td> <td data-bbox="439 850 1272 898">Implementation of procedures</td> </tr> <tr> <td data-bbox="439 898 1272 946">(a) Structure & responsibility</td> </tr> <tr> <td data-bbox="439 946 1272 994">(b) Recruitment, training, awareness & competence</td> </tr> <tr> <td data-bbox="439 994 1272 1042">(c) Communication</td> </tr> <tr> <td data-bbox="439 1042 1272 1090">(d) Employee involvement</td> </tr> <tr> <td data-bbox="439 1090 1272 1137">(e) Documentation</td> </tr> <tr> <td data-bbox="439 1137 1272 1185">(f) Effective process control</td> </tr> <tr> <td data-bbox="439 1185 1272 1233">(g) Maintenance programmes</td> </tr> <tr> <td data-bbox="439 1233 1272 1321">(h) Emergency preparedness & response (i) Safeguarding compliance with environmental legislation</td> </tr> <tr> <td data-bbox="322 1321 439 1361">V.</td> <td data-bbox="439 1321 1272 1361">Checking performance and taking corrective action</td> </tr> </table>	I.	Management commitment	II.	Environmental policy development including CI of performance	III.	Planning and implementing procedures & targets in conjunction with financial planning & investment	IV.	Implementation of procedures	(a) Structure & responsibility	(b) Recruitment, training, awareness & competence	(c) Communication	(d) Employee involvement	(e) Documentation	(f) Effective process control	(g) Maintenance programmes	(h) Emergency preparedness & response (i) Safeguarding compliance with environmental legislation	V.	Checking performance and taking corrective action	<p>Site have described their EMS and being in line with BAT as well as meeting ISO14001</p>
I.	Management commitment																			
II.	Environmental policy development including CI of performance																			
III.	Planning and implementing procedures & targets in conjunction with financial planning & investment																			
IV.	Implementation of procedures																			
	(a) Structure & responsibility																			
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	(f) Effective process control																			
	(g) Maintenance programmes																			
	(h) Emergency preparedness & response (i) Safeguarding compliance with environmental legislation																			
V.	Checking performance and taking corrective action																			

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
		(a) Monitoring & measurement		
		(b) Corrective and preventive action		
		(c) Maintenance of records		
		(d) Independent (where practicable) internal or external EMS auditing		
	VI.	Senior management review of EMS		
	VII.	Following development of cleaner technologies		
	VIII.	Whole life cycle considerations when designing a new plant i.e. impacts from eventual decommissioning and throughout its operating life		
	IX.	Regular sectoral bench marking		
	X.	Waste stream management (BAT 2)		Operator has stated that these are in place
	XI.	Inventory of waste water & waste gas streams (BAT 3)		See bat 3
	XII.	Residues Management Plan – S6.5		Operator has stated that these are in place, see also BAT 24
	XIII.	Accident Management Plan – S6.5		Operator has stated that these are in place, see also BAT 21
	XIV.	Odour Management Plan (BAT 12)		This is in place
	XV.	Noise & Vibration Management Plan (BAT 17)		Operator has stated that these are in place IC also in place for additional noise monitoring
	2	Improving overall environmental performance – ALL of the following:		Operator has stated that these are in place
a.		Set up and implement waste characterisation & pre-acceptance procedures		
b.		Set up and implement waste acceptance procedures		
c.		Set up and implement a waste tracking system & inventory		

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
3	d.	Set up and implement an output quality management system		
	e.	Ensure waste segregation		
	f.	Ensure waste compatibility prior to mixing or blending		
	g.	Sort solid incoming waste – S6.4		
	Establish and maintain a waste water and waste gas inventory as part of the EMS - <u>ALL</u> of the following:			
	<i>Information on characteristics of waste and waste treatment processes</i>			
	(i)(a)	simplified process flow sheets showing emission sources	In place	
	(i)(b)	Process-integrated and waste water/waste gas treatment descriptions including performance	In place	
	<i>Information on characteristics of waste water streams</i>			
	(ii)(a)	<i>Mean and variability of:</i>		N/A- No waste water discharge
		Flow		
		pH		
		Temperature		
	Conductivity			
	(ii)(b)	<i>Mean concentration, load and variability of:</i>		
Total suspended solids				
COD/TOC				
Nitrogen species				
Phosphorous				
Metals				
Priority substances/micropollutants				
Any other relevant compounds				
(ii)(c)	<i>Bioeliminability data (see BAT 52):</i>			

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant				
	<table border="1"> <tr><td data-bbox="506 328 1272 363">BOD</td></tr> <tr><td data-bbox="506 363 1272 399">BOD to COD ratio</td></tr> <tr><td data-bbox="506 399 1272 434">Zahn-Wellens test</td></tr> <tr><td data-bbox="506 434 1272 491">Biological inhibition potential</td></tr> </table>	BOD	BOD to COD ratio	Zahn-Wellens test	Biological inhibition potential	
BOD						
BOD to COD ratio						
Zahn-Wellens test						
Biological inhibition potential						
Information on characteristics of waste gas streams						
(iii)(a)	<table border="1"> <tr><td data-bbox="506 541 1272 576"><i>Mean and variability of:</i></td></tr> <tr><td data-bbox="506 576 1272 611">Flow</td></tr> <tr><td data-bbox="506 611 1272 663">temperature</td></tr> </table>	<i>Mean and variability of:</i>	Flow	temperature	The presence or absence of these will be established for monitoring purposes: Brominated flame retardant; Dioxin-like PCBs; Metalloids As, Cd, Co, Cr, Cu, Mn, Pb, Sb, Se, Ti and V; PCDD/F; TVOC.	
<i>Mean and variability of:</i>						
Flow						
temperature						
(iii)(b)	<table border="1"> <tr><td data-bbox="506 671 1272 746"><i>Mean concentration, load and variability of relevant substances:</i></td></tr> <tr><td data-bbox="506 746 1272 782">Organic compounds</td></tr> <tr><td data-bbox="506 782 1272 817">POPs e.g. PCBs</td></tr> <tr><td data-bbox="506 817 1272 1046">Any other relevant compounds</td></tr> </table>	<i>Mean concentration, load and variability of relevant substances:</i>	Organic compounds	POPs e.g. PCBs	Any other relevant compounds	
<i>Mean concentration, load and variability of relevant substances:</i>						
Organic compounds						
POPs e.g. PCBs						
Any other relevant compounds						
(iii)(c)	<table border="1"> <tr><td data-bbox="506 1054 1272 1090">Flammability</td></tr> <tr><td data-bbox="506 1090 1272 1125">Lower and Higher Explosive Limits</td></tr> <tr><td data-bbox="506 1125 1272 1177">Reactivity</td></tr> </table>	Flammability	Lower and Higher Explosive Limits	Reactivity	N/A	
Flammability						
Lower and Higher Explosive Limits						
Reactivity						
(iii)(d)	<table border="1"> <tr><td data-bbox="506 1185 1272 1259"><i>Presence of other substances that may affect the gas treatment system or plant safety:</i></td></tr> <tr><td data-bbox="506 1259 1272 1294">O2</td></tr> <tr><td data-bbox="506 1294 1272 1329">N2</td></tr> <tr><td data-bbox="506 1329 1272 1382">Water vapour</td></tr> </table>	<i>Presence of other substances that may affect the gas treatment system or plant safety:</i>	O2	N2	Water vapour	N/A N/A N/A
<i>Presence of other substances that may affect the gas treatment system or plant safety:</i>						
O2						
N2						
Water vapour						

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
4		Dust	Monitoring and dust filter
	Reducing environmental risk associated with waste storage – ALL of the following:		
	a.	Optimised storage location	This is detailed in the fire management plan, with additional information in the EMS and the Environment Risk assessment and control measures.
	b.	Adequate storage capacity	
	c.	Safe storage operation	
d.	Separate area for storage & handling of packaged hazardous waste		
5	Set up and implement procedures to reduce the environmental risk associated with handling and transfer of waste - include following elements:		Operator has stated that these are in place
	Carried out by competent staff		
	Duly documented, validated and verified		
	Spill prevention, detection and mitigation measures		
	Take precautions when mixing or blending wastes		
	Procedures are risk-based and consider likelihood of accidents, incidents and their environmental impact		
MONITORING			
6	Relevant emissions to water: monitor key process parameters at key locations		N/A – Operator has stated that there is no discharge of water
	Key process parameters		
	Waste water flow		
	pH		
	Temperature		
Conductivity			

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	BOD		N/A – Operator has stated that there is no discharge of water
	Other process parameters		
	Key monitoring locations		
	Pre-treatment inlet and/or outlet		
	Final treatment inlet		
	Discharge point (to the environment)		
	Other location		
7	Monitoring emissions to water (refer to table) Monitoring parameters depend on waste treatment process(es) involved		N/A – Operator has stated that there is no discharge of water
8	Monitoring emissions to air (refer to table) Monitoring parameters depend on waste treatment process(es) involved		Detailed in the environmental permit
9	Monitoring diffuse emissions of organic compounds to air from processes involving solvents. Use one or a combination of the following:		Not applicable to installation activity
	a	Measurement – S6.2 descriptions	
	b	Emissions factor calculation	
	c	Mass balance calculation	
10	Periodically monitor odour emissions where nuisance is expected and/or has been substantiated (monitoring frequency is outlined in BAT 12)		Not Applicable – there are no odour issues with the site.
	Use EN standards e.g. 13725 or 16841		
	Use equivalent methods e.g. ISO / national / international monitoring standards		
11	Annual monitoring for:		Operator has stated that these are in place
	- Water, energy and raw materials		

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
	- Generation of residues and waste water	Operator has stated that these are in place	
EMISSIONS TO AIR			
12	Set up, implement and review an Odour Management Plan (as part of the site EMS) where nuisance is expected and/or has been substantiated. Include <u>ALL</u> of the following:		
	Protocol containing actions and timelines	Not Applicable – there are no odour issues with the installation activity	
	Protocol for conducting odour monitoring (BAT 10)		
	Protocol for response to odour incidents/complaints		
Odour prevention and reduction programme			
13	Techniques to prevent, or where not practicable reduce odour emissions. Use one or a combination of the following:		
	a.	Minimising residence times (open systems only)	Not Applicable – there are no odour issues with the site
	b.	Use chemical treatment (N/A if desired output is hampered)	
	c.	Optimising aerobic treatment – see examples. Refer to BAT 36 for wastes other than water-based liquid waste.	
Techniques to prevent, or where not practicable reduce diffuse emissions to air, in particular of dust, organic compounds and odour. Use one or a combination of the following:			
14	a.	Minimising potential diffuse emission sources – see examples	Operator has stated that these are in place
	b.	Select and use high-integrity equipment – see examples	
	c.	Corrosion prevention – see examples	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	d.	Containment, collection and treatment of diffuse emissions – see examples	Operator has stated that these are in place
	e.	Dampening (with water or fog)	
	f.	Maintenance – see examples	
	g.	Cleaning of waste treatment and storage areas – see examples	
	h.	Leak Detection And Repair (LDAR) programme for organics – S6.2	
15	Use flaring only for safety reasons or non-routine operating conditions (OTNOC). Use <u>both</u> of the following:		Not Applicable – the installation does not undertake flaring.
	a.	Correct plant design – see examples	
	b.	Plant management including gas system balancing and advanced process control	
16	Reduce emissions to air when flaring is unavoidable. Use <u>both</u> of the following:		Not Applicable – the installation does not undertake flaring.
	a.	Correct design of flaring devices – see examples	
	b.	Monitoring and recording as part of flare management – see examples	
NOISE AND VIBRATIONS			
17	Set up, implement, and regularly review a Noise and Vibration Management Plan (as part of the EMS) where nuisance is expected and/or has been substantiated. Include <u>ALL</u> of the following:		Operator has stated that these are in place
	I.	Protocol with actions and timelines	
	II.	Noise and vibration monitoring plan/protocol	
	III.	Noise & vibration complaint response plan/protocol	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	IV.	Noise and vibration reduction programme	
18	Techniques to prevent, or where not practicable reduce noise and vibration emissions. Use one or a combination of the following:		Operator has stated that these are in place
	a.	Appropriate location of equipment and buildings	
	b.	Operational measures – see examples	
	c.	Low-noise equipment – see examples	
	d.	Noise & vibration control equipment – see examples	
	e.	Noise attenuation – see examples	
EMISSIONS TO WATER			
19	Optimise water consumption, reduce waste water generation and prevent or where not practicable reduce emissions to soil and water. Use one or a combination of the following:		Operator has stated that these are in place
	a.	Water management – see examples	
	b.	Water recirculation	
	c.	Impermeable surface	
	d.	Reduce likelihood and impact of tank/vessel overflows and failures – see examples	
	e.	Roofing of waste storage and treatment areas	
	f.	Segregation of water streams (being mindful of existing plant constraints)	
	g.	Adequate drainage infrastructure	
	h.	Design and maintenance provisions to allow risk-based leak detection and repair. Minimise use of underground components.	

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	i.	Appropriate buffer storage capacity (being mindful of existing plant constraints)	
20	Treat waste water using a combination of:		
	<i>Preliminary, primary and general treatment</i>		
	a.	Equalisation	Waste water treatment not needed as no discharge of waste water
	b.	Neutralisation	
	c.	Physical separation	
	<i>Physico-chemical treatment</i>		
	d.	Adsorption	
	e.	Distillation/rectification	
	f.	Precipitation	
	g.	Chemical oxidation	
	h.	Chemical reduction	
	i.	Evaporation	
	j.	Ion exchange	
	k.	Stripping	
	<i>Biological treatment</i>		
	l.	Activated sludge process	
m.	Membrane bioreactor		
<i>Nitrogen removal</i>			
n.	Nitrification/denitrification (where biological treatment used)		
<i>Solids removal</i>			
o.	Coagulation and flocculation		

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
	p.	Sedimentation		
	q.	Filtration (sand, micro, ultra)		
	r.	Flotation		
	BAT-AELs for DIRECT discharges to a receiving waterbody (mg/l)			
	<i>Table 6.1 and its supporting notes. Monitoring requirements are outlined in BAT 7</i>			
TOC	10.0-60	10-100 for water-based liquid waste		
COD (TOC is preferred)	30-180	30-300 for water-based liquid waste		
Suspended solids	5.0-60			
HOI	0.5-10	applying to specific waste treatments		
Total N	1-25	for biological treatment and waste oil re-refining		
Total P	0.3-2	for biological treatment		
Phenol	0.05-0.2	for waste oil re-refining and physio-chemical treatment of waste with CV		
Free CN-	0.02-0.1	for water-based liquid waste		
AOX	0.2-1	for water-based liquid waste		

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
	Metals & Metalloids – specific waste treatments as listed in Table 6.1	Waste water treatment not needed as no discharge of waste water	
	As		0.01-0.05
	Cd		0.01-0.05
	Cr		0.01-0.15
	Cu		0.05-0.5
	Pb		0.05-0.1
	Ni		0.05-0.5
	Hg		0.5-5
	Zn		0.1-1
	Metals & Metalloids – treatment of water-based liquid waste		
	As		0.01-0.1
	Cd		0.01-0.1
	Cr		0.01-0.3
	Hexavalent Cr [Cr(VI)]		0.01-0.1
	Cu		0.05-0.5
	Pb		0.05-0.3
	Ni		0.05-1
	Hg		1.0-10
	Zn		0.1-2
	BAT-AELs for INDIRECT discharges to a receiving waterbody (mg/l)		
Table 6.2 and its supporting notes. Monitoring requirements are outlined in BAT 7			

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	HOI	0.5-10 applying to specific waste treatments	
	Free CN-	0.02-0.1 for water-based liquid waste	
	AOX	0.2-1 for water-based liquid waste	
	Metals & Metalloids – specific waste treatments as listed in Table 6.2		
	As	0.01-0.05	
	Cd	0.01-0.05	
	Cr	0.01-0.15	
	Cu	0.05-0.5	
	Pb	0.05-0.1	
	Ni	0.05-0.5	
	Hg	0.5-5	
	Zn	0.1-1	
	Metals & Metalloids – treatment of water-based liquid waste		
	As	0.01-0.1	
	Cd	0.01-0.1	
	Cr	0.01-0.3	
	Hexavalent Cr [Cr(VI)]	0.01-0.1	
	Cu	0.05-0.5	
	Pb	0.05-0.3	
	Ni	0.05-1	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Hg	1.0-10	
	Zn	0.1-2	
EMISSIONS FROM ACCIDENTS AND INCIDENTS			
21	Techniques to prevent or limit the environmental consequences of accidents and incidents, as part of the Accident Management Plan. Use <u>ALL</u> of the following:		
	a.	Protection measures – see examples	Operator has stated that these are in place
	b.	Management of incidental or accidental emissions	
	c.	Incident/accident registration and assessment system – see examples	
MATERIAL EFFICIENCY			
22	Use materials efficiently by substituting materials with waste e.g. waste acids/alkalis for pH adjustment, fly ashes for binders		Operator has stated that these are in place
ENERGY EFFICIENCY			
23	Use energy efficiently by using <u>both</u> of the following techniques:		
	a.	Energy efficiency plan	Operator has stated that these are in place and there are conditions in the permit
	b.	Energy balance record	No energy produced.
REUSE OF PACKAGING			

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
24	Maximise the reuse of packaging as part of a Residues Management Plan (see BAT 1 XII.)	Not applicable as packaging not used or imported to site.	
MECHANICAL TREATMENT OF WASTE (GENERAL BAT)			
25	Reduce emissions to air of dust, particulate-bound metals, PCDD/F and dioxin-like PCBs by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:		
	a.	Cyclone – see S6.1	N/A
	b.	Fabric filter – see S6.1	Fabric filter to be used.
	c.	Wet scrubbing – see S6.1	N/A
	d.	Water injection into the shredder	N/A
	BAT-AEL for channelled dust emissions to air from the mechanical treatment of waste (mg/Nm³) <i>Table 6.3 and its supporting note. Monitoring requirements are outlined in BAT 8</i>		
Dust	2.0-5.0	Monitoring and emission limit set.	
MECHANICAL TREATMENT OF METAL WASTE BY SHREDDING			
26	Improve overall environmental performance and prevent emissions due to accidents and incidents. Use BAT 14g <u>AND ALL</u> of the following techniques:		
	(a)	Detailed inspection procedure for baled waste before shredding	Operator has stated that these are in place
	(b)	Remove dangerous items from waste inputs and dispose of them in a safe manner	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	(c)	Treatment of containers accompanied by a declaration of cleanliness	
27	Prevent deflagrations and reduce emissions from deflagrations. Use technique a. <u>AND ONE OR BOTH</u> of techniques b. and c.		Operator has stated that these are in place
	a.	Deflagration management plan with reduction programme, incident review and response protocol	
	b.	Pressure relief dampers	
	c.	Pre-shredding (device)	
28	Use energy efficiently by keeping the shredder feed stable		Operator has stated that these are in place
MECHANICAL TREATMENT OF WEEE CONTAINING VFCS AND/OR VHCS			
29	Techniques to prevent, or where not practicable reduce emissions of organic compounds to air. Apply BAT 14d <u>AND</u> BAT14h <u>AND</u> technique a. <u>AND ONE OR BOTH</u> of techniques b. and c.		
	a.	Optimised removal and capture of refrigerants and oils	N/A
	b.	Cryogenic condensation	N/A
	c.	Adsorption	N/A
	<i>BAT-AELs for channelled TVOC and CFC emissions to air from treatment of WEEE containing VFCS and/or VHCS (mg/Nm3)</i>		
	<i>Table 6.4. Monitoring requirements are outlined in BAT 8</i>		
	TVOC	3.0-15	N/A
CFCs	0.5-10	N/A	
30	Prevent emissions due to explosions when treating WEEE containing VFCS and/or VHCS. Use <u>EITHER</u> of the following techniques:		
	a.	Inert atmosphere e.g. N2	N/A
	b.	Forced ventilation	N/A
MECHANICAL TREATMENT OF WASTE WITH CALORIFIC VALUE			

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
31	Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:		
	a.	Adsorption – see S6.1	N/A
	b.	Biofilter – see S6.1	N/A
	c.	Thermal oxidation – see S6.1	N/A
	d.	Wet scrubbing – see S6.1	N/A
	<i>BAT-AEL for channelled TVOC emissions to air from the mechanical treatment of waste with calorific value (mg/Nm³)</i> <i>Table 6.5 and its supporting note. Monitoring requirements are outlined in BAT 8</i>		
TVOC	10.0-30.0	N/A	
MECHANICAL TREATMENT OF WEEE CONTAINING MERCURY			
32	Reduce mercury emissions to air by collecting them at source, sending them to abatement and carrying out adequate monitoring. This includes <u>ALL</u> of the following:		
	Equipment is enclosed, under negative pressure and connected to a LEV system	N/A	
	Waste gas treated using dedusting techniques – see examples – followed by adsorption on activated carbon	N/A	
	Monitoring of waste gas treatment efficiency	N/A	
	Mercury levels measured at least weekly within treatment and storage areas	N/A	
	<i>BAT-AEL for channelled mercury (Hg) emissions to air from the mechanical treatment of WEEE containing mercury (µg/Nm³)</i> <i>Table 6.6. Monitoring requirements are outlined in BAT 8</i>		
Hg	2.0-7.0	N/A	

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
BIOLOGICAL TREATMENT OF WASTE (GENERAL BAT)			
33	Reduce odour emissions and improve overall environmental performance by selecting the waste input (to ensure its suitability for biological treatment). See also BAT 2	N/A	
34	Reduce emissions to air of dust, organic compounds and odorous compounds (including H ₂ S & NH ₃) by using one or a combination of the following techniques:		
	a.	Adsorption – see S6.1	N/A
	b.	Biofilter – see S6.1	
	c.	Fabric filter – see S6.1.	
	d.	Thermal oxidation – see S6.1	
	e.	Wet scrubbing – see S6.1	
	BAT-AEL for channelled NH₃, odour, dust and TVOC emissions to air from the biological treatment of waste (mg/Nm³) (ou_E/m³) <i>Table 6.7 and its supporting notes. Monitoring requirements are outlined in BAT 8</i>		
NH ₃	0.3-20	N/A	
Odour	200-1000		
Dust	2.0-5.0		
TVOC	5.0-40		
35	Reduce the generation of waste water and reduce water usage by using <u>ALL</u> of the following:		
	a.	Segregation of water streams (see also BAT 19f)	N/A
	b.	Water recirculation	
	c.	Minimisation of the generation of leachate	
BIOLOGICAL TREATMENT OF WASTE: AEROBIC METHODS			

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
36	Reduce emissions to air and improve overall environmental performance by monitoring and/or controlling key waste and process parameters. Include following elements:	
	Waste input characteristics e.g. C to N ratio, particle size	N/A
	Temperature and moisture content within windrows (Moisture monitoring not needed for enclosed processes where H&S issues have been identified)	
	Aeration of the windrow	
	Windrow porosity, height and width	
37	Reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps. Use <u>ONE OR BOTH</u> of the following techniques:	
	a. Use of semi-permeable membrane covers	N/A
	b. Adaptation of operations to the meteorological conditions	
BIOLOGICAL TREATMENT OF WASTE: ANAEROBIC METHODS		
38	Reduce emissions to air and improve overall environmental performance by monitoring and/or controlling key waste and process parameters. Include following elements:	
	<i>Implement a manual and/or automatic monitoring system to:</i>	
	Ensure a stable digester operation	N/A
	Minimise operational difficulties and associated odour emissions	N/A
	Provide sufficient early warning of system failures	
	Windrow porosity, height and width	
<i>Monitoring and/or control of key waste and process parameters – examples below:</i>		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
		pH and alkalinity of the digester feed	
		Digester operating temperature	
		Hydraulic and organic loading rates of the digester feed	
		Volatile fatty acids and NH3 concentrations within digester & digestate	
		Biogas quantity, composition (e.g. H2S) and pressure	
		Liquid and foam levels in the digester	
MECHANICAL BIOLOGICAL TREATMENT (MBT) OF WASTE			
		Reduce emissions to air. Generally applicable to new plants, existing plants may have layout constraints. Use <u>BOTH</u> of the following techniques:	
39	a.	Segregation of the waste gas streams (refer to inventory described in BAT 3)	N/A
	b.	Recirculation of waste gas. Waste gas treatment is described in BAT 34 and recirculation in BAT 35.	
PHYSICO-CHEMICAL TREATMENT OF SOLID AND/OR PASTY WASTE			
		Improve overall environmental performance by monitoring the waste input as part of the waste pre-acceptance and acceptance procedures. See also BAT 2.	
40		Monitoring the waste input	
		Content of organics, oxidising agents, metals, salts, odorous compounds	N/A

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant		
	H2 formation potential upon mixing of flue-gas treatment residues/ashes with water			
41	Reduce emissions to air of dust, organic compounds and NH3 by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:			
	a. Adsorption – see S6.1	N/A		
	b. Biofilter – see S6.1			
	c. Fabric filter – see S6.1.			
	d. Wet scrubbing – see S6.1			
<p>BAT-AEL for channelled NH3, odour, dust and TVOC emissions to air from the physico-chemical treatment of solid and/or pasty waste (mg/Nm3)</p> <p><i>Table 6.8. Monitoring requirements are outlined in BAT 8</i></p> <table border="1" data-bbox="322 778 1272 820"> <tr> <td>Dust</td> <td>2.0-5.0</td> </tr> </table>		Dust	2.0-5.0	
Dust	2.0-5.0			
RE-REFINING OF WASTE OIL				
42	Improve overall environmental performance by monitoring the waste input as part of the waste pre-acceptance and acceptance procedures. See also BAT 2.			
	Monitoring the waste input N/A			
	Chlorinated compounds e.g. solvents or PCBs			
43	Reduce quantity of waste sent for disposal by using <u>ONE OR BOTH</u> of the following techniques:			
	a. Material recovery e.g. organic residues in asphalt products	N/A		
	b. Energy recovery			
44	Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:			
	a. Adsorption – see S6.1	N/A		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	b.	Thermal oxidation – see S6.1	
	c.	Wet scrubbing – see S6.1	
<p><i>The BAT-AEL for TVOC emissions to air set in Section 4.5 (below) applies.</i> <i>Monitoring requirements are outlined in BAT 8</i></p>			
PHYSICO-CHEMICAL TREATMENT OF WASTE WITH CALORIFIC VALUE			
	Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:		
45	a.	Adsorption – see S6.1	N/A
	b.	Cryogenic condensation – see S6.1	
	c.	Thermal oxidation – see S6.1	
	d.	Wet scrubbing – see S6.1	
<p><i>The BAT-AEL for TVOC emissions to air set in Section 4.5 (below) applies.</i> <i>Monitoring requirements are outlined in BAT 8</i></p>			
REGENERATION OF SPENT SOLVENTS			
	Improve overall environmental performance by using <u>ONE OR BOTH</u> of the following techniques:		
46	a.	Material recovery (by evaporation from distillation residues)	N/A
	b.	Energy recovery e.g. using distillation residues	
	Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using a combination of the following techniques:		
47	a.	Recirculation of process off-gases in a steam boiler. Avoid generating PCBs and/or PCDD/Fs	N/A
	b.	Adsorption – see S6.1	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	c.	Thermal oxidation – see S6.1. Avoid generating PCBs and/or PCDD/Fs	
	d.	Condensation or cryogenic condensation	
	e.	Wet scrubbing – see S6.1	
	<i>The BAT-AEL for TVOC emissions to air set in Section 4.5 (below) applies. Monitoring requirements are outlined in BAT 8</i>		
BAT-AEL FOR EMISSIONS OF ORGANIC COMPOUNDS TO AIR – SECTION 4.5 (RE-REFINING OF WASTE OIL) (PHYSICO-CHEMICAL TREATMENT OF WASTE WITH CV) (REGENERATION OF SPENT SOLVENTS)			
		<i>BAT-AEL for channelled TVOC emissions to air from the re-refining of waste oil, physico-chemical treatment of waste with calorific value and regeneration of spent solvents (mg/Nm³)</i>	
		<i>Table 6.9 and its supporting note. Monitoring requirements are outlined in BAT 8</i>	
	TVOC	5.0-30	N/A
THERMAL TREATMENT OF SPENT ACTIVATED CARBON, WASTE CATALYSTS AND EXCAVATED CONTAMINATED SOIL			
48	Improve overall environmental performance by using <u>ALL</u> of the following techniques:		
	a.	Heat recovery from the furnace off-gas e.g. for preheating combustion air or steam generation	N/A
	b.	Indirectly fired furnace i.e. avoids contact between the furnace contents and the burner flue-gases. Note applicability constraints.	

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	c.	Process-integrated techniques to reduce emissions to air – see examples	
49	Reduce emissions to air of HCl, HF, dust and organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:		N/A
	a.	Cyclone – see S6.1	
	b.	Electrostatic precipitator (ESP) – see S6.1	
	c.	Fabric filter – see S6.1	
	d.	Wet scrubbing – see S6.1	
	e.	Adsorption – see S6.1	
	f.	Condensation – see S6.1	
	g.	Thermal oxidation – see S6.1	
<i>Note supporting text for BAT 49g (thermal oxidation) Monitoring requirements are outlined in BAT 8. No BAT-AELs have been set for this BATc.</i>			
WATER WASHING OF EXCAVATED CONTAMINATED SOIL			
50	Reduce emissions to air of dust and organic compounds from the storage, handling and washing steps by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:		N/A
	a.	Adsorption – see S6.1	
	b.	Fabric filter – see S6.1	
	c.	Wet scrubbing – see S6.1	
<i>Monitoring requirements are outlined in BAT 8. No BAT-AELs have been set for this BATc.</i>			
Decontamination of equipment containing PCBs			

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant	
51	Reduce emissions to air of PCBs and organic compounds and improve overall environmental performance by using <u>ALL</u> of the following techniques:		
	a.	Coating of the storage and treatment areas – see examples	N/A
	b.	Implementation of staff access rules to prevent dispersion of contamination – see examples	
	c.	Optimised equipment cleaning and drainage – see examples	
	d.	Control and monitoring of emission to air – see examples	
	e.	Disposal of waste treatment residues – see examples	N/A
	f.	Recovery of solvent when solvent washing is used	
<i>Monitoring requirements are outlined in BAT 8. No BAT-AELs have been set for this BATc.</i>			
TREATMENT OF WATER-BASED LIQUID WASTE			
52	Improve overall environmental performance by monitoring the waste input as part of the waste pre-acceptance and acceptance procedures. See also BAT 2.		
	<i>Monitoring the waste input</i>		
	Bioeliminability e.g. BOD, BOD-COD ratio, Zahn-Wellens test, biological inhibition potential		N/A
Feasibility of emulsion breaking e.g. lab testing			
53	Reduce emissions to air of HCl, NH3 and organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:		
	a.	Adsorption – see S6.1	N/A

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	b.	Biofilter – see S6.1	
	c.	Thermal oxidation – see S6.1.	
	d.	Wet scrubbing – see S6.1	
	<i>BAT-AELs for channelled HCl and TVOC emissions to air from the treatment of water-based liquid waste (mg/Nm3)</i>		N/A
	<i>Table 6.10 and its supporting notes. Monitoring requirements are outlined in BAT 8</i>		
HCl	1.0-5.0		
TVOC	3.0-20		

ANNEX 2: Consultation Reponses

A) Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with Natural Resources Wales Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our draft decision is summarised in this Annex. Copies of all consultation responses have been placed on Natural Resources Wales public register.

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from South Wales Fire and Rescue Service	
Brief summary of issues raised:	Summary of action taken / how this has been covered
The operator was asked to clarify 4 points of detail from within their fire prevention and mitigation plan.	The operator clarified the points raised.

2) Consultation Responses from Members of the Public and Community Organisations

None received. **Awaiting response from present advert.**