

Permitting decisions

Variation

We have decided to grant the variation for Teesside Waste Management Facility operated by Total Recycling Services Limited.

The variation number is EPR/BP3830QW/V002.

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 <u>key issues</u> in the determination
- summarises the decision making process in the <u>decision checklist</u> to show how all relevant factors have been taken into account
- 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. The introductory note summarises what the variation covers.

Description of changes introduced by the variation

This is a substantial variation. The site has been mothballed since 2010 when the permitted waste tonnage was reduced to zero and the majority of treatment activities were removed from the permit. This variation reinstates those previously permitted activities:

- Receive and store hazardous waste (predominantly in bulk storage tanks) awaiting treatment/disposal.
- Receive and store non-hazardous waste (predominantly in bulk storage tanks) awaiting treatment/disposal.
- Treat hazardous waste and non-hazardous waste by filtration, neutralisation, acidification, precipitation and sludge dewatering.
- Treat hazardous waste specifically oil water mixes by gravity separation.

In addition the variation also permits the following:

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- The inclusion of the new activity of washing, crushing and granulation of glass packaging within a purpose designed machine called a glass imploder. This is a fully enclosed system, there are no emissions points.
- Increase in waste through puts to 62,500 tonnes per annum (including new wastes accepted for
 destruction within the glass imploder) from the previous operational levels of 40,000 tonnes. There
 will be no increase in storage capacity.
- Amendments to accepted waste codes. A reduction in the variety of wastes permitted with the
 removal of the majority of dusty wastes. The inclusion of a small number of hazardous and nonhazardous waste consistent with those already permitted have been included. 16 05 06*, 16 05 07*,
 16 05 08* and 16 05 09 Discarded and laboratory chemicals.
 - These wastes will be pre-packed in accordance with SGN 5.06 requirements on such waste (lab smalls). All loads are packed by the operator's chemists and assigned into their Darlington Transfer Station for assessment. Only labs smalls pre-checked in this way will be accepted at the Hartlepool site. They will then arrive in small glass packaging destined for destruction in the glass imploder.
- Additionally non-hazardous codes 07 07 12 Sludges from on-site effluent treatment other than
 those mentioned in 07 07 11, 08 04 10 Waste adhesives and sealants other than those mentioned
 in 08 04 09 and 10 12 13 Sludges from on-site effluent treatment are included which are mirror
 versions of the hazardous wastes already accepted.

The permit has been consolidated and updated to modern conditions.

Key issues of the decision

Increase in throughput of the site

We have updated the permit to increase the hazardous and non-hazardous treatment capacity.

The increase in site throughput to 62,500 tonnes per year is split as follows:

- 37,500 tonne per year of hazardous waste
- 17,500 tonnes per year of non-hazardous waste
- 7500 tonnes per year of oil and oil water mixes (hazardous waste)

The storage capacity of the site is not changing, we therefore do not consider the accident risk will increase.

Waste acceptance procedures remain as previously permitted. We have however reassessed these in line with the recently published Waste Treatment BAT Conclusions. To ensure there is sufficient treatment capacity on site we have considered the following techniques which we believe constitute BAT:

- Only pre-approved wastes with a pre-acceptance approval and confirmed arrival date will be accepted at site.
- All incoming loads are weighed on the site weighbridge.
- The site has a computerised control system that displays all tank levels which will have been preadvised by chemists.

Additional activity glass imploder/de-packaging

The activity recovers glass from contaminated glass packaging and will have a maximum capacity of 2.5 tonnes/hour dependent upon feedstock. The operation will include the de-packaging of liquid waste from grossly contaminated packaging.

This is a sealed automated unit designed for water washing without detergent. It will therefore not process flammable or oily wastes.

The feed into the machine utilizes a sealed drum tipping mechanism that hoists the drum against a seal into the tipping position before the release is triggered dropping the glass into the wet chamber. Glass is imploded with a wet process that decontaminated and granulates the glass into "rounded edge" cullet ready for recovery. Washings from the process are held in the unit storage tanks and then pumped through sealed pipework into an awaiting storage tank prior to testing and discharge to the site effluent treatment.

The plant will be located externally at the rear of the facility against the southern boundary. It will be enclosed on 3 sides by an 8ft concrete block wall. The area is fully bunded with self-contained drainage. The drainage outlet from the imploder will be installed directly into a manifold for pumping into the plant or into tank T8 for interim storage.

Tanker de-sludging

This will be undertaken within a designated area to the rear of the site. It consists of a walled enclosure with sealed drainage and sump.

This is not a complete tank wash for full certification. The activity precedes the tank wash (specialised activity undertaken offsite), removing solids that have settled on route. Small volumes (< 200 litres) of water will be jetted through the tank to remove solids from the barrel. Liquids and solids are separated from the sump with liquids pumped into the plant for treatment via tank T8. Separated solids are allocated to a waste skip or drummed for removal offsite.

This is considered in line with BAT requirements specified in SGN 5.06, all tanker loads are assessed individually upon acceptance for compatibility with designated storage tanks. Compatibility includes a lab test of contents versus intended contents as for all bulking requirements. The Waste Treatment BAT Conclusions do not introduce any additional requirements for this activity.

Biodiversity

The site is located 965m to the west of the Teesmouth and Cleveland Coast SPA, Ramsar and SSSI. The site consists of extensive sand dunes, salt marsh and wetlands which support a diverse population of breeding birds. In addition extensive areas of open water and intertidal habitat provide feeding and roosting sites for large numbers of water birds throughout the year.

The potential impacts have been considered in the H1 emission assessment and are detailed below. We are satisfied the applicant has considered all the relevant environmental factors in their assessment. We have also completed a Habitats Risk Assessment and sent to Natural England for information only.

We are satisfied that the variation is unlikely to cause significant negative effects.

Local Wildlife Sites

Eight Local Wildlife Sites lie within the screening distance to the site. The nearest is Brenda Road Brownfield, 320m to the south west. This is a linear strip of brownfield land thought to support populations of protected amphibians and Dingy Skippers. Brenda Road Sewage Treatment Works lies 320m to the south and again supports populations of Dingy Skippers.

We do not consider the variation will impact upon these species. The permitted site is separated from these areas by roads, industrial buildings and in the case of the Brownfield a railway line. There is no pathway for impact.

There are also 2 National Nature Reserves and one Local nature Reserve in the screening distance. None will be impacted by the proposed permit variation.

Emissions to air

Scrubber stack

There is an existing point source discharge to air via Point A1 at the scrubber stack. The scrubber extraction system serves the acid storage tanks, reactors, filter press and the incoming effluent storage tanks. The system was in situ during previous operations at the site and will undergo a full inspection and refurbishment. The wet scrubber uses sodium hydroxide as a scrubbing media. No other air emissions are expected from the site.

The increased throughput will result in increased atmospheric emissions from the scrubber stack. The operator has submitted an assessment of the impact of ammonia, nitrogen dioxide, hydrogen chloride, and total organic compounds (TOC as benzene) from point A1 using the conservative H1 assessment tool. The chosen parameters were as required by previously requested monitoring by the Environment Agency and are also in line with monitoring requirements set by the Waste Treatment BAT Conclusions.

The applicant based their emission rates on the maximum measurements taken during previous permitted use at 40,000 tonnes per annum. Maximum emissions were assumed to be constant throughout the year. The concentrations were then multiplied by a factor of 1.625 to represent a pro rata increase in emissions based on the proposed increase in throughput. Stack details and flow rates were those used in the original application.

Long term PCs for NO₂ and human health Ammonia are less than 1% of the relevant EAL and can therefore be screened out as insignificant. The short term PC for all relevant pollutants is less than 10% of the EQS and therefore all short term concentrations can also be screened out as insignificant.

The long term PCs for ecological Ammonia and Benzene are greater than 1% of the EQS and the acceptability of these emissions against the relevant EQS were assessed by estimating the Predicted Environmental Concentration (PEC) of NO₂, Long term NO₂. PEC is calculated by adding the PC to the long term background concentration.

Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA. Benzene data for this location was downloaded and Ammonia data was taken from the maximum value given at ecological designations within 2km of the site on the UK Air Pollution Information System and is summarised below. The sites considered were

- Tees and Hartlepool Foreshore and Wetlands SSSI
- Seal Sands SSSI and
- Seaton Dunes and Common SSSI

These sites share the same footprint as the SPA/Ramsar and are referred to collectively as the Teesmouth and Cleveland Coast.

Predicted background pollutant concentration

Pollutant	Predicted Background Concentration (μg/m³)
Ammonia	1.92
Benzene	0.301

Using the above background levels PEC could be determined as indicated below

Predicted environmental concentration

Pollutant	H1 assessment results				
	Long term results		Short term results		
	PC (µg/m3)	PEC (μg/m3)	% PEC of EQS (%)	PC (µg/m3)	% PC of headroom (%)

Ammonia (Ecological)	0.0185	1.94	194	-	-
Benzene	0.657	0.958	19.2	12.3	6.3

As indicated above, long term PECs for benzene is less than 70% of the EQS and therefore not significant. In addition, the Assessment assumes all VOCs are present as Benzene.

The PEC for Ammonia is above the EQS for ecological sensitivity of lichens. We have however checked the available citations for all habitats sites within the screening distance and there are no lichens present. The EQS is therefore not relevant. The most sensitive critical load for these habitats is shown as $2 \,\mu g/m^3$ on APIS (Seal Sands SSSI – neutral grassland. Using the EQS would indicate that the PC is less than 1% of the EQS and the PEC is less than EQS. It is therefore concluded that the Ammonia impacts as result of the proposed variation would be insignificant.

Ongoing monitoring

In line with the requirements of the BAT Conclusions we have included 6 monthly air emissions monitoring for Hydrogen Chloride, Ammonia and Total VOC.

Carbon Filter from oil/water storage tank

Oil processing drops by 50% from 15,000 tonnes per annum to 7,500 tonnes per annum from previously permitted operational levels.

Oil and water is accepted via road tanker and stored in a sealed tank (transferred by sealed pipework). Treatment is by gravity separation only. Water is drawn off from the process with oils sent for off-site recovery. The storage tank is fitted with a carbon filter which is routinely inspected with filter media replaced as necessary.

Point source emissions to water

All waste activities are undertaken on concrete kerbed surfacing with sealed drainage system. The drainage plan remains as previously submitted. Clean waters collected from the roof of the filter press building and office block are discharged to surface waters. All waters collected from site surfacing are directed and contained within an impermeable containment system. This water is utilized on site for lime batching and line flushing or passed through the waste water treatment system as a non-hazardous effluent.

Waste effluents from the treatment process are discharged to sewer under trade effluent consent from Northumbrian Water. The applicant gained a new consent prior to submission of the variation. However the operator has a duty under BAT and we are required under IED to implement the requirements of the Waste Treatment BAT Conclusions from the date of issue of this variation.

The variation increases the discharge flow from 160 tonnes/day to 170 tonnes/ day. The applicant submitted a H1 assessment which considered this slight increase and an assessment against the BAT Conclusions. Their methodology was complicated, in part due to having no recent effluent monitoring data for the installation. Their assessment however presented an outcome consistent with our expectation given the final discharge is made approximately 4km out into the North Sea this being that the environmental risk to the receiving waters is low.

Given the lack of recent emissions data and with there being some ambiguity in the applicants assessment we have included an Improvement Condition within the permit requiring the operator to fully characterise their effluent discharge and undertake a further H1 assessment once the site is operational in order to validate the conclusions within the application. This is further discussed below.

Noise and vibration

The glass imploder is a new noise source with emissions at 2m expected to be 70dB(A). The imploder will be screened on 3 sides as detailed above and the applicant does not consider this will cause a nuisance beyond the site boundary.

The site lies within an industrial location with the nearest residential properties lying approximately 1km from the site. The southern site boundary where the imploder will be positioned lies adjacent to undeveloped land within the ownership of the operator. The nearest neighbours are approx. 40m from the imploder. Aerial photography details this to be an aggregates processing facility operating a crusher/screener. Noise emissions from the new plant are unlikely to be a concern beyond the site boundary.

Noise impacts from increases to existing activities are also thought to be low. Solids handling (filter press and filter cake handling) from the main process is undertaken within a building. Doors are closed for routine operation and historically there has been no noise concern raised with on-site operations.

The permit includes a standard noise condition which allows us to request a noise management plan in the future if necessary. We are satisfied that this standard noise condition in the permit is sufficient and no additional measures are necessary.

Fugitive emissions including dust

We don't consider this variation will create fugitive emissions of dust. The majority of permitted waste accepted at the site are liquid with the majority of processes being wet. Dusty wastes previously accepted have also been removed as part of the variation. In addition the following measures are considered appropriate and constitute BAT:

- No waste is stored in the open, aqueous wastes are stored in sealed tanks
- Waste is moved around the plant in sealed pipework
- Lime powder is delivered in bulk containers and "blown" into a contained silo for storage
- Lime silo has a specialist filter mechanism to prevent dust release.
- Damp filter cake is retained within an enclosed building.

The permit includes a standard fugitive emissions condition which allows us to request a dust management plan in the future of necessary. We are satisfied that this standard emission condition in the permit is sufficient and no additional measures are necessary.

Odour

The risk of fugitive releases of odour are thought unlikely to increase given that the amount stored on site is remaining the same as previously permitted. The type of waste accepted isn't significantly changing either with the proposed new wastes in keeping with those already accepted. The glass depackaging takes place in a sealed unit. There are no outlets for odour with effluent directed into sealed pipework and storage.

As previously discussed storage tanks and the filter press extraction system pass through a wet scrubber system to abate emissions of odour. On this basis we consider this variation is unlikely to cause odour issues and that the infrastructure and controls in place on site will minimise the potential for odour problems.

Our standard condition relating to odour pollution prevention and control is included in the permit. This condition requires the operator to prevent and minimise odour. The operator may be required to submit an odour management plan in the instance of future changes to operation or a result of odour complaints.

Best Available Techniques Assessment (BAT) Assessment

The relevant BAT guidance document is the Waste Treatment BAT Conclusions which were published in August 2018. The applicant provided a BAT assessment in line with our SGN 5.06 Guidance which has

been superseded by the BAT Conclusions. This was considered acceptable for the procedural elements of the application such as EMS as there is little change. We however required the operator to provide a revised assessment for those elements from the BAT Conclusions where there is a significant difference and/or new or revised requirements (e.g. for emissions to air and water).

We consider the reinstatement of activities previously removed from the permit meets the definition of "new plant" under IED and therefore we have applied the BAT-AEL's for emissions to air and indirect emissions to water (from the treatment of water based liquid waste) from the date of issue of this variation.

The table below summarises the operator's predicted average annual concentrations of their effluent from Seaton Carew WwTW and provides a comparison with the BAT-AEL's. This however only indicates that they would be compliant with the BAT-AELs once the effluent is discharged from the WwTW, not at the installation. This is not an acceptable approach as the operator must demonstrate that they are applying BAT on their site, and are compliant with any BAT-AELs at the point where the effluent leaves their installation, and thereby not relying upon dilution in the sewer and the WwTW in order to claim that the BAT-AEL's are met.

Parameter	Average annual concentration in effluent as it leaves Seaton Carew (mg/l)	BAT – AELs Treatment of water cased liquid waste (mg/l)	Notes
Zinc	0.00412	2	BAT AEL is met
Lead and its compounds	0.000343	0.3	BAT AEL is met
Cadmium and its compounds	4.9E-06	0.1	BAT AEL is met
Nickel	0.00144	1	BAT AEL is met
Copper	0.000245	0.5	BAT AEL is met
Chromium III (95%ile) (dissolved)	4E-05	0.3	BAT AEL is met
Chromium VI (95%ile) (dissolved)	4E-05	0.1	BAT AEL is met
Silver (dissolved)	5.86E0.5	n/a	n/a
Cobalt (dissolved)	0.000415	n/a	n/a
Phenol (95%ile)	0.020624	n/a	n/a
Cyanide	0.000269	n/a	n/a
Ammonia CaCO3 > 50mg/l (90 %ile)	0.073367	n/a	n/a
Mercury	1.87E-05	10μg/l	BAT AEL is met
Arsenic	1.27E-07	0.1	BAT AEL is met

We require the applicant to demonstrate that they can meet the BAT-AEL's from the point of discharge (S1) from their site. Given our view that the environmental risk from the proposed discharge is low, and because the operator is in effect, re-commencing a previously authorised discharge with very little change, we have made a risk-based decision to grant the variation but include an Improvement Condition (IC6) on the permit. IC6 requires the operator to fully characterise their effluent using representative monitoring data, validate the conclusions in their application, and to confirm compliance with relevant requirements from the Waste Treatment BAT Conclusions (WT BATC). Should on-site improvements be required to meet BAT this is also conditioned within the IC. We are satisfied that this is a reasonable and proportionate way forward.

We have agreed to a period of commissioning to allow the operator to establish the normal operating conditions of the site. This has been incorporated into the permit using Improvement Condition (IC7). During this time we will agree a local approach to the regulation of limits set within condition 3.5.1 and Schedule 3 table S3.2 of the permit. Similarly providing the operator satisfies us they have additional measures in place to manage the risk (of exceeding effluent limits) the same applies to reporting requirements under condition 4.2.3 and Schedule 4 (table S4.1).

Decision checklist

Aspect considered	Decision	
Receipt of application		
Confidential information	A claim for commercial or industrial confidentiality has not been made.	
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.	
Consultation/Engagement		
Consultation	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.	
	The application was publicised on the GOV.UK website.	
	We consulted the following organisations:	
	Local Authority Environmental Protection Department	
	No response was received.	
The facility		
The regulated facility	We considered the extent and nature of the facility at the site in accordance with Appendix 2 of RGN 2 'Defining the scope of the installation	
	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		
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility. The plan is included in the permit.	

Aspect considered	Decision	
Biodiversity, heritage, landscape and nature	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.	
conservation	The site is 975m from Teesmouth and Cleveland Coast Ramsar, SPA, SSSI.	
	We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.	
	We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.	
	We have provided Natural England with our Habitats Regulations assessments for information only.	
Environmental risk assess	ment	
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility.	
	The operator's risk assessment is satisfactory.	
Operating techniques		
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.	
Operating techniques for emissions that do not screen out as insignificant	Emissions of copper, lead, nickel and zinc to sewer cannot be screened out as insignificant. We have assessed whether the proposed techniques are BAT.	
	The treatment operations on site are designed to neutralise and treat wastes. The operating techniques remain the same as those previously permitted and are in keeping with BAT for the treatment of liquid wastes.	
	The proposed techniques/ emission levels for emissions that do not screen out as insignificant are in line with the techniques and benchmark levels contained in the technical guidance and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions and ELVs deliver compliance with BAT-AELs.	
Operating techniques for emissions that screen out as insignificant	Emissions of all airborne pollutants and some pollutants discharging to sewer have been screened out as insignificant, and so we agree that the applicant's proposed techniques are BAT for the installation.	
	We consider that the emission limits included in the installation permit reflect the BAT for the sector.	

Aspect considered	Decision	
Permit conditions		
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(s).	
Waste types	We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.	
	We are satisfied that the operator can accept these wastes for the following reasons:	
	they are suitable for the proposed activities	
	the proposed infrastructure is appropriate; and	
	the environmental risk assessment is acceptable.	
	We made these decisions with respect to waste types in accordance with Waste Classification Technical Guidance WM3.	
Improvement programme	Based on the information on the application, we consider that we need to impose an improvement programme.	
	We have imposed an improvement programme to ensure that the effluent is fully characterised and to validate the conclusions made in the application based on current operational data.	
Emission limits	ELVs have been amended in line with the BAT-AEL's (for the treatment of water based liquid waste) for indirect discharges to water for the following substances.	
	 Hydrocarbon oil index Free cyanide Adsorbable organically bound halogens (AOX) Arsenic Cadmium Chromium (expressed as Cr) Chromium (expressed as Cr (VI) Copper Lead Nickel Mercury Zinc 	
Monitoring	We have decided that monitoring should be amended for the following parameters, using the methods detailed and to the frequencies specified:	
	Emissions to sewer for the parameters as detailed above	
	Emissions to air:	
	Hydrogen ChlorideAmmoniaTVOC	

Aspect considered	Decision
	These monitoring requirements have been amended in order to comply with the measures requirements of the Waste Treatment BAT Conclusions.
	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.
Reporting	We have amended reporting in the permit for the following parameters:
	Reporting of emissions data (air and sewer)Annual production treatment
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Technical competence	Technical competence is required for activities permitted.
	The operator is a member of an agreed scheme.
	We are satisfied that the operator is technically competent.
Relevant convictions	The Case Management System has been checked to ensure that all relevant convictions have been declared.
	No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.
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	
Section 108 Deregulation Act 2015 – 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.
	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

Aspect considered	Decision
	because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.