

Permitting decisions

Variation

We have decided to grant the variation for Grimsby Lyocell Fibers Factory operated by Lenzing Fibers Grimsby Limited.

The variation number is EPR/SP3936HE/V003.

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 checklist 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.

Key issues of the decision

The Application:

The operator applied for a substantial variation to add a new scheduled activity S4.1 A(1)(a)(iv), for the production of a new cross linking chemical reagent, its application to their basic raw cellulose fibre and the treatment/neutralisation of any unfixed reagent before discharge to the existing effluent stream.

The operator made a claim for commercial confidentiality on a range of aspects associated with the production of this new reagent including the raw materials used, the nature of the final product and the chemical processes utilised. We accepted the operator's claim for confidentiality in these aspects. The nature of the reagents and products are therefore not detailed in this document.

The Process:

Reagent 1 (powder) is reacted with Reagent 2 (liquid) under buffered pH conditions to produce Product 1 which is used to cross-link the existing cellulose fibre by padding onto the gelled fibre and chemically fixing in steam. A proportion of Reagent 1 remains unfixed to the fibre and it is concentrated using reverse osmosis to allow a more concentrated stream of unfixed Reagent 1 to be returned to the application system for re-use. The effluent stream from this stage of the process is transferred to hydrolysis tanks (six in total acting in series) where it is completely hydrolysed using an existing site sulphuric acid supply which is already stored and used on site.

The aqueous stream from this hydrolysis is neutralised with sodium hydroxide (to pH 6 – 10) before being discharged off-site with the existing site effluent stream.

Hydrogen chloride (HCl) is released during product formation reaction and hydrolysis and this is abated using a water scrubber before releases of treated gases to atmosphere via an 18-metre high stack.

Chemical Handling and Storage:

Reagent 1 is highly toxic and corrosive. It reacts violently with water and poses significant health, safety and environmental risks. It is delivered to site in double-lined flexible intermediate bulk containers (FIBC) (bags with capacities of one tonne) within enclosed delivery vehicles such as curtain sider trucks. The offloading of this material is carried out by fork lift trucks (FLT's) within a building to ensure it cannot be exposed to rain. The material is stored on dedicated racking at least 1 m above ground level to ensure no risk of flood waters coming into contact with the material.

The offloading and storage area within the building is not large and the FLT's used have been selected based on their manoeuvrability in tight areas. All drivers will have B1 FLT licences. All persons working with Reagent 1 will wear the appropriate personal protective equipment (PPE) based on COSHH (Control of Substances Hazardous to Health) assessments and advice received from process specialists.

The stock of Reagent 1 stored on site is set at a maximum of 4 tonnes. This was originally selected to ensure the storage capacity did not exceed the inventory level that would have required the facility to register under the COMAH (Control of Major Accident Hazards) Regulations. Subsequent consideration by the operator has indicated that storage of up to 40 tonnes Reagent 1 might have been possible without COMAH registration but they have decided to keep storage quantities at a low level due to the hazardous nature of the material.

Deliveries of Reagent 1 will be received on site daily as the operator wishes to keep the stock inventory as low as possible. To minimise the risk of damage to the FIBC's, the FLT'S in use have puncture protection on the forks and have been selected due their ability to operate at low speeds. All shift operators are trained in spill procedures and management.

Reagent 1 is transferred to the reactor vessel by means of a powder feeder system which incorporates dust filters. Air from this feeder system ultimately vents to the installed scrubber. There are a number of in-line

filters in this system prior to the scrubber so there should be no potential for any reaction between Reagent 1 and scrubber water within the system.

Reagent 2 is delivered to site by bulk tanker and stored in a 3 m³ tank (integrally banded) within the banded process area of the new operational area known as the A200 Make Up Facility. There are four storage tanks within this area:

- Reactor vessel 12.5 m³,
- Product 1 storage vessel 22 m³,
- Reagent 2 storage vessel 3 m³,
- Hydrolysis break tank 2.3 m³.

The bund capacity is 46 m³ (7.7 m x 13.3 m x 0.45 m) ensuring it exceeds 110% of the capacity of the largest tank and 25% of the capacity of all the tanks.

The bund is of concrete construction and all chemicals stored within it are compatible with the bund materials of construction.

Hydrolysis:

The hydrolysis reaction is key to ensuring that the liquid effluent released from this process is non-toxic and suitable for discharge with existing site effluent. The hydrolysis product is defined in the Material Safety Data Sheets as no longer being hazardous or having an impact on the receiving environment.

The original application identified one hydrolysis tank within the facility. This was revised during the determination to six smaller 4 m³ hydrolysis tanks connected in series.

The operator decided to increase the number of hydrolysis tanks to six (smaller tanks) due to:

- ease of fabrication and thus reduced lead time for procurement;
- increased accessibility (due to the reduced height) so manual pH adjustments can be made via access hatches;
- better monitoring of the process due to increased number of pH and temperature measurements across the process.

The tanks have been set up in series to ensure there is enough residence time for hydrolysis to occur prior to discharge to the main site effluent.

The operator stated in the application that the hydrolysis tank /scrubber skid unit area would also be banded. In response to a Schedule 5 Notice request, the operator noted this had been an error in the application and only the A200 Make Up Facility area would be banded with a kerb around the hydrolysis tanks and a drain to the main effluent system.

We did not consider this proposal to be BAT (Best Available Techniques) for storage and containment of liquids. The operator then proposed to raise the height of the kerb around the hydrolysis tanks to match the height of the bund around the process area tanks. This would effectively band the hydrolysis area and the A200 process area together. This would deliver a further 17 m³ capacity to the containment area bringing its total volume to 63.1 m³. The increased capacity would be sufficient to demonstrate >110% capacity of the largest and >25% capacity of all the tanks within the expanded area. A cascade system, comprised of a series of pipes within the separation wall between these two areas, would ensure flow from the smaller to the larger area in event of loss of containment in the hydrolysis tank area.

There is an effluent drain within the contained hydrolysis tanks area. Rather than totally isolating this drain, the operator has chosen to build a bund wall around the drain to the height of the containment area for the A200 process area and hydrolysis area. The effluent drain will be banded within the containment area itself to contain any releases, should there be a failure of the hydrolysis tanks. The operator shall test any excess rainwater within the hydrolysis area prior to pump discharge to the effluent drain under their control.

Gaseous Emissions:

The gaseous effluents released from the process are abated through a new water scrubber prior to discharge from a new 18-metre high stack with efflux velocity of 11 m/s and total flow of 702 m³/hour.

The recirculating water from the scrubber will progressively become more acidic and will be tested for conductivity so that it can be replaced with fresh water when required whilst also reducing total water usage.

The operator has assessed the potential impacts of this discharge on the environment using Environment Agency H1 Risk Assessment Tool.

Emission Point	Location	Purpose	Pollutant	Actual Mass Release Rates		Actual Average Release Concentration	EPR 4.02 Emission Benchmark	Emissions Screened Out
				(tonnes/year)	(kg/hour)	(mg/m ³)	(mg/m ³)	at H1
2-33C01	Outside New Facility	HCl removal from venting system	HCl	0.0615	0.007	10	10	Yes
2-33C01	Outside New Facility	HCl removal from venting system	CO ₂	35.2	4.02	Approx. 6000	N/A	Yes

Substance	Long Term EAL	Short Term EAL	Long Term			Short Term		
	(µg/m ³)	(µg/m ³)	PC (µg/m ³)	%PC of EAL	>1% of EAL?	PC	%PC of EAL	>10% of EAL?
HCl	-	750	0.0197	-	-	0.478	0.0637	NO

The operator has stated that the scrubber has been designed to deal with the worst-case conditions of HCl formation which are very unlikely to occur due to the multiple layers of protection in the synthesis and storage of the new product from operation of the new production facility.

An emission limit value of 10 mg/m³ has been set for HCl in the emission from the new vent scrubber. This is in accordance with the relevant emission benchmark stated in our guidance document, EPR 4.02, "How to comply with your environmental permit. Additional guidance for speciality chemicals sector." We have required the operator to carry out quarterly monitoring of this release point during the first year of operation to confirm the performance of the scrubber. After one year, the monitoring frequency will revert to annual.

The operator also proposed in the original application that the relief line from the reactor would also be directed to the wet scrubber for abatement prior to discharge to atmosphere. However, following subsequent laboratory safety testing, it was decided to direct the relief line outside the building via a bursting disc. The

operator has demonstrated that discharge via this relief line would occur only due to a number of adverse conditions relating to:

- Significant undercharging of water;
- Increasing ambient temperature;
- Loss of stirring;
- Instantaneous addition of reagents; and
- Loss of process control.

The operator has also demonstrated that technical process controls are in place to minimise the potential for any of these events occurring and we are satisfied that the relief from the reactor does not need to be abated through the wet scrubber.

Aqueous Emissions:

After hydrolysis, the aqueous discharge from the new process will be directed via sub-surface drains to the existing site effluent pit where it will mix with the liquid discharges from the other processes on site. From here, the effluent will flow into the effluent pipeline into the Humber Estuary that Lenzing Fibers Grimsby Limited shares with Technical Absorbents Limited (EPR/RP3632NX), Engie FM Limited (EPR/DP3338DC) and Blue Star Fibres Company Limited (EPR/VP3335LK).

Each of these individual discharges has its own emission limits for point source emissions to surface water within their specific environmental permits. Each effluent is sampled prior to discharge into this shared pipeline and compliance with permit emissions limits are assessed at these points. No analyses or assessments of impact on receiving waters are carried out in the combined effluent stream within the pipeline.

Lenzing Fibres have carried out analyses on effluents derived from short trials of production of this new reagent at their process site in Austria. These analyses and mass balance calculations, indicate that the effluent discharged from the new Grimsby process will continue to comply with existing permit emission limits for discharges to water, when mixed with existing site effluent.

We have taken the opportunity of this permit variation, and the variation to the permit for Technical Absorbents Limited (EPR/RP3632NX/V003, 17/07/18) to incorporate an improvement condition in both permits to assess the impact of the combined factory effluents on the Humber Estuary, by means of direct toxicity assessment.

In the original application, the operator based their conclusion that there would be no impact on the receiving waters of the new Lenzing effluent on a number of factors:

- The new effluent would continue to comply with existing Lenzing permit emission limits;
- There were no discharges of List I or List II species in the new effluent.

The operator proposed that approximately 18 m³/hour of aqueous discharge from the new production facility would be added to the existing site effluent at full production capacity. Based on mass balance calculations, approximately 60 kg/hour (peak) of cyanuric acid was predicted to be produced within this additional 18 m³/hour discharge. In any 24-hour period therefore, 1440kg cyanuric acid would be released through the effluent discharge.

As the typical total effluent discharge from Lenzing Fibers was approximately 2,000 m³ per day, the estimated concentration of cyanuric acid within the discharge would then be 720 mg/l before any dilution in the Humber Estuary. Whilst dilution cannot be used to demonstrate operation of BAT (Best Available Techniques), the operator carried out calculations to compare predicted concentrations in the Humber Estuary after a certain number of hours against the LC₅₀ figure for that same time frame given in the Material Safety Data Sheet (MSDS) for cyanuric acid. As the flow of the Humber Estuary is 900,000,000 litres/hour, the concentration of cyanuric acid remaining after 48 hours is estimated by the operator to be 0.014 mg/l –

which is 720,000 times lower than the LC₅₀ for cyanuric acid [LC₅₀ for water flea is given as >1,000 mg/l (48 hours) in MSDS].

The operator did not carry out an assessment using the Environment Agency H1 Risk Assessment Tool due to the lack of an Environmental Quality Standard (EQS) for the final product of effluent hydrolysis, cyanuric acid. We derived a surrogate EQS from data contained in the Material Safety Data Sheet for cyanuric acid relating to its acute and chronic toxicity on algae, fish and invertebrates and requested the operator to use this value in the H1 Tool. These surrogate EQS values were:

- 62 mg/l for short term exposure
- 3.2 mg/l for long term exposure.

The operator used these surrogate values in the H1 assessment and they demonstrated emissions of cyanuric acid would be screened out as they are likely to have an insignificant impact.

	Annual Average EQS (µg/l)	PC	%PC of EQS	PC <4% of EQS	Maximum Allowable Concentration (µg/l)	PC	%PC of EQS	PC <4% of EQS
Cyanuric Acid	3200	14.11	0.44	PASS	62000	14.11	0.0228	PASS

Waste:

The most significant waste stream from the new process will be the redundant FIBC's which previously contained Reagent 1. These will be collected in larger rescue bags or 205-litre drums alongside any spillage of Reagent 1 and any contaminated PPE for collection by the Lenzing waste contractor and disposal off-site as hazardous waste. The operator has estimated that each redundant FIBC will weigh 2.5 kg (including 0.1 kg of residual Reagent 1 powder) and there will be a total of 2.7 tonnes of this waste produced annually. This figure would imply that the operator expects very little spilled material requiring disposal.

The operator believes that not all residue of Reagent 1 powder can be removed from each FIBC and the presence of this remaining residue prevents the recycling of these FIBC's.

The other hazardous waste steam is the disposal of redundant dust filters from the Reagent 1 powder handling system. These will be replaced approximately every three months and total waste produced will be of the order of 0.024 tonnes per year.

A further small waste stream involves the disposal of the waste bags that previously held the pH buffer powder reagent. The estimate for annual disposal of this waste is 0.02 tonnes.

No other significant waste streams are proposed by the operator although there will certainly be the waste (potentially hazardous and non-hazardous) that will be generated from maintenance and repair of equipment within the new process.

The operator has confirmed that reuse and recycle initiatives for wastes generated from the new process will be initiated in line with the company's policy on sustainability.

Improvement Programme:

We have imposed an Improvement Programme in the permit variation. This consists of five new Improvement Conditions (ICs):

IC8 – Although Lenzing Fibers Grimsby Limited has emission limits for aqueous discharges to water, they relate to the point where the effluent is discharged into the combined pipeline that they share with the other occupants of the site. There are no emission limits on the final discharge of the combined effluents to the Humber Estuary. This Improvement Condition requires the operator to assess the potential impact of its aqueous effluent on the Humber Estuary using the direct toxicity assessment technique in conjunction with the other operators of the discharge pipeline. Equivalent conditions will be included in the other operators'

permits where and when applicable. This will allow an assessment of any potential impact of all the combined effluents on the receiving waters.

IC9 – The operator has estimated potential concentrations of cyanuric acid in the site effluent following installation of the new process based on laboratory trials and data from a sister site in Austria carrying out a similar process. This improvement condition requires the operator to carry out a programme of analysis of effluent for cyanuric acid and resubmit the H1 risk assessment tool based on actual analytical results rather than estimated values. Should this work indicate that a specific emission limit value for cyanuric acid in the site effluent is required, the operator shall propose such a value for approval.

IC10 – The operator has indicated from laboratory trials that any potential residue of Product 1 or any carry over of Reagent 1 (more unlikely) have been hydrolysed to non-hazardous hydrolysis products prior to discharge in site effluent. This improvement condition requires the operator to confirm this by carrying out a sampling, monitoring and testing trial.

IC11 – The operator has indicated there will be no impact on off-site receptors from any change in the noise profile emanating from the site following commissioning of the new operating process. This improvement condition requires the operator to confirm this by carrying out a noise assessment in accordance with BS4142:2014 and proposing any remedial measures should noise be demonstrated to cause off-site impact, with timescales.

IC12 – The operator has not confirmed which method will be utilised to monitor hydrogen chloride (HCl) in gaseous emissions from the newly installed vent scrubber (release point, V200). This improvement condition requires the operator to confirm the method to be used to the Environment Agency for approval.

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	<p>A claim for commercial or industrial confidentiality has been made.</p> <p>The claim has been made by the operator.</p> <p>We have accepted the claim for confidentiality. We have excluded information on the raw materials, intermediates, products and chemical reactions of the new production process being permitted. We consider that the inclusion of the relevant information on the public register would prejudice the applicant's interests to an unreasonable degree. The reasons for this are given in the notice of determination for the claim.</p> <p>The decision was taken in accordance with our guidance on confidentiality.</p>
Identifying confidential information	<p>We have not identified information provided as part of the application that we consider to be confidential.</p> <p>The decision was taken in accordance with our guidance on confidentiality.</p>
Consultation/Engagement	
Consultation	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consulted the following organisations:</p> <ul style="list-style-type: none"> - Public Health England; - Health and Safety Executive; - Joint Nature Conservation Committee; - Lincolnshire County Council Health Protection (Director of Public Health); - North East Lincolnshire Council Environmental Health Department - Marine Management Organisation; - North-eastern Inshore Fisheries and Conservation Authority; - Anglian Water Services Limited - Natural England. <p>The comments and our responses are summarised in the consultation section.</p>
The facility	
The regulated facility	<p>We considered the extent and nature of the facility/facilities at the site in accordance with RGN2 'Understanding the meaning of regulated facility' and Appendix 2 of RGN 2 'Defining the scope of the installation'.</p> <p>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.</p> <p>The site address has been changed to correct an error in previous permit variations.</p>

Aspect considered	Decision
The site	
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. The plan is included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>These sites are the Humber Estuary Special Protection Area, Humber Estuary Special Area of Conservation, Humber Estuary Ramsar site and Humber Estuary Site of Special Scientific Interest.</p> <p>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.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have consulted Natural England on our Habitats Regulations and SSSI assessments, and taken their comments into account in the permitting decision.</p>
Environmental risk assessment	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>
Operating techniques	
General operating techniques	<p>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.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p>
Operating techniques for emissions that screen out as insignificant	<p>Emissions of HCl (hydrogen chloride) to atmosphere and cyanuric acid (to the Humber Estuary) have been screened out as insignificant, and so we agree that the applicant's proposed techniques are BAT for the installation.</p> <p>Further details on this screening assessment are in the Key Issues section.</p> <p>We consider that the emission limits included in the installation permit reflect the BAT for the sector.</p>

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.
Improvement programme	Based on the information on the application, we consider that we need to impose an improvement programme. Refer to Key Issues Section for further details.
Emission limits	ELVs based on BAT have been added for the following substances: - HCl emissions to atmosphere. We made these decisions in accordance with Environment Agency guidance - How to Comply: Speciality Organic Chemicals Sector (EPR 4.02).
Monitoring	We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified: - HCl to atmosphere (quarterly for first year of operation and annually for future year's operation) These monitoring requirements have been imposed in order to meet indicative BAT. We made these decisions in accordance with Environment Agency guidance - How to Comply: Speciality Organic Chemicals Sector (EPR 4.02). Based on the information in the application we are satisfied that the techniques, personnel and equipment to be used to carry out monitoring of releases to atmosphere will have either MCERTS certification or MCERTS accreditation as appropriate.
Reporting	We have added reporting in the permit for the following parameters: - HCl to atmosphere (quarterly for first year of operation and annually for future year's operation).
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.
Relevant convictions	The Case Management System 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.
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

Aspect considered	Decision
	<p>Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“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.”</p> <p>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.</p> <p>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.</p>

Consultation

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
Public Health England
Brief summary of issues raised
The consultee noted that the main emissions to air from the new process are hydrogen chloride and carbon dioxide – both of which the applicant screened out as insignificant using Environmental Risk Assessment (H1). The consultee also noted that there are no public receptors in the immediate vicinity or close to the site. Based on the information supplied to the consultee, they had no significant concerns regarding risk to the health of the local population from the installation.
Summary of actions taken or show how this has been covered
No further action.

Response received from
Joint Nature Conservation Committee
Brief summary of issues raised
The consultee noted that the development proposal was not located within the offshore area, did not have any potential offshore nature conservation issues and was not concerned with nature conservation at a UK level. The consultee therefore had no comments to add to the consultation.
Summary of actions taken or show how this has been covered
No further action.

Response received from
Marine Management Organisation
Brief summary of issues raised
The consultee noted that any works within the Marine area require a licence from the Marine Management Organisation and it was the responsibility of the applicant to take the necessary steps to ascertain whether their works fall below the Mean High Water Line.
Summary of actions taken or show how this has been covered
The discharge of effluent from the new facility will be into the existing effluent pipeline and there is no change in the location of that pipeline with reference to the Mean High Water Line.

Response received from
Natural England
Brief summary of issues raised
For the Humber Estuary Site of Special Scientific Interest (SSSI), the consultee agreed with the conclusion of the Appendix 4 assessment that the permission was not likely to damage or destroy the interest features for which the Humber Estuary SSSI had been notified. For the provisions of the Habitats Regulations, the consultee noted that the EA had screened the proposal for the likelihood of significant effects. The consultee concurred with the view of this assessment that the

proposal could be screened out of further stages of assessment because significant effects were unlikely to occur either alone or in combination.

Summary of actions taken or show how this has been covered

Improvement Condition 8 requires operator to carry out a direct toxicity assessment of the environmental impact of effluent on the receiving waters in conjunction with all operators that discharge effluent into the joint outfall pipe in the Humber Estuary.

Response received from

Anglian Water Services Limited

Brief summary of issues raised

The consultee noted that currently the operator treats and discharges process effluent streams to the River Humber in accordance with an Environment Agency permit. The consultee noted that should the operator wish in the future to discharge trade effluent to public foul sewer, a consent would be required from Anglian Water.

The consultee requested that, with effluent discharge from the facility to the River Humber, permit conditions should ensure that the discharge be treated to a level that does not compromise bathing water compliance or threaten environmental quality (i.e., breach of environmental quality standards).

The consultee noted that, although the facility is located in an area downstream of the nearest Anglian Water Services source (Healing) and outside any catchment/source protection zone, there should be permit conditions to ensure groundwater is protected for public supply and other abstraction processes.

Summary of actions taken or show how this has been covered

There are no consented discharges from the facility to public sewer included in the permit.

The existing permit compliance limits for discharges to water (Humber Estuary) are not varied as a result of this permit variation and the facility will remain within compliance for all these discharges and consent parameters as a result of this permit variation.

Improvement Condition 8 requires the operator to carry out a direct toxicity assessment of the environmental impact of effluent on the receiving waters in conjunction with all operators that discharge effluent into the joint outfall pipe in the Humber Estuary.

Improvement Condition 9 requires the operator to carry out monitoring for cyanuric acid in the site effluent and agree with the Environment Agency, if required, an environmental limit value for cyanuric acid in the site effluent.

There is no permitted discharge to groundwater in the permit and condition 3.1.3 requires the operator to carry out periodic groundwater monitoring at least every five years unless such monitoring be based on a systematic appraisal of the risk of contamination.

No representations received from:

- Health & Safety Executive
- North-eastern Inshore Fisheries and Conservation Authority
- Lincolnshire County Council Health Protection (Director of Public Health)
- North East Lincolnshire Council Environmental Health Department.