

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for **Crown Close Optics & Structures** operated by **Novanta Technologies UK Limited**

The permit number is **EPR/GP3809BJ**

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 summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account.

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. The introductory note summarises what the permit covers.

# Key issues of the decision

## Introduction

The operator is planning to commission this new chemical installation facility and then surrender their existing regulated installation operating same fundamental process under existing permit EPR/ZP3933UU. In addition, there is a further non-operating equivalent process installation which will also be surrendered; this is permitted under EPR/CP3136YP. As such this installation will not lead to any additional environmental impacts over and above installations already permitted.

In fact the operator has committed to usage of a new specially designed acid scrubber to minimize chromium air emissions and to design the effluent treatment plant to ensure emissions to sewer are at 50 % of current plant.

## 1. Air emissions

The operator provided a H1 assessment with their additional information response dated 02/10/20. The air emission parameters linked to variation changes are as follows:

- Diethyl ether
- Beryllium and its compounds
- PM10
- Hydrogen chloride
- Chromium VI
- Hydrogen fluoride
- Nitrogen Dioxide

The H1 assessment was based on estimates of emissions for the relevant emission points A1 /A2 from existing process actual monitoring data. The estimates are based on maximum operational running hours of 3758 hours per annum (42.9 %).

## H1 screening.

### Step 1

The emissions which warrant further investigations are:

- PC (Long term) >1% of the LT Environmental benchmark.
- PC (Short term) >10% of the ST environmental benchmark.

## Basis of the assessment

A summary of the results of the Application H1 assessment of emissions to air are as follows, utilising assumptions as described above

The assessment is conservative, as the BAT design of the facility will be an improvement on the current operating installation design. The schedule 5 responses dated 02/06/20 gives details of improvements to new installation abatement including enhanced HEPA filtration for particulate abatement and VOC removal via acid scrubber.

Substance	Long Term EAL/EQS µg/m3	Short Term EAL/EQS µg/m3	PC LT µg/m3	PC % of LT EAL/EQS	PC LT >1% of EQS/EAL	PC ST µg/m3	PC ST % of EAL/EQS	PC ST >10% of EQS/EAL
Beryllium and its compounds	0.0002	-	0.00000103	0.518	No	-	-	-
Diethyl ether	12,300	154,000	0.504	0.00410	No	11.4	0.00738	No
PM 10	40	50	0.00929	0.023	No	0.169	0.338	No
Hydrogen chloride	-	750	-	-	-	0.208	0.0277	No
Chromium VI (compounds as Cr) within PM10 fraction	0.0002	-	0.00011226	5.64	Yes	-	-	-
Nitrogen Dioxide (human health)	40	200	0.0767	0.192	No	0.73	0.365	No
Oxides of Nitrogen (Ecological)	30	75	0.0767	0.256	No	1.45	16.9	Yes
Hydrogen fluoride (human health)	16	160	0.000116	0.007	No	0.0169	0.01	No
Hydrogen fluoride (daily mean ecological receptors)	-	5	-	-	-	0.0169	0.338	No
Hydrogen fluoride (weekly mean ecological receptors)	-	0.5	-	-	-	0.0169	3.38	No

## **H1 Step 1 Screening Conclusion**

### **Conclusion**

From the assessment above it is concluded all the process contributions linked to the variation changes are assessed as having insignificant environmental impact and no further assessment is required except chromium VI longer term emissions and short term Oxides of Nitrogen (ecological)

Overall, the Oxides of Nitrogen (ecological) short term impacts are only marginally above the relevant insignificant thresholds with the conservative H1 assessment tool

The usage of more accurate dispersion modelling would from our experience bring the process contributions down to a level where impacts for these parameters would be concluded as being insignificant. In addition the improved design of the new plant relevant to existing plant will further reduce emissions.

Therefore, no further assessment is required for these parameters

## **Chromium VI emissions**

In practice it is considered in reality the installation process contributions will be < 1 % of the Air Quality Standard of 0.0002 µg/m3 for chromium VI long term based on following reasoning:

- The emissions are based on total chromium emissions data not chromium VI data, hence the process contributions will be overly conservative. From a similar surface treatment process under permit EPR/BW1688IN the chromium VI emissions were less than a third of the total chromium emission levels. These results were from comparative monitoring using MCERTS monitoring standards for chromium VI versus total chromium.
- The emissions data are based on continuous operation within operating hours at peak emissions where in practice emissions are at a peak when plating materials are added or removed from the surface treatment vats but are at significantly lower levels when vats are in steady state plating mode without addition or removal of components. Therefore average emissions for long term annual assessment would average at levels considerably lower than peak monitoring results used.
- The usage of the new installation optimised acid scrubber will further minimise chromium emissions relative to monitoring data from current permitted installation.

### **Final conclusion**

***Installation atmospheric process contributions for all parameters are concluded to having insignificant environmental impacts and hence not requiring further assessment.***

## **2. Effluent emissions**

The Operator has carried out a H1 environmental assessment to effluent (final version within schedule 5 response dated 17/08/20).

The following is a summary of basis of assessment:

- Total daily limit of 86 m<sup>3</sup>/day
- Maximum peak flow of 5 litres/seconds
- For key parameters of copper, zinc, lead, chromium and nickel all the emission limit values in our Surface Metal Treatment TGN (EPR 2.07) are complied with.
- Discharge is via Ham Sewage Treatment Works (Wessex Water) and hence relevant Sewage Treatment Reduction Factors have been utilized in line with our 17\_13 “*Permitting of hazardous pollutants in discharges to surface waters*” Guidance
- Final discharge is to River Tone at NGR ST 2817124912; Q95 freshwater river flow of 0.595 m<sup>3</sup>/second
- Effluent treatment plant maximum usage 42.9% per annum. It should be noted that applicant H1 document 17/8/20 has not applied this % and all figures below are with application of this operating hours %.

### **Assessment**

For river discharges our guidance 17\_13 “*Permitting of hazardous pollutants in discharges to surface waters*” states that *the process contributions can be considered insignificant if:*

- ***The process contribution is < 4% of the EQS Maximum Admissible Concentration (MAC) and***
- ***The process contribution is < 4 % of the EQS Annual Average.***

**The results of the assessment are summarised below:**

Parameter	EQS Annual Average µg/l	PC LT µg/l	PC/EQS %	>4% EQS	EQS MAC	PC ST µg/l	PC/EQS%	>4% EQS MAC
Boron	2000	0.868	0.043	No	-	-	-	-
Chromium VI (dissolved )	3.4	0.0144	0.42	No	-	-	-	-

<b>Copper</b>	1	0.0061	0.61	No	-	-	-	-
<b>Nickel and its compounds</b>	4	0.119	2.97	No	34	0.786	2.311	
<b>Zinc</b>	10.9	0.0374	0.34	No	-	-	-	

**Conclusion**

***Overall, all the parameters screen out as insignificant and therefore no further assessment is required.***

It should be noted that within schedule 5 response dated 12/08/20 the Applicant has committed to effluent treatment plant design emissions to be reduced to 50 % of the emissions from the current facility emissions used in the H1.

**Beryllium**

There is no official Environmental Quality Standard for Beryllium. In addition, both the TGN EPR 2.07 for surface treatment and EPR 4.03 for Inorganic Chemicals do not specify benchmark emission limit values for Beryllium for the discharge from the installation itself.

The operator has optimized their new effluent treatment plant to minimize beryllium lower than those currently permitted in EPR/ZP3933UU

At present within EPR/ZP3933UU installation wastewater treatment is minimal, beryllium waters from machine shops are passed through a coarse particulate filter prior to discharge to sewer. Under the new system the water is treated to a very high standard prior to discharge. Treatment processes include flocculation, dissolved air flotation and particulate matter filtration.

We agree that the new effluent treatment has been designed to minimize beryllium emissions well below the levels of the current permitted facility. As such we consider operating techniques as robust BAT measures for beryllium emissions minimization.

**3. Containment**

**Bunding**

The BAT assessment within the schedule 5 response dated 12/08/20 clarified that the containment facilities for all the external bulk storage facilities meet the following requirements:

- Bunds are in place with containment volumes >110% of individual container and >25% of total stored volumes – based on information provided without assessment of space taken up by tankage/pipework within the bunds.
- Details of all tanks/raw material containers provided

**Conclusion**

A pre-operational condition PO 2 is in place to finalise bunding design details to specifically ensure bunding compliance with “Containment systems for the prevention of pollution (C736)” guidance

**4. Fire water management**

We were unclear from the initial application supplementary information whether controls were in place to manage and contain fire water from the installation. The operator provided a summary of their operating procedures in their schedule 5 response dated 02/06/20.

In brief they provided a summary of an operating procedure for fire water management including details of fire water usage volumes, means of containing such waste fire water including usage of shut off valves to prevent discharge to surface water.

The operator has committed to update their fire water management procedure to cover:

- Final details of storage facilities and volume available to ensure adequate storage of fire water.
- Testing/assessment of fire water quality and criteria for deciding disposal route.
- Fire water disposal procedures.

## **Conclusion**

We are satisfied that key measures will be designed into the installation facility. However, to ensure the completion of a final fire water management plan and relevant operation procedures we have included pre-operational condition PO 3 within the permit.

## **Decision checklist**

<b>Aspect considered</b>	<b>Decision</b>
<b>Receipt of application</b>	
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.
<b>Consultation</b>	
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><u>For this application we consulted the following bodies:</u></p> <ul style="list-style-type: none"> <li>• Local Council Environmental Health Department</li> <li>• HSE</li> <li>• Public Health England and Director of Public Health</li> </ul>
<b>Operator</b>	
Control of the facility	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 our guidance on legal operator for environmental permits.
<b>The facility</b>	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility'</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>
<b>The site</b>	
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

Aspect considered	Decision
	<p>consider is satisfactory. The final version of site condition report was received dated 02/10/20 and details measures to minimize risk of pollution to land, ground and surface water.</p> <p>The decision was taken in accordance with our guidance on site condition reports and specifically there was a proposal from the operator to justify not involving baseline reporting under the Industrial Emissions Directive.</p> <p>We have assessed the sufficiency of the site condition report. We conclude that there is no historical usage of the new installation area and as such baseline monitoring is not imperative.</p>
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>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 have any significant effect on any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have sent a Stage 1 Habitats Regulations Assessment dated 14/5/20 to Natural England for information only.</p> <p>The decision was taken in accordance with our guidance.</p>
<b>Environmental risk assessment</b>	
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. The detail of the risk assessment is reviewed in the key issues section of this document.</p>
<b>Operating techniques</b>	
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 all pollutants have been screened out as insignificant, and so we agree that the applicant's proposed techniques are BAT for the installation.</p> <p>We consider that the emission limits included in the installation permit reflect the BAT for the relevant sectors.</p>
<b>Permit conditions</b>	
Raw materials	We have specified limits and controls on the use of raw materials and fuels.
Pre-operational conditions	Based on the information in the application, we consider that we need to impose three pre-operational conditions as follows:

Aspect considered	Decision
	<ul style="list-style-type: none"> <li>• PO1 – Commissioning protocol for the new installation</li> <li>• PO2 – Final operating techniques for the new installation</li> <li>• PO3 - Final fire water management plan.</li> </ul>
Improvement programme	<p>Based on the information on the application, we consider that we need to impose one improvement programme.</p> <p>We have imposed an improvement programme to ensure that a commissioning report is received for the new installation to confirm emissions are in compliance with environmental impact assessment provided with the permit application</p>
Emission limits	<p>ELVs have been set for the following substances.</p> <p><u>Air emissions</u></p> <ul style="list-style-type: none"> <li>• Beryllium emissions for A1 discharge</li> </ul> <p><u>Effluent emissions</u></p> <ul style="list-style-type: none"> <li>• Beryllium</li> <li>• Nickel</li> <li>• Suspended Solids</li> </ul> <p>Unlike previous permit EPR/CP3136YP we have not required copper emission monitoring as the risk assessment has shown levels considerably lower than the insignificant threshold. The effluent emission monitoring is to ensure the effective on-going operation of the effluent treatment plant to ensure emissions are in line with application emissions assessment.</p>
Monitoring	<p>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.</p> <p>These monitoring requirements have been imposed in order to minimise environmental impacts and ensure compliance with specific emission levels provided in Applicant environmental impact assessment.</p> <p>The monitoring requirements for air are listed in Table S3.1 of the permit and those for sewer listed in Table S3.3 of the permit.</p> <p>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.</p>
Reporting	<p>We have specified reporting in the permit under schedule 4 of the permit. In addition, reporting forms have been provided at the end of the permit.</p>
<b>Operator competence</b>	
Management system	<p>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.</p> <p>The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.</p>



Aspect considered	Decision
Relevant convictions	<p>The Case Management System and National Enforcement Database has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.</p>
<b>Growth Duty</b>	
Section 108 Deregulation Act 2015 – Growth duty	<p>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.</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 application was advertised on GOV.UK for the public and consultation carried out in line with our operating procedures. The deadline for public and consultation responses was 17/4/20.

There were no public responses. We allowed a consultation response from Public Health England beyond deadline dated 5/5/20.

The following summarises the responses to consultation with other organisations and the way in which we have considered these in the determination process.

### Responses from organisations listed in the consultation section

<b>Response received from</b>
Public Health England dated 05/05/20
<b>Brief summary of issues raised</b>
General issues ,air and water emissions and odour
<b>Summary of actions taken or show how this has been covered</b>
<u>Our response to consultation issues raised is as follows</u> <ul style="list-style-type: none"><li>• General – capacity confirmed in duly making responses that plant was to be of same capacity as already permitted site permit EPR/CP3136YP</li><li>• Air and water emissions – after a review of H1 assessment after schedule 5 responses all impacts screen out. The detail is provided in this decision document</li><li>• Odour ; the risk of odour impacts is assessed by operator as inherently low and this is supported by no odour complaints linked to current permitted site EPR/ZP3933UU.</li></ul>