

The Planning Inspectorate
Temple Quay House Temple Quay
Bristol
Avon
BS1 6PN

Our ref: NA/2022/115883/08-L01
Your ref: NET ZERO TEESSIDE
PROJECT CONS

Date: 26 October 2022

Dear Sir/Madam

**EN010103: THE NET ZERO TEESSIDE NATIONALLY SIGNIFICANT
INFRASTRUCTURE PROJECT. DEADLINE SUBMISSIONS. LAND IN THE
VICINITY OF THE SSI STEEL WORKS SITE, REDCAR, TEESSIDE, TS10 5QW**

Please find enclosed our representations for Deadline 10 and the Examining Authority's Third Written Questions for this Development Consent Order (DCO) on behalf of the Environment Agency.

Please do not hesitate to contact me if you have any questions regarding this letter.

Yours faithfully

Lucy Mo
Planning Technical Specialist - Sustainable Places

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Environment Agency (EA) Representations

DCO Requirements

The EA are satisfied with Requirements 13 (contaminated land and groundwater, 16 (construction environmental management plan), 23 (piling and penetrative foundation design), 25 (restoration of land used temporarily for construction and 31 (carbon dioxide capture transfer and storage).

Deadline 9 Submission - 6.4.5 - ES Vol III Appendix 5A - Framework CEMP (Tracked) Oct 2022 [REP9-008]

We welcome the changes made to the Framework CEMP. However, it is noted that Table 5A-4: Geology, Hydrogeology and Contaminated Land has not been updated to reflect our comments in (REP6-133). Consideration has not been made with regards to the adoption of surface water / run off control measures. Such measures, particularly during earthworks and construction would help prevent the infiltration of run off into the working area and reduce the likelihood for generation of leachate and subsequent migration. If surface water / run off control measures were not implemented then the generation of leachate contamination would impact surface water quality and groundwater quality.

Deadline 9 Submission - 9.38 - Applicants' Comments on Deadline 8 Submissions Oct 2022 [REP9-018]

At our meeting of 5 October 2022 with the Applicant, we highlighted that testing of the slag was necessary to identify baseline conditions and would be necessary to inform the pile risk assessment. We also advised that we would be willing to further discuss their proposals for testing of the slag once fully considered.

We welcome the decision by the Applicant to carry out testing of the two types of slag materials during Teesworks remediation work and look forward to continued dialogue. However, at this stage, detailed design, piling information and remedial validation information is not available. However, we wish to highlight to the Applicant that we cannot discount the requirement for additional ground investigation, nor further testing should we consider it to be required to confirm risks to controlled waters.

It is stated by the Applicant that finger printing of the two types of slag materials are to be taken during Teesworks remediation work only and that these changes are included in the revised Framework CEMP. However, it is unclear where this is referred to within the revised Framework CEMP.

Deadline 9 Submission - 9.36 - Nutrient Nitrogen Briefing Paper Clean Oct 2022 [REP9-015]

We are broadly content with the modelling approach. However, we have some reservations relating to 1) the overall ammonia load and 2) effluent discharges at Bran Sands Waste Water Treatment Works (WwTW). A meeting is scheduled on



4 November 2022 between the EA and the Applicant to discuss these matters and the updated Water Framework Directive Assessment.

We welcome the commitment in section 7.2.8 regarding the installation and use of the return line from Bran Sands WwTW and installation of a new purpose built outfall - or alternative measures that achieve the same outcome.

We wish to discuss the following matters raised within the report in November with the Applicant:

- The proposal is estimated to result in a net reduction of DIN over Seal Sands amounting to 1.2kgN/hr. There is also potential to significantly reduce the loading of (Dissolved Inorganic Nitrogen) DIN on the Tees estuary and contribute towards achieving Water Environment Regulations objectives, by designing infrastructure such that an excess of Bran Sands effluent above what is required by the proposal is rerouted to the North Sea and away from the current discharge point to Dabholme Gut. Such a diversion would appear to be the most beneficial single strategic intervention to move towards achieving these environmental objectives, as opposed to merely achieving no deterioration. However overall DIN reductions on the baseline are required to achieve these objectives.
- Section 8.2.1 states the 'Proposed Development does not have the potential to impact on water quality on the identified receptor in the Tees Estuary'. However, this is contradicted by section 7.2.4 which states that 'the amount of additional nitrogen reaching Seal Sands mudflats has been estimated as ...an additional volume of DIN of 11.4 kg per high tide, or 0.95 kgN/hr'. The no net increase outcome is dependent on the commitment set out in 7.2.8 to achieve nutrient neutrality.
- Section 5.1.8 also confirms that 'if new emissions with a nitrogen load were to be discharged via Bran Sands Waste Water Treatment Works to the Dabholm Gut and ultimately the Tees Estuary, this would be introducing a new nutrient load direct to the SPA and mitigation to ensure nutrient neutrality would be required.'
- Table 6.1 states, 'water quality modelling of a range of scenarios for DIN has shown that, if the existing outfall continues to be used, DIN emissions at the predicted effluent concentrations are rapidly diluted within the Tees Bay and do not reach the Tees Estuary.'
- Table 6.1 also states, 'Given the direction of prevailing current from the Marske outfall to the south and based on initial hydrodynamic modelling, the prevailing direction of flow is away from the Tees Estuary, so there would therefore be no pathway to the Teesmouth and Cleveland Coast SPA/Ramsar site.'
- Table 6.1 also states that 'In addition, foul wastewater is to be discharged to Marske on-Sea Waste Water Treatment Works to the south. Given the direction of prevailing current from the Marske outfall to the south and based on initial hydrodynamic modelling, the prevailing direction of flow is



away from the Tees Estuary, therefore there would be no pathway to the Teesmouth and Cleveland Coast SPA/Ramsar site.'

- The modelling summarised at section 7.2.4 concludes that DIN from the proposed development reaches Seal Sands.
- The Environment Agency dCPM model 2018 indicates that some 19% of the DIN affecting Seal Sands is washed into the Tees estuary on incoming tides from offshore.
- Table 6.1 states, 'Atmospheric emissions of nitrogen have been modelled and an estimation of the load across the Tees Bay has been made. Initial analysis suggests that this will have a negligible impact on ambient DIN concentrations. Annual loads of between 0.1 and 0.45 kg N/ha/yr have been determined, with the highest values restricted to relatively small areas just off Coatham Sands.'
- The above points confirms that there will be an impact on DIN concentrations from atmospheric emissions of nitrogen. Is this included in the modelling of impacts on Seal Sands?
- Figures 6.1 and 6.2 do not show the white area shown in the legend as indicating '>1% increase'. Is it possible to map this area? Does the white area effectively cover all other areas?

Examining Authority's Third Written Questions

Question GEN.3.3: We are currently unable to answer this question. A response will be provided at a later date.

GQ.1.1 E.3.2	EA Applicants	At D6 [REP6-133], the EA stated that they had reviewed the draft Net Zero Water Quality Assessment and that the approach outlined and the impacts were acceptable. However, the EA is unable to 'sign off' this assessment until it has clarity on the matters raised in its written comments provided to the Applicants and had sight of the updated effluent dispersion modelling report, which was due at D7. This was not provided. A Briefing Paper was submitted at D8 [REP8-050]. This included an outline to the discharge modelling and referred to this supporting an updated Water Framework Directive (WFD) assessment. An updated dispersion modelling report was submitted at D9 [REP9-015], but this was not accompanied by an updated assessment as expected. The latest SoCG [REP8-042] between the EA and the Applicants states that in September 2022 'the Applicant has requested a meeting with the EA to
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		<p>discuss nutrient modelling updates’. Please provide:</p> <p>i) An update on discussions between the Applicants and the EA in relation to the WFD and related Environmental Permit(s).</p> <p>EA response: A meeting is scheduled on 4 November 2022 to discuss updates to the WFD assessment</p> <p>ii) An estimate of timescales to complete these discussions</p> <p>EA response: A meeting is scheduled on 4 November 2022.</p> <p>iii) Confirmation that the ‘Water Quality Assessment’ (60675797, 14 June 2022) in the appendices to the ‘Nutrient Nitrogen Briefing Paper’ [REP9-015] is the same as that referred to by the EA in REP6-133. Is this also the ‘preliminary modelling’ on which the EA provided comments in August 2022 as referred to in REP8-042?</p> <p>EA response: Yes.</p> <p>iv) The EA’s assessment of the most recent dispersion modelling report [REP9-015], including whether or not it is fit for purpose, whether it represents a reasonable worst case, and the estimate of error and accuracy in the model.</p> <p>EA response: The fundamental modelling approach seems to be acceptable. However, we have concerns about the input data used for the discharge. This does not seem to be reliable, due to some remaining uncertainties in the process operation.</p> <p>v) Has the EA had sight of an updated modelling report that was due, but not provided, at D7?</p> <p>EA response : We received the updated modelling report at Deadline 9.</p>
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		<p>vi) Has the EA had sight of an updated WFD assessment based on an updated water quality assessment?</p> <p>EA response: No.</p> <p>In ‘matters to be agreed’ the SoCG [REP8-042] it says ‘the EA consider that the potential for process water discharges including DIN to have adverse effects on WFD and site integrity of the adjacent designated sites and needs to be considered further’.</p> <p>vii) What are the other discharges referred to that could cause adverse effects, apart from Dissolved Inorganic Nitrogen (DIN)?</p> <p>EA response: The principal other component is ammonia.</p> <p>viii) Is the EA satisfied that these other potential pollutants have been adequately considered?</p> <p>EA response: Yes. However, we wish to discuss with the Applicant:</p> <ul style="list-style-type: none"> • The diffuser design presented is not workable. This will require updates and will have knock-on effects to the initial dilution (and possible wider dispersion) behaviour. • H1 assessment. <p>It is understood from the SoCG [REP8-042] that the EA provided detailed comments on the preliminary modelling on 22 August 2022.</p> <p>ix) Please provide a copy of these comments.</p> <p>EA response: Our comments are outlined in ‘EA comments_NZT_WQ_Aug22’ (Excel Spreadsheet).</p>
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