Planning Inspectorate

[via PINS portal]

Our ref: XA/2025/100338/07-L01
Your ref: EN010157

Date: 19 December 2025

Dear Sir/Madam

ENVIRONMENT AGENCY DEADINE 6 CLOSING STATEMENT. PEARTREE HILL SOLAR FARM, EAST YORKSHIRE.

This document sets out the final position of the Environment Agency (EA) at the close of examination for the application for a Development Consent Order for Peartree Hill Solar Farm.

The EA has participated fully with the examination for this project and has presented numerous written submissions, including Relevant Representations [RR-005], as well as for Change Request 2 [RR-052], Written Representations [REP1-102], Responses to ExQ1 [REP1-095], ExQ2 [REP3-059] and ExQ3 [REP5-101], plus additional submissions at Deadlines 2 [REP2-153] and 4 [REP4-083]. These submissions have given consideration to a number of environmental matters within our remit including aquatic ecology, water resources, flood risk, water quality, groundwater protection and waste. The EA has been working constructively with the Applicant throughout the pre-application and examination stages, and through regular and detailed discussions we have reached agreement on the vast majority of the concerns raised by us throughout this process. These agreements can be noted from the Applicant's Statement of Common Ground with the EA, a final version of which has been submitted at Deadline 6.

This closing statement does not seek to introduce anything new to the examination, but to summarise our position on the final outstanding matter relating to the proposed drainage for the Battery Energy Storage System units on the site – this relates to Issue ID EA16 in our Relevant Representations, or EA18 of the Statement of Common Ground [latest draft version REP5-085]. However, in this closing statement, we do also refer to new information within submissions made by the Applicant at Deadlines 5 and 5A.

Policy and Legislative Position

In providing comments on this matter, we have considered the following policy and legislation:

- Overarching National Policy Statement (NPS) for Energy EN-1
- Water Environment Regulations 2017
- East Riding Local Plan Update (April 2025)
- The Environment Agency's approach to groundwater protection (Feb 2018)

Overarching National Policy Statement for Energy EN-1

In particular, we draw attention to paragraphs 5.16.12 and 5.16.14, which state that the Secretary of State must be satisfied that a proposal has regard to current River Basin Management Plans (RBMPs) and meets the requirements of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and must give more weight to the water environment where a project would have an adverse effect on the achievement of environmental objectives.

Water Environment Regulations (WER) 2017

These regulations set out requirements to prevent deterioration of aquatic ecosystems; protect, enhance and restore water bodies to 'good' status; and achieve compliance with standards and objectives for protected areas. The WER are delivered through RBMPs, which set out the environmental objectives that need to be met for surface and groundwater bodies (including lakes, rivers, estuaries, groundwater, and coastal waters) in order to comply with WER requirements. Regulation 33 of the WER places a duty on each public body to 'have regard to' RBMPs when exercising their functions.

East Riding Local Plan Update

Policy ENV6 of the East Riding Local Plan Update seeks to manage risks to groundwater pollution by avoiding development that has the potential to increase the risk of groundwater pollution in source protection zones and, where an alternative site outside a Source Protection Zone (SPZ) is not available, ensuring that appropriate mitigation measures are employed.

The Environment Agency's approach to groundwater protection

The EA is responsible for the protection of controlled waters under the Water Resources Act 1991 and the Water Industry Act 1991.

'The Environment Agency's approach to groundwater protection' contains position statements setting out the EA's approach to managing and protecting groundwater. Although many of the approaches within these position statements are not statutory, they may be included in, or referenced by, statutory guidance and legislation. Relevant position statements include:

A2 – Precautionary principle. The precautionary principle is recognised within Section 17 of the Environment Act 2021 and the Government's Environmental Principles Policy Statement. Where the potential consequences of a development or activity are serious or irreversible the Environment Agency will adopt the precautionary principle to manage and protect groundwater.

A5 – Supply of adequate information. This seeks to ensure that adequate information is provided to ensure the potential impact on groundwater can be assessed, particularly where new techniques, operations, products or substances are involved.

B1 – Initial screening tools. The Environment Agency uses SPZs and aquifer designations as initial screening tools to show where it would object in principle to certain potentially polluting activities or where additional controls or restrictions on activities may be needed to protect drinking water.

G1 – Direct inputs into groundwater. The Environment Agency must take all necessary measures to prevent the input of any hazardous substance to groundwater and limit the input of non-hazardous pollutants to ensure that such inputs do not cause pollution to groundwater.

Site Context and Proposal Overview

The majority of the Project boundary lies within an SPZ 1, 2 or 3, with the entirety of the site boundary overlying a principal aquifer. SPZs are zones which show the level of risk to a water source from contamination and are determined using models to estimate the length of time it would take for a pollutant to travel from the water below ground to the source and to identify the area around the source that needs to be protected from potential pollutants. This assigns the SPZ1 (inner zone), SPZ2 (outer zone), and SPZ3 (total catchment). Principal aquifers provide significant quantities of drinking water and water for business needs, but they may also support rivers, lakes and wetlands.

As described within the submitted flood risk assessment (FRA) [REP5A-007 to REP5A-026], hybrid packs containing four BESS units, an inverter, and four converters, will be dispersed across the site. A significant number of these are proposed within the SPZ3 area, some of which are close to the SPZ2. These will sit upon a gravel base up to 300mm deep, through which runoff water will infiltrate. The recent update to the FRA now confirms that where there are more than two hybrid packs in a single field, they will instead be positively drained via a filter drain or similar, and discharge to a nearby watercourse or land drain.

Environment Agency Position

Under normal operation, BESS developments do not present significant risks to groundwater or surface water. However, there is potential for pollution of the water environment due to abnormal and emergency situations at BESS developments, in particular fires. Even where water is not proposed to be used to fight the fire, water is likely to be used to cool neighbouring containers. This water could enter burning containers through surface run off, or directly from spray cooling neighbouring containers. Furthermore, during or following a fire at a BESS development, rainwater

could enter exposed containers during the period of time it takes to remove or cover burnt out containers.

There is therefore a risk that highly polluting chemicals in batteries could enter groundwater or surface water in firewater or rainfall. Applicants should consider this risk and ensure mitigation is in place to ensure containment of this water. To appropriately manage the risks from pollution of groundwater and surface water, applicants need to assess the likelihood of pollutants within the site coming into contact with nearby waterbodies, directly or indirectly, and the degree of risk posed by the particular pollutants in question.

Although the Applicant has sought to minimise the risks of a fire through the design of their site, the risk cannot be removed entirely, and there is limited information available about BESS fires and any associated contaminants. Throughout our discussions with the Applicant, we have confirmed our position that sealed drainage should be provided to remove any pathway and any probability of contaminants reaching the water environment. However, the Applicant has instead sought to demonstrate that they have sufficient mitigation in place to remove these risks. In our view, there are too many uncertainties around the effectiveness of the proposed mitigation to ensure no environmental damage in the event of a fire. If pollutants resulting from a BESS fire reach the groundwater and cause large-scale pollution of a protected drinking water area, significant costs could be incurred during an environmental clean-up operation.

These uncertainties and our technical reasons for adopting this position are discussed in more detail within Appendix 1 of this document.

We recognise that the Examining Authority's recommendation and the Secretary of State's final decision will need to consider these matters within the wider planning balance. Should the Examining Authority be minded to recommend this project for approval, despite the potential risks highlighted, we have provided some additional recommendations within Appendix 2 of this document.

Yours faithfully

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Appendix 1 – Technical Reasoning

The following section seeks to highlight the outstanding areas of concern that mean we have been unable to reach agreement with the Applicant on a way forward.

Water Environment Regulations 2017

The Applicant's Water Framework Directive (WFD) report [REP5A-007]) states that the proposed development overlies the Flamborough Chalk groundwater body. This is recorded as having a 'poor' overall status. The aims of the WFD include preventing further deterioration of surface water bodies, groundwater bodies and their ecosystem, and to ensure progressive reduction of groundwater pollution. In accordance with NPS EN-1, paragraph 5.16.14, "a project may be approved in the absence of a qualifying Overriding Public Interest test only if there is sufficient certainty that it will not cause deterioration or compromise the achievement of good status or good potential." In the event of a fire, we do not have confidence in the current BESS design and therefore have concerns that pollution will compromise the WFD potential.

Effectiveness of the drainage system in preventing contamination and retarding contaminants and drainage from cooling adjacent BESS units

One of the most significant differences between the Applicant and EA's positions appears to be in the interpretation of the 2023 guidance published by the National Fire Chiefs' Guidance[1], which states that environmental protections "should include systems for containing and managing water runoff". In the Applicant's response to our Deadline 4 submission [REP5-078], they have added emphases on the 'should', suggesting that this is an optional recommendation. However, it is our position that containment is essential to providing confidence in no adverse effects to groundwater bodies and surface water bodies. The evidence presented by the Applicant does not demonstrate how contaminants released in the event of a fire would be prevented from reaching the controlled water environment.

Our significant concern is with the use of "a permeable geotextile to encourage percolation to the ground", as described in the WFD Screening and Scoping Report [REP5A-007]. This poses a risk to groundwater, as the Applicant has not sufficiently explained how their measures or the underlying geology will restrict the flow of contaminants to the groundwater in the Principal aquifer and SPZ3 that underlie most the site. Additionally, there is a risk to surface waters, as acknowledged by the Applicant in section 3.4.27 of the same report: "the pathway for contaminants released during a fire to enter the surface water bodies is limited but possible". This means that there remains a risk of pollution.

In the Applicant's response to our Deadline 4 submission [REP5-078], they state that their proposed drainage is compliant with the CIRIA SuDS Manual. We disagree with this as such drainage is suited for low traffic roads and car parking, which are areas where accidents, and therefore likelihood of spills, are less likely. This type of drainage is therefore suitable for those types of situations, less so for high intensity pollution events, such as a BESS fire event.

Assessment of receptor sensitivity and conceptual understanding of the site

This is fundamental to our assessment of the risks posed by the scheme. The Applicant has not demonstrated that they understand the sensitivity of the groundwater environment at the site or the pathways by which potential contaminants could be transported. We have to apply the precautionary principle (Groundwater Position Statement A2) in this instance to protect groundwater.

Understanding of BESS contaminants

This is where the largest gaps in understanding are. The Applicant acknowledges that there is limited data available in relation to the types of pollutants that could be released from a battery fire. We understand this, but lack of evidence from fires does not mean a risk does not exist and we have to apply the precautionary principle.

Risk of fire

While we appreciate that the Applicant's approach does lower the risk of a fire, particularly one that spreads across multiple units, it does not remove the risk of fire entirely, which means that there remains a potential source of pollution.

Post-fire decontamination

In their response our Deadline 4 submission [REP5-078], the Applicant has been able to provide some high-level information about how the drainage system would be cleaned following a fire event, to prevent the material acting a secondary source. Additional detail will need to be provided within the detailed Battery Safety Management Plan (BSMP), secured via Requirement 8. This information includes timescales for the clean-up and how any removed batteries will be stored to prevent the potential for contaminants to leach into the subsurface.

Efficacy of the suppressant & composition of the suppressant

We have reached some agreement with the Applicant regarding the use of a suppressant. They have stated in their Outline BSMP [REP5-069] that they will not use PFAS in the suppressant. Although we still have some uncertainty over the composition of the suppressant, we will be able to request further details, including the Material Safety Data Sheets, via the detailed BSMP, when the composition of the chosen suppressant is provided to us, so that we can assess whether it is hazardous.

Appendix 2 – Further recommendations if considered for approval

In the event that no sealed drainage system is provided, in order to reduce the risks of environmental damage as far as possible, the following details should be included in the Outline BSMP:

- Clarification about the operation and maintenance of the penstock valves that are proposed for some of the hybrid compounds, as detailed in sections 3.5.50 & 3.5.51 of the WFD Screening and Scoping Report [REP5A-007].
- Additional details of the sampling and testing methodology for pollution analysis of water retained at the above-mentioned penstock valves.
- Details of the sampling and testing methodology for pollution analysis of the gravel and sand layers. Should contaminants be positively identified, contaminated materials must be fully removed to prevent the risk of secondary contamination further causing pollution to controlled waters.
- Additional figures showing the final drainage scheme, to provide clarity of the locations that will discharge to groundwater, and surface waters. A diagram, including cross-sections for all different types of drainage solutions across the scheme (e.g. positively drained with penstock, gravel and sand drainage), should also be provided.

If further amendments to the Outline BSMP are not possible at this stage, then the following amendments should be made to Requirement 8 instead (additions in italics):

(1) No part of the authorised development that contains Work No. 2 may commence until a BSMP for that part has been submitted to and approved by the local planning authority, following consultation by the undertaker with the Humberside Fire and Rescue Service and the Environment Agency on matters relevant to their respective functions.

(2) Any BSMP submitted for approval under sub-paragraph (1) must be substantially in accordance with the outline BSMP.

(3) Any BSMP submitted for approval under sub-paragraph (1) must include the final drainage solution to show all discharging locations for groundwater and surface waters, and include details on the testing of firewater, gravel and sand for contaminants, in the event of a fire. Should contaminants be present, any contaminated material must be removed to reduce the risk of secondary contamination to controlled waters and remediation of soils, groundwater and surface water should be undertaken if risk assessments deem it necessary.

~~(3)~~ *(4)* Any BSMP approved under sub-paragraph (1) must be implemented as approved and maintained throughout the construction, operation and decommissioning of Work No. 2.