

# Steeple Renewables Project

## Appendix 1.3 - Environment Agency EIA Scoping Response Environmental Statement - Volume 2

April 2025

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## Appendix 1.3 - Environment Agency EIA Scoping Response

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The Planning Inspectorate  
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**Our ref:** XA/2024/100119/01-L01  
**Your ref:** EN010163

**Date:** 6 August 2024

Dear Sir/Madam

**PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING  
(ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (THE EIA  
REGULATIONS)– REGULATIONS 10 AND 11 - SCOPING OPINION**

**APPLICATION BY RENEWABLE ENERGY SOLUTIONS (RES) (THE  
APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE  
STEEPLE RENEWABLES PROJECT - LOCATED TO THE EAST AND WEST OF  
STURTON LE STEEPLE AND SOUTH OF WEST BURTON POWER STATION**

Thank you for your consultation on the Environmental Impact Assessment (EIA) Scoping Opinion for the above Nationally Significant Infrastructure Project (NSIP). We have reviewed the Steeple Renewables Project EIA Scoping Report Main Text, Appendices and Figures. We have the following advice to offer.

**Chapter 8 – Ecology and Biodiversity**

**Fisheries**

The Catchwater Drain and Mother Drain are both hydrologically connected to the River Trent and the Oswald Beck may provide suitable habitat for fish. It is known the European eel inhabit such ditches/drains and small watercourses. European eel are listed as critically endangered on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, they are listed as a species of principal importance under Section 41 of the Natural Environment and Rural communities (NERC) Act 2006. They are also protected under The Eels (England and Wales) Regulations 2009. It is recommended that fish surveys are conducted on ditches/drains across the site. The results should then form part of the baseline data for the EIA.

**Section 8.3**

The effects on fish have only been scoped in as being neutral and with beneficial effects overall. Activities during construction, operation and decommissioning have the potential to negatively impact fish. Such impacts may include damaging fish spawning habitat from increased surface runoff of pollutants and fine sediment, behavioural impacts on fish from noisy construction activities and loss of habitat from waterbody crossings. Therefore, the potential impacts on fish from construction,

operation and decommissioning should be scoped in and be assessed in the ES. Mitigation should be included within the Construction Environmental Management Plan.

#### **Section 8.4**

The Salmon and Freshwater Fisheries Act 1975 has not been included in the list of legislation that is relevant to biodiversity. The legal responsibility on the applicant pertaining to this fish specific legislation has not been considered. This act should be listed as relevant in the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES).

#### **Section 9.6**

Any culverting of a watercourse or waterbody that contains fish can impact on lifecycle migration, both locally and more long distant. Culverting also impacts on fish habitat and spawning habitat by decreasing the quality of substrate. Therefore, we are opposed to the culverting of any watercourse and would prefer the installation of a clear full span crossing that maintains the natural substrate and allows free passage of fish.

### **Biodiversity**

#### **Table 8.1 and Section 8.3**

We agree in general with all ecological features 'Scoped In' with regards to Aquatic Biodiversity, along with the deemed potential likely significant effects.

We note that an Invasive Non-Native Species (INNS) search is planned. We hold multiple records for INNS on and around the site, including Least Duckweed and Chinese mitten crab (recorded on ordinary watercourses within the central section), Nuttall's water-weed (recorded in the eastern section on Mother Drain) and Himalayan balsam (recorded across the different sections of the site, and just outside the site boundary).

Other INNS recorded just outside the site boundary within or near connected watercourses include Japanese knotweed, Canadian waterweed and waterfern. Therefore, we strongly suggest that INNS are 'Scoped In'. We recommend that the applicant submits a Biosecurity Method Statement and Invasive Species Management Plan alongside the DCO application for the proposed development.

#### **Section 8.3.18**

Biodiversity Net Gain (BNG) BNG will become a legal requirement for NSIPs in November 2025 and we would like to have the opportunity to comment on this report, if possible, particularly with regards to the Water Metric element. It is positive to read that the applicant has conducted a habitat survey using the U.K. Habitats Classification System (UK HABs) (1.1.4, Appendix 8B), which provides more accurate habitat identification data for the BNG Metric, and plans to verify the habitat classifications in a later survey (1.1.7, Appendix 8B). The applicant should use the



latest statutory (official) version of the biodiversity metric tool to calculate BNG, and we would also encourage the use of the Watercourse Metric.

There is no reference to the applicant's intended BNG target. It will become a legal requirement to deliver at least 10% BNG, but we would encourage the applicant to provide more. It is noted that habitat enhancement may take place after construction. However, the biodiversity metric rewards units if enhancements are delivered early. Therefore, we would encourage habitat enhancements to be delivered earlier to provide wetland habitat ahead of project completion.

### **Section 8.3.6**

A Habitats Regulations Assessment (HRA) will be completed as part of the application process to consider any potential impacts to designated sites. Although this is within the remit of Natural England, we would like to note that functionally linked watercourses (such as Catchwater Drain and Mother Drain) should be included in the assessment.

The applicant should refer to the following:

['Habitats Regulations Assessment relevant to nationally significant infrastructure projects'](#) published by the Planning Inspectorate.

### **Section 8.6**

The designed-in mitigation proposes the retention of semi-natural buffers to protect habitats and species. We recommend the provision of a 10-metre buffer from watercourse bank-tops as a minimum, to effectively protect the watercourse from sediments, enable bank stabilisation through vegetation establishment and allow space for commuting by mammals. However, where natural geomorphic processes take place (such as lateral channel migration), we advise the applicant to consider buffers greater than 10-metres in some locations where watercourse migration is identified.

### **Section 9.3.6**

We note that a WFD Assessment has been 'Scoped-In' during the construction phase. This should include an assessment of any potential impacts (such as, but not limited to, sediment pollution) to watercourses on-site and the potential to impact hydrologically linked watercourses, which may therefore also impact the biodiversity that relies on these watercourses.

### **Further advice**

In relation to the Eastern Biodiversity Mitigation Area, the habitat survey found coastal and floodplain grazing marsh and reedbed habitats present near the River Trent (1.2.3, Appendix 8). A large assemblage of wetland birds was also found. We strongly recommend that the Landscape Ecological Management Plan (LEMP)

considers the maintenance and potential enhancement of these habitats, and habitats that support the recorded species, as part of the planning and design.

It is positive to read that the applicant will consider potentially enhancing the Local Wildlife Sites (LWS) on-site. We recommend that the Nottinghamshire Wildlife Trust are consulted with regards to assessing impacts to these LWS.

### **Geomorphology**

The Scoping Report suggests that river crossings (bridges, culverts, and buried cables) may be required as part of this development. Therefore, we would expect to see geomorphologically robust designs that will cause minimal impacts on natural fluvial processes operating in the river/floodplain environment over the course of the 21<sup>st</sup> century.

Any infrastructural developments on the river/floodplain environment of the River Trent should be designed and delivered to have a minimal impact on natural river dynamics (e.g. erosion, deposition, meander migration etc.) and should not place any significant limitations on future river restoration projects. Any potential construction, operational, and decommissioning phase impacts that the proposed scheme may have on the river must be subject to a WFD Assessment.

Geomorphologically dynamic behaviour is deemed likely to intensify in the next decades in line with Flood Estimation Handbook ( ). Therefore, any infrastructure developments should also take some account of the likelihood for increased lateral and vertical river dynamics anticipated to result from continued hydro-climatic intensification (e.g. 'a flood-rich epoch') over the remainder of the 21<sup>st</sup> century (i.e., future proofed designs that are not just based on present-day baseline geomorphological configuration/behaviour).

## **Chapter 9 - Hydrology, Hydrogeology, Flood Risk & Drainage**

### **Flood Risk**

We acknowledge that flood risk during the construction and operation phases is scoped in, and that a Flood Risk Assessment (FRA) is to be completed at a later stage. However, it is not clear whether flood risk during the decommissioning phase has been scoped in.

The proposed scheme is classified as '*Essential Infrastructure*' as defined in Annex 3: Flood Vulnerability classification of the Planning Practice Guidance (PPG).

There are some areas of the site that are situated within Flood Zones 2 & 3 which have a higher probability of flooding from rivers and/ or the sea. [The Sequential Test](#) will therefore be required to be passed, as outlined in the National Policy Statement (NPS) EN-1, and the National Planning Policy Framework (NPPF).

A sequential approach should be applied to the layout of the site, with all buildings, substation, and anything considered to be critical infrastructure located outside of areas at risk of flooding (Flood Zone 1). However, if solar panels and equipment need to be situated in areas at risk of flooding (Flood Zone 2 & 3), then [The Exception Test](#) must also be applied and the FRA must assess flood risk from all sources of flooding.

Built development within the fluvial floodplain should be quantified to establish the need for compensatory flood storage. We understand that development within flood risk areas will predominantly be solar panel on supports, which would result in minimal loss of storage, however this should be demonstrated and quantified within the FRA.

Consideration of flood risk from the ordinary watercourses which bisect the site should be given. We do not hold any detailed hydraulic modelling for the ordinary watercourses such as the Catchwater Drain and Mother drain. The applicant should consider the associated fluvial flood risk from Ordinary Watercourses noting the fact that the Flood Map for Planning generally only represents flood risk for watercourses with a catchment area of greater than 3km<sup>2</sup>. It may be that some form of detailed hydraulic modelling is required for these watercourses depending on what information the Lead Local Flood Authority hold for these or whether there are other dominant flood risk sources, such as the River Trent.

It is stated, in paragraph 4.5.1 of the Scoping Report, that the project has an operational lifetime of 40 years. Please note that the [PPG \(Paragraph: 006 Reference ID: 7-006-20220825\)](#) states that non-residential development should include an assessment of flood risk over at least 75 years.

In this location the River Trent is fluvially dominant rather than tidally dominant. Therefore, based on the guidance 'Flood Risk Assessment: Climate Change Allowances', the 100-year fluvial flood event, using the 2080s epoch, higher central climate change allowance should be used as the design flood event when assessing suitable flood mitigation measures. We would expect the solar panels and equipment to be raised 300mm above the design flood level.

The assessment of future flood risk should incorporate a Credible Maximum scenario and should also be able to demonstrate how proposals can be adapted over their predicted lifetimes to remain resilient to the credible maximum climate change scenario, as required by NPS EN-1. The Upper End scenario of a 62% climate change increase should be used for this.

The applicant will need to confirm operational needs for the site, i.e., will the site remain operational and will staff remain on site during a flood event. There will also need to be consideration given to access and egress from the site during flood event scenarios.

Further advice relating to specific sections of the flood risk chapter is detailed below.

#### **Section 9.2.10 - Preliminary Baseline Conditions**

The scoping report describes how new modelling undertaken for the Environment Agency (EA) of the tidal River Trent by Jacobs in 2023 shows a much-reduced area of the site being affected by Flood Zones 2 and 3. Please note this is not correct. Whilst the defended model outputs from the Jacobs (2023) model show reduced flooding, the undefended model outputs for the 1% (1 in 100) and 0.1% (1 in 1000) annual exceedance probability events are comparable to the existing published Flood Map for Planning in the vicinity of the site boundary. The Flood Map for Planning is designed to represent the residual risk of flooding and therefore does not include the presence of raised flood defences.

It will be important for the site-specific FRA to include a comparison of the published flood zones (Flood Map for Planning) and the equivalent 2023 model outputs (Jacobs 2023) i.e., for flood zone 3, the 1 in 100-year undefended scenario, and for flood zone 2, the 1 in 1000-year undefended scenario. This will confirm the baseline flood risk at the site. Model outputs showing the defended scenarios, including suitable climate change allowances, can then be used in further detailed assessments of the site.

#### **Section 9.4.3 Assessment Methodology**

For information, the latest available hydraulic model for the River Trent is the Tidal Trent model (Jacobs, 2023). This model uses recent fluvial and tidal boundary conditions, recent climate change allowances, and recent digital terrain model data captured using Light Detection and Ranging (LiDAR) which are considered representative, although please note that this is a strategic scale hydraulic model with a fairly coarse 2d grid cell resolution (25m x 25m). For future reference, it is sensible to check that any EA modelling is suitable for your needs and representing site specific flood risk in line with guidance on undertaking modelling for Flood Risk Assessments available online at: [Using modelling for flood risk assessments - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/using-modelling-for-flood-risk-assessments)

We do not hold any detailed hydraulic modelling for the Catchwater Drain or the Mother Drain although within the Tidal Trent hydraulic model (Jacobs, 2023) these watercourses are represented in the model digital terrain model using TufLOW elevation lines (z lines). In terms of historic outlines, the EA hold historical flood extents for 1932, March 1947, 1977, and November 2000 in this location. The East Midlands Area Team may also hold information, such as aerial photography, for more recent events on the River Trent such as Storm Henk (January 2024) which may be of use. The applicant could contact the East Midlands Area Team via [EMDenquiries@environment-agency.gov.uk](mailto:EMDenquiries@environment-agency.gov.uk) to obtain available modelling data and associated flood risk datasets.



### **Section 9.5.1 Cumulative Impacts**

This project may also be of interest. [North Humber to High Marnham - Project information \(planninginspectorate.gov.uk\)](https://planninginspectorate.gov.uk/north-humber-to-high-marnham-project-information/).

#### **Further information**

It would be sensible to consider the residual risk to the development in the event of a breach of the Trent embankments. This would not be used as a design scenario, but it would help to understand the resilience of the development were a breach in the River Trent embankments to occur. As part of the Tidal Trent modelling (Jacobs, 2023) breach runs were undertaken for the 1 in 100 year and 1 in 100 year plus central (+29%) climate change scenarios. The nearest breaches to the development site are breach 28 West Burton and Breach 29 Cottam. New breach runs may be required considering the location of the existing breaches (28 and 29) in relation to the proposed development site.

#### **Surface Water**

We are pleased to see that surface water quality impacts have been scoped in and a Water Framework Directive (WFD) Assessment will be completed.

#### **Groundwater**

We note that impacts to groundwater have been scoped out, which we generally agree with as the aquifers underlying the site are not high sensitivity. It is proposed that groundwater impacts will be mitigated through the use of a CEMP. We have the following advice to offer to ensure groundwater is protected.

#### **Table 1.1**

It is stated that *“there is no known history of soil contamination on the site”* and soil will be scoped out. An assessment of historical land use and the potential presence of soil contamination is not presented in the Scoping Report, so we are unable to ascertain how this conclusion has been reached. We would like to see the evidence used to support this claim and conclusion.

### **Section 9.2**

The geological setting is discussed in this section and the description generally matches our records. However, it is stated that *“The western part of the Site has no mapped superficial deposits”*, whilst the British Geological Survey (BGS) Geology Viewer shows two small areas of superficial Head deposits in the west of the site.

#### **Paragraph 9.2.13**

This paragraph notes that *“There is the limited potential for shallow groundwater to be encountered during groundworks particularly in the eastern part”*. However, historical borehole records from the eastern half of the site, freely available from the BGS, indicate that groundwater at less than 1.5m below ground level is possible. Given the proximity of the River Trent, this is not unexpected.

### **Paragraph 9.4.3**

The baseline assessment list should include private groundwater abstractions.

### **Section 9.6**

The use of Horizontal Directional Drilling (HDD) may be proposed. This work could involve the use of drilling muds and their use may require risk assessment to ensure they do not pose a risk to controlled waters. We would expect this assessment to be included in the CEMP. A drilling fluid breakout plan will also be required for any HDD activities.

### **Table 19.2**

The table notes that *“the Site has always been in agricultural use”*. However, the proposed substation connection for the site is within the site boundary of West Burton Power Station. In addition, there are two railway lines that pass through the site area. Therefore, it's possible that historical railway infrastructure, which has a high polluting potential, may be present within the order limits. We may request that a requirement for investigating unsuspected contamination is included on any Development Consent Order (DCO) granted for the site.

### **Further advice – Battery Energy Storage System (BESS)**

A suite of management plans will be submitted with the DCO application. It is not clear whether firewater drainage from the BESS will be considered as part of the management plans. BESS have the potential to pollute the environment. The applicant should consider the impact to all environmental receptors during each phase of development. Particular attention should be applied in advance to the impacts on groundwater and surface water from the escape of firewater/foam and any contaminants that it may contain. Suitable environmental protection measures should be provided including systems for containing and managing water run-off. The applicant should ensure that there are multiple 'layers of protection' to prevent the source-pathway-receptor pollution route occurring.

### **Water Resources**

Impacts on surface water resources due to abstraction during construction have been scoped out. However, there is insufficient reason to support this.

Consumptive uses of water during construction or operational phases of the development have not been identified in the report. These may include on site potable and domestic water, water used for dust suppression; and machinery/wheel wash down. Conversely, the report later states that *“the hydrology, hydrogeology, flood risk and drainage chapter of the ES will consider the likely significant effects of the proposed development during construction, operation and decommissioning on water resources with regard to water usage”*.

We recommend that consumptive uses of water are considered in more detail and scoped into the EIA. This is to ensure potential problems can be identified and

solved early in the planning process in order to expedite future permitting applications and incorporate solutions, such as temporary (or permanent) water storage into designs if needed.

***Further advice***

There is water available for abstraction in the Lower Trent catchment, however a licence issued for the use of any local surface water will be subject to environmental protections which may prevent access to water during low flows. More information about water availability can be found here: [Lower Trent and Erewash abstraction licensing strategy - GOV.UK \(www.gov.uk\)](#). This may mean water is restricted when it is needed most in the summer.

Non-domestic water supply from the water undertaker may also be unavailable, we encourage early dialogue with the applicant if this is to be pursued.

**Chapter 18 - Miscellaneous**

**Waste**

We note that a Site Waste Management Plan will be secured via a DCO requirement which will be adhered to before the construction and decommissioning phases.

Yours faithfully

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## **Appendix 1 – Environmental Permitting – advice to applicant**

The guidance below should be followed to inform which permits may be necessary for this project. Due to the lengthy timescales currently involved in the determination process, we would encourage the applicant to engage with our permitting pre-application advice service at the earliest possible opportunity.

### ***Flood Risk Activity Permit (FRAP)***

The Environmental Permitting (England and Wales) Regulations 2016 require a permit or exemption to be obtained for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- on or within 8 metres of a flood defence structure or culverted main river (16 metres if tidal)
- on or within 16 metres of a sea defence
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- on the floodplain of a main river if the activity could affect flood flow or storage and potential impacts are not controlled by a planning permission

For further guidance please visit <https://www.gov.uk/guidance/flood-risk-activities-environmental-permits> or contact our National Customer Contact Centre on 03708 506 506 (Monday to Friday, 8am to 6pm) or by emailing [enquiries@environmentagency.gov.uk](mailto:enquiries@environmentagency.gov.uk)

### ***Water Resources - Abstraction and Impoundment***

The proposals may require Water Resource Licences in respect of the construction activities required. Advice on regulated activities and licence requirements is given below.

Water Resource (Impoundment and Abstraction) Licences are issued by the EA under the terms of the Water Resources Act 1991 and the provisions of the Water Resources (Abstraction and Impounding) Regulations 2006. No other EA administered Regulatory Regime provides consent to create or modify an impoundment and / or abstracted water at volumes greater than 20m<sup>3</sup>/day. You should seek to fully understand the permissions required for your proposal and not assume consent for abstraction and impoundment activity is provided by other regulatory documents.

### ***Abstraction licence requirement***

If you intend to abstract more than 20 cubic metres of water per day from a surface water source e.g. a stream or from underground strata (via borehole or well) for any particular purpose, then you will need an abstraction licence from the EA. There is no guarantee that a licence will be granted as this is dependent on available water resources and existing protected rights.

Dewatering is the removal/abstraction of water (predominantly, but not confined to, groundwater) to locally lower water levels near the excavation. This can allow operations to take place, such as mining, quarrying, building, engineering works or other operations, whether underground or on the surface. If dewatering is required it may require an environmental permit if it doesn't meet the exemption in The Water Abstraction and Impounding (Exemptions) Regulations 2017 Section 5: Small scale dewatering in the course of building or engineering works. More information can be found using this link:

<https://www.gov.uk/government/publications/temporary-dewatering-from-excavations-to-surface-water>

If the exemption can not be met a full abstraction licence will be required. It is important to note that some aquifer units may be closed for new consumptive abstractions in this area. More information can be found via this link:

<https://www.gov.uk/government/collections/water-abstraction-licensing-strategies-cams-process>

### ***Impounding licence requirement***

If you intend to impound a watercourse then you are likely to need an impounding licence from the EA. An impoundment is any dam, weir or other structure that can raise the water level of a water body above its natural level. 'On-line' impoundments hold back water in rivers, stream, wetlands and estuaries, and consequently affect downstream flows, sediment transport and migration of fish. Impoundments could be created through works to modify or change existing watercourses. An Impoundment Licence could also be required if you amend, modify or remove existing in channel structures. More information is available on gov.uk: <https://www.gov.uk/guidance/water-management-apply-for-a-water-abstraction-or-impoundment-licence>

### ***Discharge of trade effluent***

Effluent discharged from any premises carrying on a trade or industry and effluent generated by a commercial enterprise where the effluent is different to that which would arise from domestic activities in a normal home is described as trade effluent. If you are not able to discharge effluent, it will be classed as waste, and you must then comply with your duty of care responsibilities.

If you wish to discharge effluent, after appropriately treating it, to groundwater or surface water a permit under the Environmental Permit Regulations will be required. Full characterisation of the effluent will be required, and modelling may be required at the planning stage to determine the impact of the effluent on the receiving watercourse.

A trade effluent consent or a trade effluent agreement with your water and sewerage company must be obtained before you discharge trade effluent to a public foul sewer or a private sewer that connects to a public foul sewer.



Further guidance is available at: <https://www.gov.uk/guidance/pollution-prevention-for-businesses>

### ***Discharge of groundwater***

You may need to consider discharge of groundwater, following any treatment. More information can be found here:

<https://www.gov.uk/guidance/discharges-to-surface-water-and-groundwater-environmental-permits>

It is worth considering the likely infrastructure required to meet any potential discharge permit requirements to ensure that there is sufficient space within the Order Limits. For example, infrastructure required to treat any contaminated groundwater which may need to be discharged to surface waters. Insufficient space is a common constraint which can result in permit non-compliance, non-permitted discharges or expensive/complex treatment methods.

### ***Water Quality Permit requirements***

You do not require a permit if you are only discharging uncontaminated surface runoff. If you intend to discharge to surface water for dewatering purposes, this may be covered by a Regulatory Position Statement (RPS) for water discharge activities. If you can comply with all the conditions within the RPS, then a permit is not required for this activity. Please find the RPS conditions here:

<https://www.gov.uk/government/publications/temporary-dewatering-from-excavations-to-surface-water>

If any discharges do not fully comply with the RPS, then a bespoke discharge permit will be required. Please find guidance on applying for a bespoke water discharge permit here: <https://www.gov.uk/guidance/discharges-to-surface-water-and-groundwater-environmental-permits>

## **Appendix 2 – Environmental betterment opportunities - advice to applicant**

The [REDACTED] outlines habitat creation opportunities across the catchment which you could support.

Nottinghamshire County Council have been appointed the Responsible Authority to develop the Local Nature Recovery Strategy (LNRS). A Local Habitat Map has been produced as a component of the LNRS. We advise that you refer to these maps to inform decisions on where to site off-site BNG delivery and potential enhancements.