



**NORTH
LINCOLNSHIRE
GREEN
ENERGY PARK**

Planning Act 2008

Infrastructure Planning
(Applications
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Procedure) Regulations
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North Lincolnshire Green Energy Park

Volume 9

9.42 Comments on Anglian Water's
Response to Rule 17 letter

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Glossary

Acronym	Full term / Description
2008 Act	Planning Act 2008
AGI	Above Ground Installations
CBMF	Concrete Block Manufacturing Facility
CCTV	Closed Circuit Television
CCUS	Carbon Capture, Utilisation and Storage
CO ₂	Carbon Dioxide
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
DHPWN	District Heating and Private Wire Network
ERF	Energy Recovery Facility
ES	Environmental Statement
EV	Electric Vehicle
FGTr	Flue Gas Treatment Residue
H ₂	Hydrogen
NLGEP	North Lincolnshire Green Energy Park
NSIP	Nationally Significant Infrastructure Project
PRF	Plastic Recycling Facility
PRoW	Public Rights of Way
RHTF	Residue Handling and Treatment Facility
SuDS	Sustainable Drainage Systems

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1.0 Introduction

Overview

- 1.1 This report sets out North Lincolnshire Green Energy Park Limited's (the Applicant's) comments on Anglian Water's response to the Rule 17 letter issued by the Examining Authority on 4 May 2023.

The Proposed Development

- 1.2 The North Lincolnshire Green Energy Park (NLGEP), located at Flixborough, North Lincolnshire, comprises an ERF capable of converting up to 760,000 tonnes of residual non-recyclable waste into 95 MW of electricity and a CCUS facility which will treat a proportion of the excess gasses released from the ERF to remove and store CO₂ prior to emission into the atmosphere. The design of the ERF and CCUS will also enable future connection to the Zero Carbon Humber pipeline to be applied for, when this is consented and operational, to enable the possibility of full carbon capture in the future.
- 1.3 The NSIP incorporates a switchyard, to ensure that the power created can be exported to the National Grid or to local businesses, and a water treatment facility, to take water from the mains supply or recycled process water to remove impurities and make it suitable for use in the boilers, the CCUS facility, concrete block manufacture, hydrogen production and the maintenance of the water levels in the wetland area.
- 1.4 The Project includes the following Associated Development to support the operation of the NSIP:
- a bottom ash and flue gas residue handling and treatment facility (RHTF);
 - a concrete block manufacturing facility (CBMF);
 - a plastic recycling facility (PRF);
 - a hydrogen production and storage facility;
 - an electric vehicle (EV) and hydrogen (H₂) refueling station;
 - battery storage;
 - a hydrogen and natural gas above ground installation (AGI);
 - a new access road and parking;
 - a gatehouse and visitor centre with elevated walkway;

- railway reinstatement works including; sidings at Dragonby, reinstatement and safety improvements to the 6km private railway spur, and the construction of a new railhead with sidings south of Flixborough Wharf;
- a northern and southern district heating and private wire network (DHPWN);
- habitat creation, landscaping and ecological mitigation, including green infrastructure and 65 acre wetland area;
- new public rights of way and cycle ways including footbridges;
- Sustainable Drainage Systems (SuDS) and flood defence; and
- utility constructions and diversions.

1.5 The Project will also include development in connection with the above works such as security gates, fencing, boundary treatment, lighting, hard and soft landscaping, surface and foul water treatment and drainage systems and CCTV.

1.6 The Project also includes temporary facilities required during the course of construction including site establishment and preparation works, temporary construction laydown areas, contractor facilities, materials and plant storage, generators, concrete batching facilities, vehicle and cycle parking facilities, offices, staff welfare facilities, security fencing and gates, external lighting, roadways and haul routes, wheel wash facilities, and signage.

2.0 COMMENTS ON ANGLIAN WATER'S RESPONSE TO RULE 17 LETTER

2.1 Table 1 below sets out Anglian Water's response to the Rule 17 letter and the Applicant's comments on this response.

Table 1: Response to Rule 17 questions

Anglian Waters Response	Applicant's Comments
In response to the Rule 17 letter, Anglian Water Services (AWS) has held further discussions regarding the potential water supply to the North Lincolnshire Green Energy Park (NLGEP) with the applicant.	This is noted.

<p>The draft 2024 Water Resources Management Plan (dWRMP24) sets out a long-term strategy for managing water over the period 2025-2050. This was submitted to the Department for Environment, Food and Rural Affairs (DEFRA) in 2022 and has recently been subject to public consultation for 14 weeks.</p>	<p>This is noted.</p>
<p>The draft WRMP forecasts a future deficit of water for most resource zones (including Lincolnshire Central) if no action is taken. For the region overall this deficit is forecast to be 443 megalitres per day (a megalitre is 1 million litres of water) by 2049/50.</p>	<p>This is noted.</p>
<p>The dWRMP24 sets out the strategy to tackle this deficit which includes both supply and demand management. However, it will take time for these strategies to take effect and as such no surplus of water is forecast to supply new non-domestic customers between 2025-2030. A potential surplus is forecast to emerge from 2030.</p>	<p>This position of shortfall has changed since the Applicant first engaged with AWS, when it was confirmed 10-12.5l/s was available in response to a budget estimate. NLGEPL has worked to reduce the operational demand by 50% to 6 litres per second by inclusion of water re-use within the facility and refinement of the process plant design, on the understanding that this was achievable through the existing potable water network. The Applicant understands that the AWS network capacity may see a surplus post 2030 when the associated development is forecast to be operational and therefore a supply would available.</p> <p>The facility is expected to achieve commercial operation in 2028/9 if construction commences in 2024/5. There is therefore a limited window with a restricted water supply.</p>

<p>The applicant has prepared a technical paper setting out the potable water requirements for the project. The process part of the project requires 2.4 litres per second from 2024 rising to 6 litres per second from 2031. AWS has advised the applicant that it is not able to guarantee a potable water supply in the early stages of the project.</p>	<p>We note that post 2031 requirements should be deliverable by AWS.</p> <p>The water flow estimated for construction is an over-stated quantity, based on the maximum construction workforce. It is likely that the initial years of construction will need a more limited supply.</p> <p>For the earlier stages of the project, the Applicant is keen to explore with AWS whether a non-guaranteed supply would facilitate the priming of the system whereby the re-use of water can be optimized particularly for the commissioning and performance testing program leading up to full operation.</p>
<p>The project also needs to supply the fire water tank. Although this would only need to be filled periodically and does not necessarily require potable water, it still must be factored into the overall water supply requirements for the project. However, AWS has advised the applicant that water will be available for fire fighting purposes.</p>	<p>The requirement for the rate of replenishment of the fire water tanks is stipulated by regulatory bodies and insurance companies. The Applicant appreciates the commitment by AWS that fire-fighting water will be available to the operational Project. The Applicant is actively looking at several non-potable water supplies surrounding the Project site that could be treated or used directly for fire-water replenishment.</p>
<p>AWS had advised the applicant that they will continue to work with them on their potential solutions with a view to reaching an agreed position by the time the Examining Authority report to the Secretary of State. Further work will focus on reducing demand and increasing supply:</p> <ul style="list-style-type: none"> - The applicant will explore further opportunities for the reuse of water at source to reduce overall demand, 	<p>The Applicant is grateful to AWS for fielding a significant number of their Team for the latest on-line meeting following the unexpected positioning with the Deadline 8 submission by AWS. The session was positive and constructive and left the Applicant with confidence that an acceptable working solution would be found around the constraints that have been placed on all water authorities through reduced</p>

<ul style="list-style-type: none"> - Whether there is any existing water supply from existing buildings on site, or other sources, that is no longer required and therefore would reduce the overall balance of requirement, - Re-examine the water quality required for the project as other non-potable water supplies may be of sufficient quality or could be processed to sufficient quality to supply the project, - Consider temporary measures that could be used for an interim period, for example the use of water tankers, - AWS has advised the applicant of potential third-party sources of non-potable water although AWS would not be responsible for providing these sources, - AWS will provide more detailed modelling on what headroom might be available and when; and - The applicant has been advised to make DEFRA aware of this position. 	<p>abstraction capacities. Each point of further work is considered in order below:</p> <ul style="list-style-type: none"> - The Applicant has already committed within the dDCO, and to Severn Trent Water who also have limitations on their capacity for trade effluent, to the re-use of water from the processes within the Project. The equipment to clean the process water is included within the Project design. The Applicant will work closely with AWS to understand any additional options to reduce water demand. - The applicant will consider rainwater harvesting, in conjunction with the SuDS drainage provision, to provide a further potential source of non-potable water. This would be installed at the large buildings where space allocation already exists. - The Applicant is undertaking an analysis of potable water supply that will mirror the work undertaken with Severn Trent Water to calculate the volume of domestic foul water capacity that was being removed by the Project – e.g. Bellwin House, Glanford House and at the suggestion of AWS will include businesses that may use less water with the deployment of the heat and power network. - The Applicant will assess with AWS all potential sources of non-potable water and with some of the stakeholders that have engaged as part of the Project, that have a surplus of non-potable water. The principle of recycling and re-use is already part of our adopted design principles and codes to reduce the volume of water lost as wastewater with
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	<p>an objective to reduce the demand on the potable water network and sewage network.</p> <ul style="list-style-type: none">- The Applicant will review and assess all options for temporary measures including via the railway and marine tankers to help accommodate the supply pressure being experienced locally up until 2030.- The Applicant will work with AWS to evaluate some of the potential third-party sources, some of whom the Applicant may already be in discussions with as potential partners or off-takers for the Project.- The Applicant welcomes the commitment to providing the headroom over the construction and operational phases of the project and each of the project elements- The Applicant has committed to AWS that it will make strong representation to DEFRA regarding the impact these policies are having on development in the area.
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2.2 In summary the applicant is proposing to utilise a combination of: mains water from AWS; local non-potable supplies that are already operational, approved and permitted; rainwater harvesting; and effluent reuse. The Applicant is working to determine the proportions of the demand that each of these sources could provide.

