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Head of Planning
North Lincolnshire Council
Church Square House
30-40 High Street
Scunthorpe
North Lincolnshire
DN15 6NL

20 October 2025

Dear Sir

Proposed Hydrogen Production Facility on Land North of the A18, Melton Ross Quarries, Barnetby, North Lincolnshire, DN38 6AE. Request for an Environmental Impact Assessment (EIA) Screening Opinion under Regulations 5 and 6 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)

Centrica Energy Storage+ (hereinafter referred to as "the Applicant") intends to apply to North Lincolnshire Council for the construction and operation of a 10MW Hydrogen Production Facility (hereinafter referred to as "the Proposed Development").

We hereby request an Environmental Impact Assessment (EIA) Screening Opinion from North Lincolnshire Council under Regulation 6(1) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (hereinafter referred to as the "EIA Regulations"), to determine whether the proposed development constitutes "EIA Development" within the remit of the EIA Regulations.

This EIA Screening Report is supported by the following Figures:

- Site Location Plan; and
- Proposed Site Layout

Environmental Impact Assessment & Screening

EIA Screening is the process of determining whether a proposed development falls within the remit of the EIA Regulations, by identifying whether it is likely to have significant effects on the environment. The EIA Regulations set out thresholds for Schedule 1 development, whereby EIA is always required. Where a proposed development is listed on Schedule 2, an EIA may be required if significant effects on the environment are considered likely, by virtue of factors such as size or location.

Where proposed developments are listed within column 1 of Schedule 2, and meet or exceed the thresholds in column 2, an Applicant can request an EIA Screening Opinion or Direction from the competent authority to determine whether EIA is required. Hydrogen is not expressly mentioned within either Schedule 1 or Schedule 2 of the Regulations but most closely relates to Schedule 2 Class 3(b) Industrial installations for carrying gas, steam and hot water. The Applicant requests a Screening Opinion

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from North Lincolnshire Council to determine whether any future planning application should be accompanied by an Environmental Statement (ES).

In accordance with Regulation 6(2) of the EIA Regulations, and where relevant Schedule 3, this EIA Screening Report includes the following requirements:

- plan sufficient to identify the land;
- a description of the development, including in particular—
    - a description of the physical characteristics of the whole development and, where relevant, of demolition works;
    - a description of the location of the development, with particular regard to the environmental sensitivity of geographical areas likely to be affected;
- a description of the aspects of the environment likely to be significantly affected by the development;
- a description of any likely significant effects, to the extent of the information available on those effects, of the proposed development on the environment resulting from—
    - the expected residues and emissions and the production of waste, where relevant, and
    - the use of natural resources, in particular soil, land, water and biodiversity.
- such other information or representations as the person making the request may wish to provide or make including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

Characteristics of the Development

Schedule 3 of the EIA Regulations sets out the selection criteria for screening Schedule 2 development. The characteristics of development must be considered having regard to:

- the size and design of the development;
- the cumulation with other existing development and/or approved development;
- the use of natural resources, in particular land, soil, water and biodiversity;
- the production of waste;
- pollution and nuisances;
- the risk of major accidents and/or disasters relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge; and
- the risks to human health (for example due to water contamination or air pollution).

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Proposed Development

The Proposed Development is a 10MW Hydrogen Production Facility which will produce hydrogen for use as the fuel source for the nearby Kiln at Singleton Birch quarry, and comprises the following:

- Site Access
- Containerised Hydrogen Production equipment (Consisting of Electrolyse stacks, water purification, gas handling, transformers, rectifiers);
- Interconnecting pipe-racks and pipe-tracks;
- Hydrogen export and metering;
- Cooling water package;
- Utilities - Instrument air and water storage
- Service buildings (control Room, electrical equipment room);
- Electrical substations; and
- Boundary fence.

Design

The layout and design of the Proposed Development will be informed by the various environmental reports that will accompany any future planning application.

- Site Access - A new access suitable for construction deliveries and operation use will be required off the A18.

- Electrolyser equipment (consisting of stacks, transformers, rectifiers) and buildings;
  The electrolyser equipment contains two sets of electrolyser stack skids which contain eight electrolyser stacks within them. The stacks consist of two chambers separated by a membrane; water is circulated via pumps and coolers through the stacks. Direct Current (DC) power is applied to the stacks and hydrogen is generated at the cathode and oxygen at the anode. The electrolysis reaction results in the generation of heat which is removed by cooling the water. Cooling water is supplied to the stacks from cooling water package within the electrolyser package. The produced oxygen is vented to atmosphere through the electrolysers purpose-built vent.

  The produced wet hydrogen is then passed through a desiccant drying system. Chilled water is required to cool the hydrogen as part of the drying package to knock out water. Chilled water is supplied via a chilled water refrigeration package.

- Hydrogen is reduced in pressure via a pressure reduction package, it then flows through a fiscal metering system at the battery limit for the hydrogen export stream.

- Cooling water package
  Cooling water is provided by an air-cooled heat exchanger which is located on the top of the container unit. The cooling water pumps pump cooling water through closed loop cooling water

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system the to the users, cooling water is returned from the users to the air-cooled heat exchanger refrigeration package.

A glycol-water cooling loop is provided within the electrolyser system which cools the process water entering the stack, cools the hydrogen produced by the electrolyser to ensure it is dry and cools the desiccant within the drying columns inside the unit. The system consists of a pump which transfers the glycol-water mixture throughout pipework to a plate heat exchanger system which cools the mixture using air coolers located at the top of the unit.

- Water purification and Demineralisation, including storage
  The process is fed with water taken from the Anglian Water mains supply. Water is stored in a water storage tank, which is dosed with biocide as needed to prevent biological growth. From the tank water is pumped continuously on pressure control to the water purification and demineralisation package. There is also an intermittent supply to both the cooling water package and the chilled water package for make-up and initial fill.

  Demineralised water is produced by passing the pre-treated water through a reverse osmosis system followed by a mixed bed ion exchange system. Demineralised water from treatment is routed to the demineralised storage tank. Continuous reject from reverse osmosis is routed to the waste water drum. Demineralised water is pumped continuously from the demineralised water tank to the electrolysers. Continuous reject from reverse osmosis as well as any intermittent wastewater flows are routed to the wastewater drum which is continuously pumped out on level control to discharge.

- Interconnecting pipe-racks and pipe-tracks
  Hydrogen and utilities are transported around the facility on pipe racks.

- Service buildings (warehouse, workshop, gate house)
  Service, stores and gatehouse buildings are proposed. Local control building will provide the ability for local control and shutdown if required.

- Electrical substations
  The electrical connection point and associated substation(s) are proposed to be located on the site near the access road.

- Utilities - Instrument air and nitrogen generation
  Instrument air is produced via an instrument air package with compressors, coolers and drying. Plant air is provided upstream of the instrument air drying package. Nitrogen is supplied to the site by pressurised bottles to purge the hydrogen containing pipework before and after shutdown.

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- Refrigeration package – Chilled Water
  Chilled water for the hydrogen deoxygenation and hydrogen drying package and is provided by a closed loop system with a refrigeration compressor package. Water is pumped to the users and returned to the refrigeration package. An expansion vessel is required to account for volume changes in the system.
- Boundary fence - Fencing approximately 2.0m in height will be constructed around the Proposed Development locations for health and safety and security reasons. Inward facing CCTV cameras will also be installed upon the security fencing.

Construction Phase

The construction phase of the proposed development is anticipated to take place over a period of approximately 4- 8 months. The type of construction activities that may be required include:

- Site preparation;
- Construction of an access point;
- Construction of the Hydrogen Production Facility and associated infrastructure;
- Commissioning;
- Site reinstatement, and
- Any landscape planting and habitat enhancement measures.

A construction compound would be located close to the site access point to facilitate the construction of the Proposed Development. The compound would allow for the laydown of materials and vehicle parking throughout the duration of the construction phase. The compound would be located on land that would be leased by Singlton Birch.

Operational Phase

During the operational phase the proposed development would be operated remotely and permanently monitored.

Cumulative Developments

Cumulative effects are combination effects as a result of the proposed development and other existing and approved development, which together can increase potential levels of effect upon the environment. Schedule 3 of EIA Regulations require that the characteristics of a proposed development must be considered in relation to the "cumulation with other existing development and/or approved development."

A search was undertaken in October 2025 of other existing and/or approved developments within the vicinity of the application site. No other development was identified and therefore the potential for cumulative effects is not considered to be significant.

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In-Combination Effects

In-combination effects can arise because of effects of one environmental receptor bringing about changes to another environmental receptor, for example recommendations in terms of landscaping and potential impacts upon ecology. Any in-combination effects will be considered in each stand-alone environmental assessment to be undertaken and submitted with the planning application.

Natural Resources

The site is a backfilled quarry, and the proposal will not result in the loss of any agricultural land.

The planning application submission will be accompanied by a Preliminary Ecological Appraisal, Phase 2 surveys as necessary and Biodiversity Net Gain (BNG) Assessment.

It is not considered that the proposed development will result in any significant effects on natural resources such as soil, water or biodiversity interests given its scale and former quarry use.

Waste

It is anticipated that minimal waste would be generated during the operational phase of the proposed development. Any waste generated on the site would be managed through appropriate waste management processes.

During the construction phase, waste would be generated from the following sources:

- Waste generated from packaging and material offcuts which would be managed at the appropriate waste management facility.

Pollution & Nuisance

The construction and operational phases of the proposed development is not anticipated to result in the generation of pollution. An application will be supported by an Air Quality Assessment.

During operation of the facility no hazardous or toxic gases are produced or vented. The co-product created from splitting hydrogen from water (H_2O) is oxygen, this oxygen is proposed to be vented to the environment.

Some noise will be generated throughout the construction phase however, this will be a temporary short-term impact and is not considered to be significant. Noise will be generated through the operational phase although this is not considered significant. A Noise Impact Assessment will be submitted alongside the planning application to demonstrate that the proposed development will not result in any unacceptable impact on residential amenity.

Population & Human Health

Given the nature of the development is not considered to pose a risk to human health. The Proposed Development does not involve any hazardous substances during construction or operation.

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There are health and safety risks associated with the construction phase of any development. Standard measures will be implemented to promote health and safety across the site. During the construction and operational phases of the proposed development the site will be secured by fencing to prevent unauthorised access.

Water Resources

There are no such features on site. A surface water strategy will accompany an application which will explain how surface water will be managed without increasing the risk of flooding.

Biodiversity (Species & Habitats)

The site and surrounding land is not subject to any designation.

Landscape & Visual

There are no areas or features on or around the location which are protected for their landscape and scenic value, and/or any non-designated of high landscape or scenic value. Moreover, the site is in a location where it will be viewed in the context of existing Singleton Birch operational site.

Cultural Heritage & Archaeology

There are no above ground heritage assets on the site or within the immediate vicinity. The application will be supported by an appropriate Heritage Assessment including archaeological considerations.

Transport & Access

There are no transport routes on or around the location which are susceptible to congestion or which cause environmental problems. The operational phase of the development will only generate very limited additional vehicle movements associated with regular maintenance. Construction traffic will be for a limited time and controlled through a Construction Traffic Management Plan.

Land Use

The land is a backfilled former quarry.

Land Stability & Climate

The site is not in a location which is susceptible to earthquakes, subsidence, landslides, erosion, or extreme/adverse climatic conditions.

Cumulative Effects

There are no significant existing or approved developments in the locality which would give rise to cumulative impacts.

Transboundary Effects

The development will not lead to any transboundary effects.

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Major Accidents & Disasters

The Planning (Hazardous Substances) Regulations 2015 establish thresholds for hydrogen facilities in the UK. These regulations require hazardous substance consent for the storage or use of hazardous substances at or above specific limits. Key thresholds:

- 2 tonnes of hydrogen: Consent is required to store 2 or more tonnes of hydrogen.
- 5 tonnes of hydrogen: A further consent, see below COMAH regulations, is required where 5 or more tonnes of hydrogen will be stored.

Control Of Major Accident Hazards Regulations 2015 (COMAH) provides measures relating to the prevention and limitation of the effects of accidents involving dangerous substances. Thresholds for either a low tier or high tier COMAH facility are provided within Schedule 1, the thresholds for hydrogen are

- COMAH Low Tier requirements: 5 Tonnes
- COMAH High Teir requirements: 50 Tonnes

The proposed hydrogen development has an inventory well below the 2 tonnes threshold site inventory level as there is no significant hydrogen storage proposed with the development.

The hydrogen facility produces circa 0.190 tonnes per hour of hydrogen at maximum rate which is not stored on site, it is instead transferred and used simultaneously within thermal processes on existing Kiln at Singleton Birch where fuel switching decarbonisation benefits would be realised.

Application Site and Surrounding Area

Schedule 3 of the EIA Regulations states that the environmental sensitivity of geographical areas likely to be affected by development must be considered, having regard, in particular, to:

- the existing and approved land use;
- the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;
- the absorption capacity of the natural environment, paying particular attention to the following areas:
    - wetlands, riparian areas, river mouths;
    - coastal zones and the marine environment;
    - mountain and forest areas;
    - nature reserves and parks;
    - European sites and other areas classified or protected under national legislation; areas in which there has already been a failure to meet the environmental quality standards laid down in Union legislation and relevant to the project, or in which it is considered there is such a failure;
    - densely populated areas, and

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- landscapes and sites of historical, cultural or archaeological significance

Application Site

The site comprises a backfilled quarry to the north of the A18 and forms part of the wider Singleton Birch operational site. A railway line passes partly through the site, with land to the south in arable farming production. The development has a footprint of circa 0.2 hectares, with access proposed to be taken from the A18 to the south.

The topography of the site is generally flat. The southern and eastern boundaries are defined by hedgerows/trees. The site is open to the west.

The site is not subject to any heritage assets.

The site itself is not subject to any ecological designations.

The site is not within an area subject to a designated landscape.

The site is located within FRZ1 (low risk) for flooding from river and sea as identified by the Environment Agency. Small pockets of the site are subject to surface water flooding.

The site is not in agricultural production.

Site Selection

The application site has been selected given its proximity to the Singelton Birch Kiln, with the hydrogen produced feeding into this facility.

Conclusion and Recommendations

The Proposed Development comprises the construction and operation of a hydrogen production facility. Hydrogen is not expressly mentioned within either Schedule 1 or Schedule 2 of the Regulations but most closely relates to Schedule 2 Class 3(b) Industrial installations for carrying gas, steam and hot water. Therefore, the Applicant requests an EIA Screening Opinion from North Lincolnshire Council to determine whether the proposed development constitutes EIA development.

The Proposed Development is not considered to be unusually complex and does not pose potentially hazardous environmental effects. The intention of the proposed development is to generate a renewable source of hydrogen, contributing towards the transition to a low carbon economy.

As detailed throughout this EIA Screening Report, the Proposed Development is not likely to result in significant effects upon the environment and therefore it is our considered view that an EIA is not required. Rather, detailed technical and environmental reports will accompany any future planning application to include:

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- Planning, Design and Access Statement including Statement of Community Involvement;
- Landscape and Visual Impact Assessment;
- Archaeological Desk-Based Assessment;
- Transport Statement/Construction Traffic Management Plan;
- Flood Risk Assessment and Drainage Strategy;
- Ecological and Biodiversity Net Gain Assessment;
- Preliminary Ecological Appraisal;
- Arboricultural Survey and Arboricultural Impact Assessment;
- Noise Assessment;
- Heritage Assessment;
- Air Quality Assessment; and
- Phase 1 Geo-Environmental Assessment.

I look forward to hearing from you.

Yours sincerely,

[redacted]

Andrew Fillmore MRTPI
Town Planning Manager

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Appendix 1 – Town and Country Planning (Environmental Impact Assessment) Regulations 2017 Screening Matrix

Natural Resources
Will construction, operation or decommissioning of the project involve actions which will cause physical changes in the topography of the area?
No, with the exemption of some minor regrading the topography of the site will remain unchanged.
Will construction or operation of the project use natural resources above or below ground such as land, soil, water, materials/minerals or energy which are non-renewable or in short supply?
No, none of the resources used in this project are in short supply.
Are there any areas on/around the location which contain important, high quality or scarce resources which could be affected by the project, e.g. forestry, agriculture, water/coastal, fisheries, minerals?
No.
Waste
Will the project produce solid wastes during construction or operation or decommissioning?
Yes, the project will produce some solid waste during both construction and operation which will be managed via the existing Site Waste Management Procedures and Processes. This is not considered significant in the context of the Regulations and will be controlled through a suitable waste management facility.
Pollution and Nuisances
Will the project release pollutants or any hazardous, toxic or noxious substances to air?
No.
Will the project cause noise and vibration or release of light, heat, energy or electromagnetic radiation?
Yes, the facility will generate noise, but this will be limited and not significant in the context of the Regulations. An application will be supported by an appropriate noise assessment.
Will the project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal waters or the sea?
No
Are there any areas on or around the location which are already subject to pollution or environmental damage, e.g. where existing legal environmental standards are exceeded, which could be affected by the project?
No, there are no such areas.
Population and Human Health
Will there be any risk of major accidents (including those caused by climate change, in accordance with scientific knowledge) during construction, operation or decommissioning?
No, all construction will follow CDM Regulations and operational/maintenance risks will be managed in line with the current site COMAH Case Regulations which helps ensure the correct mitigations are in place to minimize major accidents from occurring.

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Will the project present a risk to the population (having regard to population density) and their human health during construction, operation or decommissioning? (for example due to water contamination or air pollution)
No, the facility will be operated in accordance with established industry guidance on health and safety. During both construction and decommissioning relevant CDM Regulations will be adhered to.
Water Resources
Are there any water resources including surface waters, e.g. rivers, lakes/ponds, coastal or underground waters on or around the location which could be affected by the project, particularly in terms of their volume and flood risk?
No, there are no such features on site. A surface water strategy will accompany an application which will explain how surface water will be managed without increasing the risk of flooding.
Biodiversity (Species and Habitats)
Are there any protected areas which are designated or classified for their terrestrial, avian and marine ecological value, or any non-designated / non-classified areas which are important or sensitive for reasons of their terrestrial, avian and marine ecological value, located on or around the location and which could be affected by the project? (e.g. wetlands, watercourses or other water-bodies, the coastal zone, mountains, forests or woodlands, undesignated nature reserves or parks. (Where designated indicate level of designation (international, national, regional or local))).
No.
Could any protected, important or sensitive species of flora or fauna which use areas on or around the site, e.g. for breeding, nesting, foraging, resting, over-wintering, or migration, be affected by the project?
Yes, the application will be supported by appropriate ecological surveys which fully consider this matter.
Landscape and Visual
Are there any areas or features on or around the location which are protected for their landscape and scenic value, and/or any non-designated / non-classified areas or features of high landscape or scenic value on or around the location which could be affected by the project? Where designated indicate level of designation (international, national, regional or local).
No, there are no such features in/around the site.
Is the project in a location where it is likely to be highly visible to many people? (If so, from where, what direction, and what distance?)
No, the site is located in an isolated location and will be seen in the context of existing quarry operations.
Culture Heritage/Archaeology
Are there any areas or features which are protected for their cultural heritage or archaeological value, or any non-designated / classified areas and/or features of cultural heritage or archaeological importance on or around the location which could be affected by the project (including potential impacts on setting, and views to, from and within)? Where designated indicate level of designation (international, national, regional or local).

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There are no above ground heritage assets on the site or within the immediate vicinity. The application will be supported by an appropriate Heritage Assessment including archaeological considerations.
Transport and Access
Are there any routes on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the project?
No.
Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the project?
No
Land Use
Are there existing land uses or community facilities on or around the location which could be affected by the project? E.g. housing, densely populated areas, industry / commerce, farm/agricultural holdings, forestry, tourism, mining, quarrying, facilities relating to health, education, places of worship, leisure /sports / recreation.
No.
Are there any plans for future land uses on or around the location which could be affected by the project?
No, there are no other confirmed land use allocations around the location which are likely to affect the project.
Land Stability and Climate
Is the location susceptible to earthquakes, subsidence, landslides, erosion, or extreme /adverse climatic conditions, e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems?
No, there are no such effects which are likely to arise.
Cumulative Effects
Could this project together with existing and/or approved development result in cumulation of impacts together during the construction/operation phase?
No, there are no significant existing or approved developments in the locality which would give rise to cumulative impacts.
Transboundary Effects
Is the project likely to lead to transboundary effects?
No, the development will not lead to any transboundary effects.