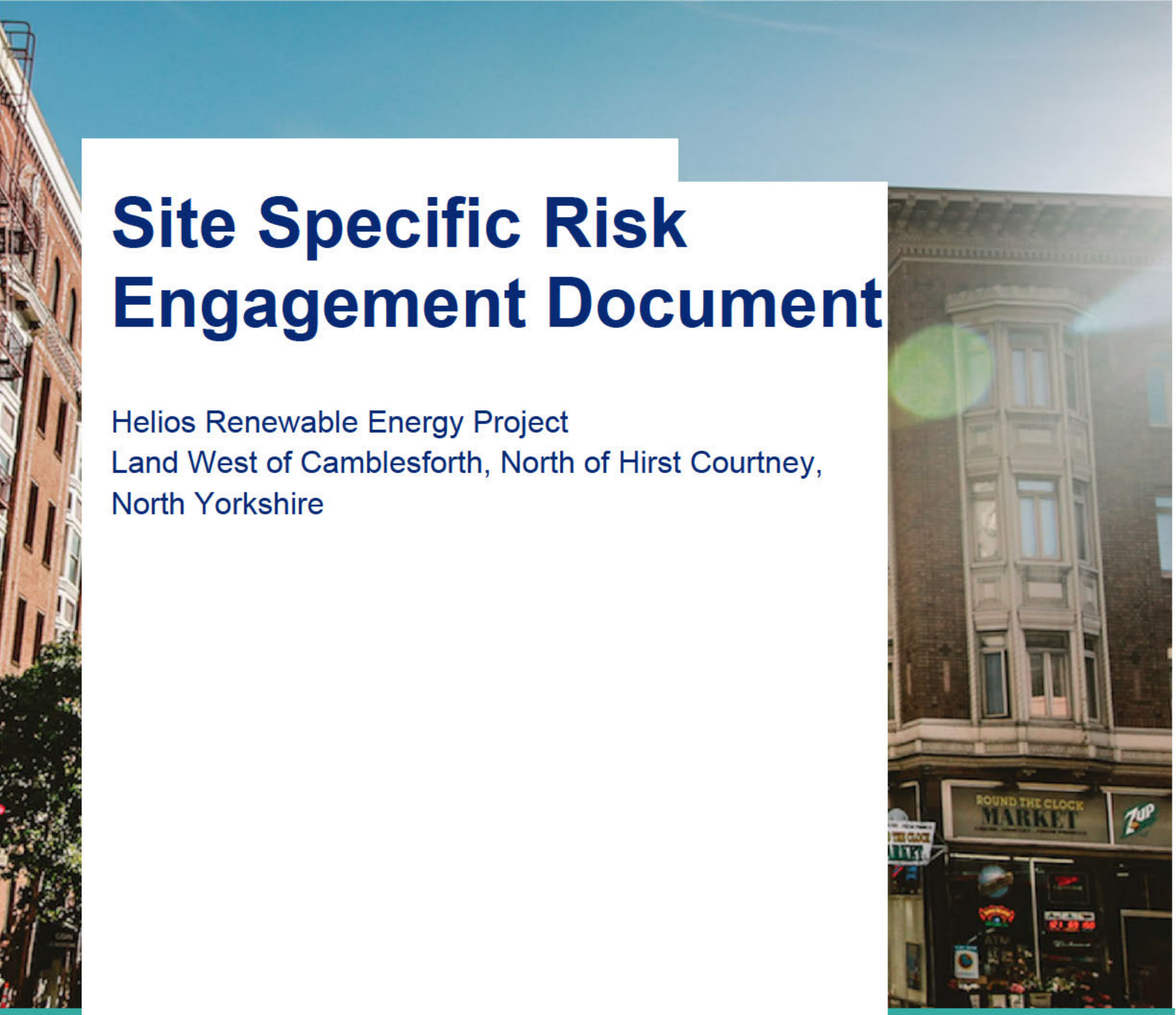
HELIOS RENEWABLE ENERGY PROJECT

PINS Document Number:
EN010140/APP/7.4

Pursuant to:
APFP Regulation 5(2)(q)

Site Specific Risk Engagament Document (SSRED)

June 2024



Site Specific Risk Engagement Document

Helios Renewable Energy Project
Land West of Camblesforth, North of Hirst Courtney, North Yorkshire

JANUARY 2024

Crest Consultancy
Authored by: Gabby Heycock

Table of Contents

Purpose

1. This Site Specific Risk Engagement Document (SSRED) has been prepared by Crest Consultancy, on behalf of Enso Green Holdings D Limited (the 'Applicant'), in relation to an application for a Development Consent Order (DCO) for the Helios Renewable Energy Project (the 'Proposed Development).
2. The Proposed Development consists of ground-mounted solar photovoltaic ('PV') arrays and on-site energy storage, together with associated infrastructure and an underground cable connection to the existing National Grid Substation at the Drax Power Station.
3. This document has been produced to support engagement with the North Yorkshire Fire and Rescue Service (NYFRS) as a key stakeholder.
4. This SSRED demonstrates how the Applicant has taken account of the Planning Practice Guidance (PPG) and specifically details the engagement undertaken with NYFRS. This information also forms the basis of the Outline Battery Safety Management Plan (oBSMP). A Detailed BSMP will be secured through a requirement of the DCO.

Background

5. Battery Energy Storage Systems (BESS) are an important contributor to a greener energy future and the protection of our climate.
6. The UK Government's commitment to developing a flexible energy grid and its encouragement of battery storage is clear (see: Prime Minister's Ten Point Plan for a Green Industrial Revolution (November 2020), Energy White Paper (December 2020), Transitioning to a net zero energy system (July 2021) report and British Energy Security Strategy (April 2022). BESS are further supported by the Future Energy Scenarios with National Grid promoting their use on the system.
7. Central Government policy highlight that there is no prohibition on new battery storage development, on any safety grounds within the UK. Rather such schemes are actively encouraged by both Central Government and National Grid.
8. The Applicant recognises that the storage of electricity can present a manageable risk and is committed to that risk being 'as low as is reasonably practical' (ALARP).
9. In 2022, the National Fire Chief's Council (NFCC) produced guidance for Fire Rescue Services (FRS)on grid scale BESS planning**1**. This NFCC guidance was, in August 2023, included within an update to the online PPG within the 'renewable and low carbon' topic.

10. The PPG "encourages" applicants and local planning authorities "to consider" the guidance produced by the NFCC. It is important to keep in mind the key qualifier at the start of the NFCC guidance:

- that it is, in itself, only guidance;
- that every BESS installation will be different;
- that fire and rescue services should make a site-specific decision;
- that the guidelines are only a "starting point" and cannot cover every eventuality or design; and
- that the "ultimate responsibility for the safe design and running" of a BESS rests with the operator [2].

11. The PPG encourages applicants to consult with their local fire and rescue service. That has been done here, with NYFRS and is demonstrated within this document.

[1] **https://www.ukfrs.com/sites/default/files/2023-04/Grid%20Scale%20Battery%20Energy%20Storage%20System%20planning%20Guidance%20for%20FRS.pdf**
[2] NFCC guidance p2/10

Consultation

A Statement of Community Consultation (SoCC) was prepared to detail the overall approach to consultation for the project. Informal consultation was undertaken in July 2022, with statutory consultation undertaken between 26 October 2023 and 7 December 2023. The Applicant has had due regard for responses received from the community and stakeholders during the informal and statutory consultations, resulting in changes to the design of the Proposed Development.

12. Pursuant to Section 42 of the Planning Act 2008 and the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations2009, the NYFRS were contacted for comment during the 2023 statutory consultation. The Applicant is appreciative of the NYFRS response, dated 15 November 2023 (Appendix 1), noting the NYFRS response signposting to the NFCC guidance document. This is dealt with later in this document under the site specific section.

Fire Liaison Framework

13. This SSRED forms the basis of ongoing engagement with NYFRS, concerning the Proposed Development and provides the foundations for the oBSMP. A Detailed BSMP for the Proposed Development will be secured through a requirement of the DCO.

14. Although it is not possible to supply full details on the BESS at this time, it is confirmed through the oBSMP that the site will include the following layered protection approach as standard:
    - Detection system;
    - Ventilation system;
    - Suppression systems; and
    - Deflagrating panels.

15. Confirmation of battery chemistry and battery form will be included in the Detailed BSMP, prepared in consultation with North Yorkshire Council (NYC) and NYFRS.

16. The fire service will be considering their core legislative requirements, in addition to the NFCC BESS guidance when reviewing the BSMP, including:

    - The Fire and Rescue Services Act 2004 (sets out the responsibilities of Fire and Rescue Authorities (FRAs));
    - The Building Safety Act 2022;
    - Regulatory Reform (Fire Safety) Order 2005;
    - Fire Safety Act 2021 and Fire Safety Regulations (England) 2022; and
    - Civil Contingencies Act 2004.

17. The Applicant will ensure that the risk associated with the Proposed Development BESS is reduced to ALARP. The Plan, Do, Check, Act [3] process is promoted by the Health and Safety Executive (HSE) as a way for business to deal with risk. It is ideally suited to this arrangement based on the multiple contacts and stages of engagement required as demonstrated in Table 1.

[3] **https://www.hse.gov.uk/managing/introduction/how-to-manage.htm**

PLAN:
• Engage with NYFRS to ensure that their thoughts and feedback are considered; • Consider all available guidance and legislation; • Recognise the need to involve both operational firefighting officers and fire safety officers; • Establish positive relationships to support the exchange of information and the achievement of managing any risk to ALARP; • Identify joint priorities for the reduction of risk; • Consider site specific conditions, what this means for risk and control measures; and • Look at the various stages and consider updates, site visits and the support of FRS awareness to support the reduction of risk to ALARP.
DO:
• Use this Site Specific Risk Engagement Document to prepare an Outline BSMP and engage further with the FRS to support their Emergency Preparedness; • Produce a Detailed BSMP in consultation with the FRS once the BESS technology has been confirmed, and submit the Detailed BESS to NYC to discharge the Applicant's requirement; • Engage with FRS to support them in discharging their responsibilities within the Fire and Rescue Service Act (2004) Section 7 (2) (d) obtaining information to support firefighting. This could include site visits and the exchange of information and knowledge directly to firefighting staff, upon request; • Engage with the FRS at an operational level as well as engaging their Fire Protection departments to support the reduction of risk for responding operational staff; and • Identify the tasks, duties, responsibilities and members of the BESS Safety Working Group.
CHECK:
• Monitor the safety systems in place for their effectiveness; • Investigate any activations of monitoring, ventilation or suppression systems; • Monitor information to ensure that learning is universal and not isolated to site specific incidents; • Monitor and engage with industry and governmental updates, guidance and legislation to support our ALARP objective; • Initiate testing regimes for any safety equipment provided; • The BESS Safety Working Group will provide oversight and monitoring of safety systems and conditions; and • Complete annual reviews of the Risk Management Plan and engage NYFRS in that review.
ACT:
• We will capture this process and approach within our Health and Safety Management Framework; • We will produce action plans where annual reviews of Management Plans identify either remedial or continuous improvement opportunities; and • The annual review of the Management Plan will act as the catalyst for the cyclical flow of the Plan, Do, Check, Act process. In addition to the annual review of safety events and near misses the release of research or legislative changes and national or international events would also result in the activation of the Check aspect of the model, leading to a cyclical flow review.

Table 1: Plan, Do, Check, Act

Site Specific Information

18. The NFCC guidance encourages that a site-specific approach is taken to each BESS, and provides guidance on the following considerations:

    - Information requirements;
    - System design, construction, testing and decommissioning;
    - Detection, monitoring and suppression systems;
    - Site access;
    - Unit spacing;
    - Water supplies;
    - Signage;
    - Emergency plans;
    - Environmental impacts; and
    - Recovery.

19. This section reviews the NFCC guidance in line with the site-specific requirements of the Proposed Development.

Information Requirements

20. Grid scale BESS forms part of Fire Rescue Service planning in accordance with arrangements required under section 7(2)(d) of the Fire and Rescue Services Act (2004). Site Specific Risk Information (SSRI) will be made available to crews in the form of an effective Emergency Response Plan which will form part of the Detailed BSMP. The Detailed BSMP will also include details of site access arrangements, such as key codes.

System Design, Construction, testing and decommissioning

21. Information on the proposed BESS will be provided as part of the oBSMP. The oBSMP will be provided to NYFRS and will set out the principles around system design, construction and testing mechanisms.

22. The Applicant will produce a Detailed BSMP in consultation with the FRS once the BESS technology has been confirmed. -

Detection, Monitoring and Suppression Systems

23. It is not possible to supply full details as these will be provided as part of the detailed design, procurement and pre-construction discussions, and secured as part of the Detailed BSMP. What can be confirmed at this stage as part of the oBSMP is that the BESS site will include, in a layered protection approach:

    - Detection system;
    - Ventilation system;
    - Suppression systems; and
    - Deflagrating panels.

24. The information on battery chemistry and battery form will be included as part of the Detailed BSMP, which will result in the formal re-engagement of NYFRS and NYC, within the planning regulatory framework, prior to development commencing on the BESS.

Site Access

25. The BESS has been designed to provide two separate access points into the site to account for opposite wind directions:
    1. Jowland Winn Lane – this is the main construction and operational access to the BESS.
    2. Hardenshaw Lane - provides an emergency access for NYFRS vehicles only.

26. The BESS includes unobstructed roads for NYFRS vehicles in all weather conditions with the inclusion of both passing and turning places suitable for fire service vehicles.

27. The layout of the BESS is shown in Appendix 2. This is an indicative drawing and the detailed BSMP will provide the full layout of the site.

Unit Spacing

28. The layout of the internal access roads ensure that every unit can be accessed directly, allowing for laying and movement of hose lines and, as such, access will be free of restrictions and obstacles.

29. The presence of High Voltage DC Electrical Systems is a risk to NYFRS and their location can be identified and exclusion zones applied as part of the Detailed BSMP.

30. The units are laid out in rows, with a spacing of 2m between the units. This is currently based on containerized LIB-ESS comprised of lithium iron phosphate (LFP) cells, which require an aisle separation of at least 1.5m on sides that contain access panels, doors or deflagration vents. The final provisions of separation distances will be provided as part of the detailed BSMP once the battery chemistry has been confirmed.

31. There are no occupied buildings within 25m of the BESS and no combustibles will be stored adjacent to the units. The BESS is also 10m from combustible vegetation which will be managed to ensure no encroachment onto the BESS compound.

Water Supplies

32. Water supplies will be situated on site through provision of four water tanks. The size and capability of the tanks provide the required minimum of 1900 litres of water per minute for at least two hours (228,000 litres).

33. Design and installation will ensure transferability of the water between the tanks. Firefighting equipment of hose lines and a ground monitor will be provided in close proximity to the tanks for use by firefighting staff.

34. The provision of more than one tank provides contingency if, for any reason, water could not be obtained for one of the tanks.

Signage

35. Signage will be installed on the access gates into the BESS compound, detailing:
    - Relevant hazards posed;
    - The type of technology associated with the BESS;
    - Any suppression system fitted; and
    - 24/7 Emergency Contact Information.

36. The signs will be legible at night from 30m from the site boundary.

Emergency Plans

37. An emergency plan will be included in the detailed BSMP. This will include arrangements for alerting the emergency services, immediate remote actions and the incident response from the applicant. NYFRS will be consulted on the draft detailed BSMP, including the emergency response plan, to ensure a collaborative and integrated approach is achieved.

Environmental Impacts

38. Suitable environmental protection measures will be provided as part of the wider Proposed Development. This includes systems for containing and managing water runoff from the BESS and takes into consideration the potential for water application rates in line with the NFCC guidance.

39. The site is located within a flood zone, therefore flood protection and mitigation measures will be included in the Flood Risk Chapter which will accompany the DCO submission.

Recovery

40. A post-incident recovery plan will be included as part of the detailed BSMP.

Conclusion

41. The Applicant will commit to the following activities:

- On-going engagement and communication including, where requested, site visits for the purposes of increased knowledge and understanding for emergency responders;
- The development of this document into an oBSMP;
- Consultation on the draft detailed BSMP
- Direct engagement with Operational Responders from NYFRS;
- The provision of comprehensive on-site information to support the safe management of any emergency event; and
- The holistic management of risk at the site through the use of the Plan, Do, Check, Act approach within an overall health and safety framework.

42. The PPG addresses fire safety by encouraging applicants and local planning authorities to consult with their local fire and rescue service which has been done here with NYFRS.

Appendix 1

NYFRS Reference: Premises: 00410240
Job: 1289087

Harrogate Fire Station
Skipton Road
Harrogate
North Yorkshire
HG1 4LE

When telephoning please ask for: S Crossley

Tel: 01423 857840
Fax: 01423 522403

Email: [redacted]@northyorksfire.gov.uk

15 November 2023

Proposed Battery Energy Storage System - Helios Renewable Energy Project

FIRE SAFETY - COMMUNICATION WITH THE PLANNING AUTHORITY

Receipt is acknowledged of your planning communication:

Dated: 14 November 2023

Your communication has been dealt with as follows:

At this stage in the planning process the North Yorkshire Police, Fire and Crime Commissioner Fire and Rescue Authority offer the following observations to the proposed development: The National Fire Chiefs Council (NFCC) publication Grid Scale Battery Energy Storage System Planning NFCC BESS (ukfrs.com) should be used as current best practice guidance in the design and installation of Battery Energy Storage System (BESS) sites.

The majority of information we collect regarding business fire safety is non-personalised information, however any personal data we collect will be managed in accordance with our Privacy Notice which can be viewed on our website, www.northyorksfire.gov.uk/about-us/data/privacy-policies/.

Under the Regulatory Reform Order 2005 we are obliged to publish a public register of enforcement action which can be viewed via our website, www.northyorksfire.gov.uk/about-us/financial/lists-and-registers/.

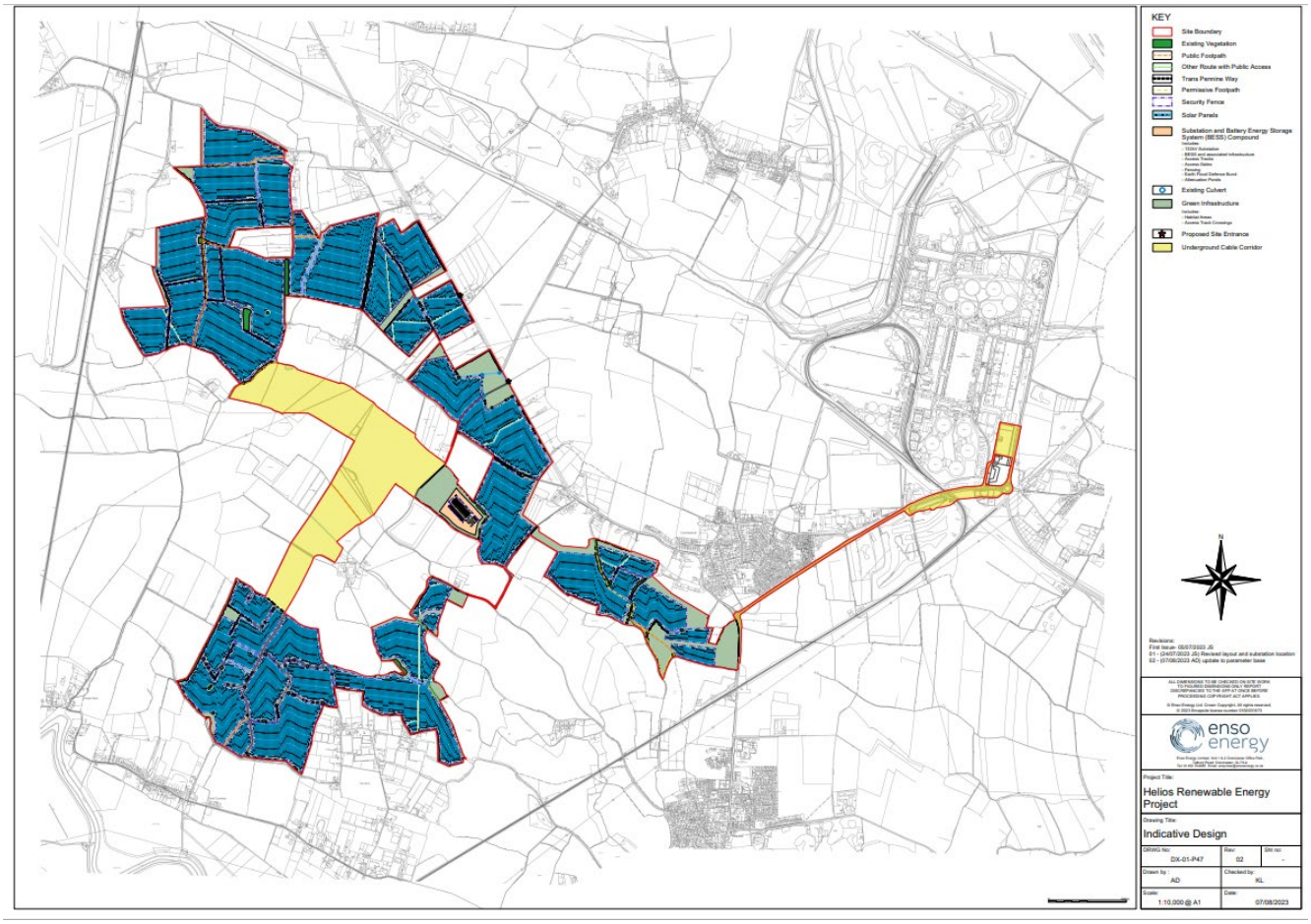
Should you require further information please contact the officer whose name appears at the head of the letter.

Yours faithfully

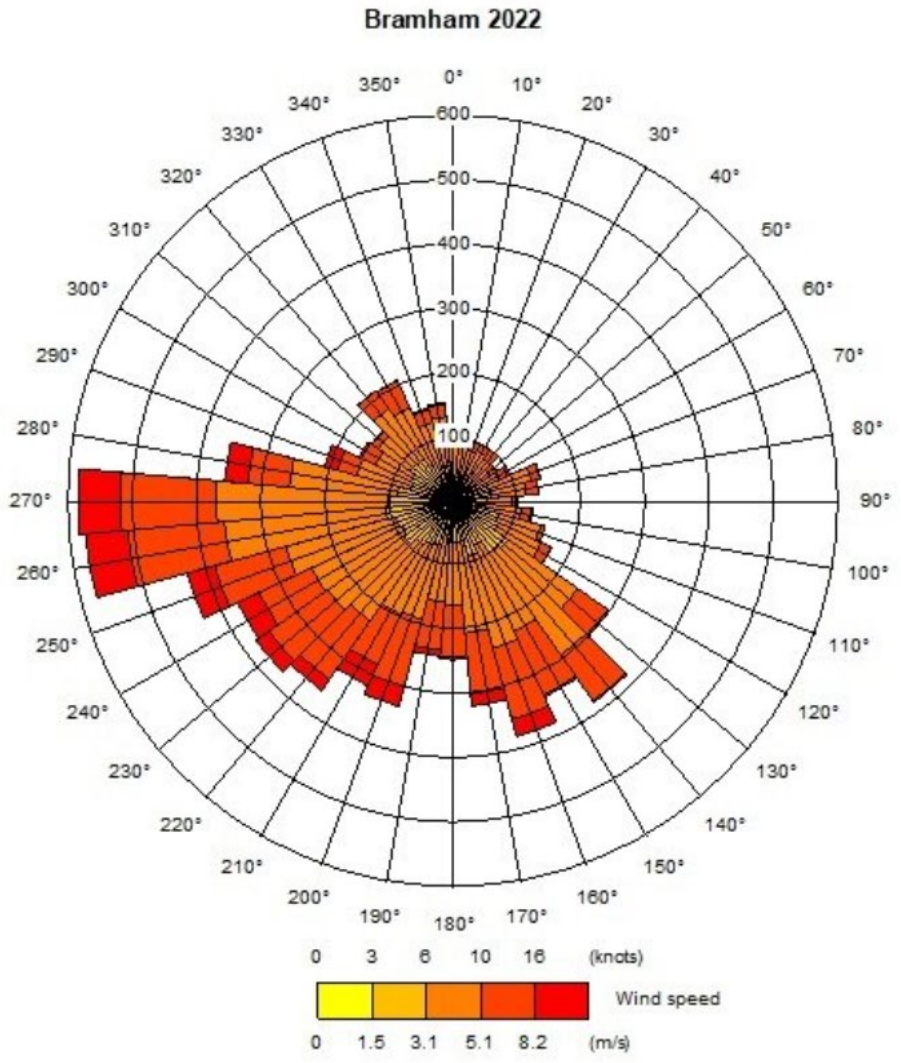
[redacted]

S Crossley MiFire

Appendix 2


KEY
Site Boundary
Existing Vegetation
Public Footpath
Other Route with Public Access
Trans Pennine Way
Permissive Footpath
Security Fence
Solar Panels
Substation and Battery Energy Storage System (BESS) Compound
Existing Culvert
Green Infrastructure
Proposed Site Entrance
Underground Cable Corridor
N
Revisions:
enso energy
Project Title:
Helios Renewable Energy Project
Drawing Title:
Indicative Design
DRWG No:
EK-01-P47
Rev:
02
Drawn by:
AD
Checked by:
KL
Scale:
1:10,000 @ A1
Date:
07/08/2023

Appendix 3


Bramham 2022
0°
10°
20°
30°
40°
50°
60°
70°
80°
90°
100°
110°
120°
130°
140°
150°
160°
170°
180°
190°
200°
210°
220°
230°
240°
250°
260°
270°
280°
290°
300°
310°
320°
330°
340°
350°
600
500
400
300
200
100
0 3 6 10 16 (knots)
Wind speed
0 1.5 3.1 5.1 8.2 (m/s)

Appendix 4

Date of contact	Method	Purpose
25/03/2024	Email	Initial contact
15/04/2024	Teams Call between Gabby Heycock (Crest Consultancy) and Sam Crossley (Fire Safety Officer NYFRS)	Site specific discussion and exploration of the site in relation to the NFCC guidance document
15/04/2024	Email (see below)	Summary of the Teams call and a record of the interaction

You forwarded this message on Tue 16/04/2024 10:24

GH Gabby Heycock
To: [redacted]northyorksfire.gov.uk

Reply Reply all Forward
Mon 15/04/2024 17:05

Sam,
thank you for your time today, it was good to meet you and establish lines of communication.

Accepting that this was informal engagement and without any prejudice to any future requests during the planning process it was good to discover that the information shared did not result in the raising of any major concerns.

I have noted the priority that you place on fire service access and the facilities that can be provided to support the safety of crews should they attend the site on an emergency response.

The developer is fully committed to the development of a consultative relationship with NYFRS and I will keep you updated as plans progress and if any major changes occur.

If at any point you have any questions then please contact me.

Kind regards,
Gabby Heycock

Crest Consultancy
Mob: [redacted]

Reply Forward

Appendix 5

Crest consultancy

Enso Energy have commissioned Crest Consultancy based on their Fire Sector knowledge and expertise. Gabby Heycock was an Area Manager with Oxfordshire Fire and Rescue Service, working at a strategic level for eleven years. During that period he was responsible for the Fire Protection department and also the creation of their current Community Risk Management Plan which involves the identification of risk and the allocation of resources to reduce the identified risks. Gabby also worked at a national level as part of the NFCC working group on Community Risk Management Planning.