Abbott Risk Consulting Limited

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Safety Statement – Old Wood Energy Park, Wysall, Nottinghamshire

Issue 1 – March 2026

Prepared for:

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APPROVAL AND REVISION RECORD					
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Executive Summary

This Safety Statement is for the proposed Old Wood Energy Park, comprising a Solar Farm and Battery Energy Storage System (BESS) at Wysall, Nottinghamshire.

The aim of this Safety Statement is to address the safety concerns raised by Dr Glenys Jones at the Inquiry held at Rushden Arena, as a spoken presentation, 10 March 2026.

Abbreviations

ALARP	As Low As Reasonably Practicable
ARC	Abbott Risk Consulting Ltd
BESS	Battery Energy Storage System
FRS	Fire and Rescue Service
HSAWA	Health and Safety at Work Act
HSE	Health and Safety Executive
NFCC	National Fire Chiefs Council
SMS	Safety Management System
SoC	Statement of Case
UK	United Kingdom
UL	Underwriters Laboratories
UN	United Nations

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1.0 Introduction

1.1 Aim and Purpose

1.1.1 This Safety Statement is for the proposed Old Wood Energy Park Solar Farm and Battery Energy Storage System (BESS) Project at Wysall, Nottinghamshire. The aim is to address the safety concerns articulated by Dr Denys Jones on 10 March 2026 at the Rushden Arena Inquiry, which have been replicated in written form and provided to the Appellant Exagen. The written representation is not paragraph numbered, as such recourse to sequentially numbering the paragraphs from top to bottom has been employed in order to navigate.

1.2 Personal Introduction

1.2.1 My name is James David Tough. I have a Masters (MSc) Degree in Environmental Decision Making and a Bachelor of Science Honors (BSc Hons) reading Safety and Environmental Management.

1.2.2 I am a Chartered Scientist and a Chartered Environmentalist and hold the position of Principal Consultant with Abbott Risk Consulting (ARC) Ltd.

1.2.3 I have been instrumental in the development of BESS Safety Management Plans, Emergency Response Plans, and BESS Site Safety Audits. Additionally I have represented clients as the Safety Subject Matter Expertise at Planning Inquiries, Planning Appeals and Public Consultations for sites in England, Wales, and Scotland.

1.2.4 I have over 25 years' experience as a Safety and Environmental Management Consultant with 5 years' experience as an Accident Investigator. I have considerable experience with Lithium-Ion technologies spanning BESS, Rail, Vehicle, and Aircraft fitted systems and have designed and assessed safety systems for Lithium-Ion systems against a variety of industry-based standards.

2.0 Safety Concerns Raised

2.1.1 At Page 1 Paragraph 3 it is stated that '…given its relative infancy as a technology (in this instance the author refers to BESS and by default Lithium-Ion technology) – what we do not yet know of [sic] the risks of BESS?'. **Appellant Response:** Lithium-Ion BESS Technology has been used since the early 1980's and the first operational BESS were installed in the Uk in 2006, the technology has advanced over the intervening years and various cell chemistries, safety measures and understanding of Lithium-Ion has progressed. The presence of Lithium-Ion technologies is widespread, from Electric Vehicles, Aircraft, Trains, Personal Devices etc. as such to label the technology as being in relative infancy, is unsubstantiated. The second point in this paragraph states that the level of residual risk is not determinable. To contextualise the level of risk recourse to the Department for Energy Security and Net Zero (DESNZ) Renewable Energy Planning Database (REPD) is considered. DESNZ promulgates the REPD on a quarterly basis and it contains details of all renewable energy projects that have been subject to the planning

process in the UK. From the quarterly extract (dated Jan 2026) the data has been filtered for BESS installations in the UK and the following salient points are deduced:

- The REPD states that as of Dec 2025 there were 136 operational UK BESS sites.
- There have currently been four reported BESS fires in the UK that have required FRS attendance, these occurred at Carnegie Road, Liverpool in Sept 2020, Cirencester March 2025, Rothienorman in Aberdeenshire Feb 2025 and East Tilbury in Feb 2025.
- The current operational UK BESS sites have accumulated an estimated 771 years of operation.
- Given the overall UK BESS sites storage capacity of approx. 3.3GW an estimation of the number of BESS units in use, using an individual BESS generic max capacity of 4MW, it has been determined that there are approx. 810-820 individual BESS units in operation across the UK. This provides an all-up operating time of approx. 67 million hours of cumulative operation.
- Given the approx. 67 million hours of operation and accounting for the four fires, this extrapolates out to approx. 6.0E-08 (0.00000006) failures per hour (fph) for BESS in the UK or 1 incident per 1900 years per BESS.
- To date, there have been no recorded fatalities, third-party injuries, or environmental damage resulting from BESS incidents in the UK.

2.1.2 At Page 1 Paragraph 4, it is stated that, paraphrased, ‘the increase in the number of incidents of battery fires in e-bikes and e-scooters led the NFCC to tighten up and demand stricter rules for large-scale BESS’. **Appellant Response:** It was the Carnegie Road BESS incident that spurred the NFCC to issue Grid-Scale BESS Planning Guidance and not the increase in the number of incidents involving e-bike and e-scooters. As a note the lithium-ion technology and cell chemistry in e-bike and e-scooters is completely different to that employed in a Grid-Scale BESS. Grid-Scale BESS are also subject to safety standards, Underwriters Laboratories (UL)1973 [Ref. 1] and UL9540A [Ref. 2], similar standards are not in place for e-bikes and e-scooters.

2.1.3 At Page 1 Paragraph 4 it is also stated that, ‘…NFCC now demands a 6-metre separation distance’. **Appellant Response:** NFCC Planning Guidance contains recommendations; it is neither statutory nor an industry code of practice. As such, it does not ‘demand’ anything; it merely recommends. In addition the 6-metre separation is no longer a recommendation in the current, NFCC Planning Guidance Feb 2026 [Ref. 3], version. As such this statement is incorrect.

2.1.4 At Page 2 Paragraph 1 it is stated ’developers are expected to conduct Atmospheric Dispersion Modelling and that an plume from a BESS fire will contain corrosive hydrofluoric (HF) acid’. **Appellant Response:** The propensity for a BESS fire is detailed at Section 2.1.1 of this Safety Statement, as such contextualising the level of risk of a BESS fire. In addition, the formation of HF acid will only occur should water be applied directly to the fire, and in this instance, the resulting HF acid will be aqueous and not

gaseous, as such it will not 'drift' in plumes from the site. There is the potential for HF in a gaseous form to be part of a plume, but the concentration levels between 5-150m from the point of origin are at most 0.8mg/m^3. This equates to Level 1 on the Acute Exposure Level Guidelines, the lowest possible level, a redacted Dispersion Model has been provided to evidence this claim. At Level 1 the effects of HF are non-fatal and temporary. At approx. 150-200m the concentration of HF falls off such that it is not admissible on the AEGL scale. A Dispersion Model for this site has not been conducted, however given the closest residential property is approx. 300m distance the residual risk of HF being a hazard to this property is negligible.

2.1.5 At Page 3 Paragraph 2 the topic of toxic water run-off and impact on the local environment is raised. **Appellant Response:** The NFCC released a BESS Position Statement, Battery Energy Storage Systems - NFCC, in which it is stated that 'Though rare, BESS fires are challenging to extinguish and can continue to burn from several hours to several days. A fire in Liverpool, in 2020, lasted 3 days. Smoke plumes from fires can also harm air quality. However, trying to extinguish fires using water can result in large volumes of contaminated firewater runoff, which can have a long-term impact on the environment. As a result, the prevailing view when it comes to firefighting tactics is to adopt a 'controlled burn' to minimise runoff whilst protecting the surrounding area from flame and heat impingement'. The Appellant has accepted this 'controlled burn' approach, and as such, the prospect of large volumes of contaminated run-off water is minimised. In addition, the drainage strategy for the site includes provision to retain any water run-off, and this will be held, tested and treated prior to any release to the local environment.

3.0 Summary and Conclusions

3.1.1 Given the safety concerns raised and the responses provided, it is concluded that, subject to implementation of the safety approach, the relative residual risk posed by the BESS installation at Old Wood Energy Park will be 'Acceptable and ALARP' and compliant with the spirit of the NFCC Guidance [Ref. 3].

3.1.2 The safety assessment has concluded that, with the implemented safety management measures in place, the risk posed by the BESS is acceptable and within the bounds stipulated in the HSE safety management report ' Reducing Risk, Protecting People [Ref. 5]. The site design and layout has acknowledged and accommodated the requirements of the NFCC Guidance [Ref. 3]. The design and planning for the Old Wood Energy Park also acknowledges the guidance provided by the Department for Energy Security and Net Zero (DESNZ) 'Health and Safety Guidance for Grid Scale Electrical Energy Storage Systems' [Ref. 4].

4.0 References

1. UL1973 – Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power, and Light Electric Rail Applications.

2. UL9540A – Lithium-Ion Battery Energy Storage System Test Methods.

3. NFCC Grid Scale BESS Planning – Guidance for FRS dated Nov 2022

4. Health and Safety Guidance for Grid Scale Electrical Energy Storage Systems – Department of Energy Security and Net Zero 014665/54750R Issue 1 dated March 2024 - Health and Safety Guidance for Grid Scale Electrical Energy Storage Systems (publishing.service.gov.uk).

5. Reducing Risk, Protecting People (HSE Publications) - https://www.hse.gov.uk/risk/theory/r2p2.pdf.