RWE

Peartree Hill Solar Farm

Response to Deadline 6 Submissions

Application Document Ref: EN010157/APP/8.33
January 2026

Contents

1 Introduction

1.1.1 This report responds to submissions at Deadline 6 by each of the following Interested Parties:

- Environment Agency **[REP6-046]**
- Network Rail **[REP6-049]**
- George Swallow **[REP6-055]**

1.1.2 The Applicant notes that there were also submissions at Deadline 6 made by other Interested Parties. At this point in the examination, the Applicant is only responding to submissions which it considers raises new information / evidence that has not been the subject of specific written or oral responses. As such, the Applicant does not consider it necessary to provide responses to these other submissions.

1.1.3 With specific regard to ERASE's Deadline 6 submission **[REP6-054]**, a separate response has not been provided as points 1-4 in that submission are covered in the response to George Swallow's Deadline 6 submission **[REP6-055]** at section 2.4 of this document, and point 5 is covered in the response to the Environment Agency's submission at section 2.2 of this document.

2 Response to Interested Parties

2.1.1 Sections 2.2 to 2.4 below provide the Applicant's response to all relevant interested parties submissions at Deadline 6.

2.2 Environment Agency

2.2.1 This section provides a response to the Environment Agency's Closing summary statement at Deadline 6 **[REP6-046]**.

Summary of Environment Agency's Position

2.2.2 The Environment Agency has summarised its position in its **Closing summary statement [REP6-047]**. In summary it says:

- Battery Energy Storage System (BESS) installations do not present significant risks to groundwater or surface water. However, there is potential for pollution of the water environment due to abnormal and emergency situations, in particular fires;
- Specifically, water can enter burning containers through surface runoff, or from cooling spray;
- Rainwater could also enter an exposed container when the fire is extinguished;
- This could release contaminants to groundwater or surface water;
- Applicants therefore need to assess the likelihood of pollutants coming into contact with waterbodies;
- There are too many uncertainties around the effectiveness of the mitigation proposed by the Applicant to reduce the risk of environmental damage in the event of a fire;
- To address the risk and in view of these uncertainties, sealed drainage should be provided to remove a pathway for contaminants.

2.2.3 In addition, the Environment Agency provides as Appendix 1 technical reasons for adopting the position, which are addressed below.

Applicant's Response

2.2.4 The Applicant agrees with the statement that battery installations do not present significant risks to groundwater or surface water in normal operation. In addition, it should be noted that, as evidenced by Section 7 of **ES Volume 4, Appendix**

5.6: Flood Risk Assessment [REP5A-009 to REP5A-025], the transition from arable farmed land to solar farm would have beneficial impacts to the water environment across the Site including reduction in runoff, soil erosion and leaching of fertilisers.

2.2.5 The primary concern of the Environment Agency is the mobilisation of contaminants in runoff generated either by fire suppression (boundary) spraying, rain falling on the units themselves or surface runoff from overland flow entering from outside the hybrid pack compounds.

Overland Flow

2.2.6 The risk of water entering the BESS containers via surface runoff (overland flow) is negligible. As described in Section 4.2 of **ES Volume 4, Appendix 5.6: Flood Risk Assessment [REP5A-009 to REP5A-025],** the BESS containers would be raised on concrete pads or plinths above the ground as secured in the **Design Parameters Document [REP4-059]**, thus elevating them above the depth of runoff expected and removing such runoff entering the containers.

Suppression Spraying

2.2.7 Boundary cooling would concentrate on suppression spraying BESS containers adjacent to the compromised unit. In addition, boundary cooling activities would be most vigorous when the fire is at its strongest. As reported in paragraph 1.6.17 of the Applicant's **Summary of oral submissions made at ISH2 [REP4-039]**, during such conditions spray water would likely be vapourised. The above factors mean that the volume of spray water entering the compromised container would be very low. The assessments assume no boundary cooling would be required once the fire has burned out.

2.2.8 There is clearly no guarantee a fire would occur during rainfall. However, if it did, BESS containers have been observed to remain intact even during fire breakout. Consequently, the opportunity for, and volume of, rainfall entering a compromised unit is likely to be very low in such conditions. In addition, the robust nature of BESS containers means that contaminants are anticipated to settle within, rather spill from, them. However, in the remote event spillages did occur, the three-layered gravel base system (summarised below) would further mitigate the risk of contaminants entering the water environment. The Applicant therefore considers that appropriate and robust mitigation, and further measures on top of that mitigation, has been provided for what is in effect an immaterial risk.

2.2.9 In summary, the Applicant concludes there is a small risk of fire breakout and that appropriate mitigation has been provided and secured for the even remoter risk of contaminant release.

2.2.10 Specifically, the Proposed Development mitigates this small risk by providing a three-layered filtration system comprising gravel base, engineered sand and geotextile membrane. Taking a risk-based approach and in the context of the very low risk for fires to occur, the risk of release of contaminants to the environment is negligible.

Response to Appendix 2 of the EA's submission

2.2.11 In response to the Environment Agency's Deadline 6 Submission **[REP6-046]** and engagement over the course of Examination, the Applicant has incorporated additional commitments in the **Outline Battery Safety Management Plan (BSMP) [EN010157/APP/7.6 Revision 4]** in accordance with the recommendations in Appendix 2 of **REP6-046**. These are set out in new paragraph 5.7.2 of the **Outline BSMP [EN010157/APP/7.6 Revision 4]**. These commitments reflect the recommendations set out in Appendix 2 of **REP6-046**, with the exception of the provision of "additional figures showing the final drainage scheme, to provide clarity of the locations that will discharge to groundwater, and surface waters" and "a diagram, including cross-sections for all different types of drainage solutions across the scheme", as these figures and diagrams are already secured under Requirement 3(1)(g) (detailed design approval). Rather, the Applicant has included in paragraph 5.7.2 of the **Outline BSMP [EN010157/APP/7.6 Revision 4]** "details of locations where any drainage system are proposed to discharge to groundwater and/or surface waters" to provide the clarity sought by Environment Agency. These commitments provide further clarification and certainty around maintenance and operational aspects of the proposed penstock valves, sampling and testing methodologies (in the highly unlikely event of a fire at a hybrid compound) and details of where any drainage system would discharge to a watercourse. The Applicant considers that the inclusion of these additional commitments, as requested by the Environment Agency, negates the need for any amendments to the existing drafting of Requirement 8 of the **draft DCO [ENEN010157/APP/3.1 Revision 11]**.

2.2.12 The Applicant notes that the proposed addition to Requirement 8 to require additional steps is wholly unprecedented, and fails to comply with the National Policy Statement, which specifies that DCO requirements should be "necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects". For the reasons outlined in this submission, further requirements are not reasonable, nor necessary in light of the immaterial risk presented and the amendments provided to the **Outline BSMP**

[EN010157/APP/7.6 Revision 4]. In this context, the Applicant reiterates its submissions in the Closing Submission, noting that the approach adopted here reflects the Applicant's portfolio approach (accepted by the Secretary of State in the Applicant's Byers Gill DCO, and by a number of local planning authorities). Additional costs have a serious risk of making the project unviable. Moreover, the process for the discharge of Requirement 8 requires consultation, and approval, thereby ensuring that appropriate controls are incorporated at that stage.

Response to Technical Justification

2.2.13 This section provides the Applicant's response to the technical justification presented by the Environment Agency.

Water Environment Regulations 2017

2.2.14 The Applicant agrees with the Environment Agency's summary and confirmed via the **Response to Deadline 4 Submissions [REP5-078]** that the assessments were based on an ethos that any degradation would be unacceptable.

Effectiveness of the Drainage System

2.2.15 The Environment Agency emphasise the reference to use of a permeable geotextile to mitigate the release of contaminants to the ground. It is important to note that the mitigation is effectively four-fold.

2.2.16 The first is the IP-rated watertight containers themselves. As stated in **ES Volume 4, Appendix 5.5: Water Framework Directive Screening and Scoping Report [REP5A-007]**, the battery containers are designed to prevent the entry of water and therefore would allow contaminants to settle locally within them. To demonstrate this, photographs taken after the fire at Carnegie Road, Liverpool, show that, despite the damage to the container casing, the base remained intact, this is demonstrated in Figure 1 and Figure 2.

Figure 1: Carnegie Road Damaged Casing Exterior (Source: Merseyside Fire and Rescue Service)

Figure 2: Carnegie Road Damaged Casing Interior (Source: Merseyside Fire and Rescue Service)

2.2.17 It is within the context of the above that the other three mitigation items (gravel base, engineered sand layer and geotextile membrane) operate.

2.2.18 In the unlikely event that contaminants escape a compromised container, the gravel, sand and membrane would receive the contaminants.

2.2.19 Research of relevant material, including the scientific paper that the Environment Agency referred to[1], shows that the likely contaminants to be released in a BESS fire would be heavy metals, such as Lithium, Cobalt, Copper, Nickel, Aluminium, organic carbonates, as well as release of various poly aromatic hydrocarbons (PAHs). The latter, along with other potential airborne contaminants such as Hydrofluoric Acid, are discussed below.

2.2.20 Research also shows gravel filters to be effective at removing heavy metals under a range of water level regimes[2].

2.2.21 Sand is well known to be effective at absorbing pollution spills, particularly hydrocarbons but engineered sand is coated with manganese oxide, which is reported to be effective at removing contaminants and has been used to treat land contaminated by a range of organic and inorganic contaminants[3].

2.2.22 The Environment Agency highlight paragraph 3.4.27 of **ES Volume 4, Appendix 5.5: Water Framework Directive Screening and Scoping Report [REP5A-007]** and that it refers to a potential, albeit unlikely, pathway to surface waters**.** This falls within Section 3.4 of the report, which describes the potential impacts arising from the Proposed Development, before mitigation. Section 3.5 of the report then describes the mitigation proposed during operation to negate the pathway for contaminants to enter surface waters.

2.2.23 The above also augments the Applicant's references to the CIRIA SuDS Manual in relation to the effectiveness of gravel to absorb high levels of contaminants, particularly heavy metals. The Environment Agency states that accidents or spills are less likely in a highways or car parking setting than a BESS fire. However, the inclusion of the engineered sand layer, in addition to the gravel, would assist with the absorption of contaminants in the unlikely event of spillage during fire breakout. The empirical evidence presented throughout the Applicant's submissions is that the risk of fire breakout is extremely low. The Applicant

[1] Bourdes, A et. al. 2024. Assessment of run-off waters resulting from lithium-ion battery fire-fighting operations. Available via https://www.mdpi.com/2313-0105/10/4/118#
[2] Hatt, Flether and Deletic, 2007. Treatment performance of gravel filter media: Implications for design and application of stormwater infiltration systems. Available via https://www.sciencedirect.com/science/article/abs/pii/S0043135407001935
[3] Tourney et. al. 2008. Mn oxide as a contaminated land remediation product. Available via https://pubs.geoscienceworld.org/minersoc/minmag/article-abstract/72/1/513/109741/Mn-oxide-as-a-contaminated-land-remediation?redirectedFrom=fulltext

therefore considers that the Environment Agency overstates the likely risk for fire breakout to occur and regard it to be higher than the data demonstrates.

Assessment of Receptor Sensitivity

2.2.24 The Applicant agrees with the application of the precautionary principle. However, as explained above, the basis of the assessments was that any degradation is unacceptable.

Understanding of BESS Contaminants

2.2.25 The Applicant has repeatedly stated that the only data it has procured on environmental monitoring has demonstrated no adverse impacts on the environment. The Environment Agency has provided no evidence to refute this statement.

Risk of Fires

2.2.26 It is agreed that there can almost never be zero risk of fire breakout. However, as explained above, the four-layered mitigation, notably the contaminants settling locally within the BESS containers, would negate the pathway of entry to the water environment. This, coupled with the very low chance for fire breakout, is fundamental to the assessments.

Post-fire Decontamination

2.2.27 The Applicant notes the Environment Agency's recommendations for further engagement on this issue. It should be noted some of the detail on this issue is likely to only be available or confirmed when the battery system is procured. In this regard, Requirement 8 of the **draft DCO [EN010157/APP/3.1 Revision 11]** provides that a Battery Safety Management Plan must be submitted to and approved by the local planning authority, following consultation with the Humberside Fire and Rescue Service and the Environment Agency.

Efficacy and Composition of the Suppressant

2.2.28 The Applicant would welcome further engagement on this issue, again noting that some of the details may not be known or confirmed until the battery system procurement process has concluded. The Environment Agency would be consulted in relation to these matters via the Requirement 8 approval process.

2.3 Network Rail

2.3.1 Network Rail Infrastructure Limited (Network Rail) noted within their Deadline 6 **Closing summary statement [REP6-049]** that the Applicant only submitted an updated draft DCO with protective provisions for the protection of the railway on 13 December 2025. This is incorrect; the draft DCO submitted at Deadline 4 **[REP4-005]** on 31 October 2025 included protective provisions for the protection of the railway. The form of wording included in the draft DCO at Deadline 4 **[REP4-005]** follows the comments provided by the Applicant to Network Rail on 31 July 2025; the Applicant having reviewed Network Rail's preferred protective provisions and amended them to reflect the particular circumstances of the Proposed Development.

2.3.2 Network Rail has therefore had ample time to comment on the proposed form of protective provisions to aid meaningful discussions with the Applicant. However, despite repeated attempts to engage with Network Rail, the Applicant has received no comments from Network Rail's representatives on the draft protective provisions and the submission by Network Rail at Deadline 6 **[REP6-049]** is the first response/ set of comments the Applicant has seen on the protective provisions, which the Applicant regards as wholly unsatisfactory in the context of a six month examination process and in circumstances where Network Rail has instructed external legal representation to protect its position. This difficulty in engaging with Network Rail was noted by the Applicant at the Issue Specific Hearing 1 held on 21 October 2025. Network Rail has further not commented on the updated draft DCO as part of the examination process (unlike other statutory undertakers) offering neither the Examining Authority (ExA) nor the Applicant an opportunity to understand and reflect upon Network Rail's position.

2.3.3 The Applicant considers it improper and unreasonable for Network Rail to have submitted detailed comments on the draft protective provisions so late into the examination. The Applicant's position on the substantive areas of disagreement set out by Network Rail at Deadline 6 remain and the Applicant would refer the ExA to the **Summary of oral submissions made at ISH1 [REP4-037],** also submitted at Deadline 4, which clearly sets out the Applicant's reasoning for the proposed protective provision drafting in the draft DCO where it differs from Network Rail's standard protective provisions. In line with Government guidance "Guidance on the content of a Development Consent Order required for a Nationally Significant Infrastructure Project", whilst Network Rail may have provided standard protective provisions, these have been reviewed in light of the Proposed Development and the Applicant has proposed reasonable and appropriate amendments to reflect the Proposed Development as well as more specific directions given in that Government guidance.

2.3.4 The Applicant therefore respectfully submits that the form of protective provisions contained in the **draft DCO [EN010157/APP/3.1 Revision 11]** should be maintained in preference to the protective provisions presented by Network Rail at Deadline 6 in **REP6-049**. In short, the Applicant should not be disadvantaged by Network Rail's failure to engage with the examination process in a timely manner.

2.3.5 Network Rail have also noted in their submission that without the inclusion of restrictions on compulsory acquisition at paragraphs 72(3)-(9) it maintains its objection to the draft DCO and notes that the tests in s127 and 138 are not met.

2.3.6 For clarity, as set out in **[REP4-037]** Network Rail has no plots of land subject to s127(2)/(3), one plot subject to s127(5)/(6) - being plot 16-3 - and four plots subject to section 138 – plots 16-3, 16-10, 17-1 and 17-6. The interaction between the Proposed Development and Network Rail land and assets is a cable beneath the railway and therefore there is no justification for the blanket restrictions sought in paragraphs 72(3)-(9). The Applicant would further note that the protective provisions included in the **draft DCO [EN010157/APP/3.1 Revision 11]** impose a number of limitations on the activities which the Applicant can undertake in relation to Network Rail land, in particular through the definition of "specified works" and requirements on the Applicant in relation to them, including the requirement to enter into a basic asset protection agreement. As the protective provisions already contain a number of restrictions and stipulate the need to enter into a basic asset protection agreement it is unclear why Network Rail is reiterating that these are needed; suggesting to the ExA that they are not provided for. As such, the Applicant's position is that the protective provisions in the **draft DCO [EN010157/APP/3.1 Revision 11]** already limit what the Applicant can do in terms of physical works on Network Rail land in the interests of railway safety and the prevention of any serious detriment to Network Rail's undertaking.

2.3.7 Network Rail also state in their Deadline 6 submission that it is the compulsory acquisition of land that should be restricted in order to prevent any serious detriment. However, the drafting proposed by Network Rail at paragraph 72(3) imposes restrictions on substantially all of the DCO powers in so far as they may relate to the railway. This demonstrates that the drafting requested by Network Rail is excessively wide and not necessary given the protections in place as noted above.

2.3.8 The Applicant maintains that the protective provisions contained in the **draft DCO [EN010157/APP/3.1 Revision 11]** are consistent with Government Guidance which makes clear that a statutory undertaker's preferred form of protective provisions must be adapted as necessary and *"should also not simply negate other provisions in the DCO, particularly concerning proposed compulsory acquisition of statutory undertakers land"*. Network Rail has failed to demonstrate

why it needs to impose a restriction on all of the powers listed in paragraph 72(3) and the additional restrictions in 72(4)-(9).

2.3.9 Lastly, Network Rail say it is “inconceivable” that a third party could be afforded temporary possession powers or compulsory acquisition powers without first seeking Network Rail’s consent yet the Secretary of State has taken a different view in the context of other applications for development consent from as far back as the National Grid (Hinkley Point C Connection Project) Order 2016 to the recently made A122(Lower Thames Crossing) Order 2025.

2.4 George Swallow

2.4.1 This section provides a response to the issues and concerns raised in relation to the Proposed Development's BESS and associated infrastructure and addresses the safety issues and concerns raised by Mr George Swallow in their **Closing summary statement [REP6-055]** submitted at Deadline 6.

2.4.2 In the opening paragraph concern is raised that the site development and design has not considered National Fire Chiefs Council Planning Guidance. **Response:** The Proposed Development's **Outline BSMP [EN010157/APP/7.6 Revision 4]** has been developed to demonstrate alignment with the recommendations detailed in NFCC Planning Guidance (2022) **[Ref. 1]** and the Humberside Fire and Rescue Service has confirmed that they are satisfied with the **Outline BSMP [EN010157/APP/7.6 Revision 4]**, see **AS-024**.

2.4.3 At paragraph 2 concern is raised over a possible cyber-attack that will result in several BESS containers being subject to thermal runaway. **Response:** BESS sites have been in operation in the UK since 2006 and it is estimated, using the Department of Energy Security and Net Zero (DESNZ) October 2025 Renewable Energy Planning Database (REPD)[4] that there are 136 BESS sites operational in the UK. None of these sites have been subject to a cyber-attack. It should also be noted that whilst the data from the BESS sites is transmitted to an Operational Control Room, this data is encrypted, and remote control of the BESS units is limited to isolating the charge and discharge of the units.

2.4.4 At paragraph 3 concern is raised over the potential for a major incident to occur resulting in harm to individuals and the environment. **Response:** There have currently been four reported BESS fires in the UK that have required Fire and Rescue Service (FRS) attendance, these occurred at Carnegie Road, Liverpool in September 2020, Cirencester March 2025, Rothienorman in Aberdeenshire February 2025 and East Tilbury in February 2025, the root cause of the last three incidents has yet to be established. Using DESNZ REPD data, it can be determined that the current operational UK BESS installations have accumulated an estimated 741 years of operation, this equates to 270,500 days or 6.5 million hours of operation. Given the 6.5 million hours of operation and accounting for the four fires, this extrapolates out to approx. 6.2E-07 (0.00000062) failures per hour (fph) for BESS in the UK. To date, there have been **no** recorded fatalities, third-party injuries, or environmental damage resulting from BESS incidents in the UK. Reflecting on the HSE R2P2 guidance, an individual risk of death of 1.0E-05 per year (or 1 in 100,000 annually) is considered broadly acceptable for workers. Based on this framework, the risk associated with BESS operation is

[4] [Renewable Energy Planning Database: quarterly extract - GOV.UK]

assessed to be within the broadly acceptable range and compliant with the Health and Safety Executive ALARP principles.

2.4.5 At paragraph 4 concern is raised over the possibility of 'flare-up' or reignition weeks after the event has occurred. **Response:** To date there have been no UK based BESS fire incidents that have 'flared up' weeks after the event. Post incident the site operator will remove the affected BESS unit, or the elements of the unit which are damaged, and the damaged unit will be replaced. As such any possibility of 're-ignition' is eliminated.

2.4.6 At paragraphs 5 and 6 concern is raised regarding the spacing of the BESS units and application of NFCC Planning Guidance recommendations. **Response:** The NFCC Planning Guidance (2022) **[Ref. 1]** 6.0m separation is based on a 2017 Issue of the FM Global Loss and Prevention Datasheet 5-33 (which footnote 9 in the NFCC Guidance refers to). This Datasheet was revised in July 2023 and again in Jan 2024, it now details the following:

1. For containerized BESS comprised of Lithium iron phosphate (LFP) cells, provide aisle separation of at least 5 ft (1.5 m) on sides that contain access panels, doors, or deflagration vents.

2. For containerized BESS, comprised of Lithium nickel manganese cobalt (NMC) cells, where wall construction is unknown or has an ASTM E119 rating of less than 1 hour, aisle separation of at least 13 ft (4.0 m), on sides that contain access panels, doors, or deflagration vents, is to be provided. For containerized NMC LIB-ESS, where wall construction is documented as having at least a 1-hour rating, in accordance with ASTM E119, aisle separation of at least 8 ft (2.4 m) is acceptable.

2.4.7 Additionally, the Department for Energy Security and Net Zero published in March 2024 their Health and Safety Guidance for BESS **[Ref. 2]** in which it is stated that the separation distance, for sides with access panel, doors or deflagration panels should be a minimum of 1.5m. Following this revision to the Datasheet, the BESS containers on-site will be compliant with the minimum distances and conformance to ASTM E119 1-hour fire rating will be confirmed on the down select of the BESS units to be procured, Table 1 of the **Outline BSMP [EN010157/APP/7.6 Revision 4]** refers.

2.4.8 At paragraph 7, 8 and 9 concern is raised regarding the supply of firefighting water and the potential for firefighting water runoff to become contaminated and be released to ground. **Response:** The design of the Site does not include any firefighting water supply as recommended in the NFCC Planning Guidance, suitable fire hydrants close to the Site will be identified and details of their location appended in documentation in the Site Information boxes, which will be at the entrances to the Site, as detailed in the **Outline BSMP [EN010157/APP/7.6 Revision 4]**. Given the distributed nature of the BESS units the recommended

volume in NFCC Planning Guidance is not commensurate with the DC-DC Couple set-up and the distributed layout. Furthermore, the current modus operandi of the FRS is not to subdue a BESS fire with water, this being ineffective, but to boundary cool and contain the fire, allowing the BESS unit to burn-out'. As such the prospect of the firefighting water runoff to become 'contaminated' through direct contact with the BESS on fire is mitigated and unlikely. Thus, the requirement to contain any firefighting water runoff is negated.

2.4.9 At paragraph 10 concern is raised regarding access and possible flood zones. **Response:** Access to the distributed BESS compounds can be made from several points on the Site, all access tracks being permeable to assist in the dispersal of rainwater. Given the expansiveness of the Site and the individual service roads leading to each compound it is not envisaged that all access routes will be obstructed.

2.4.10 Paragraphs 11, 12, 13 and 14 concern the release of harmful chemicals, Hydrogen fluoride (HF) in particular, from a BESS in the event of a fire. **Response:** There has been a single BESS fire in the UK that has been subject to monitoring as the incident progressed, this being the Carnegie Road, Merseyside[5] incident. This BESS fire was monitored by Bureau Veritas, an independent scientific consultancy, and the resultant composition of the plume was determined as being **negligible** in terms of toxic gas concentration. The Carnegie Road Significant Incident Report **[Ref. 3]** Summary and Key Learning (Page 4) Bullet 13 refers and states '*Bureau Veritas (BV) scientific advisers identified the potential for the smoke plume to contain HF and Hydrochloric Acids (HCl) as a product of burning lithium cells, however, the dilution rate within the plume deemed the concentration as negligible*.

2.4.11 This is further supported by the recent Vistra Energy Moss Landing, California (CA) fire, at which the United States Environmental Protection Agency (US EPA) concluded **[Ref. 4]**: '*On January 20 2025, the US EPA concluded supplemental air monitoring in the vicinity of the Vistra Energy battery power storage facility fire in Moss Landing, CA. Results for HF and particulate matter showed* ***no risk to public health throughout the incident****, and smoke from the facility has greatly diminished. The EPA demobilized air monitoring operations after consultation with the Monterey County Incident Command for the Vistra fire. The EPA began monitoring for HF, a highly toxic gas produced by lithium-ion battery fires, and for particulate matter after the fire began on January 16, 2025. The request for air monitoring came from Monterey County. As part of the multi-agency emergency response, the EPA installed a total of nine monitoring stations shortly after the*

[5]The recent incident at a BESS installation in East Tilbury, 19 February 2025, is acknowledged, but the cause of this fire has yet to be investigated, it should be noted that at the time of the incident the site was under construction and not operational. Early reports confirm the fire was contained to the site and no 3rd party damage or risk to life has been reported.

fire started. Two monitoring stations were located at the facility and four just outside the facility, including one at Moss Landing. Three monitoring stations were in community's due east of the fire, to the south near Castroville, and to the north in the vicinity of Moss Landing Middle School. Monitoring stations were sited to account for changes in wind direction and potential drift to nearby communities. The EPA monitoring showed concentrations of particulate matter to be consistent with the air quality index throughout the Monterey Bay and San Francisco Bay regions, with no measurements exceeding the moderate air quality level. Hydrogen fluoride gas was measured at one second intervals and there were no exceedances of California's human health standards.

2.4.12 The submission **[REP6-055]** presents the possibility that HF concentration exceedances of 1 part per million (ppm) could occur (i.e. US EPA Acute Exposure Guideline Levels for Airborne Chemicals (AEGLs) Level 1 for discomfort, irritation, or certain asymptomatic non-sensory effects) up to a dispersion distance of 2,200m. This 2,200m distance is based on modelling associated with an Atkins report undertaken for the Health and Safety Executive for Northern Ireland (Appendix A2 within the submission **[REP6-055]**), which has modelled HF at a rate of 1000kg per 5MW BESS. This emission rate is based on the maximum HF emitted as part of a range of small-scale experiments undertaken for a 2017 lithium-ion battery fire study. However, within this study (and others), there is a large range of recorded emissions which vary depending on battery type, state of charge, housing materials and measuring methodology. The submission only considers worst-case effects based on a single data point, which is considerably higher than emission rates used in other solar DCO applications[6,7], and is not likely to be representative of either the Proposed Development or real-world emissions.

2.4.13 With appropriate separation distances from receptors, the risk of significant effects is judged to be low. This assumes that industry-standard fire management practices can reduce the length of any incident and prevent the spread to multiple BESS units. In the case of the Proposed Development, the built-in mitigation measure of grouping the BESS units into smaller hybrid packs, with each pack containing four BESS containers, lowers the risk of adverse effects when compared to a centralised battery location. The Applicant considers that any potential battery thermal runaway heating incident can be appropriately managed through the Battery Safety Management Plan, which will be substantially in accordance with the **Outline BSMP [EN010157/APP/7.6 Revision 4]**, and the

[6] A total HF mass release of between 1 and 3kg over 3 hours was assumed as part of the Sunnica Energy Farm application (https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010106-001872-SEF_ES_6.2_Appendix_16D_Unplanned%20Atmospheric%20Emissions%20from%20BESS.pdf)
[7] A total HF mass release of 0.4kg over 2 hours was assumed as part of the Green Power Limited Cottam Solar Project application (https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010133-001244-C8.4.17.2_A%20BESS%20Fire%20Impact%20Assessment.pdf)

Emergency Response Plan (which is secured through the **Outline Construction Environmental Management Plan [REP6-021]**).

2.4.14 The safety comments have been reviewed and applicable responses made. It is noted that a number of the concerns are uncorroborated or conflated, drawing on information that is not relevant to the Site or the type of BESS unit to be used at the Site. Of note, the claim that the Site design and layout have not considered the recommendations detailed in NFCC Planning Guidance is misleading and incorrect, the **Outline BSMP [EN010157/APP/7.6 Revision 4]** substantiates the alignment of the Site design in accordance with NFCC Planning Guidance.

3 References

Ref. 1: NFCC Grid Scale Battery Energy Storage System Planning – Guidance for FRS dated Nov 2022.

Ref. 2: 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 – 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).

Ref. 3: Carnegie Road, Liverpool Significant Incident Report 018965 – 15092020

Ref. 4: EPA Completes Air Monitoring Near Moss Landing Vistra Battery Fire EPA - EPA Completes Air Monitoring Near Moss Landing Vistra Battery Fire | US EPA.

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