

CPC Concern	Applicant Response
Checkley Parish Council (CPC) comment that Tetra Tech's Air Quality Assessment (AQA) is based on short-term health impacts which excludes long-term worst case scenario events. CPC references the UK Health Security Agency's (UKHSA) comment and view that Lithium-ion fires can burn for an extended period of time, prolonging human exposure to toxic gases. CPC requests that the AQA is revised to consider worst-case scenario events; revision to the Fire Risk Assessment (FRA) will therefore also be required.	The UKHSA comment referred to is not from an UKHSA guidance note but relates specifically to a planning application in the North Kesteven District Council authority (reference 25/0491/FUL) which seeks permission of a BESS facility of up to 400MW which is a far greater capacity than that proposed under SMD/2025/0247. A BESS with a higher megawatt capacity holds a larger quantity of batteries which therefore increases the total amount of energy and flammable material available, leading to a potentially greater risk of a larger and longer-lasting fire. The UKHSA comment is not therefore considered directly relevant to this site. Nevertheless, to help alleviate the concerns raised about the lack of modelling of the long-term impacts of a worst-case fire event, the AQA has been revised to model the long-term impacts of a worst-case BESS fire. The results are set out in a Technical Note which concludes that <i>"the long-term (annual mean) environmental concentrations of NO2, PM10 and PM2.5 at Tean Leys Farm receptor is predicted to be below the relevant long-term AQS for the protection of human health in case of a BESS fire lasting up to 4 weeks"</i>. As such, <i>"The long-term and daily impact is determined to be not significant for the protection of human health in case of a BESS fire lasting up to 4 weeks. Therefore, the long-term impact in case of a BESS fire lasting up to 4 weeks is considered acceptable for the protection of human health"</i>. Considering no significant human health impacts are expected over the long-term period following a BESS fire, it is not necessary to update the FRA.
CPC note the lack of a detailed Risk Assessment and/or proposed plans submitted in relation to the cable routes to the sub-station and inadequate consideration of severe/reoccurring flooding that occurs on Riverside Road and potential impact of cabling works on already unstable riverbank.	Proposed plans have been submitted for the suggested cabling routes, see: • Tean Leys BESS - 33kV Cable and Trench Typical Section • Tean Leys BESS - Site Location Plan The accompanying FRA identifies that the proposed cable route will pass through Flood

	Zones 2 and 3, however it will have no above ground structures and would therefore not fundamentally increase fluvial flood risk. The cable route land previously flooded in 1977 with no record of subsequent flood events; there is therefore limited evidence to suggest that flooding in this area is ‘reoccurring’ in the sense that flood events are regular and commonplace. The FRA outlines that cabling will be fully waterproofed to prevent the ingress of water in any case.
CPC opines that the application presents inadequate spacing between BESS units (National Fire Chiefs Council guidance states this should be minimum of 6m).	NFCC guidance does not stipulate that the spacing should be a minimum of 6m; NFCC guidance does however state: <i>‘A standard minimum spacing between units of 6 metres is suggested unless suitable design features can be introduced to reduce that spacing. If reducing distances a clear, evidence based, case for the reduction should be shown’.</i> The battery units are arranged in pairs with a separation between each pair of 3m. The selected battery specification, configuration and spacing passed the requirements of Large-Scale Fire Testing and adheres to UL 9540/9540A and NFPA 855/72/69 safety design standards. It verifies that a fully engaged BESS unit fire doesn’t spread to adjacent units or external exposures, helping to protect life and the surrounding environment. Considering the justification given above, the proposed separations are acceptable and compliant with NFCC guidance on the basis that a clear, evidence-based case for the reduction is presented. Staffordshire Fire and Rescue Service responded to this point as follows on the Battery Energy Storage Systems (BESS) Planning Checklist submitted with the planning application: <i>“Noted, no concerns.”</i>
CPC raised concerns over the containment of firewater to avoid/mitigate contamination to land, groundwater, public water supply and environmental health.	These concerns are valid and have already been addressed in the accompanying Environmental Firewater Risk Appraisal (EFRA). Together with a surface water attenuation basin, a 336m³ underground

	firewater tank is proposed featuring a hydro-brake and penstock to stop flows in the event of a fire. The EFRA concludes that the environmental risks associated with the escape of firewater from the Site is considered to be low.
CPC raise concerns that there should be an assessment of potential impacts to public health of Electromagnetic Fields (EMF).	An Environmental Impact Assessment (EIA) Scoping Opinion was submitted for the scheme where it was concluded that an EIA would not be required. Assessment of EMF radiation was not included within the screening undertaken by Staffordshire Moorlands District Council (SMDC) and therefore is not deemed to be a significant public health concern. The development area is largely removed from vulnerable land uses, such as residential properties, bar the 33kV cable routing that will pass through Upper Tean to the north. This cable routing will be underground and therefore EMFs will be largely shielded from escaping to the surroundings environment. The International Commission on Non-Ionizing Radiation Protection (ICNIRP) sets the reference EMF value at $100\mu T^1$; if a measurement is below this figure, compliance with health-based limits is assumed. The 33kV cable, which passes through Lower Tean, will have a safe current-carrying capacity of 400A. The cable will be buried 1200mm below the ground surface. At 1000mm above ground-level, the emitted field strength will be approximately $36.36\mu T$ which is below the acceptable reference value of $100\mu T$. The 132Kv cable, which does not pass through any major residential development, will have a safe current-carrying capacity of 718A. The cable will be buried, at its highest point, 900mm below the ground surface. At 1000mm above ground level, the emitted field strength will be approximately $75.6\mu T$ which is below the reference value of $100\mu T$. The actual values are likely to be even less when accounting for the attenuation provided by the soil surrounding the cable, nevertheless a worst-case scenario is represented by the values

¹ <https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf>

	above. The maximum magnetic field strengths of each cable section are therefore below the ICNIRP reference value, and as a result, there is not expected to be any significant effect to human health through long-term exposure.
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