[1] Introduction.

The following are my views and comments on the current scheme issued by Green Hill Solar and reasoning why this Application should be rejected.

I would be happy to contribute/ speak at **an** Open Floor Hearing [OFH] and/ or Compulsory Acquisition Hearing [CAH].

[2] Environmental Statement: Chapter 15: Glint and Glare

[2.1] Section 15.3.2: - Green Hill Solar [GHS] states that National Policy Statement [NPS] *"It is noted that Glint and Glare is not specifically mentioned within EN-1".* Whilst the NPS does not refer to glint, it does refer to glare. Therefore, this is not an accurate statement.

[2.2] Professional judgement: The Applicant repeatedly refers to 'professional judgement' to justify their case [used on twenty occasions in the document]. It is not clear how the Applicant has applied their 'professional judgement' and the associated logic in their reasoning. The Applicant does not provide any assessment criteria. It is a concern that the Applicant, as a partisan party, is allowed to exercise unquantified opinion to justify conclusions. In such cases, 'professional judgement/ opinion' should be excluded. Evidence and reasoning are the only criteria that should be entertained. If a justifiable case can be proven, there is no need for 'professional judgement'. There is no instance where the 'professional judgement' disproves the case being made.

[2.3] Geometric Assessment/ height of panels: The Applicant has chosen to only consider the effects of glint and glare within 1km of the scheme. Although the scheme is vast in area the Applicant has indicated that solar panels will be 4.5 m high, with no justification is provided for why only 1km is sufficient for this assessment.

[2.4] Section 15.4.9 - Road: No clear explanation is provided why glare on local roads would not require modelling and are deemed to have low impact. It could be argued that glare could have a higher impact on driving along a single-track road than driving along an 'A' class trunk road.

EN-3 paragraph 3.10.149 states: *"Solar PV panels are designed to absorb, not reflect, irradiation. However, the Secretary of State should assess the potential impact of glint and glare on nearby homes, motorists, public rights of way, and aviation infrastructure (including aircraft departure and arrival flight paths)."*

It is clearly arguable that users of 'B' class road/ non-classified roads should be given the same consideration. The roads are narrower, winding and with on-coming traffic in closer proximity.

The Applicant has failed to comply with the quantitative requirements in EN-3.

[2.5] Cyclists and pedestrians: although reference is made in the table within section 15.2 of the report [Consultation] and it states that consideration is given elsewhere, but only with

regard to Public Right of Way, whilst in reality pedestrians usually walk along rural local roads, i.e. myself. There is however no impact assessment on cyclists and pedestrians in the report

Due to the size and extent of the solar arrays, a pedestrian might not be able to move quickly beyond the solar reflection zone. Of more importance, it is disputed that glare does not result in a loss of amenity. The Applicant has not followed the requirements of EN-3 paragraph 3.10.149.

There does not appear to be any consideration of the impact on cyclist in the reports.

[2.6] Cumulative effects: Although a receptor may not be impacted by glare concurrently from two or more other sites, the cumulative effect [minutes and hours of glare per day] is relevant. In addition, the Applicant only takes account of possible cumulative effects within 1km of the scheme, whilst in reality the scheme will be visible from much further away.

The cumulative effects of glare from any solar NSIP should count towards the standard criteria of more than 30 minutes per day/30 hours per year being a significant nuisance.

[2.7] Geometric assessment/ height of panels: The Applicant has chosen to only consider the effects of glint and glare within 1km of the scheme. Although the scheme is vast in area the Applicant has indicated that solar panels are now 4.5 m high, and with tracking capability, with no justification provided for why only 1km is sufficient for this assessment.

The original report for the glint and glare assessment was based on panels 2.1m high, therefore a revised report is required with a reassessment of the impact on receptors, as the 4.5m high panels will have greater visibility further away from the development.

[3] Environmental Statement Appendix 10.1; Flood Risk Assessment and Drainage Strategy Environmental Statement Appendix 10.9; Flood Risk Assessment and Drainage Strategy: Annex H: Green Hill F

These reports only assess the implications of flooding on the solar arrays and does not examine the implications of the change in constituency of the existing soils. These are arable fields that will be changed into an industrial construction site

Green Brook and its tributaries have been prone to a number of floods in recent years and no reference to this matter in noted in the document. The assessment is based on a 2013 model, following the 2012 floods, which in comparison to subsequent flood events was low in impact. The flooding events since this report have been far greater and damaging to near-by properties, which the Environmental Agency will confirm. Therefore, the above reports do not portray an accurate picture of the flooding risk and extent.

This report only concerns itself with the effects of flooding on the proposed installations. There is no consideration to the altered constituency of the existing soil, by construction activities, and its impact on increased surface water discharge into the watercourses.

There is no recognition of the consequences of flooding as a direct result of the proposed works. The Blackmile Lane area of Grendon has been prone to flooding increasingly in recent

years. Grendon Brook passes through Site F, and is fed by a number of other tributaries, within the proposed development.

Currently, these fields are ploughed for crops, which opens up the clay soil and increases porosity and permeability. However, with the prospect of the solar farm, these fields will become compacted clay, due to construction plant and equipment. This leads to less absorption and greater surface water discharge into Grendon Brook. With passing years, ground consolidation increases, exacerbating the problem. This will lead to increased risk of flooding to Blackmile Lane, in frequency and severity, for which the Applicant does not provide any mitigation proposals.

According to research by the University of Nottingham, ploughed fields have greater porosity, than non-tilled ground [16%, compared to 12%, a decrease of porosity of 25%]. The action of ploughing also opens up the pore sizes within the clay soils, which assists absorption [0.84mm/m2, compared to 0.49mm/m2, a decrease of 16% because of ground consolidation]. This is clear evidence that there will be greater surface water discharge, in frequency and intensity into the steams and brooks.

The report included within this document assessment of the risk of flooding in the area adjoining the arrays as being 1 in 100 year's flood event. There is no recognition of the effects of the additional surface water discharge from the arrays into Grendon Brook, for the reasons given above, with the increase in flooding intensity and frequency.

The classification of the area being a 1 in 100 year's flood event is inaccurate. Grendon Brook flooded on three occasions in September 2024. Prior to this, there were floods in 2020, 2012 and 1996. Just based on this information flood events in Grendon, are increasing in frequency and intensity, with The Environmental Agency attributing this to global warming.

The report also does not provide evidence as to how the 'Low' flood risk was calculated based on the actual above evidence. This matter was brought to Island Green Power's attention during the public consultation period, for which they did not respond, nor is this factored into the above reports.

Regards section 2.1.20 of Appendix 10.9, it states; *"However, the flood extents are largely shown to remain in the immediate extents of Grendon Brook".* This is an inaccurate and misleading statement as floodwater regularly breaches the banks and spreads across fields towards Blackmile Lane. With the change in soil constituency, the floodwater is likely to be more frequent and intensive.

Generally these reports are too narrow in focus and do not look at the broader implications of the scheme on the flooding risks. It relies on outdated information that does not acknowledge the increasing severity of flooding in recent years, nor the increase in frequency and severity caused by the development itself.

Site F should not receive permission due to the potential of increased flooding and intensity due to the development.

[4] Reinstatement/ decommissioning.
The Applicant does not provide any details as to their proposals for the reinstatement of the land following the completion of the contract. Are they providing a Bond to provide funds for these works in the event that they cease trading and/ or merged with another organisation that will not take on these obligations?

What is to stop the parent group winding-up the project management company at the end of the operating period without completing the obligations to reinstate the land? In the event of these scenarios, will the responsibility fall on the landowner to de-commission the solar farm/ BESS installations? What safeguards are in place to mitigate this outcome?

Clear legally binding proposals are required from the Applicant before any approvals of the scheme. These must be enforceable at the conclusion of the contract and/ or the Applicant ceases to exist as a trading entity.

[5] Battery Energy Storage Systems [BESS] Installations.

The following comments are for the proposed BESS installations to be located alongside the existing Grendon Sub-Station. From the case examples provided below, with much information drawn from the United States due to the proliferation of such installations, I will demonstrate the volatility of such installations, with particular regard to the positioning of the BESS so close to the village of Grendon.

[5.1] Consultation with Fire Officer/ Department.
Whilst appreciating that much of the consultation taken place during Building Control approval stage, it is surprising that the Applicant has not provided any evidence that they have consulted with the fire authorities.

There is no '*Fire Strategy Plan'*, as part of the Application, which should be expected as part of a planning NCO process. This would identify the risks inherent in BESS fires and the development of a safety and mitigation strategy.

[5.2] Fire risks of BESS installations.
The provision of BESS facilities will pose a risk of fire incidents that can be severe in consequences for local communities. There are no proposals on how fire incidents and 'thermal runaway' are controlled as part of a fire strategy. I would not doubt that the Applicant will likely and subsequently claim that their installations will have the latest safety features included in the design. The evidence from fires at other BESS's would prove otherwise. A fire broke out in October 2024, in Missouri, whilst the developer had claimed the facility was:

> *"…likely the most sophisticated automated and remote supervised and controlled fire suppression systems in the world. The state-of-the-art fire prevention system is designed to detect fires before they start," the company's site says. "The system covers all areas where battery materials are stored or processed. It is monitored remotely 24/7 employing high-intensity industrial forward looking infrared…camera technology."*

These *'state of the art'* control systems singularly failed to mitigate the 'thermal runaway' fire incident. Local residents were evacuated due to the toxic fumes being emitted and the fire authorities took up to 24 hours to bring the fire under control. The nearest housing in Grendon to the proposed BESS is only 300 metres distance.

According to the on-line '*BESS Failure Incident Database'* [mainly focusing on South Korea and United States fire incidents, where the proliferation of BESS's are far more established than the UK] there have been dozens of fires at BESS sites due to the volatility of the lithium-ion batteries, which the designed safety measures failed to control..

In the UK, we have experienced four 'thermal runaway' fire incidents so far [three of which have occurred in 2025]. The first in Liverpool in September 2020. The second being at a Statera BESS site in Essex, in February 2025. The third occurred, also in February 2025, near Rothienorman in Aberdeenshire. As the proliferation of BESS developments grows in the coming years, the evidence is that fires will become more frequent. Further, afield in January 2025, there was a fire incident at a facility in Claregalway, Republic of Ireland.

Press coverage of the Liverpool BESS fire, at the time quoted from the EFRI database that there had been 85no BESS fires [mainly in South Korea and the United States] since 2011.

The Essex BESS fire broke out during the construction of the facility. The alarm notification system worked and the fire authorities responded quickly. However, the spacing between lithium-ion cells, that is intended to restrict the propagation of the fire, did not control the fire spread.

Firefighters in the USA have published reports detailing why 'thermal runaway' incidents are so dangerous:

- *"Difficult to extinguish: thermal runaway fires require massive amounts of water to cool the batteries and stop the chain reaction. Traditional fire extinguishers are often ineffective.*
- *Toxic gases: burning lithium-ion batteries release toxic gases such as hydrogen fluoride, which can be harmful when inhaled.*
- *Re-ignition risk: even after the fire appears to be extinguished, there is a risk of re-ignition. The battery cells can remain hot and unstable for hours or even days".*

Contrary to claims by the industry, that their safety systems will control the risk of 'thermal runaway/ explosions/ toxic fume emissions, the following is taken from the *'Battery Energy Storage Systems – White Paper'* produced by Stat-X Aerosol Fire Suppression.

> *"…at the Arizona Public Service [APS] explosion, thermal runaway that produces smoke can occur and slowly build up for hours. At the APS incident, the smoke detection system operated as designed and activated a clean-agent fire suppression system.*
>
> *"However, even after discharge of the clean-agent, thermal runaway continued. For three hours before the fire crews opened the container doors [initiating an explosion], large quantities of flammable smoke continued to be produced".*

The BESS industry lacks a clear system of governance and agreed industry design standards, which is a subject addressed below. The touted claims that the safety features will control such instances is a misnomer as there has been a number of 'thermal runaway' instances where 'state of the art' control systems have singularly failed. There should be no expectations that the Applicants safety measures will be any more effective than the incidents quoted.

The following is an extract from '*Gridscale Batteries & Fire Risk*', produced by NetZero Watch

> *"Any design claiming to incorporate such a fail-safe approach needs to be exhaustively analysed and tested, and safety conclusively demonstrated before any decision is made whether or not to give the go ahead".*

Applicants claim that they have safe installations with various safety measures, without being required to demonstrate their effectiveness. As was the case in the 'thermal runaway' fire in the Missouri BESS incident, referenced above.

In the UK, councillors rejected an application for a BESS located in Eaglesham citing [despite prior approval by the planners]:

> *"Councillors voted to reject the project, though, raising concerns over the risk of fire from lithium-ion batteries. They also questioned the site's appropriateness and said the energy is "not necessarily from renewable sources."*

[5.3] Toxic fumes/ emissions.

The Houses of Commons research briefing document *'Battery Energy Storage Systems: April 2024'*, correctly identifies that BESS facilities are prone to fires due to 'thermal runaway'. These have a number of causes, but include:

- *"Battery component decay and overheating with spread of fires to adjacent lithium battery cells.*
- *Poor installation and maintenance standards.*
- *Gas build-up can lead to explosions and the resultant fires are aoxic in nature; i.e. not dependant on oxygen as a fuel source as the fires are caused, and sustained, by chemical reactions.*
- *Toxic metals and chemicals can leach into ground water, aquifers and watercourses".*

This part of the country mainly experiences winds originating in the south-west/ west-south-west direction. Toxic fumes from a fire will have an impact on areas of Grendon and local farms. As an example a fire at the San Diego BESS [August 2024] resulted in properties and businesses being evacuated up to a mile from the facility and affected up to 500no businesses. It took emergency services 48 hours to bring the fire under control.

A similar incident at the 300MW Moss Landing, California, BESS installation [January 2025] where 80% of the facility was lost in the fire and led to 1,200 residents being ordered to evacuate their houses due to the risk of toxic fumes. Smoke emissions were so extensive; it was visible up to 30 miles from the facility. There had been three previous fire incidents at this plant in the four previous years. The earlier incidents were the result of failures in the suppression systems that resulted in uncontrolled overheating in the cells and resultant fires. The January fire took five days to bring under control. A month after the fire was thought to have been extinguished, the facility re-ignited.

> *"There's no way to sugar coat it. This is a disaster, is what it is,"* Monterey County supervisor Glenn Church told KSBW-TV.
>
> *"It's imperative that residents heed the evacuation order and take the direction of law enforcement and fire personnel. This is a situation where we take the idea of protecting life and property very seriously. We implore people to heed the evacuation order and to go to a safe location," Monterey County spokesman Nicholas Pasculli said".*

Moss Landing BESS Fire

In the wake of the Moss Landing fire, Californian regional and state authorities are proposing, or have passed, legislation tightening control of BESS projects. Orange County and Morro Bay have instigated a moratorium on further developments. Monterey have recommended that BESS developments be halted until safety risks have been mitigated within proposed schemes. Future BESS sites will have to demonstrate that the designed safety features are effective in controlling fires. San Diego's legislators are recommending a halt to further BESS developments. State wide, California, is proposing to pass a '*Battery Energy Safety & Accountability Act'* to address these fires and the emission of pollutants and to hold the developers accountable for the impact of fires and toxic emissions on local communities.

The States *'Assembly Bill AB303'* will recommend the following restrictions regards future BESS developments that will be expected to meet the following criteria:

- *"Limit where BESS facilities can be developed in California, including on 'environmentally sensitive sites'.*
- *Prohibit BESS facilities within 3,200 feet of 'sensitive receptors;' including environmental sensitive sites and vulnerable people.*
- *Exclude developers of BESS facilities — but not of energy storage facilities that use technologies other than battery storage — from applying to the California Energy Commission [CEC] Opt-In Certification Program under AB 205 [2022]; and*
- *Mandate that the California Energy Commission deny all pending BESS projects that are currently under review as of the bill's effective date".*

The above information has been taken from an *'Energy Storage News'* article [March 2025] and these measures need to be implemented in this country.

As a direct response to the Moss Landing fire, on the 13th March 2025, the *'California Public Utilities Commission'* [CPUC] introduced a new set of standards for the maintenance and operation of BESS facilities and increasing the oversight into emergency response action plans. The CPUC adopted General Order [GO] 167-C, a framework for implementing and enforcing operational standards for electric generating facilities. The CPUC also made technical updates to its standards to improve the

safety and reliability of BESSs in an attempt to mitigate the repetition of fires and emission of pollutants at these facilities.

In the wake of such incidents, the UK Government should also be convening a commission to investigate this industry and establish our own guidance for the safety of these facilities, for an industry that currently lacks technical oversight.

[5.4] Water suppression of fires and the risk to the environment.
The Applicant does not appear to have addressed the water requirements by emergency services in controlling fires. There are no references to a hydrant supply that could be utilised by fire services. It must be insisted, that if this Application is approved, that a new hydrant water supply be brought to the two sites to cater for such emergency incidents.

The National Fire Chiefs Council's *'Grid Scale Battery Energy Storage System Planning – Guidance for FRS'* states the following with regard to water suppression requirements:

> *"Provision of adequate water supply and firefighting infrastructure to allow safe and effective emergency response".*
>
> *"…Lack of sufficient water supplies at a particular site location should not be considered as the basis for a suppression system choice. Such an approach could result in potentially ineffective and/or dangerous system designs".*
>
> *"…As a minimum, it is recommended that hydrant supplies for boundary cooling purposes should be located close to BESS containers [but considering safe access in the event of a fire] and should be capable of delivering no less than 1,900 litres per minute for at least two hours. Fire and rescue services may wish to increase this requirement dependant on location and their ability to bring supplementary supplies to site in a timely fashion".*

Fire tenders generally only have water capacity of up to 2,000 litres, which is exhausted within 5 minutes per appliance. With fires instigated by 'thermal runaway', these can take many hours to extinguish. Many fire authorities faced with these dilemmas are advising that fires are allowed to *'burn themselves out'*, which obviously increases the risk and duration of toxic fumes being generated. *[Draft NFCC [National Fire Chief's Council) Grid Scale Energy Storage System Planning – Guidance for Fire and Rescue Services: 2024]*

From the *'Briefing Note: Lithium-Ion Battery Energy Storage Systems'* [paper lead-authored by Professor Emeritus Peter Dobson OBE]:

> *"Fires are intense and self-propagating; they cannot be managed like a 'regular' fire. Most advice by Fire Services is simply to allow them to burn out [several days, sometimes weeks] and to keep surroundings cool using millions of litres of water ['drenching' takes place of surrounding buildings and areas]. Re ignition is not uncommon".*

Taking a scenario of a fire taking up to twenty-four hours to control and a required delivery of 1,900 litres per minute, this gives a water consumption of 2.7 million litres of water. The Applicant has made no proposals on how such a fire incident is managed. Nor how the contaminated water will be contained and disposed off-site as controlled waste.

At the Otay Mesa BESS fire [2024], it took the emergency services 17 days and 8 million gallons of water to bring the fire under control.

[5.5] Contaminated water run-off into watercourses.
The Applicant has not addressed how contaminated water will be contained following a fire incident. Taking the scenario as noted above, vast volumes of water is required in dampening a fire. The current Application does not address this issue, and it can only be assumed that the Applicant is relying on the contaminated water soaking away to ground and/ or into nearby watercourses.

The Grendon area lies above Oolite sedimentary rocks that act as an aquifer to provide a source of drinking water. The base of the aquifer is classified by the *'British Geological Society'* as 'High: 256' [mOD]. If contaminated water permeates into the ground this will have an impact on the quality of the ground water.

Polluted water run-off from the Applicant's site has the potential to contaminate near-by water courses, lakes and associated wildlife.

Contaminated surface water run-off from fire incidents can also have serious impacts downstream within the River Nene valley, with significant effects on the *'Upper Nene Valley Gravel Pits Special Protection Area'* [SPA], *'Ramsar wetlands'* and *'Sites of Special Scientific Interest'* [SSSI].

This risk has already been identified by the Environment Agency within their letter dated the 25th February 2025 addressed to North Northants Council, with regards to another planning application for a BESS installation adjoining Grendon Sub-Station:

> *"Condition 2: The development hereby permitted shall not be commenced until such time as a scheme to dispose of surface water in the event of a fire has been submitted to, and approved in writing by, the local planning authority".*
>
> *"…Groundwater is particularly sensitive in this location because the proposed development site is located upon secondary aquifer A".*

The *'Institut National de l'Environnement Industriel et des Risques (Ineris), Parc Technologique Alata, BP2, 60550 Verneuil-en-Halatte',* based in France undertook controlled experiments on the contaminating effect of lithium-ion battery fires on the water used as a suppressant. Its conclusions were that fire-suppressing water becomes contaminated with Cobalt [Co], Nickel [Ni], Manganese [Mn], Hydroxyapatite [HAP], Fluorine [F] and organic carbonates.

The Applicant has not addressed how the contaminated water is prevented from entering watercourses nor how the aquifer will be protected.

Also from the '*Briefing Note: Lithium-Ion Battery Energy Storage Systems'*:

> *"Firewater run-off is toxic and needs to be contained and properly disposed. If this contaminated firewater was to get into aquifers, farming irrigation or local streams or rivers it could have detrimental environmental impacts for decades".*

The National Fire Chiefs Council's document *'Grid Scale Battery Energy Storage System Planning – Guidance for FRS'* states the following:

> *"Water run-off and potential impact on the environment, along with mitigation measures, should be considered and detailed in the Emergency Response Plan".*

Intending to position a BESS facility alongside watercourses and above aquifers, is myopic at least, and at worst, negligent. Especially the risk to ecological important areas downstream of the site. No proposals have been formulated as to the control of the contaminated water, with no indication that

temporary storage has been considered to contain the contaminated water pending its removal from site as '*controlled waste'.*

[5.6] Emergency Action/ Response Plan for the BESS installations.
There is no '*Emergency Response Plan'* included in the Application that would be implemented in the event of emergency incident at the BESS plant. As an example, during the August 2024, 'thermal runaway' incident at the San Diego BESS installations, the toxic emissions resulted in the forced evacuation of houses and businesses up to a mile away from the plant as it took emergency services 48 hours to bring the fire under control.

This plan should be addressing, at least the following:

1. As the plant is automatic what is the response time of the Operator to an incident?
2. How will the BESS be isolated in the event of a fire incident, prior to the emergency services tackling the blaze? The emergency services will not isolate, nor shut down, existing supplies. What is the timescale for these responses as there is no management on site?
3. Who liaises with the emergency services if there are no management at the facility?
4. How does the Operator inform the public of an incident and any recommendations for the safety of people, animals and property?
5. Where are the proposals for evacuation measures of local residents and businesses.
6. A hydrant water supply must be provided for the emergency services use in such fire incidents. As an example at the May 2024 Otay Mesa BESS 'thermal runaway' incident, it took the emergency services 17 days to control the fire and utilised 8 million gallons of water.
7. What are the emergency access arrangements within the BESS site to provide fire vehicles full access to all units/ buildings? No vehicle tracking plans have been developed to ensure the current access track, off Station Road, is suitable to take emergency vehicles.

As part of a review undertaken by the *'Institut National de l'Environnement Industriel et des Risques (Ineris), Parc Technologique Alata, BP2, 60550 Verneuil-en-Halatte',* based in France, their conclusions noted that due to remoteness of these establishments and lack of on-site management, they found that:

> *"Owing to field operational constraints in terms of emergency response following a fire, considering time between event initiation and water suppressant application as a parameter in futures studies also seems important".*

There is a time lag between fire initiation and the response by firefighters, which can lead to major fire incidents and the emission of toxic agents. Again, the Applicant does not address this matter.

[5.7] Future development/ issues.
Lithium-ion batteries will need periodic replacement. The battery cells have a short life, varying from 8 to 13 years, which could results in 6 - 7 replacements of the batteries during the operational life of the facility.

In a fast developing industry, will the existing equipment become obsolete and require major replacement, i.e. batteries changed from lithium-ion to sodium-iron batteries. Will this lead to further construction activities at a future date. The Applicant does not address either of these matters in their submission.

There is currently a world shortage of recycling centres for the lithium-ion batteries. Current estimates is that it is three times more costly to re-purpose the constituent part of the cells than it does to produce cells with new raw materials [*Briefing Note: Lithium-Ion Battery Energy Storage Systems: January 2025*].

With no viable solution to this matter, this is going to lead to redundant cells being disposed of in landfills, with the environmental risks this poses, with contaminants leaching into the ground.

[5.8] Capacity in infrastructure.
What is clear is that there are currently connection queues for new solar farms/ BESS connections to the grid according to '*Cornwall Insight*'.

The UK government's '*Clean Power 2030'* [CP30] plan, lays out the target capacity ranges for specific technologies by 2030 and 2035, with the required solar farm/ BESS capacity for 2030 established as 27GW across both transmission and distribution, and the 2035 target adding a 2GW uplift to distribution level of solar farm capacity. However, '*Cornwall Insight's* analysis notes that the current grid connection queue for solar farm/ BESS projects seeking connection before 2030 is 61GW, well over twice the target capacity range, while the queue to 2035 currently sits at 129GW, over four times the 2035 target capacity.

As such, viable projects now risk being trapped in the queue behind unviable and speculative projects, something the *'National Energy System Operator'* [NESO] has proposed reforms to prevent.

The Applicant has not issued a business case to demonstrate the viability of this scheme, particularly when considered against the other BESS sites that are being proposed to be constructed adjacent to the Grendon Sub-Station. *'Cornwall Insight'* blames connection queues as a hurdle that threatens achieving the 2030 clean power goals.

This Application should be rejected, until the Applicant can demonstrate a need for the solar farm/ BESS installations.

[5.9] Lack of legislation/ guidance/ oversight.
This industry currently lacks effective guidance and oversight from central Government and we should be placing a moratorium on such developments until there is a greater understanding of the risks, environmental impact, safety, etc., caused by BESS installations. The Applicant has made no reference to any standards governing the provision of their BESS facilities and it is therefore not possible to formulate an opinion as to the compliance of the Application:

1. There is no clear legislation for lithium-ion BESS's in the UK.
2. There are no British Standards or other adequate government regulations being applied to ensure the safe manufacture, installation, operation and decommissioning of lithium-ion BESS's.
3. Obtain an environmental permit under the 'Environmental Permitting Regulations 2016 [as amended] [EPR] to operate the BESS facility.
4. There is no legislation preventing the use of second-life lithium-ion batteries being re-used in lithium-ion BESS's. Second life lithium-ion batteries are considered to pose a much greater safety risk, since less would be known about their previous use, which could include previous damage/abuse that can make them more prone to failure.
5. Lithium-ion BESS's should come under the Control of Major Accident Hazards [COMAH] legislation to ensure they are suitably regulated.
6. Such installations should be covered by DSEAR Regulations [Dangerous Substances and Explosive Atmosphere Regulations: 2002] and should be subject to a 'Risk Assessment'. There is no evidence that such a 'Risk Assessment' has been produced, during the concept/ planning/ design preparation stages and should therefore be rejected.

7. *'Hazardous Substances Consents'* [HSC] are most likely required for the transportation of lithium-ion BESS's units. HSC is almost certainly required for large scale lithium-ion BESS's installations.
8. Battery Management Systems vary – there are no statutory requirements or engineering specifications, so not all necessary safety features are present in all sites.
9. There are no Government regulations on appropriate locations for lithium-ion BESS's, including appropriate safe distances from occupied buildings and environmentally sensitive sites, nor a consistent approach of how to deal with lithium-ion BESS's fires and explosions. '*The National Fire Chiefs Council'* have issued guidance notes for Fire and Rescue Services on dealing with lithium-ion BESS's failures, but these are not legal requirements, nor are they specifically aimed at prevention of failures to avoid a major accident.
10. Given the known risks, and potentially disastrous consequences of lithium-ion BESS failures, it is essential that the Government apply appropriate safety regulations to these facilities as a matter of urgency. Until they do this, such installations are being installed without proven adequate safety measures in place and in unsuitable locations.
11. Some cities and regions in other countries have issued a moratorium on lithium-ion BESS's until adequate safety regulations are in place. This must surely be the most sensible approach. [The State of California, as noted previously].
12. Evidence must be provided as to how the Applicant intends to comply with the National Fire Chiefs Council's *'Grid Scale Battery Energy Storage System Planning – Guidance for FRS'.* This risk assessment and report should form part of the planning application, as it is fundamental to demonstrate compliance with these requirements.

Clarity should be sought as to the standards to be applied to the design and construction of the solar farm and BESS.

[5.10] Flood risks.
It is noted that BESS establishment immediately to the west of the Grendon Sub-Station is within low-lying land that is regularly prone to flooding; and is why the Sub-Station was constructed at its current location to mitigate the flooding risk. Immediately to the north of the proposed BESS are watercourses and lakes that feed into the River Nene.

Whilst the 'shipping containers' that will house the lithium cells will be weather tight they are not watertight.

[6] Summary
In conclusion, this Application lacks substantive evidence to warrant its development, nor has it demonstrated the need for the scheme, when there are more solar farms/ BESSs in the pipeline than our needs as a nation [by 2030]. There is an increasing risk of fires within BESSs for which the industry needs to demonstrate that the proposed preventative measures they extol can actually control the onset and spread of fire, whereas there is evidence that they fail to meet the claims made by the industry.

There are no proposals as to how the local environment will be protected in the event of a fire, and the disposal of large volumes of contaminated water, used in firefighting operations.

Finally, the position of this facility is wrong. It is too near watercourses that in turn feed into a SSSI's in the Nene Valley. The site for the BESS is in an area that floods [as recently as September 2024].

In summary my concerns are:

- The Flood Reports are inadequate and do not address the change in constituency of the existing soils and the increase risk of surface water discharge to the watercourses, exacerbating the flood risk to nearby properties.
- The Applicant is too reliant on 'Professional Judgement' in lieu of evidence. These views are subjective and lack reason and evidence to make their case.
- Glare on rural roads is dismissed, where I would contend that risks are greater to vehicle drivers, due to winding nature of the road, they are narrow with narrow gaps between on-coming vehicles.
- The area under consideration for glint and glare is only a 1km distance from the installation. This is in accordance with their original report issued as part of the original consultation and based on panels 2.1m high. The Applicant is now proposing 4.5m high tracking panels, which will increase the distance of visibility and impact. Therefore, this report should be re-commissioned.
- There are no proposals on how the installations are to be de-commissioned at the end of their serviceable life. In the event that the Applicant ceases to trade, of is wound-up in the next 60 years, there should be a Bond in place that can be utilised for reinstating the land back to its original use. Otherwise, there are concerns that the Government/ landowners, will have to fund these works.
- BESS installations; they are a number of concerns regards these installations:
    - Their volatility regards to fire incidents and the release of pollutants and toxic emissions. The Applicant has issued an emission plan that in my professional judgement underplays the risks on the local environment.
    - Potential contamination of watercourses and the aquifer.
    - No containment of water used to suppress fire, which would be classed as controlled waste.
    - The western areas of the BESS is located on area of flooding.
    - Its closeness to Grendon village.
    - The industries lack of recognisable design standards.
    - No case study to justify the need for the installation, as there are more than enough schemes going through the approval process to satisfy the renewable energy Government targets.
    - Lack of an 'Emergency Response Plan'.