Grendon Parish Council – Flooding, Land-Use, Traffic & Cumulative Impact Report

For submission to the Examining Authority (Green Hill Solar Farm, EN010170)
November 2025

1. Introduction

This report is submitted on behalf of **Grendon Parish Council** as supplementary evidence to the oral statement delivered by Councillor *Philip* Mason at the Preliminary Meeting on 22 October 2025. It focuses on three interlinked issues:

1. Flood risk associated with land use changes from solar and Battery Energy Storage System (BESS) developments.
2. Traffic impacts and pedestrian safety within the village, particularly near Grendon CE Primary School.
3. Effects on Public Rights of Way (PROWs) and access to local amenities.

While the Council supports renewable energy in principle, the current application fails to demonstrate that risks relating to flooding, drainage, community safety, and access have been properly mitigated or evidenced.

2. Background and Context

The proposed Green Hill Solar Farm and BESS are sited on historically active floodplain land within the Bozeat and Easton Maudit catchment. This area drains into **Grendon Brook**, which feeds the **River Nene** and subsequently the **Summer Leys SSSI, SPA, and RAMSAR** sites.

The site overlaps agricultural fields that play an essential role in natural water storage and runoff attenuation. Conversion of these fields into a solar array and access corridors – especially where drainage and compaction are altered – could intensify downstream flood risk in Grendon village.

The village's **Main Road and Manor Road** form the principal pedestrian routes to Grendon CE Primary School. These are narrow lanes with no dedicated pavements. At school drop-off and pick-up times, they become single track and congested. Any increase in heavy traffic, including HGV movements, along these routes presents a serious safety hazard.

Furthermore, the proposed construction works intersect the **Waendal Walk** route, a nationally recognised event attracting over 3,000 visitors annually, as well as the much-used

local walking link to **Castle Ashby**, the only accessible shop by foot for residents. Closure or obstruction of these routes will materially impact community wellbeing and local commerce.

---

3. Land Use, Drainage and BESS Safety

The applicant's assertion that conversion of arable fields to grass under the solar arrays will *reduce flood risk* is not supported by evidence. Grass cover may improve infiltration under optimal conditions, but these benefits are lost when soils are compacted by heavy machinery or overlaid with impermeable access tracks. No modelling has been provided to quantify these factors.

Given that the proposed **BESS units** are located within a **floodplain area (Zones 2 & 3)**, this raises additional safety concerns. Lithium-based systems are highly sensitive to moisture ingress and can pose serious risks of fire or explosion in flood conditions. The applicant's Operational Battery Management Safety Plan (OBMSP) does not adequately address emergency response measures in the event of inundation or water ingress.

The Council's flood evidence demonstrates that these risks are not theoretical but recurring realities in the Grendon catchment. Given the water table and run off drainage of this location goes into Grendon Brook (directly feeding into the Nene and Northamptonshire's drinking water) any moisture ingress/fire hazards has the capacity to poison Northamptonshire potable water.

---

4. Local Flood Evidence and Observations

The village has experienced multiple major flood events:

- **July 2012:** Severe flooding across Main Road and Easton Way, confirmed by Northamptonshire County Council Flood Investigation Report (FIR). Properties recorded internal flooding up to 0.6m.
- **March 2016:** Surface water from agricultural fields north of the village overtopped drainage ditches, inundating several gardens and the lower end of Main Road.
- **December 2020:** Prolonged rainfall caused Grendon Brook to overtop, closing Main Road for over 12 hours.
- **December 2023 (Christmas Day):** Flooding affected more than ten households; emergency sandbag deployment was required.
- **September 2024:** Heavy rainfall led to 12 homes suffering internal flooding, two still uninhabitable months later. Main Road was impassable for over 24 hours.

Each event has been formally logged with the **North Northamptonshire Flood and Water Management Team** and referenced in the Council's **Local Flood Report (2024)**. These recurring events demonstrate the system's existing fragility and limited drainage capacity.

The proposed development footprint lies upstream of these impacted areas. Without detailed, site-specific 2D hydrological modelling that includes infiltration loss due to compaction and cumulative surface runoff, the risk of downstream flooding cannot be considered mitigated.

5. Traffic, Pedestrian Safety & PROWs

Traffic and Pedestrian Safety:
Main Road and Manor Road are narrow, pedestrian-shared routes used by families walking to the village school. Construction traffic associated with the solar farm and BESS installation will introduce additional HGV movements, particularly problematic during school peak hours (08:30–09:30 and 15:00–16:00).

In a recent traffic survey, October 2025, conducted by Northamptonshire Police there were already 142 HGV's in a 7 day period recorded travelling through the village, and this will only increase exponentially if the solar farm goes ahead.

No provision has been made for temporary traffic management or safe pedestrian diversion. Without these, the development poses an unacceptable risk to vulnerable users.

PROW and bridleway concerns:
The development proposes changes to public rights of way and to the route of the Weandal Walk between the villages and through the site.

- Solar panel corridors are planned to run close to or across the footpath, potentially replacing open access with fencing or 4.5 m high hedging, which would reduce visibility, degrade amenity and discourage walking with prams/push-chairs or small children. Now, they have stated, they will temporarily close some and reroute others.
- Pedestrian connectivity is a key community asset; any rerouting or enclosure must not reduce safety, accessibility or enjoyment of the route. The Council requests clarity on how the applicant will maintain safe, direct, well-signed footpaths accessible to all.
- The scheme will be disruptive and not enhance the openness of the long established local footpaths linking Easton Maudit, Yardley Hastings and Cogenhoe. Many of these are part of the annually held international Waendal Walk which attracts around 3,000 visitors per year supporting local businesses. Industrial fencing and closures would break the route and damage local commerce and tourism.
- Grendon has our own footpath warden as the area around the villages *has an extensive network of* PROW*'s*. The warden holds organised walks twice per month all year round, which encourages people to get out and about and supports positive mental health. This was never more important and apparent than during the pandemic.
- The proposed closure of our walking route to Castle Ashby during the 2 year construction – the most used link to a village shop and local amenities – means residents from both villages who currently walk there and back will be forced to travel by car instead. (And the road routes will both be subject to traffic management measures). There is no alternative shop within comfortable walking distance. The closure threatens to increase car usage significantly and remove a vital non-motorised access for everyone.

6. Cumulative Impact of Solar and BESS Developments

The Green Hill Solar Farm proposal cannot be viewed in isolation. Several other solar and BESS projects are proposed or consented within a 10-mile radius, including sites at Easton Maudit, Yardley Hastings, and Bozeat. The cumulative effect of these on hydrology, road use, and visual amenity is significant.

The combined increase in impermeable areas, vehicular traffic, and battery installations within a shared catchment amplifies the risk of runoff concentration and surface water flooding. Yet, the applicant's Environmental Statement assesses cumulative effects only for solar arrays, not for BESS systems. This omission undermines the integrity of the impact assessment.

---

7. Compulsory Purchase Orders

The Council notes with concern that a **local farmer** within Grendon parish has been asked to surrender rights or face potential **Compulsory Purchase Orders (CPOs)** for cable connection works, despite these fields lying **within our parish boundary**. Any such action must be clearly justified, transparently documented and subject to parish consultation.

8. Fire and Toxicity Risks of Cumulative BESS Installations

The proposed Green Hill Solar (GHS) BESS, when considered alongside the existing 49.99 MW installation and the recently approved 49.99 MW BESS adjacent to it, represents one of the largest cumulative BESS clusters in the country. All three are positioned in close proximity to Grendon village, particularly the residential area around Main Road and the homes near the parish boundary in property 708 Station Road, and the neighbouring properties.

This cumulative configuration presents a significant public safety risk, particularly because:

- The installations sit on floodplain land, where inundation could compromise electrical isolation and battery integrity.
- In the event of a thermal runaway or fire, toxic gases such as hydrogen fluoride, carbon monoxide, and dioxins could be released. These gases are acutely hazardous and could travel significant distances under prevailing wind conditions.
- The applicant's Operational Battery Management Safety Plan (OBMSP) fails to provide an adequate emergency response framework, instead advising residents to remain indoors. Given the density of nearby housing, this is unrealistic and likely to cause unacceptable danger to life.
- There is no coordination plan between the three BESS operators to manage cross-site fire response, containment or emergency evacuation.
- In its Relevant Representation (13 August 2025) NGET emphasises that its existing and planned infrastructure is located within or adjacent to the Order Limits of GHSF, and that inadequate protective provisions pose a risk to statutory access, maintenance and future development (including the WMEL 400 kV overhead line project) of national significance. This is a clear example of a cumulative infrastructure burden: not simply the effect of GHSF in isolation, but the combined impact of GHSF + future national grid works in the same corridor.

The Parish Council therefore considers the combined BESS developments at Green Hill to represent an unacceptable cumulative hazard, exacerbated by their floodplain location, lack of integrated fire strategy and absence of meaningful engagement with local emergency services.

The Council requests that the Examining Authority require:

1. A full cumulative risk assessment covering fire, toxicity and flood interaction across all three BESS sites.
2. Publication of a joint emergency response plan involving Northamptonshire Fire and Rescue Service, North Northamptonshire Council and the Parish Council which confirms detailed plans of actions to extinguish fires in the event of a blaze/explosion.
3. Assurance that the sites will include adequate fire breaks, containment bunding, and on-site firefighting water supply capable of managing multi-site incidents.
4. Consideration of the proximity to residential areas and potential need for community evacuation planning under worst-case scenarios.

---

8. Parish Council Position and Requests

Grendon Parish Council respectfully requests that the Examining Authority:

1. **Rejects unsubstantiated claims** that grassland conversion reduces flood risk without site-specific modelling.
2. **Requires** a revised **Flood Risk Assessment** with full 2D hydrological modelling, infiltration testing and assessment of BESS flood resilience.
3. **Requires a full cumulative fire and toxicity risk assessment** across all adjacent BESS installations (the existing, approved, and proposed 49.99 MW sites), considering their shared floodplain location and proximity to residential areas.
4. **Mandates a joint emergency response, fire extinguishing and evacuation plan** to be coordinated with Northamptonshire Fire and Rescue Service, North Northamptonshire Council and Grendon Parish Council, ensuring adequate firebreaks, containment bunding and community safety measures.
5. **Mandates a Surface Water Management Plan** with measurable runoff targets, vegetation management details, and post-construction monitoring.
6. **Confirms** that the applicant must demonstrate *no net increase* in runoff for the 1-in-100-year event (plus climate change) with any residual risk borne by the developer.
7. **Requires** a **Traffic and Construction Management Plan** with defined HGV routes avoiding Main Road/Manor Road and measures to safeguard school pedestrians.
8. **Demands** a **Public Rights of Way and Access Statement** ensuring all paths, including the Waendel Walk and Castle Ashby route, remain safe and open, with well-signed alternatives if closures are unavoidable.
9. **Requests** clarification on land rights and CPO proposals affecting parish farmland, ensuring all decisions respect parish boundaries and landholder consent.
10. **Calls for** a **Post-Installation Review** after one full winter season to evaluate flood, traffic, and safety outcomes, with enforceable remediation requirements.

---

9. Conclusion

Grendon village remains acutely vulnerable to flooding, and the proposed development lies on land proven to contribute to that risk. Without comprehensive hydrological assessment, drainage planning, and flood-resilient BESS design, the proposal cannot be deemed safe.

Furthermore, the cumulative strain of construction traffic, PROW disruption and the potential compulsory use of parish land represent unacceptable risks to residents' safety and amenity. The Parish Council urges the Examining Authority to withhold consent until these matters are addressed with evidence-based mitigation and full community consultation.

Submitted by:
Grendon Parish Council
November 2025

References:

1. Northamptonshire County Council Flood Investigation Report (2012).
2. Grendon Parish Council Local Flood Report (2024).
3. North Northamptonshire Flood and Water Management Team Incident Log (2023–2024).
4. Environment Agency Flood Zone Mapping (accessed 2025).