Ancient Woodlands and impacts on BESS C.

1. Background

Sywell Woods, Horne Wood and Cold Oak Copse all fall within the proposed "Greenhill Solar Farm'.

Sywell Woods, is recognised as Ancient Woodland and is part of the West Woods area in Northamptonshire and covers approximately 300 acres. It is one of the woods covered in the Brampton Ash, Hardwick, Sywell and West Woods Forest Plan, managed by Forestry England. Sywell Woods are designated as either an Ancient Semi-Natural Woodland (ASNW) or as plantation on Ancient Woodland Sites (PAWS). Both categories are forms of ancient woodland habitat under UK definitions (ASNW) being woodland continuously since at least 1600 AD, and PAWS being replanted ancient woodland) and are treated as such in planning and conservation policy.

Horn Wood and Cold Oak Copse (Easton Maudit) were once part of the medieval woodland associated with Salcey Forest in the area around Easton Maudit. They appear in documents going back to medieval times, including references to the 13th Century, and earlier. These areas have also been continuously wooded since 1600 AD and cover 2.8 hectares. *Please refer to Doc.rep1-204, LVIA impacts around site F, for relevant details and photographs of Horn Wood, and associated PROWs likely to be severely impacted by the development.*

This long continuity allows complex, stable ecosystems to develop that simply can't be recreated quickly. These woods consist of natural broadleaf trees, ash lime, and wild service trees (an ancient woodland indicator species), including, pine, birch, hazel, hawthorn, wayfaring tree, spindle and a number of veteran oaks. Their habitats are effectively irreplaceable, because their soils, fungi, plants and invertebrate communities, have developed over centuries. Many species depend on long term woodland conditions and cannot survive in newer woods. If an ancient woodland is destroyed, planting new trees elsewhere does not recreate what is lost.

Horne Wood, along with other woodlands, adjacent to agricultural land provides vital sanctuary, not only for birds, but also for mammals such as hare, badger and at least 3 species of deer. Hare and deer like to spend time

out in the open, but if alerted to potential danger, they will quickly revert to woodland cover. There is evidence of frequent heavy 2-way animal traffic, all around the margins of Horne Wood, although the casual Walker might never see the creatures themselves. Owing to construction activity, restrictive infrastructure and habitat denial, this important feature of woodland biodiversity would be severely impacted in all phases of the development at Greenhill Site F.

2. **Ancient woodlands support a rich web of life including:**

Specialist plants, such as bluebells, wood anemone, wild garlic, and dogs mercury, wood spurge, lily of the valley, violet hellebore, Greater wood rush and columbine, fungi and lichens, many of which are rare and highly sensitive to disturbance. Invertebrates, including saproxylic species that depend on decaying wood, birds and mammals, such as bats, dormice, woodpeckers, tree creepers, owls and raptors. This biodiversity exists not just in the trees, but in the woodland floor, deadwood, tree canopies, soils and root systems, which has built up over centuries of tree cover.

3. **Complex soil ecosystems**

Ancient woodland soils are incredibly valuable, as they contain established mycorrhizal fungal networks that help trees exchange nutrient and water. The soil structure is stable, rich in organic matter and often undisturbed for generations. These soils store large amounts of carbon, helping to regulate the climate. Once damaged, or destroyed, the soil systems can take centuries to recover, if they recover at all. Unlike managed plantations, ancient woodlands, typically contain, fallen trees, rotting stumps and standing deadwood, all of which support fungi, beetles, flies, mosses and lichens, which in turn, support birds, bats and small mammals. Many rare and threatened species rely on deadwood habitats. Because they have existed for so long, ancient woodlands, have stable microclimates, more resilient to droughts, pests and climate extremes. Ancient woodlands show ecosystems functioning with minimal human interference. They are living laboratories for understanding how woodland ecosystems should function.

4. **Edge effects and buffers.**

Protection of the woodlands matters, because, from a habitat and ecological standpoint, Woodlands cannot be recreated or offset and loss leads to permanent biodiversity decline, hence protecting them is an absolute necessity. Development next or close to ancient woodland is detrimental through edge effects. Any changes to light, temperature and humidity, close to the woodland edge, can dry out soils, kill shade loving plants and encourage invasive species. These effects can penetrate up to 10 metres into the woods. The 'Woodland Trust' emphasise the importance of edge effects and their guidelines for buffer zones are set at **50 metres**.

Greenhill Solar state that temporary haul roads will run alongside the Cable Route Corrider, in this the Western edge of Sywell woods, which encroaches on to the privately owned airfield. They have confirmed that 'woodland buffers' would **not** be applied in this area. (PD -011talks of encroachment into the airfield). APP 056 states that a 15 metre buffer has been applied to all Ancient woodlands and that no construction phase impacts to Ancient Woodland are anticipated.

Woodlands buffers must be applied to this western edge of this ancient woodland. 15 metres is not an acceptable minimum. APP-056 has subsequently increased the buffer size to 30 m and is supported by the Tree Constraints Plan (APP -470, APP-500).

Why have Greenhill Solar not included woodland buffers on the Western Edge of the Sywell woods on this the airfield site? Do they have no agreement in place with the airfield owner?

5. **National Planning Policy Framework.**

Policies recognise that Ancient Woodland is an irreplaceable habitat. Development resulting in the loss or deterioration of irreplaceable habitats (such as Ancient Woodland and ancient trees) should be refused. This applies, not only to direct loss, but also to deterioration which explicitly includes indirect impacts from adjacent development. (pollution, hydrology, lighting, trampling, fragmentation, noise and light spill)

Deterioration explicitly includes indirect impacts, even where development is outside woodland boundaries.

Natural England, and Forestry Commission (material consideration in planning decision) “you should refuse planning permission if development will result in the loss or deterioration of Ancient Woodland and veteran trees“

All three of these Ancient Woodland areas Sywell Woods, Horne Wood and Cold Oak Copse represent irreplaceable habitats and harm includes indirect impacts from adjacent developments.

Mitigation cannot justify harm.

6. **Potential harm and damage to Sywell Wood from the proposed BESS installation in area ‘C’.**

This proposed option for Bess installation is **less than** 30 metres from the southernmost edge of Sywell Wood. The boundary touches the hedge, alongside the stream ‘Sywell Bottom’, which feeds directly into Sywell reservoir, an important wildlife and Country Park.

Smoke from a battery fire, could have a significant and long lasting effect on the nearby Sywell Woods. Ancient woodlands are especially vulnerable because they have developed over centuries with relatively stable conditions.

6a. Damage to trees and plants.

Leaf injury caused by smoke containing pollutants like ozone, nitrogen oxides and sulphur compounds, can reduce photosynthesis, stunt growth and weaken mature trees. Seedling loss can occur: young trees, flora and fauna are particularly sensitive and may fail to establish.

6b. Soil and Fungal impacts.

Disruption of soil chemistry easily occurs, leading to changes of soil pH and nutrient balance. Harm to mycorrhizal fungi, weakens tree growth. Reduced decomposition, changes to microbes and invertebrates, and slow nutrient cycling are all consequences.

6c. Effects on Wildlife

Respiratory stress to mammals, birds and insects can occur. Habitat degradation from smoke can kill lichens and mosses, that insects depend on, affecting the wider food web. Displacement, forces animals to abandon territory.

6d. Lichens and Mosses (key ancient woodland indicators)

Lichens are extremely sensitive to air pollution and are often among the first organisms to decline. Their loss is a strong indicator of declining air quality.

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7. Dangers from BESS C:

Grid Scale Battery Storage (large facilities) - as BESS C is proposed to be, will total of 92 containers full of Lithium-Ion batteries, combined with a huge substation. These are the large energy storage systems, whose fires typically produce significant amounts of smoke.

Documented grid scale storage facility fires are currently recorded as between 60 -90 globally since 2011. Recently documented BESS incidents 2018-2022 are currently 50 worldwide.

New research from global business insurer QBE, reveals UK fire services faced a fire involving a solar facility, almost once every 2 days in 2024, marking a 60% increase in the past 2 years (2022-2024). Data collected from QBE from Freedom of Information (FOI) requests to UK fire services in August 2025 also reveals fires are rising faster than the rate of installations. (There are currently 1336 operational Solar farms in the UK). Most large BESS fires create substantial amounts of smoke because lithium ion thermal runaway, produces dense toxic fumes. Wind direction is unpredictable and could easily be blowing the smoke from a BESS fire in any direction.

If, in the case of BESS C, the wind was blowing due West, it would be catastrophic for this Ancient Woodland at Sywell. If the wind is coming from the North, then Beckworth Emporium, a large and popular retail gardening and dining outlet, averaging over 1000 visitors per day (less than 500m away from the BESS), will be subsumed by toxic fumes and gases, and a likely tragedy will unfold. Mears Ashby, less than 1km would also be significantly affected.

There is no documented evidence on how many millions of gallons of water would be needed to put out a BESS fire, as they are all different. How many litres of contaminated water will be contained, how many litres of contaminated water will escape the containment area.

Finally, when the Fire Service reach the site and attempt to put out the fire, and the thousand of gallons of contaminated water escape from the containment area, (which they will, due to its limited capacity), this contaminated water will then drain down the natural slope into the adjacent brook (Sywell Bottom) and on into Sywell Reservoir, now known as Sywell Country Park.

Sywell Country Park is a valued open water swimming facility, a wildlife haven and one of the top Tench fisheries in the Country. Contamination of this facility would be a major disaster.

This is the wrong proposal in the wrong place, initiated by developers who seem to care little about ruining our beautiful countryside, contaminating the local area, devastating ancient woodland and destroying people's enjoyment of the open spaces and the beautiful heritage in this part of Northamptonshire.

Nick Frampton

Stop Greenhill Solar.