Address: Ballydaniel, Lackaroe, Youghal, Co. Cork.
Date: 17th October 2026

SUBMISSION / OBSERVATION TO AN COIMISIÚN PLEANÁLA

Proposed Development: Greenhills Renewable Energy Park – 220 kV AIS Substation, Loop-In Grid Connection and Associated Works, Ballyneague, Co. Cork
Applicant: Perigus Energy Ireland Midco Limited
ACP Reference: VA04.324632

1. Executive Summary

I wish to make a formal submission objecting to the proposed 220 kV air-insulated substation, loop-in grid connection and associated infrastructure at Ballyneague, Co. Cork.

My objection is based principally upon the applicant's own planning and environmental documentation.

The proposed development is substantial permanent electricity infrastructure in a rural agricultural landscape. The substation includes up to two 220 kV transformers, extensive switchgear and busbar equipment, two gantries, control buildings, a diesel generator and tank, 18 m lightning masts, a 36 m telecommunications mast, internal roads, lighting and fencing. Its stated footprint is approximately 21,493 m², while the loop-in works additionally require two new steel lattice towers approximately 27–36 m high and approximately 20 m-high gantries.

Of particular significance, the applicant's land and soils assessment expressly states that the effects on land occupied by the substation and associated access infrastructure will be **moderate, adverse and permanent**. It further confirms that, unlike the solar farm and BESS elements, the 220 kV substation and loop-in grid connection are intended to remain in place and be handed over to EirGrid following the operational life of the wider energy development.

The applicant also treats the solar farm, BESS and 220 kV infrastructure collectively as the "Proposed Development" for the purposes of its Planning and Environmental Report, notwithstanding the use of separate consenting processes.

I therefore submit that the Commission should examine the proposed substation in the context of the entire Greenhills development and should give particular consideration to cumulative environmental effects, permanent land-use change, visual impact, drainage and downstream flooding, water quality and European sites, traffic impacts, operational noise and archaeological protection.

For the reasons below, I respectfully request that permission be refused in its current form.

2. The Substation Is Functionally Part of a Much Larger Development

The 220 kV substation is not an independent development arising in isolation. Its purpose is to receive electricity from the proposed Greenhills solar arrays and connect that development to the existing Knockraha–Cullenagh 220 kV transmission line.

The applicant's own Planning and Environmental Report identifies three principal components: approximately 323 hectares of solar development, a BESS comprising 56 battery units, and the proposed 220 kV AIS substation and grid connection. Crucially, the report then states that the term **"Proposed Development" collectively describes the above three components**.

While the solar farm and BESS are subject to the Cork County Council process and the substation/grid connection is subject to a separate Strategic Infrastructure Development process before An Coimisiún Pleanála, the environmental relationship between them does not disappear because separate applications are being made.

The Commission should therefore satisfy itself that it has before it a complete assessment of the cumulative and interacting effects of the entire Greenhills project rather than assessing the substation only as a discrete electrical installation.

This issue is reinforced by the applicant's own EIA Screening Report. That report states that, even where the specified EIA thresholds are not exceeded, matters including the **size, location and design of a development, cumulative effects with other developments, pollution and nuisances, risks to human health and the environmental sensitivity of the geographical area** require examination.

In my view, particular scrutiny is required because construction of the solar farm, BESS, access infrastructure, cabling and substation is intended to overlap substantially rather than occur as completely separate projects.

3. Scale and Permanent Change of Rural Agricultural Land

The size of the proposed electrical infrastructure should not be understated.

The substation is proposed in Ballyneague approximately 6.5 km north of Killeagh and would contain an EirGrid control building, an IPP control building, welfare facilities, diesel generator and tank, space for future electrical equipment, up to two 220 kV transformers, surge arrestors, disconnectors, current/voltage transformers, circuit breakers, busbars, gantries, earthing equipment, internal cabling, lighting, fencing, internal roads and storage containers.

The documentation identifies an IPP area of approximately 143.6 m × 51 m and an EirGrid area of approximately 132 m × 116 m. It also proposes a 36 m telecom mast, 18 m lightning protection masts and approximately 2.6 m palisade fencing.

The stated footprint of the 220 kV AIS substation on the cut-and-fill area is approximately **21,493 m²**.

The loop-in infrastructure is also substantial. Two new steel lattice strain towers approximately **27–36 metres high** are proposed beneath the existing transmission corridor. An existing transmission tower, Mast 196, would be dismantled, and two approximately 20 m-high gantries would connect the transmission circuit into the new substation.

This is therefore major permanent infrastructure rather than a minor ancillary component of a solar farm.

The applicant's land assessment is particularly significant. It concludes that:

"For the lands occupied by the substation and new access track and the upgraded existing access tracks the effect will be moderate, adverse and permanent."

The same assessment records excavations of up to approximately 3.6 m at the substation; approximately 25,013 m³ of cut-and-fill associated with the substation and BESS area; and approximately 9,320 m³ of imported stone to cap the substation area.

The permanent character of the development becomes even clearer at decommissioning. While the solar and battery infrastructure is proposed to be removed or restored following its operational life, the applicant states that the **Greenhills 220 kV AIS substation and loop-in grid connection will remain in situ and be handed over to EirGrid**, resulting in permanent land-use change.

The Commission should therefore assess the substation as permanent infrastructure whose environmental and landscape consequences extend beyond the stated operating life of the solar development that gives rise to its construction.

4. Landscape and Visual Effects

The proposed substation would introduce major industrial electrical infrastructure into an existing rural landscape.

This includes towers up to 36 m high, a 36 m telecom mast, 18 m lightning masts, approximately 20 m gantries, control buildings, transformer equipment, busbars, fencing and lighting.

The applicant's Landscape and Visual Impact Assessment relies substantially on existing hedgerows, supplementary hedgerow planting and new woodland/thicket planting to reduce views of the development.

However, landscape mitigation through planting cannot be treated as equivalent to avoiding an impact at source. New planting requires time to establish, may not achieve its intended height or density in every location and requires long-term management and replacement.

The LVIA itself identifies adverse effects of a notable magnitude. It assesses construction-stage landscape effects at the site scale as **Substantial-Moderate / Negative**, with Moderate effects in the immediate vicinity. Construction-stage visual impacts in the immediate surroundings are likewise assessed as being capable of reaching **Substantial-Moderate / Negative**.

Its final assessment states that residual visual effects can reach **Substantial-Moderate**, although the consultant does not classify the overall development as producing significant residual effects under its methodology.

That professional conclusion should be considered alongside the underlying findings rather than treated as ending the matter.

A permanent 36 m telecommunications mast and new 27–36 m transmission towers cannot realistically be screened in the same manner as low-level solar panels.

I therefore request that the Commission critically examine the landscape assessment and the effectiveness of proposed screening at the time the development becomes operational, rather than relying principally upon the anticipated future maturity of planting.

5. Drainage, Surface Water and Downstream Flooding

The applicant acknowledges that the development site is associated with an extensive drainage network and that downstream flooding is already relevant to the receiving environment.

The hydrology assessment states that, while the site itself does not fall within mapped low, medium or high probability flood zones, the **Tourig_020 and Glendine_010 watercourses adjacent to the site have mapped areas of flooding**, and it records that local knowledge has identified flooding within the same river sub-basin. The report concludes that there is flooding downstream and that surface-water mitigation is consequently required.

That is an important existing sensitivity.

The assessment also calculates that in a 1-in-100-year rainfall scenario there would be a net increase in runoff associated with the development of approximately **0.016–0.185 m^3/s**, depending upon the relevant micro-catchment, representing up to approximately 4.15% of baseline runoff in the relevant micro-catchment. It acknowledges that, without mitigation, increased runoff could contribute to

flooding downstream and that poorly designed drainage could create new preferential drainage pathways, erosion and soil degradation.

The substation involves extensive hardstanding, cut-and-fill operations, roads and significant modification of the existing land surface.

Given acknowledged downstream flooding, the Commission should be satisfied through independent scrutiny that the attenuation and drainage system has adequate capacity not only for normal rainfall but for severe rainfall and future climate conditions, and that the design does not transfer flood risk downstream.

6. Water Quality, European Sites and Ecological Connectivity

The applicant's documents establish a direct hydrological pathway between the development and environmentally sensitive downstream receptors.

The NIS identifies the **Blackwater River (Cork/Waterford) SAC** and the **Blackwater Estuary SPA** as hydrologically connected to the development, with an identified hydrological distance of approximately 3.5 km. Both sites were specifically scoped into the assessment because of that connectivity.

The NIS expressly states that the Blackwater River SAC is connected through the Youghal Park River and Tourig River system.

Likewise, the Blackwater Estuary SPA is stated to have hydrological connectivity through the Youghal Park River and Tourig River approximately 3.5 km downstream.

The report further records that the Lower Blackwater M Estuary/Youghal Harbour downstream of the development has a WFD status of **Moderate** and is classified as **At Risk**, while Youghal Bay is also described as having Moderate status and being At Risk.

The hydrological assessment separately identifies construction-related pollution mechanisms directly relevant to the proposed substation. Concrete pouring and curing would be required and the report acknowledges that cementitious waste can be highly alkaline and adversely affect aquatic ecology. It also identifies potential contamination from hydrocarbons and wastewater.

Without mitigation, the applicant assesses possible effects on surface-water quality as ranging from slight to **significant**, depending upon the scale and nature of an incident.

I acknowledge that the applicant proposes mitigation and reaches conclusions regarding residual effects. My concern is that the effectiveness of those conclusions depends upon the full and continuing implementation of pollution-prevention and drainage measures.

Given the recognised direct hydrological connectivity with the SAC and SPA, these measures should be regarded as essential environmental controls and not merely good-practice commitments.

7. Construction Traffic and Abnormal Loads

The scale and duration of construction traffic are substantial.

The Traffic Impact Assessment anticipates an overall construction period of approximately **21 months**, with HGV and LGV activity at its highest during months 2 to 14.

During the peak construction period, the report estimates an average of approximately **22 HGVs and 70 LGVs visiting the site each day**, while up to approximately 100 workers may be present. The assessment states that a significant proportion of HGV traffic during this period will involve granular-material deliveries and describes the daily distribution as similar to a quarry traffic profile.

The substation also requires two exceptionally large transformer deliveries. The Traffic Impact Assessment states that **two transformers weighing approximately 150 tonnes each** will be delivered from either the Port of Cork or the Port of Waterford, transported via the N25 and R634, and then carried through the development site, crossing the L7829 at site entrances 8 and 9.

A temporary over-run area is proposed at Site Entrance 1 specifically to accommodate these abnormal-load vehicles.

These movements demonstrate that the road impact is not confined to routine construction traffic.

The Commission should ensure that local roads, junctions, structures, verges and drainage systems are capable of safely accommodating both the abnormal loads and the sustained construction traffic, and that responsibility for any damage attributable to construction traffic is clearly assigned.

8. Operational Noise – Tonality and Low-Frequency Uncertainty

The applicant predicts that operational noise criteria will be met at the modelled residential receptors, and I acknowledge that conclusion.

There is, however, an important limitation within the assessment which should be addressed before operation rather than solely after complaints occur.

The Noise and Vibration Impact Assessment identifies transformers at the substation as principal operational noise sources and assigns a sound-power level of approximately **93 dB LWA** to the substation.

The report acknowledges that octave-band information for the equipment was not available, stating that an objective assessment of tonality could therefore not be carried out at the pre-planning stage. It also identifies low-frequency transformer hum and tonality as possible special sound characteristics and proposes that these can be investigated if a complaint arises following construction.

For permanent infrastructure expected to operate continuously, I submit that a complaint-led approach should not be the principal safeguard.

The acoustic characteristics of the actual transformers selected should be established before commissioning, and post-commissioning compliance testing should be carried out at agreed sensitive receptors.

9. Archaeological and Cultural Heritage Protection

The applicant's archaeological assessment demonstrates that archaeological protection remains relevant during construction.

The assessment recommends that **all significant subsurface groundworks**, expressly including the construction of the substation, compound areas, access tracks and off-road cable trenches, should be subject to licensed archaeological monitoring.

If archaeological material is encountered, it proposes cessation of work in the affected area, consultation with the National Monuments Service and Cork County Council, preservation in situ where possible and archaeological excavation where preservation cannot reasonably be achieved.

This is particularly relevant given the depth and extent of excavation and cut-and-fill works proposed for the substation.

The wider archaeological work also identified possible archaeological anomalies within the overall project lands, including possible enclosure and ring-ditch-type features.

Any permission should therefore contain clear, enforceable archaeological requirements rather than leaving their implementation solely to later contractor practice.

10. Dependence on Mitigation Measures

A recurring feature of the applicant's environmental assessments is that several potentially adverse effects are considered acceptable only after mitigation.

This applies particularly to drainage and water quality, construction noise, landscape screening, traffic management and archaeological protection.

There is an important distinction between a predicted impact being intrinsically absent and an impact being predicted not to become significant **provided mitigation performs as intended**.

Given the permanent nature of the substation, I request that the Commission carefully distinguish between those two situations.

Where the applicant's conclusions depend upon mitigation, those measures should be precise, measurable, independently verifiable and enforceable for the period during which they are required.

11. Requested Decision

Having regard to:

the permanent and substantial nature of the proposed 220 kV infrastructure; the approximately 21,493 m² substation footprint; new electrical structures up to approximately 36 m high; permanent agricultural land-use change acknowledged by the applicant; cut-and-fill and excavation requirements; the relationship of the substation to the much larger solar and battery development; acknowledged adverse landscape effects; hydrological connections with the Blackwater River SAC and Blackwater Estuary SPA; existing downstream flood sensitivity; the potential consequences of construction-phase pollution; the scale of construction and abnormal-load traffic; uncertainty regarding tonal and low-frequency transformer noise prior to final equipment selection; and the requirement for continuing archaeological controls, I respectfully request that **An Coimisiún Pleanála refuse permission for the proposed 220 kV AIS substation and loop-in grid connection in its present form**.

In particular, I request that the Commission satisfy itself that the full direct, indirect, cumulative and interacting environmental effects of the Greenhills development have been adequately assessed before any development consent is granted.

12. Conditions Requested in the Event Permission Is Granted

Without prejudice to my request that permission be refused, if the Commission is minded to grant permission, I request that consideration be given to conditions requiring:

- a detailed Construction Environmental Management Plan approved before works commence, incorporating all mitigation relied upon in the environmental assessments;
- independent environmental supervision during major earthworks, concrete works and drainage construction;
- continuous maintenance of pollution-control measures and clearly defined emergency procedures for hydrocarbon, concrete, wastewater or other contaminant releases;
- water-quality monitoring upstream and downstream of the works before, during and for an appropriate period following major construction activities;

- verification of the final drainage and attenuation design, including its performance under extreme rainfall and climate-change scenarios;
- a pre-construction and post-construction condition survey of roads used by construction and abnormal-load traffic, with repair of attributable damage at the developer's expense;
- a detailed Traffic Management Plan governing HGV routes, abnormal loads, delivery times, signage, road cleaning and advance notification of major transformer movements;
- no material extension of the substation compound, addition of major equipment or increase in mast/tower dimensions beyond the permitted development without any further consent required by law;
- submission of final transformer manufacturer octave-band sound data before commissioning, including assessment of tonal and low-frequency characteristics;
- independent post-commissioning noise monitoring at agreed sensitive receptors, with enforceable corrective measures where required;
- minimisation of external lighting to that demonstrably necessary for safety and operation, with lighting directed to reduce unnecessary spill into the surrounding countryside;
- implementation of landscape screening at the earliest practicable stage, with replacement of failed planting and maintenance for the period necessary to achieve the intended screening effect;
- licensed archaeological monitoring of all significant ground disturbance relating to the substation, towers, compounds, access roads and cabling, together with the stop-work and consultation procedures identified by the archaeological assessment;
- strict adherence to all mitigation relied upon in the NIS in light of the acknowledged hydrological connection to the Blackwater River SAC and Blackwater Estuary SPA; and
- an accessible complaints and incident-recording procedure covering construction traffic, noise, drainage, pollution and other environmental matters, with records available to the relevant authorities.

13. Conclusion

The proposed 220 kV substation should not be considered simply as an ancillary structure associated with a temporary renewable-energy project.

The applicant's documentation demonstrates that it is a substantial piece of **permanent national-grid infrastructure** involving significant earthworks, a large compound, tall electrical and telecommunications structures, abnormal-load movements and permanent change from agricultural use.

It is also functionally dependent upon, and environmentally connected with, the much larger Greenhills solar farm and BESS development.

I therefore respectfully request that An Coimisiún Pleanála assess the development on that basis and **refuse permission in its present form**.

Yours faithfully,

Orla Hallihan