Declan Fitzgerald,
18 Ard Caladh,
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P36 PN20
01 November 2026

An Coimisiún Pleanála,
64 Marlborough St,
Rotunda,
Dublin 1,
D01 V902

ACP Reference Number: VA04.324632 / ACP Case Number: ACP-324632-26
Applicant: Perigus Energy Ireland Midco Ltd.
Description of Development: Proposed development of a 220kV Air Insulated Substation (AIS) and Loop-in Grid Connection at Greenhills Solar Farm
Located in the townlands of Ballyneague, Ballydaniel, Knocknagappagh, County Cork

The proposed development will consist of the following:
• Construction of a new 220kV Air Insulated Electricity Substation comprising 2.2 hectares, including an EirGrid compound, and will comprise a single
storey 220kV control building and all associated 220kV electrical infrastructure.
• Construction of new Independent Power Producer (IPP) compound which will comprise of a single storey customer IPP building incorporating a
control room, switch gear room, battery room, battery control room and all associated electrical infrastructure.
• The temporary construction of 2 no high conductor attachment height gantries (total height 20m) to remove 1 no. existing steel lattice tower.
• The provision of 2 no single circuit steel lattice strain towers with accompanying shield wire, 2 no additional overhead line, 2 no. oil-filled step-down
power transformers within bunded enclosures, 2 no. gantries, and all associated 220kV electrical infrastructure to connect to the Knockraha-Cullenagh
220kV overhead line.
• The provision of 2 no. 220kV transformers, associated internal cabling, neutral earthing resistor, busbars and circuit breakers.
• The erection of a 37.5m high lattice support structure carrying antennas and dishes together with associated ground-based equipment all enclosed
in security fencing.
• Temporary construction compound housing a canteen, toilet facilities, office modules, parking facilities and material laydown area.
• Surface water drainage and wastewater drainage services.
• Site reprofiling including cut and fill works.
• Site restoration and landscaping.
• The provision of all associated ancillary site development works including security fencing, external parking, 18m tall lightning protection monopoles,
CCTV, security lighting, provision of new internal site access road with a site entrance off the R634, 4 no. storage containers and a diesel generator
with fuel tank.

Dear Sir / Madam:

I refer to the above planning application and wish to make the following submission in relation to the development.

I respectfully request that ACP rejects this application in its entirety.

Whilst I support the increased use of renewable energy, having studied environmental engineering and spent a considerable amount of my career involved in large-scale energy projects internationally, I cannot support this application due to the concerns I raise through this submission.

To that end, my main concerns regarding Perigus's application centre around it's continual incomplete submission, and material deficiencies included within the submission documentation. In my opinion, the lack of technical rigour applied to the submission documents fails to pass the bar on whether the proposed siteworks are technically feasible.

I note that this planning application is largely similar in substance to two previous applications made to Cork County Council (Application reference number: 25/6876 and 26/2133) related to the solar park and BESS, submitted by 'Orsted Onshore Ireland Midco Ltd.' on 19 December 2025 and Perigus Energy Ireland Midco Ltd on 13 August 2026. As a result, where I reference Orsted in the attached report, it is to be read as 'Perigus Energy Ireland Midco Ltd.' – I understand that the applicant has similarly not changed its naming convention consistently throughout this submission to ACP and nor do I.

I provide my detailed comments in the attached report.

Best regards,

Declan Fitzgerald

Observation to An Coimisiun Pleanala

Project: Greenhills Substation and Grid Connection

ACP Reference Number: VA04.324632

ACP Case Number: ACP-324632-26

Date: 1 November 2026

1. EXECUTIVE SUMMARY

Invalid application

1.1.1 As shown Section 2, the applicants submission should be invalidated due to failings regarding the obligations under Artcile 19 and 23 of the Planning and Development Regulations.

Potential Unregularised Works and Improper Beneficial Use (See Section 5 of this submission)

1.1.2 A significant volume of hedgerow has been removed on the existing landholding, and internal tracks constructed. I have been unable to locate evidence of the required approvals being sought prior to these works taking place, or those works being subsequently regularised.

1.1.3 Orsted now seeks to benefit from these potentially unregularised works by presenting the existing 7km of internal tracks as "*existing infrastructure*".

1.1.4 Under DAFM's EIA Agriculture Regulations, removal of greater than 4 km of field boundaries requires a mandatory EIA.[1]

1.1.5 Unless / until these works are regularised, the application remains incomplete.

Requirement for a full EIA (See Section 5 of this submission)

1.1.6 This is the largest solar park project in Ireland.

1.1.7 A full EIA is mandatory because:

(a) EU guidance explicitly includes large solar farms under Annex II.[2]

(b) 323 ha of the site will receive permanent drainage works, exceeding EIA thresholds by a wide margin (DAFM guidance states an EIA is mandatory for drainage works in a land area exceeding 50 ha)[3].

(c) A separate SID-class 220 kV substation is artificially split off, masking the true project scale.

(d) Orsted's 'screening out' of a requirement for a full EIA is flawed and based on potentially inadequate technical basis regarding Orsted's Flood Risk Assessment and Glint and Glare Impact Assessment. The precautionary principle has not been applied.

[1] https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/services/environmental-impact-assessment-agriculture-regulations/ and S.I. No. 456 of 2011, 'EUROPEAN COMMUNITIES (ENVIRONMENTAL IMPACT ASSESSMENT) (AGRICULTURE) REGULATIONS 2011', Part B (as shown in page 18)

[2] 'Interpretation of definitions of project categories of annex I and II of the EIA Directive', pdf page 52 of 74 (page numbered 51)

[3] https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/services/environmental-impact-assessment-agriculture-regulations/ and S.I. No. 456 of 2011, 'EUROPEAN COMMUNITIES (ENVIRONMENTAL IMPACT ASSESSMENT) (AGRICULTURE) REGULATIONS 2011', Part B (as shown in page 18)

(e) The project clearly exceeds the sub-threshold requirements for a full EIA.

1.1.8 ACP are effectively being asked to set a precedent which could be used as an instrument to negate the requirement for an EIA across the entire solar industry (whereby all other solar farms less than 323 hectares will cite this case). This places an unfair burden on Cork County Council and ACP.

Technical Documentation Is Not Reliable (See Section 6 and 7 of this submission)

1.1.9 The technical documents submitted by Orsted contains significant and numerous errors, omissions, contradictions, and unverified assumptions.

1.1.10 In the later sections of this submission, I provide further detail and substantiation to each of the immediately following points.

1.1.11 I include the following key points regarding a number of major technical deficiencies:

Drainage and Flood Risk

(a) The drainage plan is decentralised, complex, lacks maintenance planning, is unsupported by site-wide infiltration testing, uses incorrect rainfall data, and relies on speculative assumptions (e.g., “well-maintained grass” is a critical design component).

(b) The Flood Risk Assessment is a Stage 2 desktop study only, despite clear evidence of:

(i) historic flooding within and adjacent to the site;

(ii) landslides and road failures in the catchment area; and

(iii) highly vulnerable infrastructure (BESS, substation, transformers).

(c) The FRA concludes “no risk” of flooding, which is unsupported and contrary to evidence (including photographic evidence supplied in this submission). The conclusion is dependent on mitigation at screening stage (contrary to EU case law), contains contradictions in the site runoff assumptions (4.15% vs 6.37%) and is wholly inadequate to support this application. A Stage 3 and 4 assessment is required.

Site Investigation Report

(d) Insufficient site investigation works have been undertaken to inform the drainage design, LSGHH studies and Flood Risk Assessment.

(e) Only two trial pits were completed within the solar park area (both in the BESS compound). No percolation tests (P/T tests) were conducted within the solar array area.

(f) This level of investigation would be insufficient for a single rural dwelling, let alone a 323-ha energy installation.

(g) The report fails to assess the likelihood of a perched water table and recommends further investigation after construction — an unacceptable approach.

Landscape & Visual Impact Assessment

(h) Cork County Council previously requested a cumulative impact assessment, considering the nearby windfarm development.

(i) The revised assessment does not seek to meaningfully engage with the requests sought by Cork County Council. The revised submission assessment is not supported by cumulative photomontages, cumulative ZTV mapping, cumulative viewpoint analysis or any visual modelling of the consent-ed 150m wind turbines.

(j) The cumulative assessment provided is largely narrative in nature and is not supported by the visual or analytical evidence that would normally be expected for a development of this scale in a land-scape identified by the Cork County Development Plan as having High Landscape Sensitivity.

Glint and Glare Impact Assessment

(k) The assessment is not based on any recognised standard, under-scopes its study area (1 km impact boundary, despite modelling showing impacts up to 3.4 km), and downplays serious road-safety risks.

(l) Post-mitigation, 54 dwellings still experience impacts up to 169 days per year, thereby demonstrating that the impacts of the proposal cannot be mitigated.

(m) The report conclusion appears to rely solely on subjective judgment, despite the analysis directly contradicting the “professional judgement” of the report author.

Natura Impact & Appropriate Assessment Deficiencies

(n) The AA Screening and NIS rely on mitigation to rule out Likely Significant Effects, which is unlawful at Stage 1 under People Over Wind and Sweetman.

(o) Baseline surveys (bats, otters, birds) contain acknowledged gaps.

(p) Hydrological links to the Blackwater SAC/SPA and drinking water rivers are inadequately assessed, and cumulative effects are not properly analysed.

Noise Impact Assessment

(q) The Noise Assessment report is based on an incorrect location for the BESS and Substation, thereby rendering the assessment figures as incorrect and unreliable.

(r) Cork County Council previously requested evidence that the tonal penalties should not be applied in the Noise Assessment. Instead of addressing this request, the latest Noise Impact Assessment submission does not provide this evidence and does not under-take an objective assessment of tonality. Without including these penalties, the application would likely breach the limits as set out in the EPA’s ‘Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities’ [*Note Table 1.32 – Receptor ID 1 anticipated to fail*

if tonal penalties applied, with many others borderline prior to application of penalties]

(s) The applicant continues to seek to defer an assessment until after construction (despite CCC's request re tonality) – this is inconsistent the purpose of environmental assessment, which is intended to evaluate environmental effects before consent is granted.

(t) The assessment remains technically deficient and incomplete because no objective tonal assessment has been undertaken and no evidential basis has been provided upon which tonal penalties can be excluded.

Archaeology and Cultural Heritage Impact Assessment

(u) The geophysical survey supporting the archaeology survey is incomplete. It omits 42.85 hectares of the proposed development. Where four potential archaeological sites were identified on surveyed lands, further investigations were not undertaken despite Cork County Council stating that the geophysical survey was the "minimum" required, and the applicants own consultants recommending additional test trenches.

(v) Large sections of the redline boundary where the substation is proposed to be located were excluded from the geophysical survey, with little / no justification provided by the applicant for this.

(w) The applicant is continuing to seek that investigations should be considered as conditions within any grant of permission, rather than providing the information to ACP so that it can make an informed decision at planning stage.

1.1.12 Due to the technical deficiencies listed above, these assessments cannot be relied upon as a basis for granting permission for a national-scale energy project.

Undermining of public confidence and trust (See Section 6.3 of this submission)

1.1.13 Orsted's community engagement was selective, inconsistent, and, at times, openly dismissive of local concerns.

1.1.14 Residents were mischaracterised as "*objectors*" months before any application existed.

1.1.15 This has eroded public trust to a degree that cannot be ignored in any assessment.

Conclusion

1.1.16 The application presented is incomplete and materially deficient in a number of critical areas.

1.1.17 In summary, the application is:

- **Incomplete** [CCC's requests for information regarding Geophysical Surveys, Landscape and Visual impact Assessments, and Noise Assessments have not been materially addressed by the applicant]
- **Procedurally invalid** [site notices and Article 23 deficiencies]
- **Legally unsound** [mandatory EIA triggers ignored]
- **Technically unreliable** [material deficiencies in the FRA, drainage, site investigations, and glint & glare submissions, rendering many as unreliable]
- **Non-compliant with national and EU planning law**

1.1.18 Given the scale, complexity, and risks involved, I respectfully request that ACP invalidate the application or deem it to be incomplete, and if resubmitted, require a full Environmental Impact Assessment before any determination.

1.1.19 If ACP do not invalidate the application, I request permission be refused.

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY 8
2. INCOMPLETE APPLICATION ..... **ERROR! BOOKMARK NOT DEFINED.**
3. INVALID APPLICATION ..... **ERROR! BOOKMARK NOT DEFINED.**
4. LANDS UNDER WASTE-MANAGEMENT INVESTIGATION **ERROR! BOOKMARK NOT DEFINED.**
5. POTENTIAL UNREGULARISED WORKS AND IMPROPER BENEFICIAL USE 14
6. REVIEW OF ORSTED'S TECHNICAL SUBMISSION.....20
7. SCREENING FOR ENVIRONMENTAL IMPACT ASSESSMENT (EIA) 21
8. PLANNING AND ENVIRONMENTAL REPORT 33
9. SCREENING FOR APPROPRIATE ASSESSMENT AND NATURA IMPACT STATEMENT 94

2. Invalid Application – Site Notices (Article 19) & Incomplete Information (Article 23)

2.1. Site Notices (Article 19 - Planning and Development Regulations)

2.1.1 The solar park development associated with this application has twice been invalidated by Cork County Council. Amongst the reasons for invalidation was that the applicants did not place sufficient site notices to adequately notify the public because significant sections of the development frontage, access routes and planning boundary were not covered by conspicuously displayed notices.

2.1.2 Before proceeding to comment on the placement of site notices on this application, it is worth first considering 'Kelly v Cork Council ([2013] IEHC 122)', where Mr Justice quashed the planning permission for this development on the grounds that there was non-compliance with Article 19 of the Planning and Development Regulations. This provision requires that, where there are multiple entrances, a notice must be located at each of them.

2.1.3 Article 19 (1) c states:

> *"(c) subject to sub-article (2), securely erected or fixed in a conspicuous position on or near the main entrance to the land or structure concerned from a public road, or* ***where there is more than one entrance from public roads, on or near all such entrances, or on any other part of the land or structure adjoining a public road, so as to be easily visible and legible by persons using the public road,*** *and shall not be obscured or concealed at any time"* [emphasis added]

2.1.4 The applicants drawing shows site notices erected on the proposed new entrance on the R634 and on the Park Road.

(a) It is worth pointing out that the R634 site notice at the location of the **new site entrance** is approximately **1.4km from the substation site**; and

(b) the Park Road site notice at the **location of the underpass** is approximately **800m from the substation site**.

(i) I also note that the applicants drawings have the site notices at the location of an existing underpass beneath the Park Road. However, the drawings themselves do not state whether the access road is beneath the Park Road, or through the Park Road. This is a further basis omission from the applicants submission, which prohibits a proper review of the proposed access route.

(ii) The applicant should immediately be requested to clarify what it seeks permission for in this regard, including whether any material change of use of the underpass (which was granted permission as an agricultural passageway) forms part of this application or a separate one.

2.1.5 There are multiple other existing entrances to the substation site which have not had site notices erected. I include a markup of a selection of these as follows:



2.1.6 The above graphic is not intended to be exhaustive. I have highlighted well-known entrances to the substation site which are locally known. The absence of site notices at these locations means that anyone travelling from the west and south of the proposed development would have passed multiple entrances where site notices would have been expected to be placed.

2.1.7 I note that the **four locations where site notices were omitted above are all closer to the site than the locations that the applicant chose to erect its notices**.

2.1.8 The site notice strategy (whether deliberate or not) failed to adequately notify the public because significant sections of the development frontage, access route or planning boundary were not covered by conspicuously displayed notices.

2.1.9 Based on Article 19 (1) c of the Planning and Development Regulations, and as interpreted through 'Kelly v Cork Council ([2013] IEHC 122), the application is subject to judicial review and likely determination that any granting of permission be quashed / annulled.

2.1.10 Failure of the applicant to erect site notices within 800m of its proposed development, whilst also failing to erect site notices at existing entrances to the same proposed

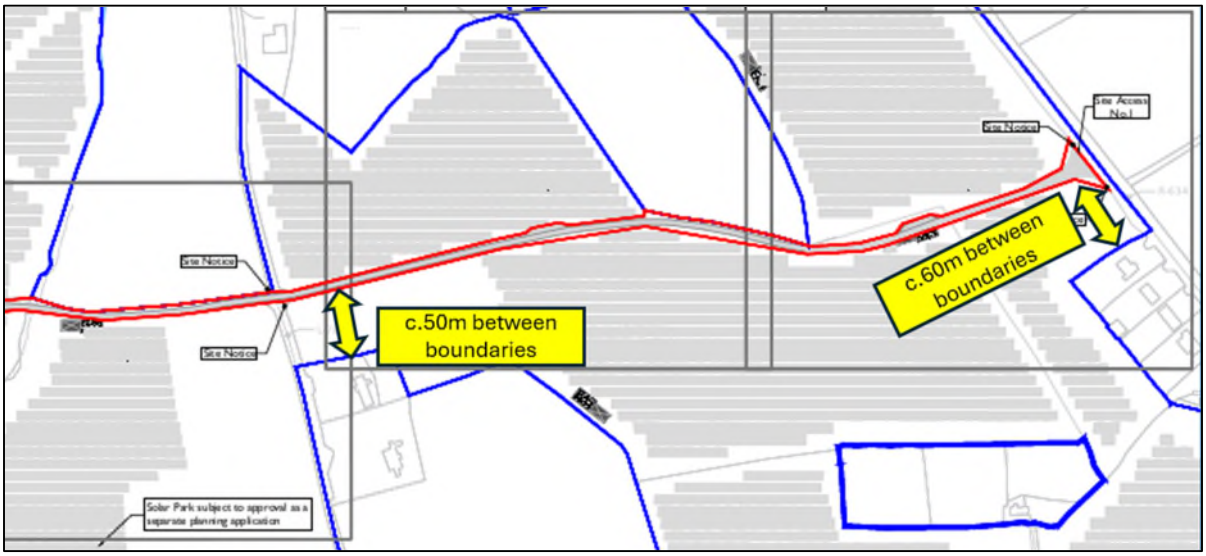
development location means that **ACP is obligated to determine that this application be deemed invalid**.

2.2. Incomplete Information (Article 23 - Planning and Development Regulations)

2.2.1 The applicant has failed to meet its obligations regarding Article 23 of the Planning and Development Regulations

2.2.2 In addition to the failure of the applicant to comply with Article 19 of the Planning and Development Regulations, in the 'Kelly v Cork Council ([2013] IEHC 122)' matter, an additional element of the claimants challenge related to failures of the applicant regarding its obligations under Article 23 of the Planning and Development Regulations. In this respect, Article 23(1)(a) specifies a range of information that must appear in the application documentation, including details of proximate watercourses and public wells. While not considering this issue the determinant factor in his judgment, Kearns J categorised the applicant's omission of a private well and a stream within 100m of the development as "material departures" from Article 23.[4]

(a) It is worth pointing out that the applicants drawings for this submission also fails on its obligations under Article 23 of the Planning and Development Regulations. As shown in the markup of the applicants drawing 300101185-DR-100B, there are multiple other properties within 100m of the applicants boundary, for which the applicant has "material departures" from Article 23 through the omission of percolation areas, private wells, significant tree stands, etc.



2.2.3 In addition to the applicants failure to note basic information such as:

(a) proximity to private wells, percolation areas;

[4] https://duncansenvironment.wordpress.com/2013/04/05/high-court-takes-a-hard-line-about-site-notices/

(b) whether the crossing at the Park Road location is via an underpass or not;

(c) drainage details for the public roads and any mitigation measures in place to avoid localised flooding risk;

2.2.4 The applicant doesn't actually state on its drawings what it means by 'Access Road'. I have been unable to locate any details on the drawings regarding whether they are tarmac, concrete, permeable gravel roads, etc.

2.2.5 Without even this basic level of information on the drawings, I cannot see and review the specific drainage that is proposed for these routes.

2.2.6 The drawings provided are materially deficient and do not provide a sufficient basis for which the application can satisfactorily be reviewed.

2.2.7 I request that **ACP refuse planning on the basis that the applicants drawings do not satisfy the requirements as set out in Article 23 of the Planning and Development Regulations**

3. Potential Unregularised Works and Improper Beneficial Use

3.1.1 As I set out in a later section, my opinion is that this development meets the threshold where a full Environmental Impact Assessment is required and should be completed prior to submitting the next application (on the grounds that Cork County Council must first invalidate this application in line with its own planning guidelines as set out in Section **Error! Reference source not found.**).

3.1.2 A full Environmental Impact Assessment would require the developer to undertake studies regarding site location options and alternatives considered.

3.1.3 However, in the absence of a full siting analysis and justification, we must proceed on the basis of accepting what the developer includes in this application.

3.1.4 Unfortunately, the developer has not included any justification regarding why THIS site was chosen, however, they do make the following arguments which has advanced its site design and justification:

(a) The existing farm tracks have "***dictated***" the location of the solar arrays and associated infrastructure [multiple instances where this is described, see example below]:

*"Existing farm tracks and site entrances were used as far as … The location of solar arrays and associated infrastructure was largely **dictated by existing access tracks**,"*[5] [emphasis added]

and

*"**Utilise internal trackways** to the extent possible for internal cabling between solar arrays and the substation location **thus minimising potential loss of treelines and hedgerows**."*[6] [emphasis added]

(b) The applicant also seeks to advance an argument that the already removed hedgerows (through which many of the tracks above have been constructed) therefore represent a low biodiversity threshold from which its proposed development should be assessed:

*"The **Proposed Development is appropriately located** in an area of high solar irradiance **on agricultural lands of low biodiversity value** and has been designed taking on board the requirements of the CCDP in terms of environmental safeguards and the protection of natural or built heritage features, biodiversity views and prospects"* [7] [emphasis added]

3.1.5 It should be worth noting that the applicant states that there are approximately 7,115m of existing access tracks which are to be upgraded.

3.1.6 For the benefit of those unfamiliar with the area, a massive volume of hedgerow has been removed by the current landholder and often replaced with internal tracks to travel through their farmland.

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[5] PER, Section 11.2.3.1

[6] PER, Section 2.1.1

[7] PER, Table 7.3, Item 'ET 13-4: Solar Farm Development', column 'Project Design & 'Policy Fit'

3.1.7 I have been unable to locate any permissions the current landholder sought prior to the removal of existing / historic hedgerows and construction of 7,115m of internal tracks across their land.

3.1.8 The Department of Agriculture, Food and the Marine (DAFM) states that it is mandatory for farmers to comply with the Environmental Impact Assessment (EIA) Agriculture Regulations if it is proposed to remove **only 4km of field boundaries / hedgerows** (i.e. significantly less than what Orsted seeks to benefit from here).[8]

3.1.9 Whether the current landholder should have sought permission to remove over 7km of hedgerows prior to doing so is for them to demonstrate. The burden of proof rests with the landholder, and no one else in this regard.

3.1.10 Orsted intends on 'upgrading' these tracks. However, if the relevant permissions were not sought for the removal of these hedgerows and installation of these tracks in the first place, then they should not be entitled to beneficial usage of these works via 'upgrade' works, nor should planning be granted on 'enhancement' of these works, unless / until those works are first regularised.

3.1.11 If the removal of field boundaries / hedgerows and installation of internal tracks has not been appropriately regularised, then Orsted's application is incomplete as it is currently stated in its application. Orsted seeks no retention for these works prior to upgrading them, nor does it include an EIA to meet DAFM's requirements (it is debateable whether Orsted is legally entitled to do either of these actions, or if it should be the current landholder).

3.1.12 As part of this submission, I request that ACP refuse planning for this development and notify DAFM that a full EIA may be required for works already completed on this landholding. It is for DAFM / ACP to determine whether remediation works must first take place in order to restore the potentially incorrectly removed hedgerows and remove internal tracks.

3.1.13 ACP should not set a precedent which seeks to reward those who potentially do not comply with the relevant regulations regarding the removal of field boundaries and hedgerows.

[8] https://www.gov.ie/en/department-of-agriculture-food-and-the-marine/services/environmental-impact-assessment-agriculture-regulations/ and S.I. No. 456 of 2011, 'EUROPEAN COMMUNITIES (ENVIRONMENTAL IMPACT ASSESSMENT) (AGRICULTURE) REGULATIONS 2011', Part B (as shown in page 18)

4. Review of Orsted's technical submission

4.1. Introduction

4.1.1 In this section, I set out my observations regarding the technical appendices included within Orsted's submission.

4.1.2 Due to the limited time available, this review is incomplete and not exhaustive. However, in my opinion, it is readily apparent that there are many deficiencies within Orsted's submission, which render the overall planning submission to be materially deficient.

4.1.3 I provide my observations against each of the technical:

(a) Screening for Environmental Impact Assessment (EIA)

(b) PER and associated Appendices

(c) AA Screening and Natura Impact Statement

4.1.4 My observations are included in the following sections.

5. Screening for Environmental Impact Assessment (EIA)

5.1. Introduction

5.1.1 Orsted states that it "*considered that an EIA is not required to be carried out on the Proposed Development, due to the fact that it is a solar farm application, which are not covered in the Regulations.*".[9]

5.1.2 Whilst it is correct that solar farms are not explicitly listed with Annex I or II of the EU EIA Directive, I note that Orsted have not reflected the European Commission's recently published "*Interpretation of definitions of project categories of annex I and II of the EIA Directive*", which clearly states:

> *"while there is no express reference to solar installations, such installations should be considered as falling under"* category 3(a) of Annex II.[10]

5.1.3 Therefore, it is the European Commission's position that this development **does** fall under the requirements umbrella of a full EIA.

5.1.4 Irrespective of the differences in the above Regulation interpretation, I disagree with Orsted's position that an EIA is not required for this proposed development. I list my themes why an EIA is actually required here:

(a) It is required under the Department of Agriculture, Food and the Marine (DAFM) EIA requirements due to the permanent nature of drainage works on agricultural land;

(b) The EIA screening assessment is inadequate as the basis of the technical appendices that Orsted relies upon to 'screen out' a requirement for the EIA are technically unsound, and oftentimes not supported by the analysis / evidence it seeks to rely upon;

(c) Precautionary Principle not applied; and

(d) Sub-threshold projects still require an EIA.

5.1.5 I expand on these three points in the sub-sections that follow.

5.2. Department of Agriculture, Food and the Marine (DAFM) EIA requirements

5.2.1 Orsted's EIA screening report states that the land will not permanently be re-zoned from agricultural use, and that it's 40 year transition to an energy park is only temporary:

> *"The Proposed Development will not lead to significant long-term loss of agricultural land as a resource to future generations."* [11]

[9] EIA Screening Report, Section 5 (pdf page 49 of 49)

[10] 'Interpretation of definitions of project categories of annex I and II of the EIA Directive', pdf page 52 of 74 (page numbered 51)

[11] EIA Screening Report, pdf page 47 of 49

5.2.2 In fact, outside of its EIA screening report, Orsted goes to great lengths to portray the energy park as temporary in nature, with the lands to revert fully to agricultural use, demonstrated (non-exhaustively) as follows:

> *"The change in land use will be temporary and reversible"*[12]
>
> *"At the end of the operational life of the solar farm, the Proposed Development will be decommissioned, and the site returned to agricultural usage"*[13]
>
> *"The use of semi-permeable gravel tracks and geotextile membranes will reduce runoff and allow for reinstatement of land to its original agricultural use following decommissioning."*[14]
>
> *"On decommissioning, all infrastructure will be removed and the site restored to agricultural use, with enhanced hedgerow boundaries remaining intact."*[15]

5.2.3 This appears to be an attempt by Orsted to reduce the concerns of locals that these lands will be 'lost' to agriculture forever.

5.2.4 However, for Orsted to seek to benefit from this argument, it also works in both ways.

5.2.5 Orsted's intention is that this a temporary reclassification of lands from agricultural use to a solar park, and then back to agricultural use. However, not all the construction works associated with this temporary reclassification are temporary. Orsted indicates that the drainage works installed during the construction phase are **not removed** during decommissioning, clearly demonstrated as follows:

> *"Where possible, decommissioning will not interfere with the established drainage system."* [16]
>
> *"Culverts and crossings installed as part of the construction process will not be removed and will remain in-situ."*[17]
>
> *"The drainage system during the decommissioning phase will align with that of the operational phase. With the passage of time, the constructed drainage network will likely become full of deposited sediment and revegetation will naturally occur… the site will therefore revert… to a more natural drainage regime."* [18]

5.2.6 Furthermore, in the main PER, Orsted does not list the drainage works as being removed during the decommissioning works. This omission appears intentional when viewed in the context of what the Decommissioning Plan shows in the extracts above.

5.2.7 In terms of drainage works, Orsted's Flood Risk Assessment indicates that the following assets may be constructed during the works:

> *"To mitigate any net change in hydraulic loading to surface waters during the construction and operational phases of the Development, the following mitigation measures can be utilised where appropriate;*

[12] PER, Appendix N, 'Land, Soils, Hydrology and Hydrogeology', Section 1.4.1.2

[13] PER, Section 6.3

[14] PER, Section 11.2.3

[15] PER, Section 12.4

[16] PER, Appendix J, Decommissioning and Restoration Plan, Section 3.3.1

[17] PER, Appendix J, Decommissioning and Restoration Plan, Section 3.3.1

[18] PER, Appendix J, Decommissioning and Restoration Plan, Section 2.4.3

- *Check dams, dams, other flow restricting infrastructure*
- *Collector drains*
- *Swales*
- *Permanent stilling ponds*
- *Attenuation lagoons*
- *Buffered outfalls to vegetated areas*
- *Controlling dewatering flow/pump rates;*
- *Restricting pumped water discharge directly to drainage or surface water networks.*
- *Offline storage ponds, overland sediment traps,*
- *Riverbank restoration*
- *River morphology and floodplain restoration – removal of embankments, re- meandered river reach"*[19]

5.2.8 In fact, from my review, Orsted's drawings appear to show drainage swales and attenuation buffers throughout the entire development wherever solar arrays are present.

5.2.9 Orsted therefore appears to be installing **permanent** drainage works across the majority of the 323 hectare site on what will essentially be agricultural land, albeit with a temporary use for an energy park.

5.2.10 Therefore, Orsted must not be allowed to benefit both ways from this argument.

5.2.11 The drainage works will ultimately be relied upon in an agricultural setting.

5.2.12 The Department of Agriculture, Food and the Marine (DAFM) regulations in this manner are quite clear. It is mandatory that an EIA be submitted for all drainage projects above 50 hectares as shown in the extract below:[20]

[19] PER, Appendix B, Flood Risk Assessment, Section 4.4.1

[20] S.I. No. 456 of 2011, 'EUROPEAN COMMUNITIES (ENVIRONMENTAL IMPACT ASSESSMENT) (AGRICULTURE) REGULATIONS 2011', Part B (as shown in page 18)

Part B — Thresholds for consent applications under Regulation 9

Type of on-farm Activity		Consent Required Mandatory Environmental Impact Assessment
Restructuring of rural land holdings	Length of field boundary to be removed	Above 4 kilometres
	Re-contouring (within farm-holding)	Above 5 hectares
	Area of lands to be restructured by removal of field boundaries	Above 50 hectares
Commencing to use uncultivated land or semi-natural areas for intensive agriculture		Above 50 hectares
Land drainage works on lands used for agriculture		Above 50 hectares

5.2.13 Therefore, Orsted's installation of permanent drainage works to lands exceeding 50 hectares, which will ultimately be used for agricultural purposes results in a requirement to submit a full EIA in accordance with DAFM regulations.

5.3. Cut and Fill volume meets the threshold for an EIA

5.3.1 The applicant includes the following cut and fill volume information in its application:

(a) 'Cut & Fill Details Substation Compound' [drawings no 300101185-DR-213]:

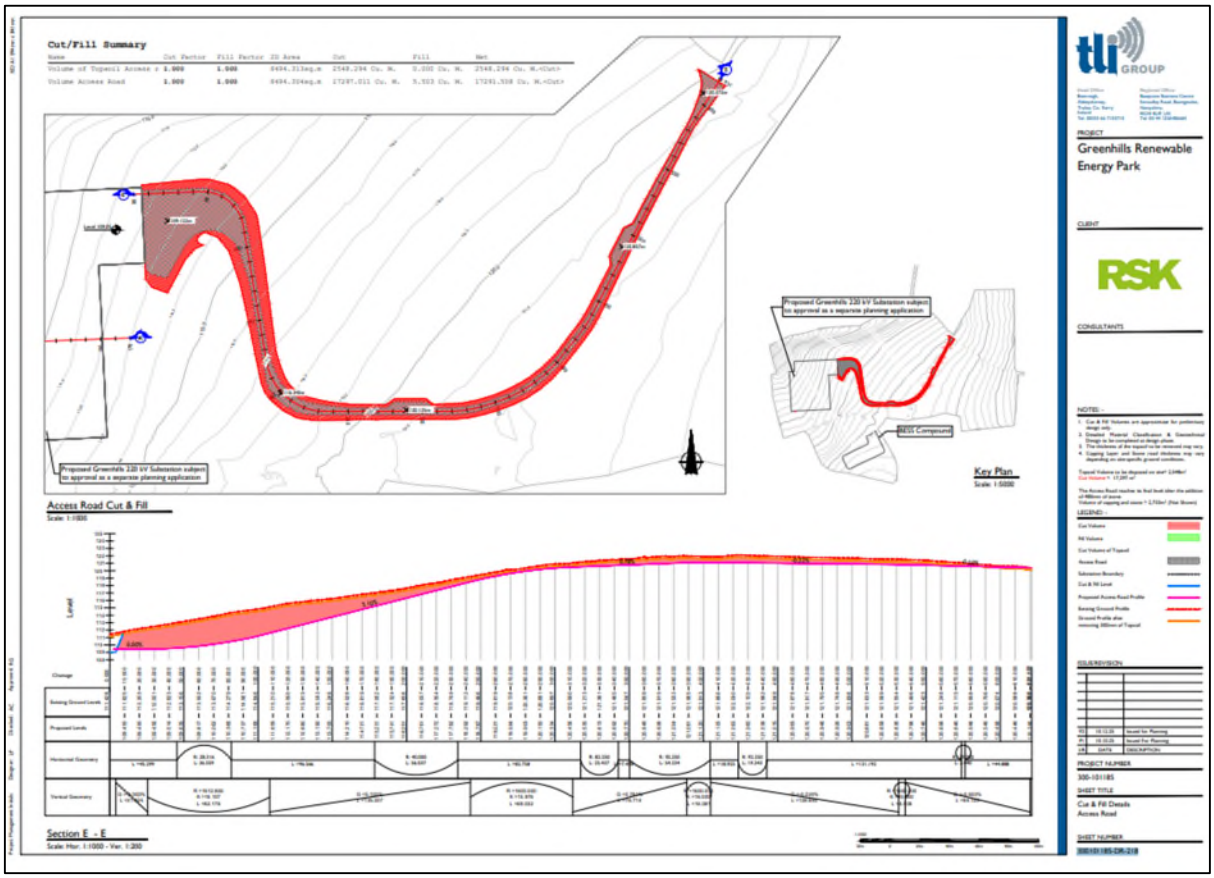
Cut/Fill Summary

Name	Cut Factor	Fill Factor	2D Area	Cut	Fill	Net
Volume Cut & Fill	1.000	1.000	28397.564sq.m	17304.135 Cu. M.	34649.342 Cu. M.	17345.207 Cu. M.<Fill>
Volume Topsoil 300mm	1.000	1.000	28397.210sq.m	8519.163 Cu. M.	0.000 Cu. M.	8519.163 Cu. M.<Cut>

5.3.2 However, the applicant does not appear to have provided no information on the cut and fill volumes for the remainder of the works – particularly the access roads to the substation location (approximately 1.5km of new accessway).

5.3.3 In the solar park application, which was invalidated by CCC, the applicant included some of the access roads cut and fill, for **works forming part of this application**:[21]

[21] CCC application number: 26/2133 'Cut & Fill Details Access Road', drawing number 300101185-DR-218



5.3.4 As shown on the drawing above, the cut and fill is shown as:

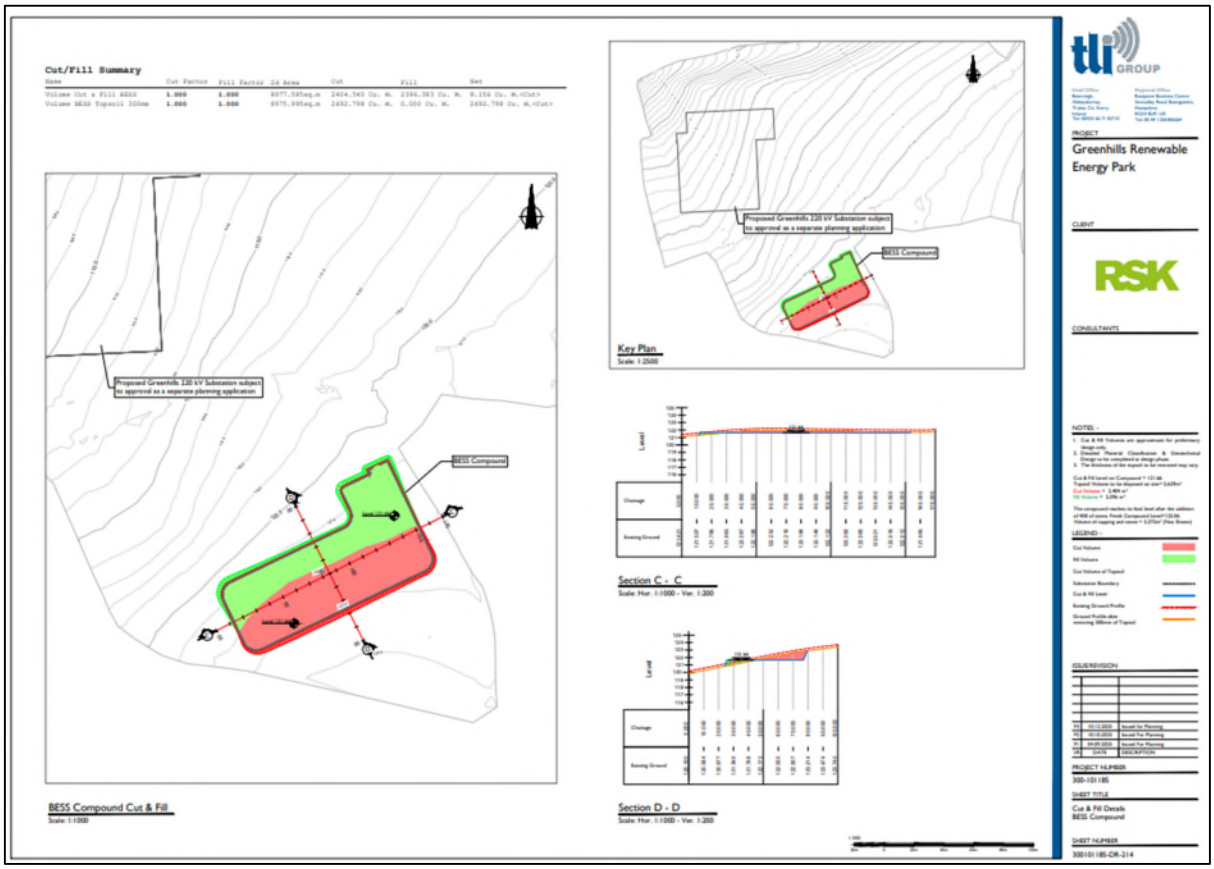
Cut/Fill Summary

Name	Cut Factor	Fill Factor	2D Area	Cut	Fill	Net
Volume of Topsoil Access r	1.000	1.000	8494.313sq.m	2548.294 Cu. M.	0.000 Cu. M.	2548.294 Cu. M.<Cut>
Volume Access Road	1.000	1.000	8494.304sq.m	17297.011 Cu. M.	5.503 Cu. M.	17291.508 Cu. M.<Cut>

5.3.5 Note that this only covers a portion of the access roadways included in this application, and does not provide ACP with all the cut and fill volumes it requires to understand the full extent proposed by the applicant.

5.3.6 In addition, there is also cut and fill associated with the BESS compound, which the applicant similarly does not include in this application – this was submitted as part of the now invalidated solar park application:[22]

[22] CCC application number: 26/2133, Cut & Fill Details BESS Compound [drawing number 300101185-DR-214]



5.3.7 This drawing shows the following cut and fill volumes:

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Volume Cut & Fill BESS	1.000	1.000	8977.585sq.m	2404.540 Cu. M.	2396.383 Cu. M.	8.156 Cu. M.<Cut>
Volume BESS Topsoil 300mm	1.000	1.000	8975.995sq.m	2692.798 Cu. M.	0.000 Cu. M.	2692.798 Cu. M.<Cut>

5.3.8 Taken cumulatively, the volumes of cut and fill shown on these drawings, which are not the total of what is proposed, demonstrates that there is significant contouring across the project.

5.3.9 This contouring will be permanent and is not temporary.

5.3.10 The contouring works alone require a full EIA report.

5.4. Inadequate technical basis relied upon in the EIA screening

5.4.1 As I set out later in my observations, there are material deficiencies within the following technical appendices, which renders a 'screening out' for an EIA unreliable, most notably:

(a) **Flood Risk Assessment** – see my detailed comment in Section 6.7. Particularly the deficiencies around a failure by Orsted to recognise that there is a history of repeated flooding both within the site boundary and immediately adjacent to the

redline boundary, which is not reflected in the FRA, rendering it incorrect and deficient.

It is also worth noting that the EIA states "*There is no risk of increasing flood risk on-site and* ***no risk of exacerbating flood risk to downstream receptors****."*[23] *[emphasis added]*

However, this is clearly and directly contradicted in the LSGHH, which states that a 4.15% net increase in surface runoff are identified as having a "*slight to very significant*" [24] impact risk on downstream flooding. To compound matters, the LSGHH (submitted in this application as an unapproved draft document) [25] incorrectly shows 4.15% net increase in surface runoff, whereas the actual analysis indicates it is a 6.37% increase in surface runoff.[26] Mitigation measures are recognised as being required, however, while mitigations *reduce* a risk, by definition, they do not *eliminate* the risk (hence the distinction between risk mitigation and risk avoidance). The risk is therefore not eliminated, it is only reduced through mitigation. Therefore, it is logically and factually incorrect to say that there is "*no risk*". This basic lack of understanding of risk and mitigations renders the unsubstantiated opinions in the EIA as unreliable. I note that modelling of failure of mitigation measures is not considered within the LSGHH, therefore, a risk remains.

Furthermore, the FRA concludes that a detailed design / Stage 3 FRA is not required based on undesigned / unspecified flood mitigation efforts being effective. This contradicts precedence in this matter: People Over Wind & Peter Sweetman v. Coillte Teoranta (Case C-323/17) & Grace v. An Bord Pleanála (Case C-164/17) show that mitigation measures cannot be taken into account in the screening phase; Waddenzee (Case C-127/02) shows that a test of "*reasonable scientific doubt*" means that the design must progress detailed stage and Sweetman v. An Bord Pleanála (C-258/11) shows that where reliance on incomplete information (such as not recognising a history of repeated flooding on and adjacent to the lands in this case) or qualitative judgements are relied upon, the design must proceed to detailed site-specific design.[27]

(b) **Glint and Glare Assessment** - see my detailed comment in Section 6.9. Particularly my comments that the Impact Assessment contains major methodological weaknesses, internal contradictions, unproven assumptions, and acknowledged data limitations. It fails to demonstrate that the proposed solar park will not result in significant nuisance or hazard to residential properties, road users, and the wider public. The conclusions appear to rely solely on the qualitative judgement of the report author, and is directly contradicted by the reports analysis (note above, a full EIA is required, if the supporting technical assessments used to 'screen out' the requirement are based on qualitative judgements).

5.4.2 The EIA screening PDF 7 **uses 106m of field-boundary removal**; PER PDF 75 and CEMP PDF 39 **use 395m**. Some difference may reflect boundary type or scope, but none is explained

[23] EIA Screening Report, Section 5.1.1 (pdf page 48 of 49)

[24] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1.1

[25] Refer to Section 6.6

[26] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Table 4.7

[27] I acknowledge that some of these precedents relate to NIS / Appropriate Assessments. However, the impact of flooding will also impact the study area within the AA, and must so be applied.

at the cited locations. Establish the full directly and cumulatively relevant quantities before assigning a threshold conclusion. These inconsistencies mean that the EIA is not aligned with the supporting documentation and may provide erroneous outputs.

5.4.3 Relying on these inadequate supporting technical documents as a justification for 'screening out' the requirement for a full EIA renders Orsted's conclusion as incorrect and unreliable.

5.4.4 Where a conclusion is reached on an unsound technical basis, then the 'precautionary principle' ought to apply, and a full EIA screening be applied. I expand upon this in the next sub-section.

5.5. Precautionary Principle

5.5.1 Based on the precautionary principle, an EIA is required where there is "*a probability or a risk*" of significant environmental effects. A risk of significant environmental effects exists "*if it cannot be excluded on the basis of objective evidence that the project is likely to have significant effects on the environment*" (C-526/16 Commission v Poland).

5.5.2 The precautionary principle has not been applied based on the technical assessments included by Orsted in it's 'screening out' justification attempt. It has also not been applied where Orsted has omitted to provide a justification, as shown below.

5.5.3 The precautionary principle has failed to be met as:

(a) **Incorrect treatment of cumulative effects**

The nearby Lyrenacarriga Wind Farm (17 turbines) shares access routes and construction windows with the proposed development and is proposed to be constructed in an overlapping construction window.

This applicants dismissal of cumulative effects fails to recognise that as part of Lyrenacarriga Wind Farm development, haul roads intended to be used by this applicant will be closed due to upgrade works; does not consider cumulative construction traffic; does not consider HGV movements; consider cumulative road safety risks; or combined landscape and visual effects.

The applicant has admitted that a separate application for the substation works will proceed via a separate application as a 'Strategic Infrastructure Development'. Incredibly, the applicant in this instance has not even addressed the cumulative impact with its OWN additional project. The substructure works clearly form part of the overall 'project of works' and the omission of the substructure works from the cumulative assessment cannot be rewarded. Harristown Solar Farm (Meath County Council) and Grid Substation (Strategic Infrastructure Development) works required a full EIA which was triggered by the cumulative impact of both the solar array and substation works and the scale and nature of the combined development.

Cumulative impacts of this application together with the substation works and Lyrenacarriga Wind Farm must be assessed through a full EIA.

(b) **Failure to consider reasonable alternatives**

The 2018 EIA Guidelines specify that screening must consider whether alternative siting or layout options could avoid significant environmental effects, reflecting Article 5(1)(d) of Directive 2014/52/EU.

No alternatives evaluation was carried out in the Screening Report — a breach of both Directive and national guidelines.[28]

The guidance says "*Reasonable alternatives may relate to matters such as project design, technology,* ***location, size and scale***".[Emphasis added] Orsted have not satisfied these criteria – it is unclear why a more appropriately sized project which would be more sympathetic with the local surroundings and concerns of residents has not been considered. A full EIA should require Orsted to justify the location, size and scale of the proposed development – satisfying their commercial interests is an insufficient argument.

(c) **Landscape and Visual Impacts Under-Assessed**

Landscape impacts must be evaluated in line with: Schedule 7 criteria relating to landscape sensitivity and cultural heritage[29] and 2018 EIA Guidelines requiring full assessment of landscape character, cumulative change, and visual intrusion.[30]

The industrial appearance of panels, compounds, 36m telecom mast, 18m lightning masts, and security fencing represents a transformation of landscape character.

The report acknowledges "*Moderate*"[31] and ''*Substantial-moderate*"[32] negative impacts yet concludes no significant effects (another apparent 'qualitative judgement') – an internally inconsistent and legally insufficient conclusion.

(d) **BESS Safety and Human Health Risks Not Addressed**

Directive 2014/52/EU requires assessment of risk of major accidents and human health impacts in screening.

The Screening Report includes no assessment of: thermal runaway risk; toxic plume modelling; emergency response capability [or even noting if the local authorities have been consulted with respect their capability regarding incident response]; or worst-case scenarios.

This omission contradicts both Schedule 7 criteria and national guidance on assessment of risk and human health impacts.

To put this more starkly, I include the entirety of Orsted's application related to a fire risk on the project. It is for others to determine if the extent of this consideration

[28] https://assets.gov.ie/static/documents/guidelines-for-planning-authorities-and-an-bord-pleanala-on-carrying-out-environmental.pdf, Section 4.12 onwards

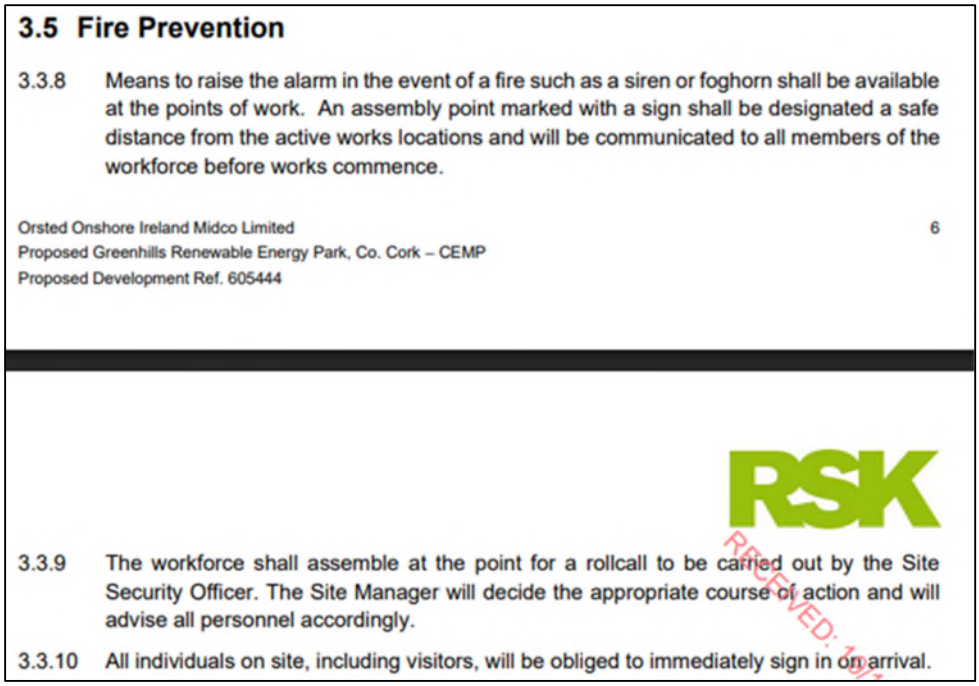
[29] https://www.irishstatutebook.ie/eli/2001/si/600/made/en/print

[30] https://assets.gov.ie/static/documents/guidelines-for-planning-authorities-and-an-bord-pleanala-on-carrying-out-environmental.pdf

[31] EIA, Section 3.9.1.4

[32] EIA, Section 5.1.1

regarding a major risk puts Orsted's submission into an incompetence category or a negligent one. The full extract is as follows:[33]



3.5 Fire Prevention

3.3.8 Means to raise the alarm in the event of a fire such as a siren or foghorn shall be available at the points of work. An assembly point marked with a sign shall be designated a safe distance from the active works locations and will be communicated to all members of the workforce before works commence.

Orsted Onshore Ireland Midco Limited 6
Proposed Greenhills Renewable Energy Park, Co. Cork – CEMP
Proposed Development Ref. 605444

RSK

3.3.9 The workforce shall assemble at the point for a rollcall to be carried out by the Site Security Officer. The Site Manager will decide the appropriate course of action and will advise all personnel accordingly.

3.3.10 All individuals on site, including visitors, will be obliged to immediately sign in on arrival.

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There is no reference to a fire risk strategy within the PER 'Appendix G: Outline Construction Methodology for Proposed Battery Energy Storage System' – despite significant risks associated with these works during construction. Similarly, it appears that Orsted's submission is silent on these risks during the operation phase.

To compound this, (and also demonstrate the fragmented and disconnected nature of Orsted's submission) the LSGHH specifically refers to this risk in its assessment of the operational phase as follows:[34]

"There is a fire risk from the BESS site operations which can result in chemical leaks to underlying soils which could potentially leach into the underlying aquifer.

The unmitigated likely effects of contamination during the operational phase of the proposed development is considered to be localised to ***regional****, direct or indirect, small adverse effect with a significance level of slight to* ***significant****."* [emphasis added]

Details for how these 'unmitigated likely effects' will be mitigated have not been provided in Orsted's submission. The impacts are acknowledged as being regionally significant.

Neither human health nor environmental impacts for this item appear to have been adequately (or at all) considered.

[33] PER, Appendix F – Constructoin and Environmental Managmeent Plan ('CEMP'), Extract from Appendix F to the CEMP, titled 'Emergency Response Plan', Section 3.5.

[34] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.2

This is a staggeringly inadequate submission regarding the management of one of the most significant risks related to this project.

5.5.4 Where significant and realistic doubt exists, ACP requires a more detailed examination of the project through a full and complete EIA. This project clearly exceeds this threshold.

5.5.5 I formally request that ACP require the preparation of a full Environmental Impact Assessment (EIA) Report before any determination is made on this application. This is necessary to ensure full legal compliance; environmental protection; adherence to the precautionary principle; and transparency in the planning process.

5.6. Sub-Threshold requirements met

5.6.1 In the event that ACP do not agree with any of the sub-section points above, the in my opinion, this project meets the requirement of a sub-threshold project.

5.6.2 Proceeding without an EIA is a breach of EIA Directive 2011/92/EU (as amended by 2014/52/EU). The EPA confirms that Ireland must apply Directive 2011/92/EU as amended by Directive 2014/52/EU, and that **sub-threshold projects** still require EIA where significant effects are likely.[35]

5.6.3 I understand this solar park will be the largest solar park in Ireland, and comparable with some of the largest solar parks on a European scale. The project (including the separate SID application for substation works) covers 323 hectares, includes a 220kV substation, 56-unit BESS, 11 access points, and extensive cabling and cut-and-fill, it is **unquestionably** a project "*likely to have significant environmental effects*" under Article 4(5) of the Directive.

5.6.4 On fire risk alone, Orsted admits that the project contains regionally significant impacts, for which no mitigation appears to have been identified or provided.

5.6.5 Given that this is the largest solar park in Ireland, ACP are effectively being asked to set a legal precedent which could be used as an instrument to negate the requirement for an EIA across the entire solar industry (whereby all other solar farms less than 323 hectares will cite this case). This places an unfair burden on ACP.

5.6.6 There are multiple examples of solar park projects being required to submit an EIA, which had far less of an impact than this project (for example Harristown Solar Farm).

5.7. Conclusion regarding the EIA requirements

5.7.1 Where significant and realistic doubt exists, ACP requires a more detailed examination of the project through a full and complete EIA.

5.7.2 An EIA is clearly required on this project because:

[35] https://www.epa.ie/our-services/monitoring--assessment/assessment/environmental-impact-assessment/

(a) The removal of the existing hedgerows and installation of internal tracks may potentially have triggered a mandatory EIA to comply with DAFM regulations (which Orsted now seeks beneficial use of) [See Section 2 of this submission];

(b) The installation of permanent drainage works above 50 hectares requires a mandatory full EIA under DAFM regulations. Note that the change to a solar park is temporary in nature, with Orsted claiming that the land will revert to agricultural use in its permanent case – therefore the permanent works (which is what the drainage works are) must be assessed in the context of the ultimate permanent land use;

(c) Orsted's position that an EIA is not required does not reflect the latest position of the European Commission regarding the intention for solar projects to be assessed under category 3(a) of Annex II[36];

(d) Orsted's 'screening out' of a requirement for a full EIA is flawed and based on potentially inadequate technical basis regarding Orsted's Flood Risk Assessment; and Glint and Glare Impact Assessment;

(e) Orsted abandons the 'precautionary principle' approach and may therefore be falling to comply with legal obligations set out under Irish and EU environmental law. Orsted does not adequately assess cumulative impacts with other projects (including its own substation works and nearby Lyrenacarriga Wind Farm project); fails to demonstrate it considered reasonable alternatives (including for location, size or scale); under assesses the landscape and visual impacts; and does not address safety and human health considerations with respect to fire risk; and

(f) The project clearly exceeds the sub-threshold requirements for a full EIA.

5.7.3 This project clearly exceeds the threshold requiring a full EIA.

5.7.4 I formally request that ACP require the preparation of a full Environmental Impact Assessment (EIA) Report before any determination is made on this application.

5.7.5 This is necessary to ensure full legal compliance; environmental protection; adherence to the precautionary principle; and transparency in the planning process.

[36] See Section 5.1 of this submission

6. Planning and Environmental Report

6.1. Introduction

6.1.1 In this section, I provide my observations regarding the technical submissions included within the PER and supporting appendices.

6.1.2 I also include my comments on the Natura Impact Study in this section. Whilst the NIS isn't directly appended to the PER, it is referenced throughout the PER and supporting appendices, and forms part of Orsted's overall technical submission.

6.1.3 I note that contrary to generally accepted guidance regarding effective public consultations, Orsted did not share details of many of these key assessments (such as Landscape / Visual Impact studies, Glint and Glare studies, etc) with the public prior to submitting them as part of its planning application.

(a) I provide more details regarding the deficiencies within my section related to the public consultation appendix (PER Appendix A)

6.1.4 As a result, the public are requested to familiarise itself with a staggeringly large (and oftentimes confusing and poorly articulated) series of fragmented documents. This has caused much confusion to the general public and severely limited its ability to constructively participate in the overall project design development / planning process ('planning' in this sense being to input in the project scope prior to Orsted proceeding to submitting its planning application).

6.1.5 These documents were also submitted by Orsted in the lead up to Christmas. Submitting this application immediately before the holidays has narrowed the window people had for familiarising themselves with and reviewing the documentation. It is not for me to say whether this is intentional on Orsted's behalf.

6.1.6 As a result, my review of the documentation is somewhat limited, and the ability of most people to comment has also been severely limited.

6.1.7 Fortunately, as I explained above, ACP is obligated to invalidate this planning submission (as set out in Section **Error! Reference source not found.**). I hope to therefore provide a more thorough review during Orsted's next submission.

6.1.8 Notwithstanding this issue, I provide my comments against these technical submissions in the following sub-sections, which, given time constraints, the extent of the review contained within this submission is primarily limited to:

(a) PER Appendix A: Summary of Public Consultation and Community Newsletters

(b) PER Appendix B: Drainage Plan

(c) PER Appendix C: Site Investigation Report

(d) PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, and supporting 'Appendix B – Flood Risk Assessment'

(e) PER Appendix O: Landscape & Visual Impact Assessment

(f) PER Appendix Q: Glint and Glare Impact Assessment

(g) PER Appendix R: Archaeology and Cultural Heritage Impact Assessment

(h) PER Appendix S: Noise Assessment

6.2. PER – Main Report

6.2.1 The Planning and Environmental Report (PER) submitted for the proposed Greenhills Renewable Energy Park does not provide a sufficiently consistent, transparent, or technically robust evidence base to allow ACP to carry out a lawful and informed assessment under Section 34 of the Planning and Development Act 2000 (as amended).

6.2.2 Across multiple chapters, and supporting appendices, the PER contains contradictory project parameters, missing quantitative analyses, and methodological gaps in areas such as glint and glare impact, ecology, drainage and flood-risk management, transport assessment, and cumulative effects (see PER Appendices A–H).

6.2.3 Taken together, these deficiencies indicate that the PER fails to demonstrate compliance with relevant planning policy, environmental guidance, and technical standards, and does not meet the level of clarity and evidential completeness required for a project of this scale and sensitivity.

6.2.4 The inconsistencies across chapters—particularly in key design parameters, survey effort, modelling assumptions, mitigation details, and compliance justifications—mean that the planning authority cannot place reliable weight on the conclusions of the submitted assessments.

6.2.5 Accordingly, a precautionary and evidence-led approach requires that ACP refuse permission on the grounds that the application, as currently presented, does not enable a complete, coherent, or technically verifiable evaluation of likely impacts.

6.2.6 The detailed technical shortcomings underpinning this objection—including issues relating to project description inconsistencies, unverified glint and glare impact assessment, insufficient drainage design evidence, incomplete ecological baselines, deficient cumulative assessment scope, unquantified traffic impacts, unsupported claims regarding screening effectiveness, and inadequate assessment of construction scenarios —are set out in the review of the respective appendices that follow.

6.3. PER Appendix A: Summary of Public Consultation and Community Newsletters

6.3.1 In this sub-section, I provide my personal experiences with Orsted's public consultation process including anecdotal evidence based on community discussions, and general observations on Orsted's Appendix A submission.

Personal experience with Orsted's community engagement

6.3.2 I was not contacted by Orsted to engage in its public consultation.

6.3.3 Upon hearing from a neighbour that Orsted had invited them to a 1:1 session to discuss the scheme in more detail, I reached out directly to Aidan Stakelum and Edward Cummins on 5th August 2025 via email.

6.3.4 I received no reply from either. I also rang both numbers provided in the public consultation documents but my calls went unanswered.

6.3.5 I chased both Orsted representatives on 8th August 2025, highlighting that they have not responded and expressing my desire to engage in the public consultation process.

6.3.6 Orsted responded on 27th August 2025 and suggested a call which clashed with my prior calendar commitments. Orsted then said, "*We will finalise a date that suits you after this Wednesday*".[37] [referring to Wednesday 3rd September 2025]

6.3.7 I was therefore extremely frustrated to note that Orsted's consultation document states the following:

> *"Additional face-to-face consultations were held in Inch community centre on **September 3rd. A total of 4 people were met with**. The decrease in number over the 5 weeks of consultations at the community centre **highlights that people were either satisfied with the information available or had no interest in engaging**." [emphasis added]*

6.3.8 This is demonstrably untrue and not a reflection of the actual willingness of the local community to proactively engage in the consultation process. This opportunity was denied to me.

6.3.9 Furthermore, from conversations I've had with locals who did attend the consultation appointments, I have heard multiple instances of wildly different feedback being provided by the Orsted representatives regarding this scheme, including, and not limited to:

(a) A community benefit fund (with different annual figures bandied about to different people) – representing a perceived attempt to induce compliance. I note that I have been unable to locate binding information regarding a Community Benefit Fund within Orsted's submission (other than a vague reference in 'Appendix A: Summary of Public Consultation and Community Newsletters');

(b) Local farmers being approached regarding a 'Phase 2' expansion to this project – which has caused unnecessary fear / anxiousness amongst locals that Orsted

[37] Via email from Aidan Stakelum [email not footnoted here due to concerns re GDPR / privacy]

intends on extending the scope of the project beyond what forms part of this application;

(c) Concerns being raised and not adequately addressed; and

(d) Promised information being made available prior to submission of the planning application (which was subsequently not provided).

6.3.10 Unfortunately, as I was not provided with a satisfactory opportunity to attend, I present the above based on anecdotal evidence provided to me. Orsted did not produce notes or provide follow-up written summations of its 1:1 sessions – had they done this, then greater transparency would have been provided and avoided unnecessary confusion.

6.3.11 From my perspective, Orsted's claimed community engagement actions do not align with my lived experience on this matter.

Orsted's unnecessarily combative approach towards local community members

6.3.12 Orsted states that:

> *"Orsted has **a history of engaging positively with local communities**. In line with this approach, Orsted has carried out community consultation activities to share information about the Proposed Development and to gather initial feedback."*[38] [emphasis added]

6.3.13 This statement does not appear to be supported by the facts in this instance, as I describe below.

6.3.14 In its 'Appendix A: Summary of Public Consultation and Community Newsletters' Orsted proceeds to 'pick out' three local community residents who had appeared on a local community radio station to discuss this project.

6.3.15 Firstly, Orsted states:

> "*there will always be some individuals who take a position of opposition for their own personal reasons*"[39]
>
> and that Orsted was interviewed on local radio to provide a 'fair and balanced perspective' on its project:
>
> *"Drivetime Current Affairs show on Community Radio Youghal, to be aired later on in the month. The interview was **in response** to a similar one conducted in August with **three local objectors** and **sought to present a fair and balanced perspective** of the proposal. Concerns voiced by the objectors included topics such as the perceived impact on agriculture and a claimed lack of community consultation"*[40] [emphasis added] and that Orsted was *"countering some of the misinformation that had cropped up in the local area and media"*[41] [emphasis added]
>
> In another example of Orsted distorting facts, I note that this interview occurred five months prior to Orsted's application submission. It is factually incorrect to refer to these

[38] PER, Section 3.2

[39] PER, Appendix A: Summary of Public Consultation and Community Newsletters, Section 7

[40] PER, Appendix A: Summary of Public Consultation and Community Newsletters, Section 7

[41] PER, Appendix A: Summary of Public Consultation and Community Newsletters, Section 7

three individuals as 'objectors', as there was no application to object to at the time. Even at the point Orsted submits it 'Appendix A: Summary of Public Consultation and Community Newsletters', none of the three individuals identified have been afforded the opportunity to object to this planning submission. Referring to locals seeking to engage with the public consultation process as 'objectors' at this stage, simply confirms bias on behalf of Orsted's public consultation process, reflecting a potential lack of diligence, ethics and standards.

6.3.16 In an apparent / potential attempt by Orsted to slyly portray these local community members as serial objectors, Orsted highlights, without any merit or relevance to this application, that some of the 'three local objectors' have raised concerns regarding a local farmers shed retention application, as follows:

> *"It is **noted that these same objectors had lodged submissions in July and again at a later date, objecting to a local farmers retention application for some existing farm infrastructure**. It is also noted that these three objectors had been met in person throughout the community consultation process outlined to this point, and unfortunately were interpreting a refusal to cease all planning for the proposed development as a lack of consultation."*[42] [emphasis added]

6.3.17 Against this, I raise a number of points:

(a) Portraying community members as serial objectors is both factually incorrect and completely irrelevant to Orsted's solar park planning application.

(b) The local community knows exactly who these 'three local objectors' are. Orsted does not need to name them, but it has effectively identified them. It is unclear what benefit Orsted seeks in this, but anecdotally people have discussed whether it has an impact of intimidation.

(c) The three individuals are valued community members, who have devoted significant time and effort to engage with this project. Orsted should receive no favour or grace in its PER application for submitting a consultation document which could reasonably be viewed as an attempt to smear the reputation of locals who have concerns regarding this project.

(d) The shed retention in question is currently unresolved, but there are approximately 40 validated submissions received by Cork County Council in this other / separate matter, submitted in response to multiple invalid planning applications.

6.3.18 I request that ACP take a dim view of the behaviour of Orsted in this regard and negatively assesses Orsted's alleged community engagement in this context.

6.3.19 Orsted must do better. A public acknowledgement from Orsted and apology for the actions of its community engagement representatives [and/or authors of this appendix if they are different] would be welcomed by the wider local community.

[42] PER, Appendix A: Summary of Public Consultation and Community Newsletters, Section 7

General observations on the 'Summary of Public Consultation and Community Newsletters'

Bias and Premeditated positioning

6.3.20 Orsted repeatedly uses the engagement process to promote the national benefits of solar; rebut "*misinformation*"; emphasise economic outputs of the solar industry; and promote Orsted as a brand (which fail miserably in the context of the points raised above).

6.3.21 This indicates the process was not neutral, deliberative, or consultative in nature but a public-relations exercise.

6.3.22 Orsted has not included any evidence within this Appendix of how the concerns of locals have impacted the actual planning / design of the solar park.

Non-compliance with requirements for meaningful public consultation

6.3.23 Best-practice guidelines provide clear expectations for early, transparent, and evidence-based engagement with communities:

(a) The 2023 Best Practice Guidance for Large-Scale Solar Energy Development, prepared with the Irish Solar Energy Association (ISEA), emphasises rigorous early-stage scoping, clarity of information, and good-faith engagement with affected communities.[43]

(b) Similarly, the SEAI Community Energy Resource Toolkit (2024) emphasises community-centered processes, transparent conveyance of environmental information, and enabling communities to make informed decisions.[44]

6.3.24 Orsted's consultation falls far short of these guidelines:

(a) The ISEA guidance requires early provision of technical information such as glint-and-glare, noise, landscape assessments and substation impacts.

Orsted provided **none of these** during consultation.

For example, photo montages were largely withheld until the planning application stage, and significant impact from local viewpoints is acknowledged. Landscape mitigation is vague (and not possible in many locations) and completely untested through public consultation.

(b) Orsted admits to basic notification failures, confirming that that many consultation letters were returned undelivered because they relied on Eircode-only addressing — a foreseeable and completely avoidable error.

This breaches the national guidance requirement for **competent**, inclusive engagement and consultation.

[43] https://www.seai.ie/documents/research-projects/RDD00651.pdf

[44] https://www.seai.ie/sites/default/files/publications/Community-Toolkit-Solar-PV.pdf

I re-iterate again, that Orsted's stated position that the consultation process ended because "*people were either satisfied with the information available or had no interest in engaging*" is demonstrably untrue.

(c) Orsted **inflates it consultation statistics** by including repeat visits to the same households, or multiple conversations with the same individual. This is inconsistent with good practice which requires accurate reporting of stakeholder reach.

Orsted figures in this regard are wholly unreliable and should be disregarded entirely.

BESS Safety

6.3.25 National guidance (ISEA 2023 & SEAI recommendations) requires robust risk management and emergency planning, which can extend to BESS installations. This management and emergency planning should consider integrating thermal runaway assessment; fire safety separation; and emergency service capacity/capability in a rural area.

6.3.26 Orsted's consultation provides only a generic response to these concerns, which is:

> *"Our BESS layout has been designed to use the latest advances in the technology with the highest safety standards possible."*[45]

6.3.27 This phrasing in non-technical, non-binding, and effectively meaningless.

6.3.28 Orsted has sought to not engage with one of the communities greatest concerns.

Separate substation works and Strategic Infrastructure Development

6.3.29 ISEA best practice highlight the need for heightened transparency and early community involvement where grid infrastructure is involved.[46]

6.3.30 Orsted's alleged community engagement almost entirely omitted meaningful consultation on the 220kV SID-class substation, despite it being the most technically impactful element of the project, generating some of the most significant concerns amongst the locals.

Minimisation of land take impacts on local community

6.3.31 Orsted relies on national statistics in an apparent attempt to claim that the land take is "*tiny*" of an "*already insignificantly small theoretical solar land area*".[47]

[45] PER, Appendix A: Summary of Public Consultation and Community Newsletters, pdf page 29 of 32

[46] https://www.seai.ie/documents/research-projects/RDD00651.pdf, Section 3.2.1, Section 3.2.5, Section 3.3, Section 3.4.3, Section 3.4.4, Section 4.2, Section 4.3, and Section 5.2.2

[47] PER, Appendix A: Summary of Public Consultation and Community Newsletters, pdf page 25 of 32

6.3.32 Planning requires this scheme to be judged on the **local impacts**, not the national level. It is the local impacts which the local community are concerned about.

6.3.33 Orsted has not engaged with concerns from locals regarding long-term displacement of land from agricultural use, fragmentation of fields within whole townlands, or future challenges this creates for the local farming community.

6.3.34 Orsted's use of national-level agricultural land statistics to downplay local agricultural impacts is downright condescending to the local community who have valid concerns which have been summarily dismissed and not addressed.

6.3.35 Separately, I note that National solar guidelines under development (per the Minister's 2025 Dáil response) emphasise that prime agricultural land should not be prioritised for solar development due to food security and land-use optimisation concerns.[48]

Summary of 'Appendix A: Summary of Public Consultation and Community Newsletters'

6.3.36 As shown above, Orsted's 'Appendix A: Summary of Public Consultation and Community Newsletters' contains a series of untruths, misrepresentations, and sly characterisations of individuals within the local community.

6.3.37 This results in a process which was wholly untransparent, unreliable and significantly reduces the confidence of the community.

6.3.38 This submission fails to demonstrate that Orsted has a social licence to operate this facility within this community.

6.3.39 For the reasons provided throughout this section, I request that ACP negatively assesses the 'Appendix A: Summary of Public Consultation and Community Newsletters' within its overall assessment of this planning application.

[48] https://www.oireachtas.ie/en/debates/question/2025-02-20/91/

6.4. PER Appendix B: Drainage Plan

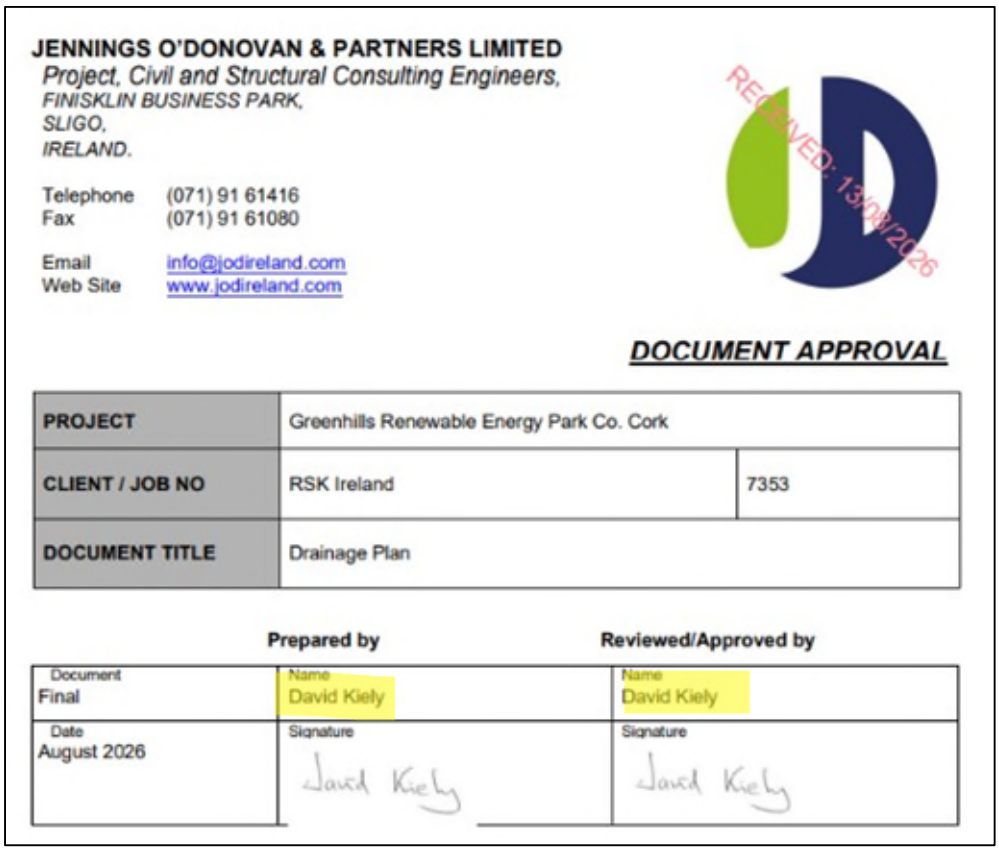
Introduction

6.4.1 In this sub-section, I provide my comments on the Drainage Plan included as Appendix B to the PER.

6.4.2 In my opinion, the proposed drainage strategy fails to comply with the Cork County Development Plan 2022–2028, the Surface Water Management Advice Note, and the requirements of Objective WM11-10. These deficiencies present unacceptable risks to flooding, hydrology, water quality, and environmental protection.

Lack of verification / review of the Drainage Design

6.4.3 Before providing my detailed observations of the drainage plan, it is first worth noting that the technical submission prepared in support of this proposed development does not appear to have been reviewed by a second- or third-party prior to issue. This is shown on the extract below:[49]



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RECEIVED: 13/08/2026

DOCUMENT APPROVAL

PROJECT	Greenhills Renewable Energy Park Co. Cork	
CLIENT / JOB NO	RSK Ireland	7353
DOCUMENT TITLE	Drainage Plan	

	Prepared by	**Reviewed/Approved by**
Document: Final	Name: David Kiely	Name: David Kiely
Date: August 2026	Signature: David Kiely	Signature: David Kiely

6.4.4 Staggeringly, the author is correcting their own homework. It is unclear what benefit or weight they sought to confer on this document by including their signature twice.

[49] PER Appendix B – Drainage Design, page 2 [highlight added]

6.4.5 I note that a peer review would have identified (and presumably corrected) many simple and avoidable errors that appear in this report, such as:[50]

> *"The subsoil permeability across **the windfarm site** is moderate or not mapped."* [emphasis added]

6.4.6 The author appears to be confused regarding the actual development that the drainage design allegedly caters for.

6.4.7 Errors such as the above erode the confidence level that can be placed in the remainder of the analysis and opinion-driven conclusions.

6.4.8 There is no evidence of independent peer review of attenuation modelling, rainfall assumptions, soil permeability, or SuDS performance. The CDP Surface Water Advice Note calls for drainage impact assessments to follow best-practice methodologies and demonstrate technical robustness.[51]

6.4.9 Failure to conduct a thorough review or verification, prior to submitting this drainage plan as part of this overall submission, means the modelling cannot be relied upon as a basis for permitting this development.

6.4.10 In any event, I provide additional points regarding the apparent inadequacy of the submission in the sub-sections that follow.

Review of Appendix B – Drainage Design

6.4.11 I provide my observations on the drainage design via the sub-headings that follow.

Insufficient Infiltration Testing for Soakaway Use

6.4.12 Soakaways are proposed widely across the site, despite the absence of site-wide infiltration testing. The only infiltration data pertains to the substation area, not the full 323ha site.[52]

(a) In my opinion, Orsted's approach of accepting information from the substation when it suits its application, but not reviewing the cumulative impacts of both projects together (via a full and complete EIA) is contradictory and without merit.

(b) ACP should require that the cumulative effects of both developments are considered together via a single site-wide EIA.

6.4.13 CDP policy [WM 11-10] requires site-specific testing to ensure SuDS operate effectively given soil permeability and groundwater levels.

6.4.14 This proposal fails to meet that requirement.

[50] PER Appendix B – Drainage Design, Section 2.2.2.5

[51] https://www.corkcoco.ie/sites/default/files/2023-01/surface-water-management-advice-note-13.12.2022.pdf

[52] As shown in my review of the PER Appendix C – Site Investigation Report, see Section 6.5 of this submission

6.4.15 Failure to undertake the appropriate site-specific testing creates a significant risk of soakaway failure; surface ponding; uncontrolled bypass flows and increased site run-off.

6.4.16 This increases the risk of flooding on-site and downstream – noting that the 323 hectare site drains into an already flood-prone river system.

Insufficient Attenuation Storage & Undersized Ponds

6.4.17 CDP guidance (Surface Water Management Advice Note) requires full drainage details, calculations, and evidence that SuDS can manage all critical storm durations.

6.4.18 The design includes **46 attenuation ponds**, many of which are undersized for the contributing drainage area. Several rely on optimistic assumptions about flow behaviour and do not include capacity contributions from check dams.

6.4.19 For example, the drainage plan explicitly states:[53]

> *"The storage calculation has not included the storage provided within the drainage conveyance system i.e. by check dams in swales. The attenuation sizes required are therefore considered as being conservative."*

6.4.20 This is presented as a conservative assumption, but the opposite is actually the case:

(a) Check dams do store water, but they also block, slow, and redistribute flows unpredictably during extreme rainfall.

(b) Their performance is highly sensitive to sediment buildup, vegetation, and maintenance frequency.

(c) Not modelling check-dam effects means you are not modelling reality — and therefore cannot claim conservatism.

6.4.21 This is further compounded by the fact that the scheme proposed is a decentralised, fragmented and overly complex design. As there are 46 attenuation ponds scattered throughout the site:

(a) Maintenance burden is extremely high; [note I comment on this separately below]

(b) If even a few ponds fail or overflow, downstream routing channels will be overloaded; and

(c) There is **no evidence of combined / cumulative runoff modelling**, only pond-by-pond analysis – this does not model real world constraints, whereby an attenuation pond may be blocked / overflow, resulting in a cascading effect which overloads the system downstream.

(d) This is similar to a 'disproportionate collapse' risk in a structural engineering design, where the unmodelled failure of a small component leads to a larger system collapse.

[53] PER Appendix B – Drainage Design, Section 2.5

6.4.22 The attenuation pond design is inadequate for the proposed development.

Excessive number of SuDS features increases failure risk

6.4.23 As shown throughout my observations of this section, the drainage design appears to be inadequate for the proposed development.

6.4.24 Should ACP disagree, then it is also worth observing that the CDP stresses that SuDS must be simple, maintainable, and sustainable over the long term. The Advice Note warns against reliance on systems that cannot be adequately maintained or monitored.

6.4.25 A drainage system which currently shows 46 ponds, multiple swales, hundreds of check dams, and widespread soakaways exceeds what can realistically be managed, violating the principle of practical, sustainable SuDS required under CDP policy.

6.4.26 Elsewhere in Orsted's submission, a realistic likelihood of lack of maintenance is explicitly acknowledged:

> *"With the passage of time, the constructed drainage network will likely become full of deposited sediment and revegetation will naturally occur which has the potential to render the drainage system less effective over time."* [54]

6.4.27 An expansive and decentralised scheme such as this has an inherent and likely risk of blockages; sediment overload; and maintenance failure.

6.4.28 As I've commented on the LSGHH and FRA, no failure modelling of the drainage system appears to have been undertaken.

6.4.29 This therefore represents an unidentified, unmeasured and unaccounted for risk within Orsted's overall submission, which is a critical blind spot across its drainage design and flood mitigation measures.

Reliance on non-evidence based assumptions

6.4.30 CDP requires that SuDS designs must be evidence-based and must show how the SuDS pillars will be achieved (including Water Quantity & Biodiversity). Objective WM11-10 requires robust nature-based water management, not speculative assumptions.

6.4.31 The Drainage Plan states that it relies on the assumption that:[55]

> *"the creation of natural conditions which allow grass beneath panels to flourish and be maintained. The* ***maintenance of grass underneath the panels is a critical component of scheme design as it preserves peak water runoff rates at optimal natural levels****."* [emphasis added]

[54] PER Appendix J, Section 2.4.3

[55] PER Appendix B – Drainage Design, Section 2.2.1 (pdf page 8 of 35)

6.4.32 It is astonishing that the claimed hydrological stability depends on "*well-maintained grass*".

(a) It appears that this (scientifically unfounded) assumption, which is a "***critical***" component of the drainage design appears to be completely unacknowledged throughout the remainder of the wider Orsted submission.

(b) I have been unable to locate any reference in the drainage plan to vegetation studies; ecological strategies; maintenance plans; or supporting documentation that allows this assumption to withhold even the most basic scrutiny.

(c) Not only does the author provide an unsubstantiated assumption, but they do also not even appear to be aware of any actual plan to ensure that this theoretical assumption can be turned to reality.

(d) Even if the assumption is correct that this solar park can provide "*well-maintained grass*" under the solar arrays, Orsted appears to have completely omitted this "***critical***" element of design and maintenance into its submission.

(e) Any assumption in this regard gives rise to unenforceable and non-binding commitments, which ACP cannot rely on if granting permission.

(f) There is a real and significant risk of basing the drainage design on unfounded / unscientific assumptions could lead to flooding on-site and to the surrounding areas.

6.4.33 The CDP explicitly requires defensible evidence and robust solutions.

6.4.34 Theoretical assumptions regarding vegetation resilience falls well short of this threshold.

6.4.35 ACP should disregard this subjective assumption and require the drainage plans to be resubmitted, taking into account defensive and scientifically sound approaches.

Absence of a maintenance plan

6.4.36 Notwithstanding the issues regarding unfounded and unactioned assumptions regarding the "***critical***" well-maintained grass, it also raises the issue of general maintenance considered within the Drainage Plan.

6.4.37 CDP requires demonstration of long-term SuDS maintenance and management, including responsibility assignment and maintenance access. Objective WM11-10 emphasises ongoing performance of nature-based drainage systems.

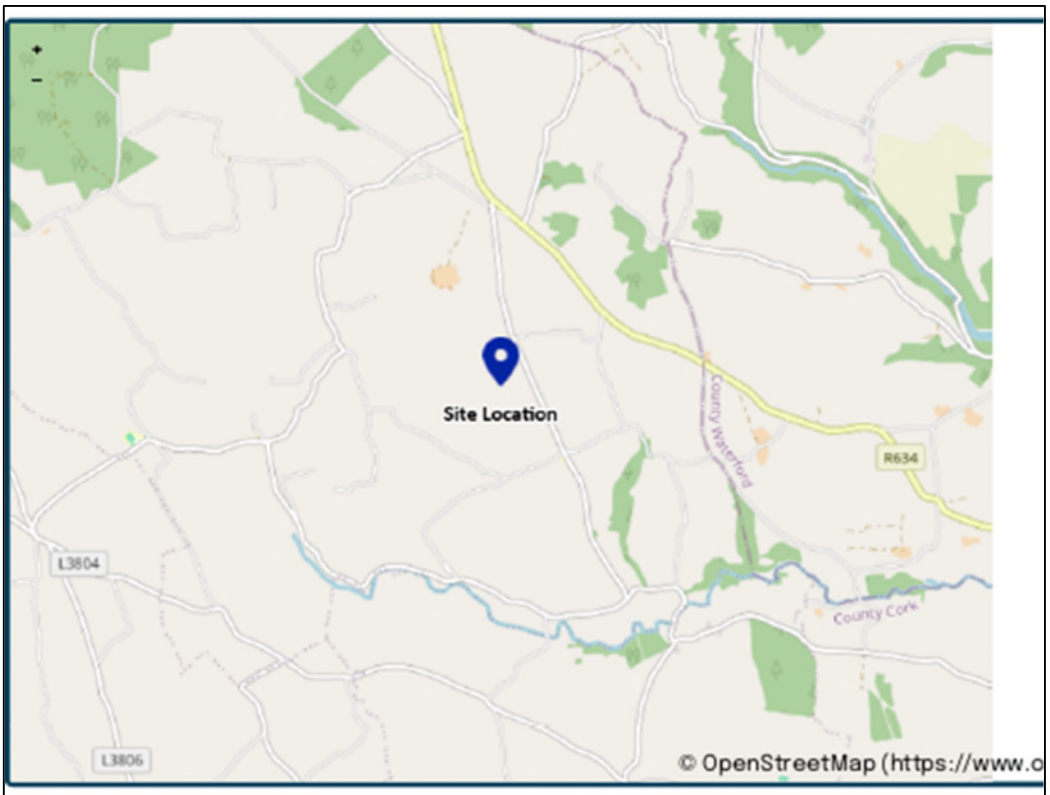
6.4.38 As noted elsewhere, the proposed scheme relies on a complex fragmented and decentralised network of attention ponds, swales, siltbuster units, silt fences, checkdams and soakaways (and well-maintained grass!). The drainage plan fails to provide any long-term maintenance schedule; defined maintenance responsibilities; identified access routes for maintenance machinery; and a performance framework for SuDS assets.

6.4.39 Lack of defined responsibilities or access routes means the SuDS network cannot be assumed to perform over the 40-year+ project lifecycle.

6.4.40 The absence of a maintenance plan violates core CDP requirements and renders the submission non-compliant and unsustainable.

The Met Eireann Rainfall Depths location does not match the site location

6.4.41 The drainage plan includes the following site location map and easting and northing coordinates:[56]



Site easting (Irish Grid)	203533
Site northing (Irish Grid)	81750
Site easting (Irish Transverse Mercator)	603483
Site northing (Irish Transverse Mercator)	581810

6.4.42 The Met Eireann Return Period Rainfall Depths for sliding Durations, upon which this design is based, are for coordinates which do not match the above:[57]

[56] PER Appendix B – Drainage Design, Section 2.2.1 (pdf page 24 of 35) [highlight added]
[57] PER Appendix B – Drainage Design, Section 2.2.1 (pdf page 27 of 33) [highlight added]

Met Eireann
Return Period Rainfall Depths for sliding Durations
Irish Grid: Easting: 203510, Northing: 81703,

RECEI

DURATION	Interval 6months,	1year,	Years 2,	3,	4,	5,	10,	20,	30,	50,	75,	100,	120,
5 mins	2.9,	3.8,	4.2,	4.8,	5.2,	5.5,	6.4,	7.5,	8.1,	9.0,	9.7,	10.3,	10.7,
10 mins	4.1,	5.3,	5.8,	6.7,	7.2,	7.7,	9.0,	10.4,	11.3,	12.5,	13.5,	14.3,	14.9,
15 mins	4.8,	6.2,	6.9,	7.9,	8.5,	9.0,	10.6,	12.2,	13.3,	14.7,	15.9,	16.9,	17.5,
30 mins	6.5,	8.3,	9.2,	10.6,	11.4,	12.1,	14.2,	16.4,	17.8,	19.7,	21.4,	22.6,	23.5,
1 hours	8.7,	11.2,	12.4,	14.2,	15.4,	16.3,	19.0,	22.0,	23.9,	26.5,	28.7,	30.3,	31.5,
2 hours	11.7,	15.0,	16.7,	19.1,	20.7,	21.9,	25.6,	29.6,	32.1,	35.5,	38.5,	40.7,	42.2,
3 hours	13.9,	17.9,	19.9,	22.7,	24.6,	26.0,	30.4,	35.1,	38.1,	42.2,	45.7,	48.3,	50.1,
4 hours	15.8,	20.2,	22.5,	25.7,	27.8,	29.4,	34.3,	39.7,	43.1,	47.7,	51.6,	54.6,	56.6,
6 hours	18.7,	24.0,	26.7,	30.5,	33.0,	34.9,	40.8,	47.2,	51.2,	56.6,	61.3,	64.8,	67.2,
9 hours	22.3,	28.6,	31.8,	36.3,	39.2,	41.5,	48.5,	56.0,	60.8,	67.2,	72.8,	77.0,	79.8,
12 hours	25.2,	32.3,	35.9,	41.0,	44.4,	46.9,	54.8,	63.3,	68.7,	76.0,	82.3,	87.0,	90.1,
18 hours	30.0,	38.5,	42.7,	48.8,	52.8,	55.8,	65.2,	75.2,	81.6,	90.3,	97.7,	103.3,	107.0,
24 hours	34.0,	43.5,	48.3,	55.2,	59.6,	63.0,	73.6,	85.0,	92.2,	102.0,	110.4,	116.7,	120.9,
2 days	45.0,	56.2,	61.7,	69.5,	74.6,	78.4,	90.1,	102.5,	110.3,	120.7,	129.6,	136.3,	140.7,
3 days	54.0,	66.4,	72.5,	81.1,	86.5,	90.7,	103.3,	116.5,	124.7,	135.7,	145.0,	152.0,	156.6,
4 days	61.9,	75.4,	82.0,	91.1,	97.0,	101.3,	114.7,	128.6,	137.2,	148.7,	158.3,	165.5,	170.3,
6 days	76.0,	91.2,	98.6,	108.7,	115.1,	119.9,	134.5,	149.5,	158.7,	171.0,	181.2,	188.8,	193.8,
8 days	88.7,	105.3,	113.2,	124.2,	131.1,	136.2,	151.8,	167.7,	177.4,	190.3,	201.1,	209.0,	214.2,
10 days	100.4,	118.2,	126.7,	138.4,	145.7,	151.1,	167.5,	184.2,	194.4,	207.8,	219.0,	227.2,	232.6,
12 days	111.4,	130.3,	139.3,	151.6,	159.3,	164.9,	182.1,	199.5,	210.0,	223.9,	235.5,	244.0,	249.5,
16 days	132.0,	152.9,	162.6,	176.0,	184.3,	190.5,	208.9,	227.4,	238.6,	253.3,	265.5,	274.4,	280.3,
20 days	151.3,	173.8,	184.3,	198.5,	207.4,	213.9,	233.4,	252.9,	264.7,	280.1,	292.8,	302.1,	308.1,
25 days	174.1,	198.4,	209.6,	224.9,	234.3,	241.2,	261.9,	282.5,	294.8,	310.9,	324.2,	333.9,	340.1,

NOTES:
These values are derived from a Depth Duration Frequency (DDF) Model update 2023
For details refer to:
'Mateus C., and Coonan, B. 2023. Estimation of point rainfall frequencies in Ireland. Technical Note No. 68. Met Eirea
Available for download at:
http://hdl.handle.net/2262/102417

6.4.43 The author does not explain why they have used different coordinates in differing sections of their report.

6.4.44 It is therefore unclear whether the Return Period Rainfall Depths applied in the analysis are appropriate for the site location or even correct.

6.4.45 There is a risk that the values adopted above are wholly incorrect and unrepresentative of the proposed development site.

6.4.46 Unfortunately, this is another example of why it is essential that this report be adequately peer-reviewed prior to its re-submission.

Summary of concerns regarding Appendix B – Drainage Design

6.4.47 The drainage design submitted as part of this appendix has not been peer reviewed or independently assessed. It contains simple errors which should not be present, such as referring to the scheme as a "*windfarm*" and apparently relying on Return Period Rainfall Depths for coordinates which do not match the site location coordinates given.

6.4.48 The design is not based on site-specific factors and insufficient testing has been undertaken to inform a proper soakaway design.

6.4.49 The design is decentralised, fragmented, complex, difficult to maintain and can be reasonably considered to have a high failure risk. Sufficient considerations do not appear to have been provided towards a maintenance plan, and impacts of poor maintenance do not appear to have been considered in the design.

6.4.50 Non-evidence based assumptions have been provided, with no / inadequate supporting justifications. It is "***critical***" that grasses be well-maintained for the drainage to function as designed, however, no reference towards how this may be implemented is provided within the Drainage Plan or elsewhere in the Orsted submission application package.

(a) It is staggering that the Drainage Plan attempts to pass this non-evidence based assumption as being in any way adequate or acceptable, without any regard to implementation that I have observed.

(b) Whether this could be interpreted as incompetent or negligent is not for me to say.

6.4.51 Based on the evidence contained within the Drainage Plan and lack of adherence to the CDP, Surface Water Management Advice Note and Objective WM11-10.

6.4.52 In my opinion, the proposed drainage design is non-compliant.

6.4.53 I therefore request that ACP refuse planning permission for this development based on the potential inadequacies contained within the Drainage Plan.

6.5. PER Appendix C: Site Investigation Report

Introduction

6.5.1 In this sub-section, I provide my comments on the Site Investigation Report.

6.5.2 Orsted's physical / fieldwork site investigations are shown in their entirety in the PER Appendix C: Site Investigation Report.

6.5.3 In my opinion, the site investigations undertaken by Orsted are wholly inadequate for a project of this size and scale. It is insufficient for the purpose of providing a technically feasible design.

6.5.4 The result of this is that Orsted requires that ACP provides permission first, before Orsted then undertakes the necessary investigations to inform its foundation design; drainage design; and flood mitigation strategies.

Inclusion / exclusion of 220kV Substation data

6.5.5 As noted elsewhere, Orsted intends on submitting a separate planning application for the 220kV Substation via a SID application directly to An Coimisiún Pleanála.

6.5.6 Orsted has not sought to address the cumulative impacts of both the solar park and substation works together – I have raised concerns on this approach in my review of the EIA.

6.5.7 But here, Orsted seeks to take benefit from the site investigations undertaken with the substation location to support its solar park application.

(a) Orsted cannot have it both ways.

(b) Either the two schemes are assessed together, or the site investigation works undertaken within the substation boundary cannot be used to support its solar park application on the basis that they are not site-specific to the application in question.

6.5.8 Without the substation investigations, Orsted's site investigation for the solar park is limited to **just two trial pits** (located in the BESS compound).[58] Orsted has not undertaken P- or T-tests anywhere within the boundary of the solar park to inform its design at this stage.

(a) This means that Orsted foundation design for arrays; inverters; drainage design; hydrogeology design and flood risk assessments are all based on theoretical desktop studies and are not supported by actual on site investigation works.

(b) Orsted has provided no reason which would have prevented it from undertaking an appropriate level of site investigations at this stage.

6.5.9 For context, the site investigations undertaken within the solar park would be insufficient to support a one-off house planning application in the locality (which would require P- and/or T-tests to determine percolation rates as part of a site suitability assessment).

[58] PER. Appendix C: Site Investigation Report, pdf page 26 of 27

6.5.10 It is incredulous to think that Orsted puts this forward as being sufficient to support an application for a 323 hectare development (including all associated infrastructure).

6.5.11 This is a staggering shortcoming in Orsted's submission.

6.5.12 ACP cannot approve of Orsted's drainage design as core design parameters still remain unknown.

6.5.13 Had this been an application for a one-off house, ACP would certainly reject this planning application on this point alone. Bizarrely, I request that ACP apply the same rigour in the review of a one-off house to a 323 hectare development and reject it on the basis that sufficient site investigations to inform a site suitability test have not been provided.

Review of Appendix C: Site Investigation Report

6.5.14 If ACP accepts an approach whereby results for investigations outside the site boundary of the purposed development can be accepted in this application as being 'site-specific', then I proceed on the basis of providing my opinion on the entirety of the Appendix C: Site Investigation Report as follows.

Low permeability clay soils

6.5.15 The P- and T-tests included within the substation area indicate poor natural drainage, which are characteristic of low-permeability clay soils.

6.5.16 The project proposal means that the infiltration capacity of the soil throughout the site is likely to be reduced even further through: increased hard-standing across the entire site (upgraded and new access roads; inverters; BESS platform; substation); compaction of soil through construction traffic ("*Soils under the footprint of the solar farm, over time have the potential to be compacted, leading to subsidence*")[59]; and channelised flows along the panel rows.

6.5.17 Low-permeable soils (such as those shown in the trial pits) mean that the site conditions generate significant surface runoff in an event of heavy rain, or worse, where multiple heavy rain events leave the soil saturated.

6.5.18 As infiltration conditions are already extremely poor, without a full-site hydrology assessment, there is **no evidence whatsoever** that the development can manage its total stormwater volume safely or sustainably.

Proposal to recommence site investigations after construction completed

[59] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.4.2.2

6.5.19 Rather bizarrely, the site investigation report recommends in its Conclusion section that site investigation works recommences after the construction works for the substation platform are completed.[60]

6.5.20 It is highly unusual for site investigations to be planned after the works have been substantially completed and may indicate a complete lack of understanding on how buildings and infrastructure are actually designed and built.

6.5.21 I cannot imagine ACP will favour this approach in its determination on the suitability of the site investigations works and recommendations.

Potential Perched Water Table

6.5.22 All six trial pits show similar results: Clay or silty clay dominant soils; high cobble content and frequent boulders; trial pits terminated early due to stone obstruction; and no groundwater encountered to depths of 2.0–2.3 m.

6.5.23 The site investigation reports indicates that the absence of groundwater in the trial pits.[61] The report notes that the ground appears site in the localised area appears to be well-drained. [62]

6.5.24 Unfortunately, the site investigation report does not comment on the risk that the absence of groundwater may indicate a perched water table, which are typical of clay-soils with low-permeability.

6.5.25 Perched water tables arise where vertical drainage is impeded due to the presence of clay in the sub-soil (in this instance, the groundwater resides only in the topsoil layer, as it cannot drainage vertically through the clay layers below).

6.5.26 This results in an increased likelihood of surface water accumulation after rainfall, which would reside almost wholly in the top 300mm (topsoil) layer of the trial pits.

6.5.27 To highlight the likelihood of the presence of a perched water table being present, it is worth considering the that the site investigations appear to have been undertaken on/around August 2025, during a period with rainfall significantly lower than historical averages.

6.5.28 I include an extract below showing the average monthly rainfall at the nearest weather station to the site (Cork Airport) for the period 1991-2020:[63]

[60] PER. Appendix C: Site Investigation Report, Section 3.2

[61] PER. Appendix C: Site Investigation Report, Section 2.1

[62] PER. Appendix C: Site Investigation Report, Section 2

[63] https://www.met.ie/cms/assets/uploads/2023/09/www_met_ie_cork_9120.htm [marked up]

Cork Airport 1991–2020 averages													
TEMPERATURE (degrees Celsius)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
mean daily max	8.2	8.5	9.8	12	14.6	17	18.6	18.4	16.5	13.3	10.3	8.7	13
mean daily min	3.2	3.2	3.9	5.3	7.6	10.1	11.7	11.6	10.2	8	5.3	3.8	7
mean temperature	5.7	5.8	6.8	8.6	11.1	13.6	15.2	15	13.4	10.6	7.8	6.2	10
absolute max.	16.1	14.5	18.8	21.1	23.6	27.2	26.7	27.8	24.5	21.1	15.9	13.9	27.8
min. maximum	-0.3	-1.9	-1.3	4.1	8.5	10.5	12.6	13.8	10.2	6	0.6	-3.1	-3.1
max. minimum	10.5	10.6	10.8	11.3	14.4	16.6	17.5	18	17	15.5	13	11.5	18
absolute min.	-5.6	-4.7	-7	-2.4	0.1	4.1	6.2	5.4	3	-1	-3.3	-7.2	-7.2
mean num. of days with air frost	3.8	3.5	2.3	0.9	0	0	0	0	0	0.2	1	2.8	14.5
mean num. of days with ground frost	12.7	11.8	10.7	6.8	2.4	0.2	0	0.1	0.5	2.4	6.8	11.2	65.6
mean 5cm soil	4.5	4.5	5.9	8.9	12.5	15.6	16.7	15.9	13.4	9.9	6.7	5.2	10
mean 10cm soil	4.9	4.9	5.9	8.2	11.5	14.4	15.7	15.2	13.1	10	7.2	5.6	9.7
mean 20cm soil	5.7	5.7	6.6	8.7	11.5	14.3	15.7	15.5	13.9	11.1	8.3	6.5	10.3
RELATIVE HUMIDITY (%)													
mean at 0900UTC	91.1	90.5	88.3	83.3	81.3	80.9	83.5	86.1	89.1	90.7	91.4	91.3	87.3
mean at 1500UTC	84.4	79.9	75.8	72.3	71.7	71.5	73.7	73.6	76.3	80.4	83.9	86.5	77.5
SUNSHINE (hours)													
mean daily duration	2	2.6	3.6	5.4	6.2	6.1	5.3	5.1	4.3	3.2	2.5	1.8	4
greatest daily duration	8.5	10	11.5	13.8	15.5	16	15.3	14.4	12.1	10.3	8.8	7.6	16
mean num. of days with no sun	9.8	6.7	5.7	3.1	2.4	2.3	2.2	2.4	3.4	6.5	7.8	11.4	63.7
RAINFALL (mm)													
mean monthly total	131.3	97.2	91.5	86.5	80.8	83.3	87.2	94.6	92	131.2	127	136.6	1239
greatest daily total	39.3	39.0	55.2	37.7	34.9	51.3	73.2	59.0	58.9	52.1	47.9	61.4	73.2
mean num. of days with >= 0.2mm	21.3	18.4	18.3	16.8	15.9	14.6	16.9	16.9	17	19.9	20.8	21.4	218.2
mean num. of days with >= 1.0mm	16.7	13.7	13.4	12.3	12	10.1	11.9	12.2	11.9	15.1	15.6	16.8	161.7
mean num. of days with >= 5.0mm	9.1	6.8	5.7	5.8	5.3	5.6	5.7	5.5	5.8	7.8	7.9	8.7	79.7
WIND (knots)													
mean monthly speed	10.9	11	10.5	9.8	9.4	8.9	8.5	8.5	8.8	9.7	10.2	10.8	9.8
max. gust	71	70	65	63	53	49	47	58	51	74	66	80	80
max. mean 10-minute speed	44	50	42	41	34	33	29	45	35	47	46	56	56
mean num. of days with gales	1.3	0.8	0.6	0.3	0	0	0	0.1	0.1	0.4	0.6	1	5.1
WEATHER (mean no. of days with..)													
snow or sleet	2.6	2.5	1.7	0.4	0	0	0	0	0	0	0.3	1.9	9.5
snow lying at 0900UTC	0.3	0.4	0.5	0.1	0	0	0	0	0	0	0	0.4	1.8
hail	1	1.1	1.2	1.5	0.5	0.2	0.1	0	0.1	0.3	0.1	0.4	6.5
thunder	0.3	0.1	0	0.1	0.6	0.4	0.6	0.4	0	0.4	0.1	0.1	3.2
fog	8.6	7.2	8.5	7.8	8	7.3	8.5	9.2	8.3	8.5	7.5	8.5	97.8

6.5.29 As shown above, historical mean monthly totals for rainfall for the period leading up to the site investigation works are:

(a) May – 80.8mm

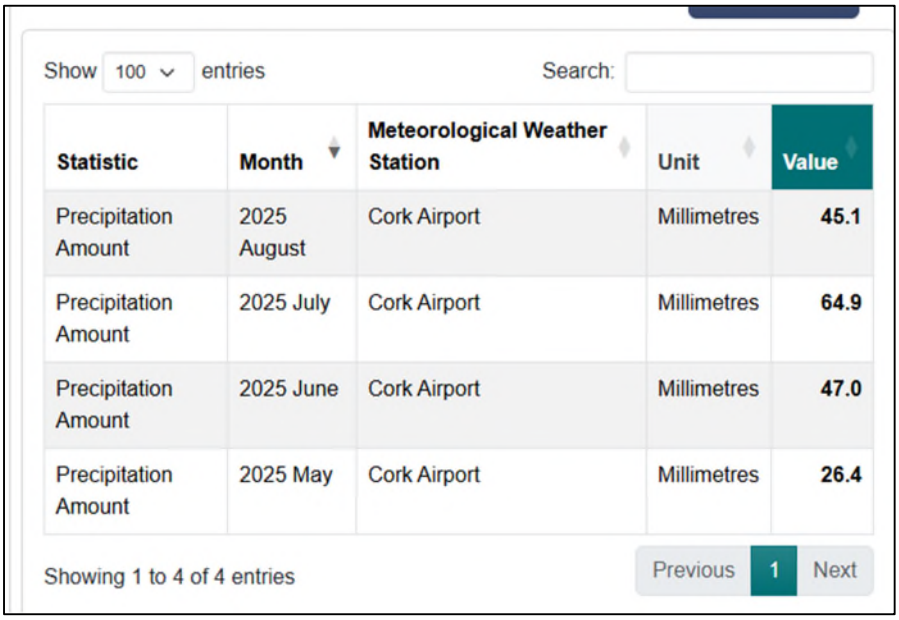
(b) June – 83.3mm

(c) July – 87.2mm

(d) August – 94.6mm

6.5.30 I now compare this to the actual rainfall recorded at the same weather station:[64]

[64] https://data.cso.ie/



Show 100 entries Search:

Statistic	Month	Meteorological Weather Station	Unit	Value
Precipitation Amount	2025 August	Cork Airport	Millimetres	**45.1**
Precipitation Amount	2025 July	Cork Airport	Millimetres	**64.9**
Precipitation Amount	2025 June	Cork Airport	Millimetres	**47.0**
Precipitation Amount	2025 May	Cork Airport	Millimetres	**26.4**

Showing 1 to 4 of 4 entries Previous 1 Next

6.5.31 As shown above, the trial pits were conducted during a period where rainfall was far lower than historical averages. A groundwater level was not found in the trial pits because it is likely that the topsoil layer had effectively dried out.

6.5.32 The presence of a likely perched water table is not even considered in the site investigation report.

6.5.33 A perched water table would indicate that a soakaway design is completely inadequate for drainage purposes. Drainage issues experienced in and around the area in question are a well-known fact within the local farming community.

6.5.34 It is surprising that Orsted's site investigation appears to be unaware of this potential fundamental flaw in the drainage designs advanced as part of its application.

Summary of Appendix C: Site Investigation Report

6.5.35 The site investigations provided by Orsted are wholly inadequate to support an application of this size and scale.

6.5.36 Within the confines of the limited investigations undertaken, the Site Investigation Report identifies that the soil consists of clay-dominated, low-permeability sub-soils, which may provide insufficient infiltration for soakaway viability.

6.5.37 The site investigation report does not consider the likelihood of a perched water table, where in the event of heavy rain, the soil cannot adequately drain vertically, resulting in increased site runoff and risk of on-site and off-site flooding.

6.5.38 Orsted's own report identifies a need for further testing after construction, which confirms the incomplete and inadequate nature of the investigations undertaken.

6.5.39 The inadequate nature of these investigations means that Orsted cannot reliably demonstrate that its drainage design is sufficient. The impact of proceeding without this design data is that

there is an unacceptable risk increased saturation of agricultural topsoils; an increase of surface water runoff being displaced onto adjacent lands; an increased risk of localised flooding; and overloading of existing land drains and watercourses.

6.5.40 Through lack of actual site investigations being undertaken, Orsted cannot demonstrate that it can avoid causing harm to neighbouring properties and the wider local environment.

6.5.41 A speculative assessment does not comply with planning requirements.

6.5.42 I request that ACP refuse planning permission based on the wholly inadequate site investigations provided.

6.6. PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment [including its Appendix B: Flood Risk Assessment]

Introduction

6.6.1 In this section, I provide my comments against the Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment (referred to as 'LSGHH' in Orsted's submission) and the Flood Risk Assessment, which is Appendix B to the LSGHH.

6.6.2 I comment first on the LSGHH (including where it refers to flood risk), before then commenting on the Flood Risk Assessment in a separate sub-section below.

Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment

6.6.3 **Introduction**

6.6.4 Before commenting on the technical submission of this appendix, I must first highlight general concerns regarding the document.

6.6.5 Firstly, the LSGHH has been included in 'Draft' by RSK, and does not appear to have technically reviewed or approved for issue, as shown below:

RSK GENERAL NOTES

EIVED: 13/08/2026

Project No.: 605444-R01

Title: Land, Soils, Geology, Hydrology and Hydrogeology

Client: Perigus Energy Ireland Midco Limited

Date: 12 August 2026

Office: Dublin

Status: Final (01)

Author(s)		**Technical Reviewer & Approver**	
Jayne Stephens, Deirdre Walsh, Nikolina Bozinovic			
Title	Senior Environmental Consultant	Title	
Signature		Signature	
Date:	12 August 2026	Date:	12 August 2026

6.6.6 Given the significance of this document, and the broader scheme in question, it is disappointing if RSK has issued this document in draft without first reviewing or approving it for use.[65]

6.6.7 A basic review of this document prior to its inclusion in this submission (in draft format) would have caught and fixed some fundamental errors. For example, it appears that the assessment is based on a land area which does not match the area of the proposed development, as shown below:[66]

> *"A total land area of the proposed site is approximately **328 hectares**" [*emphasis added*]*

6.6.8 This compares to an actual site area of 323.28 hectares, which can be readily seen throughout every other document submitted as part of this planning application.

6.6.9 Given the authors apparent confusion regarding the actual size of the development, the following paragraph is even more perplexing:[67]

> *"Land take is an unavoidable effect of the proposed Development, careful design reduces the land take. The residual effects of land take on the land have a significance level of slight"*

(a) Upon repeated readings of this paragraph, it is still unclear what the author intends to say here. No description of what 'careful design' has been undertaken to reduce the land take; the 'slight' rating appears to be entirely subjective with no criteria given for this opinion (it's an opinion as its not based on any presented measurement metric); and the author does not appear to be aware of the actual size of the project or land take proposed.

(b) Furthermore, the author also says that the proposed development (being what forms part of this planning submission) includes "***permanent** land take*".[68] This is concerning, as the remainder of Orsted's submission goes to great lengths to describe the works as temporary in nature, which will fully revert to agricultural use at the end of the 40-year planning period. The author does not explain what elements are permanent, adding to the confused nature of this assessment even further.

(i) If the "***permanent** land take*" refers to works regarding the substation, then this further adds to the confusion whereby Orsted submits two separate applications for different elements of the project, cumulatively assesses them via the supporting technical submission (such as potentially in this appendix and the Site Investigations Appendix), but yet somehow still argues that they should not be cumulatively assessed for the purpose of a full EIA.

(ii) The LSGHH appears similarly confused by Orsted's approach in this regard, and it is unclear whether the intent of this assessment is to be limited to just the solar park works (the subject of this application) or to also include the substation works (subject to a separate SID).

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[65] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, pdf page 2 of 132

[66] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.3.1

[67] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.6.1

[68] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.4.1.2

6.6.10 Due to the poorly presented report, it is unclear whether it considers the impact of the actual works or whether it is an unreviewed earlier draft, which has been incorrectly submitted by Orsted as part of this application.

6.6.11 The report claims that "*field inspections*" and "*site walk overs*" were conducted to "***observe the baseline conditions at the site*** *including visual assessment of the receiving environment in terms of impacts arising from the existing infrastructure* ***and practices at the site.***"[69] [emphasis added]

(a) The site is currently subject to enforcement actions and ongoing investigation by Cork County Council regarding waste management practices. This fact is publicly reported, known locally, and visually obvious on the ground – yet Orsted's application does not mention this at all. Cork County Council have not publicly stated whether the extent of the remediation works required is known.

(b) The LSGHH appears to have either missed this during the "*site walk over*" or chosen not to report on this in its assessment. The LSGHH notes the following regarding soil contamination in its section titled 'Geohazards':[70]

"Consultation with waste facility maps (EPA, Waste Facility) indicates that there are no ***licenced*** *waste facilities or Integrated Pollution Prevention Control (IPPC) licenced facilities on or within the immediate surrounds of the Proposed Development site which could be a potential for contaminated soil."* [emphasis added]

(c) It is unclear whether the specific inclusion of the word "***licenced***" is deliberate in the context of avoiding referring to the ongoing enforcement actions. If it is deliberate, then this may indicate a potential bias on behalf of the report which could be disappointing in the context of being interpretated as an attempt to mislead ACP regarding the actual conditions of the development site. Alternatively, if it represents a lack of knowledge of the actual site conditions, then this is also disappointing and misleading of the actual site conditions (deliberate or not).

(d) I understand that the areas on / near the ACP enforcement actions are referred to as a 'quarry' on the site drawings, e.g. on drawing '7353-pl-dr-101.pdf'. I have searched the LSGHH and do not find any mention of an existing quarry referenced during the "*site walk over*" – it is not clear how the presence of a 'quarry' on the development site would not be deemed worthy of acknowledgement from the report authors if they are aware of the actual conditions of the site.

(i) I also note that in maps supplied by Orsted prior to the planning application submission, panel arrays were intended to be located in the 'quarry'.[71] Drawing '7353-pl-dr-101.pdf' now shows panel arrays located immediately adjacent to, but not on, the '*quarry*'.

(ii) No explanation is provided for this small but significant change in the site layout by Orsted.

[69] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.2.4

[70] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.3.5

[71] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.3.5.2

(iii) This therefore adds to the confusion regarding lack of reference to either a '*quarry*' or alleged areas of enforcement action within the boundary of the proposed development.

(e) Given the severity of this issue (not referencing either 'quarry' works, or areas subject to alleged waste enforcement actions), it further raises questions regarding the professionalism, thoroughness and ultimate reliability of LSGHH report.

6.6.12 In the interests of brevity, I do not comment upon further issues regarding the apparent incorrect submission of this document (i.e. it is issued in draft, has not been reviewed / approved prior to issue, incorrect land area apparently assessed, critical elements not included / referenced in the report, etc). I therefore proceed on the basis of providing my review of the technical elements contained within this assessment in the following sub-sections.

6.6.13 I request that ACP seek further information and clarity from Orsted regarding the status of this document and whether it was submitted in error.

6.6.14 **Detailed review of LSGHH**

Drinking water risks

6.6.15 The LSGHH confirms that multiple sections of the Tourig_020 river are located on-site and adjacent to the development boundary and are formally mapped by the EPA as "*Article 7 Drinking Water Rivers*".[72]

6.6.16 The following designated areas are all hydrologically connected downstream via the site drainage network:[73]

(a) Blackwater River (Cork/Waterford) SAC

(b) Blackwater Estuary SPA

(c) Blackwater River & Estuary pNHA

6.6.17 Without mitigation, the LSGHH assessment states that:

(a) Increased runoff has "*large adverse*" impacts, of "*moderate to profound*" significance;[74]

(b) Release of suspended sediments has "*moderate to significant*" adverse impact on water quality;[75] and

[72] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Table 1.25

[73] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Table 1.24 [hydrological connectivity is "likely" for all three protective designations]

[74] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1

[75] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1

(c) Accidental pollution from hydrocarbons, wastewater, or cement has "*slight to significant*" adverse significance for surface waters (high sensitivity receptors).[76]

6.6.18 Despite these findings, the assessment concludes "*no likely significant adverse effects*"[77] after mitigation—without supplying quantitative or modelled justification. The mitigation efforts are vague in description and non-binding from a planning enforcement perspective.

6.6.19 The conclusion appears to be entirely based on qualitative judgement / subjective opinion and is unsupported by the documentation provided.

6.6.20 Given the presence of drinking water rivers and SAC connectivity, this is unacceptable.

Slope Stability risks

6.6.21 Despite Orsted's non-sensical attempt to describe the site "*relatively flat*"[78], the LSGHH rightly identifies that the site contains a significant amount of steep slopes.

6.6.22 The LSGHH states that parts of the site are mapped with "*moderate to high*"[79] landslide susceptibility, particularly near riverbanks on the western and southern boundaries.[80]

6.6.23 The LSGHH states that "*No mapped Landslide Event (GSI, Landslide Events) are recorded close to the study area*".[81] [emphasis added]

(a) I attached a photograph below showing an actual landslide and road collapse immediately adjacent to the site following heavy rains caused by Storm Babet (photo taken on/around 19 October 2023 on Youghal Park Road, adjacent to the development site):

[76] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1
[77] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.12
[78] E.g. Planning and Environment Report, Section 1.3, 7.5.3, etc
[79] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.3.5.4
[80] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Figure 1.8
[81] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.3.5.4



(b) I note that this road was subject to road closures and repair works for a significant period thereafter due to safety concerns (I cannot be certain, but I believe a period in excess of 12 months).

(c) This is another example of the LSGHH being apparently completely unaware of the actual conditions and prior history of the development site (I repeat the missed 'quarry' and waste enforcement / investigations not acknowledged by the LSGHH).

6.6.24 Despite the "*moderate to high*"[82] landslide susceptibility and prior history of landslide events adjacent to the proposed works, no geotechnical borehole logs on the site were carried out; no slope stability modelling is included or described as being proposed for future design stages; no monitoring wells or inclinometers were installed or proposed to be installed.

[82] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.3.5.4

6.6.25 Given extensive cut-and-fill volumes (25,013m³) [83] proposed during the project, this is insufficient and fails to meet IGI (2013) requirements.[84]

Inadequate Surface Water System Design & Evidence

6.6.26 Following on from the concerns I raise in my review of 'Appendix C: Site Investigation Report' (see Section 6.5), regarding the inadequacies of the investigations to inform a coherent drainage design, I note the LSGHH states the following:[85]

> *"Poorly designed drainage has the potential to adversely effect the baseline hydrological regime including new preferential pathways, erosion and soil degradation particularly during and immediately after construction phase whereby unvegetated soils are exposed."*

(a) I agree with this sentiment entirely. The drainage design included within Orsted's submission will always be at risk of being a 'poorly designed drainage' scheme as it is based on a fundamentally weak point regarding the lack of investigations of the actual site-specific ground conditions.

6.6.27 The LSGHH states that 46 drainage swales; 11 soakaways and interceptor drains will be added to prevent surface water from discharging from the site.

6.6.28 However, I have been unable to locate evidence that the design considered / included hydraulic capacity calculations reflective of the actual likely conditions on site; modelling for blockage scenarios (see note later); evidence of analysis of extreme rainfall events; or cumulative peak discharge modelling has been undertaken.

(a) Regarding the blockage scenarios, I note that elsewhere Orsted states "*With the passage of time, the constructed drainage network will likely become full of deposited sediment and revegetation will naturally occur which has the potential to render the drainage system less effective over time.*"[86]

(b) As Orsted has recognised this likelihood elsewhere in its submission, it is surprising that the LSGHH does not consider / model the impact of blockages on its proposed drainage. This is especially critical, considering Orsted admittance regarding potential downstream flooding caused by the solar park (described in the next sub-section).

[83] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.4.1.3

[84] Institute of Geologists of Ireland, Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statement

[85] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1.1

[86] PER Appendix J, Section 2.4.3

Increased downstream flood risk

6.6.29 The LSGHH notes that the site is adjacent to watercourses with mapped National Indicative Fluvial Flooding (Tourig_20 and Glendine_010).[87]

6.6.30 Construction will generate a **net increase in** runoff of 0.016–0.185 m³/s, equivalent to **up to 4.15%** of micro-catchment output during a 1-in-100-year storm.[88]

6.6.31 Needless to say, a 4.15% net increase in runoff on a 323 hectacre development, are rightly identified as impacts with ratings of "*slight to **very significant***" downstream.[89]

(a) I also note that the LSGHH downplays the actual net increase runoff, or is apparently relying on an incorrect figure. Appendix B of the LSGHH actually shows that there is a projected **6.37% increase** in surface water runoff.[90]

(b) I assume that this is a transposition error in the LSGHH, which should have read 6.37%, rather than 4.15% increase in net runoff, rather than a deliberate attempt to downplay issues adverse to Orsted's submission.

(c) However, this is another example of why it is important that ACP only considers documents which have been appropriately reviewed and approved for issue, rather than relying on those issued in draft.

6.6.32 A 4-6% net increase in surface water runoff from a 323-hectare site draining into a flood-prone river system is highly significant and cannot be dismissed as negligible.

6.6.33 Yet the LSGHH includes no / inadequate hydraulic modelling and no failure scenario analysis for attenuation or other drainage features.

6.6.34 This is a critical omission for a site of 323 hectare directly connected to flood-prone rivers.

Climate change impacts not modelled

6.6.35 I provide my detailed comments on the Flood Risk Assessment ('FRA') in a later sub-section. However, it is worth noting that within the LSGHH, it states that:[91]

> *"The drainage systems for the Proposed Development have been designed for 1 in 100 year rainfall storm events, including an **additional 20% to account for climate change**, to mitigate against flooding at the site and to adjacent areas (Appendix B)"*

6.6.36 However, as noted in my review of the FRA, the FRA was conducted via an OPW 'Guidelines on the Planning Process and Flood Risk Management' Stage 2 desktop based study only.

[87] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1.1

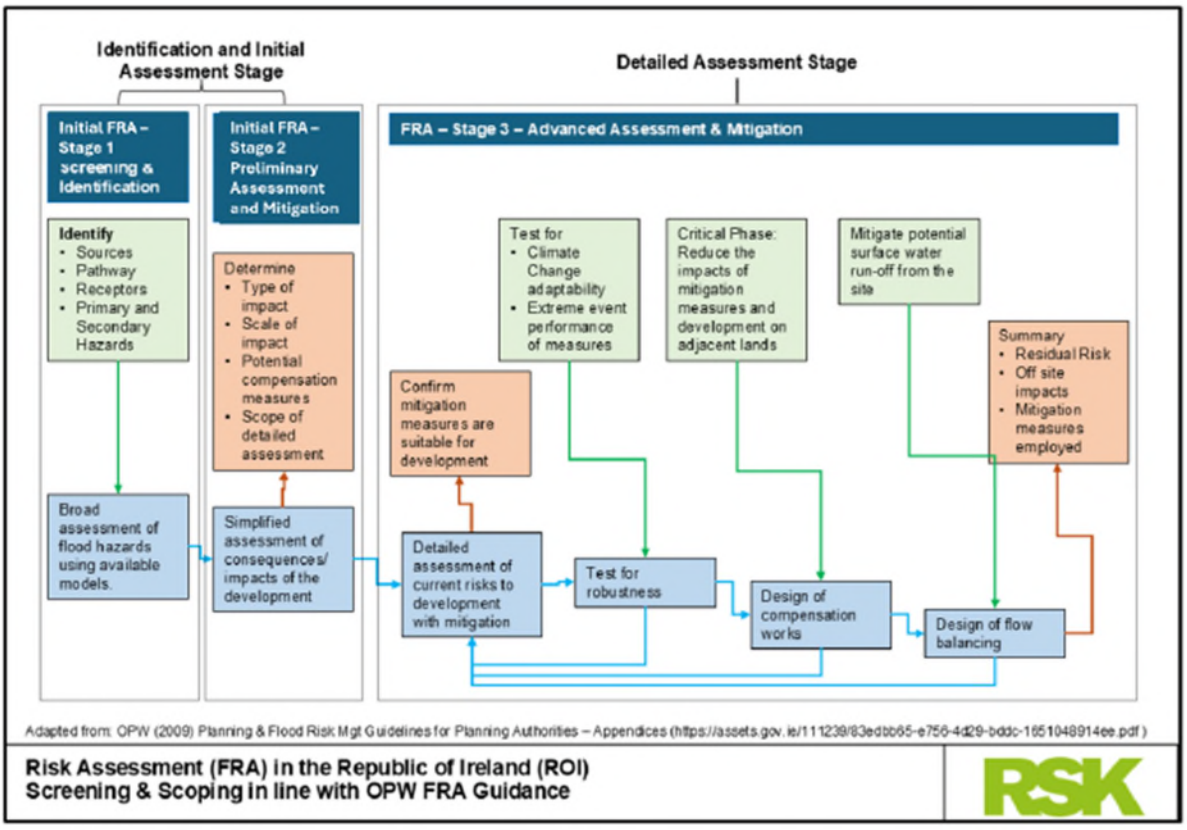
[88] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1.1

[89] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.9.1.1

[90] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Table 4.7

[91] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.10.6

6.6.37 The DEHLG/OPW Guidelines on the Planning Process and Flood Risk Management published in November 2009, which is the methodology adopted in the FRA, states that the "*Test for Climate Change adaptability*" is only considered at Stage 3 Detailed Assessment Stage, as shown in the graphic below:[92]



6.6.38 The LSGHH does not appear to provide justification for this "*additional 20%*". The figure appears to be an unstated and unsubstantiated subjective figure, seemingly based on little more than a round-figure assumption. The figure is not referenced in the FRA, and it is therefore unclear from where the LSGHH makes this allowance.

6.6.39 It therefore difficult to say with a degree of confidence that the already forecast additional net increase of 4-6% surface water runoff from a 323-hectare site draining into a flood-prone river system is reliable, or indeed under-estimated.

6.6.40 This is a highly significant issues and cannot be dismissed as negligible, which the LSGHH and FRA attempt to imply.

Flood risk

6.6.41 The LSGHH states the following regarding flood risk:

[92] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.1.1

> *"**No past flood events**, as mapped by the OPW, are shown in proximity to the site. Historic maps on the GSI website were assessed and **no historic flooding has been indicated on site**."*[93]

6.6.42 There is a significant volume of evidence demonstrating that the site itself, and areas adjacent to the site, have been the subject of recent and repeated floodings. I provide multiple examples of flooding both on the site and "*in proximity to the site*" in Section 6.7 of this submission.

(a) Note that these examples are for illustrative purposes to demonstrate the inadequacy of the LSGHH and FRA. They are not intended to be an exhaustive record of the historic and repeated flood events experienced on site and 'in proximity to the site'.

6.6.43 Unfortunately, the Flood Risk Assessment requires a separate sub-section to describe its potential deficiencies, which I include via Section 6.7 of this submission.

Summary of concerns regarding LSGHH

6.6.44 It is unclear whether the LSGHH document submitted as part of this application was submitted in error. I say this because it is issued in draft, has not been reviewed / approved prior to issue, incorrect land area apparently assessed, critical elements not included / referenced in the report and it downplays the predicted increase in surface water runoff (the LSGHH states it is a 4.15% increase, whereas the actual analysis clearly shows 6.37% increase).

6.6.45 In any event, the environmental effects have been systematically understated, and the required level of site-specific data, as mandated by EPA (2022) and IGI (2013) guidance, is not provided.

6.6.46 The development poses demonstrable, unmitigated risks to drinking water rivers, downstream SAC/SPA sites, and flood-sensitive catchments. The loss associated with the "**permanent** land take" [94] of "*high-value*"[95] agricultural soils would be significant and irreversible.

6.6.47 Critical components of the hydrological, hydrogeological, and geotechnical assessments are absent, incomplete, or unsupported by data.

6.6.48 The Flood Risk Assessment included within the LSGHH is of such concern that I comment on this in an entirely separate sub-section below - Section 6.7 of this submission.

6.6.49 The conclusions reached in the LSGHH assessment rely on assumed mitigation effectiveness, rather than evidence-based analysis.

6.6.50 I request that ACP refuse permission for this scheme based on the inadequacies in the LSGHH assessment.

6.6.51 Should ACP consider this proposal further, then I request that Orsted be required to undertake additional works in regard to the LSGHH, including and not limited to: a full geotechnical investigation including boreholes and slope-stability analysis; site specific groundwater

[93] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.8.3

[94] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Section 1.4.1.2

[95] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Table 1.1

monitoring and hydrological investigations (noting my concerns regarding the missed perched water tabled I raise in Section 6.5); and full modelling of all drainage proposals, including swales and attenuation ponds.

6.7. LSGHH: Flood Risk Assessment

Introduction

6.7.1 In this sub-section, I include my observations on the Flood Risk Assessment ('FRA'), which is included as Appendix B to the LSGHH.

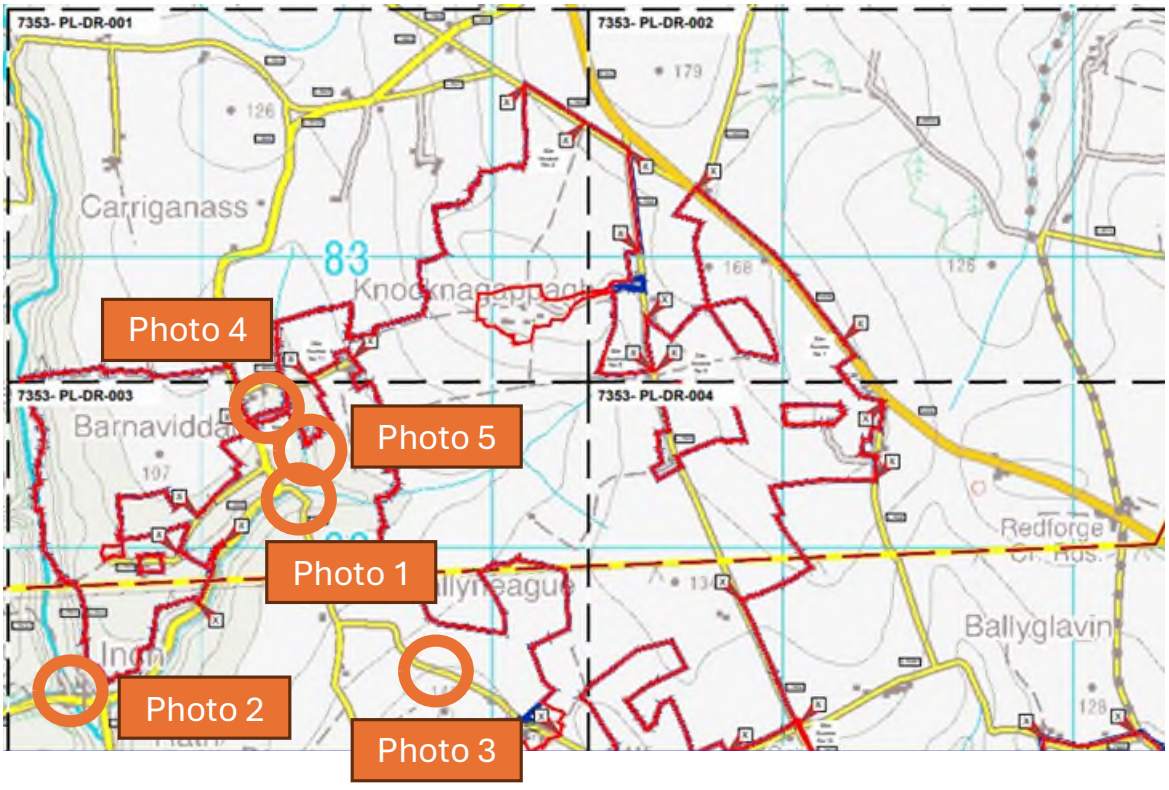
The FRA does not consider all the available evidence

6.7.2 Under the 'Sources of Information, the FRA identifies its sources of information available as via 'Desk Study', a survey in February 2025 (presumably the "*site walk overs*" referred to in the LSGHH) and (unspecified) information provided by the client.

6.7.3 As the FRA appears limited to primarily being a desktop study, it includes the following within its conclusion for its Stage 1 phase:[96]

> *"The Proposed Development lies within Flood Zone C, with* ***no records or reports of flooding on-site.****"*

6.7.4 I include a series of photos showing flooding / impacts of flooding within or adjacent to the proposed site boundary. Note that these are not intended to act as exhaustive records. Firstly I include a mark-up of the proposed development map, showing locations of the photos which follow – note that these photos were all taken on/around October 2023 in areas within / adjacent to the proposed development:



[96] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.2.10

6.7.5 **Photo 1:** I include a photograph showing the impact of flooding immediately adjacent to the site:



6.7.6 I note that the image of this collapsed bridge and near-fatal accident was reported nationally, as shown in the referenced footnote.[97] Therefore factually incorrect for Orsted to say that has been no "*reports of flooding on-site*."

6.7.7 **Photo 2:** below is a photo montage of the flood waters breaking the banks at Inch, flooding multiple homes and the community church and hall.



6.7.8 **Photo 3:** showing lands **within the proposed development redline boundary**. Flood water (receded by the time the photo was taken) breached over the roadway, making the road impassable. The road required subsequent resurfacing by Cork County Council caused by the flood damage.

[97] https://www.thesun.ie/news/11510339/storm-babet-floods-car-road-washed-away-inch-cork/



6.7.9 **Photo 4:** showing landslides adjacent to the proposed development:



(a) I note that this road was subject to road closures and repair works for a significant period thereafter due to safety concerns (I cannot be certain, but I believe a period in excess of 12 months).

6.7.10 **Photo 5:** shows flooding within the proposed redline boundary following a period of rainfall:



6.7.11 As Orsted's FRA states:[98]

> *"New information, revised practices or changes in legislation may necessitate the re-interpretation of the report in whole or in part."*

6.7.12 I therefore trust that Orsted's consultants will be revised and re-issuing the FRA, given the incorrect starting assumption it makes regarding the Proposed Development having "**no records or reports of flooding on-site**."

FRA inappropriately relies on indicative desktop studies

6.7.13 The FRA acknowledges that OPW mapped flood extents used in the FRA "*should not be relied upon for detailed design*" and that the assessment contains significant data gaps.[99]

6.7.14 The Planning System and Flood Risk Management Guidelines (2009) require site-specific hydraulic modelling where:

(a) the development is large;[100]

(b) the development is "*highly vulnerable*" infrastructure; [101]or

[98] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 2.2

[99] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.4.3

[100] Planning System and Flood Risk Management Guidelines (2009), page 13, 44-50, 52

[101] Planning System and Flood Risk Management Guidelines (2009), page 26

(c) downstream flooding is known to occur.[102]

6.7.15 All three factors apply here, yet no such modelling has been provided.

6.7.16 This is a critical flaw within the FRA, and the recommendations / conclusions contained within the current version cannot be relied upon for the purpose of granting permission for a project of this size and scale to proceed to construction.

6.7.17 The conclusion of the FRA is to essentially 'screen out' the requirement for full Stage 3 Flood Risk Assessment based on the reliance on mitigation measures and subjective opinions of the author which are not supported by the evidence.

6.7.18 This contradicts precedence in this matter: People Over Wind & Peter Sweetman v. Coillte Teoranta (Case C-323/17) & Grace v. An Bord Pleanála (Case C-164/17) show that mitigation measures cannot be taken into account in the screening phase; Waddenzee (Case C-127/02) shows that a test of "*reasonable scientific doubt*" means that the design must progress detailed stage and Sweetman v. An Bord Pleanála (C-258/11) shows that where reliance on incomplete information or qualitative judgements is relied upon, the design must proceed to detailed site-specific desing.[103]

6.7.19 This does not apply the 'precautionary principle' discussed during my review of the EIA – see Section 5 of this submission.

6.7.20 I request that ACP insists on the FRA proceeding to a Stage 3 and 4 assessment before providing a determination regarding a decision to grant planning permission.

Inconsistent figures throughout FRA

6.7.21 The FRA states:[104]

> *"This indicates a moderate, **adverse impact** of the Proposed Development on the run-off regime. However, this **net increase of 4.40%** from baseline conditions is a relatively small increase to **run-off rates** in comparison to the overall footprint of the Proposed Development."* [emphasis added]

6.7.22 This is then contradicted later in the report with:[105]

> *"A 1 in 100 year storm event scenario results in a **net increase of surface water runoff** associated with the Proposed Development, calculated to be 0.016-0.185m3/s, (or 0.01-**4.15%** relative to the associated micro catchment). The magnitude of potential net increase in runoff as a function of the Proposed Development at the Site is considered an adverse moderate effect."*

[102] Planning System and Flood Risk Management Guidelines (2009), page 47-50

[103] I acknowledge that some of these precedents relate to NIS / Appropriate Assessments. However, the impact of flooding will also impact the study area within the AA, and must so be applied.

[104] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.3 (pdf page 31 of 36)

[105] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.5

6.7.23 It is further contradicted in the analysis tables provided (note that I assume it is a typo in the title, which should refer to a 1 in 100 year storm), which indicates that a figure of **6.37%** is correct:[106]

Table 4.7: Net increase in runoff as a function of the proposed development per micro-catchment areas and baseline runoff volumes (1 in 100 year store)

Proposed Development baseline run off volumes (1 in 100 Year Hour Storm Event)								
Micro catchment	Approximate Area (m^2)	1 in 100 Year Rainfall Event (m/sec Rain)	Capped Recharge Capacity. % of Effective Rainfall[1])	Rejected Recharge / Runoff (m/hr Rain)	Runoff Discharge Rate (m^3/hr)	Runoff Discharge Rate (m^3/sec)	Net Increase (m^3/sec)	Net Increase against baseline micro-catchment runoff (%)
1	1,585,257.15	0.03	60.00%	0.012	19,023.09	5.28	0.336	6.37%
2	402,600.60	0.03	60.00%	0.012	4,831.21	1.34	0.016	1.21%
3	189,994.07	0.03	60.00%	0.012	2,279.93	0.63	0.026	4.15%
4	188,741.58	0.03	60.00%	0.012	2,264.90	0.63	0.027	0.00%
5	323,767.35	0.03	60.00%	0.012	3,885.21	1.08	0.017	1.60%
6	341,131.31	0.03	60.00%	0.012	4,093.58	1.14	0.016	1.43%
7	168,760.88	0.03	60.00%	0.012	2,025.13	0.56	0.030	0.00%

6.7.24 The authors inability to transcribe simple figures accurately and consistently throughout the report is concerning and potentially indicative of a lack of thoroughness and rigour applied to the work. This reduces the confidence level that can be placed on this analysis and recommendations.

6.7.25 Notwithstanding the above, a **4-6% net increase in surface water runoff** [FRA to confirm which figure is correct] from a **323-hectare site draining into a flood-prone river system** is highly significant and **cannot be reasonably dismissed as negligible**.

Location of highly vulnerable infrastructure in a high-risk catchment

6.7.26 The FRA categorises the solar farm's core infrastructure (220 kV substation, BESS, transformers) as "*Highly vulnerable development*",[107] per OPW classifications[108].

6.7.27 Whilst the development site resides in Zone C,[109] the OPW Guidelines (and this is reflected in the FRA itself) require that:

(a) The development must not increase flood risk elsewhere[110]

(b) The development must not contribute to downstream flooding

[106] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Table 4.7 [highlight added]

[107] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Table 4.1

[108] Planning System and Flood Risk Management Guidelines (2009), Table 3.1

[109] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.2.10

[110] Planning System and Flood Risk Management Guidelines (2009), paragraph 5.15 (Box 5.1)

6.7.28 The FRA **fails** this requirement because the development clearly increases runoff, and the applicant cannot demonstrate no downstream impact.

6.7.29 As currently provided, the FRA fails to satisfy the criteria and requirements of the OPW Guidelines which it purports to adhere to.

Construction-Phase Flood Risk Is Ignored

6.7.30 The FRA states that there is a risk of "*localised flooding or excessive draining*"[111] due to construction errors or poor design.

6.7.31 In my opinion, when considering Orsted's submission as a whole, I believe the risks of flooding due to poor design to be higher than the documentation indicates (note the multiple examples of poor work included in both the LSGHH and supporting FRA).

6.7.32 Despite the acknowledgement of the risk of human error during construction, and risk of the consultants poor design, no site-specific construction-phase risk assessment appears to be provided.

6.7.33 I have also been unable to locate adequately described measures regarding phasing strategy, compliance mechanism, or emergency response plan to address these risks.

6.7.34 Given the extent of the site, steep slopes (up to 20 degrees in areas) and the poor natural permeability of clay soils, this is a serious omission on behalf of the applicant.

SuDS measures are based on unproven assumptions and the design underspecified

6.7.35 Although the FRA proposes SuDS such as swales, check dams, and attenuation ponds, it also states:

(a) There are data gaps including lack of site-specific permeability and recharge data;

(b) The SuDS design is indicative, not supported by calculations of storage capacity or discharge rates; and

(c) The 2.1 million m² solar panel surfaces were excluded from hard-surface calculations because they are "*raised up*" from the ground.[112]

6.7.36 It is my understanding that this exclusion is not an accepted hydrological practice. Solar panel "*drip line*" effects substantially accelerate and concentrate runoff and must be included in modelling.

[111] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.2.8

[112] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.3.4.2 (pdf page 31 of 36)

6.7.37 The result is an unquantified claim that SuDS will neutralise runoff increases, with no modelling to support it.

6.8. Summary of concerns regarding the Flood Risk Assessment

6.8.1 As shown above, the flood risks associated with the proposed works do not appear to have been properly assessed for either the construction or operational phases.

6.8.2 The report is confused regarding the increased site runoff rates, citing multiple inconsistent figures throughout the document, which don't appear to be representative of the analysis undertaken.

6.8.3 In any event, the impact of the increased site runoff rates does not appear to be modelled and are simply dismissed as being negligible. This appears to be a subjective assessment / opinion and is not supported by evidence contained within the assessment.

6.8.4 The impacts of the proposed development contributing to flooding either on-site or downstream are dismissed through 'mitigation'. The apparent mitigation does not appear to be designed, described adequately, or in a manner that is binding on the project.

(a) The assessment includes no modelling demonstrating the impact should any of the alleged / unspecified mitigation efforts fail.

(b) This is an essential modelling exercise, as Orsted itself admits elsewhere in its application that: "*the constructed drainage network will likely become full of deposited sediment and revegetation will naturally occur which has the potential to render the drainage system less effective over time*."[113]

6.8.5 The report concludes that there is "*no risk*" of flooding on site or to downstream receptors – this appears to be a subjective opinion and is not supported by the facts presented in the FRA.

6.8.6 The author does not appear to understand the distinction between risk mitigation and risk avoidance. Whilst a risk can be mitigated, unless it is avoided, those mitigations do not eradicate that risk. Therefore, whilst the FRA acknowledges that risk mitigations are required, it displays a fundamental misunderstanding of risk to conclude that:[114]

> *"the Proposed Development complies with the appropriate policy guidelines for the area and is **at no risk of flooding**. There is **no risk of increasing flood risk on-site and no risk of exacerbating flood risk to downstream receptors**."*

6.8.7 The FRA does not state that a Stage 3 Detailed Assessment is required. The FRA appears to have 'screened out' this requirement based on mitigation measures being successful. As noted above, this contradicts case law and precedent in this regard, which explicitly require a Stage 3 assessment in this instance.[115]

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[113] PER Appendix J, Section 2.4.3

[114] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.5

[115] See paragraph 6.7.18

6.8.8 I note that it is only at Stage 3 of the OPW FRA Guidance where the "*Confirm mitigation measures are suitable for development*" takes place.[116] This further undermines the FRA Stage 2 conclusions that the post-mitigation design poses "*no risk of flooding*" either onsite or downstream.

6.8.9 Therefore, the FRA has failed to adequately demonstrate that the development does not increase the risk of flooding on site or increase the risk of downstream flooding.

6.8.10 I request that ACP refuse planning permission for this project on the basis of the inadequate FRA presented, and the lack of a Stage 3 Detailed Assessment.

[116] PER Appendix N: Land, Soils, Geology, Hydrology and Hydrogeology Impact Assessment, Appendix B – Flood Risk Assessment, Section 4.1.1 (as shown in Figure 4.1)

6.9. PER Appendix O: Landscape & Visual Impact Assessment

6.9.1 In its assessment of Application reference number: 25/6876, Cork County Council deemed the application to be incomplete and listed ten areas requiring additional information to be provided.

6.9.2 Item No 4 stated:

> *"The LVIA does not include a cumulative impact assessment. The permitted SID windfarm (ABP ref: 309121-21) is approximately 2kms from the site and a cumulative assessment relating to this is included in the traffic assessment. One should also be included in the LVIA."*

6.9.3 In response to this request, the applicant has resubmitted its 'Landscape and Visual Impact Assessment', which now includes Section 1.6.8 "Cumulative Effects".

6.9.4 However, the inclusion of this section appears to respond to the procedural requirement raised by Cork County Council but does not provide sufficient technical evidence to allow an objective assessment of cumulative visual impacts and does not seek to meaningfully engage with the substance of the request. I say this for the following reasons:

(a) **No combined photomontages** of the developments have been provided;

(b) The author **relies on its assertion** that the developments remain "clearly separated", "readily distinguishable" and the "cumulative effects remain relatively limited", despite **providing no evidential basis** for these conclusions;

(c) The cumulative assessment conclusion is **not supported by a viewpoint analysis**. The LVIA assesses 24 representative viewpoints but does not provide a cumulative assessment for those viewpoints. The assessment therefore **fails to identify which viewpoints experience visibility of both developments**; whether significance levels change when both developments are viewed together; and whether previously identified **Moderate or Substantial-Moderate effects increase in significance when cumulative effects are considered**.

(d) The omission of cumulative visualisations is particularly significant in respect of Scenic Route S45. The LVIA already identifies adverse visual effects at VP3 and VP7 along this **protected scenic route**. The applicant has not demonstrated through cumulative photomontages whether the **addition of visible 150m wind turbines alters the significance of those effects**;

(e) The cumulative assessment relies heavily on repeated assertions that the receiving landscape is "robust" and "modified". However, the landscape has been classified by the Cork County Development Plan as possessing High Landscape Sensitivity. No convincing explanation is provided as to why a highly sensitive landscape can simultaneously be treated as readily capable of absorbing cumulative renewable energy infrastructure. As the landscape is regarded as highly sensitive in

accordance with the Cork County Development Plan, then **a more precautionary cumulative assessment should have been undertaken.**

6.9.5 The revised assessment does not seek to meaningfully engage with the requests sought by Cork County Council. While the applicant has inserted a cumulative effects section in response to Cork County Council's request, the assessment is not supported by cumulative photomontages, cumulative ZTV mapping, cumulative viewpoint analysis or any visual modelling of the consented 150m wind turbines.

6.9.6 The LVIA expressly acknowledges that the photomontages **do not include the turbines and accepts that combined visibility will occur**.

6.9.7 **ACP is being asked to accept a conclusion of "Not Significant" cumulative impact without the visual evidence normally required to substantiate that conclusion**.

6.9.8 Accordingly, the cumulative assessment does not provide ACP with sufficient evidence to independently verify the applicant's conclusion that cumulative landscape and visual effects are "Not Significant". In the absence of cumulative photomontages, cumulative viewpoint assessment and cumulative visibility modelling, the Council cannot reasonably conclude that the requirements of its previous incompleteness request have been fully addressed.

6.9.9 In addition, the cumulative assessment also **does not appear to provide a dedicated cumulative assessment of the visual interaction between the proposed solar development and the separately-consented 220kV substation infrastructure** associated with the overall Greenhills project. This further limits the usefulness of the assessment and understates the cumulative perception of energy infrastructure within the wider landscape.

6.9.10 The cumulative assessment is **largely narrative in nature and is not supported by the visual or analytical evidence** that would normally be expected for a development of this scale in a landscape identified by the Cork County Development Plan as having High Landscape Sensitivity.

6.9.11 In my opinion, **assessment remains <u>incomplete</u>** because the **cumulative impacts of both projects are effectively dismissed by the LVIA without any meaningful analysis** begin provided to enable an objective independent assessment by ACP.

6.9.12 I request that ACP deem this **submission to be incomplete**, and request the applicant to provide it with sufficient visual evidence normally required to substantiate the conclusion included in the LVIA.

6.10. PER Appendix Q: Glint and Glare Impact Assessment

Introduction

6.10.1 In this section, I provide my comments on the Glint and Glare Impact Assessment, included as Appendix Q of the PER.

6.10.2 In my opinion, the Glint and Glare Impact Assessment is wholly inadequate and should be disregarded as such by ACP in its determination of this submission.

PER Appendix Q: Glint and Glare Impact Assessment

6.10.3 I provide my review of the Glint and Glare Impact Assessment as follows.

The Assessment is not based on any recognised industry standard

6.10.4 The Glint and Glare Impact Assessment provides an opinion on what it considers to be an 'acceptable level' of glint and glare.

6.10.5 The assessment is not based on any industry standard, independent guidance note, or generally recognised measurement metric.

6.10.6 The assessment includes a 'Magnitude of Impacts' matrix, which includes different levels of severity on nearby dwelling receptors.

6.10.7 However, this 'Magnitude of Impacts' matrix ultimately carries little weight, as the report author states, rather shockingly, that: [117]

> *"**The final category of assessment is determined on the basis of professional judgement, and accounts for mitigating factors…**"* [emphasis added]

6.10.8 I cannot emphasise enough the issue that this presents.

6.10.9 Effectively, it is admitted that any evidence contained within the Glint and Glare Impact Assessment can ultimately be over-ruled at conclusion stage based solely on the "***professional judgement***" of the report author.

6.10.10 The report authors, Macro Works, do not put forward any evidence or justification in its report as to why its 'professional judgement' should be relied upon.

6.10.11 This is problematic for ACP, as it is essentially being asked to come to a determination on this project without a sound scientific basis from which it can measure / assess effects, or enforce a binding condition as part of granting planning permission.

6.10.12 It is wholly unreasonable for ACP to be put in a position whereby it is required to provide a determination on this application based simply on trust of the unnamed author of this

[117] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

assessment. It is unclear what training or qualifications the author presents, their experience in this field, or whether the report has been through an internal review and approval process.

6.10.13 As I show in the points I raise below, ACP must disregard this assessment as being inadequate.

Road Safety Assessment is inadequate at best, dangerous at worst

6.10.14 The report downplays the risk that glint and glare has to cause accidents on the predominantly narrow country roads that surround this development, through the inclusion of the following, rather shocking, sentence:[118]

> *"Such effects can **only be experienced for the period of time it takes to travel along the affected road section, and therefore will be fleeting** and in any event significantly less than the maximum periods outlined."* [emphasis added]

6.10.15 The R634 and numerous local roads run immediately beside solar arrays.

(a) Drivers at junctions, bends, or stopping distances are **not** in motion and are therefore exposed to glare for longer;

(b) No human factors analysis (driver reaction time, eye adaptation, saccadic impairment) is included; and

(c) The impact of glint as at it most dangerous whilst drivers are in motion, and may have their visibility temporarily impaired.

6.10.16 Given that **82 road receptors** remain affected **after mitigation**, to downplay the impacts is dangerous.

6.10.17 Extending the author's logic, it is akin to saying that if the drivers drove faster, then they would experience less glare effects, which would presumably be safer.

(a) This would be a preposterous position for a reasonable Glint and Glare Impact Assessment to advance.

6.10.18 It is simply not credible that the impacts of this are downplayed by the "***professional judgement***"[119] of the reports authors because vehicles 'move past the affected section quickly'.

6.10.19 It appears that the "***professional judgement***"[120] that ACP is being asked to place its blind faith in, may not be particularly sound.

6.10.20 ACP must disregard this assessment as being unfit for purpose.

[118] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.9

[119] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

[120] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

Incomplete Assessment: Aviation impacts dismissed with evidence or receptor mapping

6.10.21 The assessment scoped out an aviation assessment from its review. This was on the basis that "*no relevant aviation receptors were identified*". [121]

6.10.22 The Glint and Glare Impact Assessment states:[122]

> *"Furthermore, the Planning and Development (Solar Safeguarding Zone) Regulations 2022 set out 43 Solar Safeguarding Zones (SSZs). A SSZ is an area around an airport, aerodrome or helipad in which there is a potential for glint or glare from solar panels to impact aviation safety."*

6.10.23 No systematic identification of private airstrips, helicopter landing zones, emergency service flight paths, agricultural aviation activity, or military/Coast Guard routes is provided.

6.10.24 Given that the study relies on FAA-derived methodologies elsewhere, the absence of even a basic receptor scan represents a material omission inconsistent with their stated approach.

6.10.25 From my basic research, there are at least four helipads with located within a 25km radius of the map:

(a) Ballynatray House

(b) Ardmore Cliff House Hotel

(c) Castlemartyr Resort Hotel

(d) Fota Hotel

6.10.26 It is unclear why the report author does not include these in its assessment.

6.10.27 All of these helipads generate regular airborne traffic over the proposed development, which are visible on all / most days.

6.10.28 In addition, the local air ambulance can be regularly observed to travel over the proposed development.

6.10.29 Given that the Glint and Glare Impact Assessment say that where there is a "***potential*** *for glint or glare from solar panels to impact aviation safety*" [123] [emphasis added], then these should be considered within its assessment.

6.10.30 The Glint and Glare Impact Assessment has incorrectly 'screened out' this part of the assessment from its scope.

6.10.31 The Glint and Glare Impact Assessment is therefore incomplete in scope and unreliable as presented.

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[121] PER Appendix Q: Glint and Glare Impact Assessment, Executive Summary

[122] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.3.1

[123] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.3.1

Incomplete Assessment: Not all reflective surfaces considered

6.10.32 Glare from supporting infrastructure — including inverter housings, security fencing, battery storage, CCTV masts, and site cabins — is entirely omitted.

6.10.33 Only solar panel surfaces are assessed.

6.10.34 This represents a **significant under-scoping** of potential glint and glare sources.

Heavy and Unreliable Dependence on Vegetation Screening

6.10.35 The digital surface model (DSM) used to assess visibility has several acknowledged limitations:

(a) It represents only a single moment in time and cannot reflect seasonal hedge-cutting, storm damage, or agricultural removal.

(b) The report concedes DSM data often overestimates hedgerow density due to overhead capture angles, potentially under-reporting actual visibility .

(c) Yet despite these limitations, vegetation is relied upon as the primary means of mitigation.

6.10.36 This approach is not robust or defensible, particularly in an Irish rural context where hedge maintenance varies year-to-year

Study Area Boundary unjustified and contradicted in the assessment

6.10.37 The assessment restricts the study area to **1 km**, stating that potential impacts reduce with distance.[124]

6.10.38 However, the report's own analysis shows that properties such as receptors **H26–H29** may experience glint and glare from panels located **up to 3.4 km away**.[125]

6.10.39 It is unclear whether the author is aware of the apparent contradiction within their report, or whether they're aware of what their stated methodology and actual findings represent.

6.10.40 It is also worth noting, that by limiting the study area boundary to 1km, the effects of Glint and Glare on the surroundings is likely to be significantly under-scoped, as those receptors outside this boundary will not be included in the figures referred to in the report.

[124] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.1

[125] PER Appendix Q: Glint and Glare Impact Assessment, pdf page 23 of 62

6.10.41 The example above clearly demonstrates that dwelling receptors beyond the arbitrary 1km inclusion zone will be affected by glint and glare from the proposed development, and are not considered in the figures provided to ACP.

6.10.42 It appears that the "***professional judgement***" [126] that ACP is being asked to place its blind faith in, may not be particularly sound.

Mitigation Measures are unsuccessful – impacts are downplayed

6.10.43 **54 dwellings** remain affected after screening (**post-mitigation**) .

6.10.44 Several dwellings (including H26–H29, H44, H50, H79–H81, H106–H108) continue to experience Medium impacts.

6.10.45 These include:

(a) Up to **169 days per year** of reflectance

(b) Up to **28 minutes per day** of glint/glare exposure

6.10.46 These results are incompatible with the authors "***professional judgement***" [127] that no significant nuisance will arise.

Contradiction Between Claimed Low Reflectivity and High Glare Durations

6.10.47 The Glint and Glare Impact Assessment author repeatedly asserts that solar panels are "*not highly reflective*".[128]

6.10.48 It is somewhat surprising then, that the authors own modelling shows (pre-mitigation):

(a) Up to **173 days/year of reflectance**

(b) Up to **62 minutes/day for certain dwellings**

6.10.49 These positions of panels not being reflective, and the figures above, cannot both be true.

6.10.50 The contradiction casts doubt on the reliability of the report's narrative and conclusions.

6.10.51 It appears that the "***professional judgement***"[129] that ACP is being asked to place its blind faith in, may not be particularly sound.

[126] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

[127] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

[128] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.1.4, 1.2.6.2, 1.2.7 and 1.2.10

[129] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

Unsubstantiated assumptions to discount / downplay impacts

6.10.52 The assessment claims real-world glare will be "*at least"* half of the theoretical values due to Irish weather and **cloud cover**.[130]

(a) In a bizarre and amusing twist, this is a similarly unscientific argument that is often deployed against the construction of solar parks in Ireland – that it is 'too cloudy'.

6.10.53 The report does **not correlate predicted glare windows with actual sunshine hours**, nor does it provide any meteorological modelling. The assumption and following conclusion is speculative and **not supported by any analysis**.

6.10.54 It appears that the "***professional judgement***"[131] that ACP is being asked to place its blind faith in, may not be particularly sound.

6.10.55 Planning decisions must be based on real world scenarios, not blind-faith optimism or unsupported discounted scenarios.

Mitigation by Design

6.10.56 The Glint and Glare Impact Assessment is based on mitigation measures being put in place to reduce the impact on dwelling receptors and road / transport receptors.

6.10.57 Mitigation typically takes the form of proactive planting of "*advanced nursery stock in the form of 8-10cm girth trees will be used to fill any noticeable gaps*" around the development site perimeter.[132]

6.10.58 I note that planting represents the **only** mitigation measures referenced in the Glint and Glare Assessment. It is in a section titled "*Mitigation by Design*".

(a) The author does not appear to understand what "*Mitigation by Design*" actually means.

(b) 'Mitigation by Design' refers to a proactive approach to identifying and reducing risks in the initial planning / design phase of projects, rather than reacting to issues later.

(c) Planting additional 'nursery stock' in an attempt to mitigate glare by incorrectly designed / located solar arrays is a reactive, rather than proactive measure.

(d) 'Mitigation by Design' would involve measures such as angling panels to reduce reflection and glint / glare in sensitive areas; avoiding solar arrays in high risk areas; etc.

[130] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2, 1.2.6.1 (pdf page 25 of 62), 1.2.7, and 1.2.10

[131] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

[132] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.4

6.10.59 It appears that the "***professional judgement***"[133] that ACP is being asked to place its blind faith in, may not be particularly sound.

Summary of concerns within the Glint and Glare Impact Assessment

6.10.60 On a personal level, I recognise that no one is entitled to a view from their house. However, what people are entitled to is to enjoy the amenity within their own homes without undue disturbance.

6.10.61 What this Glint and Glare Impact Assessment shows beyond any reasonable doubt (other than the authors "***professional judgement***"[134] is highly suspect), is that there are significant negative effects caused by the proposed solar park, which will negatively affect nearby residents from enjoying the amenity within their own homes.

6.10.62 The Glint and Glare Impact Assessment demonstrates that these negative effects cannot be adequately mitigated. It is simply a function of the proposed sites exposure and elevation in regard to its surroundings.

6.10.63 However, disappointingly, rather than reflect this reality (excuse the pun!), the Glint and Glare Impact Assessment seeks to downplay the output of its own model analysis.

6.10.64 In my opinion, the Glint and Glare Impact Assessment is wholly inadequate for the purpose of supporting an application for this proposed development. I say this because:

(a) The assessment is not based on any recognised industry practice, independent guidance notes or adopts any recognised measurement metric.

(b) The assessment relies on the "***professional judgement***"[135] of the report author, which is highly suspect. In my opinion, the "*professional judgement*" displayed by the report author is grounds in and of itself for dismissing its findings in their entirety.

(c) The Road Safety Assessment is inadequate at best, dangerous at worst. The author indicates that effects of glint and glare on road users can be discounted because vehicles 'move past the affected section quickly'.

(d) The assessment places a heavy and unreliable dependence on vegetation screening, but does not appear to model the out-of-season impacts that this may cause on nearby road and dwelling receptors.

(e) The study area of 1km is not justified and is promptly contradicted within the supporting analysis showing affected properties up to 3.4km away. This clearly demonstrates that the Glint and Glare Impact Assessment is significantly under-scoped, as it does not consider the impacts of glint and glare on dwelling receptors more than 1km (despite the report author inadvertently demonstrating that dwellings well outside this boundary are affected).

[133] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

[134] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

[135] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

(f) The Glint and Glare Impact Assessment shows that mitigation measures are unsuccessful and then attempts to downplay the significance experienced by over 50 dwelling receptors (I re-iterate, 50 is also likely to be downplayed, through the arbitrary exclusion of dwelling receptors more than 1km away).

(g) The report author repeatedly asserts that solar panels are "*not highly reflective*" and then proceeds to say that there are 173 days per year of reflectance, with some dwellings experiencing up to 62 minutes glare per day (pre-mitigation). This apparent contradiction is lost on the report author.

(h) The report author says that Ireland is cloudy and indicates that real-world glare will be "*at least*" half of what the analysis would otherwise indicate. It is unclear why the report author seeks to undermine their own analysis, by advanced unsubstantiated assumptions.

(i) The report repeatedly substitutes opinion in place of data and analysis.

6.10.65 The Glint & Glare Assessment contains major methodological weaknesses, internal contradictions, unproven assumptions, and acknowledged data limitations. It fails to demonstrate that the proposed solar park will not result in significant nuisance or hazard to residential properties, road users, and the wider public.

6.10.66 The report states that that "*it is not considered that there will be any significant nuisance or hazard effects generated from glint and glare upon any receptor identified in the study area as a result of the proposed solar farm"* [136] and pleads that we trust their "***professional judgement***".[137]

6.10.67 For the reasons above, I respectfully submit that ACP cannot reasonably rely on this assessment as evidence of compliance with residential amenity protections or road safety obligations.

6.10.68 I request that ACP refuse planning permission for this proposed development on the basis of:

(a) the significant and detrimental negative impact that this glint and glare study demonstrates will have on the ability of locals to enjoy the amenity within their own homes;

(b) the increase in risk on local roads due to the impacts of glint which cannot be safely mitigated; and

(c) the overall inadequacy of the Glint and Glare Impact Assessment.

[136] PER Appendix Q: Glint and Glare Impact Assessment, Executive Summary

[137] PER Appendix Q: Glint and Glare Impact Assessment, Section 1.2.2

6.11. PER Appendix R: Archaeology and Cultural Heritage Impact Assessment

6.11.1 In its assessment of Application reference number: 25/6876, Cork County Council deemed the application to be incomplete and listed ten areas requiring additional information to be provided.

6.11.2 The first item identified related to an 'Archaeological and Cultural Heritage Assessment', and stated the following:

> *"The application is not considered complete because of the inadequacy of the archaeological assessment. In order to facilitate the Planning Authority's examination of the application, and to determine compliance with the County Development Plan, an assessment of sub-surface archaeology is required and* ***at a minimum****, a Geophysical Survey should be carried out as a first step to guide further assessments/investigations.*
>
> *Also, all cultural heritage assets should have a CH number - at present only protected structures and buildings on the NIAH have been assigned a CH number; 19th C buildings and 'historic' buildings are mapped (PER Appendix RACHHIA FIGURES LIST), but they do not have CH numbers and some are well within the red line boundary. These will require full consideration in the Archaeological and Cultural Heritage Assessment Report." [emphasis added]*

6.11.3 Orsted's re-submission does not address this fundamental request from Cork County Council, for the following reasons:

(a) Orsted say that approximately **42.85 hectares were not surveyed**;

(b) Potential archaeology has been identified, but its nature and significance remain unknown and will be investigated later;

(c) CCC requested a geophysical survey to guide further investigations, and the results of that survey indicate that further investigations were required but were not actually undertaken before resubmission; and

(d) Orsted misplaced attempt to argue precedence for why it should complete the investigations post-award.

6.11.4 Therefore, in this regard, while Osted has submitted some additional information, the applicant has not completed the further investigations which CCC expressly indicated should follow from the geophysical survey.

6.11.5 In my opinion, the Council should not be placed in the position of approving unidentified mitigation for unidentified impacts on unidentified sites that may only be discovered during construction. **Those areas should be fully investigated now, in accordance with the recommendations of the applicant's own consultants reports**, and until such investigations are complete the planning application should continue to be regarded as incomplete.

6.11.6 Non-surveyed lands

6.11.7 The applicant has not demonstrated why the full site could not have been surveyed to support this application – absent any suitable justification, it is perfectly reasonable for CCC to require that its original request be respected in full by Orsted completing the requested surveys prior to considering the application further.

(a) If Orsted's absent justification would have included complaints that seasonal survey requirements (due to potential cropping), then there is no reason that this could not have been accommodated via a later submission when access is available to these areas (if this was the reason).

6.11.8 The applicant does not expand on why some locations included "*unsuitable ground conditions*" which prevented the survey taking place. However, this raises an obvious point that if the area cannot be surveyed with lightweight quad bikes, then how does Orsted intend to undertake heavy construction works in these areas or undertake maintenance once the construction is complete.

(a) The period when the geophysical survey works were undertaken included record-breaking periods of dry weather, so Orsted's "*unsuitable ground conditions*" excuse should not be accepted without further expansion.

(b) In any event, from my review of the remainder of the application, I cannot find reference to "*unsuitable ground conditions*" being considered in the design or construction of this proposed development. It is continually referred to as being "*relatively flat*" [138] throughout the remainder of its submission.

6.11.9 **The significance of the unsurveyed area is heightened by the fact that four archaeological anomalies were identified within the surveyed portions of the site.** The applicant therefore has no evidential basis upon which to conclude that the remaining 42.85 hectares does not contain archaeological features of similar significance.

6.11.10 <u>Failure to consider additional investigations</u>

6.11.11 The applicants position regarding it investigations undertaken thus far efficiently indicates and argues:

> *'Potential archaeology has been identified, but its nature and significance remain unknown and will be investigated later by planning condition.'*

6.11.12 CCC's previous correspondence says that the geophysical survey was "**<u>minimum</u>**" investigation to be provided in any resubmission.

6.11.13 As noted above, Orsted has not even provided a full geophysical survey and provides no reasonable justification for the absent **42.85 hectares** – therefore it has not even complied with the minimum requirement from CCC.

[138] E.g. Planning and Environment Report, Section 1.3, 7.5.3, etc

6.11.14 In any event, the geophysical survey has identified four archaeological anomalies; M1 Possible enclosure; M2 Possible ring ditch; M3 Possible ring ditch or similar feature; and M4 Possible enclosure. These are exactly the types of features commonly associated with prehistoric and early medieval settlement landscapes.

6.11.15 The geophysical survey report and overall archaeological assessment say:

> *"The anomalies of archaeological significance that were identified by geophysical survey **should be targeted during a test trenching programme that could be conditioned within any grant of permission** for the site in order to ascertain their significance and extent." [emphasis added]*

6.11.16 The applicants approach in ignoring the intent of CCC's request places an undue burden on CCC to oversee investigations undertaken during the construction phase and is contrary to the original request that these investigations be undertaken as part of the initial application.

6.11.17 **This is not a concern raised by third parties. It is the conclusion of the applicant's own archaeological specialists. Having identified potential archaeological features and having recommended targeted trenching to establish their significance, the applicant now seeks permission before undertaking the very investigations that its own experts consider necessary.**

6.11.18 If four potentially archaeological sites were identified on surveyed lands, there is no evidence base demonstrating that the unsurveyed 42.85ha is archaeologically sterile.

6.11.19 In effect, the geophysical survey highlights concern areas, which are then effectively ignored by the applicant as it seeks to gain planning permission first and undertaken appropriate investigations later. That is not an adequate basis upon which to determine an application of this scale and sensitivity.

6.12. PER Appendix S: Noise Assessment

6.12.1 In its assessment of Application reference number: 25/6876, Cork County Council deemed the application to be incomplete and listed ten areas requiring additional information to be provided.

6.12.2 Item No 2 stated:

> *"With regard to noise and vibrations impacts, a suitably scaled map should be submitted as part of the assessment showing the location of all noise sensitive locations in the vicinity of the proposed development. The respective distances of such locations should also be presented in tabular form. In addition, this map should also show the locations where all noise monitoring took place. Please note also in relation to the noise assessment, page 36 states, "it is considered that noise sources associated with the proposed development are likely to be broadband in nature, with no distinguishable tones. On this basis a tonal penalty is not applicable. Also, impulsive noise as a result o/'the* [sic] *proposed development is not considered likely at the closest sensitive receptors." This submission should be further expanded and detailed with any information to support the above claims submitted."*

6.12.3 I provide the following observations regarding CCC's request and Orsted's response:

6.12.4 <u>Scaled map shows Orsted assessment BESS and Substation located incorrectly</u>

6.12.5 CCC were correct in requesting a map from the applicant, as it shows the location of the **substation and BESS to have been modelled in the incorrect location**.

6.12.6 As both of the two most significant items regarding noise on the project are incorrectly located, the entire assessment is rendered as unreliable. Figure 1.8 of the 'Noise and Vibration Impact Assessment' is shown below:

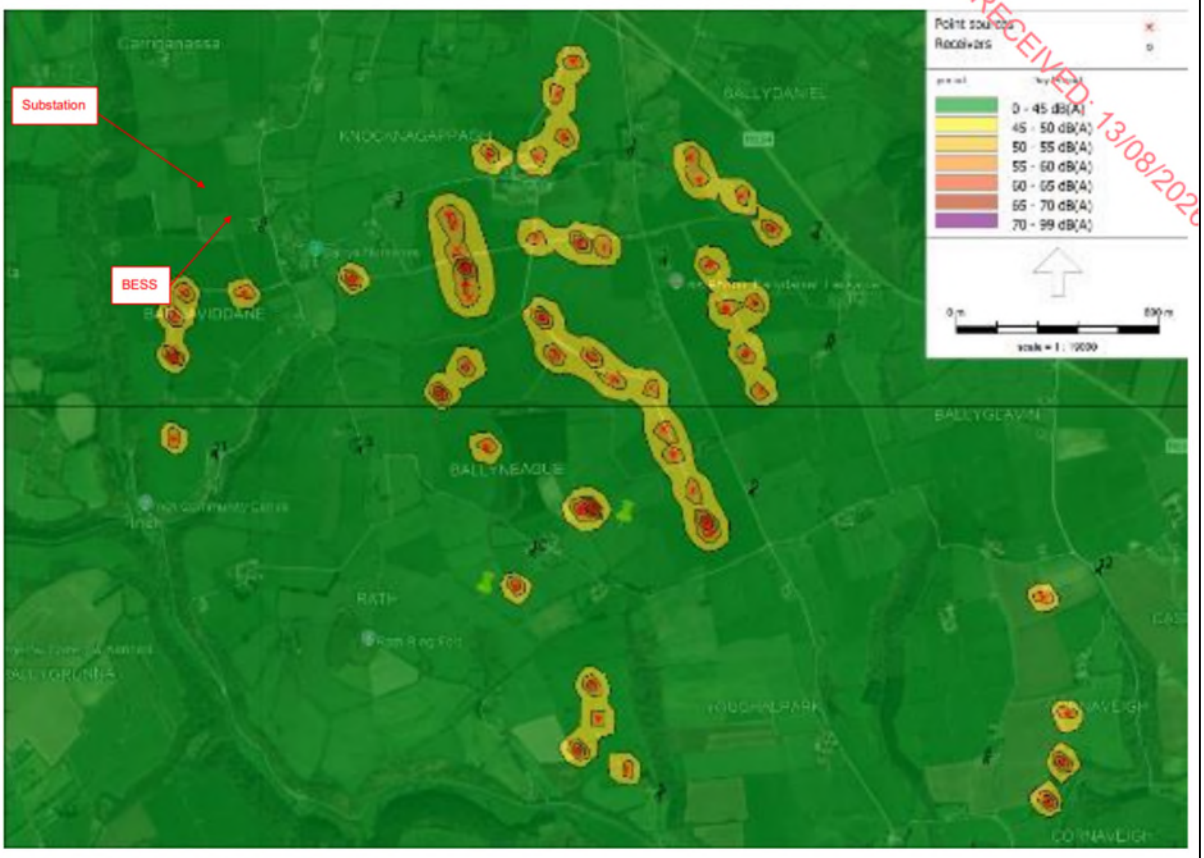

Figure 1.8: Operational Noise Contour Map – Daytime (45 dB)

6.12.7 As can clearly be seen above, the location of the BESS and Substation are incorrect, when compared to drawings submitted elsewhere in the application, such as 7353- PL-DR-100 and 7353- PL-DR-105.

6.12.8 Therefore, the analysis ought to be undertaken again, using the correct BESS and Substation locations and re-submitted to ACP.

6.12.9 <u>Tonal and Impulsive Nose</u>

6.12.10 CCC requested supporting technical evidence regarding tonal and impulsive noise claims made by the applicant in its original submission.

6.12.11 The applicant appears to have recognised that the claims made in its original submission cannot be substantiated.

6.12.12 The applicant's revised response effectively states that the necessary octave-band data is unavailable and that tonality cannot be objectively assessed. The response therefore explains the limitation but does not actually resolve it. **Assessment of transformer tonality and low-frequency noise is deferred until after construction**, notwithstanding the proximity of numerous residential receptors and the minimal compliance margin at certain locations.

6.12.13 Having had to retreat from its initial unsubstantiated claim, the applicant now effectively states 'low-frequency noise and tonality are rare and can be investigated if complaints arise

after construction'.[139] The proposed approach effectively postpones assessment of tonal and low-frequency transformer noise until residents experience the impact and submit complaints. Consequently, the 'Noise and Vibration Impact Assessment' conclusion that operational noise impacts are insignificant cannot be reasonable viewed as substantiated.

6.12.14 This is particularly concerning as several receptors operate with little or no compliance margin. If tonal characteristics are subsequently found to exist, the application of noise penalties could result in exceedance of guideline criteria.

(a) For example, Receptor 1 is predicted to experience 40dB against a 40dB (evening) limit. The assessment **predicts compliance only because no tonal correction has been applied**.

(b) As the applicant acknowledges that tonality has not been assessed, there is no evidential basis for concluding that the applicable rating level at Receptor 1 would remain compliant should tonal characteristics be present.

(c) This omission is particularly significant given that the applicant acknowledges that transformers are identified as the principal operational noise source and that transformer noise exhibits tonal and low-frequency characteristics.

6.12.15 <u>Number of receptors assessed</u>

6.12.16 In addition to the points raised by CCC, it is also worth noting that there are 106 identified receptors in the 'Noise and Vibration Impact Assessment'.

6.12.17 Only 13 receptors are included in the assessment.

6.12.18 In my opinion, the 13 receptors identified may not represent an indicative sample which would representatively model the noise impacts of the development as a whole, or potentially not show the worst-case Receptors from which compliance should be measured. For example, the following receptors are not assessed: Receptor 14 (5m from red line boundary); Receptor 37 (7m), Receptor 21 (8m), Receptors 41 and 46 (9m) and Receptors 15 and 32 (11m). None of these appear in Table 1.32.

6.12.19 The assessment does not explain why several dwellings situated immediately adjacent to the development boundary were excluded from the operational noise prediction table. In the absence of receptor-specific modelling, it cannot be verified that these properties experience lower impacts than the representative receptors selected by the applicant.

6.12.20 In light of the tonal penalties issue identified above, ACP should request that these receptors be added to any future assessment in the applicants next re-submission for this development.

6.12.21 <u>Noise and Vibration Impact Assessment summary:</u>

[139] Noise and Vibration Impact Assessment, Section 1.4.3.2

6.12.22 In summary:

(a) Cork County Council requested supporting information to justify the applicants assertion that tonal and impulsive noise impacts would not arise.

(b) The applicant's response does not provide octave-band data and does not undertake an objective assessment of tonality. The assessment therefore provides no technical basis upon which tonal penalties can be excluded.

(c) The applicant therefore has not provided the evidence requested by Cork County Council and instead seeks to **defer assessment until after construction**. Such an approach is inconsistent with the purpose of environmental assessment, which is intended to **evaluate environmental effects before consent is granted**.

(d) In addition, the applicant indicates that it has modelled the location of the BESS and Substation in the incorrect locations.

(e) The applicants selection of which Receptors it puts forward in its assessment may omit some receptors which may otherwise fail compliance (in light of the exclusion of tonal penalties).

6.12.23 Therefore, the applicant has not adequately addressed the substantive concern previously raised by Cork County Council regarding tonal and impulsive noise. The assessment remains **technically deficient and incomplete** because no objective tonal assessment has been undertaken and no evidential basis has been provided upon which tonal penalties can be excluded.

6.12.24 ACP should therefore require the applicant to submit a revised noise assessment supported by manufacturer-specific acoustic data and a fully substantiated evaluation of tonal characteristics prior to determining the application.

7. Screening for Appropriate Assessment and Natura Impact Statement

7.1. Introduction

7.1.1 In this section, I provide my observations on the Appropriate Assessment ('AA) Screening and Natura Impact Statement (NIS).

7.1.2 In my opinion, the AA Screening and NIS submitted is legally and procedurally deficient and fails to comply with the requirements of Article 6(3) of the Habitats Directive and Part XAB of the Planning and Development Act 2000 (as amended).

7.1.3 The applicant's own report repeatedly demonstrates that the project cannot be screened out without reliance on mitigation, which is unlawful at Stage 1 and insufficiently certain at Stage 2.

(a) I also re-iterate my opinion on the points regarding the other appendices submitted within the PER being technically inadequate and in some places, materially deficient.

(b) Therefore, any mitigation relied upon in the NIS, which requires support from the PER appendices related to site-specific conditions, LSGHH, flood risk, drainage and glint and glare impacts, are also technically unsound.

(c) As a result, the mitigations relied upon in the NIS are highly suspect and potentially unreliable.

(d) Therefore, these mitigations should be discounted, and the AA be required to proceed to a full Stage 3 and 4 assessments.

7.1.4 In my opinion, the following grounds show that the Screening and NIS cannot support granting planning permission.

7.2. Baseline survey data contains significant gaps

7.2.1 The report admits limitations in survey methodologies, including:

(a) Bats: data excluded from the report as *'not relevant'*[140]

(i) However, evidence has been provided of the presence of a 'registered and protected bat roost' via a previous observation for a planning application within the proposed development redline boundary earlier in 2025.[141]

(ii) It appears that the 'screening out' of a requirement for a full bat survey did not consider all the available evidence to the NIS author and can therefore be reasonably argued to be inappropriate / incomplete.

[140] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 3.5.2.3

[141] Planning Application No: 255154, see submission provided by Ivor Sweeney, dated 17 July 2025

(b) Otter surveys: seasonal and spatial limitations have been acknowledged in the NIS, however, these limitations are subjectively downplayed.[142]

(c) Bird surveys: a single Vantage Point used for flightlines[143] and the author acknowledges the limited seasonal coverage.[144] The limitation of this is dismissed by the report author.

7.2.2 These gaps create uncertainty that must be resolved in favour of site protection.

7.2.3 **Under Sweetman (C-285/11), any non-trivial uncertainty triggers the requirement for Stage 3 / 4 Appropriate Assessment, or refusal.**

7.3. Inadequate assessment of in-combination / cumulative effects

7.3.1 The NIS addresses cumulative effects,[145] identifying multiple developments, but provides no hydrological modelling; no overlapping construction timelines; and no quantified sediment or pollution load assessment.

7.3.2 The recommendation that "*Mitigation measures are required to offset in-combination effects from this project as adverse effects are likely to occur*"[146] is not developed appropriately and non-compliant with Article 6(3), which requires demonstrable analysis.

7.3.3 The NIS appears to have identified only a single instance where in-combination / cumulative effects of the development require mitigation measures, relating to housing development '244647'.[147]

7.3.4 This is particularly concerning, as this is my house [Housing Development (Declan Fitzgerald, Knocknagappagh, Killeagh, Co. Cork)].[148]

7.3.5 As discussed during my review of the 'PER Appendix A: Summary of Public Consultation and Community Newsletters', see Section 6.3 of this submission, I have repeatedly attempted to reach out and engage with Orsted regarding this submission.

(a) Orsted has failed to engage with me in any meaningful sense prior to, or since, submitting its application.

7.3.6 Any 'mitigation measures' identified within the NIS come as news to me, further demonstrating the rather generic application of this phrase throughout the NIS, which I expand upon in the sub-heading point immediately following this one.

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[142] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 4.2.3

[143] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 3.5.2.5

[144] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 4.2.4 (pdf pages 59 to 66, of 132) [document number pages 53-60]

[145] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 8

[146] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 8.1.1.2

[147] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 8.1.1.2

[148] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 5.6.2, pdf page 93 of 132

7.3.7 I note that the NIS continues to state:[149]

> *"Construction works and operation works involving water courses or works within 20m of watercourses including all measures prescribed above for contamination management* ***will be conducted outside the construction phase for the Housing Development project (244647)****."*

7.3.8 Orsted has not contacted me regarding the requirement to complete the construction of my house, prior to them commencing construction on works close to waterways on its site.

7.3.9 At a really basic level, the NIS has not even identified how it will satisfy itself that my 'construction works' will be complete. Orsted states "*This project will only require 18-24 months to complete.*"[150]

(a) I may take significantly longer to complete the construction works than the assumption relied upon within the NIS.

7.3.10 Given the lack of coherence through the various connecting technical appendices within Orsted's submission, this fragmented approach is not surprising.

7.4. Over-reliance on Generic Mitigation

7.4.1 Across the NIS, mitigation measures are generic, including:

(a) Silt fences and settlement ponds

(b) Standard pollution control

(c) Toolbox talks

(d) Timing restrictions

7.4.2 **Article 6(3) is clear – mitigation cannot be generic 'off the shelf' measures**. Article 6(3) requires project-specific, detailed, measurable and enforceable mitigation measures.

7.4.3 The mitigation measures included within the NIS do not satisfy this threshold requirement.

7.5. Over-reliance on mitigation at Screening Stage

7.5.1 The AA Screening repeatedly states that Likely Significant Effects (LSEs) cannot be ruled out without mitigation (e.g., hydrological pathways, disturbance effects).

7.5.2 Mitigation measures are cited as necessary to prevent impacts. These statements occur throughout Section 5 (Screening for LSEs) prior to the NIS, where the report concludes in multiple instances that effects 'cannot be excluded in the absence of mitigation'.

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[149] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 9.1.3.4

[150] 'Screening for Appropriate Assessment and Natura Impact Statement', Section 9.1.3.4

7.5.3 Under ***People Over Wind*** **and** ***Sweetman*****, mitigation cannot be considered at Screening**. **Where impacts cannot be excluded *without* mitigation, a <u>full AA</u> must be undertaken** with a precautionary approach.

7.5.4 The Screening fails this legal test.