S. 37

File With ____________

CORRESPONDENCE FORM

Appeal No: ABP 322787-25

M ____________

Please treat correspondence received on 03/07/25 **as follows:**

1. Update database with new agent for Applicant/Appellant ____________	
2. Acknowledge with BP 40	**1. RETURN TO SENDER with BP** ____________
3. Keep copy of Board's Letter ☐	2. Keep Envelope: ☐
	3. Keep Copy of Board's letter ☐

Amendments/Comments observation from Catherine Buckle & Conor Browne

4. Attach to file	**RETURN TO EO** ☐
(a) R/S ☐ (d) Screening ☑	
(b) GIS Processing ☐ (e) Inspectorate ☐	
(c) Processing ☐	

	Plans Date Stamped ☐ Date Stamped Filled in ☐
EO: Dale lith cult	**AA:** Laoise Foley
Date: 14/07/25	**Date:** 15/07/25

S. 37

File With _____

Appeal NO:_ABP 322787 **Defer Re O/H** ☐

TO: SEO

Having considered the contents of the submission da ted/receive d 03/07/25

from

Catherine Buckle & Conor Browne I recommend that section 131 of the Planning and Development Act, 2000

be/not be invoked at this stage for the following reason(s):. no new material information

E.O.: Diane Uí Cuív **Date:** 06/08/25

For further consideration by SEO/SAO

Section 131 not to be invoked at this stage. ☐

Section 131 to be invoked – allow 2/4 weeks for reply. ☐

S.E.O.: _____ **Date:** _____

S.A.O: _____ **Date:** _____

M _____

Please prepare BP _____ **- Section 131 notice enclosing a copy of the attached submission**

to: _____ **Task No:** _____

Allow 2/3/4weeks – BP_____

EO: _____ **Date:** _____

AA: _____ **Date:** _____

Lodgement Cover Sheet - LDG-081141-25

An Bord Pleanála

Details

Lodgement Date	03/07/2025
Customer	Catherine Buicke and Conor Browne
Lodgement Channel	In Person
Lodgement by Agent	No
Agent Name	
Correspondence Primarily Sent to	
Registered Post Reference	

Lodgement ID	LDG-081141-25
Map ID	
Created By	Pádraic Keane
Physical Items included	No
Generate Acknowledgement Letter	
Customer Ref. No.	
PA Reg Ref	

Categorisation

Lodgement Type	Observation / Submission
Section	Processing

PA Name	Cork County Council
Case Type (3rd Level Category)	

Fee and Payments

Specified Body	No
Oral Hearing	No
Fee Calculation Method	System
Currency	Euro
Fee Paid	50.00
Refund Amount	

Observation/Objection Allowed?	
Payment	PMT-063666-25
Related Payment Details Record	PD-063505-25

Observation

Run at: 03/07/2025 13:44

Run by: Pádraic Keane

ABP 322787-25

PA Case Number	
PA Decision Date	
County	
Development Type	
Development Address	
Appellant	
Supporting Argument	

Development Description	
Applicant	
Additional Supporting Items	

Run at: 03/07/2025 13:44

Run by: Pádraic Keane

Cork County Council
County Hall
Cork
Tel - 021 427 6891
VAT Registration No - 0007458M

Customer Details
C. Browne and Catherine Buicke
Kilmaclenine
Ballyclough
Mallow
Co. Cork

05-SEP-2024
13:16:20

Cork County Council

Receipt : PLG0045638

Header Details

Receipt Reference:	PLG0045638
Received From:	C. Browne and Catherine Buicke
Billing Address:	Kilmaclenine Ballyclough Mallow Co. Cork
Account No.:	POS 7000004
Amount Paid (EUR):	20.00
Type:	CASH
Comments:	24/5503 C Browne Submission
Receipt Issued By:	CLMURPHY
Receipt Date:	05-Sep-2024
Site:	0300 : Planning Applications/Submiss
D/N/U:	D
Invoice Reference:	9000261582 : Cash

Line Details

From Reference	To Reference	Transaction Date	Remarks	Amount Paid
PLG0045638	9000261582	05-Sep-2024	24/5503 Submission	20.00

RECEIPT IS ISSUED SUBJECT TO CLEARANCE OF CHEQUE/CREDIT CARD
ISSUED ON BEHALF OF
Planning Applications/Submiss,
Planning Front Office, Floor 1,

AN COIMISIÚN PLEANÁLA
LDG- 081141-25
ACP-
03 JUL 2025
Fee: € 50 Type: Card
Time: 13:24 By: Hand

Comhairle Contae Chorcaí
Cork County Council

Pleanáil agus Forbairt,
Halla an Chontae,
Bóthar Charraig Ruacháin,
Corcaigh T12 R2NC.
Fón: (021) 4276891
R-phost: planninginfo@corkcoco.ie
Suíomh Gréasáin: www.corkcoco.ie
Planning & Development,
County Hall,
Carrigrohane Road, Cork T12 R2NC.
Tel (021) 4276891
Email: planninginfo@corkcoco.ie
Web: www.corkcoco.ie

ACKNOWLEDGEMENT OF RECEIPT OF SUBMISSION OR OBSERVATION ON A PLANNING APPLICATION

THIS IS AN IMPORTANT DOCUMENT

KEEP THIS DOCUMENT SAFELY. YOU WILL BE REQUIRED TO PRODUCE THIS ACKNOWLEDGEMENT TO AN BORD PLEANÁLA IF YOU WISH TO APPEAL THE DECISION OF THE PLANNING AUTHORITY. IT IS THE ONLY FORM OF EVIDENCE WHICH WILL BE ACCEPTED BY AN BORD PLEANÁLA THAT A SUBMISSION OR OBSERVATION HAS BEEN MADE TO THE PLANNING AUTHORITY ON THE PLANNING APPLICATION.

PLANNING AUTHORITY NAME **Cork County Council**

PLANNING APPLICATION REFERENCE NO. 24/05503

A submission/observation, in writing, has been received from:

Conor Browne & Catherine Buicke
Kilmaclenine
Ballyclough
Mallow
Co. Cork

ON 05/09/2024 in relation to the above planning application.

The appropriate fee of €20 has been paid.

The submission/observation is in accordance with the appropriate provisions of the Planning and Development Regulations, 2001 and will be taken into account by the Planning Authority in its determination of the planning application.

Guy Clarke Hurley
Clerical Officer

Date: 05/09/2024

Local Authority Stamp

Planning Department
Cork County Council
County Hall
Cork

C. Buicke & Conor Browne
Kilmaclenine,
Ballyclough,
Mallow,
Co, Cork
P51A2H5
2nd July 2025

The Secretary,
An Bord Pleanála,
64 Malborough Street,
Dublin 1.

An Bord Pleanála Case ref PL04.322787 Cork County Council planning ref 245503

A Chairde,

I have concerns in relation to the decision of Cork County Council on the following grounds. Cork County Council did not consider this planning application with due diligence.

Cork County Council RFI Item 1

"The proposed grid connection route traverses the study area for the proposed N72/N73 relief road. You are advised to engage in consultation with the Cork National Roads Office in relation to the grid connection route in the context of the proposed N72/N73".

1. **Reliance on Verbal or informal Agreement**

Applicant response: ***It has been agreed that between the parties that the grid connection will be installed in the existing public road (L-5320)....this proposal has been excepted by Cork NRO***

Issue The response **lacks written confirmation or binding agreement** from the Cork National Roads Office Regarding;

- Final design acceptance,

- Conditions for integration with the N72/N73 scheme
- Construction sequencing

In Ireland **verbal agreement or meeting summaries** are not considered a sufficient legal basis for planning consent where future public infrastructure such a relief road may be affected.

2. **No Impact Assessment of Conflict with Future Relief Road**

The applicant proposes joint bays at both ends of the future flyover, but states this "does not affect the assessment within the EIAR."

Issue: EIAR documents must reflect interactions with other committed developments. The N72/N73 relief road is already at an advanced planning stage and its future construction could:

- Conflict with grid connection trenching,
- Require re-excavation of a new public road,
- Pose temporary disruption or double handling of works.

The claim of **"no impact" is not supported by design simulations, Road Safety Audits, or coordinated phasing plans,** as would typically be required under Irish Roads Acts and TII guidance.

3. **No Confirmation from TII Despite Proximity to National Infrastructure.**

"The Grid Connection will be installed... as is proposed in the planning application already submitted."

Issue: The application references consultation but does not include letters of support or approvals from TII, even though:

- The N72 and N73 are National Secondary Roads,
- Works intersect the proposed **NRO-controlled corridor.**

In Irish planning, any works even adjacent to national roads typically require explicit coordination with TII and submission of a **Traffic Impact Assessment or Road Safety Audit** if utility works occur within proximity of TII-managed assets.

4. **No Confirmed Consent for Integration Works**

The applicant commits to:

- Pay for ducting by the N72/N73 road contractor,
- Allow ESBN to energise cables through the flyover at a later phase.

Issue: There's no binding construction protocol or contract terms outlined between:

- The wind farm developer,
- Cork County Council/NRO,
- Future road contractor,
- ESB Networks.

In practice, this may lead to significant construction delays or design conflicts if not legally formalised before planning permission is granted.

Cork County Council RFI Item 2

1. Delayed or Reactive Site Investigation

   "A site investigation was conducted in December 2024 whereby two boreholes were drilled at T1 and T5..."
   Concern: The borehole testing was only carried out after the RFI was issued, despite karst susceptibility being highlighted earlier in the EIAR through geophysical resistivity surveys. This raises questions about the **completeness of the original EIAR submission,** as baseline geotechnical data for turbine foundations is a standard expectation under Irish EIA regulations.

2. Only Two Boreholes for Nine Turbines

- Only T1 and T5 had intrusive investigations, with no boreholes at T2–T4, T6–T9, or the substation—even though some are also underlain by limestone.

- **Problem:** Karst risk is not necessarily localized. The use of resistivity data alone at these other turbine locations, without confirmatory intrusive sampling, means the karst risk to over half the site remains unquantified.

This contradicts EPA 2022 EIAR Guidelines, which require that conclusions drawn from screening-level methods (like resistivity) be validated by ground-truthing in potentially sensitive areas

3. Downplaying Weathered Limestone as a Risk

"The survey indicated that underlying T1 and T5 were likely weathered limestones.

" **Concern:** While the report notes weathered bedrock, it does not quantify voiding, settlement potential, or mitigation measures (e.g., piling, raft foundations). Weathered limestone—especially **Waulsortian**—is associated with hidden cavities in Irish karst terrains. Simply acknowledging the lithology without addressing its **geotechnical** implications is inadequate.

4. **Unclear Karst Risk Ranking Criteria**

"The karst risk review is attached as Appendix 2.2.

" Problem: No clear risk rating matrix is shown in the main RFI response. There's no summary table translating geological observations into **engineering or planning consequences** (e.g. "low", "moderate", "high risk").

This is inconsistent with GSI guidelines on development in karst-prone zones, which recommend structured risk evaluation and clearly defined mitigation pathways.

5. **No Cumulative or Structural Design Integration**

There is no evidence that:

- The turbine foundation design has been revised based on karst findings, or

- Structural engineers have signed off on the sufficiency of ground bearing capacity or ground improvement needs.

This omission conflicts with expectations under **SI No. 600/2001** (Planning & Development Regulations), where all material risks to construction safety must be addressed in full.

Cork County Council RFI Item 3

Planning Authority request;
A revised Natura Impact Statement (NIS) was requested to include an assessment of potential impacts to otters, particularly around the HDD (Horizontal Directional Drilling) crossing at the South Caherduggan Stream, where no information had previously been submitted.

Applicant's Response Highlights:

• A dedicated otter survey was conducted on 31 January 2025.

• No signs of otter activity (e.g., spraints, holts, prints) were found within 150m upstream/downstream of the crossing.

• The stream connects to the River Blackwater SAC, where otters are known to occur.

• The revised NIS incorporates the findings, reflects the 2024 SAC statutory instrument (S.I. No. 452/2024), and concludes no additional mitigation is needed.

• Mitigation measures from the CEMP (Construction Environmental Management Plan) are referenced.

1. Insufficient Survey Effort

The entire otter assessment is based on a single survey conducted on one day in January, which:

- **Is outside peak survey seasons (spring/summer).**
    - May not detect transient otter use due to weather, stream flow, or seasonal behavior.
- Best practice generally recommends:

- Multiple visits across seasons, particularly near watercourses linked to SACs.
- At least one nocturnal or early morning survey.

The minimal survey effort does not meet the threshold for robust assessment, especially near an SAC.

2. Stream is Suitable, but Risk is Downplayed.

- The report confirms the stream is suitable and connects directly to otter habitat (River Blackwater SAC), but:
  - No assessment of potential future otter use is provided.
  - The response downplays disturbance risk simply due to absence of signs.

A "no-signs, no-risk" conclusion contradicts best-practice guidance, especially in proximity to SAC habitat.

3. **No Otter-Specific Mitigation or Monitoring**

- CEMP mitigation focuses on general HDD pollution prevention, such as:
  - Bentonite fluid use
  - Spill control measures
- However:
  - No otter-specific mitigation is proposed (e.g., pre-construction walkover, exclusion zones, timing restrictions).
  - No pre- or post-construction monitoring is committed to.

Otter-specific risks are not explicitly addressed in the mitigation plan, leaving a gap in legal protection under the Habitats Directive.

4. **No Evidence of NPWS Engagement or Licensing Contingency**

- There is no statement about consultation with the NPWS (National Parks and Wildlife Service).
- There's no discussion of whether a derogation license may be needed if otters are discovered during construction.

Lack of contingency planning for protected species could breach legal obligations under Irish and EU wildlife law.

5. Revised NIS Lacks Transparent Update Scope

- The response states the NIS was updated, but:
  - The exact sections modified are not detailed.
  - The extent of impact reassessment is unclear.

Inconsistency: It's difficult to verify whether the NIS adequately integrates the new data.

RFI Item 3 contains multiple technical inconsistencies, particularly in survey timing, insufficient impact assessment, and lack of otter-specific protections. This section may be vulnerable to legal challenge or further RFI if assessed rigorously under the Habitats Directive.

Cork County Council RFI Item 4

Planning Authority Request:
1. (a) Confirm if spring static bat surveys were conducted as required by best practice (NatureScot guidance: 10 nights in each of spring, summer, and autumn).

2. (b) Assess feasibility of re-siting Turbines 5 and 7 to increase buffer distances from trees/hedgerows.

3. (c) Provide a Preliminary Roost Assessment (PRA) of Ballyviniter Road bridge (grid connection route), as no bat survey was previously submitted.

1. **(a) – Static Detector Survey Timing**

- The response admits there is a typographical error in the EIAR, which gave the impression that spring surveys were not conducted.

- It claims that spring static bat surveys were done and are documented in Appendix 7.1, stating detectors were deployed in spring, summer, and autumn for 10 nights each.

Inconsistency: The justification hinges on **Appendix 7.1,** not the main EIAR chapter. If the main EIAR text misrepresents or omits this, it undermines transparency and regulatory confidence.

The applicant relies on a "typo" defense instead of clearly correcting the EIAR text or providing explicit evidence (e.g., logs/tables from surveys in spring 2022).

2. **(b) – Re-siting of Turbines 5 and 7**

- T7: Re-siting deemed not feasible due to site constraints and inter-turbine spacing.

- T5: Previously re-sited by 35m; now suggests it could be moved 20m more but claims this would not meaningfully reduce bat collision risk due to low/moderate activity levels.

The response does not include any collision risk modelling or site-specific ecological justification to support the conclusion that re-siting is unnecessary.
Weak Justification: Decisions are based on "professional judgment" without quantitative support or sensitivity analysis.

3. **(c) – Bridge and Culvert Bat Assessment**

- The response states that a Preliminary Roost Assessment (PRA) was done on 13 September 2022 but was accidentally omitted from the original application.
- PRA concluded:
  - Ballyviniter Bridge: Low roost potential.

  - Caherduggan South Stream culvert: Negligible potential.

- Includes survey methods (torch, ladder, binoculars) and rationale for low/no impact.

- No further surveys or derogation license deemed necessary.

Inconsistency, this is a reactive correction rather than proactive compliance. The omission of the PRA from the original application is significant, as:

- It forms the basis for screening out further bat surveys or licensing.
- It could have affected initial planning authority review.

Also, the survey was over 2 years old at time of RFI response, and vegetation or structure conditions could have changed, especially if ivy cover is involved.

Inconsistency Spring Survey (a) EIAR main text implies no spring survey; relies on an unverified claim of typo.

Turbine Re- siting (b) Lack of quatitative modelling/data to support judgement bat risk

Bridge PRA (c) Originally omitted from submission; over 2-year-old at RFI stage; no update or validation of conditions

Cork County Council RFI Item 5

Planning Authority Request:
(a) Confirm spring surveys were conducted for birds using static detectors (10 nights per season).
(b) Explain the absence of nocturnal migration surveys.
(c) Explain why no transects were conducted near Turbines 1–4.
(d) Assess the appropriateness of a pond enhancement near Turbine 1, which could attract birds into collision risk zones.

Inconsistencies

1. (a) – Spring Surveys for Birds

- The response states that this item duplicates RFI 4(a) (bat surveys) and is not applicable to birds, since static detectors are not used for bird monitoring.

2. (b) – Nocturnal Migration Surveys

- The applicant justifies omitting nocturnal migration surveys based on:
    - Desk studies showing no major flyways or high migratory use.

- Very limited observed migratory species activity (e.g., only 2 Whooper Swan observations over 3 years).
- SNH (2017) guidance suggests nocturnal surveys only for sites with likely high nocturnal activity.

While the rationale follows SNH guidance, no GIS-based flight corridor mapping or radar data is provided to robustly support the "low use" claim—especially important for a site near the River Blackwater, a known corridor for migratory species.

3. (c) – Missing Transects Near T1–T4

• It is acknowledged that Transects C and D were accidentally omitted from the original Figure 8.1 map.

- he applicant states those transects were conducted in 2022–2023 and provides a corrected map in Appendix 5.1.

Omission of Critical Field Survey Data

• The initial omission of key transect data raises concerns about the completeness and quality assurance of the baseline report.

• No explanation is provided for why this error occurred or how it was not caught during internal review.

• This omission could have misled reviewers during initial assessment and possibly underrepresented bird usage near T1–T4.

4. **(d) – Pond Enhancement Near T1**

• A pond 110m from T1 is proposed for ecological enhancement (e.g., vegetation and water quality improvement).

• Planning authority warned this might attract more birds closer to turbines, increasing collision risk.

• Applicant response:

- It's an existing pond already used by birds.
- Enhancement is small-scale (0.08 ha).
- No significant increase in bird activity is expected.
- Benefits to biodiversity outweigh risk, especially with post-construction **mortality monitoring** and potential for remedial measures.

Potential Risk Not Fully Quantified

• There's no collision risk modelling that includes a scenario with increased bird activity due to the pond.
• No visibility of post-construction mitigation triggers if bird deaths occur.

• Enhancement may benefit ecology, but proximity to turbines may still increase risk, which is not critically examined.

Inconsistency

(b) Nocturnal surveys

- Justified with weak/no data – lack of mapped evidence on flyways or expert opinion.

(c) Transect omission

- Major omission from original map; credibility of survey reporting affected.

(d) Pond near T1

- Risk of bird attraction not quantified; no scenario modelling to support safety claim.

Cork County Council RFI Item 6

Planning Authority Request:
(a) Provide details on the **extent of removal** of a mature hedgerow north of Turbine 2 (T2), which forms a historic

townland boundary. Assess **alternative routes** or **reduction of permanent impacts and** submit a **hedgerow appraisal.**

(b) Submit **maps clearly showing**:

- All existing **hedgerows/treelines.**
- All **proposed removals/modifications.**

Inconsistencies

1. **(a) – Insufficient Justification for Hedgerow Removal**

• The response confirms that a 10–12m section of a mature, historic townland boundary hedgerow must be removed to connect T1 to the rest of the site.

- The hedgerow was appraised (Appendix 6.1) and found to be:
    - 4m high, double-stemmed, with willow, blackthorn, hawthorn. o in "favourable condition" and of "high significance" due to species, structure, and historical value.

• However, the rationale provided for removal is:

- t's "unavoidable" due to infrastructure connection.
- the hedgerow is "losing density" and becoming more of a treeline.

The project asserts the loss is minor due to limited extent but does not demonstrate a **thorough attempt to avoid** or route around the hedgerow using trenchless techniques (e.g., HDD for cabling) or a realigned track. The term "unavoidable" **is unsupported by technical drawings or route constraints.**

2. **(a) – Weak Consideration of Alternative Methods**

- The response does not explore
    - Cable-only crossings with no track breach.
    - HDD or narrow trench options beneath the hedgerow
    - Engineering design alternatives to preserve the boundary.

The request to assess **alternative routing methods** is only superficially addressed—no actual comparison or engineering reasoning is included.

3. (b) – Lack of Detail in Mapping Explanation

• The response says mapping of hedgerows/treelines and proposed removals is handled under RFI Item 7, not directly here.

• No excerpted map or key excerpt from drawings is included in this response to clarify impact.

Inconsistencies
There is no immediate visual or tabular summary here of:

• Which hedgerows are lost.
• Which are altered or retained.
• Where biodiversity enhancements will occur (e.g., new planting).

This forces the reader to cross-reference RFI 7 and planning drawings, making review more difficult.

4. Offsetting Relies on Future Measures

• The response states that loss of 10–12m of high-value hedgerow will be offset through:
  - New hedgerow and treeline planting, detailed in the Habitat Management Plan (Appendix 7.3).
  - Claims of net biodiversity gain and alignment with Cork County Development Plan Objective BE 15-6.

While offsetting is accepted practice, this approach relies heavily on future actions, with no **guarantee of maturity or ecological equivalence** to a historic hedgerow—especially for a townland boundary with cultural significance.

Issue Unsubstantiated "unavoidable" impact

- No detailed technical justification or alternatives provided for hedgerow breach.

Cultural/historical context understated

- Townland boundaries are protected heritage elements under some local plans; not addressed here.

Mapping not included in section

- Defers visual clarity to RFI

Cork County Council RFI Item 7

Planning Authority Request:

- Submit revised site plans overlaid on accurate survey data, clearly showing:
  - All existing hedgerows/treelines.
  - Differentiation between existing farm lanes, modifications, and new permanent lanes.
  - New field openings.

- Replace the colour green for hedgerow loss (due to clarity issues).

- Resubmit Figures 7-7 (pages 1–4) to improve clarity on mitigation proposals.

1. Lack of Clarity on Hedgerow/Treeline Impacts

- While revised drawings are listed in detail (over 15 plan numbers), the response fails to:

  - Summarize hedgerow/treeline impacts (e.g., number of meters removed, retained, replanted).
  - Describe which hedgerows are impacted and how.

The absence of **summary data** in the narrative makes it hard to understand what the real change is. A table showing total hedgerow affected (removed/retained/newly planted) would have greatly improved transparency.

2. "For Clarity Only" Statement Raises Concern

"It should be noted that the proposals for removal of hedgerows/treelines remain the same as the planning application originally submitted. The drawings being submitted as part of this RFI are for purposes of clarity only."

This statement suggests that **no substantive changes** were made in response to legitimate concerns about visual clarity and mapping accuracy. If the **original figures were unclear or misleading,** then simply repackaging the same data may not fully satisfy the request or correct earlier deficiencies.

3. No Confirmation of Compliance with Specific Drawing Requests

• The RFI asked to differentiate

- Existing farm lanes. o Modified lanes.
- New permanent lanes.
- New field openings.

• The response claims these are included in revised drawings—but **does not confirm explicitly** that all requested elements (especially the **legend update)** have been addressed.

Inconsistency; There's no direct mention of the **colour correction** (i.e., removing green from hedgerow loss depiction), which was specifically requested to reduce confusion in the mapping.

4. No Narrative Explanation of Mitigation Design

• While drawings are resubmitted, the RFI also asked for:

"...how it is proposed to mitigate impacts...having regard to the hedgerow proposals set out in figs 7-7..."

• The response defers entirely to the drawings and does not explain:

- **What the mitigation entails** (e.g., hedgerow translocation, enhancement, fencing, long-term management).
- **Whether or how mitigation drawings were updated** in line with RFI feedback.

Visuals alone are not sufficient without accompanying narrative tying the design back to biodiversity or landscape policy objectives.

Issue **Lack of impact summary**

- No clear indication of total hedgerow/tree loss, retention, or mitigation area.

Drawings unchanged in substance

- Response states drawings are for clarity only—no change to mitigation despite mapping issues.

No explicit response to color revision request

- Green color issue not addressed, even though directly raised.

- No explanation of how hedgerow impacts are to be mitigated beyond mapping.

Cork County Council RFI Item 8

Planning Authority Request:

- Identify the landowner(s) and their respective landholdings within the blue line boundary.
- Submit **written consent** from each landowner for:
  - Implementation of **habitat enhancement/mitigation measures** on their lands.
  - Willingness to accept a planning condition and possibly enter into a Section 47 agreement to facilitate those measures.

Inconsistencies

1. Lack of Transparency on Landowner Information

- The response references revised drawings (Drawing Nos. 20910-NOD-XX-XX-DR-C- 8305 to 8306 and 8041 to 8044) showing landowner boundaries within the blue line.
- It states that landowner consent letters were included in the original planning application in Section 2, Part 1.

Inconsistency,

The RFI explicitly asks for confirmation within the RFI response, but the applicant refers back to documents already submitted—without:

- Summarizing which landowners are involved.
- Re-stating folio numbers or linking each habitat measure to a specific landholding.
- Including even an excerpt or copy of a consent letter in this response.

This leaves reviewers to search elsewhere to verify consent.

Narrative gap on mitigation measures

2. No Clear Link Between Habitat Measures and Landownership

- The drawings are said to identify landowners, but the response does not clarify:
    - Which habitat enhancement measures are on which landowners' plots.
    - Whether each landowner's consent aligns with the specific works planned on their property.

There is no direct cross-reference between the habitat enhancement measures (e.g., hedgerow planting, pond restoration, species buffers) and the relevant land parcel or consent document. This breaks a critical audit trail.

3. Unverified Acceptance of Planning Conditions or Section 47

"The Applicant can confirm that the landowners... are willing to accept a planning condition..."
Risky Assertion Without Evidence:

This is a declaration without documentation. There is no signed statement, letter from landowners, or even a table summarizing who agreed to what. There's also:

- No mention of legal advice taken.
- No template agreement draft.
- No indication if the landowners understand what a Section 47 entails.

If one landowner later disputes consent, habitat measures may become unenforceable—undermining part of the biodiversity mitigation plan.

4. No Description of Long-Term Management Responsibility

- The RFI implicitly assumes that habitat measures will be maintained—especially if they form part of a biodiversity offset.
- The response does not address:
    - Who is responsible for monitoring and maintenance. o Whether access agreements are in place.
    - **If a Section 47 agreement is drafted or will be drafted.**

Without these assurances, the habitat enhancement measures could be non- binding or short-lived.

Please see attached letter from landowner who has not signed in relation to Section 47
Issue No documentation of willingness to accept Section 47
Legal enforceability is unproven

Cork County Council RFI Item 9

Planning Authority Request:

1. Revise the list of sensitive receptors to include **dilapidated and uninhabited properties,** in light of the Cork County Development Plan 2022 objective to encourage their reuse.

2. Update shadow flicker assessment to account for these dwellings in case of future occupation.

3. Submit:

- An updated receptor list in sequential order.
- A map showing distances to all sensitive receptors, including derelict dwellings.

Inconsistencies

1. **Failure to Fully Incorporate Derelict Dwellings in Impact Assessments**

- The response acknowledges the Development Plan's objective to reuse derelict dwellings.
- However, it defends excluding such dwellings from noise and shadow flicker assessment on the grounds that:

"...by virtue of their uninhabitable status, it was concluded that there was no potential for the proposed development to give rise to likely significant effects..."

Policy Non-Compliance Risk

This **directly contradicts** the planning authority's instruction and the Cork County Development Plan (2022) RP 5-30, which promotes reuse of derelict buildings.
By not including these as potential future receptors, the assessment:

- **May underestimate impacts.**

- Could **expose future occupants** to non-compliant shadow flicker or noise levels.

- Could render the **Environmental Impact Assessment Report (EIAR)** incomplete under relevant Irish/EU regulations.

2. No Update to Shadow Flicker Control System

- The planning authority explicitly requested an investigation into including derelict dwellings in the shadow flicker control system.
- The applicant does not address this directly.
- No evidence is provided that the control system could be pre-programmed or later expanded to include such dwellings if they become inhabited.

Implementation Gap

This is a missed opportunity to ensure futureproofing. The lack of adaptability in the control system contradicts best practice and **ignores the authority's concern.**

3. Missing Updated Receptor List and Map

- The response **does not** include:
  - **An updated list** of receptors.
  - **A map** showing distances to all receptors including derelict dwellings.

Inconsistencies

The request was clear: provide a sequential list and an annotated map. The failure to include either means:

- The submission is incomplete.
- Reviewers must refer back to the original documentation, which excluded these Dwellings.

4. Overreliance on "Overriding Public Interest" Legal Argument

- The response invokes EU Council Regulation 2022/2577 and RED III, arguing that renewable energy projects are in the overriding public interest and should benefit from expedited administrative treatment.
- While legally relevant, this argument is used to justify not incorporating derelict dwellings, even though:
  - Technical inclusion (i.e., adding them to models or control systems) is feasible.
  - Doing so would align the project with both policy and planning guidance.

Misapplied Justification:
Legal support for renewable projects does not exempt developers from addressing valid planning policy concerns—especially when they relate to long-term residential amenity.

Non-inclusion of derelict dwellings
Contradicts planning policy and RFI instruction; weakens EIA defensibility.

No evidence of shadow flicker system adaptability
Fails to show futureproofing or mitigation plan.

Missing updated list and map
Directly fails to meet RFI request requirements.

Overuse of legal "overriding interest" rationale
Does not resolve or negate planning and amenity concerns raised.

Cork County Council RFI Item 10

Planning Authority Request:
Provide further details regarding **Equine Welfare**—specifically, a professional assessment of the potential impact **of the wind farm on horses and horse-related activities** in the vicinity of the proposed development.

Applicant's Response Summary

- A dedicated Equine Welfare Assessment Report was submitted as Appendix 22.1.• The assessment was conducted by Michael Sadlier, a veterinary surgeon with extensive international experience in equine welfare.

- The report evaluates:
  - **Equine visual and auditory sensitivity.**
  - Potential impacts from shadow flicker, noise, and **movement of turbine blades.**
  - Influence of **construction activities**, including traffic and heavy machinery.

- Conclusion: The proposed development **would not result in significant adverse effects** on equine welfare based on:
  - Distance from active equine facilities.
  - Horses' ability to habituate to turbines.
  - Mitigation measures during construction.

Inconsistencies

1. **Lack of Site-Specific Engagement with Local Equine Stakeholders**

   - The response does not confirm whether any horse owners or equine facility operators were consulted.
   - No evidence is presented of direct communication with nearby equestrian businesses or horse breeders, despite these being key stakeholders.

An equine impact assessment without **stakeholder engagement** weakens its credibility. Local horse owners may have context-specific insights (e.g., nervous stock, stud farm operations) that could materially alter risk perception or mitigation needs.

2. **No Mapping of Proximity to Equine Facilities**

   - The response references "distance" from facilities but does not include a map or table showing:

     - Locations of known equine enterprises.
     - Proximity to turbines or haul routes.

Omission:
Visual representation is standard practice in equine impact assessments—absence makes it hard to verify adequacy of the buffer distances.

3. Assumes General Habituation Without Supporting Data

- The assessment asserts that horses generally habituate to wind turbines but provides:

  o No empirical studies, site monitoring, or data from similar developments.

  o No literature review or comparison with farms of similar scale and turbine proximity.

  This generalization could be challenged, especially if local horses are bred for specific disciplines (e.g., eventing, racing) where spookiness is a higher concern.

4. Limited Construction Phase Risk Assessment

- The construction-related impacts are mentioned but not fully quantified:
  - No noise level projections at equine properties.
  - No traffic movement modelling on equine-used roads.
  - No timeline for peak disruption periods. Gap in Detail:

Gap in Detail:
Without construction traffic/noise projections near horse farms, the mitigation measures may be **incomplete or generic.**

No stakeholder consultation
Weakens social validity and may overlook localised sensitivities.

Lack of mapped equine facility proximity
Omits key visual tool to demonstrate adequacy of turbine buffers.

Assumes horse habituation
Unsupported by data or peer-reviewed studies.

Incomplete construction-phase assessment
No quantification of noise/traffic impacts near horse- sensitive areas.

Cork County Council RFI Items 11

Planning Authority request

Council Concern: Concern about impact on private wells, particularly during construction and drilling.

- The applicant's response lacks clarity and is insufficient.
- There were no surveys or investigations on private wells, which will be significantly affected during construction and drilling.
- Please see attached Expert report Mr. Bruno Teillard Hydrogeology

Cork County Council RFI Item 12

Applicant response:

With regards to the proposed substation, modern substations are well insulated and at the distance of ~235m to the nearest sensitive receptor, tonality is not expected to be an issue.

With regards to the proposed turbines, although it is not possible to guarantee that there will be no tonality or impulsivity when the development becomes operational, the presence of these acoustic features is unlikely, due to the distance of the turbines to receptors, the turbine selection, as well as the comprehensive noise modelling carried out and turbine noise mitigation measures outlined in EIAR Chapter 13 Noise and Vibration (i.e. curtailment of certain turbines under specific wind conditions and time periods). At commissioning stage, it is proposed that tonal analysis of the wind turbines and substation will be carried out, in accordance with the procedure outlined in Annex B, Guidelines Note 3, of the IoA GPG. In the unlikely event that audible tones are found to be present at noise sensitive receptors; tonal penalties shall be applied to the measured data in accordance with the procedure outlined in IoA GPG.

This is unacceptable and unsatisfactory.

- The limitation of equipment is not disclosed in the EIAR.

- The Council assessed the document in evident ignorance of that limitation and no reference to it in its own internal reports nor is it disclosed or accounted for in the Acoustician's report commissioned by the Council
- This report is again inadequate.

Cork County Council RFI Item 13

Planning Authority

Risk of interference with telecoms (TV, radio, mobile) not fully assessed — clarity needed on mitigation and coordination with providers.

- The Applicant did not address any other mitigation measures to prevent the issues with Saorview Reception. The National Digital Terrestrial Television Service in Ireland. The height of the proposed development site with the addition of the 175m industrial turbine will have potential to interfere with the Saorview path which gives service to all Televisions in the Buttevant / Doneraile area.

Cork County Council RFI Item 14

Planning Authority:

The windfarm site must allow for **emergency vehicle** access — **especially with increased traffic and large vehicle movements.**

- This clearly shows that the executive engineer agreed 3 not 4.5m setback.
- This should be redesigned so that the existing hedgerow can be retained

Cork County Council RFI Item 15

Planning Authority

"Please submit an autotrack drawing in respect of the deliveries of the wind turbines to the site showing that access can be achieved at the entrance without impacting on the safety of other road users".

- **This drawing is inadequate as this will impinge on a Neighbours private property**

Cork County Council RFI Item16

Planning Authority

"With regard to the delivery route options, a detailed analysis of the potential delivery route from the N20 via the L5523-18 and L5523-0 to Kilmaclenine Junction should be undertaken with consent obtained from the various landowners,

- **The applicate has not included any consents from the landowners**
- Heritage wall on this route (re submission Mark Lysaght) will be greatly affected.

Cork County Council RFI 17

- Heritage bridge located in grange is protected under the planning and development Act 2000
- The proposed development route will greatly impact the structure of this heritage bridge.

Cork County Council RFI Items18

- Please refer to Hydrogeology expert report from Aqua Geo Services Mr. Bruno Teillard

Cork County Council RFI Item19

Planning Authority

"It is noted that the grid connection route traverses a private track between the N72 and the local road, L12201. You are requested to provide clarification in respect of the landowner(s) consent in relation to the planning application and carrying out the proposed development. A letter of consent from the relevant landowner(s) and the associated map should be submitted".

Landowners Consent

I, Johnny Horgan for and on behalf of Horgan Engineering Limited, with a registered office at 25, Bank Place, Mallow, County Cork being the registered owner of Folio CK29333 ('the Property') hereby consent to the planning Application to be made by or on behalf of Tullacondra Green Energy Limited (or its associated companies) in connection with a proposed windfarm at Tullacondra County Cork.

I confirm that Horgan Engineering Limited grant the right to Tullacondra Green Energy Limited to apply for planning permission for the proposed development as outlined above.

- Mr. Horgan has not given any consent in relation to the grid connection on his property

Cork County Council RFI Item 20

- Unsatisfactory report

Cork County Council RFI Item 21

Planning Authority

"*It is noted that partial key plans are included in the visualisations. In the interests of clarity, please submit one clear map showing all the viewpoints associated with the photomontages*".

- **These photomontages inaccurately depict the actual height of the industrial turbines, which are visible from miles away**

Cork County Council RFI Item 22

- In relation to Equine Please refer to Veterinary Specialist Dr. Desmond Leadon on Community Appeal
- Please refer to Carl Nolan Vetinary report in Cork Council who recommends that this application should be refused.

Cork County Council RFI Item 23

Planning Authority

"*Uisce Éireann records indicate that there is an existing 3-inch water pipe within the public road at Knockaunavaddereen and a 400mm and a 315mm water main within the public road between the L1207, L5320 and the junction of the L1220 roads. You are required to engage with Uisce Eireann's Diversions Team to assess the feasibility of build over and/or diversion.*

- No clarification from Uisce Eireann submitted in relation to Diversion team to assess the feasibility of build over and / over diversion. The Applicant response is inadequate.

Cork County Council RFI Item 24

Planning Authority

"Please submit an outline Decommissioning and Restoration Plan (DRP) for the project. This shall make provision for the restoration of habitats, including hedgerows".

- If this development is sold on who is responsible for the Decommissioning or restoration plan.
- All agreement with the Planning Authority will be void

Lack of consultation

- We were never informed of the above development re public meetings; no letter drop was ever received at our home. We were never given any chance to communicate our concerns. Please see attached Code of Practice for Wind Energy Development in Ireland

- It is overwhelming that a development of this size has been given all the advantages. We are a community who is now under duress both mentally and financially. The amount of time Cork County Council has given to digest this material, and reports is unacceptable I believe the act requires 5 weeks, but it was only four. As the material was not made available for one full week online after it was received by the Council.

- We were denied any opportunity to reply regarding the Applicant's response to Cork County Council's Request for further information on 24 items. This was briefly updated on the file but changed again the following day. Speaking with a Councillor about this matter, it was understood that we would be given an opportunity to reply; however, this was not the case. Please see the attached photo taken from the planning application file. I continued to send my submissions to Ms. Louise Ahern Senior planner who was over this planning application. The response from the applicant was inadequate and not truthful.

Suitability of Development

- The Applicant states that the proposed development is in an area marked as open to consideration for renewable energy according to the Cork County Development Plan.
- As stated in their own RSK Page 42 Item 6...

Commercial wind energy development is for consideration where proposals avoid adverse impacts on Residential amenity such as noise, shadow flicker and visual impact.

- Our home, located less than 700 meters from this large development site, will be significantly affected by noise, shadow flicker, and vibration. My husband's farm, even closer to the site as shown on the map, will face serious impacts on our work and animal welfare.

- The Applicant's EIAR states that noise levels from the operation will only meet the outdated 2006 WEDG noise criteria, claiming no significant impact on our lives. However, this is inadequate for turbines that are now 175 meters high with a 150-meter span. The 2006 guidelines, relevant to turbines one-third of this size, are now 19 years old.

- The location of Turbine 9 is in proximity to our boundary ditch, resulting in minimal or no buffer zone. The attached applicant's map indicates that the buffer zone encroaches on private property, as well as Turbine 6 on a neighboring property. Also please see co-ordinates for turbine

- This land is crucial for future food security. Developing it poses significant risks to food production, including disease and reduced milk output.

Hydrology

- The Applicants' EIAR reports are insufficient and inaccurate. Please see attached **Aqua Geo Services report Mr. Bruno Teillard** which finds the EIAR report to be fundamentally inadequate and fails to meet the level of rigour required for this size development.
- No survey of our private well was conducted. Applicant reports indicate a high risk of groundwater contamination. We rely on good quality water from our well for our health and our animals' wellbeing. The planned piling is concerning, as it may reduce or eliminate our water supply.

Adverse effects on our streams and water courses

- This development will significantly affect our streams and watercourses leading to the River Blackwater. As it is a European Special Area of Conservation, this will harm endangered freshwater pearl mussels, crayfish, and salmon and all other species.

- **The applicant EIAR reports are inadequate, and I feel untrue. Please see attached Expert report from Pascal Sweeney Biologist.**

Wildlife habitats and ornithology

- The applicant EIAR reports is insufficient and inadequate. Please see attached several different species of wildlife that are on our property and neighbouring lands.

- **The Northern Lapwing (Vanellus vanellus)**

  - is a protected species in Ireland. It is Ireland's national bird and is also a red-listed species on the Birds of Conservation Concern in Ireland due to its declining population. Video footage of this beautiful bird on USB Key. I have informed the NPWS through text message.
  - Otters, please see attached video on USB key
  - Whooper swan flying over where the proposed development site
  - Yellow hammers, Owls, Bats, Snipe and many more species of birds

Devaluation of our Property

- Our property borders an industrial wind farm, which will reduce our property's value by at least 15%. Given our significant investment in our home and farm business through mortgages, this is extremely unjust as we have worked and invested greatly over the years.

Freshwater ecology and Habitats

- This development lies within the subcatchments of the Awbeg river to the east, the Finnow stream to the south, and the Minor Awbeg river to the west
- All three are significant tributaries within the Munster Blackwater catchment, with the former also recognised as an important recreational angling resource.
- The same surface waters provide for both brown trout and Atlantic salmon. Spawning /nursery habitat.
- Holding populations of eel, lamprey and native crayfish.
- The Blackwater is a Special Area of Conservation where it is home to the freshwater pearl mussel. The freshwater pearl mussel (Margaritifera margaritifera) is a mussel species of clean rivers that is on the verge of extinction in Ireland and western Europe due to intensification of land use.

- The Survey methods from the standard methodology inexact invertebrate data is incomplete FPM surveying and no assessment of a relevant Qualifying interest of SAC 002170 the `Aquatic Ecology Baseline Report for the Tullacondra Green Energy is not adequate for determination of potential impacts on aquatic habitats and species
- **Please see Expert report by Mr. Pascal Sweeney Biologists**

Visual impact on our landscape

- The proposed wind turbines will be among the largest in the country, standing 175 meters high with a 150-meter span, creating a 1.5-kilometer wall. These turbines will dominate the local environment and be visible for miles, profoundly affecting our valuable landscapes in the long term.

Archaeology

- Applicants' EIAR report, Volume 111, Chapter 15, covers Archaeology and Cultural Heritage. The EIAR report states that there are no UNESCO, National monuments, or protected sites within the site or within a 1 km radius of the site. Section 15.6.10 on pages 15-32 indicates that 54 monuments are located within a 1 km radius of the site's boundary. This number of monuments suggests that the area has a rich early medieval history.
- Section 15.6.11.2 indicates that there are two Neolithic period monuments within a 1km radius. The County of Cork's record of National Monuments lists approximately 300 recorded structures and monuments in the area, with 24 highlighted on their map. This section of the map encompasses the proposed site and the surrounding areas that may be impacted by this development.

15.6.6 Protected structures within 5km of the site boundary. There are 21 protected structures

- There are 21 protected structures within a 5km radius of the wind farm site boundary. The closest is Kilmaclenine Castle, an Anglo-Norman masonry castle located just under 800m to the east (National Monument Service, 2023). The remaining 20 protected structures are over 1.5km from the site boundary.

Aviation Impact

- The north Cork Air Ambulance service, operated by the HSE from Rathcoole airfield in Mallow, follows visual flight rules, limiting it to 500 feet above ground level. This prevents it from flying over mountains, necessitating valley flight paths (Rathcoole-Twopothouse towards Limerick or Cork). The helicopter travels at 160-180 miles per hour. The travel time between the air base and the proposed site is approximately 7 minutes as the distance is 17 km. If the proposed development proceeds, the Air Ambulance flight path will be obstructed by the Turbine development. Their legal flight height is 152 m above sea level, while the proposed turbines extend to 175 m above ground level. Submissions were sent by individuals and Rathcoole Air Base to Cork County Council last September; however, these submissions were not considered in any of the requests for further information by the council. The impact on emergency services should be carefully evaluated to understand potential consequences.
- Please see attached video on USB key

Enviromental Impact

- The Environmental impact Assessment Report must contain all the necessary information and data to enable the board to reach a conclusion about the environmental impact of the proposed development. Data must be accurate, reliable and complete. It must not be misleading or partisan.
- If requirements are not met, The EIA does not pass the legal threshold.
- The EIAR fails to meet these requirements. **Please refer to Chapter 13 Appendix 13.2**

Location of Turbine 9

- Please refer to the attached survey regarding the Turbine. It indicates that the turbine is overshadowing our property or there is little to no buffer zone. This will significantly interfere with our boundary ditch, and we do not grant permission for this.

Dilapidated houses

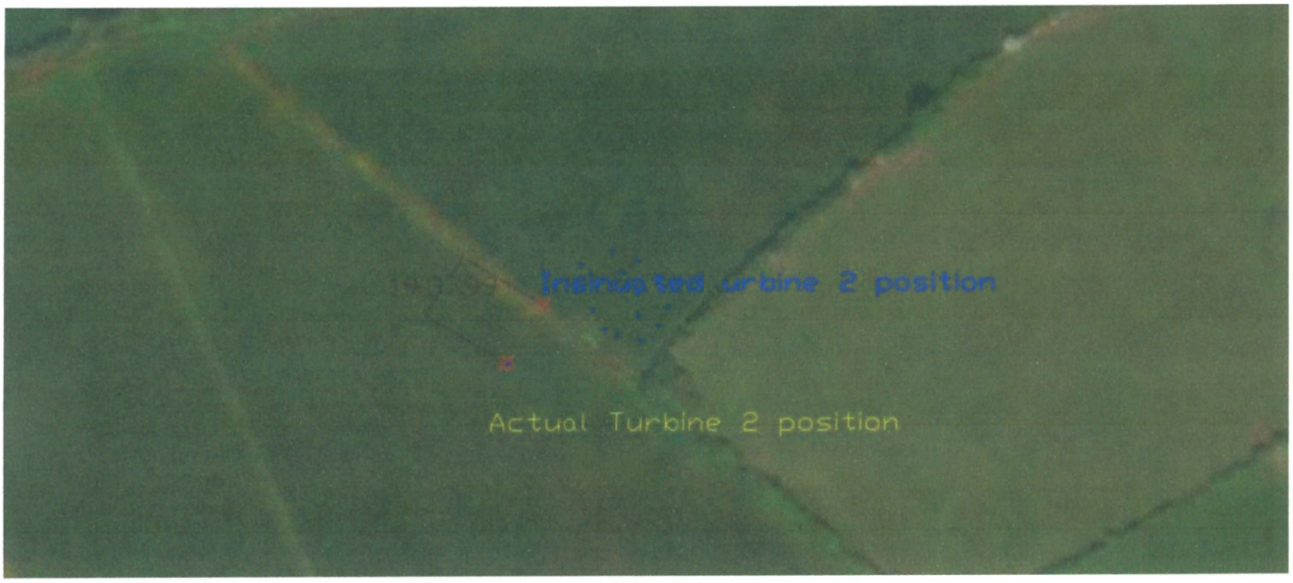
- Located on our farm is a 200-year-old house. This house was never included on the sensitive receptor list for noise and shadow flicker. Please see photographs on attached USB key
- Please see attached map from the Applicant with location marked

Location of Turbines Co-ordinate Survey attached Civil Engineer John Maher and Land Surveyor Marcin Lecznar

- Regarding the O'Connell family landowners, folio no, CK 2888 Turbine 2, folio CK64369F Turbine 3 and folio no. CK 287 Turbine 4. Please refer to the land surveyor's co-ordinates.

Turbines 2, 3, and 4 are not located as previously marked by Tullacondra Green Energy on their property.

- Please see attached co-ordinate pictures below



CK 2888

CK64369F

CK 287

Also please note that there is several Slogaires (swallow holes) on this property surveyed where turbines are located.

List of Enclosures

Submission	Details
Page 18	Letter M. Tim Cronin
Page 27	Code of Practice
Page 27	CCC changed planning file
Page 28	Report from Aqua Geo Services Mr. Bruno Teillard
Page 29	Video of Northern Lapwing for sitting room window USB key Video Otters outside our home Kilmaclenine USB key Video of Whooper swan flying over our property on the flight path to Anna bog USB key
Page 30	Report from Expert Biologist Mr. Pascal Sweeney
Page 31	Video of Air Ambulance flying over proposed wind farm site Photographs of 200-year-old farmhouse on our property Map of Sensitive Receptor Derelict house missing

Mr. Tim Cronin
Garrett McGarrett,
Kilbrin,
Kanturk
Co Cork
6th June 2025

Cork County Council planning Reference 245503 Tullacondra Green Energy

Regarding the Cork County Council request for further information, I did not consent to or approve point 8.

A number of habitat enhancement measures and mitigation measures are proposed outside of the red line boundary of the application site and inside the blue line boundary. You are requested to identify the landowner(s) and the extent of each landowner(s) landholding within the blue line boundary on a layout plan drawing. You are requested to provide written consent from each landowner for the implementation of the measures proposed within landowner(s) property and confirm they are willing to accept a planning condition and possible section 47 legal agreement, if required, to allow the developer to implement and maintain the measures proposed.

I do not nor have I given final consent in relation to any planning condition to allow implementation and maintenance of measures proposed.

The developer is aware that I know longer want to go ahead with this development on my land. I would urge you to please consider this letter.

Yours sincerely,

Tim Cronin

Tim Cronin
(087) [redacted]

21 December 2016

Code of Practice for Wind Energy Development in Ireland
Guidelines for Community Engagement[1]

Building strong and effective relationships with communities and individuals that will live with all infrastructure projects, including wind turbines, is an integral part of any infrastructure project, from large-scale resource projects and major transport infrastructure, to the development of local community facilities.

Ignoring or poorly managing community concerns can have long-term negative impacts on a community's economic, environmental or social situation. In addition, not involving communities in the project development process has the potential to impose costly time and financial delays for project promoters, or prevent the realisation of much needed infrastructure and facilities.

Establishing dialogue and building trust within a community can be challenging, but is vitally important for infrastructure providers who should have a long-term interest in the communities in which they operate.

This Code of Good Practice is intended to ensure that wind energy development in Ireland is undertaken in observance with the best industry practices, and with the full engagement of communities around the country.

Delivering any significant project will require community engagement through the different stages of a project, from the initial scoping, feasibility and concept stages, right through construction to the operational phase. The approach and level of engagement should reflect the nature of the project and the potential level of impact that it could have on a community.

The long standing focus of project promoters on technical and financial considerations has expanded to address environmental and spatial planning considerations. Successful engagement requires a full, open, honest and practical engagement with communities. The guidance below sets out a number of practical steps that wind farm promoters must comply with in engaging with communities.

[1] This document sets out a Code of Practice to enhance engagement and transparency between wind farm promoters and communities and does not purport to be of a legal form. It is not a substitute for planning obligations or other legal requirements imposed on wind energy developers.

1. Contact and visibility

A nominated Community Liaison Officer (CLO) should be appointed by the project promoter, with readily accessible contact details, who should be available to neighbouring residents and community groups from the initial project development phases, through to the operational phase of the wind farm. As necessary, regular meetings should be scheduled with the local community and there should be ongoing community liaison at all stages of a project from the development of an initial proposal and throughout its operation to decommissioning. The Community Liaison Officer should:

- Make publically available full, clear and comprehensive information about the project during key milestone stages of development (e.g. pre-planning, planning, construction);
- Have the authority and resources to receive, record, investigate, respond to and address queries and complaints during the different stages of the project development and operation.

The promoter shall submit an annual report to the local authority of all communications and information provided, queries received, responses to same and recording if these are ongoing or resolved, which will be published on a dedicated register available online.

A local Authority will take into consideration their performance of these obligations when deciding on new applications by the promoter elsewhere in the county or on repowering applications.

The promoter shall submit reports to the elected members and/or relevant officials of the competent local authority, as appropriate and may be required, during different phases of the development.

For the duration of the project, from scoping right through to decommissioning, a copy of all relevant information must be made available for inspection online though the project website and for viewing publically accessible locations such as local authority offices and public libraries or similar.

2. Arrangements for making contact

The objective of project promoters should be to ensure the widest possible consultation with individuals and communities from the commencement of the project. Project promoters should make every effort to identify those to engage with and should be flexible and facilitative in the way they approach this engagement including, for example, in relation to the timing and venues for engagement.

Local authorities maintain a database of registered community and voluntary organisations including recommended points of contact and information packs should be provided to these by the project promoters for dissemination (examples include the Local Community Development Committees and Public Participation Networks in each local authority area). At a minimum a contact telephone number (including out of hours during operation), email, website and social media address should be made available with a commitment that all requests will be acknowledged within a reasonable period, and not later than 48 hours.

Each individual and community organisation engaged with should receive the same information.

Where public exhibitions are used to provide information, project promoters should work with the local community to ensure that the time and venue has regard to:

- Prominence in the local community;
- Accessibility to individuals and community groups;
- The availability of appropriate media technology for the display of maps, plans and full illustrations and/or information leaflets in an understandable format;
- The need for exhibitions to be adequately staffed from the promoter's organisation or project team;
- The availability of environmental or other expertise being relied upon by the promoter;
- The need to provide the fullest possible range of information including EIA, Planning application;
- Potential conflict with other events or periods in a given year where the potential attendance at an event may be compromised.

3. Engagement

The project promoter should engage with the local community throughout each stage of the project, e.g., feasibility, design, EIA and planning, tender, construction, and operation. These elements should all form part of a Community Liaison Strategy (CLS) which must set out an engagement timeline at key project milestones (following the sample template at Appendix 1) and include at a minimum a dedicated website, the distribution of regular newsletters, education and outreach programmes. The actual approach in each project/stage will vary, but there must be open and transparent sharing of information and outreach, e.g. site and project information, advising individuals and communities of lodgement of consent applications, updating on progress. As well as providing information, promoters should work to understand the views of local communities at an early stage to enable these to be considered in the final design of the project to the greatest extent possible.

4. Compliance with Statutory/Regulatory Obligations

Statutory and Regulatory Systems (e.g. Planning Consent, Environmental Impact Assessment, Natura Impact Assessment) generally impose obligations on project promoters in relation to providing information and consulting individuals and communities (and certain designated bodies) in relation to project proposals. These requirements must be fully complied with, and effective community engagement requires that project promoters are open and transparent in their engagement under these codes. Failure to do so may be a breach of obligation, but also has serious risk of undermining trust and willing engagement between communities and the project promoters.

It is note that applications under certain consent procedures (e.g. Strategic Infrastructure Act 2006) may also have particular prescribed obligations imposed for the duration of the planning process, such as the provision of documents for download on a project specific website. However, adopting best-in-class levels of engagement beyond statutory requirements may increase the likelihood of project success. Conversely poor engagement increases the likelihood of negative reactions, increased opposition and greater planning risk.

5. Community benefit

Community benefit encompasses a range of measures that a project can bring to those living in its hinterland. For the majority of projects, this is associated with the level of economic benefit, widely defined, that a project brings to a community. This can range from employment and service supply to a project, participation as a stakeholder, economic transfers, or benefit in kind (e.g. discounted energy). The precise benefit will likely be a function of the scale and financial benefit of the project to the project promoters, the impact of the project on the local communities and their expectations regarding the nature of the community benefit. It is important that promoters recognise the potential of such benefits to become a source of division at local level and to, therefore, be open and transparent in providing information on how the benefit was calculated and allocated.

Due consideration should be given to measures regarding a planned project, which will benefit the economic sustainability of the local community beyond the lifetime of the project itself. The overall community benefit programme will be notified to the local authority following consultation on best practice, when available, with the Sustainable Energy Authority of Ireland (SEAI). A well-designed and well executed community benefit scheme can provide material and lasting value to communities that host wind farms.

Robust planning is required to identify what the project can deliver to the community and at what cost. Options for consideration should include enhancement of local amenity value; for example, by improving visual amenity or infrastructure upgrades.

6. Impact mitigation

Wind energy delivers a range of national and local benefits in terms of supporting regional and local economic development, decarbonising the energy system, enabling Ireland to meet its renewable energy ambitions on a least cost basis, addressing the health impacts of fossil fuels, etc. Large infrastructure projects also have the potential, however, to impact negatively on local communities. Project promoters should clearly identify and consult with local communities, on these impacts and set out the reasonable measures and steps they will take to ameliorate, mitigate or compensate for these impacts. The approach taken to mitigation must also align with relevant planning and environmental assessment guidelines and processes.

7. Independent Advisory and information bodies

There can be a sense in any community faced with a major new development of an imbalance in the information and advice available to project promoters on the one hand and individuals and communities on the other hand. It is important, therefore, that project promoters actively identify and encourage people to contact and seek advice and information from independent public bodies with an expertise in relation to wind energy projects. Contact details for the SEAI should also be provided for independent information on renewable energy, as well as contact details of the relevant planning authority, the Environmental Protection Agency, the Geological Survey of Ireland, Inland Fisheries Ireland, the National Parks and Wildlife Service, etc.

8. Expert Professional advice

While public bodies can provide a great deal of relevant information, individuals and communities engaging with project promoters should be encouraged to seek independent professional advice before entering into agreements or signing any legal documents, whether relating to agreements, benefit schemes, leases, wayleaves, or rights-of-way.

9. Ancillary Development

In addition to the wind farm itself, ancillary and related projects should be clearly disclosed and full information provided. There should be full and early information, once known, on elements such as road access, grid connection proposals, traffic management, sub-station or control buildings, maintenance facilities, at the outset of engaging with local communities.

10. Reports

Project promoters should openly and transparently demonstrate their compliance with this Code of Practice, publishing every twelve months a report (following the template at Appendix 2) of the actions that they have taken in accordance with its principles, any issues that have arisen, complaints received and response undertaken, and benefit measures implemented with local individuals and communities.

Appendix 1

Community Liaison Strategy – Engagement Timeline
Sample Template

Pre-planning submission

Early consultation with certain statutory stakeholders and other relevant bodies is a fundamental requirement within the environmental assessment and planning process. No later than at this consultation stage (e.g. EIA Scoping), and preferably earlier during project feasibility and site wind assessment, a Community Liaison Officer should be appointed and their contact details provided to the community. A timeline for response to queries should be highlighted to the community also. Promoters should seek to anticipate host community issues early on with a view to achieving solutions.

Promoters should advertise public consultation locally with letter drops and house contact in the community. Further options for consideration in public awareness are schools presentations and public consultation events. These options need to be reflective of the public availability with regards to location and timing.

During Planning

During the planning stage the promoter should be available to residents in relation to any local issues and requirements that arise. Understanding issues as they arise through the planning cycle and liaising with parties accordingly can increase understanding of the project and may reduce the likelihood of planning objections.

Pre-Construction

Prior to starting construction, concentrated communication with all relevant stakeholders should take place to confirm any aspects of the project which have evolved and any potential impacts resulting to the community as a result of construction. Independent sources of information with appropriate expertise should be identified through SEAI in order to address matters of concern such as health impacts. Updates on project progress should be regularly provided and feedback from key community figures should be actively sought and "Meet the Buyer" evenings should be organised to introduce the main contractor of the project to the community. This will offer the contractor the opportunity to interact with local suppliers and trades in order to facilitate greater local economic benefits.

Complaints arising as a consequence of the development should be registered and actively managed by the promoter along with the full scope for the community benefit which should be finalised prior to the energisation of the project.

During Construction

It is essential that complaints be registered and actively managed by the promoter in a timely manner. Promoters should demonstrate an eagerness to prioritise community issues particularly during construction. Good examples of issues include the management of traffic flow and dust suppression during construction, in addition to execution of all mitigation measures proposed and adherence to any planning conditions imposed.

Likewise, it is essential to record the local employment and net economic benefit of the project. The highlights of this should be provided amongst other detail in quarterly newsletters to the community and periodic updates ahead of major events. A full economic assessment of the project should be conducted and maintained during the development.

Post-Construction and Operation

As any community fund will remain in place for the full lifecycle of the development, it is important the promoter maintains a record of it. Where possible, local maintenance technicians should be trained and employed to further local net economic benefit.

Appendix 2

Annual Report of Compliance with Code of Practice
Sample Template

Requirement	Implementation	Compliance
Contact and Visibility Early and ongoing consultation is required on a regular basis to deal with queries, complaints, community engagement activities etc. from feasibility/site assessment through to operation and decommissioning. The continued maintenance of contact platforms is therefore required and the obligation to acknowledge/respond to communications remains for the duration of the project.	Confirm maintenance of contact platforms and Community Liaison Officer (CLO) details.	
	Confirm acknowledgment of all communications within 48 hours has been made.	
	Confirm all queries and complaints have been followed up, published on project website and resolved as appropriate.	
	Where issues cannot be resolved or remain outstanding, confirm they are appropriately identified thus and published on the project website.	
	Confirm the number of queries and complaints has been published on the project website.	
	Confirm all reported incidents on site have been followed up, published on project website and resolved as appropriate.	
	Confirm all instances of planned disruption through maintenance, traffic restrictions etc. have been highlighted and clearly communicated to the community in advance.	
	Confirm a standard approach has been adopted when highlighting instances of planned disruption to the community.	
Community Engagement and Benefit A standard approach is helpful in ensuring fair and equitable community engagement. Scale of benefit, activities and beneficiaries of any community benefit scheme should also be reported annually	Confirm Community Liaison Strategy and project website have been maintained detailing engagement timelines and key milestones.	
	Confirm progress on community engagement projects and benefit schemes undertaken has been published on project website.	

along with the future proposals for beneficiary schemes. Where engagement of the community requires entering into legal agreements, professional advice should be sought. It is essential the promoter recommends seeking professional advice in any legal agreements entered into with host communities.	Confirm a standard approach has been adopted in highlighting the progress on benefit schemes and when accepting requests for new schemes.	
	Confirm professional advice has been recommended to host communities where legal agreements are being entered into.	
Compliance with Regulation Continuing fulfilment of obligations regarding statutory and regulatory systems (environmental standards and sound level limits) must be publicised on project website.	Confirm fulfilment of statutory and regulatory obligations and publication of fulfilment on project website.	
Mitigation of Development Impacts Where project promoters working with local communities have identified potential impacts resulting from the project, steps to mitigate for these impacts are required. Such steps may involve annual input and compliance of continued effort to address them is necessary.	Confirm scheduled input from project promoter has taken place to mitigate impacts arising as a result of the project which have been identified with local communities.	
	Confirm that where additional impacts have been identified by project promoters and local communities, steps to mitigate these have been addressed.	
To openly demonstrate compliance with the code of practice, detail on action taken in accordance with its principles which is not covered by the above checklist and/or for which further material is considered appropriate, should be attached to the checklist and submitted.		

Decision Appeal

Planning Application: 245503 (Cork County Council)			
File Number:	245503		
Application Type:	PERMISSION	**Planning Status:**	NEW APPLICATION
Received Date:	09/08/2024	**Decision Due Date:**	22/05/2025
Validated Date:	16/08/2024	**Invalidated Date:**	
Further Info Requested:		**Further Info Received:**	
Withdrawn Date:		**Extend Date:**	
Decision Type:		**Decision Date:**	
Leave to Appeal:		**Appeal Date:**	
Commenced Date:		**Submissions By:**	01/05/2025

Further Information Land Owner

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REPORT ISSUE FORM

Review of the hydrogeological information submitted as part of Planning Application No. 24/5503 for the development of a nine-turbine Windfarm near Tullacondra, Co. Cork.

Status: Final Report	**Version:** 1.0
Job No. 516-25	**Date issued:** 16/05/25

Client:	**Tullacondra Turbine Awareness Community Group**	**Prepared by:**	EurGeol Bruno Teillard PGeo, M.Sc. Hydrogeology
Contact:	Sheila Gayer, Vice-Chair.		
Address (Contact):	C/O Noonan Linehan Carroll Coffey Solicitors, 54 North Main Street, Cork, T12 WY2D, Ireland.		
Comments: 1 digital copy issued			

Project No	516-25		
Document Title	Review of the hydrogeological information submitted as part of planning application No. 24/5503 for the development of a nine-turbine windfarm near Tullacondra, Co. Cork.		
Version History	Final report version 1.0 released on the 16th of May 2025.		
Author	EurGeol Bruno Teillard, PGeo M.Sc. Hydrogeology		
Signed on behalf of Aqua Geoservices		Signed on behalf of the client*	

* Where it is a requirement that this report be issued to a regulatory or other authority, then the client should sign the appropriate place in the above table and, unless specifically agreed in writing to the contrary, forward copies to the appropriate authority (e.g. EPA etc.)

FOREWORD

This report has been prepared by Aqua GeoServices Ltd. (**AGS**) in line with best current practice and with all reasonable skill, care and diligence within the limitations imposed by the techniques applied and the resources devoted to it by agreement with the client (**Tullacondra Turbine Awareness Community Group**). No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us.

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This document and its contents are confidential and may not be disclosed, copied, quoted or published unless **Tullacondra Turbine Awareness Community Group** have given their prior written consent.

AGS accepts no liability for any loss or damage arising as a result of any person other than the named client acting in reliance on any information, opinion or advice contained in this document.

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The information contained in this report is based on information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by AGS has not been independently verified by AGS, unless otherwise stated in the report.

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LIMITATIONS

The work described in this report is based on the conditions encountered and the information available during the said period of time. The scope of this report and the services are accordingly factually limited by these circumstances.

Where field investigations have been carried out, these have been restricted to a level of detailed required to achieve the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements should be made after any significant delay in using this report. If the scope of work includes subsurface investigation such as boreholes, trial pits and laboratory testing of samples collected from the subsurface or other areas of the site, and environmental or engineering interpretation of such information, attention is drawn to the fact that special risks occur whenever engineering, geophysical, environmental and related disciplines are applied to identify subsurface conditions.

Even a comprehensive sampling and testing programme implemented in accordance with best practice and a professional standard of care may fail to detect certain conditions. Laboratory testing results are not independently verified by AGS and have been assumed to be accurate in the provision of this report. The

environmental, ecological, geological, geotechnical, geophysical, geochemical and hydrogeological conditions that AGS interprets to exist between drilling and/or sampling points may differ from those that actually exist. Passage of time, natural occurrences and activities and/or near the site may substantially alter encountered conditions.

All work carried out in preparing this report has used, and is based upon, AGS' professional knowledge and understanding of the current relevant National legislation. Future changes in applicable legislation may cause the opinion, advice, recommendations or conclusions set out in this report to become inappropriate or incorrect.

Certain statements made in the report that are not historical facts may constitute estimates, projections or other forward-looking statements and even though they are based on reasonable assumptions as of the released date of the report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. AGS specifically does not guarantee or warrant any estimate or projections contained in this report.

Unless otherwise stated in this report, the assessments made assume that the site and facilities will continue to be used for their current or stated proposed purpose without significant changes.

The content of this report represents the professional opinion of experienced hydrogeological and environmental consultants. AGS does not provide legal advice or an accounting interpretation of liabilities, contingent liabilities or provisions. Where assessments of works or costs required to reduce or mitigate any environmental liability identified in this report are made, such assessments are based upon the information available at the time and are subject to further investigations or information which may become available. Costs may therefore vary outside the ranges quoted. No allowance has been made for changes in prices or exchange rates or changes in any other conditions, which may result in price fluctuations in the future. Where assessments of works or costs necessary to achieve compliance have been made, these are based upon measures which, in AGS' experience, could normally be negotiated with the relevant authorities under present legislation and enforcement practice, assuming a pro-active and reasonable approach by site management.

This document supersedes any prior documents (whether draft, interim or otherwise) dealing with any matter that is the subject of this document.

CONCLUSION & RECOMMENDATIONS

The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by these parties from whom it has been requested. Information obtained from third parties has not been independently verified by AGS, unless otherwise stated in the report.

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LIST OF ABBREVIATIONS

The following abbreviations are used in this report:

Abbreviation	Full Form
AGS	Aqua GeoServices Ltd.
BH	Borehole (e.g., BH-T01, BH-T05)
CEMP	Construction Environmental Management Plan
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
ESBN	Electricity Supply Board Networks
EurGeol	European Geologist (certification by European Federation of Geologists)
GCR	Grid Connection Route(s)
GSI	Geological Survey of Ireland
IGI	Institute of Geologists of Ireland
IAH	International Association of Hydrogeologists
M.Sc.	Master of Science
PGeo	Professional Geologist
RFI	Request for Further Information
RKd	Regionally Important Karstified (Diffuse) Aquifer
S.I.	Statutory Instrument (e.g., S.I. No. 113 of 2022)
TTACG	Tullacondra Turbine Awareness Community Group
ZOC	Zone of Contribution

I. INTRODUCTION

I.1 Background

Tullacondra Green Energy Ltd. has submitted a planning application (**No. 24/5503**) to Cork County Council for the construction, operation, and decommissioning of a wind energy development. The proposed project comprises nine wind turbines, a meteorological mast, an associated substation, and underground cabling to connect to the Electricity Supply Board Network (ESBN). The development is located around Tullacondra and adjacent townlands in Co. Cork, with two proposed options for Grid Connection Routes to the main substation in Mallow, Co. Cork.

An Environmental Impact Assessment Report (**EIAR**), prepared by RSK (Ireland) Ltd., accompanies the application.

I.2 Scope of Appointment

Aqua GeoServices Ltd. (**AGS**) were appointed by the Tullacondra Turbine Awareness Community Group (**TTACG**) to independently review the hydrogeological information submitted in the EIAR, including the applicant's responses to the Request for Further Information (**RFI**) issued by Cork County Council.

This report presents the findings of that review, focusing on the adequacy and reliability of the hydrogeological data provided to date.

I.3 Qualifications

This review was prepared by Bruno Teillard, a highly experienced hydrogeologist holding a French M.Sc. in Hydrogeology (with Distinction) and over 27 years of professional experience in Ireland and internationally. His professional certifications include:

- Professional Geologist (PGeo) with the Institute of Geologists of Ireland (**IGI**) since 2004
- European Geologist (EurGeol) with the European Federation of Geologists (**EFG**) since 2005

Mr. Teillard is also a member of the International Association of Hydrogeologists (**IAH**), a professional member of the Irish Association of Economic Geology, an associate member of the Geological Society (NI Regional Group), and is part of the panel of independent hydrogeologists approved to work on Irish Water projects.

He has extensive experience contributing to Environmental Impact Statements (**EIS**) and EIARs related to soils, geology, and hydrogeology dating back to 2000.

II. DOCUMENTS REVIEWED

To undertake the review of the hydrogeology chapter, the following documents and sections were examined:

- EIAR Volume II – Main Report Chapter 1: Introduction and Background
- EIAR Volume II – Main Report Chapter 9: Hydrology and Hydrogeology
- EIAR Volume II – Main Report Chapter 10: Land, Soils, and Geology
- EIAR Volume II - Chapter 20: Schedule of Mitigation Measures
- EIAR Volume III – Appendices for Chapter 9: Hydrogeology
- EIAR Volume III – Appendices for Chapter 10: Soils and Geology
- EIAR Relevant Drawings

All documents were obtained from the Cork County Council ePlan online inquiry viewer. It is important to note that no site visit or independent field verification was carried out as part of this review. Consequently, this assessment relies solely on the accuracy, completeness, and adequacy of the information provided by the applicant.

Additionally, the review included relevant sections of the applicant's response to Requests for Further Information (**RFI**) relating to geohazards and ground stability, as well as the proposed Construction Environmental Management Plan (**CEMP**) described in EIAR Volume III Appendices Chapter 5 – Project Description.

The response to the RFI was provided by the Tullacondra Turbine Awareness Community Group, while the CEMP was accessed via the Cork County Council ePlan online inquiry viewer.

III. PROJECT DESCRITION

The proposed project includes:

- The construction of nine wind turbines (three blades, type Vestas V-150) with a blade tip height of 175m, rotor diameter of 150m and hub height of 100m providing a power rating of 4.5MW each.
- Turbine foundations and crane pad hardstanding areas and associated drainage. It was noted that the turbine foundation would not extend deeper than 3.0m
- Upgrade of existing site tracks and construction of new site tracks and associated drainage.
- Access from the local public road L5302 at Croughta consisting of a new site entrance for the construction phase and upgrade of an existing entrance for the operational phase.
- An on-site 38kV electrical substation to Electricity Supply Board Networks (**ESBN**) specification to include control building with electrical infrastructure, welfare facilities supplied by rainwater harvesting and storage tank, a wastewater holding tank, car parking, security fencing and lighting, and all associated infrastructure services, and site works including a temporary construction compound.
- All associated underground electrical and communication cabling connecting the turbines to the proposed on-site electrical substation.
- A temporary construction compound and associated ancillary infrastructure including welfare services, office accommodation, parking, fencing, lighting etc.
- Areas for temporary storage of excavated materials.
- A permanent meteorological mast of 100m height above ground level on a concrete base.
- Installation of 38kV underground electrical cabling, mainly within the public road, between the proposed on-site windfarm substation to the Mallow 110kV substation boundary at St Joseph's Road, Mallow.
- All associated site works, including site clearance and ancillary development including site drainage, security gates, fencing, permanent and temporary signage and biodiversity mitigation and enhancements, including hedgerow planting.

The application is for a 10-year duration planning permission and a 35-year operational lifespan from the date of commissioning of the entire wind farm.

IV. HYDROGEOLOGY REVIEW

IV.1 Geological and Hydrogeological Setting (Baseline).

The baseline conditions relevant to the hydrogeology of the site are presented in Section 9.4 of the EIAR. The assessment methodology described in Section 9.2 indicates that a desktop study was undertaken using online sources (e.g. Geological Survey of Ireland, Environmental Protection Agency, Teagasc, Ordnance Survey of Ireland etc.) combined with site specific information obtained from a series of field inspections (reportedly carried out in June, September and October 2022) and a geophysical investigation consisting of 2D resistivity surveys conducted at selected locations (Full report contained in EIAR Volume II, Appendix 10.1).

The desktop study content and figures were compared to the online sources and no fundamental discrepancies were noted between online sources and the information presented in Chapter 9 of the EIAR.

The subsoil deposits (when present) do not hold any aquifer potential. Therefore, it is the bedrock aquifers that are considered to be the main receptors potentially at risk.

The Northernmost portion of the proposed windfarm site (encompassing T1, T2 and T3) is underlain by Waulsortian Limestones, which are classified as a "Regionally Important Karstified (diffuse) Aquifer (**RK_d**)".

The Southern portion of the proposed windfarm area is underlain by the following formations:

- Limestones of the Ballysteen Formation (T4, T5 and T6),
- the Lower Limestone Shale Formation and,
- the Old Red Sandstones Formation (encompassing T7, T9 and the substation).

In this later portion, the Lower Limestone Shale Formation has been classed as "Poor aquifer, bedrock which is generally unproductive except for Local zones" while all other formations have been classed as "Locally important bedrock aquifers, which are moderately productive only in local zones".

IV.2 Drainage and Water Features

Based on the information presented in the EIAR, the assessment of drainage channels and existing and proposed watercourse crossings appears sufficiently detailed. The consulting team has demonstrated a good understanding of the precise locations of these hydrological features, which is essential for designing and implementing effective mitigation measures during the construction phase.

A key feature of concern is a drainage channel previously identified as a "sinking stream[1]", highlighted in red on Figure 9.10a and discussed in Section 9.4.8.3 (Aquifer Vulnerability) of the EIAR.

This drainage feature, which encircles T1, T2, T3, and T4, should be regarded as a potential preferential pathway for the direct discharge of contaminants into the underlying groundwater system.

IV.3 Groundwater levels, flow direction and groundwater hydrochemistry

The development area is geologically complex, having experienced significant faulting and deformation over the geological times. Of particular concern is the Kilmaclenine Anticline, a prominent structural feature that "probably acts locally as both a groundwater and surface water divide[2]". Consequently, groundwater flow in the region is likely influenced not only by the dip of bedding planes but also by north–south trending faults, which could act as preferential flow paths if hydraulically active.

Further complexity arises from the karstic nature of the Waulsortian Limestone Formation, which underlies the locations of turbines T1 to T3. In karst terrains, groundwater flow is often disconnected from surface topography and can occur rapidly through solutionally enhanced features. The presence of numerous observable surface karst features strongly suggest the potential for fast groundwater movement through the bedrock, significantly increasing the risk of long-distance contaminant transport in the event of a pollution incident.

Despite these well-established hydrogeological sensitivities, Section 9.4.11 of the EIAR ("Groundwater Levels, Flow Direction & Groundwater Hydrochemistry") fails to provide any site-specific information on groundwater levels, flow direction, or hydrochemical baseline data. Notably, **no groundwater chemistry data is presented whatsoever.**

Instead, this section relies on a regional groundwater study undertaken 12 to 13 years ago, originally prepared for a different purpose, namely the delineation of groundwater protection zones for the Mountnorth Regional

[1] Source: EPA, Establishment of groundwater source protection zones Mountnorth Regional Water Supply Scheme, Mountnorth Spring and Borehole, December 2012.
[2] Source: EPA, Establishment of groundwater source protection zones Mountnorth Regional Water Supply Scheme, Mountnorth Spring and Borehole, December 2012

Water Supply Scheme. While some aspects of that study may offer limited relevance to the Grid Connection Routes (**GCR**), which cross the Zone of Contribution (**ZOC**) for the two local Public Supply Source Protection Areas, they are not applicable to the proposed turbine locations for the following reasons:

- The wind farm site lies in a different hydrogeological catchment;
- The referenced study was conducted for a different purpose, unrelated to this development;
- The study provides no site-specific hydrogeological data relevant to the proposed turbine area.

Furthermore, the boreholes drilled in response to RFI Item 2 (BH-T01 near T1 and BH-T05 near T5) did not provide any information regarding the depth to the water table. This was partly due to the rotary core drilling method employed, which used a water-based flush system. Without drilling supervision by a trained hydrogeologist, no valuable information would therefore be obtained. This shortcoming reflects a lack of foresight in the investigation strategy, as evidenced by the absence of provision to convert these coreholes into dual-purpose installations - for example, by retaining them as monitoring wells. Instead, they were backfilled shortly after drilling, precluding any opportunity for groundwater levels, future groundwater sampling, long-term observation, or hydraulic testing.

Significantly, the lithological description from BH-T01[3] indicates the presence of "brownish white mottled grey crystalline vuggy coarse grained dolomitised limestone". This rock type is associated with moderate to high secondary permeability, due to the presence of vugs, coarse grain size, and dolomitization - especially if the vugs are interconnected. The decision not to retain or test these coreholes as monitoring wells represents a missed opportunity for further hydrogeological investigation, including hydraulic testing.

This lack of fundamental site-specific hydrogeological data represents a substantial omission in the EIAR. A clear understanding of groundwater levels, flow direction, and baseline chemistry is essential for:

- Identifying potential groundwater receptors at risk during both construction and operational phases;
- Designing appropriate mitigation measures;
- Establishing an effective groundwater monitoring programme, if required.

Given the scale of the proposed development and the documented karst vulnerability of the underlying geology, this absence of such data is both concerning and unacceptable. The failure to conduct and present site-specific hydrogeological data undermines the integrity of the groundwater impact assessment and leaves critical risks unquantified.

IV.4 Wells

In rural areas such as Tullacondra and the surrounding townlands, which predominantly consist of agricultural land, it is reasonable to expect that most farms—and possibly some households—maintain private wells for domestic and/or commercial use.

While many homes may be connected to the local watermain where available, it cannot be assumed that all properties are connected. The potential reliance on private wells as a primary source of drinking water must therefore be fully considered in any environmental assessment.

Section 9.4.10 ("Wells") of the EIAR appears to rely solely on the Geological Survey of Ireland (**GSI**) well database. This database is widely acknowledged to be incomplete and is not an adequate substitute for field verification. The EIAR only refers to a small number of mapped wells in the vicinity and concludes that "any potential effect from the development is low risk for wells in the immediate vicinity, **although there is potential for farmyards and local dwellings to have private wells.**" This statement is contradictory and highlights the uncertainty created by the absence of direct investigation.

[3] Source: Drillhole log BH-T01, Tullacondra Wind Farm, Ground Investigation contract factual report, Irish Drilling Ltd. dated 23/01/25.

Furthermore, Section 9.4.14 ("Receptor Sensitivity") states that "no wells have been identified within the 250m buffer zone of shallow excavations along the Grid Connection Route (**GCR**), using the GSI database." Again, this offers no assurance regarding the true extent and location of potentially vulnerable groundwater receptors.

Given the scale of the proposed development, and the documented extreme vulnerability of certain areas—particularly those underlain by karstified limestone—this issue should have been properly addressed through dedicated field surveys. A targeted well survey should have been undertaken to identify all active domestic and agricultural wells in the vicinity of turbines, substations, haul roads, and cable routes. Disused wells should also have been recorded, as they may act as preferential pathways for groundwater contamination and, subject to landowner consent, could be repurposed for monitoring.

Where access is granted, representative wells should be instrumented for groundwater level and water quality monitoring. Such data would significantly improve confidence in determining groundwater flow direction and establishing baseline hydrochemical conditions prior to the commencement of construction works. The selection of water quality parameters should be risk-based and agreed with the local authority—e.g., including indicators relevant to oil and fuel spill risks.

Depending on the outcomes of a hydrogeological risk assessment, ongoing monitoring may be required at wells identified as being at higher risk from construction or operation of the proposed windfarm. The duration and frequency of such monitoring should also be determined in consultation with the local authority.

Finally, to ensure impartiality and technical integrity, all monitoring results should be reviewed by a Chartered Hydrogeologist or suitably qualified Water Engineer. Should any indication of groundwater contamination arise during the project, additional mitigation measures must be implemented without delay and verified by further sampling and analysis.

In summary, the EIAR's approach to identifying and assessing private wells and groundwater receptors is inadequate and does not meet the standard of environmental due diligence expected for a development of this magnitude. The omission of a comprehensive well survey introduces significant uncertainty and undermines the reliability of the groundwater impact assessment.

IV.5 Assessment of likely significant effects

The assessment of potential effects on hydrogeology is presented in Section 9.5 of the EIAR, with Subsection 9.5.2 focusing on specifically addressing likely significant effects during the construction phase.

It is acknowledged that the construction phase will involve only shallow excavations (approximately 3 metres in depth at turbine bases) and confirms that no dewatering or groundwater abstraction for potable supply is proposed.

However, the reliability of the impact assessment is fundamentally undermined by the lack of essential baseline data. The EIAR fails to establish the groundwater flow direction, nor does it provide site-specific information on groundwater depths. Furthermore, the identification of potentially affected domestic and farm wells relies entirely on desk-based analysis using the GSI database, without any field verifications or well survey. Given the known limitations of the GSI well database, and the vulnerability of karst aquifers present on site, the conclusions drawn in Section 9.5.2.11 regarding impacts on local groundwater supplies are unsubstantiated and must be revisited once appropriate field data has been collected.

Additionally, the EIAR refers to "Governing Industry Guidelines" in Subsection 9.2.2, citing a required 100m buffer between shallow excavations (e.g. site access tracks and cable trenches) and wells used for drinking water abstraction. The source cited for this buffer is EPA Water Advice Note No. 11: Technical Assessments and Prior Investigations. However, this reference is misleading and inappropriate in this context. EPA Advice Note No. 11 pertains to setback distances for landspreading of organic fertilisers and soiled water, which is unrelated to the nature of the works or the types of contaminants potentially arising from wind farm construction (e.g. hydrocarbons, concrete washout, sediment-laden runoff). Furthermore, the referenced statutory instrument (S.I. No. 610 of 2010) has since been superseded, with the most current version being S.I. No. 113 of 2022.

While the mitigation measures proposed (such as bunding, spill response planning, and surface water management etc.) generally align with industry good practice, their adequacy cannot be properly assessed in the absence of a robust risk assessment. Such an assessment would require at a minimum:

- Installation of a series of groundwater monitoring wells at strategic locations;
- Seasonal measurements of groundwater levels, determination of flow directions and hydraulic properties of the underlying bedrock aquifers;
- A comprehensive well survey to identify all domestic and agricultural wells within the proposed development's zone of influence, which shall be informed by field investigations and not standard buffer zones as these latter generally do not apply to karstic environments;
- Establishment of baseline groundwater quality and water table levels prior to construction;
- Continuous groundwater quality monitoring during the construction phase, with parameters tailored to the site-specific contaminants (e.g. hydrocarbons, concrete leachate, suspended solids), in consultation with the local authority.

In the absence of these essential data and monitoring provisions, the EIAR's assessment of likely significant effects on groundwater during construction remains incomplete, unverified, and of limited utility for an informed decision-making.

V. CONCLUSION

The hydrogeological assessment presented in the Environmental Impact Assessment Report for the proposed wind farm development is fundamentally inadequate and fails to meet the level of rigour required for a project of this scale, complexity, and environmental sensitivity. While the EIAR outlines the general hydrogeological context using publicly available data, it does not provide sufficient site-specific baseline information necessary to identify and evaluate the potential risks to groundwater receptors.

Key data gaps include the absence of direct measurements of groundwater levels, flow direction, and hydrochemistry, particularly within the highly vulnerable karstified Waulsortian Limestone aquifer. The reliance on outdated, regional-scale studies, carried out over a decade ago for unrelated purposes, further undermines the credibility and relevance of the conclusions drawn.

The EIAR also fails to properly address the presence and vulnerability of private wells. No targeted well survey was conducted, despite the rural, agricultural nature of the area and the known limitations of the Geological Survey of Ireland's well database. This omission renders the assessment of potential effects on groundwater-dependent receptors (such as domestic and/or agricultural wells) both speculative and unreliable.

Moreover, the mitigation strategy presented cannot be deemed robust or effective, as it is not based on a proper understanding of site-specific hydrogeological conditions. Without groundwater monitoring wells, verified receptor locations, and established baseline groundwater quality data, the proposed mitigation measures cannot be validated, and compliance with environmental protection standards cannot be assured.

Given the karstic geology (presence of many karstic features surrounding the proposed turbine locations), structural complexity, and documented extreme groundwater vulnerability of parts of the proposed site, the deficiencies in the EIAR's hydrogeological assessment represent a potentially serious and unacceptable risk to local water resources. These shortcomings render the EIAR's conclusions on likely significant effects incomplete and unreliable.

In light of these fundamental weaknesses, it is respectfully submitted that the planning authority should not grant permission for this development unless and until a comprehensive, site-specific hydrogeological investigation is undertaken, and a revised assessment, based on proper field data, is made available for public review.

Appraisal of Aquatic Ecology Reporting
in
EIAR for Tullacondra Green Energy Ltd.

Prepared for

Tullacondra Turbine Awareness Community

by

Pascal Sweeney, Sweeney Consultancy, Rahan, Mallow, Co. Cork

TABLE OF CONTENTS

1. INTRODUCTION

1.1 DOCUMENT ASSESSED

The purpose of the present report, prepared by Pascal Sweeney of Sweeney Consultancy, is the appraisal of aspects of the Aquatic Ecology reporting in the EIAR for Tullacondra Green Energy Ltd. (EIAR Vol II, Chapter 7, Section 7.7.5 and EIAR Vol III Appendix 7.2), completed in 2023 and received by Cork Co. on 09/08/2024 (File No. 245503)

1.2 REPORT AUTHOR, PASCAL SWEENEY

Pascal Sweeney of Sweeney Consultancy is a freshwater biologist, specialising in aquatic invertebrates. Following his B.Sc. degree in zoology, with funding from the National Board for Science and Technology, he monitored biological parameters in the Killarney Lakes. This led to a research M.Sc. on nutrient enrichment impacts on aquatic invertebrates. He is a committee member of the Irish Freshwater Sciences Association. His work is focussed mainly on biological water quality assessments and protected species surveys. Every summer since 2012, he has been contracted by EPA to assess sites throughout Irish river catchments for the National River Monitoring Programme. Pascal Sweeney is issued yearly licences by NPWS for crayfish surveys and Stage 2 surveys of freshwater pearl mussels throughout the state. Clients for these surveys have included NPWS, IFI, Uisce Eireann, OPW, Coillte, Irish Rail, Cork CC, Carlow CC, Tipperary CC, Galway CC, as well as several engineering firms planning infrastructure projects. In recent years, Pascal Sweeney surveyed c.80km of the upper Munster Blackwater, the Owentaraglin and the River Allow for IRD Duhallow and found over 3,400 mussels, many at previously unknown locations for this protected species. He is currently very involved in the rescue of the last few healthy crayfish from the River Awbeg that have not yet succumbed to crayfish plague. He has 21 peer-reviewed scientific publications on aquatic ecology.

2. APPRAISAL METHODS

2.1 USE OF AVAILABLE INFORMATION

The sourses and relevance of available aquatic data was considered.

2.2 FIELD METHODOLOGIES

The stated methologies used in the field were reviewed and their relevance was assessed in terms of accuracy and completeness.

2.3 REPORTING & PRESENTATION OF EIAR RESULTS

Clarity and accuracy of results are of paramount importance in a technical report. These aspects were carefully checked.

2.4 OMISSIONS

Omitted important information was checked for.

2.5 COMPARISON OF EIAR RESULTS WITH A 2025 FIELD ASSESSMENT

To help assess the results presented, a field survey was conducted by Pascal Sweeney on March 3rd and 4th, 2025.

3. APPRAISAL RESULTS

3.1 USE OF AVAILABLE INFORMATION

3.1.1. Biological Water Quality

Historical Q-values from 1990 in the Awbeg (Kanturk) are referred to in EIAR Vol III Appendices, Section 3.2.2, rather than checking the current water quality.

3.1.2. Crayfish

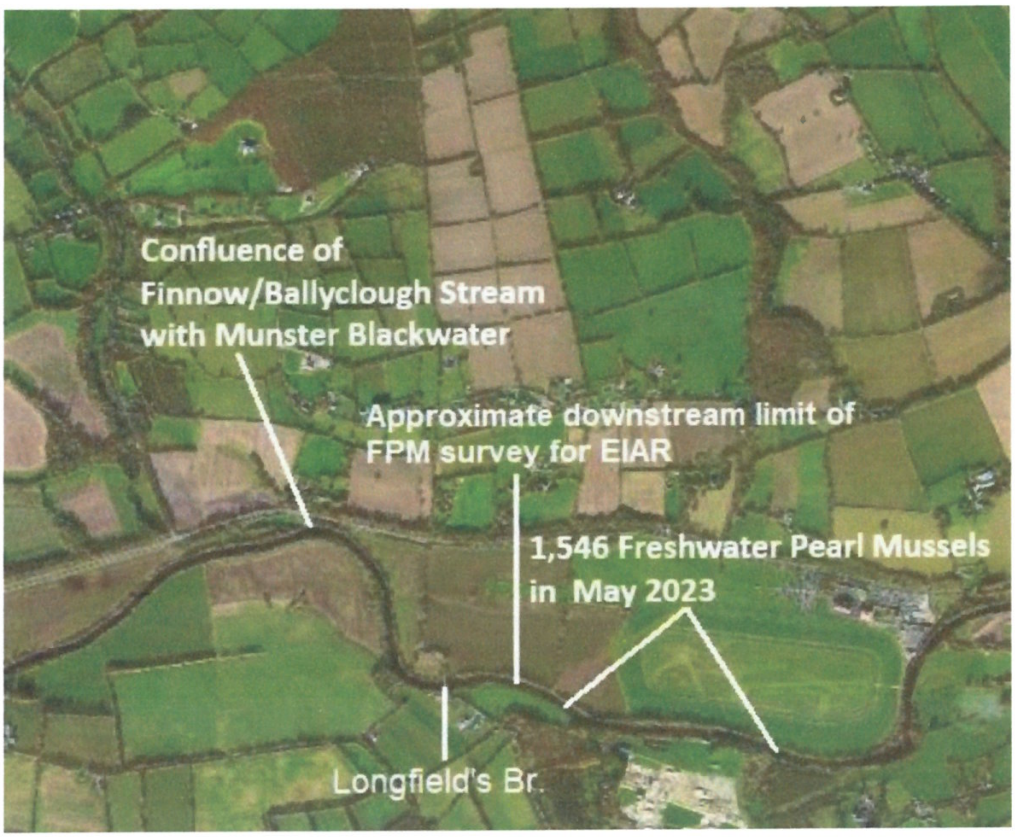
The Marine Institute was not consulted for information on the status of crayfish plague in the Blackwater catchment.

3.1.3. Freshwater Pearl Mussels

EIAR Vol III Appendices, Section 3.2.4 states that two reaches of the Blackwater were surveyed for FPM. Reach 1 is from Roskeen Bridge to 750m downstream, ignoring the 150m between the confluence of the Allow (Kanturk) and Roskeen Bridge. Consultation with NPWS should have brought to light the following important information on the FPM in this stretch of river. In 1994, prior to bridge repair works being undertaken, a team of NPWS staff collected mussels at and downstream of Roskeen Bridge and translocated them to upstream of the bridge (Eva Sweeney, retired NPWS Conservation Ranger, *pers. comm.*).

It is reported that only a single live freshwater pearl mussel was found in the Blackwater from downstream of the confluence of the Finnow/Ballyclogh Stream. With a 300m stretched skipped due to habitat conditions that were deemed unsuitable, the 750m survey would therefore have extended to c.200m downstreamof Longfield's Bridge. A Data Request Form to NPWS prior to submission of the report to Cork Co. Co. would have revealed that a substantial population of 1,546 individuals of this protected species was recorded in a surveyed stretch of the Blackwater, starting 400m downstream of Longfield's Bridge from ITM 552053 597625 to ITM 552785 597424, undertaken by trainees on a course run by Sweeney Consultancy, in May 2023 and supervised by Pascal Sweeney (Fig. 3.1).

Fig. 3.1: Freshwater Pearl Mussel Population downstream of Longfield's Br. (2023)



3.1.4. Fish

EIAR Vol III Appendices, Section 3.2.5 details impacts of two weirs farther downstream on the Blackwater, one at Clondulane and the second at Fermoy, on fish migration. This is despite the readily available information that a large section of Fermoy Weir had collapsed by 2019, opening up a channel for migratory fish.

3.2 FIELD METHODOLOGIES

3.2.1. Q-Values

Section 7.6.3.2.5 of the EIAR Volume II, Main Report, Chapter 7: Biodiversity, refers to the methodology used for Q-value assessments at seven sites following the standard methodology of Toner *et al.* (2005). This methodology has been updated by EPA on several occasions since 2005.

Because the small watercourses at Derryorgan and Kilmaclenine dry during the summer, it is acknowledged in EIAR Volume III, Appendices, Section 7.3.2.2 that the Q-values are likely not a reflection of true water quality. However, Q-values for these sites are still presented in EIAR Volume III, Appendices, Chapter 7, Table 5. By all versions of the Q-value standard methodology, from Toner *et al.* (2005) to EPA (2021, Version 2.2), a Q-value should not be ascribed to either of these watercourses.

3.2.2. Crayfish

EIAR Volume III, Appendices, Section 7.2.2.4, states that the crayfish survey was carried out following the guidance set out by Peay (2003). However, the report results give no indication that this was done, with no mention of five suitable habitat patches per site identified and ten refuges per patch searched for crayfish.

The stated methodology of using the contents of otter spraints to establish crayfish distribution is unreliable, as pointed out by Smiddy and Saich (2005: *Using otter (Lutra lutra) diet to indicate presence of White-clawed Crayfish (Austropotamobius pallipes) populations*. Irish Naturalists' Journal 34: 45-50.), This is because otter spraints can be deposited several kilometres from where the prey was eaten, and the only certain way of determining presence of crayfish is the discovery of living specimens.

3.2.3. Freshwater Pearl Mussels

Within both reaches of Blackwater surveyed for FPM, sections were skipped because the habitat was deemed unsuitable (EIAR Vol III Appendices, Section 3.2.4). The criteria for this decision are not given and doing so is contrary to the NPWS guidelines quoted.

The NPWS guidelines state that either all mussels per 500m stretch be counted or, where populations are dense, there chould be five 2m wide transects in every 100m of river surveyed (10% of the channel). With 20 cross-river transects surveyed in 1.5km of the Blackwater for the EIAR, this equates to 40m of the channel, which is less than 3% of the channel.

3.2.4. Fish

EIAR Volume III, Appendices, Section 7.3.2.5, describes a snorkelling fish surveying methodology, quoting two American papers, rather than the standard electrofishing methodology, as uses by Inland Fisheries Ireland. Furthermore, most of the watercourses in this study are unsuitable for snorkelling, due to size and depth.

3.3 REPORTING & PRESENTATION OF EIAR RESULTS

3.3.1. Locations

Locations referred to are not clearly specified. No grid references are given, as would be expected in a report of this type. This, combined with a lack of photographs to illustrate sampling sites, and only relatively small-scale mapping makes it difficult to re-sample for comparative purposes.

The Ketragh River, as it is named on all Ordnance Survey maps, is called the Lisduggan North in the EIAR, again making locations confusing.

3.3.2. Q-Values

In EIAR Volume III, Appendices, Chapter 7, Table 5. Invertebrate List for Biological Water Quality Sampling, the following errors are made:

Spelling: Seratella should be Serratella

Spelling: Amphinemoura should be Amphinemura

Spelling: Simulidae should be Simuliidae

Spelling: Chironomous should be Chironomus

Spelling: Hirudinae should be Hirudinea

Arachnida are not members of the Crustacea

Seratella sp. is not the Yellow Evening Dun, it is the Blue-winged Olive as subimago and Sherry Spinner as imago. The Yellow Evening Dun is *Ephemerella notata.*

Baetis muticus was moved to the Genus Alainites in 1994 and since then is *Alainites muticus.*

While a single typographical error might be excused, the combination of the above taxonomic errors in one table might suggest a lack of familiarity with aquatic invertebrates.

Although Table 2 in Section 7.6.3.2.5 of the EIAR Volume II, Main Report, Chapter 7: Biodiversity, correctly lists Q3-4 as being Moderate Starus, two watercourses that were assigned Q3-4 in Table 5 of EIAR Volume III, Appendices, Chapter 7, are described as being in Poor Status.

3.4 OMISSIONS

3.4.1 Annex I Habitats

Despite the Annex I habitat "Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation" (Habitat Code 3260) being correctly listed in EIAR Volume II, Main Report, Table 7.7 as a Qualifying Interest of SAC 002170, there is no assessment of this habitat.

3.4.2. Freshwater Pearl Mussels

Sections of the Blackwater were not surveyed, leaving gaps in the information on distribution of this protected species (see Section 3.1.3, above).

3.5 COMPARISON OF EIAR RESULTS WITH A 2025 FIELD ASSESSMENT

3.5.1 2025 FIELD ASSESSMENT

To help assess the Q-value results presented in the EIAR, a field survey was conducted by Pascal Sweeney on March 3rd and 4th, 2025. Seven sites were assessed, six corresponding to sites evaluated in 2022 for the EIAR and one additional site for

comparison to EPA 1990 data. One of the 2022 sites had no water when visited on 3rd March 2025. An additional site, not sampled in 2022, on the upper Awbeg (Kanturk) was sampled in 2025 in order to compare the current status with the las reported status in 1990.

Site details are presented in Tables 1-7, mapped in Fig.3.2, and illustrated in Photos 1-7.

Table 1. Site 1

Site Code	1
Grid Ref (ING)	R45128 06266
Watercourse	Awbeg (Kanturk)
EPA Watercourse Code	18A06
Corresponding to EIAR Site	None. Upper Awbeg (Kanturk) not sampled for EIAR
Description	Just downstream of confluence of unnamed stream flowing from the east, under Sal's Bridge. Between EPA Stations 18A060200 and 18A060500.
Photograph No.	1
Sampling depth (m)	0.1
Flow	Riffle: 100%
Substrate (%)	Cobble 20 Gravel 70 Silt 10

Table 2. Site 2

Site Code	2
Grid Ref (ING)	R43349 01061
Watercourse	Awbeg (Kanturk)
EPA Watercourse Code	18A06
Corresponding to EIAR Site	Awbeg (Kanturk)
Description	Upstream of Ketragh confluence
Photograph No.	2
Sampling depth (m)	0.4
Flow	Riffle: 100%
Substrate (%)	Cobble 50
	Gravel 30
	Sand 20

Table 3. Site 3

Site Code	3
Grid Ref (ING)	R44241 01630
Watercourse	Ketragh
EPA Watercourse Code	None
Corresponding to EIAR Site	Ardine Bridge
Description	20m upstream of bridge
Photograph No.	3
Sampling depth (m)	0.4
Flow	Fast glide: 100%
Substrate (%)	Cobble 50
	Gravel 40
	Silt 10

Table 4. Site 4

Site Code	4
Grid Ref (ING)	R43466 01096
Watercourse	Ketragh
EPA Watercourse Code	None
Corresponding to EIAR Site	Lisduggan North
Description	Upstream of confluence with Awbeg (Kanturk)
Photograph No.	4
Sampling depth (m)	0.5
Flow	Fast glide: 100%
Substrate (%)	Gravel 100

Table 5. Site 5

Site Code	5
Grid Ref (ING)	R49009 08133
Watercourse	Unnamed tributary of the Awbeg (Buttevant)
EPA Watercourse Code	None
Corresponding to EIAR Site	Lisgriffin
Description	Stream flowing east just south of Lisduggan Crossroads
Photograph No.	5
Sampling depth (m)	0.03
Flow	Riffle: 100%
Substrate (%)	Cobble 40
	Gravel 40
	Silt 20

Table 6. Site 6

Site Code	6
Grid Ref (ING)	R48048 04387
Watercourse	Unnamed watercourse flowing southwest from Tullacondra proposed wind turbine site.
EPA Watercourse Code	None
Corresponding to EIAR Site	Derryorgan
Description	Small watercourse that dries in summer
Photograph No.	6
Sampling depth (m)	0.02
Flow	Riffle: 100%
Substrate (%)	Cobble 20
	Gravel 70
	Silt 10

Table 7. Site 7

Site Code	7
Grid Ref (ING)	R49096 01677
Watercourse	Unnamed tributary of the Ballyclough/Finnow Stream
EPA Watercourse Code	None
Corresponding to EIAR Site	Ballyclogh
Description	Upstream of confluence with Ballyclough/Finnow Stream
Photograph No.	7
Sampling depth (m)	0.1
Flow	Riffle: %
Substrate (%)	Cobble 40
	Gravel 40
	Silt20

Fig.3.2 Map of Sampling Sites 2025

Sampling Site 1 Photo

Sampling Site 2 Photo

Sampling Site 3 Photo

Sampling Site 4 Photo

Sampling Site 5 Photo

Sampling Site 6 Photo

Sampling Site 7 Photo

3.5.2 RESULTS OF A 2025 FIELD ASSESSMENT

The invertebrate taxa collected at all seven sites sampled are presented in Table 8.

Table 8. Invertebrate Fauna

Relative abundance expressed as D: Dominant; N: Numerous; C: Common; F: Few; SS: Single Specimen

TAXON	SITE 1	SITE 2	SITE 3	SITE 4	SITE 5	SITE 6	Site 7
Group A (Sensitive)							
Isoperla sp.	F						
Protonemura sp.	F				F	F	
Brachyptera risi	F				SS		
Ecdyonurus sp.	C	F					
Rhithrogena sp.	N	D		F			
Group B (Less Sensitive)							
Leuctra sp.	F						
Glossosomatidae			F				
Goeridae			F				
Limnephilidae	F			F	F		
Odontocera albicorne		SS					
Sericostoma personatum	F	F	F	C			F
Group C (Relatively Tolerant)							
Tricladida			SS				
Lumbricidae		F					F
Lumbriculidae	SS		F	F			
Potamopyrgus antipodarum			F				
Planorbis planorbis						C	
Potamopyrgus antipodarum		F	F				SS
Ancylus fluviatilis							
Hydrachnidae							F
Gammarus sp.	C	F	D	N			D
Baetis rhodani group		F	F		N	C	
Serratella ignita				SS			
Hydropsyche sp.	SS	C	F	F			F
Rhyacophila sp.		F					
Polycentropus sp.		F		F			
Holocentropus sp.		SS					
Elmis aenea		F	F	F			F
Limnius volckmari	F	SS	F	F			SS
Gyrinidae	SS			F			
Haliplidae				F			
Hydraenidae						C	
Dicranota sp.	SS		F				
Tipulidae				SS			
Simuliidae		F			F	F	
Ceratopogonidae							SS
Procladius sp.						F	
Cryptochironomus sp						SS	
Other Chironomidae					F	F	

Table 8 continued

TAXON	SITE 1	SITE 2	SITE 3	SITE 4	SITE 5	SITE 6	Site 7
Group D (Very Tolerant)							
Enchytraeidae						SS	
Helobdella stagnalis			SS				
Erpobdella sp.	SS				SS	F	F
Glossiphonia sp.							F
Pisidium sp.			SS				
Ampullaceana balthica					F		
Physa fontinalis					SS		SS
Asellus sp.	SS			SS	F		
Group E (Most Tolerant)							
Tubificinae			SS		SS		
Q-value	**Q4-5**	**Q4**	**Q3**	**Q3-4**	**Q3-4**	**N/A**	**Q3**

3.5.3 COMPARISON OF INVERTEBRATE RESULTS

Due to the lack of clarity around the locations of the sampling sites in the EIAR (see 3.3.1, above), it is likely that some of the 2025 samples were not taken at exactly the same point in each watercourse, but they were taken in at least close proximity.

46 invertebrate taxa were recorded six sites sampled in March 2025 (excluding Site 1 which had not been sampled in 2022), compared to 30 taxa reported in EIAR Volume III, Appendices, Chapter 7, Table 5 for all seven sites sampled in summer 2022. This increase of over 50% in 2025 can be partly explained by seasonality, with three species of stoneflies being at adult stage in summer. As these are EPA Group A (Pollution Sensitive) species, this affects the Q-value. It is not understood why, with other surveys being carried out for the EIAR at other times of year, the aquatic invertebrates were not sampled between September and April as well.

In EIAR Volume III, Appendices, Chapter 7, Table 5, the Family Chironomidae are divided into *Chironomus sp.* (Bloodworms) and "green chironomids". This suggests that all red chironomids were counted as *Chironomus sp.*, which is in EPA Class E. This genus was recorded as Numerous in occurrence at the Derryorgan site in 2022, which affects the interpretation of the biological water quality status. However, in 2025, a different red chironomid, *Cryptochironomus sp.* (EPA Class C), was found to be common in this watercourse.

Diving beetles (Dytiscidae) were recorded at the Derryorgan site in 2022, despite the fact that this small shallow temporary watercourse would not be suitable habitat this family of beetles. In 2025, crawling beetles of the family Hydraenidae were found to be common in this watercourse.

All riffle beetles (Elmidae) are listed as *Elmis sp.* in EIAR Volume III, Appendices, Chapter 7, Table 5. In 2025, a second similar species of riffle beetle, *Limnius volckmari*, was widely recorded.

The status of the upper reaches of the Awbeg (Kanturk) was found to have improved very significantly, with Q4-5 recorded near Sal's Bridge, in contrast to the poor quality in 1990, referred to in the EIAR.

4. ADDITIONAL COMMENTS

4.1.1. Crayfish

No reference is made to crayfish plague, which was recorded by eDNA analysis in water samples taken in the Blackwater and Awbeg (Buttevant) by the Marine Institute in October 2022 and in dead crayfish from the Blackwater in May 2023. This information would have readily been available via a query to the Marine Institute. There is currently an ongoing effort to capture and protect any remaining healthy crayfish from the Awbeg (Buttevant) until the plague has run its course. It will be important that no additional pressures are placed on this river when these crayfish are reintroduced.

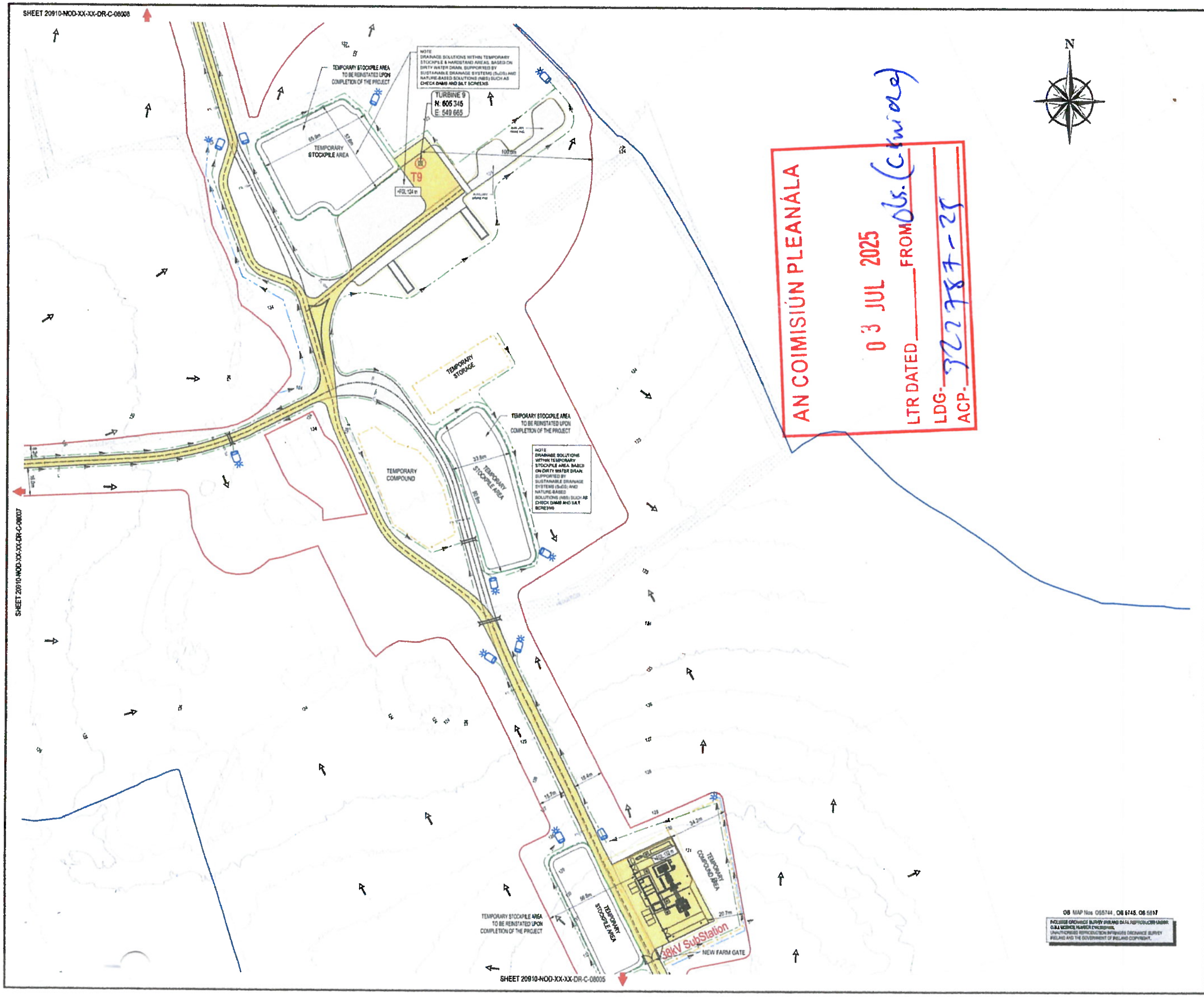
In EIAR Volume III, Appendices, Chapter 7, Table 3, it is reported that one dead crayfish was found in Reach 2 of the Blackwater. This specimen, which was found just a few months earlier than the first record of crayfish plague in the Blackwater was not sent to the Marine Institute to be checked. If it had been found to have succumbed to crayfish plague, warnings to anglers and other river users would have been issued earlier, slowing the progress of the disease. Furthermore, the only references to biosecurity in the EIAR refer to invasive non-native species, not diseases. Without taking adequate biosecurity measures against the spread of crayfish plague, the researchers for the EIAR could themselves have been vectors for its spread.

4.1.2. Freshwater Pearl Mussels

As the current full extent of the freshwater pearl mussels population in the Blackwater downstream of the confluence of the Awbeg (Kanturk) and the Finnow/Ballyclogh Stream is not known, applying the Precautionary Principle, the likely presence of FPM should have been presumed in the unsurveyed stretches.

5. CONCLUSIONS

With the use of outdated, unreliable field survey methods, deviations from standard methodology, inexact invertebrate data, incomplete FPM surveying, and no assessment of a relevant Qualifying Interest of SAC 002170, the Aquatic Ecology Baseline Report for the Tullacondra Green Energy Project is not adequate for accurate determination of potential impacts on aquatic habitats and species.



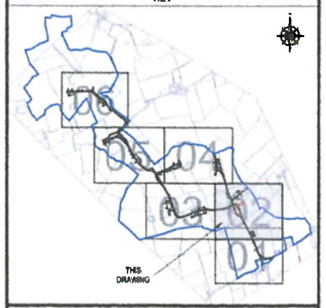
NOTES

1. DO NOT SCALE DRAWINGS, DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
3. ALL LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
5. DESIGNER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

SCALE 1 : 1,000

SCALE AS AGREED WITH CORK COUNTY COUNCIL

KEY



LEGEND

- BLUE LINE BOUNDARY
- RED LINE PLANNING BOUNDARY
- PERMANENT WIND TURBINE TOWER
- TEMPORARY TURBINE HARDSTAND AREA
- PERMANENT WIND TURBINE HARDSTAND (750sqm approx)
- PROPOSED FINISHED TRACK LEVEL
- NEW TEMPORARY ACCESS TRACKS
- NEW / EXISTING PERMANENT ACCESS TRACKS
- EXISTING CONTOURS AND FLOW DIRECTION
- TEMPORARY TURNING AREA
- PASSING BAY
- TEMPORARY CONSTRUCTION COMPOUND
- SURFACE DRAINAGE DIFFUSE OVERFLOW
- SETTLING POND
- PROPOSED CULVERT (with velocity & erosion reduction measures)
- EX. CULVERT. (to be upgraded with velocity & erosion reduction measures where required)
- CLEAN WATER INTERCEPTION DRAIN (Part of NBS / SuDS)
- DIRTY WATER DRAIN (INTERCEPTION DITCH) (with 300mm check dam @ 50m c/c. Part of NBS / SuDS)
- PROPOSED SILT SCREEN (Part of NBS / SuDS. Construction Phase only)
- EARTHWORKS OUTLINE

REV	DATE	DESCRIPTION	C.D.	D.Z.	G.Y.
C01	15.05.2024	ISSUED FOR PLANNING	D	C	A

PROJECT No. 20910 — STAGE: PLANNING

NICHOLAS O'DWYER
an RSK company
Unit E4, Nutgrove Office Park, Nutgrove Avenue, Dublin 14
T +353 1 296 9000
F +353 1 296 9001
E dublin@nodwyer.com
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CLIENT: TULLACONDRA Green Energy
Station Road, Adare, CO. Limerick.
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Web - www.tullacondragreenenergy.ie
Phone Office - 061 975 200

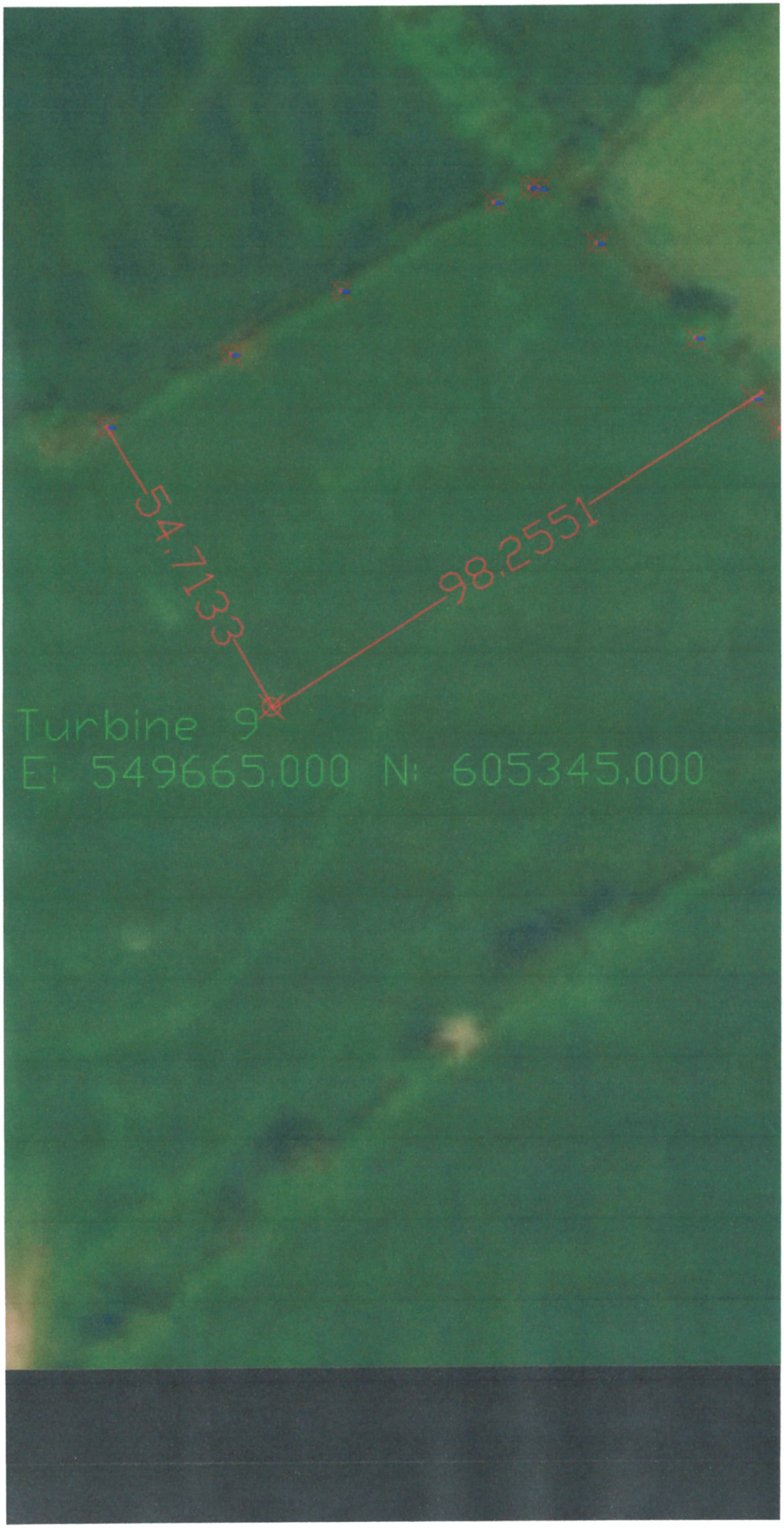
PROJECT: TULLACONDRA GREEN ENERGY PROJECT

TITLE: SITE LAYOUT SHEET 2 OF 6

SCALES @ A1	DRAWN	CHECKED	APPROVED
1:1000	F. Wall	Y. Mansoor	G. Young
	DATE 22.03.2024	DATE 22.03.2024	DATE 22.03.2024

SUITABILITY CODE: A3 — SUITABILITY DESCRIPTION: STAGE APPROVED

DRAWING No. 20910-NOD-XX-XX-DR-C-08006 — REVISION C01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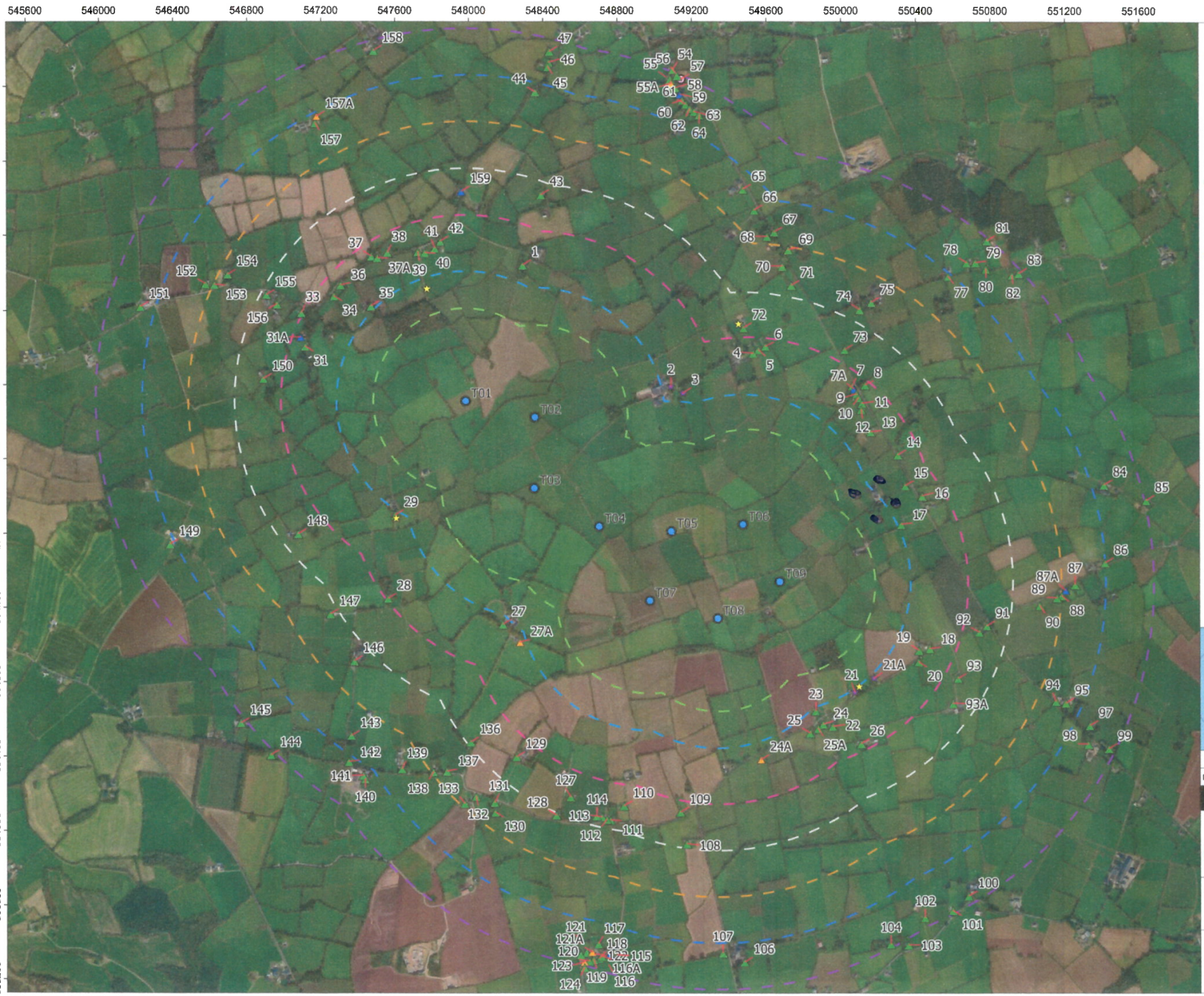

Legend

- Proposed Turbine Locations
- Associated Dwelling
- Occupied Dwelling
- Planning Approved
- School
- Unoccupied Dwelling
- Noise Monitoring Locations
- Turbine Buffer 500m
- Turbine Buffer 700m
- Turbine Buffer 1000m
- Turbine Buffer 1250m
- Turbine Buffer 1500m
- Turbine Buffer 1750m
- Turbine Buffer 2000m

Rev	Date	Description	Dm	Chk	App
01	24/03/2025	Sensitve Receptors	RC		

Tullacondra Wind Farm

TITLE:
Sensitive Receptors

0 190 380 570
Metres

SCALE 1:9,500 @A1

REV 01

Document Path: V:\Environment Section\5 Working Reports\20910 Tullacondra Wind Farm\Harry GIS\Completed Pop and HH Maps\Job 20910 - Tullacondra (Fig 6 1-6.9).aprx

Neil McAuliffe
Curraglass
Castlecor
Mallow
Co. Cork

05/09/2024

APPLICANT: Tullacondra Green Energy Limited

DEVELOPMENT: The Applicant is seeking permission for the construction, operation and decommissioning of a wind energy development including:

- 9 wind turbines each with a blade tip height of 175 metres, rotor diameter of 150 metres, hub height of 100 metres and a rated output of 4.5 megawatts.
- Turbine Foundations, crane pad hardstanding areas and associated drainage.
- Upgrade of existing site tracks and construction of new site tracks and associated drainage.
- Access from the local road L5302 at Crought, Ballyclogh including a new site entrance for the construction phase and upgrading of an existing entrance for the operational phase.
- An on-site 38 kilovolt electrical substation to Electricity Supply Board Networks specification to include control building with electrical infrastructure, welfare facilities supplied by rainwater harvesting and storage tank, a wastewater holding tank with high level alarm, car parking, security fencing and lighting, and all associated infrastructure, services, and site works including a temporary construction compound.
- All associated underground electrical and communications cabling connecting the turbines to the proposed electrical substation.
- A temporary site construction compound and associated ancillary infrastructure including welfare services, office accommodation, parking, fencing, lighting etc.
- Areas for temporary storage of excavated materials.
- A permanent meteorological mast of 100 metres height above ground level on a concrete base.
- Installation of approximately 13.5 kilometres of 38 kilovolts underground electrical cabling, mainly within the public road, between the proposed wind farm substation to the boundary of Mallow 110 kilovolt substation at Saint Joseph's Road Mallow.
- All associated site works including site clearance and ancillary development including site drainage/Sustainable Drainage System, security gates, fencing, permanent and temporary signage, and biodiversity mitigation and enhancements, including hedgerow planting.

The Applicant is seeking a 10-year duration planning permission and 35-year operational period from the date of overall commissioning of the entire wind farm. The Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) will be submitted to the Planning Authority with the application.The wind farm

development is proposed on a site in the townlands of Polnareagha and Ardskeagh (Templemary E.D.); and Tullacondra and Croughta, (Kilmaclenine E.D.), County Cork.
The proposed grid connection will be installed underground mainly within the public road from the wind farm site at Croughta, Ballyclogh to the boundary of the 110 Kilovolts substation at Saint Joseph's Road, Mallow passing through the townlands of Kilmaclenine, Croughta, Knockaunavaddreen, Copestown, (Kilmaclenine E.D.), Ballybeg (Buttevant E.D.), Baltydaniel East, Twopothouse, and Caurraghakerry (Caherduggan E.D); and Cloghlucas North, Curraghphadeen, Ballyviniter Upper, Ballyviniter Middle, Ballyviniter Lower, Parkadallane, Carrigoon More and Carrigoon Beg Mallow Rural E.D.).

AT: Polnareagha, Ardskeagh, Tullacondra, Croughta Kilmaclenine, Ballyclogh, Knockaunavaddreen, Copestown, Ballybeg, Baltydaniel East Twopothouse, Caurraghakerry, Co. Cork

FOR: Permission

PLANNING REGISTRATION NO: 24/05503

A Chara,

I wish to acknowledge receipt of your submission/observation on 05/09/2024 concerning this application. I enclose herewith receipt no. PLG0045632 in respect of correct fee paid. I wish to confirm that your submission/observation has been received within the period of five weeks beginning on the date of registration of the application and is therefore considered a valid submission/observation.

Copies of site map/plans and particulars submitted in connection with the application will be available for inspection at this department during office hours (9.00 a.m. to 4.00 p.m., Monday to Friday) until the application, or any appeal thereon, is finally determined. The applicant shall be given your name and content of the submission/observation should it be requested.

Your letter will form part of the documentation available for inspection by the public. You will be notified when a decision is made on the application.

This letter should be retained. If you wish to appeal such decision a copy of this acknowledgement together with the attached official document must accompany your appeal to An Bord Pleanála.

Yours faithfully,

Guy Clarke Hurley

Guy Clarke Hurley
Clerical Officer

ACKNOWLEDGEMENT OF RECEIPT OF SUBMISSION OR OBSERVATION ON A PLANNING APPLICATION

THIS IS AN IMPORTANT DOCUMENT

KEEP THIS DOCUMENT SAFELY. YOU WILL BE REQUIRED TO PRODUCE THIS ACKNOWLEDGEMENT TO AN BORD PLEANÁLA IF YOU WISH TO APPEAL THE DECISION OF THE PLANNING AUTHORITY. IT IS THE ONLY FORM OF EVIDENCE WHICH WILL BE ACCEPTED BY AN BORD PLEANÁLA THAT A SUBMISSION OR OBSERVATION HAS BEEN MADE TO THE PLANNING AUTHORITY ON THE PLANNING APPLICATION.

PLANNING AUTHORITY NAME **Cork County Council**

PLANNING APPLICATION REFERENCE NO. 24/05503

A submission/observation, in writing, has been received from:

Neil McAuliffe
Curraglass
Castlecor
Mallow
Co. Cork

ON 05/09/2024 in relation to the above planning application.

The appropriate fee of €20 has been paid.

The submission/observation is in accordance with the appropriate provisions of the Planning and Development Regulations, 2001 and will be taken into account by the Planning Authority in its determination of the planning application.

Guy Clarke Hurley

Guy Clarke Hurley
Clerical Officer

Local Authority Stamp

Date: 05/09/2024