

Formal Objection to Planning Application — Limerick City and County Council

To:

The Planning Department
Limerick City and County Council
Merchants Quay, Limerick

From:

Frank Kelly
Creggane Castle, Charleville,
Co. Limerick

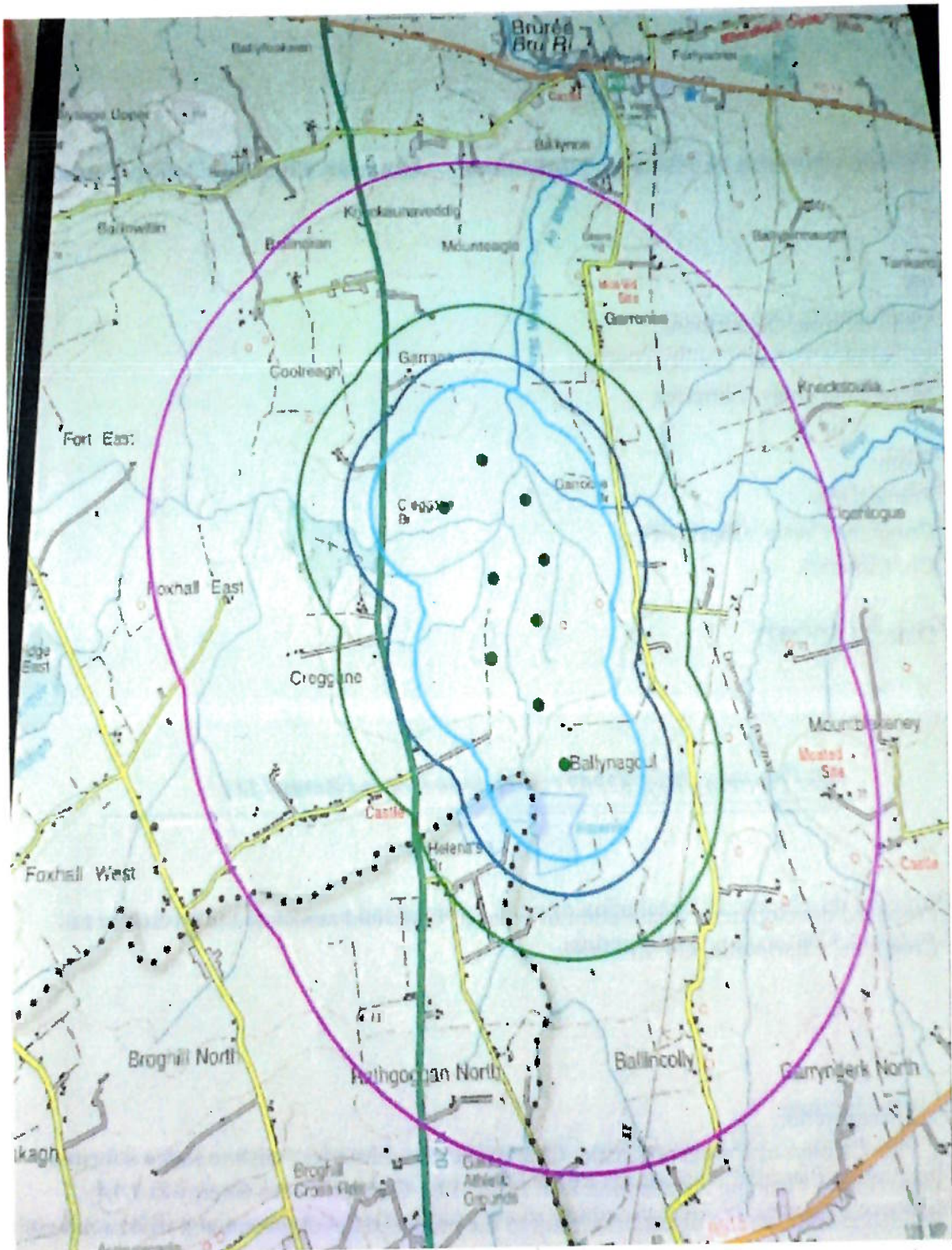
Date: 21/10/2025

Re: Planning Ref. 323635 — Garrane Green Energy Ltd

Proposed development: Installation of wind turbines and associated infrastructure at Creggane, Charleville, Co. Limerick.

1. Introduction

I, Frank Kelly, of Creggane Castle, Charleville, Co. Limerick, wish to lodge a formal objection to Planning Application Ref. 323635 by Garrane Green Energy Ltd. My residence is located in direct proximity to the proposed development and will be severely impacted by noise, shadow flicker, road safety risks, and visual intrusion.



Map Provided by company

2. Mapping and Consultation Boundary Concerns

The map submitted by the applicant, showing a green curved line around the turbine sites, is not drawn to scale and appears to have been manipulated to exclude my property at Creggane Castle. Creggane Castle is marked in red on the map. The line curves irregularly in front of my home, extending further north and south than east to west. This distortion removes my property from the consultation zone and avoids the applicant's obligation to notify me directly. I request that Limerick City and County Council independently verify the mapping accuracy and ensure that all affected landowners have been properly included in the consultation process.

3. Lack of Community Consultation

No meaningful engagement or information meetings were offered or held by Gurrane Green Energy with local residents before this application was lodged. I wrote to them on their website on 23/08/2025. I received no response email nor did the company in any way engage with me. This lack of transparency contravenes both the Wind Energy Development Guidelines (2006) and the Draft Revised Guidelines (2019), which require early and open consultation with communities affected by wind energy developments.

4. Visual and Landscape Impact

The proposed turbines will be about three times as tall as Charleville Church and will change the Creggane area's rural landscape and heritage character forever. This visual intrusion conflicts with the Limerick County Development Plan 2022–2028, which commits to preserving the rural and scenic amenity of the county.

5. Noise, Sleep and Health Impacts

The nearest turbine is approximately 900 metres from my residence, posing a significant risk of chronic low-frequency noise exposure, especially at night. Evidence shows that turbine noise, even when measured within regulatory limits, can disrupt sleep and cause stress-related health effects.

I refer in particular to the report by Dr Christopher Hanning, "**Wind Turbine Noise, Sleep and Health**" (July 2012), submitted to North Cumberland County Council. Dr Hanning concluded that:

- Wind turbine noise is uniquely intrusive due to its low-frequency and fluctuating amplitude characteristics.
- Sleep disturbance occurs at sound levels lower than many current planning thresholds.
- Chronic exposure results in fatigue, stress, hypertension, and impaired well-being.
- A minimum setback distance of at least 1.5 km is recommended to protect residents from adverse effects.<https://stopthesethings.com/wp-content/uploads/2014/12/hanning-wind-turbine-noise-sleep-and-health-report-jul-2012.pdf>

Dr Hanning in his study recommends a mandatory minimum setback of 1.5 km for turbines over 2 MW from residences and sensitive sites to protect public health. Increased distances might be necessary to mitigate cumulative exposures from multiple turbines.

In direct response to Northumberland County Council:

- **Question 58 (Renewable Energy Delivery):** The Council should consider noise and health impacts, making large-scale wind inappropriate for most of Northumberland without setbacks.

- **Question 61 (Separation Distances):** The core strategy must include a 1.5 km minimum separation to safeguard residents, overriding ETSU-R-97 based on new evidence as “material considerations” in planning.

Other Studies:

- **“Visual and Acoustic impact of Wind Turbine Farms on residents”**

WINDFARMperception (2008, n=725): 20% reported sleep disturbance at 30-35 dB(A), with turbine noise more annoying than traffic.

- **Pedersen et al. (2009):** Dose-response models show annoyance and stress symptoms starting at low noise levels, recommending limits below 35 dB(A).

- **Shepherd et al. (2011, n=39 near turbines at 1.4 km):** Worse sleep quality, energy levels, and environmental quality of life compared to controls 8 km away.

- **Nissenbaum et al. (2011, sites <1.4 km):** Higher Pittsburgh Sleep Quality Index (PSQI) and Epworth Sleepiness Scale (ESS) scores, plus poorer mental health, with effects decreasing with distance.

- **Critique of ETSU-R-97:** This 1997 UK guidance allows night-time noise up to 43 dB LA90, which the report deems inadequate as it prioritises wind energy over health protection. It ignores turbine size increases, amplitude modulation, and low-frequency noise. A suppressed 2006 DTI draft suggested lowering limits to 38 dB LA90. Experts recommend setbacks of 1-3.2 km (average 2.08 km from a table of 16 opinions).

Conclusions and Recommendations

These studies conclude that wind turbine noise causes significant sleep disturbance and health effects at distances permitted by current guidelines, with no evidence supporting safety within 1.5 km.

Also, **The World Health Organization Environmental Noise Guidelines for the European Region (2018)** likewise recommend that average wind turbine noise exposure should not exceed 45 dB Lden ($\approx$ 40 dB(A) at night) to avoid sleep disturbance and health risks. Given the rural location and proximity of my home, the proposed turbines are 1

In the absence of comprehensive evidence to the contrary and in light of the research and public health guidance quoted above, I submit that this development poses a significant risk to human health and negatively impacts the rural environment.

6. Shadow Flicker and Light Intrusion

The Wind Energy Development Guidelines (2006) state that shadow flicker should not exceed 30 hours per year or 30 minutes on any given day at any dwelling. The turbine layout and orientation towards the sunrise mean that my property and the adjoining public road will be directly exposed to shadow flicker during the morning hours. No independent modelling has been provided to demonstrate compliance with these statutory limits, nor has any mitigation plan (such as automatic turbine shutdown controls) been outlined.

The developers have not provided the required independent sun-path geometry and turbine coordinates to demonstrate compliance with the guidelines for my home.

7. Road Safety and Flicker Risk

The same orientation that causes shadow flicker at my residence will also create driver distraction on the nearby public road. Under Section 34(4)(g) of the Planning and Development Act 2000 and Sections 5.12–5.13 of the Wind Energy Development Guidelines (2006), the developer must show that the proposal “does not endanger public safety by reason of traffic hazard or obstruction of road users.”

No Road Safety Audit or flicker risk assessment appears in the documentation. I therefore request that the Council require the applicant to provide:

- A full independent Road Safety Audit, including flicker and visual-distraction analysis;
- Details of automatic turbine shut-down systems during high-risk periods;
- Commitments to curtail turbine operation at sunrise and sunset when shadow flicker affects the public road network.

I therefore request that Limerick City and County Council refuse permission until an independent Road Safety Audit is completed and adequate mitigation measures—including automatic turbine shut-down during flicker periods—are guaranteed.

No independent model has been provided to demonstrate that these statutory limits will be met. I therefore request that the Council require full shadow-flicker analysis before determination and, if permission is granted, impose a condition mandating automated turbine shutdown when flicker exceeds permissible levels.

8. Property Devaluation and Community Well-Being

Research by the University of Galway (2023) and other sources shows that proximity to large-scale wind turbines can result in property devaluation and long-term stress for affected homeowners. This proposal threatens both the financial security and mental well-being of local residents, contrary to Section 34 of the Planning and Development Act 2000, which requires planning authorities to safeguard residential amenity.

Property Value Impacts.

Peer-reviewed evidence shows nearby wind turbines can depress house prices, especially at close range and with tall machines. In Ireland, the University of Galway (2023) finds an average of -14.7% within 1 km, rising to -22.9% for >125 m turbines, with effects diminishing over time. UK evidence (LSE 2015) shows ~5–6% reductions for visible turbines within 2 km and <2% by 2–4 km. Dutch studies report -1.4% within 2 km on average, larger for taller turbines. A recent U.S. study finds ~11% declines within 1 mile after announcement. Taken together, these results indicate a material risk of devaluation for dwellings at ~1 km from large turbines such as those proposed here.

9. Social and Cumulative Impact

The project risks dividing and unsettling the local community through lack of consultation and disproportionate scale. It contradicts balanced or sustainable rural development, as envisaged by the Limerick County Development Plan.

10. Conclusion and Request

I respectfully request that Limerick City and County Council REFUSE Planning Permission Ref 323635 for all the reasons outlined above, which include mapping irregularities, inadequate consultation, noise and flicker impacts, and road-safety risks.

Should the Council nonetheless consider granting permission, I request that strict conditions be attached to require:

- Full independent verification of noise and flicker compliance
- Continuous real-time monitoring of environmental impact;
- A minimum 1.5 km setback from occupied dwellings
- A community benefit fund and decommissioning bond to ensure local and long-term protection.

Thank you for your consideration.

Signed

A handwritten signature in black ink, appearing to read 'Frank Kelly', with a long horizontal flourish extending to the right.

Frank Kelly
Creggane Castle
Charleville
Co. Limerick
21/10/2025