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Senior Executive Officer
Draft Carlow County Development Plan 2022-2028
Planning Department
Carlow County Council
Athy Road
Carlow
R93 E7R7

01 October 2021

To whom it may concern,

Re: Draft Carlow County Development Plan 2022-2028

1.0 Executive Summary

On behalf of our client, Galetech Energy Developments Limited, we wish to make the following submission to the Draft Carlow County Development Plan 2022-2028.

Our client requests that lands currently under investigation for their ability to accommodate a wind energy development, illustrated at **Annex 1**, located c. 9km east of the town Tullow, c. 5km southwest of Hacketstown and c. 1.5km southwest of the settlement of Clonmore, Co. Carlow are designated as being a 'Preferred Location' for wind energy development, such that the wind resource of the county can be fully exploited, for the following reasons.

The subject lands adhere to, and are in accordance with, the key criteria set out in the Draft Carlow County Development Plan 2022-2028 upon which the designation of suitable lands for wind energy development has been based. In particular:-

1) The subject lands are assessed to have a wind speed in excess of 7.5m/s (per Figure 6.2 of the Draft Renewable Energy Strategy);
2) The subject lands are not the subject of any overwhelming environmental, heritage and amenity constraints, including the presence of European or Ramsar sites; significant groundwater vulnerability or flood risk susceptibility; geoheritage significance or geological instability concerns; or cultural heritage features (per Figure 3.4 of the Draft Renewable Energy Strategy, and Maps 10.1 and 10.2 of the Draft Carlow County Development Plan 2022-2028;
3) There is a sufficient spatial extent (land) available for the development of a wind energy development which, in the first instance, allows for adherence to turbine manufacturer requirements for inter-turbine spacing, provides for a minimum setback of 500m from all dwellings, and generally accords with the visual amenity setback requirements (separation distances) to residential dwellings as set out in the *Draft Revised Wind Energy Development Guidelines 2019*; and
4) The proposed development would not directly interfere with any identified scenic routes or viewpoints. There are a number of scenic viewpoints to the north of the proposed development site; however, having reviewed the Landscape Character Assessment, these prospects are generally described as being orientated to the east or southeast and are, therefore directed away from the subject lands.

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Our client, therefore, respectfully requests that the Planning Authority designates the subject lands as being a 'Preferred Location' for wind energy development as they meet the criteria applied in the Draft RES. However, the application of these criteria has, as explained in detail above, been found to be undermined by inaccuracies. The failure of the Draft RES to identify and designate the subject lands as suitable for wind energy development is inappropriate and unwarranted having regard to their suitability to accommodate such development and the pressing urgency of delivering on binding national renewable energy targets. Therefore, our client respectfully requests that the subject lands be designated as a 'Preferred Location' for Wind Energy Development.

2.0 Introduction

Firstly, our client welcomes the opportunity to make this submission on the Draft Carlow County Development Plan 2022-2028 ('the Draft Plan') which will guide the appropriate development of County Carlow of the period of the plan, including in respect of the delivery of renewable energy development. Furthermore, our client welcomes the preparation of a dedicated Draft Renewable Energy Strategy ('Draft RES') by Carlow County Council ('the Planning Authority') which addresses the broad range of renewable energy technologies available in meeting Ireland's binding renewable energy targets.

As the Planning Authority will be aware, the current Programme for Government commits to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (a c.51% reduction over the decade) and to achieving 'net-zero' emissions by 2050. This has recently been legislated for in the Climate & Low Carbon Development (Amendment) Bill 2021 and is one of the most ambitious decarbonisation pathways anywhere in the world. The Programme for Government also recommits to a renewable energy target of at least 70% by 2030. According to the latest EPA projections, a 70% contribution of renewable energy in electricity generation by 2030 will mainly result from a further expansion in wind energy, including a total of 8.2 gigawatts (GW) of onshore wind as set out in the Climate Action Plan 2019.

At the time of writing, the Republic of Ireland has an approximate installed capacity of 4.3GW[1] thus requiring the delivery of a further 3.9GW of capacity to be installed up to 2030 to achieve the overall target of 8.2GW. Effectively, a doubling of the currently installed onshore wind capacity will be required in order for Ireland to meet the targets set out in the Climate Action Plan 2019. This target, and others, can only be achieved where all stakeholders; including Government, the general public, developers, and planning authorities; endeavour to maximise the delivery of wind energy developments to fully exploit the substantial wind resource available in Ireland. It is, therefore, imperative that planning authorities, including Carlow County Council, set ambitious local targets for the delivery of wind energy developments and that local planning policy creates an environment which is conducive to the delivery of such

[1] Wind Energy Ireland (https://windenergyireland.com/about-wind/facts-stats) estimates the electrical capacity in the Republic of Ireland to be 4,309 megawatts (MW)

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developments at appropriate locations.

Our client is currently investigating the suitability of a parcel of land ('the subject lands') located c. 9km east of the town Tullow and c. 1.5km southwest of the settlement of Clonmore, the general extent of which are illustrated at **Annex 1**, to accommodate a wind energy development. As part of this process, our client is undertaking an extensive environmental scoping exercise evaluating the subject land's ability to comply with the policy provisions of the Carlow County Development Plan (2015-2021) ('the current Plan'), the incorporated Wind Energy Strategy ('WES'), and the Draft Renewable Energy Strategy ('RES'). Additionally, the evaluation is also being undertaken in accordance with the requirements and recommendations of the *Wind Energy Development Guidelines for Planning Authorities 2006* (Department of Environment, Heritage and Local Government, 2006) ('the 2006 Guidelines') and the *Draft Revised Wind Energy Development Guidelines 2019* (Department of Housing, Planning and Local Government, 2019) ('the 2019 Draft Guidelines').

3.0 Draft Carlow County Development Plan 2021-2027

3.1 Introduction

Our client welcomes the overall objective of the Draft RES and the clear recognition that "*[a] Renewable Energy Strategy (RES) for Carlow is vital to enable the county <u>to fully harness</u> its natural resources in a way that is both economical and sustainable*" [emphasis added]. Furthermore, our client supports the 'Vision for Renewable Energy', at Section 1.3 of the Draft RES, which seeks "*[t]o encourage and support the transition of Carlow to a sustainable county through community engagement, energy efficiency and the sustainable development of renewable energy, whilst providing environmental and economic benefit at a local and national level in accordance with all relevant planning and environmental considerations.*"

Initially, therefore, it would appear that the Draft RES is fully supportive of the further development of renewable, including wind, electricity generating projects and is delivering on its objective to cascade national renewable energy policy to the local level. However, following a detailed assessment, our client submits that the ambition displayed by the overall objective and vision of the Draft RES is not reflected throughout and, unfortunately, it does little to actively encourage and promote the delivery of onshore wind energy developments which, as described above, is heavily supported by Government and widely recognised as the key mechanism in reaching renewable energy generation and greenhouse gas emission targets.

As described above, the current electrical capacity of wind energy developments in the Republic of Ireland is approximately 4.3GW. According to Table 6-1 of the Draft RES, County Carlow currently has an installed capacity of c. 5.8 MW which accounts for 0.13% (i.e. less than one-eighth of one-percent) of the currently installed national wind energy capacity. While the relative scale of the county, when compared to others, is acknowledged, our client submits that there is significant potential within the county for a substantial increase in the contribution of County Carlow to the volume of renewable electricity being generated; however, this potential fails to be recognised by the Planning Authority.

Section 6.1.5 of the Draft RES describes, on the basis of certain mapping exercises and assumptions, what the Planning Authority considers to be the estimated available capacity in County Carlow. However, as will be demonstrated further below, our client submits that the calculations and assumptions significantly underestimate the available lands for development and, consequently, estimate that County Carlow will only contribute a further 18.3MW of wind energy. On this basis, and assuming that Ireland meets its target of 8.2GW of onshore wind energy, County Carlow will be contributing, a barely perceptible, 0.29% (i.e. less than one-third of one-percent) to Ireland's overall wind energy generation.

This clearly demonstrates an overall lack of ambition in the Draft RES, in terms of wind energy, and is therefore entirely at odds with settled national policy regarding the development of wind energy projects.

3.2 Technical Analysis & Mapping Exercise

The Draft RES, at Section 6.1.5, sets out a stepwise '*technical analysis and mapping exercise*' in order to identify the most suitable locations for wind energy development and 4 no. key criteria in assessing the suitability of a location/area for wind energy development. These criteria are as follows:-

1) Wind Speed – using data presented in the SEAI Wind Energy Atlas;
2) Environmental, Heritage and Amenity Constraints – taking into account constraints posed by features such as European and Ramsar protected sites including waterbodies, settlements and existing infrastructure/material assets, and also taking into account natural physical attributes such as groundwater vulnerability, geological heritage sites, soil drainage, landslide and flooding susceptibility;
3) Available Area > 5km² - taking into account the spatial requirements for large wind farm development; and
4) Separation distances from housing – taking into account the mandatory setback distance of 500m from all sensitive receptors as per the Draft 2019 WEDGs.

Each of these steps/criteria are addressed in turn below, including in terms of their relevance to subject lands.

3.2.1 Wind Speed

According to Figure 6.2 of the Draft RES, which uses data from the Sustainable Energy Authority of Ireland (SEAI) Wind Mapping System, the subject lands have an estimated wind speed in excess of 7.5 m/s at 100m height. Section 6.1.5 of the Draft RES, without any rationale or justification, proceeds to solely consider that a wind speed of 7.6m/s to be 'viable', and discounts all other areas.

In the first instance, the subject lands are considered to have a wind speed of 7.5m/s, a mere 0.1m/s less than that which the Planning Authority deems, without any evidence, to be 'viable'. However, it is noted that on-site wind speeds, when recorded using specialist equipment, tend to exceeds the speeds predicted in the SEAI Wind Mapping System. On this basis, our client submits that it is inappropriate to exclude lands from a positive wind energy land-use designation solely on this basis.

Secondly, while the Planning Authority considers that a wind speed of 7.6m/s is required in order for developments to be viable; it is noted, at Figure 6.2, that 2 no. of the existing wind energy developments in County Carlow[2] are located in areas with a wind speed of '>7.5m/s'. Evidently, the existence of these developments in areas with a wind speed of <7.6m/s demonstrates, beyond doubt, that a wind speed of >7.6m/s is not required to deliver a viable wind energy development.

Overall, therefore, our client submits that the suitability of specific locations for wind energy development should not be solely based on wind speeds alone. This is particularly so given that actual wind speeds are regularly found to exceed those stated in the SEAI Wind Mapping System and, in this case, where wind speeds at the subject lands are only 0.1m/s below the 'viable' wind speed as considered by the Planning Authority.

3.2.2 Environmental, Heritage and Amenity Constraints

The second step in the Draft RES's evaluation of potentially suitable sites for wind energy development predominately involves an evaluation of lands having regard to the natural environmental, heritage and amenity designations. The Draft RES assesses the presence of environmental constraints which could limit, or preclude, wind energy developments at certain locations including *inter alia* European and Ramsar protected sites including waterbodies, settlements and existing infrastructure/ material assets, groundwater vulnerability, geological heritage sites, soil drainage, ground stability and flooding susceptibility.

Unfortunately, the Planning Authority has not completed a detailed assessment of the subject lands to determine the presence, or lack thereof, of specific constraints; however, we set out a brief assessment below.

3.2.2.1 Ecological/Biodiversity Designations

There are no European or Ramsar designated site either within the subject lands or in its immediate vicinity. The nearest Special Conservation Area (SAC), designated for the presence of protected habitats and species, is the Slaney River Valley SAC and is located c. 4.5km to the west. There are no Ramsar sites located within 20km of the subject lands.

3.2.2.2 Settlements, Existing Infrastructure, and Material Assets

The subject lands is located in rural County Carlow, adjacent to the boundary with County Wicklow, with a generally low population density which exhibits a dispersed settlement pattern comprising one-off rural dwellings often accompanied by agricultural buildings. There are also a number of small nucleated settlements in the wider environs of the subject lands including Clonmore (County Carlow) and Ballyconnell (County Wicklow). The subject lands have been assessed for the presence of infrastructure or other material assets which could constrain the development of a wind farm; however, no particular constraints have been identified which would preclude such a development.

[2] Tullow Mushroom Growers Limited (single wind turbine) and Ballon Wind (single wind turbine)

3.2.2.3 Groundwater Vulnerability

The subject lands are located in an area considered, by Geological Survey Ireland, to have a groundwater vulnerability ranking of 'Moderate' to 'High'. However, it should be noted that due to the near-surface nature of construction activities and the characteristics during their operational phase, wind energy developments do not pose a significant risk to groundwater.

Therefore, the vulnerability classification of 'Moderate' to 'High' should not, of itself, be a determining factor in the designation of suitable areas for wind energy development due to the specific characteristics of such developments and the availability of measures to ensure the protection of the hydrogeological, and hydrological, environment.

3.2.2.4 Geological Heritage Sites

There are no geological heritage sites within the subject lands or its immediate environs . The nearest such site is Ballyrahan Quarry, located c. 7km southeast of the subject lands.

3.2.2.5 Ground Stability

The subject lands are generally considered, by Geological Survey Ireland, to have a 'Low' susceptibility to landslides. It is noted, however, that isolated parcels of land have a higher classification but these are assessed as being related to localised escarpments and the natural topography of the area. Ground stability is not, therefore, assessed to be a significant constraint in this general location.

3.2.2.6 Flood Risk Susceptibility

The Strategic Flood Risk Assessment, prepared to support the Draft Plan, does not identify any risk of flooding within the subject lands or its immediate environs and no fluvial or pluvial flooding concerns have been raised and no past flood events have been identified on the subject lands or its immediate environs.

3.2.2.7 Summary

Evidently; on the basis of the key environmental, heritage and amenity criteria under which the Planning Authority have assessed the suitability of areas for wind energy development; the subject lands exhibit a high degree of compliance with the stated requirements and clearly do not contain any overwhelming constraints which would preclude a wind energy development on the subject lands.

3.2.3 Available Area >5km²

The Draft RES takes the view that a minimum spatial extent of 5km² is required in order to accommodate a wind energy development. However, no evidence base, justification or rationale has been offered for this entirely arbitrary figure.

While turbine manufacturers often require specific inter-turbine spacings, a careful iterative design and siting process can often deliver wind energy development within relatively compact sites. The assumed requirement, of the Draft RES, that a minimum area of 5km² is required to accommodate a wind energy development is, therefore,

overly-restrictive and would unnecessarily preclude the delivery of small-scale developments of, for example, less than 5 no. turbines.

As a consequence of the selection of this entirely unfounded and arbitrary figure, the Planning Authority has completely undermined the entire Draft RES (as it relates to wind energy) given that all subsequent electrical capacity calculations are based on this choice.

3.2.4 Separation distances from housing

As part of our client's evaluation of the subject lands, it has been identified that substantial setback distances to dwellings, in excess of 500m, are readily achievable. This evaluation has been undertaken using a desktop approach followed by fieldwork to verify and validate the desktop study.

Our client submits, therefore, that Figure 6.3 of the Draft RES fails to fully identify all available lands located in excess of 500m from a residential dwelling. Moreover, Section 6.1.5.1 states that "…*the constraints mapping suggests that it may be difficult to meet separation distances between wind turbines and dwellings*…" in the 'River Slaney – East Rolling Farmland' area. This has been demonstrated, through investigations by our client, to be incorrect. Therefore, it is recommended that a further assessment of available lands is undertaken to ensure that all suitable lands within County Carlow are correctly identified.

3.2.5 Summary

The above appraisal of the subject lands clearly, and unequivocally, demonstrates that this area is generally suitable for wind energy development. No particular constraints have been identified in this general location and, in the event that any site-specific constraints were identified, appropriate design measures could be implemented to avoid these localised constraints. The subject lands are, therefore, undoubtedly a suitable location for wind energy development in accordance with the Planning Authority's very own assessment criteria.

3.3 Landscape Character Assessment

It is noted, at Section 6.1.5 of the Draft RES, that an assessment of landscape and visual constraints is specifically excluded from the technical analysis and mapping exercise undertaken. A separate assessment of the landscape and visual capacity of the county to accommodate wind energy developments is provided at Section 6.1.5.1.

It is noted that a revised Landscape Character Assessment (LCA) has not been prepared and the LCA from the current Plan has been incorporated into the Draft Plan. In doing so, the Planning Authority is inferring that there has been no substantive alteration to the existing landscape such that would warrant a revision to the landscape character areas, landscape character types or, indeed, landscape sensitivities.

In the LCA, the subject lands are located wholly within the 'River Slaney – East Rolling Farmlands' principal landscape character area and the 'Rolling Rough Grazing' landscape type. The 'Rolling Rough Grazing' landscape type is, on a scale of 1-to-5, assessed as having a sensitivity of '4' which is deemed to be of 'Increasing' sensitivity.

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Additionally, the LCA considers that the 'River Slaney – East Rolling Farmlands' has a 'Moderate to High' potential capacity to accommodate wind energy developments.

3.4 Absence of Overall Wind Energy Strategy Map

The Draft RES fails to provide any clear direction or wind strategy map which clearly conveys the location of suitable areas for wind energy development. Put simply, the Draft RES solely indicates that there are 2 no. locations within the county designated 'Not Normally Permissible' but fails to identify locations where wind energy developments should be directed (i.e. Preferred Locations) or areas where such development may be acceptable subject to compliance with prevailing national policy or guidance (i.e. Areas Open to Consideration').

While it is noted that he Draft RES states that "*the technical mapping exercise in and of itself does not support nor preclude wind energy development. It is a tool which flags areas of having a higher or lower concentration/ distance from various sensitive receptors*"; our client submits that the failure of the Draft RES to clearly and coherently identify suitable lands for development represents a flawed approach to the overall preparation of this Draft RES.

4.0 Conclusion

The recently published Programme for Government commits to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (a 51% reduction over the decade) and to achieving net zero emissions by 2050. This is one of the most ambitious decarbonisation pathways anywhere in the world.

Our client, therefore, respectfully requests that the Planning Authority designates the subject lands as being a 'Preferred Location' for wind energy development as they meet the criteria applied in the Draft RES. However, the application of these criteria has, as explained in detail above, been found to be undermined by inaccuracies and is fundamentally flawed. The failure of the Draft RES to identify and designate the subject lands as suitable for wind energy development is inappropriate and unwarranted having regard to their suitability to accommodate such development and the pressing urgency of delivering on binding national renewable energy targets. Therefore, our client respectfully requests that the subject lands be designated as a 'Preferred Location' for Wind Energy Development.

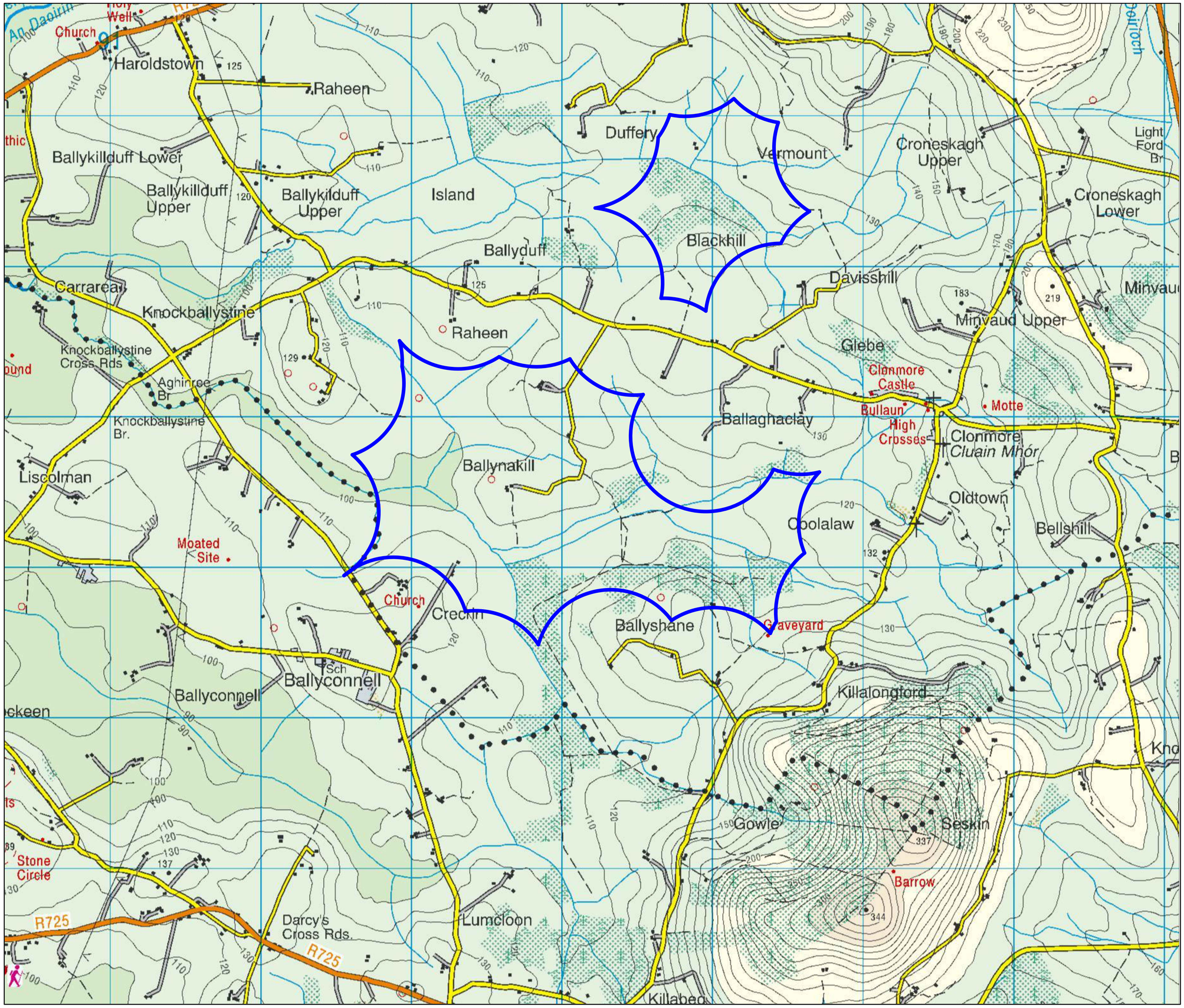
Kind Regards,

Galetech Energy Services

Galetech Energy Services

Annex 1 –

Lands currently being investigated by Galetech Energy Developments Limited



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Legend:

500m Set Back

Date:	Rev:	Description:	Drawn By:

Prepared by:

GALETECH Energy Developments

Galetech Energy Developments Ltd,
Clondargan,
Stradone,
Co. Cavan

Client:

Galetech Energy Developments Ltd.

Job Title:

Corragh

Drawing Title:

Wind Development Available land

Drawing No.:	Revision No.:
CORR_Master Design	5
Scale:	Date:
(A1) 1:16,000	21/08/2020

Drawn By:	Checked By:	Confirmed By:
KB	S.D	J.C