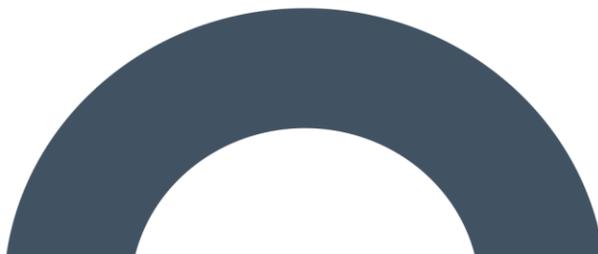


Hen Harrier Enhancement Plan

Slieveacurry Renewable
Energy Development, Co.
Clare





DOCUMENT DETAILS

Client: **Slieveacurry Ltd**

Project Title: **Slieveacurry Renewable Energy Development, Co. Clare**

Project Number: **170224c**

Document Title: **Appendix 7-7 – Hen Harrier Enhancement Plan**

Document File Name: **170224c – HHEP -F- 2021.07.29**

Prepared By: **MKO
Tuam Road
Galway
Ireland
H91 VW84**



Rev	Status	Date	Author(s)	Approved By
01	Final	29/07/21	PC	PR

Table of Contents

1.	INTRODUCTION.....	1
2.	MANAGEMENT PLAN.....	2
2.1	Scope of the Management Plan	2
2.2	Main objectives	2
3.	IDENTIFICATION OF HABITAT ENHANCEMENT AREAS	3
3.1	Calculation of Theoretical Displacement Buffer	3
4.	HABITAT ENHANCEMENT	5
4.1	Management of Farmland for Hen Harrier	5
4.2	Forestry Management	8
5.	IMPLEMENTATION	9
6.	MONITORING	10
6.1	Auditing.....	10
	BIBLIOGRAPHY	11

FIGURES

	<i>Figure 1-1 Proposed Enhancement Areas for Hen Harrier.....</i>	<i>1</i>
--	---	----------

TABLES

	<i>Table 2-1: Average Quantum of Theoretical Displacement Lands Per Year.....</i>	<i>4</i>
--	---	----------

APPENDICES

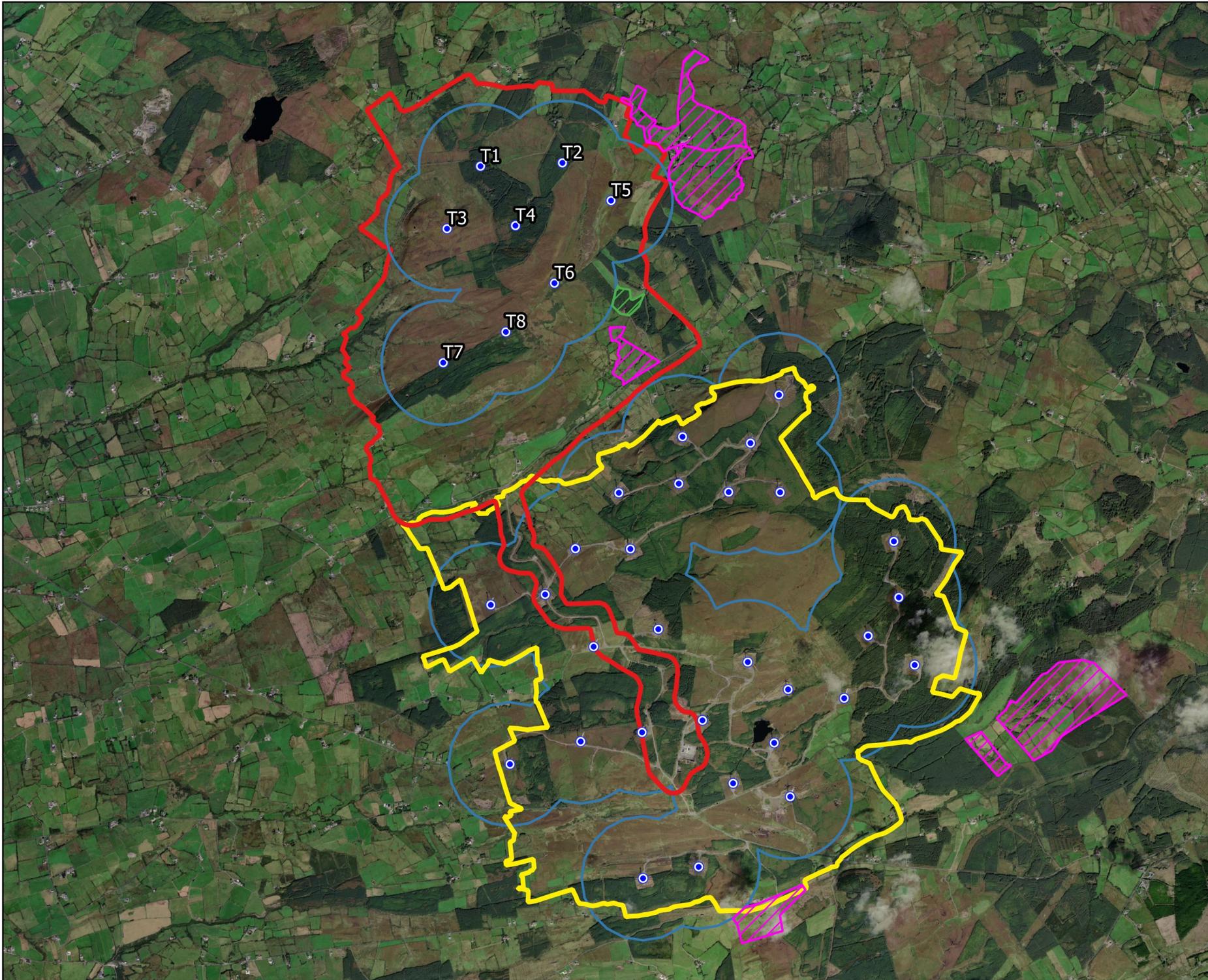
Appendix A – Habitat Enhancement Calculation

Appendix B – Letters of Consent

1. INTRODUCTION

This Enhancement Plan has been prepared to provide biodiversity gains locally with particular reference to hen harrier. The provision of the enhancement lands is not proposed to reduce or avoid an identified impact. As it is noted that an impact assessment of hen harrier displacement impacts is provided in Section 7.8.2.1 of the EIAR, which identified no significant habitat loss, disturbance displacement or collision risk effects.

Notwithstanding the above and in acknowledgement of the significance of the surrounding uplands to hen harrier and the decline of the local population, it is proposed to create enhanced habitat for hen harrier. It is proposed to actively manage 124ha of upland grassland, peatland and forestry. The enhancement lands are outside a 500m radius of proposed and existing turbines and are additional to the similarly managed lands within the Slievecallan Wind Farm. Thereby, increasing the overall enhanced lands in the area as a whole. Please refer to Figure 1-1 below for location details.



Map Legend

- Slieveacurry Site Boundary
- Slievecallan Site Boundary
- Turbine Location
- 500m Turbine Buffer
- Forest - Enhancement Areas
- Farm - Enhancement Areas

Microsoft product screen shots reprinted with permission from Microsoft Corporation



Drawing Title	
Proposed Enhancement Areas for Hen Harrier	
Project Title	
Slieveacurry Renewable Energy Development, Co. Clare	
Drawn By	Checked By
Margaux Pierrel	Padraig Cregg
Project No.	Drawing No.
170224c	Fig. 1-1
Scale	Date
1:40,000	30.08.2021
MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@mkofireland.ie Website: www.mkofireland.ie	

2. MANAGEMENT PLAN

2.1 Scope of the Management Plan

This habitat management plan has been prepared with particular reference to hen harrier.

Hen harrier was selected in acknowledgement of the significance of the surrounding uplands to hen harrier and the decline of the local population.

Any conservation and habitat management plan for hen harrier will also benefit a wide range of other species. Managing the land for hen harrier fits the concept of focal species modelling. In managing habitats to benefit hen harrier, a range of other beneficial outcomes will be achieved. In particular, many of the proposed measures aim to increase the local population of passerines, e.g. meadow pipit and skylark.

2.2 Main objectives

The main objective of this habitat management plan is to maintain and improve the existing habitats for the benefit of the local hen harrier. This will be achieved by two principal actions:

- Maintaining existing supporting habitat.
- Improving the value of the proposed enhancement lands for foraging hen harriers.

It is recognised that anything that benefits potential prey species is of benefit to the hen harrier. This management plan makes provision for habitat enhancement, and this will be achieved by diversifying the range and extent of habitats within the identified enhancement area with a particular focus on habitats that support prey species.

3. IDENTIFICATION OF HABITAT ENHANCEMENT AREAS

The following sections outline the methodology used to quantify the quantum of foraging habitat proposed for enhancement.

3.1 Calculation of Theoretical Displacement Buffer

It is noted that an impact assessment of hen harrier displacement impacts is provided in Section 7.8.2.1 of the EIAR. However, even though the proposed wind farm is not anticipated to result in significant displacement of the species, a calculation was undertaken to quantify the amount of potential hen harrier habitat that is present within a theoretical displacement buffer of turbines.

It has been reported (Pearce-Higgins,2009) that, in a multi-site study at twelve wind farms in Britain, a reduction of 52.5% in Hen Harrier activity was recorded within a 500m buffer zone of operating wind turbines. This calculation assumes that there will be total avoidance of a buffer zone with a 250m radius from any proposed wind turbine. The assumption of 100% avoidance within 250m of proposed wind turbines has been previously proposed in other recent planning permission applications for wind farm developments in the Republic of Ireland, following consultation with the National Parks and Wildlife Service, most notably on an application by DP Energy Ireland Ltd. for a proposed six-turbine wind farm in Buttevant, Co. Cork (Pl. Ref. No. 13/05885) and an application for a six-turbine extension to a previously permitted eight-turbine development by Esk Windfarm Ltd. on a site near Nad, Co. Cork (Pl. Ref. No. 14/05602). In addition, the planning application for the Meenbog Wind Farm in Co. Donegal (Pl. Ref. No. PL05E.300460) similarly included a displacement calculation that assumed 100% avoidance within 250m of proposed wind turbines. The development comprised the construction of nineteen turbines. This application was submitted directly to An Bord Pleanála (ABP) through the SID process. ABP granted planning permission for that project and in doing so, accepted the habitat displacement calculation methodology and mitigation strategy.

In total, a radius of 250 metres from a turbine base equates to an area around each turbine of c. 19.6 hectares. However, only suitable foraging habitat was included in the habitat loss calculation. Suitable foraging habitat was considered to include open peatland, grassland and pre thicket forestry plantation. As forestry matures/ is felled there is potential for the ongoing loss/creation of hen harrier foraging habitat. Therefore, the theoretical displacement calculation has taken into account the rotational cycle of forestry management within 250m of turbines. The amount of forestry that has been considered suitable for foraging hen harrier has been taken to be the average over the 30-year life span of the proposed wind farm.

The assessment of displacement provided below relies on the following precautionary assumptions:

- 100% displacement within the 250m buffer of the turbines;
- Open habitats (e.g. open peatland, grassland and stunted forestry) are available throughout the 30-year life span of the wind farm.
- Forestry plantations in their initial years (up to 10 years), before canopy closure, have the potential to support foraging hen harrier. Therefore, as forestry matures/is felled there is potential for ongoing loss/creation of supporting habitat for hen harrier.
- All forestry will be felled after 45 years.

In estimating the contribution of forestry to the theoretical displacement calculation the following assumptions were made.

- > If forestry provides suitable hen harrier habitat for the first 10 years of a 45-year forestry cycle, then this forestry is available to hen harrier for 22.22% of the time.
- > Throughout the 30-year life span of the wind farm, the maximum forestry would be available to hen harrier is 33.33% of the time.
- > The average of these two scenarios was used to estimate the contribution of forestry to the theoretical displacement calculation, to account for the mixed age classes of forestry. Please see **Appendix A** of this report for the calculation workings.

Following the analysis of the forestry and the open habitats surrounding the turbine layout, the quantum of land available to hen harrier was determined within the 250m radius in any given year during the operational phase of the development. Table 1-1 (below) outlines the quantum of theoretical displacement lands within the Slieveacurry Wind Farm.

Table 2-1: Average Quantum of Theoretical Displacement Lands Per Year

	Slieveacurry Wind Farm
Open Habitat	100.86
Average Forestry Habitat	15.6
Total	116.46ha

4. HABITAT ENHANCEMENT

The habitat enhancement plan involves a combination of active management of forestry and farmland for the benefit of hen harrier. The combined area totals 124ha. This hen harrier management plan will be implemented to run concurrently with the commencement of construction of the proposed wind farm development. The plan will continue to be implemented for the lifetime of the wind farm.

The applicant has committed to enter an agreement with landowners to manage land for the benefit of hen harrier (letters of consent from relevant landowners for the inclusion of their lands within the Hen Harrier Management Plan are included in Appendix B). Measures will be put in place in advance of the first breeding season of the operational phase of the project programme should permission be forthcoming for the Proposed Development.

4.1 Management of Farmland for Hen Harrier

The management plan will aim to safeguard existing hen harrier habitat and promote the creation of new supporting habitat for hen harrier and their prey. The programme will broadly follow the approach taken by the Hen Harrier Project (www.henharrierproject.ie).

The prescriptions are concerned mainly with maintaining low-level extensive grazing in bog and heath areas, the maintenance of rough wet upland grassland in a condition that is neither too overgrown nor too heavily grazed (preferably by means of low-intensity grazing) and the retention and creation of scrub areas and edge habitats (i.e. bushy hedgerows). The intention is to ensure that extensive grazing continues and that appropriate management of grassland, scrub and bog creates a favourable habitat mosaic for hen harrier.

The applicant will be responsible for having these managed lands audited to ensure the prescriptive measures have been implemented before funds are released to landowners. To aid with the practical implementation of management prescriptions and to facilitate the audit process individual farm plan will be created for each landowner if planning permission is granted. Please refer to Section 5 for further details. Audits will be undertaken annually for the 30-year lifespan of the wind farm. Please refer to Section 6 for further details.

Creating Hen Harrier Foraging Habitat

> Wildlife seed crops

Establishing linear strips of wildlife cover to increase the availability of foraging habitat for hen harrier locally. This measure will involve the sowing/planting of a wildlife seed crop.

Wildlife seed crops will be sown by May 31st each year. Recommended crop species include linseed, rye and triticale. These species have been selected to attract hen harrier passerine prey species. The crop will be planted in a 9 metre wide strip along the sheltered side of existing hedges. The crop must be left in situ until March 15th the following year but its location can alternate between years. Crop strip must be a minimum of a 100 metres in length and fenced to prevent livestock grazing. An adaptive management approach will be instituted. A minimum of ten strips will be created. Passerine point counts will be undertaken monthly April to September inclusive in each monitoring year at each of the ten wildlife seed crop strips. The monitoring aims to investigate to what extent seed crops increase the availability of prey species for hen harrier.

> Scrub and Hedgerows

Hen harrier shows a strong preference for foraging in dense hedgerows ideally 3 to 4 metres wide. Landowners will restore hedgerows to these conditions. These will be widened by parallel planting of native hedgerow species. Restoring hedgerows will increase the availability of foraging habitat locally

and establish connectivity between otherwise discrete land parcels. To ensure biodiversity; restored hedgerows should contain a minimum of two (woody plant) species per 10 metres. Suggested woody plant species could include hawthorn, blackthorn, willow spp., and holly. Existing vegetation will not be cleared to plant the new hedgerow and under no circumstance should herbicides be used. New hedges will be protected from grazing. Habitat management prescriptions for scrub and hedgerows are outlined below:

- Retain existing areas of scrub and hedgerows;
- Where there is evidence of scrub or hedgerow removal (since 2016), these habitats will be reinstated as part of individual farm plans ;
- In open areas or where the extend of scrub and hedgerows is limited, create new areas of habitat;
- In open areas or where the extend of scrub and hedgerows is limited, allow expansion of native hardwood scrub;
- Trim established areas of gorse or willow scrub as the only means of preventing further encroachment onto grassland or access paths and tracks. Repeat annually if necessary;
- Prevent any removal, burning or herbicide use on areas of established scrub;
- If deemed necessary for road safety reasons, cut roadside hedgerows outside of the birds nesting season (March 1st – August 31st);
- If deemed necessary for the protection of overhead electricity lines, cut hedgerows outside of the birds nesting season (March 1st – August 31st);
- Hedgerow maintenance is permitted to prevent the hedge from “escaping”. In such cases, hedgerow trees should be left uncut, and the remainder of the hedgerow cut into an “A” shape, i.e. wider at the base than at the top;
- Encroachment of scrub onto grassland can be controlled by cutting on an annual basis if required. Cutting, in this case, should not come closer than 1 metre from the base of the hedge;
- Herbicides and pesticides will not be used within 5 metres of an existing hedgerow; and
- Hedge cuttings will be piled into heaps and left to decay naturally.

New foraging habitat will not be created at the expense of existing supporting habitat, e.g. those habitats that are likely to support the highest density of prey species: including brambles, bilberry and heather. The areas selected for safeguarding heather and scrub will be on a slope, at least 250 metres from forestry and contain heather/scrub. The measure will promote vegetation succession towards tall heather/scrub to provide nesting habitat for hen harrier and their prey. The area will be fenced off to control grazing. This measure aims to create safe nesting habitat for hen harrier.

➤ Wet Grassland and Peatland

The principal method for managing grassland and peatland habitats as suitable habitats for hen harrier is the use of low-intensity grazing, and regular inspection to ensure no self-seeding conifers are becoming established on these habitat areas. Low-intensity grazing will be maintained, to ensure cover for prey species is present. Landowners will maintain a stocking density of no greater than 0.15 livestock units per forage hectare for seven consecutive months within the calendar year, as defined by the Department of Agriculture, Food and the Marine. Habitat management prescriptions for heath and bog are outlined below:

- In general, maintain stocking levels of no greater than 0.15 livestock units (LU) per forage hectare;
- In the specific case of blanket bog maintain stocking levels of up to 0.10 LU/ha;
- No new forestry planting on the bog and heath areas within the enhancement area will be permitted;
- Self-seeded conifers invading open areas of bog and heath will be removed;

- Heath and bog habitats will be surveyed at least once every two years to ensure that new seedlings are removed;
- Participating landowners will remove any self-seeding conifers as they appear or as they are noticed;
- On areas of wet grassland, the application of chemical or organic fertiliser will be avoided;
- All rhododendron or other invasive species must be removed in Year 1 of the plan. Ongoing control will be required in each subsequent year. Acceptable control methods are cutting/pulling or spot treatment with a suitable herbicide;
- Consideration will be given to the creation of shallow pools 30- 50 cm deep to provide spawning sites for amphibians; and
- In cases where the land is wet, limit grazing to the summer months.

Normal agricultural practice will be allowed to continue on improved agricultural grassland. Although not compulsory, participating landowners will be encouraged to allow improved grassland to revert to a more natural state.

> Rush Management

The objective in managing rushes is to maintain rough grassland in the optimal condition for hen harrier. Optimal condition constitutes as dense a covering of rushes as feasible, but not to the point where rushes are falling over, or matting the ground. Rush cover in the 30 – 70% range is ideal. Habitat management prescriptions for managing rushes on wet grassland are outlined below:

- In general, rushes should be cut on a 2-year cycle unless there are specific reasons for a longer cycle, e.g. weak rush growth.
- In most cases, active rush management should commence in year 1 of the plan and should only be delayed until year 2 or 3 where improved grassland is in reversion, where rush growth is very weak or where the rushes were cut or treated with herbicide in the year prior to joining the scheme.
- On farms with a large area of rushy wet grassland (> 10 hectares), active rush management can be delayed on a portion of the area until Year 2 of the farm plan. The area where active rush management is to be delayed for this reason should not normally exceed 50% of the wet grassland component of the farm.
- The planned rush management should be reviewed on an annual basis to determine if it is having the desired effect. If it is found during an annual inspection that rush recovery has been stronger or weaker than had been originally anticipated, the farm plan should be changed to adjust the cutting sequence for future years.

> Grassland Fields >4 hectares in size

In grassland fields over 4 hectares in area, the establishment of new hedges and/or exclosures is required. In grassland fields over 4 hectares in size, at least one exclosure or 100 metres of new hedgerow are required for each hectare or part thereof over 4 hectares. For example in a 6 hectare grassland plot, 2 exclosures or 200 metres of new hedgerows are required. If the plot in question is improved agricultural grassland in reversion, then these requirements are in addition to any additional hedgerow planting required as part of the reversion process.

Exclosures will be 0.1-0.3 hectares in size. Livestock will be excluded from these exclosures through a permanent fence before the end of Year 1 of the management plan. The fence must be maintained in a stockproof condition. Where possible, exclosures should incorporate any existing patches of scrub. Exclosures are to be planted with native tree/ shrub species at a density of 1,000 plants per hectare (whips 40-80 cm in size are the preferred planting material). Planting must be completed before the end of Year 1 of the plan. The planting density may be reduced if some scrub already exists on the site.

- In common across all habitat types

If at any point, hen harrier are identified to be nesting within farm plan lands, the individual landowner will provide for the protection of the nest site.

The use of poisons or stupefying baits is not permitted within enhancement lands. Hen harriers and other birds of prey can fall victim to secondary and direct poisoning.

4.2

Forestry Management

In addition, it is proposed to manage a single block of currently closed-canopy forestry for the benefit of hen harrier. Please refer to Figure 1-1 above for location details. Open canopy forestry offers foraging and nesting opportunities to hen harrier. Therefore to enhance these lands for hen harrier it is proposed to maintain this forestry as open canopy throughout the lifetime of the wind farm. The management prescriptions will include:

- **Pre-mature felling of closed-canopy forestry:** Closed canopy forestry is of little use as foraging habitat given the inability of the harrier to hunt for prey on the ground. Felling such closed-canopy areas before they otherwise would have been felled creates additional suitable foraging area for the benefit of hen harrier.
- **Extended fallow periods:** Once the pre-mature felling has taken place, the land will be left fallow and not replanted for two years. Under normal forestry rotation cycles, forested land is replanted within one year of felling. Forest Service felling licence requirements stipulate that the maximum period an area can be left fallow before planting is two years from the date of felling, and therefore it is intended to make maximum use of this provision and avail of the full two years, during which the land will remain available to foraging hen harrier.
- **Plant slow-growing varieties:** A slow-growing variety of tree, such as the north coastal variety of lodgepole pine (*Pinus Contorta*) will be selected for replanting in the habitat enhancement plan foraging areas. Such varieties are slower growing than the typical conifer species used in commercial forestry plantations. The intention of selecting the slower growing varieties is that the forest canopy remains open for longer than normal, and therefore remains a suitable foraging habitat for hen harrier. The canopies of conventional conifer species such as sitka spruce or larch remain open and suitable for foraging hen harrier typically for a ten year period. The canopies of the slower-growing varieties such as the north coastal variety of lodgepole pine remain open for up to fifteen years, which would extend the period that the areas remain suitable for foraging hen harrier.
- **No application of fertiliser:** The replanted areas in the managed foraging areas will not receive any application of fertiliser. Fertiliser application promotes tree growth however this is counterproductive in this instance. As slow growth is desired to maintain an open tree canopy for as long as possible, fertiliser application will not be undertaken.
- **Re-felling and re-planting:** When the canopies of the areas selected for active management inevitably close, they will again be felled pre-maturely in order to keep them available and suitable for foraging Hen Harrier. Upon felling, they will again be left fallow for the full allowable two-year period before replanting.
- There will be no application of herbicides.
- Enhancement and maintenance works will be undertaken outside of the nesting season as per the Wildlife Acts 1976 – 2012 as amended.
- If at any point, hen harrier are identified to be nesting within this forestry, no actions will be taken that might cause disturbance to within 500m of the nest.
- The use of poisons or stupefying baits is not permitted within enhancement lands. Hen harriers and other birds of prey can fall victim to secondary and direct poisoning.

5.

IMPLEMENTATION

As previously discussed, this enhancement plan will be implemented to run concurrently with the commencement of construction of the proposed wind farm development. The enhancement plan will be implemented on an individual landowner-by-landowner basis as follows.

1. A meeting will be held with individual landowners to outline the general aims, objectives and requirements of the enhancement plan.
2. An audit of the individual landholdings will be conducted to establish the current land management practices, stocking rates, habitat conditions, opportunities for improvement of habitat, etc.
3. An individual farm plan will be prepared for each landowner contributing land to the project. The farm plans will outline the individual prescriptions required in each case to ensure the implementation of this habitat enhancement plan. Each farm plan will include a map of the relevant landholding, and a prescriptive list of actions to be undertaken, and the time of year when the necessary works and management measures are to be undertaken.

The prescriptions for the individual farm plans will be chosen from the various recommended management options and practices outlined in Section 4 of this report, above.

It is recommended that a suitably qualified environmental scientist or ornithologist/ecologist be engaged by the wind farm development company to oversee the implementation of this enhancement plan. The implementation is also likely to require the input of agricultural advisors including with regard to appropriate stocking levels.

6. MONITORING

The enhancement plan will be the subject of ongoing monitoring to assess the effectiveness of the measures proposed and employed and to contribute to advances in habitat management methods, which can be applied to future similar projects.

The monitoring measures will include:

- The area proposed for enhancement will be the subject of ongoing monitoring during the operational phase of the wind farm to ensure it is offering supporting habitat for breeding hen harrier. The ongoing monitoring will take place during the breeding bird season. The monitoring will seek to identify whether optimal hen harrier habitat has been created within areas under active management and will be conducted by way of vantage point surveys. These surveys will be undertaken once a month March to August inclusive.
- Passerine point counts will be undertaken monthly from April to September inclusive in each monitoring year at each of the enhancement areas. The location of enhancement areas is provided in Figure 1-1 above. The monitoring aims to investigate to what extent enhancement measures e.g. seed crops, increase the availability of prey species for hen harrier.
- Areas of favourable hen harrier foraging habitat (i.e. scrub, blanket bog, wet heath and heather banks) within the enhancement areas should be accurately mapped and should be monitored annually to check that the areas so covered have not altered in size and that the grazing regime that is in place is maintaining the current state of these habitats (i.e. neither poaching nor overgrowth of open areas is occurring). As well as mapping, this monitoring should be recorded by means of fixed point photography.

The efficacy of the enhancement measures employed will be reviewed in years 1, 2, 3, 5, 10 and 15 following commencement of the plan based on the results of bird surveys. Analysis of the data collected will be the basis for a review of the measures and techniques employed. Should any adjustments to the plan be deemed necessary or advisable, these will be the subject of consultation with the NPWS before any alterations to the plan.

Reports detailing the monitoring works carried out, the results obtained and a review of their success, along with any suggestions for amendments to the plan will be prepared and submitted to the planning authority in years 1, 2, 3, 5, 10 and 15 following commencement of the plan.

6.1 Auditing

The applicant will ultimately be responsible for the implementation of the management measures (as per Section 4) and audits. Audits will be required to ensure the effectiveness of the enhancement plan. They are essential to ensure adequate plan quality, compliance and control. Audits will be based on a field inspection and the assessment of the farm plans.

Up to 10% of the farm plans will be selected each year for auditing. The audit will assess:

- Objectives of the individual farm plan;
- Implementation of the plan; and
- Adherence to requirements of the farm plan.

Individual farm plans will be reviewed every five years.

BIBLIOGRAPHY

Anon. *NPWS farm plan scheme for pro-active habitat management for Hen Harrier*. NPWS (4 pp.).

Anon (2010) *National Parks and Wildlife Service Farm Plan Scheme, Terms and Conditions Document*, Department of Environment, Heritage and Local Government, Dublin, Ireland.

Anon. *Information note on SPA designations for the Hen Harrier (frequently asked questions)*. NPWS (4 pp.).

Arroyo, B., Leckie, F., Amar, A., McCluskie, A. and Redpath, S. (2014). Ranging behaviour of Hen Harriers breeding in Special Protection Areas in Scotland. *Bird Study* 61: 48-55.

Fernandez-Bellon et.al (2015) Reproductive output of Hen Harrier *Circus cyaneus* in relation to wind turbine proximity *Irish Birds* 10: 143 -150 (2015).

Pearce-Higgins, J.W., Stephen, L., Langston, R.H.W., Bainbridge, I.P. and Bullman, R. (2009). The distribution of breeding birds around upland wind farms. *Journal of Applied Ecology* 46: 1323-1331.

Ruddock, M., Mee, A., Lusby, J., Nagle, T., O'Neill, S. & O'Toole, L. (2016). 2015 Hen Harrier post hoc analyses. A report prepared for National Parks & Wildlife Service of the Department of Arts, Heritage & the Gaeltacht

Scottish Natural Heritage 2016. *Assessing Connectivity with Special Protection Areas (SPAs) Version 3*.

Wilson et.al (2015) *The Interaction between Hen Harrier and Wind Turbines*. School of Biological Earth & environmental Sciences. University College Cork.



APPENDIX A

HABITAT ENHANCEMENT CALCULATION

Scenario 1: Forestry is available for 10 years out of every 45 years				
Turbine	Habitat	Hectares	Availability	Average Availability Per Year
T1	Open	8.18	100%	8.18
	Forestry	11.45	22.22%	2.54
T2	Open	10.22	100%	10.22
	Forestry	9.41	22.22%	2.09
T3	Open	19.29	100%	19.29
	Forestry	0.34	22.22%	0.08
T4	Open	2.49	100%	2.49
	Forestry	17.14	22.22%	3.81
T5	Open	19.29	100%	19.29
	Forestry	0.34	22.22%	0.08
T6	Open	18.75	100%	18.75
	Forestry	0.88	22.22%	0.20
T7	Open	10.1	100%	10.10
	Forestry	9.53	22.22%	2.12
T8	Open	12.54	100%	12.54
	Forestry	7.09	22.22%	1.58
			Total Open Habitat	100.86
			Total Forestry Habitat	12.48
			Total Availability	113.34

Scenario 2 (i.e. all forestry is available for 10 years during the 30 year operational lifetime of the wind farm)				
Turbine	Habitat	Hectares	Availability	Average Availability Per Year
T1	Open	8.18	100%	8.18
	Forestry	11.45	33.33%	3.82
T2	Open	10.22	100%	10.22
	Forestry	9.41	33.33%	3.14
T3	Open	19.29	100%	19.29
	Forestry	0.34	33.33%	0.11
T4	Open	2.49	100%	2.49
	Forestry	17.14	33.33%	5.71
T5	Open	19.29	100%	19.29
	Forestry	0.34	33.33%	0.11
T6	Open	18.75	100%	18.75
	Forestry	0.88	33.33%	0.29
T7	Open	10.1	100%	10.10
	Forestry	9.53	33.33%	3.18
T8	Open	12.54	100%	12.54
	Forestry	7.09	33.33%	2.36
			Total Open Habitat	100.86
			Total Forestry Habitat	18.72
			Total Availability	119.58

Scenario	Hectareage
Scenario 1	113.34
Scenario 2	119.58
Average	116.46



APPENDIX B

LETTERS OF CONSENT

Jim Greene, Curraghadea Miltown Malbay County Clare

To the relevant planning authority,

**Re: Planning Application Ref: 21/370 - Slieveacurry Renewable Energy
Development – Hen Harrier Enhancement Plan**

Dear Sirs,

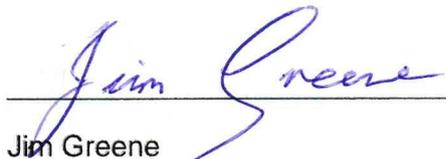
I, Jim Greene am the beneficial owner of the unregistered land, which adjoins the lands comprised in folio CE9201, in the townland of Curraghodea, County Clare ("the Property").

I understand that Slieveacurry Limited ("the Company") is preparing a First Party Planning Appeal to An Bord Pleanala in respect of the decision by Clare County Council to refuse planning permission for the planning application as lodged ("the Appeal").

I understand that the Company has proposed a Hen Harrier Enhancement Plan ("the Plan") which will accompany the Appeal and the Property forms part of the Plan.

I hereby consent to the inclusion of the Property within the Plan.

Additionally, I consent to the Planning Authority displaying all the information contained in this letter on the public Planning File.


Jim Greene

Dated: 24-06-21

John Talty, Knockliscrane Miltown Malbay County Clare

To the relevant planning authority,

**Re: Planning Application Ref: 21/370 - Slieveacurry Renewable Energy
Development – Hen Harrier Enhancement Plan**

Dear Sirs,

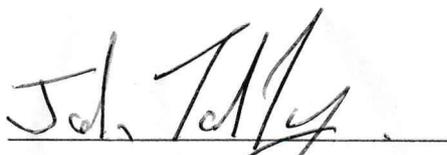
I, John Talty am the registered owner of the land contained in folio CE53450F, in the townland of Cloonlaheen, County Clare ("the Property").

I understand that Slieveacurry Limited ("the Company") is preparing a First Party Planning Appeal to An Bord Pleanala in respect of the decision by Clare County Council to refuse planning permission for the planning application as lodged ("the Appeal").

I understand that the Company has proposed a Hen Harrier Enhancement Plan ("the Plan") which will accompany the Appeal and the Property forms part of the Plan.

I hereby consent to the inclusion of the Property within the Plan.

Additionally, I consent to the Planning Authority displaying all the information contained in this letter on the public Planning File.



John Talty

Dated: 24-6-2021

John Tierney, The Hand Mullagh County Clare

To the relevant planning authority,

**Re: Planning Application Ref: 21/370 - Slieveacurry Renewable Energy
Development – Hen Harrier Enhancement Plan**

Dear Sirs,

I, John Tierney am the registered owner of the land contained in folios CE34032F and CE20783, in the townland of Magherabaun, County Clare (“the Property”).

I understand that Slieveacurry Limited (“the Company”) is preparing a First Party Planning Appeal to An Bord Pleanala in respect of the decision by Clare County Council to refuse planning permission for the planning application as lodged (“the Appeal”).

I understand that the Company has proposed a Hen Harrier Enhancement Plan (“the Plan”) which will accompany the Appeal and the Property forms part of the Plan.

I hereby consent to the inclusion of the Property within the Plan.

Additionally, I consent to the Planning Authority displaying all the information contained in this letter on the public Planning File.

John Tierney

John Tierney

Dated: 28-06-21

Michael Haran, Breaffy South Spanish Point Miltown Malbay County Clare

To the relevant planning authority,

**Re: Planning Application Ref: 21/370 - Slieveacurry Renewable Energy
Development – Hen Harrier Enhancement Plan**

Dear Sirs,

I, Michael Haran am the registered owner of the land contained in folios CE5465 and CE5461, in the townland of Letterkelly, County Clare ("the Property").

I understand that Slieveacurry Limited ("the Company") is preparing a First Party Planning Appeal to An Bord Pleanala in respect of the decision by Clare County Council to refuse planning permission for the planning application as lodged ("the Appeal").

I understand that the Company has proposed a Hen Harrier Enhancement Plan ("the Plan") which will accompany the Appeal and the Property forms part of the Plan.

I hereby consent to the inclusion of the Property within the Plan.

Additionally, I consent to the Planning Authority displaying all the information contained in this letter on the public Planning File.

Michael Haran

Michael Haran

Dated: 24/6/21

Michael Lafferty, Curraghadea Miltown Malbay County Clare

To the relevant planning authority,

**Re: Planning Application Ref: 21/370 - Slieveacurry Renewable Energy
Development – Hen Harrier Enhancement Plan**

Dear Sirs,

I, Michael Lafferty am the registered owner of the land contained in folio CE9201, in the townland of Curraghodea, County Clare ("the Property").

I understand that Slieveacurry Limited ("the Company") is preparing a First Party Planning Appeal to An Bord Pleanala in respect of the decision by Clare County Council to refuse planning permission for the planning application as lodged ("the Appeal").

I understand that the Company has proposed a Hen Harrier Enhancement Plan ("the Plan") which will accompany the Appeal and the Property forms part of the Plan.

I hereby consent to the inclusion of the Property within the Plan.

Additionally, I consent to the Planning Authority displaying all the information contained in this letter on the public Planning File.



Michael Lafferty

Dated: 24 - 6 - 2021