

An aerial photograph showing a dense forest of trees with autumn-colored foliage (yellows, oranges, and browns) on the left side, and a dark blue river or stream flowing through the center and right side. The text 'COILLTE' is overlaid in white, and 'nature' is overlaid in a yellow script font below it.

COILLTE  
*nature*

2021 End of Year Update

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[Watch our 2021 Update video to find out what's been happening!](#)

# Message from Ciarán Fallon

## Director of Coillte Nature

For me 2021 was the year we began to seriously engage with the changes we need to make in the coming years to mitigate climate change and biodiversity loss. It was the year that the real scale of the challenge began to settle in.

This shift in thinking opened-up opportunities for Coillte Nature and in the report that follows you will read about the work we have done through public and private partnerships to achieve real impact at scale. Coillte has a long record of activity in this area and Coillte Nature was established by our Board in 2019 to drive the delivery of large climate change and biodiversity projects. It is a not-for-profit venture and combines funding which it receives as part of the Coillte Group with external private and public funding sources to deliver large scale projects on the ground using Coillte's own staff and our large and specialised contractor base.

Working under our key strategic themes this year, we made real progress on our projects to restore, rehabilitate and regenerate natural habitats. By doing so we also enhance the ability of these natural systems to provide us with clean air and water, as well as a beautiful natural landscape to enjoy. Reflecting on each of our projects, I am glad to say that good progress has been made this year in developing these projects and building on our understandings of how we can all work together for the benefit of people and nature.

This year we launched a new not-for-profit company that will partner with business to establish thousands of hectares of new native woodland across Ireland in the coming years. In our project Restoring Hazelwood we have breathed new life into the iconic woodland on the banks of Lough Gill in Co. Sligo by removing vast areas of invasive species which were choking the native woodland. The Dublin Mountains Makeover continues to transform the popular urban forests, while ground-truthing has started on the Wild Western Peatlands pilot site at beautiful Derryclare in Connemara, with exciting potential for the restoration of blanket bog and wet heath habitats. Last, but not least, the Midlands Native Woodland, a collaboration with Bord na Móna, aims to complement their peatland rewetting project with the establishment of native woodland areas, stabilising bare peat and contributing to a mosaic of habitats. I hope you enjoy reading our updates on these projects in this report and you can sign up to our seasonal e-newsletter [here](#) to follow our progress into 2022.

Best regards,  
Ciarán



ABOVE – Ciarán Fallon, Director of Coillte Nature



ABOVE – (L–R) Coillte CEO Imelda Hurley, John Beckett (Forestry Partners), Antoinette McDonald (Axa) & Minister Hackett at announcement of Axa investment in new native woodlands.

# Find out what Coillte Nature has been up to this year...

Coillte Nature is the not-for-profit branch of Coillte founded in 2019, that is dedicated to the restoration, regeneration and rehabilitation of nature across Ireland.

Our mission is to deliver real impact on the climate and biodiversity crises through large-scale projects based on the best ecological evidence. Coillte Nature is building on 30 years' experience in forestry, land management and habitat restoration and is carrying out innovative projects-of-scale across four strategic themes.

In the following pages, we will go into more detail about Coillte Nature's key projects and activities undertaken in 2021, all of which fit within one of these strategic themes.

Sign up for our seasonal e-newsletter [here](#) to get regular updates about our activities and see [www.coillte.ie/coillte-nature](http://www.coillte.ie/coillte-nature)



**1** | **Afforesting our landscapes** by planting new native woodlands on un-forested land.



**2** | **Restoring important biodiversity** areas by investing in major habitat improvements.



**3** | **Regenerating urban forests** for the benefit of people and nature.



**4** | **Rehabilitating ecosystem services** by bringing sensitive or degraded lands into better health.

# New Native Woodlands

This year we launched a new not-for-profit which will see the establishment of native woodlands at scale in communities across Ireland.

In partnership with business and government, we will increase the native tree cover on the island and manage these woodlands as natural spaces and public amenities into perpetuity. The initiative harnesses private and public financing and is supported by the Department of Agriculture, Food and the Marine's Forestry Programme. We are currently acquiring unforested land to plant with new native woodlands and will continue to do so over the coming years.



## These new native woodlands will provide a range of benefits



### Carbon

Trees sequester and store carbon, so planting new native woodlands is a vital action in mitigating against climate change.



### Biodiversity

Native woodlands provide valuable habitats for a range of plants, animals, birds and insects.



### Wellbeing & Community Amenity

These woodlands will be open access to the public, providing spaces for recreation, relaxation and education.





**ABOVE** – Professor Yvonne Buckley, chairperson of our Scientific Advisory Panel

### Scientific Advisory Panel

We are honoured to have Professor Yvonne Buckley, first ever Vice President for Biodiversity and Climate Action at Trinity College Dublin as chairperson of our Scientific Advisory Panel. This panel will provide guidance to ensure that scientific rigour is at the heart of our operations when establishing new native woodlands.



**ABOVE** – Ireland has under 2% native woodland cover, well below the European levels

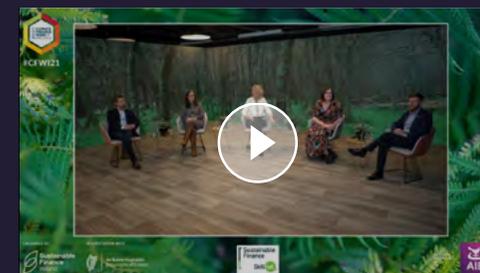
### Partnering with business

We are delighted to have partnered with Axa Insurance Ireland to fund the first issuance of €2m. This investment, arranged by Bank of Ireland, will go towards the establishment of 200 hectares of new open-access native woodlands across Ireland. Further issuances are currently open, so if you are interested to find out more about this exciting new nature-based initiative, get in touch with the **Coillte Nature team**.

### UN Sustainable Development Goals

The UN Sustainable Development Goals, are the overarching global targets that guide us all towards a sustainable future, and many companies are aligning their sustainability strategies with them. Several are directly relevant to the establishment of new native woodlands, including:

- Goal 03** – Good health and wellbeing
- Goal 11** – Sustainable cities and communities
- Goal 13** – Climate action
- Goal 15** – Life on land
- Goal 17** – Partnerships for the Goals



**WATCH** – On the 'Talent and Innovation' day of **Climate Finance Week Ireland 2021**, Coillte Nature Director Ciarán Fallon was joined by John Beckett, founder of Forestry Partners, Antoinette McDonald of Axa Ireland and Yvonne Buckley, Vice President for Biodiversity and Climate Action at Trinity College Dublin to discuss the challenges and opportunities of nature-based solutions to tackle climate and loss of biodiversity.



**ABOVE** – DJ Welshy created a woodland-inspired track to launch the AIB Youth Reforestation Initiative. AIB will plant a new native tree for every new second-level account opened.

# Restoring Hazelwood

Hazelwood on the banks of the Garavogue river and Lough Gill in Co. Sligo is a beautiful woodland, not only of great value to the local residents, but the alluvial woodland in the northern section of the site is also a rare habitat of European importance.

At the National Biodiversity Conference in 2019, Coillte announced that it would invest €5m rehabilitating and restoring this special woodland. In 2020 this work started as Coillte Nature worked closely with the National Parks and Wildlife Service to develop a management plan for the site as it is within a Special Area of Conservation (SAC). Some initial groundworks were started in clearing the invasive species which are a threat to the long-term survival of the woodland.

## Clearing Invasive Species

In 2021 the work really got underway with a significant area of 29 hectares cleared of rhododendron, cherry laurel and other invasive species from beneath the native woodland canopy. These invasive species had been blocking the sunlight and preventing other vegetation and native trees from growing. To clear such an area, the highly-skilled contractors worked two large machines and carried out hand-cutting over the summer and autumn months. The larger stumps were treated with 'ecoplugs' and smaller stumps painted with herbicide to prevent regrowth. The result is incredible and we have had an enthusiastic response from the general public on seeing the woods transformed in this way!

We have already seen signs that natural regeneration is occurring gradually where rhododendron was cleared in the northern section of the woods last year. There is new ground flora emerging and even some young native trees starting to grow. However, some of the invasive species are also continuing to resprout where they were cut last year, and this will have to be managed over the coming years to ensure that the native vegetation, shrubs and trees have the advantage.



ABOVE – New native woodland area at Hazelwood



ABOVE – Machine clearing rhododendron

# Restoring Hazelwood



**ABOVE** – Hazelwood is a site of international importance for biodiversity

“It's incredible to see how this restoration work has transformed the forest. Hazelwood is a site of international importance in regards to biodiversity and by managing the invasive species, this rare alluvial woodland will thrive into the future.”

— Ciarán Fallon, Director, Coillte Nature

## **New Native Woodland Thriving**

As well having high biodiversity value Hazelwood is heavily used for recreation, and for these reasons, remaining areas of commercial conifer woodlands on this Coillte-owned site will be phased out over time. In some areas, mature Norway spruce will be allowed to grow on as future veteran trees which provide an important food source for red squirrels. As the conifers mature they will be felled and these areas will be replanted with native woodland. One such area of new native woodland was planted in April 2020 and we are happy to report that this area is now well established with species such as birch, willow, rowan, alder and Scots pine. A new small, looped trail will soon be added which will pass by this new area of native woodland and link in with the existing trails, allowing visitors to enter the site from a new access point.

## **Making Room for Native Species**

Over the winter season we will continue with the Restoring Hazelwood project, focusing on encouraging the growth of native tree and shrub species in the mixed woodland area close to the popular walking trails. Using Continuous Cover Forestry (CCF) management, we will select and mark some non-native trees, such as beech and hemlock, for removal. This will allow light to reach new seedlings and will give more space to native trees already growing in the forest canopy. The aim is to create the conditions for a greater mix of tree species to regenerate, allowing the forest to become more diverse in terms of age, tree sizes and species in future.

# Dublin Mountains Makeover

This year the Dublin Mountains were busier than ever before: hard evidence that the transition towards managing these forests for people and nature is the right thing to do! Ticknock alone, Coillte's most popular forest, had on average about 1,000 visitors per day this year.

Through the Dublin Mountains Makeover project, an area of over 900 hectares across nine Coillte forests is transitioning away from being managed primarily for timber production towards prioritising people and nature, using two main approaches: 'CCF' and 'R&R'.

Using Continuous Cover Forestry (CCF) management, a permanent forest cover is kept at all times, but the forest is thinned regularly to gradually create a more diverse, multi-structural and multi-aged forest that will last into the future.

Using Remove and Replant (R&R), Sitka spruce and lodgepole pine trees are removed, and the area is replanted with native species such as Scots pine, birch, rowan, oak and holly to enhance habitats for nature and bring autumn colours to the hills.

## New Native Woodlands and Trails in R&R Areas

In April this year an area of 6ha that was cleared last year at Cruagh Woods under R&R management was replanted with native woodlands. This new native woodland area, as well as two other R&R areas that were planted at Ticknock last winter are doing great after their first growing season on site. The young native woodlands are now well established, despite the sometimes harsh conditions on these exposed mountain slopes. Although these new native woodland areas are protected with a deer fence, they are open to the public and we are working closely with the Dublin Mountains Partnership on the development of new trails and signage. These new R&R areas offer spectacular views of the city and you will be able to enjoy the new trails and watch these new native woodland areas develop over the coming seasons and years.



ABOVE – Watch our video about the R&R areas at Ticknock



ABOVE – Coillte CEO Imelda Hurley with Minister Pippa Hackett starting off the 2020–21 planting season at an R&R area in the Dublin Mountains

# Dublin Mountains Makeover



**ABOVE** – Operations Manager Karen Woods leads an educational walk at Cruagh Woods in November



**ABOVE** – Signage on a deer fence gate at a Ticknock R&R area

The new R&R areas look a bit messy at the moment as the branches from the previous crop have been pulled into rows to make room to plant the new native trees, but these will decompose over time. We have also left some fallen and standing dead trees as these encourage bird and insect life and are great for biodiversity.

There are more areas of R&R planned for several sites across the Dublin Mountains with harvesting and site preparation taking place at Cruagh (2.5ha), Ticknock (6.8ha), Ballyedmonduff (6ha) and Carrickgollogan (18.5ha), to be planted this planting season, which generally runs through the colder months from November to April.

## CCF Thinning for More Resilient Forests

We have also thinned two sites in Ballyedmonduff and Kilmashogue under CCF principles, and a further site in beautiful Barnaslingan wood will be thinned this winter. You will see the pink forward slashes on some pine and fir trees which identify the trees to be removed during this thinning operation. These trees have been selected to give more space to the native trees already growing in the canopy and release pockets of naturally regenerating native

trees, as well as creating space and light for new seedlings of all species to regenerate. This will create conditions in future for the forest to become more diverse in terms of tree sizes, age and species. This increases biodiversity and makes the forests more resilient to the pressures that may come from climate change as well as pests and diseases.

## Biodiversity Monitoring and Action Plans

32 long-term biodiversity monitoring plots have been set up across the Dublin Mountains Makeover area, both in forested areas and on blanket bog and heathland. Initial ecological baseline surveying has assessed the amount and diversity of vegetation and dead wood across the sites. Future surveys are planned every three to five years to show the change in biodiversity as the makeover continues. Additional biodiversity surveys will also assess bird and mammal populations going forward.

Coillte has nine Biodiversity Areas across the Dublin Mountains Makeover sites, with a Biodiversity Area Management (BAM) plan for each one. These BAM plans outline a series of actions to be taken to manage and enhance the biodiversity of these areas.

## DMM Communications and Updates

The Dublin Mountains Makeover is a large, long-term project and we want to keep everyone up-to-date on what is happening. Coillte Nature team members regularly attend meetings of the Dublin Mountains Partnership to ensure good collaboration among various stakeholders such as the Dublin City and County Councils. In November, Coillte Nature Operations Manager, Karen Woods, led a walk with the Dublin Mountain Partnership Volunteer Rangers for interested members of the public at Cruagh woods to learn about the forest management methods being used. We have continued to put up signage about the different CCF and R&R operations taking place at each site as well as notifying residents by letter where appropriate.

Updates about the ongoing activities are regularly posted on our [Coillte Nature News blog](#) and we have made a [new video](#) about the new R&R areas in Ticknock. We have also undertaken to record high-quality aerial photography and video footage of the operations taking place so that in future we will be able to see the transition of these areas over time in high definition!

➤ [Find out project updates on our Coillte Nature News page](#)

# Wild Western Peatlands

“Really exciting work has been taking place this year in Derryclare gathering a wealth of information about the site. We have used this to develop a draft management plan in order to maximise the biodiversity and ecosystem system services with the rehabilitation of blanket bog and wet heath as a priority.”

— Karen Woods, Operations Manager, Coillte Nature

Coillte is the largest landowner of peatlands in the country, much of which is Atlantic blanket bog, an Annex 1 habitat of European importance. In 2020, the Department of Agriculture, Food and the Marine announced €7m funding for the Wild Western Peatlands (WWP), an exciting project to explore options for the redesign and rehabilitation of 2,100ha of western peatlands forests. The aim of this project is to maximise the ecosystem services of such sites through the enhancement of biodiversity, sequestration of carbon, and improvement of water quality.

This year, a shortlist of WWP sites was drawn up with sites across five western seaboard counties, and surveying and planning began on our WWP pilot site. You can find out more detailed information about the overall project in our [Stakeholder Information Document](#).

## WWP Pilot Site: Derryclare, Co. Galway

Our pilot site is a 560ha Coillte property in Connemara on the shores of Lough Inagh and Derryclare Lough. The site is surrounded by the Twelve Bens/Garraun Complex Special Area of Conservation and borders the Derryclare Nature Reserve.

This will be a long-term project for Derryclare and we started the work on the ground this summer with hydrological, ecological and LiDAR surveying to assess the current state of the site.

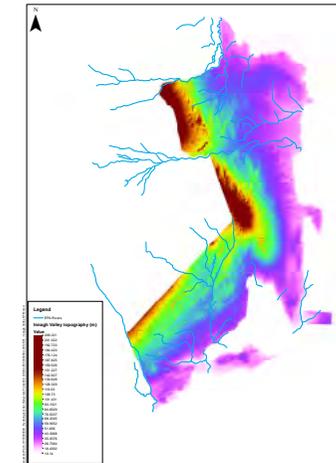


ABOVE – Watch our video about the Wild Western Peatlands project



ABOVE – The carnivorous peatland plant sundew at Derryclare

# Wild Western Peatlands



ABOVE – LiDAR imagery of Derryclare site showing terrain, watercourses and tree height

Today the majority of the site is planted with conifers for timber production, having been extensively drained in the past. However our surveying has shown that there is great potential for the restoration of blanket bog and wet heath habitats, with many peatland plants found on site. Peat depths range from 0.2m to 4.25m and initial assessments suggest that between 60–80% of the site could be suitable for the restoration of blanket bog and wet heath.

A range of management scenarios are being considered for different parts of the site depending on topography, peat depth, drainage, plant communities present, level of modification and proximity to water courses. The preferred option is to restore areas of blanket bog and wet heath, but other options will also be considered such as establishing low-density native woodland, restructuring existing conifer plantations or leaving open areas along watercourses.

Mapping was carried out of 'target habitats,' or the type of habitats that should be aimed for in the redesign of the property. These maps were overlain with the hydrological assessment of the site to identify where rewetting is possible. Information on pressures such as rhododendron spread, regeneration of conifers and grazing has also been collected.

## Engaging with Stakeholders

Due to Covid 19 restrictions, we were unable to hold any on-site public engagement events as we had hoped, but an initial online stakeholder engagement was held in June with a wide range of stakeholders attending. The Coillte Nature team shared an overview of the Wild Western Peatlands project and asked attendees to share their initial reactions to the project before further exploring potential challenges and opportunities for the project. The event also aimed to encourage collaboration, support and learning between relevant initiatives, organisations and agencies.

The reaction to the project was overwhelmingly positive and there were many valuable comments and suggestions regarding the planning, design and management of the project. We would like once again to thank everyone that gave their time and energy to take part. Following this we have continued to engage with several of the stakeholder in attendance as well as others relating to concerns raised, such as the red squirrel population at Derryclare. Inputs from those attending this initial stakeholder engagement and such follow-on discussions have informed the development of a draft management plan. Please get in touch if you would like to engage or collaborate with us in relation to this project.

## Management plan for Derryclare

Following the surveying and stakeholder inputs, the Coillte Nature team has developed a draft management plan for the Derryclare site. The plan outlines management scenarios for different parts of the site, describing current and target habitats, pressures, and actions to achieve target habitats. An Environmental Impact Assessment (EIA) is also being drawn up to assess the various management scenarios for different parts of the site. These plans will be then be used as a springboard for further stakeholder engagement.

In the long term, it is expected that learning and solutions from this project will inform the management of similar areas like this into the future for the benefit of climate, nature and people.

➤ [Find out project updates on our Coillte Nature News page](#)



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine

# Midlands Native Woodland

The Midlands Native Woodland project is a collaboration with Bord na Mona to establish native pioneer woodland on some parts of the midland raised cutaway bog at Baunmore, Co. Kilkenny, complementing the overall rewetting programme.

The primary approach to the rehabilitation of this site is to rewet, but on some higher and dryer sections of the cutaway bog, which will not rewet, Coillte Nature has been trialling the seeding and planting of native trees and shrubs, taking our lead from the natural regeneration happening elsewhere. The aim is to speed up the regeneration process and stabilise the bare peat in order to reduce soil erosion and CO<sub>2</sub> emissions.

Over the last year, significant work went into compiling and submitting a Form 1 Afforestation Application for just over 200 hectares (about 5% of the total site) and Environmental Impact Assessment (EIA) report to the Department of Agriculture, Food and the Marine.

### Update on Native Tree and Shrub Trials

In 2020, extensive trials were carried out to see what was the best approach for afforestation, with over 100 plots of seeding and planting of native tree and shrub species. The species we are trialling are birch, rowan, Scots pine and alder through seeding, planting bare root and planting in mini-plugs. We had also cut branches or 'cuttings' of willow nearby and struck them directly into the peat to test how well they will grow.



ABOVE – Ecological Lead Declan Little inspecting the trial plots of native species



ABOVE – Birch seedlings in July 2021, seeded in spring 2020

# Midlands Native Woodland



ABOVE – Bord na Móna cutaway raised bog at Littleton, Co. Kilkenny

“This is a really exciting and innovative project working in a very challenging environment which can be exposed to wind, rain, cold and drought. However there is great potential for gains to be made in increasing biodiversity as well as reducing soil erosion and carbon emissions.”

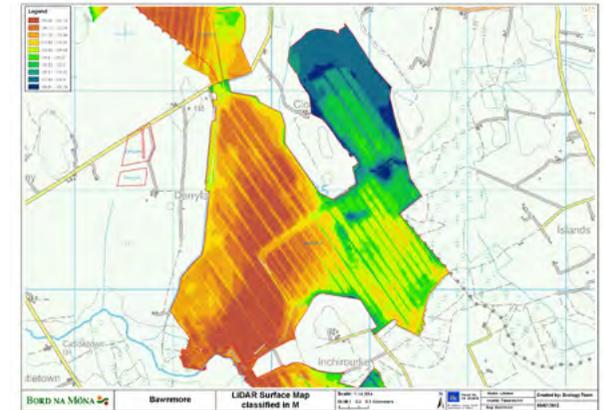
— Declan Little, Ecological Lead, Coillte Nature

Over 2021 we assessed the progress of the trials, which informed the afforestation application and will determine how best to proceed with this project.

Our key findings from the trials are:

- There was excellent establishment rate of planting with over 90% survival rate.
- Initial results show that the seeding done in spring was more successful than that done in autumn.
- Seedling mortality was high in the first year of growth due to exposure, mainly wind and water erosion but also drought at times.
- Planting on deep peat, such as that over 1m deep is not to be recommended for this project.

This December we sowed acorns and planted young oak trees in test plots, as an addition to our existing trials. You can read more about this on our [Coillte Nature News](#) section.



ABOVE – LIDAR imagery of the site pictured above showing elevation



# New projects added for 2022



**ABOVE** – The LIFE INSULAR project will focus on protecting and managing sand dune ecosystems.



**ABOVE** – FOR-ES Project lead, Professor Jane Stout, from the School of Natural Sciences, Trinity College

## **FOR-ES: Valuing the Multiple Benefits of Forestry**

An exciting and innovative new research project, FOR-ES, was launched by Minister for Agriculture, Food and the Marine, Charlie McConalogue this December. FOR-ES is led by Trinity College Dublin, in collaboration with UCD and Coillte Nature.

FOR-ES will use an approach known as 'Natural Capital Accounting' to assess and value the multiple benefits of forests to society. Professor Jane Stout, from the School of Natural Sciences, Trinity College Dublin, said "I am excited to be working with colleagues in UCD and Coillte on this project.

This interdisciplinary approach is really important because assessing natural capital stocks, and valuing benefits from forests, can help enable sustainable decision-making, which is crucial to address the current biodiversity and climate crises."

[www.for-es.ie](http://www.for-es.ie)

## **LIFE INSULAR: Protecting and managing sand dune ecosystems**

Coillte Nature is delighted to be a partner in the EU funded LIFE INSULAR project which will focus on protecting and managing sand dune ecosystems. 'Insular' is a Spanish word relating to 'Island' and this is a joint project between Ireland and Spain, coordinated by the Universidade de Santiago de Compostela, focusing on the protection and restoration of important biodiversity areas on western Atlantic islands, Ireland being one of the larger ones!

Sand dune ecosystems are sensitive and dynamic systems that change over time by the forces of nature. Some of the areas to be addressed in the project are under pressures such as old and dying forestry plantations as well as areas of forestry and invasive species encroaching onto the dunes. LIFE Insular will work to reduce these pressures through conservation actions including sand dune restoration.

Coillte Nature are excited to be working together with the NPWS, as well as local communities, scientific experts and local authorities to develop long-term management plans for these areas. The aim is to increase their biodiversity value and resilience of such areas in the face of climate change and rising sea levels so future generations can continue to enjoy them.

# Meet the Coillte Nature Team

We will continue to work on all our key projects into 2022, making further progress on our key strategic themes towards the restoration, regeneration and rehabilitation of nature in Ireland.



**Dr Ciarán Fallon**  
Director



**Karen Woods**  
Operations Manager



**Dr Declan Little**  
Ecological Manager



**Hedda Dick**  
Outreach Manager



**Lyn Sheeran**  
Finance Manager

[www.coillte.ie/coillte-nature](http://www.coillte.ie/coillte-nature)

Subscribe to our seasonal e-newsletter [here](#)

If you are interested in our projects and would like to collaborate or to get further information, please get in touch by emailing Coillte Nature's Outreach Manager, Hedda Dick on [hedda.dick@coillte.ie](mailto:hedda.dick@coillte.ie) or 087 1927257.