Wild Western Peatlands Project:

Concept Note

Version 2: November 2025

TABLE OF CONTENTS

List of Tables & Figures

Executive Summary

The Wild Western Peatlands (WWP) Project was initiated in 2020, when the original Concept Note (V1) was agreed between DAFM and Coillte. In the interim, a number of developments have had an important bearing on the project. This document incorporates these changes into an updated Concept Note (V2).

The impetus for the WWP Project remains the same as before, which is to address a national legacy of unproductive peatland forests.

On agreeing the original Concept Note, Coillte immediately commenced work on the design and planning of a major peatland restoration project at Derryclare, Co. Galway.

The developments, outlined in this document, that have materially affected project progress since 2020 include:

- The requirement for planning permission for all projects that involve removal of forests, which was not envisaged in 2020 and has a significant bearing on costs (Section 4);
- Escalation of operations costs since 2020 (Section 4);
- The development of Coillte Strategy, A Vision for its Future Forest Estate has had a positive effect on the WWP Project. Specifically, the modelling work done to develop the Forests for Climate and Forests for Nature Ambitions: a) showed that forest-to-bog is only one of several valid options that should be considered when managing peatland forests for the benefit of climate, and b) improved our knowledge of peatland forests with ecological restoration potential (Section 1);
- Changes to the governance structure for peatland restoration and redesign projects in Coillte (Section 5).

Planning permission for Derryclare was secured in May 2025 – a significant achievement that proved to be both rigorous and demanding, most likely because it was the first project of its kind to go through planning.

Despite the challenges, the WWP Project remains more relevant than ever. The ongoing introduction of national policy and legislative measures reflect the growing urgency to implement practical measures to combat the dual challenges of climate change and loss of biodiversity.

By way of example, the Climate Action Plan calls out the need to restore and rehabilitate degraded peatlands, while the Nature Restoration Law will require concrete measures to improve the status of peatland habitats and the species associated with them.

Despite challenges, Coillte is committed to delivering peatland restoration and redesign projects for the benefit of climate and nature. More than ever, it is important that the WWP Project continues and develops a practical pathway for the management of unproductive peatland forests, providing a means for converting these important forests to habitats that are more ecologically valuable and have better potential to become carbon sinks.

1 Project Description

1.1 Project Vision & High-level Objective

The overall objective of the Wild Western Peatlands Project is to commence the process of delivering national targets for nature restoration and climate action in relation to the redesign and restoration of afforested peatlands on state lands.

The overarching aim of the project is to build a pathway a practical pathway for the management of peatland forests, providing a means for converting these important forests to habitats that are more ecologically valuable and have better potential to become carbon sinks.

1.2 Project Description

The project focuses on peatland forests on the Coillte estate. The project will implement management actions that will converting these important forests to habitats that are more ecologically valuable and have better potential to become carbon sinks.

Through delivery of the various phases of the WWP Project, lessons will be learned that will inform the wider application of this type of management approach in future. While the primary focus of the project is addressing the practical issues around managing peatland forests, we will also, through collaboration with research bodies, contribute to the growing national research on the carbon balance of forested peatlands.

As a result of former policy, Ireland has extensive areas of peatland forests that are not performing well, either from an economic or an environmental perspective. It is important for Ireland, and the forestry sector in particular, to address the legacy of peatland forests,

The WWP Project aims to inform how this can be done, and to demonstrate how improved environmental management of peatland forests can be delivered, with the intention to scale up on a national basis, in sync with current national and international commitments and future targets for nature restoration.

1.3 Project Objectives

1. Redesign peatland forests to improve habitat diversity of selected peatland forests. This will entail restoring blanket bog habitat where feasible; converting forests to diverse mosaics of open habitats with native and mixed forests and scrub; and creating riparian buffer zones to protect sensitive water catchments;
2. Enhance the aesthetic value of sensitive landscapes through forest redesign;
3. Ensure best practice in site selection and management planning to deliver climate and nature objectives;
4. Engage strategically with key stakeholders (local communities, State Agencies, NGOs, Local Authorities, scientists, practitioners and public representatives);
5. Work in partnership with state bodies and key NGOs to ensure technical synergy and a thorough understanding of the issues and delivery of best practice;
6. Generate best practice for managing peatland forests for the benefit of nature and climate;
7. Secure statutory stakeholder agreement from the Forest Service with a view to land-use policy adjustment regarding western peatland forests;

8. Translate silvicultural and ecological learnings to inform future management of the wider western peatland forest estate in Ireland.

1.4 Context

Irish Peatlands

The term "peatlands" refers to a broad range of site types and habitats with peat soils that cover extensive areas both in lowland and upland landscapes across Ireland, particularly the western counties. Intact peatlands once covered a total area of 1.17 million ha or 17% of the area of the Republic of Ireland (Hammond, 1981 REF), which is among the highest original percentage cover of peatlands in European countries.

Most of Ireland's peatlands have been extensively modified by humans. Peat has been used in Ireland since prehistoric times, but the scale and intensity of use escalated significantly in the 20th century, to the extent that only approx. 10% of Ireland's peatland habitats are currently deemed suitable for conservation (Renou-Wilson et al., 2011 REF), in that they retain characteristics of the original peatland habitat. Despite the widespread loss of peatlands in recent decades, Ireland remains one of the strongholds for peatlands, particularly bogs, in Europe.

Values of Peatlands

In recent decades, there is increasing recognition of the environmental values and carbon storage of peatlands. Peatlands represent a rich diversity of habitats that support a range of birds, mammals and higher plants, as well as a host of specialist mosses, liverworts and lichens.

Irish peatlands are broadly classified as follows (Fossitt 2000, Renou-Wilson *et al.*, 2011 REFS):

- Bogs: lowland or Atlantic blanket bog, upland blanket bog, raised bog and cutover bog
- Fens and flushes
- Heaths: wet heath, dry heath and montane heath

These broad categories include a diverse range of other habitat types. For instance, in the NPWS Article 17 report REF, 13 Annex I habitats are referred to in the context of peatlands. Predominant among these are blanket bog, wet heath and dry heath – which can cover extensive areas – but also several types of lake habitats, upland grasslands, subalpine heath and transition mires. These habitats vary in the depth and type of peat present, and consequently their vegetation and ecology. The peatland habitats of best ecological quality are designated for conservation in SACs and NHAs, while large expanses of peatlands important for protected birds are designated in SPAs.

Peatlands are understood to play an important role in regulating climate change, although the picture is complex. Peat soils cover 20.6% of the national land area and contain more than 75% of the national soil organic carbon[1]. Most of Ireland's peatlands are a source of carbon dioxide (CO_2) and, at the national level, Irish peatlands are a large net source of carbon, estimated currently at around 2.64 Mt C/year. Peatlands feature prominently in Ireland's biodiversity and climate adaptation strategies (Section 1.6).

[1] Renou-Wilson F., Bolger T., Bullock C., Convery F., Curry J., Ward S., Wilson D. & Muller C. (2011). *BOGLAND: Sustainable Management of Peatlands in Ireland*. EPA Strive Report Series No. 75; EPA, Johnstown Castle, Wexford

Peatlands and Forestry

During the 20th century, peatlands were viewed as waste land and efforts were made by the state to convert them to more productive use. The main land use applied was industrial peat extraction, which usually resulted in the removal of the peat profile. Forestry was also explored as a possible land use, and approx. 25% of Ireland's peatlands were converted to use for timber production. Unlike peat extraction, the peat remained in place, but the peat surface was ploughed, drained and planted with trees. The tree species selected for use were conifers, predominantly lodgepole pine and Sitka spruce, because early research demonstrated that the growth rates of those species were reasonably good, even on poor peatland soils, hence they could produce usable timber. Afforestation of peatlands is no longer pursued by Coillte or funded by the state.

During the 20th century, a broad range of peatland habitats were afforested, with varying results. Some of the peatland forests proved to be very productive and continue to produce high quality timber for the national and export markets. Other peatland forests produced a very different outcome. The trees grew poorly, or in such a way that the forest has retained characteristics of the former peatland habitat, with consequent opportunities to improve their habitat value as peatlands and/or their carbon balance.

1.5 Peatlands and Coillte Strategy

In 2022, Coillte developed a Future Forest Vision for the Coillte Estate[2], a land use strategy that recognises the multiple values of forests. The strategy frames Coillte's activities from now into the future, with the aim of delivering benefits for climate, for nature, for wood and for people. Following research work and modelling of scenarios across the Coillte estate, eleven ambition statements were developed. Peatlands featured prominently in the development of this strategy. Coillte is the largest single owner of peatlands in Ireland and is best placed to deliver significant peatland habitat restoration at scale. Of the eleven ambitions developed, three are particularly relevant to peatlands (Table 1).

The Coillte strategy has identified peatland forests that have the best value for nature and for climate. Peatland forests on the Coillte estate vary widely in terms of the site type, and in terms of their value for nature, for climate and for wood production.

Peatlands and peatland forests that are assessed as having the best ecological value are mapped as biodiversity areas and are included in the 30% of the estate managed primarily for nature (Ambition 5, Table 1).

There are also large areas where the peatland forests have less obvious ecological value but are also not very productive and therefore not valuable for wood production. These sites will be enhanced through a process of forest redesign, to create more open habitats with a higher value for nature. These future habitats are likely to consist of a mosaic of open habitat (bog or heath) with scrub or forest.

The Wild Western Peatlands Project will consider the broad range of management options for peatland forests, to deliver benefits for both climate and nature, and will benefit from the multi-disciplinary approach that was taken in the development of Coillte's strategic options for managing peatland forests into the future.

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[2] https://www.coillte.ie/wp-content/uploads/2022/07/Coillte-Future-Forest-Estate-Strategic-Vision-Consultation-Booklet.pdf

Table 1: Coillte's strategic ambitions relevant to peatlands

Ambition 3: Redesign 30,000 hectares of peatland forests for climate and ecological benefits by 2050
This is one of four ambitions in the "forests for climate" pillar. Coillte adapted carbon models for forests which indicated that poorly growing trees on deep peats present an emission risk and should be mitigated. The model identified climate mitigation scenarios that can be applied to different parts of the estate depending on site characteristics, to improve the carbon profile of the peatland forests over time. These include: • **Rewet**: remove forests and rewet peatland/bog ("forest-to-bog") • **Rewild**: remove the conifer forest and allow to regenerate with a mosaic of open habitat and scrub (convert to "semi-natural wilderness") • **Retain**: allow the forest stand to remain in place indefinitely Usually, the best approach on large peatland sites is to apply a combination of all three of the above options, depending on the site conditions, and this combined approach is termed **redesign**. Depending on whese and how actions are implemented, they can also deliver benefits for nature (habitats and species).
Ambition 5: Enhance and restore biodiversity by increasing the area of our estate managed primarily for nature from 20% to 30% by 2025
Since 2001, Coillte has systematically mapped biodiversity areas, which are habitats of ecological value on its estate. These, together with riparian buffers and small or local biodiversity features, account for 90,000 hectares, or 20% of the estate, mapped and managed primarily for nature. During the development of the Coillte strategy, we identified more habitats of potential ecological value, which have since been assessed by ecologists. The sites of highest ecological value are identified as 'new biodiversity areas', expanding the area managed primarily for nature from 90,000 hectares to 134,000 hectares, or 30% of the estate. Peatland habitats feature strongly in Coillte's biodiversity areas. The earliest ecological surveys commissioned by Coillte (2001-2005) located peatlands of very high ecological value on the Coillte estate. Some of these were never planted but were protected from grazing by fences erected along Coillte boundaries. Others were planted with conifer trees but retain the vegetation and topography of good quality peatland habitats. The range of peatland habitats present primarily include lowland (Atlantic) blanket bog, upland bog/heath and raised bog. However, some rare peatland habitat types are also recorded in Coillte sites, notably minerotrophic flushes, bog woodland, transition mires and fens. The recent mapping of new biodiversity areas has continued to locate forested peatlands of ecological value on the estate that should be restored for the benefit of nature, and Coillte intends to continue this work.
Ambition 6: Transform areas of our forests so that 50% of our estate is managed primarily for nature in the long term
Further analysis of the estate identified areas that may have future potential to be managed primarily for nature. These are primarily 'legacy areas', where the current forest is not meeting one of our core objectives. Redesigning these forests will increase species diversification and may create habitats that have value for both nature and climate. Many of these sites are located on peatlands, and they vary widely in terms of site type. They may be restored to near natural conditions or converted to "semi-natural wilderness" (a mosaic of scrub and open habitats), depending on site characteristics.

1.6 Alignment with National and EU Policies

Regulatory Context

The regulatory context for peatland restoration and redesign has moved on significantly since 2020 and significant national and EU legislative policy changes have increased the importance and urgency for peatland restoration and rehabilitation projects. All new changes between 2020 and 2025 are listed in Table 2 and discussed in more detail below. The importance of peatland restoration/rehabilitation is linked to both nature and climate primarily, and it is pivotal to both EU and national initiatives that address biodiversity loss and reduce greenhouse gas (GHG) emissions. The Nature Restoration Law 2024 is the most significant policy change, as it will see the introduction of legally binding national targets as it looks to restore 30% and 50% of drained peatlands by 2030 and 2050 respectively.

In conclusion, all these changes suggest that peatland restoration and redesign will play a pivotal role and that additional funding and funding security is essential for Ireland to be compliant with national and EU legislation and policy.

Table 2: List of the main national and EU legislative changes 2020 to 2025

Year	Description
2024	NATURE Restoration Law 2024
2024	The LULUCF Report to the European Parliament and the Council 2024
2024	Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction 2024
2024	Greenhouse Gas Emissions and Removals from Land Use, Land Use Change and Forestry
2024	The Climate Action Plan 2024
2024	Draft Revision of the National Planning Framework 2024
2024	Hen Harrier Threat Response Plan 2024-2028
2021	European Green Deal – European Climate Law (2021)
2021	European Commission EU strategy on adaptation to climate change 2021
2021	National Climate Objectives

Nature Restoration Law 2024

The EU Nature Restoration Law 2024 is the first continent-wide, comprehensive law of its kind. It is a key element of the EU Biodiversity Strategy, which sets binding targets to restore degraded ecosystems, particularly those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters. Part 59 of the Nature Restoration Law relates specifically to peatland restoration for forestry stating that the restoration and rewetting of organic soils on drained peatlands will "*help achieve significant biodiversity benefits, an important reduction of greenhouse gas emissions and other environmental benefits, while at the same time contributing to a diverse agricultural landscape*." Article 11 of the Restoration Law requires the state to restore organic soils in agricultural use (including forestry), so that 30%, 40% and 50% of drained peatland will be rewetted 2030, 20240 and 2050 respectively.

The LULUCF report to the European Parliament and the Council 2024

LULUCF is a EU regulation that sets out EU net emission reduction targets of at least -55% by 2030 as compared to 1990 levels, and a climate neutrality target by 2050 at the latest. The land sector (which includes forestry) plays a key role in achieving the EU climate neutrality objective. It has the potential to provide long-term climate benefits, both in terms of climate mitigation and adaptation, as well as to contribute to the long-term climate goals of the Paris Agreement. The key revised LULUCF Regulation target is to increase land-based net removals in the EU by an additional -42 million tonnes of CO_2 equivalent (Mt CO_2-eq) by 2030, as compared to the yearly average over the period 2016-2018.

Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction

Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction 2024 notes the requirement for forward thinking out to 2050 and beyond. Its purpose is to build on the targets, policies, measures and actions we have already committed to in the period to 2030 as set out in successive annual national Climate Action Plans and our EU National Energy and Climate Plans. A key component of this strategy is "maximising the carbon sink capacity of our land use" by adopting optimal land use strategies.

GHG and Removals from Land Use, Land Use Change and Forestry 2024

The importance of greenhouse gas (GHG) emissions and removals associated with land are recognised as a significant aspect of mitigation efforts nationally and internationally. There are high levels of ambition for the use of land at both an EU and National level including the role of land as a carbon sink and an opportunity for agricultural diversification. The strategy states that the term peatlands is not a land use category in Land Use, Land Use Change and Forestry "committed and continued national scale peatland restoration and rehabilitation efforts" are necessary.

The Climate Action Plan 2024

The Climate Action Plan 2024 (CAP24) sets out a roadmap of actions to meet our national climate objectives by the end of the year 2050. This plan reiterates that Government Policy on climate change will "*Support the restoration and rehabilitation of degraded peatlands"*. This plan also supports the Coillte Strategic Vision, which aims to capture additional CO2 in its forests, soils and wood products by 2050 and it also recognises that the Coillte estate should be managed to improve carbon storage by "Redesigning peatland forests to improve the carbon balance".

Draft Revision of the National Planning Framework 2024

The Updated Draft Revised National Planning Framework was published in November 2024 as the Government's high-level strategic plan for shaping the future growth and development of our country out to the year 2040. Section 9.2 focuses on Transition to a Zero Carbon Economy and states that "*Ireland's forests and also separately, peatlands, play an important role in helping with climate change mitigation, through carbon sequestration and acting as carbon sinks.*"

Hen Harrier Threat Response Plan

The hen harrier is a ground-nesting bird of prey that breeds mainly in upland bogs, heather moorlands, and young forestry plantations. The species is listed on Annex I of the Birds Directive. Recent surveys show that the number of breeding pairs in Ireland is declining. NPWS released the Hen Harrier Threat Response Plan in 2024. The plan aims to reverse the decline of hen harrier and improve its future prospects. It sets out coordinated actions across agriculture, forestry, and wind energy sectors.

European Green Deal – European Climate Law (2021)

The European Green Deal sets out the 'blueprint' for a transformational change in the EU from a high to a low-carbon economy, without reducing prosperity and while improving people's quality of life, through cleaner air and water, better health and a thriving natural world. The Green Deal goal is net zero carbon emissions by 2050 and a 55% cut in emissions by 2030 (compared with 1990 levels).

European Commission EU strategy on adaptation to climate change 2021

The European Commission adopted its new EU strategy on adaptation to climate change to set out how the EU can adapt to the unavoidable impacts of climate change and become climate resilient by 2050. The Strategy promotes nature-based solutions.

National Climate Objectives

The Climate Action Plan features 493 action plans set out how Ireland will achieve a 51% reduction in overall greenhouse gas emissions by 2030 and lay the foundations for achieving net zero carbon emissions by 2050. One of the key targets in relation to wetlands is *'…rehabilitating 65,000 hectares of peatlands across numerous landowners and projects'* by 2030.

1.7 Project Beneficiaries and Collaborations

Project Beneficiaries

There is a wide array of project beneficiaries ranging from local communities right up to governmental and EU level. Some of the main project beneficiaries are summarised below.

Table 3: Beneficiaries of the WWP Project

Beneficiaries	Commentary
Forum Connemara (local community)	Local community employment group specialising in treating rhododendron and invasive species.
DAFM (Govermental dept.)	Area qualifies under article 11 of the Restoration Law 2024.
Forest Service (Governement dept.)	Provides an understaning and a roadmap on how to manage peatland restoration for afforested peatlands.
National Goverment	It aligns with the Climate Action Plan 2024.
National Goverment	It aligns with the European Green Deal to move to a low-carbon economy.
National Goverment	It will contribute to the national tyarget of rehabilitating 65,000 ha of oeatnads by 2030 as outlines in the National Climate objectives.
National Goverment	Complies with Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction 2024 which calls for forward thinking out to 2050 and beyond.
National Goverment & EU	Coillte as the largest single owner of state peatlands can play a central role in helping Ireland meet its commitments under the Nature Restoration Law.
National Goverment & EU	Peatland restoration contributs to LULUCF targets, with peatland rehabiltation specifically called out in the policy.
National Goverment & EU	It complies with the EU climate change strategy 2021 which promotes nature-based solutions.

Project Collaborations

Project collaborations are a key component of this project, and the table below summarises the main collaborations to date.

Table 4: List of WWP Project Collaborations

Collaborations to date	Commmentary
NPWS	• *Member of a working group documenting best practice for peatland restoration.* • *Site by site collaborations.* • *Signed MOU with NPWS.*
Forest Service	• Felling license administration.
Inland Fisheries Ireland	• *Site by site consultations.* • *Signed MOU with IFI.*
Galway Co Council	• *Pre planning meetings.* • *On site visits.*
WAN-LIFE	• *Participant in the WAN-LIFE project, an EU project for peatland restoration.*
Marine Institute	• *Detailed consultation son Glennamong property whioch is in the MI catchment in Burrishule.* • *Data sharing arrangmnets in place locally.*
LAWPRO	• *Data sharing arrangements in place locally.*
DAFM	• *Main project sponsor.* • *Quarterly updates.*
NatureScot	• *Ongoing colloboration on best practice techniques and innovation, include site visits and data sharing.*
Shared Island Initiative	• *Inter governmental peatland project set up between Ireland and the UK to promote linkages and share peatland restoration best practice between Ireland and the UK.* • *Two conferences held to date.*
Peatland Finance Ireland	• *Providing technical supprt to PFI who are developing a national apporach to developing a mecanism to trade carbon credits.*
NUIG	• *Colloborating on the iCRAG project to assess th eimpact of restoration on water quality. Contract in palce, waiting on funding to proceed.*
UL	• *PeatFor project looking at GHG emmissions during restoration and immedialtley after. Project is up and running and Coillte's participation is in kind.*
Ground force	• *A completed project that looked at using remote sensiting to monitor teh carbon and water fluxes in peatland sites. Project was discontinued as the results were inconclusive.*
Terra Motion	• *A coillte funded project assessing the effectiveness of using radar remote sensiting to correlate ground motion to peatland condition on a landscape scale. This is similar to the studies done alrteday in Scotland and this is assessing the same technique under Irish conditions.*
ATU Galway	• *Facilitated a master study on biodiversity in peatland sites by provided site access.*

1.8 Previous Experience

Former LIFE Projects

Coillte is a committed player in peatland restoration, with a proven track record in both raised and blanket bog restoration. Under previous LIFE projects in the early 2000's (Table 5), Coillte delivered restoration actions on approx. 2,000ha of blanket bog and more than 1,200ha of raised bog and associated habitats.

All of the former LIFE sites are within candidate Special Areas of Conservation (cSACs) under the EU Habitats Directive, designated for the protection of blanket bog or raised bog and associated habitats. Most of the project sites were selected because they were within SACs, while others were designated as SAC as a consequence of the project actions, which were deemed to be successful in creating conditions for the development of bog habitats that are ecologically significant at European level.

The restored bogs provide habitat for a range of nationally important rare plant and animal species. For example, ornithological surveys commissioned by Coillte in recent years recorded hen harrier nesting on restored blanket bog at a former LIFE site.

A primary purpose of these LIFE projects was to explore various restoration techniques, such as tree removal, felling of trees to waste and blocking drains to re-wet previously drained peatland habitats.

The blanket bog restoration project, which is the one most relevant to the Wild Western Peatlands Project, consisted of sixteen project sites, all but one of which are located in the west of Ireland, primarily Mayo and Galway, but also Donegal, Clare and Kerry.

Many lessons were learned regarding practical implementation of restoration actions, for example the benefits of peat dams over plastic dams for blocking drains; the importance of using low ground pressure machines on extremely soft peat soils; and the best way to put in place an effective baseline for future monitoring.

Many of the techniques developed two decades ago under the LIFE project are still used today and still represent best practice. However, in the last decade, one additional change has occurred, and this relates to surface smoothing. This is a restoration technique that has gained prominence in the UK and is now widely adopted as a best practice restoration technique that has impressive results on suitable sites (see Section 1.9).

While results of the LIFE projects were promising and positive on all the project sites, issues subsequently arose at some of the sites that require more long-term management input. The main issue on restored blanket bog sites is natural regeneration of lodgepole pine. The UK experience indicates that one of the advantages of the new restoration techniques (Section 1.9) is that natural regeneration of lodgepole pine post-restoration works is very much reduced, which would be a significant advantage over other techniques.

On the restored raised bogs, natural regeneration of birch on the "high bog" can also be a problem. Also, some of the restored raised bogs have required upgrades of the dams, and Coillte continues to engage with NPWS to address this on some of the former LIFE sites and other designated raised bogs.

It is almost two decades since the blanket bog LIFE project was completed, and since then there has been no large-scale peatland restoration projects on the Coillte estate. However, Coillte has

a proven track record and experience in delivering land-based projects and also has the qualified personnel available to carry out these works.

The development in recent years of Coillte Strategy (Section 1.5) has led to a renewed impetus to address the legacy issue of afforested peatlands, to seek out and implement the best approaches and to deliver peatland restoration and redesign at scale.

Table 5: Former Coillte-led LIFE Projects aimed at peatland restoration on the Coillte estate

PROJECT DURATION	HABITAT	EU LIFE PROJECT CODE	HECTARES RESTORED
2002-2008	Blanket Bog	LIFE02 NAT/IRL/008490	2,000
2004-2008	Raised Bog	LIFE04 NAT/IE/000121	600
2009-2013	Raised Bog	LIFE09 NAT/IE/000222	685
TOTAL			3,285

Development of Coillte Strategy and Relevance to WWP

In the development of a Future Forest Vision for the Coillte Estate (Section 1.5), Coillte developed models to understand and build a picture of how the Coillte estate could benefit all four strategic pillars: Forests for Climate, for Nature, for Wood and for People.

The work on **Forests for Climate** examined all forests across the estate, including the peatland forests. A range of scenario models were developed at stand level, that could be applied across the estate for different forest stands or site types. The overall approach was to assess the estate in terms of its potential to sink, store and substitute carbon in the forests and wood products[3].

The model indicated that peatland forests of low productivity (where the trees are not growing well) have the lowest capacity to sequester carbon. The best options for managing these forests, from a carbon or climate perspective, are to:

- **Rewet**: remove forests and rewet peatland/bog ("forest-to-bog")
- **Rewild**: remove the conifer forest and allow to regenerate with a mosaic of open habitat and scrub (convert to "semi-natural wilderness")
- **Retain**: allow the forest stand to remain in place indefinitely

Usually, the best approach on large peatland sites is to apply a combination of all three of the above options, depending on the site conditions, and this combined approach is termed **redesign**.

In the development of the **Forests for Nature** component of Coillte's strategy, preliminary modelling work was conducted to identify peatland habitats of potential ecological value. Freelance ecologists were then engaged to assess those peatland habitats, both forested and unforested, on the estate, and to select those with the best ecological value and/or restoration potential. A set of criteria were developed to inform the assessment of all habitat types, including peatland habitats, which ensured consistency of assessments[4].

[3] Forests for Climate: Report on Carbon Modelling of the Coillte Estate https://www.coillte.ie/wp-content/uploads/2022/08/Report-on-Carbon-Modelling-of-the-Coillte-Estate_August2022.pdf

[4] Forests for Nature: Information Booklet https://www.coillte.ie/wp-content/uploads/2025/09/Coillte-Forests-for-Nature-Information-Booklet-2025.pdf

In recent years, NPWS has also conducted a desk review of forests on peatlands, based on ecological criteria, and identified areas that may have restoration potential. Coillte participated in this review, and this information will be considered in the future selection of sites for peatland restoration and redesign.

All of these initiatives have expanded our knowledge of peatlands of ecological value on the estate, and this will inform our peatland programme into the future, particularly in terms of site selection, decisions about the management approaches and techniques to be adopted and monitoring the project outcomes.

The strategy development work has revealed that the management of peatland forests is multi-faceted. Removal of forest and restoration of open bog or heath habitats is only one of several options for managing peatland forests to improve their carbon balance. Ecological assessments can point to locations where restoration to open peatland habitat is likely to yield the best outcomes for nature, but there is a broader suite of valid forest redesign options that will also deliver positive outcomes for both climate and nature.

1.9 Best Practice, Innovation and New Techniques

The majority of operation s specified in the project are standard forestry or peatland restoration operations, with the sole exception of surface smoothing. Surface smoothing is a relatively new technique, first developed over a decade ago. This technique is widely used in the UK and is now widely adopted as a best practice method, resulting in impressive restoration results. In an Irish context, previous peatland restoration and redesign restoration left the original plough furrows in place, and this provided a seed bed for subsequent natural regeneration of conifer and invasives. Surface smoothing removes these seed beds and curtails regeneration by ensuring the water table rises uniformly to surface across the whole site. Surface smoothing uses a variety of techniques in combination, to level out the plough ridges. These surface smoothing techniques include:

1. Surface smoothing using stump flipping.
2. Surface smoothing using the excavator bucket, and
3. Surface smoothing using a stump grinder.

1. Surface smoothing using stump flipping

Stump flipping is a surface smoothing technique that peels off the shallow root systems from the underlying peat, flipping them over, followed by compressing them upside down into the furrows with the back of the bucket. The technique used by the machine operator is important and it involves using a toothed bucket to peel the stump off the peat (to minimizing peat disturbance) and then flip the stump over into the furrow and then by driving over it, the stump is compressed into the furrow. Before stump flipping it is important to set out effective buffers along all watercourses, as a water protection measure. Stump flipping is best used on peats deeper than 1m. Stump flipping is suitable for Sitka spruce crops as they have a shallow root plate, which is least likely to disturb the peat in the catotelm. Conversely, the larger lodgepole pine trees have a deeper root ball, that may bring catotelmic peat to the surface, and for these areas an alternative restoration technique would be more appropriate. Stump flipping can also be done on intermediate slopes. Flipping every stump is not always the best approach, do not flip the large stumps if the expected disturbance is too great, flip all the medium sized stumps and push all the small stumps down into the peat. Aim to retain as much of the surface vegetation as possible, by

finding a balance between disturbance from reprofiling and minimal disturbance. All stump flipping should minimize the level of peat disturbance and for the larger stumps and root plates it is advisable to leave these in situ. The machine needed for stump flipping can be either a 14 or 20 t machine, with the larger stumps needing the larger 20 t machine. Underpowered machines will not be unable to flip the stumps (you will observe that the machine will be pulled into the peatland, and the stump will not move).

2. Surface smoothing using the excavator bucket.

Reprofiling without stump flipping can occur on poorly drained sites where tree growth is very poor, bog vegetation abundant and furrow depths shallow. In these areas, the excavator bucket can be used to level up the site by filling in the plough furrows by either scraping or nudging the ridges into the furrows. Typically, this is followed up by and complimented by cross tracking with the machine to ensure a level surface is achieved and a good deal is formed. This option is limited by the presence of tree stumps and roots, and it is therefore only suitable for the very smaller stumps, but it can also be used in felled areas that are left fallow for a long enough period of time that has allowed the stumps and roots to rot and decay. If reprofiling without stump flipping reprofiling is not possible, then more intense drain blocking of the main and peripheral drains will be required. If the peat depth is deep, then the felled timber and brash can be used to block the furrows. For this to be effective, peat dams must be installed first. The timber and brash are useful to slow down the speed of the water but they do not form a good seal in the peat. Therefore, this technique will also require peat dams. It is recommended to block all outflows from existing furrows and install silt traps along collector drains and install dams at 10-20 m intervals along furrows and drains (flat ground or shallow slopes <1 degree) and increase frequency on steeper gradients. Dams should be built to plough ridge height (or approximately 20 cm about the round surface if ridges are absent) and staggered between adjacent furrows to encourage rewetting over a wider area. Plastic piling should only be considered if there is no other option as it is more difficult to get a good seal with plastic piling when there are roots in the peat adjacent to the furrow.

3. Surface smoothing using a stump grinder

Reprofiling with stump grinding is a new approach that involves grinding the stump first to make subsequent reprofiling with the excavator bucket easier. This approach is the same reprofiling without stump flipping as described above, with the addition of first using a stump grinder to grind all the larger stumps. This approach requires two passes with excavators. The first pass is with an excavator mounted with a stump grinder attached to grind the larger stumps. The second pass (it can be same machine with the stump grinder attachment replaced with a bucket) is with the excavator with a bucket attached.

Surface smoothing has been adopted by the Peatland Programme of IUCN UK (the UK branch of the International Union for Conservation of Nature) as a restoration technique [5].

[5] Forest to Bog Restoration: Demonstrating Success

2 Project Sites

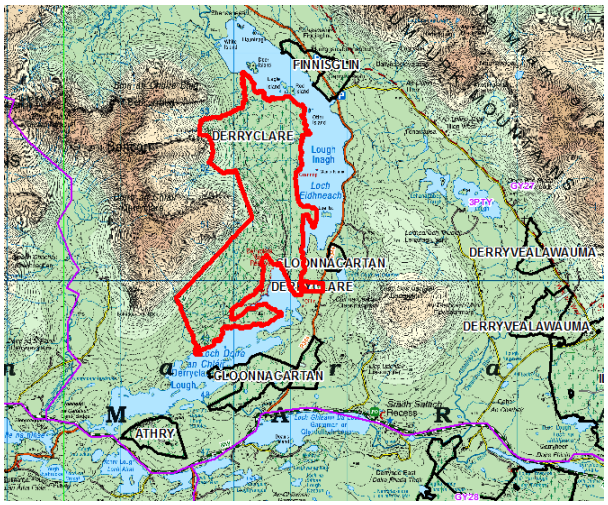
2.1 Derryclare (Co Galway) and Glennamong (Co Mayo)

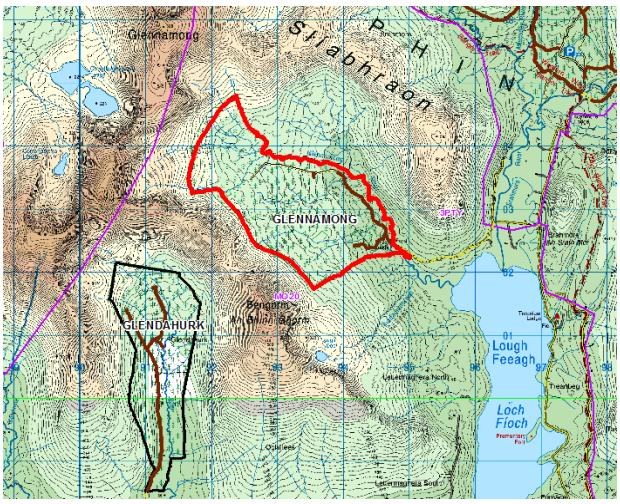
Two Coillte properties were selected as the project sites, namely Derryclare and Glennamong. These sites were selected as they are representative of the different site types to be encountered nationally. Derryclare in Co Galway is a 567ha site, of which 343 ha was deemed suitable for restoration and redesign and 224 ha was deemed not suitable. The area deemed not suitable contains a second rotation crop that had a second significant drainage intervention (mounding) and as all current best practice relates to first rotation crops, this area was excluded). Glennamong in Co Mayo is a 444ha site, where the restoration plan is currently been drafted to suggest that the entire site is suitable for restoration (this also includes approximately 100 ha of second rotation crop, however, this was included as there was no significant drainage intervention as the area was 'flat planted').

Derryclare is a large forest located on the lower eastern slopes of the Twelve Bens and on the western shores of Lough Inagh in Connemara, Co. Galway. The conifer forest was established during the 1960's and surrounds the Derryclare is surrounded by the Twelve Bens/Garraun Complex SAC. Derryclare is very scenically located in the beautiful Inagh Valley. Much of the forest consists of poorly growing trees on peat, so there is potential to reduce GHG emissions by converting the current forest to open habitat and scrub or mixed forest. There is potential for restoration of blanket bog habitat in the northern portion.

The forest surrounds the Derryclare Nature Reserve, which consists of native oak forest (Annex I habitat old oak woodland 91A0). Soil analysis revealed that there is potential to expand the area of native oak forest around the nature reserve by 62.3 ha

Glennamong is a large forest located in a valley in the southeastern portion of the Nephin Beg mountain range in Co. Mayo, between the mountains and Lough Feeagh, which lies a short distance southeast. The forest is surrounded by the Owenduff/Nephin Complex SAC. Glennamong is a typical western peatland site, that was ploughed and planted almost exclusively with lodgepole pine. The main objective at Glennamong is to redesign the forest to reduce GHG emissions. This will entail converting the current forest to open habitat and scrub or mixed forest. This forest offers a unique opportunity to link in with the Marine Institute, who have been monitoring this water catchment (Burrishoole) for the last 70 years.





2.2 Future Site Selection

Since the first sites were selected for the WWP Project (Derryclare and Glennamong), Coillte has expanded its knowledge of peatlands of ecological value on the estate. This has been achieved through:

a) Mapping an additional 10% of the estate that will be managed primarily for nature as part of Coillte Strategy (see Section 1.5)
b) Flagging peatland forests for redesign as part of the development of Coillte Strategy (see Section 1.5)
c) Collaboration with NPWS on a national desk review of peatland forests to identify areas where there is strong ecological reason to support the peatland restoration and redesign decision.

Selection of future sites for peatland restoration and redesign projects will be informed by the outcomes of these initiatives, and by close collaboration between Coillte's Peatland Programme Manager and Ecology Lead (see Section 5.2).

2.3 Method Statements

All projects can be categorised into 3 phases, namely

1. Planning
2. Operations
3. Research & collaboration.

Typically, a project plan is developed on a property basis, to ensure as large an area is planned for, so that economies of scale and value for money can be achieved. Each property-based plan must go through a rigorous planning phase, before moving into the operational phase. The research & collaboration phase refers to the ancillary tasks that occur in tandem with the planning an operational phase. Table 6 below gives a summary of the 3 main project phases and associated actions for each phase.

The planning phase

The first iteration of the WPP project addresses the planning phase and Table 7 below indicates the level of detail required to meet the planning regulations. As peatland restoration with tree removal is a change of land use, all sites over 70ha must complete a detailed EIAR as part of the planning application., This process requires extensive field work, and detailed baseline survey, with the entire application taking a minimum of 1 year to complete.

The operational phase

The current iteration of the WPP will address the operational phase, as we move from planning into operations. This needs to be built from the bottom up and requires modification to the existing harvesting methods and the adoption of restoration techniques. It also requires the appointment and upskilling of a contactor base, to ensure the works can be done to the required standards.

The research & collaboration phase

The first iteration of the WPP project has set a good baseline for research & collaboration which includes:

- Partnering with the PeatFor project with the University of Limerick (UL), in quantifying carbon emissions and erecting 2 flux towers.
- Pending partnership with iCRAG assessing at the impacts of restoration on water quality.
- Coillte is funding a startup remote sensing monitoring project with Terra Motion, looking to see if the "bog breathing" approach with NatureScot is suitable for Irish conditions.
- Part of the NPWS project looking at forestry on peatlands nationally with the view to prioritising their suitability for restoration.
- Part of the NPWS group looking to develop a best practice for peatland restoration and redesign guidelines.

Table 6: An overview of the main project phases and actions.

Planning phase	
Planning & baseline data	• *Collect baseline data (water quality, LIDAR, peat depths, peat stability)* • *Map the natural drainage patters (EPA & relevant water courses)* • *Install live water monitoring and piezometers.* • *Prepare a planning application (full EIAR, AA, site surveys etc.)* • *Plan optimum road layout and water crossings* • *Plan timber removal & restoration plan (apply coupe size restrictions)* • *Consultation on plan.* • *Secure planning and felling licences*
Mitigations	• *Adhere to all planning conditions (appoint specialists, pre-commencement surveys, additional monitoring & site-specific conditions)* • *Insert pre-operational sediment control measures (silt traps, leaky dams etc.)* • *Secure existing riparian buffer zones* • *Link operations to weather conditions and turbidity threshold values*
Operational phase	
Operations (Peatland restoration)	• *Remove timber using conventional felling, non-conventional felling (whole tree harvesting with a shears head, consolidate brash mats with processing of trees on the consolidated mat) and felling to waste including mulching.* • *Insert post-tree removal sediment control measures (as site is now more accessible)* • *Carry our peatland restoration measures including standard windrowing, peat damming, surface smoothing using a combination of using the excavator bucket, stump grinding and selective stump flipping.* • *Carry out property wide restoration measures including external fencing, site maintenance, invasive species controls and other works specified in the planning.*
Operations (Redesign)	• *Restructuring lodgepole pine leading to mixed woodlands through respacing, low density restocking, ring- barking and broadcasting pioneer tree seed to create more diverse forest in terms of species and structure.* • *Natural regeneration and planting of Scots pine and other suitable species (willow, birch, alder) at low densities.* • *Improving the aesthetic appeal of the forests by improving species diversity, feathering stand edges and along watercourses, and creating gaps for natural regeneration of native broadleaves* • *Planting low density lodgepole pine with native tree species to create mixed woodlands* • *Replanting. Replanting pioneer woodland (only where appropriate)*
Other	
Research & collaboration	• ***Research**. Participate in related research collaborations that support the project.* • ***Work in collaboration** with the NPWS to develop and improve current best practices.* • ***Collaborate** with governmental initiatives to support the implementation of the Nature Restoration binding targets.*

Table 7: Detailed required for a peatland restoration and redesign planning application.

Select suitable sites	
Gate 1 – Baseline data & draft plans	**Gate 2 - Field surveys** †
Collect LIDAR data	Additional Ecology Survey
Collect monthly water samples	Land & Soils
Peat Depths (Hydrology Assessment)	Peat slide Risk Assessment
Initial Ecology Survey	Archaeological Assessment
Mapping watercourses/interceptor drains	Landscape Visit & Initial Assessment
Install live water monitoring	Ecological Impact Assessment (EcIA)
Initial Road Design & water crossings	Invasive Species Survey
Draft Timber Removal Plan (Coillte)	Wintering Birds
Draft Restoration Plan	Breeding Birds
	Mammals
	Habitat / Botanical Surveys (Optimal Time)
	Freshwater Ecology
	Migratory Birds (Spring) - Survey Window
	Migratory Birds (Autumn) - Survey Window
	Bats
Gate 3 - Write up application	
Intro	Landscape& Visual
Project Description	Land, Soils, & Geology
Traffic & Transport (RPS)	Hydrology & Hydrogeology
Methodology & Consultations	Biodiversity
Air Quality	Interaction of the Foregoing
Climate	Schedule of Mitigation
Population	Non-Technical Summary
Human Health	Appropriate Assessment& NIS
Noise & Vibration	CEMP (mitigations)
Material Assets	Finalise EIAR
Major Accidents or Disasters	Planning Application Preparation
Archaeology& Cultural Heritage	Submission of EIAR & Planning Application
Consideration of Alternatives	
Submit planning application	

† *The number of surveys required is dependent on the Qualifying Interests in the adjoining statutory areas.*

3 Project Action Plan

3.1 Description of Work Packages (WPs)

1. WP1: Project management
2. WP2: Design & planning
3. WP3: Tree clearance
4. WP4: Restoration works
5. WP5: Comms & engagement
6. WP6: Site monitoring & reporting
7. WP7: Research & best practice

WP1: Project management

To comply with the planning conditions both an environmental manager and an operational manager are required to manage the site. The environmental manager fulfils the ecological clerk of works role on site and ensures all mitigation as specified in the CEMP plan are implemented. The operational manager is required to manage the site and the contractors to ensure compliance with the restoration plan. The environmental and operational manager will outsource all required specialist services required to comply with the survey work outlined in work package 4.

Target	All project personnel in place
Output/Deliverable	Internal appointments completed Specialist consultants appointed Contractor team procured
Indicator	Full working structure in place
Measurement	Schedule of planned operations implemented as per plan
Outcome	Full working structure in place

WP2: Design & planning

In terms of planning, peatland restoration with tree removal is a change in a land use that currently requires a planning consent. There is no Irish 'Peatland Code' to assist with the development of peatland restoration and redesign plans in Ireland and as a result a full EIAR planning application (similar to a windfarm development) is required. Planning is an involved process that requires at least one year's baseline data to support planning applications, resulting in multiple site surveys and comprehensive reporting. Based on the Derryclare application, the level of detail to necessary to achieve planning is broadly the same as that of a windfarm development. Unfortunately, this is also reflected in the cost of the application. The planning application developed by Coillte, as part of the Western Peatland Project, uses a 3 Gate approach (see Table 7), where Gate 1 collects the baseline data (LIDAR, monthly water samples) and prepares draft timber removal and restoration plans, Gate 2 collects all relevant field work required for the site (peat depths, peat stability, ecological surveys, bird and mammal surveys, freshwater ecology, and other surveys required for the planning EIAR report), and Gate 3 validates the data and collates all the information into a full planning EIAR report, including a 'CEMP plan' that details all the site mitigations, that is then submitted for planning.

Planning for peatland restoration with tree removal requires dual consents, namely planning permission and a felling license. Preparing a planning application is costly and is open to public objections and Further Information Requests (FIRs), which can delay decisions and add costs. Only when planning is approved can the felling license application be made. The felling license consent process is also open to objections, which can also result in further delays and costs.

Target	All consents in place
Output/Deliverable	All consents in place
Indicator	All consents in place
Measurement	Coillte records
Outcome	All consents in place

WP3: Tree clearance

The work package for tree clearance includes the cost of roads, harvesting costs and transportation of material to the mill. It is important to note that timber revenues are accounted for in the cost calculations by subtracting them from the overall total tree clearance cost. This means that the tree clearance costs are net of all timber revenues.

Roading is an essential component of the plan, to ensure timber removals are done responsibly and that the site is accessible for the restoration works. All new forest roads are "floating roads" that use the "Build on top" COFORD specification. All new roads are carefully located using the same peat stability factor of safety approach used by windfarms. The road layout also includes engineered road crossing points and must also accommodate, where possible, the 25ha coupe restriction. The road layout is the spine of the plan, and if properly located, it is one of the main ways to control sedimentation on the site. The building of floating roads also avoids excavation, which is a positive sedimentation control measure.

Tree removal is the first step in restoration and it is done in three main ways, 1) conventional harvesting using a harvester & forwarder (used only in the steeper slopes where the subsequent restoration works requires windrowing), 2) non-conventional harvesting using whole tree harvesting, double handling of whole trees to consolidate the bash mats, with subsequent tree processing on the consolidated brash mats (used only where the subsequent restoration works is surface smoothing), and 3) Fell to waste or mulching, where a modified excavator is used to fell to waste or mulch the crop (used only where the trees are not developed and no merchantable timber is available).

Target	Tree removal complete all 3 sites
Output/Deliverable	All 3 sites roaded Tree removal complete all 3 sites
Indicator	Hectares of tree clearance completed
Measurement	Coillte records
Outcome	Tree removal complete across all three sites; monitoring of habitat development has commenced

WP4: Restoration works

Restoration works includes a range of measures including sediment control, surface smoothing, windrowing, planting, fencing, invasive species control, operational monitoring, professional oversight, equipment & materials, fire management and trespass control. Peatland restoration is not one single restoration operation, but is instead a mix of different operations, that can be mixed and matched to best suit the site conditions. As a result, it is difficult to cost accurately without a site-specific restoration plan. The restoration works post felling are matched to the site conditions, with surface smoothing preferred in the flatter areas with deeper peat and windrowing preferred in the steeper areas where drain blocking would be ineffective. The large-scale restoration works are all done by excavators, with limited manual interventions to install sediment controls in buffer zones. Best practice requires all excavators to have a ground pressure of less than 15kPa and this cannot be achieved with standard undercarriages. To achieve the required ground pressure, a bespoke extra wide undercarriage is required, that allows the extra wide tracks (1.9m to 2.2m) to operate correctly. Invasive species control of predominately rhododendron is an important element of the restoration works. In nearly all afforested peatland sites, rhododendron is present and typically thrives when the ground is disturbed. External sheep fencing is recommended, especially in areas with historic trespass issues. Deer fencing is also recommended, where the restoration works include with pioneer species.

Target	All restoration & redesign works completed
Output/Deliverable	LGP undercarriage used for operations Sediment control measures installed Planting works completed Restoration works completed Invasive species controlled Site fenced All planned mitigations applied
Indicator	Hectares of actions completed
Measurement	Coillte records
Outcome	Restoration actions implemented as specified in restoration plans

WP5 Comms & engagement

As with all large projects a budget is set aside for communications and engagements. The first iteration of this project has done a lot of work in this area and has completed the groundwork. None the less, continued communications and engagements are budgeted for the successful implementation of this project.

Target	Positive PR and collaborations
Output/Deliverable	PR events Communications in press and social media
Indicator	Number of engagements Responses to social media posts Level of stakeholder engagement
Measurement	Coverage reports Social media activity
Outcome	Local community groups are positively engaged Positive perception of the project among stakeholders and wider public

WP6 Site monitoring & reporting

Derryclare is the first peatland restoration and redesign site in Ireland to have a planning consent and the first to provide us with the likely required mitigations and the expected cost of compliance with planning for an approved peatland restoration and redesign project. Derryclare was subject to numerous FIR requests, some of which were resolved by adding additional mitigations, other than the standard forestry mitigations. Compliance with planning for Derryclare has added additional management requirements in 2 key areas namely:

Management of operations. The appointment of specialist personnel with watching briefs to oversee the project operations. These include an environmental manager (cost included in WP1), a peatland ecologist, a hydrologist, an archaeologist and an ecologist (these costs are included in the operation al costs under WP4).

Site monitoring. Site monitoring includes monitoring for operations but also includes ongoing monitoring of the entire site in real time or at periodic intervals. Real time monitoring refers to the use of telemetry to take water measurement readings every 15 minutes with data uploaded onto a web portal for immediate viewing. (This also allows alarm notifications to be set to notify if acceptable thresholds are exceeded). This real time monitoring includes live water monitoring stations (strategically located in fixed positions on site) and turbidity monitoring (strategically located in mobile locations downstream of operations). Monitoring at periodic intervals refer to the collection of additional data including a) monthly grab samples for chemical analysis, b) watertable depths using piezometers, and c) vegetation succession, using annual or biannual quadrant vegetation.

Target	Robust monitoring regime in place
Output/Deliverable	Link monitoring to operations Relate water quality to restoration works Assess impact on Q rating status Assess vegetation change post-restoration Assess impact on watertable depths
Indicator	Water quality indicators Vegetation: species and cover/abundance Watertable depth below peat surface
Measurement	Regular monitoring of water quality, vegetation and watertable depth
Outcome	Monitoring results demonstrate the changes in peatland habitat and water quality over time

WP7 Research & best practice

An important element of this project is the continuation of research and best practice. Research collaborations were part of the original scope, and three collaborations are well advanced. These three collaborations include: a) PeatFor is an "in kind" collaboration that is now active, looking at the GHG emissions during and after restoration, b) iCRAG is a 50/50 collaboration that can be active if funded (200k over 2 years), looking at the impacts of restoration on water quality, and 3) Terra Motion which is fully funded by Coillte to look at using new RADAR based remote sensing techniques to correlate peatland ground movement with peatland condition at a landscape level.

Target	Robust research and collaborations in place
Output/Deliverable	Robust data on carbon emissions Robust data on water quality during and post-operations Peer review site monitoring data
Indicator	Number of research partnerships
Measurement	Reports produced
Outcome	Robust professional network in place Stakeholders have access to best practice information

3.2 Project Timelines

Project timelines for large scale peatland restoration and redesign restoration on large sites are expected to be 8-10 years. The planning permission for Derryclare is a 10-year planning consent. The main reason behind these long-term timelines is the implementation of, where possible, the 25ha felling coupe size restriction. The timelines for future peatland restoration with tree removals, if continued to be governed by the coupe size restriction, will all be long term plans, where felling and restoration works in general could be limited in each property to between 2 or 3 coupes per year (50 to 75ha).

Project timelines are dependent on project consents, which end to end can take at least 16 months. Planning permission typically takes 1 year to prepare and submit, the planning application takes 8 weeks to a decision, and this is then followed by the felling licence application, which is estimated to take further 8 weeks. At the time of writing, Derryclare is planning approved and the Glennamong planning application is 70% complete, with detailed draft plans and timelines in place.

3.3 Project Milestones

The main milestones include securing consents (planning and felling licences), establishing a contractor base with suitable machinery and training, establishing a dedicated management team within Coillte, identifying a third site to make up the 1,000 ha, and finally planning, scheduling and monitoring the works in line with the consents.

Table 8 below outlines the anticipated project milestones, particularly those planned for 2026 and 2027. The timing of milestones is largely determined by the timing of project consents. Based on an estimate of the time required to obtain consents, we are assuming that the third site will be

operational in 2027. As expected, the precision around milestones tapers out for the years beyond 2027, but this will be reviewed regularly with DAFM as the project progresses.

Table 8: Indicative project milestones

Milestones	Date	Commentary
Secure felling approval for Derryclare	April 2026	Derryclare fully consented and can ”go live”
Start planning application for 3rd site	May 2026	Select suitable site and initiate planning application
Appoint contractor(s) for restoration works in Derryclare	May 2026	Procure and train suitable contractor(s)
Begin operations in Derryclare	June 2026	Start tree removal and restoration works
Obtain planning and FL consent for Glennamong	July 2026	Glennamong fully consented and can ”go live”
Appoint contractor(s) for restoration works in Glennamong	Sept 2026	Procure and train suitable contractor(s)
Obtain planning and FL consent for 3rd site	May 2027	Third site will be fully consented and can ”go live”
Appoint contractor(s) for restoration works in third site	June 2027	Procure and train suitable contractor(s)
Begin operations in third site	July 2027	Start tree removal and restoration works
Mid project review	Dec 2029	Mid project review
Last tree removal Derryclare	Dec 2030	Last tree removal harvest block
Last restoration work Derryclare	Dec 2031	Last restoration harvest block
Last tree removal Glennamong	Dec 2033	Last tree removal harvest block
Last restoration work Glennamong	Dec 2034	Last restoration harvest block
Last tree removal 3rd site	Dec 2033	Last tree removal harvest block
Last restoration 3rd site	Dec 2034	Last restoration harvest block
Completed project	Dec 2034	Project end

4 Project Costs

4.1 Current Financial Position (end October 2025)

Spend to-date:

1. Invoiced and Paid by DAFM: [redacted]
2. Invoiced but yet to be Paid by DAFM: [redacted]
3. Incurred but yet to be Invoiced by Coillte to DAFM: [redacted]
4. Overall spend to-date: [redacted]
   of which, [redacted] remains to be recovered by Coillte [redacted]

Given the financial exposure in this project, in August 2025, Coillte made the decision to pause all but essential activity for both Derryclare and Glennamong. As such, water quality sampling is the only activity currently ongoing at either site.

Table 9: Costs Incurred up to end October 2025

	Costs Incurred	Derryclare		Glennamong		Total
	Time Period	**€**	**Main Activities**	**€**	**Main Activities**	**€**
A	Pre-2025	[redacted]	• Design & planning fees • Lidar data • Baseline site monitoring	[redacted]	• Lidar data • Ecology baseline surveys • Draft plans	[redacted]
B	Q1 2025		• Brash removal trial 2024 • Monthly water sampling		• Monthly water sampling	
C	Q2 2025		• Monthly water sampling • Environment & planning professional fees		• Monthly water sampling • Design & planning fees	
D	July-Oct. 2025		• Invasives removal & control • Monthly water sampling		• Environment & planning professional fees • Monthly water sampling	
E	2025 ytd Total (Jan.-Oct.)					
F	Overall Total					

4.2 Project Costs by Work Package (WP)

Increases in Costs 2020 to 2025

In the 5-year period since 2020, significant additional costs, both actually incurred and projected, have materialised across all aspects of the Wild Western Peatlands project.

The increase of costs is outlined in Table 10 and Figure 1 below. The work packages in the original Concept Note have been mapped to more practical work packages in the current project plans for Derryclare and Glennamong (from which the costs of delivering 1,000 hectares in total have been extrapolated).

The main drivers of these cost increases, which were not envisaged when preparing the original Concept Note, are:

1. The requirement to secure formal planning permission through the local authority:
   a) A significant number of FIRs and an initial refusal by Galway Co. Co. added very considerable cost to the Design and Planning work package.
   b) When Galway Co. Co. subsequently approved the project, the conditions it placed on operations (especially professional supervision and operational monitoring) inflated the cost of the restoration works themselves, and on the costs of monitoring.
2. The nature of the forests on these sites is very poor, and the net cost of tree clearance (having accounted for sales revenues) is greater than was originally envisaged.

Table 10: Unit Cost Increases 2020-2025 by Work Package (€/ha)

Work Package (WP)	*2020*	*2025*	Difference
WP1: Project Management	[redacted]		
WP2: Design & Planning			
WP3: Tree Clearance Costs (Net)			
WP4: Restoration Works			
WP5: Comms. & Engagement			
WP6: Monitoring & Reporting			
WP7: Research & Best Practice			
Overall Unit Cost			

Tree Clearance: Net Costs

Harvest Blocks (HBs) have been created for the planned felling coupes in the Derryclare and Glennamong properties (totalling 631 ha). This allowed us to generate, for each HB:

1. **Volume estimates by Log Product:** based on species and average tree size;
2. **Timber Revenues:** based on 7-year average prices;
3. **Harvesting Costs:** based on species, average tree size and ground conditions; and
4. **Haulage Costs:** based on distance to the nearest appropriate mill for each product.

In addition, we have estimated the **total cost of road construction** for each property, as needed to facilitate tree clearance, restoration and redesign operations and general access.

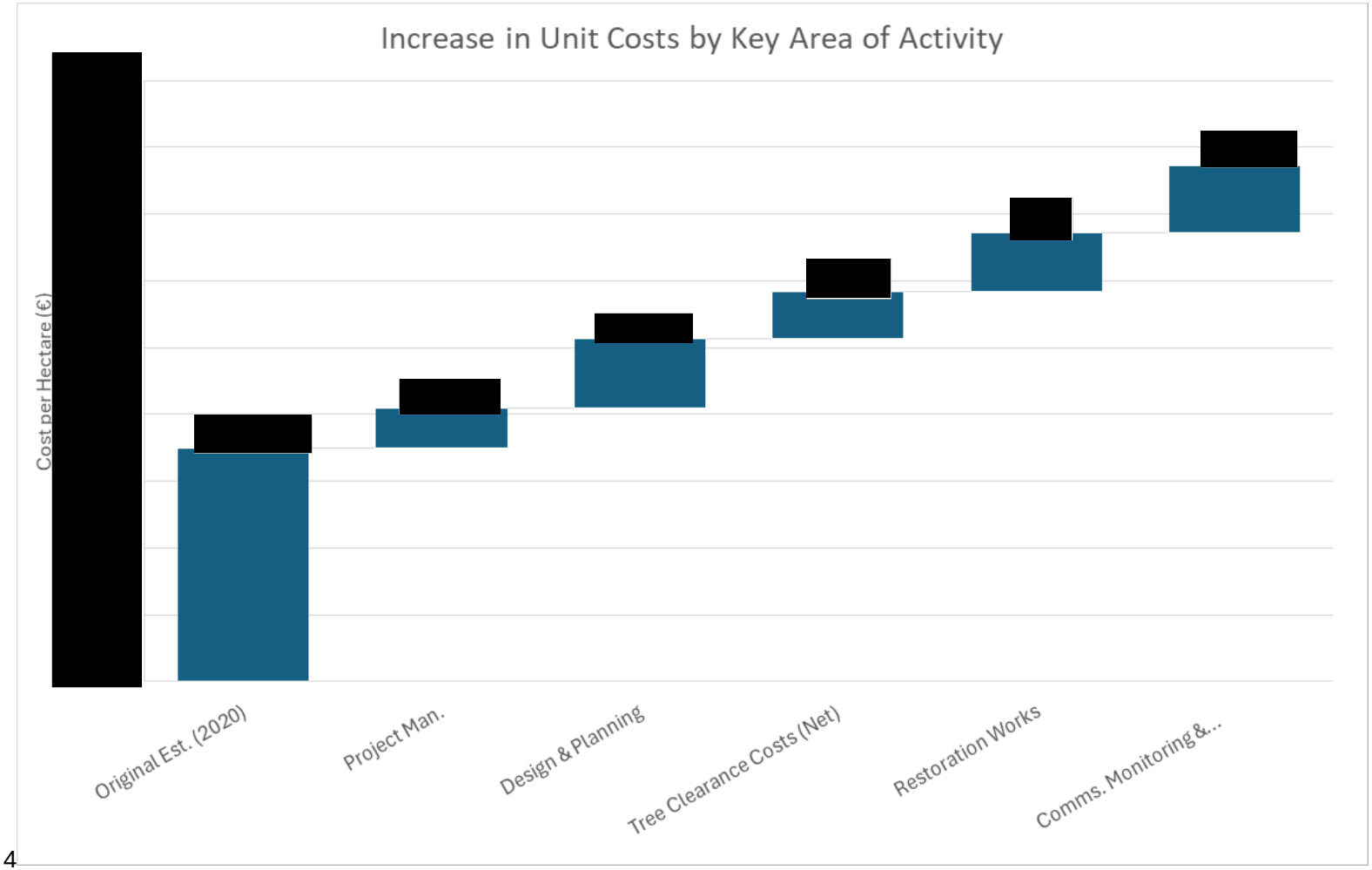
We have assumed similar revenues and costs for the as yet unidentified third property(s) (c. 369 ha) required to bring the total project area to 1,000 ha.

These revenue and cost figures are detailed in Table 11, below.

Table 11: Tree Clearance Revenues and Costs

Redesign Area (ha)	Total Volume (m^3)	Volume Production (m^3/ha)	Timber Revenue (Millgate - €m)	Harvesting Costs (€m)	Haulage Costs (€m)	Mulching Costs (€m)	Roading Costs (€m)	Net Cost (€m)
1,000	[redacted]							
Unit Prices/Costs	[redacted]							

Figure 1: Unit Cost Increases 2020 to 2025 (€/ha)



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4.3 Overall Project Cost Estimate

Given the cost increases outlined in Section 4.2, above, it is estimated that approximately [redacted] is required to deliver a revised ambition of 1,000 hectares of peatland restoration under the Wild Western Peatlands project.

Table 12: Total 10-year Project Costs across all Work Packages (for 1,000 ha)

Work Package	Main Activities	Est. (10-Year) Cost (€ 000s)
WP1: Project Management	• Project Manager (0.25 x FTE) • Operations Manager (0.75 x FTE)	[redacted]
WP2: Design & Planning	• Assess & select sites • Develop targeted habitats & outcomes • Undertake Habitat, Species & Water Surveys • Undertake Archaeological & Cultural Survey • Complete EIA report • Prepare & Submit Planning Application • Prepare & Submit Felling Licence Application	
WP3: Tree Clearance Costs (Net)	• Road construction • Fell & extract (merchantable) Timber • Haul timber to mill *less revenue from timber sales*	
WP4: Restoration & Redesign Works	• Fell to Waste Unrecoverable Trees • Windrowing • Surface smoothing • Sediment Control • Peat Damming • Removal of Invasives • Brash Removal • Replanting • Professional Supervision & Oversight • Equipment & Materials **NOTE:** not all of the above will be applied to the same piece of ground.	
WP5: Comms. & Engagement	• Non-statutory Engagement • Peatland Collaboration Forums (30% FTE)	
WP6: Monitoring & Reporting	• Monitoring surveys (vegetation, habitat, species, water) • Commissioned analysis & report writing	
WP7: Research & Best Practice	• PEATFor (in kind) • iCRAG • TerraMotion (Coillte-funded)	
Total Cost for 1,000 ha (€m)		
Unit Cost (€/ha)		

* **With expenditure to-date of [redacted], the projected expenditure to the end of the project is [redacted]**

4.4 Phasing of Costs

Table 13, below, outlines the indicative phasing of costs for the project for the next 9 years (up to 2034 incl.). This includes the addition of one further site to the project to reach 1,000 hectares. The upcoming years will see the first tree clearance and restoration works commencing, in addition to submitting the planning application for Glennamong and advancing same for the additional site.

Table 13: Indicative phasing of costs for the project up to 2034 (for 1,000 ha)

Year	Project Management	Design & Planning	Tree Clearance Cost (Net)	Restoration & Redesign Works	Comms. & Engagement	Monitoring & Reporting	Research & Best Practice	Total	%
Pre-2025	[redacted]								
2025									
2026									
2027									
2028									
2029									
2030									
2031									
2032									
2033									
2034									
Total									

5 Project Management, Monitoring & Impacts

5.1 Proposed Structure for DAFM/Coillte Interaction

Proposed WWP Steering Group

Coillte proposes that a WWP Liaison Group be established, to include nominated representatives of both DAFM and Coillte.

This group will meet annually to discuss and review items to include but not limited to:

- Progress update
- Financial report
- Technical overview
- Challenges and opportunities

Financial Planning and Invoicing

Coillte will issue invoices to DAFM quarterly, to recoup costs incurred in the previous quarter. Supporting invoices will be accompanied by a written quarterly project update.

Each year, in Q4, Coillte will advise DAFM of a costed workplan for the following year.

Coillte will present a financial report at each annual meeting of the WWP Steering Group.

5.2 Coillte Project Governance

All Coillte's peatland projects are co-ordinated by the Peatlands Programme Manager, who is a member of Ecology Conservation Team in the Coillte Forest Division (Figure 2). The benefit of this team structure means that all peatland projects are now closely linked with Coillte's nature projects and actions.

The prime responsibility of Ecology Conservation Team is to enable Coillte to scale up its Forests for Nature activities. The team designs nature projects and co-ordinates their delivery in close conjunction with the Coillte Forest operations teams (BAUs). The Peatland Programme Manager has responsibility for all of Coillte's peatland redesign projects (Table 14).

Figure 2: Ecology Conservation Team in Coillte Forest

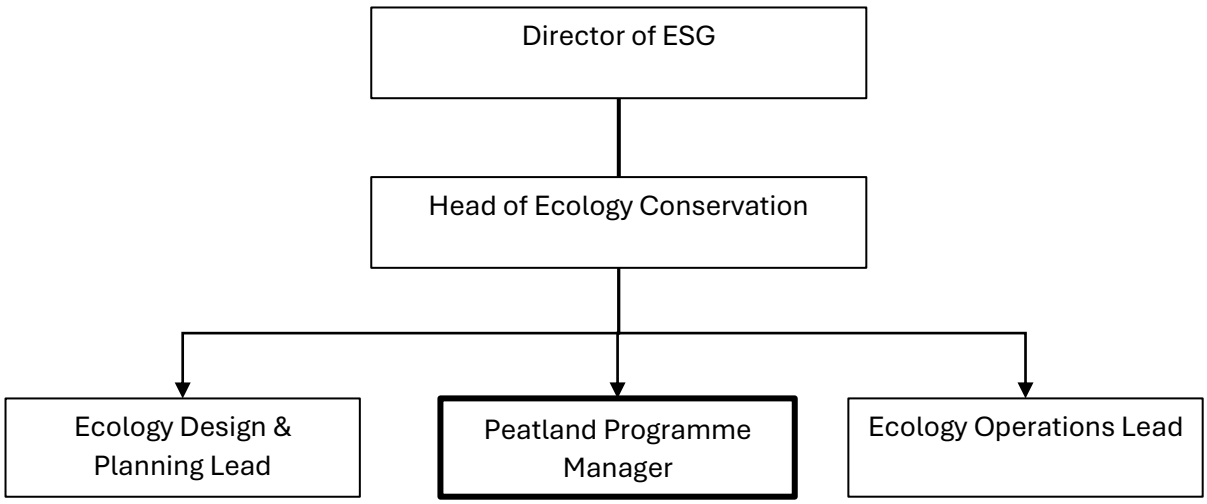
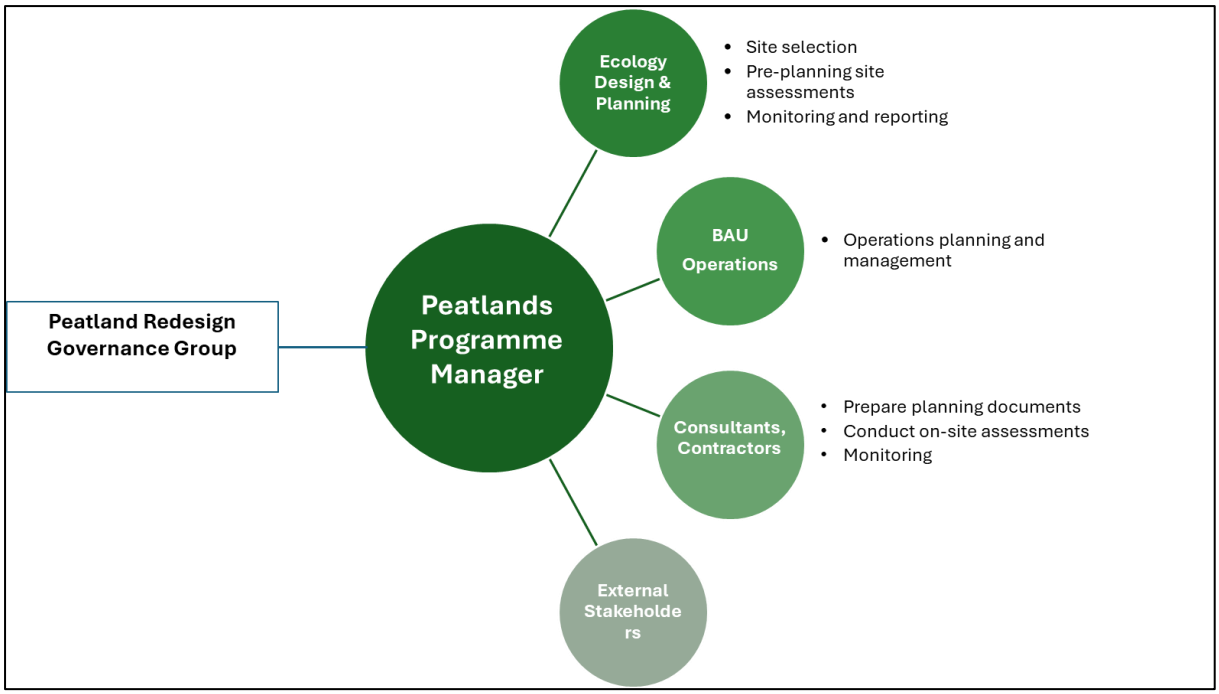


Table 14: Coillte's Portfolio of Peatland Projects

Project Name	Partners	Project Objective	Coillte Property Name
Wild Western Peatlands **WWP**	DAFM	Restore & redesign forested Atlantic blanket bog & heathland	Derryclare
			Glennamong
			To be confirmed
Wild Atlantic Nature **WAN-LIFE**	NPWS	Restore & rehabilitate forested Atlantic blanket bog; develop policy measures to support conservation of blanket bog	Derrylea
			Cappaghoosh
Cappaghoosh	Amazon	Restore & rehabilitate forested blanket bog & associated habitats	Cappaghoosh

A Coillte Peatland Redesign Governance Group is in place (Figure 3), where the Peatlands Programme Manager, Head of Ecology Conservation and Director of ESG meet monthly with the MD of Coillte Forest to review project progress and budgets.

Figure 3: Governance of Peatland Redesign Projects in Coillte



5.3 Sustaining the Benefits of the WWP

Coillte is excited to have this opportunity to deliver the WWP Project, in collaboration with DAFM. The objectives of the WWP project align both with national nature/climate objectives and with Coillte's stated strategic ambitions.

The management of peatland forests is an important issue in the context of Ireland's climate and nature objectives.

As the largest owner of peatlands and of forests in Ireland and bearing in mind Coillte's proven track record in delivering similar large-scale projects, we believe that Coillte is uniquely placed to deliver on the objectives of the WWP initiative. We have built a good network of contacts across organisations with similar ambitions and relevant experience.

We understand the challenges associated with delivering this project but believe we have the capacity to address these challenges and to find practical solutions that deliver action on the ground. The lessons learned from the WWP Project will be invaluable and applicable across the extensive national area of forested peatlands in Ireland, and for those forestry practitioners who manage them.