



**Irish Peatland Conservation Council  
submissions to the Peatlands and Climate Action Scheme  
rehabilitation of former industrial peatland  
by Bord na Móna**

**Living document last updated: 17/11/2021**

The Irish Peatland Conservation Council would like to acknowledge funding support for our work from the Heritage Council under the Heritage Sector Support Fund 2021 and IPCC Friends of the Bog.

An Chomhairle Oidhreachta  
The Heritage Council



<b>Rehabilitation Site Name</b>	<b>Region</b>	<b>Date Submitted</b>
Edera Bog	Co. Longford	7/12/2020
Clooniff Bog	Co. Roscommon	21/1/2021
Derrycolumb Bog	Co. Longford	21/1/2021
Pollagh Bog	Co. Offaly	25/1/2021
Oughter Bog	Co. Offaly	25/1/2021
Umeras Bog	Co. Kildare	22/2/2021
Kellysgrove Bog	Co. Galway	30/3/2021
Castlegar Bog	Co. Galway	16/4/2021
Boora Bog	Co. Offaly	20/5/2021
Belmont Bog	Co. Offaly	3/7/2021
Kilmacshane Bog	Co. Galway	28/7/2021
Mount Lucas Bog	Co. Offaly	28/7/2021
Garyduff Bog	Co. Galway	18/8/2021
Esker Bog	Co. Offaly	21/9/2021
Derrycashel Bog	Co. Roscommon	8/10/2021
Derrinboy Bog	Co. Westmeath	Open
Kilgarven Bog	Co. Westmeath	Open
Begnagh Bog	Co. Longford	Open
Derrybrat Bog	Co. Offaly	Open



# IRISH PEATLAND CONSERVATION COUNCIL

COMHAIRLE CHAOMHNAITHE PHORTAIGH NA HÉIREANN

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**Doreen King - Project Manager**  
**Peatlands Climate Action Scheme**  
**Bord na Móna Energy Division**  
**Leabeg**  
**Tullamore**  
**Co. Offaly**  
**Doreen.King@bnm.ie**

**7th December 2020**

## **RE: Edera Bog (County Longford) Draft Rehabilitation Plan**

Dear Mrs King,

Thank you for allowing the Irish Peatland Conservation Council (IPCC) to make comments on this draft rehabilitation plan. IPCC previously had input into the decommissioning and rehabilitation of Edera Bog as a consultee on the previous draft plan (See our letter addressed to David Fallon of 23rd May 2019).

Initially, IPCC find this plan very general and lacking in data and information that could assist consultees in assessing the proposed actions within the plan. This is surprising as it is being billed as an enhanced rehabilitation plan. It is in this regard that IPCC would like to make a number of points that will strive to make a more robust plan that safeguards the future of Ireland's natural peatland landscape and its carbon sink and greenhouse gas emissions.

1. The published data on the methods to be used in the rehabilitation needs to be provided for evaluation. This would allow us and other consultees to compare methods in the context of Edera Bog.
2. Bord na Móna must guarantee resilience in terms of carbon and rewetting effectiveness. What enhanced steps are you taking to ensure Edera Bog once rehabilitated will withstand the impacts of climate change as described by the EPA published reports NEROS and VAPOR?
3. Edera is a varied site and could be an ideal one for full GHG monitoring which would include CH<sub>4</sub>, CO<sub>2</sub> and DOC on the different habitats within the site. Please also include what type of sites Bord na Móna will monitor these GHG's on so it is possible to understand the strategy more fully.
4. The carbon savings from the rehabilitation measures you propose on Edera need to be monitored and reported on. At this stage would you have some information on the baseline emissions from this site that you could provide.
5. Please provide information on what bird species you will target as indicative of peat-loving habitat and good sustainable wetland.
6. In addition to monitoring vegetation from aerial photos IPCC need to see piezometers on the ground for water level monitoring. This would provide precise data on the exact areas the water table is within 20cm and for what period of the year. From this data hydrographs can be provided as part of the monitoring. Please provide us with a map of the location of the network of piezometers you will be monitoring on this site.
7. IPCC need specific targets being set in terms of the types of vegetation communities developing on the cut-away that have a strong role to play in greenhouse gas sequestration. Bord na Móna also need to specifically track the development of these peat-forming vegetation communities and report on them to National Parks and Wildlife Service. Please advise us as to which of these communities you are targeting.

## **35 YEARS TAKING ACTION FOR BOGS AND WILDLIFE**

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8. Dissolved Organic Carbon emissions from the site also need to be determined and monitored. IPCC understand that a huge quantity of carbon is being lost from cutaway bogs in bog water. This needs to be quantified and accounted for. We can see no detail as to how DOC will be measured within this plan. Perhaps you will clarify this issue?
9. Please clarify where the donor site for *Sphagnum* inoculation of Edera will be. Fisherstown Bog (Co. Longford) is part of an SPA and this would not be suitable.
10. Within the IPCC Sites Database Edera Bog is described as containing birch woodland, heath, poor fen, reedbed, scrub, wetland, woodland and embryonic *Sphagnum* vegetation. What are the priority habitats that this rehabilitation plan will target?
11. Please clarify what actions will be taking place in each zone marked for rehabilitation in Figure 8.5 in the plan. Actions should be tabulated. The table should include information on the action methods, the expected results in terms of birds, vegetation, carbon storage and carbon sequestration and costed.
12. Are there any plans for a commercial use of this site? e.g. the Derryadd Windfarm is north of the rehab site, is there any plans to extend this into Edera Bog?
13. Could you please clarify if this rehabilitation plan needs planning permission? IPCC note that retrospective EIAR has not been applied for. Can this be explained?
14. The IPCC Sites Database has an area value of 467ha for Edera Bog which differs from the area of 283ha quoted in this rehabilitation plan. Is this an error? What has happened to the other 184ha of this site? Best practice would suggest a holistic approach should be taken to the rehabilitation including all areas owned by Bord na Móna.
15. Please include a best estimate on the amount of carbon presently stored within Edera Bog.

Thank you for reading through our concerns and we await your response.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation Policy & Fundraising Officer



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**Bord na Móna Energy Division**  
**Leabeg**  
**Tullamore**  
**Co. Offaly**  
**doreen.king@bnm.ie**

**21st January 2021**

**RE:Clooniff Bog - County Roscommon**

Dear Mrs King,

Thank you for allowing the Irish Peatland Conservation Council (IPCC) to make comments on this draft rehabilitation plan. IPCC welcome the accelerated decommissioning and enhanced measures in the rehabilitation of Clooniff Bog. IPCC have a number of points to make on the draft rehabilitation plan.

Dissolved Organic Carbon (DOC) has been reported as an issue in the emissions to water from peat production sites. DOC needs to be monitored and reported on to ascertain the levels and the effects to the neighbouring designated sites.

Additionally, under the Water Framework Directive, some streams/rivers surrounding the rehabilitation area are unassigned and it is not possible to know what the quality of the water is ("Ecological Status"). Will these unassigned waterways be monitored in terms of the WFD as part of the rehabilitation?

While the draft plan lists some priority species recorded on site, IPCC see no focussed actions that will target specific species. We understand that general rehabilitation will improve the site for most wetland species but there is a chance here to involve local groups e.g. environmental organisations - in monitoring and improving habitat for their species of interest. The plan could include a map which describes the areas where community involvement may be possible in future and National Parks & Wildlife Service would be included in addressing species of concern.

The NPWS has had success in integrating the local community in the restoration process of some designated raised bogs in regards to the management of the surrounding drains/gullies. This was to alleviate fears that blocking the drains on the bog would flood neighbouring land. Using hydrological studies it was found in many circumstances that surrounding drains and gullies - if managed/cleaned - would reduce the risk of flooding and a management plan was created for the locals who were happy to be involved. This should be a process undertaken within this draft rehabilitation plan.

Your Sincerely,

Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer

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**Bord na Móna Energy Division**  
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**Tullamore**  
**Co. Offaly**  
**doreen.king@bnm.ie**

**25th January 2021**

**RE:Oughter Bog & Pollagh Bog - Peatland Climate Action Scheme**

Dear Mrs King,

Thank you for allowing the Irish Peatland Conservation Council (IPCC) to make comments on the draft rehabilitation plans. IPCC welcome the accelerated decommissioning and enhanced measures in the rehabilitation of Oughter & Pollagh Bogs. IPCC have a number of points to make on the draft rehabilitation plan.

While the draft plan lists some priority species recorded on site, IPCC see no focussed actions that will target specific species. We understand that general rehabilitation will improve the site for most wetland species but there is a chance here to involve local groups e.g. environmental organisations - in monitoring and improving habitat for their species of interest. The plan could include a map which describes the areas where community involvement may be possible in future and National Parks & Wildlife Service would be included in addressing species of concern. In addition, as there are already areas of constraint i.e. the shooting and grazing areas (Oughter Bog), and that there is already a rich community of species utilising the site (Northern Lapwing, breeding Black-Headed Gull, Common Ringed-Plover, Roding Woodcock etc) it is important that Bord na Móna create a biodiversity plan for the site which includes working with the associated parties to manage and control activities.

The NPWS has had success in intergrating the local community in the restoration process of some designated raised bogs in regards to the management of the surrounding drains/gullies. This was to alleviate fears that blocking the drains on the bog would flood neighboring land. Using hydrological studies it was found in many circumstances that the surrounding drains and gullies - if managed/cleaned - would reduce the risk of flooding and a management plan was created for the locals who were happy to be involved. This should be a process undertaken within this draft rehabilitation plan.

Your Sincerely,

Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer

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**22nd February 2021**

## **RE:Peatlands Climate Action Scheme - Umeras Bog**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Enhanced Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (flood regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Umeras Bog as this will put the habitats contained within the site on the right track to recovery and provide important refugia for peatland dependent species. The Irish Peatland Conservation Council are primarily concerned with the protection of the deep peats and the restoration of active raised bog.

### **Umeras Bog**

The location of Umeras Bog is well situated and with the rehabilitation of the peatland habitats there is a chance for an integrated approach in developing the conservation potential and amenity value. As the bog is beside the Barrow Blueway there is a tourism angle that if developed would create a sustainable attraction with visitors being able to stop off and enjoy a midlands peatland vista. This could also tie in with the Ballykelly Distillery recently announced for the area. The Irish Peatland Conservation Council have wrote a letter of support for the creation of a Peatland Park at Umeras Bog which has been proposed by a local action community group. As there is already local support for the rehabilitation of the bog and funding provided under the Just Transition to look into the design, biodiversity potential and strategic planning we hope that Bord na Móna can work with the County Councils who have shown interest in the development of a South Kildare biodiversity hotspot which will feed into the sustainable tourism plans for the area.

### **Wildlife**

The Irish Peatland Conservation suggest that focussed species conservation management plans be drawn up for Umeras Bog. It has the potential to provide supporting habitat for species which are protected or under threat of extinction. Whooper Swans (ANNEX I EU Birds Directive and Amber Listed under the Birds of Conservation Concern in Ireland) are known to the area and may benefit from habitat being made available to them from the rehabilitation. Native breeding Curlew (Red listed under the Birds of Conservation Concern in Ireland) have also been recorded on site and as this species is on the brink of extinction there needs to be a monitoring and conservation plan which manages potential threats and disturbances to them. Lapwing have been recorded breeding on Umeras (Red Listed in the Birds of Conservation Concern in Ireland) and high numbers of Golden Plover (ANNEX I EU Birds Directive and Red Listed in the Birds of Conservation Concern in Ireland) have also been recorded. Hen Harrier (ANNEX I EU Birds Directive and Amber Listed in the Birds of Conservation Concern in Ireland) have been recorded utilising Umeras which highlights the importance of this bog as foraging ground to important protected species.

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Please engage with the National Parks and Wildlife Service and BirdWatch Ireland in regards to best practices in the creation and implementation of conservation management plans for these species.

### **Deep Peats and Raised Bog Remnants (See Map 1)**

As highlighted within the Enhanced Umeras Rehabilitation Plan much of the site still has deep peats (>2.5m) with some red acidic peat still present. Umeras would be a good candidate for *Sphagnum* inoculation along with the cell bunding technique proposed within the plan. Although the timeline for a full restoration of raised bog habitats is lengthy and probably beyond our own lifetimes it will provide future generations with ecosystem services which we have lost.

There are raised bog remnants to the east and west of the main area that need to be managed for restoration and protection. It may be possible to use these areas as *Sphagnum* donor sites but it needs to be investigated as to whether they could sustain the extraction of flora for inoculation on other areas of Umeras. We understand that some areas are naturally high and dry such as the mineral ridge exposed on the west - is it possible to re-profile this area to allow more re-wetting of the peats. Much of Bord na Mona's land-bank is proposed to become fen habitat but Umeras is a candidate for heavy restoration and re-creation of the original habitat that was present before the intensive extraction of peat took place.

### **Heath Habitat (See Map 1)**

To the east there is an area of wet heath that if managed would increase the diversity of habitats at Umeras. It would also provide important invertebrate and ornithological refugia. This area has become encroached with scrub and would benefit from clearance but could be an important wildlife corridor from the direction of the Grand Canal pNHA. This part of Umeras is similar to The Irish Peatland Conservation Councils Lullymore West Nature Reserve which has been successful in promoting peatland and wetland habitats to the public due to the amenity value of the wild native invertebrates and flora which tourists and educational groups visit the nature reserve to learn about. There is a chance to engage with the local community in managing this area as it may benefit from low intensive grazing and any scrub clearance could be conducted by local groups. With the establishment of a local Umerus community group ongoing around the development of the Peatlands Park these community wildlife management events would have a platform for promotion and public engagement.

### **Private Industrial Extraction Area (See Map 1)**

To the east there is a private cutover where ongoing industrial extraction is occurring. The optics of rehabilitation alongside the industrial activity of peat mining is jarring. Is it possible that Bord na Móna can purchase this portion of Umeras and extend the rehabilitation over the rest of the site? This would further Bord na Móna's intention to change from a peat mining company to a climate change energy solution project manager and it would provide real conservation dividends for the midlands if the entire site was included in the rehabilitation plan.

### **Long-Term Monitoring**

The rehabilitation plan sets out a monitoring agenda which aims at fulfilling the goals of the EPA Licence. If the installation of piezometers and monitoring of water levels could be conducted with schools/colleges and community groups it would provide outreach, education and engagement over a long timeframe - beyond the rehab plan. This needs to be a feature within the plan as rehabilitation of the voluntary support network in these rural areas is also a priority.

### **Conclusion**

The rehabilitation of Umeras Bog is a positive step towards the re-instatement of the natural landscape in the midlands and will provide important habitat for many of Ireland's protected and rare species. With the rehabilitation and hopeful development of a peatland park Umeras Bog's future conservation and biodiversity potential is high, but this potential needs to be protected and the site formally included within the Biodiversity Action Plan to secure its place as a conservation area beyond the rehabilitation plans lifetime. The Irish Peatland Conservation Council also need to see an integrated plan as to how Bord na Móna will manage the network of rehabilitated bogs once licences have been handed back to the EPA. Are all the sites to be included within the Bord na Móna Biodiversity Action Plan or handed over to the National Parks and Wildlife Service for management as Raised Bog Natural Heritage Areas? This could support Ireland's efforts within the National Peatland Strategy.

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on the rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer



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**Bord na Móna Energy Division**  
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**Tullamore**  
**Co. Offaly**  
**pcasinfo@bnm.ie**

**30th March 2021**

**RE:Peatlands Climate Action Scheme - Kellysgrove Bog - County Galway**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Enhanced Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (flood regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Kellysgrove Bog as this will put the habitats contained within the site on the right track to recovery and provide important refugia for peatland dependent species.

### **Kellysgrove Bog**

As Kellysgrove Bog has not been harvested for peat (other than the extensive drainage and active turbarry) it is a good candidate for raised bog restoration. We understand that some restoration works have already taken place as a part of the Raised Bog Restoration Programme circa 2018, this should be included in the Peatlands Climate Action Scheme Rehab Plan for Kellysgrove bog for future reference. This bog also acts as supporting habitat for designated sites (NPWS Site codes 001247, 004097, 000222) and the Irish Peatland Conservation Council welcome the move to manage this site for biodiversity and eco-system services but it also needs to be formally included in the Biodiversity Action Plan (which is due for renewal) as a pledge to the importance of Ireland's peatland and the ecosystem services they provide.

### **Cloonascragh Fen and Blackwood pNHA (Sitecode: 001247)**

Although this designated site is outside the rehabilitation - it is connected to Kellysgrove Bog hydrologically. Has there been an environmental impact assessment to assess the potential detrimental affects on the fen from the restoration works on Kellysgrove Bog?

### **Habitat Survey**

The National Parks & Wildlife Service (NPWS) have recently published an Irish Wildlife Manual (IWM 128 The Habitats of Cutover Raised Bog) for identifying important habitats on cutover bog which although degraded could aid in the restoration of active raised bog and contribute supporting habitat. The traditional habitat classification scheme - Fossit, (2000) - may not easily identify important conservation areas on these cutover habitats which are also important in regards to carbon accounting. The changes between bare peat and regenerating bog have not been extensively studied and the emissions need to be itemised. Has Bord na Móna investigated the possibility of using this new publication in the habitat surveys of the Peatland Climate Action Scheme? Kellysgrove Bog includes areas of cutover (private and semi-state) on the margins and could be used to ground-truth and explore the new classification scheme with an aim to implementing it across the Peatland Climate Action Scheme.

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## **Monitoring**

For the general site visits the Irish Peatland Conservation Council welcome the quarterly monitoring and bi-annual visits (after 2 years). Page 31 within the plan describes the development of a Habitat Condition Assessment that is to be developed to monitor the vegetation and habitat rehabilitation for 5 years after the rehab phase. The Habitat Condition Assessment needs to be evaluated by an independent party such as the Environmental Protection Agency, National Parks and Wildlife Service and/or eNGOs to establish its positive and negative abilities in assessing the condition.

In monitoring the biodiversity and ecosystem services to see if there is improvements related to the rehabilitation it is suggested that specific indicators (p31) are to be used including breeding birds, bees/butterflies and *Sphagnum*. The Irish Peatland Conservation Council suggest the Large Heath Butterfly as a specific indicator for raised bog habitat and there is an established survey methodology for quantifying the population size present (National Biodiversity Data Centre).

Aerial monitoring has been suggested for assessing the re-vegetation but this needs to be ground-truthed also. We also suggest that monitoring should be done after extreme weather events such as extended dry periods or heavy rainfall to establish the habitats environmental resilience.

## **Turbary**

It is noted that there is private turbary ongoing and this is out of Bord na Móna's control. Is it possible that these plots could be purchased by Bord na Móna or relocation sites found to incentivise the full restoration of Kellysgrove Bog? What are the impacts of not restoring these plots, how does it affect the rehabilitation works and the eventual restoration? This should be featured within the plan.

## **Curlew Ecological Appraisal**

Native breeding Curlew presence needs to be evaluated during the correct time (March to July, Curlew Task Force Recommendations) and machinery should not be active until it has been established whether Curlew are utilising the site or not.

## **Invasive Species**

Page 20 notes the presence of garden escapees. These should be dealt with during the restoration to halt encroachment on to the site and possible spreading to other sites via machinery/transport etc.

## ***Sphagnum* sp.**

It is noted on Page 19 that *Sphagnum fuscum* and *Sphagnum austinii* are present but rare on site. These should be protected from the rehabilitation works e.g, from machinery, which should be minimised as much as possible in these areas.

## **Dumping**

Page 56 notes that domestic dumping is an ongoing issue and that fires have occurred within the last 3 years. The leaching of dumped materials will have a negative effect on the rehabilitation and this needs to be tackled. We suggest engaging with the community i.e. establishment of a neighbourhood watch system where they can report to Bord na Móna and have communication lines for management of the area. This could be facilitated with annual public meetings with the local community describing the successes in rehabilitation and other management issues such as the dumping and fires.

## **Decommissioning**

Page 68 displays a table that is missing item No.5. Is this an error or has something been removed?

## **Conclusion**

The rehabilitation of Kellysgrove Bog is a positive step towards the re-instatement of the natural landscape in the midlands and will provide important habitat for many of Ireland's protected and rare species. With the rehabilitation - Kellysgrove Bog's future conservation and biodiversity potential is high, but this potential needs to be protected and the site formally included within the Biodiversity Action Plan to secure its place as a conservation area beyond the rehabilitation plans lifetime. The Irish Peatland Conservation Council also need to see an integrated plan as to how Bord na Móna will manage the network of rehabilitated bogs once licences have been handed back to the EPA. Are all the sites to be included within the Bord na Móna Biodiversity Action Plan or handed over to the National Parks and Wildlife Service for management as Raised Bog Natural Heritage Areas? This could support Ireland's efforts within the National Peatland Strategy and be a real pledge to Ireland's Peatland environment.

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on the rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer



# IRISH PEATLAND CONSERVATION COUNCIL

COMHAIRLE CHAOMHNAITHE PHORTAIGH NA HÉIREANN

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**Doreen King**  
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**Leabeg**  
**Tullamore**  
**Co. Offaly**  
**pcasinfo@bnm.ie**

**16th April 2021**

**RE: Peatlands Climate Action Scheme - Castlegar Bog - Co. Galway**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Enhanced Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (flood regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Castlegar Bog as this will put the habitats contained within the site on the right track to recovery and provide important refugia for peatland dependent species.

## **Rehabilitation Trials**

It is noted on Page 28 that there is to be 7 rehabilitation trials conducted at Castlegar Bog in association with the National Parks and Wildlife Service. Please expand on this. What are the methods being trialled and the location within the site. What outcomes are to be assessed and how will the findings be used (will the results be published)? Will there be ongoing monitoring of these trials and how will they affect the planned enhanced rehabilitation of Castlegar Bog? The National Parks and Wildlife Service and Bord na Móna are already using new techniques for the restoration of raised bog habitats (such as cell/trench and finger bunding) which could already be considered trials in an Irish context, how will these trials be different and add to the growing research repository?

## **Wildcrafting**

Please elucidate on the location that this will be trialled and the potential impacts to the enhanced rehabilitation. It is possible that Bog Myrtle may exacerbate transpiration from the bog hindering rehabilitation and restoration at this stage. This is potentially a sustainable afteruse for the rehabilitated landscape of Castlegar Bog and other sites but the appropriate level of restoration must occur as the primary focus. The Irish Peatland Conservation Council need to see more details on this trial to properly assess its potential role going forward.

## **Sphagnum Inoculation**

Please include the locations of where *Sphagnum* will be harvested for inoculation. These areas also need to be protected from machinery during the rehabilitation procedures to ensure that indigenous sources of vegetation are not lost from the site.

## **Designated Sites**

Annaghbeg Bog NHA is noted as to be delisted as an NHA. How will this affect the enhanced rehabilitation and future biodiversity potential of Castlegar Bog? If Annaghbeg Bog is to be left for turbarry the rehabilitation works which aim to restore the quality of the aquatic network leaving Castlegar could be in vain if un-regulated

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peat extraction is taking place beside it. How will this be managed?

It is also noted that the River Suck Callows SPA is overlapping the east of Castlegar Bog. How will the rehabilitation works affect the management of the wildlife on this SPA? The improvement of peatland habitat from restoration is immensely positive and will re-create appropriate space for biodiversity but there (hopefully) will be an increase in movement of species from neighbouring sites and this may impact the management of the wetland species associated with the SPA and other designated sites. This will need to be monitored in association with National Parks & Wildlife Service and contingency examined and included within the plan for possible positive and negative affects.

### **Long-Term Monitoring**

The rehabilitation plan sets out a monitoring agenda which aims at fulfilling the goals of the EPA Licence. If the installation of piezometers and monitoring of water levels could be conducted with schools/colleges and community groups it would provide outreach, education and engagement over a long timeframe - beyond the rehab plan. This needs to be a feature within the plan as rehabilitation of the voluntary support network in these rural areas is also a priority.

### **Conclusion**

The rehabilitation of Castlegar Bog is a positive step towards the re-instatement of the natural landscape in East Galway and will provide important habitat for many of Ireland's protected and rare species. With the rehabilitation - Castlegar Bog's future conservation and biodiversity potential is high, but this potential needs to be protected and the site formally included within the Biodiversity Action Plan as a Bord na Móna Biodiversity Area to secure its place as a conservation area beyond the rehabilitation plan's lifetime. The Irish Peatland Conservation Council also needs to see an integrated plan as to how Bord na Móna will manage the network of rehabilitated bogs once licences have been handed back to the EPA. Are all the sites to be included within the Bord na Móna Biodiversity Action Plan or handed over to the National Parks and Wildlife Service for management as Raised Bog Natural Heritage Areas? This could support Ireland's efforts within the National Peatland Strategy and be a real "Pledge" to Ireland's Peatland environment.

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on this rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer



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**20th May 2021**

## **RE:Peatlands Climate Action Scheme - Boora Bog**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Enhanced Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction and already established amenity. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (flood regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Boora Bog as this will put the habitats contained within the site on the right track to recovery, provide important refugia for peatland dependent species and set the areas in question on a path of climate change mitigation.

### **Amenity**

The Irish Peatland Conservation Council appreciate that Boora Bog is predominately an amenity and biodiversity project area with many interested parties/stakeholders such as Bord na Móna, Coillte, Irish Wildlife Trust and the National Parks & Wildlife Service. The cost of amenity in terms of biodiversity and the carbon sequestration potential over the site should be quantified so as to establish a baseline that can be used when assessing possible land uses of sites nationally in the future. Issues such as footfall/ramblers (unauthorised trampling, anecdotically it is said that it takes 10 years for a footprint on a bog to disappear), area lost to amenity infrastructure, chemical parameters (e.g nitrogen influence on wetland vegetation from roadways/traffic/concrete) and frequency of rubbish/littering/dumping (and possible leaching of chemicals). It is described in the plan that carbon emissions from this site are to be estimated but as Boora Bog is a large amenity with multiple land uses carbon monitoring may be able to help quantify the affect these land uses are having on the current timeframe proposed for environmental stabilisation and restoration. The data could then be used to inform future projects.

### **Bog Remnants**

Please clarify, on Figures 3.3 and 3.4 four Bog Remnants are identified within the map but on Figure 8.4 this area is highlighted as Marginal Land (MLT 1) where it is described that no work is required (Table 8.1). Degraded Raised Bog is an Annex I Habitat and if it is possible to restore these areas then it is important that they receive the restoration treatment. The Irish Peatland Conservation Council appreciate that much of the site will not return to the original natural functioning raised bog but will still be on a path to carbon protection with the managed rewetting - but if it is possible to restore some of the original raised bog remnants then this should be pursued, these areas should be part of the wider story of Boora Bog.

### **Long-Term Monitoring**

The rehabilitation plan sets out a monitoring agenda which aims at fulfilling the goals of the EPA Licence and

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further (e.g. Water Framework Directive). If the installation of piezometers and monitoring of water levels could be conducted with schools/colleges and community groups it would provide outreach, education and engagement over a long timeframe - beyond the rehabilitation plans lifetime. This needs to be a feature within the plan as rehabilitation of the voluntary support network in these rural areas is also a priority.

### ***Sphagnum* Inoculation**

Please indicate where *Sphagnum* will be harvested from for inoculation and how much of the deep peat rewetting areas will be included for *Sphagnum* transfer.

### **Biosecurity**

The Irish Peatland Conservation Council appreciate that stringent measures are needed for a strong defence against the impacts of invasive species. It may also be beneficial for future readers of the plan if the reasons of why cutaway and degraded peatlands are susceptible to the spread of invasives are included. It is possible to highlight issues such as the drying out of the peat which allows species which would not normally survive in the naturally wet conditions to colonise and that this then can exacerbate erosion and transpiration increasing degradation of the peatland.

### **Environmental Control Measures**

Appendix IV describes the control measures to be applied to bog rehabilitation, please include what measures are taken to protect peat mounds (possibly from borrow-pits/re-profiling/bunding/damming) from extreme weather events e.g. heavy rain. While it is described that - "During periods of heavy precipitation and run-off, activities will be halted", the weather is not always predictable and peat slippage may occur. The possible impacts should also be described here such as possible damage to areas recently restored and biodiversity.

### **Conclusion**

Boora Bog is an already established amenity but the enhanced rehabilitation will bring the site closer to true conservation and climate change mitigation potential. The recreation of peat-forming habitats where possible is necessary as the basic rehabilitation only protects the carbon already stored but does not return the habitat to a carbon sequestering wetland which globally is needed to mitigate climate change. The Irish Peatland Conservation Council appreciate the extensive monitoring being undertaken such as the Dissolved Organic Carbon as this will inform future projects as to what carbon is being lost within the water as well as in atmospheric emissions. Where possible monitoring should also be inclusive of the local community as they are the ones that have the local knowledge and cultural investment in the area.

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on this rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer





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**3rd July 2021**

## **RE:Peatlands Climate Action Scheme - Belmont Bog, Co. Offaly**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Enhanced Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (flood regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Belmont Bog as this will put the habitats contained within the site on the right track to recovery, provide important refugia for peatland dependent species and provide ecological services such as water regulation and carbon sequestration to local communities and nationally.

### **Wildlife**

With the enhanced rehabilitation and recreation of wetland and peatland habitat there will be an increase in supporting habitat to the benefit of protected species utilising the designated sites. There may be an increase in the movement of species between the designated sites and rehabilitated sites. This should be monitored and recorded and the data used to feed into behavioural studies of these species to increase our knowledge in best efforts to protect them. Such as how to provide the best and safest ecological corridors.

The large number of bird species listed as utilising Belmont Bog within the rehabilitation plan (**Nightjar (ANNEX I EU Birds Directive, Red Listed - BoCCI)**, **Lapwing (Red Listed - BoCCI)**, **Snipe (Amber Listed - BoCCI)**, **Eurasian Curlew (Red Listed - BoCCI)**, **Golden Plover (ANNEX I EU Birds Directive, Red Listed - BoCCI)**, **Greylag Geese (Amber Listed - BoCCI)**, **Whooper Swan (ANNEX I EU Birds Directive, Amber Listed - BoCCI)**, **Red Grouse (Red Listed - BoCCI)**, **Kingfisher (ANNEX I EU Birds Directive, Amber Listed - BoCCI)**, **Yellow Hammer (Red Listed - BoCCI)**, **Hen Harrier (ANNEX I EU Birds Directive, Amber Listed - BoCCI)**, **Kestrel (Amber Listed - BoCCI)**, **Barn Owl (Red Listed - BoCCI)**, **Merlin (ANNEX I EU Birds Directive, Amber Listed - BoCCI)**, **Peregrine Falcon (ANNEX I EU Birds Directive)**) need to have a monitoring programme in place so that any changes in population are recorded and the cause of the change can be ascertained. Please liaise with the National Parks & Wildlife Service and BirdWatch Ireland in regards to best practice in the implementation of a conservation and management plan for these bird species. As habitats develop after restoration there is a chance for research into these species regarding conservation best practices of the red-listed and ANNEX species listed.

### **Ground Nesting**

Please ensure that the rehabilitation works are conducted sensitively towards ground nesting birds during the bird nesting season so as not to disrupt their natural behaviour. An education and awareness program with the restoration workers would help in this regard.

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### **Designated Sites**

Please also include Clorhane Wood pNHA (000894), Fin Lough SAC (000576) and Lough Nang Esker (000910) within the rehabilitation plan. Although works on Belmont Bog should be beneficial to these designated sites they need to be included and acknowledged within the plan so changes to the possible pathways of influence can be monitored for future reference (e.g. groundwater, springs, emissions and movement of species).

### **Biosecurity**

The Irish Peatland Conservation Council appreciate that stringent measures are needed for a strong defence against the impacts of invasive species. It may also be beneficial for future readers of the plan if the reasons of why cutaway and degraded peatlands are susceptible to the spread of invasives are included. It is possible to highlight issues such as the drying out of the peat which allows species which would not normally survive in the naturally wet conditions to colonise and that this then can exacerbate erosion and transpiration increasing degradation of the peatland.

### **Long-Term Monitoring**

The rehabilitation plan sets out a monitoring agenda which aims at fulfilling the goals of the EPA Licence. If the installation of piezometers and monitoring of water levels could be conducted with schools/colleges and community groups it would provide outreach, education and engagement over a long timeframe - beyond the rehab plan. Bord na Móna need to be pro-active in terms of promoting citizen engagement in the long term monitoring of species such as birds, butterflies and other indicator species. Education and awareness events could be hosted in liaison with the National Biodiversity Data Centre and local community groups on how to record species identifications and the benefits in monitoring and recording changes of their local environment. This needs to be a feature within the plan as rehabilitation of the voluntary support network in these rural areas is also a priority.

### **Dissolved Organic Carbon**

As Belmont Bog has a trajectory towards rich fen in places the DOC emissions need to be monitored to better inform future restoration projects and also ascertain the correct emission factors for these developing fen habitat types. This could feed into the National Peatlands Strategy as IPCC have commented on the Strategy Mid-Term Review that the number of fens monitored (1) as part of the Fen Conservation Management Pilot Study has not taken into account the variety of fen habitats found in Ireland.

### **Conclusion**

The recreation of peat-forming habitats where possible is necessary as the basic rehabilitation only protects the carbon already stored and does not return the habitat to a carbon sequestering wetland which will withstand the effects of climate change. The enhanced rehabilitation puts the site on the right track to recovery but a lengthy monitoring agenda is needed to ensure we understand the changes happening at a landscape scale as well as local. Even though the PCAS scheme is possibly the largest rehabilitation project of its kind currently in Europe, the scheme is only committed to 33,000ha of Bord na Móna's land holding and this needs to be increased if we are to tackle the Climate and Biodiversity Crisis announced by the Irish Government in 2019. The sites included also need to be formally protected and included in the Bord na Móna Biodiversity Action Plan to secure the ecosystem services for future generations and as a real "Pledge for Peatlands & People".

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on the rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer



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**28th July 2021**

## **RE:Peatlands Climate Action Scheme - Kilmacshane Bog, Co. Offaly**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (fresh water regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Kilmacshane as this will put the habitats contained within the site on the right track to recovery, provide important refugia for peatland dependent species and provide ecological services such as water regulation and carbon sequestration to local communities bolstering our national environmental targets.

### **Enhanced Rehabilitation**

The area most south of the site is described as containing deep peats, as seen in Figure 8.2. IPCC understand that light drainblocking is proposed and that it may likely develop into wet/dry woodland. This deep peat area would benefit from the enhanced restoration measures to ensure a trajectory of carbon sequestering habitat in the future, which would have more benefits in terms of climate change mitigation. This area could be targeted with cell bunding and *Sphagnum* inoculation maximising the future sequestering potential.

### **Raised Bog Remnants (See map below)**

Kilmacshane Bog has many raised bog remnants around the margins of the site that need to be protected and monitored to ensure that they are not lost through private peat extraction or other detrimental developments. The remnants to the north of the site are sandwiched between the designated Shannon Callows SPA and the rehabilitation site yet the fate of these remnants is not known. We welcome the restoration of the remnants to the east of the site (Reask) as its possible to see the striations from drainage on aerial imagery. Bord na Móna could purchase the remnants not in their ownership and include them within the rehabilitation plan as it does not make sense to be recreating wetland habitats while leaving the natural sites outside the scope of the plan. Please engage in communication with landowners and the community to raise awareness of the synergistic benefits that the remnants, SPA and rehabilitation site will have if the remnants are included within the plan and the entire site is managed as one biodiversity unit.

### **Nitrogen**

It has been highlighted to the Irish Peatland Conservation Council that nitrogen is becoming an issue for designated sites. In 2018 in the UK 39 of 57 Special Areas of Conservation listed on the APIS website (<http://www.apis.ac.uk>) exceeded the Critical Load Threshold for nitrogen. This is having negative impacts on the vegetation of the designated habitats. There are various sources of excess nitrogen such as construction (e.g. roads, developments), urban waste water (pollution) and agriculture (e.g. fertilizer/piggerys) and can enter a

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habitat via wet or dry deposition. Nitrogen may be an issue for Bord na Móna rehabilitation sites and it may be having an impact on the enhanced rehabilitation measures undertaken - altering the future timelines for environmental stabilisation/rehabilitation. Bord na Móna need to monitor the rehabilitation sites for point and diffuse sources of nitrogen pollution (including aerial deposition) and report on the findings. This would also pose as an opportunity to collaborate with other state organisations such as the National Parks & Wildlife Service, Environmental Protection Agency and Irish Water in the management of the wider environment.

### Conclusion

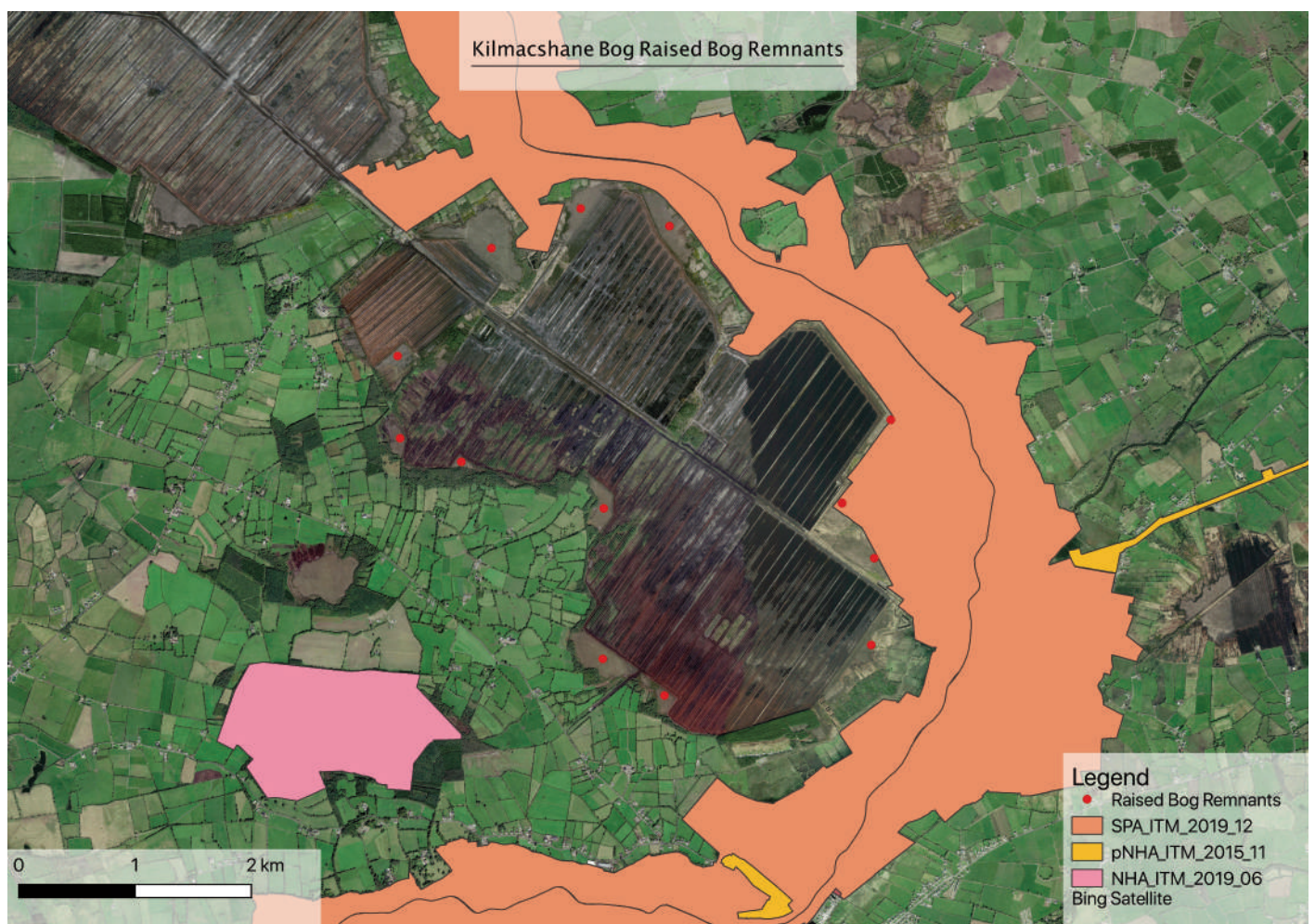
The recreation of peat-forming habitats where possible is necessary as the basic rehabilitation only protects the carbon already stored and does not return the habitat to a carbon sequestering wetland which will withstand the effects of climate change. The enhanced rehabilitation puts the targeted area on the right track to recovery but a lengthy monitoring agenda is needed to ensure we understand the changes happening at a landscape scale as well as local. Even though the PCAS scheme is possibly the largest rehabilitation project of its kind currently in Europe, the scheme is only committed to 33,000ha of Bord na Móna's land holding and this needs to be increased if we are to tackle the Climate and Biodiversity Crisis announced by the Irish Government in 2019. The sites included also need to be formally protected and included in the Bord na Móna Biodiversity Action Plan to secure the ecosystem services for future generations and as a real "Pledge for Peatlands & People".

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on the rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer







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**28th July 2021**

**RE:Peatlands Climate Action Scheme - Mount Lucas, Co. Offaly**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Enhanced Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (fresh water regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Mount Lucas as this will put the habitats contained within the site on the right track to recovery, provide important refugia for peatland dependent species and provide ecological services such as water regulation and carbon sequestration to local communities and national environmental targets.

### **Wildlife**

While the draft plan lists some priority species recorded on site, IPCC see no focussed actions that will target specific species. We understand that general rehabilitation will improve the site for most wetland species but there is a chance here to involve local groups e.g. environmental organisations - in monitoring and improving habitat for their species of interest. The plan could include a map which describes the areas where community involvement may be possible in future and National Parks & Wildlife Service would be included in addressing species of concern.

### **Long-Term Monitoring**

The rehabilitation plan sets out a monitoring agenda which aims at fulfilling the goals of the EPA Licence. If the installation of piezometers and monitoring of water levels could be conducted with schools/colleges and community groups it would provide outreach, education and engagement over a long timeframe - beyond the rehab plan. Bord na Móna need to be pro-active in terms of promoting citizen engagement in the long term monitoring of species such as birds, butterflies and other indicator species. Education and awareness events could be hosted in liaison with the National Biodiversity Data Centre and local community groups on how to record species identifications and the benefits in monitoring and recording changes of their local environment. This needs to be a feature within the plan as rehabilitation of the voluntary support network in these rural areas is also a priority.

### **Climate Change Resilience**

Can Bord na Móna guarantee resilience in terms of carbon and rewetting effectiveness. Will the rehabilitated sites withstand the impacts of climate change as described by the EPA published reports NERO, VAPOR and BOGLAND? The PCAS is designed to increase the benefits in terms of carbon storage, biodiversity and fresh-water management but not all areas will be targeted with the enhanced rehabilitation. What will be the outcome and cost of leaving some areas to naturally colonise as within the standard rehabilitation.

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### **Renewable Energy Carbon & Biodiversity Cost**

The Irish Peatland Conservation Council appreciate that Mount Lucas is predominately a renewable energy project. The cost of this in terms of biodiversity and the carbon sequestration potential over the site should be quantified so as to establish a baseline that can be used when assessing possible land uses of sites nationally in the future. Mount Lucas is still undergoing drainage and hydrological disruption due to the management of the wind farm. Other issues such as footfall/ramblers (unauthorised trampling) area lost to amenity infrastructure, chemical parameters (e.g nitrogen influence on wetland vegetation from roadways/traffic/concrete) and frequency of rubbish/littering/dumping (and possible leaching of chemicals). It is described in the plan that carbon emissions from this site are to be estimated but as Mount Lucas is a large site with multiple land uses carbon monitoring may be able to help quantify the affect these land uses are having on the current timeframe proposed for environmental stabilisation and restoration. The data could then be used to inform future projects.

### **Dissolved Organic Carbon**

DOC emissions needs to be monitored as Mount Lucas has many other ongoing activities other than conservation. Mount Lucas features a wind farm, aquaculture, horticulture, turf cutting, amenity, a gun club and built infrastructure (FAS building).The compatability of the various uses of Mount Lucas and their impact on DOC emissions as the site moves to a trajectory of environmentally stable and peat forming habitats needs to be recorded to inform future projects and developments.

### **Conclusion**

The recreation of peat-forming habitats where possible is necessary as the basic rehabilitation only protects the carbon already stored and does not return the habitat to a carbon sequestering wetland which will withstand the effects of climate change. The enhanced rehabilitation puts the site on the right track to recovery but a lengthy monitoring agenda is needed to ensure we understand the changes happening at a landscape scale as well as local. Even though the PCAS scheme is possibly the largest rehabilitation project of its kind currently in Europe, the scheme is only committed to 33,000ha of Bord na Mónas land holding and this needs to be increased if we are to tackle the Climate and Biodiversity Crisis announced by the Irish Government in 2019. The sites included also need to be formally protected and included in the Bord na Móna Biodiversity Action Plan to secure the ecosystem services for future generations and as a real “Pledge for Peatlands & People”.

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on the rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer



# IRISH PEATLAND CONSERVATION COUNCIL

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**Doreen King**  
**Project Manager**  
**Bord na Móna Energy Division**  
**Leabeg**  
**Tullamore**  
**Co. Offaly**  
**pcasinfo@bnm.ie**

**18th August 2021**

## **RE:Peatlands Climate Action Scheme - Garryduff Bog, Co. Galway**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (fresh water regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Garryduff as this will put the habitats contained within the site on the right track to recovery, provide important refugia for peatland dependent species and provide ecological services such as water regulation and carbon sequestration to local communities while also bolstering our national environmental targets.

### **Raised Bog Remnants**

The raised bog remnants to the South West (raised and cutover, PB1 & 4), most Southern tip (PB1 & 4) and along Eastern boundary (PB1) of Garryduff Bog, contain Raised Bog remnants that are being domestically cut away for turf. Is it possible for Bord na Móna to secure these areas for restoration by purchasing them or promoting the benefits of restoring these areas to the families and offering to relocate them to another area. The most important areas of Garryduff which contain the original raised bog features of the site are still being cut-away while the rest of the site is re-wet.

### **Large Heath**

The Large Heath butterfly is described as being vulnerable on the European and Irish Red List for Butterflies and is predicted to decrease in population size by 30% due to climate change and habitat loss. As this species is present there needs to be a monitoring and management plan in place to ensure that as the site is re-wet the ecological preferences and parameters of this species are recorded and the data can be used to inform future research and restoration projects. The National Biodiversity Data Centre manage a Large Heath Monitoring Survey to increase the knowledge of this species as it is a raised bog specialist and may be a good indicator of the condition of raised bog. Please liaise with NBDC in the management of Large Heath on Garryduff.

### **Ground Nesting**

Please ensure that the rehabilitation works are conducted sensitively towards ground nesting birds during the bird nesting season so as not to disrupt their natural behaviour. An education and awareness program with the restoration workers would help in this regard.

### **Nitrogen**

It has been highlighted to the Irish Peatland Conservation Council that nitrogen is becoming an issue for designated sites. In 2018 in the UK 39 of 57 Special Areas of Conservation listed on the APIS website

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(<http://www.apis.ac.uk>) exceeded the Critical Load Threshold for nitrogen. This is having negative impacts on the vegetation of the designated habitats. There are various sources of excess nitrogen such as construction (e.g. roads, developments), urban waste water (pollution) and agriculture (e.g. fertilizer/piggerys) and can enter a habitat via wet or dry deposition. Nitrogen may be an issue for Bord na Móna rehabilitation sites and it may be having an impact on the enhanced rehabilitation measures undertaken - altering the future timelines for environmental stabilisation/rehabilitation. Bord na Móna need to monitor the rehabilitation sites for point and diffuse sources of nitrogen pollution (including aerial deposition) and report on the findings. This would also pose as an opportunity to collaborate with other state organisations such as the National Parks & Wildlife Service, Environmental Protection Agency and Irish Water in the management of the wider environment.

### **Conclusion**

The recreation of peat-forming habitats where possible is necessary as the basic rehabilitation only protects the carbon already stored and does not return the habitat to a carbon sequestering wetland which will withstand the effects of climate change. The enhanced rehabilitation puts the targeted area on the right track to recovery but a lengthy monitoring agenda is needed to ensure we understand the changes happening at a landscape scale as well as local. Even though the PCAS scheme is possibly the largest rehabilitation project of its kind currently in Europe, the scheme is only committed to 33,000ha of Bord na Móna's land holding and this needs to be increased if we are to tackle the Climate and Biodiversity Crisis announced by the Irish Government in 2019. The sites included also need to be formally protected and included in the Bord na Móna Biodiversity Action Plan to secure the ecosystem services for future generations and as a real "Pledge for Peatlands & People".

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on the rehabilitation plan.

Your Sincerely,

A handwritten signature in black ink that reads "Tristram Whyte". The signature is written in a cursive, slightly slanted style.

Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer



# IRISH PEATLAND CONSERVATION COUNCIL

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**Bord na Móna Energy Division**  
**Leabeg**  
**Tullamore**  
**Co. Offaly**  
**pcasinfo@bnm.ie**

**21st September 2021**

## **RE:Peatlands Climate Action Scheme - Esker Bog, Co. Offaly**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Enhanced Peatlands Climate Action Scheme Rehabilitation Plans for the sites coming out of industrial peat extraction. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (flood regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely diminished through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage.

The Irish Peatland Conservation Council welcomes the enhanced rehabilitation of Esker Bog as currently it is a bare peat site which is adding to the climate and biodiversity emergency announced by the Irish Government in 2019. Not only has the decimation of the bog directly displaced the species which utilised it but ongoing drainage and peat extraction has altered the chemical composition of the river network. This has resulted in a biodiversity crash which needs to be addressed by repairing the ecological and hydrological functioning of peatlands which are a keystone habitat in Ireland's landscape.

### **Cell Bunding Technique**

Figure 8.5 within the plan illustrates the locations and methods of rehabilitation. There are large areas targeted for the "DPT4" treatment which consists of the 45m x 60m cell bunding. These cells are quite large and very neat (as seen on a site visit to Ummeras Bog Monestrevin, Co. Kildare), there is a possibility that the expanse of water once pooled within the cell may be subject to wave action slowing the recovery of vegetation and also creating an environment which promotes a monoculture.

There are examples within the Cumbria LIFE Project (Natural England) where they have deployed peat "hags" within the cells to create niche microhabitats which allow a more diverse array of species to develop ([www.youtube.com/watch?v=YTEjlaUT\\_sA @ 8m32s](http://www.youtube.com/watch?v=YTEjlaUT_sA)). Has Bord na Móna trialled this and what does the cost-benefit analysis show in regards to returns in biodiversity. If this has not been trialled to scale, Esker Bog, due to the large area of DPT4 treatment, may be a good candidate to assess this method and its potential to increase species diversity within the rehabilitation outcomes. This is important as the speed at which the PCAS has been rolled out is commendably fast but may also come with a caveat that once the rehab operations have been completed there may be limited opportunity to return and change certain parameters which could have increased the biodiversity returns.

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on this rehabilitation plan.

Your Sincerely,

Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer

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# IRISH PEATLAND CONSERVATION COUNCIL

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**Project Manager**  
**Bord na Móna Energy Division**  
**Leabeg**  
**Tullamore**  
**Co. Offaly**  
**pcasinfo@bnm.ie**

**8th October 2021**

**RE: Peatlands Climate Action Scheme - Derrycashel Bog, Co. Offaly**

Dear Mrs King,

Thank you for including Irish Peatland Conservation Council as one of the consultees on the Peatlands Climate Action Scheme. The Irish Peatland Conservation Council started the Save the Bogs Campaign 38 years ago to raise awareness of the disappearing peatland and the ecosystem services (flood regulation, biodiversity, tourism and amenity) being lost through habitat destruction and fragmentation. The peatland landscape of the midlands has been severely devastated through the industrial extraction of peat for energy and horticulture and this has led to major consequences for the generations that have grown up without the opportunity of experiencing their natural heritage. As Peatland covers 1/5th of Ireland it is a keystone habitat and the intense industrial exploitation of which has directly contributed to the Climate and Biodiversity Emergency that was officially announced by Government in 2019.

The Irish Peatland Conservation Council have a number of comments to make on the PCAS Enhanced Rehabilitation Plan which has been developed for Derrycashel Bog, Co. Offaly.

### **Invasive Species**

The IPCC Sites DB lists Derrycashel as containing the largest abundance of *Sarracenia purpea* and *flava* in Ireland. Unfortunately these need to be removed as they are invasive and displacing native species. Please include these in the Invasive Species Management Plan for the site. Monitoring will be essential to ensure that they have all been removed and that they do not return. (Maybe they could be supplied to the National Botanic Gardens of Ireland for research).

### **Water Framework Directive**

The EPA have monitored the river network surrounding Derrycashel Bog in terms of the Water Framework Directive. The results have shown that the water quality is below “good ecological status” and has been rated as “poor”. With the rehabilitation and stabilisation of peat soils through PCAS this should improve but needs to be monitored and a flexible plan in place to allow for changes or extra actions that may be needed when discovering new point or diffuse sources of pollution.

### **Curlew**

The conservation of Curlew is of utmost concern as the national population has suffered declines of ~97% since the 1980s due to changes in agricultural practices and loss of habitat. This species is on the brink of extinction and there is currently less than 138 pairs recorded breeding (138 pairs were recorded within the first ever national Curlew survey conducted in 2015 by the National Parks & Wildlife Service but these numbers have dropped every year since). Please include a monitoring plan for this species as Curlew have been recorded on-site (albeit in 2013). If it is ascertained that the Curlew are returning to Derrycashel Bog to breed then the rehabilitation works must be sensitive to this and provide the disturbance-free space needed during the nesting season. Please liaise with BirdWatch Ireland and NPWS and prepare a monitoring agenda which could feed into the national effort to conserve this bird. IPCC are aware that Bord na Móna have had a specific Curlew Monitoring Project ongoing across the land-holding since 2017 - please ensure that Derrycashel Bog is included within this. While there may not be Curlew utilising this site currently, the rehabilitation of Derrycashel will

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increase suitable habitat for Ireland's largest wader improving their prospects.

**Marsh Fritillary**

This species of Butterfly is the only protected butterfly species in Ireland which is listed under ANNEX II of the Habitats and Species Directive of the European Union. Please include the areas where it has been identified previously on Derrycashel Bog within the monitoring agenda. The local community and Butterfly Conservation Ireland could engage in larval counts and habitat assessments for this species as designed by the National Biodiversity Data Centre.

**Update on PCAS**

Could Bord na Móna please provide an update as to what sites rehabilitation works will have been progressed by the end of the year?

**Conclusion**

IPCC need to see Bord na Móna include the sites benefitting from the PCAS within a network of areas protected for biodiversity and the other ecosystem services they provide. They should be included within the BnM Biodiversity Action Plan, which we note is also due for renewal. Even though the PCAS scheme is possibly the largest rehabilitation project of its kind currently in Europe, the scheme is only committed to 33,000ha of Bord na Móna's land holding and this needs to be increased if we are to tackle the Climate and Biodiversity Crisis announced by the Irish Government in 2019. By maximising the PCAS across BnM Estate and integrating the sites into a network of biodiversity and wildlife conservation reserves which will exist in perpetuity for the present and future generations would be a real "Pledge for Peatlands & People".

Thank you for providing the Irish Peatland Conservation Council the opportunity to comment on this rehabilitation plan.

Your Sincerely,



Tristram Whyte - Freshwater Biology B.Sc(hons) - IPCC - Conservation, Policy & Fundraising Officer

Please note that "Esker Bog" is mentioned within the AA Screening Report for Derrycashel in Chapter 4.3.1 & 4.3.3.