



GBIF GB25 – Excursion

Introducing Ireland's Peatlands



Friday 19th October, 2018

The National Biodiversity Data Centre offers delegates attending the 25th Governing Board meeting of the Global Biodiversity Information Facility an excursion to visit the midlands of Ireland. The excursion will provide an introduction to Ireland's peatlands, habitats which are of international conservation importance.

The sites visited will show:

1. **Abbeyleix Bog** - a local community led example of restoration of an active raised bog,
2. **Slieve Bloom Mountains** – land use pressures on conservation of upland blanket bog,
3. **Curragh Bog** - the commercial exploitation of a raised bog and
4. **Lough Boora Parklands** - a large-scale rehabilitated peatland site, post commercial production.

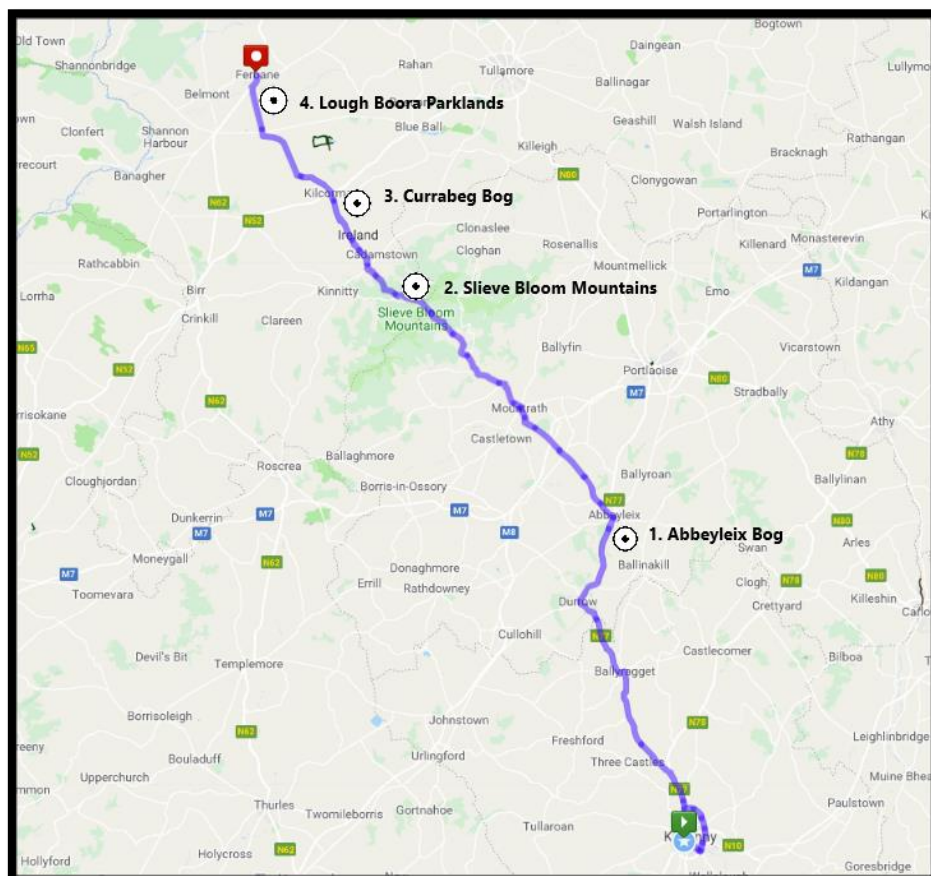
Excursion guides:

Dr. Pete Foss, Principal Ecologist - Foss Environmental Consulting, an internationally recognised expert in peatland ecology, conservation and management will accompany the excursion.

Mr. Chris Uys, Development Officer - Community Wetlands Forum, will meet the excursion at Abbeyleix Bog to introduce the work done by the local community to restore the site.

Mr. Tom Egan, Land Project Manager - Bord na Móna, will join the excursion at Lough Boora Parklands to talk about the on-site land management issues and Bord na Móna's activities.

The route



Excursion schedule

08:45hrs – Assemble in the main lobby of Kilkenny Ormonde Hotel, Kilkenny

09:00hrs – Coach Departs

1. 10:00hrs - Arrive Abbeyleix Bog

The **Abbeyleix Bog Project** is a community led initiative to restore and conserve a raised bog as a natural resource, educational site and local amenity. This raised bog was threatened with peat harvesting around 2000, but following the establishment of a local action group, the 200ha site was handed over to the local community in 2010 on a 50 year lease by Bord na Móna, Ireland's peat development agency. The site is a good example of a Midlands Raised Bog, and is now undergoing active habitat restoration. A boardwalk and information boards have been developed to encourage greater access to the site [<http://www.abbeyleixbog.ie>].



Abbeyleix Bog with boardwalk

2. 11:30hrs – Depart Abbeyleix Bog and driving over Slieve Bloom Mountains

The **Slieve Bloom Mountains** is an upland area of rolling hills rising to just over 500m in the Irish midlands. The original upland vegetation is blanket bog, 2,300ha of which form Ireland's largest Nature Reserve. In addition to being a good example of blanket bog habitat, it is important for breeding Red Grouse (*Lagopus lagopus scoticus*) and Hen Harrier (*Circus cyaneus*). Much of the remainder of the uplands have been afforested with non-native conifer plantations. The Slieve Bloom stop will provide an insight to the ecology of blanket bogs and some of the land use policies that threatened its conservation [<https://www.npws.ie/nature-reserves/slieve-bloom-mountains>].



Slieve Bloom Mountains

3. 12:30hrs – Currabeg Bog

A brief stop at Currabeg Bog to see an active commercial peat milling operation. Here the raised bog has been drained, stripped of its vegetation and is being milled and dried for commercial use. Bord na Móna is the State Agency, established in 1946, to harvest Ireland's peatlands for use as fuel for energy generation. Bord na Móna own 80,000ha of peatlands and has more than 2,000 employees, making it a huge employer for the midlands of Ireland.



Commercial peat harvesting operations at Currabeg

13:30hrs – 14:30hrs – Lunch Hennessy's of Ferbane

Gastropub in a traditional Irish setting [<https://www.facebook.com/hennessysofferbane>]

Choice of 1 main course per person plus tea/coffee. Please choose from the following options and inform one of the organisers at the Icebreaker registration desk (Monday 15 October):

1. Beef and Guinness casserole with creamy mash potato
2. Chicken and mushroom vol au vents served with house salad and hand cut chips
3. Fillet of Salmon, creamy mash, mixed vegetables and a dill cream sauce
4. Goats cheese and sundried tomato salad
5. Spinach & sundried tomato quiche with house salad and baked potato

4. 14:30hrs – Depart for Lough Boora Parklands

Lough Boora Parklands is an area of 2,500ha of cutaway peatlands that have been reflooded and allowed to regenerate naturally. The area has been developed as a conservation and amenity area by Bord Na Móna, and present examples of vegetation at different phases of recolonization. The area supports important transitional habitats and is an important site for breeding and wintering birds [<http://www.loughboora.com>].



Lough Boora Parklands

Background information

The following information was extracted from a variety of sources including the following:

- Wetland Surveys Ireland
[www.wetlandsurveysireland.com]
- Irish Peatland Conservation Council
[www.ipcc.ie]
- National Peatland Strategy 2015;
National Parks and Wildlife Service
[www.npws.ie]
- Fossitt, J.A. (2000) A Guide to Habitats in Ireland. The Heritage Council, Kilkenny

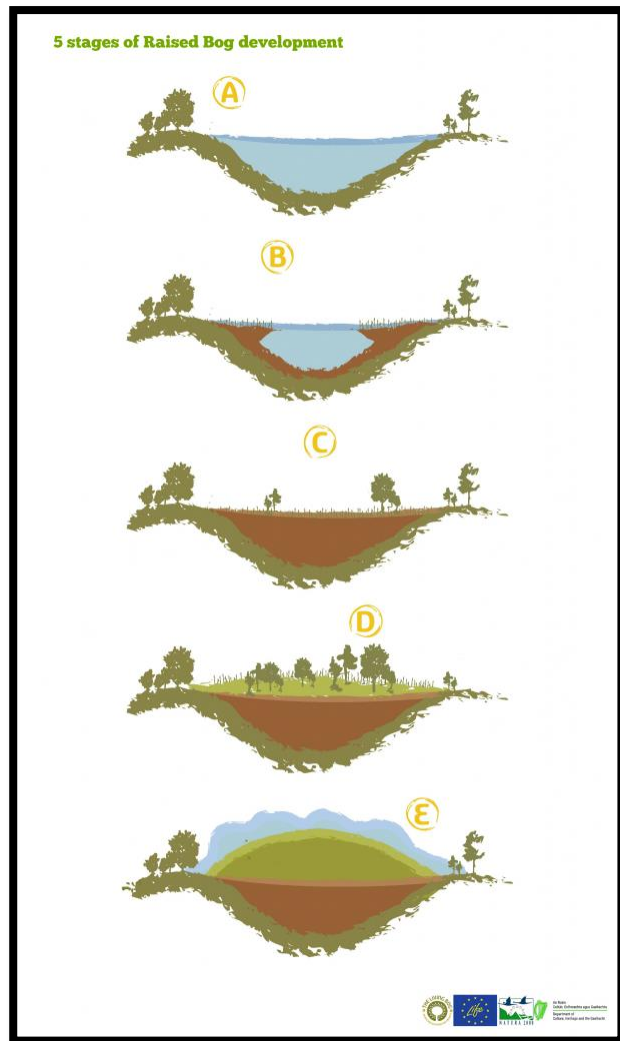
Peatlands in Ireland

Peatlands in Ireland are subdivided into two main types, bogs and fens. Bogs, which are what we are interested in on this trip are ombrotrophic (rain-fed) peatlands where almost all inputs of water to the system are derived from precipitation and where acid, oligotrophic peat deposits accumulate in areas of impeded drainage. The structure of bogs, their surface features, vegetation and fauna are all profoundly shaped by the water regime of such habitats. One group of lower plants which have carved their own niche within these conditions are *Sphagnum* mosses, also known as the bog-builders due to the important role they have in the make-up of peatlands and what makes these places unique habitats.

Types of peatlands

1. Raised Bog

Raised bogs are accumulations of deep acid peat (3-12 m) that originated in shallow lake basins or topographic depressions at the end of the last glaciation 10,000 years ago. The surface of a relatively intact raised bog is typically wet, acid and deficient in plant nutrients, and supports specialised plant communities that are low in overall diversity.



5 STAGES OF BOG DEVELOPMENT. SOURCE - LIVING BOG [[HTTP://RAISEDBOGS.IE/](http://RAISEDBOGS.IE/)]



SPHAGNUM MOSS – THE BOG-BUILDER

2. Upland Blanket Bog

Upland blanket bog occurs on flat or gently sloping ground above 150 m and is widespread on hills and mountains throughout Ireland. Peat depths vary and normally fall in the range of 1-2 m, but can be much deeper in pockets. Upland blanket bog can be extremely wet where it occurs on level terrain and may have surface drainage features that are typical of lowland blanket bog.

3. Lowland Blanket Bog

Lowland blanket bog, also known as Atlantic or oceanic blanket bog, is more restricted in its distribution than the upland type and is largely confined to wetter regions along the western seaboard where the annual rainfall exceeds 1250 mm. Blanket formation started 4,000 years ago as the climate became wetter.

4. Cutover Bog.

Cutover bog is a variable habitat, or complex of habitats, that can include mosaics of bare peat and re-vegetated areas with woodland, scrub, heath, fen and flush or grassland communities. It occurs where part or all of the original peat has been removed through turf cutting, by the traditional hand method or mechanically, for either domestic or commercial purposes.

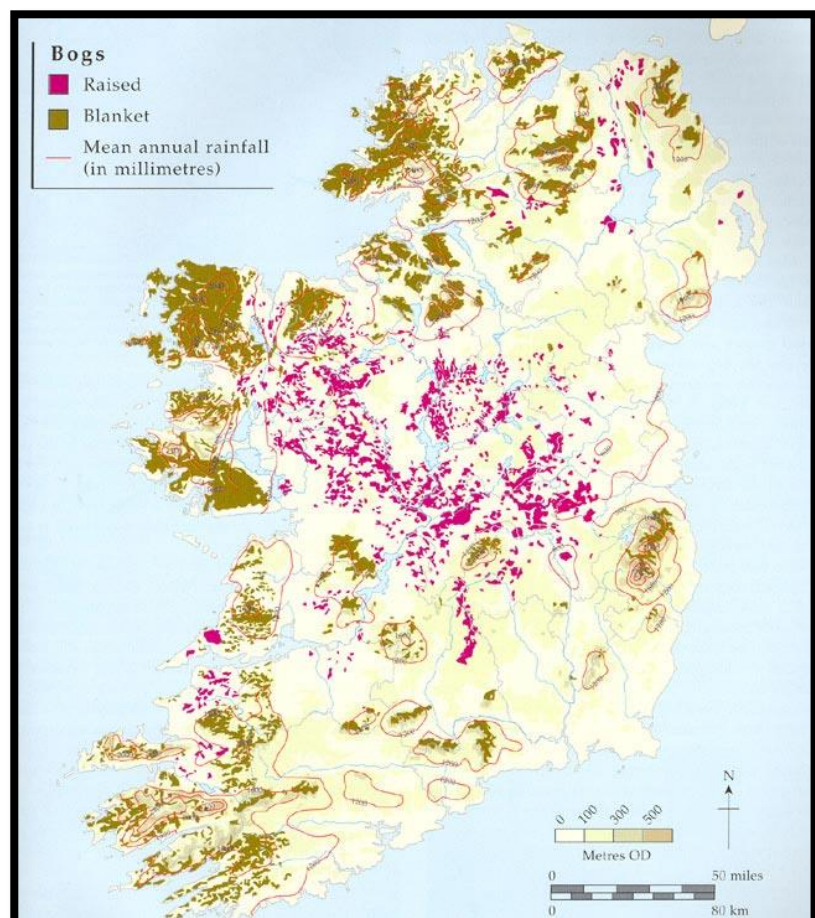
Peatland Distribution

Raised bogs are most abundant in the lowlands of central and mid-west Ireland. Upland Blanket bogs are widespread on hills and mountains throughout Ireland whereas you will only find lowland blanket bog distributed along the western seaboard where Ireland experiences a hyper-oceanic climate with high levels of precipitation.

Exploitation of peatlands

Traditional uses

Irish people have been closely connected to peatlands by a long history of cultural and economic development. Archaeological finds are intimately associated



DISTRIBUTION OF BOGS IN IRELAND. SOURCE: THE ATLAS OF THE IRISH RURAL LANDSCAPE (1997) P. 107

with peatland habitats and have produced fabulous well-preserved findings offering insights into the culture of ancient Ireland, many of which are available to view in Irelands National History and Archaeological Museum, Dublin [<https://www.museum.ie/Archaeology>], including corpses of those killed in rituals or by murder, ancient weaponry, and also foodstuffs, such as butter which would have been kept within peat in the same way we keep dairy products in refrigerators today.

The extraction of peat for fuel grew in importance as our native forests were lost and generations of Irish families have relied on turf (sods of cut peat) as their only source of heat. Peatlands have developed over millennia, creating an important economic raw material on which the livelihoods of certain rural populations have critically depended.



TURF STACKED AND DRIED AFTER BEING CUT INTO SODS

Contemporary uses

Contemporary uses of peat include:

- Turf cutting for domestic fuel
- Peat extraction for the generation of electricity
- Agriculture
- Peat extraction for horticulture
- Sites for renewable energy production e.g. wind
- Afforestation

Conservation of peatlands

Peat soils cover 20.6% of the national land area. The original area of raised bogs in the State was approximately 311,000 ha and the original area of blanket bogs was approximately 774,000 ha. Fens were once common in Ireland but they have been all reclaimed except for some 20,000 ha of conservation importance. It has been estimated that only 10% of the original raised bog and 28% of the original blanket peatland resource are deemed suitable for conservation (natural peatlands).

Distribution of the main land use categories of peatlands:

Natural Peatlands	269,270ha
Cutover Peatlands (Affected by Domestic Turf Cutting)	612,380ha
Afforested Peatland	300,000ha
Farmed Peatland (grassland)	295,000ha
Industrial cutaway peatlands	70,000ha
Rehabilitated cutaway peatlands	18,000ha

The conservation of Irish peatlands has been a difficult political issue in Ireland as there is little support amongst the general public and public representatives for stopping or restricting the commercial and traditional exploitation of peatlands in order to promote their conservation.



A SIGN IS ERECTED IN PROTEST OF THE NATIONAL PARKS AND WILDLIFE SERVICE (NPWS) AND THEIR PARTNERS WHOSE TASK WOULD BE TO ENFORCE THE LAW WITH REGARDS TO THE PROTECTION OF DESIGNATED SITES IN IRELAND.

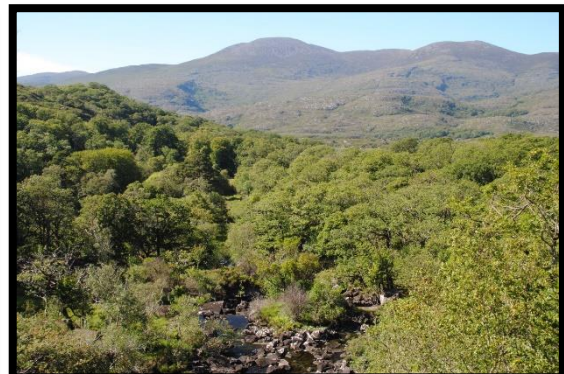
Forestry in Ireland

Ireland was once a wooded landscape, but by the beginning of the 17th Century woodland covered as little as 2% of the country and only 1.5% at the beginning of the 20th Century. The State commenced an afforestation programme in 1923 and forestry cover is now at its highest level in roughly 350 years, where currently around 731,650 ha, or 10.5% of the total land area of Ireland is under forest cover.

The majority of this is composed of commercial non-native conifer plantations, and only around 1.1% of the country is covered by woodland dominated by native tree species, and much of this is highly fragmented and modified. Sitka Spruce, a species native to the Pacific coast of North America is by far Ireland's most common tree species, occupying 52.4% of the forest area and has become the Irish timber industry's mainstay in terms of timber processing and end markets.



MONOCULTURAL CONIFER PLANTATIONS IN THE SLIEVE BLOOMS



EXTENSIVE BROADLEAF FORESTRY IS A RARE SIGHT IN IRELAND THESE DAYS

In 2012, 44% or 284,850 ha of the forest area was located on peat soils with the majority being on blanket bog (197,180 ha). Roughly half of Ireland's total forest area is in public ownership, mainly Coillte (Ireland's state-owned commercial forestry business), and almost all planting is State-funded.