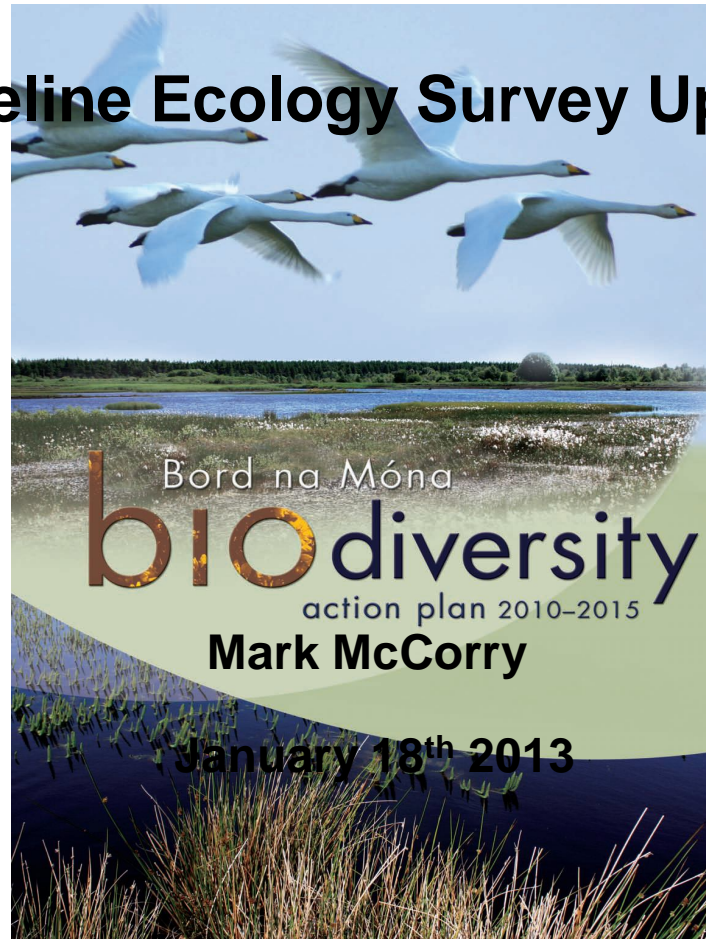


# Biodiversity Action Plan Review 2012

## Baseline Ecology Survey Update



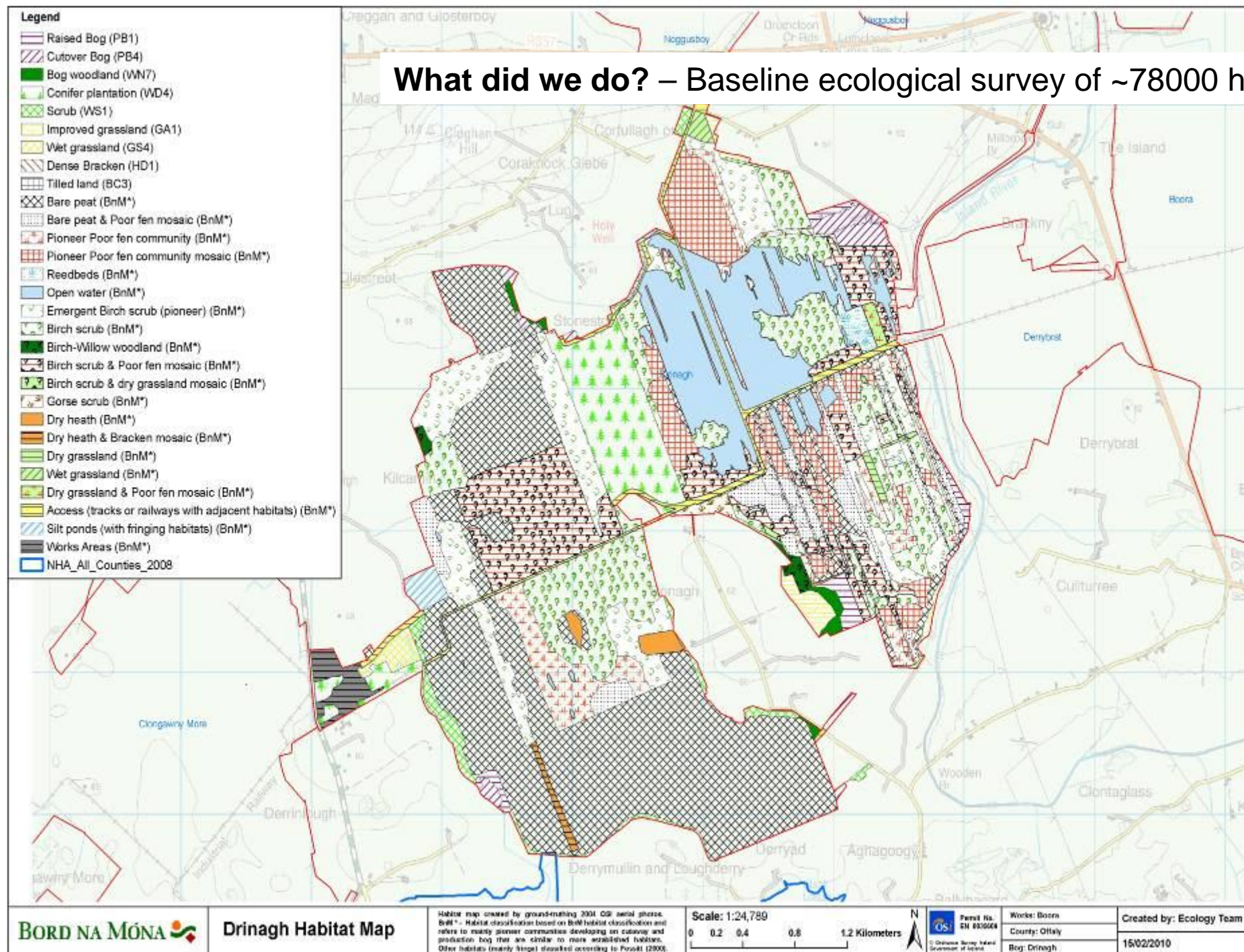
# Outline

- What did we do? - *The Baseline Ecological Survey*
- What did we find?
- Some future trends with habitats and species
- The next steps - planning rehabilitation





## What did we do? – Baseline ecological survey of ~78000 ha



## What did we find?

- Pioneer cutaway habitats dominated by
  - Rush/Bog Cotton-dominated communities
  - Birch scrub/bog woodland,
  - wetland communities,
  - dry heath,
  - dry grassland communities
- Pioneer habitat development dependant on various environmental factors
  - peat depth, pH of remnant peat (~6), nutrient status, hydrology, (pumped drainage), local topography (wet basins, dry mounds)
- No prospects for significant development of *Sphagnum*-dominated peat-forming communities in near future (no significant re-growth of bogs in short-term!)





## Active production bog



## Pioneer cutaway habitats



Soft Rush-  
dominated poor fen



Bog Cotton  
-dominated poor fen

Wetlands  
& Open water



Dry Heath



Birch scrub



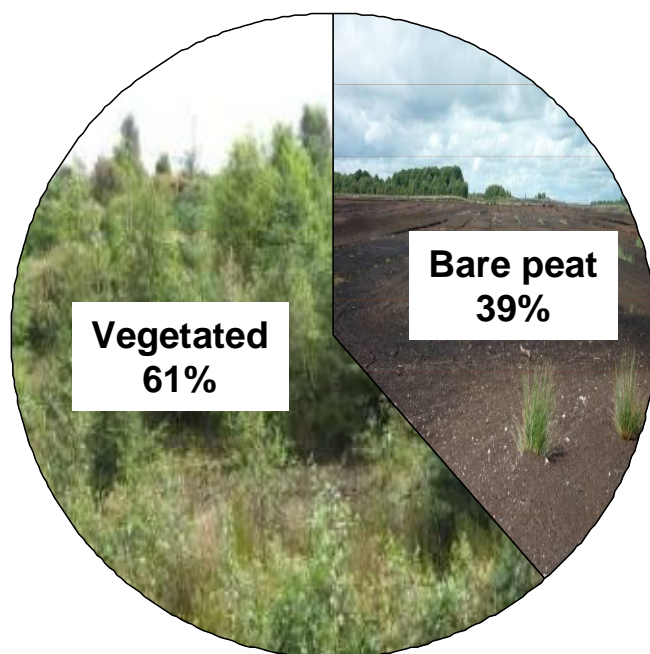
Dry calcareous grassland



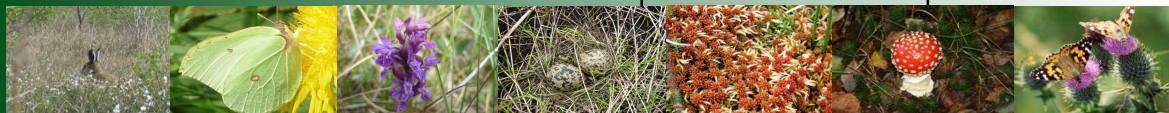
Reedbeds



## Current status of BnM property



	Habitat	Area (Ha)	%
Unvegetated	bare peat or gravel sub-soil	30261	38.7
Vegetated cutaway and/or remnant habitats	scrub*	8174	10.4
	pioneer cutaway vegetation	6680	8.5
	cutaway habitats	4623	5.9
	conifer plantation	3793	4.8
	heath*	3672	4.7
	woodland*	1970	2.5
	wetlands	1563	2.0
	grassland	1403	1.8
	open water	773	1.0
	riparian*	776	1.0
	fen*	316	0.4
	temporary flooded areas	184	0.2
Remnant/other habitats	bog*	7660	9.8
	cutover bog	3115	4.0
	built	1578	2.0
	degraded blanket bog	1253	1.6
	blanket bog	113	0.1
	agriculture	378	0.5
	<b>Grand Total</b>	<b>78284</b>	<b>100</b>





## Future Trends



Majority of dry cutaway expected to develop Birch-dominated woodland

- Proportion of bog woodland/open habitats?





## Future Trends

Expected increase in wetland cover in the future to ~ 15%  
- especially in pumped bogs like Garryduff

**Garryduff**



## Derrycashel Future wetlands?





## Future Trends



Some embryonic bog  
community development on  
cutaway with deeper wet peat

Rare on more typical milled-  
peat cutaway





## Future Trends



### Development of rich fen

- Extent of fen indicators limited
- but significant wetland with marl subsoil – extent of fen to increase?
- Likely development in wetlands
- Fen is a peat-forming habitat





## Species using the cutaway

- Many species colonise the cutaway (e.g. Bioblitz 940 species)
- Includes species of conservation significance e.g.



Whooper Swan

(Annex I Birds Directive)

Otter

(Annex II Habitats Directive)

Marsh Fritillary

(butterfly - Annex II Habitats Directive)

Basil Thyme

(plant - Flora Protection Order species)

Blue Fleabane

(plant - Red Databook species)

Marsh Helleborine

(plant – uncommon species)

- Likely to be continued colonisation into the future



## Planning Rehabilitation – when peat production ceases

- Condition 10.2 of EPA licenses - rehabilitation plan
- Rehabilitation not the same as after-use and development
  - but linked
- Rehabilitation primarily is about stabilisation of the former peat production areas
- Future land-use is
  - Windfarm development, Amenity, Biodiversity, Forestry, Industrial development etc (Strategic Framework for the Future Use of Peatlands)
- But can be significant lag period between cessation of peat production and after-use development of the site
  - need for rehabilitation and peat stabilisation
  - Some sites will be unsuitable for development and will continue to develop naturally after rehabilitation





## General criteria defining successful rehabilitation (milled cutaway scenario)

Stabilisation of bare peat areas, largely through enhancing natural colonisation

- targeted management
- active re-wetting (drain-blocking)

Mitigation of silt run-off via re-vegetation



## Planning Rehabilitation – continued

### Scope of each draft plan (pre-consultation) – general issues

- Categorisation of the habitats developing on the site
- Stabilisation of the former peat production areas
- Drainage management through the site and water emissions from the site
- The timeframe for cutaway bog rehabilitation
- The impact of the other potential developments on the site and on rehabilitation





## Planning Rehabilitation – continued

### Proposed rehabilitation programme

#### Short-term (0-5 years)

- most sustainable management option .... allow continued natural re-colonisation
- and some targeted management if required
- continued monitoring of bare peat areas

#### Medium-term

- targeted management will be carried out on any remaining bare peat areas, if required

#### Long-term

- evaluate success of short/medium rehabilitation measures outlined above and enhance where necessary
- Reporting to the EPA will continue until the IPPC License is surrendered



## Planning Rehabilitation – continued

- Development of a draft rehabilitation plan
- Consultation
  - With BnM staff, EPA, NPWS, Coillte, Inland Fisheries Ireland, Forest Service, IPCC; An Taisce, BWI; local authorities and other interested groups etc
- Development of finalised rehabilitation plans



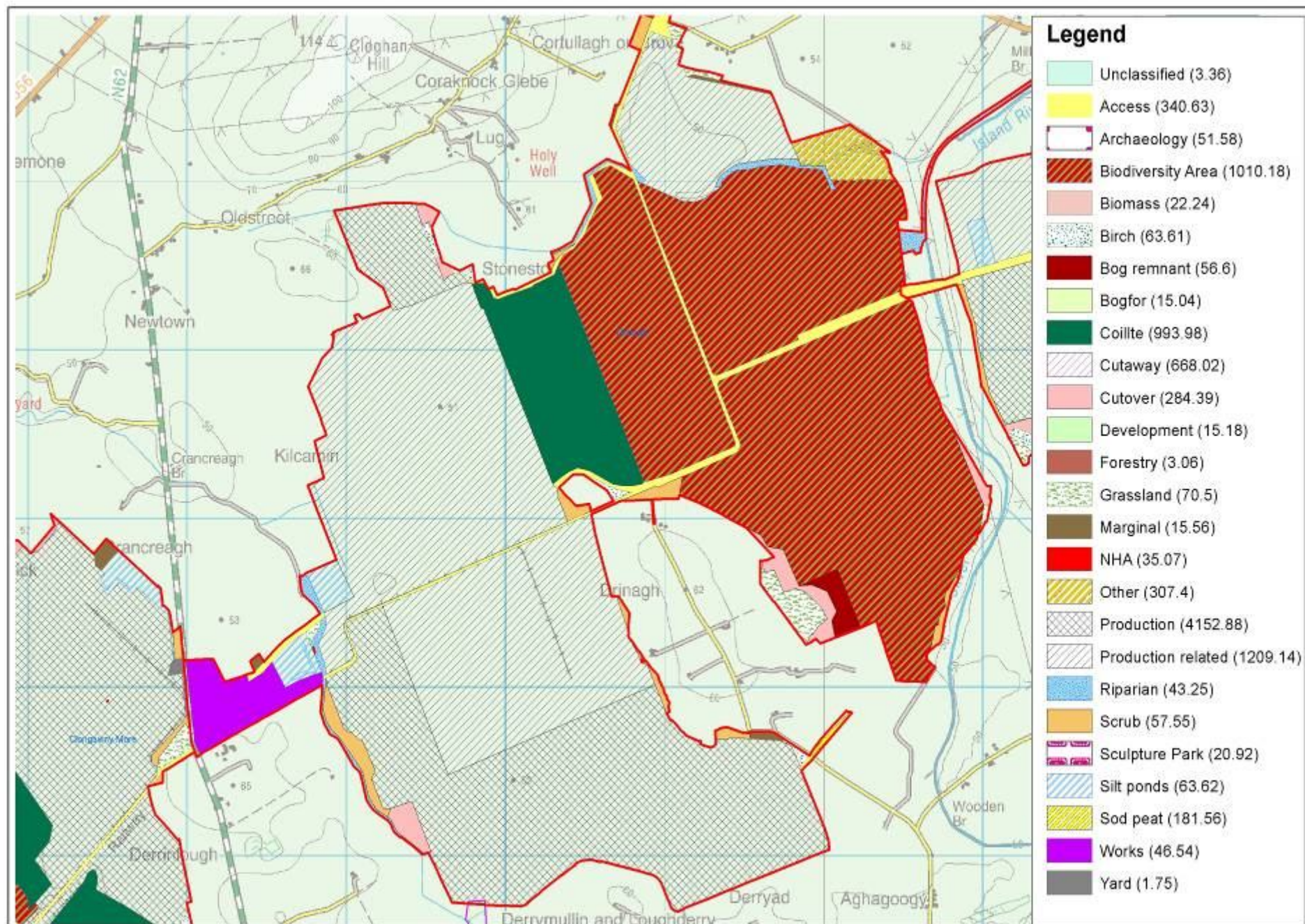


## Planning Rehabilitation – continued

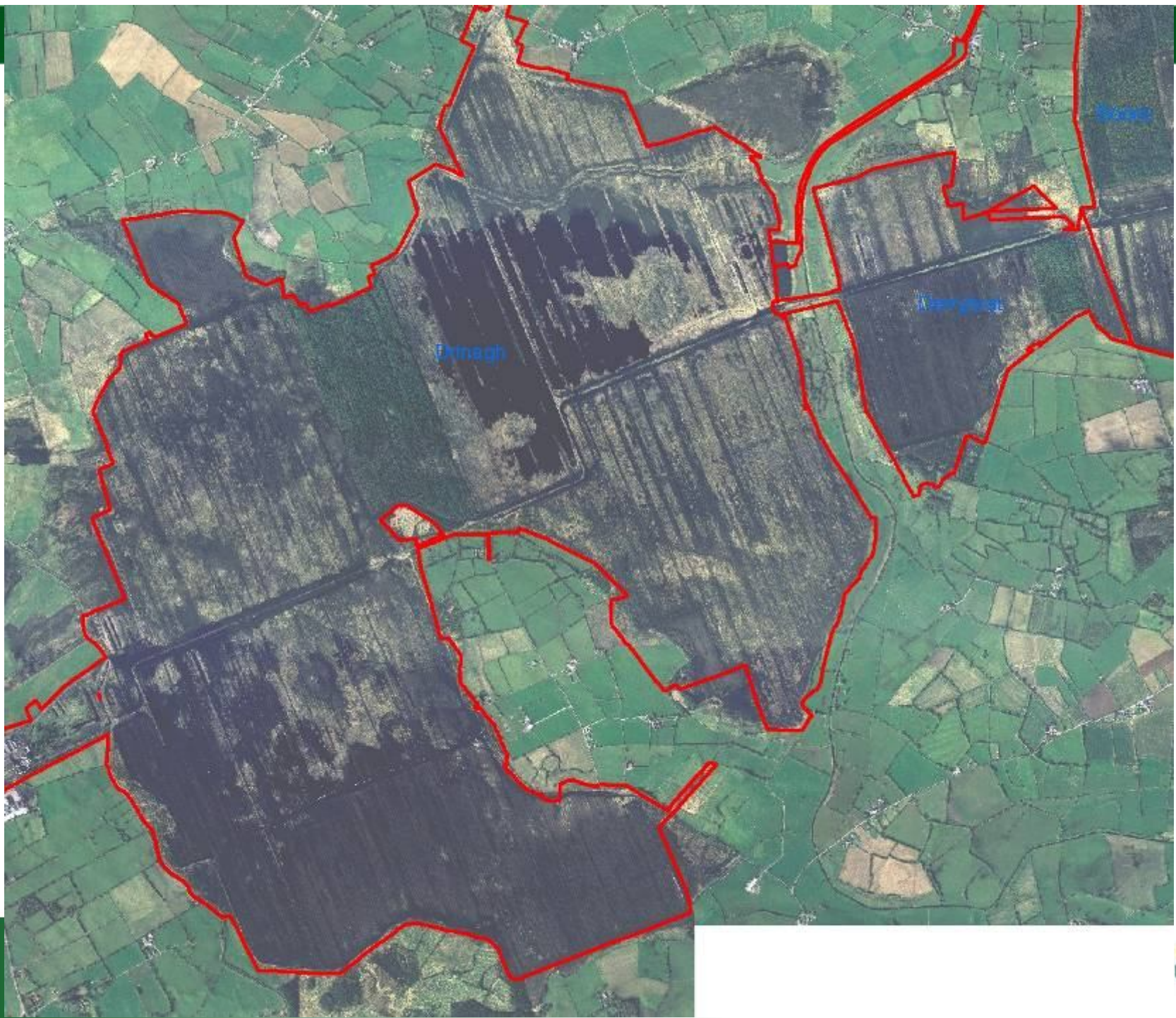
### Timeframes

- Some sites available for rehabilitation now (e.g. Derrydoo-Woodlough)
- But much of the cutaway associated with sites that will be in production for some time (e.g. Drinagh peat production projected until 2027)
- Can't proceed until production ceases totally - e.g. due to drainage issues  
- but there is potential for staged rehabilitation (e.g. Boora)
- At some sites can't plan fully until bog drainage is in its final stage (e.g. new pumps projected at some sites)
- Rehabilitation can also be combined with future land-use development (e.g. Mountlucas windfarm)











# Development and implementation of a rehabilitation plan

## Derrydoo/Woodlough - Moyarwood Bog

Degraded raised bog –drained in 1980's

Draft rehab plan developed 2011

### Criteria defining successful rehabilitation

- re-wetting via drain blocking
- enhanced nature conservation status

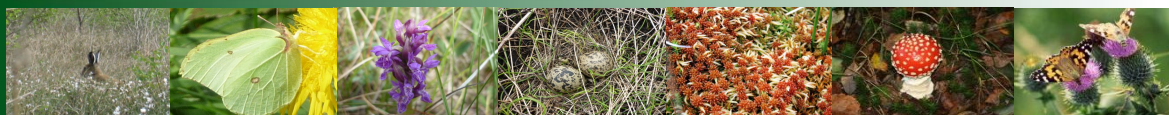




## Derrydoo-Woodlough

- Draft rehabilitation plan developed 2011
- Consultation - winter-spring 2012  
BnM, NPWS, EPA, IPCC, An Taisce, local communities etc
- Consultation - site visit with NPWS (March 2012)
- Final plan developed April 2012
- Planning - spring 2012  
Machinery/HR (BnM Feedstock)  
Drainage survey (BnM Surveyor Team)  
Access
- Rehabilitation begins June 2012

Bord na Móna		Derrydoo-Woodlough Rehabilitation Plan									
<b>Rehabilitation Plan</b>											
<p>This rehabilitation plan is developed under Condition 10 of IPPC Licence Ref. 502. It outlines the measures that will provide for stabilisation of the bog area. Rehabilitation can comprise natural colonisation with or without targeted management, and in some instances will incorporate other after-uses (development of sites for nature conservation, amenity, renewable energy, forestry and/or other commercial developments) deemed compatible with the site as outlined under the Bord na Móna Land Use Framework document 2011.</p>											
Bog Name:	Derrydoo-Woodlough Bog group	Area (ha):	<p>Total approx. 469 Ha (comprises a cluster of sites of variable size)</p> <table border="0"> <tr> <td>Moyanwood Bog</td> <td>188ha</td> </tr> <tr> <td>Lemnagh Bog</td> <td>102ha</td> </tr> <tr> <td>Paul's Lough Bog</td> <td>143ha</td> </tr> <tr> <td>Gortnahulla</td> <td>38ha</td> </tr> </table>	Moyanwood Bog	188ha	Lemnagh Bog	102ha	Paul's Lough Bog	143ha	Gortnahulla	38ha
Moyanwood Bog	188ha										
Lemnagh Bog	102ha										
Paul's Lough Bog	143ha										
Gortnahulla	38ha										
Works Name:	Attymon	County:	Galway								
Author(s):	CF, MMC & DF	Survey Date(s):	<p>Site survey dates:</p> <p>8<sup>th</sup> &amp; 9<sup>th</sup> April 2010; June 2011</p>								
Maps:	Rehabilitation map										
Review status: finalised March 29th 2012											
<b>Background</b>											
<p>The Derrydoo-Woodlough Bog group is comprised of a cluster of four sub-sites, each of which is an example of degraded raised bog with associated marginal habitats. These bogs were ditched (drained) in the early 1980s but were never industrially harvested for peat and the surface vegetation remained largely intact. Derrydoo-Woodlough bog is part of the Attymon – Blackwater 502 bog group.</p> <p>This plan is a specific rehabilitation plan for the Derrydoo-Woodlough Bog group and outlines:</p> <ul style="list-style-type: none"> <li>• criteria which define the successful rehabilitation,</li> <li>• consultation with interested parties,</li> <li>• main issues for rehabilitation,</li> <li>• proposed rehabilitation programme,</li> <li>• and proposed timeframe to implement this programme, and associated aftercare, maintenance and monitoring.</li> </ul> <p>The basis for the proposed approaches and implementation is the experience gained in 40 years of research on the after-use development and rehabilitation of the Bord na Móna outaway bogs (see reference documents).</p>											
<b>Scope</b>											
<p>The scope of the rehabilitation plan seeks to address issues of concern as identified by Bord na Móna and the consultees. The key issues identified are:</p> <ul style="list-style-type: none"> <li>• Categorisation of the habitats developing on Derrydoo-Woodlough Bog group (outlined in Appendix 1)</li> <li>• Environmental stabilisation of the former peat production areas (N/A)</li> <li>• Maintenance of drainage and silt control through the site</li> <li>• Remediation of water courses where necessary (decommissioning)</li> <li>• The timeframe for bog rehabilitation/restoration</li> <li>• The impact of any other proposed development on the site and rehabilitation plan</li> </ul>											
<b>List of consultees</b>											
Bord na Móna Senior Management; NPWS, IPCC; BWI; Golden Eagle Trust; An Taisce, Colliie; EPA, local county council, Heritage Officer, local communities											



**Thank You**

