Baseline Ecology Survey Update

Mark McCorry

January 18th, 2013
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 ~78,000 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

Reedbeds

Dry calcareous grassland
## Current status of BnM property

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

1. Stabilisation of bare peat areas, largely through enhancing natural colonisation and targeted active rewetting.
2. Mitigation of silt runoff 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 - Moyanwood Bog
Degraded raised bog, drained in 1980s

Draft rehab plan developed 2011

Criteria defining successful rehabilitation:
- 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
Thank You