The Peat Project

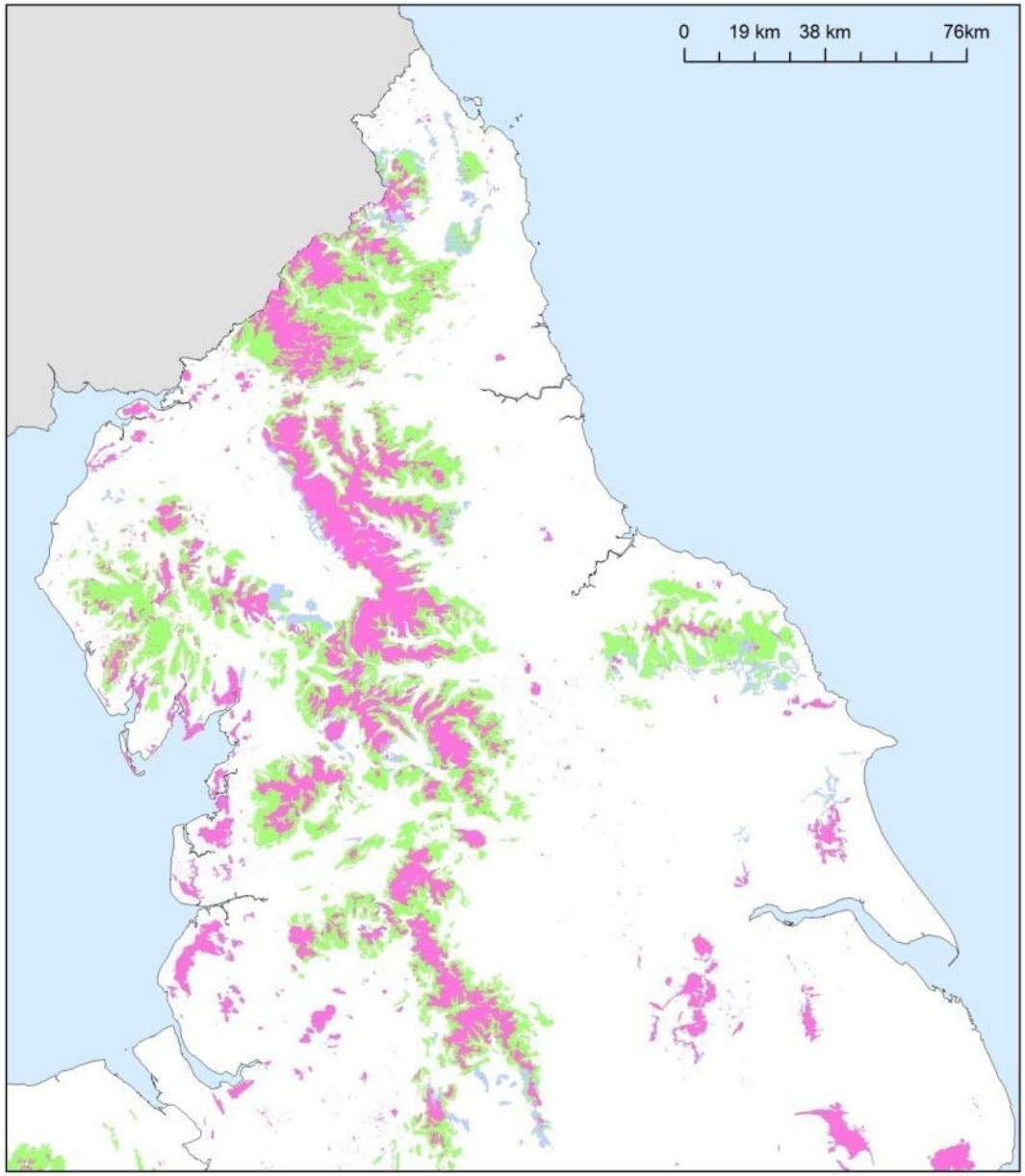
- Partnership Peat Project is an initiative to bring together English, Welsh and Northern Irish departments and agencies to address peatland issues.
- Phase 1 (ends Dec 09) aims to:
  - Improve coordination among partners' work on peatlands
  - Collate evidence and promote research on the value and services of peatlands
  - Develop new approaches to reducing horticultural peat use
  - Review and develop policy that accounts for value and services of peatlands.
  - Develop guidance, tools, resources to improve peatland management
  - Develop framework to deliver peatland restoration

Background and Rationale

- Increasing interest in the importance of peatlands
  - biodiversity
  - stores of organic C
  - GHG flux
  - flood management
  - water quality
  - food production
  - cultural heritage (leisure, archaeology)
- How peatlands deliver these depends on extent, management, cover, and condition
- Previously had no national picture of the state of our peatlands.

The Peat Project

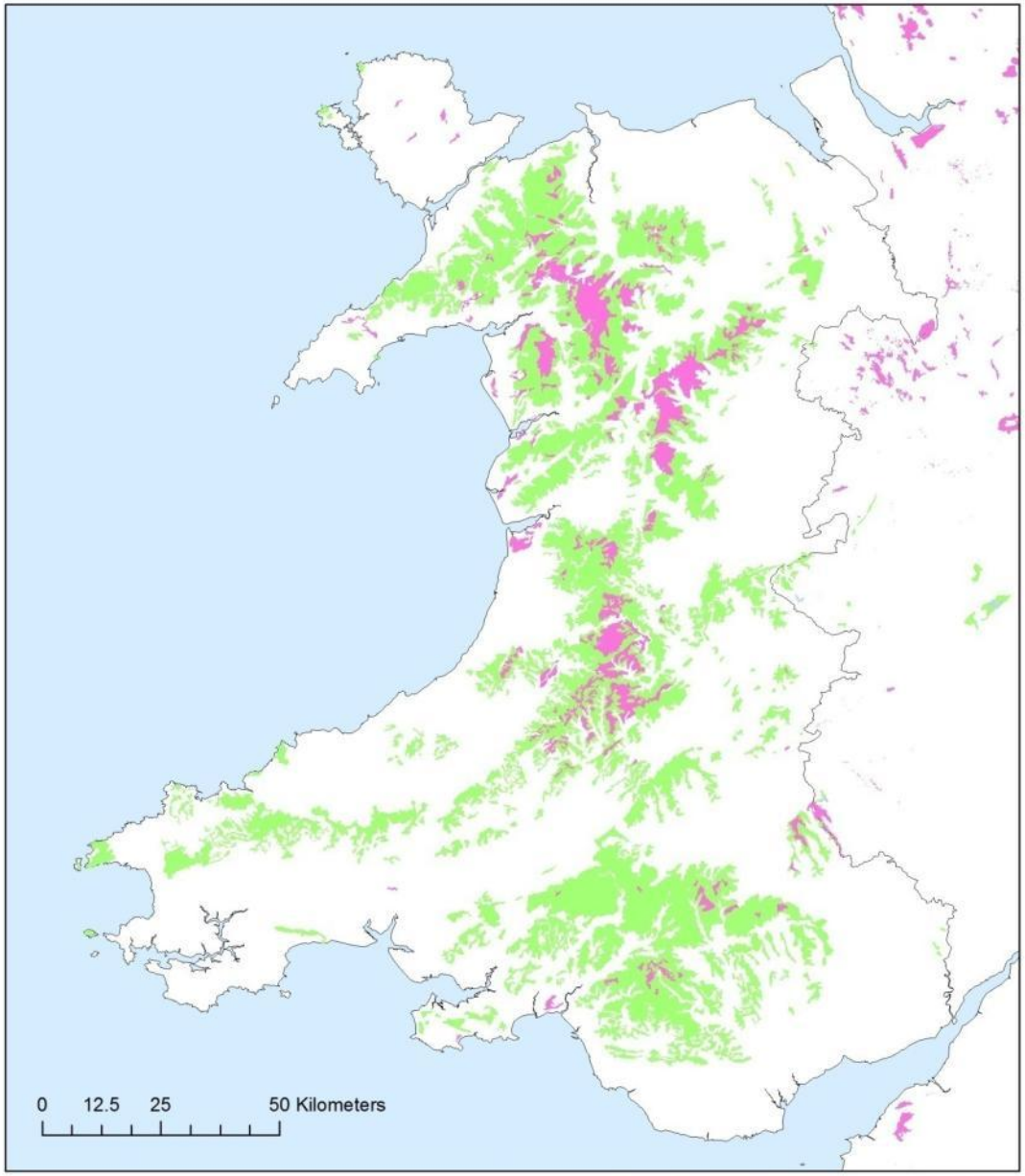
- Natural England has been leading on mapping of peat status and location
- Mapping of peat location draws on NSRI, BGS, and NE BAP data
- Welsh peat mapping based on ECOSSE project
- Northern Irish peat map based on AFBI soils map.
- Maps show:
  - Deep peaty soils
  - Shallow peaty soils
  - Soils with peaty pockets



NATURAL ENGLAND

Peaty Soil Type

- Deep Peaty Soils
- Shallow Peaty Soils
- Soils with Peaty Pockets



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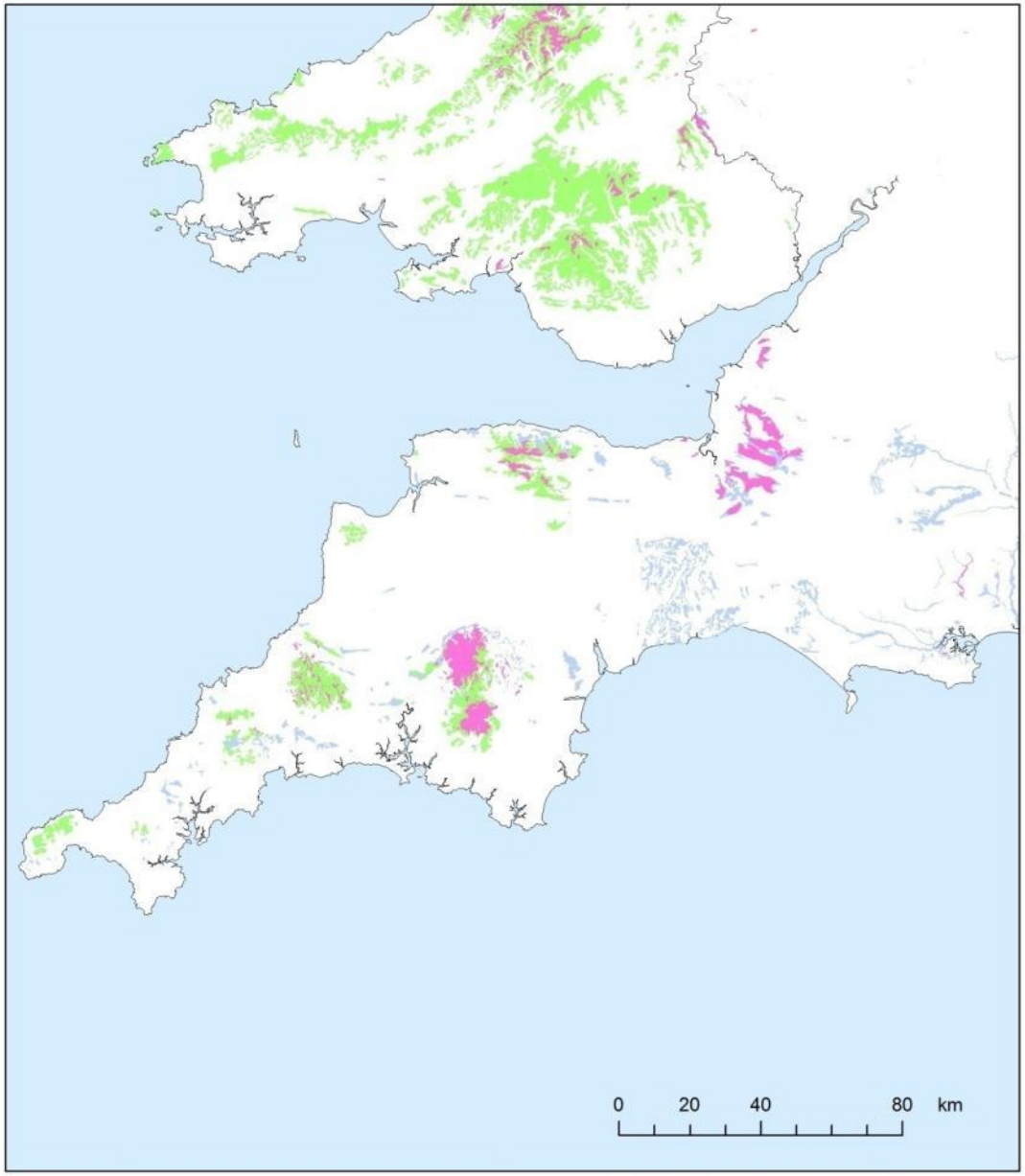


NATURAL ENGLAND

Peaty Soil Type

- Deep Peaty Soils
- Shallow Peaty Soils
- Soils with Peaty Pockets

Peat Extent - England

- In England we have

Peat Type	Area
Deep Peaty Soils (including wasted peats)	**6,799 km^2**
Shallow Peaty Soils	**5,272 km^2**
Soils with Peaty Pockets	**2,114 km^2**
Total	**14,185 km^2**

Peat Status Mapping

- Assigns peat areas a "status" class based on land use, cover or condition of peat.
- Land Use
  - Cultivated
  - Gripped
  - Rotationally Burned
  - Peat extraction
  - Restored

Peat Status Mapping

- Land Cover
  - Afforested
  - Wooded
  - Scrub
  - Semi-natural (non peat-forming)
  - Improved Grassland
  - Pristine
  - Bare

Peat Status Mapping

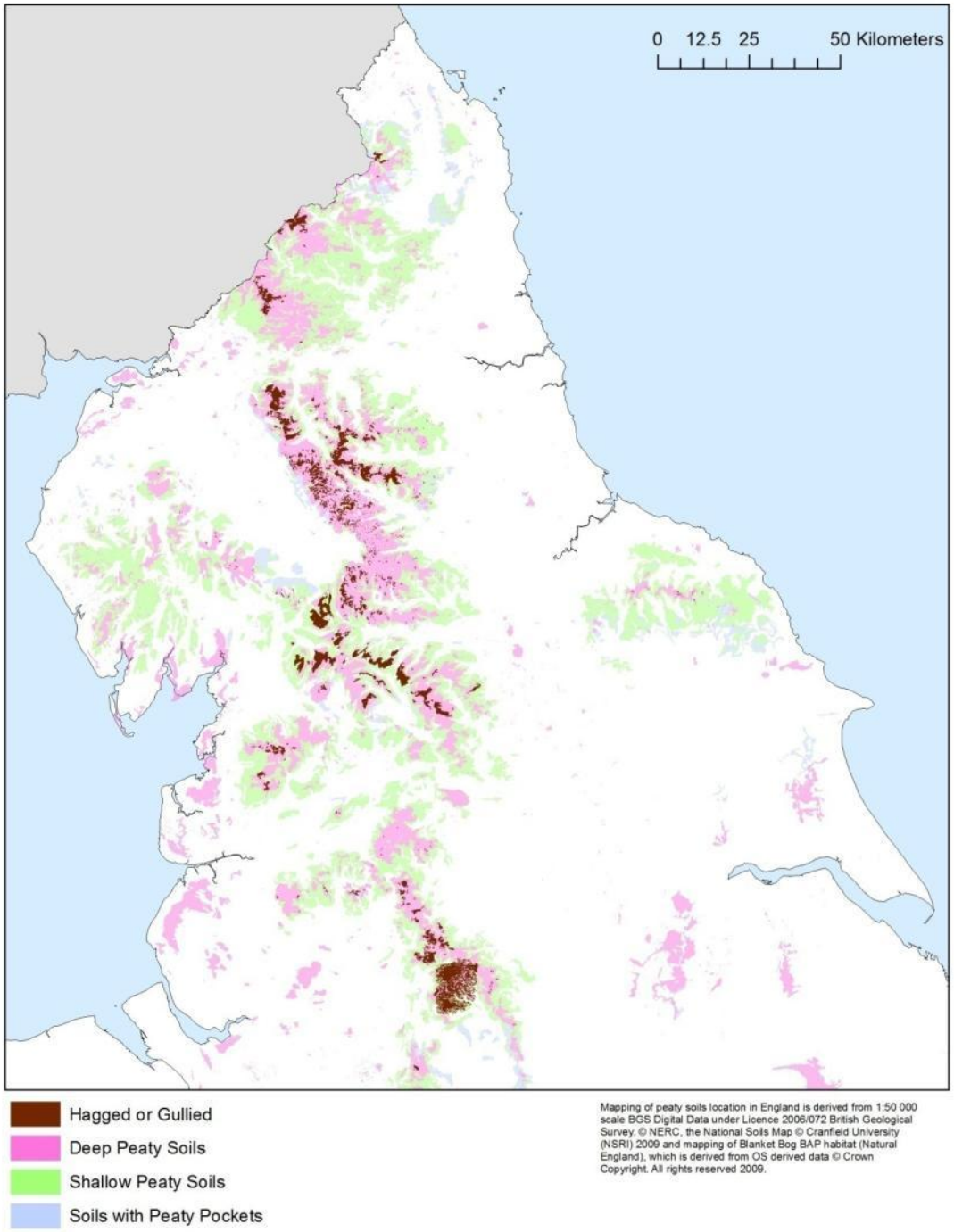
- Peat condition
  - Hagged/Gullied (eroded)
  - Wasted
  - Peat cut
  - Polluted

Peat Status Mapping

- For England, this data draws upon
  - NE datasets (local – grip mapping, national - ENSIS)
  - Partners' datasets (eg. National Inventory Woodland and Trees – FC, Single Payment Scheme)
  - 2009 Upland Aerial Photo analsyis of moorland deep peat (Penny Anderson Assoc.)
  - Data sets from Local Authorities/NPAs, Local Records Centres, National Trust, RSPB.
  - Researchers and contractors

Peat Status Mapping

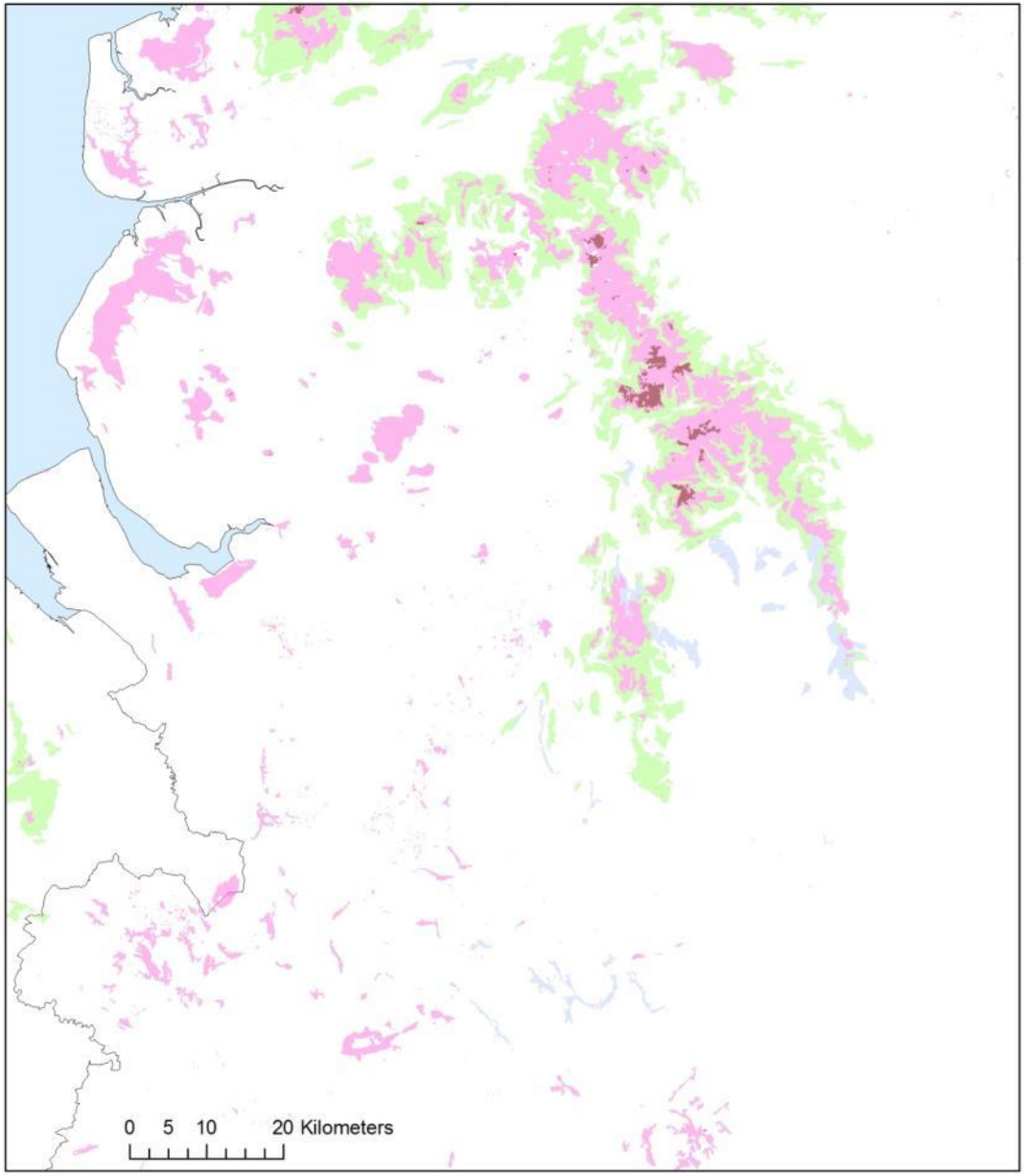
Hagged and Gullied Peatland



NATURAL ENGLAND

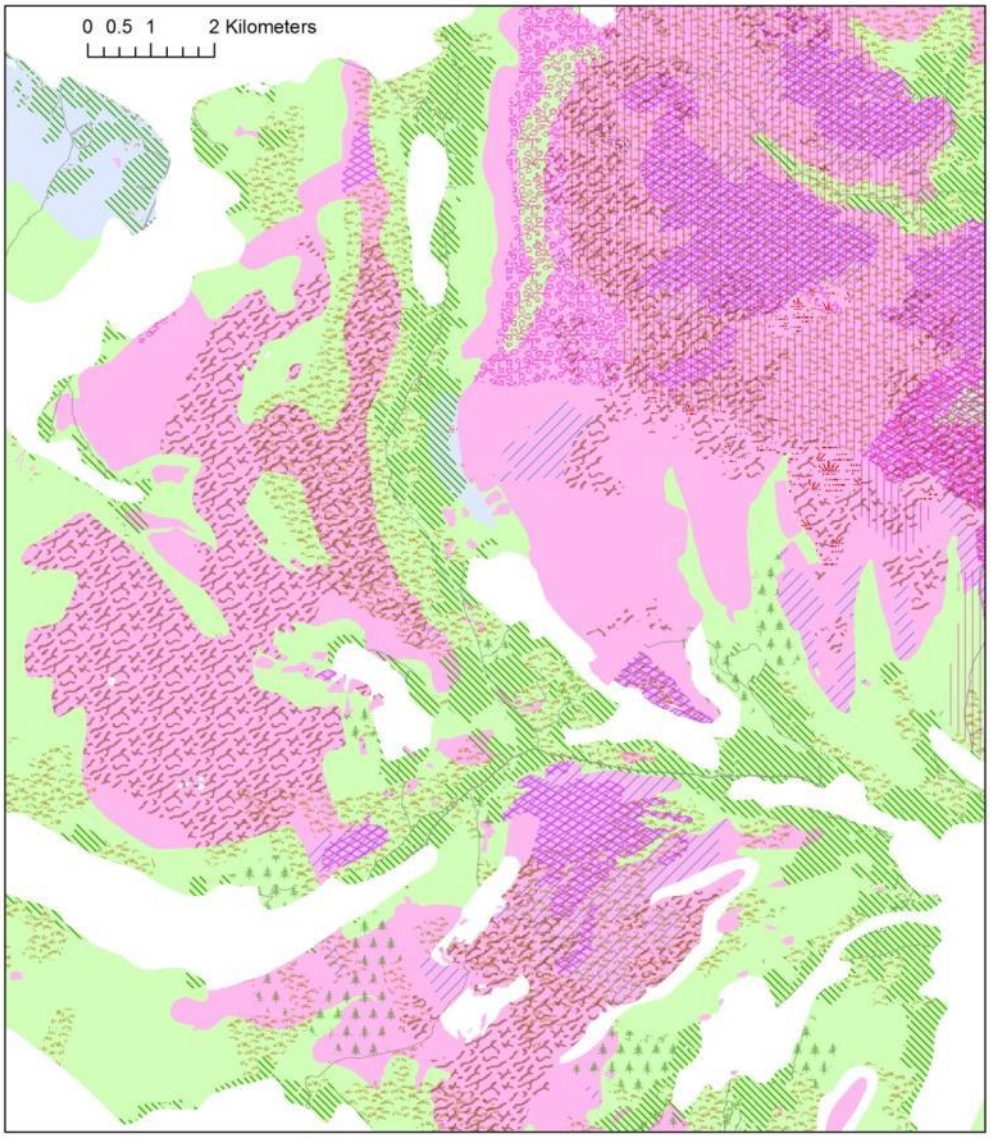
Peat Status Mapping

Bare Peatland



NATURAL ENGLAND

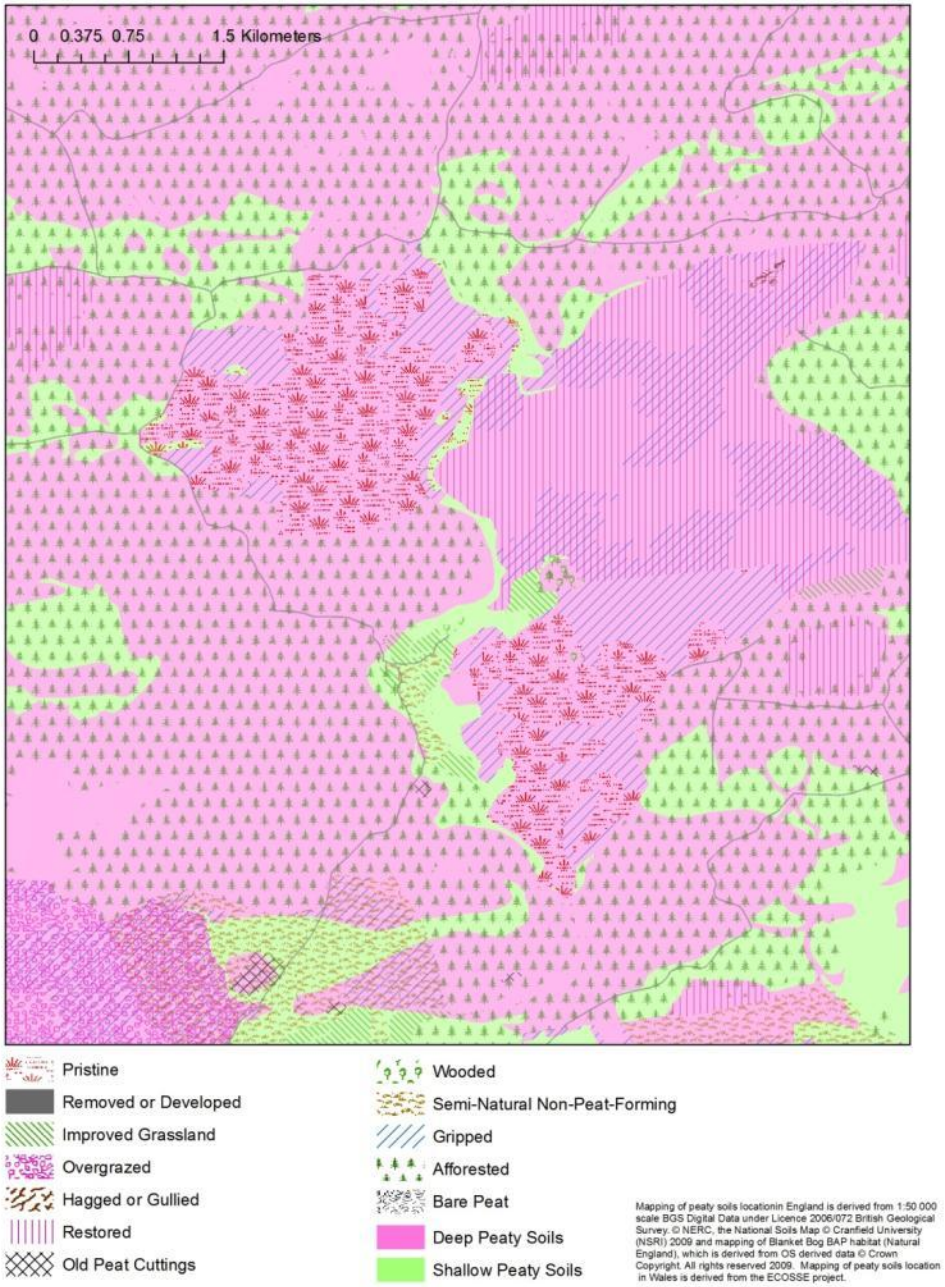
Peat Status Mapping Baugh Fell, and Mallerstang Common



Removed or Developed
Improved Grassland
Overgrazed
Molinia-dominated
Bare Peat
Hagged or Gullied
Restored
Pristine
Rotationally Burnt
Semi-natural Non Peat-forming
Gripped
Afforested
Deep Peaty Soils
Shallow Peaty Soils
Soils with Peaty Pockets

NATURAL ENGLAND

Peat Status Mapping Butterburn Flow, Northumberland



NATURAL ENGLAND

Overall peat status mapping (includes lowland peat)

Peaty Soil Type	Peat Status Class	Area (ha)	% of total area for that soil type
Deep Peat	afforested	33156	4.9
	bare	4239	0.6
	burnt	105533	15.5
	eroded	49319	7.3
	gripped	74107	10.9
	improved	60318	8.9
	overgrazed	30643	4.5

Overall peat status mapping (includes lowland peat)

Peaty Soil Type	Peat Status Class	Area (ha)	% of total area for that soil type
Shallow Peaty Soils	afforested	65752	12.5
	bare	7	0
	burnt	35340	6.7
	eroded	2981	0.6
	gripped	17025	3.2
	improved	112391	21.3
	overgrazed	13500	2.6

Support and Guidance

- Review of monitoring techniques for peatland restoration – guidance pending.
- Review of impacts of windfarms on peatlands – guidance pending
- Upland restoration handbook – out soon!
- Internal guidance already rolled out on grip blocking that is sensitive to historic environment
- Development of standard protocol (cf EA) in planning and running grip blocking programmes

Research and Development

- GHG flux and C storage
  - Fred Worrall currently using NE's upland peat status data and Durham Carbon Model for a national upland peatland GHG and C flux budget
  - NE have looked at the case for peatland C trading
  - NE have worked with JNCC to develop UK Peatland GHG and C Flux project – designing research programme
  - Defra are developing an experimental project on how to minimise GHG flux during peatland restoration
- National data on peat depth – C storage
  - Have already provided estimates of C storage in National Parks – needs refining with better depth, quality, location and status data.
  - NE is collating peat depth data with a view to proposing a national peat depth and quality project

Research and Development

- Flood risk management
  - NE are working with EA on project with Durham University (Dave Milledge) to model peat hydrology and the impacts of restoration
  - NE are part-funding monitoring work on Stean Moor on hydrology and fluvial C loss

Research and Development

- Defra-funded MftF project on ecosystem services from 4 case study peatland areas reports Nov 09
  - Aims to determine and map ecosystem services from 4 peatland case study areas
  - Humberhead Levels, Migneint & Berwyn, Peak District, and Somerset Levels.
  - Provide framework to evaluate peatland benefits and where these flow

R&D Lowland peatland

- Preparing spec on balance of food security and re-wetting peatlands
- Helping to establish Wetland Vision projects, through data supply on peat status, financial and organisiational support.
- Possible CASE studentship on GHG flux from restored peatlands in the Humberhead Levels
- NE managed Defra project on biodiversity impacts of peat extraction – examining basis of the UK 2010 peat reduction target
- Defra projects on economic impact of peat reduction, and on GHG flux associated with growing media – out soon.
- A Defra workshop on the post 2010 target will be held 11th Nov, London.

Action for the future

- The Peat Project and Soils Strategy require a framework to be developed to enhance delivery of peatland restoration
- Build on successes of eg MftF and Peatscapes
- NE, EA and Defra are working to develop a National Peatland Restoration Delivery Forum
- Proposal for network will go to ministers in early 2010.

Action for the future

- Possible aims for the forum:
  - Seek to establish peatland restoration projects for all major areas of peatland in England.
  - Encourage a clear vision for a restored peatland, grounded in ecosystem services (including biodiversity).
  - Seek to ensure that NE, EA and other organisations recognise the importance of peatland restoration in their resource planning.
  - Encourage wider understanding of peatland benefits to encourage support for restoration projects.
  - Provide and organise training, knowledge transfer, tools and resources for peatland restoration practitioners.
  - Seek to ensure that NE and EA etc. procedures are consistent and coordinated to ease restoration.
  - Represent the views of peatland restoration projects to government.

Action for the future

The forum could:

- work with uplands and lowland wetland BIGs to help deliver 2015 biodiversity targets
- encourage participation of all current restoration projects.
- Review NE and EA procedures to remove unnecessary obstacles.
- Determine the requirements of peatland restoration practitioners for training guidance and research
- Provide support and guidance for peatland restoration projects.
- Develop an ecosystem services approach to setting objectives for peatland restoration projects.
- Influence resourcing for peatland restoration projects.