

# Peatland data: more deviation than standard



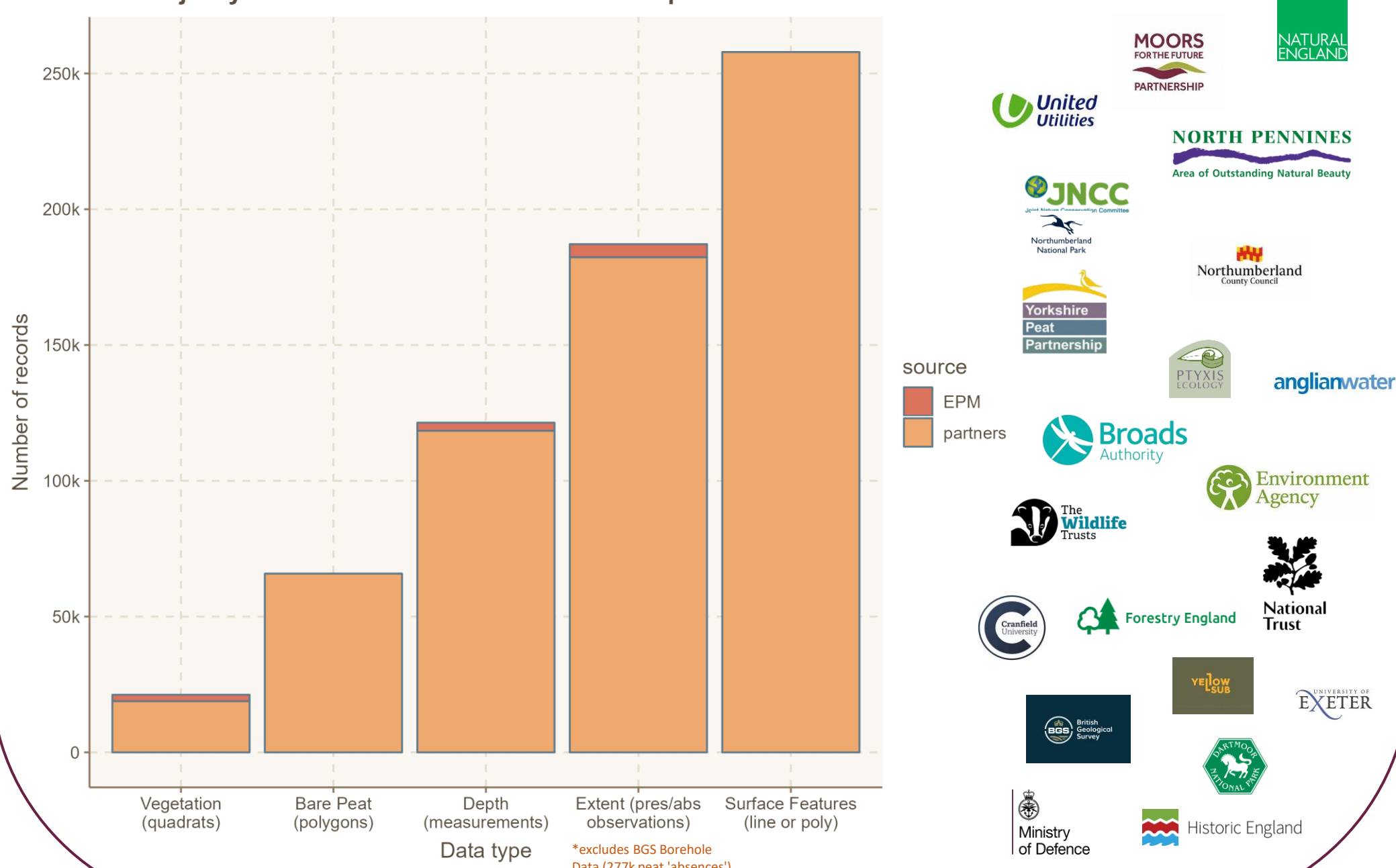
## 1) We collated over 400k records from over 30 partners...

As part of the **England Peat Map** project we have engaged with colleagues and stakeholders to locate and collate field data about the extent, depth and condition of peatlands. External data makes up vast majority of peat extent (shown below), depth and vegetation on peat. For bare peat and surface features) it is our ONLY source.

Not all the data is directly observed in the field. Bare peat and surface features data are a combination of field observation and digitising from aerial imagery. We also have over 277,000 peat absence points, derived from BGS core data.

We will publish as much of it as we can in March 2025, but it's been hard to licence it all for publication.

The majority of EPM field data comes from our partners



## 2) ...but putting it together was hard!

### Already standard

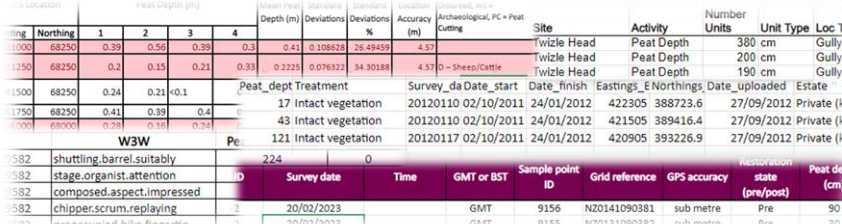
Almost universally **adopted** standards:

- Peat depth in cm
- Veg abundance in % cover
- Location: eastings / northings
- Date of survey included
- Electronic data (.csv or .shp)

### Lots of deviation

Frequently **missing**:

- Definitions:
  - Peat, peaty, organic soil?
  - Hag, gully, grip, erosion
  - Width
  - Veg classification system
- Full depth or something else (i.e. was mineral soil reached)
- Methods and tools
- Location accuracy
- Purpose of survey
- Single measurement or average?



## 3) Data standards benefit us all

### The big picture

- To make the case for peatlands we need to combine data from many projects
- Funders will set de-facto data standards: community should lead
- Innovation, tools and software can be driven by standardisation
- Peatlands are long-term, and long-term data needs standards

### Project level

- Improves evidence to support effective restoration
- Easier to share (interoperability), better comms
- Easier to do quality assurance
- Off-the shelf solutions based on standards
- Easier to make comparisons between projects

## 4) Standards are emerging



### Co-development of peatland data standards for research and conservation

University of Leeds, contact [R.Grayson@leeds.ac.uk](mailto:R.Grayson@leeds.ac.uk)

Leeds University WaterLANDS UK (supported by UKRI Impact Acceleration Account) working to:

- identify and map data standardisation **needs** for peatland monitoring organisations;
- consult on data and monitoring **protocols library**;
- publish **data and monitoring protocols** for UK peatland monitoring (version 1);
- create a data standards **implementation roadmap** by engaging with IUCN, DEFRA and peatland practitioners
- develop and deliver **training materials** for the implementation of data standards



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### Surface Features

Initiated by National Trust, contact [tia.crouch@nationaltrust.org.uk](mailto:tia.crouch@nationaltrust.org.uk)

Provides standard terms for bare peat, hagg, gully, grip, peat cutting, peat pipe, drains and non-peatland features. E.g.:

Field Name	Alias	Data Type
RegionsCountries	Region or Country	Text
PropertyGroup	Property Group	Text
PropertyName	Property Name	Text
FeatureType	Surface feature type	Text
	Head or Edge pipe outlet	Text
	Width	Text
	Depth	Text
	Aspect	Text
	Base type	Text
Method	Mapping method	Text
DateCreated	Date Created	Text
DateAP	Date of aerial photographs	Text
ResAP	Resolution of aerial photographs	Text
Notes	Notes	Text
DeliveredBy	Delivered by	Text
DataOwner	Data owner	Text

**Surface feature type**

- Peat pipe (collapsed section)
- Pipe origin
- Pipe outlet
- Pipe vent hole

**Method**

- Traced from aerial photographs
- Remote sensing technique
- Mapped in field
- Unknown



### Peaty soil surveys

Initiated by Natural England, contact [PeatMap@naturalengland.org.uk](mailto:PeatMap@naturalengland.org.uk)

Provides standard terms and minimum requirements for surveys of peat(y) soil, including presence, depth, equipment and whether full depth was measured. E.g.:

Attribute	Description	Example
surfacePeatDepth	Maximum depth of surface peat (organic soil depth), measured from the surface, specified in centimetres. Depth may be zero if there is no surface peat.	143
peatDepthResolution	The description of the potential error, if any, associated with the peatDepth measurement, e.g. was peat depth measured to the nearest 1cm, or 10cm, or was the bottom difficult to ascertain with certainty (in which case peatDepthRemarks should provide details)?	Nearest 1cm
probeType	Type of peat probe or other sampling method. Values: peat probe avalanche probe cable rod drainage rod threaded rod peat borer soil corer open end corer stick other The "other" option may be used for devices used that are not actually peat probes, e.g. surface level rods, supported by peatDepthRemarks for additional details.	avalanche probe
probeReachedBottom	Was the base of the peat layer(s) reached, e.g. was probe long enough to measure the full depth of peat? As opposed to suspecting that peat continued to lower depths that could not be measured. "No" means that the full depth of peat was not measured, and hence the peatDepth recorded is a minimum value only. Values: Yes No	Yes



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## 5) What can I do today?

### Existing data:

Just add **metadata!**

- methodology
- equipment
- definitions
- purpose & sampling strategy
- people
- dates

Work out who it can be shared with (e.g. check contracts)

### Help out:

- **Share** your protocols with WaterLANDS (see below)
- **Lead** the development of a standard, e.g.
  - Condition monitoring
  - Restoration monitoring
  - Biodiversity (e.g. veg, inverts, etc.)
  - Hydrology
- **Tell us** what you need: contacts below

### New survey / project:

- Just add **metadata!** (see above)
- Is there an **emerging standard?**

• Ask yourself:  
*What do I need to record in the field to make this data more useful long-term?*

### Components of a data standard

	Defined terms
<b>Required</b>	to make a record <b>usable</b>
<b>Desirable</b>	to improve <b>quality</b> of a record
<b>Optional</b>	Alternatives, options

### Format

