England Peat Map:
Extent and depth of peaty soils

Sam Dixon, Christoph Kratz, Chris Miller, Alex Hamer, Mike Prince, Charlie Hart, Craig Dornan & Andrew Webb
peatmap@naturalengland.org.uk

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What is the England Peat Map?

- Baseline national-scale maps of predicted peat extent, depth and condition in England by March 2024
- Developed by a team with expertise in ecology & field surveying, earth observation & data science
- Created using new and existing field survey data, satellite imagery and geospatial data in machine learning frameworks

Our approach

- We will use a *modelling* approach as opposed to a *mapping* approach used previously

- We have chosen this approach because:
  - It is more explicit about uncertainty
  - England is too large to map in detail
  - Can be enhanced with detailed maps and/or models

- The models will be trained using both existing data and an extensive new field survey programme

- Our model will utilise several predictor datasets. These are national mapping and satellite products which have a relationship with peat extent and/or depth
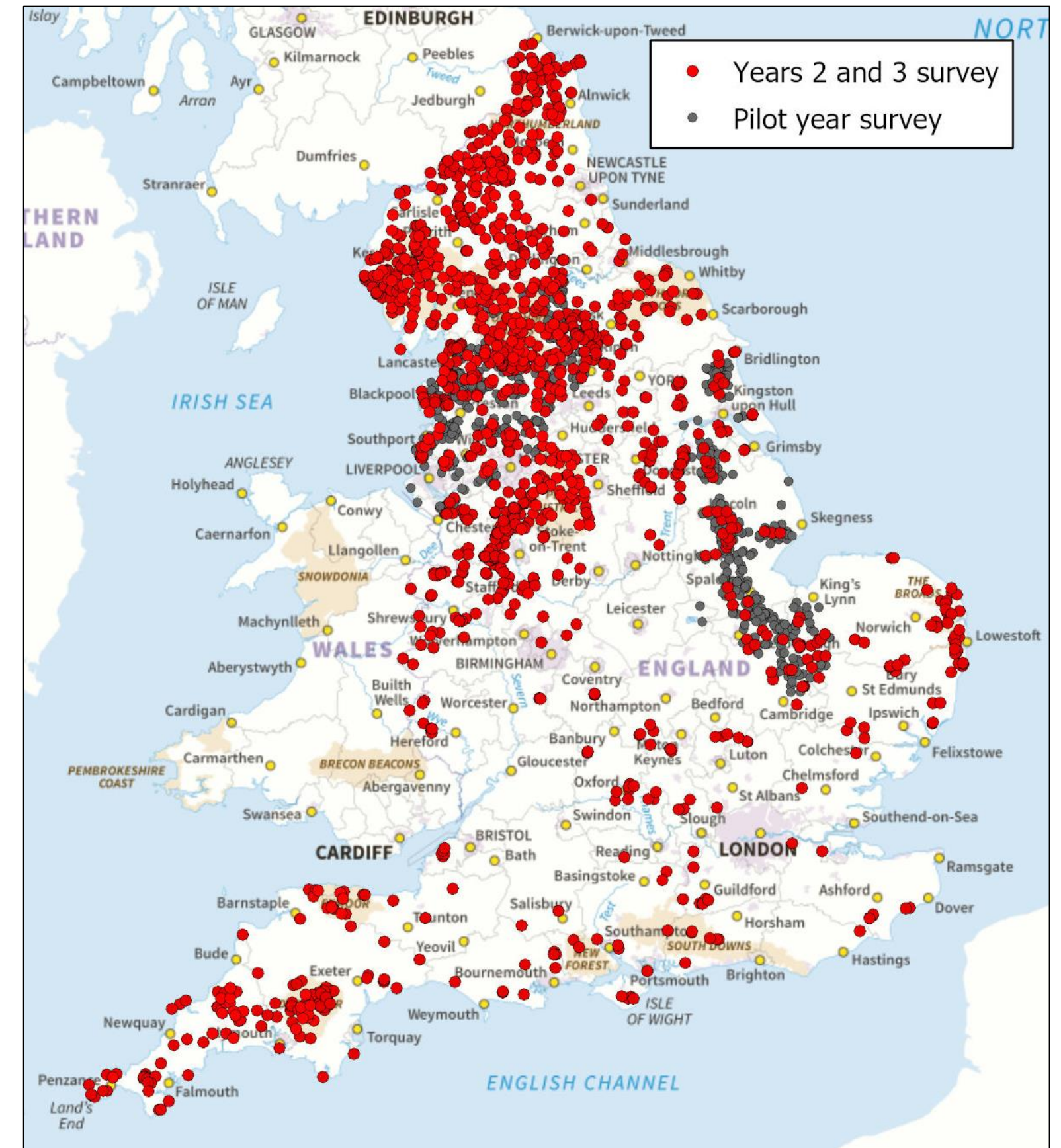

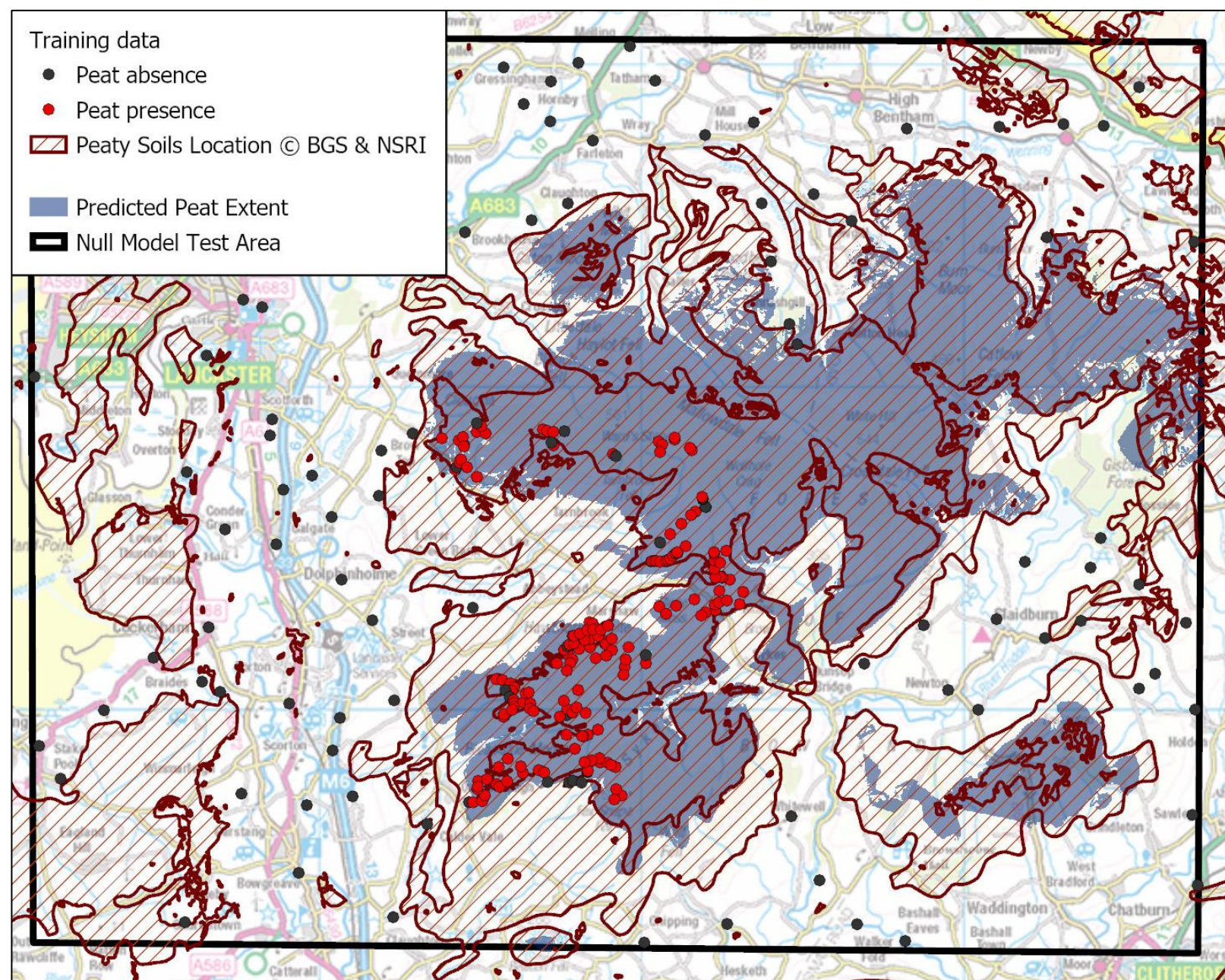Figure 1: Field survey locations. Half of years 2 and 3 survey points will be surveyed.

Figure 2: Example *null model* output for peat extent with peaty soils location for comparison. Peat data supplied by the EA.
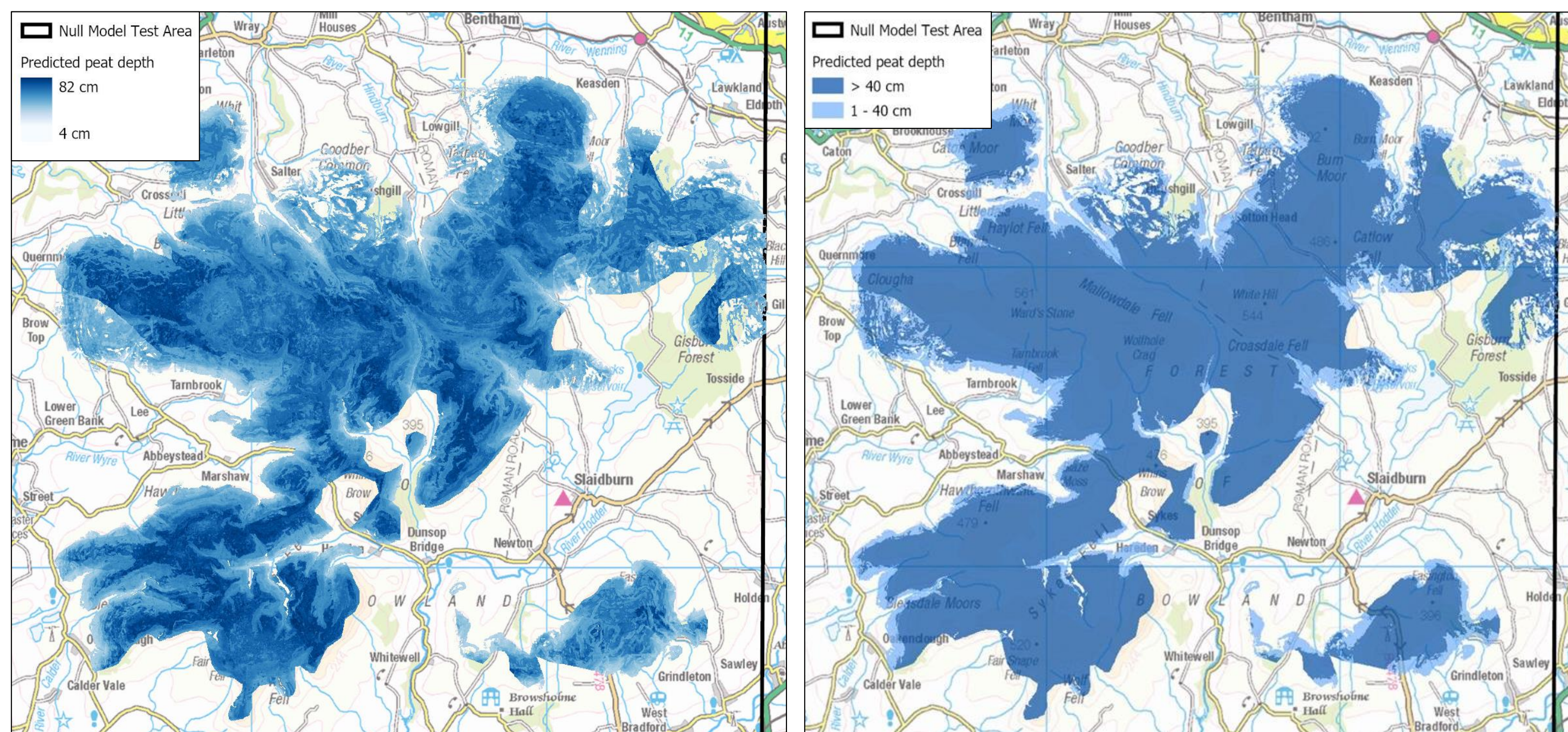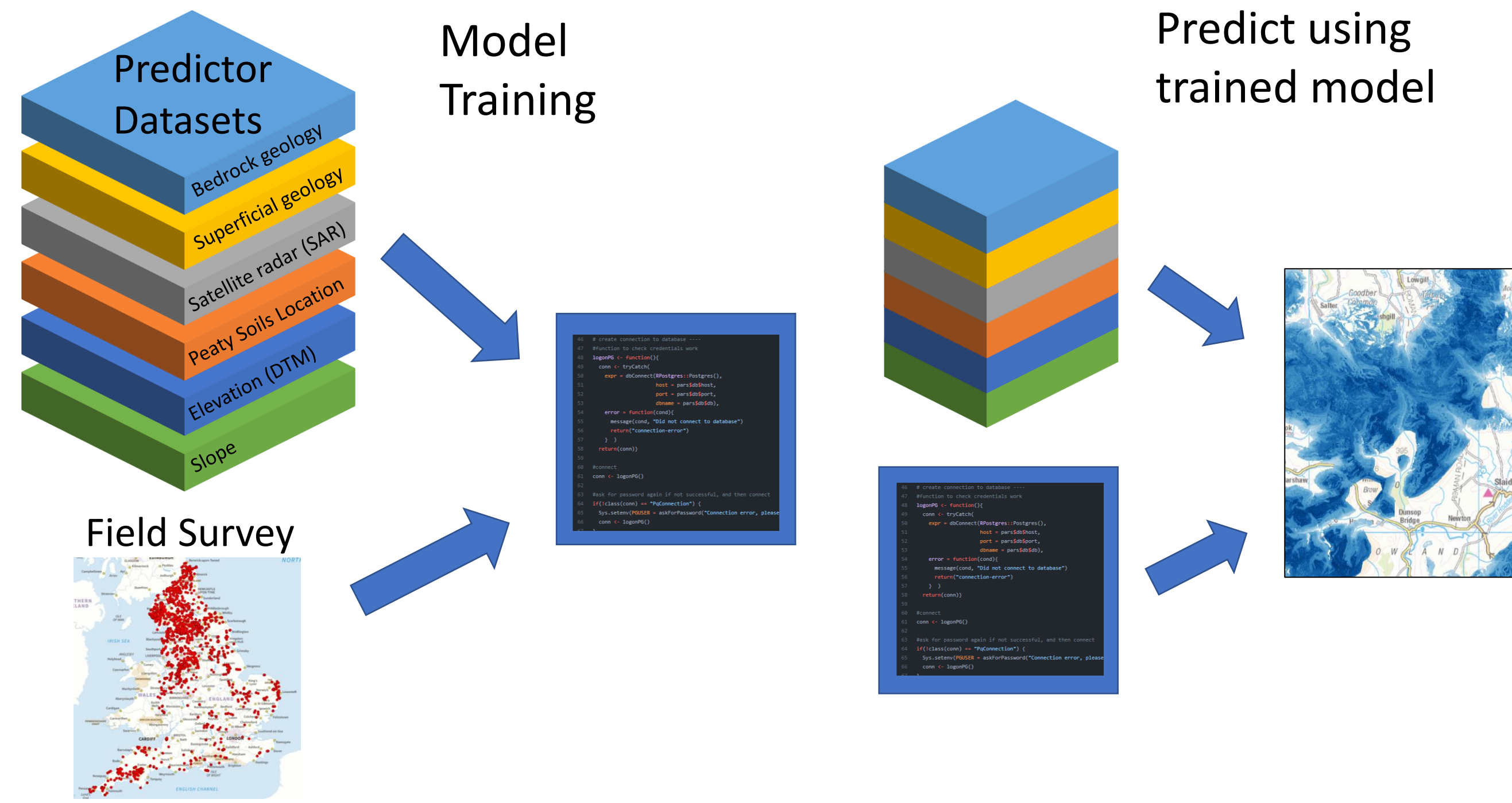

How we plan to improve our outputs

- Targeted field survey. We will focus on:
  - Transition between shallow and deep peat
  - Lowland peats
- Improved modelling
  - Additional predictors
  - Interpolation (kriging)
  - Ensemble modelling

Figure 3: Example *null model* outputs for peat depth (left) and example showing how this can be classified (right)

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