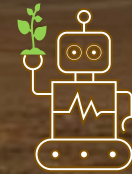


AI for Peatlands



Cabinet Office NTT DATA Office for National Statistics @government



Department
for Environment
Food & Rural Affairs



Forestry Commission



Food
Standards
Agency
food.gov.uk



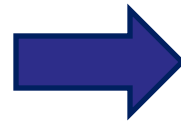
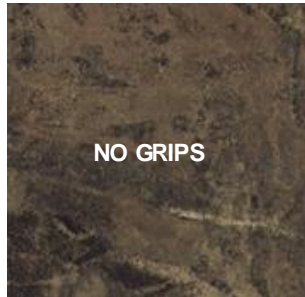
Department for
Business, Energy
& Industrial Strategy

Using AI to Map Peatland Drains



AI4Peat Computer Vision Approach

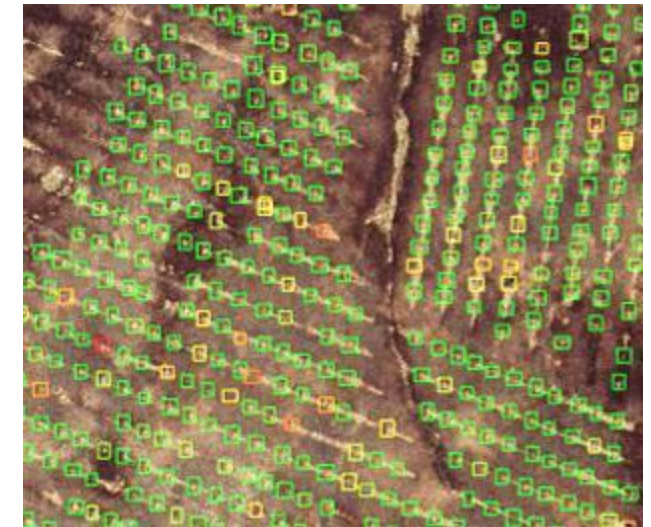
1. Grip clusters identification – which areas of peatland contain grips?



2. Grip locations - which pixels contain grips?

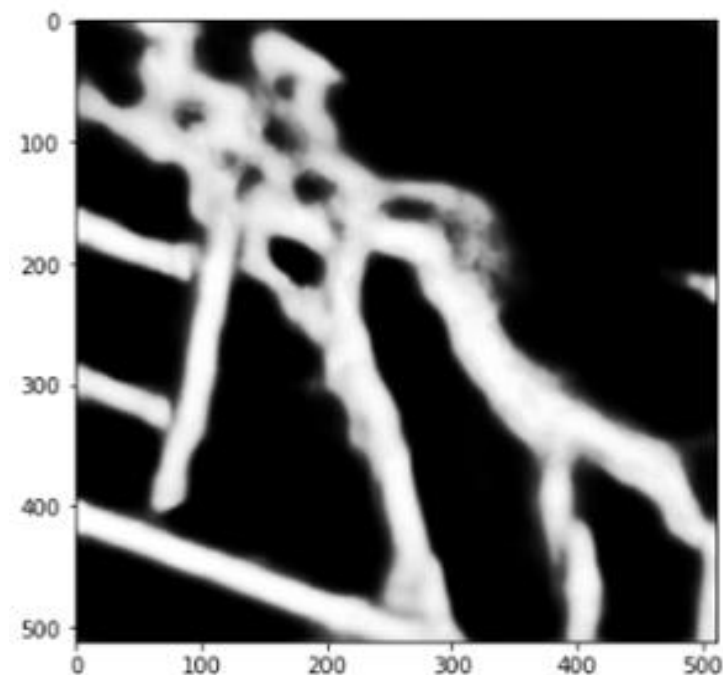
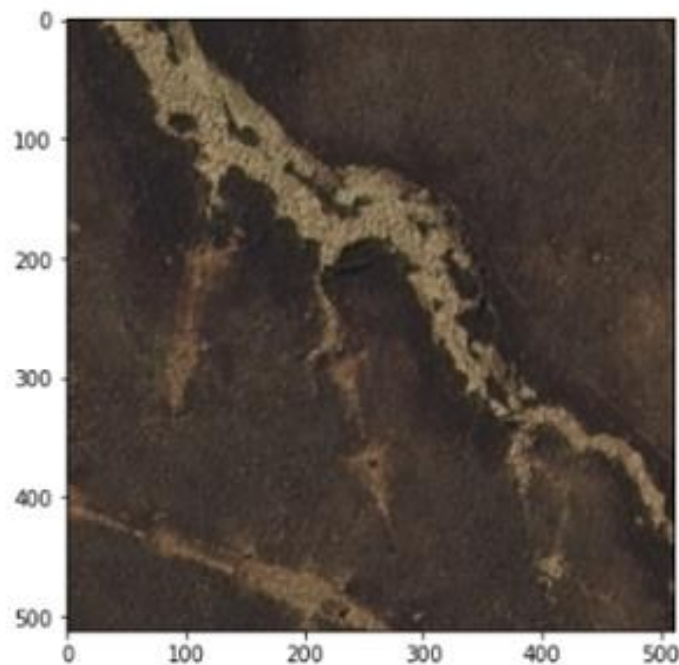


3. Dam locations - which grips have already been blocked?



Results so far: Grips

- Trained and tested on the West Pennines
- Accuracies of 89% and 72%
- Leaves the door open for further analysis and modelling...



Results so far: Dams

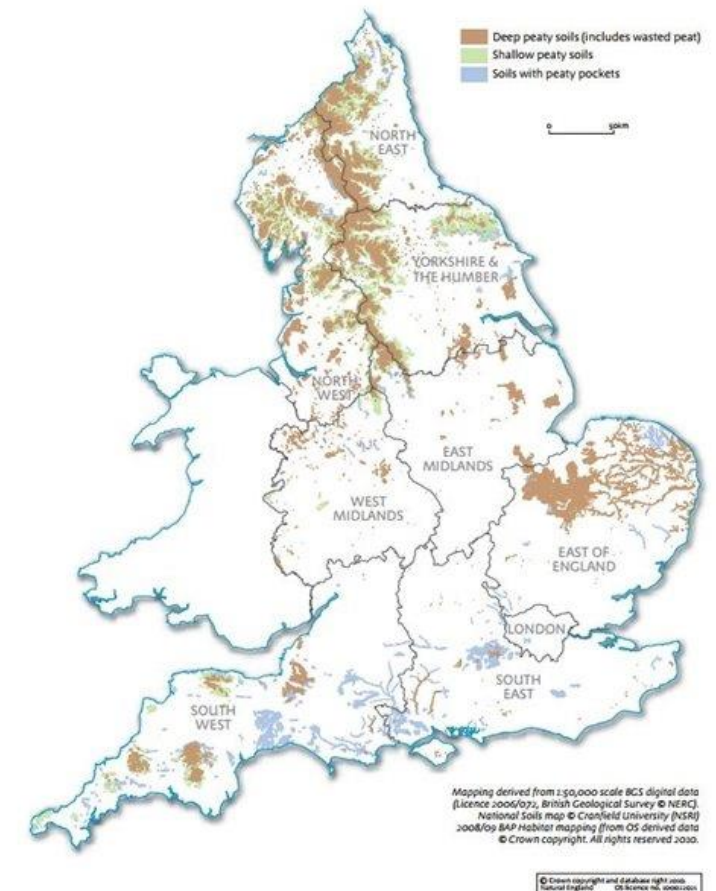
- Trained and tested on the West Pennines
- All stages getting good results so far, especially on peat dam detection.



Next Steps

- Test performance on the Forest of Bowland
- Extend to all of England and then to the rest of the UK!
- Collaborating with Natural England's England Peat Map project.

Map 1: England's deep peatlands cover much of our uplands, but also include large lowland areas. Shallower peaty soils fringe our uplands.

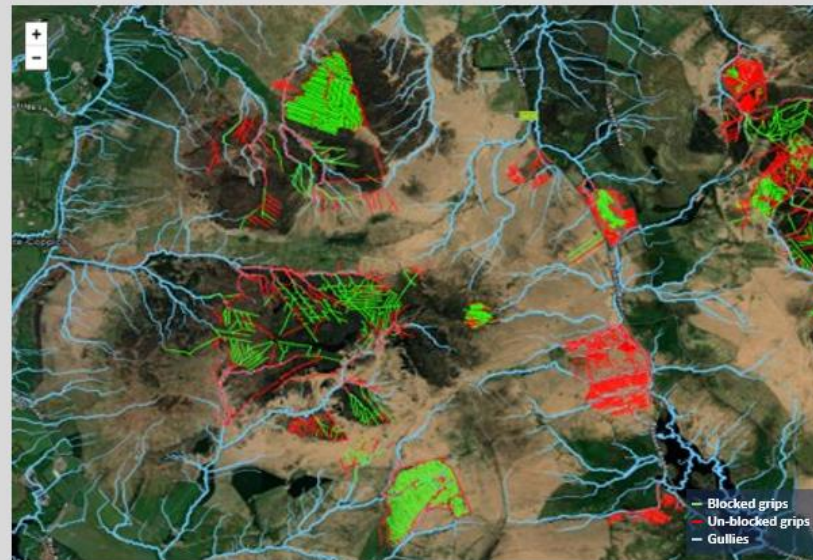


Communicating Information to Users

Possible information to include:

- Where are the grips?
- Have they been dammed?
- How deep are they?
- How much carbon could be captured through restoration?
- How have the grips changed over time?

Peatland Restoration Dashboard



Estimated Carbon Stored

Current (kg)	Potential (kg)	Potential Increase (kg)
214,365,030	389,867,282	175,502,252

Grips Identified

Total length of grip (m)	Length of restored grip (m)	Number of dams	Change in number of dams from previous year
340,154	189,375	762	+72%

Your opportunity to contribute

What other information would help in efficient peatland restoration?

Give us your feedback!

