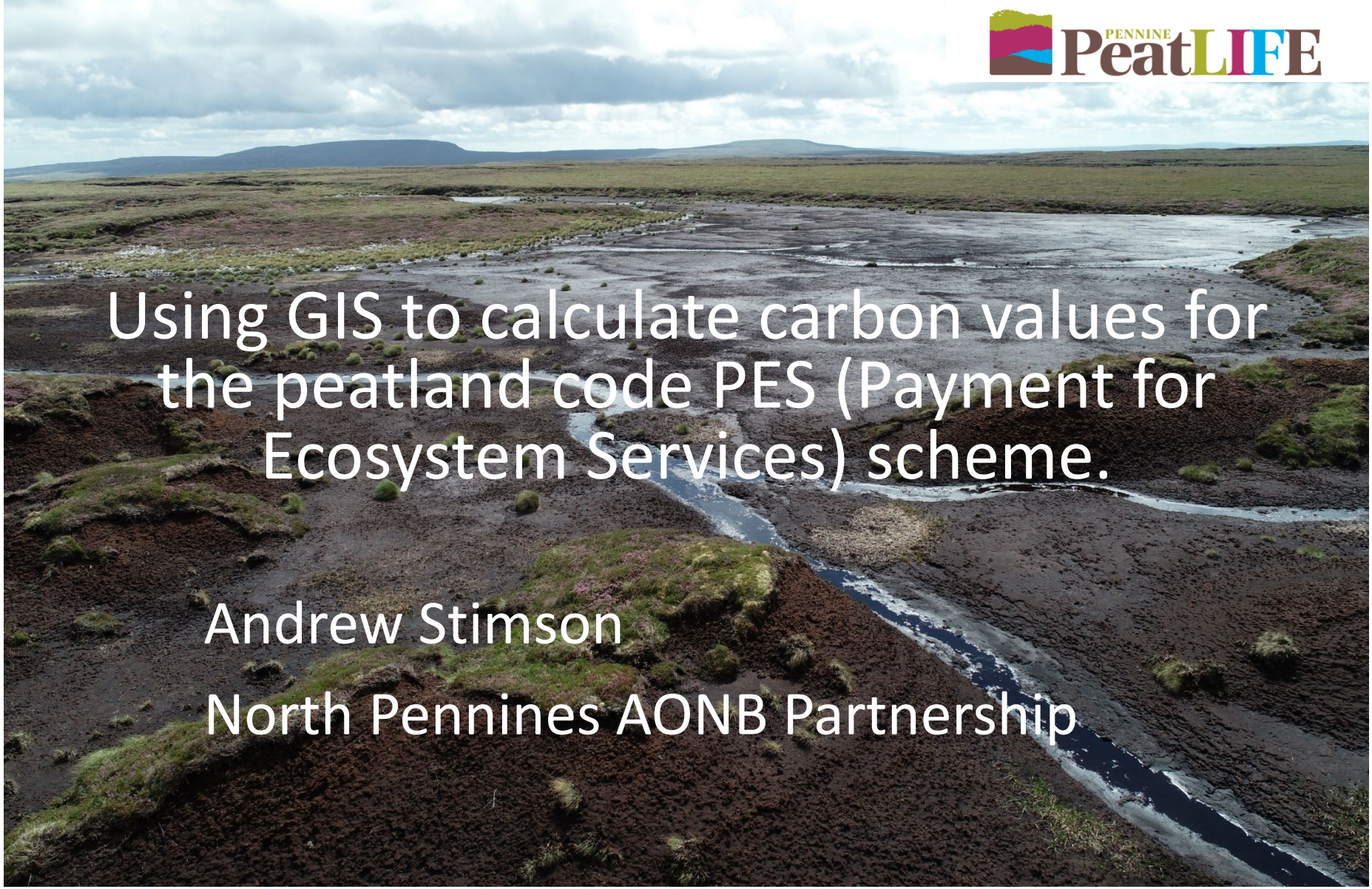


Using GIS to calculate carbon values for the peatland code PES (Payment for Ecosystem Services) scheme.

Andrew Stimson

North Pennines AONB Partnership

The Peatland Code

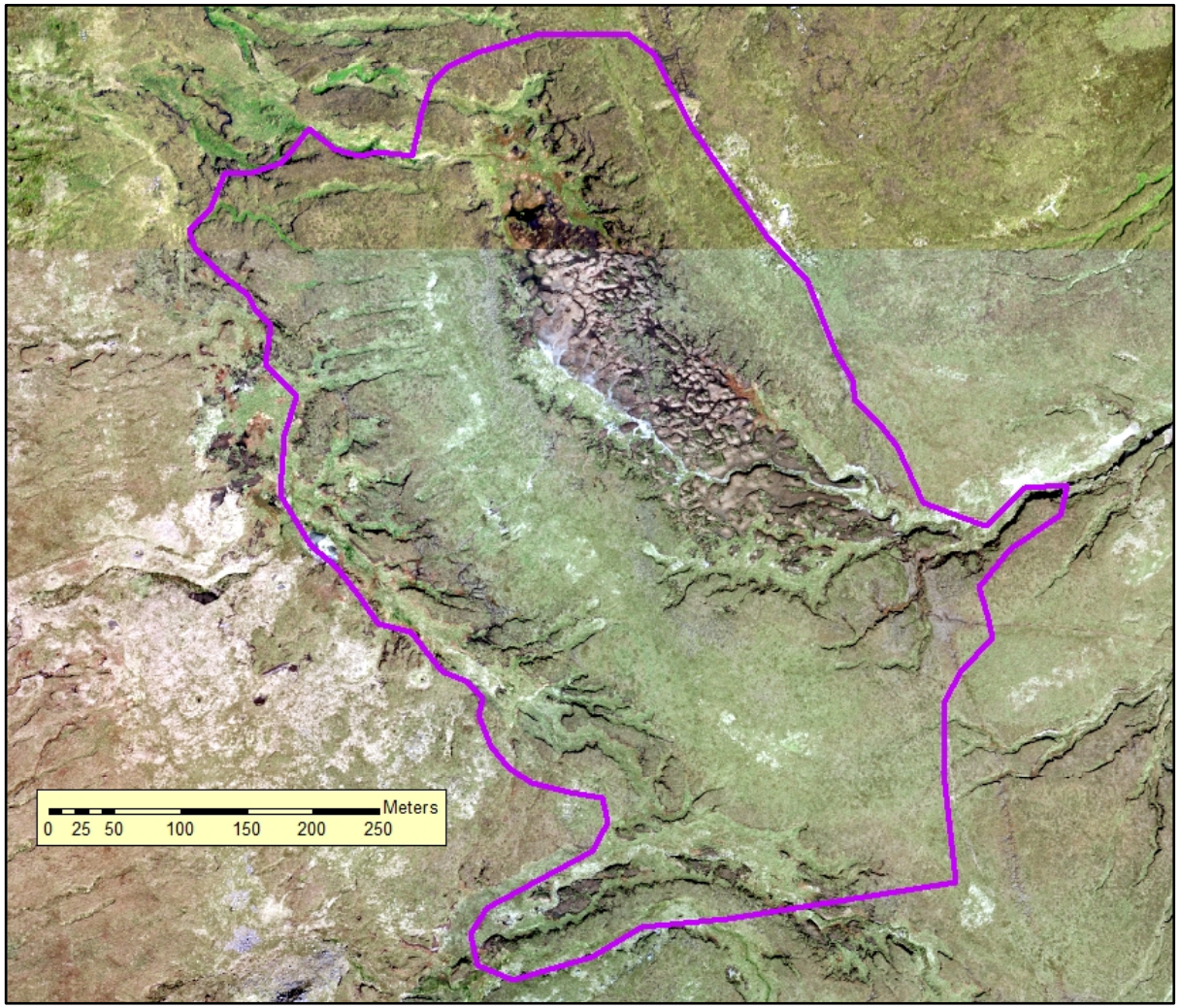
- IUCN UK PES (Payment for Ecosystem Services) scheme
- Enable private funding for restoration linked to quantifiable GHG reductions.
- Demonstrate best practice to ensure buyer confidence.
  - Standard methods developed with scientists
  - Independent validation
  - Ongoing monitoring
- Code is in development and being tested by NP AONB as part of Pennine PeatLIFE EU funded project.

GIS & Peatland Code Carbon calculations

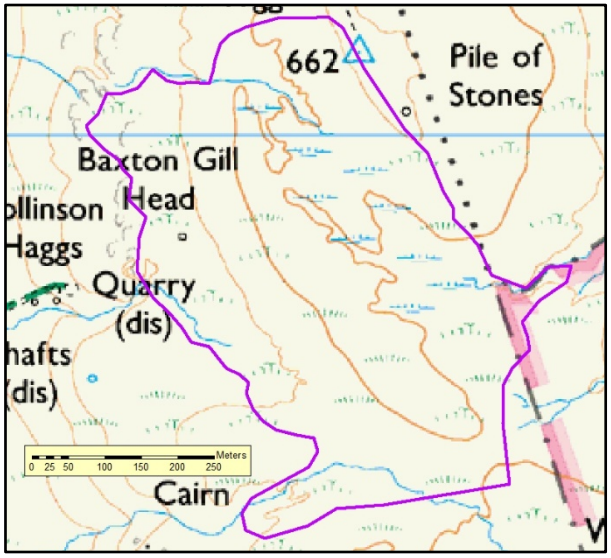
- Aim: Identify how much eroding and drained bog will be restored to give GHG reduction figure at example site.

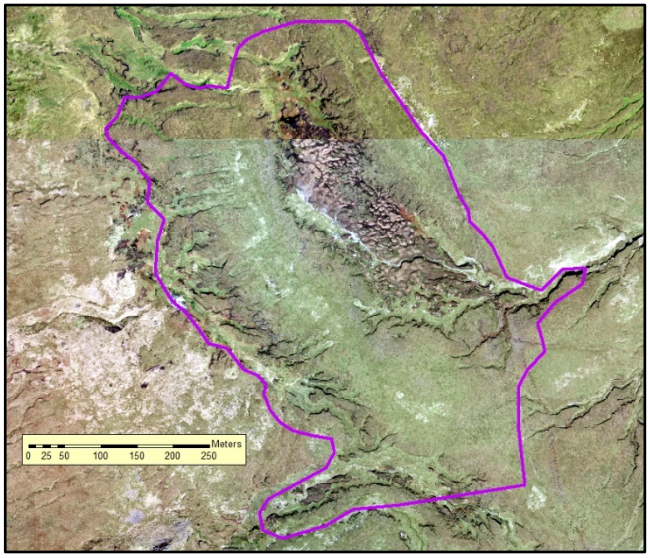
- Uses of GIS: 1) Visualisation 2) Tracing & buffering 3) Classification 4) Area calculations

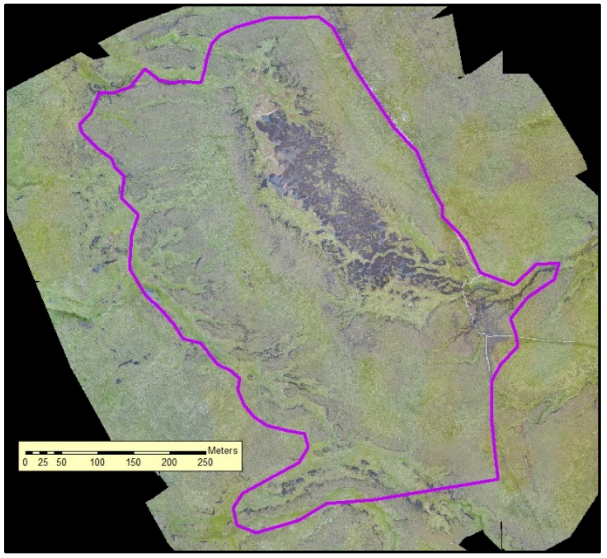
Visualisation (1)



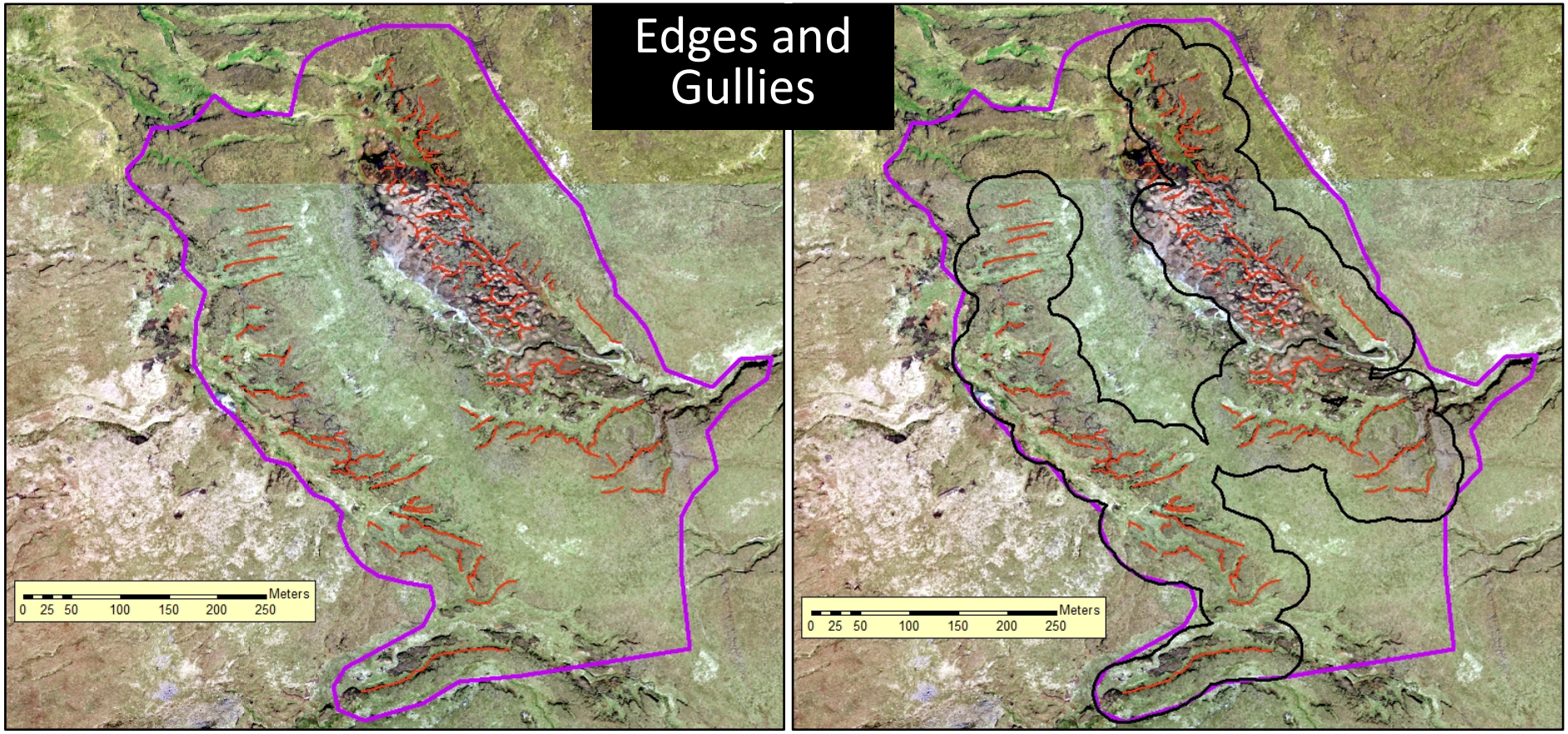
Visualisation (2)



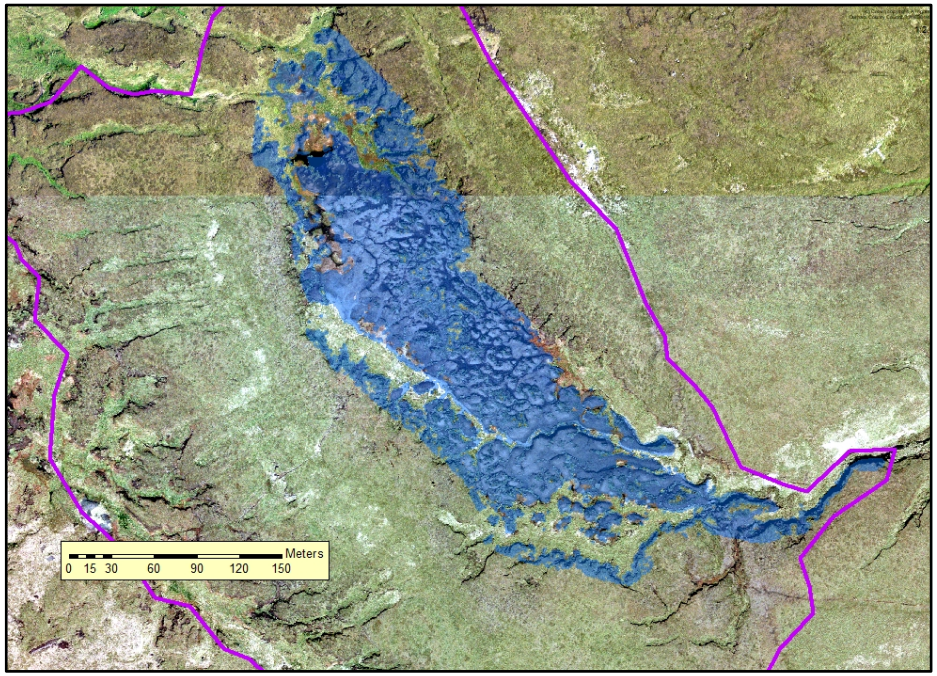


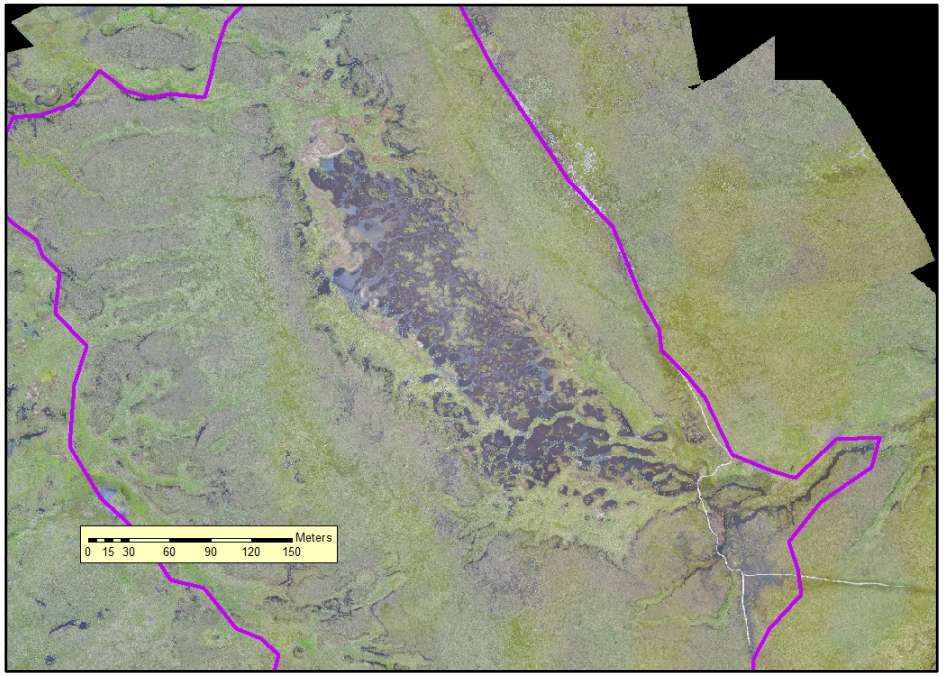


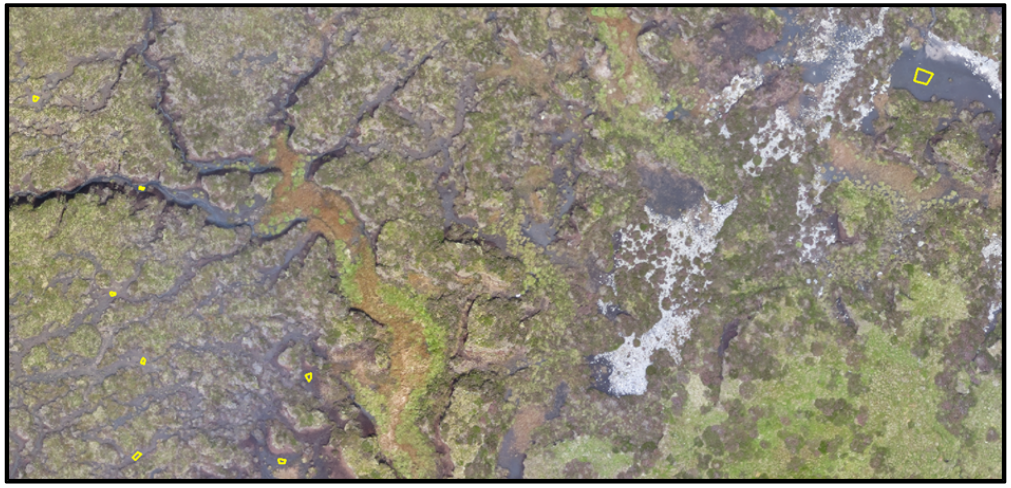
Tracing and buffering



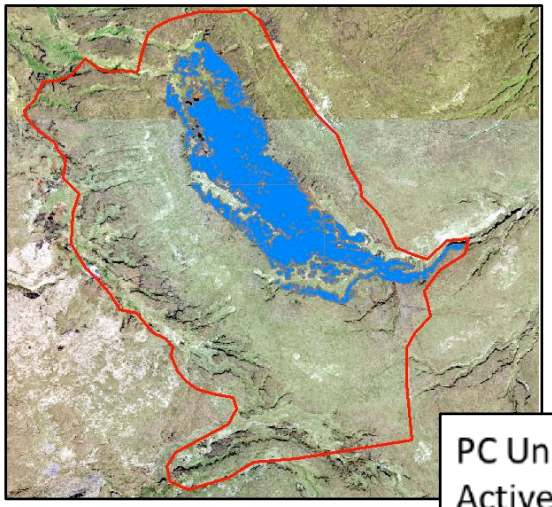
Bare Peat Classification

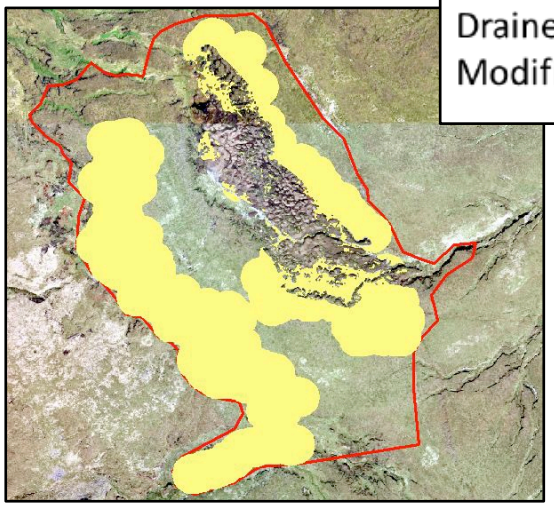




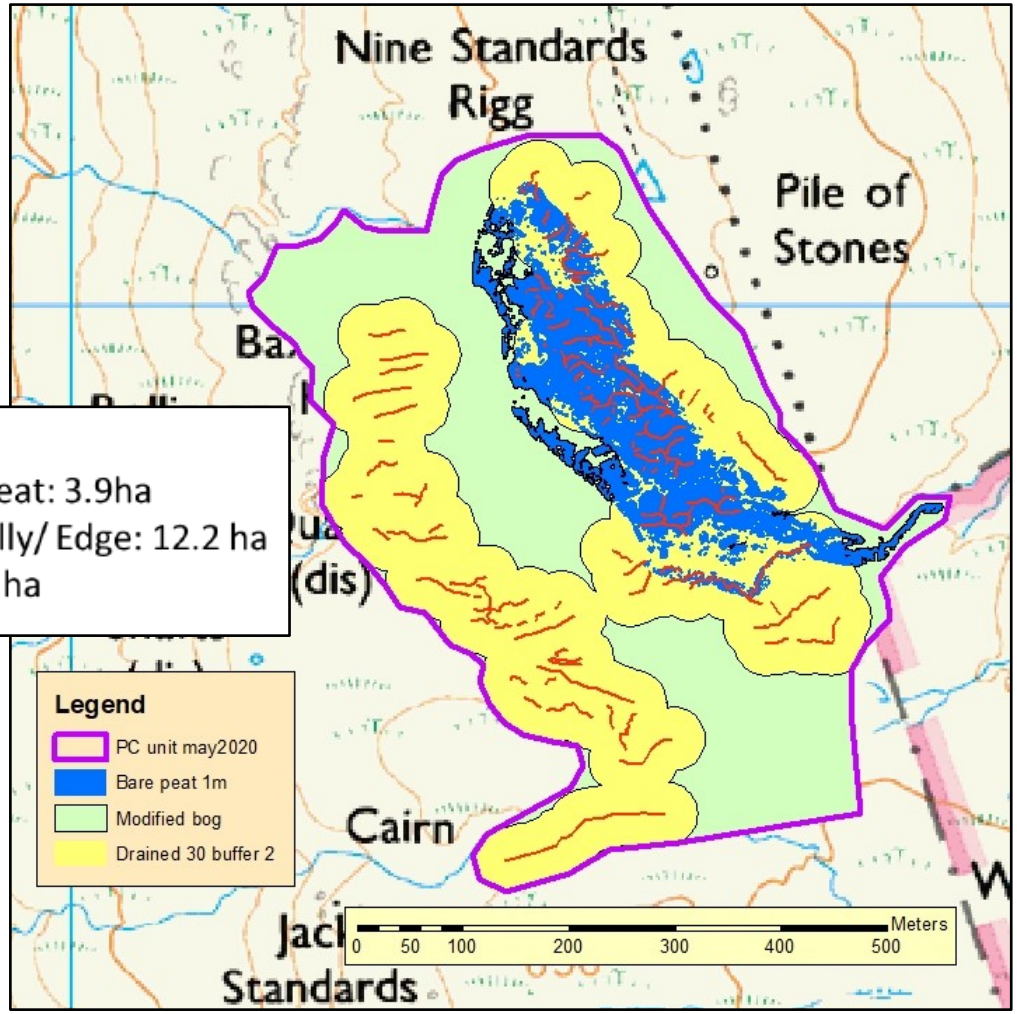


Area Calculations





PC Unit: 25.2 ha
Actively Eroding Peat: 3.9ha
Drained Hagg/ Gully/ Edge: 12.2 ha
Modified Bog: 9.2 ha



GHG reductions

- 2281t CO2 reduction over 30 year period
- Eroding peat = 1723t Drained areas = 558t

Summary and conclusions

- GIS offers useful tools for area based calculations.
- Should boost buyer confidence and ease of carbon estimates
- BUT care needed with data management, appropriate scale / complexity

NORTH PENNINES
Area of Outstanding Natural Beauty

United Nations Educational, Scientific and Cultural Organization
North Pennines UNESCO Global Geopark

IUCN National Committee United Kingdom
Peatland Programme

PEATLAND CODE