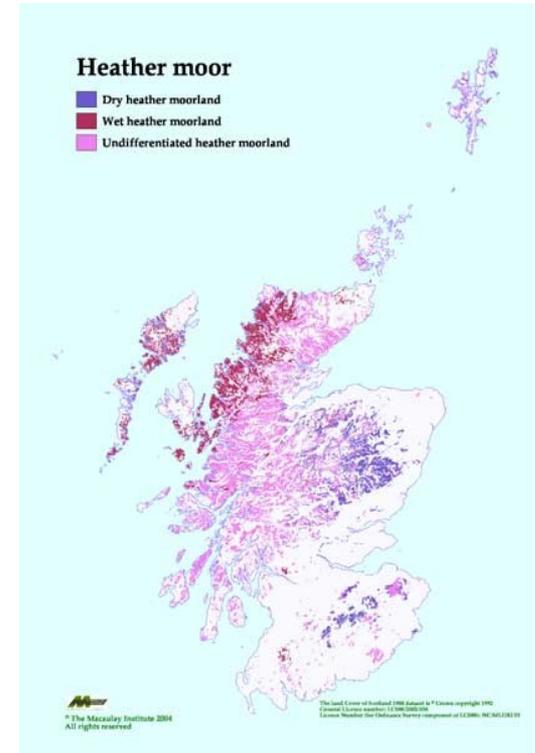


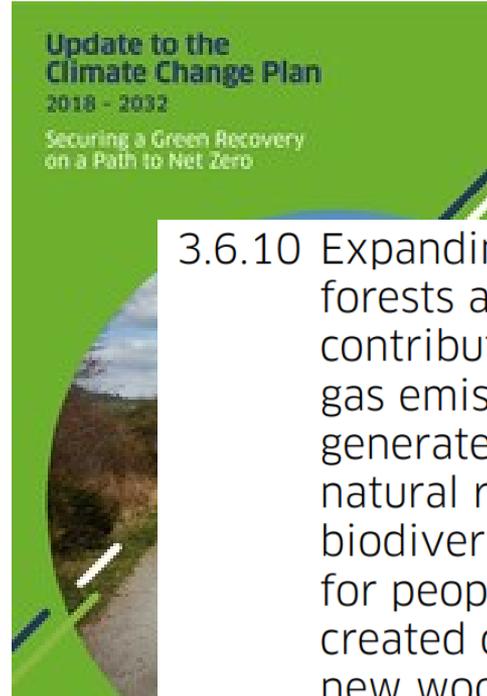
- I'm looking at native tree colonisation of Scotland's heather moorlands and its effects on soil carbon



- I'm looking at native tree colonisation of Scotland's heather moorlands and its effects on soil carbon
- With a particular focus on the contributions of these newly establishing woodlands to net zero targets



- Is woodland establishment in Scotland the silver bullet for climate change mitigation that we hope it is?



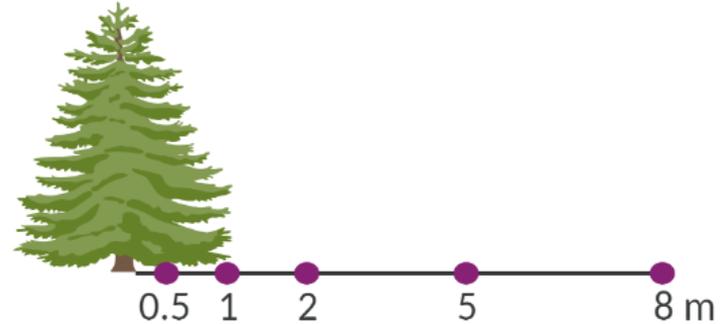
3.6.10 Expanding the area of Scotland's forests and woodlands will contribute to reduced greenhouse gas emissions, and will also generate an important commercial natural resource, improve biodiversity and provide spaces for people to enjoy. We have created over 22,000 hectares of new woodland in the last two years, and we will continue to invest to increase overall forest cover in Scotland. As part of the

What I've been up to...



What I've been up to...

- Measured tree, heather, and soil carbon stocks
- Along transect from single tree into open heather moorland





... What we've found

- Less soil carbon in the major rooting zone of trees



... What we've found

- Less soil carbon in the major rooting zone of trees
- Trees drive soil carbon losses



... What we've found

- Less heather (carbon) under the canopy of trees



... What we've found

- Less heather (carbon) under the canopy of trees
- Trees restrict heather growth via shading effects

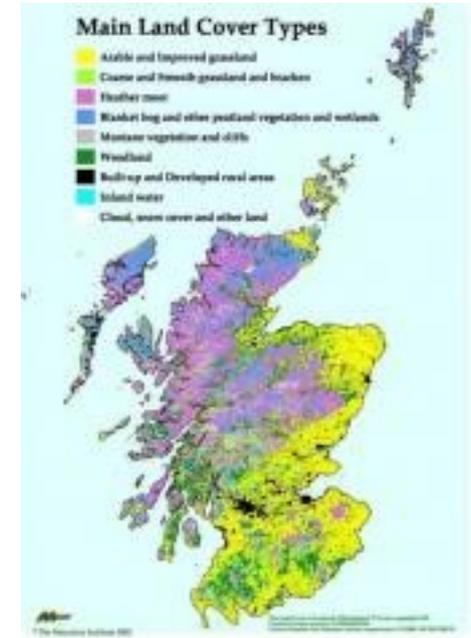
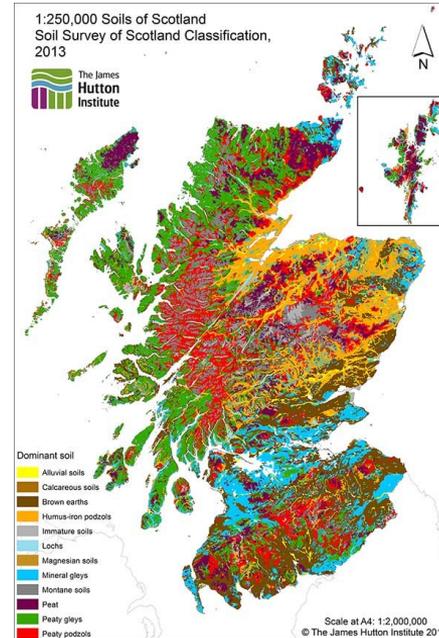
What does this mean for the ecosystem?

- Now looking at the difference between tree + heather + soil carbon stocks (i.e. ecosystem stocks) between colonised and uncolonised ecosystems



What does this mean for net zero policy?

- Newly established forests can't always be assumed to capture carbon
- Need to consider potential for soil and vegetation carbon losses



However...

- Also need to consider how these tree and soil carbon changes are different in productive forestry context...



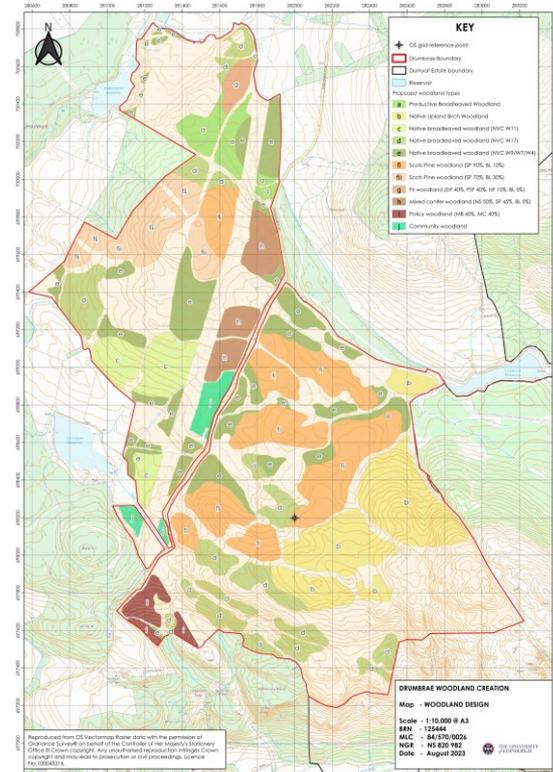
FPP

- FPP's Drumbrae project provides a unique opportunity to do so



FPP

- Range of different tree species
- Representing current forestry practices and policy





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