

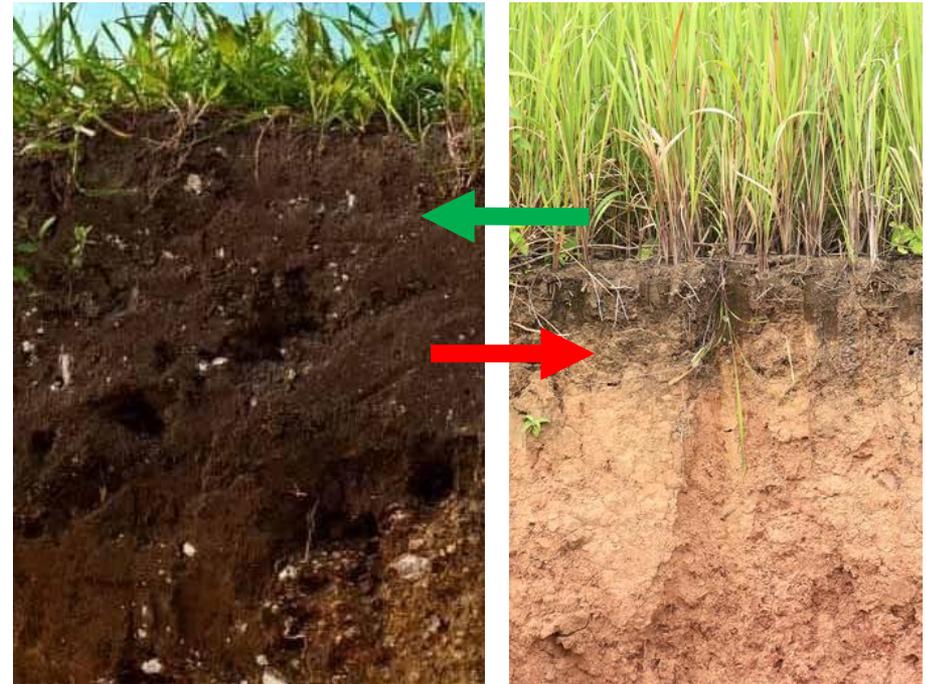
Opportunities for increasing soil carbon in Sussex

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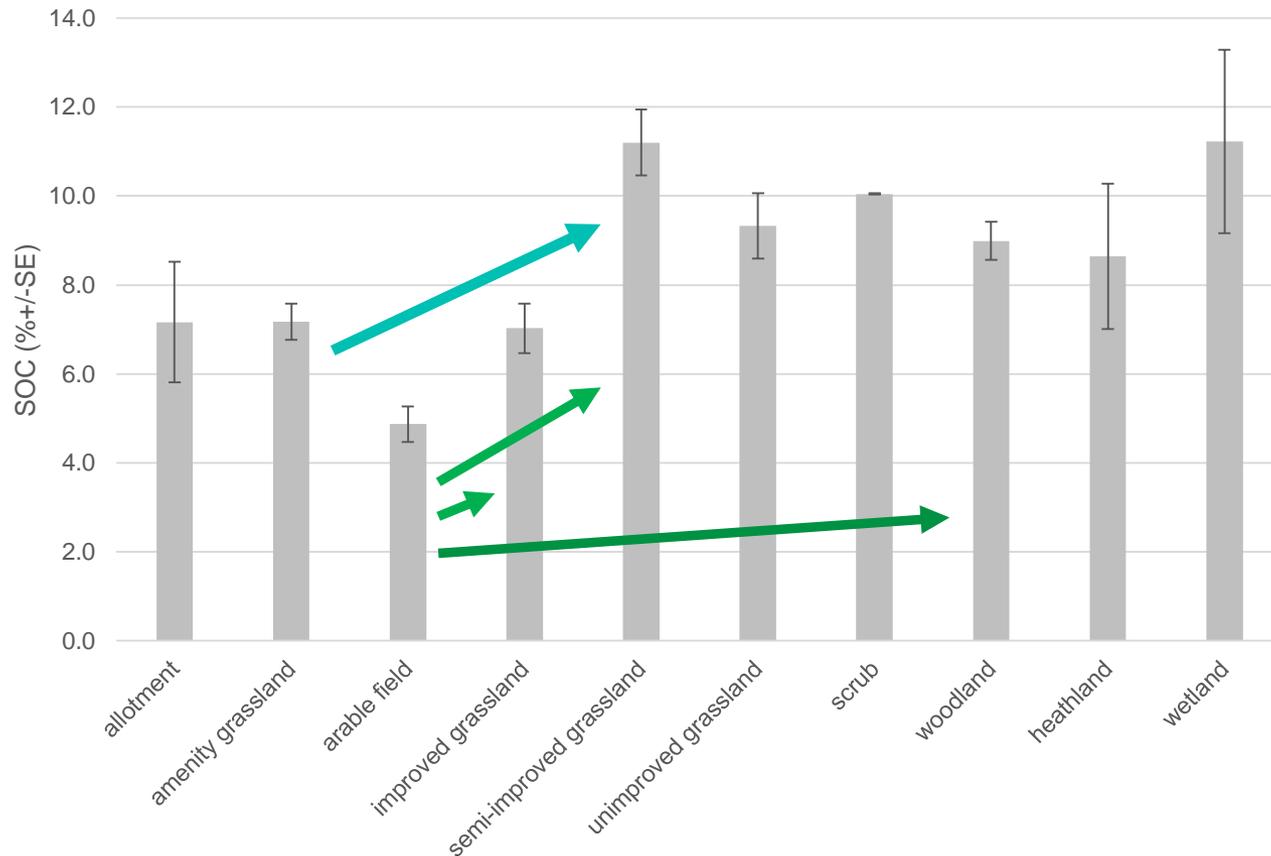
Introduction

- Healthy soils are highly biodiverse, store carbon, and aid crop growth
- Soil is the largest terrestrial store of organic carbon (1,550 Gt, 70%) (much more than forests)
- Agricultural soils tend to have declining C stocks: ~116 Gt lost to atmosphere
- 1990-2000 UK soils lost 6.5-9.4 Mt of C as CO₂
- Changing management to increase soil organic C has great potential to mitigate climate change, but...
- We have a poor understanding of what management practices favour C sequestration.



Evaluating soil organic carbon stocks

- >430 sites sampled across Sussex to quantify current stocks of SOC.



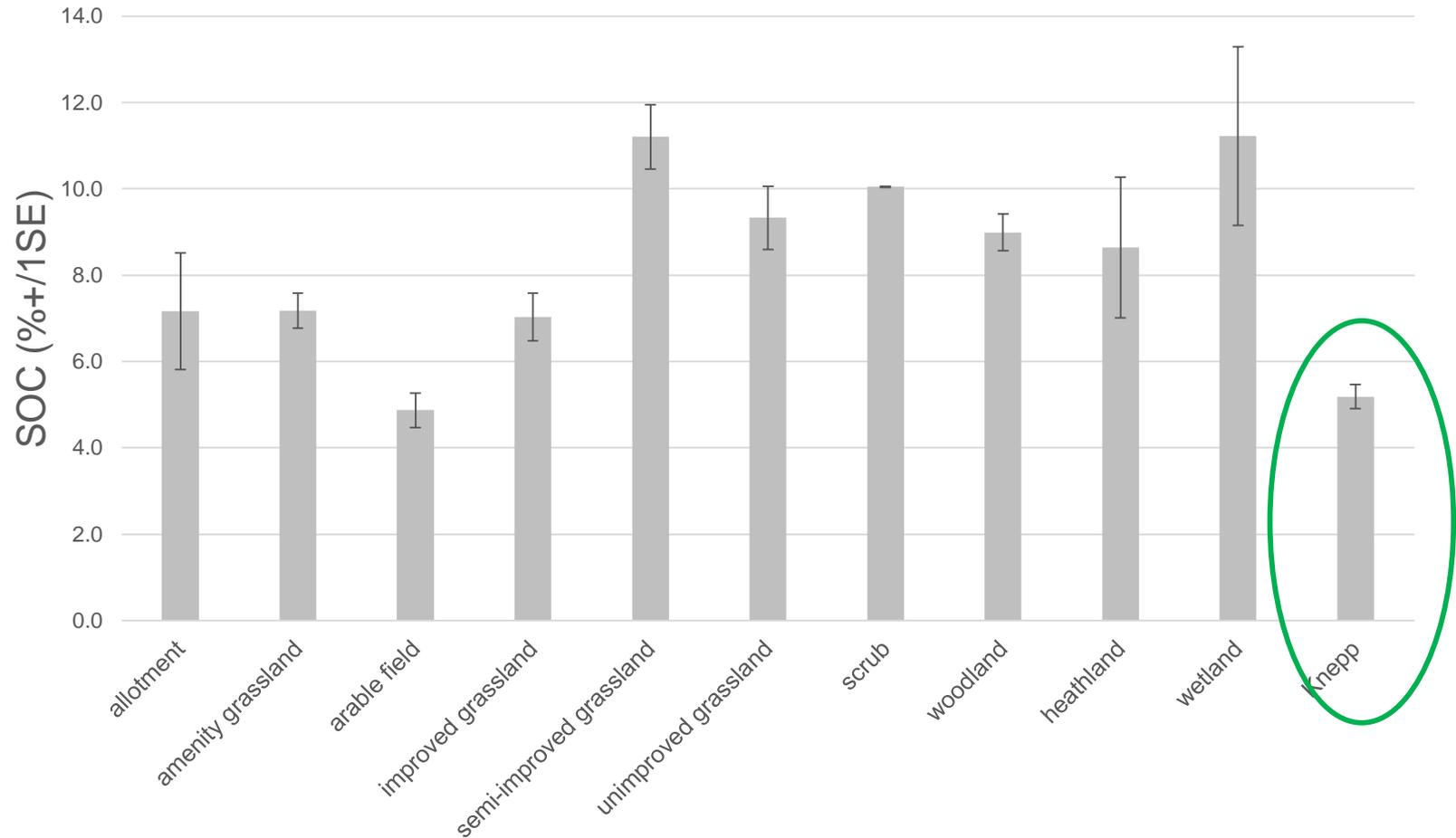
e.g. 10% Sussex arable land → woodland = 164,000 t of C absorbed?



The Knepp Rewilding Project



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Future analyses and questions

- Baseline established
- Can we explain the wide variation in SOC within habitat types (e.g. within grasslands best sites had >23% SOC)?
- Do regenerative farming practices increase SOC in farmed soils? E.g. cover crops, no-till, organic, agroforestry, biodynamic
- What recommendations can we make for increasing carbon capture?

