



EXECUTIVE SUMMARY

- Up to January 2020, 27.8 km² (2780 ha) of peatland have been restored following methods specifically developed for Exmoor and Dartmoor. **Page 12.**
- In shallow peats, water table responses to restoration are complex. In the driest areas, where drainage had the greatest effect pre-restoration, water tables rose by as much as 4 cm. Overall, however, water tables remain statistically similar post-restoration. **Page 16.**
- In deeper peats, restoration increased the permanent deep water storage in the soil by 7.3 cm and increased average water tables by 2.45 cm. **Page 20.**
- Restoration can significantly alter rainfall runoff regimes in restored catchments; within deeper peat, gully flow was reduced by around 66 %. In shallow peatlands the flow response was more complex with storm generated discharge reduced by up to 32 % in some catchments. **Pages 16 and 20.**
- In shallow peats, restoration has not significantly changed water quality, suggesting that there has not been a significant change in the ecohydrological function of the peatland to-date. **Page 24.**
- Post-restoration, the total load of dissolved organic carbon leaving the study site on Dartmoor during storm events was approximately 1/3 of the pre-restoration loads due to a significant decrease in runoff. **Page 28.**
- Population densities of the sheep tick, a vector of economically important livestock diseases, are significantly lower in mires than in drier habitats on the same sites. **Page 32.**
- Bog asphodel (*Narthecium ossifragum*), a potentially toxic plant, contributes up to 20 % forage value in a transitional bog community and continues to survive but has not spread significantly post-restoration. **Page 34.**
- In shallow peats, restoration did not significantly alter (heterotrophic) respiration of the peat soil or increase methane fluxes (even after 7 years), illustrating how degraded these peatlands were and how much intervention is required to restore ecosystem functionality. **Page 35 and 36.**
- In deeper peats, raised water tables significantly reduced (heterotrophic) respiration of the peat store and initially increased methane emissions; both processes are indicative of a return to more natural functioning in the longer term. **Page 40.**
- Dartmoor National Park is estimated to have 158 ± 101 km² (15800 ha) of peat >0.4 m deep storing 13.1 megatonnes of carbon. **Page 42.**
- Functionally intact blanket bog covers just 3.6 km² (360 ha) of Dartmoor; however it is fragmented and often surrounded by ecohydrologically degraded peat which covers an area of 29 km² (2900 ha). **Page 42.**