

## South Downs National Park Research Priorities 2017-18

Listed below and overleaf are the South Downs National Park Research Priorities for the academic year 2017/18. If you are interested in one of these projects or you have an idea for your own research project in the South Downs National Park, then please get in touch with Tanya Hibberd and Adam Brown at [research@southdowns.gov.uk](mailto:research@southdowns.gov.uk) or download the Research Project Application Form from our website: [www.southdowns.gov.uk/discover/research/research-opportunities/](http://www.southdowns.gov.uk/discover/research/research-opportunities/)

Broad project area
<p><b>Catchment management ‘success’ monitoring</b></p> <p>Monitor the success of ‘on the ground schemes’ driven by the NIA nitrate modelling (e.g. Brighton CHAMP, Landscapes for Groundwater).</p> <p>Research topics could include:</p> <ul style="list-style-type: none"> <li>• Analysis of long term compositional trends from monitoring data</li> <li>• Chemical source tracking of nitrate in the aquifer</li> <li>• Contaminant loading from soakaways in the chalk</li> <li>• Fate of nitrate in the chalk aquifer</li> <li>• Land use and diffuse inputs to the aquifer</li> <li>• Pesticides or oestrogen inputs to the aquifer and natural attenuation processes</li> <li>• Turbidity in the aquifer – its sources and characteristics etc</li> <li>• Urban drainage and inputs to the chalk</li> <li>• Water quality of SUDS outputs and the impact of flood alleviation on water quality</li> </ul>
<p><b>Economic and tourism opportunities and challenges for the SDNP resulting from Brexit</b></p>
<p><b>Effectiveness of new farm incentive schemes post-Brexit</b></p>
<p><b>Extent of deer and/or squirrel damage to trees in the South Downs National Park</b></p>
<p><b>Grayling Butterfly distribution on the South Downs</b></p> <p>The Grayling occupies a small area in the eastern downs near Deep Dean. Previous attempts to naturally disperse to other sites in the past have not been successful. The SDNPA is undertaking habitat management in the local area to provide better connectivity and habitat opportunities. However, great clarification on habitat requirements of the species is required. As such research questions could be along the lines of the following:</p> <ul style="list-style-type: none"> <li>• ‘Investigating the factors limiting distribution of the Grayling butterfly on the chalk downs’</li> <li>• ‘Identifying the habitat requirements of the Grayling on the chalk downs’</li> </ul>

**Potential impacts of the expansion and creation of vineyards on the South Downs National Park, including water and soil quality**

**Earth Observation as a tool to monitor landscape change**

**Implications of grazing on chalk grassland**

*Note: Different approaches have been trialled but it would be good to have one agreed upon approach. Also, the Heritage Coast Partnership has set up a sub group on conservation grazing so they would need to be involved in the project*

**Management techniques for the control of Tor Grass, *Brachypodium pinnatum*, on chalk grassland sites**

**Multi-user routes: investigation into surface types and user experiences in the South Downs.**

- Desk research investigating surface types used on multi-user routes across the UK (outside of cities), including costs of different options and any associated constraints
- Through surveys or interviews with key users of existing multi-user paths in the South Downs National Park – for example: land owners, access authorities, horse riders, disability access representatives, cyclists, walkers etc- establish the views and experiences of using these paths
- Based on the results of the desk top research and survey work, make recommendations as to the appropriate surface types and installation techniques in the South Downs that could be utilised in future schemes.

*Note that New Forest Forestry Commission are doing a lot of research into suitable materials for car parks. This information may be useful to support this project.*

**Review of Farm Diversification Schemes**

Research topics could include:

- Assessment of the barriers and issues that farmers have to address in planning and running farm diversification schemes
- Evaluation of the impact on the environment, infrastructure, income generation and sustainability, and the impact on the local economy and rural tourism
- Examination of the underlying reasons for diversification
- Outline exemplar farm diversification projects within National Parks in England and compare / contrast with diversification practices in the SDNP
- Review of existing, proposed and potential farm diversification schemes in the South Downs National Park.

*This work is very important to the SDNPA as we look to align planning policy with practice in development management.*