

## R1: Carbon Storage

### **Ecosystem Service Definition**

Quantities of carbon stored in soil and vegetation, rather than the ability of habitat to actively sequester carbon over time.

### **Baseline Methods & Rationale**

A non-relational dataset was produced to map the Carbon Storage ecosystem service baseline within Gloucestershire. The rationale for not selecting a modification layer for the Carbon Storage baseline was (i) the absence of an available dataset that could be used as a spatial modifier for the ecosystem service and (ii) the complexity of interaction between a habitat's spatial configuration and its ability to sequester carbon.

### **Opportunity Methods & Rationale**

An opportunity dataset was not produced for the carbon storage ecosystem service due to the absence of a meaningful data that can be used to assess where the ecosystem service of carbon storage currently being delivered by natural capital assets is not meeting demand for delivery of the ecosystem service.

### **Limitations and Further Development**

Knowledge of wetland and soil carbon storage is currently less developed than is the case with woodlands and as a result, these habitat classes may be underscored in the HSSM.

Literature indicating the extent to which habitats near to sources of carbon emissions store carbon in relation to those further from these sources could allow a meaningful modifier for the carbon storage baseline to be developed.

Soil depth – and the impact this may have on carbon storage – can vary across similar habitats and is not accounted for in the eco-metric scoring (Smith, 2020). The National Soil Resource Inventory provides estimates of soil carbon storage and may be a useful modifying layer for the carbon storage ecosystem service.

### **References**

Smith, A., 2020. Natural capital in Oxfordshire: Short report. Environmental Change Institute, University of Oxford.

## R1: Carbon Storage (baseline)

Figure R1.1: Carbon Storage  
Baseline (non-relational)

