

Key Defra Soil Protection programme R&D projects

Projects are listed by the following assessment units of the Soil Protection programme:

- SP01 Impacts of sewage sludge on soil quality
- SP04 Soil erosion
- SP05 Soil management, indicators and quality
- SP07 Soils in the built environment
- SP09 Strategic underpinning for soil science

Project description/objective	Contractor(s)	Project code	Duration	Co-funding/collaboration
<i>SP01 Impacts of sewage sludge on soil quality</i>				
Effects of sewage sludge on agricultural productivity and soil fertility (Phase III): Evaluation of the effects of the established range of soil heavy metal concentrations on soil microbial activity, the implications for agricultural productivity and long-term soil fertility.	Rothamsted Research, ADAS, Water Research Centre	SP0130	02/2002-06/2006	No
<i>SP04 Soil erosion</i>				
Documenting soil erosion rates on agricultural land in England and Wales – Part 1: Development and validation of field sampling and data processing protocols to use Cs-137 measurements for reconnaissance assessment of gross and net soil erosion rates. This approach will be used to assemble a national scale database on soil erosion rates. Two phase project.	Exeter University	SP0411	07/2003-06/2005	No
Documenting soil erosion rates on agricultural land in England and Wales - Part 2: Development and validation of field sampling and data processing protocols to use Cs-137 measurements for reconnaissance assessment of gross and net soil erosion rates. This approach will be used to assemble a national scale database on soil erosion rates. Two phase project.	Exeter University	SP0413	07/2005-08/2008	No
Scoping study of lowland soil loss through wind erosion, tillage erosion and soil co-extracted with root vegetables: Identification of various factors, other than erosion events caused by water, which cause agricultural soil loss. Assessment of the contribution of each to the total amount of agricultural soil lost per year.	National Soil Resources Institute	SP08007	12/2005-04/2006	No
<i>SP05 Soil management, indicators and quality</i>				
Critical levels of soil organic	Silsoe	SP0519	11/2001-	No

carbon in surface soils in relation to soil stability, function and infiltration: Investigation of the relationships between surface layer properties of soil and their ability to allow infiltration of rainfall and resist erosion.	Research Institute (BBSRC)		02/2004	
UK soil and herbage pollutants survey: Survey in England, Wales, Scotland and Northern Ireland of concentrations of dioxins, PCBs, PAHs and metals in surface soils and herbage, including field measurements of gamma radiation dose rates, in-situ gamma spectrometry and laboratory analysis of radionuclides in soil and herbage samples by gamma ray spectrometry.	Environment Agency	SP0522	01/2002-08/2003	Defra, FSA, NAW, EHS, FSAS, SEPA, SNIFFER
Development of economically and environmentally sustainable methods of C sequestration in agricultural soils: Research to provide a quantified assessment of likely carbon sequestration in soils from practical management options, together with the consequential effects in respect to their ecological implications and the impacts on the farm business.	ADAS	SP0523	06/2002-04/2003	No
Organic Manure and Crop Organic Carbon Returns - Effects on Soil Quality (SOIL-QC): Providing an improved understanding of the processes and linkages through which organic carbon additions influence soil bio-physical and physico-chemical properties.	ADAS	SP0530	04/2004-03/2009	No
Vulnerability of organic soils: Description of the potential threats to organic soils in England and Wales, estimation of their likely magnitude, occurrence and impact and indication of the policy and management implications of these future threats and impacts.	Leeds University	SP0532	02/2006-04/2006	No
Scoping biological indicators of soil quality - phase II: Development of a set of policy relevant and scientifically robust indicators of soil quality. This phase tests a set of indicators, prioritised in a previous project (SP0529), for use in a national-scale soil monitoring scheme.	Centre for Ecology and Hydrology	SP0534	01/2006-12/2008	No
Soil organic matter as a headline indicator of soil health: Identification of: the types and location of soils vulnerable to SOM loss in England; the processes	Cranfield University	SP0546	10/2004-03/2005	No

involved in SOM loss; a baseline level of SOM for vulnerable soil types; projected trends in SOM for vulnerable soil types. Consideration of: likely impacts of climate change; the problem of excess nutrients from excessive organic matter application. Development of targets and indicators appropriate to vulnerable soil types.				
Sources and impacts of past, current and future contamination of soil: Identification of the major past, current and future sources of soil contaminants and to assess their potential impacts on soil functions.	ADAS	SP0547	03/2005-08/2005	No
Soil net: an internet resource for soils education: Development of an internet portal dedicated to soils education and a range of related educational resources including pre-prepared lesson plans, activities and factual information sheets.	Cranfield University	SP0552	02/2005-02/2007	No
Compendium of UK practical restoration and management projects: Compilation of information on UK peat restoration and management projects and analysis of the experience gained in these projects for future advice and guidance.	Moors for the Future	SP0556	12/2007-03/2008	No
Design of a UK Soil Monitoring Scheme: Development of a UK monitoring scheme and framework for delivery that is based on the indicators of soil function identified by previous UKSIC projects and which can assess the current status of soils and changes over time at a UK and devolved administration level.	Environment Agency	SP0558	01/2007-03/2008	No
Climate change critical review: Review of the extent to which reduced tillage practice and organic matter returns will increase the carbon content of arable soils under English and Welsh conditions.	ADAS	SP0561	01/2007-03/2007	No
Review of international policies and experience on peat extraction, management and restoration: Review of international policies and experience on peat extraction, management and restoration and assessment of the suitability of these, as well as the extent to which they could be transferred to the UK.	JBA Consulting	SP0565	01/2008-03/2008	No
Unravelling the loss of soil carbon: Review of the causes of	Aberdeen University	SP08010	02/2006-03/2006	No

carbon loss from soils and the fate of the lost carbon.				
SP07 Soils in the built environment				
Fate of surplus soil at development sites: Use of case studies at sites across England to produce a Good Practice Note on sustainable soil use on construction and development sites. (Includes review of current soil management practices on construction and development sites, documentation of good and bad practice, identification of constraints to sustainable soil use and re-use).	Land Research Associates	SP0701	02/2006-03/2006	No
SR01/SP09 Soil resources: strategic underpinning for soil science				
LANDIS Reference Site support: The LANDIS Reference Site holds the national computerised database system for soils and related environmental information for the UK, and consists of hardware, software and the human resources for their management. This agreement sustains the Reference Site through regular maintenance in order to assist Government in the provision of environmental information and its ability to support sustainable use of UK land resources.	Cranfield University	SP0901	10/2007-09/2010	No