Cranfield UNIVERSITY

Report Prepared for the Department for Environment, Food and Rural Affairs

Report of Activity for LandIS Support

Quarterly Progress Report
1st Jan – 31st Mar 2009

Report of Activity for LandIS Support
For the Department for Environment, Food and Rural Affairs

by
Caroline Keay, Timothy Farewell, Andrew Rayner

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DEFRA Contract No. SP0901
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CHANGE HISTORY

Version	*Date*	*Summary of change*
1.0	16/04/2009	First Issue

Reviewer: Dr Stephen Hallett

Reference to this report should be made as follows:

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Progress with the LandIS Support Contract

Reporting Period: 1 Jan, 2009 – 31 Mar, 2009

Database Maintenance

No specific maintenance issues have been experienced this period. The new virtual server is continuing to provide good service. The service team in the Cranfield University IT computing group provides a high standard of maintenance care and support.

Soil Site Reports

The Soil Site Reporter (http://www.landis.org.uk/gateway/reports/) continues to be used extensively. In the current period there have been 37 new companies and 215 new users registered. Importantly, and following our recent promotional campaign, this now includes 22 new Universities who have registered to take advantage of our initiative to provide free soil site reports as a general educational resource to all UK University Undergraduate students.

The following figures illustrate the level of response and use of the reporter to-date (figures 1-2):

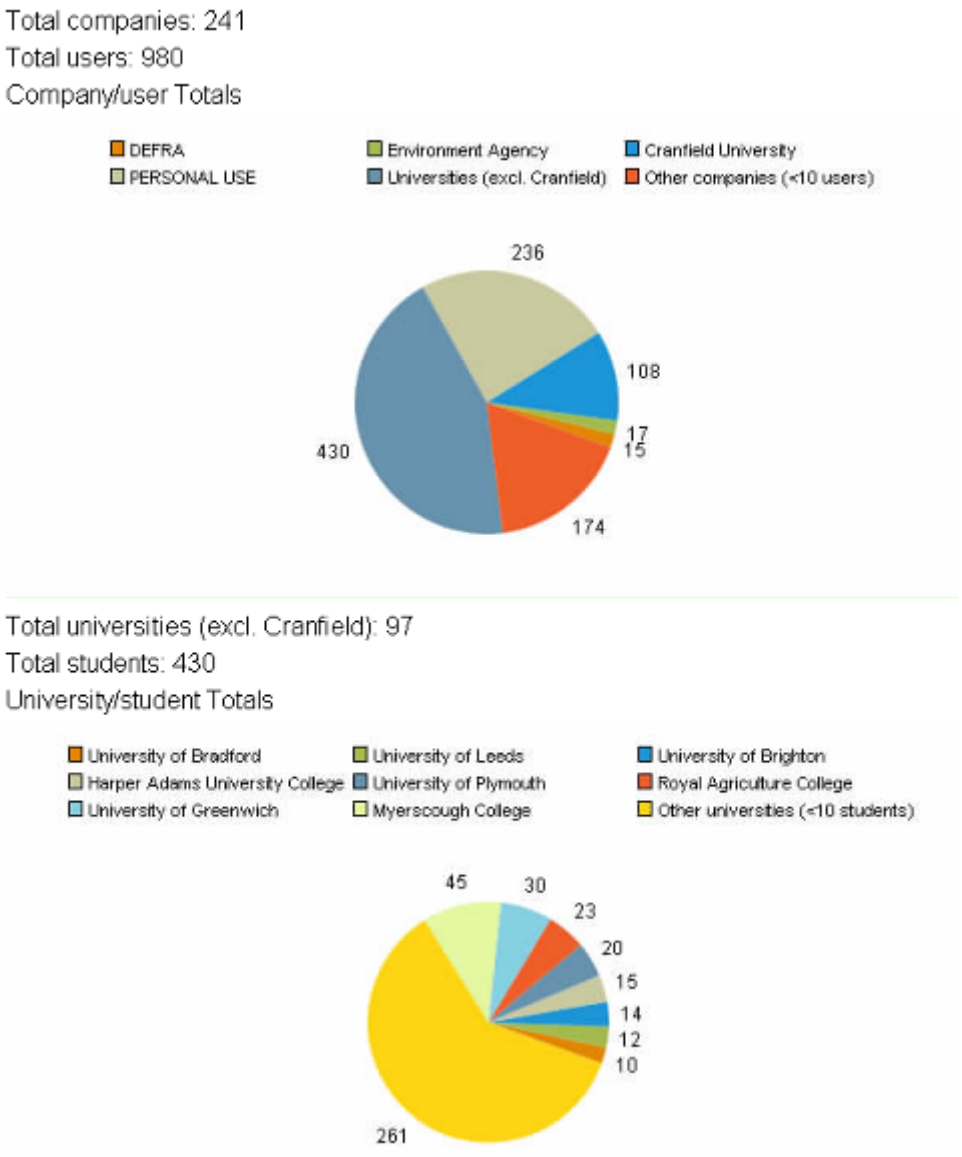

Figure 1 Summary of Soil Site Reporter uptake by user group

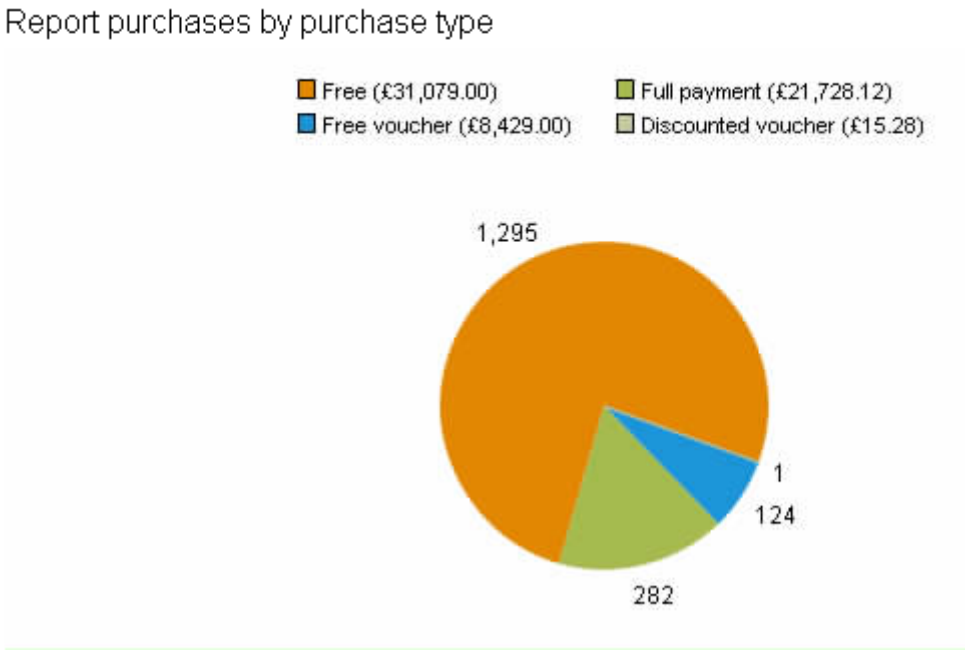

Figure 2 Summary of report types served by Soil Site Reporter

INSPIRE Compliance

The paper written for last years INSPIRE Conference in Slovenia, entitled “Moving the National Soil Database for England and Wales (LandIS) towards INSPIRE Compliance”, has now been peer reviewed for the International Journal of Spatial Data Infrastructures Research and been accepted for publication pending certain revisions to the text. The reviews were all very favourable with respect to the relevance and timeliness of the paper and we are currently editing the paper to accommodate the helpful suggestions the editors recommended.

EIONET - European Environment Information and Observation Network

Professor Mark Kibblewhite attended a workshop conference held at the Joint Research Council, JRC, in Ispra, It. on 4/3/09, representing Defra. The workshop was to provide a forum for the DG.Environment Eionet initiative, being a partnership network of the European Environment Agency (EEA) and its member and cooperating countries and involving approximately 900 experts and more than 300 national institutions. The network supports the collection and organisation of data and the development and dissemination of information concerning Europe’s environment. The JRC Workshop focussed on provision of soil information from member states, identification of the national data providers. The meeting objectives included: data requirements and reporting oblications; convergence with the activities of the European Soil Data Centre ESDAC; and the relationship to INSPIRE; the role of the NRCs, PCPs, NFPs in EIONET. A full set of minutes has been provided to Judith Stuart separately by Professor Kibblewhite.

LandIS PERSONNEL/TIME

Time put down to the LandIS project for the period April 08 to March 09 with budgeted days for Year 2 (Apr 08 to Mar 09) in brackets:

Caroline Keay	53	(58) days
Timothy Farewell	50.7	(50) days
Stephen Hallett	16.7	(20) days
Andrew Rayner	50.5	(50) days
Dick Thompson	4.1	(2) days
Ian Truckell	3.7	(0) days
Mark Kibblewhite	2.0	(0) days

Defra budget used between 1st April 2008 and 31st March 2009

£6,225 was spent from a budget of £5,800 for 12 Defra projects.

The 6 data leases marked with a * have had their charges (representing £1,900) deferred until the beginning of April 2009 and will therefore be charged to the Year 3 data lease budget.

NEW DATA LEASES FOR THE YEAR TO DATE

Organisation	Abstract	Purpose of Use	Start Date	End Date	P&A	Uncharged Royalty
Data Lease funded by DEFRA via the LandIS fund						
Forestry Commission	NATMAP vector and SOILSCAPES for England and Wales	To map those areas where soil associations vulnerable to erosion can be found.	14-APR-08	13-APR-13	£375	£95,350
Royal Veterinary College	Soilscapes- Wales Yr 2 & Yr 3 - Soilscapes England	To be used in a study of risk factors of disease introduction in a population of cattle herds and sheep flocks in Wales.DEFRA code: SE4002/CTA0301. (Single User licence)	01-MAY-08	30-APR-09	£375	£24,000
University of Nottingham	NATMAPvector and HORIZONhydraulics. 6/6/07 - additional data supplied - NATMAP vector + topsoil texture data - River Kent - Kendal, Cumbria - 528km2.	DEFRA project code: FD2016/CSA6616 - partnered with EA - Flood Risk Management Research Consortium - Hawkcombe Stream Somerset.	01-JUN-08	31-MAY-09	£200	£2,700
Ministry of Defence	NATMAP 250k data for England and Wales with legend. Association and pH data.	Within the MOD HQ Land Forces.	02-JUN-08	01-JUN-09	£375	£130,190
University of Durham	1) NATMAP vector, SOILSERIES hydrology, HORIZON fundamentals. 3/12/08 - amended to include: NATMAP legend, associations, SOILSERIES info, NSIsite and topsoil 1&2 (10 catchments in England and Wales). 2) NATMAP vector, legend, associations, SOILSERIES info, hydrology, HORIZON fundamentals, NSI site, topsoil 1 &2, profile, texture (Entire UK).	1) Within DEFRA project WQ0105CSA7393 as previously. 2) Within DEFRA project WQ0105CSA7393.	04-JUN-08	01-JAN-10	£200	£123,700
Rothamsted Research	NATMAP vector, SOILSERIES hydrology, HORIZON hydraulics, HORIZON fundamentals.	DEFRA project: LK0986. Improving water use efficiently and drought tolerance in UK winter wheats.	25-JUN-08	30-NOV-10	£375	£18,419
University of Nottingham	NATMAP vector & HORIZON hydraulics + topsoil data for OS area 300300SW by 310310 NW	DEFRA project: Flood Risk Management Research Consortium - code FD2016/CSA6616	28-AUG-08	30-NOV-09	£375	£400
DEFRA	All NSI data. All SOILSERIES and HORIZON data. 8/2/08 - Incorporating data licenced under ref:LC0013/007 NATMAP vector, NATMAP soilscapes, NATMAP legend, NATMAP associations	Within DEFRA.	01-DEC-08	30-NOV-08	£200	£130,190

Organisation	Abstract	Purpose of Use	Start Date	End Date	P&A	Uncharged Royalty
University of Lancaster	NATMAP vector, legend, associations, SOILSERIES info, hydrology, HORIZON fundamentals, NSI site, topsoil 1 & 2, profile, texture (Entire UK).	Within DEFRA project WQ0129: Delivery of Phosphorus and Faecal Indicator Organisms from Agricultural Sources to Watercourses.	15-DEC-08	31-JUL-13	£375	£123,700
Welsh Assembly Government	1. Wetness class: map showing soil associations in which more than 65% of the association area comprises soils having wetness class IV, V or VI. 2. Maps (with associated shape files) of shallow, stony, coarse, fine textured and peat soils. We would supply hard copy maps (A4 or A3 as agreed) and shape files that NE and WAG GI units could map and model in relation to climate and slope criteria (as requested). 3. Map showing complete extent of Less Favoured Areas defined using new criterion compared with current extent.	Determining Less Favoured Areas in England and Wales. Consortium licence in conjunction with Natural England ref: LC0013/008	01-DEC-08	30-NOV-10	£3,000	£123,700
Natural England	as above	Determining Less Favoured Areas in England and Wales. Consortium licence in conjunction with The Welsh Assembly Government ref: LC0200/001	01-DEC-08	30-NOV-10	£0	£0
University of Nottingham	NATMAP vector & HORIZON hydraulics + topsoil data for OS area 300300SW by 310310 NW	DEFRA project: Flood Risk Management Research Consortium - code FD2016/CSA6616	28-AUG-08	30-NOV-09	£375	£400
NERC / CEH*	1km resolution soil carbon database for England and Wales, giving the soil series in each 1km square together with particle size, bulk density and carbon content for layers 0-30cm and 30-100cm	To be used by CEH (Edinburgh) for DEFRA Project on Preparation of Annual Greenhouse Gas Inventory for LUCF in the UK	01-JUN-08	31-MAY-10	£200	£50,000
Forestry Commission*	NSI data points - DEFRA contract SP0521.	Forestry Commission research project EH66600E ' Carbon dynamics in forests'.	11-OCT-08	10-OCT-09	£200	£97,000

Organisation	Abstract	Purpose of Use	Start Date	End Date	P&A	Uncharged Royalty
University of Stirling*	NATMAP vector, NSI topsoil, SOILSERIES hydrology, SOILSERIES pesticides.	Defra project: FC1177 "Development of a risk evaluation system for the establishment of Gyrodactylus salaris in English and Welsh river systems." Data to be used by David Morris.	23-FEB-09	22-FEB-10	£375	£112,000
Forestry Commission*	NATMAP vector - Breckland Forest area	Data to identify heathland areas and for use in forestry planning	25-FEB-09	21-FEB-14	£375	£3,000
Maslen Environmental*	Soilscapes for England and Wales.	Defra R&D project SP0573: Basis of the UK BAP target for the reduction in use of peat in horticulture Development of a map showing lowland raised peat bogs where the peat deposits have historically or are currently being extracted.	02-FEB-09	01-FEB-10	£375	£38,525
Environment Agency*	NSI Carbon/texture data Soil C (%)	DEFRA project SP0562 - 'Co-ordinate an expert group to assemble UK-wide data on soil carbon (and greenhouse gas fluxes) in the context of land management).	19-JAN-09	18-JAN-10	£375	£2,400
				TOTAL (Defra Charges)	£8,125	£1,075,674

Organisation	Abstract	Purpose of Use	Start Date	End Date	P&A	Uncharged Royalty
Bona Fide Research						
Oxford Brookes University	NATMAP vector + Soilscapes	By Nicola McHugh within PhD study incorporating soil data into modelling of the landscape for the purpose of ecological planning.	28-APR-08	27-APR-11	£375	£95,350
European Environment Agency	NSI topsoil carbon data (from Bellamy, Bradley & Kirk's Nature paper.	For documentation purposes only. No set period - For eternity. Data only for use by licencee. Forbidden to pass data to another party.	06-MAY-08	05-MAY-58	£0	£24,000
University of Sheffield	Soil Carbon inventory for England and Wales	To be used by CTCD Sheffield University in collaboration with Forest Research, York University and Edinburgh University in bona fide research to model soil carbon fluxes in UK soils. DEFRA code: SP0511	11-JUL-08	10-JUL-13	£375	£5,000
Rothamsted Research	HOST 1km data for England and Wales	Within 2 year research project for DEFRA - (ACO307 & WQO106) and BBSRC - ISPG Core program Grasslands and Environmental Soil Systems Theme 1).	28-JUL-08	27-JUL-10	£375	£13,000
Imperial College London	NATMAP vector + NSI Topsoil data.(Tamar catchment).	Bonafide research - interpreting of statistical modelling work using soil geochemical data. Single user licence.	11-AUG-08	10-AUG-13	£375	£600
NERC / CEH	NATMAP vector, NATMAP HOST, SOILSCAPES data.	2 research projects: ' Can Metapopulation theory explain the regional dynamics of plants' and 'Securing the Conservation of biodiversity across Administrative Levels and spatial, temporal and Ecological scales'.	01-SEP-08	31-AUG-13	£375	£130,000
AEA Energy and Environment	NSI topsoil data.	Within Defra project RMP2106- investigating the potential contribution to atmospheric heavy metal concentrations from wind erosion from soils in NAEI (National Atmospheric Emission Inventory).	22-SEP-08	21-SEP-09	£375	£24,600
Imperial College London	NATMAP vector for England and Wales. (+ Soilseries pesticides and Soilseries hydrology)	Within GIS group for use within the INTARESE project and SAHSU pesticide study by Danielle Vienneau. Single user licence. 'For research purposes only'.	15-OCT-08	14-OCT-09	£200	£130,000

Organisation	Abstract	Purpose of Use	Start Date	End Date	P&A	Uncharged Royalty
University College London	Research project to identify the types of soil on which cemeteries and nearby settlements were located. Soilscapes data to be used for some basic landscape characterisations.	Data for use in the specified project only, to help develop guidelines and as input into collaborative paper on soils and archaeology	27-OCT-08	30-APR-09	£0	£800
University College London	NATMAP vector, SOILSERIES hydrology, HORIZON hydraulics.(Tern catchment Shropshire).	PhD study - Rebekah Rochester.	17-NOV-08	16-NOV-09	£375	£130,000
University of Sheffield	NATMAP vector. SERIES pesticides, SERIES hydrology, SERIES agronomy, HORIZON fundamentals, HORIZON hydraulics.	Study by Meghann Mears - Translating habitat into ecosystem services.	24-NOV-08	23-NOV-10	£375	£130,000
Wildlife Trust (BCNP)	Soilscapes	Green infrastructure planning. To analyse current habitats and assess opportunities for habitat creation and restoration.	20-DEC-08	19-DEC-09	£200	£500
University of Southampton	NATMAP 1000 Soilseries agronomy	Within Ningthoujam Ramesh Kumar research study entitled: Remote sensing of vegetation chlorophyll content for climate modeling'	12-JAN-09	11-JAN-10	£375	£17,860
University of Brighton	National Soil Map soil associations for the South East of England with text legend file 2/4/09 - Additional data supplied. MUSID - horizon and agronomy properties summarised	For a research and development project on Habitat Suitability Modelling on the South Downs	23-MAR-09	22-MAR-10	£200	£5,000
				TOTAL (Bona fide Research)	£3,975	£706,710

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