

WP No. 5.1

WP Leader: Howard Wheeler

**WP Title: Source-Pathway-Receptor Modelling for Flood Impact of Upland Land Use and Management Change**

**Description of data generated with FRMRC funding ([web link will be inserted for each data set if appropriate](#))**

D5.3 A database containing the Pontbren experimental data. (Contact Neil McIntyre: [n.mcintyre@imperial.ac.uk](mailto:n.mcintyre@imperial.ac.uk)). A short summary of the data collected is provided below. Most observations were recorded continuously from 2006 to the end of 2009.

AWS (x1)

Intensively monitored hillslopes (x2)

Hillslope 1 – “the Bowl”

Runoff weir box (drain flow and overland flow)

Drain flow and overland flow tipping buckets

Tensiometers (8 arrays at 3 depths)

Neutron probe (x2)

Hillslope 2 – “half moon”

Drain and overland flow weir boxes

Tensiometers (6 arrays at 3 depths and 3 arrays at 2 depths)

Tree shelterbelt overland flow

Moorland tensiometers (1 array at 3 depths)

Ground water (5x boreholes)

Manipulation plots (x4). At each site:

Overland flow tipping bucket

Neutron probe

Tensiometers (1 array of three different depths)

Soils data (pre and post manipulation)

Shelterbelt interception data (x2 sites)

Stemflow

Throughfall

Rain gauges to capture rain shadow (x3)

Rain gauges (x6)

Streamflow (x13)

Soil survey of the catchment

D5.4 Self-documented demonstration software for new algorithms for information tracking for estimation of vulnerability to land use change. (contact Greg O’Donnell: [g.m.o'donnell@newcastle.ac.uk](mailto:g.m.o'donnell@newcastle.ac.uk))

Numerical simulations of the Hodder catchment to estimate impacts of land use and land management change (note: observations of the Hodder catchment are from EA project SC060092 and are included in the next section).

1. Simulations of the Hodder using information tracking algorithms and runoff generation showing spatial sensitivity to land management change (contact Greg O’Donnell: [g.m.o'donnell@newcastle.ac.uk](mailto:g.m.o'donnell@newcastle.ac.uk))

2. Simulations of the Hodder and subcatchments under land management scenarios with uncertainty (Contact Neil McIntyre: [n.mcintyre@imperial.ac.uk](mailto:n.mcintyre@imperial.ac.uk))

**Supporting data sets owned by others**

**Web links or contact details to be inserted to allow others to seek permission to access third party data sets.**

MORECS potential evapotranspiration time series.

<http://www.metoffice.gov.uk/services/industry/data/general>

NSRI soils database. GIS maps and associated data tables.

<http://www.cranfield.ac.uk/sas/nsri/index.html>

LCM2000 land cover maps.

[http://www.ceh.ac.uk/sci\\_programmes/BioGeoChem/LandCoverMap2000.html](http://www.ceh.ac.uk/sci_programmes/BioGeoChem/LandCoverMap2000.html)

EA project SC060092, "Multiscale experimentation, monitoring and analysis of long-term land use changes and flood risk", deliverables:

Ewen, J., Geris, J. O'Donnell, G, Mayes, W. O'Connell, P. E. Multiscale experimentation, monitoring and analysis of long-term land use changes and flood risk, SC060092: Final Science Report, Newcastle University, 133p.

Electronic Project Record:

Contact: [adam.baylis@environment-agency.gov.uk](mailto:adam.baylis@environment-agency.gov.uk)<<mailto:adam.baylis@environment-agency.gov.uk>>

Wharfedale peatland experimental results

Used in "Ballard, C., McIntyre, N., Wheeler, H.S., Holden, J. and Wallage, Z.E., 2011. Hydrological modelling of drained blanket peatland. Journal of Hydrology, accepted."

contact: Prof. Joseph Holden [J.Holden@leeds.ac.uk](mailto:J.Holden@leeds.ac.uk)

**Barriers to making data freely available after project.**

Data listed in the first section can be made available on request (from the listed contacts).