

Name	Contact details	Dates	Summary	Background	Selected findings	Partners	Funding	NFM type	Woodland type	Extent	Location	Technical details			
												Woodland management - further details	Woodland creation - further details	Catchment monitoring	Modelling
ENGLAND															
E1 - Helston, Cornwall	Tom Fletcher - Environment Agency, tom.fletcher@environment-agency.gov.uk, 01208 265025.										(Coordinates on Location Map (appendix 5.2 of report), for Helston: 165563, 027587).				
E2 - Buckfastleigh, Devon	Mark Prior - South West FC Area Team, Forestry Commission, mark.prior@forestry.gsi.gov.uk, 0300 067 5845 / 07836 607029. Rob Newton - Environment Agency, rob.newton@environment-agency.gov.uk.		The project is still at development stage and currently identifying sites in the catchment where NFM measures could be taken.			The project is led by the Environment Agency .	The budget is still to be set.				(Coordinates on Location Map (appendix 5.2 of report), for Buckfastleigh: 273623, 066361).	A range of woodland management measures are considered for the Kings Wood area which is being managed by Fountains Forestry.	The creation of wet woodland is considered within the catchment.		
E3 - Holnicote Multi-Objective Flood Management Demonstration Project, Somerset	Nigel Hester - National Trust, nigel.hester@nationaltrust.org.uk, 01643 863905. Steve Rose - JBA Consulting, steve.rose@jbaconsulting.com, 01274 714269.	Autumn 2009 - commencement - establishment of Project Steering Board and appointments. 2009-March 2011 - Phase 1 - implementation phase. April 2011 on-going - Phase 2 - further work.	The project is at the catchment scale, with significant monitoring, modelling, assessment and stakeholder engagement work involved.			Project delivery team: National Trust , Penny Anderson Associates and JBA Consulting . Key partners and other links: the Environment Agency , Natural England , the University of Exeter (water quality research) and Cranfield University (initial ecosystems research). Other partner organisations: Wessex Water , Somerset County Council and Esmoor National Park Authority .	Main funder: Defra with £473k to 31 March 2011 and £66k from April 2011, with additional contributions from the Environment Agency (£170k cash and £30k in kind) and National Trust (£50k cash plus £104 in kind).	Hydraulic roughness	Floodplain woodland; Woody debris dams	Between the villages of Allerford and Blackford, one woodland block c. 1 ha (190x100m) , the other under 1 ha (c. 50x105m) .	Woodland blocks between the villages of Allerford and Blackford - one with approximate centre at 291437, 145780, the other at 291653, 145837. Woody debris dams in Horner Wood , west of the village of Luccombe around: 289220, 144031. (Coordinates on Location Map (appendix 5.2 of report): 289220, 144031).	At Horner Wood, the woody debris dams mostly created naturally but some artificial.			
E4 - Parrett Catchment Project	Tom Nisbet - Forest Research, tom.nisbet@forestry.gsi.gov.uk, 0300 067 5600 / 0300 057 5697. Huw Thomas - Forest Research, huw.thomas1@forestry.gsi.gov.uk, 07810 86379.										(Coordinates on Location Map (appendix 5.2 of report), north-east of Cannington: 327550, 140822).				
E5 - River Lyd/Lydbrook Scheme, Forest of Dean		2015 on-going (7).	The scheme is aimed to reduce flooding impact in the town of Lydney through the installation of woody debris dams on the watercourse and in forest drainage system.			The scheme may involve the Environment Agency .					North of Lydney - (Coordinates on Location Map (appendix 5.2 of report), for Lydney: 363450, 202386).		N/A		
E6 - Upper Lydbrook Scheme, Forest of Dean	Forest Enterprise - westengland@forestry.gsi.gov.uk, 0300 0674800. Peter Kelsall - Forestry Commission, peter.kelsall@forestry.gsi.gov.uk, 0300 0674816.	Summer 2015 on-going (possibly): woody debris dam installation.	The project aims to reduce surface flooding to properties in Upper Lydbrook village by limiting the peak flows from the Greathough Brook through the installation of large woody debris dams in the watercourse and on the steep valley sides.			Still to be confirmed but will involve the Forestry Commission , the Environment Agency and the Forest of Dean District Council .	Environment Agency: Flood and Coastal Erosion Risk Management - Grant in Aid contribution of £70k approved for 2014/15.				Approximately 6 woody debris dams (still to be confirmed).	North of the Forest of Dean on the Greathough Brook - above the village of Lydbrook. (Coordinates on Location Map (appendix 5.2 of report), for Lydbrook: 360155, 215803).		N/A	
E7 - River Frome, Stroud	Mark Prior - South West FC Team, Forestry Commission, mark.prior@forestry.gsi.gov.uk Anthony Perry - Environment Agency, anthony.perry@environment-agency.gov.uk.										(Coordinates on Location Map (appendix 5.2 of report), for Stroud: 385550, 205833).				
E8 - rSuDS Project, Stroud	Chris Uttley - Stroud District Council, chris.uttley@stroud.gov.uk.	May 2014-May 2017	The project is focused on measures to slow the flow and reduce siltation throughout the River Frome catchment. Measures include those aimed at woodland and agricultural land.	The Stroud Valleys suffered extensive flooding during the summer of 2007. Every year since has seen flooding in some parts of the Stroud Valleys, including most recently Chalford on the middle Frome, and Bridgend and Eastington on the lower Frome. Of particular concern to residents and the District Council is the designation by the Environment Agency of the Slad Valley as at risk of destructive flash flooding, of a similar type to the event that destroyed parts of Boscastle in Cornwall. In 2012, the Environment Agency commissioned a report into the feasibility and potential benefits of implementing Natural Flood Management (also called Rural Sustainable Drainage - rSuDS) throughout the catchment of the Frome and associated tributaries. Acting on findings of the study, the Severn and Wye Regional Flood and Coastal Committee (RFCC) agreed to fund a project officer to implement and promote rural sustainable drainage in the Frome catchment.		A formal partnership between Gloucestershire County Council , the Environment Agency , the Regional Flood and Coastal Committee and Stroud District Council was established to implement the work, and under a collaborative agreement, Stroud District Council agreed to employ the Project Officer for three years. The project has also involved Gloucestershire Wildlife Trust and several landowners within the Slad and Toadsmoor Valleys.	£150,000 revenue funding from the Regional Flood and Coastal Committee over 3 years (May 2014-May 2017). Capital funds supplied by Gloucestershire County Council, Stroud District Council and funding in kind from the National Trust and Gloucestershire Wildlife Trust. Further capital funding secured for next year financial year from Gloucestershire County Council, the Environment Agency and Stroud District Council.	Hydraulic roughness; Surface runoff interception	Woody debris dams and other timber structures	Slad Valley - 21 medium-large woody debris dams in all within Slad Valley riparian woodland: 5 within a 50m stretch at the confluence of two streams, 16 at Snows Farm Nature Reserve on Dillay Brook, with another 7 very large floodplain attenuation timber structures - Workmans Wood - 12 large woody debris dams along Sheepscote Brook in all: 11 along channel with base flow and 1 upstream in the dry channel with seasonal flow. 4 large timber deflectors or flood attenuation structures . 8 woody debris structures to slow down water flow from culverts built underneath woodland tracks to downstream outlet and 8ft soakaway. Toadsmoor Wood - 18 medium woody debris dams .	Slad Valley - approximate coordinates for Snows Farm Nature Reserve : 388714, 208059. Workmans Wood (within the Painswick Valley in the Cotswold Commons and Beechwoods NNR) - approximate coordinates for the wood: 290000, 210900. Toadsmoor Wood - Toadsmoor Valley - approximate coordinates: 388270, 204462. (Coordinates on Location Map (appendix 5.2 of report): 388714, 208058).	Slad Valley - Woody debris dams are artificially constructed with materials sourced from the streamside, typically Ash, Alder and other hardwoods, with hazel also along Dillay Brook. Reinforced steel bars are used to hold main logs in place. The floodplain attenuation structures are experimental and built of Poplar and/or Alder, 18ft long, and placed to divert water away from the watercourse to the floodplain at times when river flow is increased significantly. Workmans Wood - Woody debris dams are artificially constructed with local materials, with reinforced steel bars used to hold main logs in place. Large poplar trees used to deflect flow from the channel to adjacent woodland to facilitate infiltration. The culverts constructed underneath woodland tracks and associated woody debris structures and soakaways are also designed to collect silt. Toadsmoor Wood - Thinning is taking place within this deciduous broadleaf woodland of Hazel coppice, Beech and Douglas Fir, in order to provide materials for the woody debris dams which are designed to slow water flow and trap sediment along unnamed watercourse that feeds Toadsmoor Pond. The 30 ha woodland is otherwise privately owned and commercially managed for firewood, with a 40% contribution in time and labour from the landowner towards the construction of the woody debris structures.	N/A		
E9 - Berkshire Downs	Matthew Woodcock - South East FC Area Team, Forestry Commission, matthew.woodcock@forestry.gsi.gov.uk. Gillian Davies - Environment Agency, gillian.m.davies@environment-agency.gov.uk.										(Coordinates on Location Map (appendix 5.2 of report), for Berkshire Downs: 429896, 186325).				
E10 - Aldingbourne Rife catchment, Sussex	Matthew Woodcock - South East FC Area Team, Forestry Commission, matthew.woodcock@forestry.gsi.gov.uk. Jamie Fielding - Environment Agency, jamie.fielding@environment-agency.gov.uk.										(Coordinates on Location Map (appendix 5.2 of report), for Aldingbourne: 492616, 105524).				
E11 - South Downs National Park Authority, West Sussex	Matthew Woodcock - South East FC Area Team, Forestry Commission, matthew.woodcock@forestry.gsi.gov.uk. Nina Williams - South Downs NPA, nina.williams@southdowns.gov.uk, 02392 572606.										(Coordinates on Location Map (appendix 5.2 of report), for South Downs: 514753, 109982).				
E12 - Upper Thames tributaries, Wallingford	Mark Barnett - Environment Agency, mark.barnett@environment-agency.gov.uk. Matthew Woodcock - South East FC Area Team, Forestry Commission, matthew.woodcock@forestry.gsi.gov.uk, 0300 067 4422 / 07771 666543.					The Environment Agency and Forestry Commission .					Upper Thames tributaries to include the Ock , the Thames (including Cherwell , Evenlode and Windrush), the Ray and the Thame . (Coordinates on Location Map (appendix 5.2 of report), for Wallingford: 460305, 188063).				

E13 - Sorens Flow Initiative - River Ouse East Sussex, formerly Trees on the River Uck (TrUck)	Sandra Manning-Jones - Sussex Wildlife Trust, sandramanningjones@gmail.com. Matthew Woodcock - South East FC Area Team, Forestry Commission, matthew.woodcock@forestry.gsi.gov.uk.	2012 on-going.	The project was set up to investigate the potential for woodland as a flood risk reduction measure given the existence of modelling in the Uck catchment.			The Environment Agency , Sussex Wildlife Trust , the Woodland Trust .					River Uck within Ouse catchment. (Coordinates on Location Map (appendix 5.2 of report), north of Hadlow Down: 552394, 125716).				
E14 - River Leam, Warwickshire	James Bickley - North West and West Midlands FC Area Teams, Forestry Commission, james.anderson-bickley@forestry.gsi.gov.uk. Ewan Calcott - North West and West Midlands FC Area Teams, Forestry Commission, Ewan.Calcott@forestry.gsi.gov.uk, and 0300 067 4244 / 07831 235213. Melissa - Severn Rivers Trust, melissa@severnriverstrust.com										(Coordinates on Location Map (appendix 5.2 of report), for near Marton: 440380, 269261).				
E15 - Farming Floodplains for the Future, Stafford	Matt Jones - RSPB, Matt.jones@rspb.org.uk.	2007-2010	The project was principally aimed at determining whether the farmed landscape might be viably managed to effectively reduce flood risk downstream while at the same time enhancing the natural environment.			Project hosted by Staffordshire Wildlife Trust in partnership with Sow & Peak Drainage Board , the Environment Agency , Natural England , Farming & Wildlife Advisory Group and Staffordshire County Council .	Funding from Defra - Flood and Coastal Erosion Risk Management Innovation Fund.	Floodplain woodland; Woody debris dams	About 6 woodland blocks .		(Coordinates on Location Map (appendix 5.2 of report), for Stafford: 391686, 323135).				
E16 - Knowledge Transfer Partnership	Johanne Williams - Waterco, johanne.williams@waterco.co.uk, 01824 702220.		The project is at proposal stage and will look to creating an innovative flood risk management service to offer a more cost-effective, catchment-based natural approach to flood risk management.			led by the Technology Strategy Board with partners Waterco consultants and the School of Environmental Sciences, Liverpool University .					(Coordinates on Location Map (appendix 5.2 of report), St Helens: 350948, 395167).				
E17 - Roding catchment, Chipping Ongar	Sarah Jane Scott - Environment Agency, sarah.jane.scott@environment-agency.gov.uk. David Bole - East & East Anglia FC Area Team, Forestry Commission, David.Bole@forestry.gsi.gov.uk, 01623 821433 / 07712 750549.		The project may look at working with natural processes, including the creation of woody debris dams and the deployment of other woodland management measures, in order to reduce flood risk. The project is currently at feasibility stage.					Woody debris dams			(Coordinates on Location Map (appendix 5.2 of report), for Chipping Ongar: 555009, 202417).				
E18 - South West Peak Landscape Partnership	Karen Shelley-Jones - South West Peak Landscape Partnership, Peak District National Park Authority, karen.shelley-jones@peakdistrict.gov.uk / info@southwestpeak.co.uk. James Bickley - North West and West Midlands FC Area Teams, Forestry Commission, James.Anderson-Bickley@forestry.gsi.gov.uk. Ewan Calcott - North West and West Midlands FC Area Teams, Forestry Commission, Ewan.Calcott@forestry.gsi.gov.uk, and 0300 067 4244 / 07831 235213. Tim Brooks - Environment Agency, tim.brooks@environment-agency.gov.uk.		One of the sub-projects within the SW Peak Landscape Project, currently at development stage, is around management of headwaters for multiple objectives which may include tree planting.			South West Peak Landscape Partnership includes the following official partners: Peak District National Park (lead partner), Cheshire Wildlife Trust , English Heritage , the Environment Agency , Farming Life Centre , Natural England , RSPB , Severn Trent Water , Staffordshire County Council , Staffordshire Wildlife Trust , Support Staffordshire and United Utilities . Also involved in the partnership are: Nature Peak District , residents of the South West Peak, the people of Joke-on-Trent , Newcastle-under-Lyme , Leek , Buxton and Macclesfield , Friends of the Peak District , Hanmore Marketing , Moorland Association , Trent Rivers Trust and Waymark Interpretation .	Funding secured from the Heritage Lottery Fund: Landscape Partnership Scheme.				(Coordinates on Location Map (appendix 5.2 of report), approximate centre of SW Peak: 398955, 371062).		Tree planting may take place within the project.		
E19 - Sustainable Catchment Management Programme (SCaMP), North West England	Edward Lawrence - United Utilities, edward.lawrence@uuplc.co.uk / scamp@uuplc.co.uk, 01925 463066 / 07795 235758.	2005-2015	The project is primarily aimed at improving water quality and supporting wildlife. One of the measures in place in order to achieve this is to re-establish upland and clough woodland.			Partnership between United Utilities and RSPB with input from Natural England , Forestry Commission and local authorities , and working with local farmers, tenants and land managers .	United Utilities: £4M for capital works beyond the scope of Higher Level Stewardship scheme (Natural England)	Upland woodland; Gully woodland	Overall extent of project area: 30,000 ha and 60,000 trees planted as upland woodland.	Focus on two estates with SSSIs damaged by over-grazing: in the Peak District near Goyt and Longdendale and in the Forest of Bowland, North West England . (Coordinates on Location Map (appendix 5.2 of report), for Goyt: 392379, 390138 (although site also in Forest of Bowland: 361376, 450595)).	N/A				
E20 - Clough Woodland Project, Peak District	Rob Twigg - Moors for the Future Partnership, Rob.Twigg@peakdistrict.gov.uk, 07584 471243.	November 2012 (start of pilot)- September 2015 , with potential for extension, subject to funding.	The project aims to deliver multiple benefits: biodiversity, landscape enhancement, health and wellbeing, protecting soils and reducing erosion, improving water quality, providing shelter and shade for livestock as well as reducing downstream flooding.			The project is led by the Moors for the Future Partnership (MFFP).	Funding from Forestry Commission (direct), the Environment Agency (Water Framework Directive Grant in Aid, with a 5 year statement of intent letter received for the period to 2020 as well as funding for monitoring equipment installation through the Catchment Restoration Fund), National Trust, Royal Society for the Protection of Birds (no longer a current funder), £2.5 million from English Woodland Grant Scheme approved (to regenerate up to 490 ha of woodland within the National Trust Peak District Estate, subject to following the Clough Woodland Guiding Principles document and undertaking an appropriate assessment under the Habitat Regulations). Potential future funding from water companies and local flood authorities.	Gully woodland	Up to 490 ha .	Project area includes parts of the Aire and Calder , Don and Rother , Derbyshire Dales , Dove , Weaver/Goway and Upper Mersey catchments. (Coordinates on Location Map (appendix 5.2 of report), approximate centre: 414107, 395718).	N/A	Woodland creation measures include a mixture of dry and wet native broadleaf woodland, including the following species: oak, birch, rowan, hazel, holly, hawthorn, alder, willow, aspen, bird cherry, small-leaved lime, crab apple. Given the vast majority of areas approved for woodland creation fall within the South Pennines Moors Special Area of Conservation, a protected upland landscape with many sensitivities/constraints to woodland creation, the project is finding it difficult to design the woodland specifically to address NFM objectives and meet Woodlands for Water design criteria.	Moors for the Future Partnership installed monitoring equipment during 2014/15 and are delivering a programme of monitoring fieldwork specifically designed to support an assessment of native broadleaf woodland creation within the cloughs of the National Trust Dark Peak Estate and the subsequent impacts on peak river flows and water quality. There are draft proposals to secure funding for monitoring, with flow gauges upstream and downstream of where woodland would be, and to measure water quality.	N/A - the pilot looked at Woodlands for Water and other data to identify priority areas where woodland creation could help with flood and water quality.	

E21 - SOURCE, Upper Calder & Aire catchment	Charles Foreman - Environment Agency, charles.foreman@environment-agency.gov.uk. Dorothy Kanich - Treesponsibility, treesponsibility@yahoo.co.uk, 07847 815926.	Summer 2011 - formal launch.	The project deploys land management approaches, including woodland measures, aimed at reducing local flood risk by minimising surface water run-off and reducing hillside erosion and sediment deposits following heavy rainfall. The project is also involved with moorland restoration and river ecology as well as educational and volunteer activities across the spectrum of project activities.	The project is informed by the significant flood risk level in the upper Calder catchment due to rapid run-off from the land, and the Calder and Colne water bodies failing WFD standards due to sediment levels.	A model was developed as part of PhD research carried out by Dr Gao at the University of Leeds, also part of the water@leeds centre, to assess the impacts of land use management on floods in the Upper Calder catchment, with findings on the Golden Water modelling study made public in September 2014 (although these have not been sourced so far in the context of this project). Monitoring also in place on erosion control programme and river invertebrate.	The project is an environmental partnership between the Calder and Colne Rivers Trust - Calder Valley Wildlife Group , Tomdorden Moor Restoration Trust - Calder Futures , Calderdale Council (Countrywide Department) , the Environment Agency , Treesponsibility , White Rose Forest , BlackBark Woodland Management , Moors for the Future , National Trust , Trees for Yorkshire , Upper Calderdale Wildlife Group . The project also contributes to broader strategic activities and contributes to the Leeds City Region green infrastructure investment programme Rivers For Life - the work of the local regeneration company Pennine Prospects and their South Pennine Landscapes work in the Dark Peak Nature Improvement Area. SOURCE has also worked with a large number of volunteers from diverse community groups (too numerous to list comprehensively), for eg. St. Josephs RC Primary School, Manchester Quakers, Liverpool Woodcraft Folk.	Woodlands for Water funding received from the Forestry Commission and in-kind contributions from the Woodland Trust and Yorkshire Water. Funding also received from the Coal Authority, Cooperative Community Fund and Calderdale Council for volunteer training on invertebrate monitoring, from Calderdale Council through the Defra Community Resilience Pathfinder to enable a range of project-related events, from Calderdale Council Cleaner Greener with private match funding from SUMA Wholefoods, and from Hebden Bridge Town Council.	Hydraulic roughness; Surface runoff interception	Gully woodland; Woody debris dams	44,000 trees planted to date across all sites: c. 10,000 trees and 800m of hedging over 8 ha site at Warland Farm. The extent of the site near Blackshawhead is 2.5 ha .	Headwaters of the River Calder catchment near Tomdorden: at Gorpley Cough within Infield Pasture Common (391900, 423500) ; Warland Farm (394626, 420249) ; Call Lee, South Grain and Sager Lane . Also upper Derwent catchment within Dark Peak Improvement Area. Headwaters of the River Calder catchment near Blackshawhead (Coordinates on Location Map (appendix 5.2 of report): 391900, 423500).	At Gorpley Cough: fencing installed to exclude sheep and cattle. Woody debris dam or 'leaky dam' construction near Blackshawhead.	Warland Farm: ash, oak, sweet chestnut, hazel and willow coppice as well as blackthorn hedgerow. Gorpley Cough: hedge and trees planted.		
E22 - Cussey Beck, Cumbria	Mike Sturt - South Cumbria Rivers Trust, 1539 530047 / 07826 141019.	Until August 2014	The pilot project involved the installation of large woody debris dams on Cussey Beck on the west shore of Lake Windermere with a view to holding water back in flood events and allowing silt deposition.			Led by South Cumbria Rivers Trust with support from the WindermereReflections project team, Freshwater Biological Association volunteers and the Lake District National Park .		Hydraulic roughness	Woody debris dams	6 large woody debris dams on Cussey Beck.	Approximate location on Cussey Beck : 337717, 493625. (Coordinates on Location Map (appendix 5.2 of report): 337717, 493625).		N/A		
E23 - Rydal Valley, Cumbria	Peter Leeson - Woodland Trust, Peter.Leeson@woodlandtrust.org.uk.	2013 on-going	The project involves a 400 ha scheme to increase wood pasture and reduce grazing by sheep, using cattle and gaining vegetation change, with benefits expected to streams flowing into Lake Windermere.			Woodland Trust and Natural England .	Funding from Forestry Commission: English Woodland Grant Scheme and Natural England: Higher Level Stewardship scheme, with top-up funding from the Woodland Trust.	Surface runoff interception; Hydraulic roughness	Upland woodland	4 areas of (potential) planting, with the largest at 188 ha .	Approximate centres of planting blocks: 336281, 505957 / 336410, 507173 and 336489, 507498 for 3 blocks planted under the English Woodland Grant Scheme. Approximate centres of planting areas: 336532, 507820 / 336267, 508249 / 336443, 508330 and 336139, 508653 for potential planting into bracken. Approximate centre of planting block: 337086, 508279 for woodland and scrub planting in the Buckstones area . Approximate centre of planting area: 336219, 509597 for potential alder planting in the Top alignment area (Coordinates on Location Map (appendix 5.2 of report): 336281, 505957).	Woodland management measures to assist woodland establishment include keeping tubes upright, weeding where needed, beating up seasonally, managing the deer population and keeping stock proof.	Species planted are a mix of aspen, alder, downy and silver birch, crab apple, hawthorn, rowan, oak, hazel, goat willow with smaller proportions of dwarf willow, juniper and scots pine	N/A - no modelling used to inform the siting of woodland.	
E24 - Duddon upper catchment, Cumbria	Peter Leeson - Woodland Trust, Peter.Leeson@woodlandtrust.org.uk.	29.10.2014 on-going	The project involves tree and scrub planting, excluding grazing and gaining vegetation change on land in the upper reaches around Wynnose and Hardtost passes, with benefits expected for water quality as the Duddon suffers PH loads down to +/- 3 highly detrimental to fish.			Woodland Trust and Natural England .	Funding from Natural England: Higher Level Stewardship scheme.	Surface runoff interception; Hydraulic roughness	Upland woodland; Gully woodland	6 blocks of woodland planting totalling 87 ha	Approximate centre of planting between Red Tarn and Wynnose : 327101, 503070. Approximate centre of planting along Galscale Gill : 325770, 502608. Approximate centre of planting along Mossdale Beck : 324327, 502050. Approximate centre of planting along Kardnot Gill : 323631, 501584. Approximate centre of planting around Cockley Beck : 325114, 501656. Approximate centre of planting south of Cockley Beck Gill : 324792, 501200. Approximate centre of planting near Dale Head : 324485, 500496. (Coordinates on Location Map (appendix 5.2 of report): 327101, 503070).	Woodland management measures to assist woodland establishment include keeping tubes upright, weeding where needed, beating up seasonally, managing the deer population and keeping stock proof.	Species planted are a mix of aspen, alder, downy and silver birch, crab apple, hawthorn, rowan, oak, hazel, goat willow with smaller proportions of dwarf willow, juniper and scots pine	N/A - no modelling used to inform the siting of woodland.	
E25 - Kinniside Common, Cumbria	Peter Leeson - Woodland Trust, Peter.Leeson@woodlandtrust.org.uk.	2013 on-going	The project involves tree and scrub planting, excluding grazing and gaining vegetation change over 4 or 5 blocks of land on the Common, with benefits expected for Worm Gill in particular (currently a high mobile stream carrying a huge sediment load). The aim of the project is to put trees back in the landscape and create woodland that looks as natural as possible by mimicking natural seed dispersion and matching suitable species to the locations.			Woodland Trust , Natural England	Funding from Natural England - Higher Level Stewardship scheme (HLS) whereby "for every tree funded by HLS capital works an established tree must be present in year 10 of the agreement".	Surface runoff interception; Hydraulic roughness	Upland woodland; Gully woodland	7 blocks of planting of about 38,000 trees over an area totalling 62 ha : (a) 12.1 ha; (b) 1.3 ha; (c) 3.2 ha; (d) 11.5 ha; (d2) 2.4 ha; (e) 7.6 ha and (f) 24 ha.	Approximate centre of planting areas: (a) 309739, 513527; (b) 306646, 514092; (c) 306108, 512156; (d) 306711, 511433; (d2) 306423, 510401; (e) 306498, 509606 and (f) 307717, 509541. (Coordinates on Location Map (appendix 5.2 of report): 307717, 509541).	Woodland management measures to assist woodland establishment include keeping tubes upright, weeding where needed, beating up seasonally, managing the deer population and keeping stock proof.	Species for wet ground to consist of: Common Alder (6000), Goat Willow (3500), Crack Willow (3450), Dwarf Willow (650), Aspen (2450), Silver Birch (3400) and Downy Birch (1600). Species for dry ground: Hazel (1500), Hawthorne (9025), Blackthorn (1625), Dogwood (275), Elder (350), Scots Pine (50), Hally (125), Sessile Oak (650), English Oak (525), Rowan (1650), Sweet Chestnut (200), Wild Cherry (235), Field Maple (235), Crab Apple (275) and Lime (175).	N/A - no modelling used to inform the siting of woodland.	
E26 - River Derwent catchment, North West Cumbria	Diane Mills - Woodland Trust, dianemills@woodlandtrust.org.uk.		The project involved working in partnership with landowners in the River Derwent catchment to help them plant trees on their land in order to stabilise banks, slow flood water and reduce the likelihood and impact of floods in the future.	The project emerged following the major floods experienced in the North West of England in November 2009, especially around Keswick, Cockermouth and Workington.		Project led by the Woodland Trust in partnership with local landowners . Other partners include Catchment Sensitive Farming officers, the Derwent Rivers Trust and the Environment Agency .	Woodland Trust	Hydraulic roughness	Floodplain woodland; Riparian woodland	At Stainburn Hill Farm, 2000 trees planted along the river bank and in blocks. At Paplava Farm, 400 trees planted. At Derwent Ings, trees planted over 3 ha .	Stainburn Hill Farm near Workington. Paplava Farm Derwent Ings . (Coordinates on Location Map (appendix 5.2 of report), for Workington: 299698, 528310).	N/A			
E27 - Deerne Valley, South Yorkshire	Pete Wall - Deerne Valley Green Heart Project Leader, deernevalleyia@gmail.com / Pete.Wall@rspb.org.uk. Tom Wild - South Yorkshire Forest Partnership, tom.wild@yforest.co.uk. Nicola Schofield - South Yorkshire Forest Partnership, team@yforest.co.uk / Nicola.Schofield@yforest.co.uk, 0114 2571199.										(Coordinates on Location Map (appendix 5.2 of report), for Conisbrough: 452119, 399332).				
E28 - White Rose Forest, Yorkshire	Guy Thompson - Kirklees Council, Guy.Thompson@kirklees.gov.uk, 01484 234079 / 07720 414356.		The partnership aims to plant and manage more woodlands to make Yorkshire a greener and healthier place for people and business.								(Coordinates on Location Map (appendix 5.2 of report), approximate centre for White Rose Forest: 433472, 435256).				

E29 - Ripon Multi-Objective Project (Ripon MOP) and associated River Laver demonstration project	Tom Nisbet - Forest Research, tom.nisbet@forestry.gsi.gov.uk, 0300 067 5600 / 0300 067 5697. Huw Thomas - Forest Research, huw.thomas1@forestry.gsi.gov.uk, 07810 86379.	2007-2010 .	The Ripon Multi-Objective Project (Ripon MOP) was primarily set up to help reduce the risk of flooding in Ripon, North Yorkshire. A River Laver study was set up following the Ripon MOP to assess the contribution of floodplain woodland to flood alleviation.	The project was informed by concerns that the relationship between land use and flood management was not being adequately considered or realised.	Models showed that planting woodland at four sites in the River Laver catchment slowed down the progression of a 1-in-100 year flood by almost one hour, which in turn could potentially desynchronise the flood flows from a tributary catchment and reduce downstream flood peak. The project also demonstrated that a collection of small blocks might be as effective in slowing down flood flows as equivalent single woodland block.	The project was initially led by Defra (until Easter 2007), then run as a partnership between the Environment Agency , Nidderdale Area of Outstanding Natural Beauty , Natural England , Yorkshire Dales Rivers Trust and the National Trust , with participation from Forest Research and JBA Consulting .	Funding received from the Environment Agency for capital works. Defra Innovation funding for Forest Research project to study the potential benefits of floodplain woodland. Funding made available for 15 ha of woodland planting as part of the River Laver demonstration project.	Hydraulic roughness	Floodplain woodland	Ripon MOP study area covered 14,000 ha . The River Laver demonstration project included 4 sites totalling 40 ha within the catchment.	The Ripon MOP study area was mainly within the Nidderdale Area of Outstanding Natural Beauty and focused on the River Skell, River Laver, Kix Beck and their tributaries. The River Laver demonstration project took place at: (1) Beckmeetings , (2) Ings , (3) Galphay Mill in the middle reach of the River Laver, and (4) Cow Myers at Birkby Nab in the lower reach of the catchment. (Coordinates on Location Map (appendix 5.2 of report), for Nidderdale Area of Outstanding Natural Beauty: 415773, 467400).	The Ripon MOP supported woodland management measures such as fencing existing woodland from livestock.	The Ripon MOP and River Laver demonstration project included floodplain woodland creation and hedge planting.	Broad-scale modelling was commissioned as part of the Ripon MOP to further develop understanding of the impacts of land use and management on flood risk management.	
E30 - Tebay Common, Cumbria	Peter Leeson - Woodland Trust, Peter.Leeson@woodlandtrust.org.uk.	2012 on-going	the project is focused on upper catchment flood alleviation work through tree planting, excluding grazing and gaining vegetation change over 123 ha at Tebay Common at the head of the Lune, with benefits expected for the streams in Eller Gill and Tebay Gill as well as the Lune Gorge itself.			Woodland Trust , Natural England , owner Hugh Lord Lonsdale and the farmers who manage the common have also been involved.	Natural England: Higher Level Stewardship scheme with top-up funding from the Woodland Trust.	Surface runoff interception; Hydraulic roughness	Upland woodland; Gully woodland	69,000 trees planted over an area covering 123 ha	Approximate centres of proposed woodland/scrub planting areas: 363450, 502506 / 362270, 502863 / 361532, 502900 / 361506, 501441 / 361909, 501009 and 361990, 500425. (Coordinates on Location Map (appendix 5.2 of report): 363450, 502506).	Woodland management measures to assist woodland establishment include keeping tubes upright, weeding where needed, beating up seasonally, managing the deer population and keeping stock proof.	Species planted are a mix of aspen, alder, downy and silver birch, crab apple, hawthorn, rowan, oak, hazel, goat willow with smaller proportions of dwarf willow, juniper and scots pine	N/A - no modelling used to inform the siting of woodland.	
E31 - Slowing the Flow at Pickering, North Yorkshire	Tom Nisbet - Forest Research, tom.nisbet@forestry.gsi.gov.uk, 0300 067 5600 / 0300 067 5697. Dean Hamblin - Environment Agency, dean.hamblin@environment-agency.gov.uk. Richard Pow - Yorkshire & North East FC Area Team, Forestry Commission, Richard.Pow@forestry.gsi.gov.uk, 01670381005 / 07831216024. Paul Murby - Defra, paul.murby@defra.gsi.gov.uk.	01.06.2009-31.03.2015 .	The project focused on the Pickering catchment looking at a range of NFM techniques.	The long history of flooding in Pickering and the damage these floods caused to properties form the context for this project.	The project found that the installation of just 100 large woody debris dams resulted in peak flow reductions of between 3.5% and 7.5%. Another finding was that NFM measures can at times increase flood risk, particularly when implemented close to flood prone sites. (Mouchel, 2013)	Forest Research , Forestry Commission England , the Environment Agency , Natural England , Durham University , North York Moors National Park , Ryedale District Council , North Yorkshire Moors Railway , Sinnington Parish Council , North Yorkshire County Council	Defra project cost of £247,000. Woodland Creation Grant received under the English Woodland Grant Scheme to meet the costs of tree planting, totalling just over £15,500.	Hydraulic roughness; Surface runoff interception	Floodplain woodland; Riparian woodland; Woody debris dams	Floodplain woodland extent was 30 ha ; riparian woodland 50 ha , with 100 large woody debris dams constructed.	(Coordinates on Location Map (appendix 5.2 of report), for Pickering: 480522, 483447).			Opportunity mapping identified approximately 400 ha of riparian land comprising 96 individual stream reaches as potential for woodland creation. The 'Overflow' model from Durham University was used to assess potential sites and identify locations for woodland creation that would contribute the most to reducing flood risk.	
E32 - Lustrum Beck Flood Alleviation Project, Stockton-on-Tees	Alex Nicholson - Environment Agency, alexander.nicholson@environment-agency.gov.uk. Richard Pow - Yorkshire & North East FC Area Team, Forestry Commission, Richard.Pow@forestry.gsi.gov.uk, 0167 038 1005. Phil Welton - Environment Agency, phil.welton@environment-agency.gov.uk. Samantha Boyes - Environment Agency, samantha.boyes@environment-agency.gov.uk.	2013-2014 : discussions between Stockton-on-Tees Borough Council and Environment Agency. Summer 2014 : commencement of work. 2015 : discussions between Environment Agency and Forestry Commission on NFM. 2015-2018 : potential NFM implementation.	The project is implementing hard engineered flood management solutions upstream of Stockton-on-Tees and currently considering a range of NFM options with a view to starting NFM implementation by 2016.	The background to this project is the severed flood damage caused to properties along the Lustrum Beck corridor during the Autumn 2012 flood events.		The project is led by Stockton-on-Tees Borough Council with support from the Environment Agency in partnership with the Forestry Commission given the latter owns and manages some of the land involved in the scheme.	Stockton-on-Tees Borough Council worked with the Environment Agency to secure flood alleviation funding. For the hard engineered element, a total of £1.6 million made up of: £1.2 million of Flood Defence in Aid Funding, Environment Agency + £415,000 from North-East local levy. There is NFM funding for 4 years although figures not yet confirmed.	Hydraulic roughness	Floodplain woodland; Riparian woodland; Woody debris dams		Coatham Wood (owned by Forestry Commission) and other areas. (Coordinates on Location Map (appendix 5.2 of report), for Stockton-on-Tees: 443566, 518671).	Woody debris dams probably to be artificially formed of debris collected in the local woodland.		The project is hoping to install a monitoring scheme, with the river network being monitored to confirm peak river flow and to monitor NFM features. Monitoring is expected to be an iterative process.	
E33 - Saltholme, Tyneside											(Coordinates on Location Map (appendix 5.2 of report), near RSPB Saltholme: 450533, 522960).				
E34 - Coalburn, Kielder Forest	Steve Birkinshaw - Newcastle University, s.j.birkinshaw@ncl.ac.uk. James Bathurst - Newcastle University, james.bathurst@ncl.ac.uk. Mark Robinson - Centre for Ecology & Hydrology, 01491 838800 / 01491 692424.	1967 on-going	The longest running forest research catchment project in the UK, providing data on the long-term impact of forestry on hydrology.	The project takes its roots in the 1960s when the Hydrological Research Unit began investigating the impacts of upland land-use change and the loss of water yield moorland afforestation might cause. At the time, economic and population growth projections also suggested potential future shortages in water supply.	One of the main findings of interest in the context of this review is that while ploughing of the upland grassland caused a small increase in annual streamflow, the now mature forest has caused a major decrease in annual streamflow.	Newcastle University			Upland woodland	150 ha catchment.	Coordinates for approximate centre of study site within Kielder Forest : 369447, 578479. (Coordinates on Location Map (appendix 5.2 of report): 369447, 578479).	Site deep ploughed prior to tree planting - 1972/72.	Upland woodland planted with coniferous trees following deep ploughing - 1972/73.	Large hydrological dataset built since 1967.	
E35 - River Till Wetland Restoration Project, Northumberland											(Coordinates on Location Map (appendix 5.2 of report), approximate: 394081, 616013).				
E36 - Belford Catchment Solutions Project, Northumberland	Paul Quinn - Newcastle University, p.f.quinn@newcastle.ac.uk. Peter Kerr - Environment Agency, peter.kerr@environment-agency.gov.uk.	2007-2014 .	The project involved the design and implementation of a network of soft engineered Runoff Attenuation Features (RAFs) upstream of Belford, intensive field monitoring and detailed hydrological analyses.	A number of severe flood events across the North East of England form the background to this project.	Detailed monitoring and assessment was carried out by Newcastle University.	Partnership project between the Environment Agency , Newcastle University and local landowners .	Funding from the Northumbria Regional Flood Defence Committee.	Surface runoff interception; Hydraulic roughness	Riparian woodland; Woody debris dams	12 woody debris dams built.	(Coordinates on Location Map (appendix 5.2 of report), for Belford: 410893, 633610).		In order to increase roughness, riparian woodland planting, holly and hazel especially, was carried out alongside woody debris dams construction.		
SCOTLAND															
E1 - Upper Clyde Natural Flood Management Scoping Study, Upper Clyde Valley	Dylan Huws - AECOM, dylan.huws@aecom.com.	2011				AECOM , South Lanarkshire Council , Scottish Environment Protection Agency , SNIFFER , Scottish Natural Heritage and the RSPB			Gully woodland; Floodplain woodland; Riparian woodland; Woody debris dams		Portrail Water catchment: area between Nether Burn and Ever Burn . Dumeston Water catchment: 3km reach upstream and downstream of Snar Water . Medwin Water catchment: 4.26km reach from South Medwin to Newholm Cottages . Medwin Water catchment: 1.25km reach upstream of A721 on North Medwin . Douglas Water catchment: between town of Douglas and M74. Douglas Water catchment: Gleapin Burn and tributaries. Methan Water catchment: 850m reach between confluences of Pockmure and Scots Burn . River Clyde catchment. (Coordinates on Location Map (appendix 5.2 of report), for Douglas: 282250, 631073).				
E2 - Craik Forest/Borthwick Water, Scottish Borders	Dick Johnson - MNV Consulting Ltd, info@mncvconsulting.eu.					Previously a Mountain Environments project then included in EU Interreg FORDIClim project (Transnational Forestry Management Strategies in Response to Regional Climate Change Impacts).		Surface runoff interception			(Coordinates on Location Map (appendix 5.2 of report), for Craik Forest: 334450, 609795).	The project involved blocking forest drains in Craik Forest.			

53 - Eddleston Water Project, Scottish Borders	Luke Comins - Tweed Forum, luke.comins@tweedforum.org, 01896 849723. Chris Spray - UNESCO Centre for Water, 01382 388362. Tom Ball - Dundee University, t.ball@dundee.ac.uk, 01382 385116. Huw Thomas - Forest Research, huw.thomas1@forestry.gsi.gov.uk, 07810 863799. Nadeem Shah - Forest Research, Nadeem.Shah@forestry.gsi.gov.uk.	2009 (scoping study) on-going	The project is aimed at finding out whether land use management changes and natural habitat restoration can assist in improving river ecology and minimise flooding risk to Eddleston and Peebles. The project also has a more general remit to restore the Eddleston Water for the benefit of the local community and wildlife.			Project led by Tweed Forum in partnership with Scottish Environment Protection Agency , the Scottish Government and the University of Dundee . Other key partners include British Geological Survey , Scottish Borders Council , Scottish Natural Heritage , the Forestry Commission , National Farmers Union , Forest Carbon and the Woodland Trust . Finally, the project works with local schools and other educational organisations to spread the word on river restoration and natural flood management.	Over £300k.	Hydraulic roughness; Surface runoff interception	Gully woodland; Riparian planting; Woody debris dams	50,000 trees planted over an area of 35 ha .	Approximate centre of gully and riparian woodland planting on the Longcote Burn : 325690, 646525. Approximate centre of riparian woodland planting on the Shiplaw Burn : 323361, 651164. Approximate centre of area for 10 woody debris dams installed on the Middle Burn : 322315, 650254. (Coordinates on Location Map (appendix 5.2 of report): 325690, 646525).			A large array of hydrometric instrumentation has been deployed across the study area to enable the quantification of the impacts of NFM implementation on flood attenuation: monitoring equipment including rain gauges, groundwater and river level gauges, are in place to ensure the effects of the measures deployed as part of the project are measured and assessed for impact on river flows and flood frequencies.
54 - Etrick Water, Scottish Borders	Luke Comins - Tweed Forum, luke.comins@tweedforum.org, 01896 849723.										(Coordinates on Location Map (appendix 5.2 of report), for Etrick Water: 348809, 631999).			
55 - Bowmanhill Farm, Teviot, Scottish Borders	Luke Comins - Tweed Forum, luke.comins@tweedforum.org, 01896 849723.	2013									(Coordinates on Location Map (appendix 5.2 of report), for Teviot: 370899, 627539).			
56 - Bowmont-Glen catchment	Luke Comins - Tweed Forum, luke.comins@tweedforum.org, 01896 849723.	2010-on-going	The project is aimed at developing a sustainable catchment management plan for the catchment through a participatory process between land managers and regulatory agencies. The project has involved planting woodlands, creating woody debris dams, restoring wetlands and allowing certain areas to flood. Alongside other demonstration projects, work within the Bowmont-Glen catchment forms part of Cheviot Futures.	The project emerged following the major floods of 2008 and 2009 in the Bowmont-Glen catchment which caused significant damage to farmland. Disagreement between land managers and regulatory bodies on how to reduce future flood risk further contributed to the creation of the project.	Overseen by Tweed Forum in partnership with land managers, regulatory and administrative bodies .		Hydraulic roughness; Surface runoff interception	Gully woodland; Riparian woodland; Woody debris dams	70m of hedgerow.	(Coordinates on Location Map (appendix 5.2 of report), for Bowmont Water: 390703, 630825).	The project involved some woodland creation, including the planting of 70m of new hedgerow to assist with stabilising the riverbank and intercept surface water runoff, and the planting of gully and riparian woodland to assist natural flood management.	Monitoring work on the woody debris dam structures carried out by the James Hutton Institute to clarify the impact of such structures on the local and catchment scale.		
57 - Inner Forth FutureScapes	David Anderson - RSPB Scotland.										(Coordinates on Location Map (appendix 5.2 of report), for Firth of Forth: 292207, 687541).			
58 - River Devon Natural Flood Management Demonstration Project, Clackmannanshire	Dick Johnson - MNV Consulting Ltd, info@mivconsulting.eu.				WWF (part project of UK's Natural Rivers Programme), Mountain Environments and Clackmannanshire Council .	HSBC (part of their £12.7 million in WWF's worldwide freshwater programme).	Hydraulic roughness	Upland woodland; Gully woodland; Riparian woodland; Woody debris dams;		(Coordinates on Location Map (appendix 5.2 of report), for Clackmannanshire: 291925, 696729).	Woody debris dams encouraged within gully and riparian woodland.	Planting of upland and riparian mixed-species native woodland.		
59 - Allan Water NFM Techniques and Scoping Study, and associated Allan Water NFM Project		2010-2011	The scoping study investigated NFM views from landowners, carried out catchment modelling and suggested two conceptual proposals with the greatest potential for flood reduction. The study was followed by a project to implement NFM measures.		The project was for client Scottish Environment Protection Agency and was carried out as a partnership between Halcrow Group Limited , the Centre for River Ecosystems Science , the University of Stirling , Forestry Commission Scotland , Forest Research , Party & Kinross Council , the RSPB , the Scottish Government , Scottish Natural Heritage and Stirling Council .	Potential funding identified as a result of the study: SRDP - Scotland Rural Development Programme for the River Knaik, possibly supplemented by funding from local fisheries or RAFTS for the installation of riparian fencing, for Allan Water NFM, potential funding identified as SEPA's Restoration Fund.		Riparian woodland		The scoping study proposed work on the River Knaik, including riparian woodland creation, to be taken forward, and potential sites identified within the Braco Castle Farms Estate, Drummond Estates and Craigton Farm . Other locations considered within the scoping study were Muckle Burn headwaters and Darry Burn headwaters (Coordinates on Location Map (appendix 5.2 of report), for Braco Castle, Stirling: 282690, 711193).				
510 - Spey Catchment Initiative, North East Scotland	Liz Henderson - Spey Catchment Initiative, l.henderson@speyfisheryboard.com, 01479 810477 / 07534 174992. Duncan Ferguson , d.ferguson.spey@btconnect.com, 07823 334747, Mark Wilkinson - James Hutton Institute, Mark.Wilkinson@hutton.ac.uk.	2010-2013 : inception. 2014-2016 : current 3-year phase.	The project is currently focused on 4 priority themes: planting and safeguarding riparian woodlands and enhancing wetlands; demonstrating natural flood management techniques; understanding how the river works and education, awareness raising and getting people involved in the catchment.		Scottish Natural Heritage , Cairngorms National Park Authority , Diageo , Spey Fishery Board , Moray Council , Scottish Environment Protection Agency , Forestry Commission Scotland and the Highland Council .	£2.5million of Heritage Lottery Funding earmarked for the Tomintoul & Glenlivet Landscape Partnership (TGLP); £200,000 in funding from the Scottish Government via Cairngorms National Park Authority for Aviemore Riverside Park; support from the Woodland Trust; support from Water Environment Fund and the Green Stimulus Peatland Restoration Fund on peatland restoration work at Allt a'Mharcaidh.	Hydraulic roughness; Surface runoff interception	Riparian woodland; Woody debris dams	10,000 riparian trees planted across several sites and several woody debris dams at Allt a'Mharcaidh.	Allt a'Mharcaidh river . (Coordinates on Location Map (appendix 5.2 of report), for Auchlean: 284853, 797353).				
511 - Tarland Burn	Mark Wilkinson - James Hutton Institute, Mark.Wilkinson@hutton.ac.uk.				James Hutton Institute					(Coordinates on Location Map (appendix 5.2 of report), for Tarland: 348379, 804799).				
512 - Stonehaven/Cowie Water	Rene Dobson - JBA Consulting, Rene.Dobson@jbaconsulting.com.				JBA				Woody debris dams	(Coordinates on Location Map (appendix 5.2 of report), for Stonehaven: 387065, 785850).				
513 - Aberdeenshire Land Use Strategy Pilot (RLUP), Aberdeenshire	James Davidson - RLUP, J.Davidson@aberdeenshire.gov.uk. Irina Birnie - RLUP, irina.birnie@aberdeenshire.gov.uk. Bill Slee - James Hutton Institute, bill.slee@hutton.ac.uk. Mark Wilkinson - James Hutton Institute, mark.wilkinson@hutton.ac.uk.	To March 2015 : pilot running, with findings to feed into the Scottish Government's 2016 review of Land Use Strategy	Some opportunity mapping and multi-criteria analysis for B.L woodland expansion carried out. One of the criteria was 'flooding protection', where SEPA flood risk maps were used. The project was not focused on flooding though but explicitly on multiple benefits.		Aberdeenshire Council is carrying out the Aberdeenshire pilot as part the Scottish Land Use Strategy on behalf of the Scottish Government , in partnership with the James Hutton Institute .					(Coordinates on Location Map (appendix 5.2 of report), for Aberdeenshire: 364953, 818665).				
WALES														
W1 - Natural Resource Management Trials	(Possibly Huw Thomas - Forest Research, huw.thomas1@forestry.gsi.gov.uk, 07810 863799.)		The trials are assessing the impact of land use, forestry, etc. on flooding and looking at NFM.		Natural Resources Wales					3 areas under consideration: Dyff, Tawe , Swansea and Rheola . (Coordinates on Location Map (appendix 5.2 of report), for Swansea: 266484, 195986).				
W2 - Great Trilley Wood, Abergavenny	Tom Nisbet - Forest Research, tom.nisbet@forestry.gsi.gov.uk, 0300 067 5600 / 0300 067 5697. Huw Thomas - Forest Research, huw.thomas1@forestry.gsi.gov.uk, 07810 863799.				Woodland Trust and Forest Research project.					(Coordinates on Location Map (appendix 5.2 of report), for Abergavenny: 330460, 215804).				

W3 - Pontbren Project	Neil McIntyre - Sustainable Minerals Institute, University of Queensland, n.mcintyre@uq.edu.au	1997: Pontbren farmers start coming together. 2004-2012: intensive hydrological research programme.	The project was primarily aimed at improving livestock production through woodland management and tree planting.		The project observed that a major secondary benefit was that woodland measures also help reduce water run-off. Hydrological research carried out as part of the project found that "... infiltration rates were up to 60 times higher in woodland areas compare to grazed pasture" (Environment Agency, 2012). "woodland planting across a whole catchment could reduce peak flows by 10-54%..." (Environment Agency, 2012) and "(planted) trees begin to have this effect (improved soil structure) as early as two years after planting" (Woodland Trust).	Environment Agency		Surface runoff interception	Cross-slope woodland		(Coordinates on Location Map (appendix 5.2 of report), approximate: 304708, 306741).			A large array of hydrometric instrumentation was deployed at various scales across the Pontbren study area to study both in-field processes and effects, and hydrological responses in the arterial stream network to rainfall events.	A physics-based, distributed model, capable of representing soil heterogeneity was used to characterise hydrological processes at the hillslope scale. Meta modelling techniques were then used to upscale through the development of a semi-distributed catchment-scale model.
NORTHERN IRELAND															
N11 - Lagan River/Ulster Canal, Belfast	Peter Close - Department of the Environment, Northern Ireland, peter.close@doeni.gov.uk.		The project is to re-open the Lagan River/Ulster Canal and involve significant landscape engineering measures along the canal in order to facilitate NFM measures including detention/wetland and woodland measures. The project is aimed at both biodiversity and visual amenity benefits.			Partnership with 3 separate councils in order to guarantee access to land along the canal; also working with Queen's University, Ulster University and Trinity College.	EU - £1.8million.	Hydraulic roughness	Floodplain woodland; Riparian woodland		(Coordinates on Location Map (appendix 5.2 of report), for Belfast: 144572, 529564).				